



**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)

**MetalTech, Inc.
7635 West 2nd Court
Hialeah, FL 33014**

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: Maximum Impact Econoline Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 99-56, titled "Maximum Impact Econoline Accordion Shutter", sheets 1 through 10, prepared, signed and sealed by Walter Tillit, P.E., dated 2/16/99, bearing the Miami-Dade County Product Control Renewal 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 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.

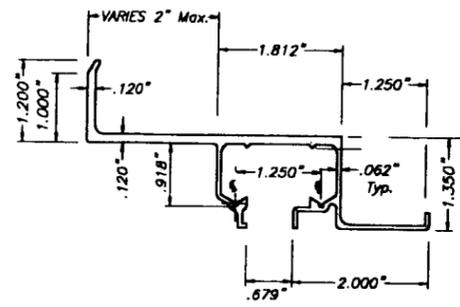
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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 # 99-0224.03 and, consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Raul Rodriguez**.



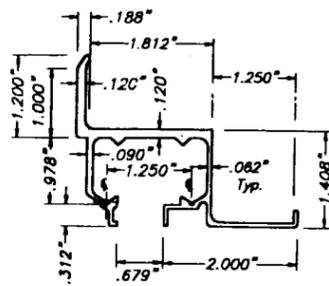
**NOA No 02-0311.01
Expiration Date: April 6, 2007
Approval Date: April 7, 2002
Page 1**



(A1) WALL HEADERS

(A1) WALL HEADERS (INVERTED USE)

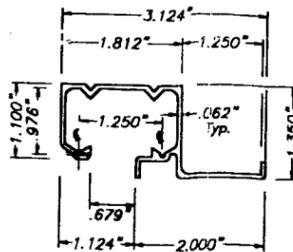
SCALE: 3/8" = 1"



(A2) WALL HEADER

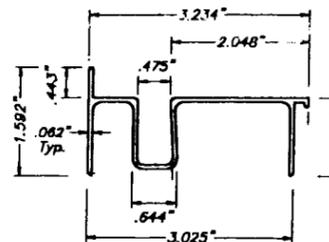
(A2) WALL HEADER (INVERTED USE)

SCALE: 3/8" = 1"



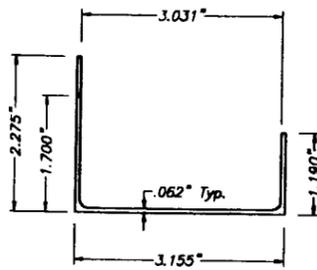
(B) CEILING HEADER

SCALE: 3/8" = 1"



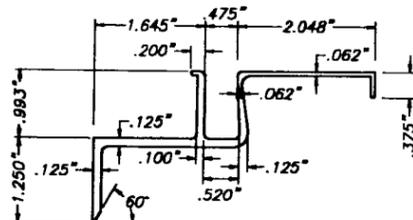
(C) SILL

SCALE: 3/8" = 1"



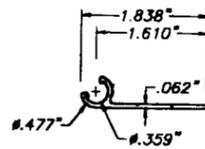
(D) SILL ADAPTER

SCALE: 3/8" = 1"



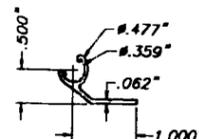
(E) BOTTOM BUILT-OUT

SCALE: 3/8" = 1"



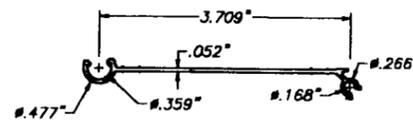
(F) FEMALE END SLAT

SCALE: 3/8" = 1"



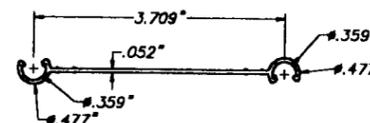
(F1) STARTER STRIP

SCALE: 3/8" = 1"



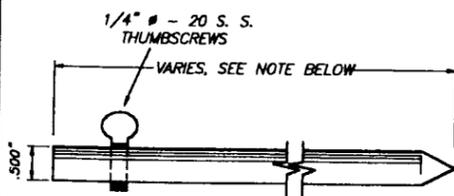
(G) RESIDENTIAL BLADE

SCALE: 3/8" = 1"



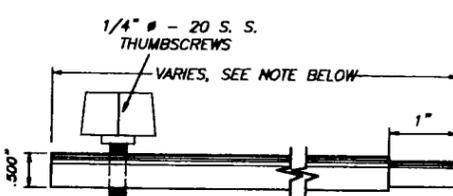
(G1) FEMALE RESIDENTIAL BLADE

SCALE: 3/8" = 1"



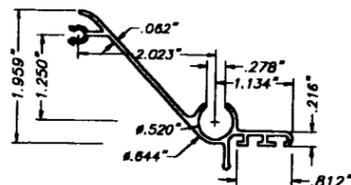
(H) LOCKING PIN

SCALE: 3/8" = 1"



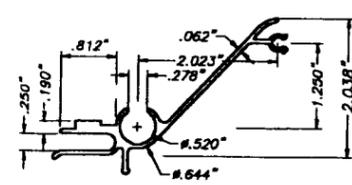
(H1) ALTERNATE LOCKING PIN

SCALE: 3/8" = 1"



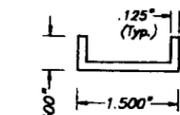
(I) MALE LOCK SLAT

SCALE: 3/8" = 1"



(J) FEMALE LOCK SLAT

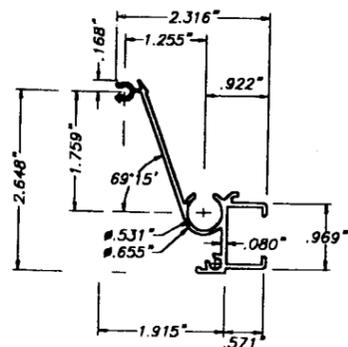
SCALE: 3/8" = 1"



(K) LOCK CLIP

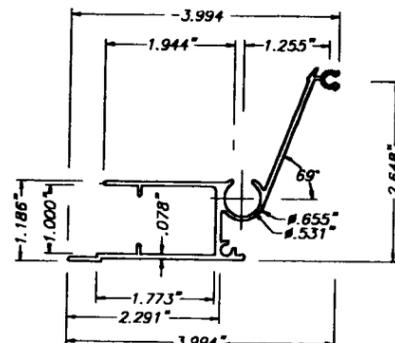
4" LONG
SCALE: 3/8" = 1"

6" Min. FOR UP TO 9'-0" SHUTTER BLADE LENGTHS,
12" Min. FOR SHUTTER BLADE LENGTHS GREATER THAN
UP TO 12'-0".



(L) MALE LOCK SLAT

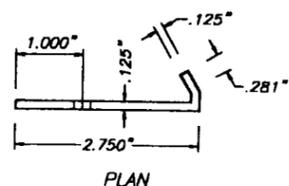
SCALE: 3/8" = 1"



(M) FEMALE LOCK SLAT

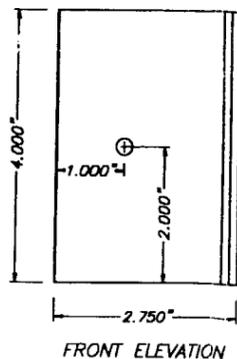
SCALE: 3/8" = 1"

COMPONENTS



(N) LOCKER

SCALE: 3/8" = 1"



(O) ALUMINUM ANGLE

SCALE: 3/8" = 1"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 99-0311.01
Expiration Date: April 6, 2007
By: *[Signature]*
Miami Dade Product Control
Division

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE: April 06, 1999
BY: *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0224-03

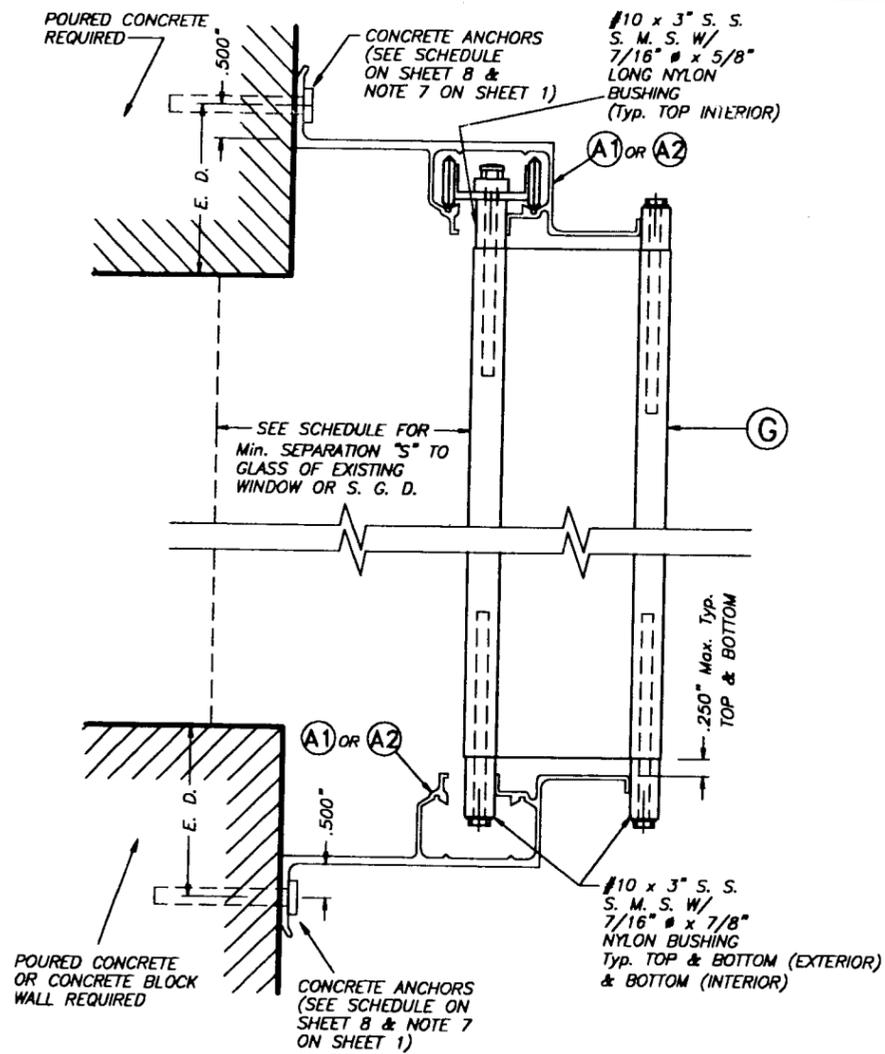
DADE COUNTY

TILECO inc.
TILLIT TESTING & ENGINEERING COMPANY
6595 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166
Phone: (305)871-1530 Fax: (305)871-1531
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167

MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE	
METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HALEAH, FLORIDA 33041		2/16/99 DATE	
REV. No		DRAWING No	
1	DESCRIPTION	DATE	REV. No
2			
		99 - 56	
		DRAWING No	
		SHEET 1 OF 10	

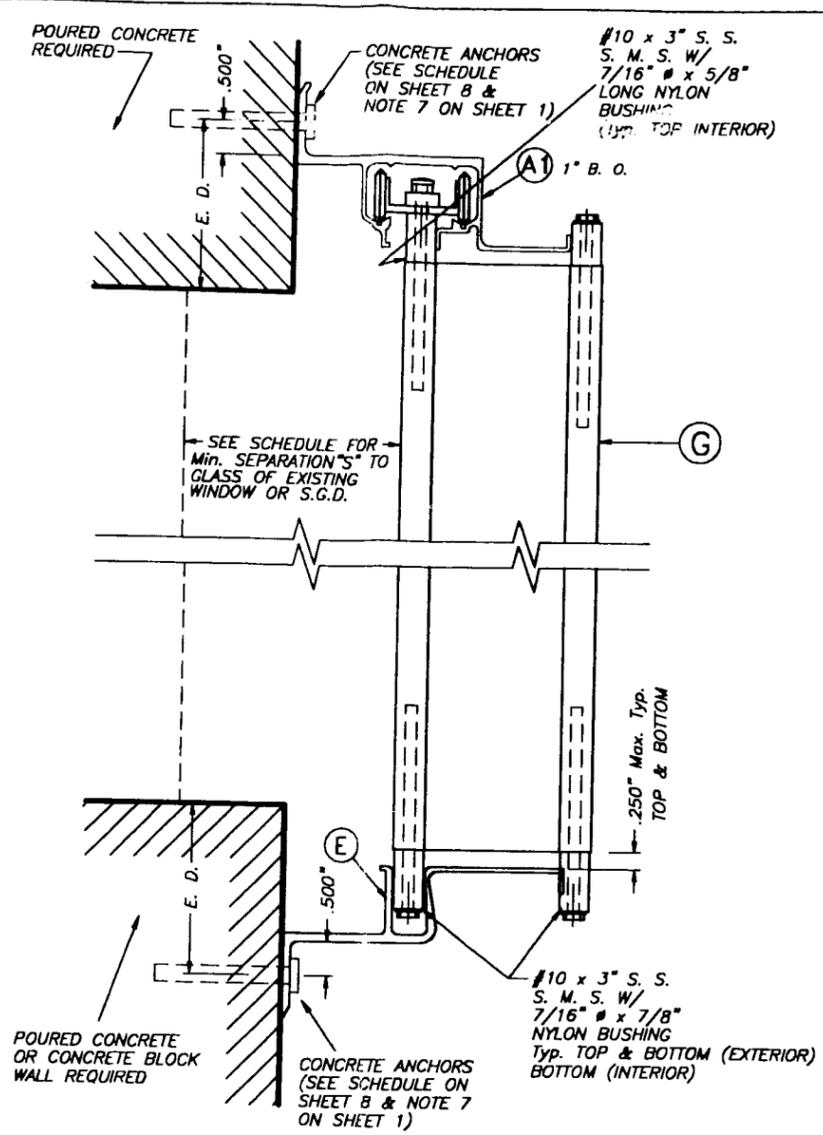
data as sub
4/12/99

99-0224-03



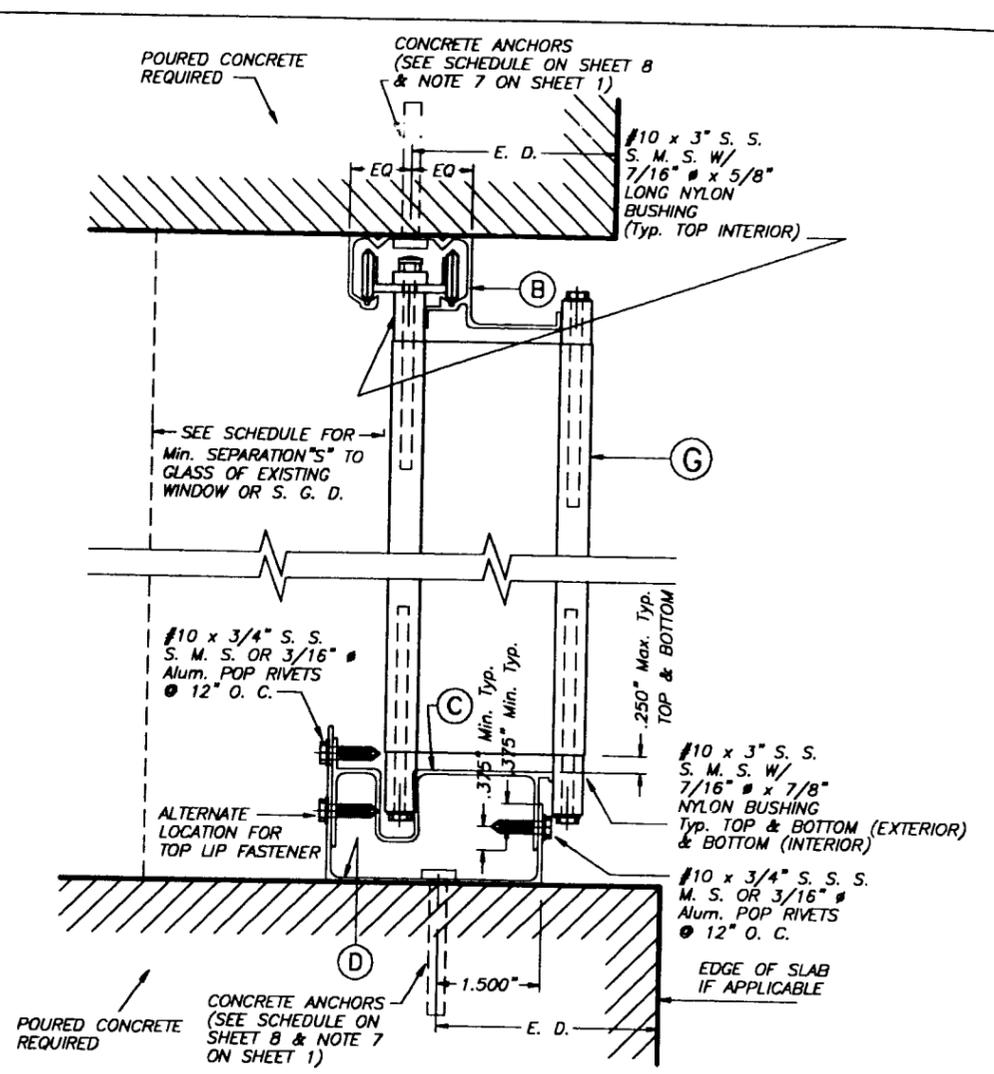
WALL MOUNTING INSTALLATION

SECTION A SCALE : 3/8" = 1"



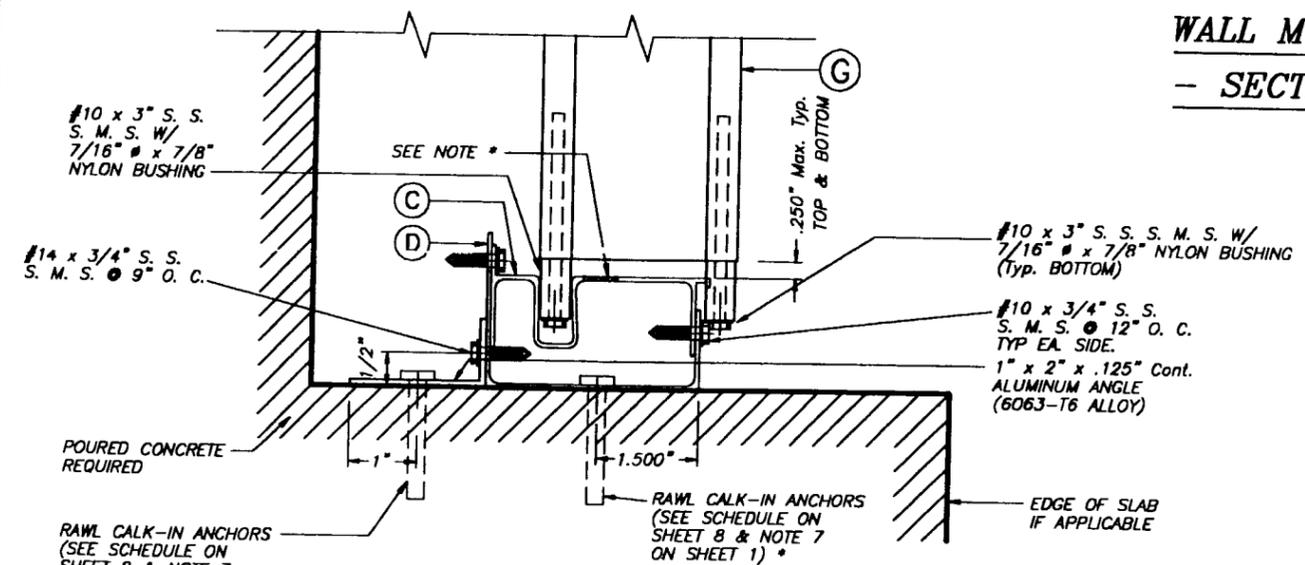
WALL MOUNTING INSTALLATION

SECTION A1 SCALE : 3/8" = 1"



CEILING & FLOOR MOUNT. INSTALLAT.

