



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

Custom Storm Shutters Inc
215 SE 8th Avenue
Boyton Beach ,FL 33435

Your application for Notice of Acceptance (NOA) of:

ASSA/Residential Bertha Accordion 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 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.

ACCEPTANCE NO.: 01-1220.01

EXPIRES: 04/13/2007

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 Miami-Dade County, Florida under the conditions set forth above.

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

APPROVED: 01/31/2002

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

1.1 This **renews** Notice of Acceptance (NOA) No. **99-0302.05**, which was issued on April 13, 1999. It renews the approval of an Aluminum Extruded Residential Bertha Accordion Shutter, as described in Section 2 of this NOA, designed to comply with the South Florida Building Code (SFBC), 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

2.1 The **Aluminum Extruded Residential Bertha Accordion Shutter** and its components shall be constructed in strict compliance with the following document: Drawing No **99-60**, Sheets 1 through 10 of 10, titled "ASSA / Residential Bertha Accordion Shutter," prepared by Tilteco Inc., dated 2/19/99, bearing the Miami-Dade County Product Control renewal stamp with the NOA number and expiration date by the Miami-Dade County Product Control Division. This document shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

3.1 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

4.1 This Aluminum Extruded Residential Bertha Accordion Shutter and its components shall be installed in strict compliance with the approved drawings.

5. LABELING

5.1 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".

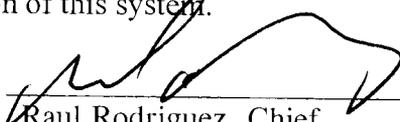
6. BUILDING PERMIT REQUIREMENTS

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.



Raul Rodriguez, Chief
Product Control Division

Custom Storm Shutters, Inc.

ACCEPTANCE No.: 01-1220.01

APPROVED: January 31, 2002

EXPIRES: April 13, 2007

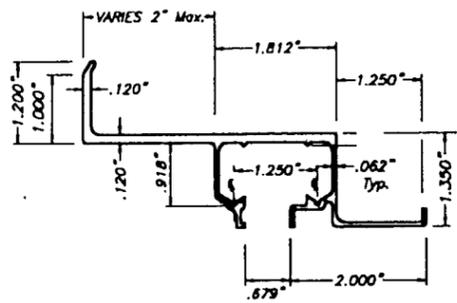
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, 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 purpose.
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 need 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.

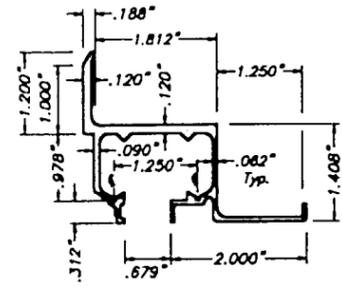
END OF THIS ACCEPTANCE



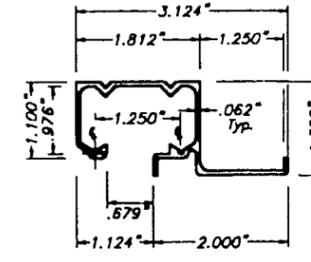
Raul Rodriguez, Chief
Product Control Division



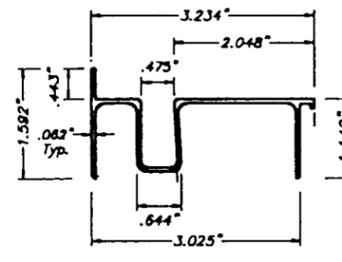
(A1) WALL HEADERS
(A1) WALL HEADERS (INVERTED USE)
 SCALE: 3/8" = 1"



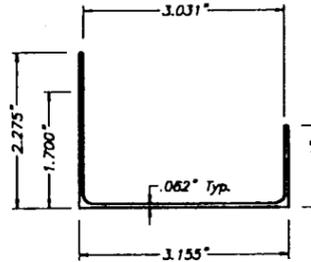
(A2) WALL HEADER
(A2) WALL HEADER (INVERTED USE)
 SCALE: 3/8" = 1"



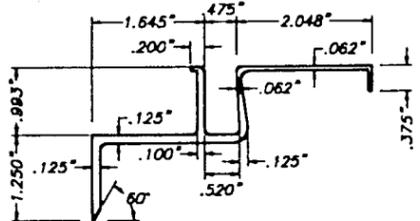
(B) CEILING HEADER
 SCALE: 3/8" = 1"



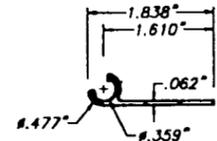
(C) SILL
 SCALE: 3/8" = 1"



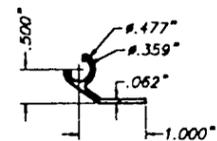
(D) SILL ADAPTER
 SCALE: 3/8" = 1"



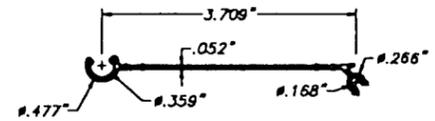
(E) BOTTOM BUILT-OUT
 SCALE: 3/8" = 1"



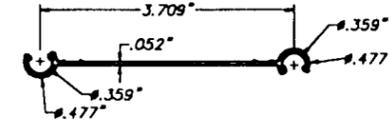
(F) FEMALE END SLAT
 SCALE: 3/8" = 1"



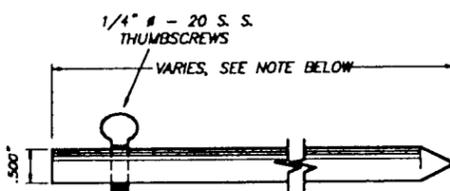
(F1) STARTER STRIP
 SCALE: 3/8" = 1"



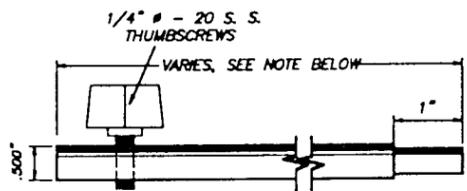
(G) RESIDENTIAL BLADE
 SCALE: 3/8" = 1"



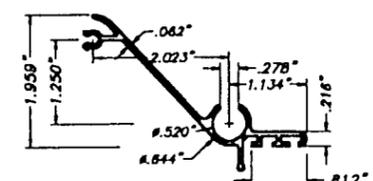
(G1) FEMALE RESIDENTIAL BLADE
 SCALE: 3/8" = 1"



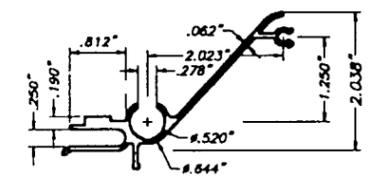
(H) LOCKING PIN
 SCALE: 3/8" = 1"



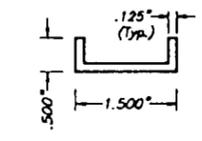
(H1) ALTERNATE LOCKING PIN
 SCALE: 3/8" = 1"



(I) MALE LOCK SLAT
 SCALE: 3/8" = 1"

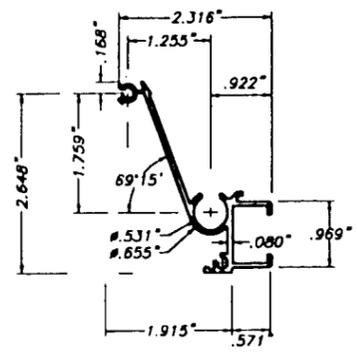


(J) FEMALE LOCK SLAT
 SCALE: 3/8" = 1"

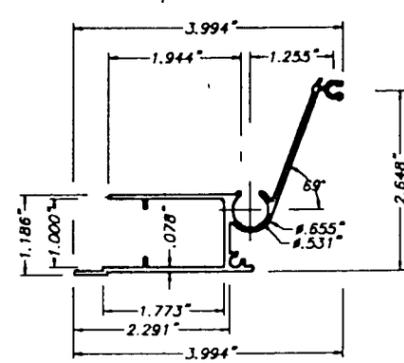


(K) LOCK CLIP
 4" LONG
 SCALE: 3/8" = 1"

