



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.buildingcodeonline.com

NOTICE OF ACCEPTANCE (NOA)

Atrium Shutters, Inc.
4800 S.W. 51st Street
Davie, Florida 33314

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: 0.039" (min.) Galvanized Steel Storm Panel Shutter

APPROVAL DOCUMENT: Drawing No. 08-169, titled 0.039" Galvanized Steel Storm Panel, sheets 1 through 16 of 16, and sheets 1A, 11A, & 12A of 16, prepared by Tilteco, Inc., dated 05/22/2008, last revision #1 dated 05/22/2008, signed and sealed by Walter A. Tillit Jr., P.E., bearing Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each panel 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 **renews NOA # 05-0927.01** and consists of this page 1, evidence submitted pages E-1, E-2, E-3 & E-4 as well as approval document mentioned above.

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



Helmy A. Makar
07/31/2008

NOA No. 08-0611.02
Expiration Date: 06/26/2013
Approval Date: 07/31/2008
Page 1

Atrium Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL No. 96-1101.02

A. DRAWINGS

1. *Drawing No. 96-297, Robico, Inc., 20 gage Storm Panels, Sheets 1, 2, 3, 4, 5, 6, 7, and 8 of 8, prepared by Tilteco, Inc., dated 06/05/97, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on Uniform Static Air Pressure Test of 20 gage storm panels, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-96-570, dated Sept. 18, 1996, signed and sealed by Hector M. Medina, P.E.*
2. *Test report on Large Missile Impact and Cyclic Wind Pressure Test, of 20 Gage Steel Storm Panels, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-96-569, dated Aug. 09, 1996, signed and sealed by Hector M. Medina, P.E.*

C. CALCULATIONS

1. *Storm panel shutter calculations, Sheets 1 through 17 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., dated 10/30/96.*
2. *Storm panel shutter calculations, Sheets 1 through 17 by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., dated 05/19/97.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Inspection Report, dated 10/05/96, for Hot Dipped Galvanized Steel, ASTM A446 Grade C by Robert O'Neil of R & R Metals, Inc., with chemical composition and physical properties.*
2. *Tensile Test Reports from Hurricane Engineering & Testing Inc., Job No. HETI-96-T30 dated 10/20/96 for galvanized steel, tested per ASTM E8-93, signed and sealed by Hector M. Medina, P.E.*

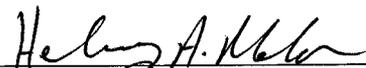
2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL No. 99-0317.04

A. DRAWINGS

1. *Drawing No. 96-297, titled "20 Gage Storm Panel", prepared by Tilteco, Inc., dated September 20, 1996, last revision dated May 5, 1999, sheets 1 through 15 of 15, total of 16 sheets including sheet 10A of 15, signed and sealed by Walter A. Tillit, Jr., P.E.*

B. TESTS

1. *Test reports on Uniform Static Air Pressure Test, SFBC PA 202-94, Large Missile Impact Test, SFBC PA 201-94 and Cyclic Wind Pressure Test SFBC PA 203-94 of 20 ga. galvanized steel storm panels, prepared by Fenestration Testing Laboratory, Inc., Test Report No. 2032, dated April 16, 1998, signed and sealed by Gilbert Diamond, P.E.*



Holly A. Makar, P.E., M.S.

Product Control Examiner

NOA No. 08-0611.02

Expiration Date: 06/26/2013

Approval Date: 07/31/2008

Atrium Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. *Test reports on Uniform Static Air Pressure Test, SFBC PA 202-94, Large Missile Impact Test, SFBC PA 201-94 and Cyclic Wind Pressure Test SFBC PA 203-94 of 20 ga. galvanized steel storm panels, prepared by Fenestration Testing Laboratory, Inc., Test Report No. 2126, dated October 5, 1998, signed and sealed by Gilbert Diamond, P.E.*

C. CALCULATIONS

1. *Anchor analysis, 20 ga. Galvanized Steel Storm Panel, dated May 06, 1998, pages 1 through 11 of 11, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.*
2. *Anchor analysis, 20 ga. Galvanized Steel Storm Panel, dated November 04, 1998, pages 1 through 14 of 14, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit, Jr., P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Inspection Report issued by R & R Metals, Inc., dated 07/02/98 with chemical composition and mechanical properties of 20 ga. grade 40 galvanized steel per ASTM A446-C.*
2. *Certified Tensile Test Report Number CTL #634D, prepared by Certified Testing Laboratories, dated July 15, 1998, tested as per ASTM E-8, for steel storm panel, signed and sealed by Ramesh Patel, P.E.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL No. 00-0307.04

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

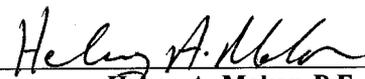
1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

E. OTHERS

1. *Letter from Tilteco, Inc., dated February 24, 2000, signed and sealed by Walter A. Tillit Jr., P.E., stating that he is still the engineer of record for this product and manufacturer and continues to be in the engineering business.*

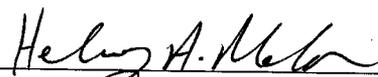


Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 08-0611.02
Expiration Date: 06/26/2013
Approval Date: 07/31/2008

Atrium Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

- 4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0521.07**
- A. DRAWINGS**
1. *Drawing No. 03-095, titled " 20 gage Storm Panel ", sheets 1 through 16 of 16, including sheet 11A, total of 17 sheets, prepared by Tilteco, Inc., dated May 15, 2003, last revision #1 dated May 15, 2003, signed and sealed by Walter A. Tillit Jr., P.E.*
- B. TESTS**
1. *None.*
- C. CALCULATIONS**
1. *Anchor analysis, 2 Pages, prepared by Tilteco, Inc., dated July 30, 2001, signed and sealed by Walter A. Tillit Jr., P.E.*
- D. MATERIAL CERTIFICATIONS**
1. *None.*
- 5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #05-0927.01**
- A. DRAWINGS**
1. *Drawing No. 05-289, titled 0.039" Galvanized Steel Storm Panel, sheets 1 through 16 of 16, and sheets 1A, 11A, & 12A of 16, prepared by Tilteco, Inc., dated 09/15/2005, last revision #1 dated 09/15/2005, signed and sealed by Walter A. Tillit Jr., P.E.*
- B. TESTS**
1. *None.*
- C. CALCULATIONS**
1. *Anchor calculations prepared by Tilteco, Inc., dated September 15, 2005, sheets 1 through 85 of 85, signed and sealed by Walter A. Tillit Jr., P.E.*
- D. QUALITY ASSURANCE**
1. *By Miami-Dade County Building Code Compliance Office.*
- E. MATERIAL CERTIFICATIONS**
1. *None.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 08-0611.02
Expiration Date: 06/26/2013
Approval Date: 07/31/2008

Atrium Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

6. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 08-169, titled 0.039" Galvanized Steel Storm Panel, sheets 1 through 16 of 16, and sheets 1A, 11A, & 12A of 16, prepared by Tilteco, Inc., dated 05/22/2008, last revision #1 dated 05/22/2008, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

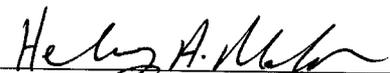
1. *None.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 08-0611.02
Expiration Date: 06/26/2013
Approval Date: 07/31/2008

GENERAL NOTES: VALID FOR 0.039" GALVANIZED STEEL STORM PANEL

1. STORM PANEL 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. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.A.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A DURATION FACTOR CD=1.60 WAS USED FOR VERIFICATION OF FASTENERS IN WOOD.

STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER HURRICANE ENGINEERING & TESTING INC. REPORTS 96-569, 96-570 & 96-T30 AND FENESTRATION TESTING LAB. INC., REPORTS #2032 & #2126, AS PROTOCOLS TAS-201, TAS-202 AND TAS-203.

- 2. ALL ALUMINUM EXTRUSIONS TO BE 6063-T6 ALLOY AND TEMPER. (UNLESS OTHERWISE NOTED)
- 3. ALL ALUMINUM SHEET METAL USED AT CLOSURES SHALL HAVE 3105-H14 ALLOY.
- 4. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY STEEL, ASTM A-653 GRADE 40 MINIMUM, G-60 GALVANIZED STEEL DESIGNATION W/FY= 42.9 ksi (AFTER ROLLED).
- 5. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 W/ 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH.
- 6. BOLTS TO BE ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL, WITH 36 ksi MINIMUM YIELD STRENGTH.
- 7. ANCHORS TO WALL SHALL BE AS FOLLOWS:
 - (A) TO EXISTING POURED CONCRETE:
 - 1/4" Ø TAPCON ANCHORS AS MANUFACTURED BY I. T. W. BUILDEX OR ELCO TEXTRON.
 - 1/4" Ø CF TAP-GRIP ANCHORS, AS MANUFACTURED BY TRU-FAST CORPORATION.
 - 1/4" Ø x 7/8" CALK-IN ANCHORS OR ELCO male/female PANELMATES AS MANUFACTURED BY POWERS FASTENERS INC. AND ELCO TEXTRON, RESPECTIVELY.

NOTES:

- A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE SHALL BE 1 3/4", 1 7/8" FOR ELCO PANELMATES AND FOR CF TAP-GRIP ANCHORS IS 1 1/4".
- 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, AND 1" MINIMUM FOR WALLS WITH NO STUCCO, AND MAY BE HEADED SCREWS OR ALL THREADED SCREWS W/O HEAD, BUT WITH WING NUTS.
- A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, PAVERS, STUCCO OR WOOD BANS 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 MENTIONED IN A.1) AND IN A.2).

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4" Ø TAPCON ANCHORS, AS MANUFACTURED BY I. T. W. BUILDEX OR ELCO TEXTRON.
- 1/4" Ø CF TAP-GRIP ANCHORS, AS MANUFACTURED BY TRU-FAST CORPORATION.
- 1/4" Ø x 7/8" CALK-IN ANCHORS OR ELCO male/female PANELMATES AS MANUFACTURED BY POWERS FASTENERS INC. AND ELCO TEXTRON, RESPECTIVELY.

NOTES:

- B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS, ELCO PANELMATES AND CF TAP-GRIP, 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, AND MAY BE HEADED SCREWS OR ALL THREADED SCREWS W/O HEAD, BUT WITH WING NUTS.
- B.3) IN CASE THAT PRECAST STONE, OR PRECAST CONCRETE PANELS, STUCCO OR WOOD BANS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS MENTIONED IN B.1) AND IN B.2).

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

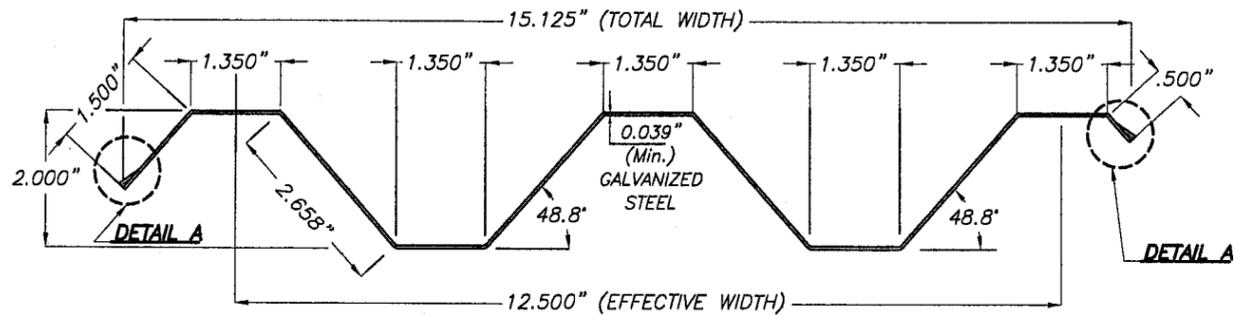
- 8. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTION 1, 2, 2A (BUT ONLY W/ STUDDED ANGLE (4A) & (4B) EA. SIDE) AND 3, 4, 5, 6 & 7 ON SHEET 3 & 4 OF 16, EXCEPT THAT STUDDED ANGLE (4A) SHALL BE USED INSTEAD ON CEILING HEADER (3).
- 9. IT SHALL BE THE RESPONSIBILITY 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. EACH PANEL WITH LENGTHS OVER 104" SHALL HAVE A LEGIBLE AND READILY VISIBLE MARKING INSTRUCTING OWNER OR TENANT TO SECURE PANELS WITH APPLICABLE REINFORCEMENT DURING PERIODS OF HURRICANE WARNING.
- 11. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
- 12. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
- 13. (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 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 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 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.
- 14. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL. ONE LABEL SHALL BE PLACED FOR EVERY PANEL. LABEL SHALL READ AS FOLLOWS:
 ATRIUM SHUTTERS, INC.
 DAVIE, FL.
 MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

PRODUCT RENEWED
 as complying with the Florida
 Building Code
 Acceptance No 08-0611.02
 Expiration Date 06/26/2013
 By *Walter A. Tillit Jr.*
 Miami Dade Product Control
 Division

Walter A. Tillit Jr.
 MAY 29 2008

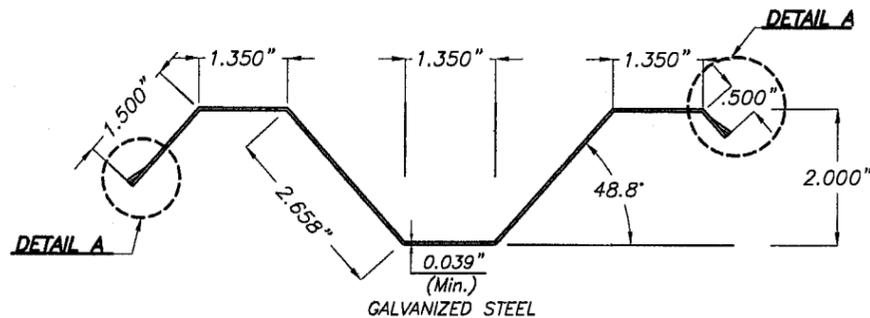
F.B.C. (High Velocity Hurricane Zone)

© 2008 TILTECO, INC.		0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E. DRAWN BY:	
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33168 Phone : (305) 871-1530 . Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:	
		REV. No DESCRIPTION DATE REV. No DESCRIPTION DATE 1 OLO 05-289 05/22/08 3 - - 2 - - 4 - -		08-169 DRAWING No	
				SHEET 1 OF 16	

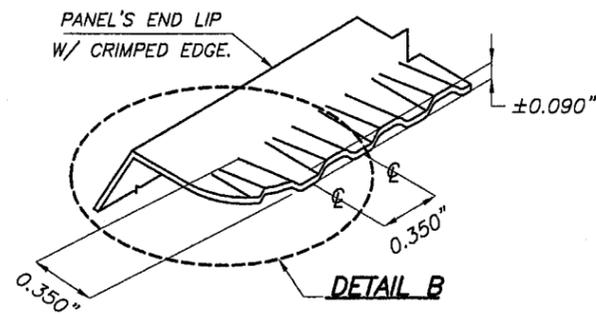


① **PANEL**
SCALE: 3/8" = 1"

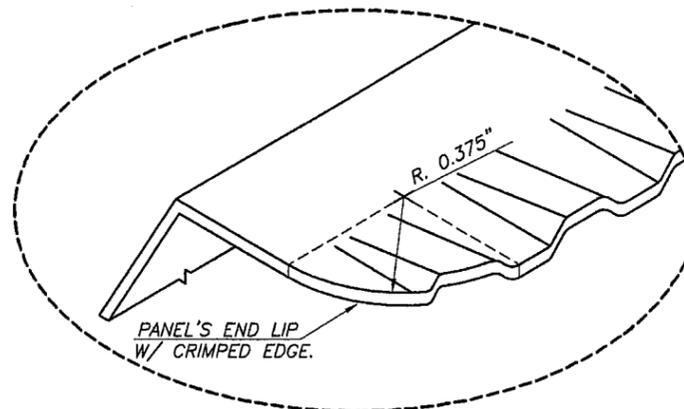
COMPONENTS



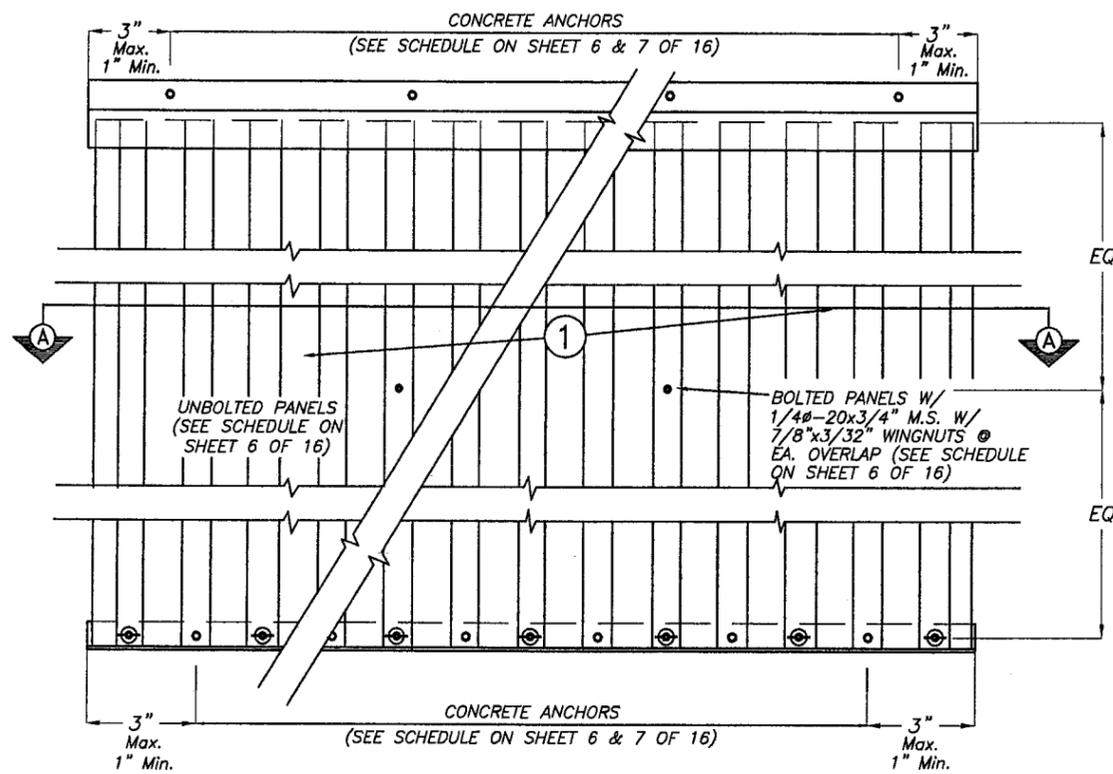
①A **END PANEL**
SCALE: 3/8" = 1"



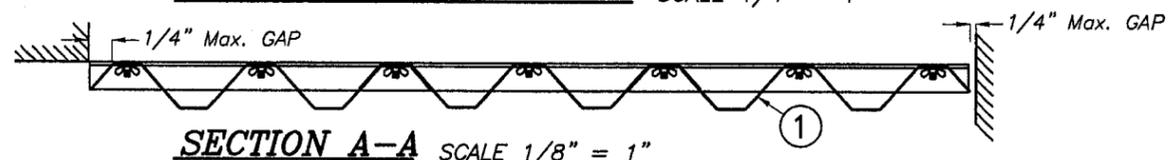
ISOMETRIC VIEW
DETAIL A
(N.T.S.)



DETAIL B
ROUNDED CORNER @ ENDS OF PANEL'S
END LIP W/ CRIMPED EDGE.
(N.T.S.)