SECTION B SCALE : 3/8" = 1"



REMOVABLE FLOOR MOUNTING INSTALLATION

SECTION B1 SCALE : 3/8" = 1"

* ALTERNATIVELY TO 1" x 2" Alum. ANGLE W/ ANCHOR, DRILL HOLE AT (C) TO INSTALL RAWL CALK-IN AT (D). COVER HOLE WITH NYLON CAPS.

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 8 OF 10)

NOTE FOR COMBINATION OF SECTIONS : WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

PRODUCT RENEWED as complying with the Florida Building Code Acceptance No 02-0311.01 Expiration Date April 16, 2007 By *[Signature]* Miami Dade Product Control Division

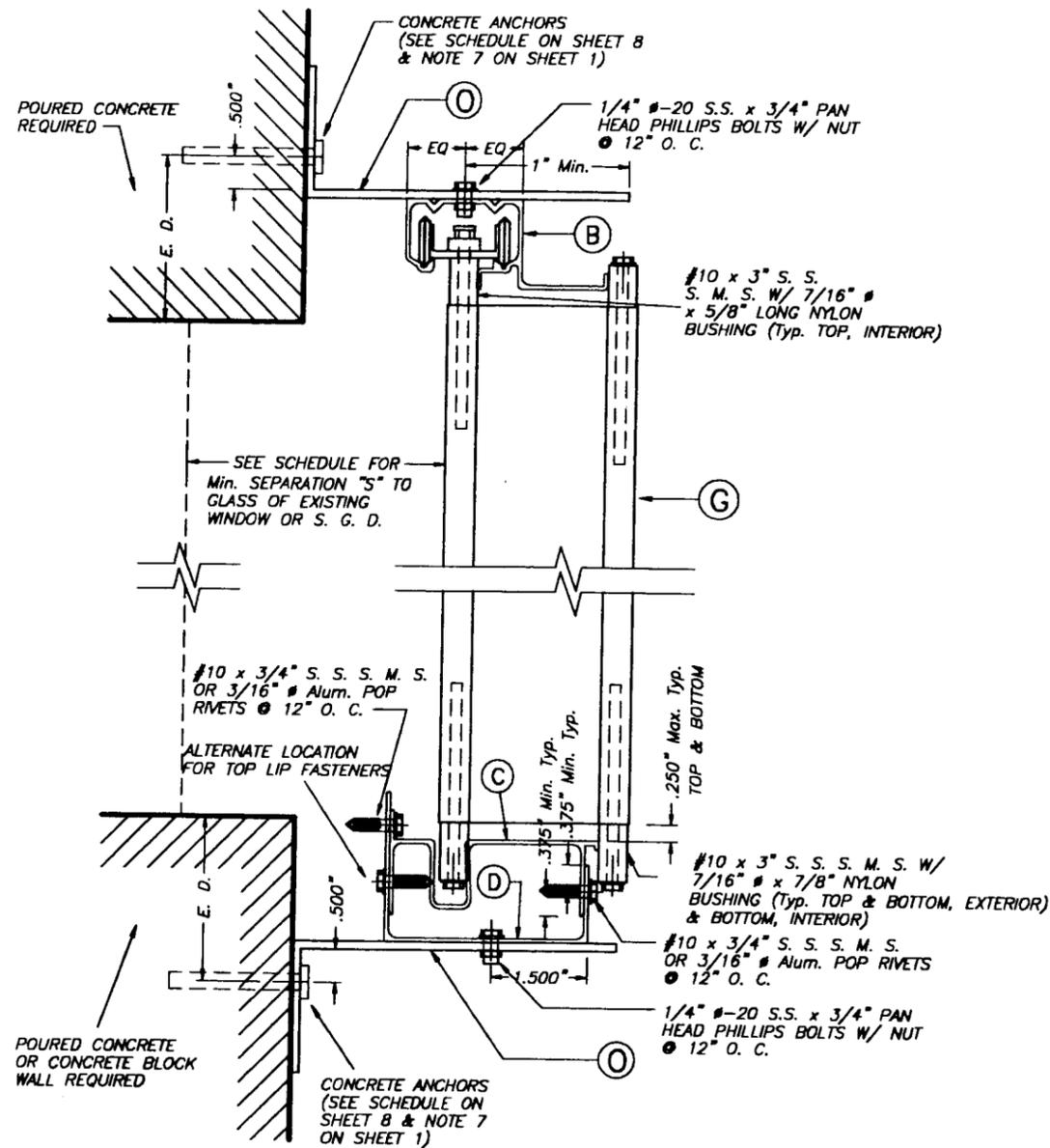
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE DATE APRIL 06 1999 BY *[Signature]* PRODUCT CONTROL DIVISION BUILDING CODE COMPLIANCE OFFICE ACCEPTANCE NO. 99-0224-03

DADE COUNTY

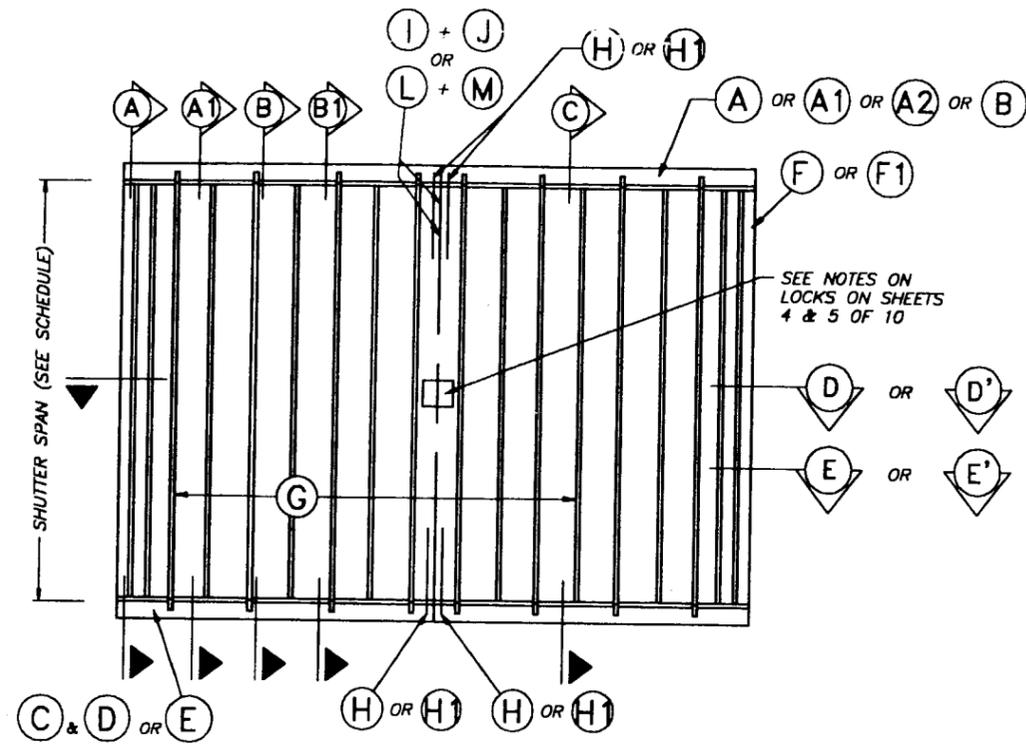
TILTECO INC.
TILLOT TESTING & ENGINEERING COMPANY
6585 N.W. 30th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166
Phone : (305)871-1530 Fax : (305)871-1531
WALTER A. TILLOT Jr., P. E.
FLORIDA Lic. # 44167

MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER			AS SHOWN SCALE		
METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HALEAH, FLORIDA 33041			2/16/99 DATE		
			99 - 56 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-
SHEET 2 OF 10					

[Handwritten Signature]
4/9/99



WALL MOUNTING INSTALLATION (BUILD-OUT)
SECTION C SCALE : 3/8" = 1'



TYPICAL ELEVATION N. T. S.

