



**MIAMI-DADE COUNTY**  
**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)**

[www.miamidade.gov](http://www.miamidade.gov)

**MetalTech, Inc.**  
**7635 West 2<sup>nd</sup> Court**  
**Hialeah, Florida 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" Extruded Aluminum Bahama Shutter**

**APPROVAL DOCUMENT:** Drawing No. 06-013, titled "Maximum Impact Extruded Bahama Shutter", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated February 02, 2006, last revision #1 dated February 02, 2006, signed and sealed by Walter A. Tillit Jr., P.E., 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 # 02-0122.04 and consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E.**



*Helmy A. Makar*  
 10/03/2006

**NOA No 06-0217.04**  
**Expiration Date: 02/24/2007**  
**Approval Date: 10/03/2006**  
**Page 1**

**MetalTech, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

- 1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 02-0122.04**
  - A. DRAWINGS**

See NOA 98-1228.04
  - B. TESTS**

See NOA 98-1228.04
  - C. CALCULATIONS**

See NOA 98-1228.04
  - D. MATERIAL CERTIFICATIONS**

See NOA 98-1228.04
  - E. STATEMENTS**

See NOA 98-1228.04
  - F. OTHER**

NOA 98-1228.04
- 2. NEW EVIDENCE SUBMITTED**
  - A. DRAWINGS**
    1. *Drawing No. 06-013, titled " Maximum Impact Extruded Bahama Shutter ", sheets 1 through 9 of 9, prepared by Tilteco, Inc., dated February 02, 2006, last revision #1 dated February 02, 2006, signed and sealed by Walter A. Tillit Jr., P.E.*
  - B. TESTS**
    1. *See Association's generic approval under 05-0237.*
  - C. CALCULATIONS**
    1. *See Association's generic approval under 05-0237.*
  - D. QUALITY ASSURANCE**
    1. *By Miami-Dade County Building Code Compliance Office.*
  - E. MATERIAL CERTIFICATIONS**
    1. *See Association's generic approval under 05-0237.*
  - F. STATEMENTS**
    1. *Letter by Tilteco, Inc., dated February 06, 2006, certifying that the drawing (No. 06-013) prepared for MetalTech, Inc. signed and sealed by Mr. Walter A. Tillit Jr., P.E., is engineering wise identical to ASSA generic drawing (No.05-094).*



Helmy A. Makar, P.E.  
Product Control Examiner  
NOA No 06-0217.04  
Expiration Date: 02/24/2007  
Approval Date: 10/03/2006

**GENERAL NOTES:**

1. EXTRUDED BERTHA BAHAMA SHUTTER SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P. A. D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE.

THIS BAHAMA SHUTTER SYSTEM MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. IN ORDER TO VERIFY THAT ANCHORS ON THIS P.A.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE LOADS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. HOWEVER, FOR LAG SCREWS INTO WOOD, A 1.60 WIND LOAD DURATION FACTOR WAS USED TO CALCULATE SCREWS SPACINGS.

EXTRUDED BERTHA BAHAMA SHUTTER'S ADEQUACY FOR HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER ATL REPORTS #0923.01-97 AND #0309.01-04 AS PER PROTOCOLS TAS-201, TAS-202 AND TAS-203.

2. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER, WITH  $F_y = 25.0$  ksi MINIMUM (UNLESS OTHERWISE NOTED).

3. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018.

4. BOLTS TO BE ALUMINUM ASSOCIATION 2024-T4 ALLOY AND TEMPER, ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.

5. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.

6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)

(A) TO EXISTING POURED CONCRETE: (Min.  $f'_c=3145$  p.s.i.)

- 1/4"  $\phi$  TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDDEX.

- 1/4"  $\phi$  x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY THE POWERS FASTENERS, INC.

NOTES:

A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE IS 1 1/2".

A.2) CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED.

1/4"  $\phi$ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1) & A.2) ABOVE.

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4"  $\phi$  TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDDEX.

- 1/4"  $\phi$  x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY THE POWERS FASTENERS, INC.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".

B.2) CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4"  $\phi$ -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 06-0217.04  
Expiration Date 02/24/2007  
By Helmut A. Miller  
Miami Dade Product Control  
Division

*[Handwritten Signature]*  
2/2/06

B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1) & B.2) ABOVE.

(C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

7. EACH SHUTTER SHALL HAVE A LEGIBLE AND READILY VISIBLE MARKING INSTRUCTING OWNER OR TENANT TO SECURE SHUTTER WITH SIDE & SILL BRACKETS DURING PERIODS OF HURRICANE WARNINGS.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. CONTRACTOR TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN PERMANENT AND CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

9. EXTRUDED BERTHA BAHAMA SHUTTER'S INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

10. (a) THIS P.A.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.A.D., PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(c) THIS P.A.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

(d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.A.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

(e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

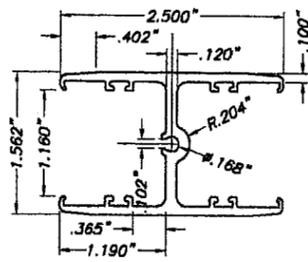
11. SHUTTER'S MANUFACTURER LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE BAHAMA FRAME  $\text{\textcircled{E}}$  OR  $\text{\textcircled{C}}$ .

ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:

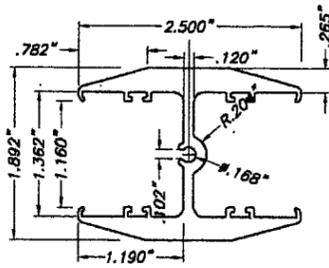
METALTECH, INC.  
HIALEAH, FL.  
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

F.B.C. (High Velocity Hurricane Zone)

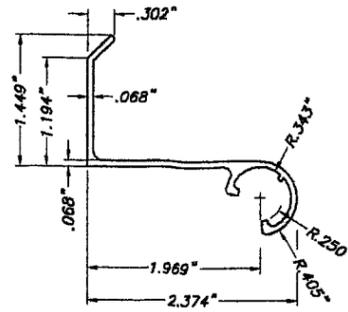
 TILIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILIT Jr., P. E. FLORIDA Lic. # 44167 © 2004 TILTECO INC.		MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER ASSA/EXTRUDED BERTHA BAHAMA SHUTTER		DRAWN BY: S.M.	
		 EST. 1957 7638 W. SECOND CT. HIALEAH, FL 33014 PHONE: (305)826-1804 FAX: (305)826-7878 (ASSA #26)		2/2/06 DATE	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 98-304	2/2/06	3	-	-
2	-	-	4	-	-
					06-013 DRAWING No
					SHEET 1 OF 9



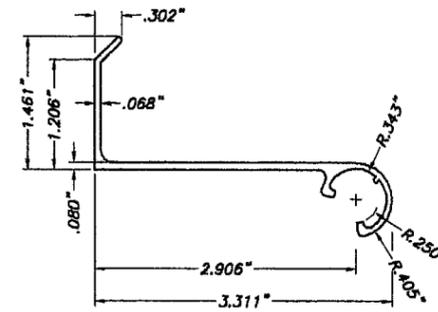
**(A1) REGULAR INTERIOR MULLION**  
6005-T5 Alum. ALLOY  
SCALE: 1/2" = 1"



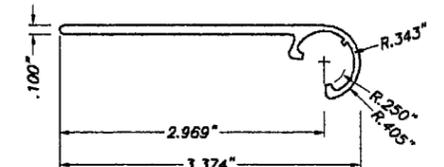
**(A2) HEAVY INTERIOR MULLION**  
6005-T5 Alum. ALLOY  
SCALE: 1/2" = 1"



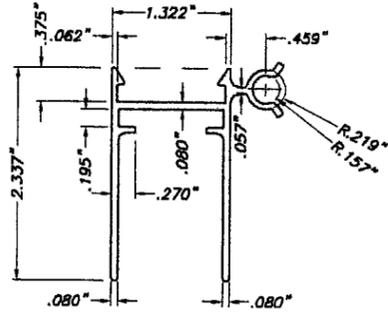
**(B) FEMALE HINGE**  
SCALE: 1/2" = 1"



