



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)

Alufab Hurricane Shutters, Inc.
13000 N. W. 38th Avenue
OPA-LOCKA, Florida 33054

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: 0.0295" (min.) Galvanized Steel Storm Panels Shutter

APPROVAL DOCUMENT: Drawing No. 05-145, titled " 0.0295" Thick Galvanized Steel Storm Panel ", sheets 1 through 15 of 15, & 8A of 15, prepared by Tilteco, Inc., dated June 19, 2005, last revision #2 dated October 06, 2005, signed and sealed by Walter A. Tillit Jr., P.E., bearing Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each 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 revises NOA # 04-1104.01 and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

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



Helmy A. Makar
 05/11/2006

NOA No 05-1003.17
Expiration Date: 04/29/2009
Approval Date: 05/11/2006

Alufab Hurricane Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #04-0210.01

A. DRAWINGS

1. *Drawing No. 03-244, titled " 0.0295" thick galv. Steel storm panel ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated December 04, 2003, last revision #1 dated March 30, 2004, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on Uniform Static Air Pressure Test, Large Missile Impact Test, and Cyclic Wind Pressure Test of 0.0295" galvanized steel storm panels shutter, prepared by Construction Testing Corporation, Report No. 03-025, dated December 31, 2003, signed and sealed by Yamil G. Kuri, P.E.*

C. CALCULATIONS

1. *0.0295" thick galvanized steel Storm panel calculations, Sheets 1 through 51 of 51, by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., dated February 03, 2004.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *Mill Certified Inspection Report, dated 02/17/03, for G-60 Steel, ASTM A653 Grade 80 by GalvTech, with chemical composition and physical properties.*
2. *Tensile Test Reports from Certified Testing Laboratories, Job No. CTL-1116 dated January 23, 2004 for galvanized steel, tested per ASTM E8-93, signed and sealed by Ramesh Patel, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #04-1104.01

A. DRAWINGS

1. *Drawing No. 03-244, titled " 0.0295" thick galv. Steel storm panel ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated December 04, 2003, last revision #1 dated March 30, 2004, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-1003.17
Expiration Date: 04/29/2009
Approval Date: 05/11/2006

Alufab Hurricane Shutters, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *None.*

3. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 05-145, titled " 0.0295" Thick Galvanized Steel Storm Panel ", sheets 1 through 15 of 15, & 8A of 15, prepared by Tilteco, Inc., dated June 19, 2005, last revision #2 dated October 06, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on Uniform Static Air Pressure Test, Large Missile Impact Test, and Cyclic Wind Pressure Test of 0.0295" galvanized steel storm panels shutter, prepared by Construction Testing Corporation, Report No. 05-002, dated October 10, 2005, signed and sealed by Yamil G. Kuri, P.E.*

C. CALCULATIONS

1. *0.0295" thick galvanized steel Storm panel calculations, Sheets 1 through 74 of 74, by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E., dated October 14, 2005.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *None.*



Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-1003.17
Expiration Date: 04/29/2009
Approval Date: 05/11/2006

GENERAL NOTES:

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.

THIS 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. 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 CONSTRUCTION TESTING CORPORATION REPORT #03-025 AND 05-002 AS PER TAS-201, TAS-202 AND TAS-203 PROTOCOLS.

2. ALL STEEL SHEET METAL PANELS SHALL HAVE STRUCTURAL QUALITY ASTM A-653, GRADE 80 DESIGNATION W/ Min. Fy=93.78 ksi (AFTER ROLLED) AND TO BE G-90 GALVANIZED.

3. ALL ALUMINUM EXTRUSIONS SHALL BE ALUMINUM ASSOCIATION 6063-T6 ALLOY AND TEMPER (UNLESS OTHERWISE NOTED). THE THICKNESS OF ALL EXTRUSIONS SHALL BE AS SHOWN ON THIS DRAWING.

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

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

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

(A) TO EXISTING POURED CONCRETE:

- 1/4"Ø TAPCON ANCHORS MANUFACTURED BY ELCO TEXTRON INC., INTO CONCRETE W/ f'c=3.32 Ksi (Min.)
- 1/4"Øx7/8" CALK-IN ANCHORS MANUFACTURED BY POWERS FASTENERS, INC., INTO CONCRETE W/ f'c=2.0 Ksi (Min.)
- 1/4"Øx7/8" PANELMATE (female/male) MANUFACTURED BY ELCO TEXTRON, INC., INTO CONCRETE WITH f'c=3.35 Ksi (Min.)

NOTES:

A.1) MINIMUM EMBEDMENT INTO POURED CONCRETE OF TAPCON ANCHOR AND ELCO PANELMATE 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, AND 1" MINIMUM FOR WALLS WITH NO STUCCO. SCREWS SHALL HAVE HEAD SIZES AS INDICATED ON CORRESPONDING SECTIONS OF DRAWING.

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

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

- 1/4"Ø TAPCON ANCHORS MANUFACTURED BY ELCO TEXTRON, INC.
- 1/4"Øx7/8" CALK-IN ANCHORS MANUFACTURED BY POWERS FASTENERS, INC.
- 1/4"Øx7/8" PANELMATE (female/male) MANUFACTURED BY ELCO TEXTRON, INC.

NOTES:

B.1) MINIMUM EMBEDMENT OF TAPCON ANCHOR AND ELCO PANELMATE INTO CONCRETE BLOCK UNIT IS 1 1/4".

B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTIRELY EMBEDDED INTO 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. SCREWS SHALL HAVE HEAD SIZES AS INDICATED ON CORRESPONDING SECTIONS OF DRAWING.

B.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER 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 B.1 & B.2 ABOVE.

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

7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1 THRU 4 (SHEET 3 AND 4 OF 15) EXCEPT THAT HEADERS 2 AND 3 SHALL NOT BE USED.

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

9. 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.

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

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

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

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

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

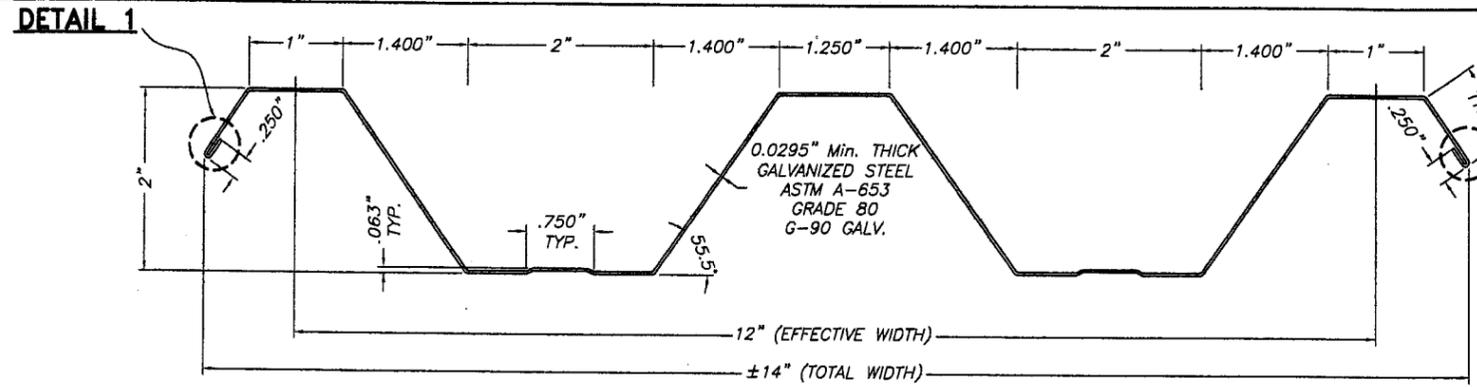
11. SHUTTER'S MANUFACTURER PERMANENT LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE CENTER FLANGE OF A PANEL APPROXIMATELY 4" ABOVE THE BOTTOM OF SUCH PANEL. ONE LABEL SHALL BE PLACED FOR EVERY PANEL. LABEL SHALL READ AS FOLLOWS:
ALUFAB HURRICANE SHUTTERS, INC.
OPA-LOCKA, FL.
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-1003.17
Expiration Date 04/29/2009
By *Helmut A. Miller*
Miami Dade Product Control
Division

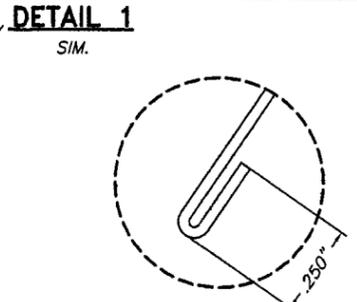
F.B.C. (High Velocity Hurricane Zone)

© 2005 TILTECO, INC.		0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V.	
 TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tiltco@aol.com EB-0006719 WALTER A. TILLIT, Jr., P. E. FLORIDA Lic. # 44167		ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
		13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	05/19/05	3		
2	GENERAL	10/6/05	4		
			SHEET 1 OF 15		

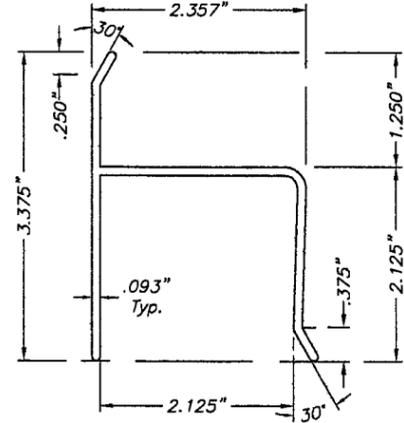
NOV 09 2005



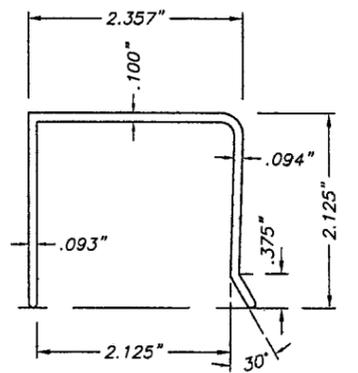
1 PANEL
SCALE: N.T.S.



DETAIL 1
SCALE: N.T.S.

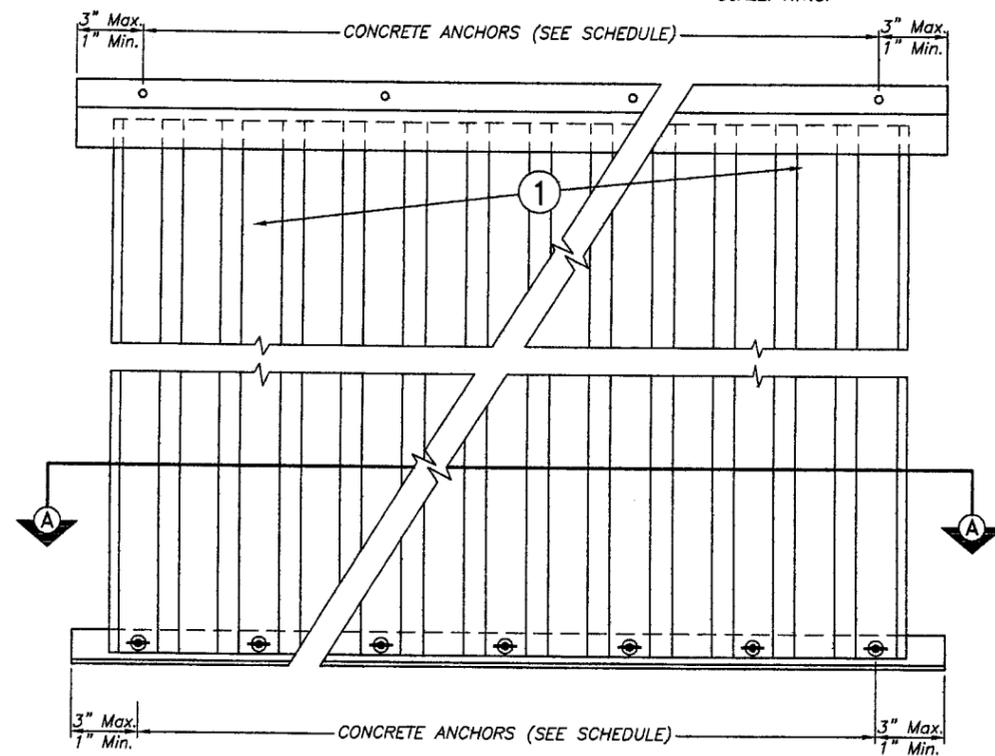


2 h HEADER
(6005-T5 ALUMINUM ALLOY)
SCALE: 1/2" = 1"

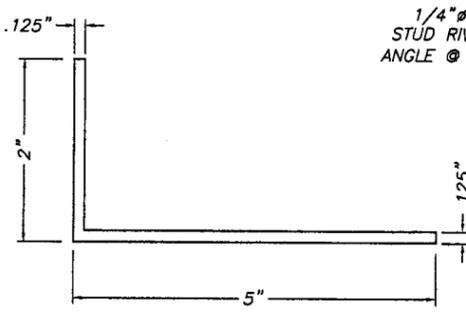


3 u HEADER
(6005-T5 ALUMINUM ALLOY)
SCALE: 1/2" = 1"

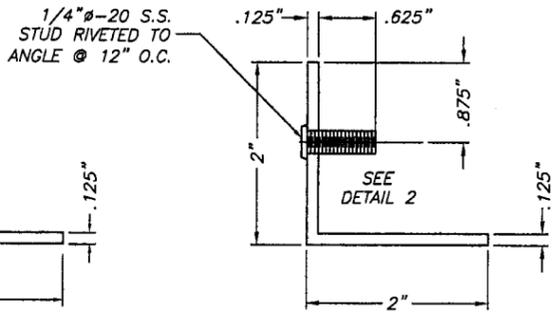
COMPONENTS



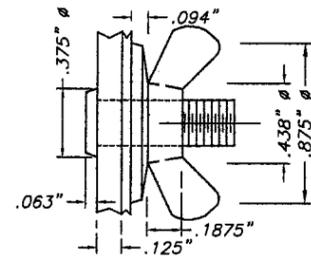
STORM PANEL ELEVATION
SCALE: N.T.S.



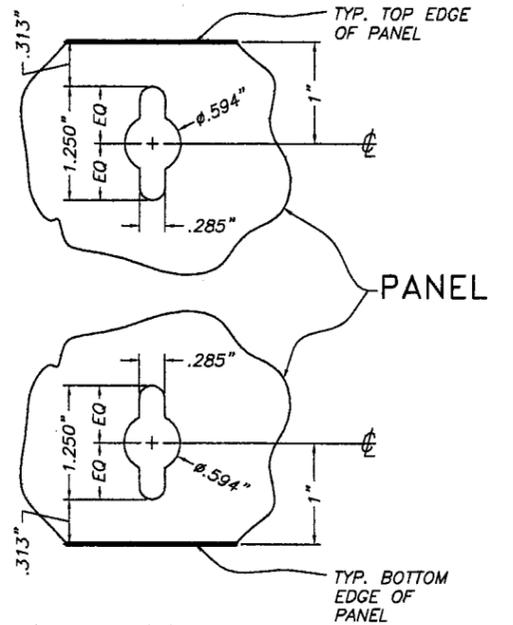
4 2"x5" (Max.) x 1/8" ANGLE
SCALE: 1/2" = 1"



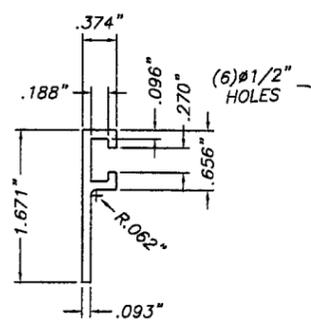
5 ANGLE WITH STUD
SCALE: 1/2" = 1"



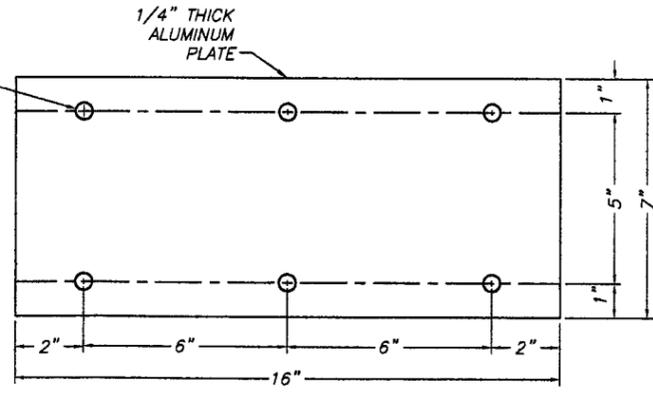
DETAIL 2:
STUD W/ WING NUT
SCALE: 1" = 1"



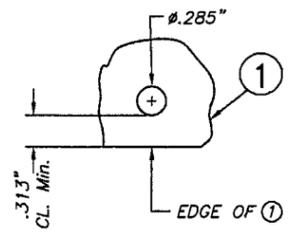
8 KEY HOLE AT PANEL
SCALE: N.T.S.



6 F TRACK
SCALE: 1/2" = 1"



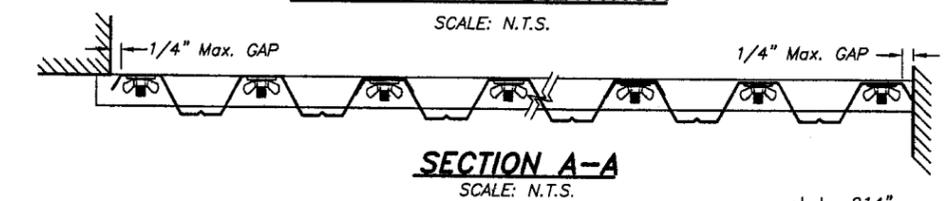
7 1/4"x7"x16\"/>



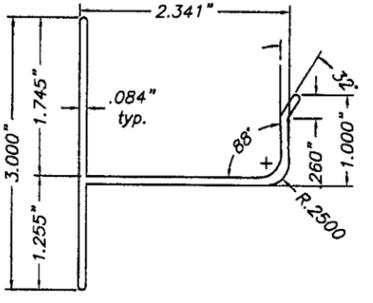
8A ROUND HOLE AT PANEL (OPTION TO 8)

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 05-1003.17 Expiration Date 04/29/2009
By *Helmut J. Miller*
Miami Dade Product Control Division

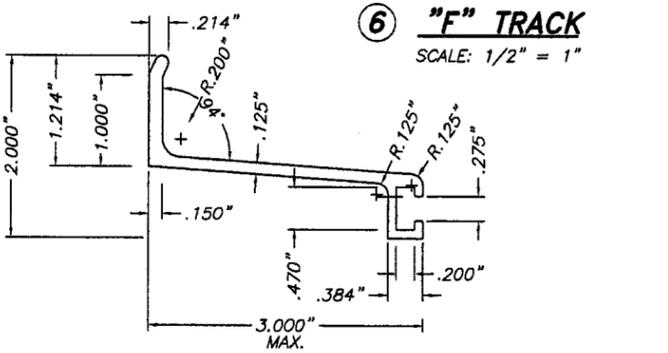
F.B.C. (High Velocity Hurricane Zone)



SECTION A-A
SCALE: N.T.S.



