



**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)

**All Broward Hurricane Panel, Inc.
450 West McNab Road
Ft. Lauderdale, Florida 33309**

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

APPROVAL DOCUMENT: Drawing No. 94-46, titled "Accordion Shutter Details", sheets 1 through 4 of 4, prepared by Al-Farooq Corporation, dated June 10, 1994, last revision #G dated July 12, 2002, 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 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.

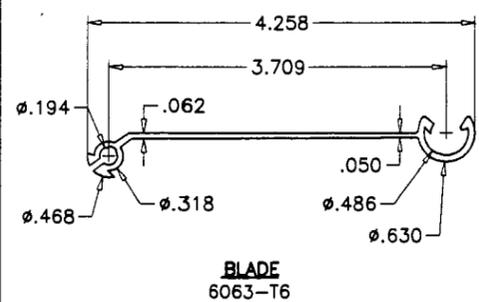
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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.

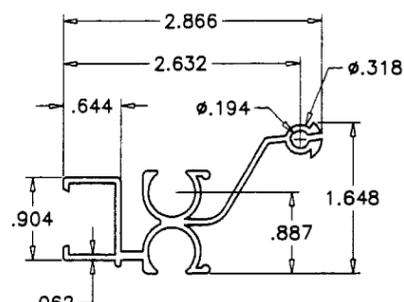
This NOA revises NOA # 00-0424.08 and consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E.**



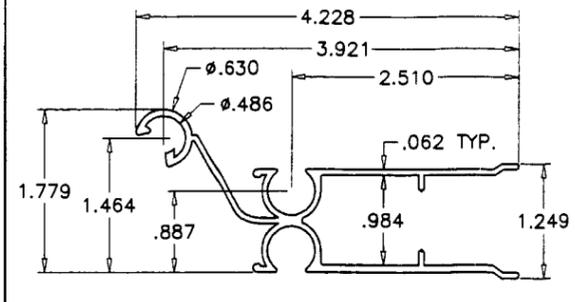
**NOA No 02-0904.05
Expiration Date: 07/23/2003
Approval Date: 09/19/2002
Page 1**