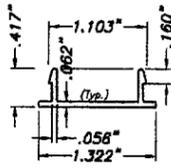
**(C) 1" B. O. FEMALE HINGE**  
SCALE: 1/2" = 1"



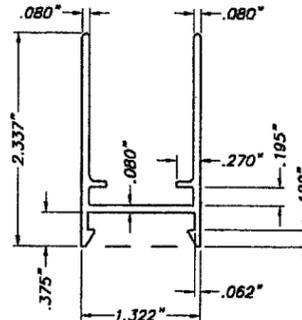
**(D) FLAT FEMALE HINGE**  
SCALE: 1/2" = 1"



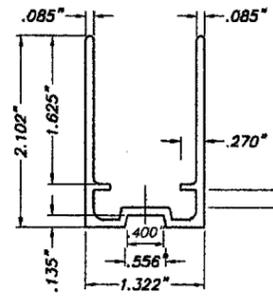
**(E) BAHAMA MALE TOP FRAME**  
SCALE: 1/2" = 1"



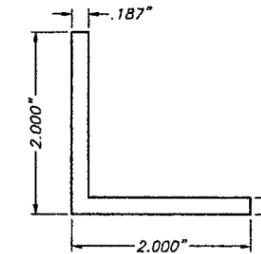
**(F) SNAP CAP**  
SCALE: 1/2" = 1"



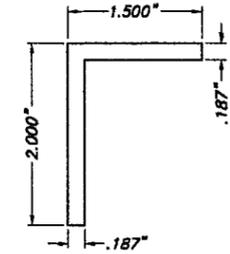
**(G) BAHAMA FRAME**  
SCALE: 1/2" = 1"



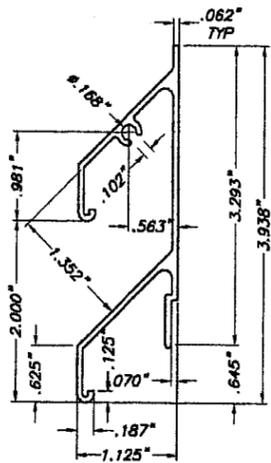
**(G1) ALTERNATE BAHAMA FRAME**  
SCALE: 1/2" = 1"



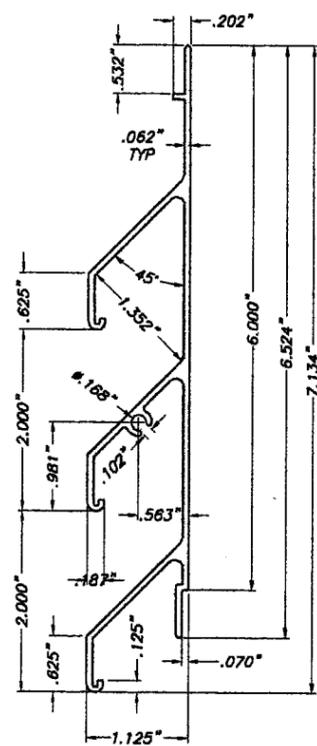
**(H) CORNER KEY**  
1" LONG  
SCALE: 1/2" = 1"



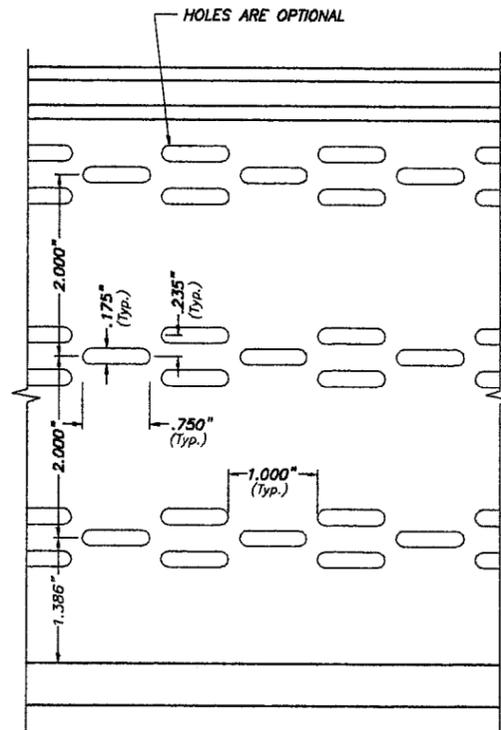
**(N) WALL MOUNT Alum. BRACKET**  
7" LONG  
SCALE: 1/2" = 1"



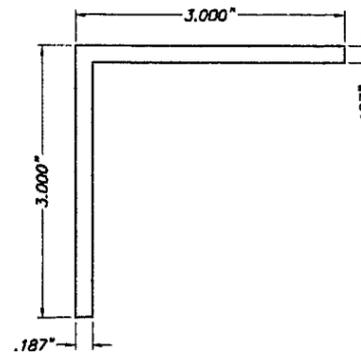
**(I) HALF SHUTTER BLADE**  
SCALE: 1/2" = 1"



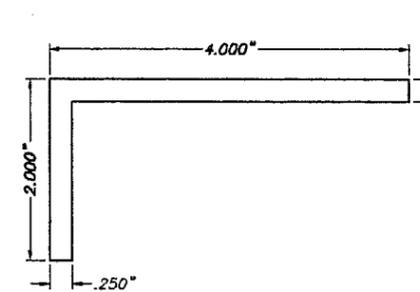
**(J) SHUTTER BLADE**  
SCALE: 1/2" = 1"



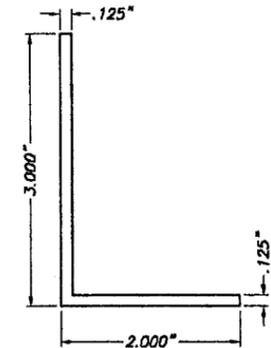
**SHUTTER BLADE ELEVATION**  
SCALE: 1/2" = 1"



**(O) BUILD-OUT Alum. BRACKET**  
7" LONG  
SCALE: 1/2" = 1"



**(P) BUILD-OUT SIDE BRACKET**  
7" LONG  
SCALE: 1/2" = 1"



**(Q) SILL ANGLE**  
SCALE: 1/2" = 1"

**COMPONENTS**

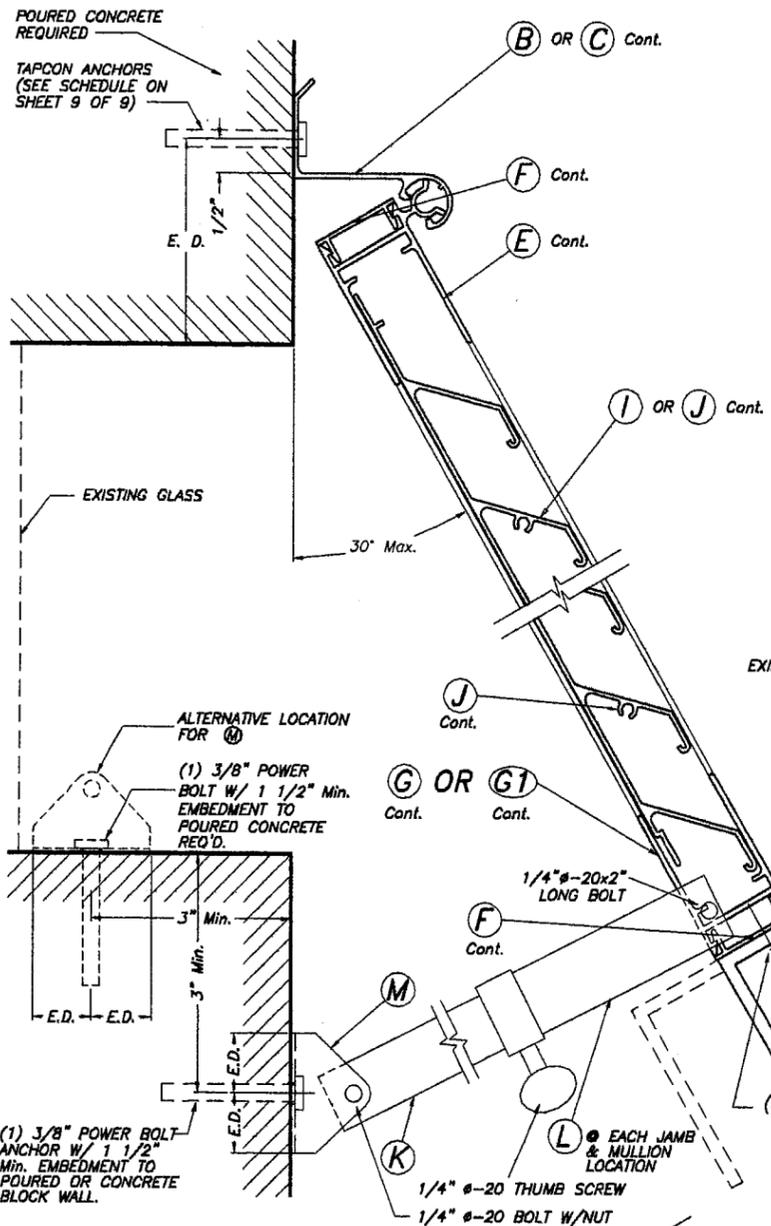
PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 06-0217.04 Expiration Date 02/22/2007  
By *Helmut A. Tillit*  
Miami Design Product Control Division