9 h SILL
SCALE: 1/2" = 1"



10 3\"/>

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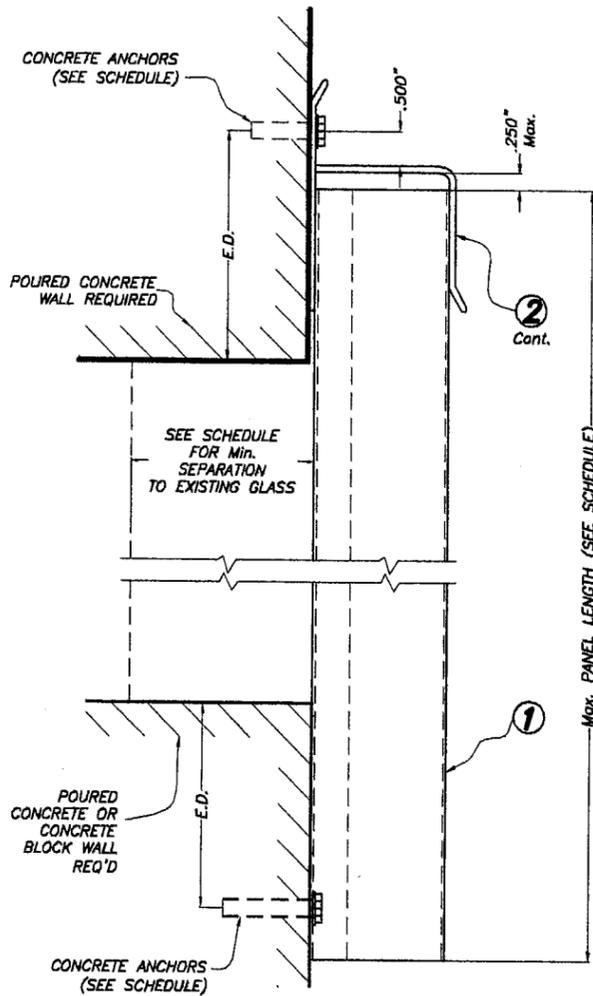
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 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

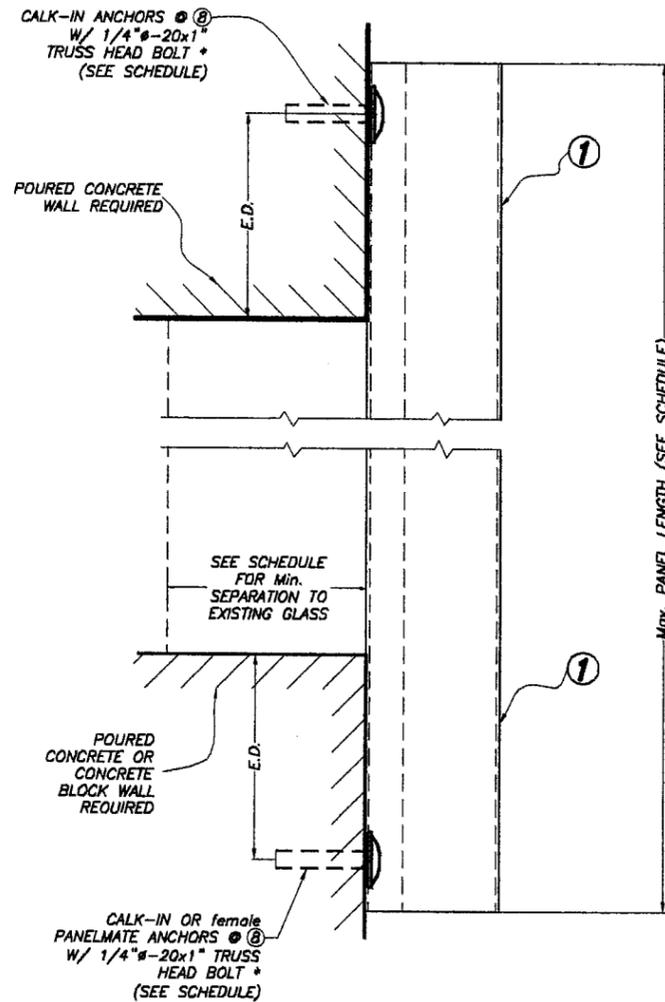
0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V.	
ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
1	OLD 03-244	06/19/05	3
2	GENERAL	10/8/05	4

SHEET 2 OF 15

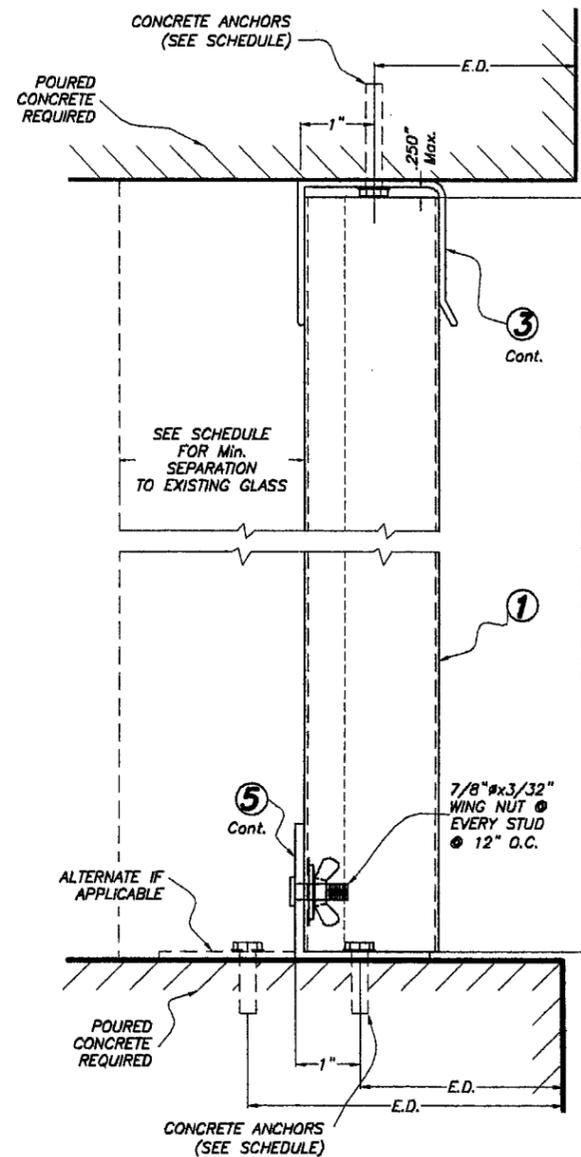
NOV 09 2005



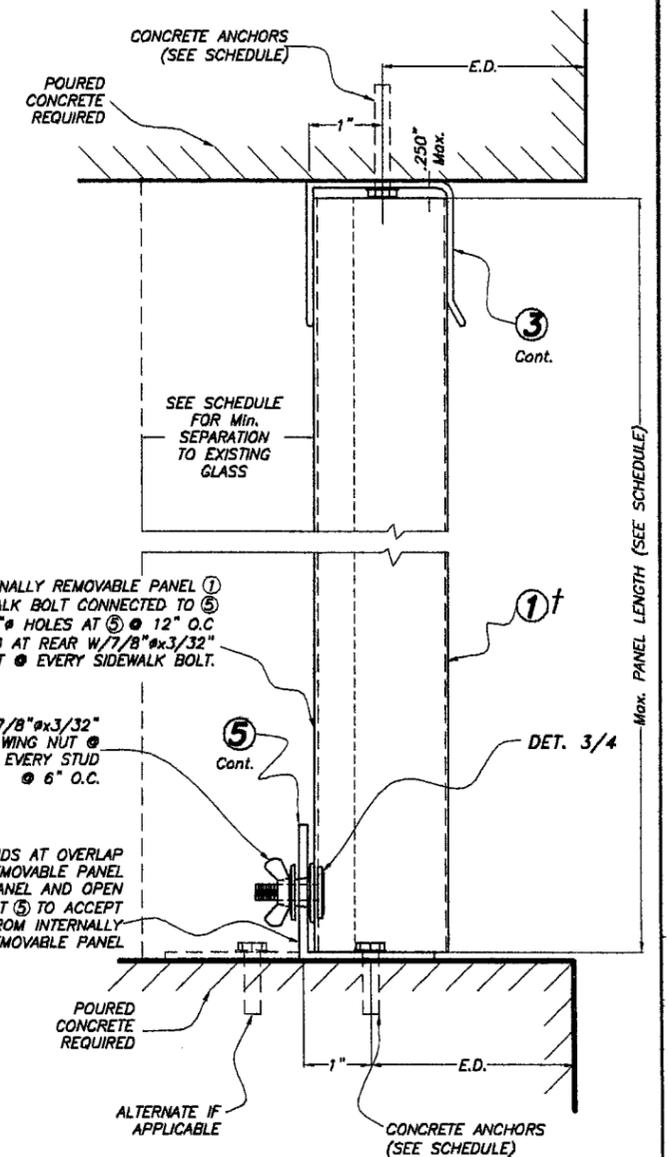
WALL MOUNTING INSTALLATION
- SECTION 1
 SCALE: 3/8" = 1"



DIRECT MOUNTING INSTALLATION
- SECTION 2
 SCALE: 3/8" = 1"



SECTION 3A
ADJACENT PANELS



SECTION 3B
INTERNALLY REMOVABLE PANEL**

CEILING AND FLOOR MOUNTING
INSTALLATION - SECTION 3

SCALE: 3/8" = 1"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-1003.17
 Expiration Date 04/29/2009
 By *Helmut A. Madon*
 Miami Dade Product Control Division

E.D. = EDGE DISTANCE
 (SEE SCHEDULE ON SHEET 11 OF 15)

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

* TRUSS HEAD BOLT TO BE 3/4" x 3/32" THICK HEAD MACHINE SCREW W/ LENGTH AS PER NOTES A.2 & B.2 ON SHEET 1.

** NOTE:
 INTERNALLY REMOVABLE PANEL SHOWN ON SECTION 3B SHALL ALWAYS BE INSTALLED IN BETWEEN ADJACENT PANELS MOUNTED AS SHOWN ON SECTION 3A.

† NOTE:
 INTERNALLY REMOVABLE PANEL SHALL BE PROVIDED W/ AN ADEQUATE REMOVABLE HANDLE IN ORDER TO INSTALL PANEL.

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

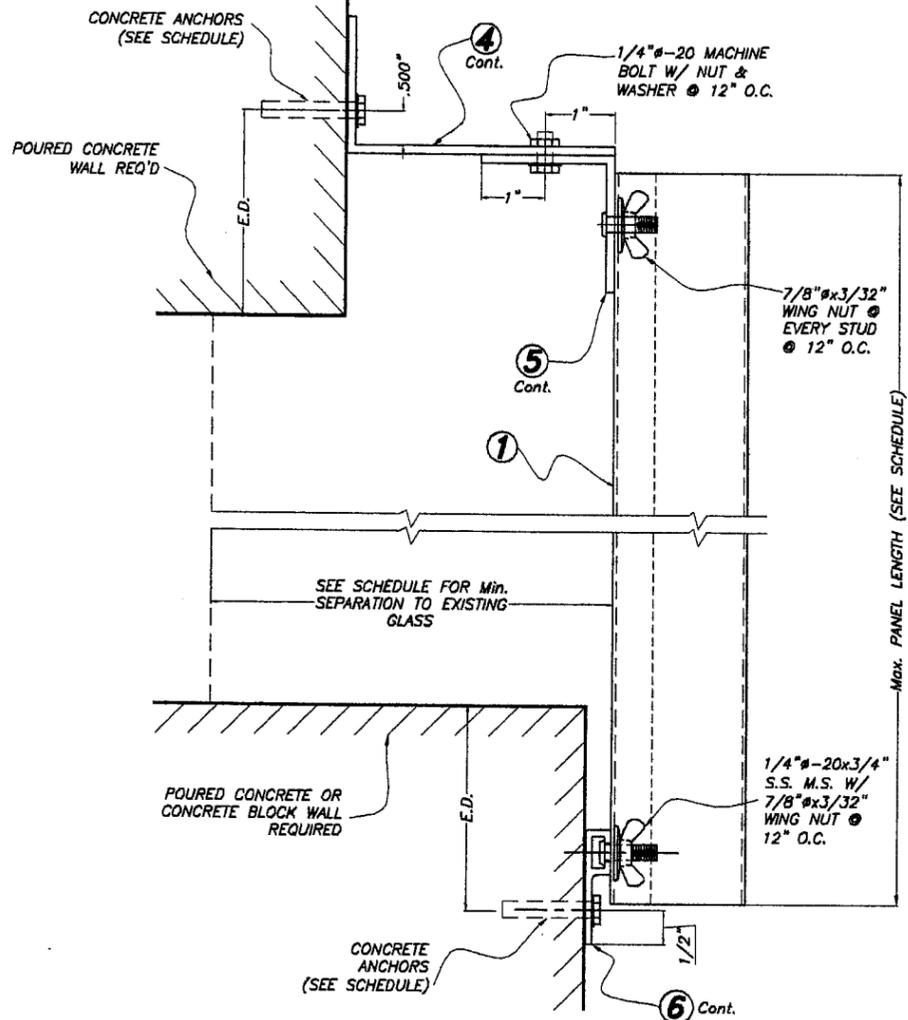
© 2005 TILTECO, INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 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

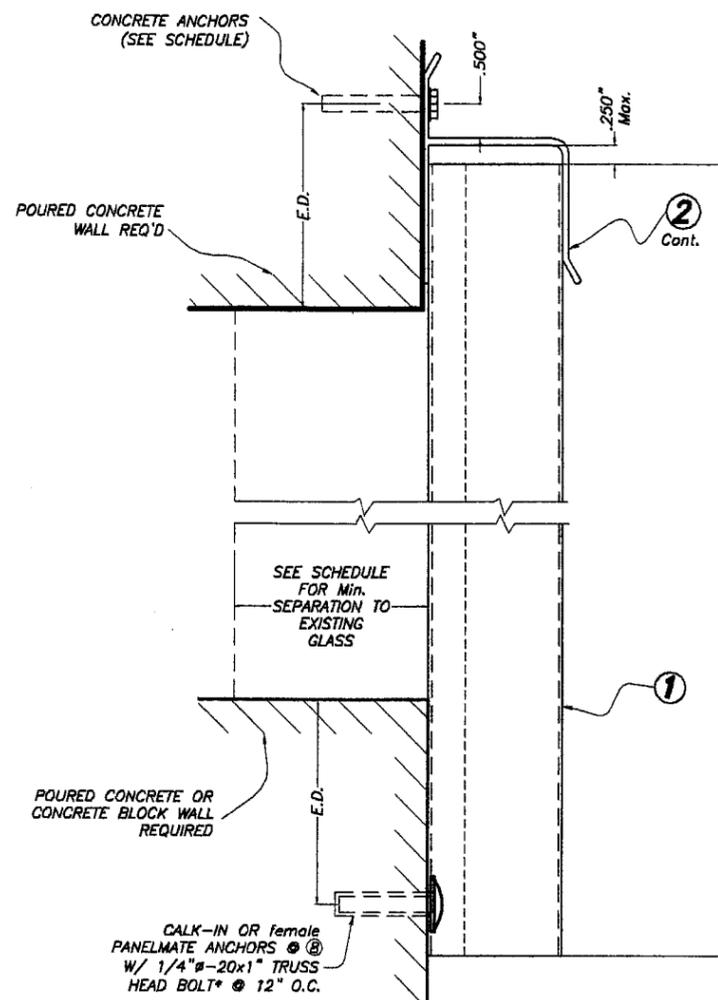
0.0295" THICK GALVANIZED STEEL STORM PANEL			DRAWN BY		
ALUFAB HURRICANE SHUTTERS, INC.			06/19/05 DATE		
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054			05-145 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3	-	-
2	GENERAL	10/6/05	4	-	-

NOV 09 2005

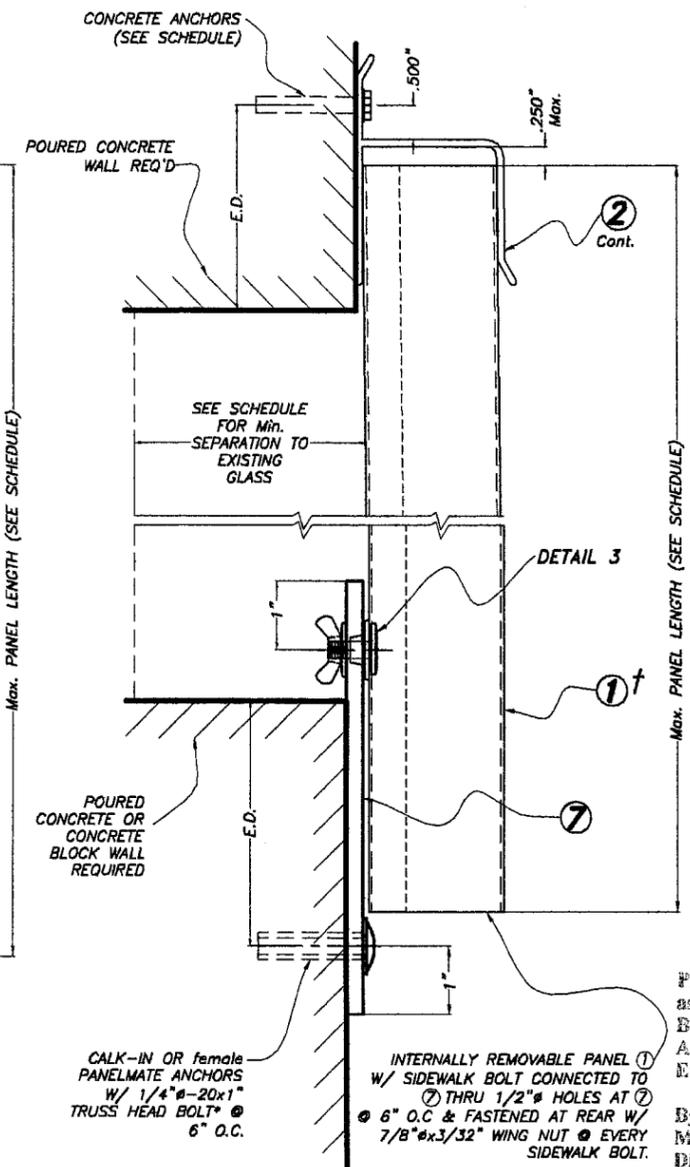


**BUILD-OUT INSTALLATION
- SECTION 4**

SCALE: 3/8" = 1"

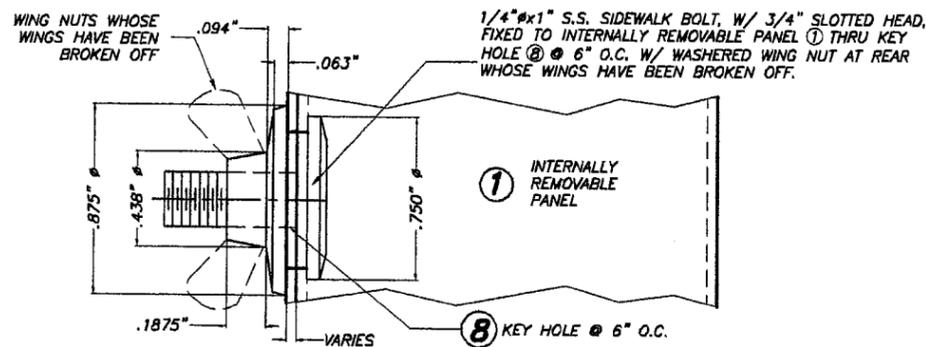


**SECTION 5A
ADJACENT PANELS**



**SECTION 5B
INTERNALLY REMOVABLE PANEL****

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 05-1003, 17
Expiration Date 04/29/2009
By Helmut A. Mader
Miami Dade Product Control
Division



DETAIL 3 - INSTALLATION OF 1/4\"/>

E.D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEET 11 OF 15)

* TRUSS HEAD BOLT TO BE
3/4\"/>

† NOTE:
INTERNALLY REMOVABLE PANEL SHALL BE
PROVIDED W/ AN ADEQUATE REMOVABLE
HANDLE IN ORDER TO INSTALL PANEL.

** NOTE:
INTERNALLY REMOVABLE PANEL SHOWN ON
SECTION 5B SHALL ALWAYS BE INSTALLED
IN BETWEEN ADJACENT PANELS MOUNTED
AS SHOWN ON SECTION 5A.

**WALL MOUNTING INSTALLATION
- SECTION 5**

SCALE: 3/8" = 1"

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

© 2005 TILTECO, INC.

TILTECO INC.

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

0.0295" THICK GALVANIZED STEEL
STORM PANEL

ALUFAB HURRICANE SHUTTERS, INC.
13000 N.W. 38th AVE.
OPA-LOCKA, FL 33054

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3	-	-
2	GENERAL	10/8/05	4	-	-