STORM PANEL ELEVATION SCALE 1/4" = 1"



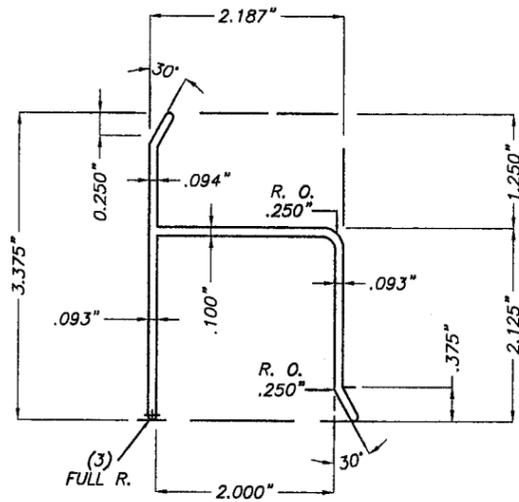
SECTION A-A SCALE 1/8" = 1"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 08-0611.02
Expiration Date 06/26/2013
By *Healy A. Nelson*
Miami Dade Product Control
Division

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

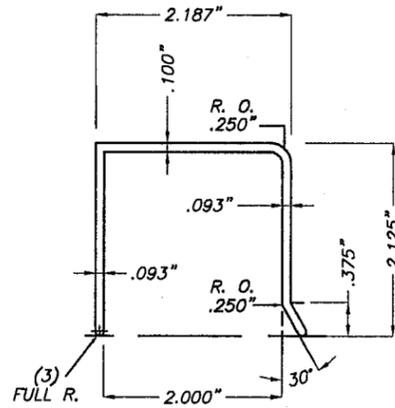
© 2008 TILTECO, INC.		0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E. DRAWN BY:	
 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33186 Phone: (305) 871-1530 • Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:	
		REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE 1 OLD D5-289 05/22/08 3 - - 2 - - - 4 - -		08-169 DRAWING No	
				SHEET 1A OF 16	

MAY 29 2008



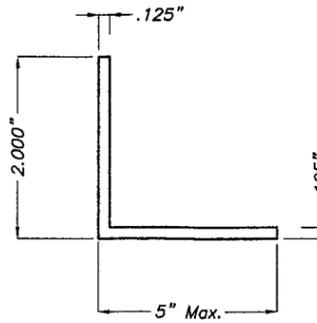
② "h" HEADER

SCALE: 1/2" = 1"



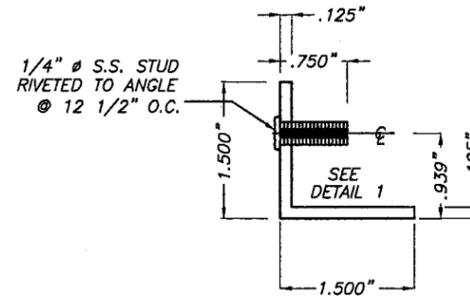
③ "U" HEADER

SCALE: 1/2" = 1"



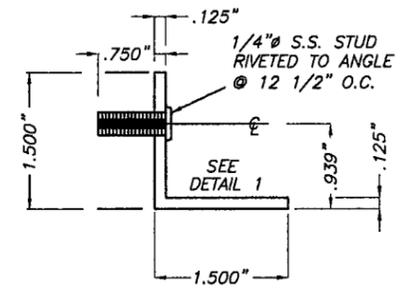
④ ANGLE

SCALE: 1/2" = 1"



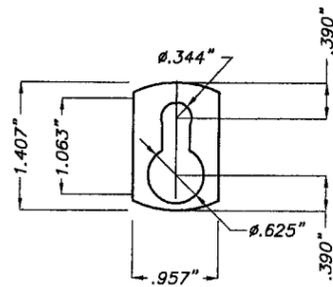
④A ANGLE WITH STUD

SCALE: 1/2" = 1"



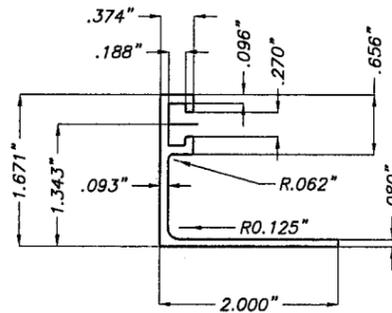
④B ANGLE WITH REVERSED STUD

SCALE: 1/2" = 1"



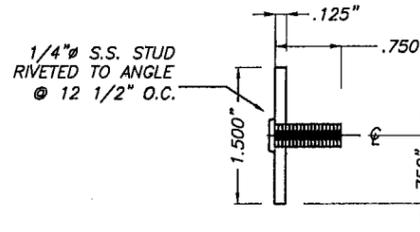
⑤ KEY HOLE WASHER

3105-H154 Alum. ALLOY
SCALE: 1/2" = 1"



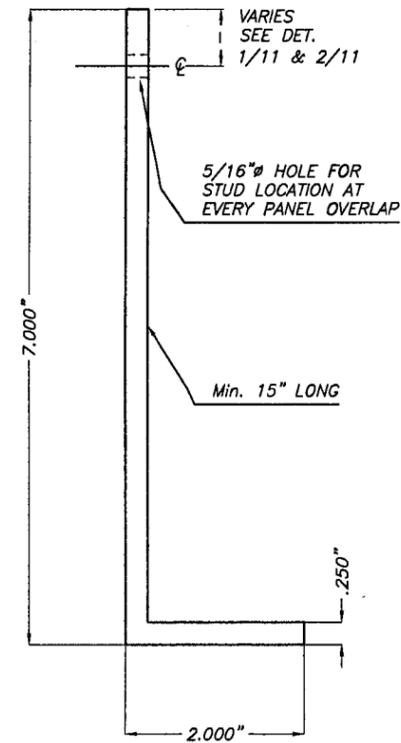
⑥ "F" TRACK ANGLE

SCALE: 1/2" = 1"



⑦ FLAT PLATE WITH STUD

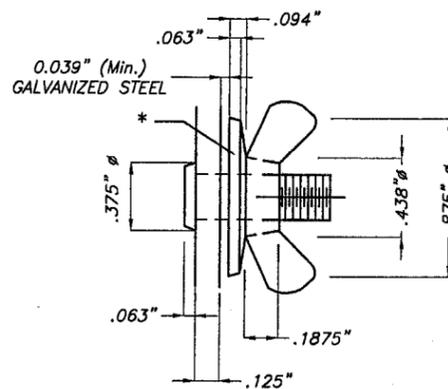
SCALE: 1/2" = 1"



⑧ 2"x7"x1/4" ALUMINUM ANGLE

SCALE: 1/2" = 1"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 08-0611.02
Expiration Date 06/26/2013
By *Healy A. Allen*
Miami Dade Product Control
Division



DETAIL 1

SCALE: 2" = 1"

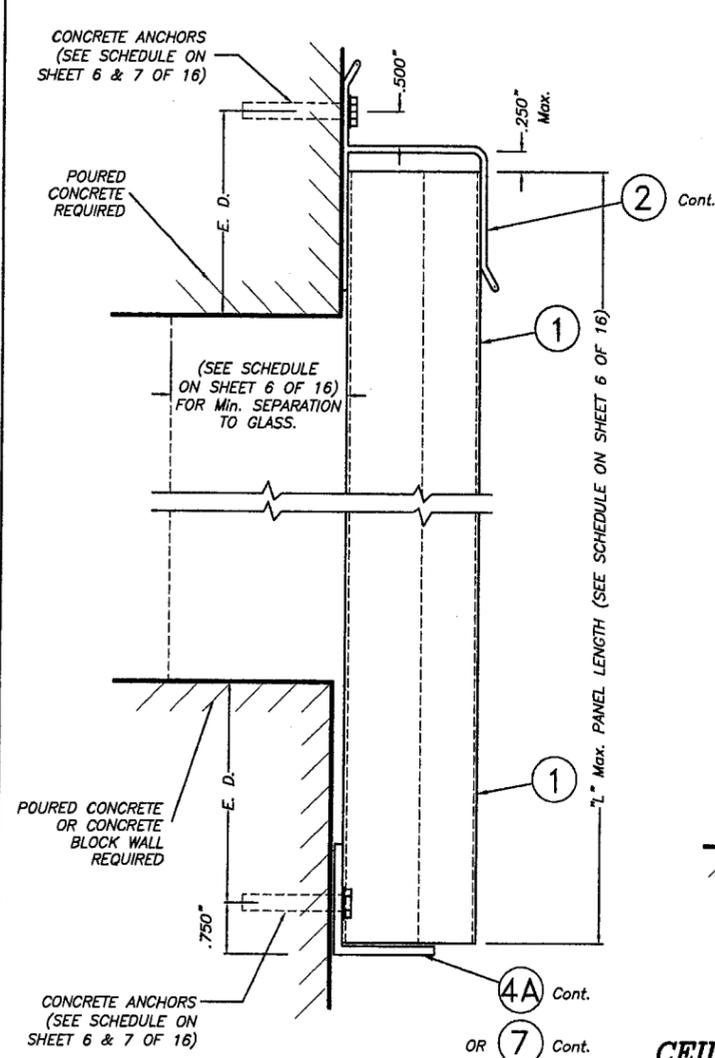
* ALTERNATIVELY, USE WING NUT W/OUT
MONOLITHIC WASHER W/ ADDITIONAL
7/8"x3/32" WASHER (STAINLESS
STEEL OR NICKEL PLATED STEEL).

COMPONENTS

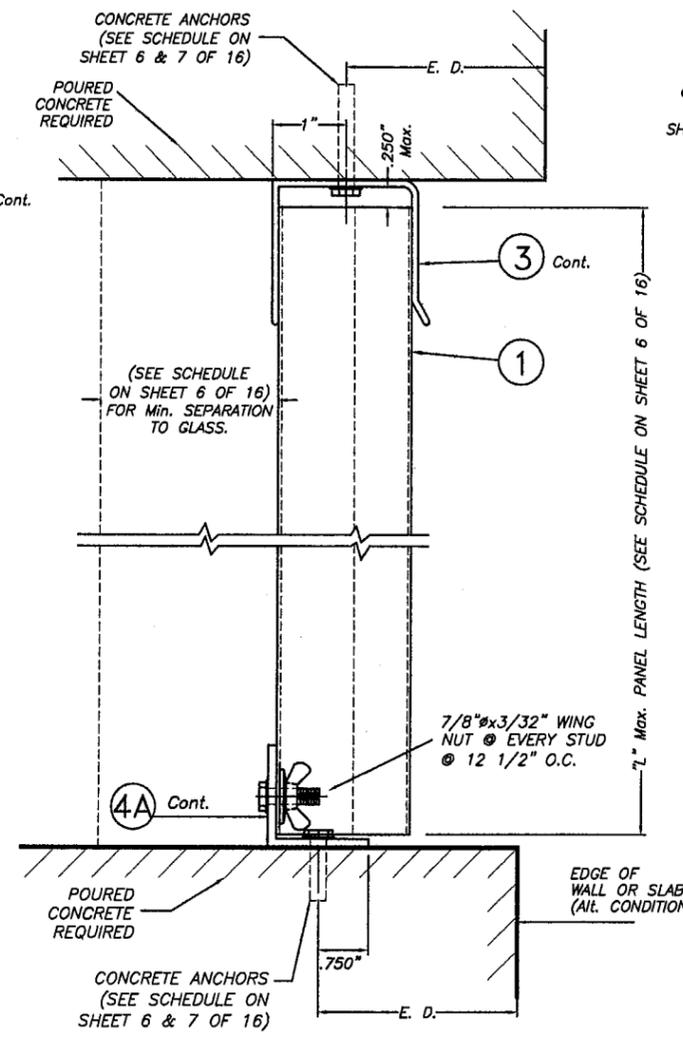
MAY 29 2008

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

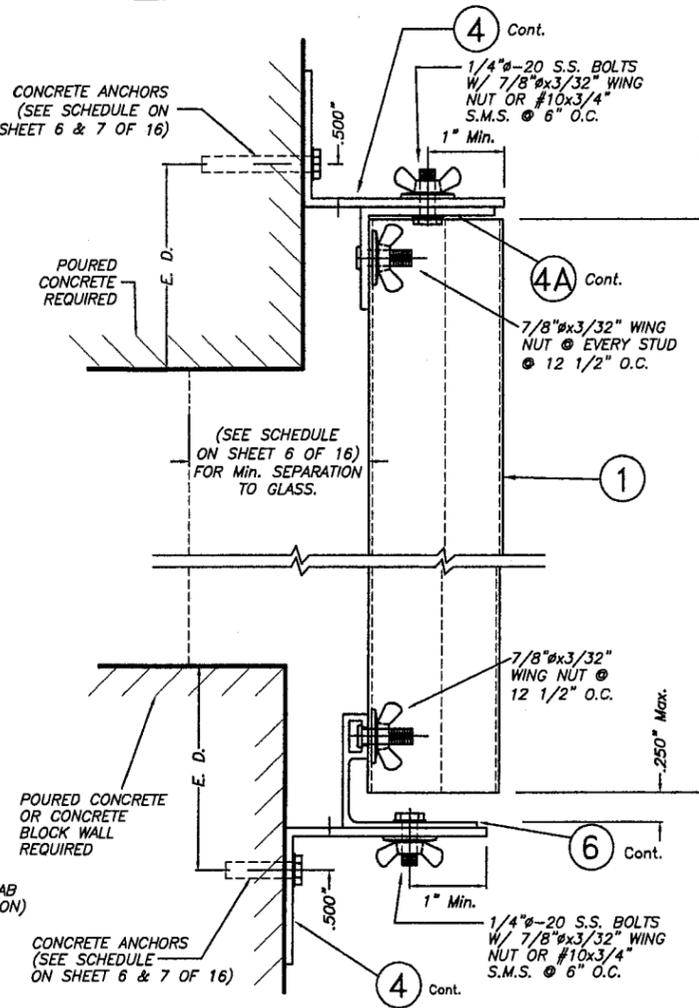
© 2008 TILTECO, INC.		0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E. DRAWN BY:	
 TILLIT TESTING & ENGINEERING COMPANY 8335 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33168 Phone: (305) 871-1530 Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:	
		08-169 DRAWING No		SHEET 2 OF 16	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-



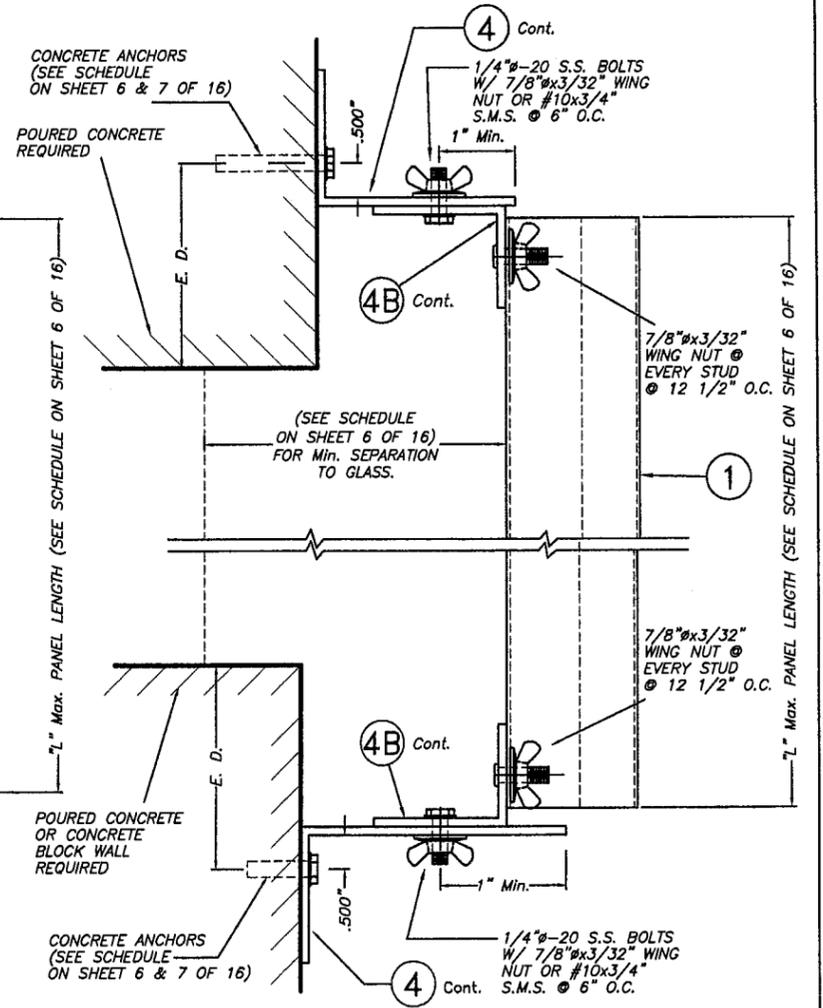
SECTION @ ANCHOR



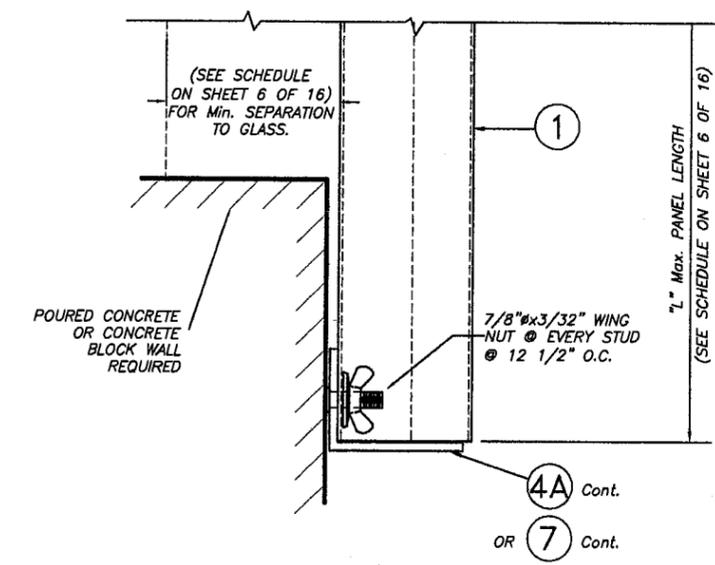
CEILING AND FLOOR MOUNT. INSTALLAT.
- SECTION 2 SCALE: 3/8" = 1"



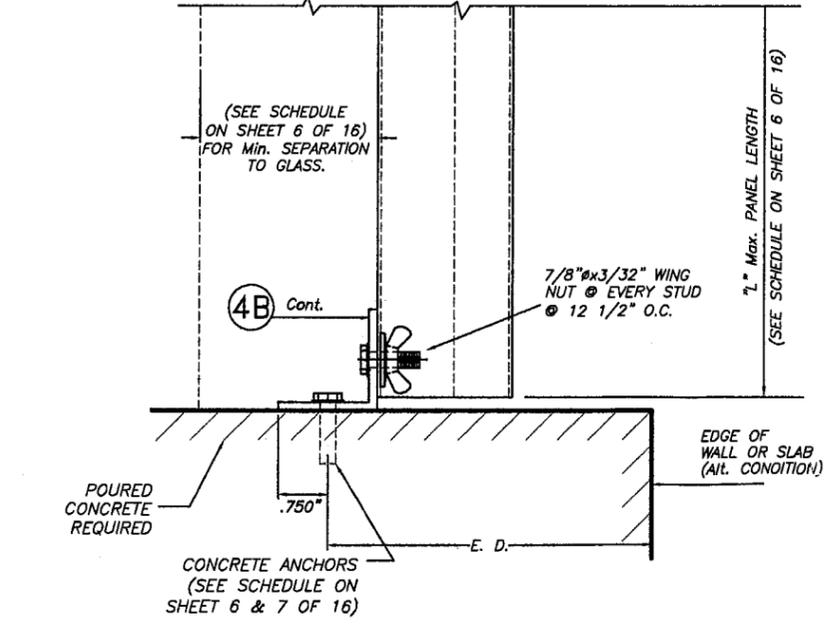
BUILD OUT MOUNTING INSTALLATION
- SECTION 3 SCALE: 3/8" = 1"



ALTERNATE BUILD-OUT MOUNT. INSTALLAT.
- SECTION 4 SCALE: 3/8" = 1"



SECTION @ STUD



CEILING AND FLOOR MOUNTING INSTALLATION
- SECTION 2A SCALE: 3/8" = 1"

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEET 6 OF 16)

NOTE FOR COMBINATION OF SECTIONS:
MOUNTING SHOWN ON SECTIONS 1 THROUGH 4
CAN BE COMBINED IN ANY WAY TO SUIT ANY
INSTALLATION.

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 08-0611.02
Expiration Date 06/26/2013
By *Helmut A. Weber*
Miami Dade Product Control
Division

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

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EB-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E.
ATRIUM SHUTTERS, INC.		DRAWN BY:
4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:
		08-169 DRAWING No
REV. No	DESCRIPTION	DATE
1	OLD 05-289	05/22/08
2		

REV. No	DESCRIPTION	DATE
3		
4		

MAY 29 2008

CALK-IN OR ELCO male/female "PANELMATE" OR CF TAP-GRIP (SEE SCHEDULE ON SHEET 6 & 7 OF 16)

POURED CONCRETE OR CONCRETE BLOCK WALL REQUIRED

1/4"Ø-20x1" M.S. W/ NUT @ EVERY OVERLAP & AT MIDLENGTH OF PANEL FOR SECTION 6 ONLY.

(SEE SCHEDULE ON SHEET 6 OF 16) FOR Min. SEPARATION TO GLASS.

POURED CONCRETE OR CONCRETE BLOCK WALL REQUIRED

CALK-IN OR ELCO male/female "PANELMATE" OR CF TAP-GRIP (SEE SCHEDULE ON SHEET 6 & 7 OF 16)

CONCRETE ANCHORS (SEE SCHEDULE ON SHEET 6 & 7 OF 16)

POURED CONCRETE REQUIRED

7/8"Øx3/32" WING NUT @ EVERY STUD @ 12 1/2" O.C.

POURED CONCRETE OR CONCRETE BLOCK WALL REQUIRED

CONCRETE ANCHORS (SEE SCHEDULE ON SHEET 6 & 7 OF 16)

1/4"Ø-20x3/4" S.S. BOLTS W/ 7/8"Øx3/32" WING NUT @ 6" O.C.

7/8"Øx3/32" WING NUT @ EVERY STUD @ 12 1/2" O.C.

1/4"Ø-20x3/4" S.S. BOLTS W/ 7/8"Øx3/32" WING NUT @ 6" O.C.