F.B.C. (High Velocity Hurricane Zone)

**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6385 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33168  
Phone: (305)871-1530, Fax: (305)871-1531  
EB-0006719  
WALTER A. TILLIT Jr., P. E.  
FLORIDA Lic. # 44167  
© 2004 TILTECO INC.

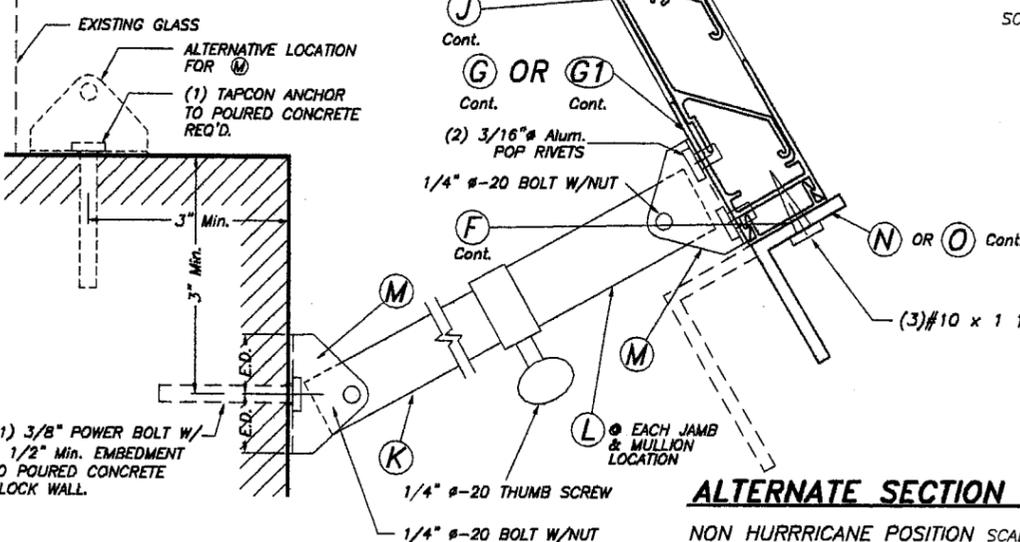
MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER		ASSA/EXTRUDED BERTHA BAHAMA SHUTTER		DRAWN BY: S.M.	
EST. 1957		7835 W. SECOND CT., HIALEAH, FL 33014		2/2/06 DATE	
PHONE: (305)823-1604, FAX: (305)826-7979		(ASSA #20)		06-013 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 98-304	2/2/06	3	-	-
2	-	-	4	-	-





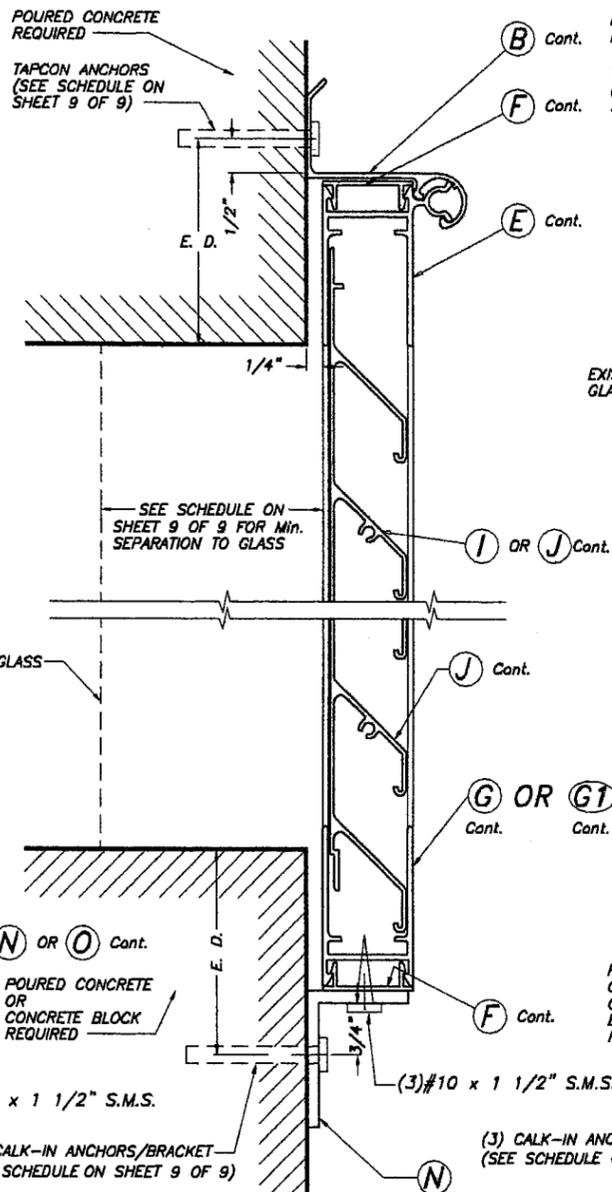
**SECTION C - C (WALL MOUNT)**

NON HURRICANE POSITION (74 m.p.h. WIND SPEED)  
SCALE: 3/8" = 1"



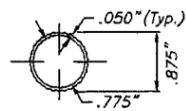
**ALTERNATE SECTION C' - C' (WALL MOUNT)**

NON HURRICANE POSITION SCALE: 3/8" = 1"

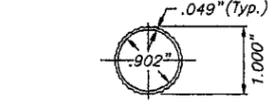


**SECTION C - C (WALL MOUNT)**

HURRICANE POSITION  
SCALE: 3/8" = 1"



