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)

Hurricane Manufacturing, Corporation
11850 Miramar Parkway
Miramar, Florida 33025

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: "Omega / Hi-Rise " Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 05-283, titled " Omega Accordion Shutter / Hi-Rise ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated September 13, 2005, last revision #1 dated September 13, 2005, signed and sealed by Walter A. Tillit Jr., P.E. bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA # 03-0722.01** and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

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

Helmy A. Makar
11/24/2005

NOA No 05-0927.05
Expiration Date: 09/25/2008
Approval Date: 11/24/2005

Hurricane Manufacturing, Corporation

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #97-0513.02

A. DRAWINGS

1. *Drawing No. 96-159, "The Jeff Robinson Shutter Co.", Sheets 1 through 8 of 8, dated 05/29/96, latest revision No. 1, dated 08/28/97, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *Test report on: 1.) Large Missile Impact Test, per PA 201-94*
   2.) Cyclic Wind Pressure Test, per PA 203-94
   3.) Uniform Static Air Pressure Test Loading, per PA 202-94
   of extruded aluminum accordion shutter (96", 108", 120", 144" & 192" spans), prepared by Miami Testing Laboratory, Report No. MTL 16908, dated February 14, 1997, signed and sealed by John M. Bridenstine, P.E.
2. *Test report on: 1.) Large Missile Impact Test, per PA 201-94*
   2.) Cyclic Wind Pressure Test, per PA 203-94
   3.) Uniform Static Air Pressure Test Loading, per PA 202-94
   of extruded aluminum accordion shutter (96", 108", 120", 144" & 192" spans), prepared by Miami Testing Laboratory, Report No. MTL 16910, dated February 18, 1997, signed and sealed by John M. Bridenstine, P.E.

C. CALCULATIONS

1. *Comparative Analysis and Anchor Analysis dated 03/09/97, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Test Report issued by Caradon Indalex, with chemical composition for aluminum 6005-T5 Alloy and aluminum 6063-T6 alloy dated 01/03/97.*
2. *Mill Certified Test Report issued by Caradon Indalex, with chemical composition for aluminum 6005-T5 Alloy dated 01/10/97.*
3. *Tensile Test Report No. CAE 97010, prepared by Center For Applied Engineering, Inc., dated January 20, 1997, signed and sealed by John M. Bridenstine, P.E.*
4. *Tensile Test Report No. CAE 97019, prepared by Center For Applied Engineering, Inc., dated January 20, 1997, signed and sealed by John M. Bridenstine, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-0719.02

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0927.05
Expiration Date: 09/25/2008
Approval Date: 11/24/2005

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS

1. None.

D. MATERIAL CERTIFICATIONS

1. None.

E. STATEMENTS

1. Letter by The Jeff Robinson Shutter Company, Inc., dated July 5, 2000, signed by Jeffry T. Robinson, indicating that the approval has not changed.

2. Letter by Tilteco Inc., signed and sealed by Walter A. Tillit, Jr., P.E., dated May 4, 2000, certifying that Tilteco, Inc. is still the engineer of record and he continues to be in the engineering business.

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0722.01

A. DRAWINGS:

1. Drawing No. 03-154, titled " Omega Accordion Shutter / Hi-Rise ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated July 08, 2003, last revision #1 dated July 08, 2003, signed and sealed by Walter A. Tillit Jr., P.E.

B. TESTS:

1. None.

C. CALCULATIONS:

1. None.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATION:

1. None.

F. OTHERS

1. Letter from Tilteco, Inc., dated July 7, 2003, signed and sealed by Walter A. tillit Jr., P.E., certifying that drawing #03-154 prepared for Hurricane Manufacturing Corporation is engineering wise identical to the Jeff Robinson Shutter Co. drawing #96-159, except one wall mount header. The new extrusion has the same thickness and the anchor location has not changed.

2. Letter from Mr. Jeff Robinson requesting to change his company name from The Jeff Robinson Shutter Company to Hurricane Manufacturing Corporation.

Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0927.05
Expiration Date: 09/25/2008
Approval Date: 11/24/2005

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 05-283, titled " Omega Accordion Shutter / Hi-Rise ", sheets 1 through 8 of 8, prepared by Tilteco, Inc., dated September 13, 2005, last revision #1 dated September 13, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Anchor Analysis dated 09/23/2005, sheets 1 through 42, prepared by Tilteco, Inc., signed and sealed by Walter A. Tillit Jr., P.E.*

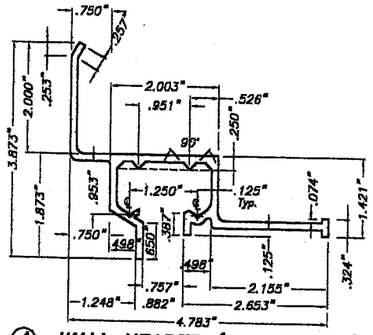
D. QUALITY ASSURANCE

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

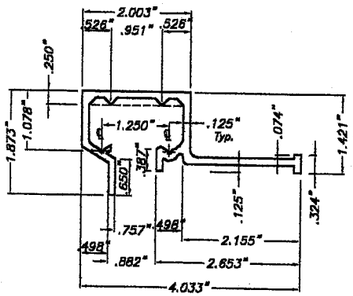
E. MATERIAL CERTIFICATIONS

1. *None.*

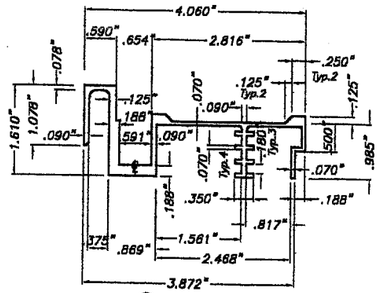
Helmy A. Makar, P. E.
Product Control Examiner
NOA No 05-0927.05
Expiration Date: 09/25/2008
Approval Date: 11/24/2005



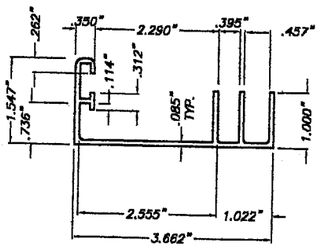
Ⓐ **WALL HEADER (& INVERTED)**
SCALE : 3/8" = 1"



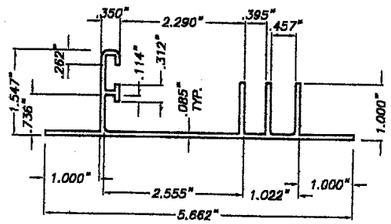
Ⓑ **CEILING HEADER**
SCALE : 3/8" = 1"



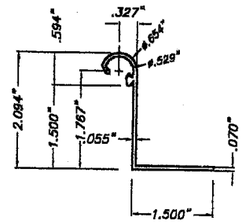
Ⓒ **SILL**
SCALE : 3/8" = 1"



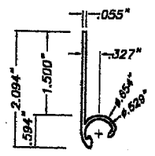
Ⓓ **ADJUSTABLE SILL ADAPTOR**
SCALE : 3/8" = 1"



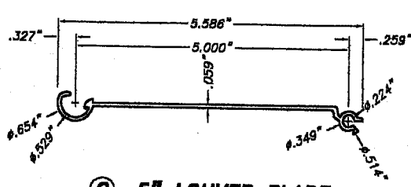
Ⓓ1 **ADJUSTABLE SILL ADAPTOR**
SCALE : 3/8" = 1"



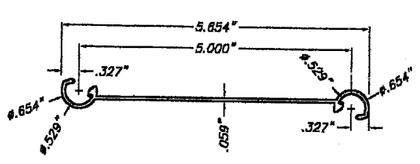
Ⓔ **90° STARTER**
SCALE : 3/8" = 1"



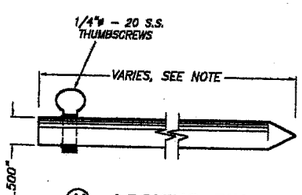
Ⓕ **180° STARTER**
SCALE : 3/8" = 1"



Ⓖ **5" LOUVER BLADE**
6005-T5 ALLOY
SCALE: 3/8" = 1"

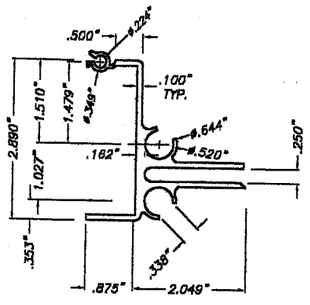


Ⓖ1 **FEMALE-FEMALE 5" LOUVER BLADE**
6005-T5 ALLOY
SCALE: 3/8" = 1"

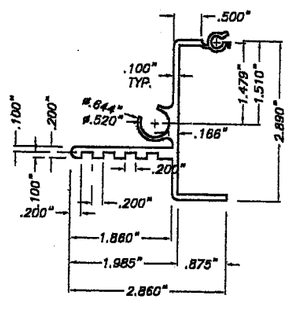


Ⓗ **LOCKING PIN**
SCALE: 3/8" = 1"

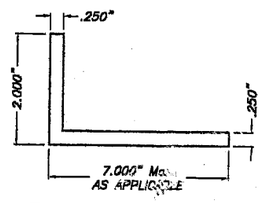
NOTE:
TOTAL LENGTH OF TOP & BOTTOM PINS SHALL ADD A MINIMUM 2/3 OF SHUTTER'S BLADE LENGTH W/ MINIMUM INDIVIDUAL PINS LENGTH OF 12" FOR UP TO 9'-0" BLADE LENGTH & 24" FOR BLADE LENGTH GREATER THAN 9'-0".