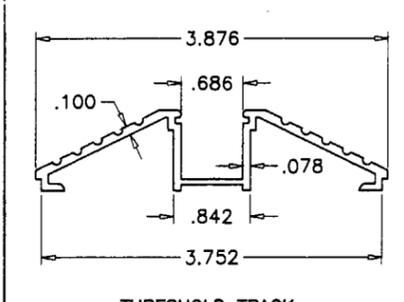
BLADE
6063-T6



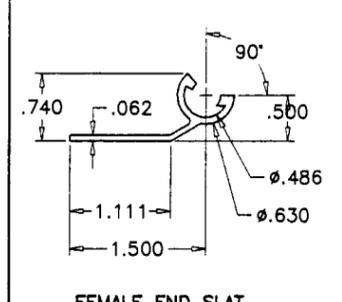
MALE LOCKING SLAT
6063-T6



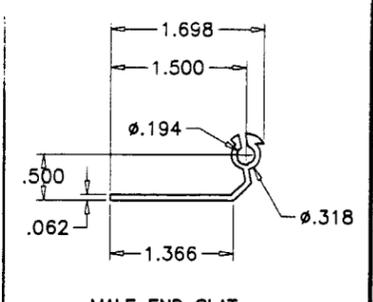
FEMALE LOCKING SLAT
6063-T6



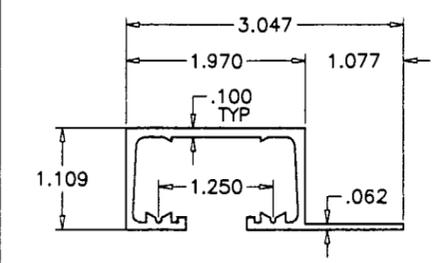
THRESHOLD TRACK
6063-T6



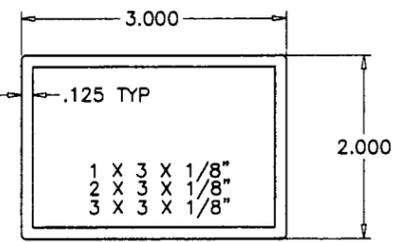
FEMALE END SLAT
6063-T6



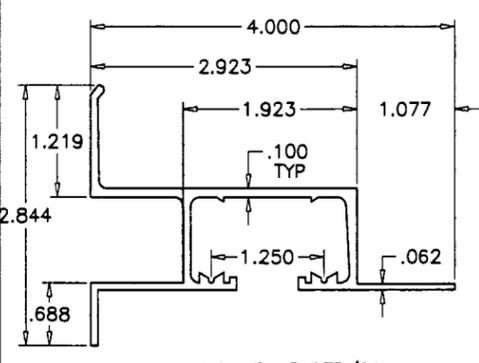
MALE END SLAT
6063-T6



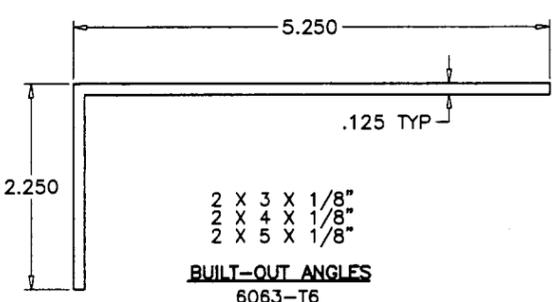
CEILING MOUNT HEADER
6063-T6



SPACER TUBE
6063-T6



WALL MOUNT HEADER/SILL
6063-T6

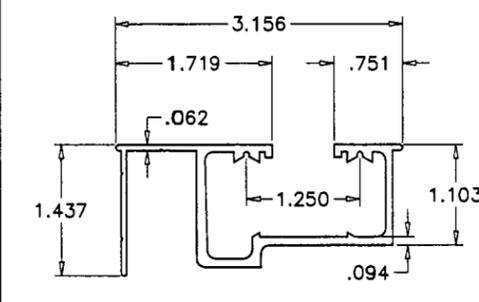
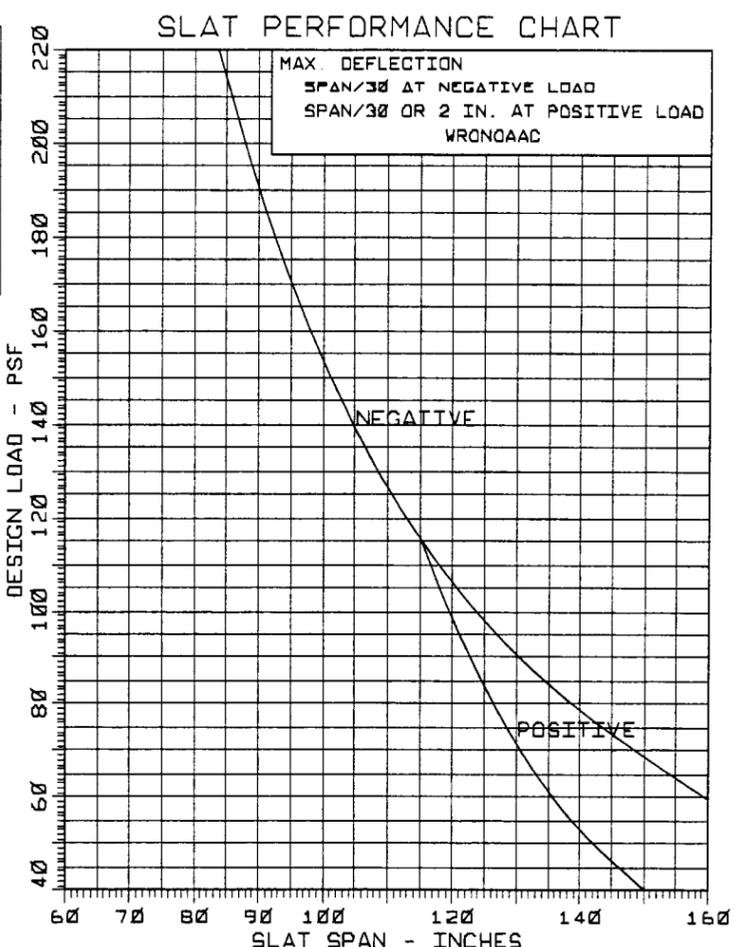
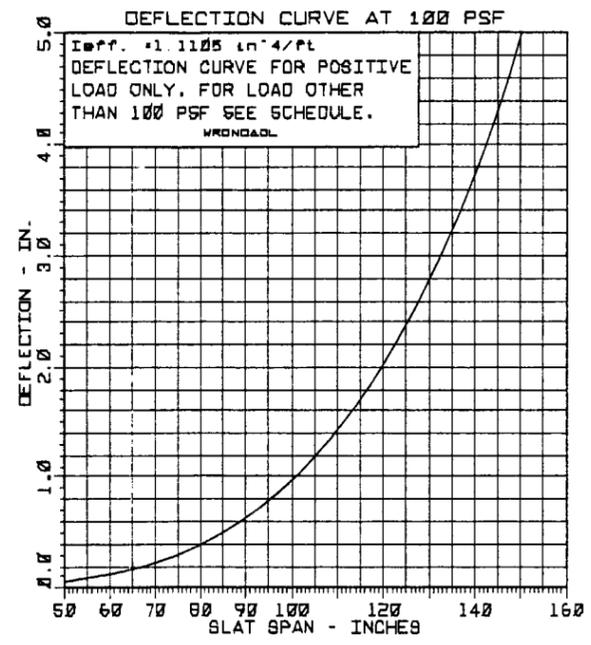


BUILT-OUT ANGLES
6063-T6

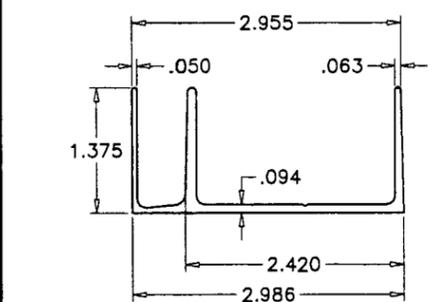
MINIMUM SEPARATION FROM GLASS REQUIRED

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.