WALL MOUNTING INSTALLATION

(D. M.) - SECTIONS 5 & 6

SCALE: 3/8" = 1"

E. D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 6 OF 16)

NOTE FOR COMBINATION OF SECTIONS:

MOUNTINGS SHOWN ON SECTIONS 5 THROUGH 7 CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

WALL MOUNTING INSTALLATION

BUILD-OUT- SECTION 7

SCALE: 3/8" = 1"

* NEW 1" WIDE x VARIES x 1/8" THICK ALUM. TUBE OR 1" x P. T. WOOD PLATE SPACERS

* NEW 1" WIDE x VARIES x 1/8" ALUM. TUBE OR 1" x VARIES P. T. WOOD PLATE SPACER BEHIND TRACK

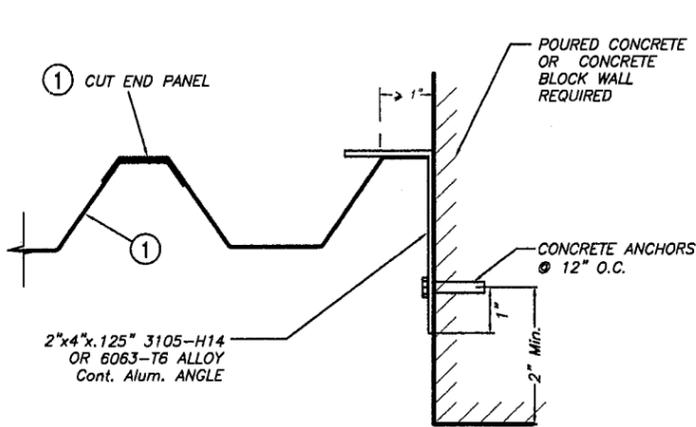
CONCRETE ANCHORS (SEE SCHEDULE ON SHEET 6 & 7 OF 16)

POURED CONCRETE OR CONCRETE BLOCK WALL REQUIRED

* Max. SPACER LENGTH IS 6". Min. SPACER HEIGHT TO BE EQUAL OR GREATER THAN TRACK'S HEIGHT.

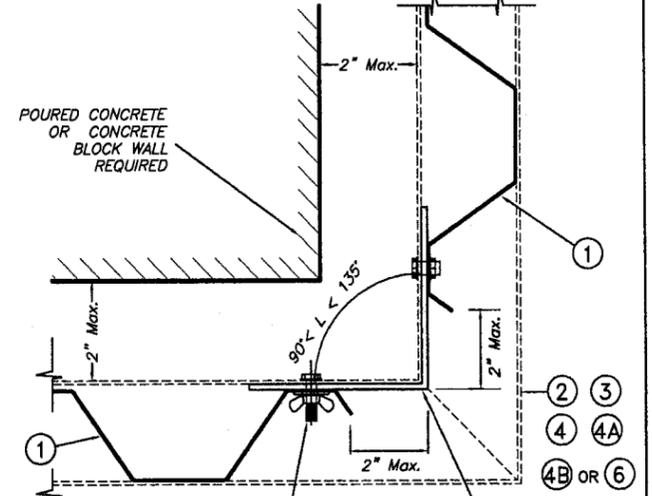
DETAIL FOR SPACERS REQUIRED AT TOP OR BOTTOM TRACKS ADJACENT TO STUCCO/WOOD BANDS

SCALE: 1/4" = 1" MAY 29 2008



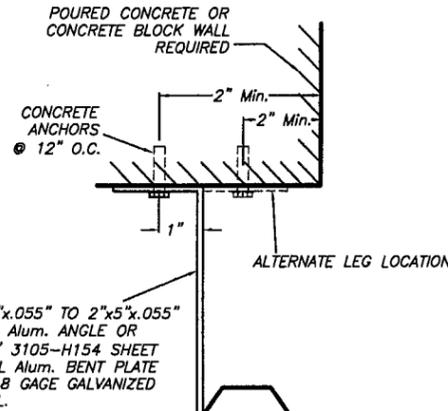
CASE A (Plan)

SCALE: 1/4" = 1"



CASE B (Plan)

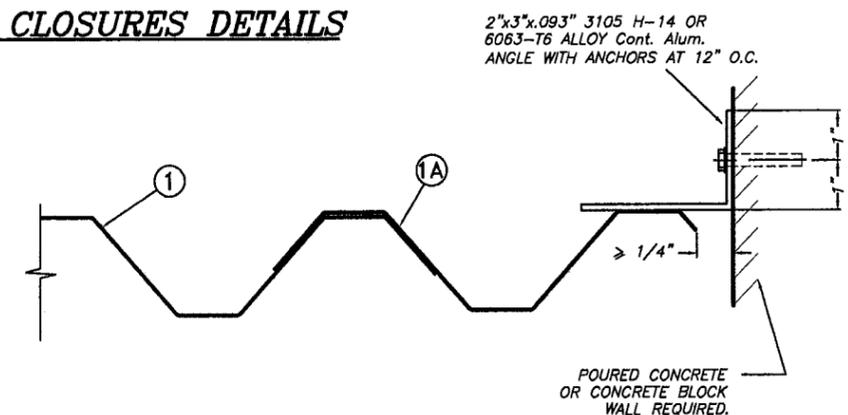
SCALE: 1/4" = 1"



CASE C (Plan)

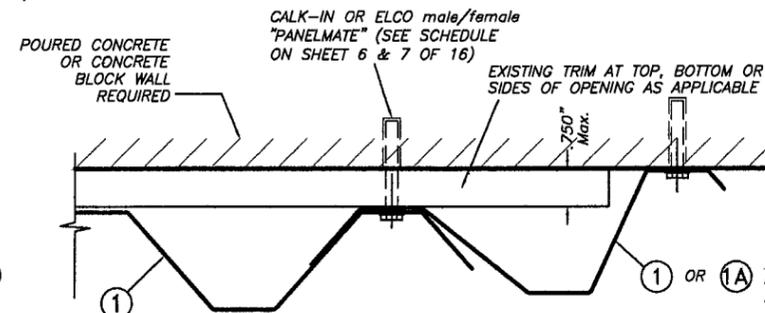
SCALE: 1/4" = 1"

END CLOSURES DETAILS



CASE D (Plan)

SCALE: 1/4" = 1"



CASE E (Plan)

SCALE: 1/4" = 1"

VALID FOR DIRECT MOUNT INSTALLATION ONLY & CERTIFIED PANEL INSTALLATION AT WALLS W/ SURFACE LEVEL VARIATIONS WITHIN 3/4"

PRODUCT RENEWED as complying with the Florida Building Code Acceptance No 08-0611.02 Expiration Date 06/26/2013 By Healy A. Healy Miami Dade Product Control Division

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

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 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 303, VIRGINIA GARDENS, FL 33166
 Phone: (305) 871-1530 . Fax: (305) 871-1531
 EB-0006719
 WALTER A. TILLIT Jr., P.E.
 FLORIDA Lic. # 44167

0.039" GALVANIZED STEEL STORM PANEL

ATRIUM SHUTTERS, INC.

4800 S.W. 51 STREET
 DAVIE, FL 33314
 PHONE: (954)689-7545, FAX: (954)689-8797

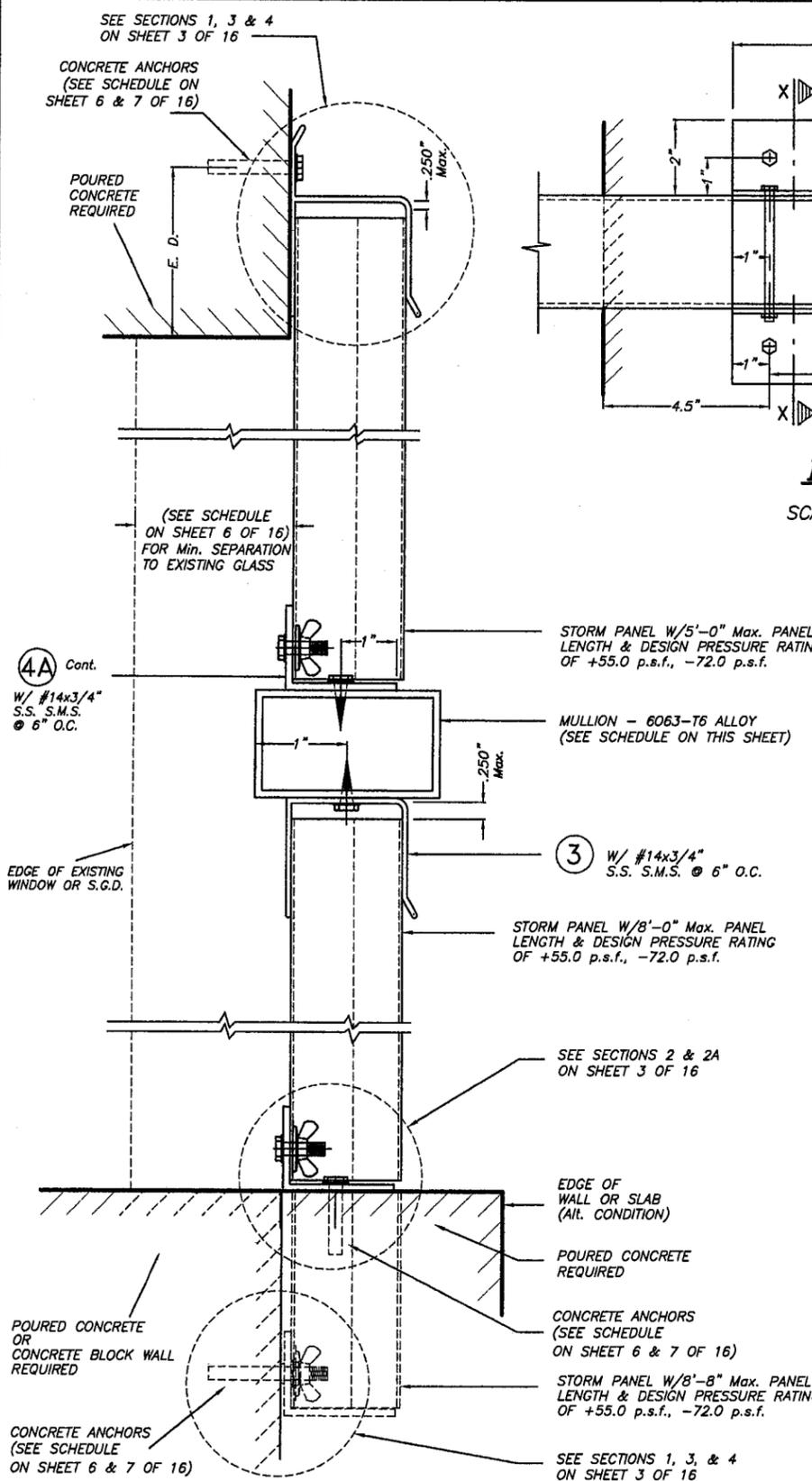
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-

L.G./R.E.
DRAWN BY:

05/22/08
DATE:

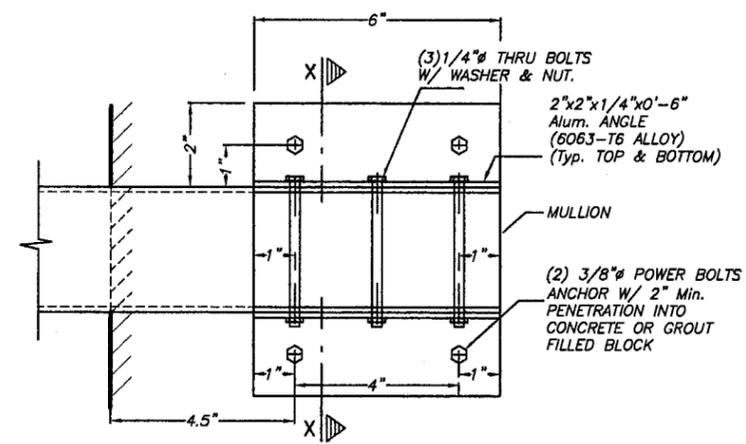
08-169
DRAWING No

SHEET 4 OF 16



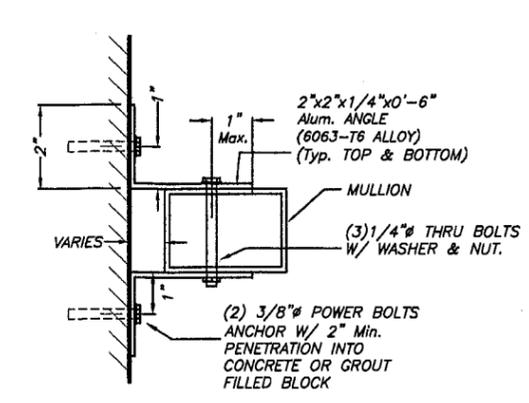
WALL AND FLOOR MOUNTING INSTALLATION FOR SPLIT PANELS - SECTION 1 SCALE: 3/8" = 1"

NOTE: MULLION CAN ALSO BE INSTALLED W/O STORM PANELS ON TOP OR BOTTOM SO THAT IT IS LOCATED AT TOP OR BOTTOM OF OPENING. (ONE PANEL OPENING W/ TUBE TOP & BOTTOM)

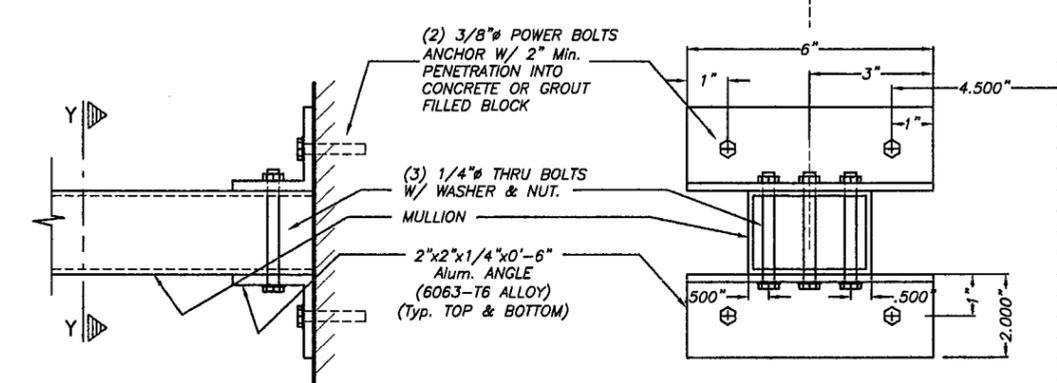


ELEVATION SCALE: 1/4" = 1"

DETAIL 1

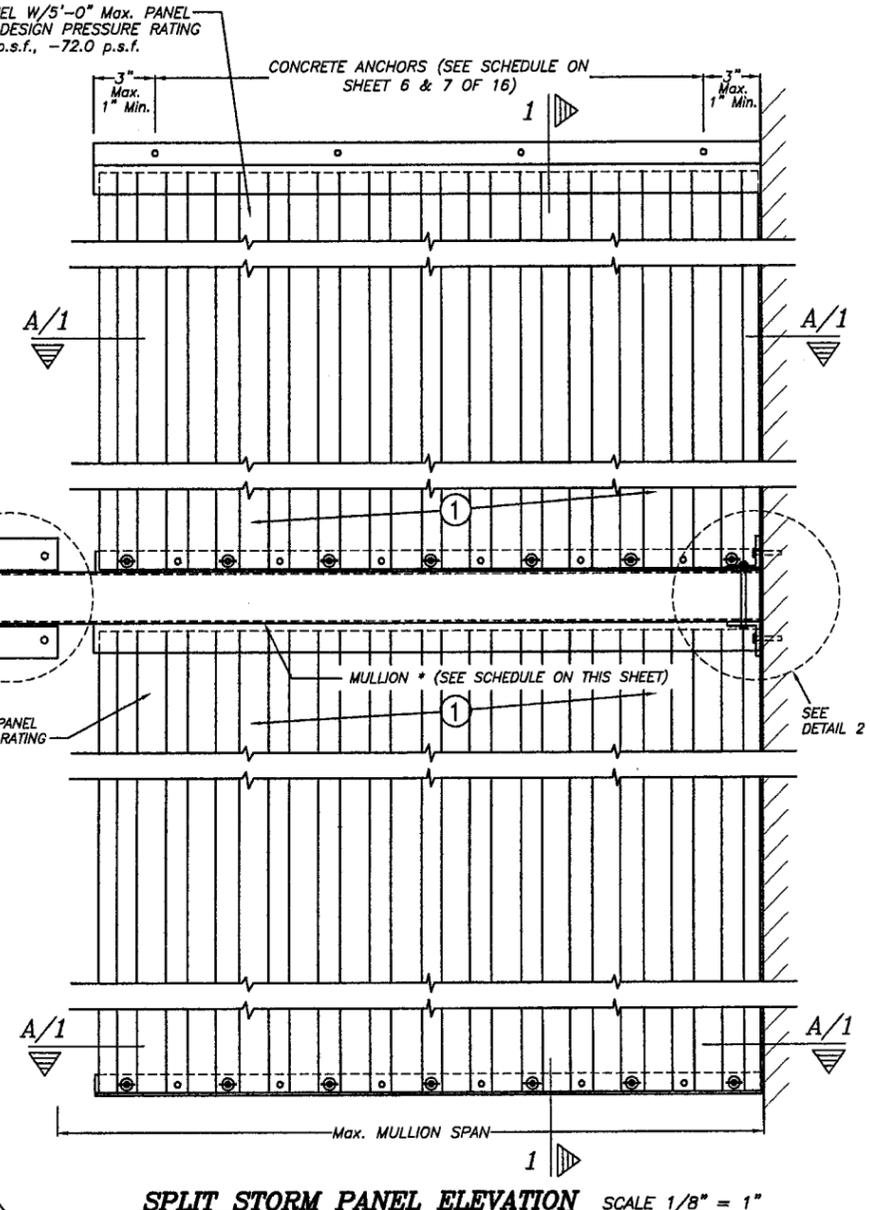


SECTION X-X SCALE: 1/4" = 1"



ELEVATION SCALE: 1/4" = 1"

DETAIL 2



SPLIT STORM PANEL ELEVATION SCALE 1/8" = 1"

MULLION SCHEDULE

Max. MULLION SPAN (Ft.) *	REQUIRED Min. TUBE MULLION **
≤ 4'-6"	2" x 3" x 1/8"
> 4'-6" TO 5'-8"	2" x 4" x 1/8"
> 5'-8" TO 6'-10"	2" x 5" x 1/8", 2" x 4" x 1/4"
> 6'-10" TO 8'-0"	2" x 6" x 1/8"

* SPANS VALID FOR DESIGN PRESSURE RATING LOADS OF +55.0 p.s.f., -72.0 p.s.f.
 ** MINIMUM TUBE'S DIMENSION SHALL BE ORIENTED PARALLEL TO STORM PANEL'S LENGTH.

MAY 29 2008

PRODUCT RENEWED as complying with the Florida Building Code
 Acceptance No. 08-0611-02
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 By *Heidi A. Miller*
 Miami Dade Product Control Division

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

©2008 TILTECO, INC.		0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E. DRAWN BY:
 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6335 N.W. 36th St., Ste. 303, VIRGINIA GARDENS, FL 33168 Phone: (305) 871-1530 . Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:
		REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE 1 OLD 05-289 05/22/08 3 - - 2 - - - 4 - -		08-169 DRAWING No
				SHEET 5 OF 16

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

MAXIMUM PANEL LENGTH "L" SCHEDULE

(VALID ONLY FOR PANEL INSTALLATIONS AS PER SECTIONS 1 THRU 7, ON SHEETS 3 & 4 OF 16)

MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	Max. PANEL LENGTH L (ft.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	PANEL CONDITION	APPLICABLE TO SECTIONS # AND ANY COMBINATION OF THEM
+55.5, -72.0	7'-5" OR LESS	2 1/4"	UNBOLTED	1 THRU 5 & 7
+55.5, -72.0	>7'-5" TO 8'-8" Max.	2 3/4"	UNBOLTED	1 THRU 5 & 7
+55.0, -72.0	>8'-8" TO 11'-2" Max.	2 1/2"	* BOLTED AT MIDLENGTH AT OVERLAPS	6

* BOLTED W/ 1/4"Ø-20x1" S.S. M.S. & WINGNUT AT OVERLAP & MIDLENGTH OF PANEL.

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND MASONRY STRUCTURES *

(VALID ONLY FOR PANEL INSTALLATIONS AS PER SECTIONS 1 THRU 7, ON SHEETS 3 & 4 OF 16)

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **								APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	TAPCONS		CF TAP-GRIP		CALK-IN		PANELMATES			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+55.5, -72.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	1 (TOP)	7'-5" OR LESS
	6"	6"	N/A	N/A	6"	6"	6"	6"	1 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	2 (TOP)	
	6"	N/A	N/A	N/A	6"	N/A	5"	N/A	2 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	3 (TOP)	
	6"	6"	N/A	N/A	6"	6"	6"	6"	3 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	4 & 7 (TOP)	
	6"	6"	N/A	N/A	6"	6"	6"	6"	4 & 7 (BOTTOM)	
	N/A	N/A	6 1/4"	6 1/4"	12 1/2"	6 1/4"	6 1/4"	6 1/4"	5 (TOP/BOTTOM)	

— SEE SHEET 8 & 9 OF 16 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 SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE : Min. E. D. FOR CALK-IN ANCHORS IS 2 1/2"). 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 LEGEND.