Ⓘ **OMEGA FEMALE CENTERMATE**
SCALE: 3/8" = 1"



Ⓙ **OMEGA MALE CENTERMATE**
SCALE: 3/8" = 1"



Ⓚ **ALUMINUM ANGLE**
SCALE: 3/8" = 1"

COMPONENTS

GENERAL NOTES:

1. ACCORDION SHUTTER SHOWN ON THIS PRODUCT APPROVAL DOCUMENT 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 ANCHORS ON THIS P.A.D., AS TESTED, WERE NOT OVERSTRESSED, A 33⅓ INCREASE IN ALLOWABLE LOADS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. HOWEVER, FOR LAG SCREWS INTO WOOD, A 1.60 WIND LOAD DURATION FACTOR WAS USED TO CALCULATE SCREWS SPACINGS. ACCORDION SHUTTER'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER TAS-201, TAS-202 AND TAS-203 PROTOCOLS.

2. STAINLESS STEEL SHEET METAL SCREWS USED AT LOUVER BLADE SHALL BE # 14 x 3", 410-HT MINIMUM SERIES W/ 135.0 ksi YIELD STRENGTH & 180 ksi TENSILE STRENGTH. SCREWS SHALL BE COATED WITH XYLAN 5000 SERIES FLUOROPOLYMER COATINGS AS MANUFACTURED BY WHITFORD Co, BOX 507. WEST CHESTER PA. 19381.

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

4. 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.

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

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

7. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)
(A) TO EXISTING POURED CONCRETE:
- 1/4" ø TAPCON ANCHORS, MANUFACTURED BY I.T.W. BUILDEX OR ELCO TEXTRON.
- 1/4" ø ZAMAC NAILIN ANCHORS, MANUFACTURED BY POWERS FASTENERS, INC.
- 1/4" ø x 7/8" CALK-IN ANCHORS MANUFACTURED BY POWERS FASTENERS, INC.

NOTES:
A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO CONCRETE IS 1 3/4". MINIMUM EMBEDMENT OF ZAMAC NAILIN IS 1 1/2"

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

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

(B) TO EXISTING CONCRETE BLOCK WALL:
- 1/4" ø TAPCON ANCHORS MANUFACTURED BY I.T.W. BUILDEX OR ELCO TEXTRON.
- 1/4" ø ZAMAC NAILIN ANCHORS MANUFACTURED BY POWERS FASTENERS, INC.
- 1/4" ø x 7/8" CALK-IN ANCHORS MANUFACTURED BY POWERS FASTENERS, INC.

NOTES:
B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS, AND ZAMAC NAILIN ANCHORS INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".

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

B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE 1 1/4" MINIMUM FOR ANCHORS MENTIONED IN B.1.), & 7/8" FOR ANCHORS MENTIONED IN B.2.).

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

8. 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.

9. 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.

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

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

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

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

11. SHUTTER'S MANUFACTURER LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE FEMALE LOCK SLAT (COMPONENT Ⓘ).
ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
HURRICANE MANUFACTURING CORP.
MIRAMAR, FL 33025
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

PRODUCT REVISED
as complying with the Florida
Buiding Code
Acceptance No. 05-0927.05
Expiration Date 09/25/2008
By Helena A. Melo
Miami Dade Product Control
Division

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

9/23/05

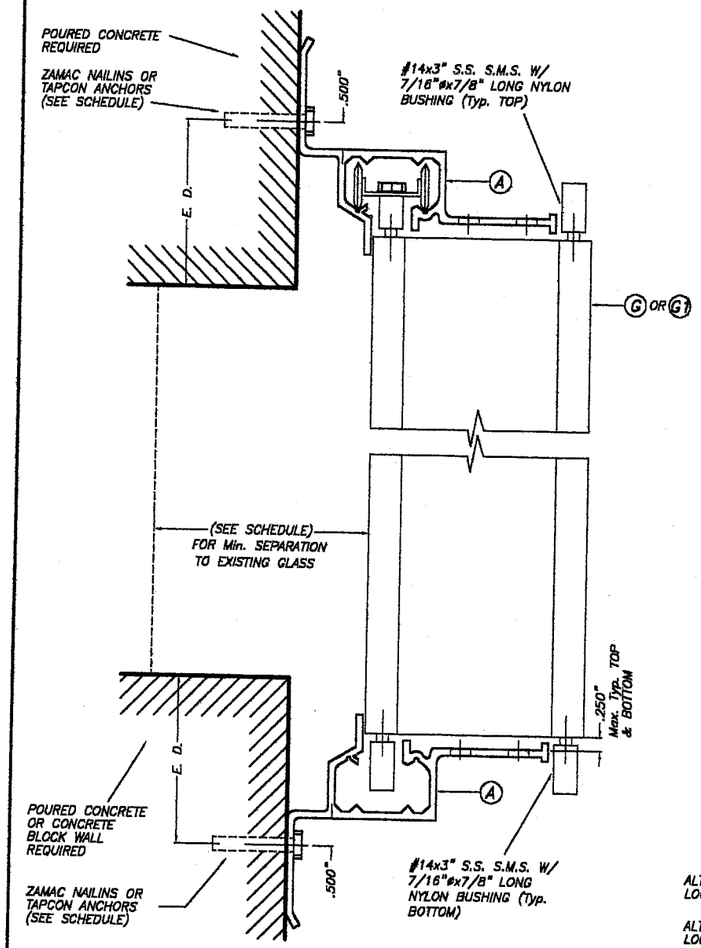
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT, Jr. P. E.
FLORIDA Lic. # 44167

OMEGA ACCORDION SHUTTER / HI-RISE

HURRICANE MANUFACTURING, CORP.
12040 MIRAMAR PARKWAY
MIRAMAR, FLORIDA 33025
PH:(1800)642-3057, FAX:(954)392-7356

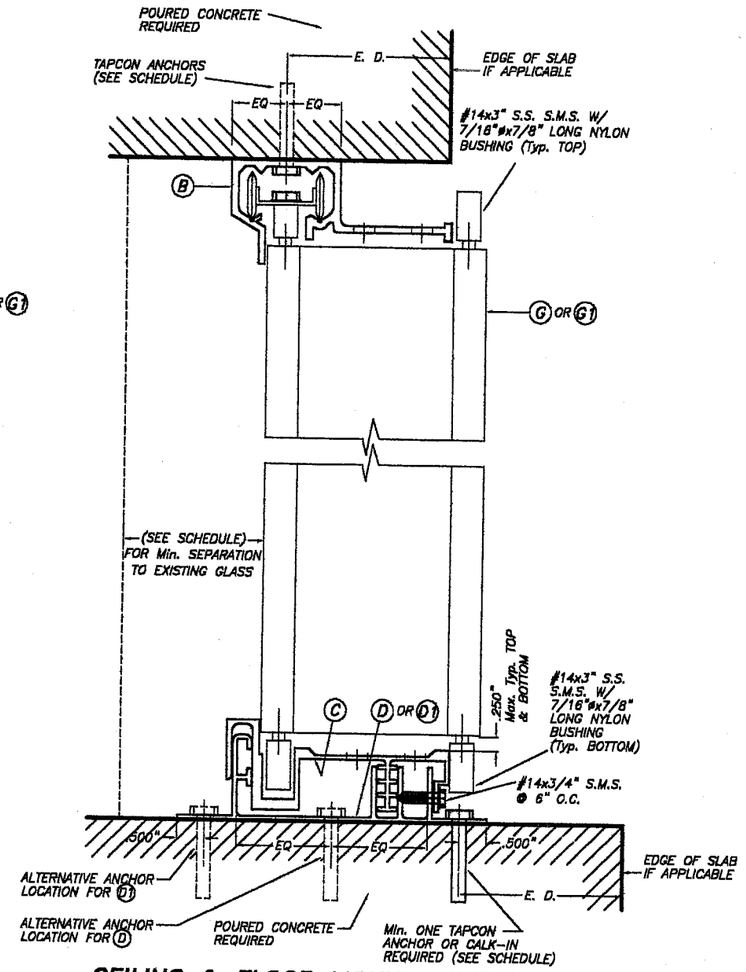
DRAWN BY: J.J.V.
9/13/05 DATE
05-283 DRAWING No
SHEET 1 OF 8

