



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Advanced Hurricane Technology, Inc.
6063 Janes Boulevard
Naples, Florida 34109

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: Mega Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 07-368, titled "Mega Aluminum Accordion Shutter", sheets 1 through 5 of 5, prepared by Thornton Tomasetti, dated June 01, 2007, last revision #1 dated August 13, 2007, signed and sealed by J. W. Knezevich, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and the approval 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 consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
 09/13/2007

NOA No. 07-0612.05
Expiration Date: 09/13/2012
Approval Date: 09/13/2007
Page 1

Advanced Hurricane Technology, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 07-368, titled " Mega Aluminum Accordion Shutter ", sheets 1 through 5 of 5, prepared by Thornton Tomasetti, dated June 01, 2007, last revision #1 dated August 13, 2007, signed and sealed by J. W. Knezevich, P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of "Accordion Shutter", prepared by Fenestration Testing Laboratory, Inc., Report No. 5082-03, dated January 06, 2007, signed and sealed by Michael R. Wenzel, P.E.*

C. CALCULATIONS

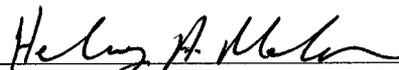
1. *Comparative analysis and Anchor calculation, dated June 04, 2007, Sheets 1 through 27 of 27, prepared by Thornton Tomasetti, signed and sealed by J. W. Knezevich, P.E.*
2. *Anchor calculation, dated August 23, 2007, 3 Sheets, prepared by Thornton Tomasetti, signed and sealed by J. W. Knezevich, P.E.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *Certified Tensile Test Report, prepared by Fenestration Testing Laboratory, Inc., Report No. 5082-04, dated January 11, 2007, signed and sealed by Michael R. Wenzel, P.E.*
2. *Corrected Certified Tensile Test Report, prepared by Fenestration Testing Laboratory, Inc., Report No. 5082-04, dated August 08, 2007, signed and sealed by Michael R. Wenzel, P.E.*