ADJ. HEADER/SILL
6063-T6



TRACK ADAPTER
6063-T6

- GENERAL NOTES**
- THIS APPROVAL DOCUMENT REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISIONS SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE.
 - 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 $\leq L/30$ OR 2".
 - ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE TO BE ENGINEERED SEPARATELY.

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.
WRONOFOLD 'AIR' ACCORDION SHUTTER
"DADE COUNTY PRODUCT CONTROL APPROVED"

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

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.

FOR INSTALLATION DETAILS SEE SHEET 2 & 3.

- REVISIONS:**
- | no. | date | description |
|-----|----------|------------------------------|
| 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 |
| F | 04.02.02 | UPDATED FOR FBC |
| G | 07.12.02 | REV. PER BOCC COMMENTS |
- A- THIS APPROVAL DOCUMENT IS GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE SPECIFIC APPLICATION OF SHUTTER SYSTEM.
- B- THIS APPROVAL DOCUMENT IS SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED ON THIS DOCUMENT.
- C- ANY MODIFICATIONS OR ADDITIONS TO THIS APPROVAL DOCUMENT WILL VOID THE APPROVAL DOCUMENT.
- D- WHEN THE SITE CONDITIONS DEVIATE FROM THIS APPROVAL DOCUMENT, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS.
- THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT SHOWING DETAIL AND JUSTIFICATION OF THE DEVIATION, SAID DOCUMENT SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
 - THAT A ONE TIME SITE SPECIFIC APPROVAL BE APPLIED FOR AND SECURED FROM THE MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION.
- WHEN THE SITE CONDITION DEVIATION OCCUR WITHIN THE HIGH VELOCITY HURRICANE ZONE AREA ONLY OPTION '2' SHALL BE ACCEPTED BY THE BLDG. OFFICIAL.
- F- THIS APPROVAL DOCUMENT COMPLIES WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.

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

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 02-0904.05
Expiration Date 07/23/2003
By: *Helmut A. Miller*
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
ACCORDION 94-46A/EH

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

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

revisions:

no.	date	description
C	12.1.94	T.H. COMPLETE REVISION
D	6.15.98	T.H. CO. NAME CHANGED
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F	04.02.02	UPDATED FOR FBC
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drawing no. **94-46**
sheet 1 of 4