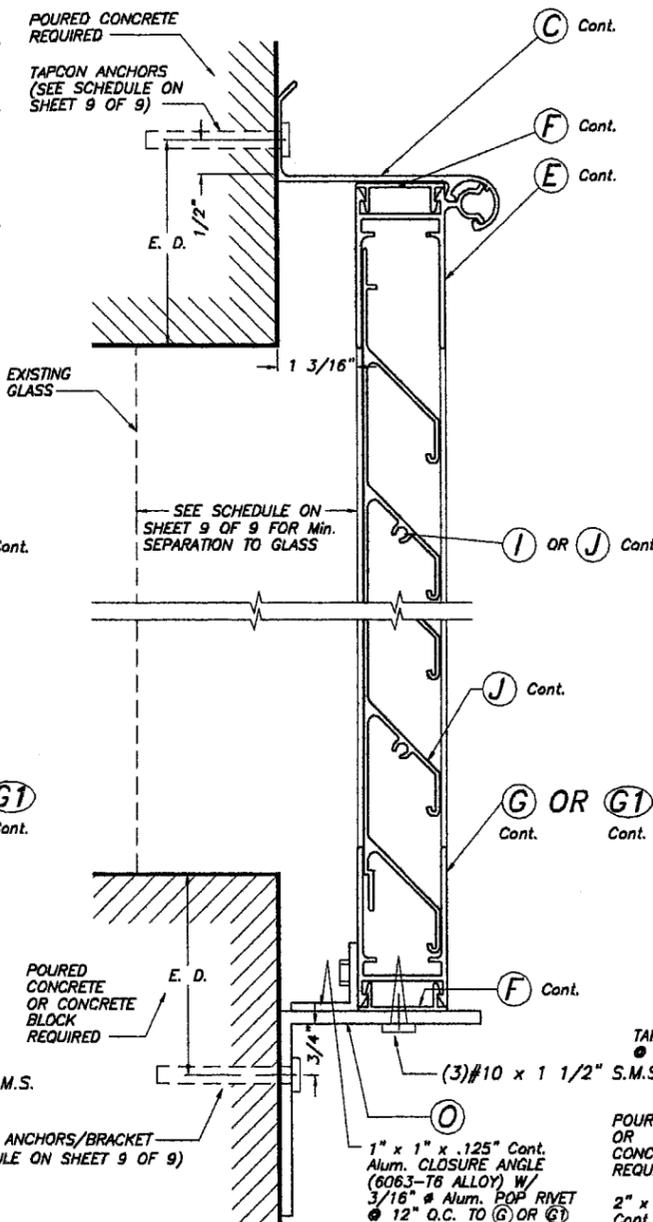
**(K) .875" SERRATED TUBE**  
INSIDE ARM  
6063-T6 ALLOY  
SCALE: 3/8" = 1"



**(L) 1" SERRATED TUBE**  
OUTSIDE ARM  
6063-T6 ALLOY  
SCALE: 3/8" = 1"

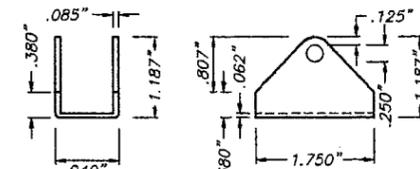
NOTE:  
E. D. = 3 1/2" Min.

2/2/06

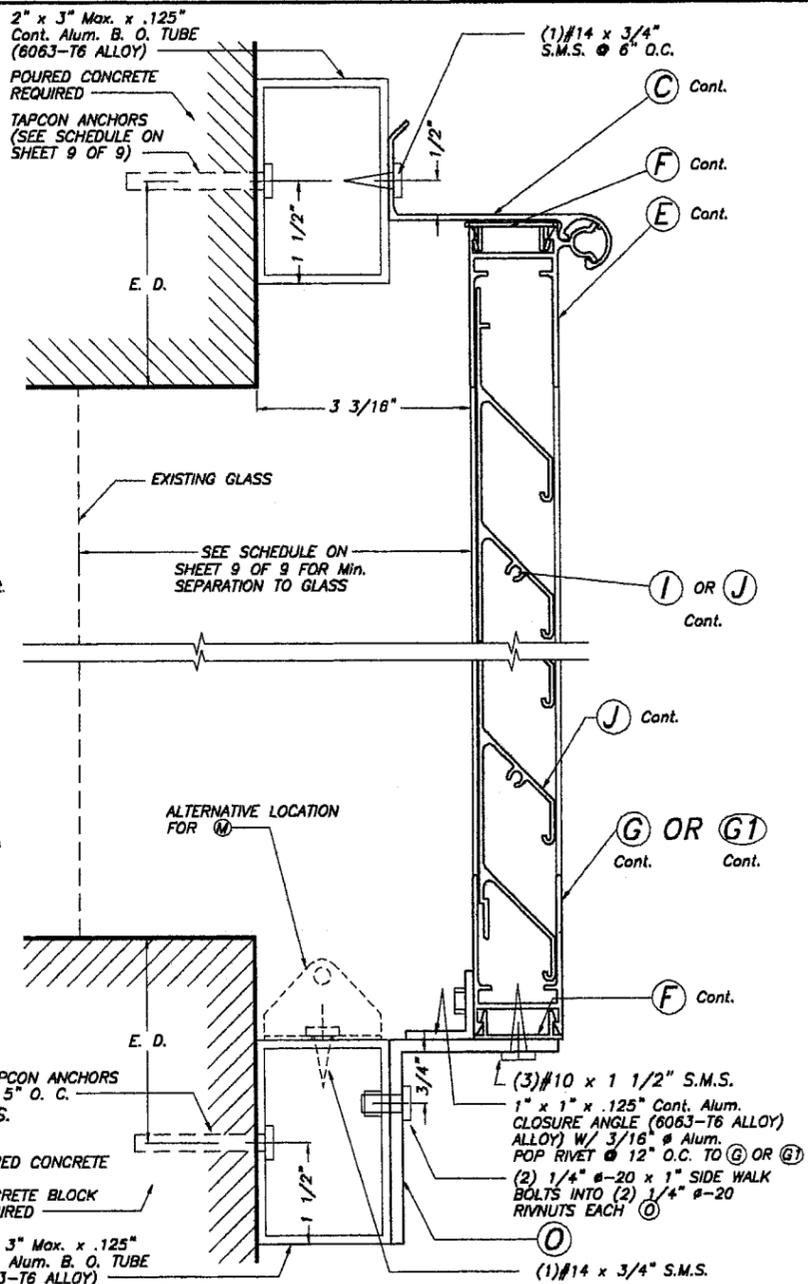


**SECTION D - D (BUILD-OUT)**

HURRICANE POSITION  
SCALE: 3/8" = 1"



**(M) CAMEL BACK HINGE**  
3003-H14 Alum. ALLOY  
SCALE: 3/8" = 1"



**SECTION E - E (BUILD-OUT)**

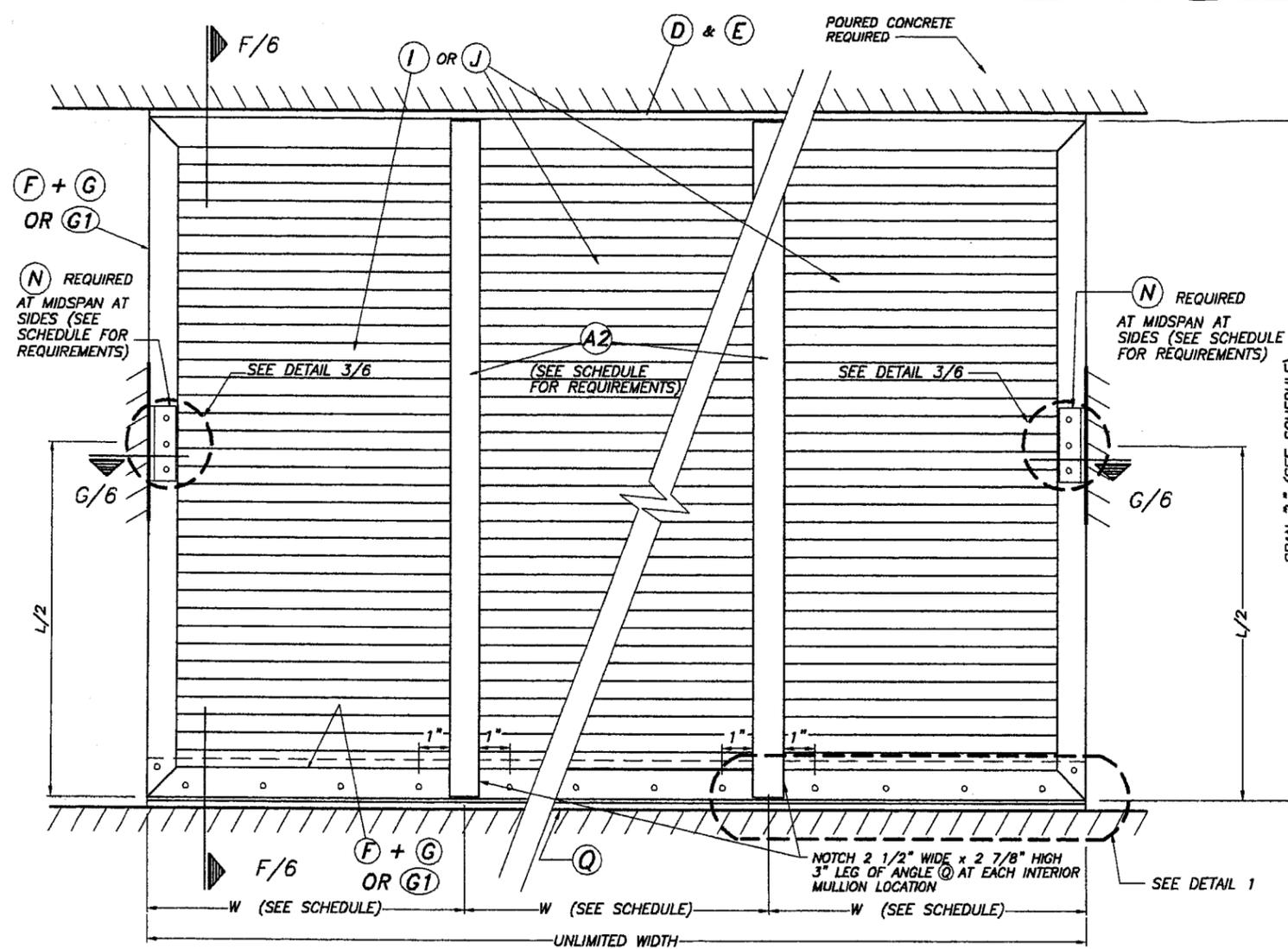
HURRICANE POSITION  
SCALE: 3/8" = 1"

