



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

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Homeshield Industries of Miami, Inc.
5761 NW 37th Avenue
Miami, Florida 33142

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: "Super Shutter" Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 10-032, titled " Supper Shutter Accordion ", sheets 1 through 6 of 6, prepared by Tilteco, Inc., dated March 03, 2010, last revision #1 dated March 03, 2010, 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 the 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 & renews** NOA # **09-0226.07** and consists of this page 1, evidence submitted pages E-1, E-2, E-3 & E-4 and approval document mentioned above.

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



Helmy A. Makar
 04/07/2010

NOA No. 10-0308.05
Expiration Date: 03/06/2011
Approval Date: 04/07/2010
Page 1

Homeshield Industries of Miami, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #97-0212.08

A. DRAWINGS

1. *Drawing Number 96-252 sheets 1 through 6 of 6 dated 08/13/96, revision #1 dated 01/23/98, signed and sealed on 01/23/98 by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on Uniform Static Air Pressure Test of "Accordion Shutter", for various blade heights, prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-94-347, dated Oct. 20, 1994, signed and sealed by Hector M. Medina, P.E.*
2. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of "Accordion Shutter", prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-94-361, dated Oct. 31, 1994, signed and sealed by Hector M. Medina, P.E.*
3. *Test report on Large Missile Impact Test of "Accordion Shutter", for center mate impact of 155" blade height specimen, prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-95-435, dated March 29, 1995, signed and sealed by Hector M. Medina, P.E.*
4. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of "Accordion Shutter", prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-96-582, dated December 3, 1996, signed and sealed by Hector M. Medina, P.E.*

C. CALCULATIONS

1. *Anchor analysis dated December 20, 21, 22 & 23, 1994, Pages A-0 thru A-12 and AP-1 thru AP-11, prepared by Al-Farooq Corp., signed and sealed by Humayoun Farooq, P.E.*
2. *Comparative Analysis dated October 01, 1996, Pages 1 through 14 of 14, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, P.E.*
3. *Anchor analysis received on September 17, 1997, Pages 1 through 18 of 18, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Test Report #800414-A, issued by Werner Co. dated 09/30/94 with chemical composition and mechanical properties for aluminum alloy 6063-T6.*
2. *Tensile Test Report No. HETI-94-T39, prepared by Hurricane Engineering & Testing Inc. dated 11/09/94, signed and sealed by Hector M. Medina, P.E.*
3. *Mill Certified Test Report #805368-A-03, issued by Werner Co. dated 09/07/96 with chemical composition and mechanical properties for aluminum alloy 6063-T6.*
4. *Tensile Test Report No. HETI-96-T39, prepared by Hurricane Engineering & Testing Inc. dated 11/19/96, signed and sealed by Hector M. Medina, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-1122.04

A. DRAWINGS

1. *None.*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner

NOA No. 10-0308.05

Expiration Date: 03/06/2011

Approval Date: 04/07/2010

Homesield Industries of Miami, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

E. STATEMENTS

1. *A letter by Homesield Industries, Inc. stating that the product has not changed.*
2. *Letter by Tilteco Inc., dated November 2, 1999, certifying that Tilteco, Inc. is still the engineer of record and continues to be in the engineering business, signed by Mr. Walter A. Tillit, Jr., P.E.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0106.08

A. DRAWINGS

1. *Drawing No. 02-528, titled " Supper Shutter Accordion ", sheets 1 through 6 of 6, prepared by Tilteco, Inc., dated November 07, 2002, last revision #1 dated November 07, 2002 signed and sealed Walter A. Tillit, Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

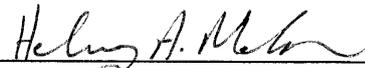
E. STATEMENTS

1. *Letter issued by Mr. Walter A. Tillit, Jr., P.E., dated December 04, 2002, indicating that the only change is up-date General Note numbers 1 & 10 to reference the Florida Building Code and ASCE 7-98.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 05-0912.06

A. DRAWINGS:

1. *Drawing No. 05-182, titled " Supper Shutter Accordion ", sheets 1 through 6 of 6, prepared by Tilteco, Inc., dated August 22, 2005, last revision #1 dated August 22, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*



**Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner**

NOA No. 10-0308.05

Expiration Date: 03/06/2011

Approval Date: 04/07/2010

Homesfield Industries of Miami, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS:

1. *None.*

C. CALCULATIONS:

1. *Anchor analysis dated September 08, 2005, Pages 1 through 47 of 47, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATION:

1. *None.*

F. STATEMENTS

1. *Letter from Tilteco, Inc., dated September 08, 2005, signed and sealed by Walter A. Tillit Jr., P.E., certifying that the drawing (No. 05-182) prepared for Homesfield Industries, Inc., signed and sealed by Walter A. Tillit, Jr., P.E., is in compliance with the 2004 Edition of the Florida Building Code.*

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 07-0831.07

A. DRAWINGS:

1. *None.*

B. TESTS:

1. *None.*

C. CALCULATIONS:

1. *None.*

D. QUALITY ASSURANCE

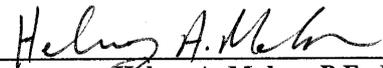
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATION:

1. *None.*

F. STATEMENTS

1. *Letter from Tilteco, Inc., dated August 09, 2007, signed and sealed by Walter A. Tillit Jr., P.E., certifying that Tilteco, Inc. is still the engineer of the record for this product and manufacturer and continues to be in the engineering business.*

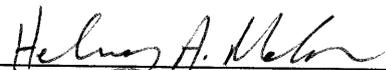


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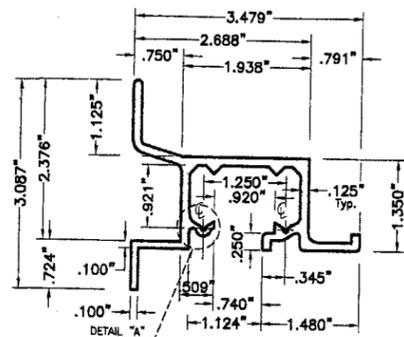
Homeshield Industries of Miami, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

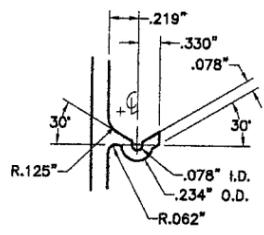
- 6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 09-0226.07**
- A. DRAWINGS:**
1. *None.*
- B. TESTS:**
1. *None.*
- C. CALCULATIONS:**
1. *None.*
- D. QUALITY ASSURANCE**
1. *By Miami-Dade County Building Code Compliance Office.*
- E. MATERIAL CERTIFICATION:**
1. *None.*
- 7. NEW EVIDENCE SUBMITTED**
- A. DRAWINGS:**
1. *Drawing No. 10-032, titled " Supper Shutter Accordion ", sheets 1 through 6 of 6, prepared by Tilteco, Inc., dated March 03, 2010, last revision #1 dated March 03, 2010, signed and sealed by Walter A. Tillit Jr., P.E.*
- B. TESTS:**
1. *None.*
- C. CALCULATIONS:**
1. *None.*
- D. QUALITY ASSURANCE**
1. *By Miami-Dade County Building Code Compliance Office.*
- E. MATERIAL CERTIFICATION:**
1. *None.*
- F. OTHERS**
1. *Bill of Sales.*



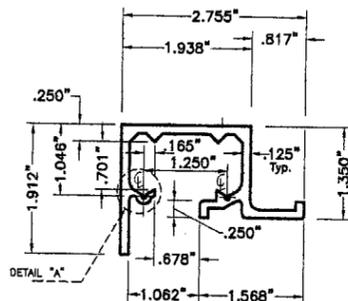
Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 10-0308.05
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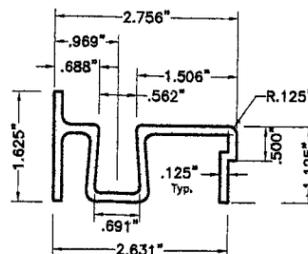
(A) HEADER-WALL MOUNTING
(A) SILL-WALL MOUNTING (INVERTED USE)
 SCALE: 3/8" = 1"



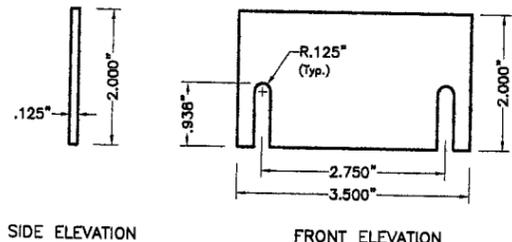
DETAIL "A" HEADER
 SCALE: 2 : 1



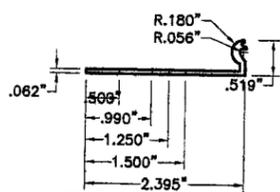
(B) HEADER CEILING MOUNTING
 SCALE: 3/8" = 1"



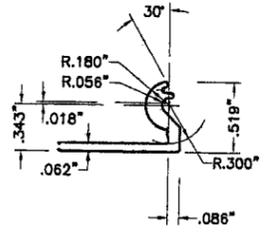
(C) SILL
 SCALE: 3/8" = 1"



(D) INSIDE LOCKER
 SCALE: 3/8" = 1"