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

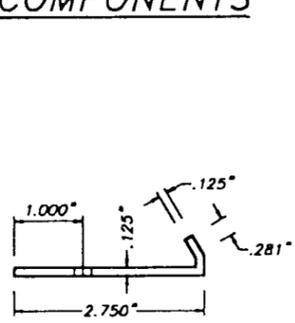


(L) MALE LOCK SLAT
 SCALE: 3/8" = 1"

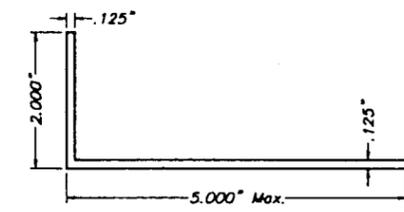
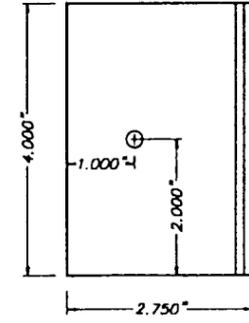


(M) FEMALE LOCK SLAT
 SCALE: 3/8" = 1"

COMPONENTS



(N) LOCKER
 SCALE: 3/8" = 1"



(O) ALUMINUM ANGLE
 SCALE: 3/8" = 1"

PRODUCT RENEWED

ACCEPTANCE No. 01-1220-01
 EXPIRATION DATE April 13, 2007
 By: [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE: April 13, 1999
 BY: [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0302-05

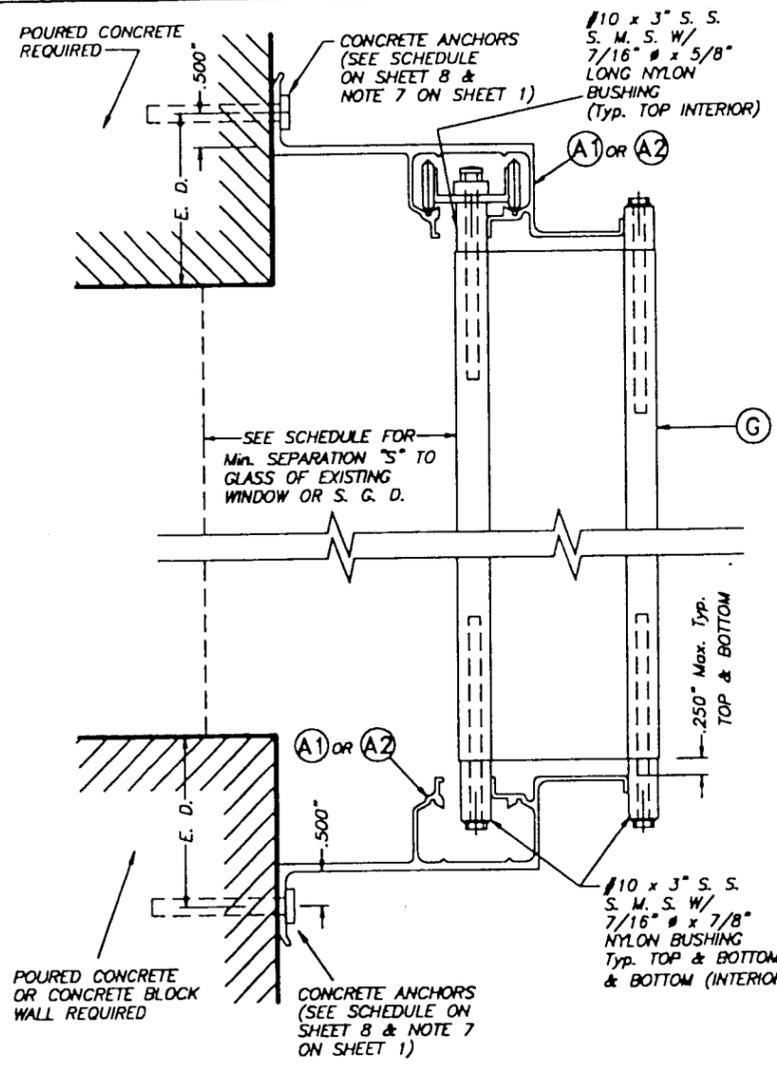
DADE COUNTY

TILECO inc.
 TILLIT TESTING & ENGINEERING COMPANY
 8585 N.W. 39th St., Ste. 212, WILMOTA GARDENS, FLORIDA 33168
 Phone: (305)871-1530 Fax: (305)871-1531
 WALTER A. TILLIT Jr., P. E.
 FLORIDA Lic. # 44167

ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE
CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435		2/19/99 DATE
REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE		99 - 60 DRAWING No
1		
2		
		SHEET 1 OF 10