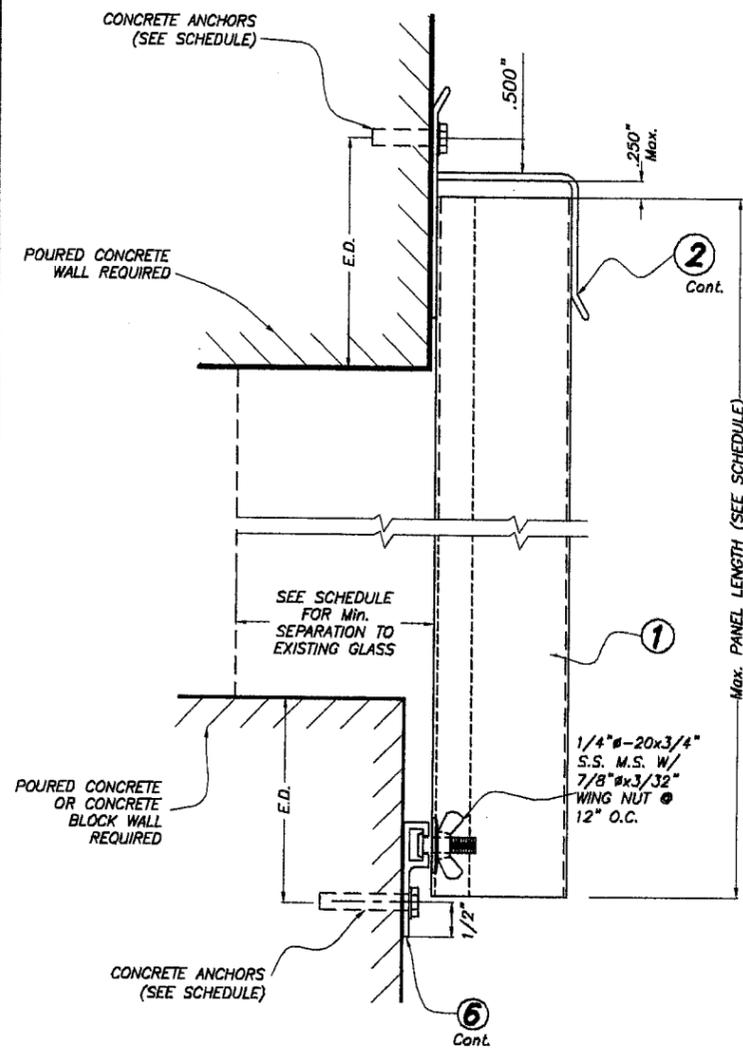
DRAWN BY

06/19/05
DATE

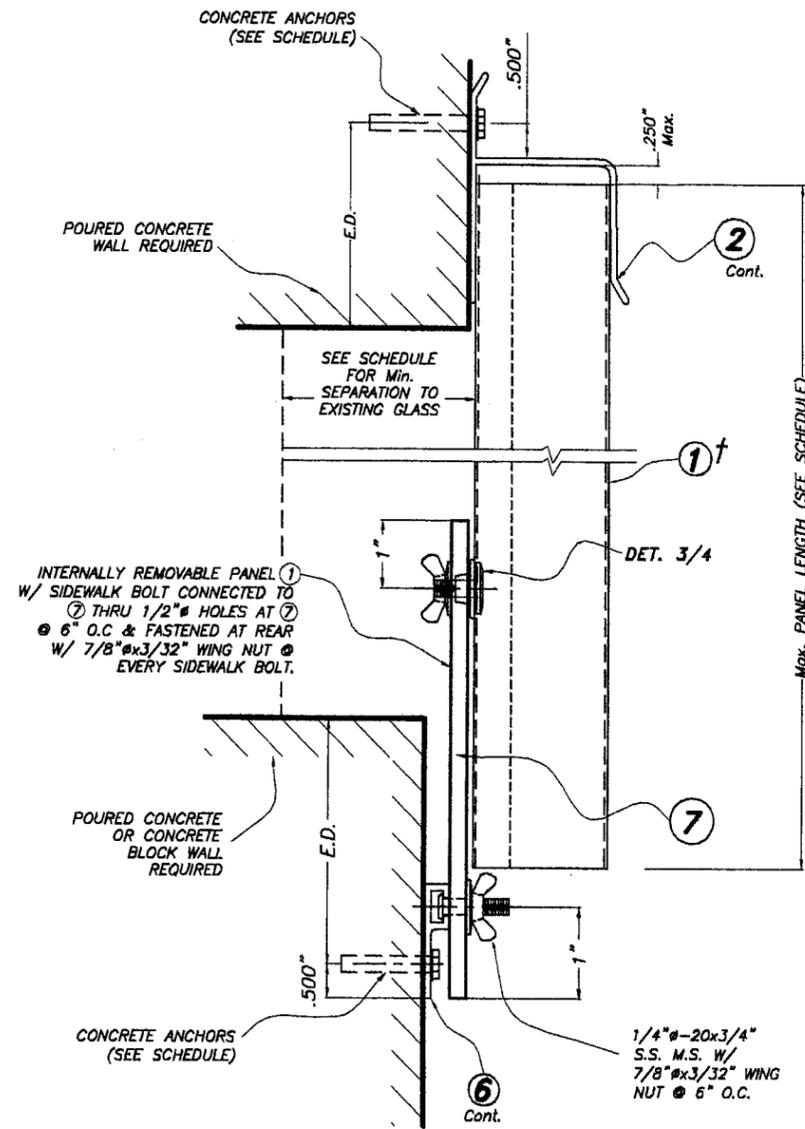
05-145
DRAWING No

SHEET 4 OF 15

NOV 09 2005



**SECTION 6A
ADJACENT PANELS**



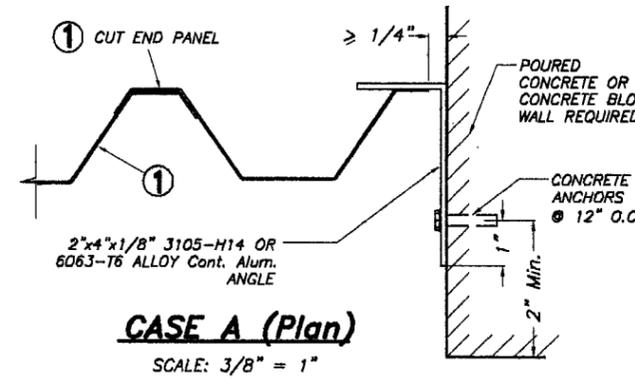
**SECTION 6B
INTERNALLY REMOVABLE PANEL ****

**WALL MOUNTING INSTALLATION
- SECTION 6**

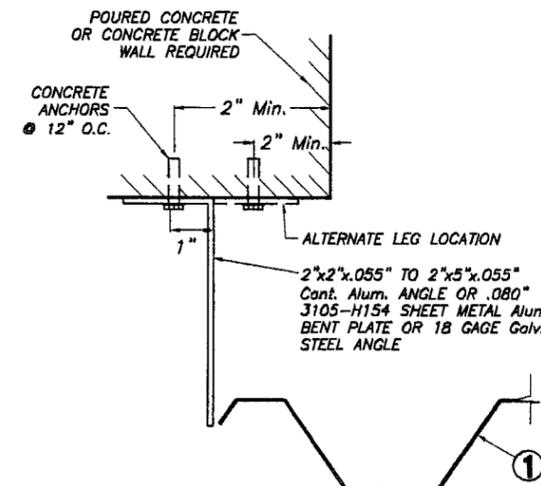
SCALE: 3/8" = 1"

**** NOTE:**
INTERNALLY REMOVABLE PANEL SHOWN ON SECTION 6B SHALL ALWAYS BE INSTALLED IN BETWEEN ADJACENT PANELS MOUNTED AS SHOWN ON SECTION 6A.

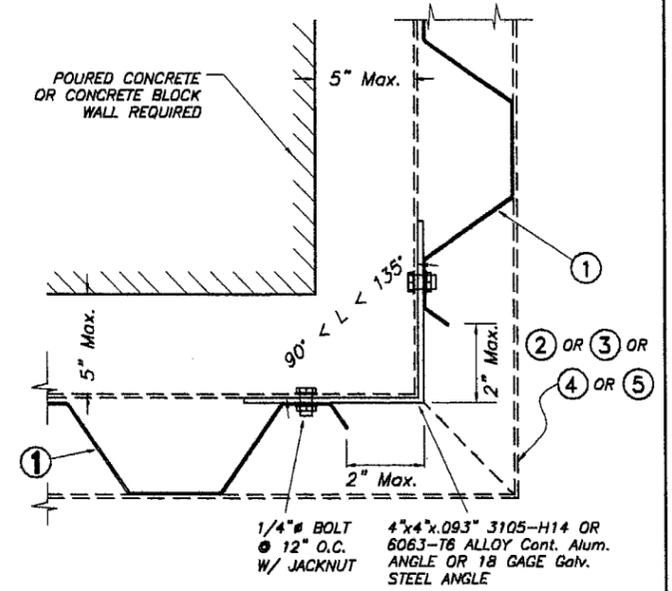
† NOTE:
INTERNALLY REMOVABLE PANEL SHALL BE PROVIDED W/ AN ADEQUATE REMOVABLE HANDLE IN ORDER TO INSTALL PANEL.



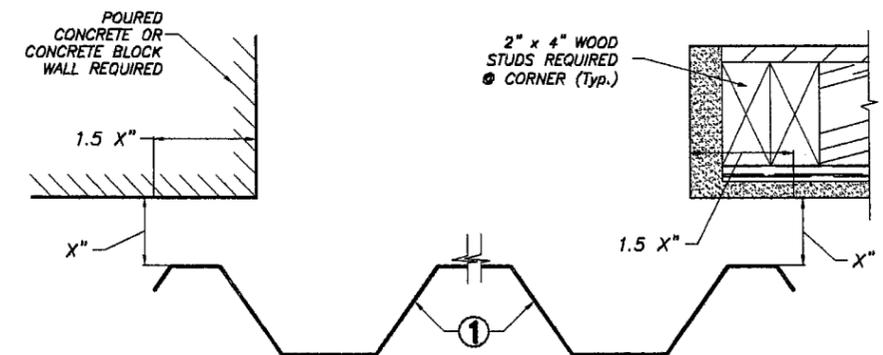
CASE A (Plan)
SCALE: 3/8" = 1"



CASE C (Plan)
SCALE: 3/8" = 1"



CASE B (Plan)
SCALE: 3/8" = 1"



CASE D (Plan)
SCALE: 3/8" = 1"
END CLOSURES DETAILS

E.D. = EDGE DISTANCE
(SEE SCHEDULE ON SHEET 11 OF 15)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 05-1003.17
Expiration Date 04/29/2009
By: *Helmy A. Matar*
Miami Dade Product Control Division

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

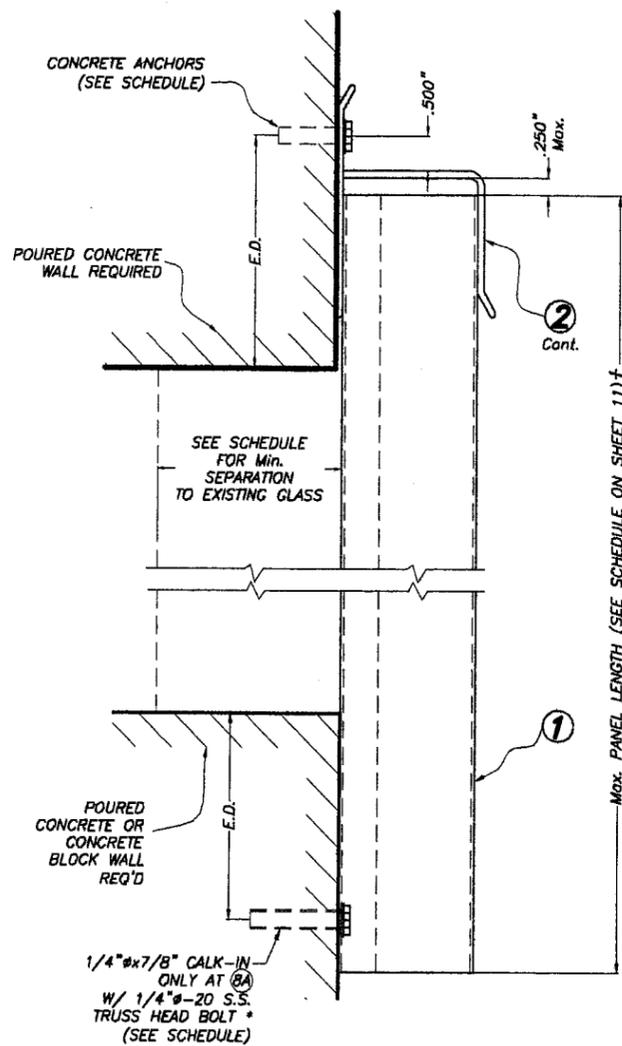
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TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 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

0.0295" THICK GALVANIZED STEEL STORM PANEL			DRAWN BY		
ALUFAB HURRICANE SHUTTERS, INC.			06/19/05 DATE		
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054			05-145 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3		
2	GENERAL	10/8/05	4		

NOV 09 2005

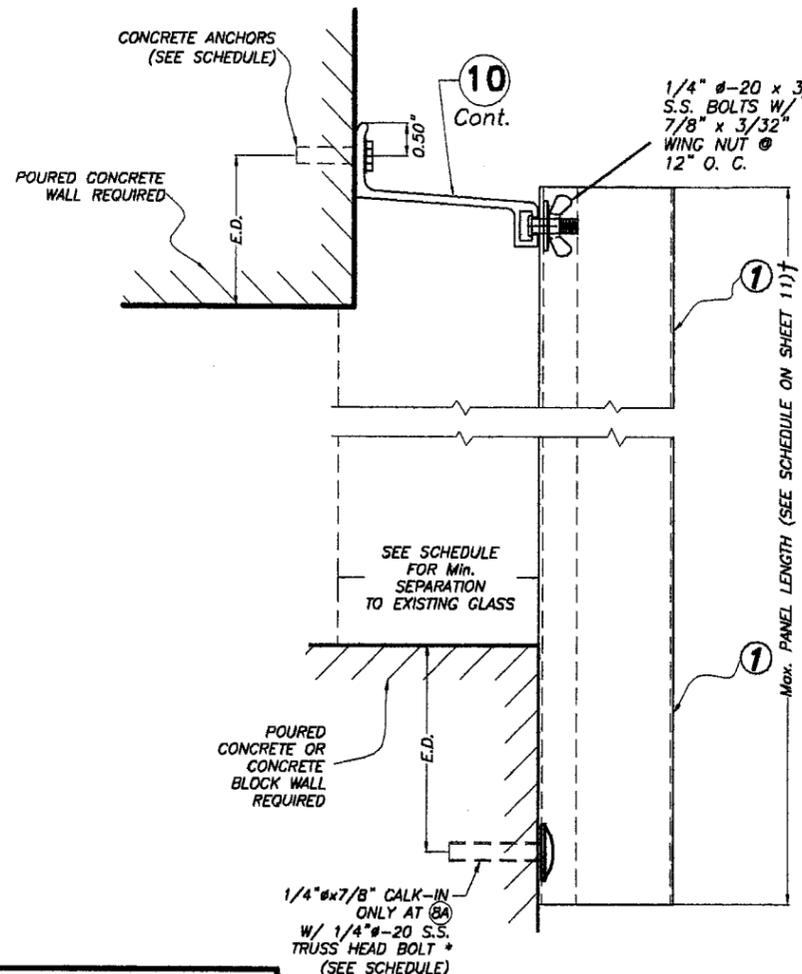


WALL MOUNTING INSTALLATION
- SECTION 7 †

SCALE: 3/8" = 1"

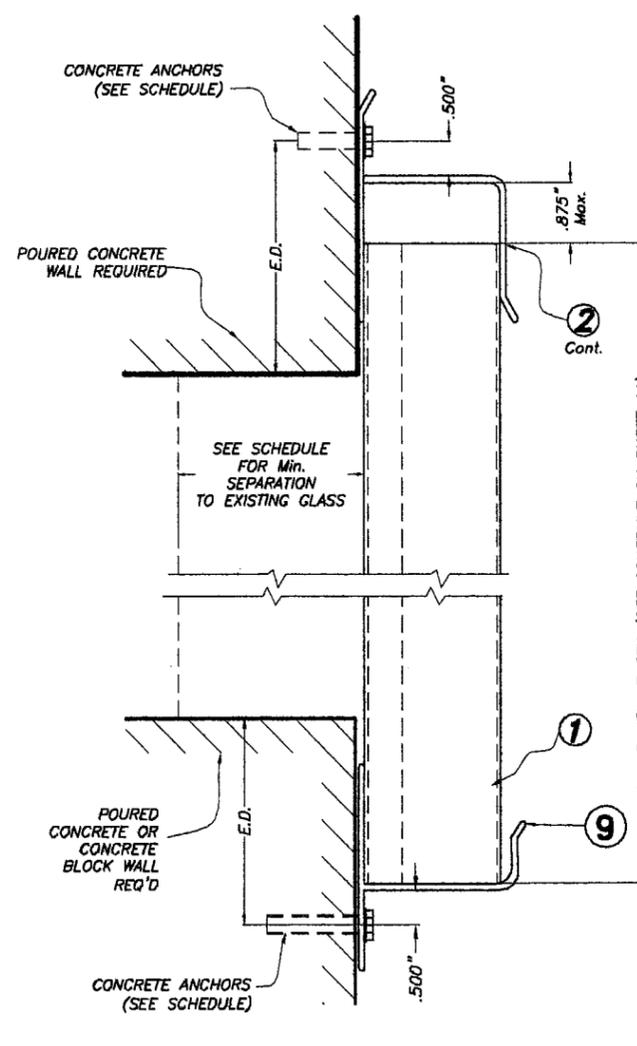
† MAX PANEL LENGTH LIMITED TO 84" IF BOTTOM SUBSTRATE IS CONCRETE BLOCK

* TRUSS HEAD BOLT TO BE 9/16" x 3/32" THICK HEAD MACHINE SCREW W/ LENGTH AS PER NOTES A.2 & B.2 ON SHEET 1.



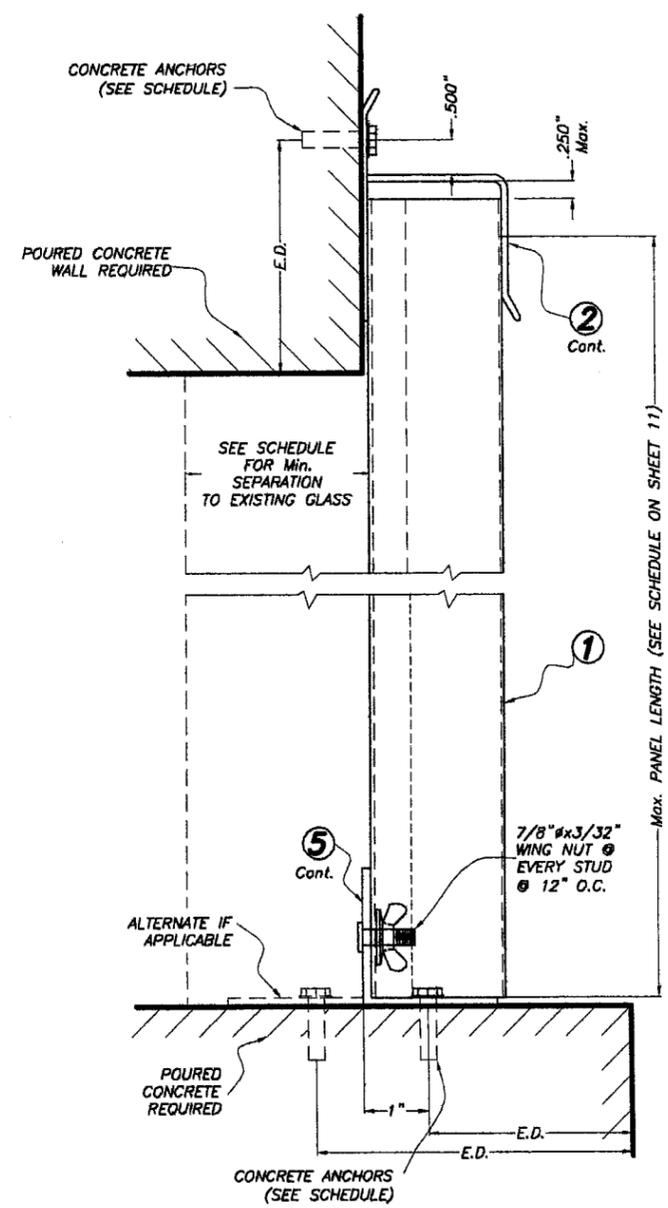
WALL MOUNTING INSTALLATION
- SECTION 8 †

SCALE: 3/8" = 1"



WALL MOUNTING INSTALLATION
- SECTION 9

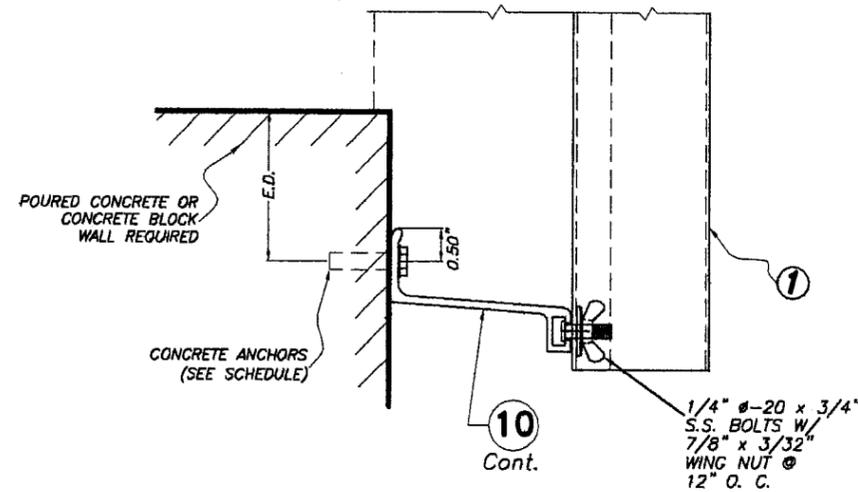
SCALE: 3/8" = 1"



CEILING AND FLOOR MOUNTING INSTALLATION - SECTION 10

SCALE: 3/8" = 1"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 05-1003.17
 Expiration Date 04/29/2009
 By *Helmut A. Kuhn*
 Miami Dade Product Control Division



BUILD-OUT MOUNTING INSTALLATION - SECTION 8A †

SCALE: 3/8" = 1"

E.D. = EDGE DISTANCE (SEE SCHEDULE ON SHEET 12 OF 15)

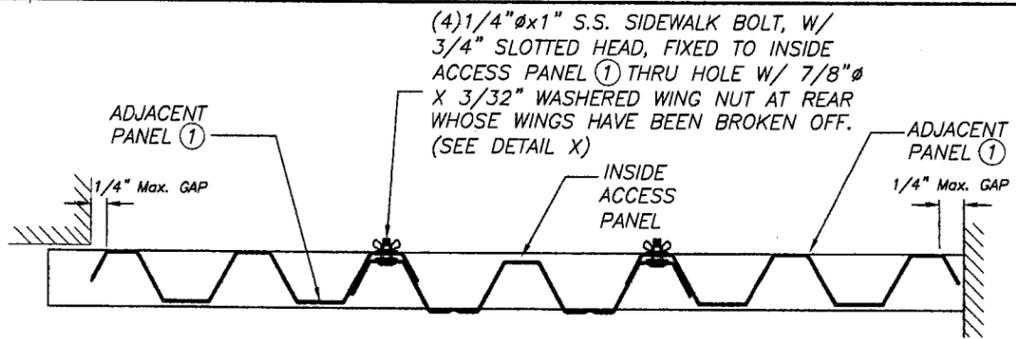
NOTE FOR COMBINATION OF SECTIONS:
 FLOOR/WALL MOUNTING SECTIONS CAN BE COMBINED IN ANY WAY TO SUIT ANY INSTALLATION.