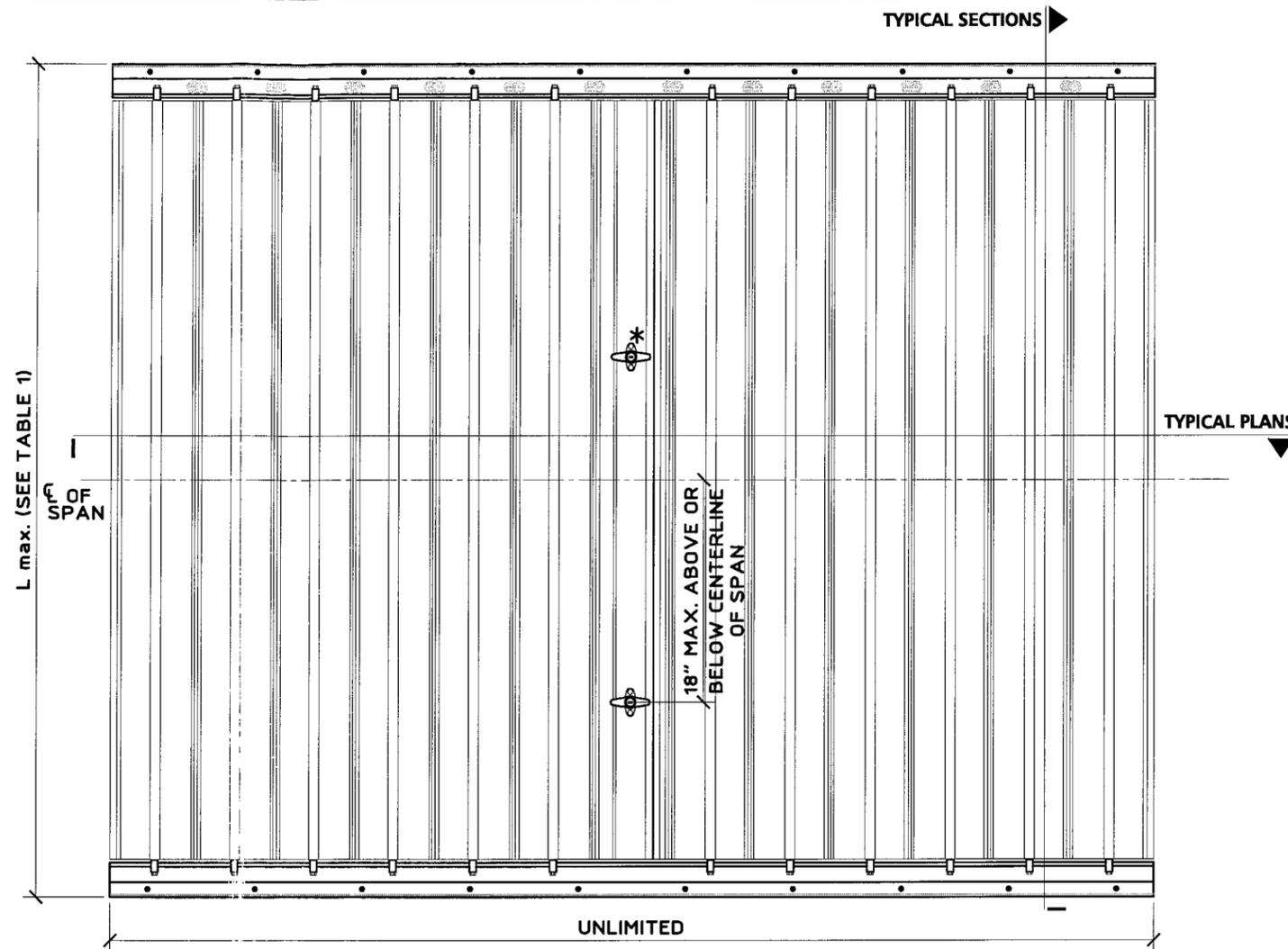


Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-0612.05
Expiration Date: 09/13/2012
Approval Date: 09/13/2007

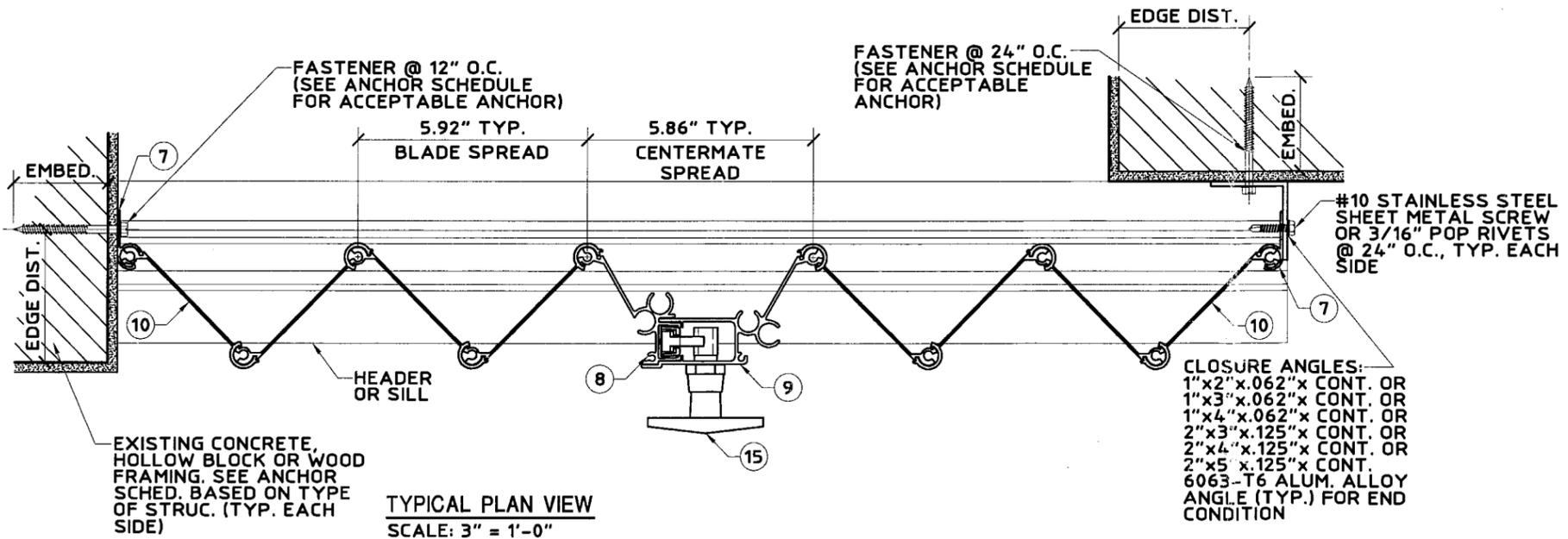
GENERAL NOTES:

1. THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISION SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE 2004 WITH 2005 & 2006 SUPPLEMENTS.
2. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW DESIGN.
3. DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH ASCE 7-02, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ SHALL BE USED.
4. THESE PRODUCT EVALUATION DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
5. USE OF THESE PRODUCT EVALUATION DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
6. THESE PRODUCT EVALUATION DOCUMENTS ARE INTENDED FOR USE ONLY BY A LICENSED CONTRACTOR, PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT AND ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN. CONTRACTOR SHALL VERIFY EXISTING STRUCTURE CAN WITHSTAND SUPERIMPOSED LOAD OF SHUTTER.
7. ANY MODIFICATIONS OR ADDITIONS TO THESE PRODUCT EVALUATION DOCUMENTS WILL VOID THE PRODUCT EVALUATION DOCUMENTS.
8. WHEN THE SITE CONDITIONS DEVIATE FROM THESE PRODUCT EVALUATION DOCUMENTS, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS:
 - A) REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION. SAID DOCUMENTS SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
 - B) REQUIRE THAT A ONE-TIME SITE SPECIFIC APPROVAL BE APPLIED FOR AND SECURED FROM THE MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION

WHEN THE SITE CONDITION DEVIATIONS OCCUR WITHIN THE HIGH VELOCITY HURRICANE ZONE AREAS ONLY OPTION "B" SHALL BE ACCEPTED BY THE BUILDING OFFICIAL.
9. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED AT THE BOTTOM END OF THE LOCKING SLAT AS FOLLOWS:
 ADVANCED HURRICANE TECHNOLOGY, INC.
 NAPLES, FLORIDA
 MIAMI-DADE COUNTY PRODUCT APPROVED
10. ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
11. ALL BOLTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 K.S.I., U.O.N. POP RIVETS SHALL BE 3/16" DIA. 5052 ALUMINUM ALLOY, U.O.N.
12. TOP AND BOTTOM DETAILS MAY BE INTERCHANGED AS FIELD CONDITIONS REQUIRE.



* FOR SPANS GREATER THAN 104",
 USE (2) LOCKS AT 1/3 & 2/3 OF SPAN
 TYPICAL ELEVATION
 SCALE: 1" = 1'-0"



TYPICAL PLAN VIEW
 SCALE: 3" = 1'-0"

Approved as complying with the
 Florida Building Code
 Date 09/13/2007
 NOA# 07-0612-05
 Miami Dade Product Control
 Division
 By Helmut A. Mohr

Thornton Tomasetti
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Mega Aluminum Accordion Shutter

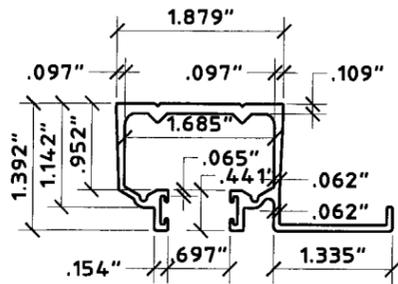
 Advanced Hurricane Technology, Inc.
 2409 J & C Boulevard • Naples, FL 34109
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J.W. Knezevich
 Professional Engineer
 FL License No.: PE 0041961

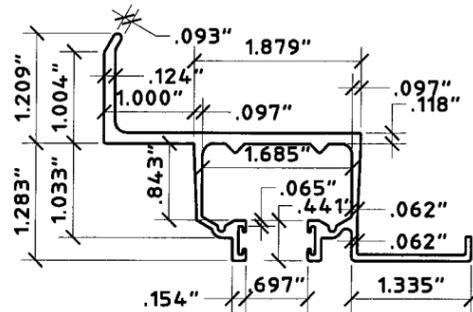
JWK
 AUG 13 2007

revisions	
no	description
1	COUNTY COMMENTS

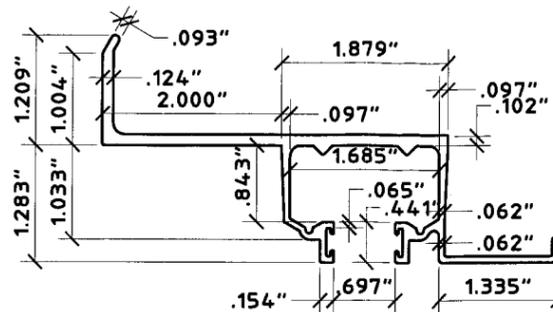
date	06/01/2007
scale	AS NOTED
design by	NW
checked by	JWK
drawn by	MCR
drawing no.	07-368
sheet	1 of 5