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	-	-
2	-	-	4	-	-



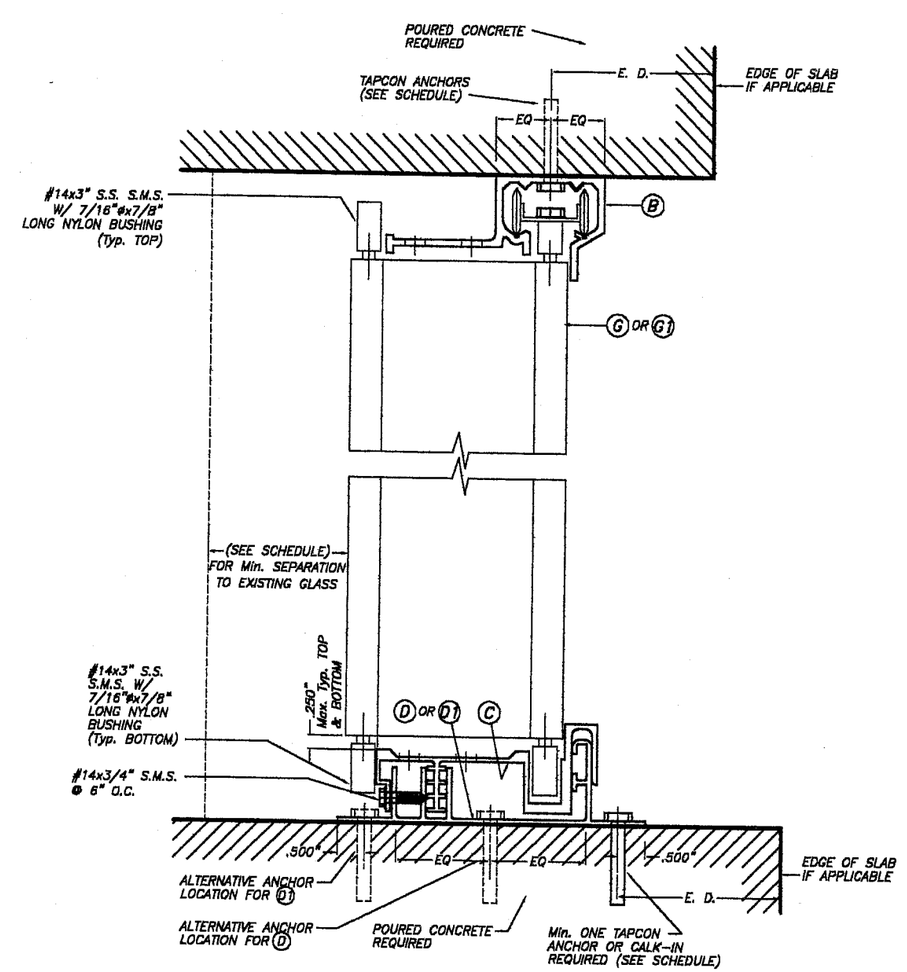
WALL MOUNTING INSTALLATION – SECTION A

SCALE : 3/8" = 1"



CEILING & FLOOR MOUNT. INSTALLATION – SECTION B. W/ REGULARLY ORIENTED TRACKS TOP & BOTTOM

SCALE : 3/8" = 1"



CEILING & FLOOR MOUNT. INSTALLATION – SECTION B1. W/ REVERSED TRACKS TOP & BOTTOM

SCALE : 3/8" = 1"

PRODUCT REVISED
as complying with the Florida Buiding Code
Acceptance No 05-0927.05
Expiration Date 09/15/2008
By Helena A. Molina
Miami Dade Product Control Division

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

9/23/05

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
8355 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

OMEGA ACCORDION SHUTTER / HI-RISE

DRAWN BY: J.J.V.

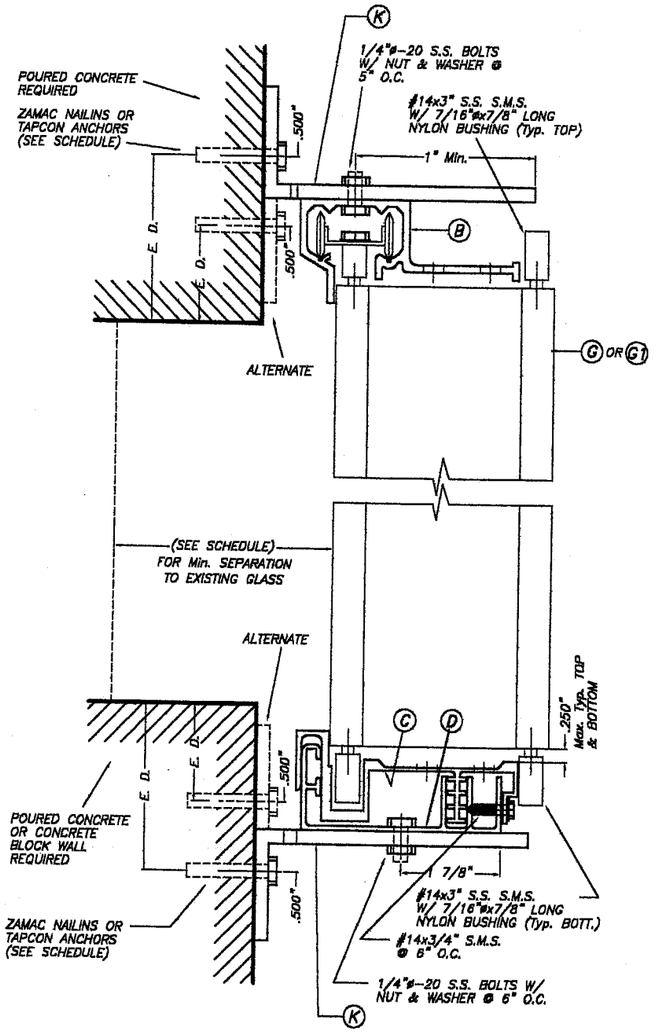
HURRICANE MANUFACTURING, CORP.
12040 MIRAMAR PARKWAY
MIRAMAR, FLORIDA 33025
PH:(1800)642-3057, FAX:(954)392-7356