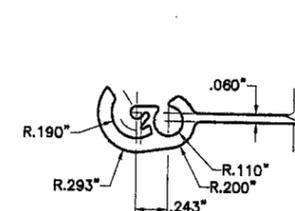


(E) 180° STARTER
 SCALE: 3/8" = 1"

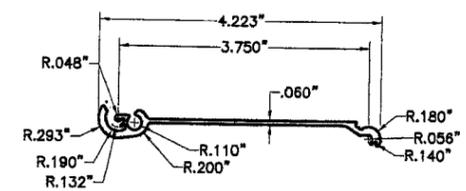


DETAIL 180° STARTER
 SCALE: 2 : 1

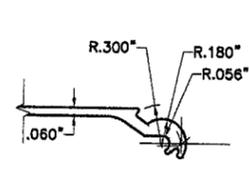
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 10-0308-05
 Expiration Date 03/06/2011
 By *Walter A. Tillit Jr.*
 Miami Dade Product Control
 Division



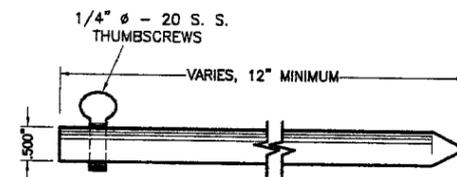
DETAIL BLADE
 SCALE: 2 : 1



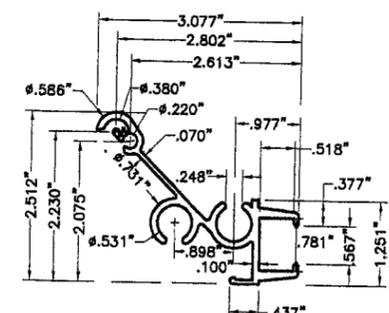
(F) LOUVER BLADE
 SCALE: 3/8" = 1"



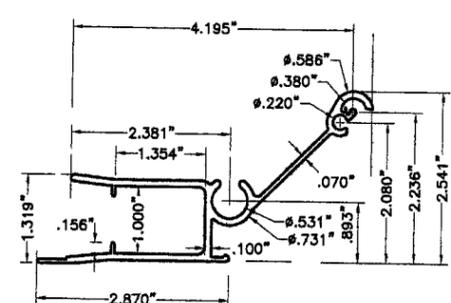
DETAIL BLADE
 SCALE: 2 : 1



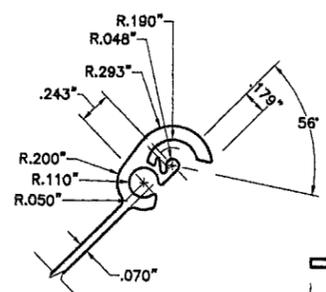
(G) LOCKING PIN
 SCALE: 3/8" = 1"



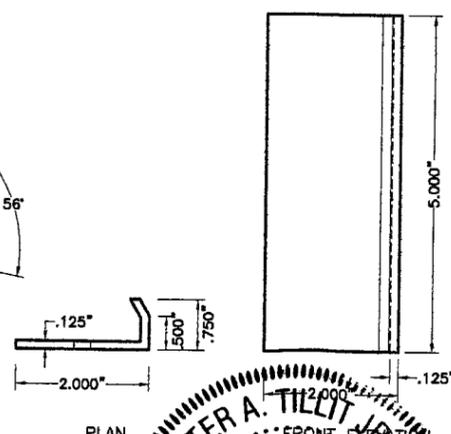
(H) MALE LOCK SLAT
 SCALE: 3/8" = 1"



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



DETAIL FEMALE LOCK & MALE LOCK
 SCALE: 2 : 1



(J) OUTSIDE LOCKER
 SCALE: 3/8" = 1"

COMPONENTS

GENERAL NOTES:

1. ACCORDION SHUTTER SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE. THIS ACCORDION 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. FASTENERS SPACING IN WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. ACCORDION SHUTTER'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE.

2. STAINLESS STEEL SHEET METAL SCREWS USED AT BLADE PIN SHALL BE # 14 x 3", TYPE B, 410-H MINIMUM SERIES. SCREWS SHALL BE COATED WITH XLAN 5000 SERIES FLUOROPOLYMER COATINGS AS MANUFACTURED BY WHITFORD Co., BOX 507, WEST CHESTER PA. 19381.

3. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY (UNLESS OTHERWISE NOTED).

4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES WITH 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH.

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

6. BOLTS TO BE ASTM A-307 GALVANIZED OR AISI 304 SERIES STAINLESS STEEL WITH 35 ksi MINIMUM YIELD STRENGTH.

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

(A) TO EXISTING POURED CONCRETE: MIN. 3000 p.s.i. COMPRESSIVE STRENGTH.

- 1/4" Ø TAPCON, AS MANUFACTURED BY ITW BUILDEX, INC.

- 1/4" Ø x 7/8" CALK-IN ANCHOR AS MANUFACTURED BY POWERS FASTENERS, INC.

NOTES:

A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO CONCRETE IS 1 3/4".

A.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.

A.3) MINIMUM EDGE DISTANCE (E.D.) INTO CONCRETE IS 2 1/2" FOR TAPCON ANCHOR & 3" FOR CALK-IN ANCHOR. EDGE DISTANCE IS BEYOND ANY FINISH MATERIAL.

A.4) 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) & A.3) ABOVE.

(B) TO EXISTING CONCRETE BLOCK WALL: ASTM C-90

- 1/4" Ø TAPCON, AS MANUFACTURED BY ITW BUILDEX, INC.

- 1/4" Ø x 7/8" CALK-IN ANCHORS AS MANUFACTURED BY POWERS FASTENERS, INC.

NOTES:

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

B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4" Ø-20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST AND 1" MINIMUM FOR WALLS WITH NO STUCCO.

B.3) MINIMUM EDGE DISTANCE (E.D.) INTO CONCRETE IS 2 1/2" FOR TAPCON ANCHOR & 3 3/4" FOR CALK-IN ANCHOR. EDGE DISTANCE IS BEYOND ANY FINISH MATERIAL.

B.4) 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 1 1/4" MINIMUM FOR ANCHORS MENTIONED IN B.1.), & 7/8" FOR ANCHORS MENTIONED IN B.2.).

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

8. EACH UNIT SHALL HAVE A READILY VISIBLE DECAL INSTRUCTING OWNER OR TENANT THE MANDATORY USE OF TWO ANGLES FASTENED TOGETHER WITH BOLT AND WINGNUT, OR TWO FLAT PLATES SECURED WITH THUMB SCREWS, AT CENTER MATES DURING PERIODS OF HURRICANE WARNING.

9. 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. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.

10. ACCORDION SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION. ONE LABEL SHALL BE PLACED FOR EVERY UNIT. LABEL SHALL READ AS FOLLOWS:

HOMESHIELD INDUSTRIES OF MIAMI
MIAMI, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

11. (A) THIS PRODUCT APPROVAL DOCUMENT (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 PRODUCT APPROVAL DOCUMENT PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

(C) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

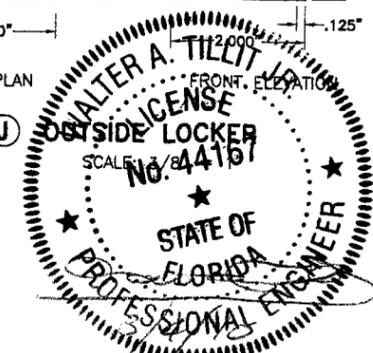
(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE PROFESSIONAL OF RECORD (P.O.R) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D.

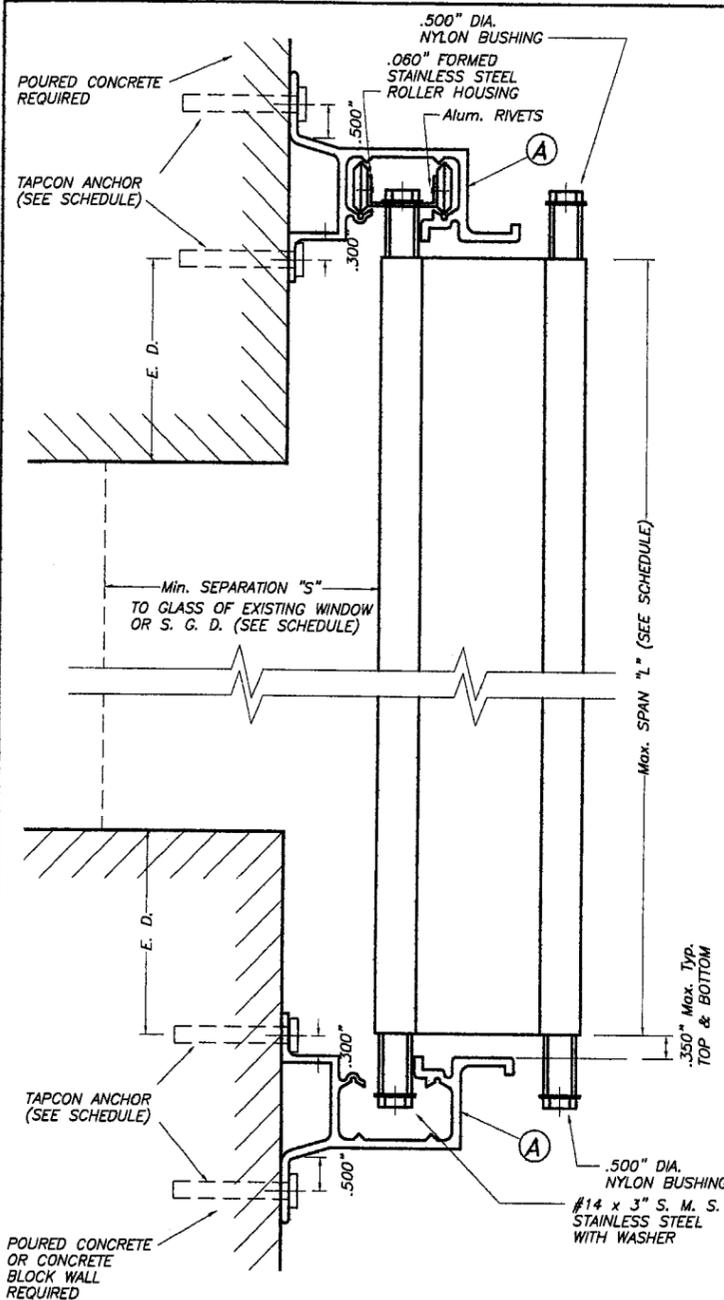
(E) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