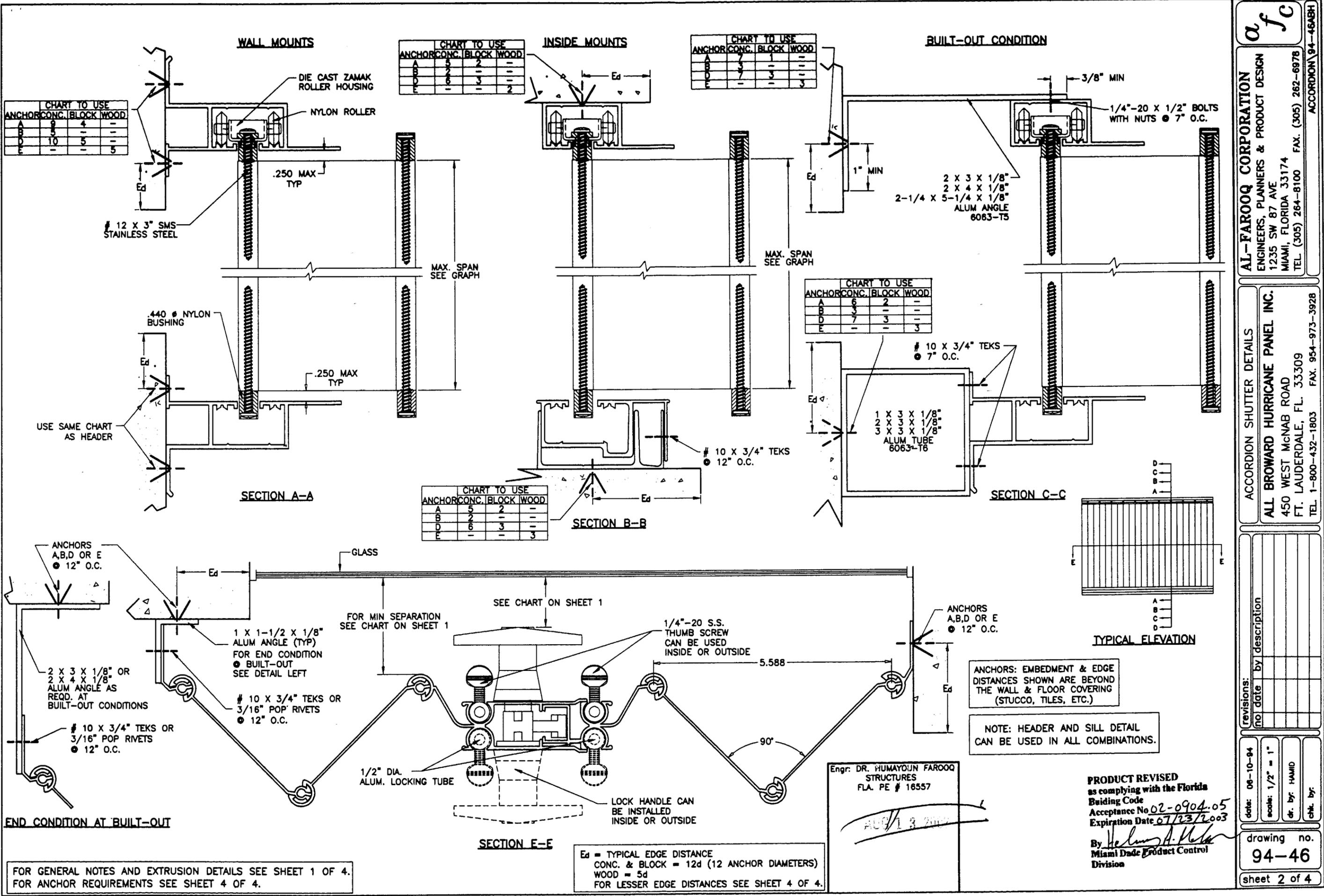


CHART TO USE
ANCHOR CONC. BLOCK WOOD

A	5	2	-
B	2	-	-
D	6	3	-
E	-	-	3

CHART TO USE
ANCHOR CONC. BLOCK WOOD

A	5	2	-
B	2	-	-
D	6	3	-
E	-	-	3

CHART TO USE
ANCHOR CONC. BLOCK WOOD

A	5	2	-
B	2	-	-
D	6	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

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.

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

PRODUCT REVISED
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Acceptance No 02-0904.05
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By *Heung A. Hui*
Miami Dade Product Control
Division

afC

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revisions:

no	date	by	description

date: 06-10-04
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	-
F	-	-	2

INSIDE MOUNTS

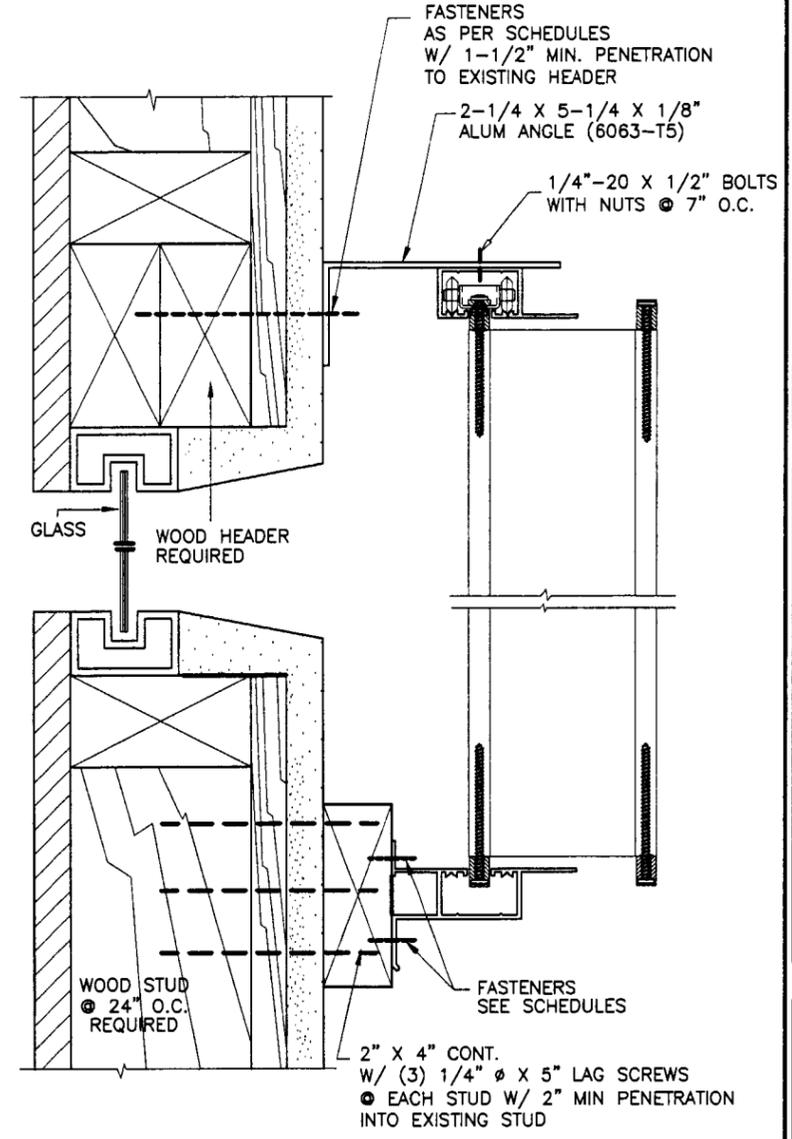
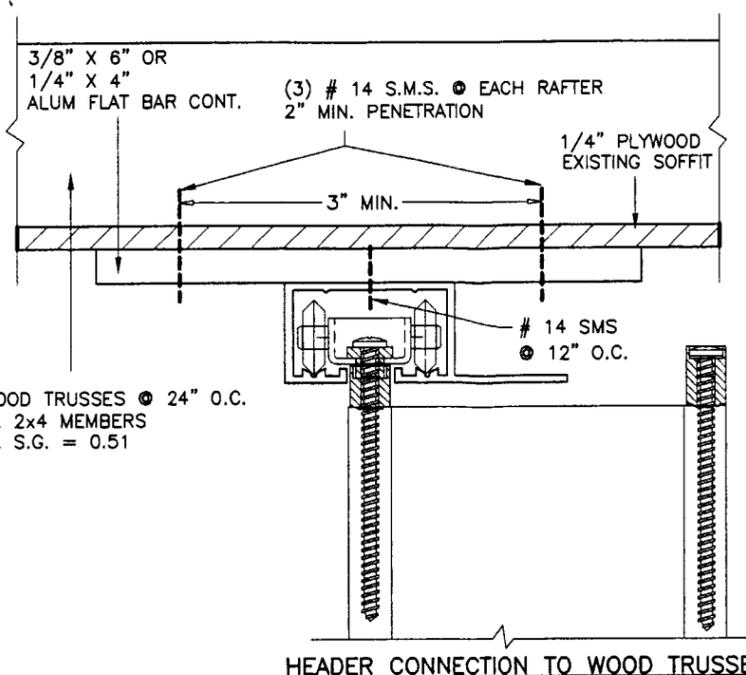
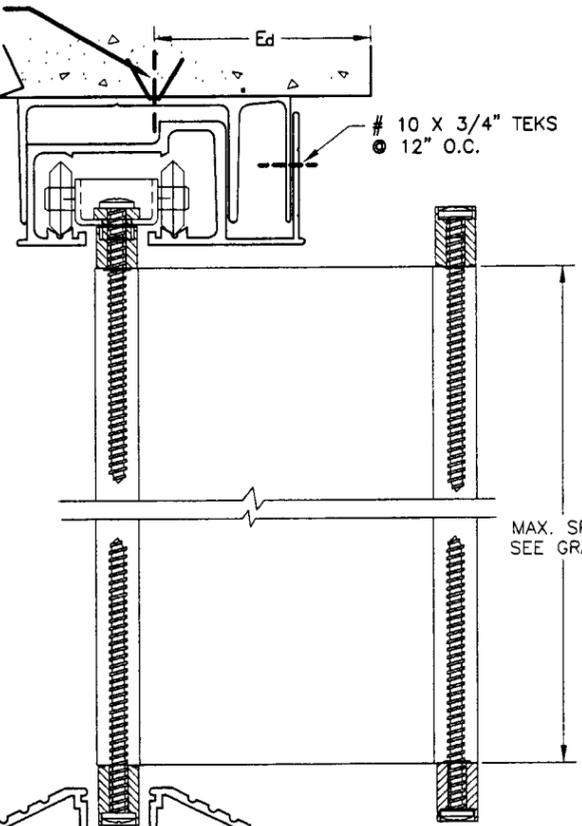
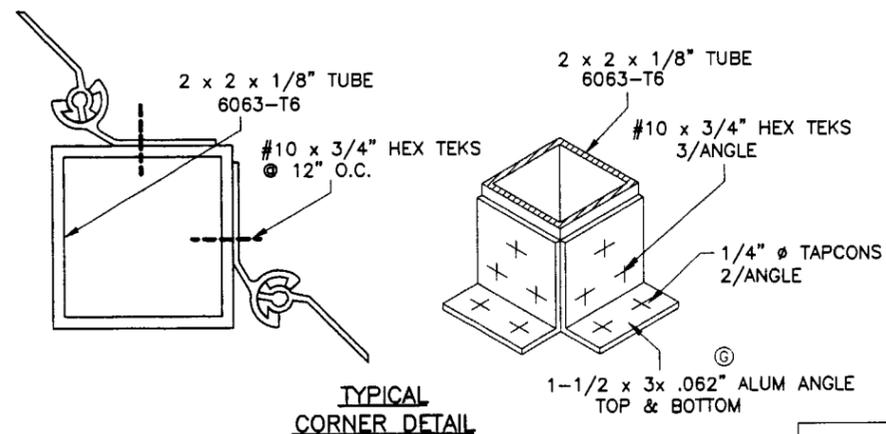
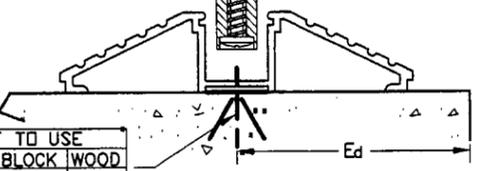