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 06-0217-04  
Expiration Date 02/24/2007  
By *Helmut A. Nelson*  
Miami Dade Product Control  
Division

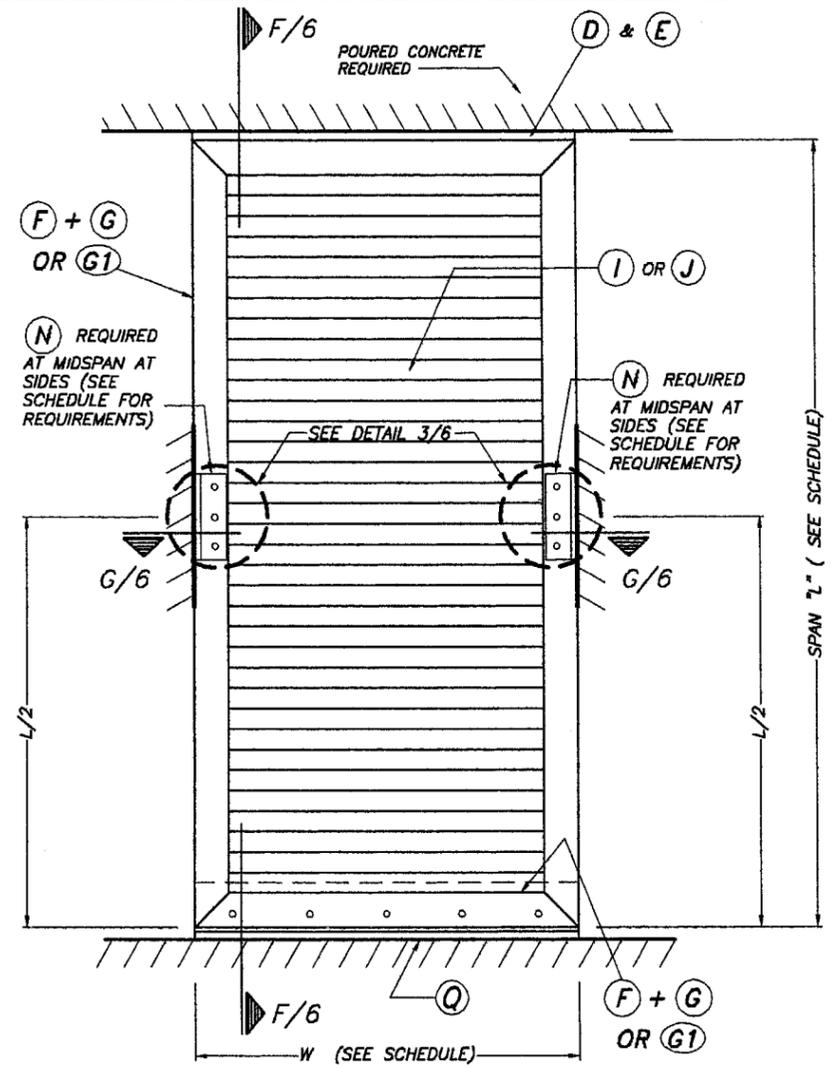
F.B.C. (High Velocity Hurricane Zone)

**TILECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166  
Phone: (305) 871-1530 Fax: (305) 871-1531  
EB-0006719  
WALTER A. TILLIT Jr., P. E.  
FLORIDA Lic. # 44167  
© 2004 TILECO INC.

MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER ASSA/EXTRUDED BERTHA BAHAMA SHUTTER			DRAWN BY: S.M.		
EST. 1957 7635 W. SECOND CT. HIALEAH, FL 33014 (ASSA #28) PHONE: (305) 823-4804 FAX: (305) 826-7878			2/2/06 DATE		
<b>METALTECH, INC.</b>			06-013 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 98-304	2/2/06	3	-	-
2	-	-	4	-	-
SHEET 4 OF 9					



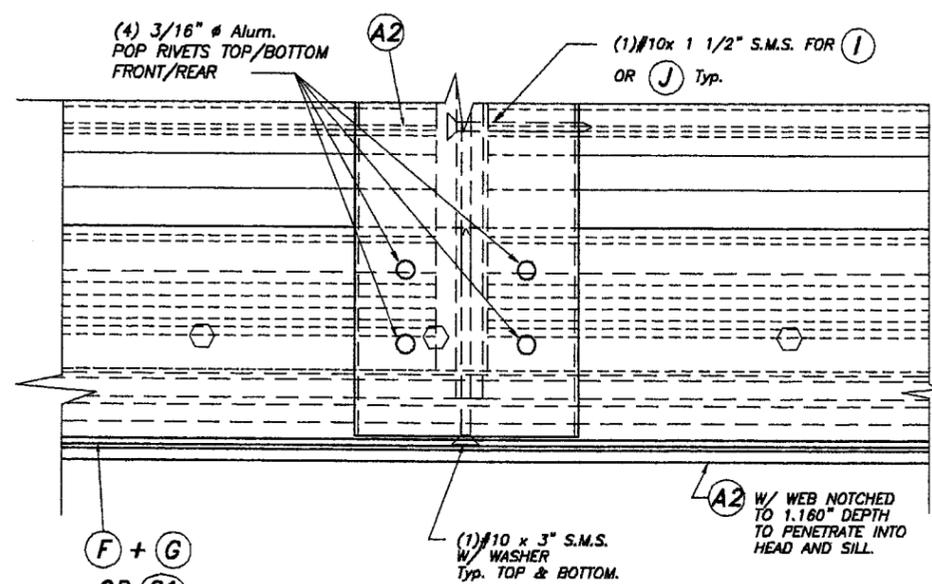
**MULTIPLE UNIT**



**SINGLE UNIT**

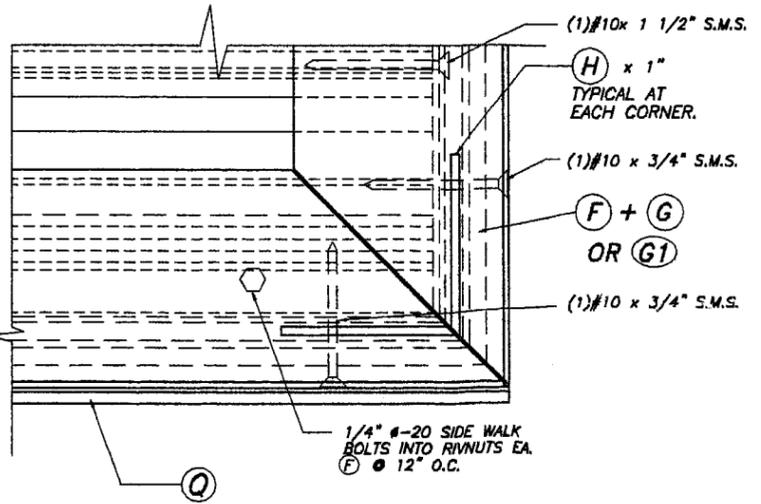
**ELEVATIONS**

N. T. S.



**DETAIL 1**

SCALE: 1/2" = 1"