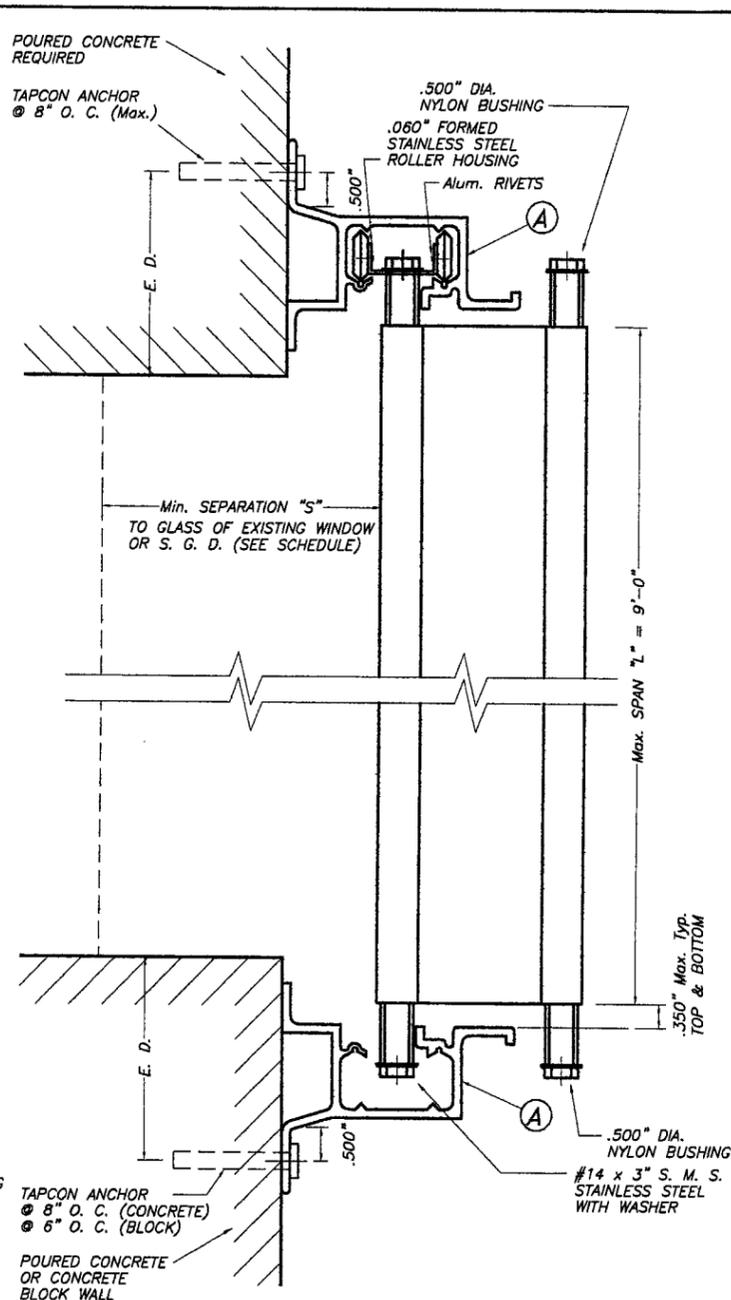
© 2010 TILTECO INC.
TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305 - VIRGINIA GARDENS, FL 33166
 Phone : (305) 871-1530 , Fax : (305) 871-1531
 e-mail: tilteco@aol.com
 EB-0006719
 WALTER A. TILLIT Jr., P.E.
 FLORIDA Lic. # 44167

SUPER SHUTTER ACCORDION		DRAWN BY: M.C.V.
HOMESHIELD INDUSTRIES OF MIAMI		3/3/10 DATE
5761 N.W. 37th AVENUE MIAMI, FLORIDA 33142 PH:(305)691-2888, FAX:(305)691-2244		10-032 DRAWING No
REV. NO	DESCRIPTION	DATE
1	OLD 08-025	3/3/10
2	-	-
REV. No	DESCRIPTION	DATE
3	-	-
4	-	-
SHEET 1 OF 6		





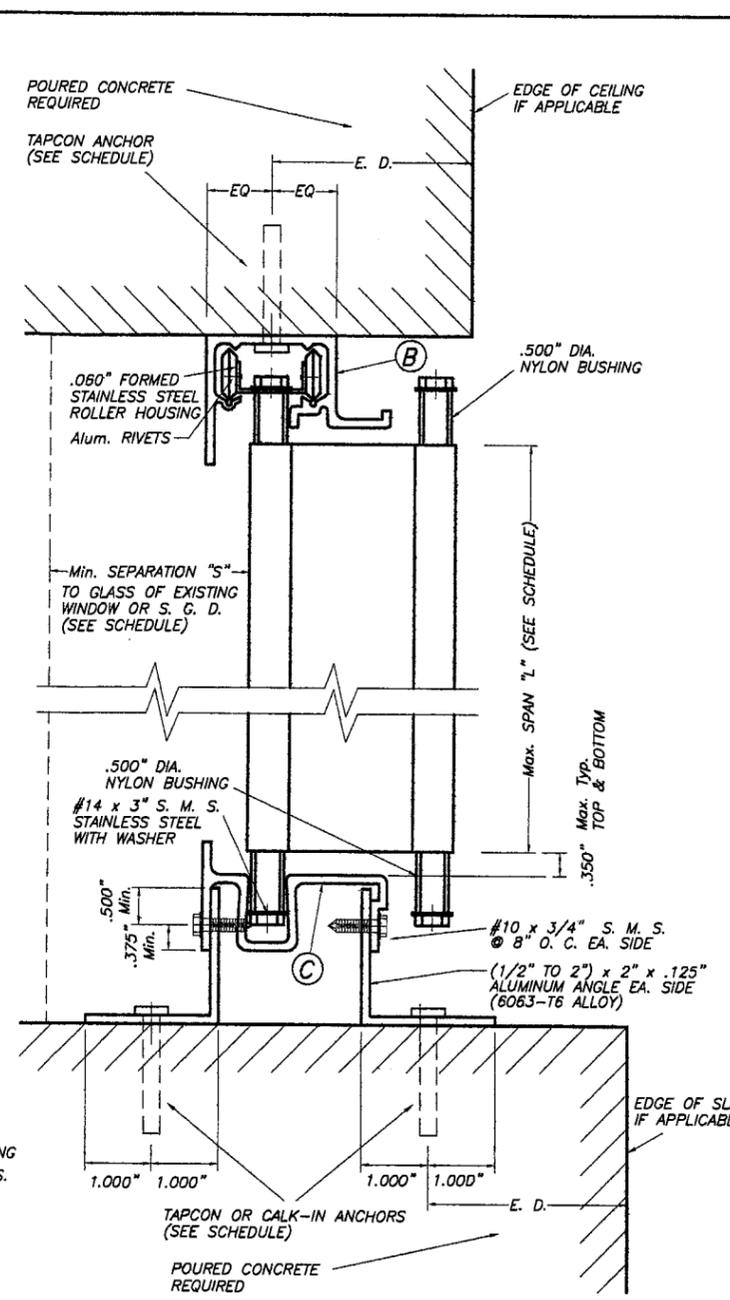
WALL MOUNTING INSTALLATION
- SECTION A SCALE: 3/8" = 1"