9/13/05 DATE

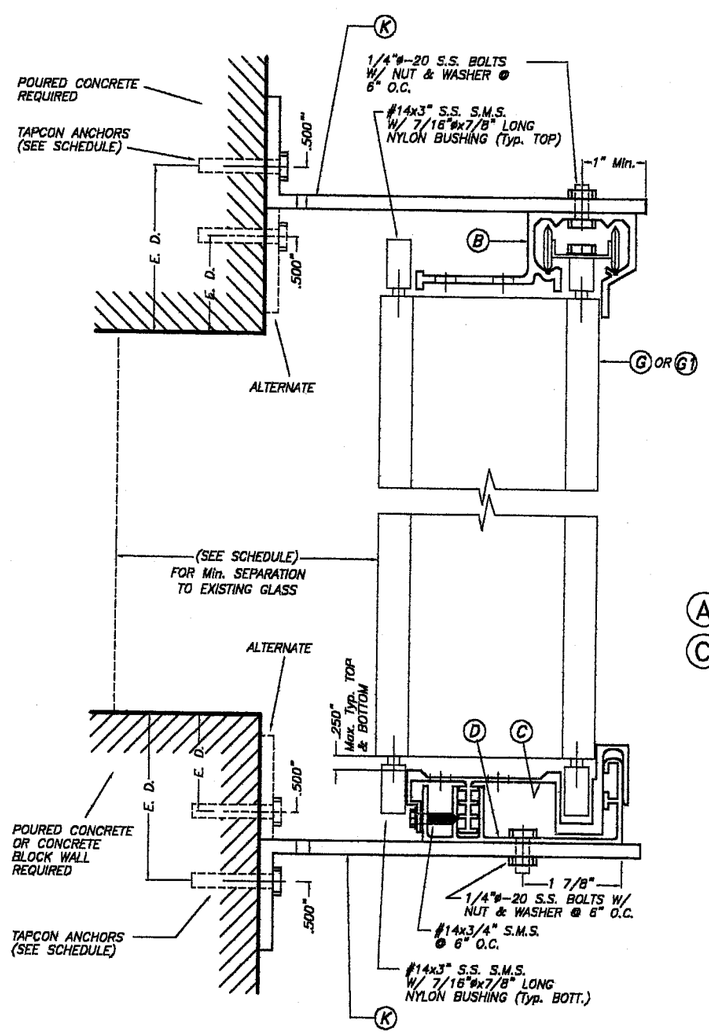
05-283 DRAWING No

SHEET 2 OF 8

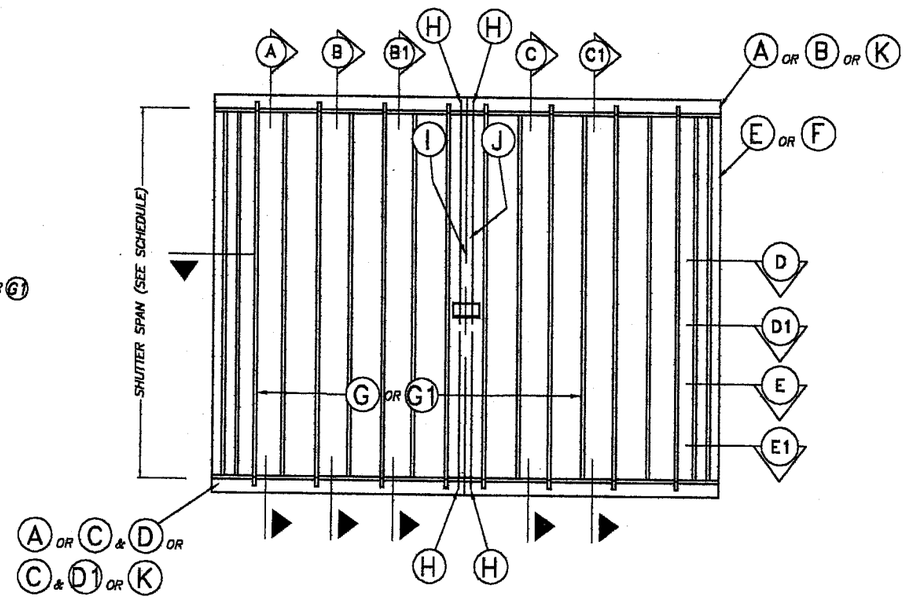
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	–	–
2	–	–	4	–	–



WALL MOUNTING INSTALLATION (OFFSET) – SECTION C. W/ REGULARLY ORIENTED TRACKS TOP & BOTTOM SCALE : 3/8" = 1"



WALL MOUNTING INSTALLATION (OFFSET) – SECTION C1. W/ REVERSED TRACKS TOP & BOTTOM SCALE : 3/8" = 1"



TYPICAL ELEVATION N. T. S.

PRODUCT REVISED
as complying with the Florida Baiding Code
Acceptance No. 05-0927.05
Expiration Date 09/25/2008
By
Miami Dade Product Control Division

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

9/23/05

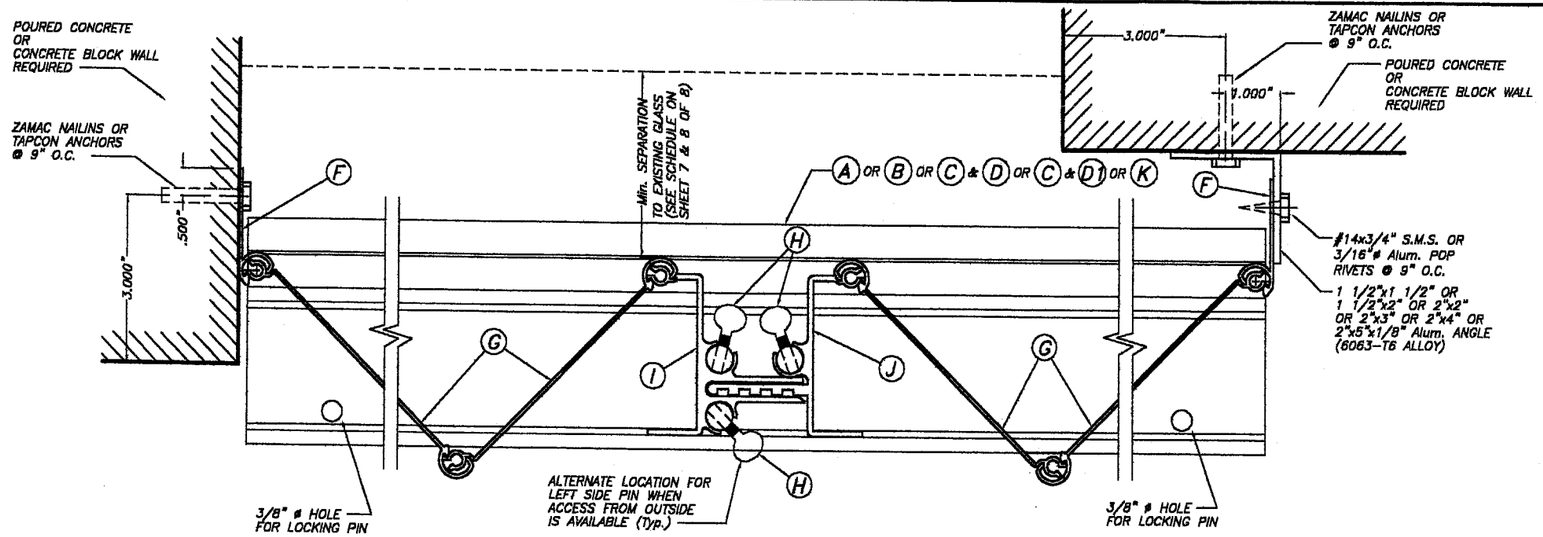
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, Fl. 33166
Phone : (305)871-1530 Fax : (305)871-1531
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

OMEGA ACCORDION SHUTTER / HI-RISE

HURRICANE MANUFACTURING, CORP.
12040 MIRAMAR PARKWAY
MIRAMAR, FLORIDA 33025
PH:(1800)642-3057, FAX:(954)392-7356

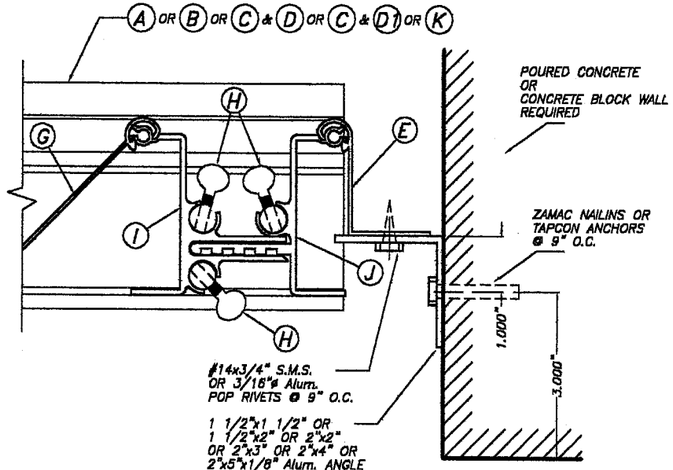
REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	–	–
2	–	–	4	–	–

DRAWN BY: J.J.V.
9/13/05 DATE
05-283 DRAWING No
SHEET 3 OF 8



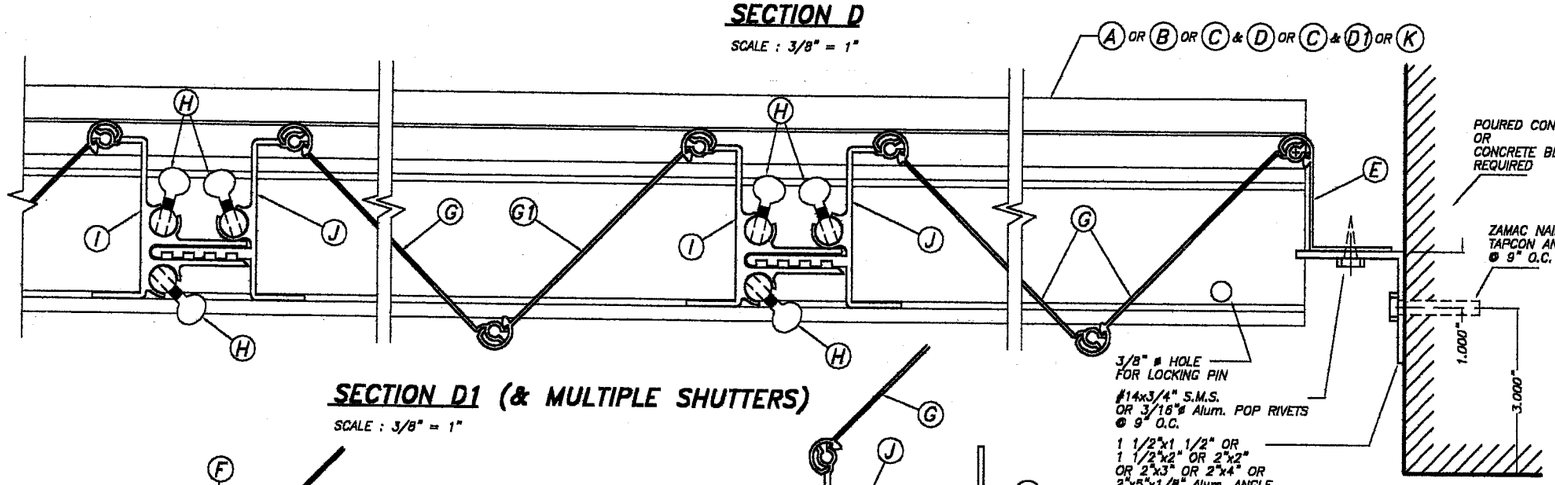
SECTION D

SCALE : 3/8" = 1"