VALID FOR NON INSIDE ACCESS PANEL & INSIDE ACCESS (ADJACENT) PANELS MOUNTINGS

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

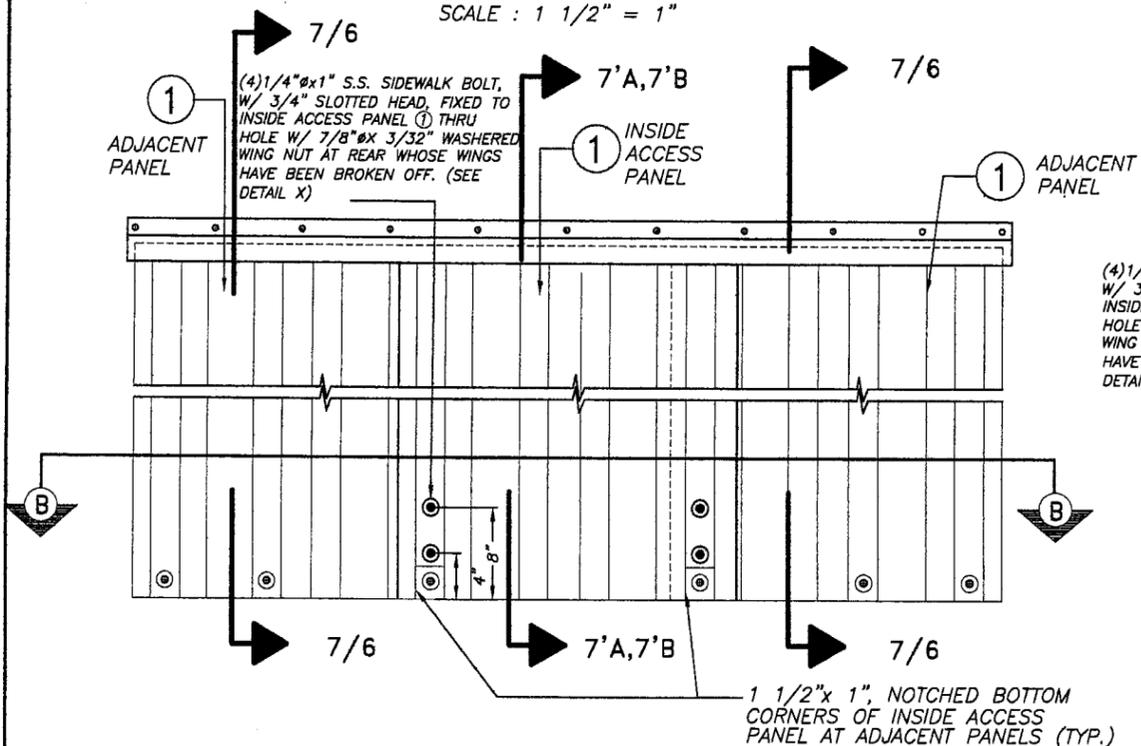
© 2005 TILTECO, INC		0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY J.J.V.	
TILTECO INC.		ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tilteco@aol.com EB-0006719		13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167				SHEET 6 OF 15	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3		
2	GENERAL	10/8/05	4		

NOV 09 2005



SECTION B-B

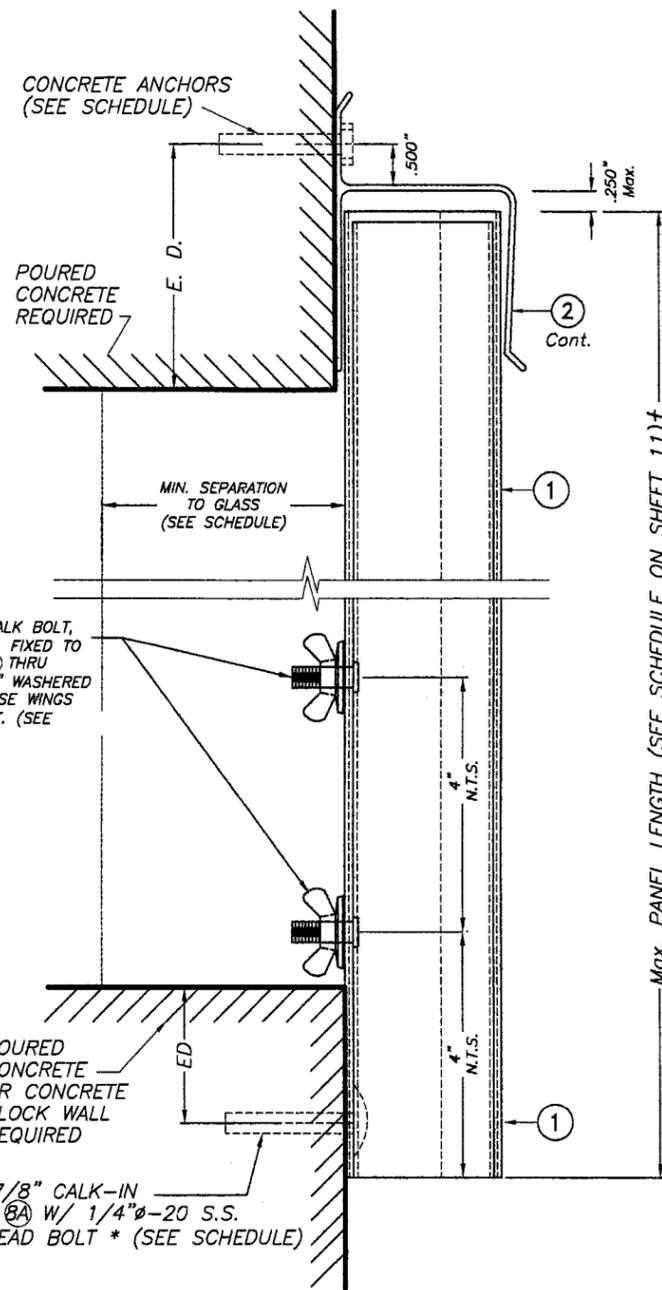
SCALE : 1 1/2" = 1"



INSIDE ACCESS PANEL INSTALLATION

ELEVATION

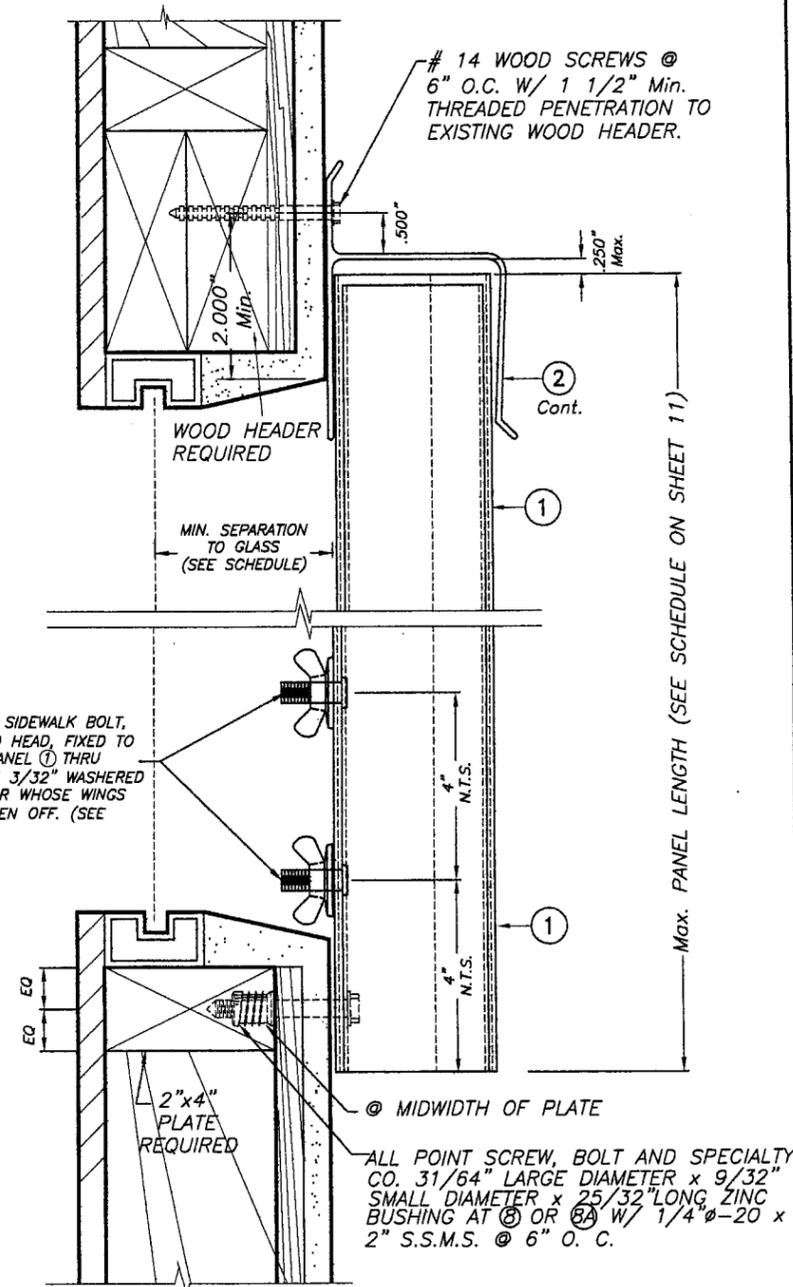
SCALE : 1 1/2" = 1"



**REMOVABLE INSIDE ACCESS PANEL
INSTALLATION SECTION 7'A †**

SCALE : 1/2" = 1"

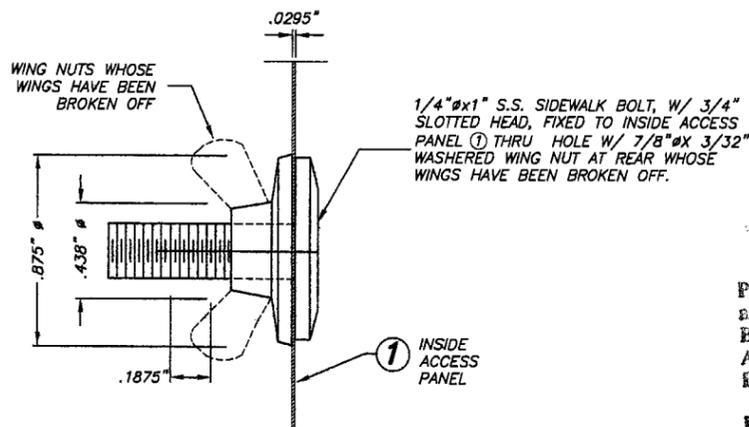
† MAX PANEL LENGTH LIMITED TO 84" IF BOTTOM SUBSTRATE IS CONCRETE BLOCK



**REMOVABLE INSIDE ACCESS PANEL
INSTALLATION SECTION 7'B**

SCALE : 1/2" = 1"

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



DETAIL X - INSTALLATION OF 1/4" x 1" SIDEWALK BOLT @ INSIDE ACCESS PANEL

* TRUSS HEAD BOLT TO BE 9/16" x 3/32" THICK HEAD MACHINE SCREW W/ LENGTH AS PER NOTES A.2 & B.2 ON SHEET 1.

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-1003.17
 Expiration Date 04/29/2009
 By *Helmut A. M...*
 Miami Door Product Control Division

NOV 09 2005

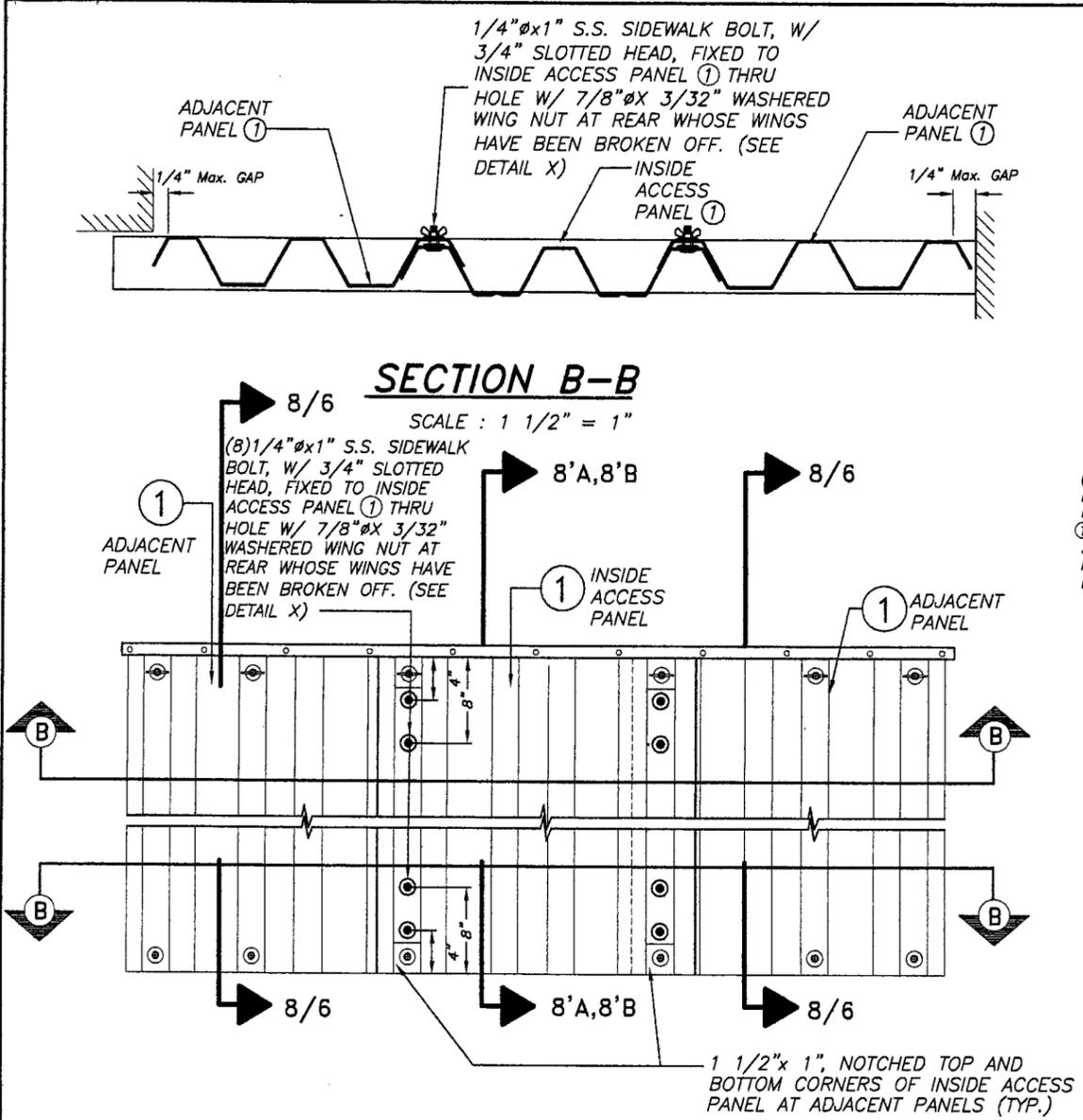
© 2005 TILTECO, INC.

TILTECO INC.

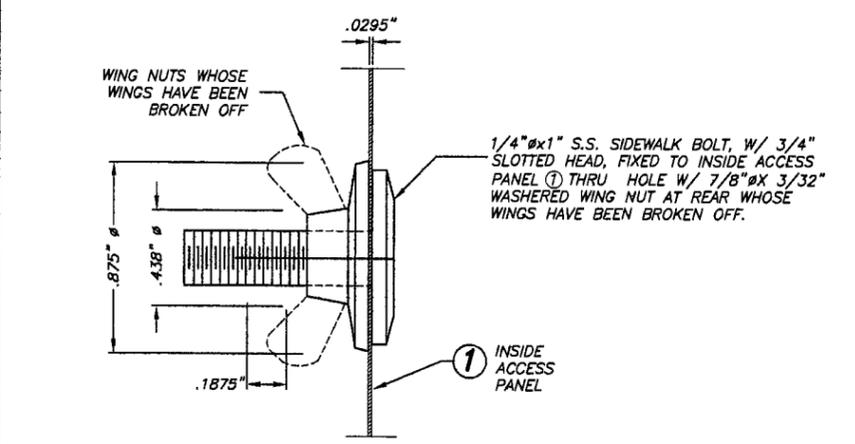
TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166
 Phone : (305)871-1530 . Fax : (305)871-1531
 e-mail: tilteco@aol.com
 EB-006719
 WALTER A. TILLIT Jr., P. E.
 FLORIDA Lic. # 44167

0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V.			
ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE			
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No			
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3		
2	GENERAL	10/8/05	4		

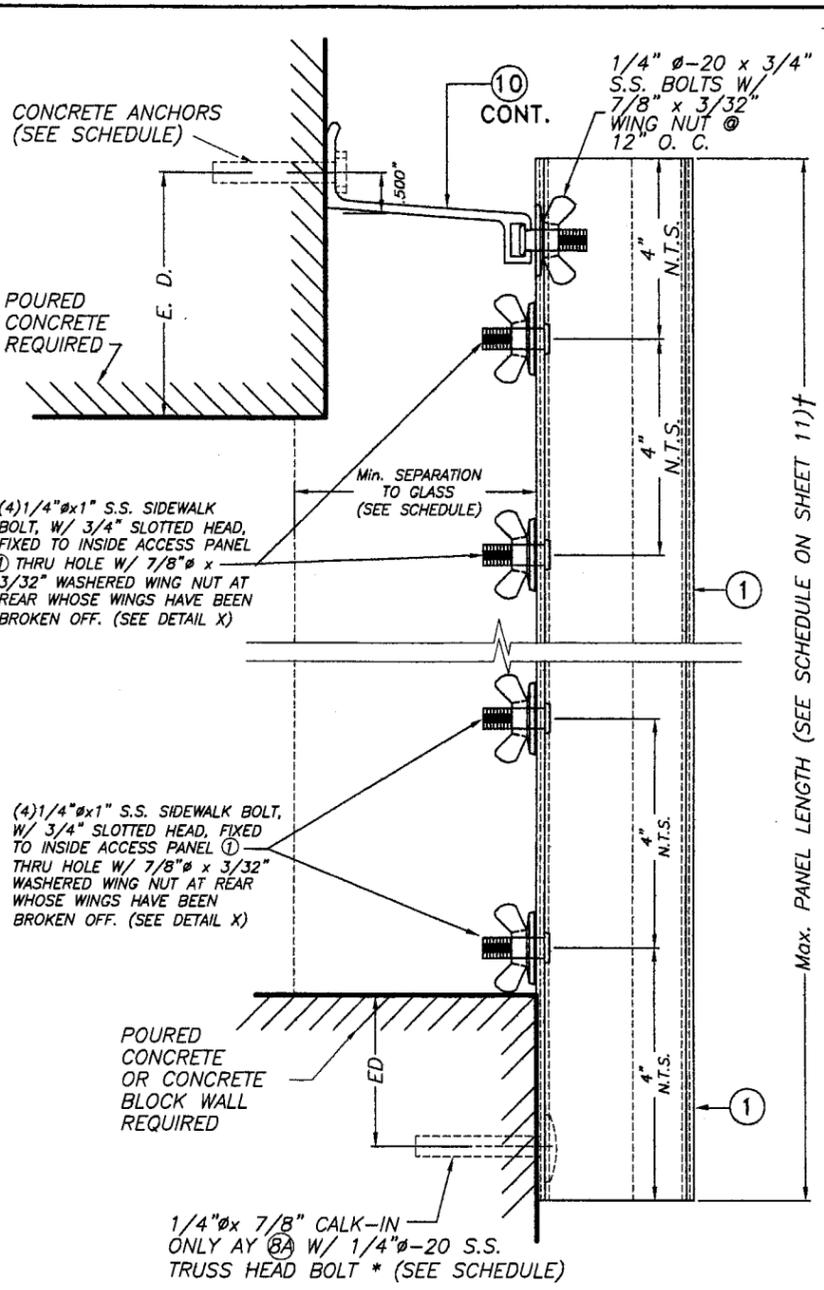
SHEET 7 OF 15



INSIDE ACCESS PANEL INSTALLATION ELEVATION
SCALE : 1 1/2" = 1"