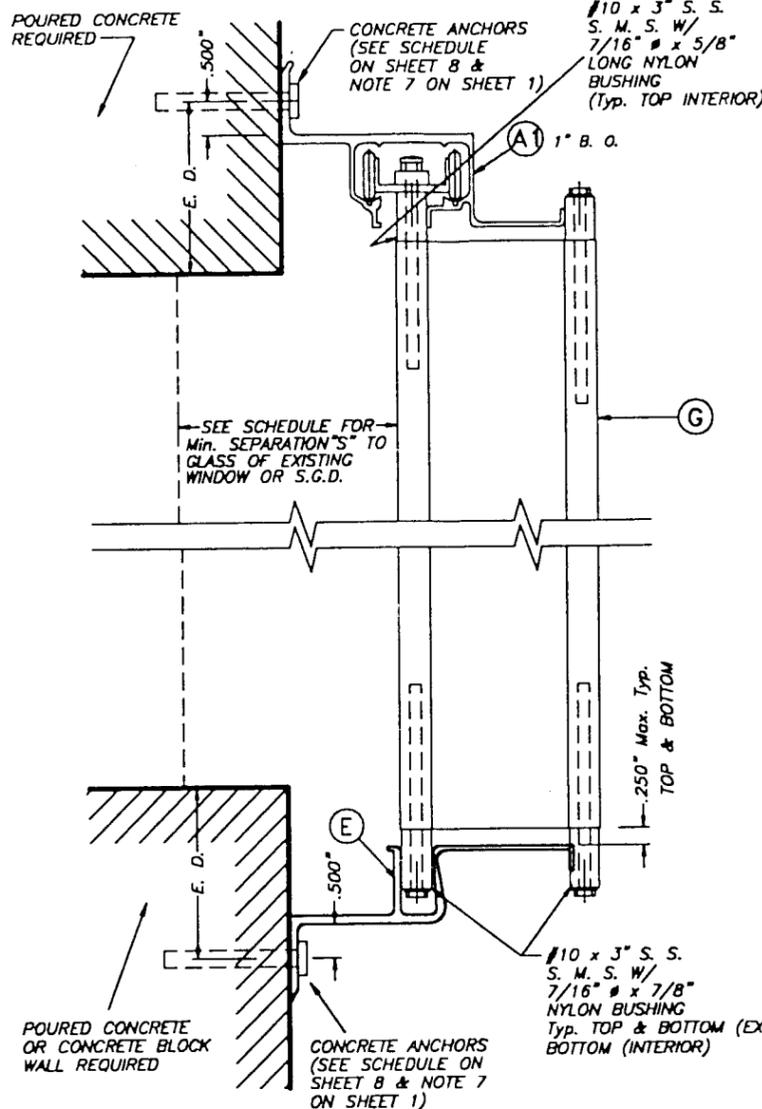
99-0302-05

Handwritten signature and date: 4/23/99



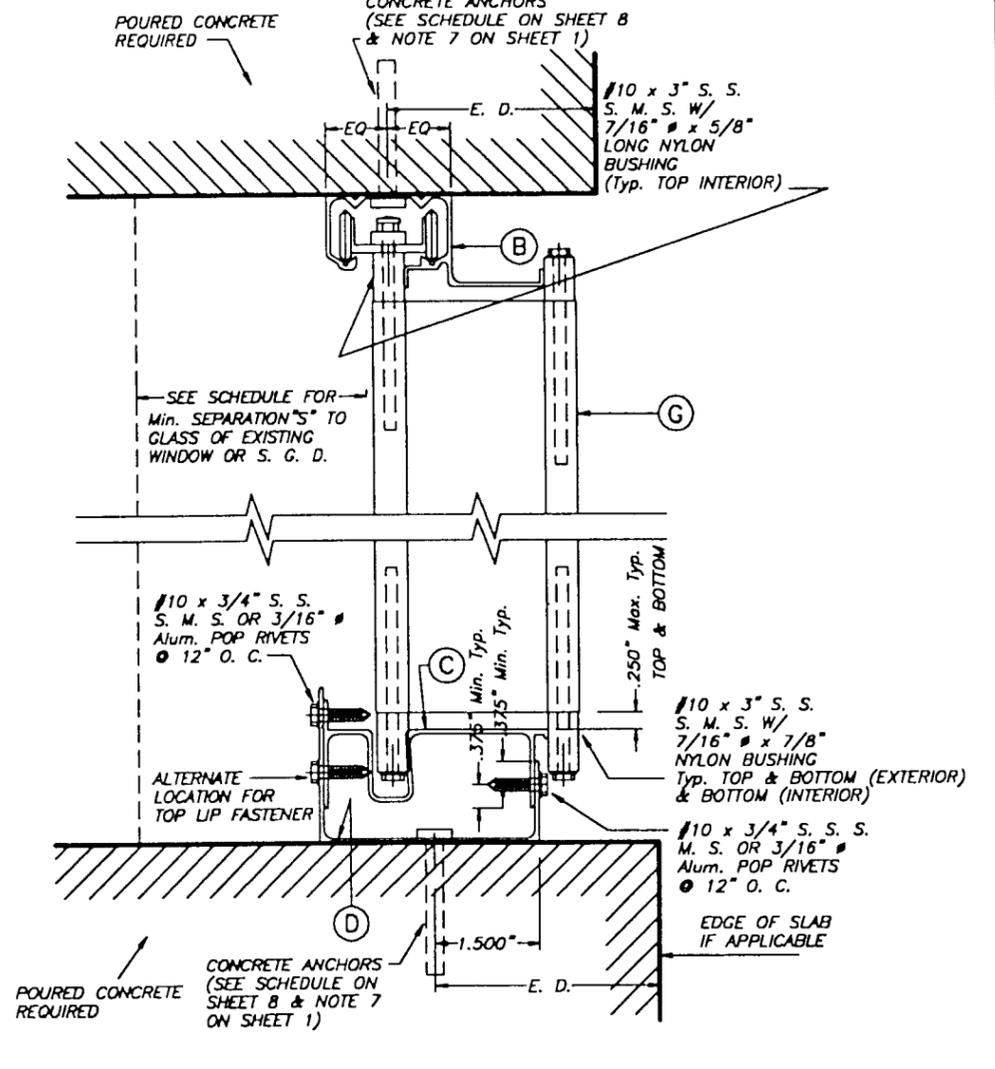
WALL MOUNTING INSTALLATION

SECTION A SCALE: 3/8" = 1"



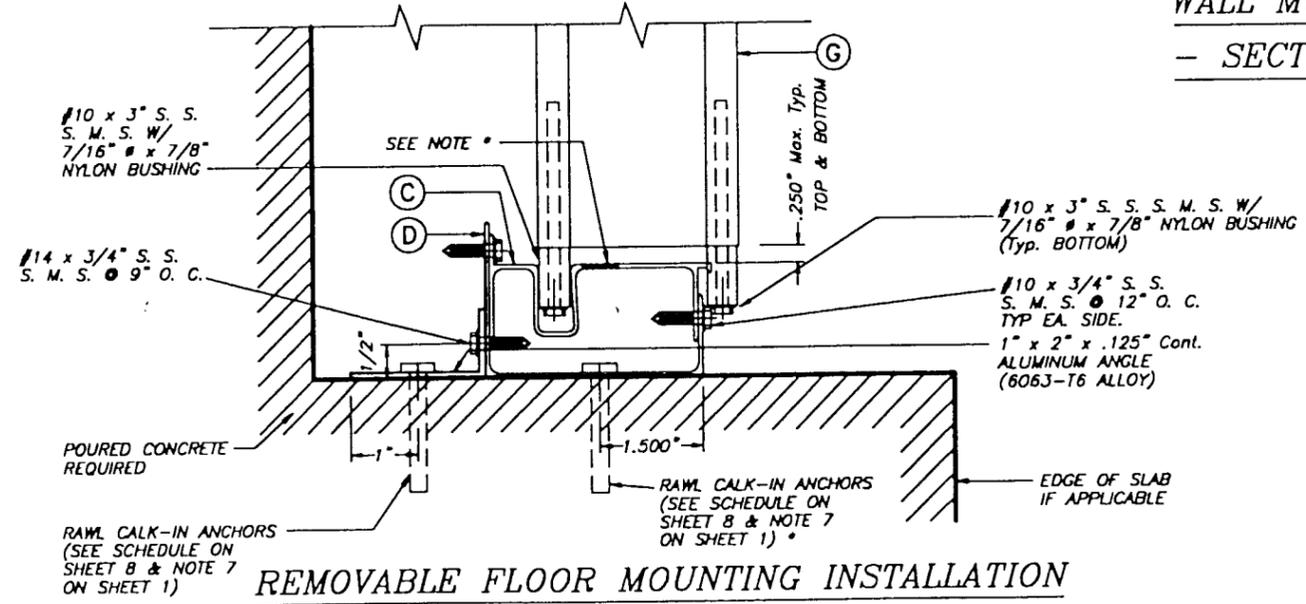
WALL MOUNTING INSTALLATION

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

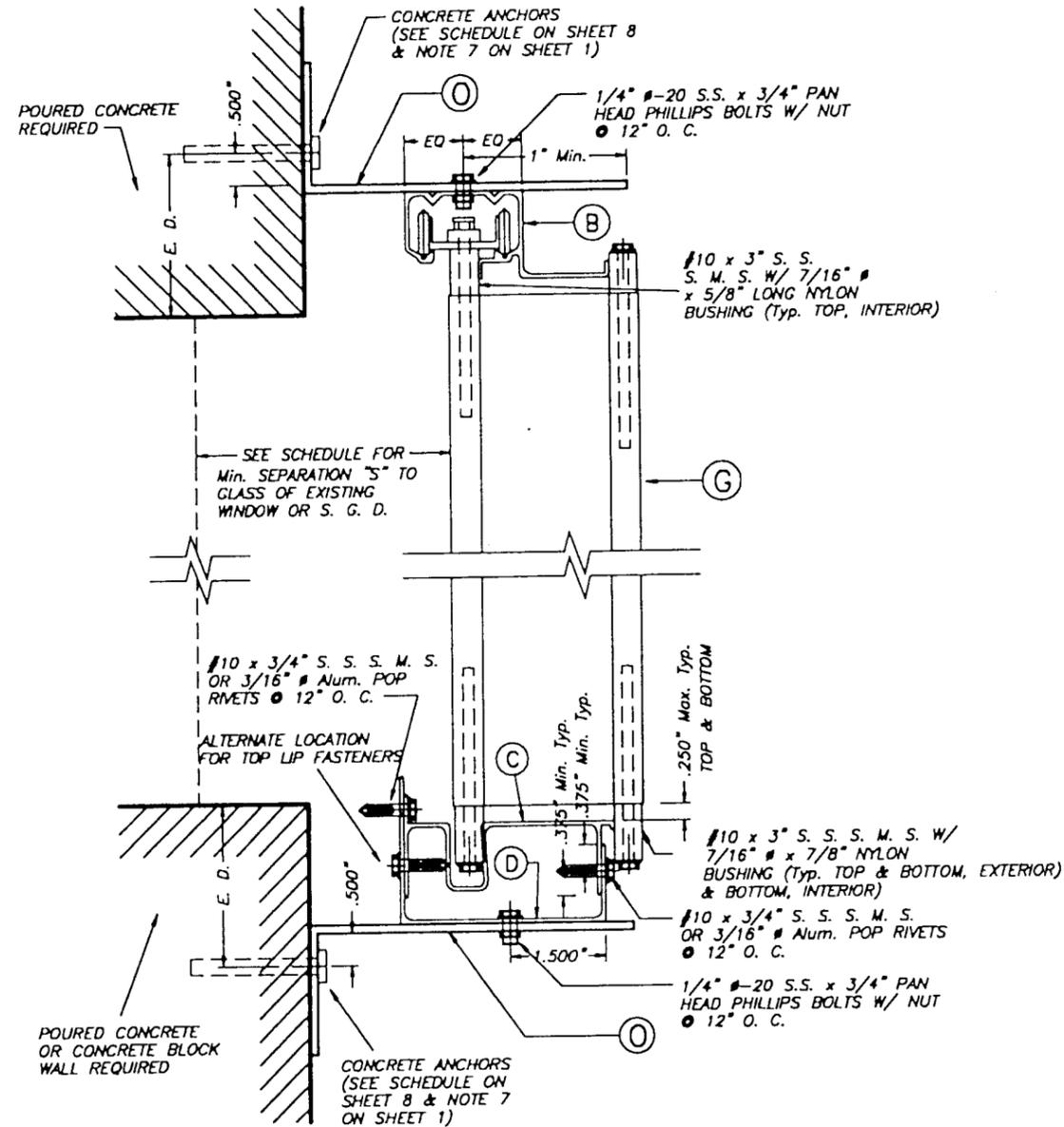
ACCEPTANCE No. 021220.01
EXPIRATION DATE April 13, 2007
By [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE APRIL 13 1999
BY [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302.05