ACTUAL E. D.	FACTOR		
	TAPCON/PANELMATES	CALK-IN	CF TAP-GRIP
3"	.86	.75	1.00
2 1/2"	.71	.50	.80
2"	.50	—	—

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING
TAPCON/PANELMATES	3.0"
CALK-IN	2.5"
CF TAP-GRIP	3.0"

E. D. = EDGE DISTANCE

PRODUCT RENEWED
 as complying with the Florida
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 Expiration Date 06/26/2013
 By *Helmut A. Heber*
 Miami Dade Product Control
 Division

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

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MAY 29 2008		08-169		DRAWING No
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION
1	OLD 05-289	05/22/08	3	—
2	—	—	4	—
				SHEET 6 OF 16

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND MASONRY STRUCTURES *

(VALID ONLY FOR PANEL INSTALLATIONS AS PER SECTIONS 1 THRU 7, ON SHEETS 3 & 4 OF 16)

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **								APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	TAPCONS		CF TAP-GRIP		CALK-IN		PANELMATES			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+55.5, -72.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	1 (TOP)	>7'-5" TO 8'-8"
	6"	6"	N/A	N/A	6"	6"	6"	6"	1 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	2 (TOP)	
	6"	N/A	N/A	N/A	6"	N/A	5"	N/A	2 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	3 (TOP)	
	6"	6"	N/A	N/A	6"	6"	6"	6"	3 (BOTTOM)	
	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	4 & 7 (TOP)	
	6"	6"	N/A	N/A	6"	6"	6"	6"	4 & 7 (BOTTOM)	
	N/A	N/A	12 1/2"	6 1/4"	12 1/2"	6 1/4"	6 1/4"	6 1/4"	5 (TOP/BOTTOM)	
+50.0, -53.3	N/A	N/A	12 1/2"	6 1/4"	12 1/2"	6 1/4"	6 1/4"	6 1/4"	6 (TOP/BOTTOM)	>8'-8" TO 11'-2"
+55.0, -72.0	N/A	N/A	6 1/4"	N/A	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 (TOP/BOTTOM)	>8'-8" TO 11'-2"

— SEE SHEET 8 & 9 OF 16 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 SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE : Min. E. D. FOR CALK-IN ANCHORS IS 2 1/2"). 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 LEGEND.

ACTUAL E. D.	FACTOR		
	TAPCON/ PANELMATES	CALK-IN	CF TAP-GRIP
3"	.86	.75	1.00
2 1/2"	.71	.50	.80
2"	.50	-	-

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING
TAPCON/ PANELMATES	3.0"
CALK-IN	2.5"
CF TAP-GRIP	3.0"

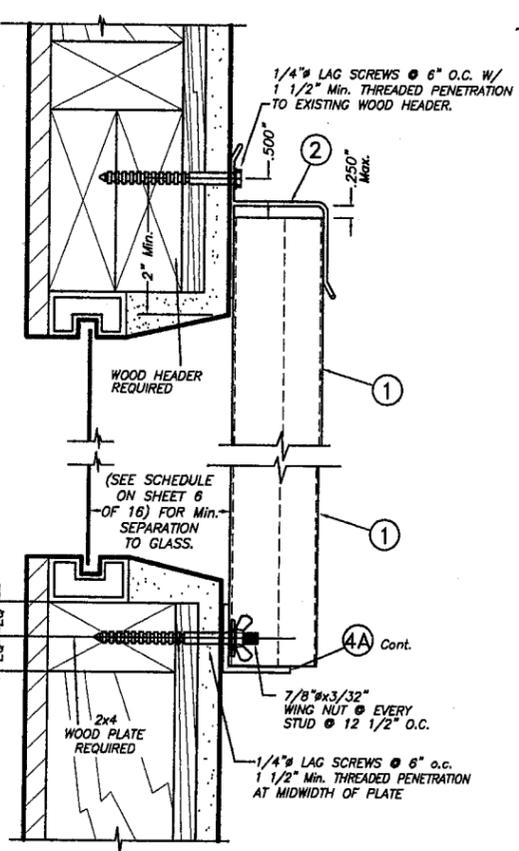
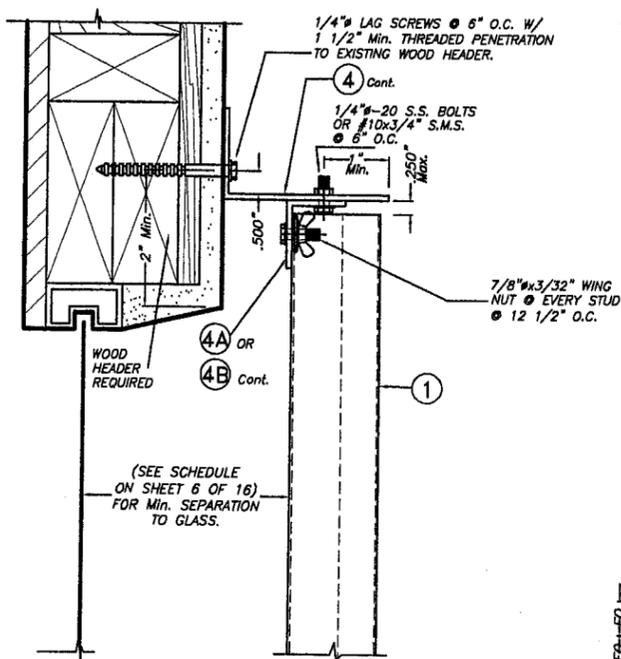
E. D. = EDGE DISTANCE

PRODUCT RENEWED
 as complying with the Florida Building Code
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 By Helene A. Miller
 Miami Data Product Control Division

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EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		08-169 DRAWING No		SHEET 7 OF 16	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-

MAY 29 2008



ALTERNATIVE 2

WALL MOUNTING INSTALLATIONS - SECTION 1

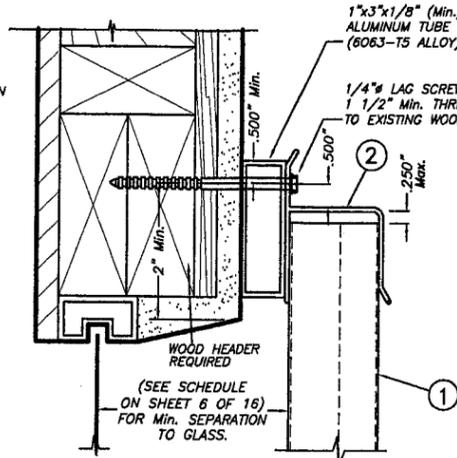
SCALE: 1/4" = 1"

NOTES:

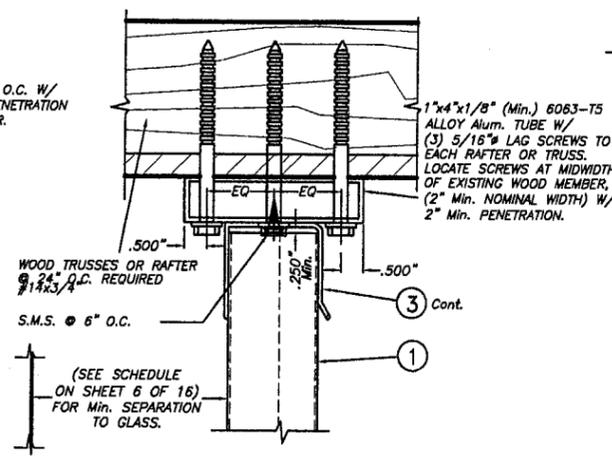
- INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH DESIGN LOADS UP TO +55.5, - 72.0 psf AND PANEL'S LENGTH UP TO 8'-8". (EXCEPT AS NOTED)
- FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

NOTE FOR COMBINATION OF SECTIONS:

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

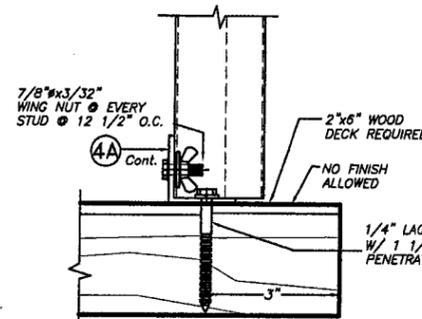


ALTERNATIVE 3



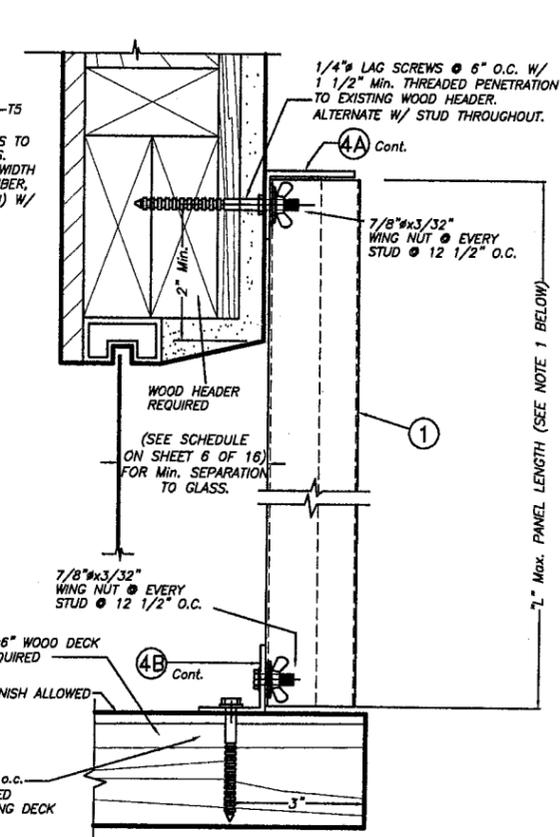
SECTION 2A

(LIMITED TO +55.5; -67.0 psf)



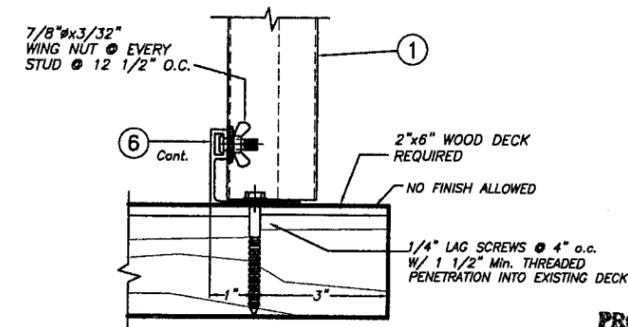
CEILING & FLOOR MOUNTING INSTALLATION - SECTION 2

SCALE: 1/4" = 1"



WALL MOUNTING & FLOOR MOUNTING INSTALLATIONS - SECTION 3

SCALE: 1/4" = 1"



FLOOR MOUNTING INSTALLATION - SECTION 2B

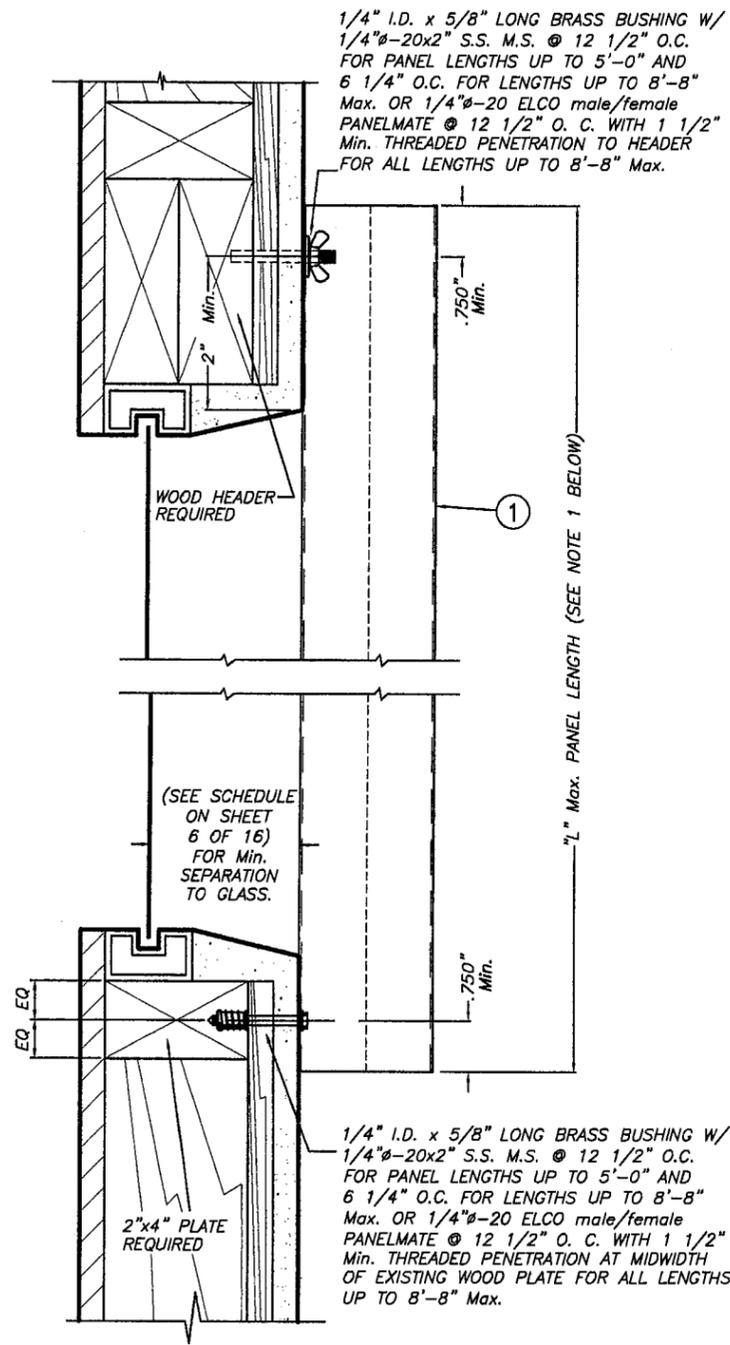
SCALE: 1/4" = 1"

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 08-0611.02
 Expiration Date 06/26/2013
 By *Helmut A. Walter*
 Miami Dade Product Control Division

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

© 2008 TILTECO, INC.		0.039" GALVANIZED STEEL STORM PANEL		L.G./R.E. DRAWN BY:	
<p>TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33186 Phone : (305) 871-1530 . Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167</p>		<p>ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797</p>		05/22/08 DATE:	
				08-169 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-288	05/22/08	3	-	-
2	-	-	4	-	-

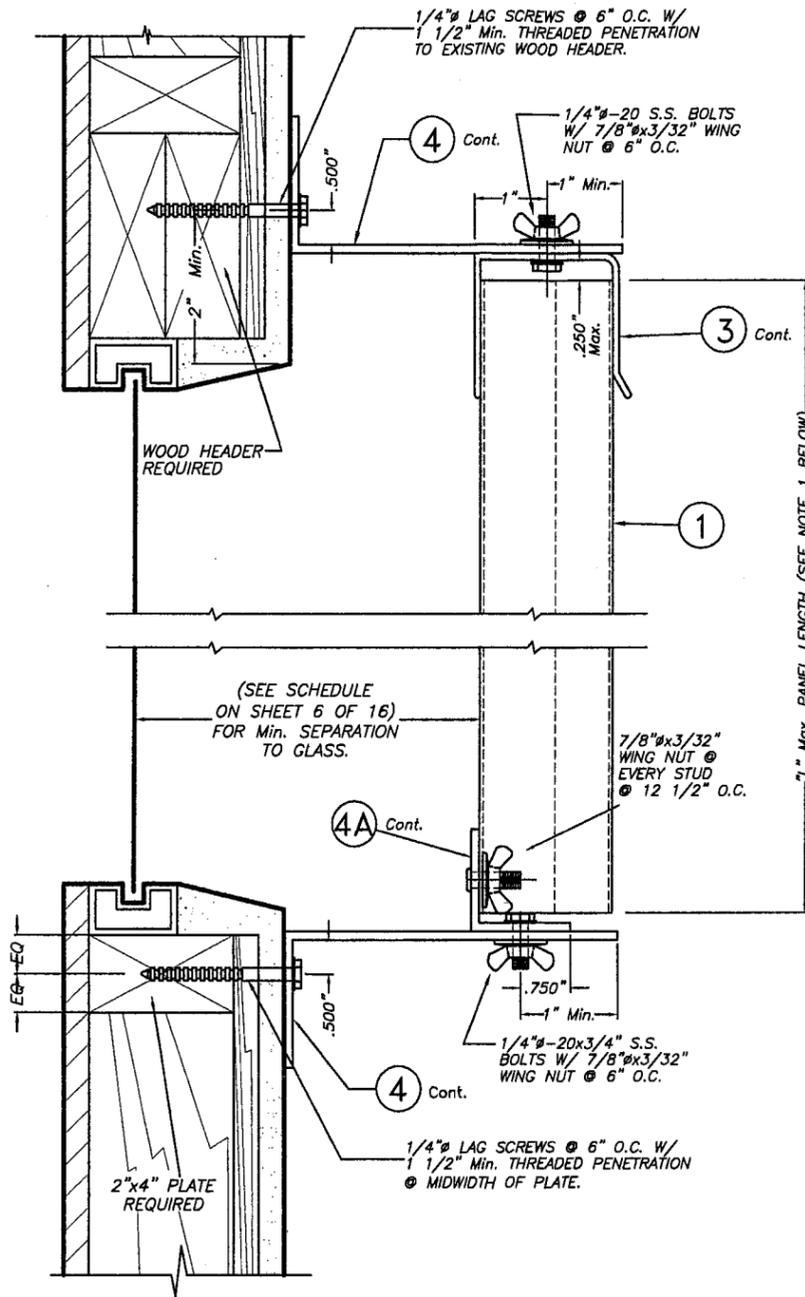
MAY 29 2008



ALTERNATIVE 5

WALL MOUNTING INSTALLATION - SECTION 1

SCALE: 3/8" = 1"



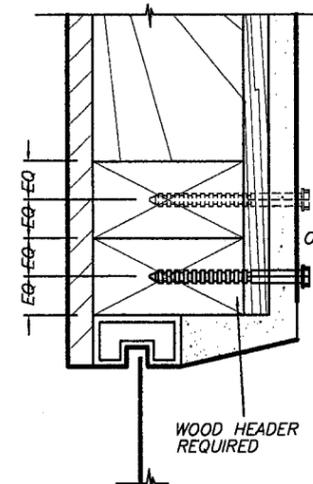
ALTERNATIVE 6

NOTES:

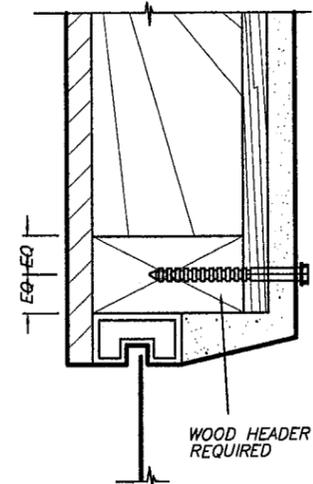
- INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH DESIGN LOADS UP TO +55.5, -72.0 psf AND PANEL'S LENGTH UP TO 8'-8".
- FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

NOTE FOR COMBINATION OF SECTIONS:

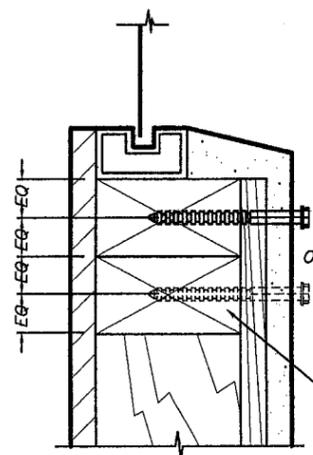
FLOOR/ WALL/ CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



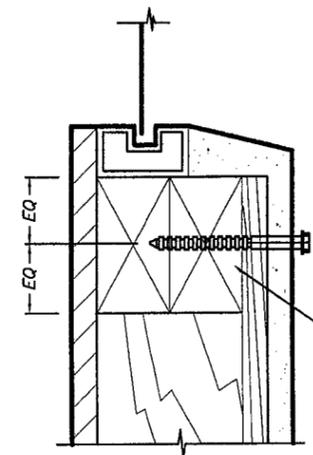
ALTERNATIVE 1



ALTERNATIVE 2



ALTERNATIVE 3



ALTERNATIVE 4

ALTERNATIVE WOOD FRAME CONDITIONS & ANCHOR LOCATIONS

SCALE: 3/8" = 1"