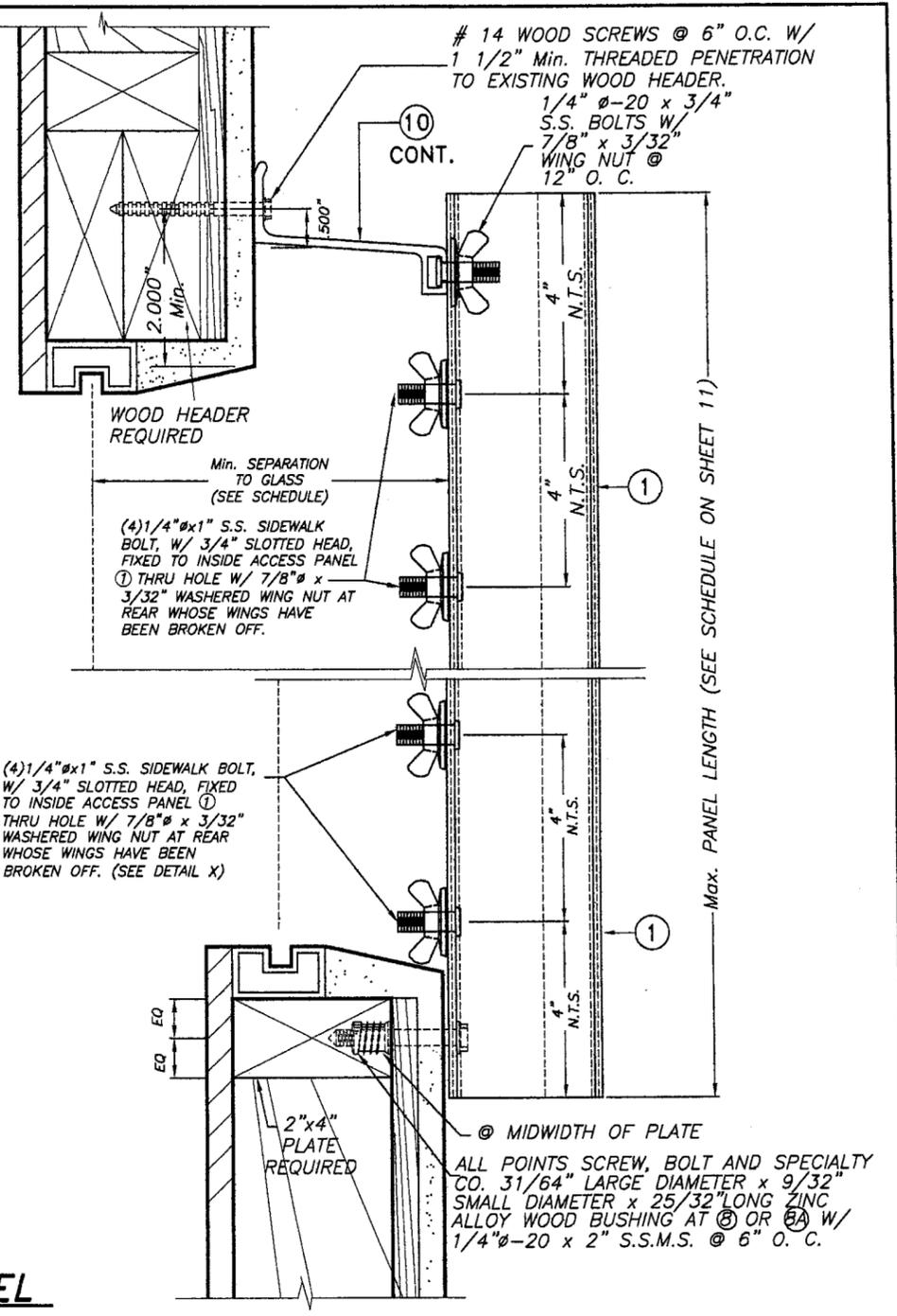


DETAIL X - INSTALLATION OF 1/4" x 1" SIDEWALK BOLT @ INSIDE ACCESS PANEL



REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 8'A †
SCALE : 1/2" = 1"

† MAX PANEL LENGTH LIMITED TO 84" IF BOTTOM SUBSTRATE IS CONCRETE BLOCK



REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 8'B
SCALE : 1/2" = 1"

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No. 05-1003-17
Expiration Date 04/29/2009
By *Helmut H. Mohr*
Miami Dade Product Control Division

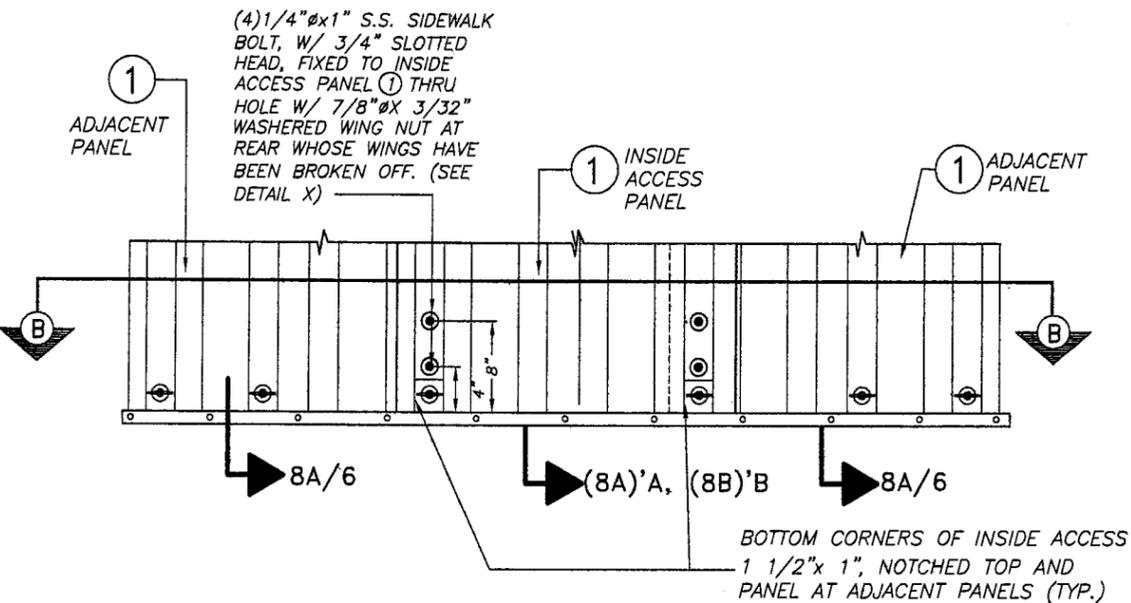
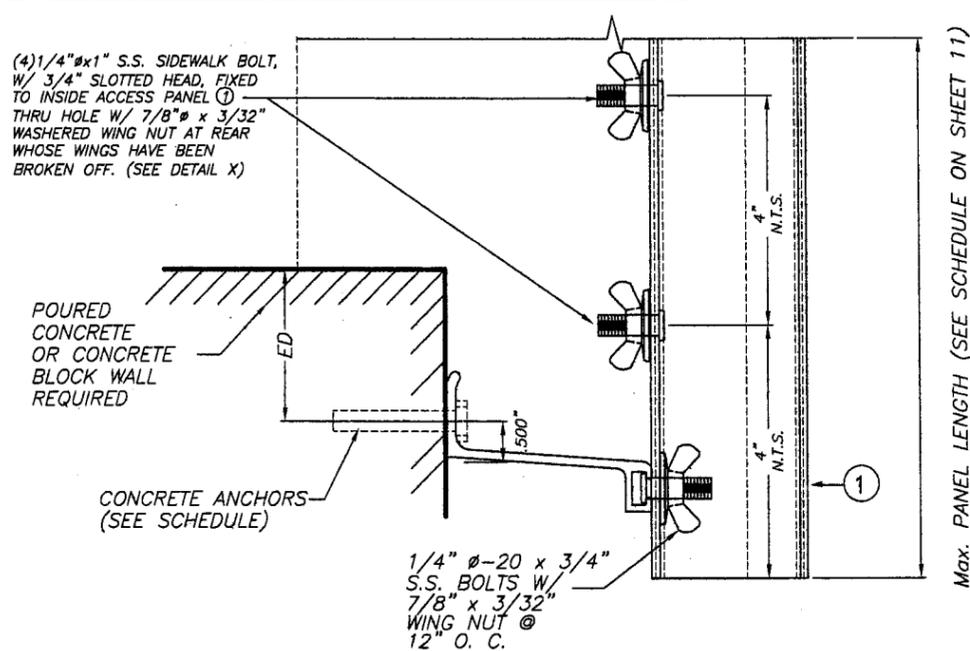
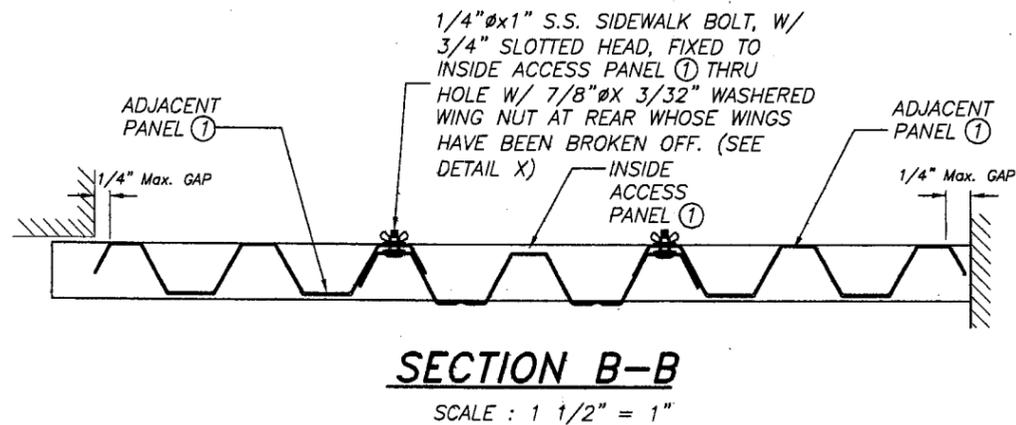
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TILLIT TESTING & ENGINEERING COMPANY
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167

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

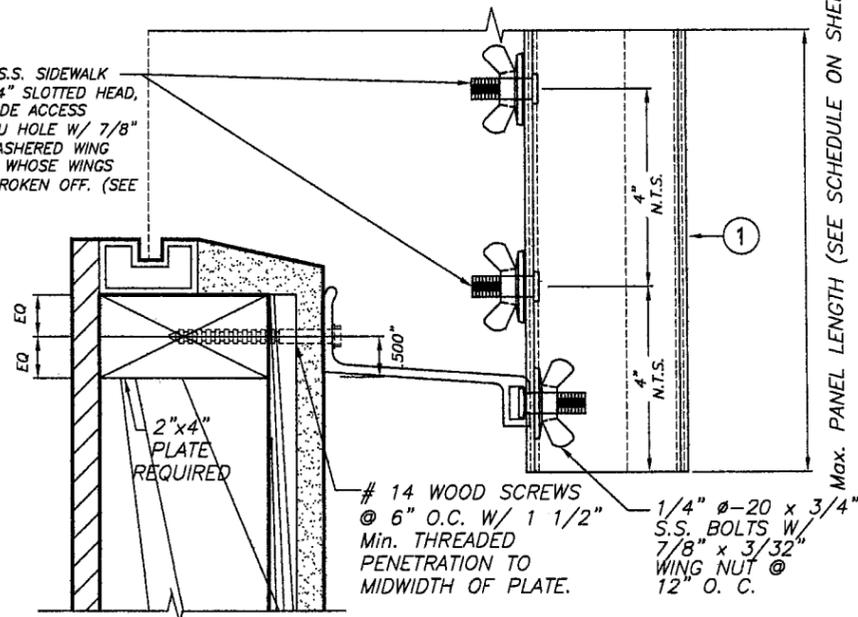
0.0295" THICK GALVANIZED STEEL STORM PANEL			DRAWN BY M.C.V.		
ALUFAB HURRICANE SHUTTERS, INC.			08/19/05 DATE		
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054			05-145 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3		
2	GENERAL	10/8/05	4		

SHEET 8 OF 15

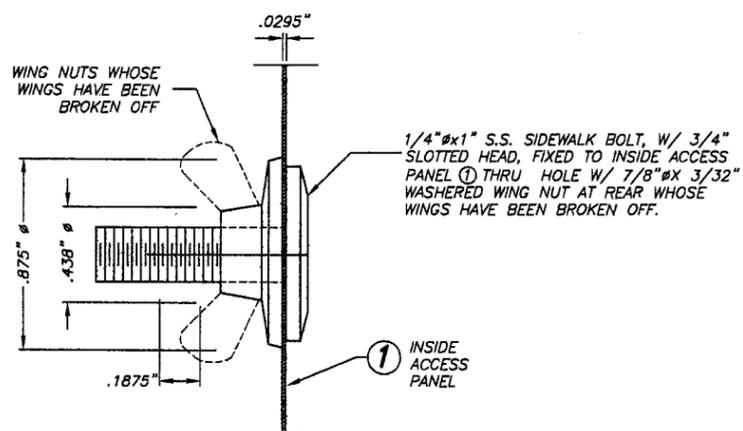


**REMOVABLE INSIDE ACCESS PANEL
INSTALLATION SECTION (8A)'A**
SCALE : 1/2" = 1"

**INSIDE ACCESS PANEL INSTALLATION
ELEVATION**
SCALE : 1 1/2" = 1"



**REMOVABLE INSIDE ACCESS PANEL
INSTALLATION SECTION (8B)'B**
SCALE : 1/2" = 1"



**DETAIL X - INSTALLATION OF 1/4" x 1"
SIDEWALK BOLT @ INSIDE ACCESS PANEL**

* TRUSS HEAD BOLT TO BE 9/16" x 3/32" THICK HEAD MACHINE SCREW W/ LENGTH AS PER NOTES A.2 & B.2 ON SHEET 1.

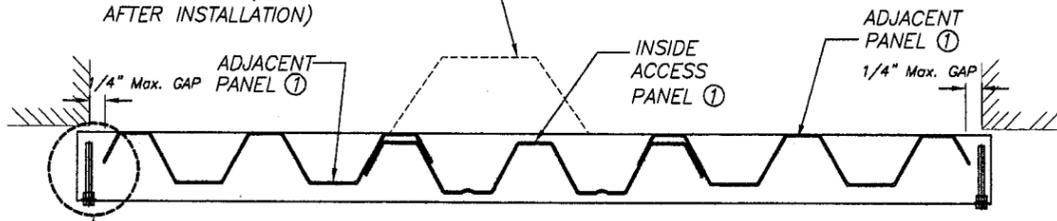
PRODUCT REVISED as complying with the Florida Building Code
Acceptance No 05-1003.17
Expiration Date 04/29/2009
By *Helmut A. Mader*
Miami Dade Product Control Division

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

© 2005 TILTECO, INC.		0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V.	
<p>TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 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</p>		ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
		13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	GENERAL	10/6/05	4		
					SHEET 8A OF 15

NOV 09 2005

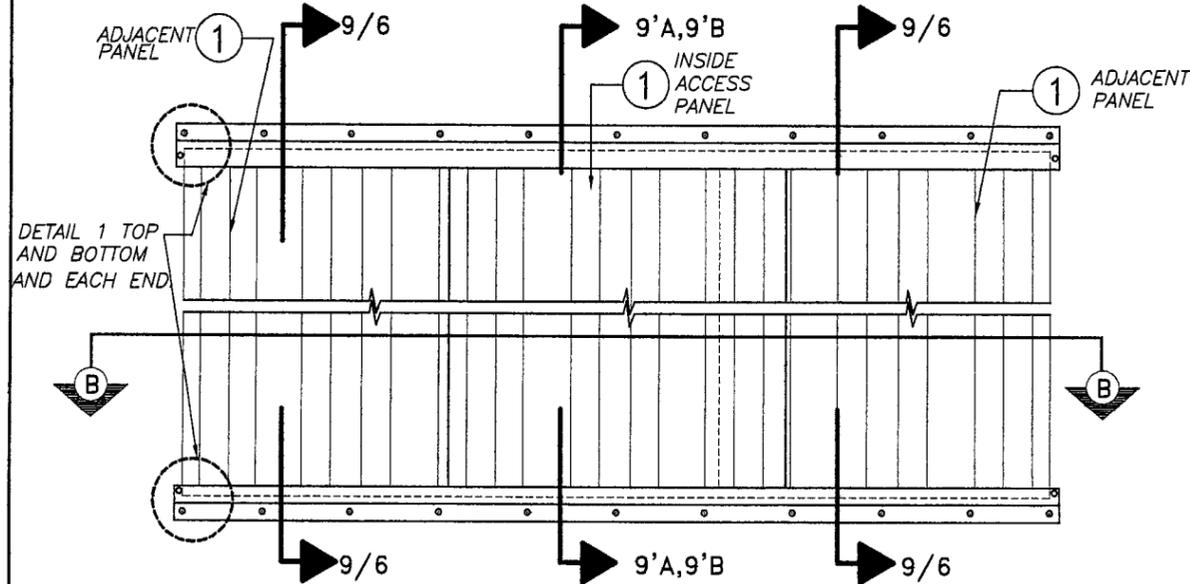
REMOVABLE HANDLE ON THE INTERIOR SIDE OF INSIDE ACCESS PANEL TO FACILITE THE OF I.A.P. INSTALLATION. (TO BE REMOVED AFTER INSTALLATION)



SECTION B-B

SCALE : 1 1/2" = 1"

DETAIL 1 TOP AND BOTTOM AND EACH END.

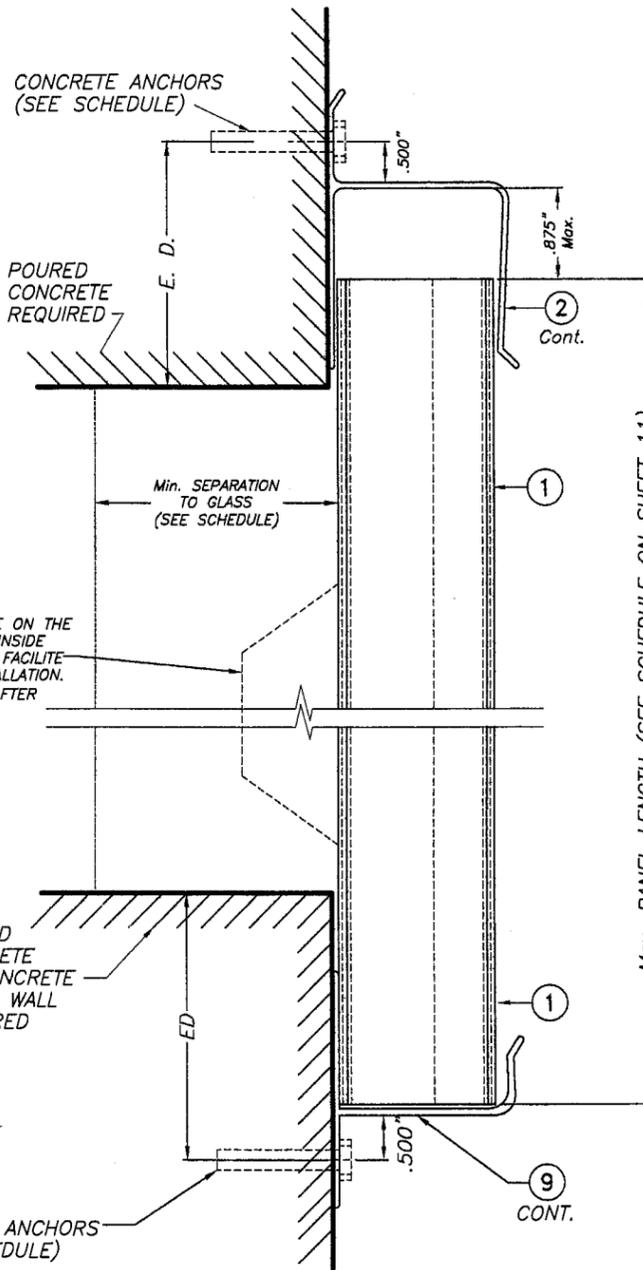


INSIDE ACCESS PANEL INSTALLATION

ELEVATION

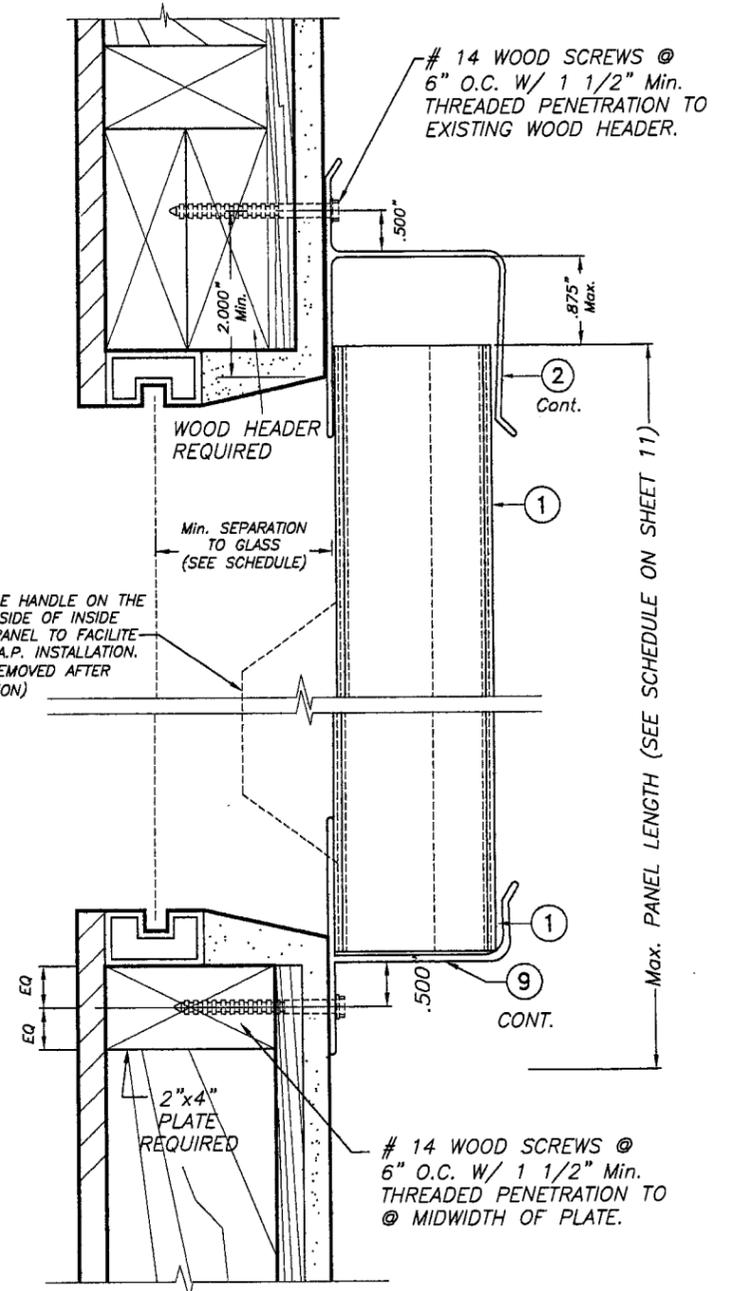
SCALE : 1 1/2" = 1"