DADE COUNTY

 TILECO INC. TILLIT TESTING & ENGINEERING COMPANY 6545 N.W. 38th St., Ste. 217, VEROBEACH GARDENS, FLORIDA 33164 Phone: (305)871-1530 Fax: (305)871-1531 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE		
		CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435	2/19/99 DATE		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-
					99 - 60 DRAWING No
					SHEET 2 OF 10

David [Signature]
4/23/99

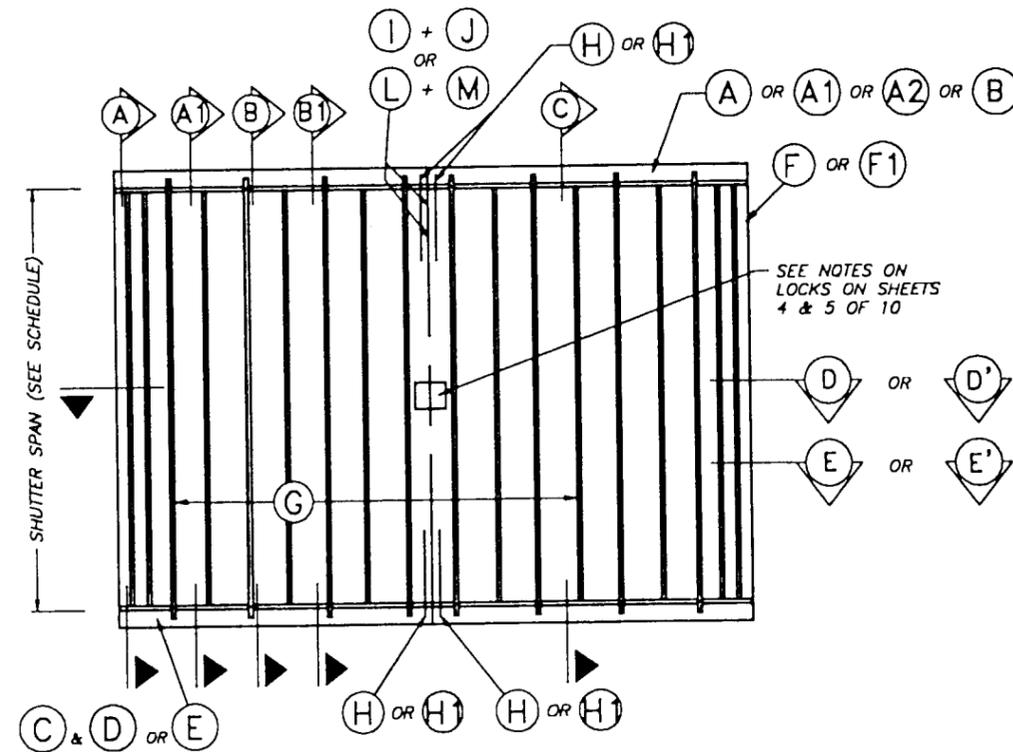


WALL MOUNTING INSTALLATION (BUILD-OUT)

- SECTION C

SCALE: 3/8" = 1'

Handwritten signature
4/23/99



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.

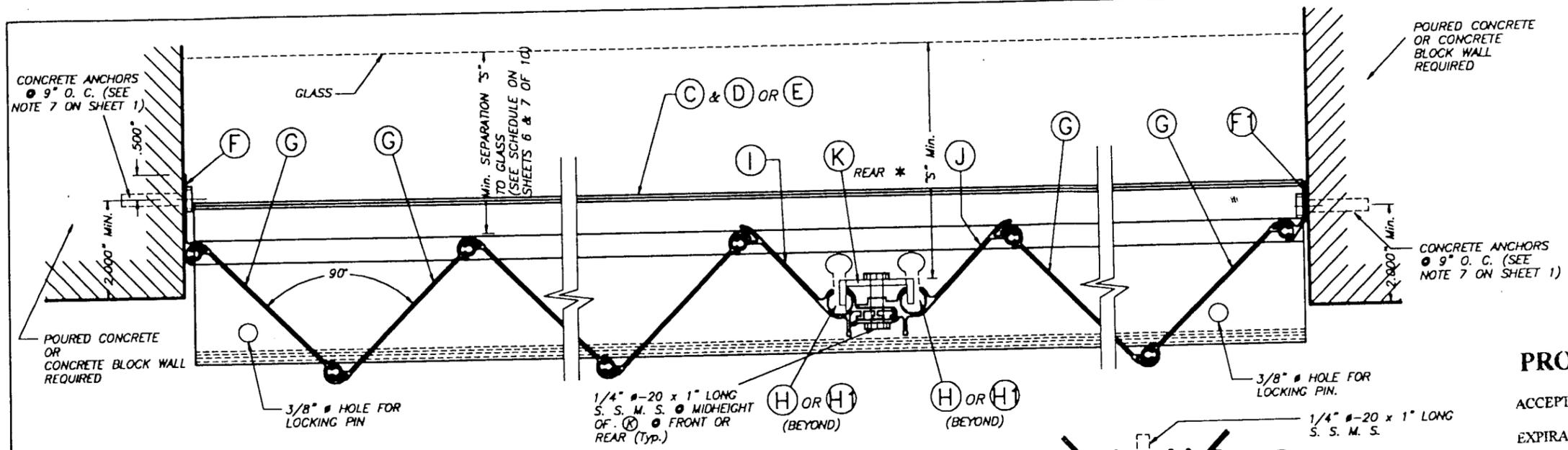
PRODUCT RENEWED

ACCEPTANCE No. 01-1220.0
EXPIRATION DATE April 13, 2007
By *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

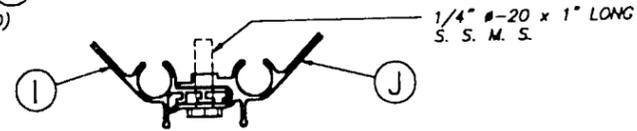
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE April 13, 1999
BY *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302.05