PRODUCT REVISED  
 as complying with the Florida  
 Building Code  
 Acceptance No. 06-0217.04  
 Expiration Date 02/20/2007  
 By *Helmy A. Mub*  
 Miami Dade Product Control  
 Division

**TILECO inc.**  
 TILLIT TESTING & ENGINEERING COMPANY  
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166  
 Phone: (305)871-1530 • Fax: (305)871-1531  
 EB-0006719  
 WALTER A. TILLIT Jr., P. E.  
 FLORIDA Lic. # 44167  
 © 2004 TILECO INC.

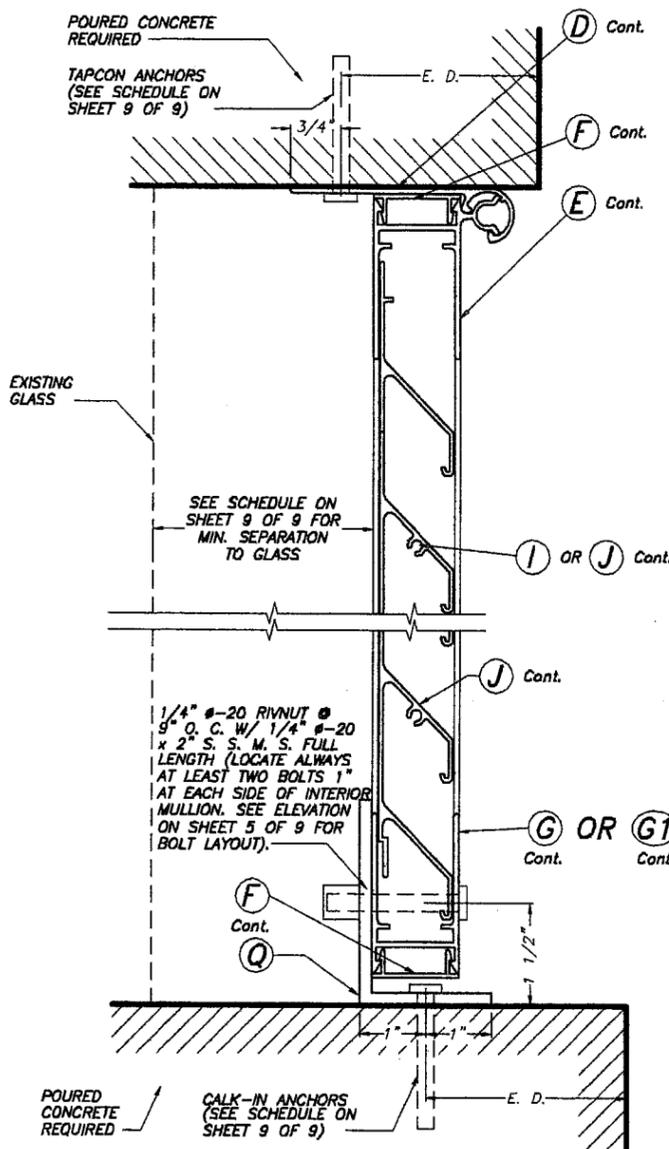
F.B.C. (High Velocity Hurricane Zone)

MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER  
 ASSA/EXTRUDED BERTHA BAHAMA SHUTTER

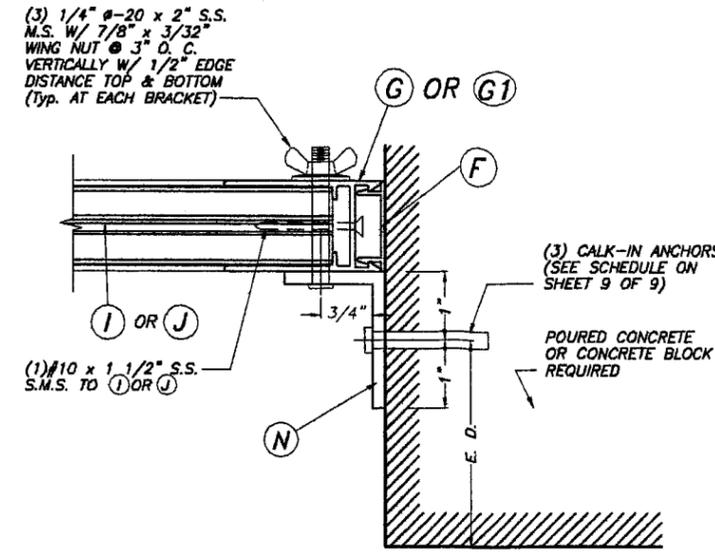
**METALTECH, INC.**  
 EST. 1957 7635 W. SECOND CT. HIALEAH, FL 33014  
 (ASSA #28)  
 PHONE: (305)823-1804, FAX: (305)828-7979

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 98-304	2/2/06	3	-	-
2	-	-	4	-	-