NOTE: SHUTTER TRACKS NOT SHOWN FOR CLARITY

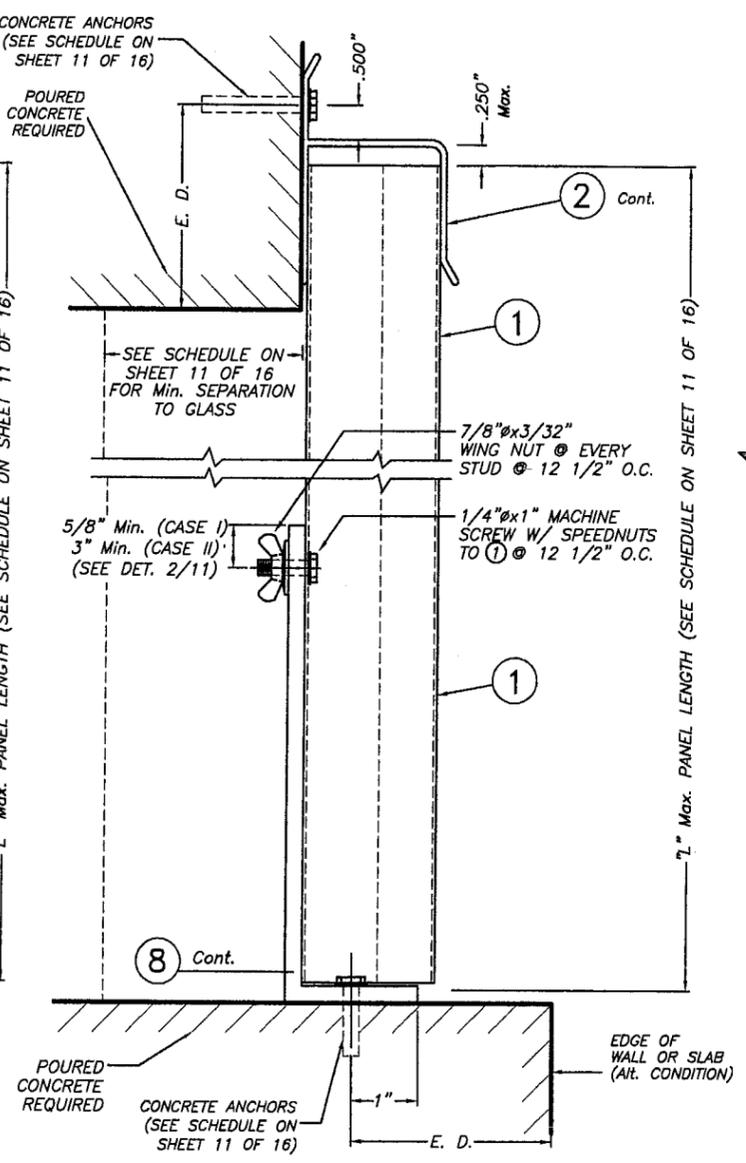
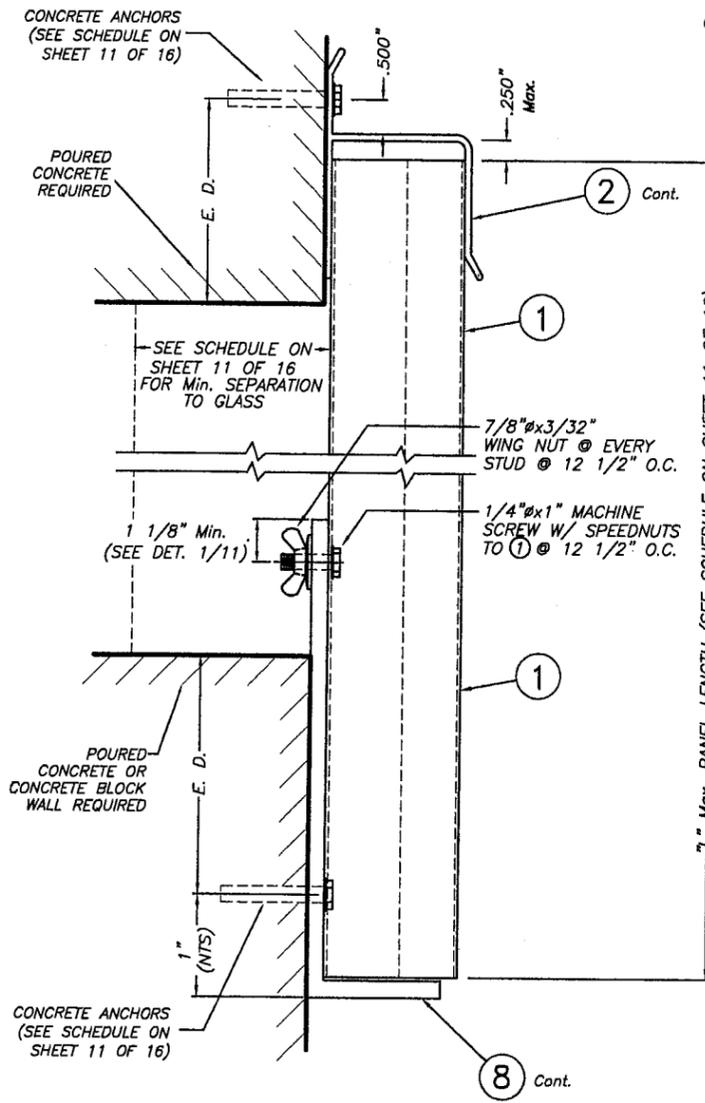
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Acceptance No. 08-0611.02
Expiration Date 06/26/2013
By *Heather A. Nelson*
Miami Dodge Product Control
Division

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

**INSTALLATION DETAILS ON
EXISTING WOOD BUILDINGS**

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 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33186 Phone: (305) 871-1530 . Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL. 33314 PHONE: (954)689-7545; FAX: (954)689-8797		05/22/08 DATE:	
				08-169 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	-	-	4	-	-

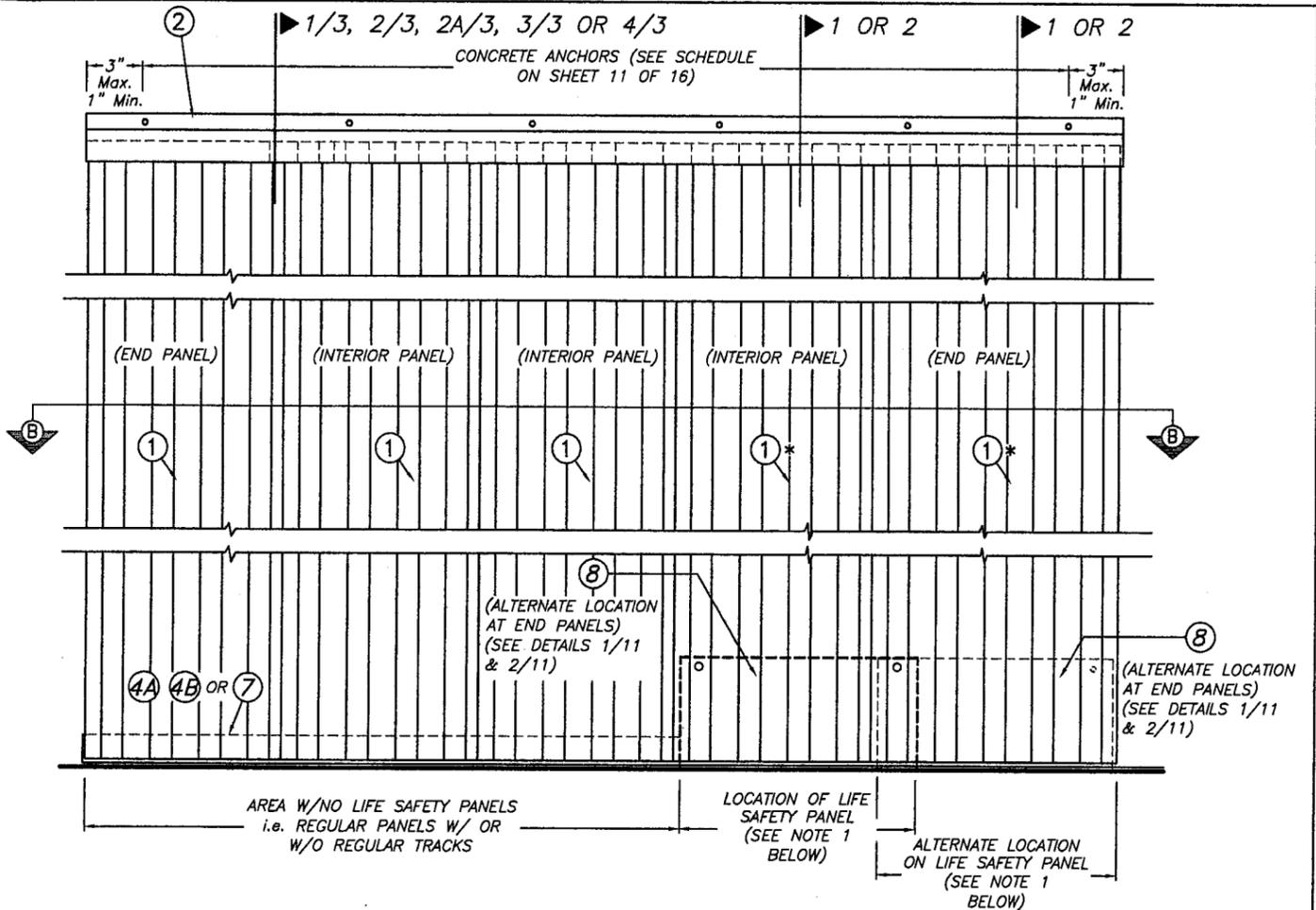
MAY 29 2008



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

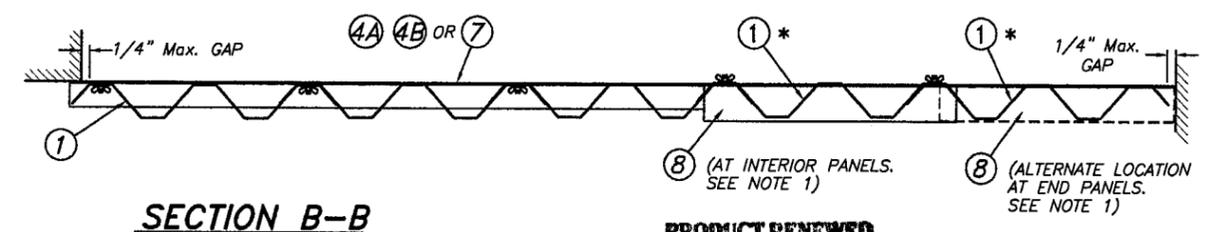
WALL AND FLOOR MOUNTING INSTALLATION
- SECTION 2 SCALE: 3/8" = 1"

- NOTES ON LIFE SAFETY STORM PANEL SYSTEM INSTALLATION:**
- LIFE SAFETY STORM PANEL CAN BE LOCATED AS AN END PANEL (FIRST OR LAST PANEL) OR AS AN INTERIOR PANEL. (ANY PANEL LOCATION IN BETWEEN END PANELS). LIFE SAFETY PANELS MAY OR MAY NOT BE INSTALLED ADJACENT TO REGULAR PANELS (W/ OR W/O REGULAR TRACKS.)
 - LIFE SAFETY STORM PANEL CONSISTS OF 0.039" GALVANIZED STEEL STORM PANEL AS PER COMPONENT 1, SHEET 1 OF 16 OF DRAWING. THIS PANEL ALLOWS ITSELF TO BE REMOVED OR INSTALLED FROM THE INSIDE OF STRUCTURE.
 - LIFE SAFETY PANEL REQUIRES TOP TRACK TO BE COMPONENT 2 & BOTTOM TRACK TO BE COMPONENT 3 AS PER SHEET 2 OF 16 OF THIS DRAWING. COMPONENT 3 MAY BE INSTALLED WALL OR FLOOR MOUNTED FOLLOWING SECTIONS 1 & 2 ON THIS SHEET, AS WELL AS DETAILS 1 & 2 ON SHEET 11 OF 16.
 - Min. LENGTH FOR COMPONENT 3 IS 15". Max. ANCHOR SPACING FOR COMPONENT 3 ANCHORAGE AT BOTTOM IS GIVEN ON SCHEDULES 1 & 2, SHEET 11 OF 16. COMPONENT 3 MAY BE PERMANENT OR REMOVABLE.
 - SEE DETAILS FOR INSTALLATION INTO WOOD FRAME BUILDINGS ON SHEET 11A OF 16.
 - SEE SHEET 3 OF 16 FOR DETAIL APPLICABLE TO THE NECESSITY FOR THE INSTALLATION OF SPACERS AT TRACKS INSTALLED ADJACENT AND BEYOND TO STUCCO/WOOD BANDS.



TYPICAL ELEVATION
 SCALE 3/32" = 1"

* LAST PANEL 1 TO BE INSTALLED AS LIFE SAFETY STORM PANEL OPENING SHALL ALWAYS BE PROVIDED W/ REAR HANDLE TO FACILITATE INSTALLATION IF INTENDED TO BE INSTALLED OR REMOVED FROM INSIDE OF STRUCTURE.



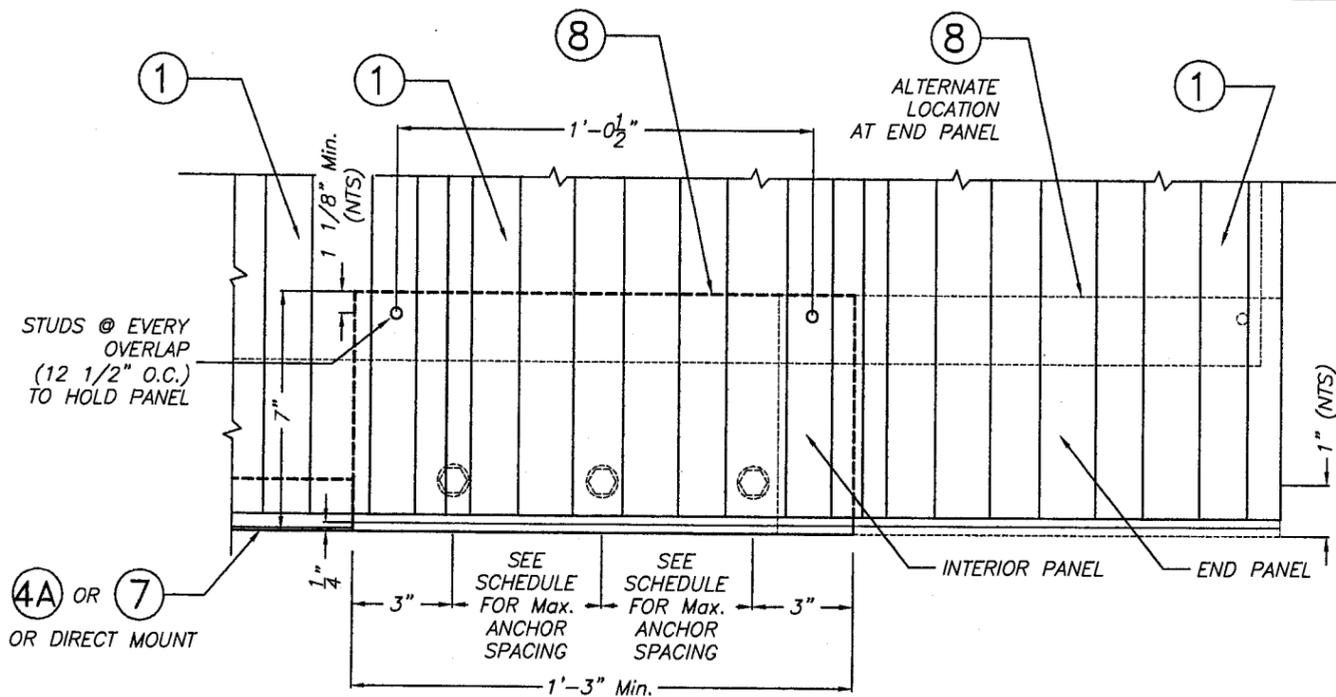
SECTION B-B

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 08-0611-02
 Expiration Date 06/26/2013
 By *[Signature]*
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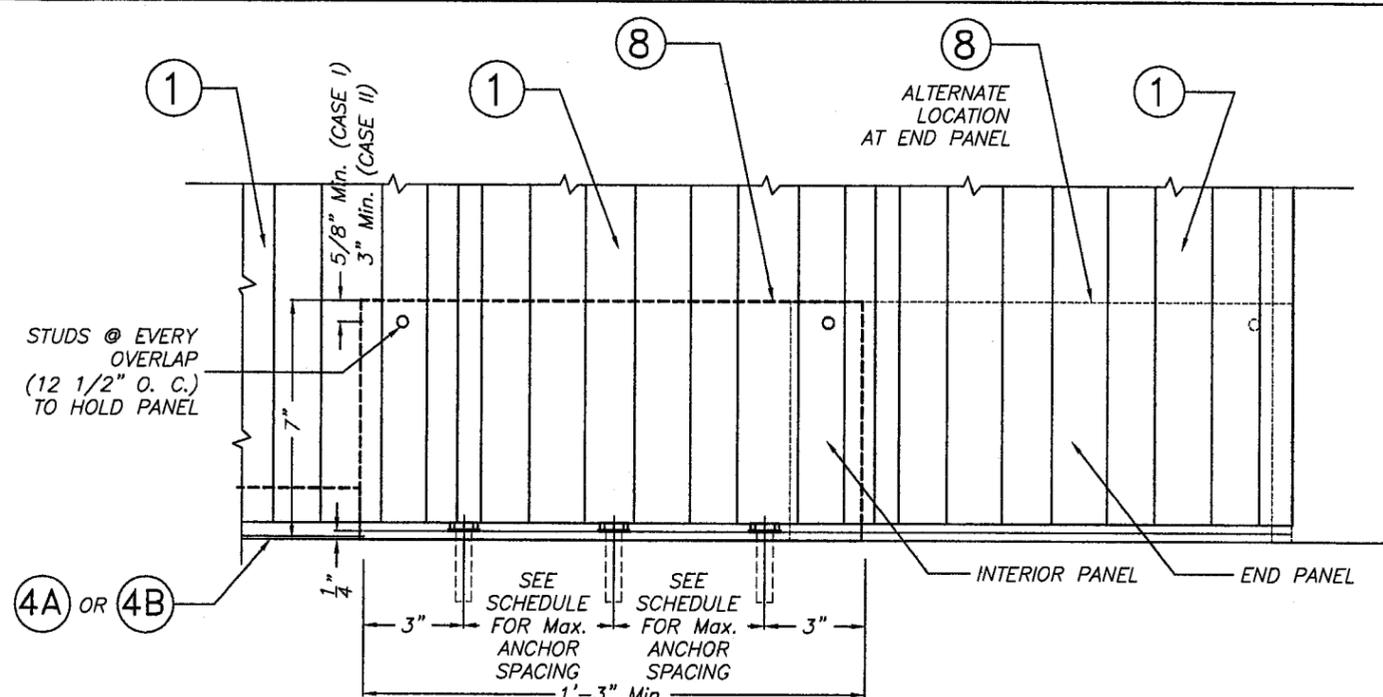
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305) 871-1530 Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		LIFE SAFETY STORM PANEL SYSTEM™ (0.039" GALVANIZED STEEL)		L.G./R.E. DRAWN BY:
		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:
REV. No DESCRIPTION DATE REV. No DESCRIPTION DATE		1 OLD 05-289 05/22/08 3 - - - 2 - - - 4 - - -		08-169 DRAWING No
				SHEET 10 OF 16

MAY 29 2008



DETAIL 1 : WALL MOUNTING INSTALLATION (APPLICABLE TO SCHEDULE 1)

SCALE: 3/16" = 1"



DETAIL 2 : FLOOR MOUNTING INSTALLATION (APPLICABLE TO SCHEDULE 2)

SCALE: 3/16" = 1"

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE AT (8) FOR INSTALLATIONS INTO CONCRETE AND MASONRY STRUCTURES

E. D. = EDGE DISTANCE

SCHEDULE # 1 : (8) W/ WALL MOUNT CONDITIONS TOP & BOTTOM W/ E. D. = 3 1/2" *

MAXIMUM DESIGN LOAD W (p.s.f.)	TAPCONS		CF TAP-GRIP		CALK-IN		PANELMATES		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	TO CONCRETE	TO MASONRY								
+55.0, -72.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	1 & 2 (TOP)	5'-0" OR LESS
	9"	9"	9"	9"	9"	9"	9"	9"	1 (BOTTOM)	
+55.0 -72.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	1 & 2 (TOP)	>5'-0" TO 7'-6"
	9"	6"	9"	6"	9"	9"	9"	9"	1 (BOTTOM)	
+55.0 -72.0	6"	N/A	N/A	N/A	6"	N/A	6"	N/A	1 & 2 (TOP)	>7'-6" TO 8'-8"
	9"	6"	9"	6"	9"	6"	6"	6"	1 (BOTTOM)	

SCHEDULE # 2 : (8) W/ FLOOR MOUNT CONDITIONS AT BOTTOM W/ E. D. = 3 1/2" *

MAXIMUM DESIGN LOAD W (p.s.f.)	CASE I (STUD @ 5/8" Min. FROM TOP OF ANGLE)		CASE II (STUD @ 3" Min. FROM TOP OF ANGLE)		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	TAPCONS		CALK-IN			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+49.2 -61.5	3"	N/A	3"	N/A	2 (BOTTOM)	7'-6" OR LESS
+52.8 -66.0	3"	N/A	3"	N/A	2 (BOTTOM)	7'-6" OR LESS
+55.0 -72.0	2 1/2"	N/A	2 1/2"	N/A	2 (BOTTOM)	7'-6" OR LESS
+55.0 -72.0	2 1/2"	N/A	2 1/2"	N/A	2 (BOTTOM)	>7'-6" TO 8'-0"
+55.0 -72.0	N/A	N/A	3"	3"	2 (BOTTOM)	>7'-6" TO 8'-8"

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

(APPLICABLE ONLY TO SECTIONS 1 & 2 INDICATED FOR LIFE SAFETY STORM PANEL SYSTEM ON SHEET 9 OF 16).

MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	Max. PANEL LENGTH L (ft.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	PANEL CONDITION
+55.0, -72.0	8'-8"	2 3/4"	UNBOLTED

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING
TAPCON/PANELMATES	3.0"
CALK-IN	2.5"
CF TAP-GRIP	3.0"

* MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE : Min. E. D. FOR CALK-IN ANCHORS IS 2 1/2"). 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 LEGEND.