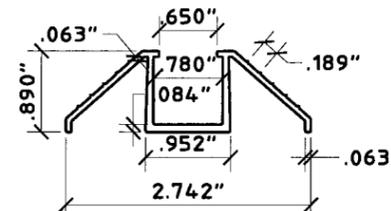
1 6061-T6 ALUM. ALLOY TRAP MOUNT TRACK SCALE: HALF SIZE



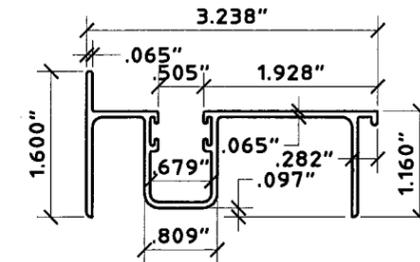
2 6061-T6 ALUM. ALLOY 1" BUILD-OUT TRACK - WALL MOUNTED SCALE: HALF SIZE



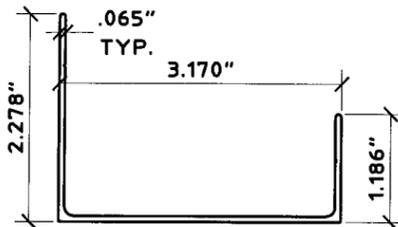
3 6061-T6 ALUM. ALLOY 2" BUILD-OUT TRACK - WALL MOUNTED SCALE: HALF SIZE



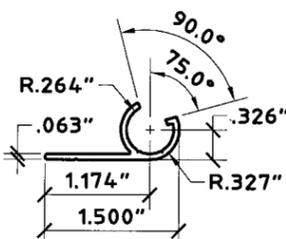
4 6061-T6 ALUM. ALLOY SILL - WALKOVER SCALE: HALF SIZE



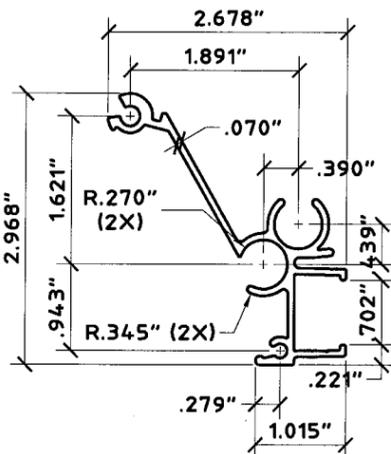
5 6061-T6 ALUM. ALLOY SILL - TOP ADJ. SCALE: HALF SIZE



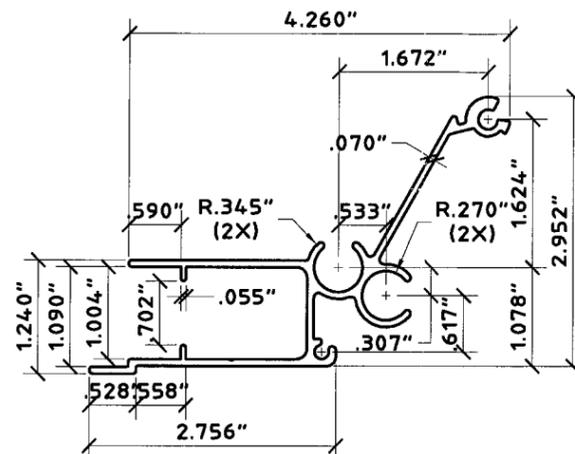
6 6061-T6 ALUM. ALLOY SILL - BOT. ADJ. SCALE: HALF SIZE



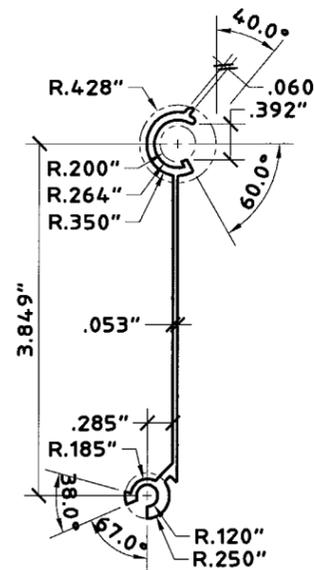
7 STARTER CHANNEL SCALE: HALF SIZE



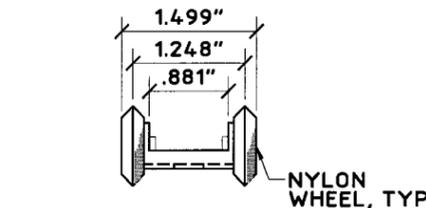
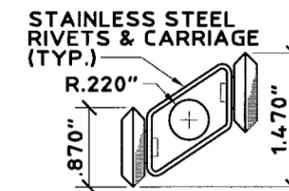
8 FEMALE CENTERMATE SCALE: HALF SIZE