DADE COUNTY

<p>TILLIT TESTING & ENGINEERING COMPANY 1585 N.W. 34th St., Suite 317, Virginia Gardens, Florida 33184 Phone: (305)871-1530 Fax: (305)871-1531</p> <p>WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167</p>		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE	
		<p>CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435</p>		2/19/99 DATE	
				99 - 60 DRAWING No	
				SHEET 3 OF 10	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	-	-	3	-	-
2	-	-	4	-	-



SECTION D
SCALE: 3/8" = 1"



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

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

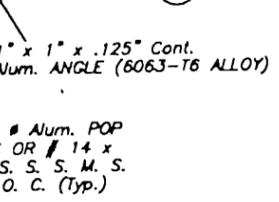
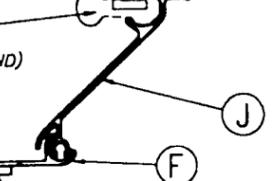
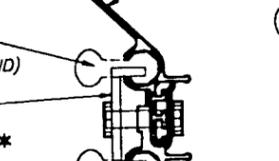
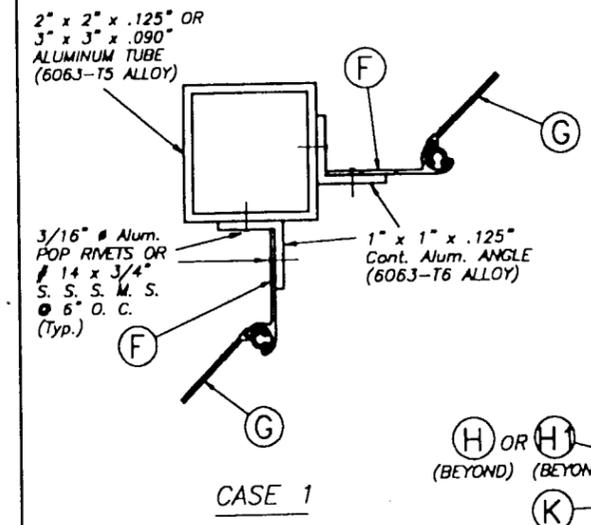
- * CENTERMATES (I) & (J) SHALL ALWAYS BE LOCKED BY USING LOCK CLIP (K) INSTALLED FROM THE INSIDE OF SHUTTER W/ 1/4" #20 x 1" S.S. SIDEWALK BOLT AS SHOWN ON SECTIONS D & E. BOLT SHALL PENETRATE (K) LOCK CLIP, AS WELL AS (I) & (J) ENTIRELY. LOCK CLIP 1/2" FLANGES SHALL FIT ENTIRELY INTO (I) & (J) LOCKING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

PRODUCT RENEWED

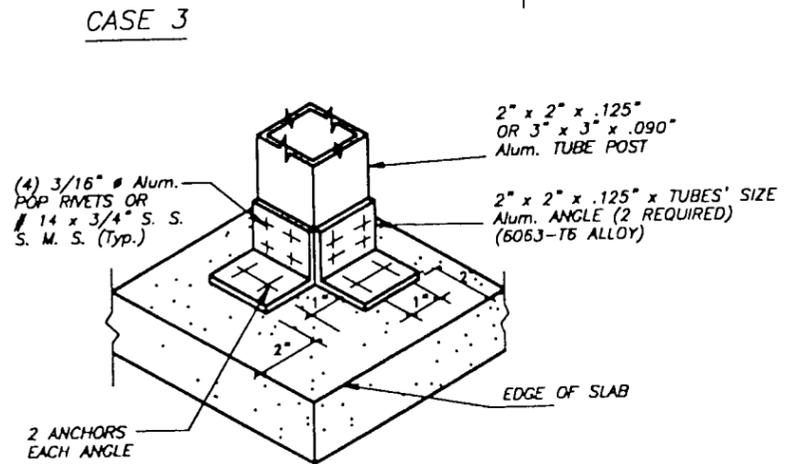
ACCEPTANCE No. 01-1220.01

EXPIRATION DATE April 13, 2007

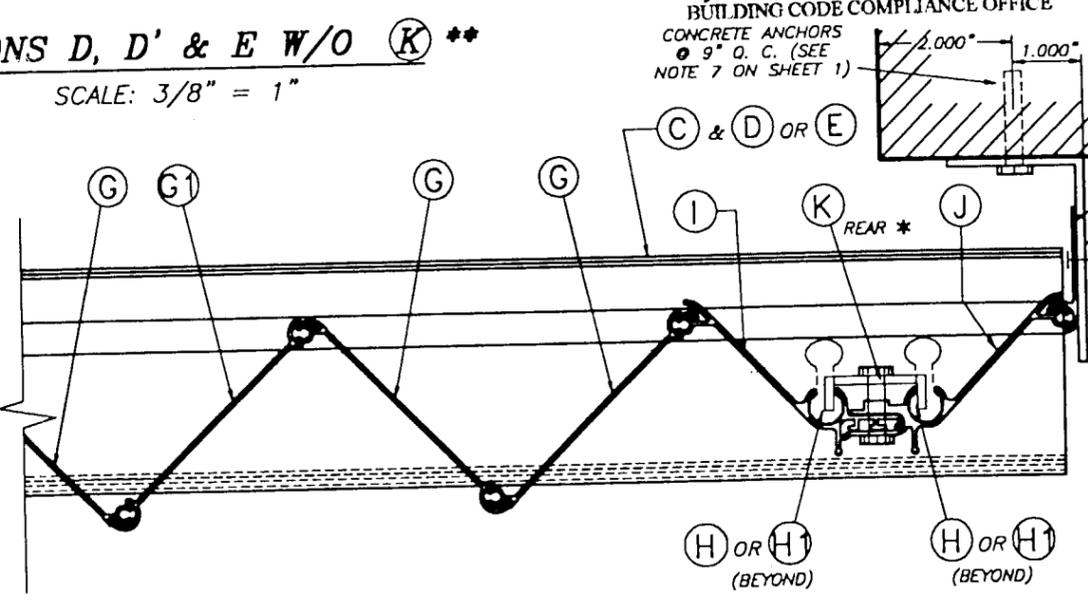
By *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE



SECTIONS E
SCALE: 3/8" = 1"



ISOMETRIC (CORNER POST)
(Typ. AT TOP & BOTTOM SLABS)
[Signature]
4/23/99



**SECTION D' : ONE SIDED SHUTTER
END CONNECTION DETAIL**

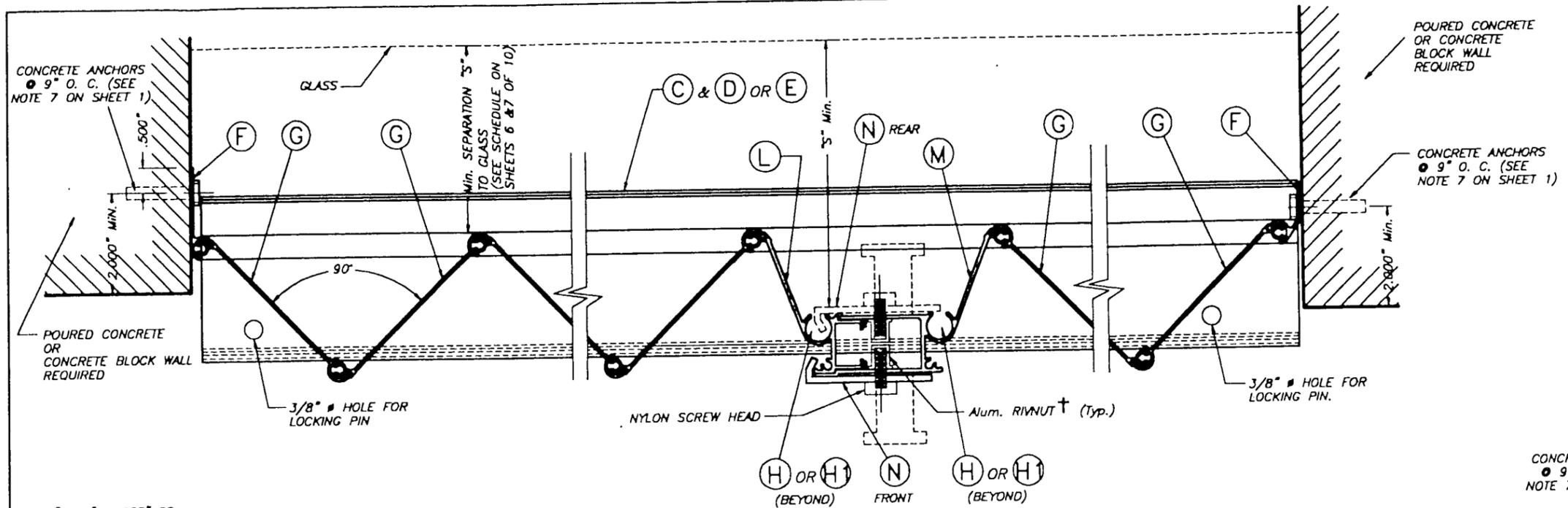
SCALE: 3/8" = 1"