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 8 OF 10)

NOTE FOR COMBINATION OF SECTIONS :
 WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE APRIL 06 1999
 BY Helmut A. Hahn
 PRODUCT CONTROL DIVISION ON BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0224-03

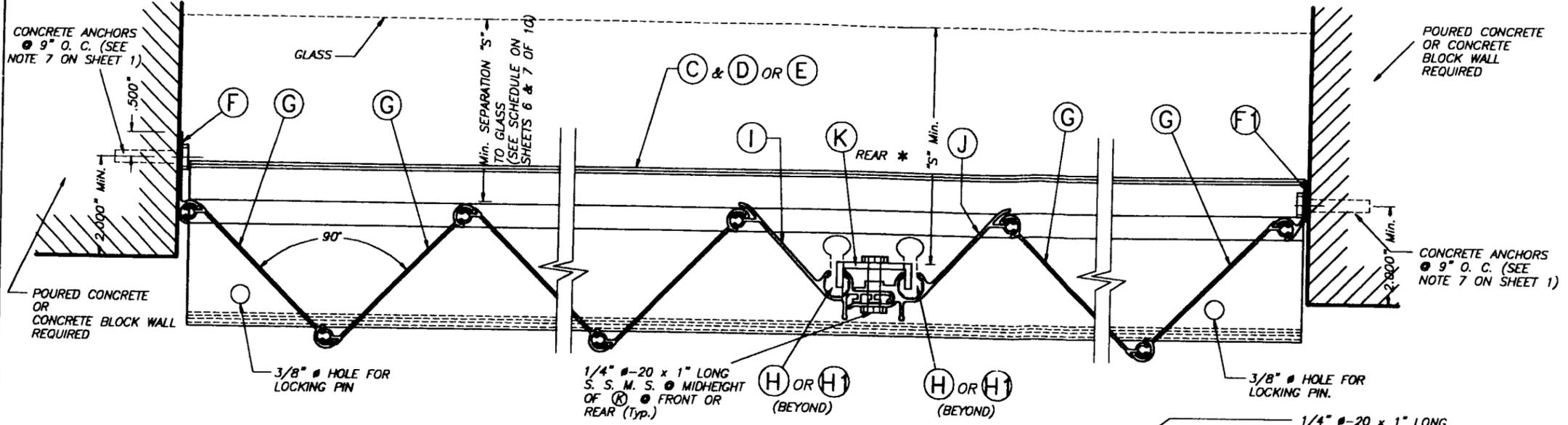
PRODUCT RENEWED as complying with the Florida Building Code
 Acceptance No. 02-0311-01
 Expiration Date April 6, 2007

By [Signature]
 Miami Dade Product Control Division

DADE COUNTY

Walter A. Tillit Jr.
 4/19/99

 TILECO INC. TILLIT TESTING & ENGINEERING COMPANY 6585 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33148 Phone : (305)871-1530 Fax : (305)871-1531 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167	MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE																		
	METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041	2/16/99 DATE																		
<table border="1"> <thead> <tr> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> <td>-</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE	1	-	-	3	-	-	2	-	-	4	-	-	99 - 56 DRAWING No	SHEET 3 OF 10
REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE															
1	-	-	3	-	-															
2	-	-	4	-	-															



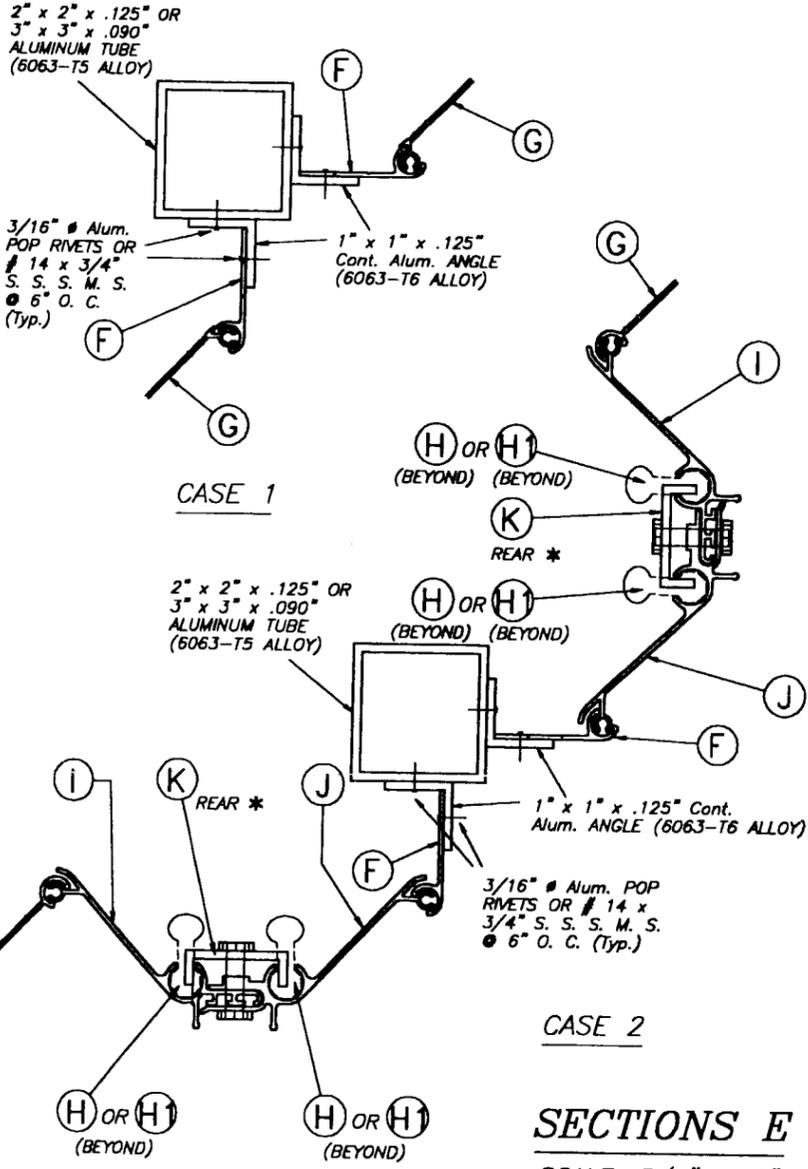
NOTES ON LOCKS: APPLICABLE TO LOCK DETAILS SHOWN ON THIS SHEET.

* CENTERMATES (I) & (J) SHALL ALWAYS BE LOCKED BY USING LOCK CLIP (K) INSTALLED FROM THE INSIDE OF SHUTTER W/ 1/4" #20 x 1" S. S. SIDEWALK BOLT AS SHOWN ON SECTIONS D & E. BOLT SHALL PENETRATE (K) LOCK CLIP, AS WELL AS (I) & (J) ENTIRELY. LOCK CLIP (K) 1/2" FLANGES SHALL FIT ENTIRELY INTO (I) & (J) LOCKING PIN GROOVES BEFORE SIDEWALK BOLT IS TIGHTENED.

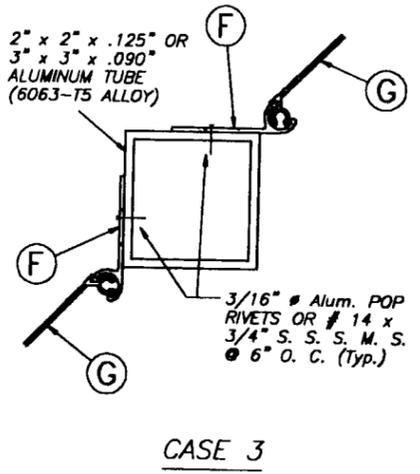
** ALTERNATIVELY TO USING (K) LOCK CLIP, CENTERMATES (I) & (J) SHALL ALWAYS BE LOCKED BY INSTALLING A 1/4" #20 x 1" S. S. SIDEWALK BOLT DIRECTLY THRU BOTH CENTERMATES. FOR THIS PURPOSE, (I) & (J) CENTERMATES SHALL BE PRE-DRILLED AT THE LOCATION AS WELL AS TAPPED THRU IN ORDER TO ACCEPT THE 1/4" #20 SIDEWALK BOLT. THIS BOLT MAY BE INSTALLED FROM EITHER THE FRONT OR REAR OF SHUTTER.

SECTION D
SCALE: 3/8" = 1"

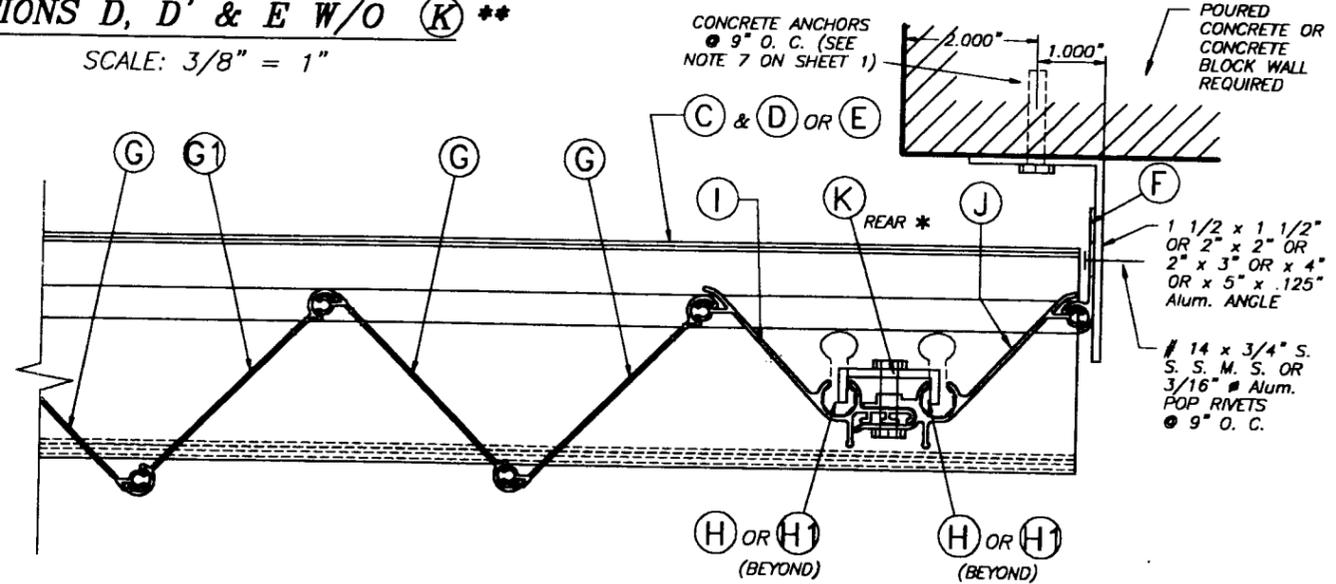
SECTIONS D, D' & E W/O (K) **
SCALE: 3/8" = 1"