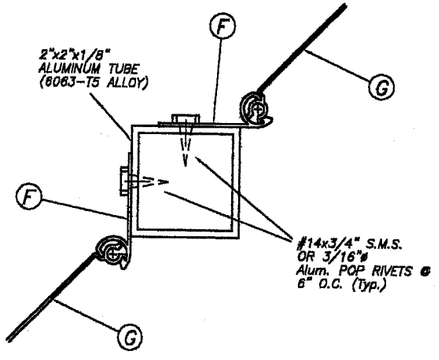
ONE SIDED SECTION: END CONNECTION DETAIL

SCALE : 3/8" = 1"



SECTION D1 (& MULTIPLE SHUTTERS)

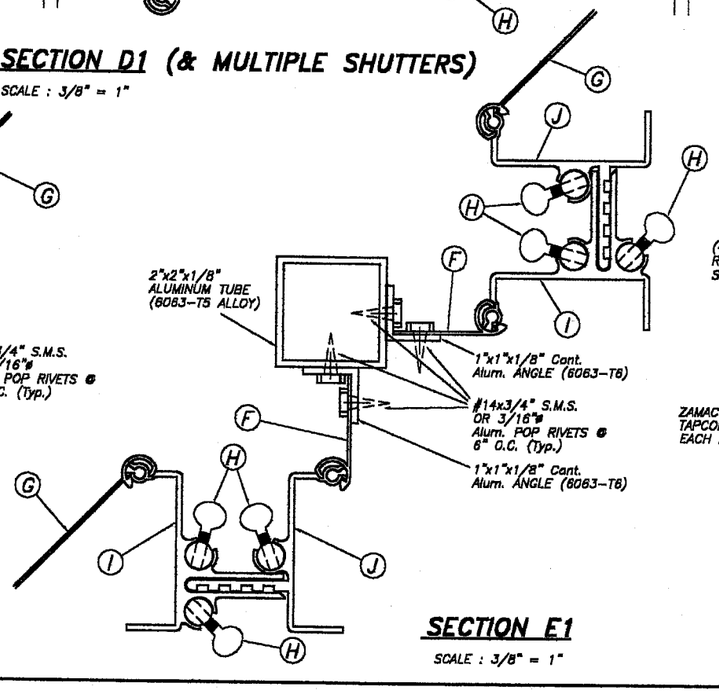
SCALE : 3/8" = 1"



SECTION E

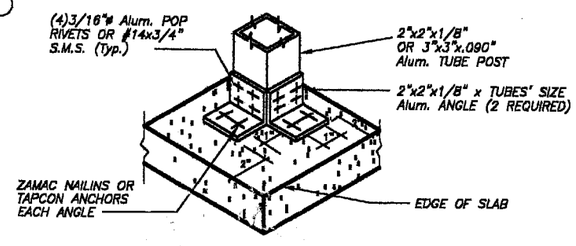
SCALE : 3/8" = 1"

NOTE :
SECTIONS E & E1 CAN BE COMBINED TO SUIT ANY INSTALLATION.



SECTION E1

SCALE : 3/8" = 1"



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

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 05-0927.05
Expiration Date 09/25/2008
By Helena A. Melian
Miami Dade Product Control Division

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

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6353 N.W. 36th. St., Sts. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 . Fax : (305)871-1331
EB-0006719
WALTER A. TILLIT Jr. P. E.
FLORIDA Lic. # 44167

OMEGA ACCORDION SHUTTER / HI-RISE

DRAWN BY: J.J.V.

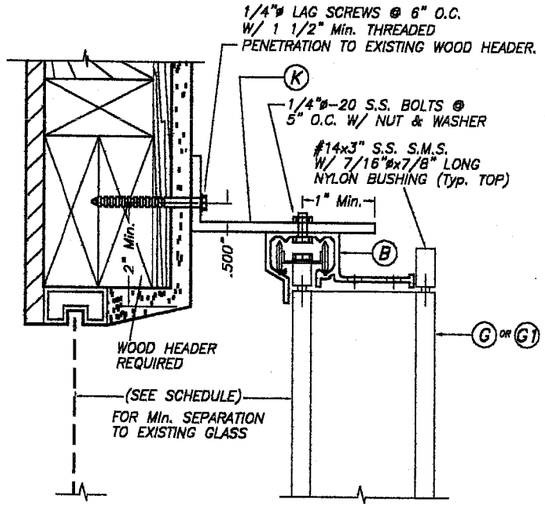
HURRICANE MANUFACTURING, CORP.
12040 MIRAMAR PARKWAY
MIRAMAR, FLORIDA 33025
PH:(1800)842-3057, FAX:(954)392-7356

9/13/05 DATE

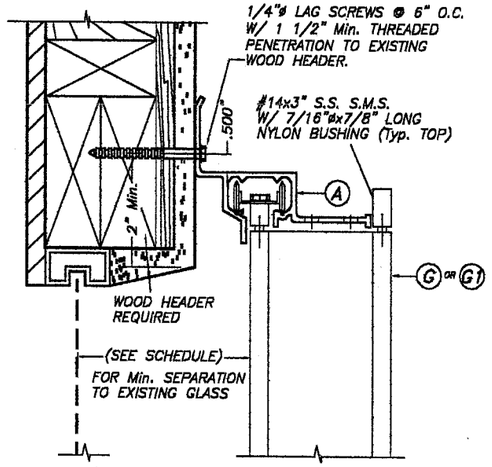
05-283 DRAWING No

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	–	–
2	–	–	4	–	–

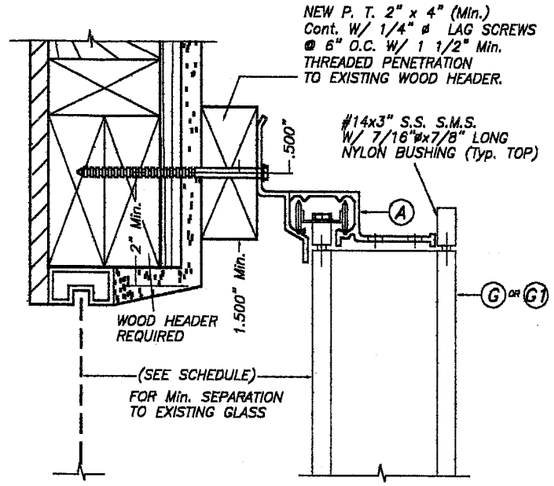
SHEET 4 OF 8



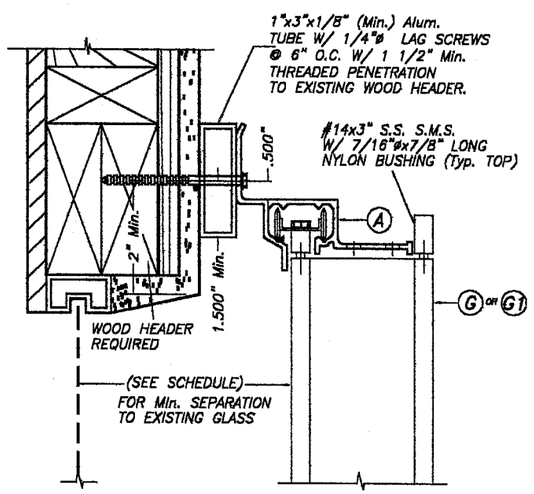
ALTERNATIVE 1



ALTERNATIVE 3



ALTERNATIVE 4



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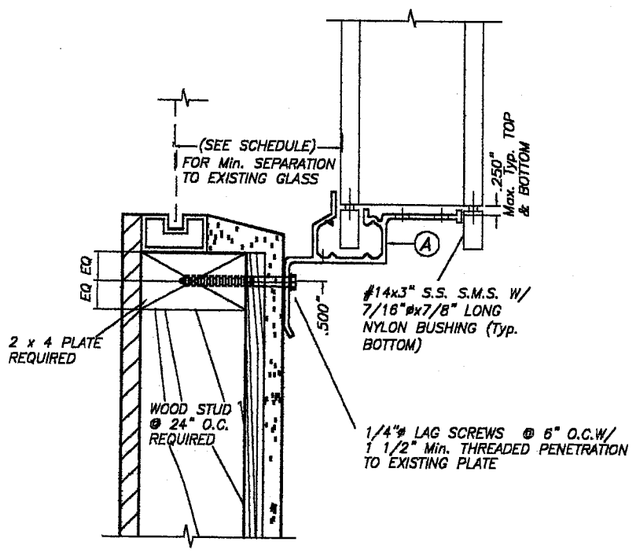