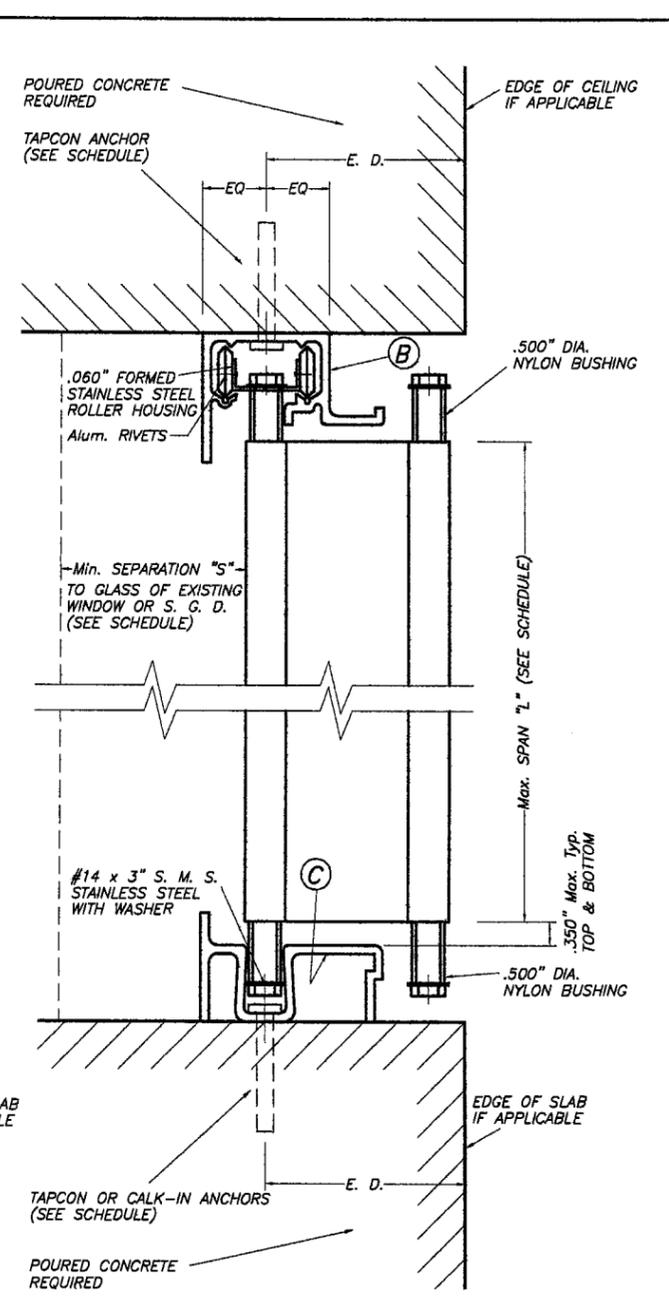
WALL MOUNTING INSTALLATION
- SECTION A1 SCALE: 3/8" = 1"

NOTE: THIS SECTION ONLY VALID FOR DESIGN LOADS UP TO 75 psf.

E. D. = EDGE DISTANCE
 (SEE SCHEDULE ON SHEET 5 OF 6)



CEILING/FLOOR MOUNTING INSTALLATION
- SECTION B SCALE: 3/8" = 1"



CEILING/FLOOR MOUNTING INSTALLATION
- SECTION B1 SCALE: 3/8" = 1"

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 10-0308.05
 Expiration Date 03/06/2011
 By *Helmut A. Miller*
 Miami Dade Product Control
 Division



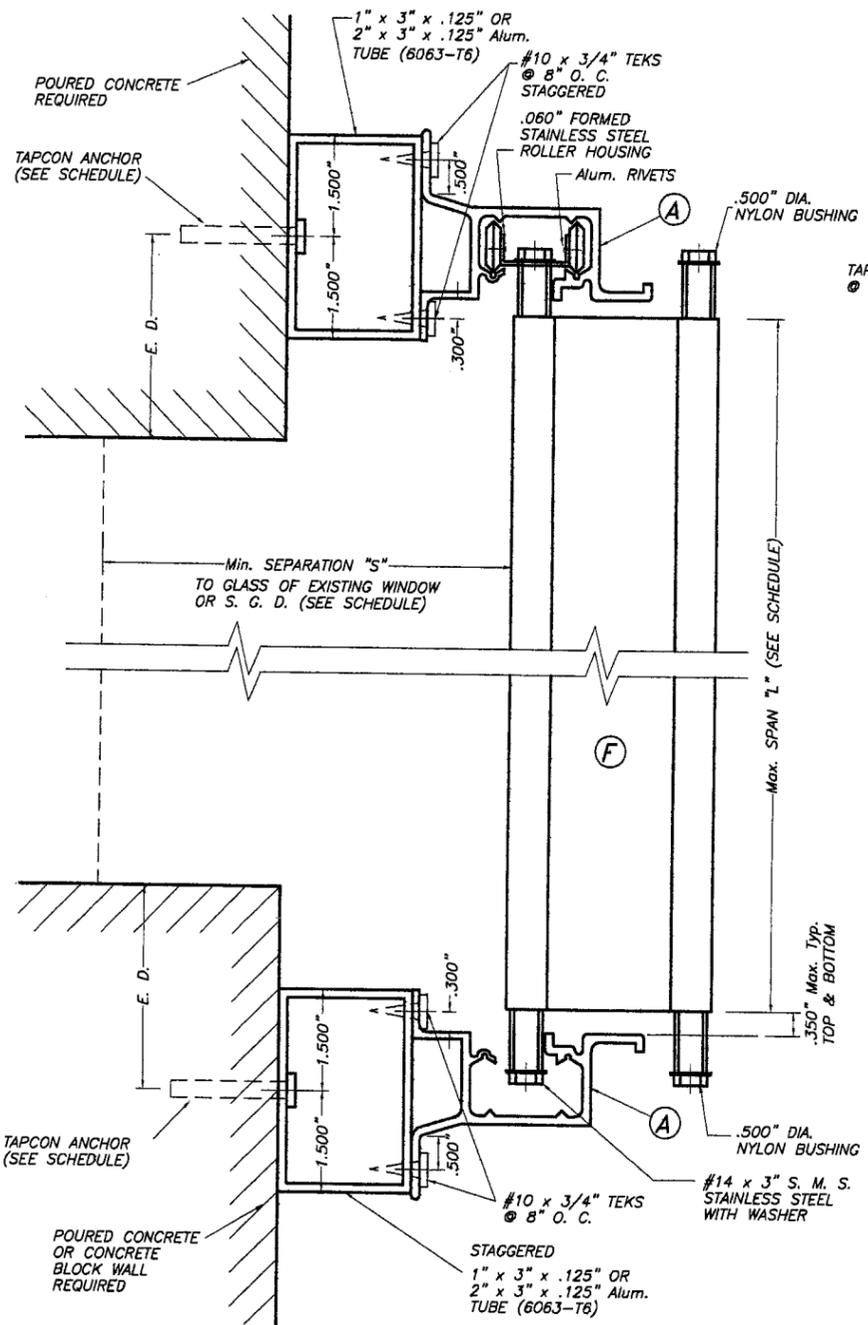
© 2010 TILTECO INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305 - VIRGINIA GARDENS, FL 33166
 Phone: (305) 871-1530, Fax: (305) 871-1531
 e-mail: tilteco@aol.com
 EB-0006719
 WALTER A. TILLIT Jr., P.E.
 FLORIDA Lic. # 44167

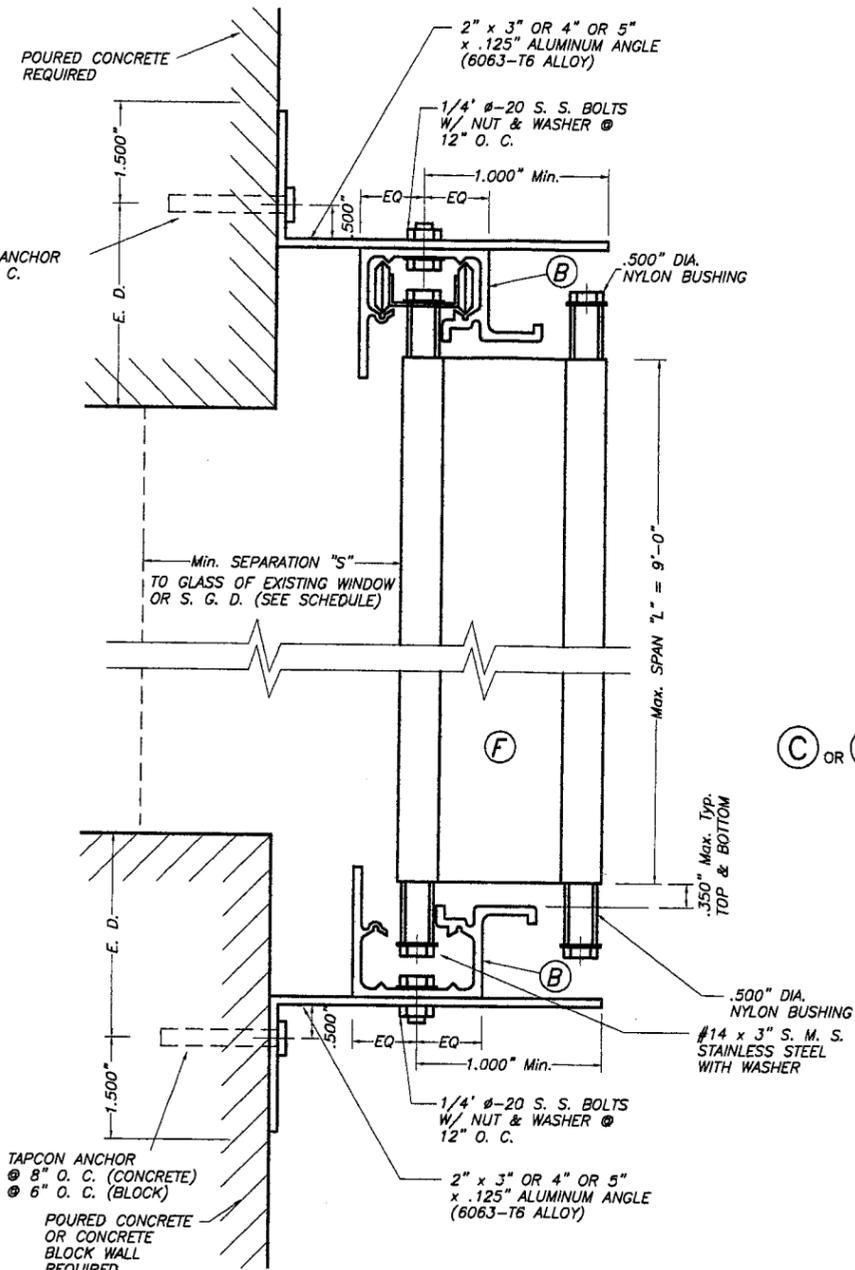
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SUPER SHUTTER ACCORDION		DRAWN BY: M.C.V.	
HOMESHIELD INDUSTRIES OF MIAMI		3/3/10 DATE	
5761 N.W. 37th AVENUE MIAMI, FLORIDA 33142 PH:(305)691-2888, FAX:(305)691-2244		10-032 DRAWING No	
REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 09-025	3/3/10	3
2	-	-	4
SHEET 2 OF 6			