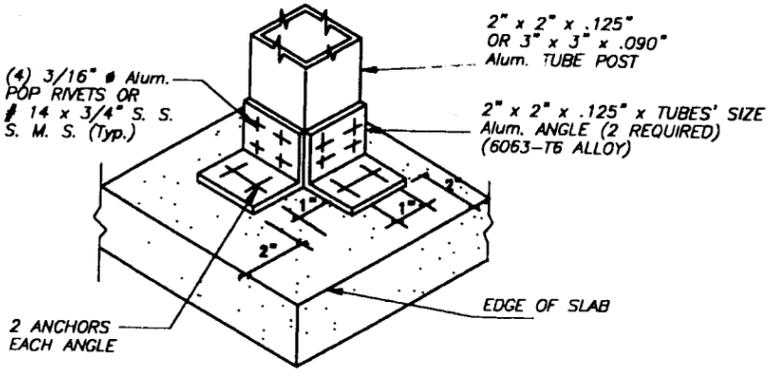
SECTIONS E
SCALE: 3/8" = 1"



CASE 3



SECTION D' : ONE SIDED SHUTTER
END CONNECTION DETAIL
SCALE: 3/8" = 1"



ISOMETRIC (CORNER POST) & BOTTOM SLABS
(Typ. AT TOP & BOTTOM SLABS)

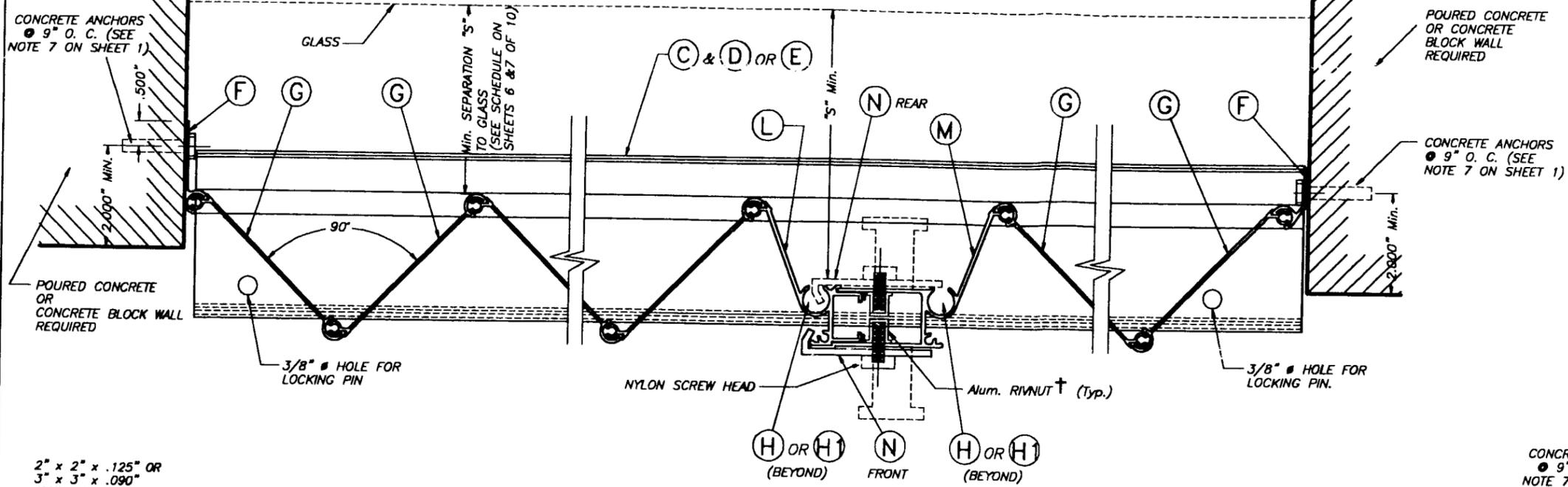
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE: APRIL 06 1999
BY: *Helmut A. Mader*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0224-03

PRODUCT RENEWED as complying with the Florida Building Code
Acceptance No. 02-0311-01
Expiration Date April 6, 2007
By: *[Signature]*
Miami Dade Product Control Division

DADE COUNTY

		MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE			
		METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041		2/16/99 DATE			
TILLIT TESTING & ENGINEERING COMPANY 6595 N.W. 38th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531		REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1					3		
2					4		
WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167							99 - 56 DRAWING No
							SHEET 4 OF 10

David L. [Signature]
4/9/99



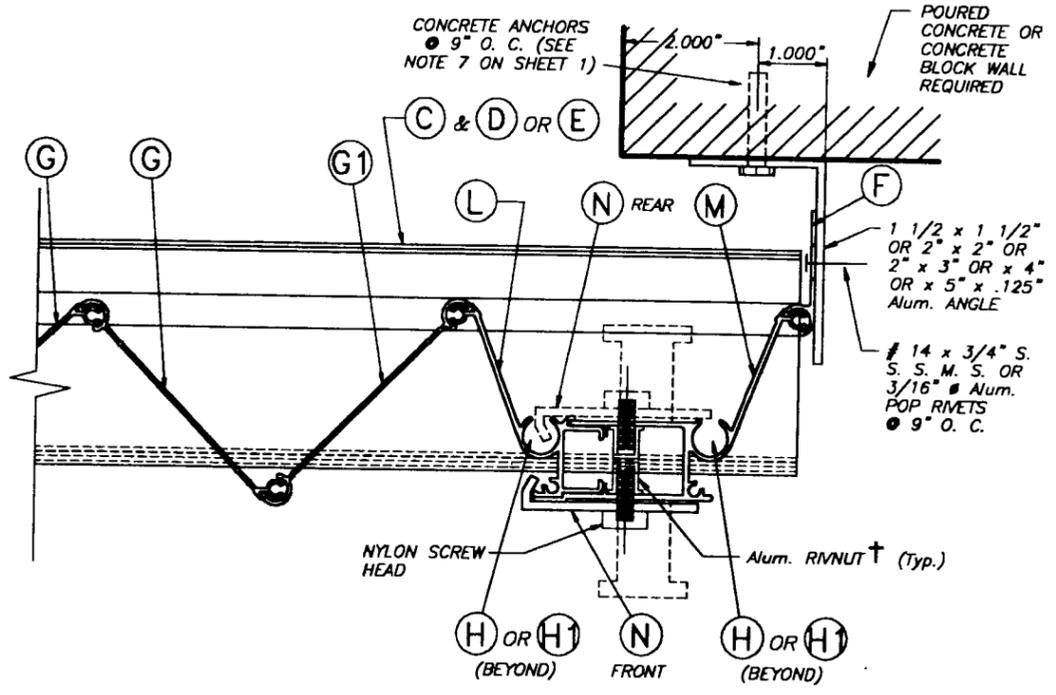
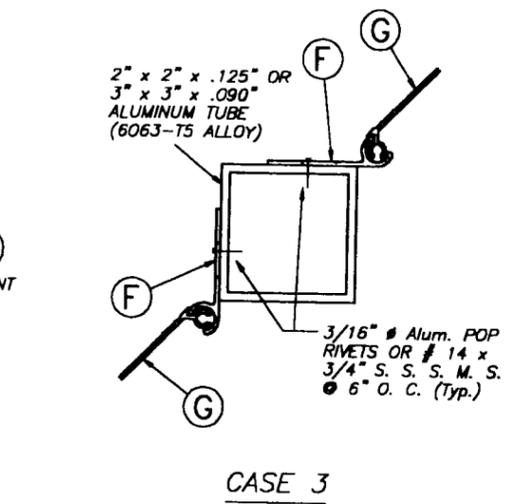
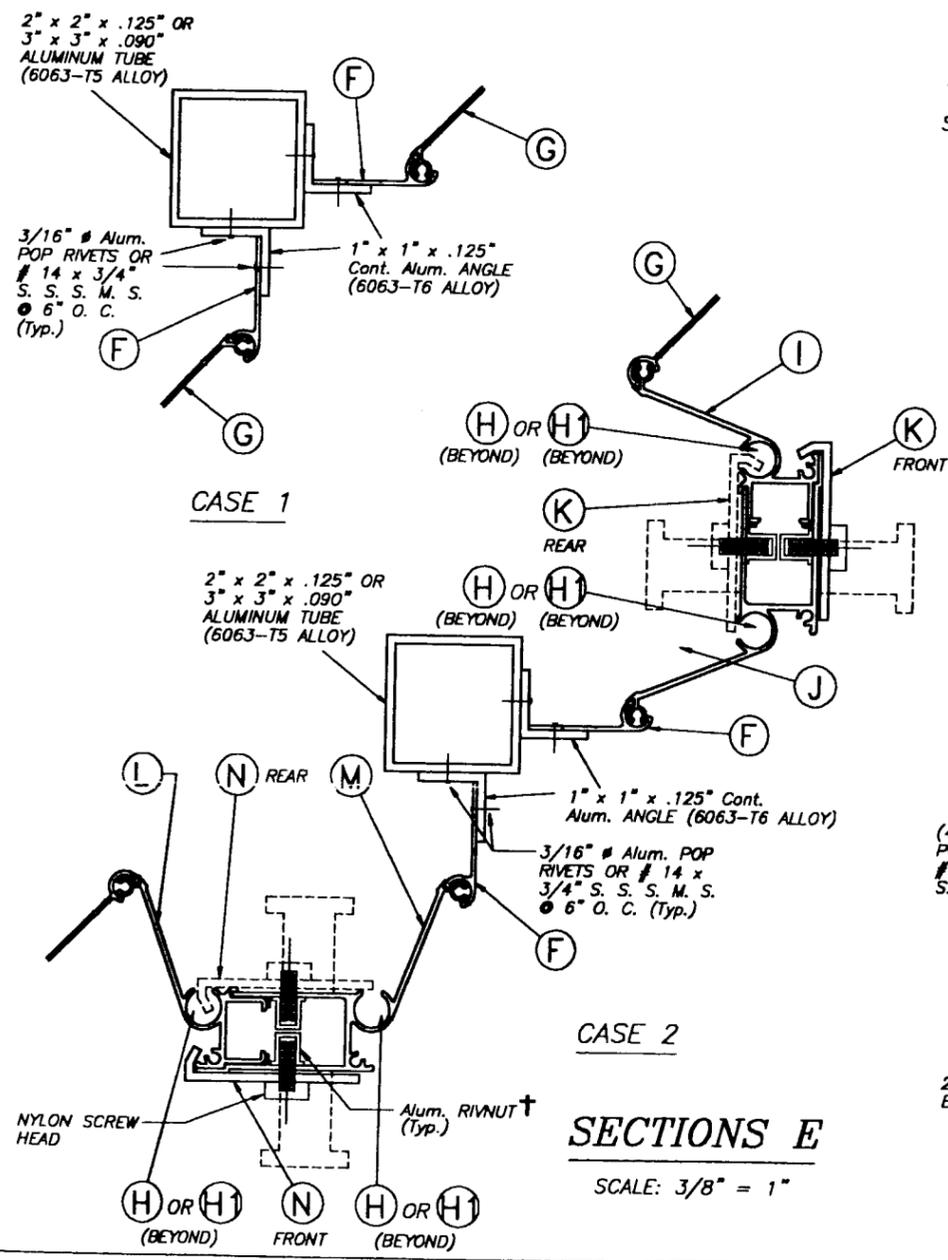
NOTES ON LOCKS: APPLICABLE TO LOCK DETAILS SHOWN ON THIS SHEET.