ALTERNATIVE 2

WALL MOUNTING INSTALLATION – SECTIONS A

SCALE : 1/4" = 1"

NOTE FOR COMBINATION OF SECTIONS:

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

NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH 75 p.s.f. Max DESIGN LOADS AND 9'-0" Max. SHUTTER SPAN.
2. NEW 2" x 6" P. T. TO BE SOUTHERN PINE No. 2, SURFACED DRY WITH 19 % M. M. C. W/ SPECIFIC DENSITY OF 0.55.
3. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.

PRODUCT REVISED
as complying with the Florida
Buiding Code
Acceptance No 05-0927.05
Expiration Date 09/25/2008
By
Miami Dade Product Control
Division

INSTALLATION DETAILS ON EXISTING WOOD FRAME BUILDINGS

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

9/23/05

TILLIT TESTING & ENGINEERING COMPANY
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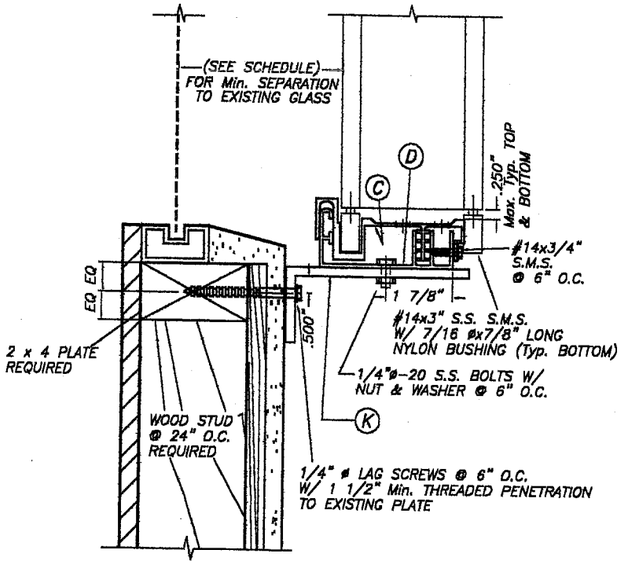
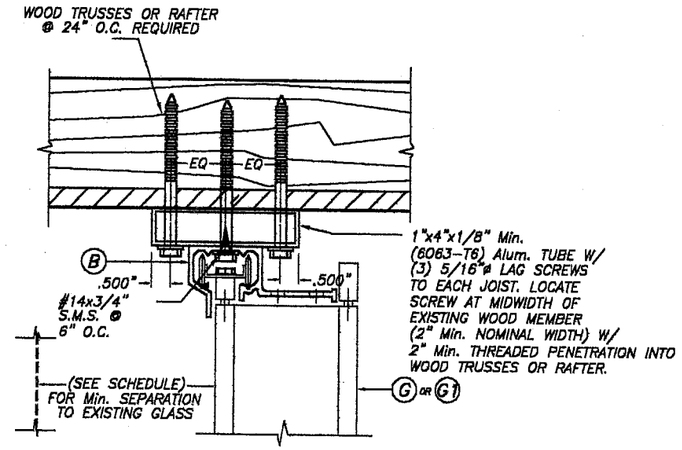
SHEET 5 OF 8

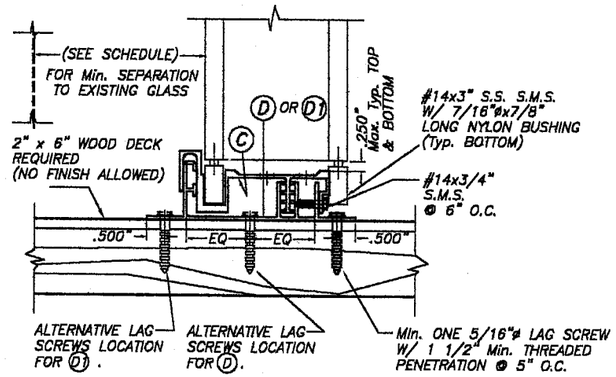


ALTERNATIVE 6



ALTERNATIVE 1

(LIMITED TO +60.0, -66.0 p.s.f. DESIGN LOAD AND UP TO 9'-0" Max. SHUTTER LENGTH)



ALTERNATIVE 2

WALL MOUNTING INSTALLATION- SECTIONS A

SCALE : 1/4" = 1"

CEILING & REMOVABLE FLOOR MOUNTING INSTALLATION - SECTIONS B

SCALE : 1/4" = 1"

NOTE FOR COMBINATION OF SECTIONS:

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

NOTES:

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

INSTALLATION DETAILS ON EXISTING WOOD FRAME BUILDINGS

PRODUCT REVISED
as complying with the Florida Buiding Code
Acceptance No 05-0927.05
Expiration Date 09/25/2008
By Helena A. Marin
Miami Dade Product Control Division

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

9/23/05

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TILLIT TESTING & ENGINEERING COMPANY
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	-	-
2	-	-	4	-	-

DRAWN BY: J.J.V.
9/13/05 DATE
05-283 DRAWING No
SHEET 8 OF 8

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

(VALID FOR SECTIONS A, B & C ON SHEET 2 & 3 OF 8).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-98 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
35.0	16'-0"	3 1/16"	3"
40.0	16'-0"	3 1/16"	3"
45.0	15'-7"	3 1/16"	3"
47.8	15'-4"	3 1/16"	3"
49.0	15'-3"	3 1/16"	3"
50.5	15'-1"	3 1/16"	3"
52.0	15'-0"	3 1/16"	3"
52.4	15'-0"	3 1/16"	3"
55.0	14'-10"	3 1/16"	3"
55.2	14'-9"	3 1/16"	3"
55.6	14'-9"	3 1/16"	3"
57.2	14'-7"	3 1/16"	3"
58.6	14'-5"	3 1/16"	3"
58.8	14'-5"	3 1/16"	3"
59.5	14'-3"	3 1/16"	3"
59.7	14'-3"	3 1/16"	3"
61.5	14'-1"	3 1/16"	3"
61.8	14'-0"	3 1/16"	3"
61.9	14'-0"	3 1/16"	3"
63.7	13'-10"	3 1/16"	3"
66.9	13'-6"	3 1/16"	3"
67.0	13'-6"	3 1/16"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
67.5	13'-5"	3 1/16"	3"
70.1	13'-2"	3 1/16"	3"
71.1	13'-1"	3 1/16"	3"
71.4	13'-1"	3 1/16"	3"
71.5	13'-0"	3 1/16"	3"
72.9	12'-11"	3 1/16"	3"
75.1	12'-9"	3 1/16"	3"
75.2	12'-9"	3 1/16"	3"
75.3	12'-8"	3 1/16"	3"
77.0	12'-7"	3 1/16"	3"
77.5	12'-6"	3 1/16"	3"
78.8	12'-5"	3 1/16"	3"
80.7	12'-3"	3 1/16"	3"
81.5	12'-3"	3 1/16"	3"
82.5	12'-2"	3 1/16"	3"
83.4	12'-1"	3 1/16"	3"
86.2	11'-10"	3 1/16"	3"
86.7	11'-10"	3 1/16"	3"
86.8	11'-10"	3 1/16"	3"
88.5	11'-8"	3 1/16"	3"
90.3	11'-7"	3 1/16"	3"
90.8	11'-7"	3 1/16"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
91.4	10'-6"	3 1/16"	3"
92.7	11'-5"	3 1/16"	3"
93.8	11'-5"	3 1/16"	3"
94.8	11'-4"	3 1/16"	3"
96.6	11'-3"	3 1/16"	3"
96.8	11'-2"	3 1/16"	3"
97.7	11'-2"	3 1/16"	3"
100.5	11'-0"	3 1/16"	3"
101.5	10'-11"	3 1/16"	3"
103.7	10'-10"	3 1/16"	3"
106.5	10'-8"	3 1/16"	3"
108.8	10'-7"	3 1/16"	3"
110.6	10'-6"	3 1/16"	3"
111.0	10'-6"	3 1/16"	3"
114.1	10'-4"	3 1/16"	3"
116.5	10'-3"	3 1/16"	3"
116.9	10'-2"	3 1/16"	3"
117.6	10'-2"	3 1/16"	3"
119.7	10'-1"	3 1/16"	3"
120.0	10'-1"	3 1/16"	3"
121.2	10'-0"	2 7/16"	1 15/16"
122.5	10'-0"	2 7/16"	1 15/16"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
125.3	9'-10"	2 7/16"	1 15/16"
125.8	9'-10"	2 7/16"	1 15/16"
126.7	9'-10"	2 7/16"	1 15/16"
129.6	9'-8"	2 7/16"	1 15/16"
130.9	9'-8"	2 7/16"	1 15/16"
131.6	9'-7"	2 7/16"	1 15/16"
134.3	9'-6"	2 7/16"	1 15/16"
136.2	9'-5"	2 7/16"	1 15/16"
137.9	9'-5"	2 7/16"	1 15/16"
140.7	9'-4"	2 7/16"	1 15/16"
142.8	9'-3"	2 7/16"	1 15/16"
143.5	9'-2"	2 7/16"	1 15/16"
147.0	9'-1"	2 7/16"	1 15/16"
148.4	9'-1"	2 7/16"	1 15/16"
152.6	8'-10"	2 7/16"	1 3/4"
153.1	8'-10"	2 7/16"	1 3/4"
156.8	8'-7"	2 7/16"	1 3/4"
157.5	8'-7"	2 7/16"	1 3/4"
157.8	8'-7"	2 7/16"	1 3/4"
160.8	8'-5"	2 7/16"	1 3/4"
161.7	8'-4"	2 7/16"	1 3/4"
164.4	8'-3"	2 7/16"	1 3/4"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
165.2	8'-2"	2 7/16"	1 3/4"
168.1	8'-0"	2 7/16"	1 3/4"
168.7	8'-0"	2 7/16"	1 3/4"
170.0	7'-11"	2 7/16"	1 3/4"
175.6	7'-8"	2 7/16"	1 3/4"
176.6	7'-8"	2 7/16"	1 3/4"
180.3	7'-6"	2 7/16"	1 3/4"
188.0	7'-2"	2 7/16"	1 3/4"
195.0	6'-11"	2 7/16"	1 3/4"