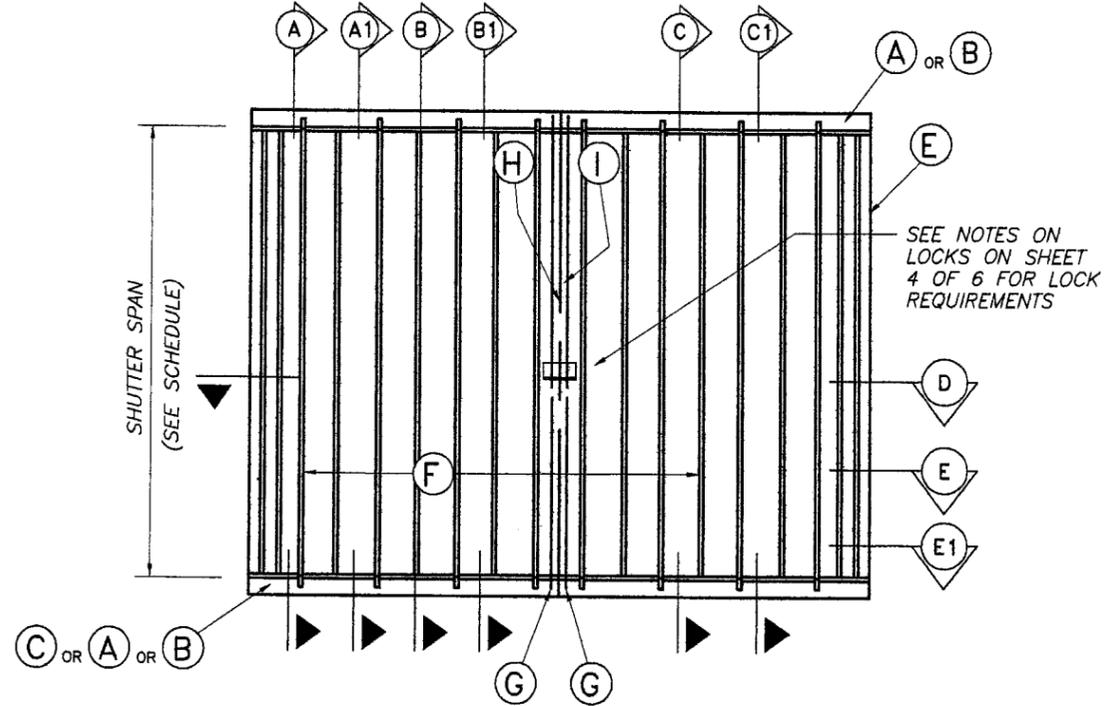
WALL MOUNTING INSTALLATION (OFFSET)
- SECTION C SCALE: 3/8" = 1"

E. D. = EDGE DISTANCE
 (SEE SCHEDULE ON
 SHEET 5 OF 6)



WALL MOUNTING INSTALLATION (OFFSET)
- SECTION C1 SCALE: 3/8" = 1"

NOTE: THIS SECTION ONLY VALID FOR DESIGN
 LOADS UP TO 75 psf.



TYPICAL ELEVATION N. T. S.

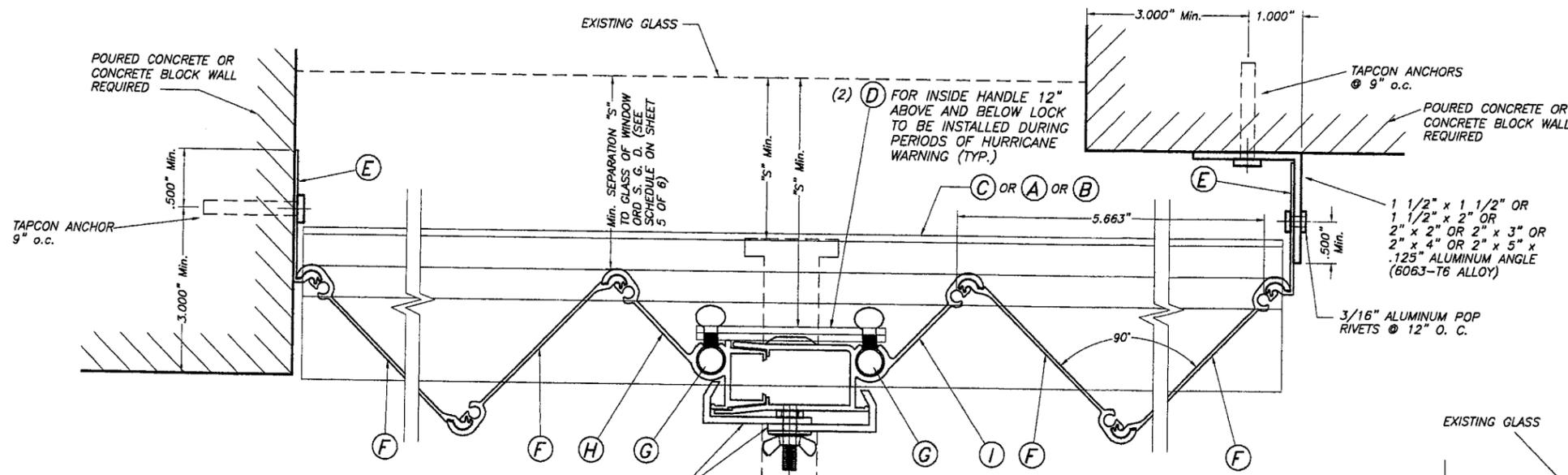
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 10-030805
 Expiration Date 03/06/2011
 By *Helmut A. ...*
 Miami Dade Product Control
 Division

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 TILLIT TESTING & ENGINEERING COMPANY
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 Phone: (305) 871-1530, Fax: (305) 871-1531
 e-mail: tilteco@aol.com
 EB-0006719
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 FLORIDA Lic. # 44167

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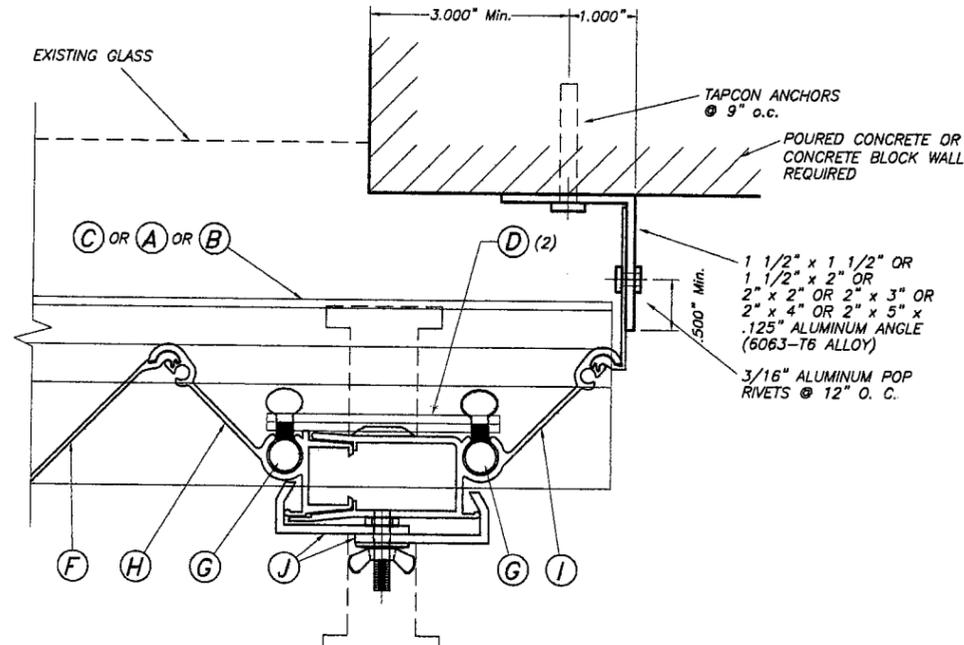
SUPER SHUTTER ACCORDION		DRAWN BY: M.C.V.
HOMESHIELD INDUSTRIES OF MIAMI		3/3/10 DATE
5761 N.W. 37th AVENUE MIAMI, FLORIDA 33142 PH:(305)691-2888, FAX:(305)691-2244		10-032 DRAWING No
REV. NO	DESCRIPTION	DATE
1	OLD 09-025	3/3/10
2	-	-