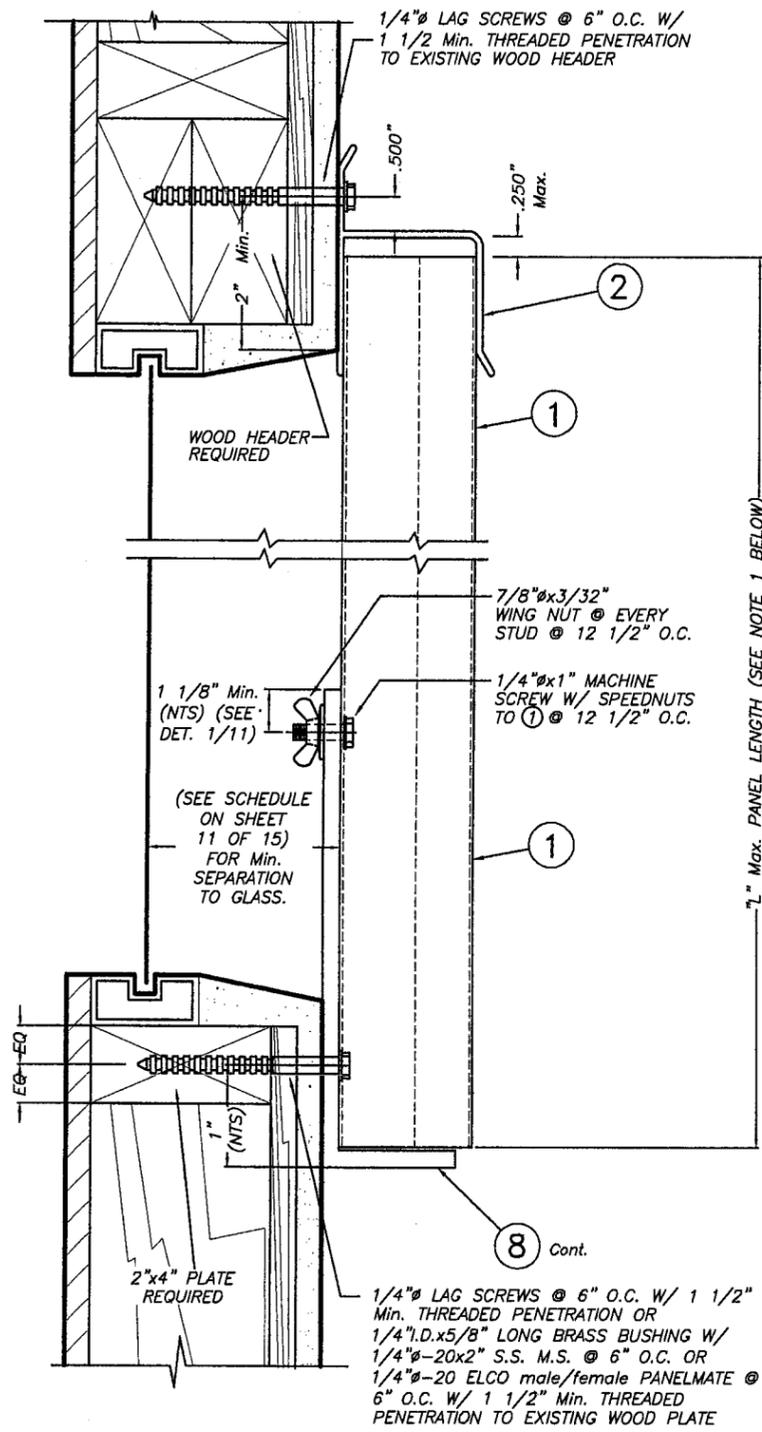
ACTUAL E. D.	FACTOR		
	TAPCON/PANELMATES	CALK-IN	CF TAP-GRIP
3"	.86	.75	1.00
2 1/2"	.71	.50	.80
2"	.50	-	-

PRODUCT RENEWED
 as complying with the Florida Building Code
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 Expiration Date 06/26/2013
 By *Helena A. Adams*
 Miami Dade Product Control Division

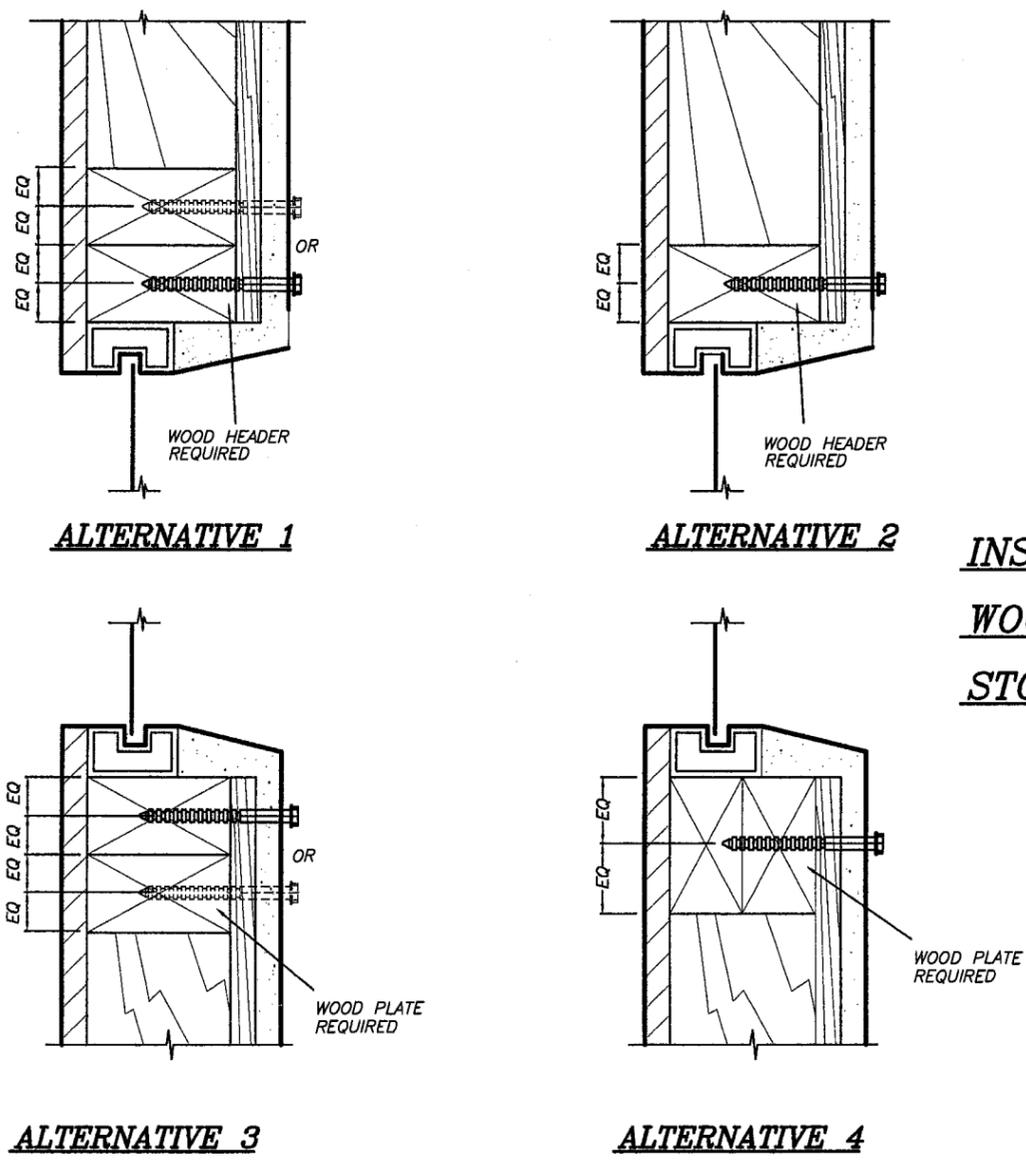
F.B.C. (High Velocity Hurricane Zone)

 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6335 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305) 871-1530 . Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167	LIFE SAFETY STORM PANEL SYSTEM™ (0.039" GALVANIZED STEEL)	L.G./R.E. DRAWN BY:
	ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797	05/22/08 DATE:
REV. No DESCRIPTION DATE REV. No DESCRIPTION DATE 1 OLD 05-289 05/22/08 3 - - - 2 - - - 4 - - -	08-169 DRAWING No	SHEET 11 OF 16

MAY 29 2008



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



ALTERNATIVE WOOD FRAME CONDITIONS & ANCHOR LOCATIONS

SCALE: 3/8" = 1"

NOTE: SHUTTER TRACKS NOT SHOWN FOR CLARITY

- NOTES:**
- INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH DESIGN LOADS UP TO +55.5, -72.0 psf AND PANEL'S LENGTH UP TO 8'-8".
 - FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS FOR LIFE SAFETY STORM PANEL SYSTEM

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 08-0611.02
Expiration Date 06/26/2013
By Helmut A. Miller
Miami Dade Product Control Division

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

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1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-

SHEET 11A OF 16

MAY 29 2009

GENERAL NOTES: VALID E-Z HANG STORM PANEL SYSTEM

1. E-Z HANG STORM PANEL 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. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE. IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.A.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS **NOT** USED IN THEIR ANALYSIS. A DURATION FACTOR CD=1.60 WAS USED FOR VERIFICATION OF FASTENERS IN WOOD.

STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER FENESTRATION TESTING LABORATORY, INC. REPORT # 2032, AS PROTOCOLS TAS-201, TAS-202 AND TAS-203.

2. THIS SYSTEM HAS BEEN DESIGNED TO BE INSTALLED ON THE OUTSIDE OF THE OPENING ACCESSING THE OPENING FROM THE INSIDE W/O THE USE OF A LADDER OR LIFT. THIS APPLICATION IS VALID WHEN INSTALLATION IS INTENDED TO BE PERFORMED FROM THE INSIDE OF STRUCTURE.

3. SERIES 1000 INSTALLATION IS APPLICABLE TO SINGLE AND DOUBLE HUNG STYLE WINDOWS WHEN INSTALLATION IS REQUIRED TO BE PERFORMED FROM THE INSIDE OF STRUCTURE.

4. SERIES 2000 INSTALLATION IS APPLICABLE TO SINGLE AND DOUBLE HUNG AND HORIZONTAL SLIDERS STYLE WINDOWS WHEN INSTALLATION IS REQUIRED TO BE PERFORMED FROM THE INSIDE OF STRUCTURE.

5. ALL ALUMINUM EXTRUSIONS TO BE 6063-T6 ALLOY AND TEMPER. (UNLESS OTHERWISE NOTED)

6. ALL ALUMINUM SHEET METAL USED AT CLOSURES SHALL HAVE 3105-H14 ALLOY.

7. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY STEEL, ASTM A-653 GRADE 40 Min., GALVANIZED STEEL DESIGNATION W/FY= 41.4 ksi (AFTER ROLLED).

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

9. BOLTS TO BE ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL, WITH 36 ksi MINIMUM YIELD STRENGTH.

10. ANCHORS TO WALL SHALL BE AS FOLLOWS:

(A) TO EXISTING POURED CONCRETE:

- 1/4"Ø TAPCON ANCHORS AS MANUFACTURED BY I.T.W. BUILDDEX OR ELCO TEXTRON.
- 1/4"Øx7/8" CALK-IN ANCHORS OR ELCO male/female PANELMATES AS MANUFACTURED BY POWERS FASTENERS INC. AND ELCO TEXTRON, RESPECTIVELY.

NOTES:

A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE SHALL BE 1 3/4" AND 1 7/8" FOR ELCO PANELMATES.

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, AND 1" Min. FOR WALLS WITH NO STUCCO, AND MAY BE HEADED SCREWS OR ALL THREADED SCREWS W/O HEAD, BUT WITH WING NUTS.

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 MENTINED IN A.1) AND IN A.2).

(B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4"Ø TAPCON ANCHORS, AS MANUFACTURED BY I.T.W. BUILDDEX OR ELCO TEXTRON.
- 1/4"Øx7/8" CALK-IN ANCHORS OR ELCO male/female PANELMATES AS MANUFACTURED BY POWERS FASTENERS INC. AND ELCO TEXTRON, RESPECTIVELY.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS AND ELCO PANELMATES INTO CONCRETE BLOCK SHALL BE 1 1/4".

B.2) 7/8" CALK-IN ANCHORS AND 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 Min. SHOULD STUCCO EXIST, AND 1" Min. FOR WALLS WITH NO STUCCO, AND MAY BE HEADED SCREWS OR ALL THREADED SCREWS W/O HEAD, BUT WITH WING NUTS.

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 MENTIONED IN B.1) AND IN B.2).

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

11. 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.

12. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.

13. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

14. ROBICO SHUTTER, Inc. E - Z HANG STORM PANEL SYSTEM™ IS PATENT PENDING.

15. (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 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 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 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.

16. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL. ONE LABEL SHALL BE PLACED FOR EVERY PANEL.

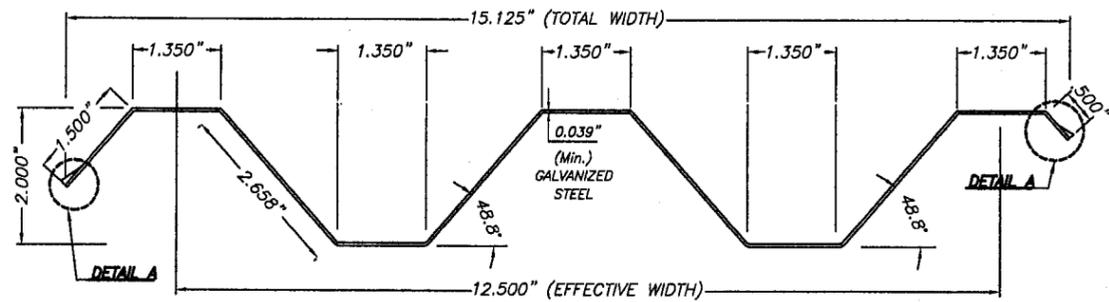
LABEL SHALL READ AS FOLLOWS:
 ATRIUM SHUTTERS, INC.
 DAVIE, FL.
 MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

PRODUCT RENEWED
 as complying with the Florida
 Building Code
 Acceptance No. 08-0611.02
 Expiration Date 06/26/2013
 By [Signature]
 Miami Dade Product Control
 Division

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

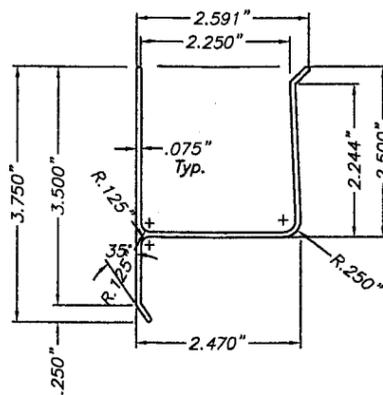
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 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305) 871-1530 . Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL. 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:	
		REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE 1 OLD 05-289 05/22/08 3 - - 2 - - - 4 - -		08-169 DRAWING No	
				SHEET 12 OF 16	

[Signature]
 MAY 29 2008



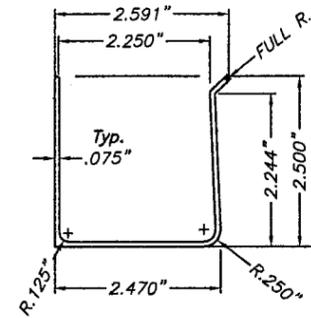
① **PANEL**

SCALE: 3/8" = 1"



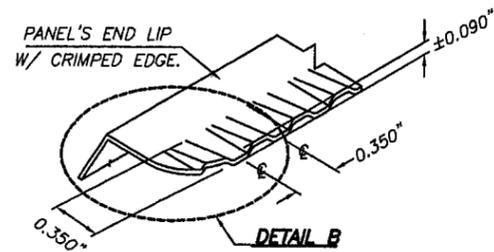
② **REVERSED "h" TRACK**

SCALE: 3/8" = 1"



③ **REVERSED "U" TRACK**

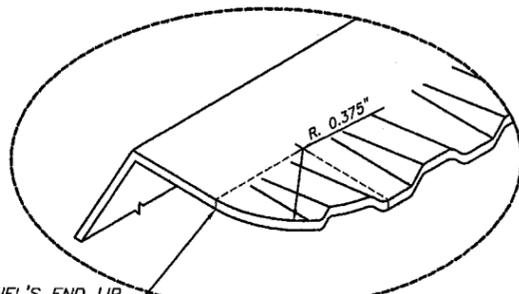
SCALE: 3/8" = 1"



ISOMETRIC VIEW

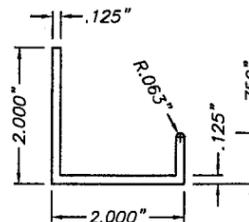
DETAIL A

(N.T.S.)



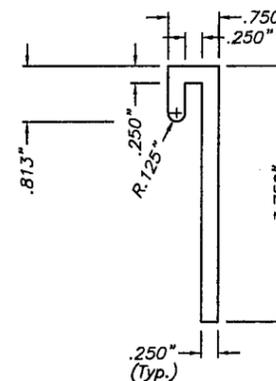
DETAIL B

ROUNDED CORNER @ ENDS OF PANEL'S
END LIP W/ CRIMPED EDGE.
(N.T.S.)



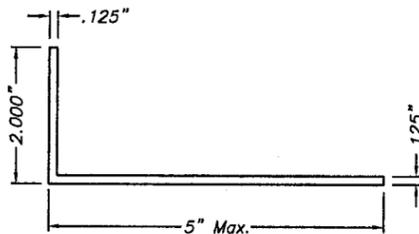
④ **"J" TRACK**

SCALE: 3/8" = 1"



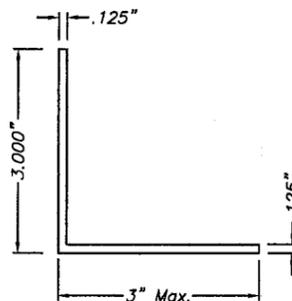
⑤ **PANEL HANGER : 1 1/4" WIDE**

6061-T6 Alum. ALLOY
SCALE: 3/8" = 1"



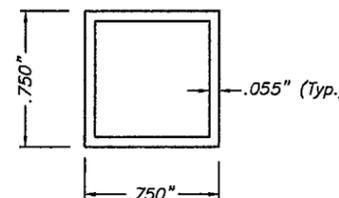
⑥ **2"x5"(Max.) Alum. ANGLE**

SCALE: 3/8" = 1"



⑦ **3"x3"(Max.) Alum. ANGLE**

SCALE: 3/8" = 1"



⑧ **STOP BAR 11" LONG**

6063-T5 Alum. ALLOY
SCALE: FULL

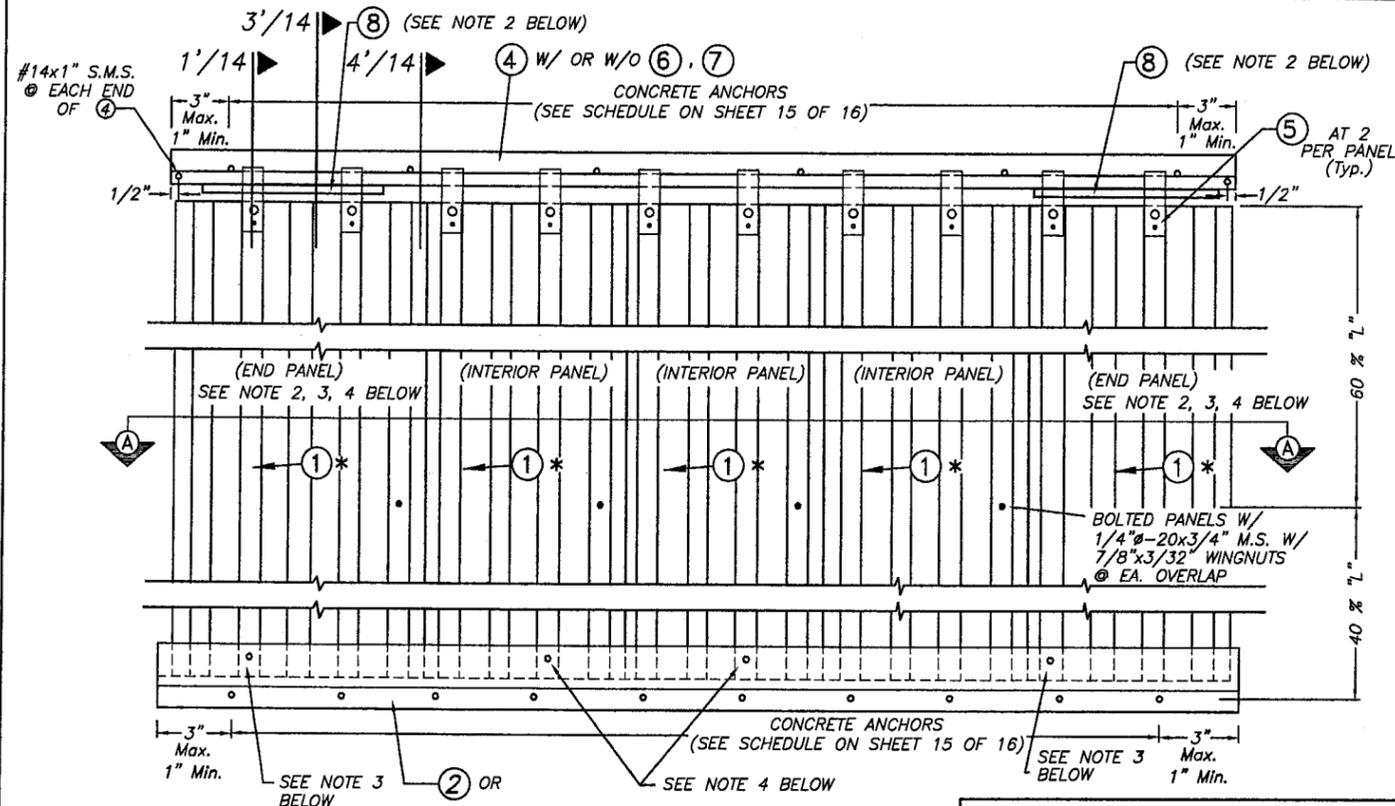
PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 08-0611.02
Expiration Date 06/26/2013
By *Helmy A. Miller*
Miami Data Product Control
Division

COMPONENTS

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

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		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL. 33314 PHONE: (954)689-7545, FAX: (954)689-8797		DRAWN BY:	
				05/22/08 DATE:	
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305) 871-1530 Fax: (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		08-169 DRAWING No		SHEET 12A OF 16	
REV. No	DESCRIPTION	DATE	REV. No		DESCRIPTION
1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-

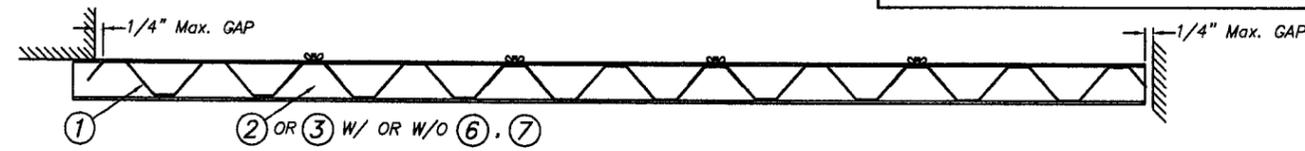
MAY 29 2008



STORM PANEL SERIES 2000 INSTALLATION

SCALE 3/32" = 1"

* LAST PANEL ① TO BE INSTALLED AT EACH OPENING SHALL ALWAYS BE PROVIDED W/ REAR HANDLE TO FACILITATE INSTALLATION IF INTENDED TO BE INSTALLED FROM INSIDE OF STRUCTURE.