* LOCKER (N) SHALL ALWAYS BE USED FOR ANY SPAN AND INSTALLATIONS AT ANY ELEVATION. LOCKER (N) MAY BE USED AS AN INSIDE OR OUTSIDE LOCKER IF ATTACHED TO (C) & (D) W/ 1/4" #20 x 1" LONG S.S. THREADED BOLT W/ 1/4" #20 x 5/8" INTERNALLY THREADED ALUMINUM RIVNUT. SEE INSTALLATION DETAIL ON THIS SHEET.

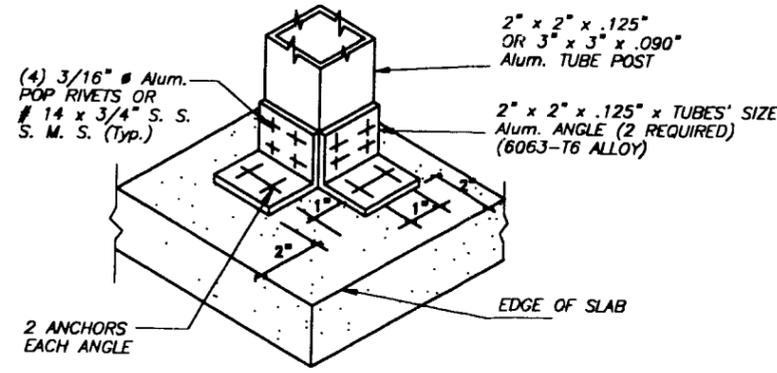
** FOR INSTALLATIONS AT ANY ELEVATION OF BUILDING AND IN ADDITION TO (N) LOCKERS, A REGULAR T LOCK MAY BE USED FOR SECURITY PURPOSES AT ANY DESIRED LOCATION OF CENTERMATE (INSIDE OR OUTSIDE). WHEN USED INSIDE, MINIMUM SEPARATION TO GLASS SHALL ALSO BE VERIFIED FROM THE TIP OF SUCH T LOCK OR FROM THE OTHER SHUTTER COMPONENTS SHOWN ON SECTION D (WHICHEVER IS MORE CRITICAL).

†: SERIES 9444 ALUMINUM (2024-T3 ALLOY) LARGE FLANGE THIN SHEET NUTSERT, PART # 0820, AS MANUFACTURED BY AYDEL CHERRY TEXTORN, PARSIPPENY, NEW JERSEY 07054 OR EQUAL.

SECTION D
SCALE: 3/8" = 1"



**ONE SIDED SHUTTER :
END CONNECTION DETAIL**
SCALE: 3/8" = 1"



**ISOMETRIC
(CORNER POST)** (Typ. AT TOP & BOTTOM SLABS)
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167
4/19/99

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE APRIL 06 1999
BY Helmut A. Mader
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0224-03

PRODUCT RENEWED as complying with the Florida Building Code
Acceptance No. 02-0311-01
Expiration Date April 6, 2007
By [Signature]
Miami Dade Product Control Division

DADE COUNTY

<p>TILLIT TESTING & ENGINEERING COMPANY 6595 N.W. 38th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531</p> <p>WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p>		<p>MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER</p> <p>METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HALEAH, FLORIDA 33041</p>	<p>AS SHOWN SCALE</p> <p>2/16/99 DATE</p> <p>99 - 56 DRAWING No</p> <p>SHEET 5 OF 10</p>		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM SPAN "L" SCHEDULE.

(VALID FOR SECTIONS A, A1 & C ON SHEETS 2 & 3 OF 10).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-88 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
40.0	12'-1"	3 7/8"	3"
42.5	11'-11"	3 7/8"	3"
45.0	11'-9"	3 7/8"	3"
47.5	11'-7"	3 7/8"	3"
50.0	11'-5"	3 7/8"	3"
52.5	11'-1"	3 7/8"	3"
55.0	10'-10"	3 7/8"	3"
57.5	10'-7"	3 7/8"	3"
60.0	10'-5"	3 7/8"	3"
62.5	10'-2"	3 7/8"	3"
65.0	10'-0"	3 7/8"	3"
67.5	9'-10"	3 7/8"	3"
70.0	9'-7"	3 7/8"	3"
72.5	9'-5"	3 7/8"	3"
75.0	9'-4"	3 7/8"	3"
77.5	9'-2"	3 7/8"	3"
80.0	9'-0"	3 7/8"	3"
82.5	8'-9"	3 7/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
85.0	8'-6"	3 7/8"	3"
87.5	8'-3"	3 7/8"	3"
90.0	8'-0"	3 3/8"	3"
92.5	7'-9"	3 3/8"	3"
95.0	7'-7"	3 3/8"	3"
97.5	7'-5"	3 3/8"	3"
100.0	7'-2"	3 3/8"	3"
102.5	7'-0"	3 3/8"	3"
105.0	6'-10"	3 3/8"	3"
107.5	6'-8"	3 3/8"	3"
110.0	6'-7"	3 3/8"	3"
112.5	6'-5"	3 3/8"	3"
115.0	6'-3"	3 3/8"	3"
117.5	6'-2"	3 3/8"	3"
120.0	6'-0"	3 3/8"	3"
122.5	5'-11"	3 3/8"	3"
125.0	5'-9"	3 3/8"	3"
127.5	5'-8"	3 3/8"	3"
130.0	5'-6"	3 3/8"	3"
132.5	5'-5"	3 3/8"	3"
135.0	5'-4"	3 3/8"	3"
137.5	5'-3"	3 3/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
140.0	5'-2"	3 3/8"	3"
142.5	5'-1"	3 3/8"	3"
145.0	5'-0"	3 3/8"	3"
147.5	4'-11"	3 3/8"	3"
150.0	4'-10"	3 3/8"	3"
152.5	4'-9"	3 3/8"	3"
155.0	4'-8"	3 3/8"	3"
157.5	4'-7"	3 3/8"	3"
160.0	4'-6"	3 3/8"	3"
162.5	4'-5"	3 3/8"	3"
165.0	4'-4"	3 3/8"	3"
167.5	4'-4"	3 3/8"	3"
170.0	4'-3"	3 3/8"	3"
172.5	4'-2"	3 3/8"	3"
175.0	4'-1"	3 3/8"	3"
177.5	4'-1"	3 3/8"	3"
180.0	4'-0"	3 3/8"	3"

TABLE 1:

MINIMUM SEPARATION "S" BETWEEN GLASS AND SHUTTER FOR A GIVEN SHUTTER SPAN "L" FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ABOVE GRADE OF A GIVEN BUILDING. 30'-0" ELEVATION SHALL BE MEASURED AT BOTTOM OF SHUTTER SEPARATION "S" TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 10.

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S"
LEES OR EQUAL THAN 8'-0"	3 3/8"
>8'-0" TO 12'-0"	3 7/8"

* FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING. SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.
 ** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No 02-0311-01
 Expiration Date April 5, 2007
 By *[Signature]*
 Miami Dade Product Control Division

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE APR 26 1999
 BY *[Signature]*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0224-03

DADE COUNTY

[Signature]
 4/19/99

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6585 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167	MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE																	
	METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041	2/16/99 DATE																	
<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> <td>-</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	-	-	3	-	-	2	-	-	4	-	-	99 - 56 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE														
1	-	-	3	-	-														
2	-	-	4	-	-														
		SHEET 6 OF 10																	

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM SPAN "L" SCHEDULE.