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 05-1003.17
 Expiration Date 04/29/2009
 By *Helmut A. Meier*
 Miami Dade Product Control Division



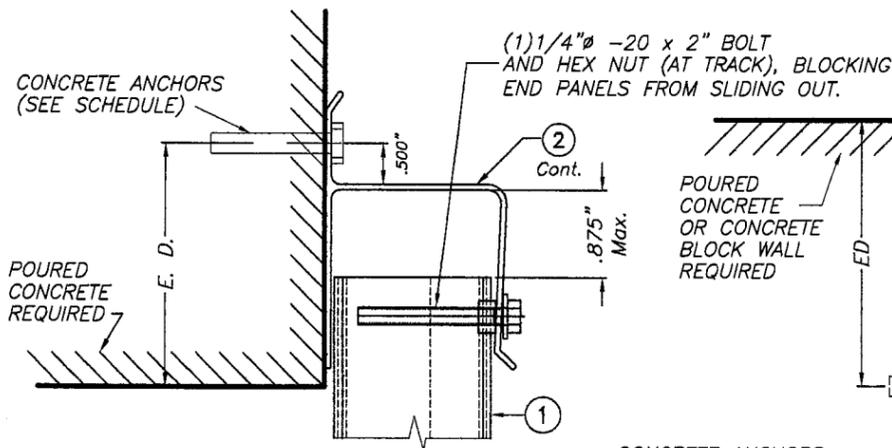
REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 9'A

SCALE : 1/2" = 1"



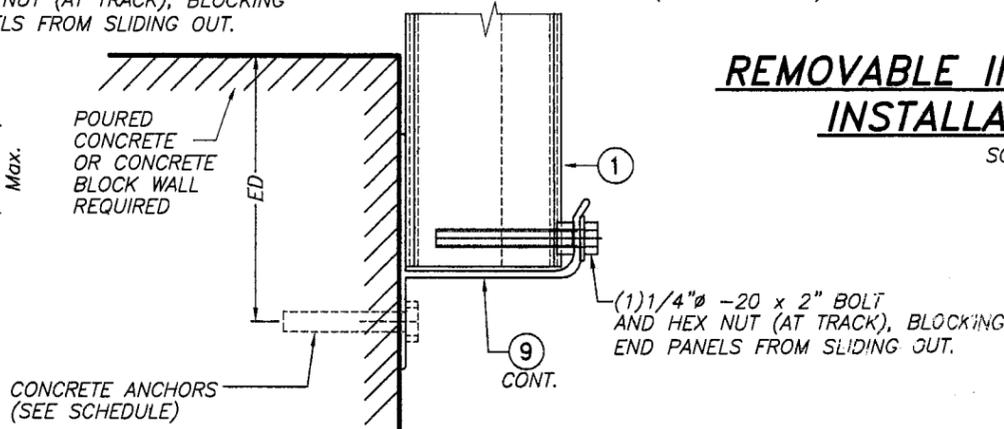
REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 9'B

SCALE : 1/2" = 1"



DETAIL 1 TOP

SCALE : 1 1/2" = 1"



DETAIL 1 BOTTOM

SCALE : 1 1/2" = 1"

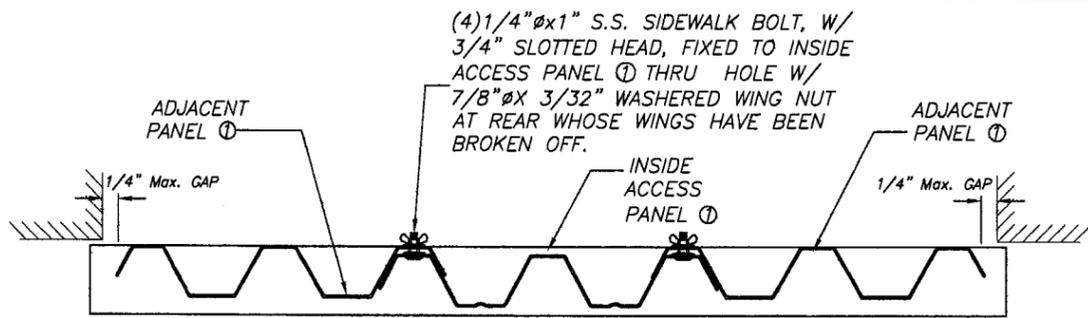
F.B.C. (High Velocity Hurricane Zone)

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 6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166
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 e-mail: tilteco@ool.com
 EB-006719
 WALTER A. TILLIT Jr., P. E.
 FLORIDA Lic. # 44167

0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V.	
ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
1	OLD 03-244	06/19/05	3
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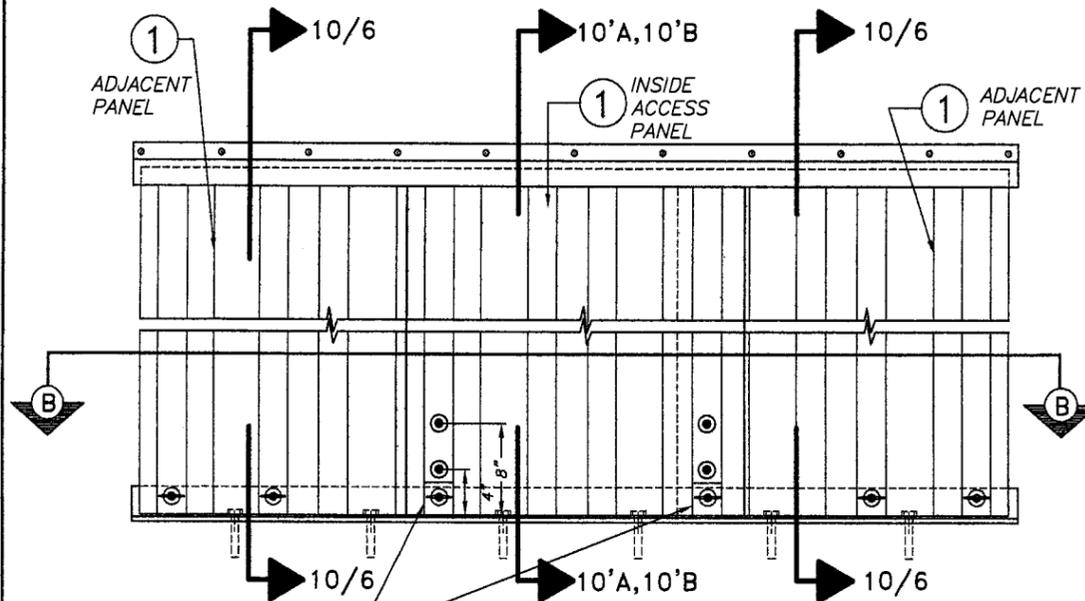
SHEET 9 OF 15

NOV 09 2005



SECTION B-B

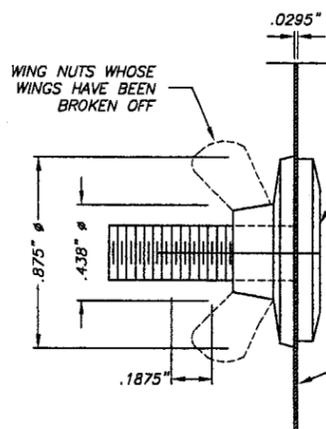
SCALE : 1 1/2" = 1"



INSIDE ACCESS PANEL INSTALLATION ELEVATION

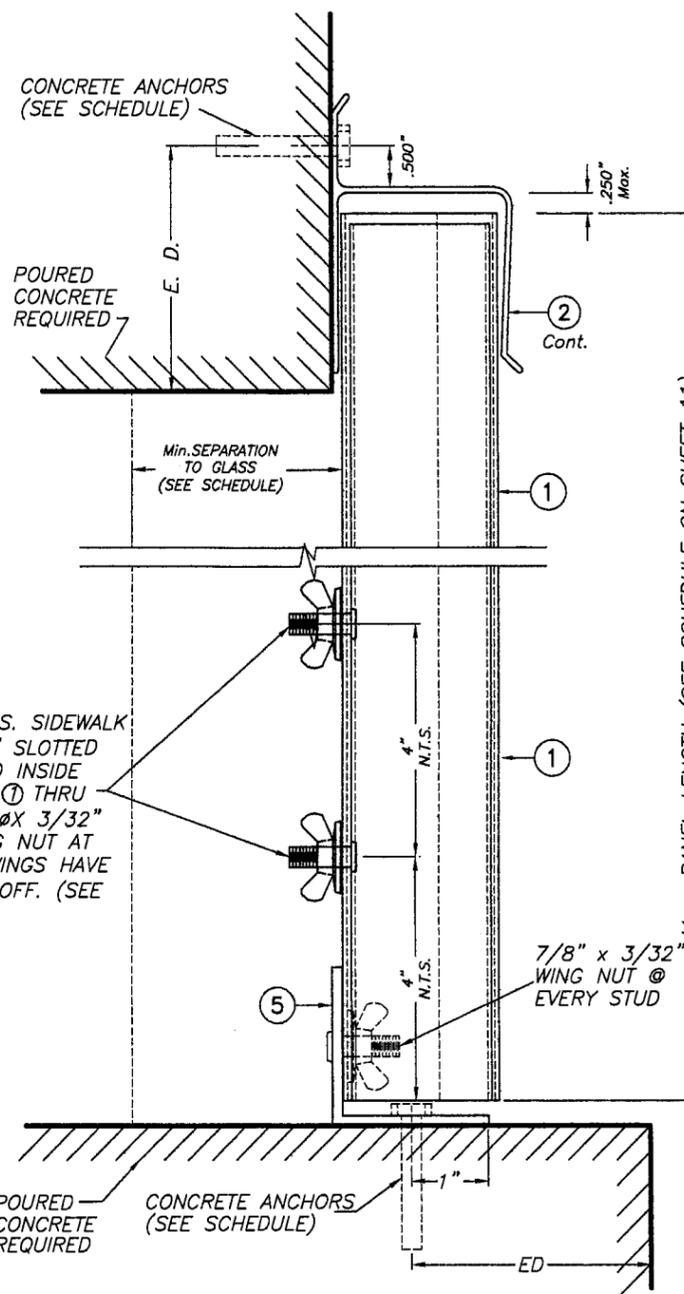
SCALE : 1 1/2" = 1"

1 1/2" x 1" NOTCHED BOTTOM CORNERS OF INSIDE ACCESS PANEL AT ADJACENT PANELS (TYP.)



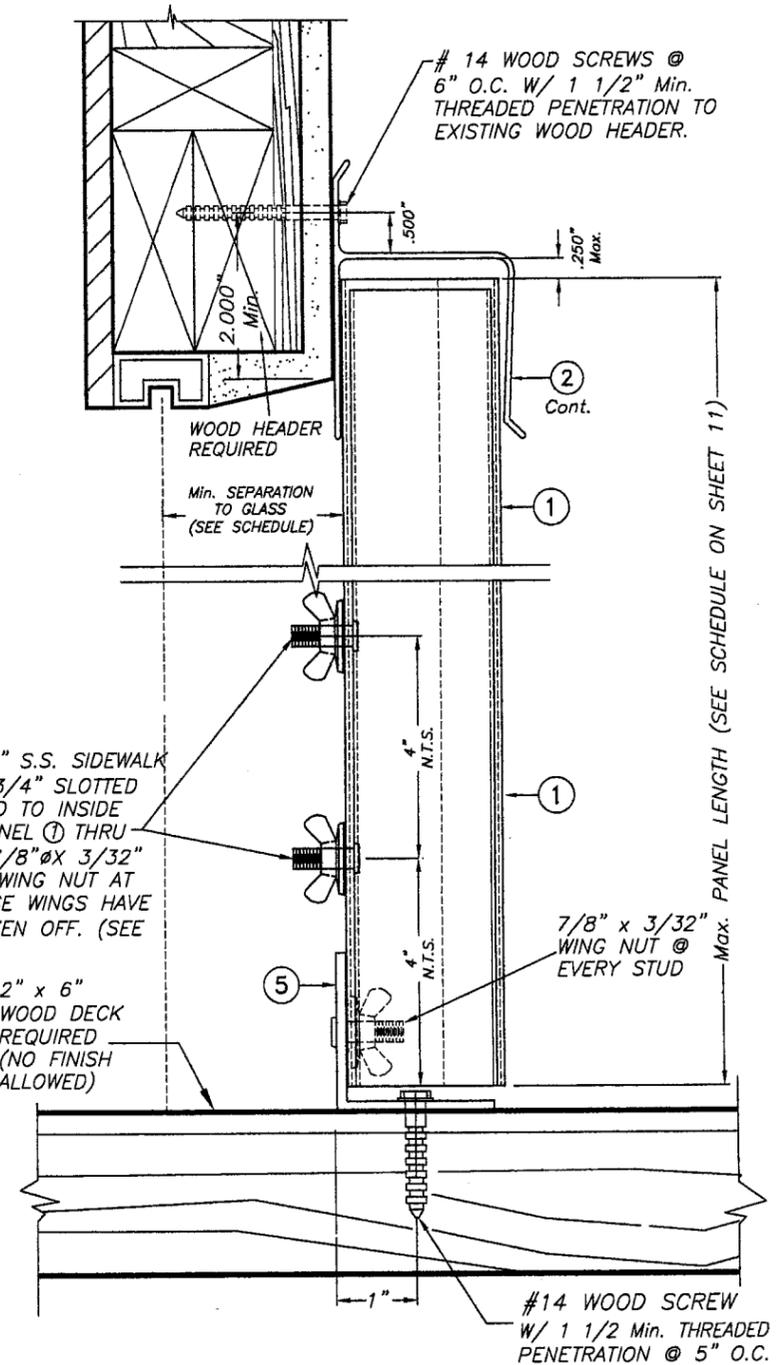
DETAIL X - INSTALLATION OF 1/4"x1" SIDEWALK BOLT @ INSIDE ACCESS PANEL

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No. 05-1003.17
 Expiration Date 04/29/2009
 By *Helmut A. Moler*
 Mutual Trade Product Control Division



REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 10'A

SCALE : 1/2" = 1"



REMOVABLE INSIDE ACCESS PANEL INSTALLATION SECTION 10'B

SCALE : 1/2" = 1"

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

© 2005 TILTECO, INC. TILTECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tilteco@aol.com EB-006719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167		0.0295" THICK GALVANIZED STEEL STORM PANEL ALUFAB HURRICANE SHUTTERS, INC. 13000 N.W. 38th AVE. OPA-LOCKA, FL 33054	DRAWN BY L.G./M.C.V. 06/19/05 DATE 05-145 DRAWING No SHEET 10 OF 15																		
<table border="1"> <thead> <tr> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>OLD 03-244</td> <td>08/19/05</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>GENERAL</td> <td>10/8/05</td> <td>4</td> <td></td> <td></td> </tr> </tbody> </table>	REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE	1	OLD 03-244	08/19/05	3			2	GENERAL	10/8/05	4					
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE																
1	OLD 03-244	08/19/05	3																		
2	GENERAL	10/8/05	4																		

NOV 09 2005

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

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

MAXIMUM DESIGN PRESSURE RATING W (p.s.f.)	Max. PANEL LENGTH (ft.) (SEE SECTIONS)	MINIMUM SEPARATION TO GLASS	APPLICABLE TO SECTION # AND ANY COMBINATION OF THEM
+90.0, -90.0	8'-0"	2 3/4"	1 THRU 6
+72.0, -72.0	<5'-6"	3 1/2"	9, 9'A & 9'B
+72.0, -72.0	>8'-0" TO 8'-6"	3 1/8"	1 THRU 6
+66.0, -66.0	>8'-6" TO 8'-9"	3 1/8"	1 THRU 6
+66.0, -66.0	8'-9"	3 1/2"	7† 7'A, 7'B, 8† 8'A, 8'B, 8A, (8A)A, (8A)B, 10, 10'A & 10'B
+45.0, -45.0	>8'-9" TO 10'-0"	3 1/8"	1 THRU 6

† MAX PANEL LENGTH LIMITED TO 84" IF BOTTOM SUBSTRATE IS CONCRETE BLOCK

E. D. = EDGE DISTANCE

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING
TAPCON	3.0"
CALK-IN	2.5"
PANELMATE	3.0"

* SEE SHEET 13, 14 & 15 OF 15 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/PANELMATE	CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50	-

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		CALK-IN		PANELMATE			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+45.0, -45.0	12"	12"	12"	12"	12"	12"	1 (TOP)	8'-9" OR LESS
	-	-	12"	12"	12"	12"	1 (BOTTOM)	
	-	-	12"	12"	12"	12"	2 (TOP & BOTTOM)	
	12"	-	12"	-	12"	-	3A & 3B (TOP)	
	12"	7 1/2"	11"	7"	12"	6 1/2"	3A & 3B (BOTTOM)	
	12"	12"	12"	12"	12"	12"	4 (TOP)	
	12"	12"	12"	12"	12"	12"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	12"	5A & 5B (TOP)	
	-	-	12"	12"	12"	12"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	12"	12"	12"	12"	12"	12"	6A & 6B (TOP)	
	12"	12"	12"	12"	12"	12"	6A (BOTTOM)	
9"	4"	8 1/2"	4"	9 1/2"	3 1/2"	6B (BOTTOM)		
+45.0, -45.0	12"	11 1/2"	12"	11 1/2"	12"	11"	1 (TOP)	>8'-9" TO 10'-0"
	-	-	12"	6"	12"	6"	1 (BOTTOM)	
	-	-	12"	6"	12"	6"	2 (TOP & BOTTOM)	
	12"	-	12"	-	12"	-	3A & 3B (TOP)	
	12"	6 1/2"	9 1/2"	6"	12"	5 1/2"	3A & 3B (BOTTOM)	
	12"	11 1/2"	12"	11 1/2"	12"	11"	4 (TOP)	
	12"	11 1/2"	12"	11 1/2"	12"	11"	4 (BOTTOM)	
	12"	11 1/2"	12"	11 1/2"	12"	11"	5A & 5B (TOP)	
	-	-	12"	6"	12"	6"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	12"	11 1/2"	12"	11 1/2"	12"	11"	6A & 6B (TOP)	
	12"	11 1/2"	12"	11 1/2"	12"	11"	6A (BOTTOM)	
9"	4"	8 1/2"	4"	9 1/2"	3 1/2"	6B (BOTTOM)		
+66.0, -66.0	12"	7"	12"	7"	12"	6 1/2"	1 (TOP)	8'-9"
	-	-	12"	6"	12"	6"	1 (BOTTOM)	
	-	-	12"	6"	12"	6"	2 (TOP & BOTTOM)	
	11 1/2"	-	9"	-	11"	-	3A & 3B (TOP)	
	9"	5"	7 1/2"	5"	9 1/2"	4 1/2"	3A & 3B (BOTTOM)	
	12"	9"	12"	9"	12"	8 1/2"	4 (TOP)	
	12"	9"	12"	9"	12"	8 1/2"	4 (BOTTOM)	
	12"	7"	12"	7"	12"	6 1/2"	5A & 5B (TOP)	
	-	-	12"	6"	12"	6"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	12"	7"	12"	7"	12"	6 1/2"	6A & 6B (TOP)	
	12"	9"	12"	9"	12"	8 1/2"	6A (BOTTOM)	
9"	4"	8 1/2"	4"	9 1/2"	3 1/2"	6B (BOTTOM)		

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		CALK-IN		PANELMATE			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+72.0, -72.0	12"	12"	12"	12"	12"	11 1/2"	1 (TOP)	6'-0" OR LESS
	-	-	12"	12"	12"	6"	1 (BOTTOM)	
	-	-	12"	12"	12"	6"	2 (TOP & BOTTOM)	
	12"	-	12"	-	12"	-	3A & 3B (TOP)	
	12"	7"	10"	6 1/2"	12"	6"	3A & 3B (BOTTOM)	
	12"	12"	12"	12"	12"	11 1/2"	4 (TOP)	
	12"	12"	12"	12"	12"	11 1/2"	4 (BOTTOM)	
	12"	12"	12"	12"	12"	11 1/2"	5A & 5B (TOP)	
	-	-	12"	12"	12"	6"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	12"	12"	12"	12"	12"	11 1/2"	6A & 6B (TOP)	
	12"	12"	12"	12"	12"	11 1/2"	6A (BOTTOM)	
9"	4"	8 1/2"	4"	9 1/2"	3 1/2"	6B (BOTTOM)		
+72.0, -72.0	12"	5 1/2"	12"	5 1/2"	12"	5 1/2"	1 (TOP)	>6'-0" TO 8'-6"
	-	-	12"	6"	12"	6"	1 (BOTTOM)	
	-	-	12"	6"	12"	6"	2 (TOP & BOTTOM)	
	11"	-	8 1/2"	-	10 1/2"	-	3A & 3B (TOP)	
	8 1/2"	5"	7"	4 1/2"	9"	4"	3A & 3B (BOTTOM)	
	12"	8 1/2"	12"	8 1/2"	12"	8"	4 (TOP)	
	12"	8 1/2"	12"	8 1/2"	12"	8"	4 (BOTTOM)	
	12"	5 1/2"	12"	5 1/2"	12"	5 1/2"	5A & 5B (TOP)	
	-	-	12"	6"	12"	6"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	12"	5 1/2"	12"	5 1/2"	12"	5 1/2"	6A & 6B (TOP)	
	12"	8 1/2"	12"	8 1/2"	12"	8"	6A (BOTTOM)	
-	-	-	-	-	-	6B (BOTTOM)		
+90.0, -90.0	7 1/2"	-	7"	-	7 1/2"	-	1 (TOP)	8'-0"
	-	-	12"	6"	12"	6"	1 (BOTTOM)	
	-	-	12"	6"	12"	6"	2 (TOP & BOTTOM)	
	9"	-	7"	-	9"	-	3A & 3B (TOP)	
	7"	4"	6"	3 1/2"	7 1/2"	3 1/2"	3A & 3B (BOTTOM)	
	12"	6 1/2"	12"	6 1/2"	12"	6"	4 (TOP)	
	12"	7"	12"	7"	12"	6 1/2"	4 (BOTTOM)	
	7 1/2"	-	7"	-	7 1/2"	-	5A & 5B (TOP)	
	-	-	12"	6"	12"	6"	5A (BOTTOM)	
	-	-	6"	6"	6"	6"	5B (BOTTOM)	
	7 1/2"	-	7"	-	7 1/2"	-	6A & 6B (TOP)	
	12"	7"	12"	7"	12"	6 1/2"	6A (BOTTOM)	
-	-	-	-	-	-	6B (BOTTOM)		