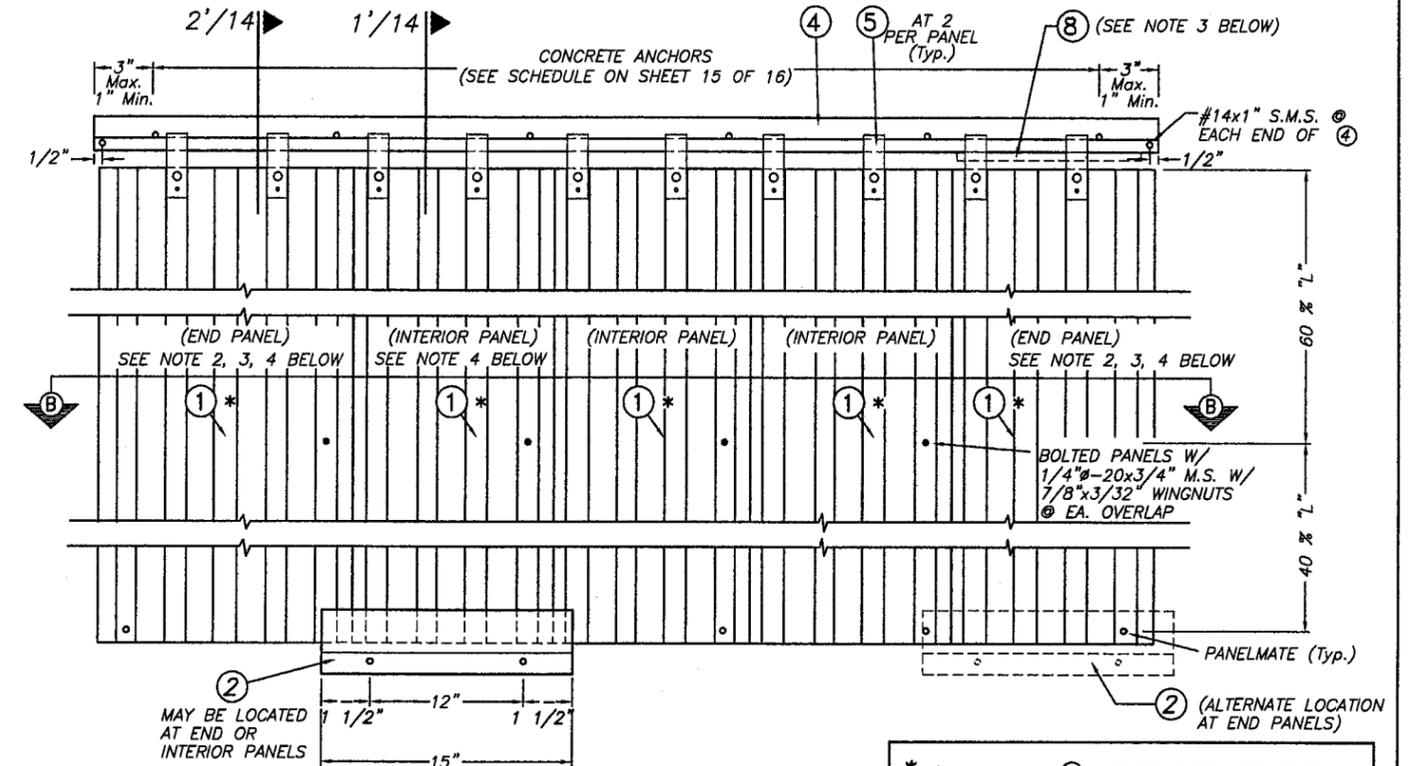


SECTION A-A

SCALE 3/32" = 1"

NOTES :

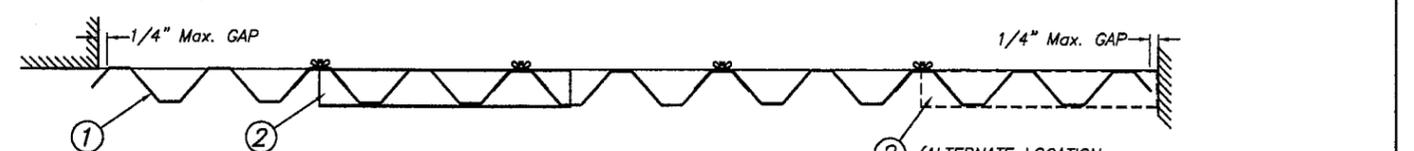
- (1). DEFINITION OF SERIES 2000: E - Z HANG STORM PANEL SYSTEM CONSISTING OF PANEL + Cont. TRACKS TOP & BOTTOM.
- (2). END PANELS SHALL ALWAYS BE CONNECTED TO BOTTOM TRACK OTHERWISE A STOP BAR ⑧ SHALL BE PROVIDED AT TOP OF SUCH PANELS.
- (3). IF END PANELS ARE CONNECTED TO BOTTOM TRACK, CONNECTION SHALL CONSIST OF 1/4"Ø-20x3/4" M.S. W/ 7/8"Øx3/32" WING NUT OR 1/4"Øx3/4" Min. THUMBSCREW INTO TAPPED BOTTOM TRACK. LOCATION OF FASTENERS MAY BE AT EITHER OF TWO EXTERIOR FLAT FLANGES OF END PANEL.
- (4). IN CASE THAT END PANELS ARE NOT CONNECTED TO BOTTOM TRACK (i.e. A STOP BAR IS ONLY USED AT TOP) AT LEAST TWO PANELS SHALL BE CONNECTED TO BOTTOM TRACK USING SPECS INDICATED ON NOTE (3) ABOVE. IN SUCH CASE, CONNECTION OF PANELS TO BOTTOM TRACK MAY OCCUR AT ANY PANEL LOCATION.
- (5). SEE SECTION 1', 3' & 4' ON SHEET 14 OF 16. SEE ANCHOR SCHEDULE ON SHEET 15 OF 16.



STORM PANEL SERIES 1000 INSTALLATION

SCALE 3/32" = 1"

* LAST PANEL ① TO BE INSTALLED AT EACH OPENING SHALL ALWAYS BE PROVIDED W/ REAR HANDLE TO FACILITATE INSTALLATION IF INTENDED TO BE INSTALLED FROM INSIDE OF STRUCTURE.



SECTION B-B

SCALE 3/32" = 1"

NOTES :

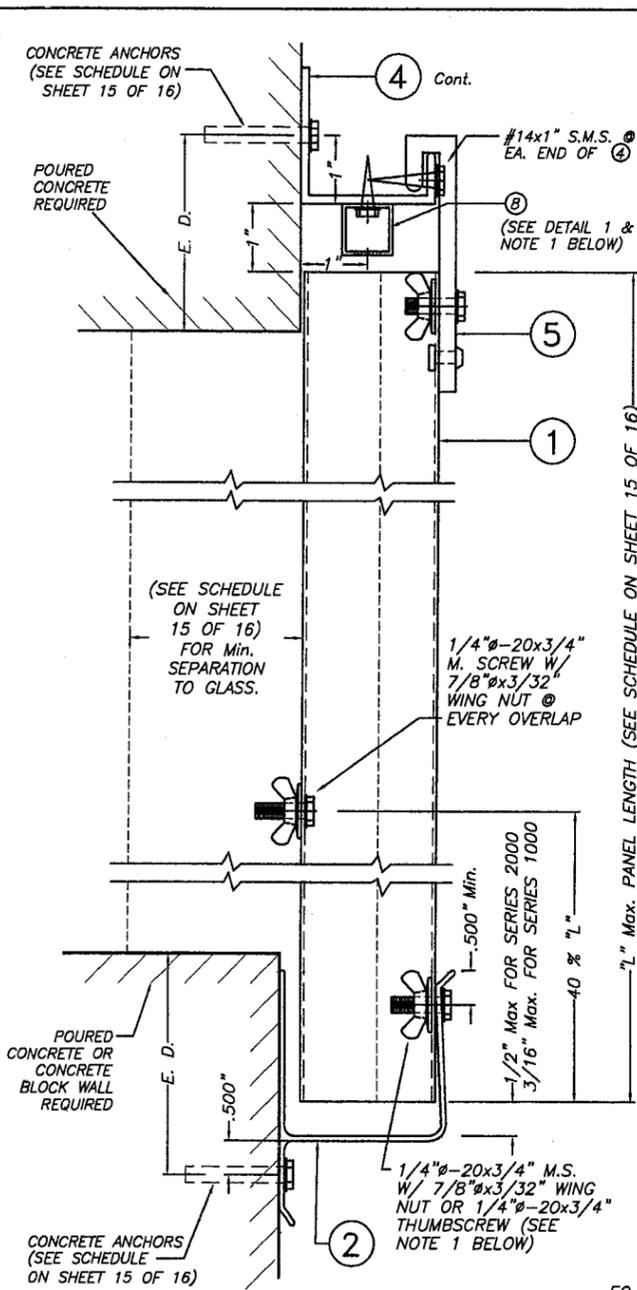
- (1). DEFINITION OF SERIES 1000: E - Z HANG STORM PANEL SYSTEM CONSISTING OF PANEL + Cont. TRACKS AT TOP & male PANELMATES OR 15" LONG ② AT BOTTOM W/ PANELMATES.
- (2). END PANELS SHALL ALWAYS BE CONNECTED TO EXISTING SILL WALL BY MEANS OF PANELMATES OR, IF USED JOINTLY W/ 15" LONG ② TRACK AT BOTTOM, END PANELS SHALL BE CONNECTED TO ② W/ 1/4"Ø-20x3/4" M.S. W/ 7/8"Øx3/32" WING NUT OR 1/4"Ø-20x3/4" Min. THUMBSCREW INTO TAPPED ② (EXCEPT AS DESCRIBED ON NOTE (3) BELOW).
- (3). FOR CASES WHEN END PANELS ARE USE JOINTLY W/ 15" LONG TRACK ② AT BOTTOM BUT END PANELS ARE NOT CONNECTED TO BOTTOM TRACK ②, A STOP BAR ⑧ SHALL BE PROVIDED AT TOP OF SUCH PANELS.
- (4). FOR INSTALLATIONS WHEN END PANELS AND SOME INTERIOR PANELS ARE DIRECTLY MOUNTED TO EXISTING SILL WALL BY MEANS OF PANELMATES, ONE INTERIOR PANEL MAY BE USED JOINTLY W/ TRACK ② AT BOTTOM ATTACHING BOTTOM TRACK TO WALL W/ TWO PANELMATES FOLLOWING SPACING SHOWN ON ELEVATION AND W/ A 3 1/2" Min. EDGE DISTANCE. FOR THIS CASE, INTERIOR PANEL USED JOINTLY W/ ② DOES NOT NEED TO BE CONNECTED TO ② BY ANY MEANS. TRACK ② SHALL BE INSTALLED SUCH THAT ADJACENT PANELS (TO THE LEFT & RIGHT SIDE OF INTERIOR PANEL) HAVE THEIR OVERLAPS RETAINED BY ②.

PRODUCT RENEWED
 as complying with the Florida
 Building Code
 Acceptance No 08-0611.02
 Expiration Date 06/26/2013
 By *Heidi A. Kuhn*
 Miami Data Product Control
 Division

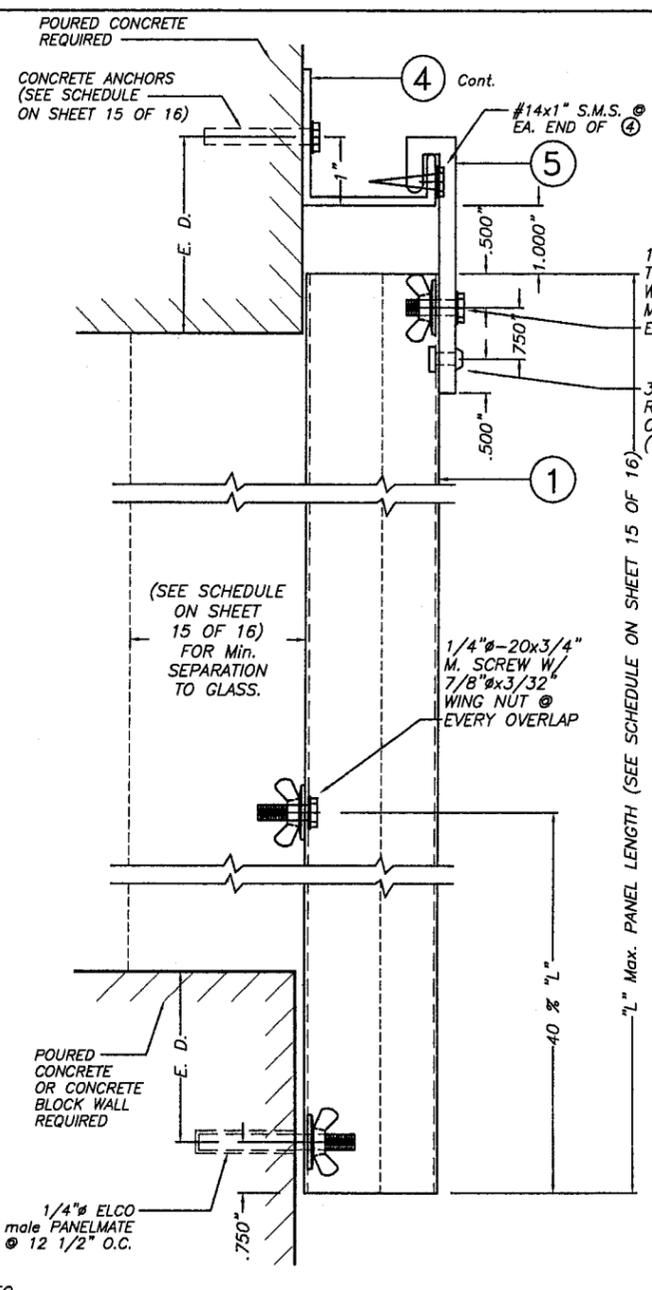
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MAY 29 2008

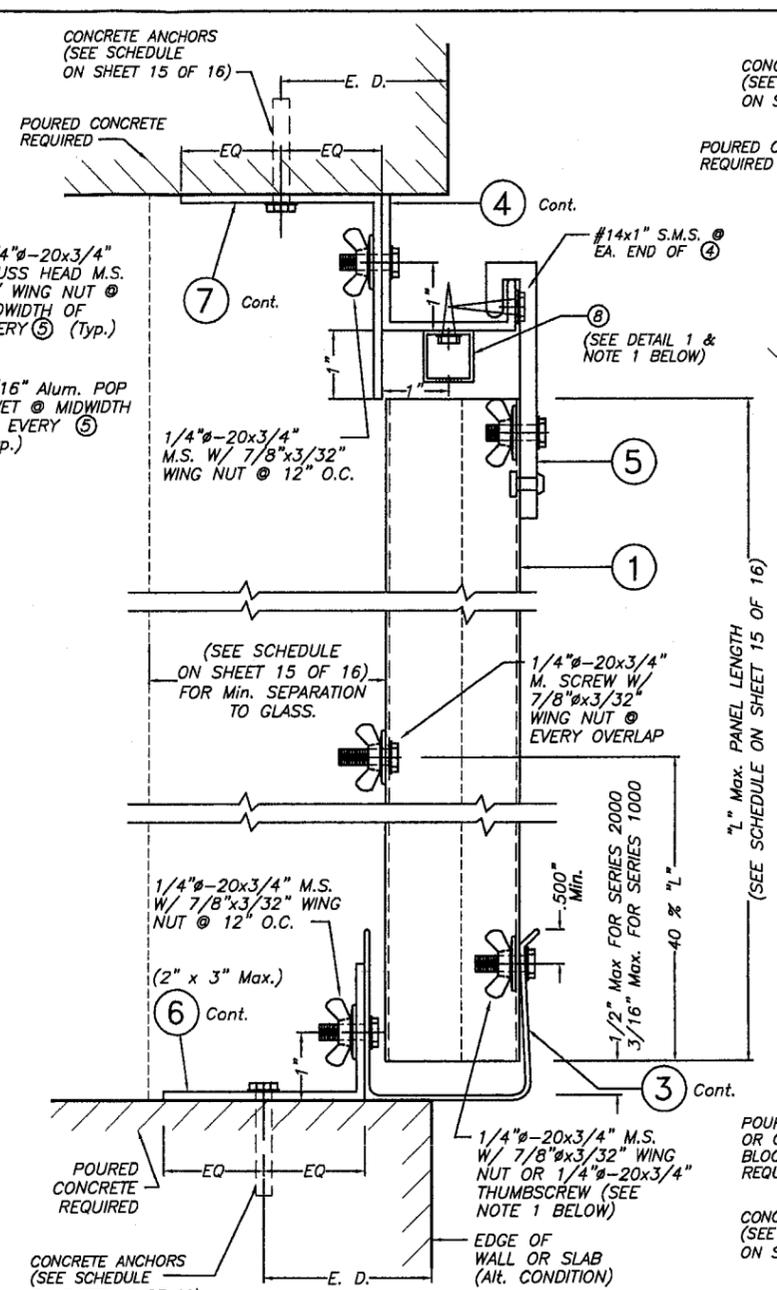
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 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone : (305) 871-1530 . Fax : (305) 871-1531 EB-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVIE, FL 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:	
				08-169 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 05-289	05/22/08	3	-	-
2	-	-	4	-	-



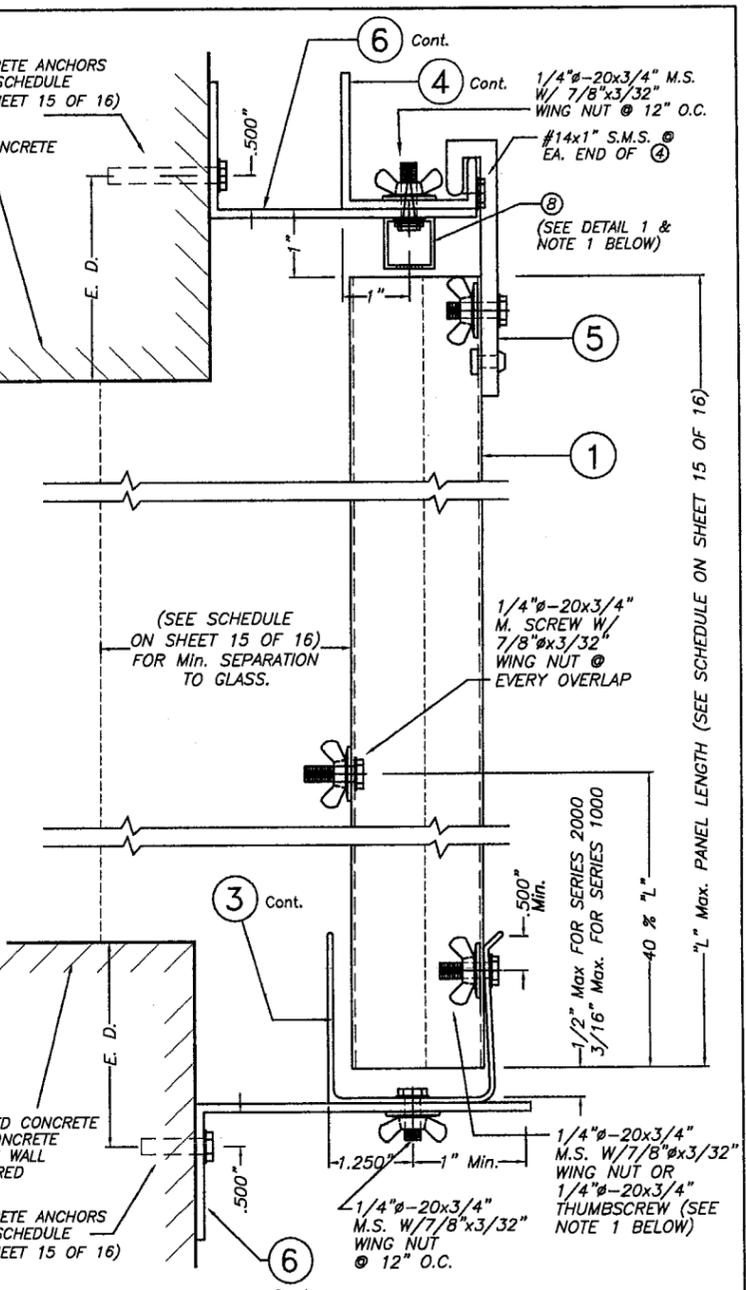
SECTION 1'
SCALE: 3/8" = 1"