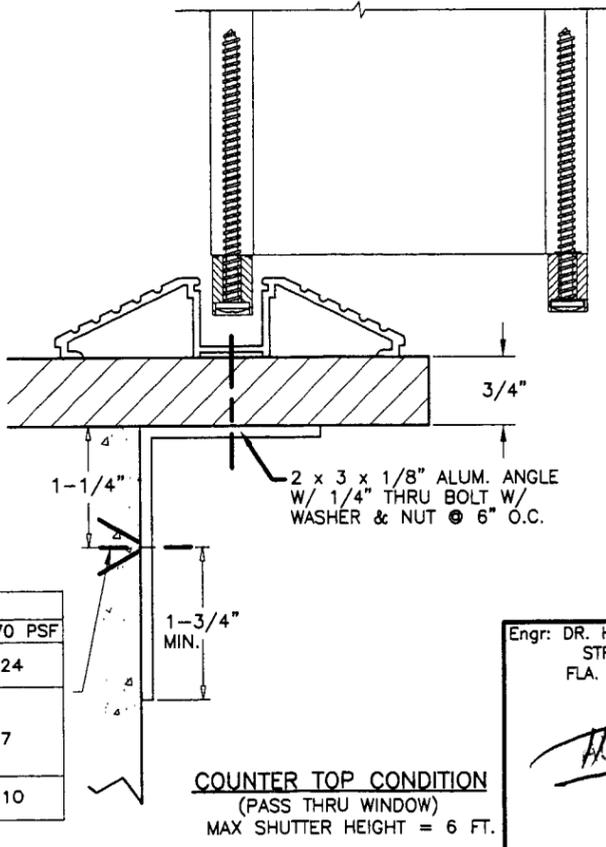
CHART TO USE			
ANCHOR	CONC.	BLOCK	WOOD
A	12	11	-
B	8	-	-
D	12	11	-
E	-	-	8

SECTION D-D



TYPICAL CORNER DETAIL

BASE MAT.	ANCHOR	FASTENER SPACING IN.	
		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 SMS 1-1/2" EMBED.	18	10



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

Handwritten signature and date: AUG 13 2002

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"

PRODUCT REVISED
as complying with the Florida Building Code
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Expiration Date 07/23/2003
By *Handwritten signature*
Miami Dade Product Control Division