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE APRIL 13, 1999
BY *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302-05

DADE COUNTY

TILECO INC.
TILIT TESTING & ENGINEERING COMPANY
6585 N.W. 30th St., Ste. 217, VERO BEACH, FLORIDA 33164
Phone: (305)871-1530 Fax: (305)871-1531
WALTER A. TILIT, P. E.
FLORIDA Lic. # 44167

ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE			
CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435		2/19/99 DATE			
		99 - 60 DRAWING No			
		SHEET 4 OF 10			
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1			3		
2			4		



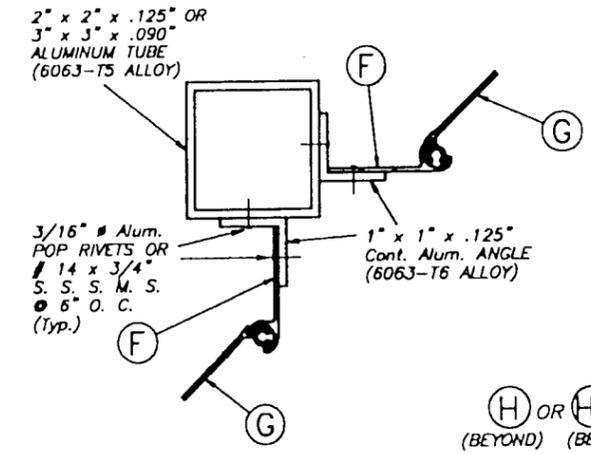
NOTES ON LOCKS : APPLICABLE TO LOCK DETAILS SHOWN ON THIS SHEET.

* 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 (L) & (M) 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.

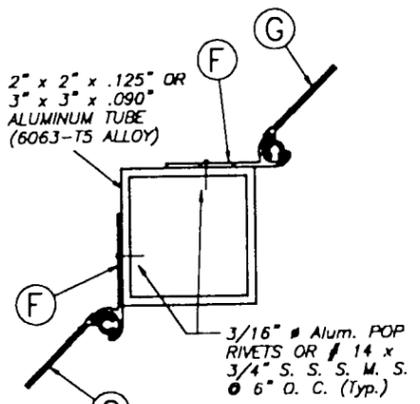
** FOR INSTALLATIONS AT ANY ELEVATION OF BUILDING AND IN ADDITION TO (N) LOCKERS, A REGULAR T LOCK MAY BE USED FOR SECURITY PURPOSES AT ANY DESIRED LOCATION OF CENTERMATE (INSIDE OR OUTSIDE). WHEN USED INSIDE, MINIMUM SEPARATION TO GLASS SHALL ALSO BE VERIFIED FROM THE TIP OF SUCH T LOCK OR FROM THE 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 AVDEL CHERRY TEXTORN, PARSIPPENY, NEW JERSEY 07054 OR EQUAL.

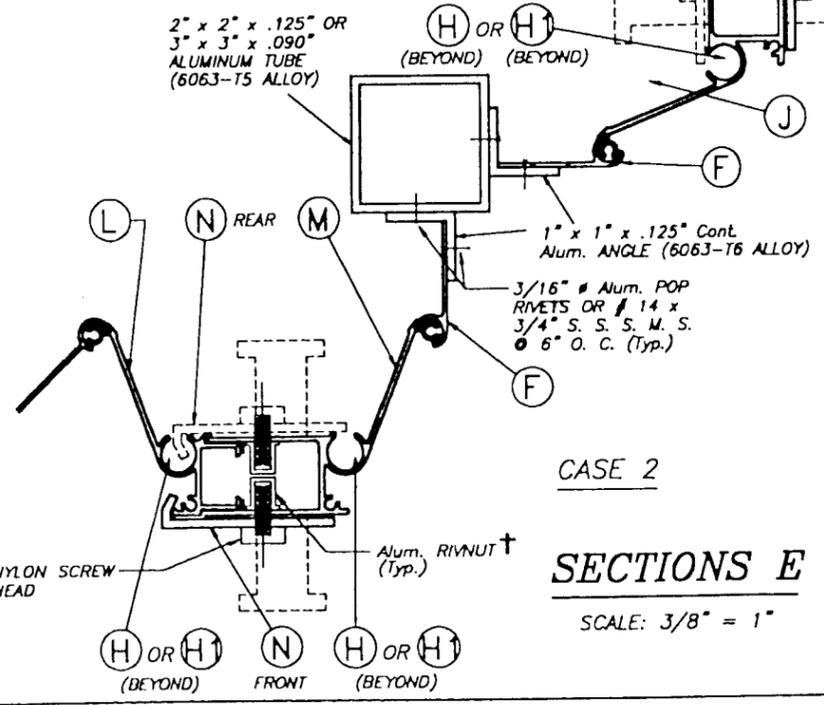
SECTION D
SCALE: 3/8" = 1"