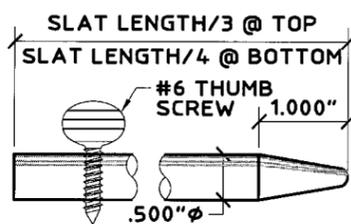
9 MALE CENTERMATE SCALE: HALF SIZE



10 TYP. SLAT SCALE: HALF SIZE

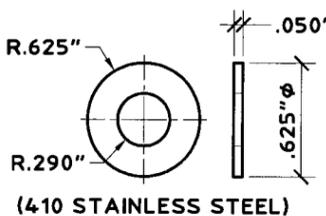


11 ROLLER ASSEMBLY SCALE: HALF SIZE

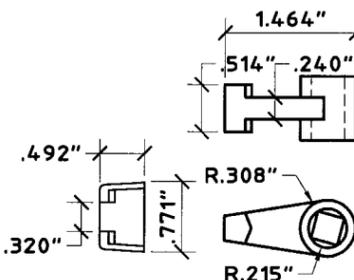
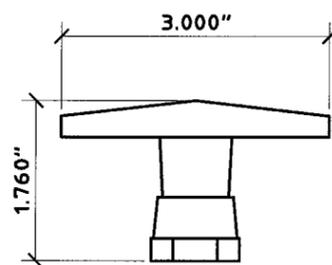


(LOCKING PINS ARE REQUIRED)

12 LOCKING PIN SCALE: HALF SIZE



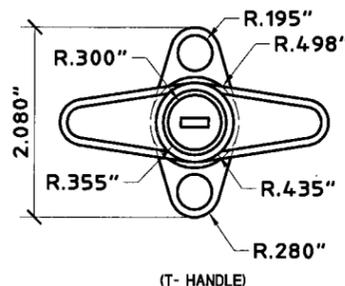
14 WASHER SCALE: FULL SIZE



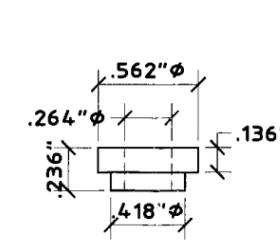
(RECEIVER)

(PIVOT ARM)

15 LOCK SYSTEM SCALE: HALF SIZE

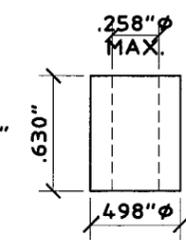


(T- HANDLE)



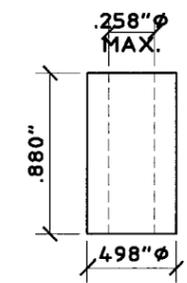
CARRIER (TOP AT EVERY ROLLER)

16 NYLON BUSHING SCALE: FULL SIZE



CARRIER (BOTTOM AT EVERY ROLLER)

17 NYLON BUSHING SCALE: FULL SIZE



CARRIER (TOP/BOTTOM AT EVERY VALLEY)

18 NYLON BUSHING SCALE: FULL SIZE

#14 SCREW, 410 HT STAINLESS STEEL (WITH FLUOROCARBON COATING)