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

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 05-1003.17
Expiration Date 04/29/2009
By *Walter A. Tillit Jr.*
Miami Dade Product Control Division

NOV 09 2005

© 2005 TILTECO, INC.	0.0295" THICK GALVANIZED STEEL STORM PANEL	DRAWN BY J.J.V.
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tilteco@aol.com EB-0006719	ALUFAB HURRICANE SHUTTERS, INC. 13000 N.W. 38th AVE. OPA-LOCKA, FL 33054	06/19/05 DATE
WALTER A. TILLIT JR., P. E. FLORIDA Lic. # 44167	REV. No. DESCRIPTION DATE 1 OLD 03-244 06/19/05 2 GENERAL 10/6/05	05-145 DRAWING No
		SHEET 11 OF 15

MAXIMUM DESIGN PRESSURE RATING "W" (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND MASONRY STRUCTURES IN SECTIONS 7, 8, 8A, 9 & 10 *

MAXIMUM DESIGN LOAD W (p.s.f.)	TAPCONS		CALK-IN		APPLICABLE TO SECTIONS # & ANY COMBINATION OF THEM	MAXIMUM PANEL LENGTH "L" (ft.)
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+66.0, -66.0	12"	-	12"	-	7 (TOP)	8'-9" †
	-	-	10"	6" †	7 (BOTTOM) †	
	8"	-	10"	-	8 (TOP)	
	-	-	10"	6" †	8 (BOTTOM) †	
	8"	3 1/2"	10"	4 1/2"	8A (BOTTOM)	
	12"	-	12"	-	10 (TOP)	
	6"	-	5"	-	10 (BOTTOM) **	
+72.0, -72.0	12"	-	12"	-	9 (TOP)	5'-6"
	12"	7"	12"	10 1/2"	9 (BOTTOM)	

† MAX PANEL LENGTH LIMITED TO 84" IF BOTTOM SUBSTRATE IS CONCRETE BLOCK, APPLICABLE ONLY TO SECTIONS 7 & 8 AT BOTTOM.

E. D. = EDGE DISTANCE

ANCHORS LEGEND

ANCHORS TYPE	ANCHOR MIN. SPACING	MIN. E.D. †
TAPCON	3"	2"
CALK-IN	2 1/2"	2 1/2"

† E. D. DOES NOT INCLUDE ANY WALL FINISH

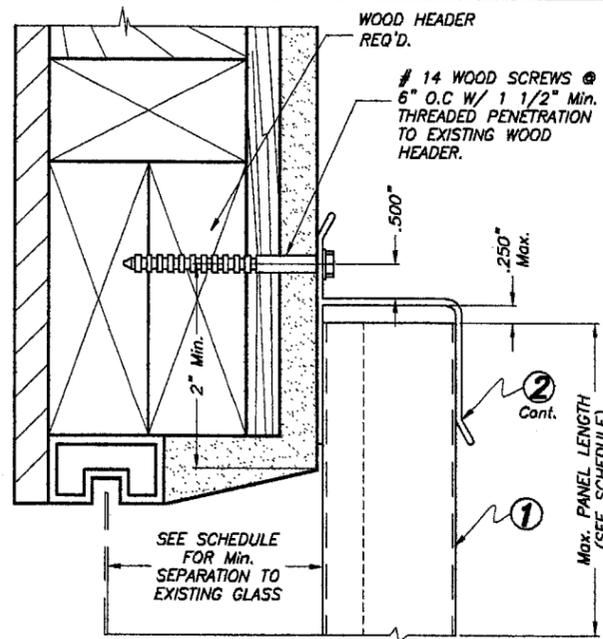
* SEE SHEET 13, 14 & 15 OF 15 FOR ANCHORS TYPE & SPACING FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.

** MIN. E.D. = 3 1/2" REQUIRED

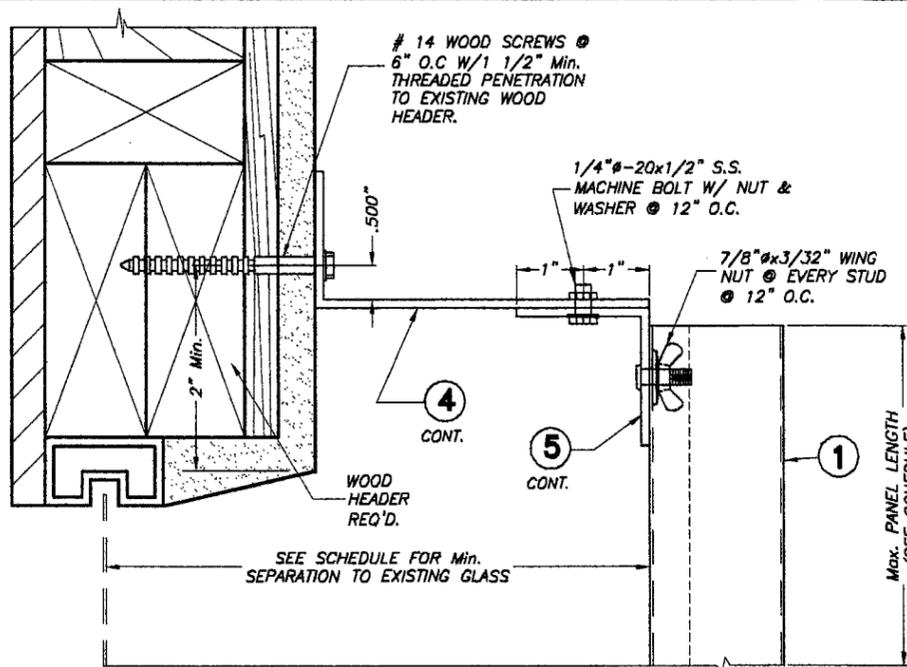
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 05-1003.17
 Expiration Date 04/29/2009
 By *Heather A. Walker*
 Miami Dade Product Control
 Division

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

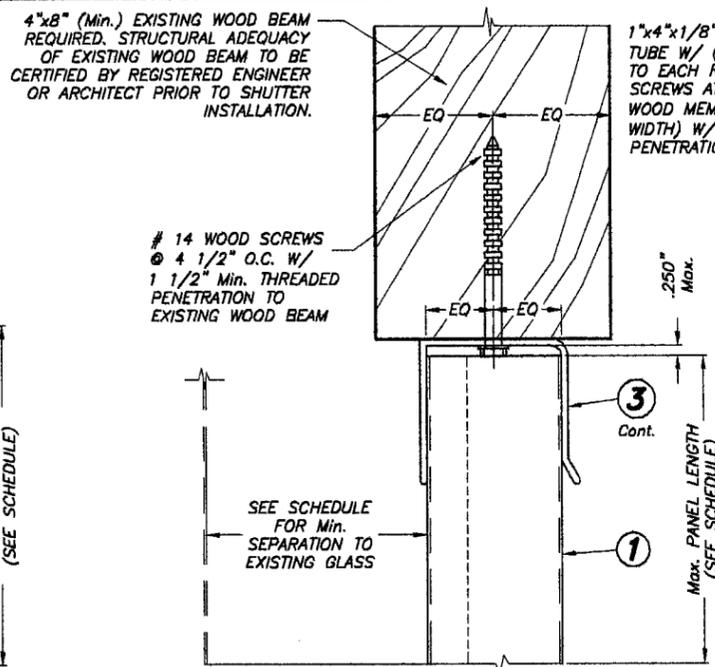
© 2005 TILTECO, INC.		0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY J.J.V.	
 TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FLORIDA 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tilteco@aol.com EB-0008719 WALTER A. TILLIT Jr., P. E. FLORIDA Lic. # 44167		ALUFAB HURRICANE SHUTTERS, INC. 13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		06/19/05 DATE	
NOV 09 2005		05-145 DRAWING No		SHEET 12 OF 15	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
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2	GENERAL	10/8/05	4		



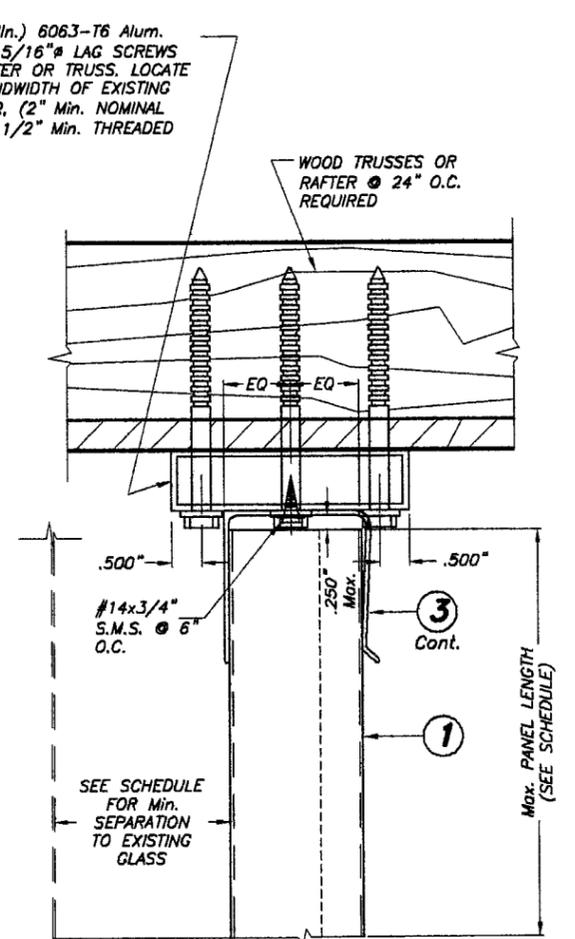
ALTERNATIVE 1



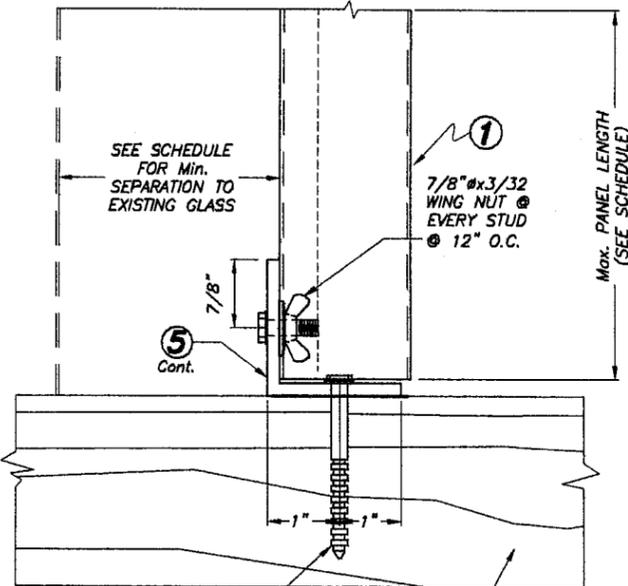
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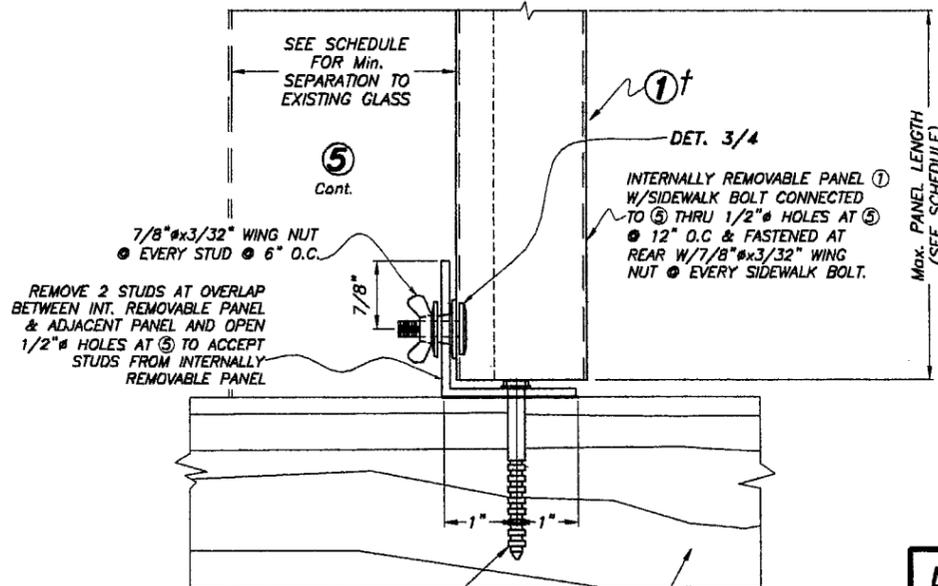
ALTERNATIVE 4



ALTERNATIVE 5



**ALTERNATIVE 2A
ADJACENT PANELS**

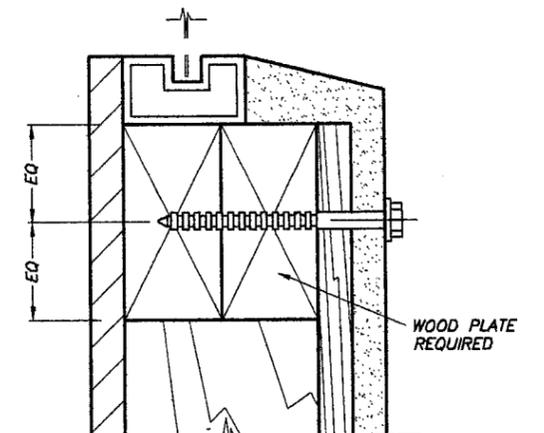


**ALTERNATIVE 2B
INTERNALLY REMOVABLE PANEL****

† NOTE:
INTERNALLY REMOVABLE PANEL SHALL BE PROVIDED W/ AN ADEQUATE REMOVABLE HANDLE IN ORDER TO INSTALL PANEL.

**** NOTE:**
INTERNALLY REMOVABLE PANEL SHOWN ON ALTERNATIVE 2B SHALL ALWAYS BE INSTALLED IN BETWEEN ADJACENT PANELS MOUNTED AS SHOWN ON ALTERNATIVE 2A.

NOTES:
1. INSTALLATIONS ARE VALID ONLY FOR DESIGN WIND LOADS AND Max. PANEL LENGTHS AS PER SCHEDULE ON SHEET 11 OF 15.
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.



**ALTERNATIVE WOOD FRAME CONDITION
& ANCHOR LOCATION AT BOTTOM**

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

INSTALLATION DETAILS ON EXISTING WOOD BUILDINGS
SCALE: 3/8" = 1"

SCALE: 1/4" = 1"
NOTE: SHUTTER TRACKS NOT SHOWN FOR CLARITY
F.B.C. (High Velocity Hurricane Zone)

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Expiration Date: 04/29/2009
By: Helmut A. Melzer
Miami Dade Product Control
Division

[Signature]

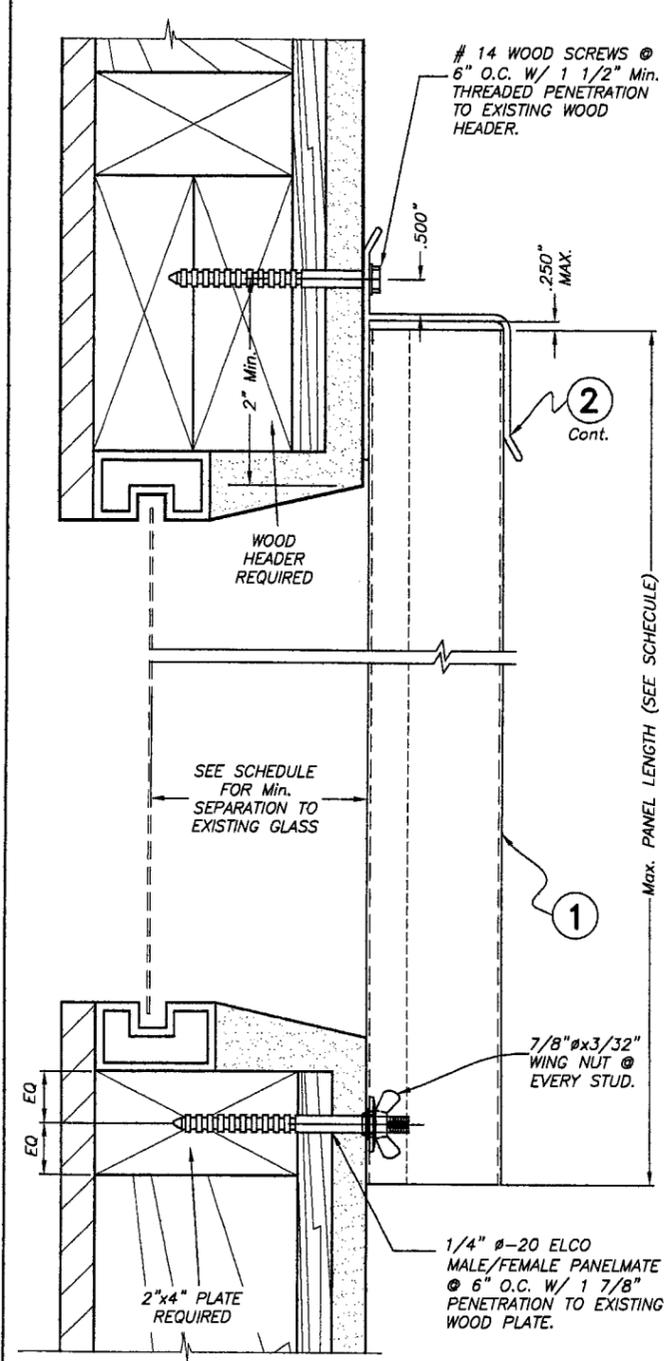
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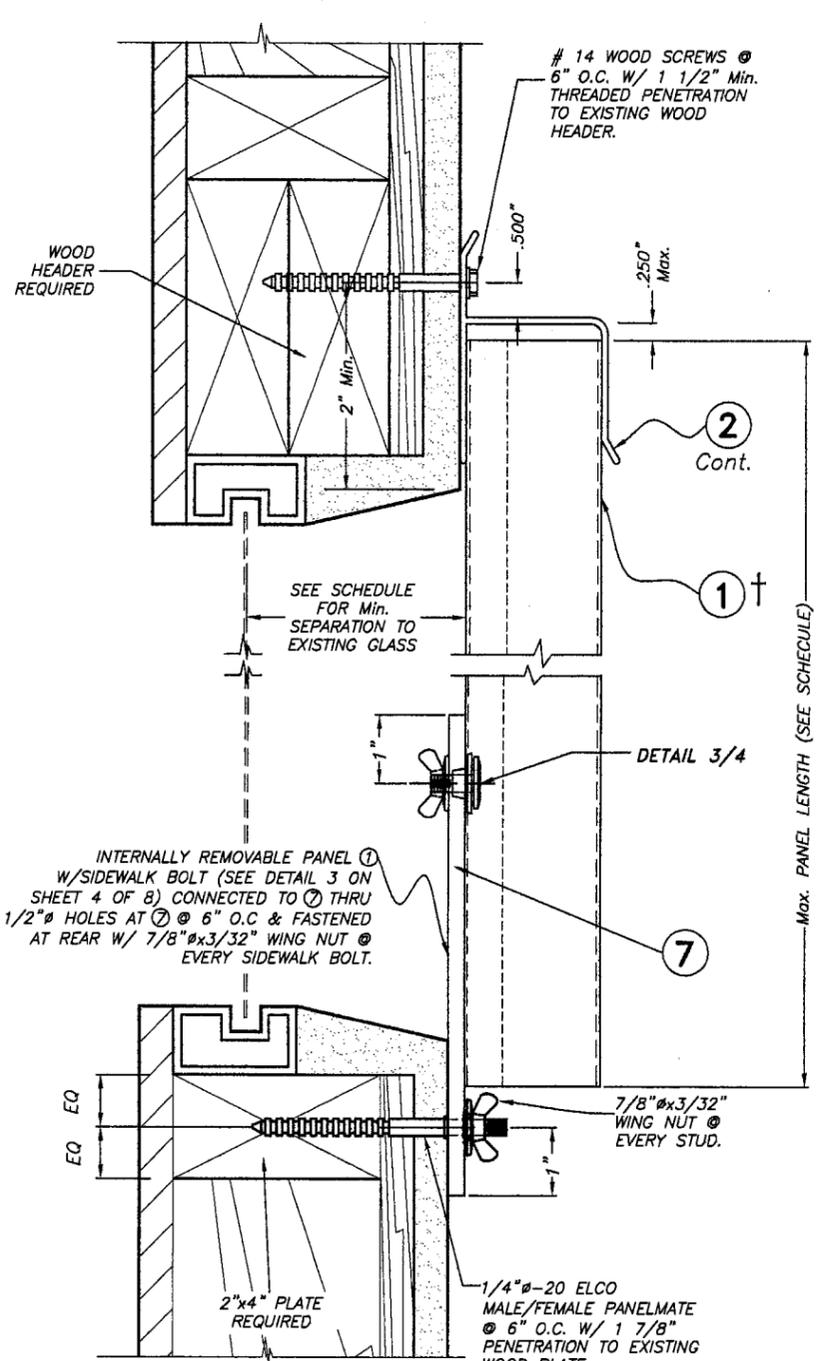
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
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Phone: (305)871-1530 Fax: (305)871-1531
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EB-006719
WALTER A. TILLIT Jr., P. E.
FLORIDA Lic. # 44167