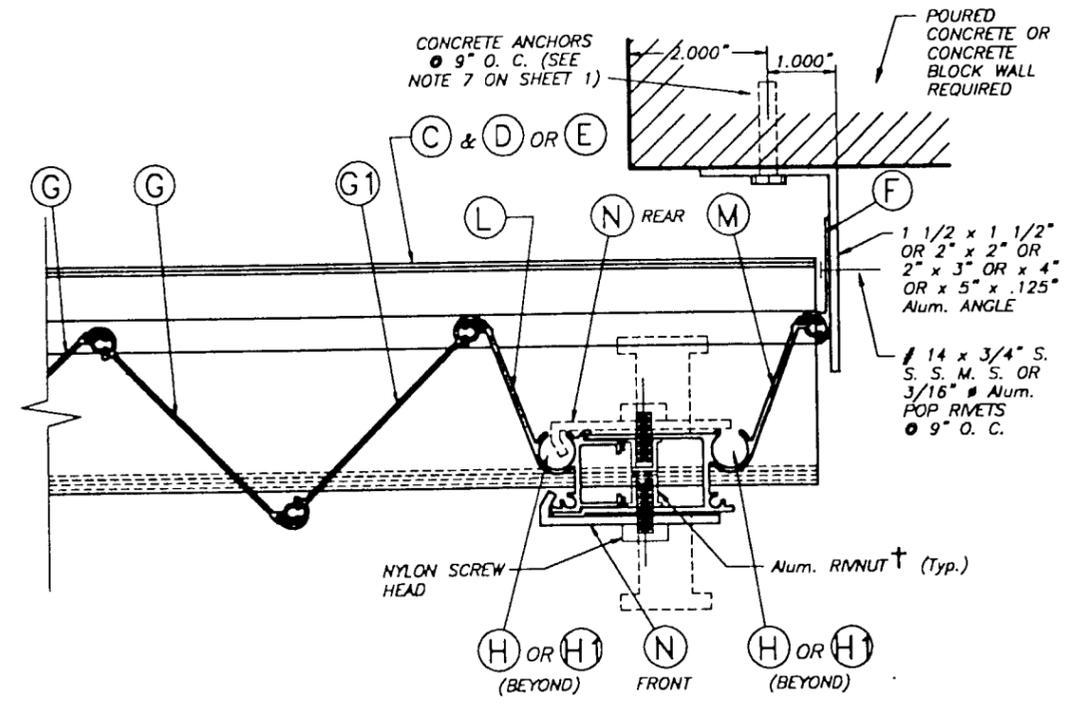
CASE 1



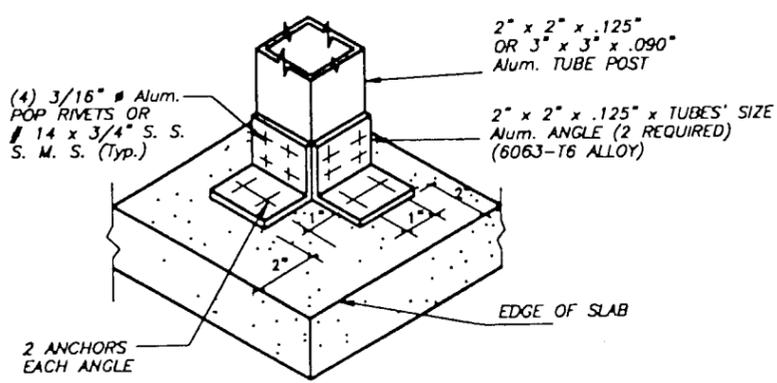
CASE 3



SECTION E
SCALE: 3/8" = 1"



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



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

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE APRIL 13, 1999
BY Helmut A. Miller
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO 99-030205

PRODUCT RENEWED
ACCEPTANCE No. 01-1220.01
EXPIRATION DATE April 13, 2007
By [Signature]
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

DADE COUNTY

TILTECO INC.
TILIT TESTING & ENGINEERING COMPANY
6530 N.E. 38th St., Ste. 217, WILMOTA GARDENS, FLORIDA 33166
Phone : (305)871-1530 Fax : (305)871-1531
WALTER A. TILIT Jr., P. E.
FLORIDA Lic. # 44167

ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE
CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435		2/19/99 DATE
REV. No		99 - 60 DRAWING No
1		
2		
		SHEET 5 OF 10

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"

PRODUCT RENEWED

ACCEPTANCE No. 01-1220.01
 EXPIRATION DATE April 13, 2007
 By [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE April 13, 1999
 BY [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 99-0302-05

DADE COUNTY

* 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

Walter A. Trill Jr.
 4/27/99

 TILECO Inc. TILIT TESTING & ENGINEERING COMPANY 4505 N.W. 38th St., Ste. 317, Miramar, Florida 33146 Phone: (305)871-1530 Fax: (305)871-1531 WALTER A. TRILL Jr., P. E. FLORIDA Lic. # 44167	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE																		
	CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435	2/19/99 DATE	99 - 60 DRAWING No																	
<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>2</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	-	-	2	-	-	2	-	-	4	-	-		SHEET 6 OF 10
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	-	-	2	-	-															
2	-	-	4	-	-															

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"
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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

Handwritten signature
4/23/99

PRODUCT RENEWED

ACCEPTANCE No. 01-1220.01

EXPIRATION DATE April 13, 2007

By *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE APRIL 13, 1999
BY *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302-05

DADE COUNTY

 TILECO INC. <small>TLLIT TESTING & ENGINEERING COMPANY</small> <small>8505 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33164</small> <small>Phone: (305)871-1530 Fax: (305)871-1531</small> WALTER A. TLLIT Jr., P. E. <small>FLORIDA Lic. # 44167</small>	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER CUSTOM STORM SHUTTERS, INC. <small>(ASSA # 122)</small> 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435	SCALE 2/19/99 DATE 99 - 60 DRAWING No																		
	<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>2</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	-	-	2	-	-	2	-	-	4	-	-	SHEET 7 OF 10
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
1	-	-	2	-	-															
2	-	-	4	-	-															

**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"	8 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	-

ZAMAC NAILIN
TAPCON OR RAWL CALK-IN
ANCHOR SPACING LEGEND

Walter A. Tillit Jr.
4/23/99

PRODUCT RENEWED

ACCEPTANCE No. 01-1220.01
EXPIRATION DATE April 13, 2007
By *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE APRIL 13, 1999
BY *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302-05

DADE COUNTY

 TILECO Inc. TILLIT TESTING & ENGINEERING COMPANY 6385 N.W. 36th St., Ste. 217, WINDY GARDENS, FLORIDA 33148 Phone: (305)871-1530 Fax: (305)871-1531 WALTER A. TILLIT, Jr., P. E. FLORIDA Lic. # 44187	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	SCALE																		
	CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435	2/19/99 DATE	99 - 60 DRAWING No																	
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REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE															
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2	-	-	4	-	-															

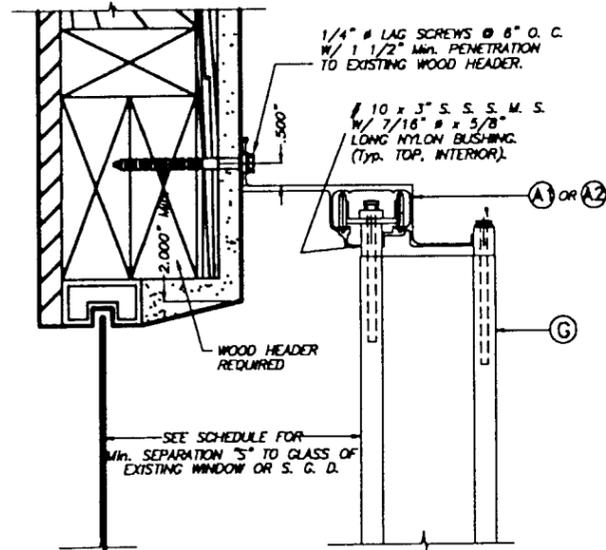
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS

NOTES :

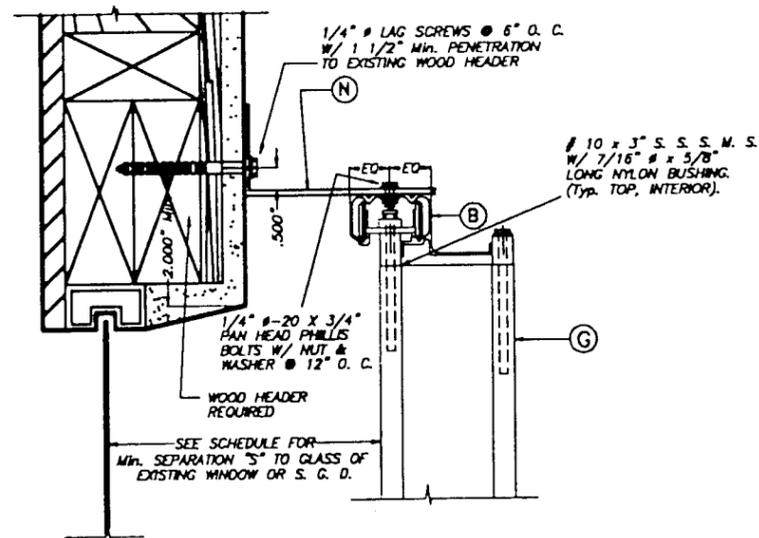
1. INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN 75 p.s.f. AND 9'-0" Max. SHUTTER SPAN.
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

NOTE FOR COMBINATION OF SECTIONS :