NOTES ON "p.s.f." VS SPAN SCHEDULE

* MINIMUM SEPARATION BETWEEN GLASS & SHUTTER FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING MEASURED AT BOTTOM OF SHUTTER.
SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.

** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER.

SEPARATION TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 8.

TABLE 1:

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION (in.)
LESS OR EQUAL THAN 10'-0"	2 7/16"
> 10'-0" TO 16'-0"	3 1/16"

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

(VALID FOR SECTIONS A, B & C ON SHEET 2 & 3 OF 8).

MAXIMUM DESIGN LOAD "W" (p.s.f.)	SECTION A ONLY						SECTION B			SECTION C					
	WALL MOUNTING INSTALLATION AT TOP & BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT BOTTOM (TO MASONRY)			FLOOR/CEILING MOUNTING INSTALLATION TOP & BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT TOP & BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT BOTTOM (TO MASONRY)		
	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3
FROM 35.0 TO 61.8	6"	6"	6"	6"	6"	5 1/2"	6"	6"	4"	6"	6"	6"	6"	6"	6"
	6"	6"	6"	6"	6"	3"	6"	6"	3 1/2"	6"	6"	6"	6"	6"	4"
FROM 61.9 TO 75.3	6"	6"	5"	6"	6"	3 1/2"	6"	5 1/2"	3 1/2"	6"	6"	6"	6"	6"	6"
	6"	6"	6"	6"	5 1/2"	N/A	6"	5"	3 1/2"	6"	6"	6"	6"	5 1/2"	3 1/2"
FROM 75.4 TO 91.4	6"	6"	5"	6"	6"	3 1/2"	6"	4 1/2"	3 1/2"	6"	6"	6"	6"	6"	6"
	6"	6"	6"	6"	4"	N/A	6"	4"	3 1/2"	6"	6"	6"	6"	4 1/2"	3 1/2"
FROM 91.5 TO 120.0	6"	4"	N/A	6"	3"	N/A	5 1/2"	3 1/2"	N/A	6"	6"	5 1/2"	6"	5 1/2"	4 1/2"
	6"	6"	4 1/2"	6"	N/A	N/A	5 1/2"	3"	2 1/2"	6"	6"	6"	6"	3 1/2"	3"
FROM 120.1 TO 168.1	6"	N/A	N/A	6"	N/A	N/A	4"	N/A	N/A	6"	5"	5"	6"	4"	4"
	6"	3 1/2"	3 1/2"	3 1/2"	N/A	N/A	4"	2 1/2"	2 1/2"	6"	6"	6"	4"	3"	3"
FROM 168.2 TO 195.0	3"	N/A	N/A	4"	N/A	N/A	3 1/2"	N/A	N/A	6"	5"	N/A	5"	4"	N/A
	5 1/2"	3 1/2"	N/A	N/A	N/A	N/A	3"	2 1/2"	N/A	6"	6"	N/A	3 1/2"	N/A	N/A

ANCHOR SPACING LEGEND

(1) Max. ANCHOR SPCG. VALID FOR SPANS OF 5'-0" OR LESS.
(2) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 5'-0" TO 8'-6".
(3) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 8'-6" TO Max. ALLOWED.

MAXIMUM ANCHOR SPACING LEGEND

WALL MOUNTING	FLOOR/CEILING MOUNTING
ZAMAC NAILIN	TAPCON (TOP & BOTTOM)
TAPCON	CALK-IN (BOTTOM)

MIN. ANCHORS SPACING SCHEDULE

ANCHORS TYPE	MIN. SPACING
TAPCONS	3.0"
CALK-IN 3000 psi. (MIN.) CONCRETE	2.5"
ZAMAC NAILIN	2.5"

+ 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 MIN. ANCHORS SPACING SCHEDULE.

ACTUAL E. D.= EDGE DISTANCE	FACTOR	
	TAPCON/ZAMAC NAILIN	CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50"	-

+ SEE SHEETS 5 & 6 OF 8 FOR ANCHORS TYPE SPACING FOR INSTALLATIONS INTO WOOD FRAME BLDGS.
SEE ANCHORS LEGEND FOR ANCHORS TYPE FOR A GIVEN SPACING, LOAD & SHUTTER SPAN.

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 05-0927.05
Expiration Date 09/25/2008
By Helena A. Melon
Miami Dade Product Control Division

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

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

OMEGA ACCORDION SHUTTER / HI-RISE

HURRICANE MANUFACTURING, CORP.
12040 MIRAMAR PARKWAY
MIRAMAR, FLORIDA 33025
PH:(1800)642-3057. FAX:(954)392-7356

REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	-	-
2	-	-	4	-	-

DRAWN BY: J.J.V.
9/13/05 DATE
05-283 DRAWING No
SHEET 7 OF 8

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

(VALID FOR SECTIONS B1 & C1 ON SHEET 2 & 3 OF 8).

NOTE: DESIGN PRESSURE RATING CORRESPONDS ONLY TO NEGATIVE PRESSURE (SUCTION) LOADS, IN ACCORDANCE WITH ASCE 7-98 CRITERIA FOR A GIVEN OPENING. IF NEGATIVE PRESSURE VALUES COMPLY WITH THE REQUIRED PRESSURE FOR THE OPENING, THE POSITIVE PRESSURE WILL AUTOMATICALLY QUALIFY AND NEED NOT TO BE CHECKED.