DRAWN BY: S.M.  
 DATE: 2/2/06  
 DRAWING No: 06-013  
 SHEET 5 OF 9

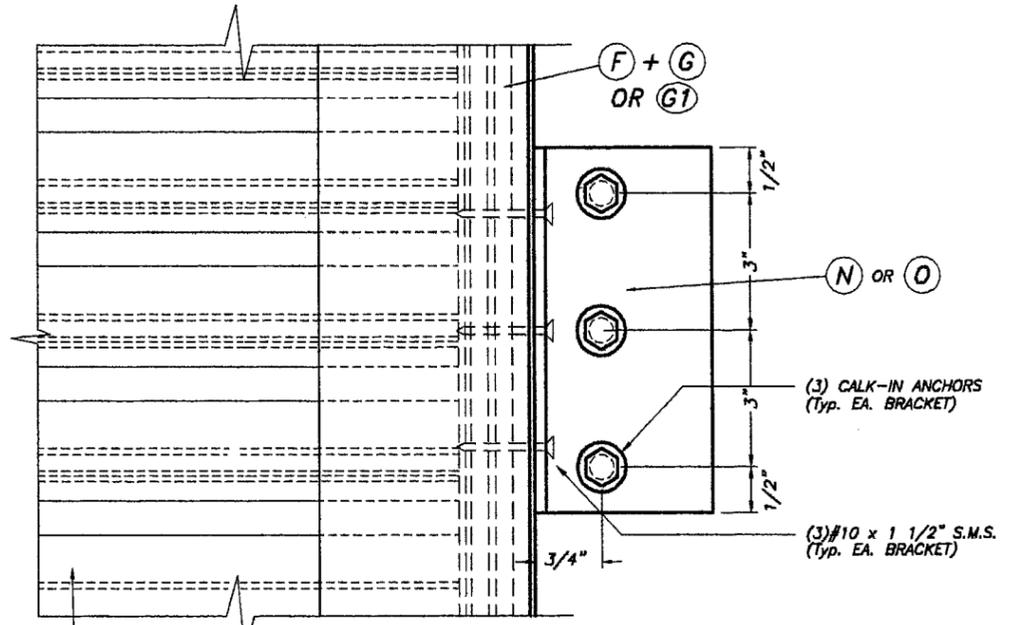


**SECTION F - F** (TRAPPED MOUNT)  
HURRICANE POSITION  
SCALE: 3/8" = 1"

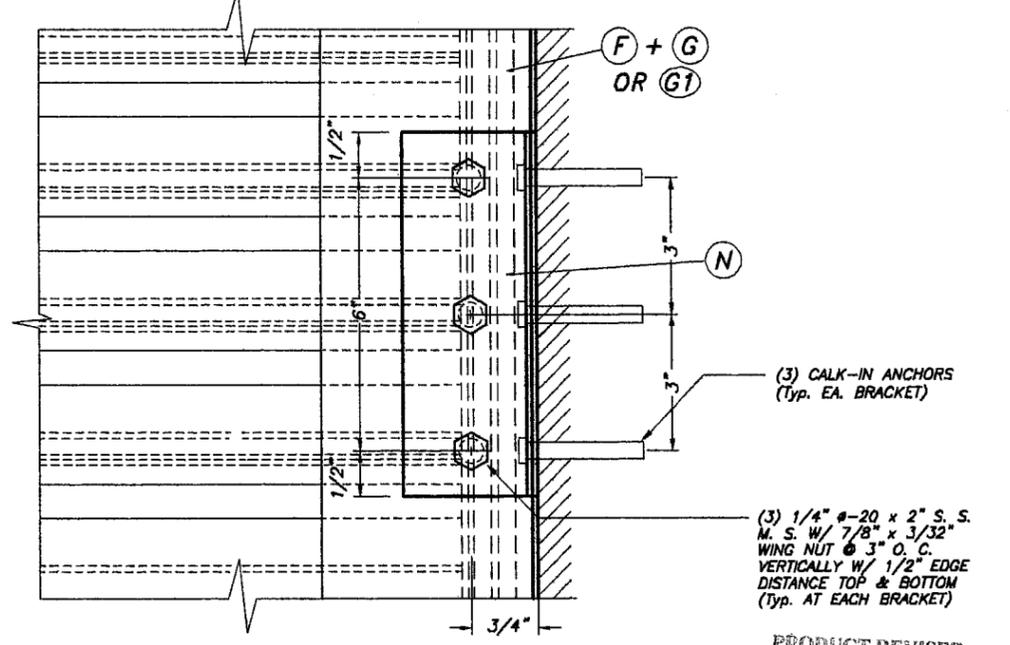


**SECTION G - G**  
(TRAPPED MOUNT)  
HURRICANE POSITION  
SCALE: 3/8" = 1"

NOTE:  
E. D. = 3 1/2" Min.



**DETAIL 2 WALL MOUNT.**  
SCALE: 1/2" = 1"



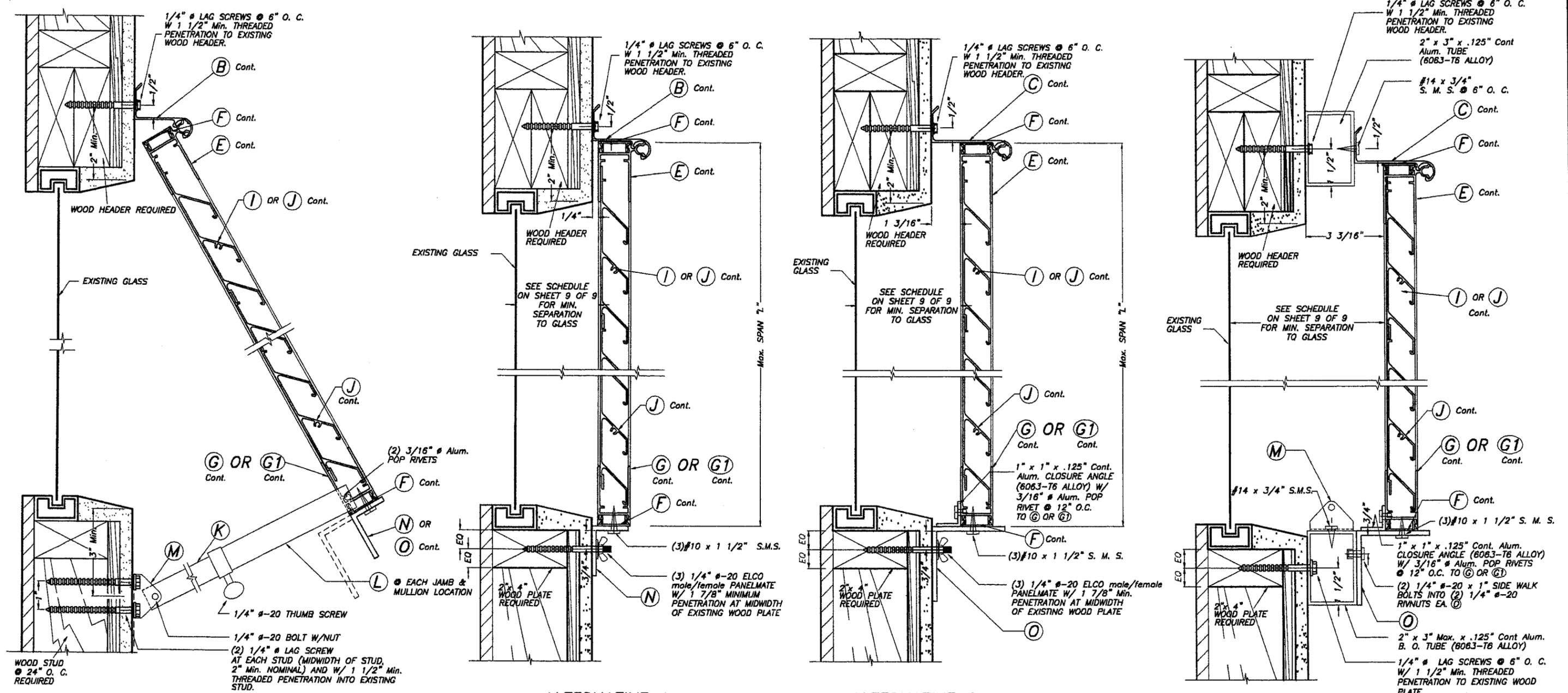
**DETAIL 3 TRAPPED**  
SCALE: 1/2" = 1"

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 06-0217.04  
Expiration Date 02/24/2007  
By *Helmut A. Nuber*  
Miami Design Product Control  
Division

F.B.C. (High Velocity Hurricane Zone)

 <b>TILTECO inc.</b> TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, MIRAMAR GARDENS, FLORIDA 33166 Phone: (305)871-1330, Fax: (305)871-1331 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167 © 2004 TILTECO INC.	MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER ASSA/EXTRUDED BERTHA BAHAMA SHUTTER	DRAWN BY: S.M.  2/2/06 DATE
	 <b>METALTECH, inc.</b> EST. 1957 7635 W. SECOND CT., HIALEAH, FL 33014 (ASSA #28) PHONE: (305)823-1804, FAX: (305)826-7879	06-013 DRAWING No

*Handwritten signature and date: 2/2/06*



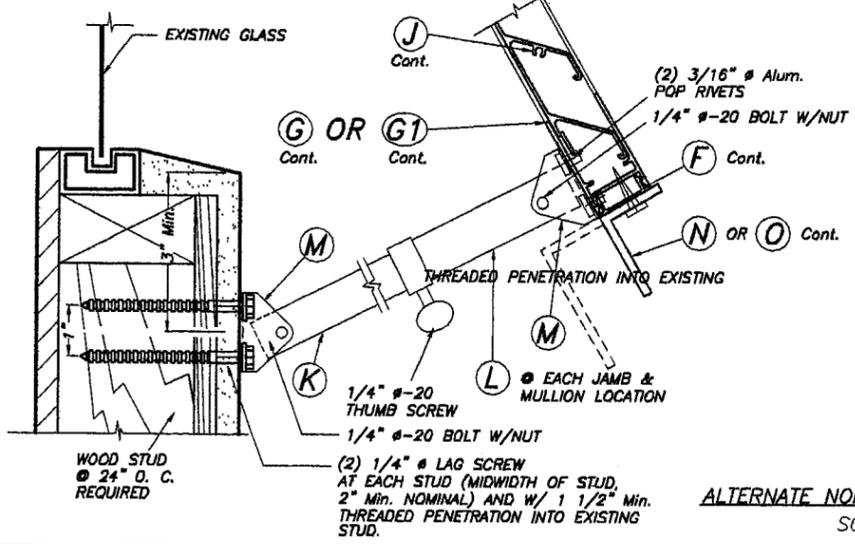
**NON HURRICANE POSITION DETAIL:** (74 m.p.h. OR LESS WIND SPEED)  
SCALE: 3/8" = 1"