13 #14 SCREW SCALE: HALF SIZE

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Mega Aluminum Accordion Shutter
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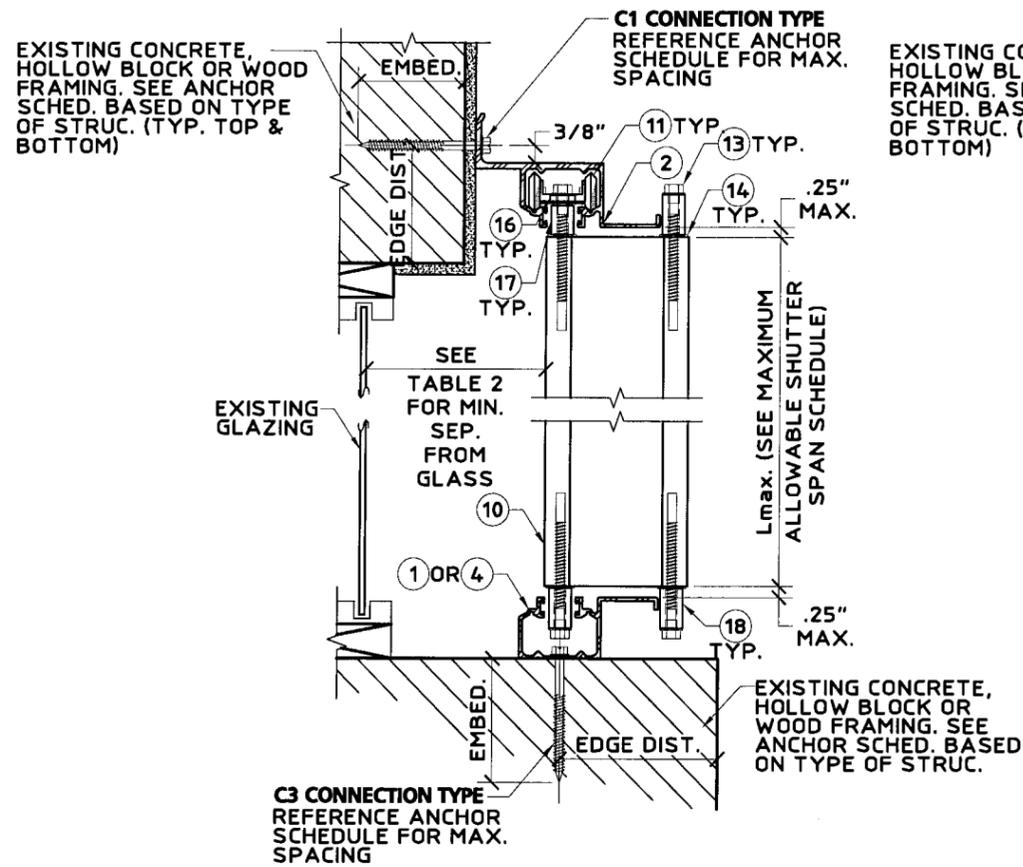
J.W. Knezevich
Professional Engineer
FL License No.: PE 0041961

AUG 13 2007

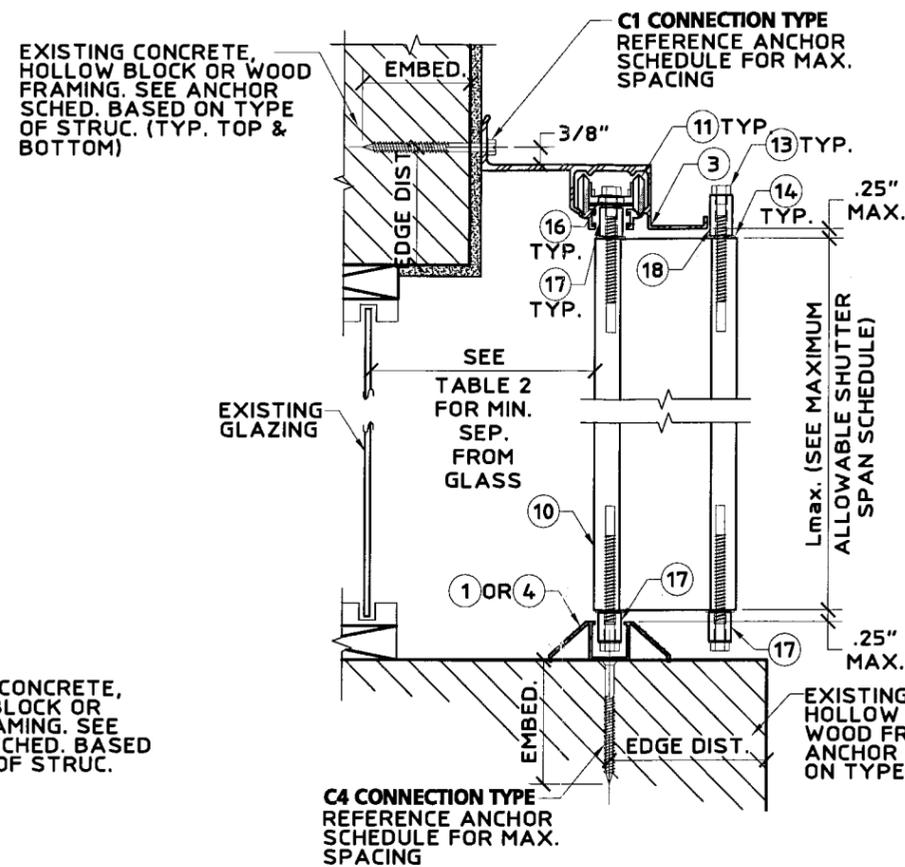
Table with 3 columns: no, date, description. Row 1: 1, 08/13/2007, NW, COUNTY COMMENTS.