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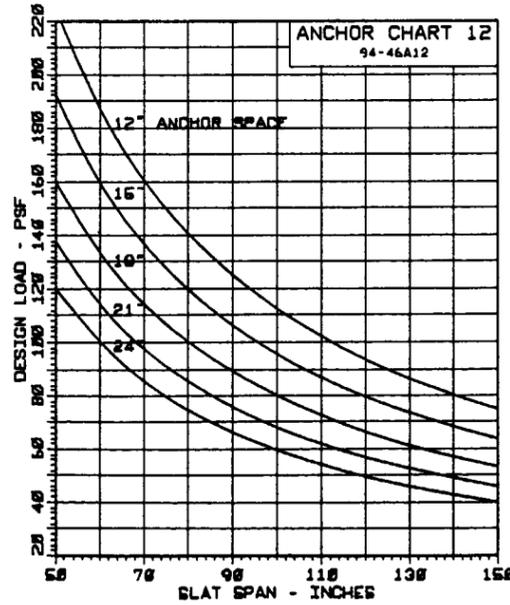
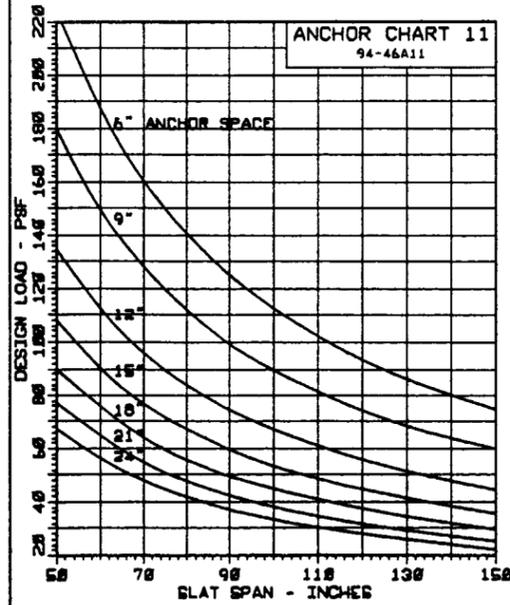
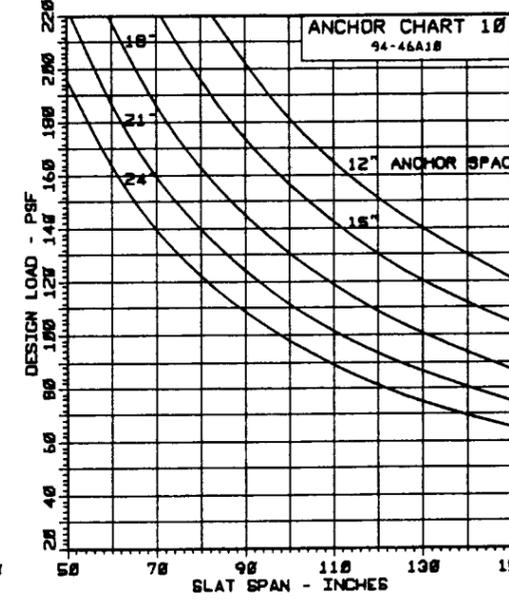
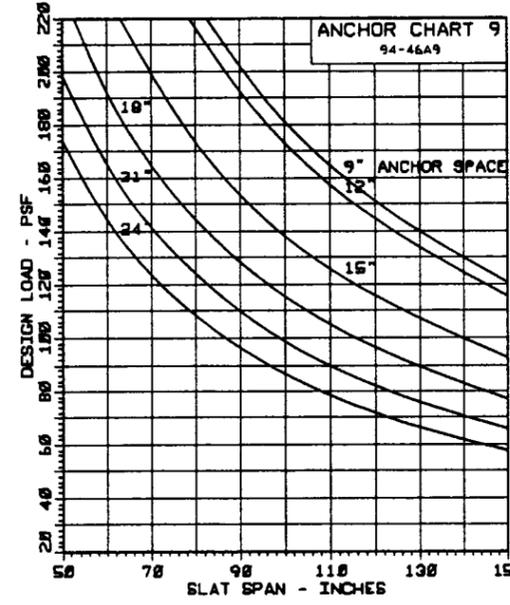
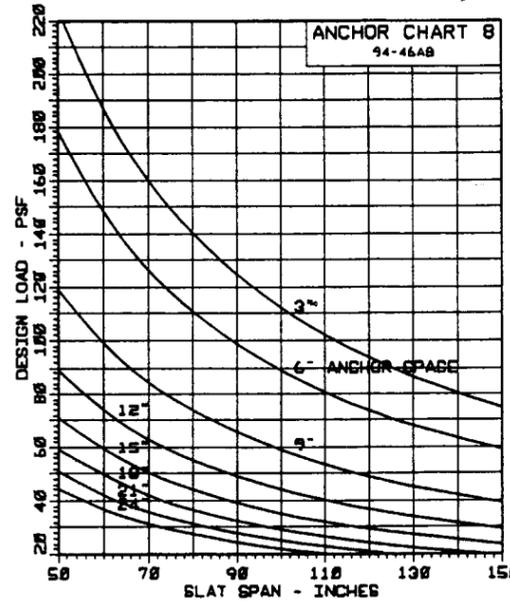
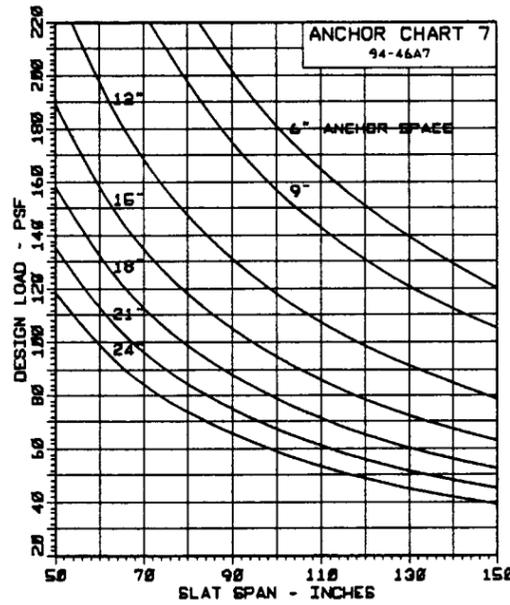
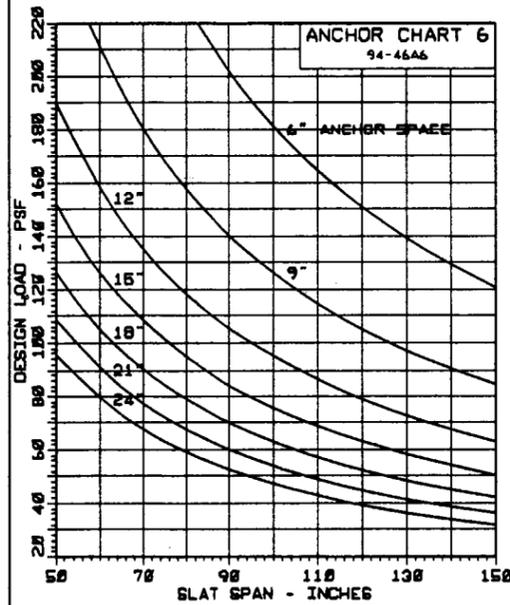
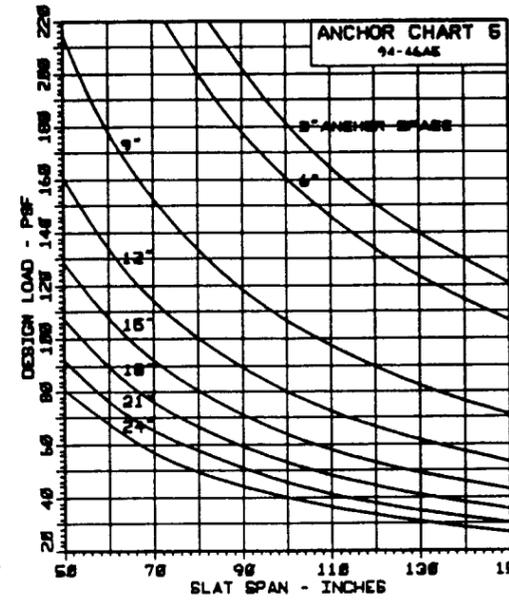
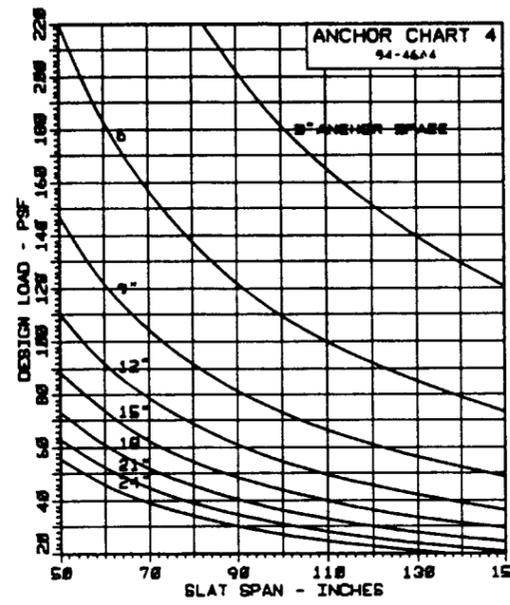
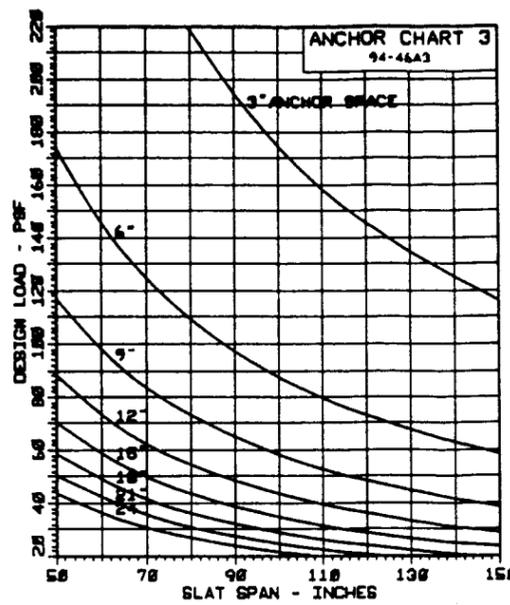
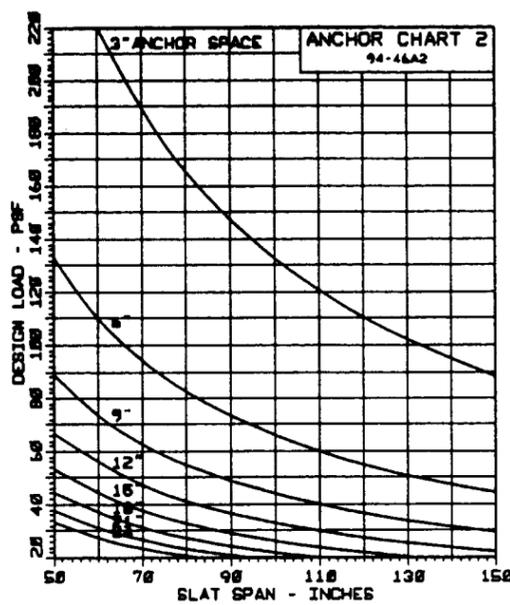
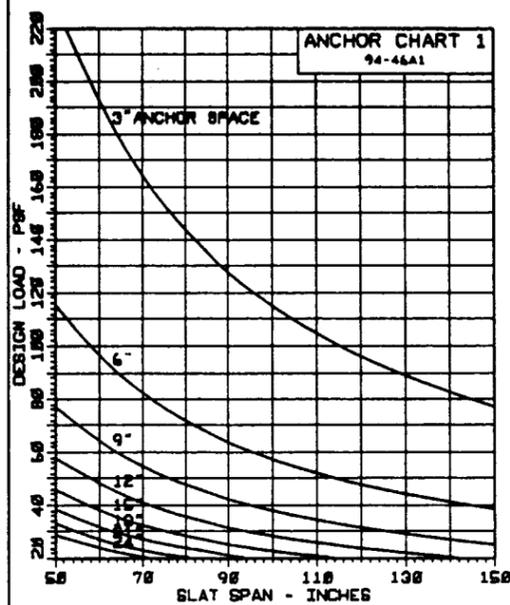
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ACCORDION SHUTTER DETAILS
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revisions:	no.	date	by	description
	G	07.31.02	ANGLE THICK.	REV.

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. (S.G. = 0.47)
1-1/2" MIN. PENETRATION.
- 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. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 18557

Handwritten signature and date: 07/23/2003

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 02-0904.05
Expiration Date 07/23/2003
By *Handwritten signature*
Miami Dade Product Control
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revisions:

no.	date	by description

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

drawing no.
94-46
sheet 4 of 4