(VALID FOR SECTION B & B1 ON SHEET 2 OF 10).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-88 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
40.0	12'-0"	3 7/8"	3"
42.5	11'-11"	3 7/8"	3"
45.0	11'-9"	3 7/8"	3"
47.5	11'-7"	3 7/8"	3"
50.0	11'-5"	3 7/8"	3"
52.5	11'-3"	3 7/8"	3"
55.0	11'-1"	3 7/8"	3"
57.5	10'-10"	3 7/8"	3"
60.0	10'-7"	3 7/8"	3"
62.5	10'-4"	3 7/8"	3"
65.0	10'-2"	3 7/8"	3"
67.5	10'-0"	3 7/8"	3"
70.0	9'-10"	3 7/8"	3"
72.5	9'-8"	3 7/8"	3"
75.0	9'-6"	3 7/8"	3"
77.5	9'-4"	3 7/8"	3"
80.0	9'-2"	3 7/8"	3"
82.5	9'-0"	3 7/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
85.0	8'-11"	3 7/8"	3"
87.5	8'-9"	3 7/8"	3"
90.0	8'-5"	3 7/8"	3"
92.5	8'-3"	3 7/8"	3"
95.0	8'-1"	3 7/8"	3"
97.5	7'-10"	3 3/8"	3"
100.0	7'-8"	3 3/8"	3"
102.5	7'-6"	3 3/8"	3"
105.0	7'-3"	3 3/8"	3"
107.5	7'-1"	3 3/8"	3"
110.0	6'-11"	3 3/8"	3"
112.5	6'-10"	3 3/8"	3"
115.0	6'-8"	3 3/8"	3"
117.5	6'-6"	3 3/8"	3"
120.0	6'-5"	3 3/8"	3"
122.5	6'-3"	3 3/8"	3"
125.0	6'-1"	3 3/8"	3"
127.5	6'-0"	3 3/8"	3"
130.0	5'-11"	3 3/8"	3"
132.5	5'-9"	3 3/8"	3"
135.0	5'-8"	3 3/8"	3"
137.5	5'-7"	3 3/8"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" TO GLASS (in.)	
		*	**
140.0	5'-6"	3 3/8"	3"
142.5	5'-4"	3 3/8"	3"
145.0	5'-3"	3 3/8"	3"
147.5	5'-2"	3 3/8"	3"
150.0	5'-1"	3 3/8"	3"
152.5	5'-0"	3 3/8"	3"
155.0	4'-11"	3 3/8"	3"
157.5	4'-10"	3 3/8"	3"
160.0	4'-9"	3 3/8"	3"
162.5	4'-8"	3 3/8"	3"
165.0	4'-8"	3 3/8"	3"
167.5	4'-7"	3 3/8"	3"
170.0	4'-6"	3 3/8"	3"
172.5	4'-5"	3 3/8"	3"
175.0	4'-4"	3 3/8"	3"
177.5	4'-4"	3 3/8"	3"
180.0	4'-3"	3 3/8"	3"

TABLE 1:

MINIMUM SEPARATION "S" BETWEEN GLASS AND SHUTTER FOR A GIVEN SHUTTER SPAN "L" FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ABOVE GRADE OF A GIVEN BUILDING. 30'-0" ELEVATION SHALL BE MEASURED AT BOTTOM OF SHUTTER SEPARATION "S" TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 10.

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S"
LEES OR EQUAL THAN 8'-0"	3 3/8"
>8'-0" TO 12'-0"	3 7/8"

* FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING. SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.
 ** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 02-0311-01
 Expiration Date April 6, 2007

By: *[Signature]*
 Miami Dade Product Control Division

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE April 06 1999
 BY Helmut A. Mader
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0224-03

DADE COUNTY

Walter A. Tillit Jr.
 4/19/99

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 8595 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167	MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE
	METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041	2/16/99 DATE
99 - 56 DRAWING No		SHEET 7 OF 10

**MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND
CORRESPONDING MAXIMUM ANCHOR SPACING (In.) SCHEDULE. +**

MAXIMUM DESIGN LOAD "W" (p.s.f.)	SECTIONS A, A1, C			SECTIONS A, A1, C			SECTIONS B, & B1		
	WALL MOUNTING INSTALLATION AT TOP OR BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT TOP OR BOTTOM (TO MASONRY & CONCRETE)			CEILING & FLOOR MOUNTING INSTALLATION AT TOP OR BOTTOM (TO CONCRETE)		
	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3
FROM 40.0 TO 62.5	12"	11"	9"	12"	8"	6 1/2"	12"	7"	5 1/2"
	12"	12"	12"	9 1/2"	5 1/2"	4 1/2"	12"	11"	9"
FROM 62.6 TO 75.0	12"	9"	8"	11 1/2"	6 1/2"	6"	10"	6"	5"
	12"	12"	11 1/2"	8"	4 1/2"	4"	12"	9"	8"
FROM 75.1 TO 92.5	12"	7"	7"	9"	5 1/2"	5 1/2"	8"	5"	-
	12"	10"	10"	6 1/2"	4"	4"	12"	7 1/2"	7 1/2"
FROM 92.6 TO 120.0	9 1/2"	7"	-	7"	5 1/2"	-	6"	5"	-
	12"	10"	-	5"	4"	-	9 1/2"	7 1/2"	-
FROM 120.1 TO 180.0	7"	7"	-	5 1/2"	5 1/2"	-	5"	5"	-
	10"	10"	-	4"	4"	-	7 1/2"	7 1/2"	-

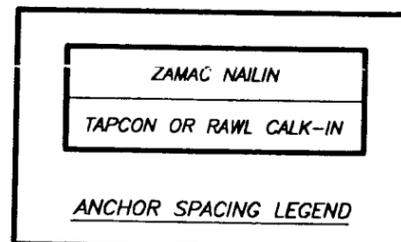
ANCHOR SPACING LEGEND

- (1) Max. ANCHOR SPCG. VALID FOR SPANS OF 5'-0" OR LESS.
- (2) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 5'-0" TO 8'-6".
- (3) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 8'-6" TO Max. ALLOWED.

NOTES ON ANCHOR SPACING SCHEDULE

+ SEE SHEETS 9 & 10 OF 10 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS. MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (Min. E. D. FOR RAWL CALK-IN IS 2 1/2").

ACTUAL E. D.= EDGE DISTANCE	FACTOR	
	TAPCON / ZAMAC NAILIN	RAWL CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50	-



PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 02-0311.01
Expiration Date July 16, 2007
By [Signature]
Miami Dade Product Control Division

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE April 06, 1999
BY [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0224-03

DADE COUNTY

[Signature]
4/19/99

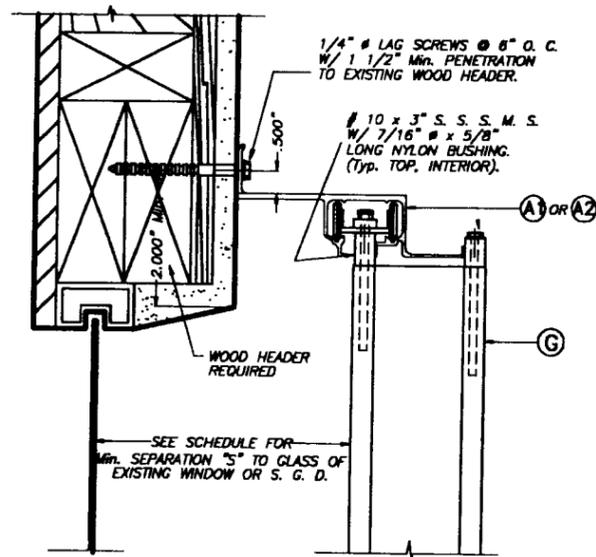
 TILECO INC. <small>TILLIT TESTING & ENGINEERING COMPANY 6585 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33168 Phone: (305)871-1530 Fax: (305)871-1531</small> WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167	MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER <small>ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER</small>				AS SHOWN SCALE
	METAL TECH, INC. <small>(ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041</small>				2/16/99 DATE
	99 - 56 DRAWING No				SHEET 8 OF 10
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

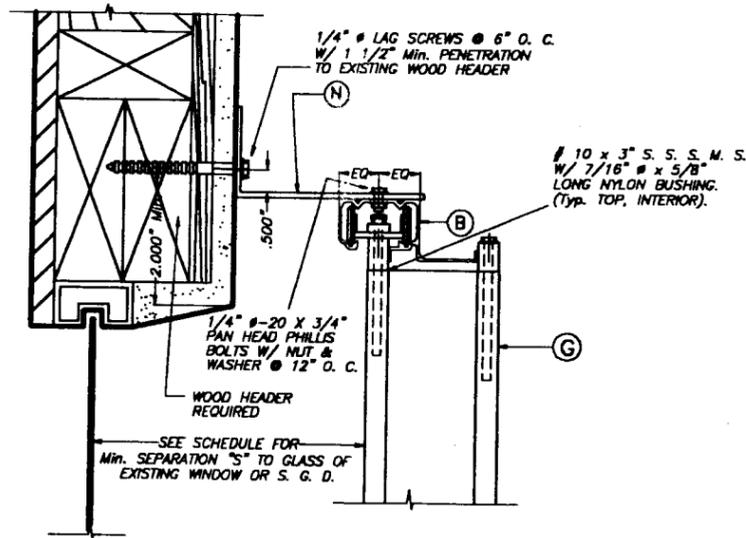
NOTES :

- INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN 75 p.s.f. AND 9'-0" Max. SHUTTER SPAN.
- FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

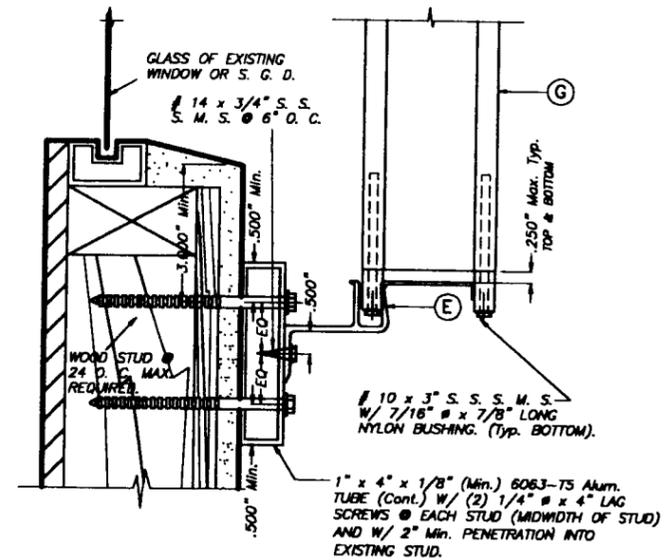
NOTE FOR COMBINATION OF SECTIONS :
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



ALTERNATIVE 1



ALTERNATIVE 2



ALTERNATIVE 3

WALL MOUNTING INSTALLATION - SECTIONS A

SCALE: 1/4" = 1"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 02-0311-01
Expiration Date: Apr 16, 2007
By: [Signature]
Miami Dade Product Control
Division

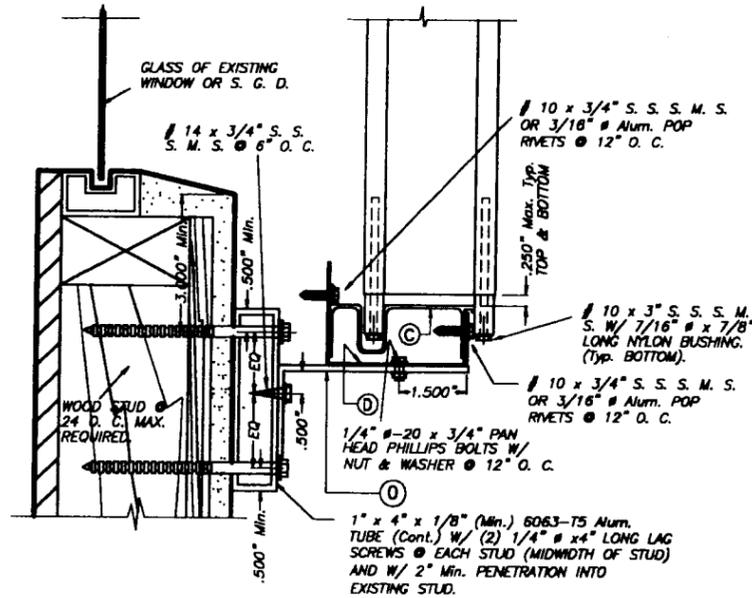
APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE: APRIL 06 1999
BY: [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0224-03

DADE COUNTY

[Signature]
4/1/99

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY <small>6595 N.W. 38th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531</small> WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167	MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE
	METAL TECH, INC. (ASSA #26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041	2/16/99 DATE
		99 - 56 DRAWING No
		SHEET 9 OF 10

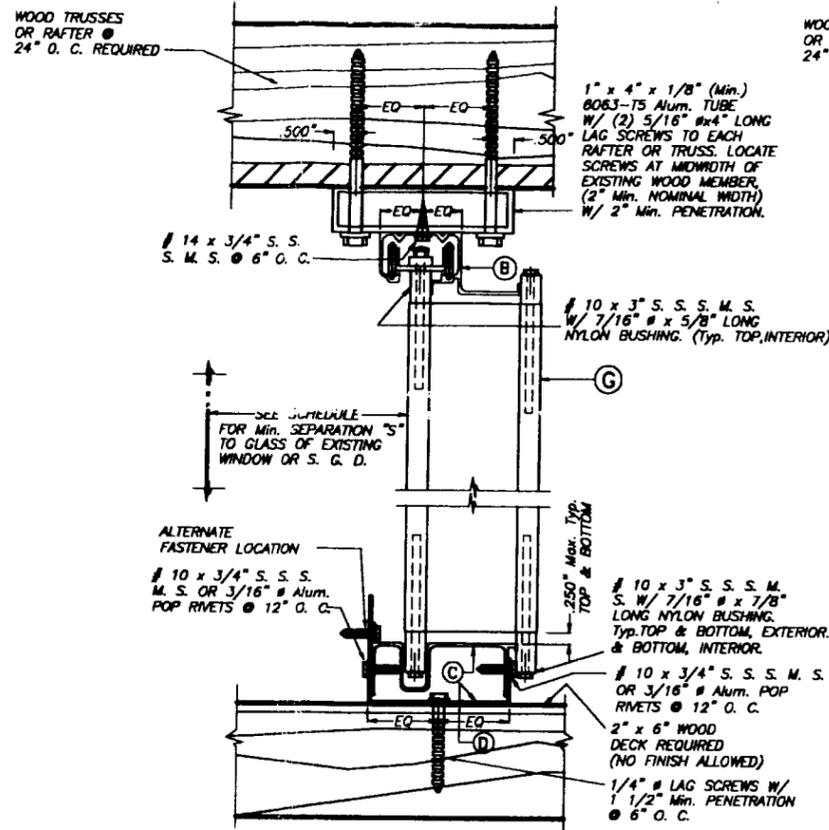
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



ALTERNATIVE 4

WALL MOUNTING INSTALLATION - SECTION A

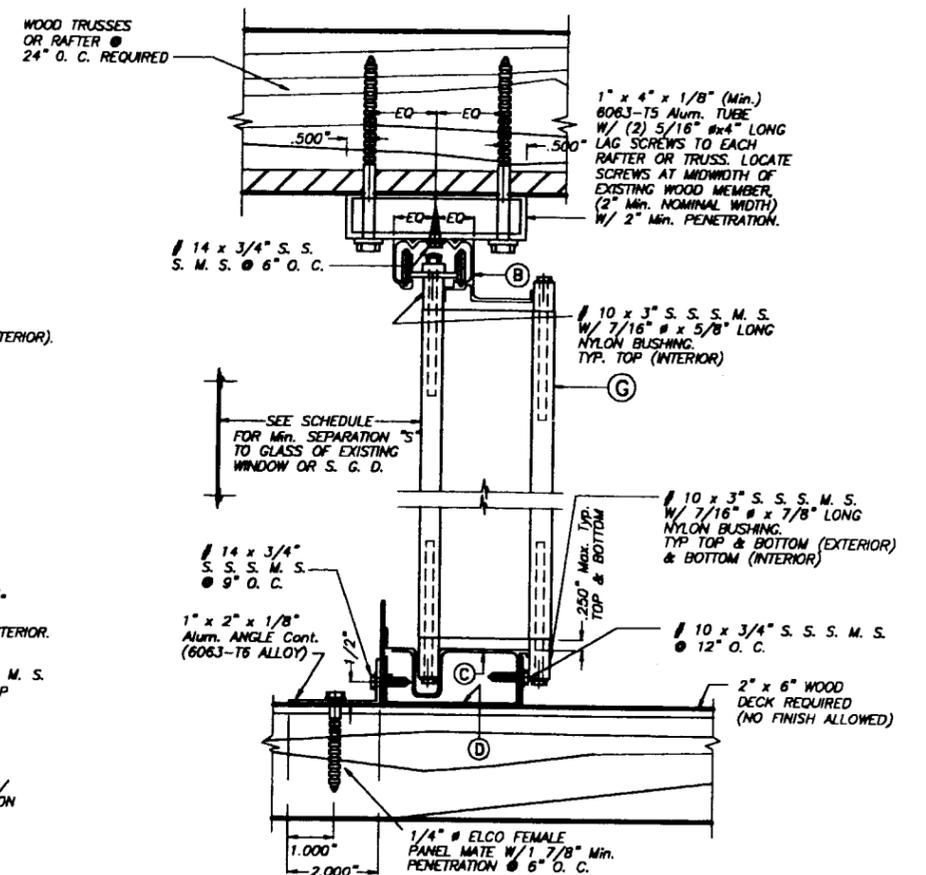
SCALE: 1/4" = 1"



CEILING & FLOOR MOUNTING INSTALLATION

- SECTION B

SCALE: 1/4" = 1"



CEILING & FLOOR MOUNTING INSTALLATION

- SECTION B1

SCALE: 1/4" = 1"

NOTE :

WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

NOTES :

- INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN 75 p.s.f. AND 9'-0" Max. SHUTTER SPAN.
- FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 02-0311.01
 Expiration Date 4/26/2007
 By *[Signature]*
 Miami Dade Product Control Division

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE APRIL 06 1999
 BY *[Signature]*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0224-03

[Signature]
 2/19/99

TILECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6595 N.W. 38th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33166
 Phone: (305)871-1530 Fax: (305)871-1531
 WALTER A. TILLIT Jr., P. E.
 FLORIDA Lic. # 44167

MAXIMUM IMPACT ECONOLINE ACCORDION SHUTTER ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER					AS SHOWN SCALE
METAL TECH, INC. (ASSA # 26) 7635 WEST 2nd COURT HIALEAH, FLORIDA 33041					2/16/99 DATE
					99 - 56 DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-

DADE COUNTY