**ALTERNATIVE 1**  
HURRICANE POSITION  
SCALE: 3/8" = 1"

**ALTERNATIVE 2**  
HURRICANE POSITION  
SCALE: 3/8" = 1"

**ALTERNATIVE 3**  
HURRICANE POSITION  
SCALE: 3/8" = 1"

**WALL MOUNTING INSTALLATION & BUILD-OUT**  
- SECTION A  
**INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS**



**ALTERNATE NON HURRICANE POSITION DETAIL**  
SCALE: 3/8" = 1"

- NOTES:**
- INSTALLATIONS ARE ONLY VALID FOR INSTALLATIONS WITH DESIGN WIND LOADS LESS OR EQUAL THAN +62.0, -75.0 p.s.f. AND Max. SHUTTER SPAN AS PER SCHEDULES ON SHEET 9 OF 9.
  - NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19% M. M. C. W/ SPECIFIC DENSITY OF 0.55.
  - FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

PRODUCT REVISED  
to comply with the Florida  
Building Code  
Acceptance No. 06-0217-04  
Expiration Date 02/24/2007  
By *Helmut A. Miller*  
National Product Control  
Director

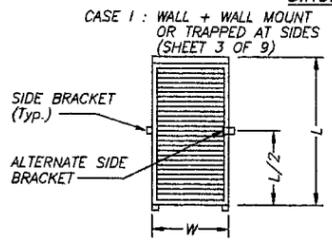
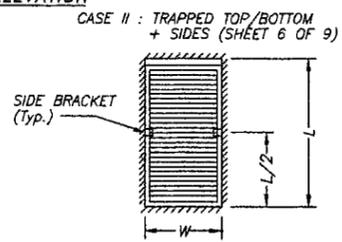
F.B.C. (High Velocity Hurricane Zone)

 <b>TILECO INC.</b> TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone: (305)871-1530 Fax: (305)871-1531 EB-0006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167 © 2004 TILECO INC.		MAXIMUM IMPACT EXTRUDED BAHAMA SHUTTER ASSA/EXTRUDED BERTHA BAHAMA SHUTTER		DRAWN BY: S.M.																		
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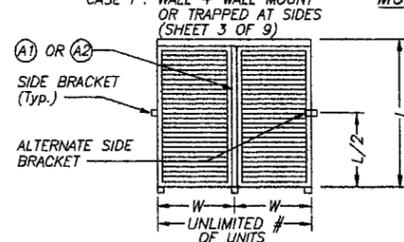
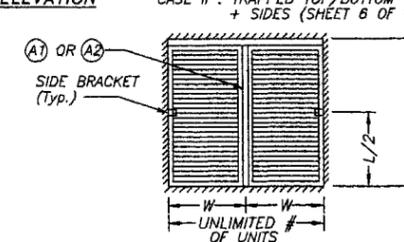
**SCHEDULE # 1**

**MAXIMUM SINGLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE**

BAHAMA SHUTTER TYPE	SINGLE UNIT ELEVATION			
	CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 3 OF 9)		CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 6 OF 9)	
				
DESIGN PRESSURE RATING (p.s.f.) AND CASE #	MAXIMUM UNIT WIDTH "W" (IN)	MAXIMUM SPAN "L" (IN)		
		W/O SIDE BRACKET	W/ SIDE BRACKET	MINIMUM SEPARATION TO GLASS (IN)
CASES I & II +56.0, -63.0	42"	52"	N/A	3 1/8"
CASES I & II +75.0, -100.0	42"	N/A	96"	2 1/8"

**SCHEDULE # 1A**

**MAXIMUM MULTIPLE UNIT FOR A CORRESPONDING DESIGN PRESSURE AND MOUNTING TYPE**

BAHAMA SHUTTER TYPE	MULTIPLE UNIT ELEVATION				
	CASE I : WALL + WALL MOUNT OR TRAPPED AT SIDES (SHEET 3 OF 9)		CASE II : TRAPPED TOP/BOTTOM + SIDES (SHEET 6 OF 9)		
					
DESIGN PRESSURE RATING (p.s.f.) AND CASE #	MAXIMUM UNIT WIDTH "W" (IN)	MAXIMUM SPAN "L" (IN)			
		W/O SIDE BRACKET	W/ SIDE BRACKET	INTERIOR MULLION TYPE REQUIRED	MINIMUM SEPARATION TO GLASS (IN)
CASE I +50.0, -43.3	36 1/2"	72 1/2"	N/A	A1	2 1/2"
CASE I +62.0, -75.0	36 1/2"	N/A	83"	A2	2 3/8"
CASE II +62.0, -75.0	36 1/2"	N/A	84"	A2	2 3/8"

**SCHEDULE # 2**

**LIMITATIONS FOR SINGLE AND MULTIPLE UNITS BAHAMA SHUTTER'S UNIT WIDTH (IN), SPAN L (IN) AND CORRESPONDING MAXIMUM DESIGN PRESSURE (p.s.f.) FOR THE INSTALLATION OF SIDE & SILL BRACKETS INTO CONCRETE & MASONRY BUILDINGS BY MEANS OF (3) 1/4" Ø x 7/8" CALK-IN ANCHORS \***

MAXIMUM NEGATIVE DESIGN PRESSURE RATING (p.s.f.)	SINGLE UNITS				MULTIPLE UNITS			
	SIDE & SILL BRACKETS **							
	TO CONCRETE		TO BLOCK		TO CONCRETE		TO BLOCK	
	Max. "W"	Max. "L"	Max. "W"	Max. "L"	Max. "W"	Max. "L"	Max. "W"	Max. "L"
-55.7	42"	96"	42"	96"	36 1/2"	84"	36"	84"
-65.0	42"	96"	42"	96"	36 1/2"	84"	36"	72"
-75.0	42"	96"	42"	96"	36 1/2"	83"	31"	84"
-83.0	42"	96"	42"	96"	N/A	N/A	36 1/2"	62"
-100.0	42"	96"	42"	63"	N/A	N/A	27"	83"
			36"	73"	N/A	N/A	N/A	N/A

\* FOR ELCO PANELMATES ((3) 1/4" Ø W/ 1 7/8" PENETRATION) USED AT SILL & SIDE BRACKETS FOR INSTALLATIONS INTO WOOD. SEE SCHEDULES # 1 & # 1A FOR SHUTTER SIZE.

\*\* IN ANY CASE, MAXIMUM "W" & "L" VALUES W/ CORRESPONDING DESIGN LOADS SHALL NOT EXCEED MAXIMUM VALUES INDICATED ON SCHEDULES # 1 & 1A.

**SCHEDULE # 3**

**MAXIMUM ANCHOR SPACING AT TOP FEMALE HINGES (B), (C), OR (D) AS WELL AS SILL ANGLE (A) AT BOTTOM (AS APPLICABLE) FOR INSTALLATIONS INTO Poured CONCRETE HEADERS AND SILL \*\*\***

DESIGN PRESSURE RATING (p. s. f.)	SINGLE & MULTIPLE UNITS
	TOP & BOTTOM TO CONCRETE
ALL PRESSURES COVERED IN SCHEDULE # 1 & # 1A	9" O.C. TOP & 7" O.C. BOTTOM.

\*\*\* SEE SHEETS 7 & 8 OF 9 FOR ANCHOR SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

PRODUCT REVISED as complying with the Florida Building Code  
 Acceptance No 06-0217-04  
 Expiration Date 02/24/2007  
 By *Helmy A. Miller*  
 Miami Dade Product Control Division

**F.B.C. (High Velocity Hurricane Zone)**

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*2/2/06*