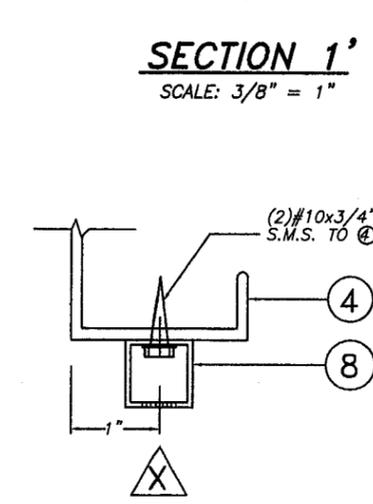
SECTION 2'
SCALE: 3/8" = 1"



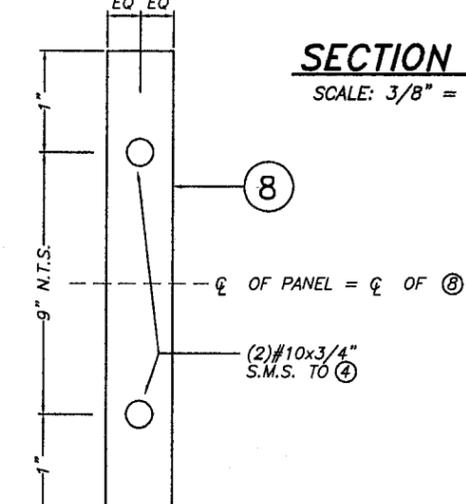
SECTION 3'
SCALE: 3/8" = 1"



SECTION 4'
SCALE: 3/8" = 1"



DETAIL 1
SCALE: 1/2" = 1"



VIEW X

NOTE 1:
SEE SPECIFICATIONS AND REQUIREMENTS FOR USE OF STOP BAR (8) AT TOP AS WELL AS PANEL (1) CONNECTION TO TRACKS (2) OR (3) AT BOTTOM, BASED ON 1000 OR 2000 SERIES INSTALLATION TYPE ON SHEET 13 OF 16.

NOTE FOR COMBINATION OF SECTIONS:
MOUNTING SHOWN ON SECTIONS 1' THROUGH 4' CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

E. D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEET 15 OF 16)

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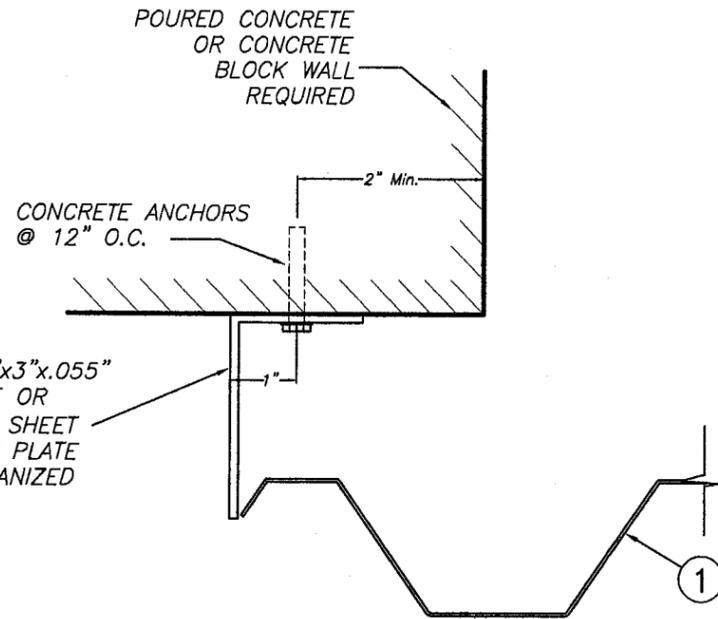
By *Helmut A. Tillit*
Miami Data Product Control Division

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

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EB-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

E-Z HANG STORM PANEL SYSTEM™ (0.039" GALVANIZED STEEL)		L.G./R.E. DRAWN BY:
ATRIUM SHUTTERS, INC. 4800 S.W. 51 STREET DAVE, FL. 33314 PHONE: (954)689-7545, FAX: (954)689-8797		05/22/08 DATE:
REV. No. DESCRIPTION DATE REV. No. DESCRIPTION DATE		08-169 DRAWING No
1	OLD 05-289	05/22/08
2		
3		
4		

MAY 29 2008



CASE A (Plan)

SCALE: 3/8" = 1"

END CLOSURES DETAILS

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

(VALID ONLY FOR PANEL INSTALLATIONS AS PER SECTIONS 1' THRU 4', SHEET 14 OF 16).

MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	Max. PANEL LENGTH L (in.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	PANEL CONDITION	APPLICABLE TO SECTIONS
+66.0, -75.3	70" OR LESS	2 9/16"	BOLTED *	1', 2' & 3'
+66.0, -75.3	70" OR LESS	2 7/8"	BOLTED *	4'

* BOLTED W/ 1/4"Ø-20x3/4" S.S. M.S. & WINGNUT AT OVERLAP & 40% OF PANEL LENGTH MEASURED FROM BOTTOM OF PANEL.

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING
TAPCON/PANELMATES	3.0"
CALK-IN	2.5"
CF TAP-GRIP	3.0"

— SEE SHEET 16 OF 16 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND MASONRY STRUCTURES *

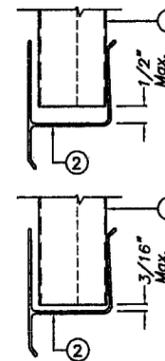
(VALID ONLY FOR PANEL INSTALLATIONS AS PER SECTIONS 1' THRU 4', SHEET 14 OF 16).

E. D. = EDGE DISTANCE

MAXIMUM DESIGN LOAD W (p.s.f.)	MAXIMUM ANCHORS SPACING FOR E. D. = 3 1/2" **						APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (in.)
	TAPCONS		CALK-IN		PANELMATES			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+66.0, -75.3	12"	N/A	12"	N/A	12"	N/A	1' & 2' (TOP)	70" OR LESS
	12"	4"	12"	5 1/2"	5"	5"	1' (BOTTOM) SERIES 2000 +	
	12"	5 1/2"	12"	8 1/2"	8"	8"	1' (BOTTOM) SERIES 1000 ++	
	N/A	N/A	N/A	N/A	12 1/2"	12 1/2"	2' (BOTTOM)	
	7"	N/A	6 1/2"	N/A	4 1/2"	N/A	3' (TOP)	
	12"	N/A	12"	N/A	9 1/2"	N/A	3' (BOTTOM)	
	12"	N/A	12"	N/A	12"	N/A	4' (TOP)	
	12"	8"	12"	12"	12"	12"	4' (BOTTOM)	

+ REQUIRES Max. DISTANCE BETWEEN BOTTOM OF PANEL AND ② TO BE: 1/2"

++ REQUIRES Max. DISTANCE BETWEEN BOTTOM OF PANEL AND ② TO BE: 3/16"



** MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE. FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING SPACING SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS. (NOTE: Min. E. D. FOR CALK-IN ANCHORS IS 2 1/2"). 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 LEGEND.

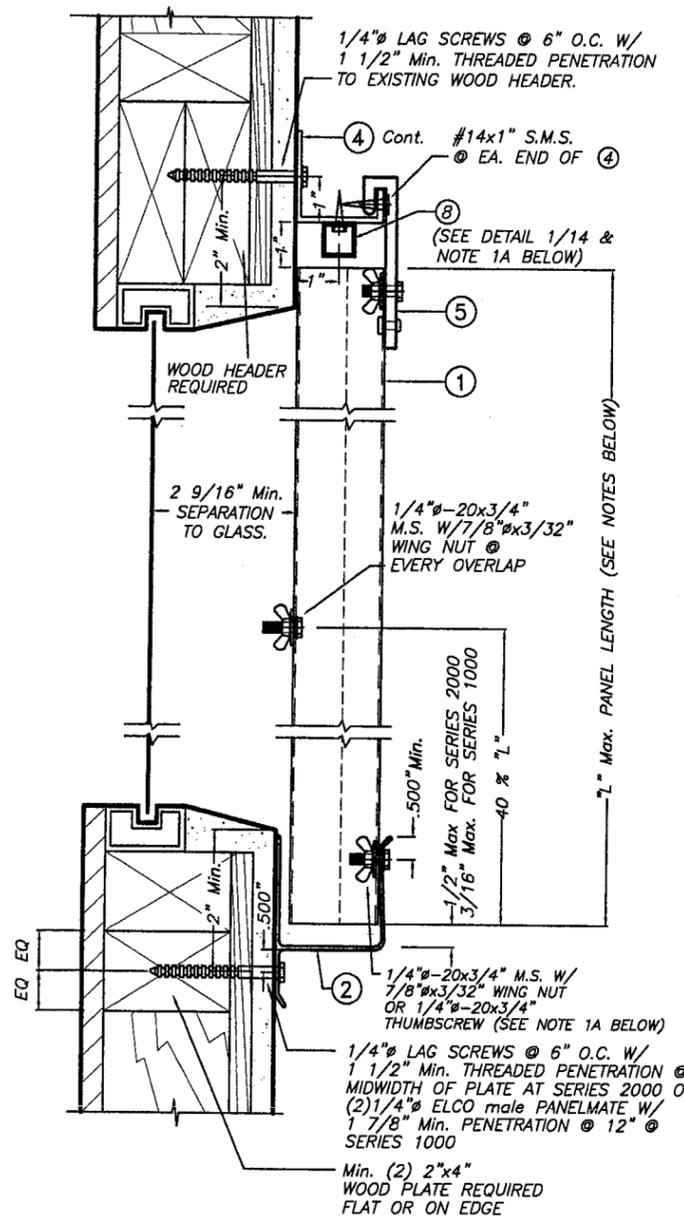
ACTUAL E. D.	FACTOR		
	TAPCON/PANELMATES	CALK-IN	CF TAP-GRIP
3"	.86	.75	1.00
2 1/2"	.71	.50	.80
2"	.50	-	-

PRODUCT RENEWED
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 By *Heather A. Walker*
 Miami Dade Product Control
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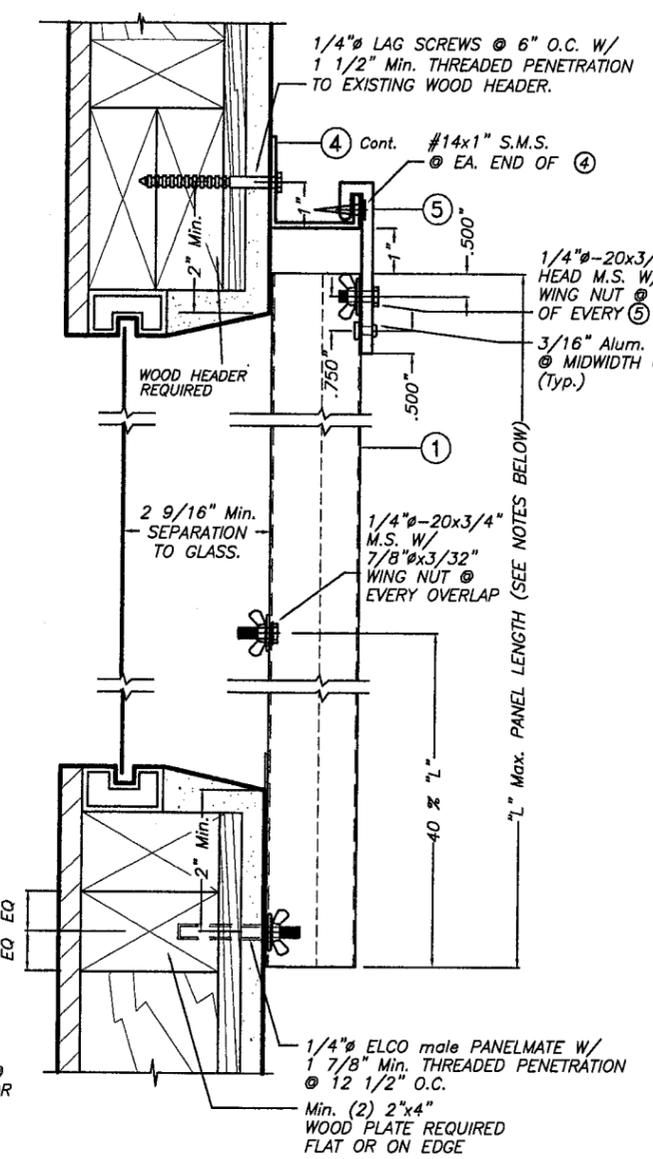
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		1 OLD 05-289 05/22/08 3 - - -		08-169 DRAWING No	
				SHEET 15 OF 16	

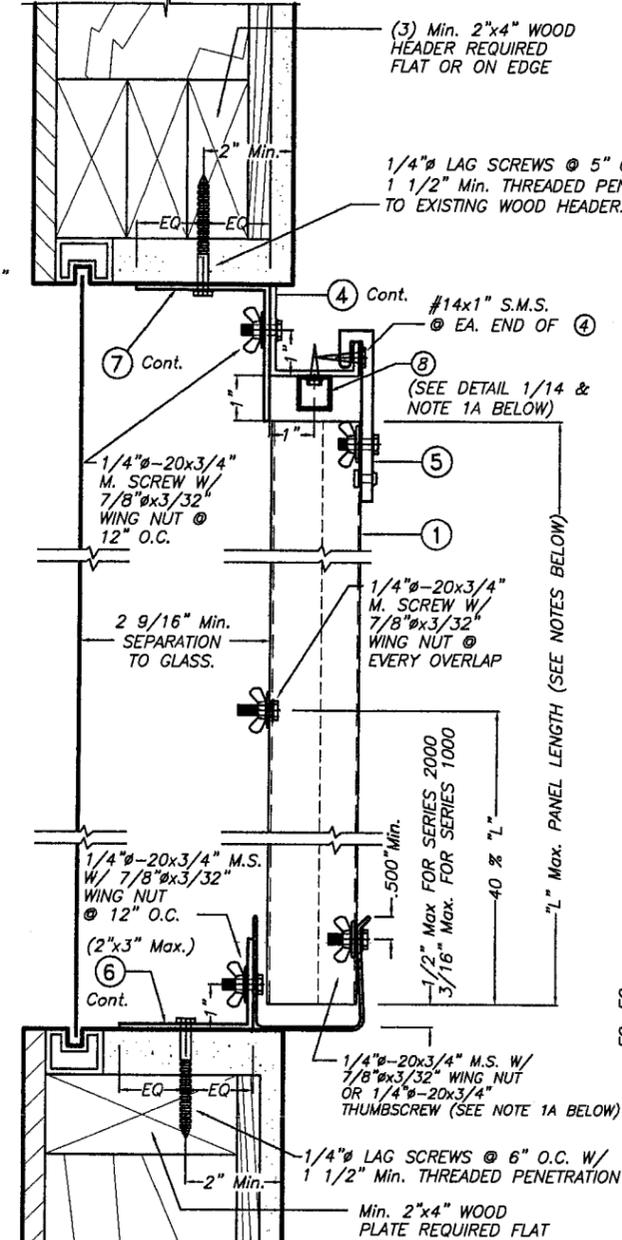
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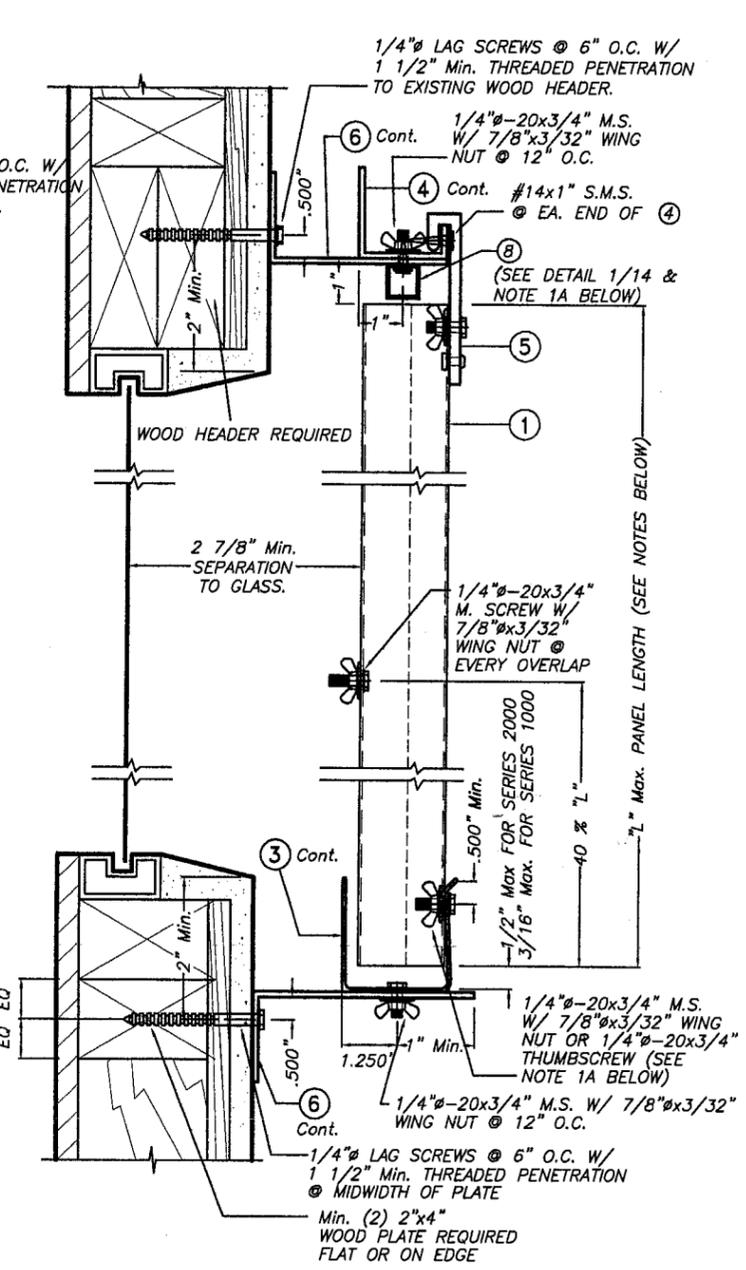
SECTION 1"
SCALE: 1/4" = 1"



SECTION 2"
SCALE: 1/4" = 1"



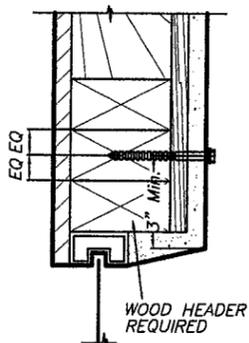
SECTION 3"
SCALE: 1/4" = 1"



SECTION 4"
SCALE: 1/4" = 1"

NOTES:
1. INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH DESIGN LOADS UP TO +66.0, -75.3 psf AND PANEL'S LENGTH UP TO 5'-10".
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:
FLOOR/ WALL/ CEILING MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.



ALTERNATIVE TOP HEADER WOOD FRAME CONDITION & ANCHOR LOCATION
SCALE: 1/4" = 1"
NOTE: SHUTTER TRACKS NOT SHOWN FOR CLARITY

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS FOR E-Z HANG STORM PANEL SYSTEM

NOTE 1A:
SEE SPECIFICATIONS AND REQUIREMENTS FOR USE OF STOP BAR (8) AT TOP AS WELL AS PANEL (1) CONNECTION TO TRACKS (2) OR (3) AT BOTTOM, BASED ON 1000 OR 2000 SERIES INSTALLATION TYPE ON SHEET 13 OF 16.

PRODUCT RENEWED as complying with the Florida Building Code
Acceptance No 08-0611.02
Expiration Date 06/26/2013
By *Helmut A. Weber*
Miami Dade Product Control Division

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2	-	-	4	-	-

L.G./R.E.
DRAWN BY:
05/22/08
DATE:
08-169
DRAWING No
SHEET 16 OF 16

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