SHEET 3 OF 6



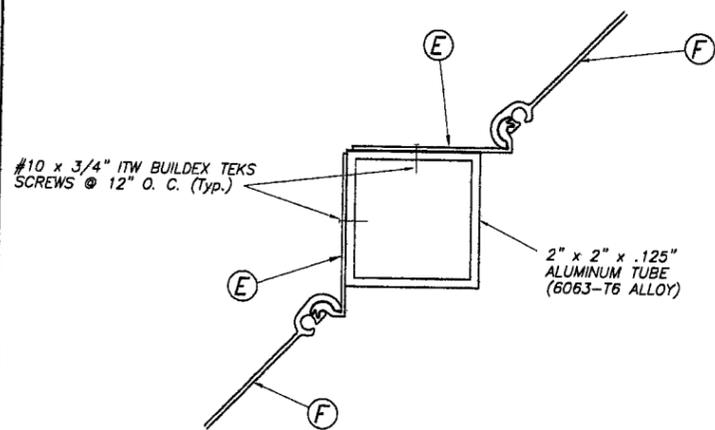
SECTION D

SCALE: 3/8" = 1"



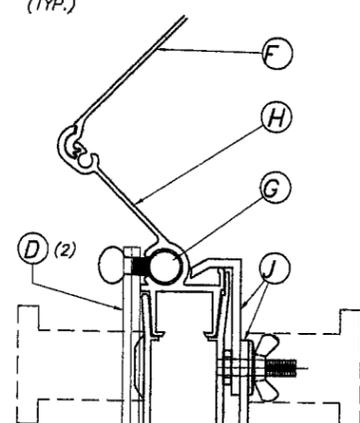
ONE SIDED SHUTTER : END CONNECTION DETAIL

SCALE: 3/8" = 1"

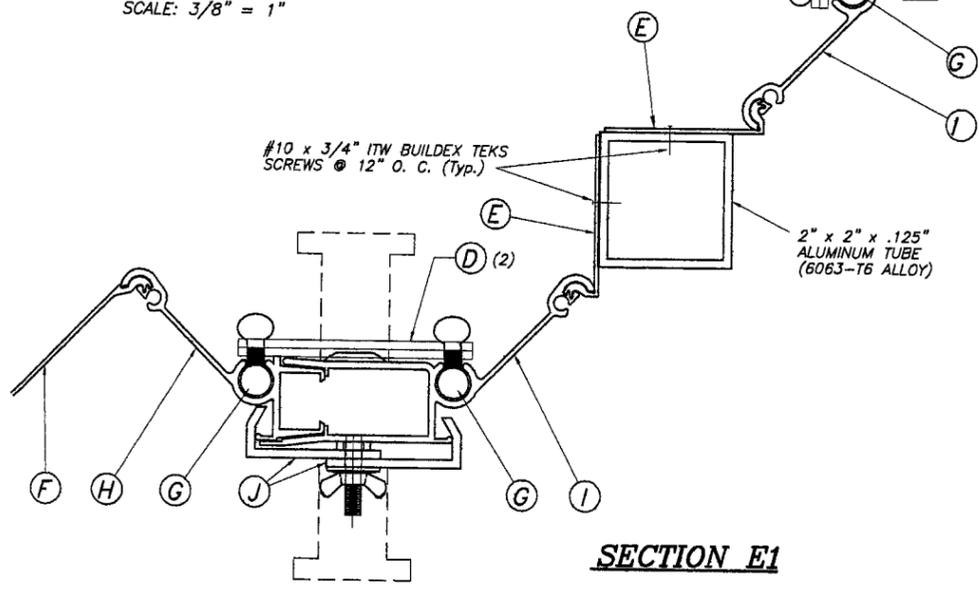


SECTION E

SCALE: 3/8" = 1"

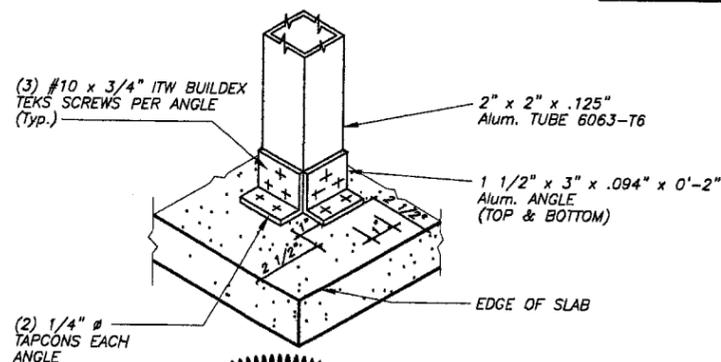


(2) WITH 1/4"-20 BOLT & WINGNUT FOR OUTSIDE HANDLE 12" ABOVE AND BELOW LOCK TO BE INSTALLED DURING PERIODS OF HURRICANE WARNING. (TYP.)



SECTION E1

SCALE: 3/8" = 1"



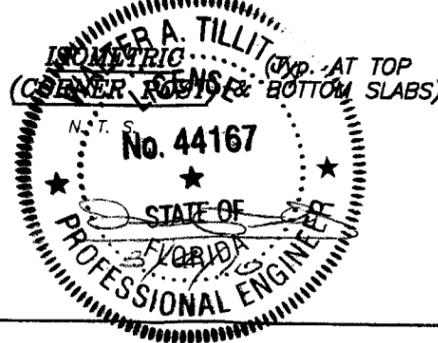
(3) #10 x 3/4" ITW BUILD EX TEKS SCREWS PER ANGLE (Typ.)

2" x 2" x .125" Alum. TUBE 6063-T6

1 1/2" x 3" x .094" x 0'-2" Alum. ANGLE (TOP & BOTTOM)

EDGE OF SLAB

(2) 1/4" # TAPCONS EACH ANGLE



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 EB-0006719
 WALTER A. TILLIT Jr., P.E.
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SUPER SHUTTER ACCORDION

HOMESHIELD INDUSTRIES OF MIAMI

5761 N.W. 37th AVENUE
 MIAMI, FLORIDA 33142
 PH:(305)691-2888, FAX:(305)691-2244

DRAWN BY:
M.C.V.

3/3/10
DATE

10-032
DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 09-025	3/3/10	3	-	-
2	-	-	4	-	-

SHEET 4 OF 6

PRODUCT REVISED
 as complying with the Florida
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 Acceptance No 10-0308.05
 Expiration Date 03/06/2011