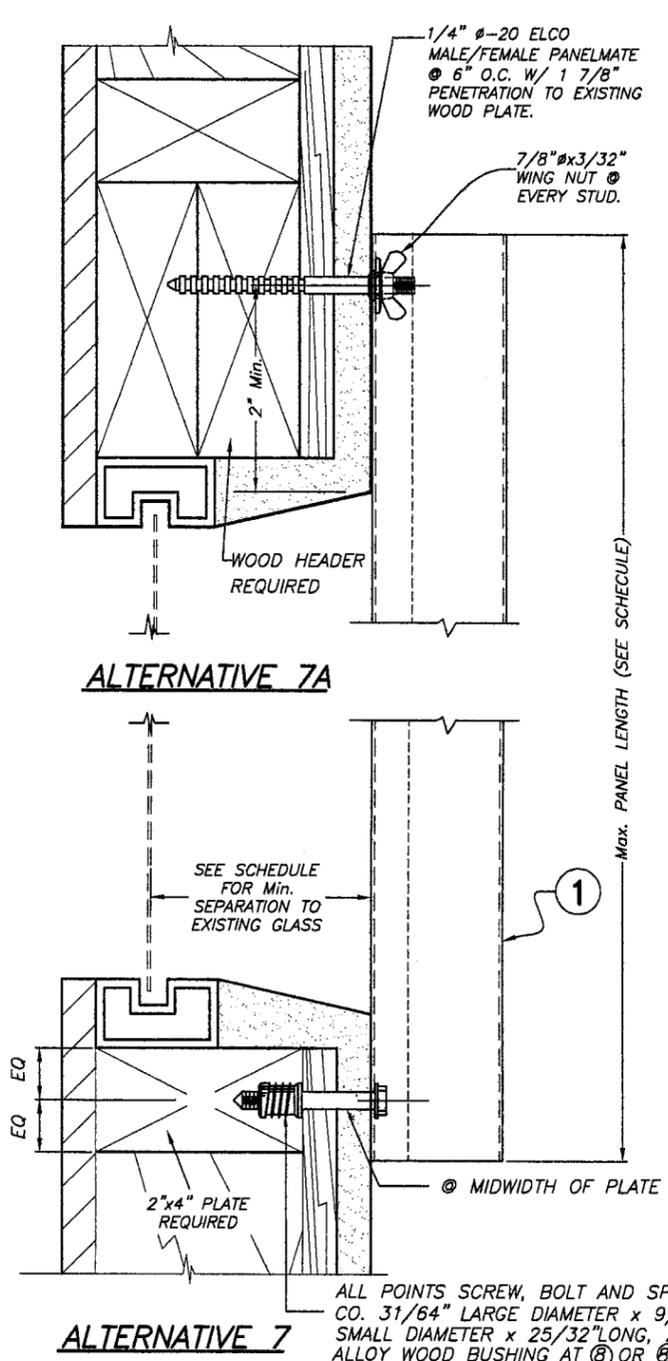
0.0295" THICK GALVANIZED STEEL STORM PANEL			DRAWN BY M.C.V./L.G.		
ALUFAB HURRICANE SHUTTERS, INC.			06/19/05 DATE		
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054			05-145 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-244	06/19/05	3		
2	GENERAL	10/6/05	4		



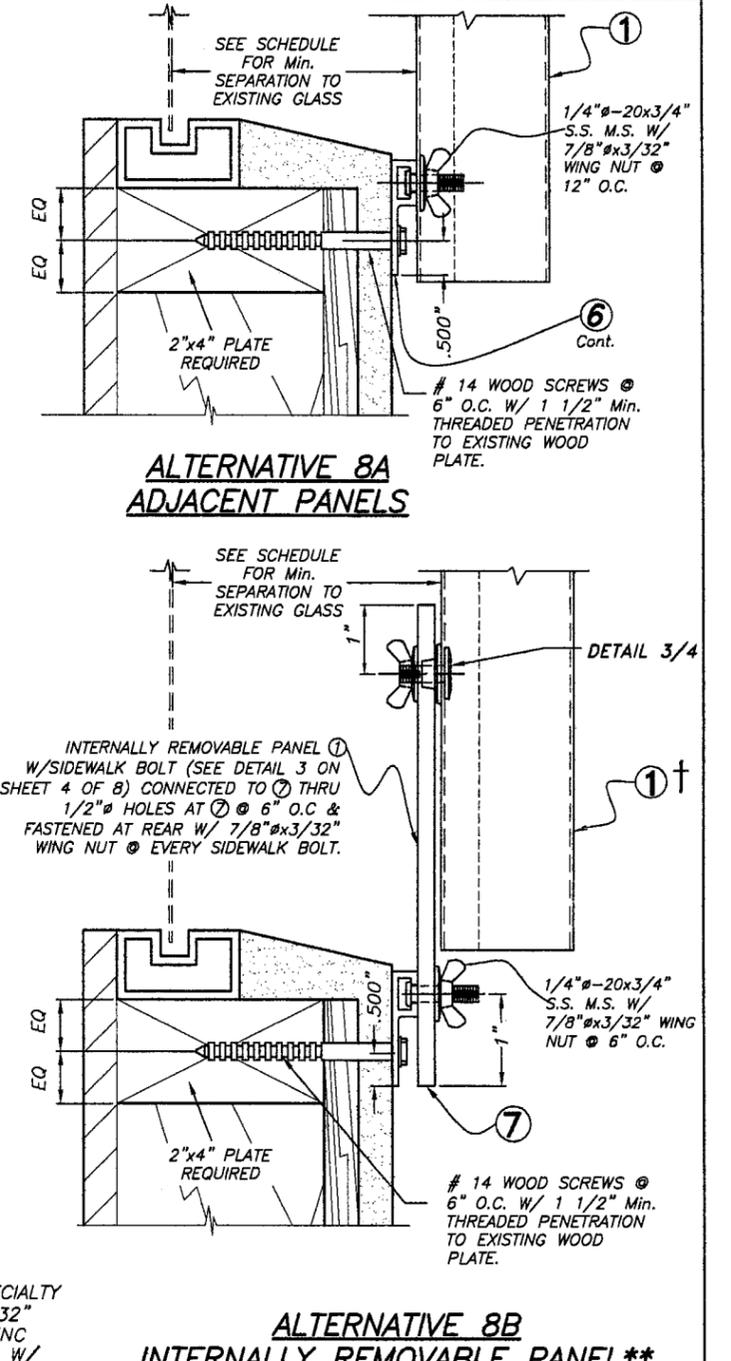
ALTERNATIVE 6A
ADJACENT PANELS



ALTERNATIVE 6B
INTERNALLY REMOVABLE PANEL**



ALTERNATIVE 7



ALTERNATIVE 8A
ADJACENT PANELS

ALTERNATIVE 8B
INTERNALLY REMOVABLE PANEL**

ALTERNATIVES 8

WALL MOUNTING INSTALLATIONS

ALTERNATIVES 6

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

NOTES:
1. INSTALLATIONS ARE VALID ONLY FOR DESIGN WIND LOADS AND Max. PANEL LENGTHS AS PER SCHEDULE ON SHEET 11 OF 15, EXCEPT THAT ALTERNATIVE #7 MUST BE LIMITED TO 105" PANEL LENGTH AND ± 66 psf DESIGN LOAD.
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

**** NOTE:**
INTERNALLY REMOVABLE PANEL SHOWN ON ALTERNATIVE 6B & 8B SHALL ALWAYS BE INSTALLED IN BETWEEN ADJACENT PANELS MOUNTED AS SHOWN ON ALTERNATIVE 6A & 8A.

† NOTE:
INTERNALLY REMOVABLE PANEL SHALL BE PROVIDED W/ AN ADEQUATE REMOVABLE HANDLE IN ORDER TO INSTALL PANEL.

PRODUCT REVISED
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Acceptance No. 05-1003.17
Expiration Date 04/29/2009
By *Helmut A. Tillit*
Miami Dade Product Control
Division

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

NOV 09 2005

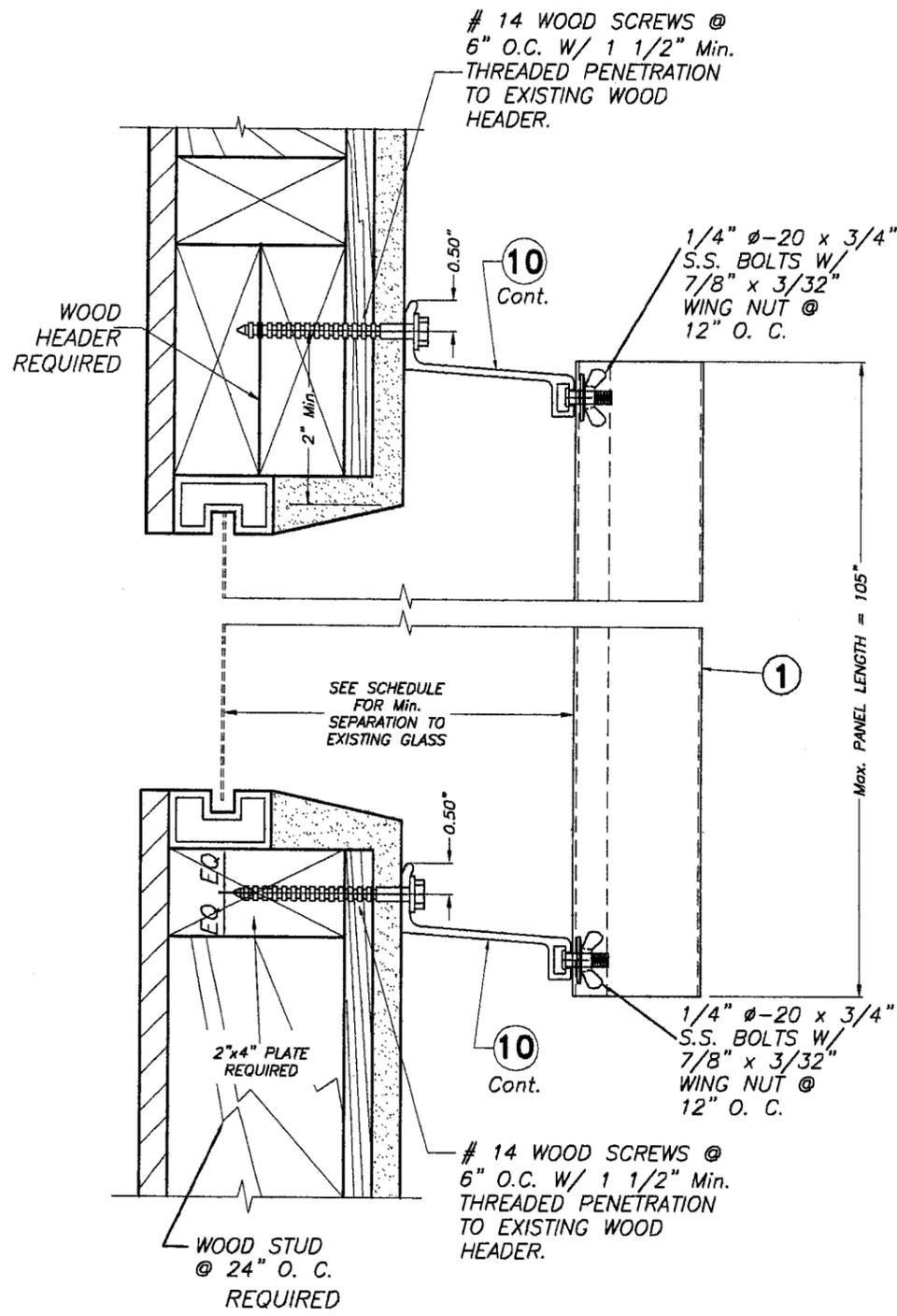
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e-mail: tilteco@aol.com
EB-0006719
WALTER A. TILLIT JR., P. E.
FLORIDA Lic. # 44167

0.0295" THICK GALVANIZED STEEL STORM PANEL		DRAWN BY M.C.V./L.G.	
ALUFAB HURRICANE SHUTTERS, INC.		06/19/05 DATE	
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054		05-145 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No
1	OLD 03-244	06/19/05	3
2	GENERAL	10/6/05	4

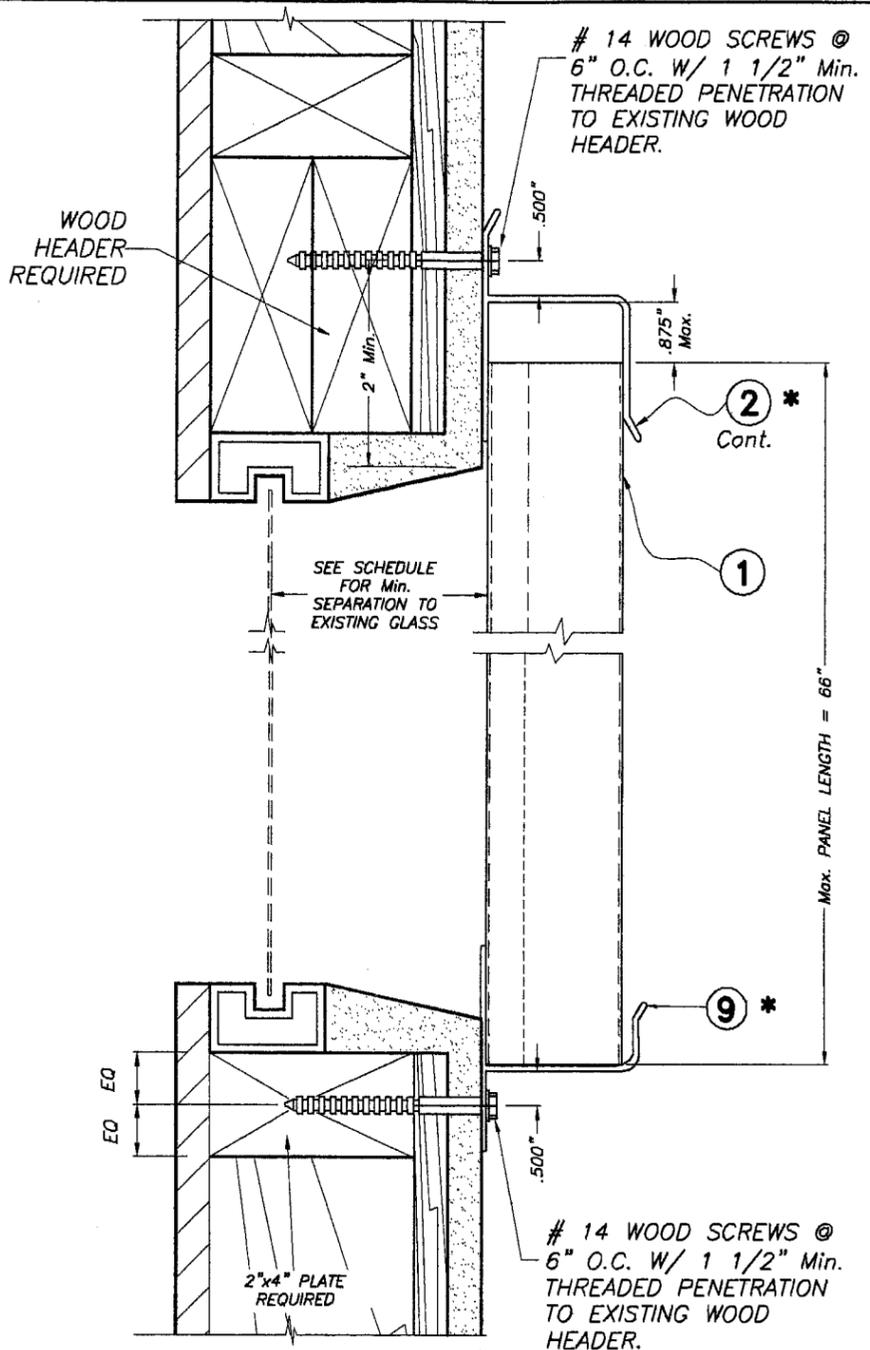
SHEET 14 OF 15



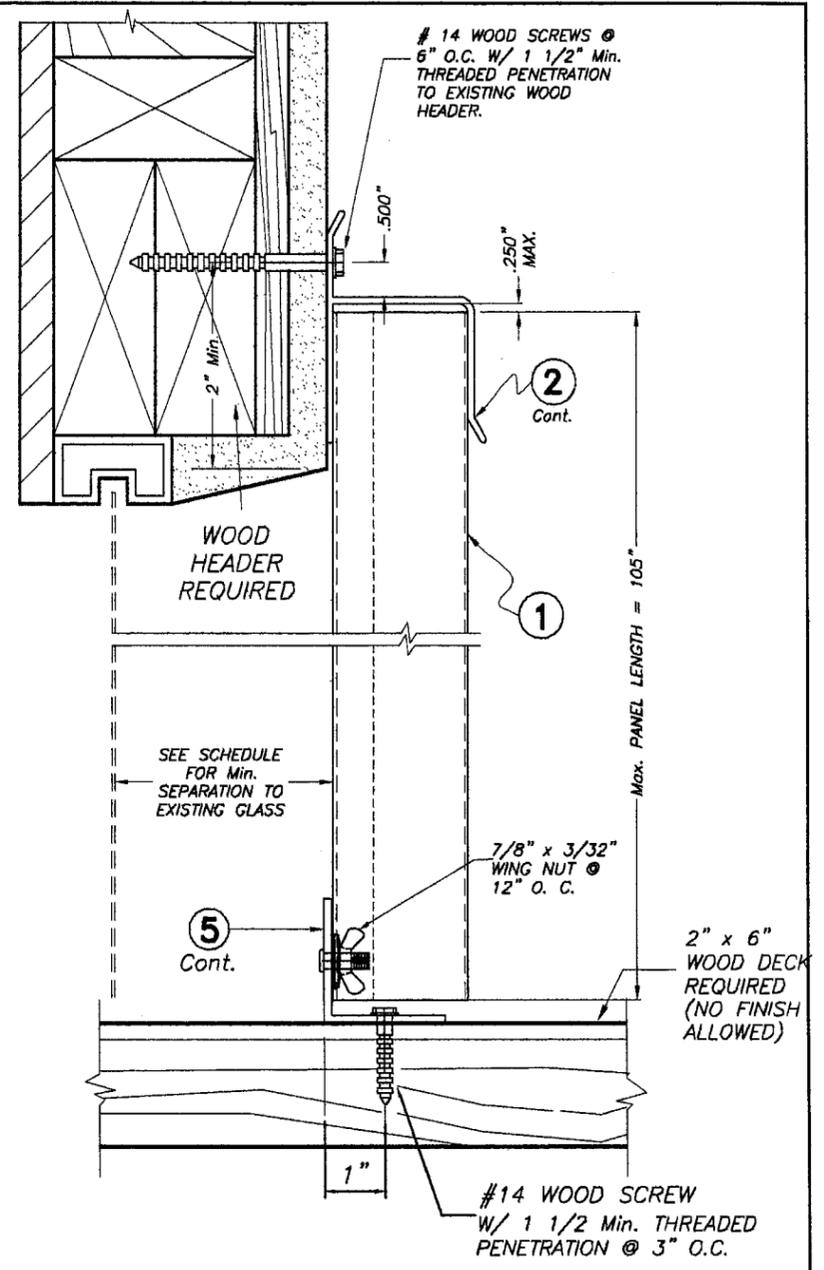
ALTERNATIVE 9
Max. DESIGN LOAD = ±66.0 psf

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

NOTES:
1. INSTALLATIONS ARE VALID ONLY FOR DESIGN WIND LOADS AND Max. PANEL LENGTHS AS INDICATED ON THIS SHEET.
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.



ALTERNATIVE 10
Max. DESIGN LOAD = ±72.0 psf
* SEE DETAIL 1 (TOP AND BOTTOM) ON SHEET 9.



ALTERNATIVE 11
Max. DESIGN LOAD = ±66.0 psf

WALL MOUNTING INSTALLATIONS

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Expiration Date 04/29/2009
By *Helmut A. Miller*
Miami Dade 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

0.0295" THICK GALVANIZED STEEL STORM PANEL			DRAWN BY J.J.V.		
ALUFAB HURRICANE SHUTTERS, INC.			06/19/05 DATE		
13000 N.W. 38th AVE. OPA-LOCKA, FL 33054			05-145 DRAWING No		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD Q3-244	06/19/05	3		
2	GENERAL	10/6/05	4		

WALTER A. TILLIT Jr., P. E.
NOV 9 2005