Approved as complying with the Florida Building Code
Date: 09/13/2007
NOAH 07-0612-05
Miami Dade Product Control
Division
By: Helmut A. Weber

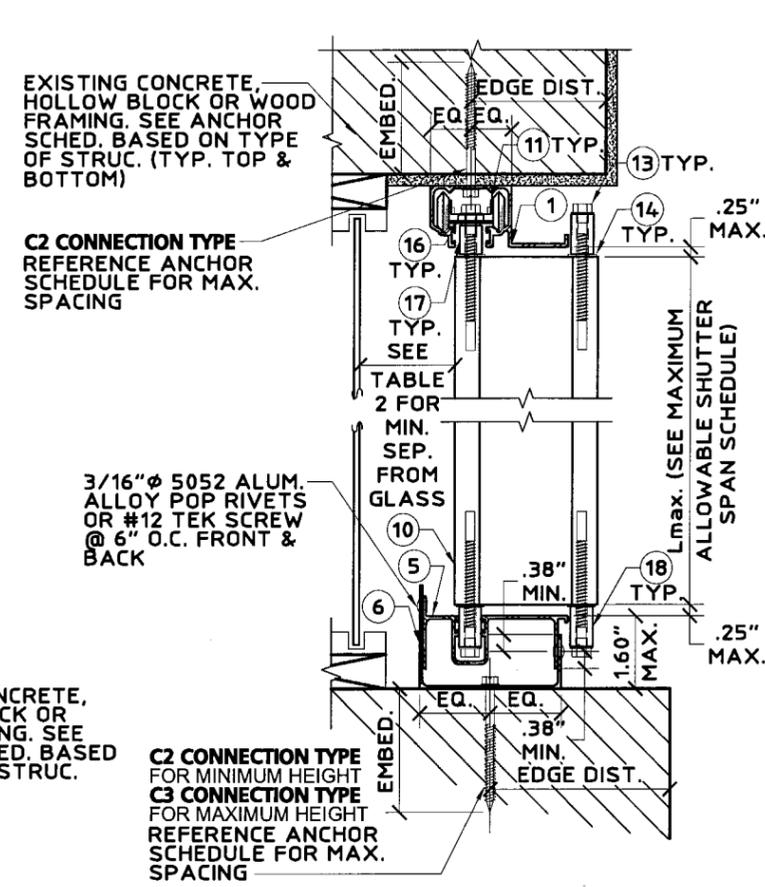
date: 06/01/2007
scale: AS NOTED
design by: NW
checked by: JWK
drawing no.: 07-368
sheet 2 of 5



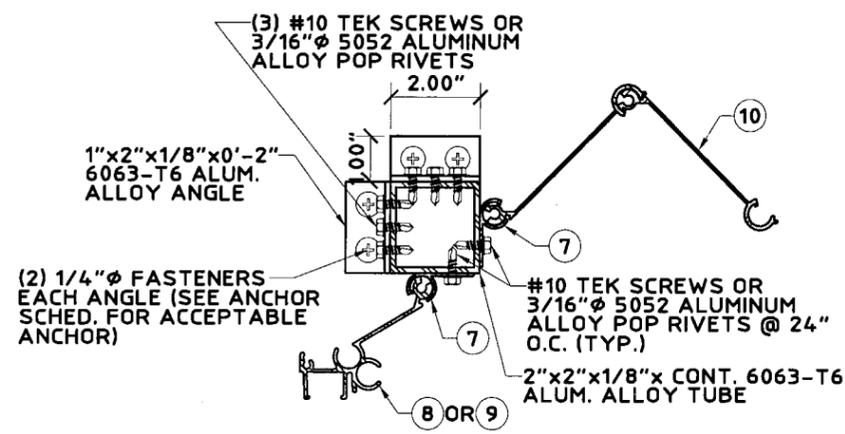
A WALL/TRAP MOUNT SECTION
SCALE: 3" = 1'-0"



B WALL/TRAP MOUNT SECTION
SCALE: 3" = 1'-0"



C TRAP MOUNT SECTION
SCALE: 3" = 1'-0"



NOTE: EITHER CONDITION MAY BE TYPICAL FOR EITHER SIDE.