By *Helmut H. Miller*
 Miami Dade Product Control
 Division

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

(VALID FOR SECTIONS A, B, B1 & C ON SHEETS 2 & 3 OF 6).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-05 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 PANEL SPAN "L" (ft.)		MINIMUM SEPARATION "S" TO GLASS (in.)	
	*	**	*	**
45.1	12'-11"	13'-10"	3"	3"
47.8	12'-11"	13'-8"	3"	3"
49.0	12'-11"	13'-7"	3"	3"
50.5	12'-11"	13'-6"	3"	3"
52.0	12'-11"	13'-4"	3"	3"
52.4	12'-11"	13'-4"	3"	3"
55.0	12'-11"	13'-2"	3"	3"
55.2	12'-11"	13'-2"	3"	3"
55.6	12'-11"	13'-2"	3"	3"
57.2	12'-11"	13'-0"	3"	3"
58.6	12'-11"	13'-0"	3"	3"
58.8	12'-11"	13'-0"	3"	3"
59.5	12'-11"	12'-11"	3"	3"
59.7	12'-11"	12'-11"	3"	3"
61.5	12'-10"	12'-10"	3"	3"
61.8	12'-10"	12'-10"	3"	3"
61.9	12'-10"	12'-10"	3"	3"
63.4	12'-9"	12'-9"	3"	3"
63.6	12'-9"	12'-9"	3"	3"
63.7	12'-8"	12'-8"	3"	3"
66.9	12'-7"	12'-7"	3"	3"
67.0	12'-7"	12'-7"	3"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)		MINIMUM SEPARATION "S" TO GLASS (in.)	
	*	**	*	**
67.5	12'-6"	12'-6"	3"	3"
70.1	12'-5"	12'-5"	3"	3"
71.1	12'-4"	12'-4"	3"	3"
71.4	12'-4"	12'-4"	3"	3"
71.5	12'-4"	12'-4"	3"	3"
72.9	12'-3"	12'-3"	3"	3"
75.1	12'-2"	12'-2"	3"	3"
75.2	12'-2"	12'-2"	3"	3"
75.3	12'-2"	12'-2"	3"	3"
77.0	12'-2"	12'-2"	3"	3"
77.5	12'-1"	12'-1"	3"	3"
78.8	12'-0"	12'-0"	3"	3"
80.7	12'-0"	12'-0"	3"	3"
81.5	11'-11"	11'-11"	3"	3"
82.5	11'-10"	11'-10"	3"	3"
83.4	11'-10"	11'-10"	3"	3"
86.2	11'-9"	11'-9"	3"	3"
86.7	11'-9"	11'-9"	3"	3"
86.8	11'-9"	11'-9"	3"	3"
88.5	11'-8"	11'-8"	3"	3"
90.3	11'-8"	11'-8"	3"	3"
90.8	11'-7"	11'-7"	3"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)		MINIMUM SEPARATION "S" TO GLASS (in.)	
	*	**	*	**
91.4	11'-7"	11'-7"	3"	3"
92.7	11'-6"	11'-6"	3"	3"
93.8	11'-6"	11'-6"	3"	3"
94.8	11'-6"	11'-6"	3"	3"
96.6	11'-5"	11'-5"	3"	3"
96.8	11'-5"	11'-5"	3"	3"
97.7	11'-5"	11'-5"	3"	3"
100.5	11'-4"	11'-4"	3"	3"
101.5	11'-4"	11'-4"	3"	3"
103.7	11'-3"	11'-3"	3"	3"
106.5	11'-2"	11'-2"	3"	3"
108.8	11'-2"	11'-2"	3"	3"
110.6	11'-0"	11'-0"	3"	3"
111.0	11'-0"	11'-0"	3"	3"
114.1	11'-0"	11'-0"	3"	3"
116.5	10'-11"	10'-11"	3"	3"
116.9	10'-11"	10'-11"	3"	3"
117.6	10'-11"	10'-11"	3"	3"
119.7	10'-11"	10'-11"	3"	3"
120.0	10'-11"	10'-11"	3"	3"
121.2	10'-10"	10'-10"	3"	3"
122.5	10'-9"	10'-9"	3"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)		MINIMUM SEPARATION "S" TO GLASS (in.)	
	*	**	*	**
125.3	10'-9"	10'-9"	3"	3"
125.8	10'-8"	10'-8"	3"	3"
126.7	10'-8"	10'-8"	3"	3"
129.6	10'-7"	10'-7"	3"	3"
130.9	10'-7"	10'-7"	3"	3"
131.6	10'-7"	10'-7"	3"	3"
134.3	10'-6"	10'-6"	3"	3"
136.2	10'-6"	10'-6"	3"	3"
137.9	10'-5"	10'-5"	3"	3"
140.7	10'-5"	10'-5"	3"	3"
142.8	10'-4"	10'-4"	3"	3"
143.5	10'-4"	10'-4"	3"	3"
147.0	10'-2"	10'-2"	3"	2 7/8"
148.4	10'-2"	10'-2"	3"	2 7/8"
152.6	10'-0"	10'-0"	3"	2 7/8"
153.1	10'-0"	10'-0"	3"	2 7/8"
156.8	9'-10"	9'-10"	3"	2 7/8"
157.5	9'-10"	9'-10"	3"	2 7/8"
157.8	9'-10"	9'-10"	3"	2 7/8"
160.8	9'-9"	9'-9"	3"	2 3/4"
161.7	9'-9"	9'-9"	3"	2 3/4"
164.4	9'-8"	9'-8"	3"	2 3/4"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)		MINIMUM SEPARATION "S" TO GLASS (in.)	
	*	**	*	**
165.2	9'-7"	9'-7"	3"	2 3/4"
168.1	9'-6"	9'-6"	3"	2 3/4"
168.7	9'-6"	9'-6"	3"	2 3/4"
170.0	9'-6"	9'-6"	3"	2 3/4"
175.6	9'-4"	9'-4"	3"	2 5/8"
176.6	9'-4"	9'-4"	3"	2 5/8"
180.3	9'-2"	9'-2"	3"	2 5/8"
188.0	9'-0"	9'-0"	3"	2 1/2"
195.2	8'-10"	8'-10"	3"	2 1/2"

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 6.

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" (in.)
LESS OR EQUAL THAN 8'-2"	2 5/8"
> 8'-2" TO 12'-11"	3"

* 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.

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

(VALID FOR SECTIONS A, A1, B, B1, C & C1 ON SHEETS 2 & 3 OF 6).

MAXIMUM DESIGN LOAD "W" (p.s.f.)	WALL MOUNTING INSTALLATION AT TOP OR BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT BOTTOM (TO MASONRY)			CEILING MOUNTING INSTALLATION TOP & BOTTOM (TO CONCRETE)			FLOOR MOUNTING INSTALLATION TOP & BOTTOM (TO CONCRETE)		
	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3
FROM 45.1 TO 61.8	8"	8"	8"	8"	8"	6"	8"	8"	6"	8"	8"	7"
FROM 61.9 TO 75.3	8"	8"	8"	8"	6 1/2"	5"	8"	6 1/2"	5 1/2"	8"	7 1/2"	6"
FROM 75.4 TO 91.4	8"	8"	8"	6 1/2"	5"	4"	7"	5 1/2"	4 1/2"	8"	6"	5"
FROM 91.5 TO 120.0	8"	8"	8"	5"	4"	3 1/2"	5"	4"	3 1/2"	6"	4 1/2"	4"
FROM 120.1 TO 168.1	8"	8"	8"	3 1/2"	3"	3"	3 1/2"	3"	3"	4"	3"	3"
FROM 168.2 TO 195.2	8"	7"	7"	3"	3"	-	3"	3"	3"	3 1/2"	3"	3"

ANCHOR SPACING LEGEND

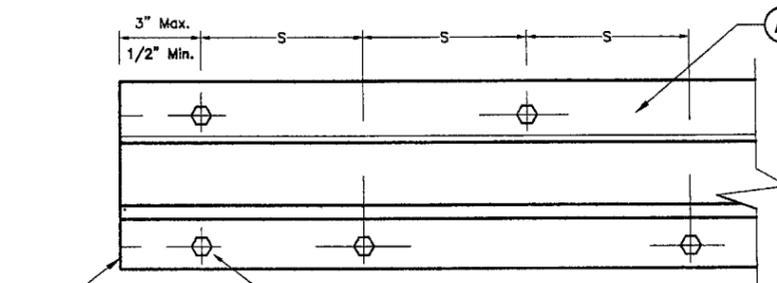
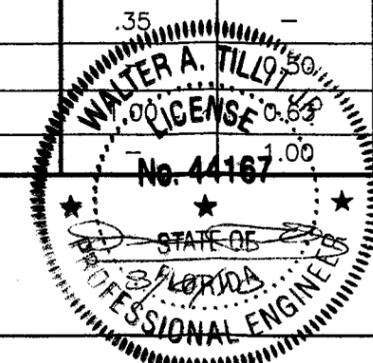
- (1) Max. ANCHOR SPCG. VALID FOR SPANS OF 7'-6" OR LESS.
- (2) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 7'-6" TO 9'-6".
- (3) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 9'-6" TO Max. ALLOWED.

+ USE ONLY CARBON STEEL TAPCON ANCHORS AT ALL WALL & CEILING MOUNT INSTALLATIONS. USE CARBON STEEL TAPCON/CALK-IN ANCHORS AT FLOOR INSTALLATION. SEE SHEET 6 OF 6 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

Δ REQUIRES USE OF 410 SERIES STAINLESS STEEL TAPCON ANCHORS.

MINIMUM ANCHOR SPACINGS LISTED BELOW ARE AS PER MIN. EDGE DISTANCE, INDICATED ON GENERAL NOTE 7 ON SHEET 1. FOR E.D. LESS THAN INDICATED ABOVE REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. FOR THIS OPERATION TO BE POSSIBLE, REDUCED SPACING OBTAINED USING FACTOR SHALL NOT BE LESS THAN MINIMUM SPACING INDICATED FOR EACH ANCHOR TYPE AT ANCHORS SCHEDULE.

ACTUAL EDGE DISTANCE (E.D.)	FACTOR	
	TAPCON	CALK-IN
1 1/2"	.35	-
2 1/2"	-	-
3"	-	-
3 1/2"	-	-



EDGE OF (A) 2 ANCHORS REQUIRED EACH END
S = ANCHOR SPACING GIVEN ON SCHEDULE
STAGGERED ANCHORS
ANCHORS USED W/TRACK "A" (TOP & BOTTOM) SHALL BE INSTALLED STAGGERED AT Max. SPACINGS INDICATED ON SCHEDULES.