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
35.0	16'-0"	3 3/16"	3"
40.0	15'-7"	3 3/16"	3"
45.0	15'-2"	3 3/16"	3"
47.8	14'-11"	3 3/16"	3"
49.0	14'-0"	3 3/16"	3"
50.5	14'-9"	3 3/16"	3"
52.0	14'-7"	3 3/16"	3"
52.4	14'-7"	3 3/16"	3"
55.0	14'-5"	3 3/16"	3"
55.2	14'-5"	3 3/16"	3"
55.6	14'-5"	3 3/16"	3"
57.2	14'-3"	3 3/16"	3"
58.6	14'-2"	3 3/16"	3"
58.8	14'-2"	3 3/16"	3"
59.5	14'-2"	3 3/16"	3"
59.7	14'-2"	3 3/16"	3"
61.5	14'-0"	3 3/16"	3"
61.8	14'-0"	3 3/16"	3"
61.9	14'-0"	3 3/16"	3"
63.7	13'-11"	3 3/16"	3"
66.9	13'-9"	3 3/16"	3"
67.0	13'-9"	3 3/16"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
67.5	13'-8"	3 3/16"	3"
70.1	13'-7"	3 3/16"	3"
71.1	13'-6"	3 3/16"	3"
71.4	13'-6"	3 3/16"	3"
71.5	13'-6"	3 3/16"	3"
72.9	13'-5"	3 3/16"	3"
75.1	13'-4"	3 3/16"	3"
75.2	13'-4"	3 3/16"	3"
75.3	13'-4"	3 3/16"	3"
77.0	13'-3"	3 3/16"	3"
77.5	13'-3"	3 3/16"	3"
78.8	13'-2"	3 3/16"	3"
80.7	13'-1"	3 3/16"	3"
81.5	13'-1"	3 3/16"	3"
82.5	13'-0"	3 3/16"	3"
83.4	13'-0"	3 3/16"	3"
86.2	12'-11"	3 3/16"	3"
86.7	12'-10"	3 3/16"	3"
86.8	12'-10"	3 3/16"	3"
88.5	12'-10"	3 3/16"	3"
90.3	12'-8"	3 3/16"	3"
90.8	12'-8"	3 3/16"	3"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
91.4	12'-8"	3 3/16"	3"
92.7	12'-7"	3 3/16"	3"
93.8	12'-6"	3 3/16"	3"
94.8	12'-5"	3 3/16"	3"
96.6	12'-3"	3 3/16"	3"
96.8	12'-3"	3 3/16"	3"
97.7	12'-3"	3 3/16"	3"
100.5	12'-1"	3 3/16"	3"
101.5	12'-0"	2 13/16"	2 13/16"
103.7	11'-10"	2 13/16"	2 13/16"
106.5	11'-8"	2 13/16"	2 13/16"
108.8	11'-7"	2 13/16"	2 13/16"
110.6	11'-6"	2 13/16"	2 13/16"
111.0	11'-6"	2 13/16"	2 13/16"
114.1	11'-4"	2 13/16"	2 13/16"
116.5	11'-2"	2 13/16"	2 13/16"
116.9	11'-2"	2 13/16"	2 13/16"
117.6	11'-2"	2 13/16"	2 13/16"
119.7	11'-0"	2 13/16"	2 13/16"
120.0	11'-0"	2 13/16"	2 13/16"
121.2	11'-0"	2 13/16"	2 13/16"
122.5	10'-11"	2 13/16"	2 13/16"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
125.3	10'-9"	2 13/16"	2 13/16"
125.8	10'-9"	2 13/16"	2 13/16"
126.7	10'-9"	2 13/16"	2 13/16"
129.6	10'-7"	2 13/16"	2 13/16"
130.9	10'-7"	2 13/16"	2 13/16"
131.6	10'-6"	2 13/16"	2 13/16"
134.3	10'-5"	2 13/16"	2 13/16"
136.2	10'-4"	2 13/16"	2 13/16"
137.9	10'-3"	2 13/16"	2 13/16"
140.7	10'-2"	2 13/16"	2 13/16"
142.8	10'-1"	2 13/16"	2 13/16"
143.5	10'-1"	2 13/16"	2 13/16"
147.0	10'-0"	2 3/4"	2 1/4"
148.4	9'-11"	2 3/4"	2 1/4"
152.6	9'-9"	2 3/4"	2 1/4"
153.1	9'-9"	2 3/4"	2 1/4"
156.8	9'-8"	2 3/4"	2 1/4"
157.5	9'-7"	2 3/4"	2 1/4"
157.8	9'-7"	2 3/4"	2 1/4"
160.8	9'-6"	2 3/4"	2 1/4"
161.7	9'-6"	2 3/4"	2 1/4"
164.4	9'-5"	2 3/4"	2 1/4"

MAXIMUM DESIGN LOAD "W" (p.s.f.)	MAXIMUM PANEL SPAN "L" (ft.)	MINIMUM SEPARATION TO GLASS (in.)	
		*	**
185.2	9'-5"	2 3/4"	2 1/4"
188.1	9'-4"	2 3/4"	2 1/4"
188.7	9'-4"	2 3/4"	2 1/4"
170.0	9'-3"	2 3/4"	2 1/4"
175.6	9'-1"	2 3/4"	2 1/4"
176.6	9'-1"	2 3/4"	2 1/4"
180.3	9'-0"	2 3/4"	2"
188.0	8'-7"	2 3/4"	2"
195.0	8'-4"	2 3/4"	2"

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

(VALID FOR SECTIONS B1 & C1 ON SHEET 2 & 3 OF 8).

MAXIMUM DESIGN LOAD "W" (p.s.f.)	SECTION C1						SECTION B1		
	WALL MOUNTING INSTALLATION AT TOP & BOTTOM (TO CONCRETE)			WALL MOUNTING INSTALLATION AT BOTTOM (TO MASONRY)			FLOOR/CEILING MOUNTING INSTALLATION TOP & BOTTOM (TO CONCRETE)		
	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3
FROM 35.0 TO 61.8	6"	6"	6"	3"	3"	3"	6"	6"	3 1/2"
FROM 61.9 TO 75.3	6"	6"	6"	3"	3"	3"	6"	5"	3"
FROM 75.4 TO 91.4	6"	6"	6"	3"	3"	3"	6"	4"	3" *
FROM 91.5 TO 120.0	6"	6"	6"	3"	3"	3"	5 1/2"	3"	3" *
FROM 120.1 TO 168.1	3"	3"	3"	3"	2 1/2"	N/A	4"	3" **	N/A
FROM 168.2 TO 195.0	3"	3"	3"	3"	N/A	N/A	3"	N/A	N/A

ANCHOR SPACING LEGEND

(1) Max. ANCHOR SPCG. VALID FOR SPANS OF 5'-0" OR LESS.
(2) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 5'-0" TO 8'-6".
(3) Max. ANCHOR SPCG. VALID FOR SPANS GREATER THAN 8'-6" TO Max. ALLOWED.

ANCHOR SPACING LEGEND

WALL MOUNTING	FLOOR/CEILING MOUNTING
TAPCON	TAPCON (TOP & BOTTOM) & CALK-IN (BOTTOM)

MIN. ANCHORS SPACING SCHEDULE

ANCHORS TYPE	MIN. SPACING
TAPCONS	3.0"
CALK-IN 3000 psi. (MIN.) CONCRETE	2.5"

+ 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 MIN. ANCHORS SPACING SCHEDULE.

ACTUAL E. D.= EDGE DISTANCE	FACTOR	
	TAPCON/ZAMAC NAILIN	CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50"	.50

+ SEE SHEETS 5 & 6 OF 8 FOR ANCHORS TYPE SPACING FOR INSTALLATIONS INTO WOOD FRAME BLDGS. SEE ANCHORS LEGEND FOR ANCHORS TYPE FOR A GIVEN SPACING, LOAD & SHUTTER SPAN.

* USE 3" SPACING FOR TAPCONS AND USE 2 1/2" SPACING FOR CALK-INS
** FOR UP TO 145 p.s.f. AND 8'-9" Max. SPANS AND ONLY FOR TAPCON ANCHORS

8/23/05

NOTES ON "p.s.f." VS SPAN SCHEDULE

* MINIMUM SEPARATION BETWEEN GLASS & SHUTTER FOR SHUTTERS INSTALLED WITHIN THE FIRST 30'-0" ELEVATION OF BUILDING MEASURED AT BOTTOM OF SHUTTER. SEE TABLE 1 FOR MINIMUM SEPARATION TO GLASS FOR SPANS SHORTER THAN THE MAXIMUM ALLOWED SHOWN ON SCHEDULE.
** FOR SHUTTERS INSTALLED ABOVE 30'-0" ELEVATION OF BUILDING, MEASURED AT BOTTOM OF SHUTTER.

SEPARATION "S" TO BE MEASURED AS INDICATED ON SECTION D, SHEET 4 OF 8.

TABLE 1:

SHUTTER SPAN "L" (ft.)	MINIMUM SEPARATION "S" (in.)
LESS OR EQUAL THAN 10'-0"	2 3/4"
> 10'-0" TO 12'-0"	2 13/16"
> 12'-0" TO 16'-0"	3 3/16"

PRODUCT REVISED
as complying with the Florida Buiding Code
Acceptance No 05-0927.05
Expiration Date 09/25/2008
By Helmy A. Mekhaeil
Miami Dade Product Control Division

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MIRAMAR, FLORIDA 33025
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REV. NO	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 03-154	9/13/05	3	-	-
2	-	-	4	-	-

DRAWN BY: J.J.V.
9/13/05 DATE
05-283 DRAWING No
SHEET 8 OF 8