D CORNER CLOSURE DETAIL
SCALE: 3" = 1'-0"

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J.W. Knezevich
 Professional Engineer
 FL License No.: PE 0041961

[Signature]
 AUG 13 2007

no.	date	description
1	08/13/2007	NW

Approved as complying with the
 Florida Building Code
 Date: 09/13/2007
 NOA# 07-0612.05
 Miami Dade Product Control
 Division
 By: *[Signature]*

date	06/01/2007
scale	AS NOTED
design by	NW
drawn by	MCR
checked by	JWK
drawing no.	07-368
sheet	3 of 5

**T
A
B
L
E
1**

MAXIMUM ALLOWABLE SHUTTER SPAN SCHEDULE	
DESIGN WIND LOAD (W) (P.S.F.)	ACCORDION SHUTTER SPAN SCHEDULE FOR ALL MOUNTING CONDITIONS
	Lmax (FT-IN)
61.00	12' - 0"
65.00	11' - 10"
70.00	11' - 7"
75.00	11' - 5"
80.00	11' - 3"
85.00	11' - 1"
90.00	10' - 11"
95.00	10' - 9"
100.00	10' - 5"
105.00	10' - 2"
108.00	10' - 0"
110.00	9' - 7"
115.00	9' - 0"
120.00	8' - 6"
130.00	7' - 8"
140.00	7' - 0"
150.00	6' - 4"
160.00	5' - 10"
170.00	5' - 4"
180.00	5' - 0"
190.00	4' - 8"
200.00	4' - 6"

**T
A
B
L
E
2**

MINIMUM SHUTTER SEPARATION FROM GLASS SCHEDULE			
POSITIVE DESIGN LOAD (W) (P.S.F.)	ACTUAL SHUTTER SPAN (L) (FT-IN)	MINIMUM SEPARATION FOR INSTALLATIONS LESS THAN 30'-0" ABOVE GRADE (IN.)	MINIMUM SEPARATION FOR INSTALLATIONS GREATER THAN 30'-0" ABOVE GRADE (IN.)
30.00	5' - 0"	2-1/8"	1"
30.00	7' - 0"	2-1/8"	1-1/8"
30.00	9' - 0"	2-1/8"	1-1/4"
30.00	12' - 0"	2-1/8"	2"
50.00	5' - 0"	2-1/8"	1"
50.00	7' - 0"	2-1/8"	1-1/8"
50.00	9' - 0"	2-1/8"	1-1/2"
50.00	12' - 0"	2-1/2"	2-1/2"
70.00	5' - 0"	2-1/8"	1-1/8"
70.00	7' - 0"	2-1/8"	1-1/4"
70.00	9' - 0"	2-1/8"	1-5/8"
70.00	11' - 7"	3"	3"
90.00	5' - 0"	2-1/8"	1-1/8"
90.00	7' - 0"	2-1/8"	1-3/8"
90.00	10' - 11"	3"	3"
120.00	5' - 0"	2-1/8"	1-1/8"
120.00	8' - 6"	2-1/8"	2"

TABLE 1 NOTE:

FOR DESIGN WIND LOADS BETWEEN TABULATED VALUES USE NEXT HIGHER LOAD OR LINEAR INTERPOLATION MAY BE USED TO DETERMINE ALLOWABLE SPANS.

TABLE 2 NOTE:

ENTER TABLE 2 WITH POSITIVE DESIGN WIND LOAD TO DETERMINE MINIMUM STORM SHUTTER SEPARATION FROM GLASS.

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 Date: 09/13/2007
 NOA# 07-0612-05
 Miami Dade Product Control
 Division
 By: Helmy A. Mela

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J.W. Knezevich
 Professional Engineer
 FL License No.: PE 0041961

[Signature]
 AUG 13 2007

no.	date	by	description
1	08/13/2007	NW	ISSUE FOR COUNTY COMMENTS

date: 06/01/2007
 scale: AS NOTED
 design by: NW
 checked by: JWK
 drawing no. 07-368
 sheet 5 of 5