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No 10-0308.05
Expiration Date 03/06/2011
By *Helmut Altko*
Miami Dade Product Control Division

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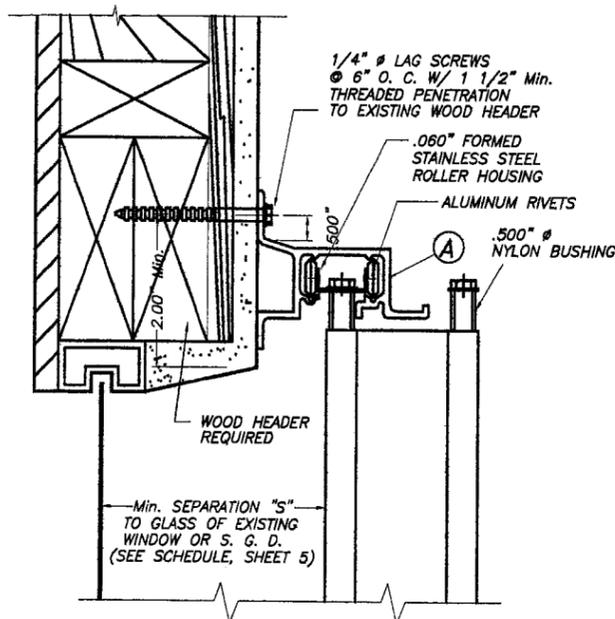
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

SUPER SHUTTER ACCORDION

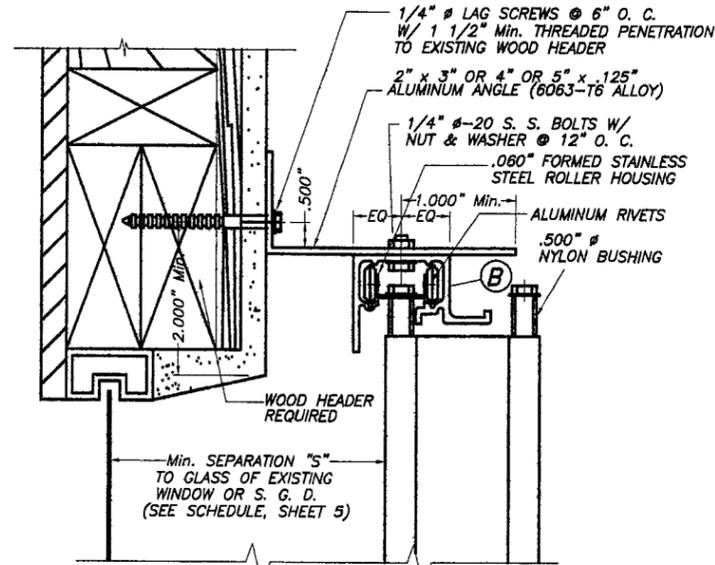
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5761 N.W. 37th. AVENUE
MIAMI, FLORIDA 33142
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 08-025	3/3/10	3	-	-
2	-	-	4	-	-

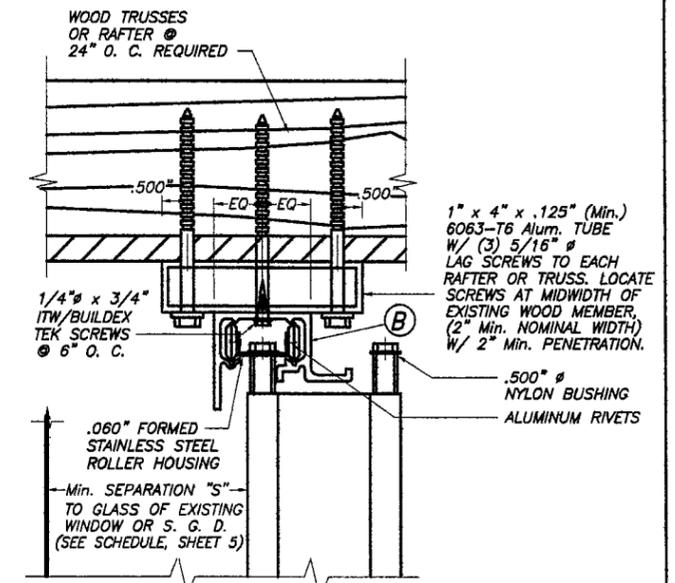
DRAWN BY: M.C.V.
3/3/10 DATE
10-032 DRAWING No
SHEET 5 OF 6



ALTERNATIVE 1

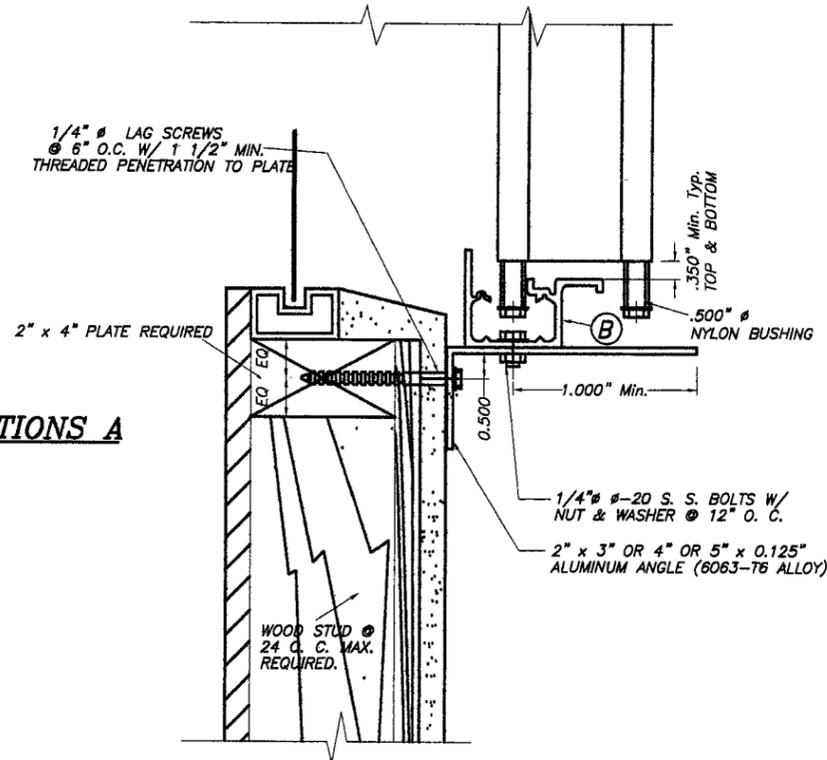


ALTERNATIVE 2

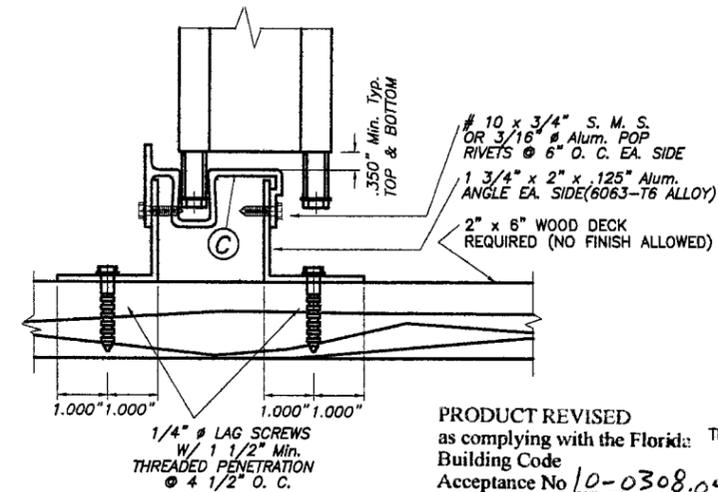


ALTERNATIVE 2
(LIMITED TO +60.0, -66.0 psf DESIGN LOAD)

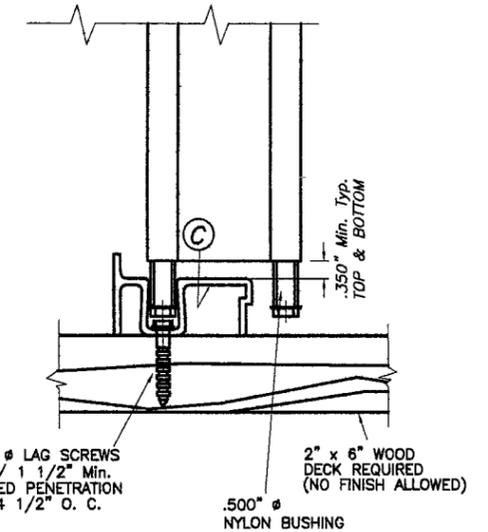
WALL MOUNTING INSTALLATION - SECTIONS A
SCALE: 3/8" = 1"



ALTERNATIVE 3



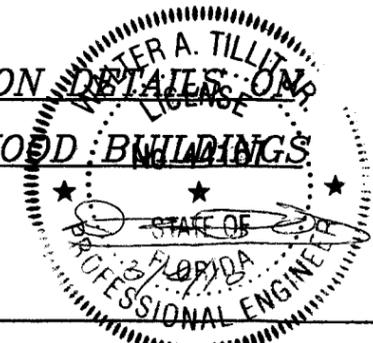
ALTERNATIVE 1



ALTERNATIVE 3

CEILING/FLOOR MOUNTING INSTALLATION - SECTIONS B
SCALE: 3/8" = 1"

INSTALLATION DETAILS FOR EXISTING WOOD BUILDINGS



PRODUCT REVISED as complying with the Florida Building Code Acceptance No 10-0308.05 Expiration Date 03/06/2011
By *Helmut A. Miller*
Miami Dade Product Control Division

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

NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH MAXIMUM DESIGN LOAD LESS THAN OR EQUAL TO 75.0 p.s.f. AND 9'-0" Max. SHUTTER SPAN (EXCEPT AS NOTED).
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

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TILLIT TESTING & ENGINEERING COMPANY
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REV. NO	DESCRIPTION	DATE	REV. No
1	OLD 09-025	3/3/10	3
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