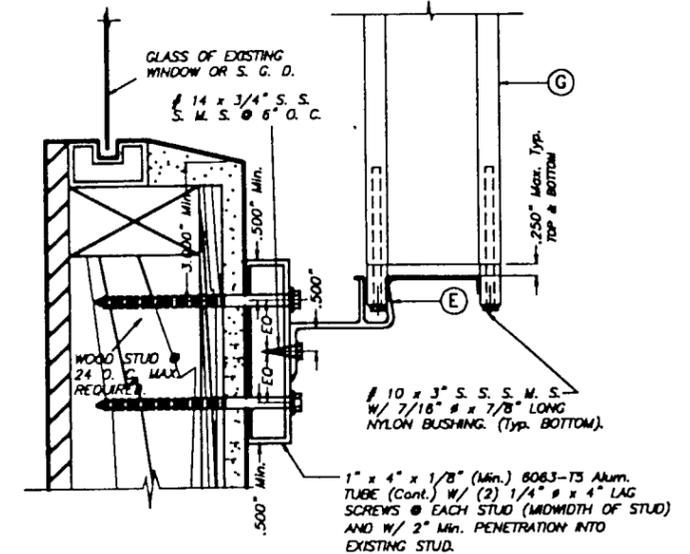
WALL/FLOOR/CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



ALTERNATIVE 1



ALTERNATIVE 2



ALTERNATIVE 3

WALL MOUNTING INSTALLATION - SECTIONS A

SCALE 1/4" = 1"

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE APRIL 13 1999
BY Walter A. Tillit
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 99-0302-05

PRODUCT RENEWED

ACCEPTANCE No. 01-1220.01

EXPIRATION DATE April 13, 2007

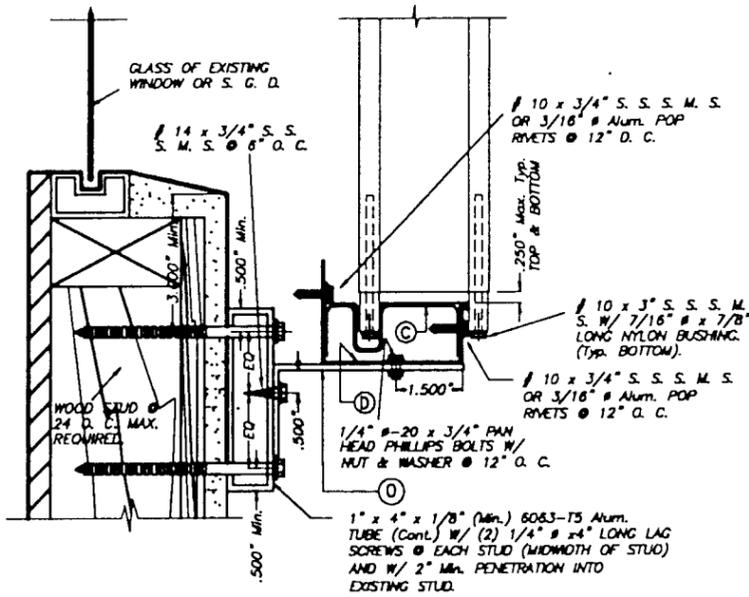
By Walter A. Tillit
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

DADE COUNTY

Walter A. Tillit
4/23/99

 TILTECO INC. <small>TILLIT TESTING & ENGINEERING COMPANY 2585 N.W. 36th St., Ste. 217, VIRGINIA GARDENS, FLORIDA 33146 Phone: (305)871-1530 Fax: (305)871-1531</small> WALTER A. TILLIT JR., P. E. <small>FLORIDA Lic. # 44167</small>	ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER	AS SHOWN SCALE
	CUSTOM STORM SHUTTERS, INC. <small>(ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435</small>	2/19/99 DATE
		99 - 60 DRAWING No
		SHEET 9 OF 10

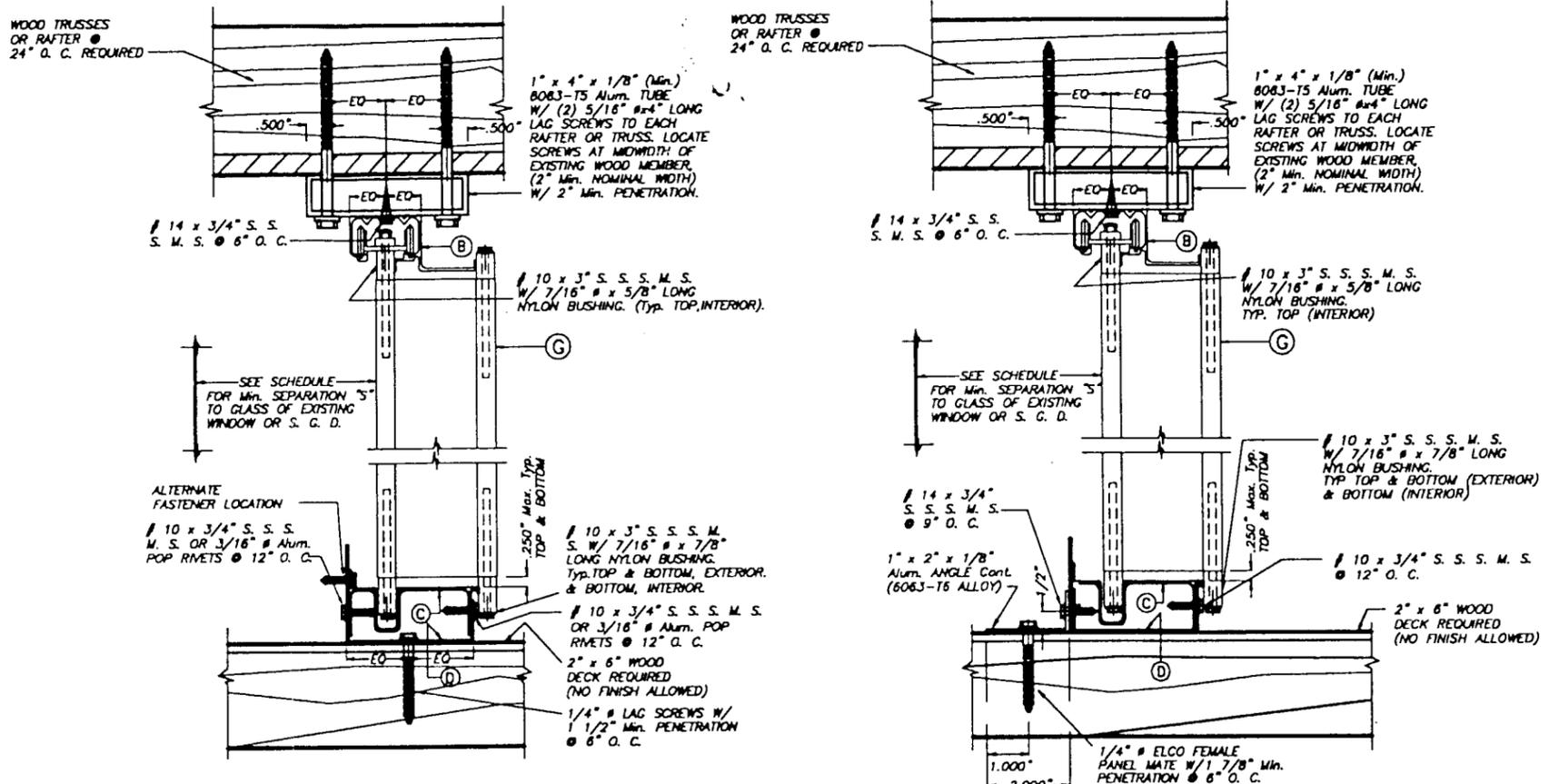
INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS



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.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE

DATE APRIL 13 1999

BY Heather A. Mark

PRODUCT CONTROL DIVISION

BUILDING CODE COMPLIANCE OFFICE

ACCEPTANCE NO. 99-0302-05

PRODUCT RENEWED

ACCEPTANCE No. 01-120-01

EXPIRATION DATE April 13, 2007

By [Signature]

PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

DADE COUNTY

[Signature]
4/23/99

<p>TILLIT TESTING & ENGINEERING COMPANY 6530 N.W. 36th 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>		ASSA / RESIDENTIAL BERTHA ACCORDION SHUTTER		AS SHOWN SCALE	
		<p>CUSTOM STORM SHUTTERS, INC. (ASSA # 122) 215 SE 8th AVE. BOYNTON BEACH, FLORIDA 33435</p>		2/19/99 DATE	
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