



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

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov

Metal Tech, Inc.
7635 W. 2nd Court
Hialeah, FL 33014

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: "Maximum Impact Duraweld" Aluminum Hinged Bahama Shutter

APPROVAL DOCUMENT: Drawing No. 27102, titled "Maximum Impact Bahama Shutter", sheets 1 through 5 of 5, prepared by Ramms Engineering, Inc., dated December 01, 2007, signed and sealed by Robert S. Monsour, P.E., on March 27, 2008, 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
05/08/2008

NOA No. 07-1210.03
Expiration Date: 05/08/2013
Approval Date: 05/08/2008

Metal Tech, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 27102, titled "Maximum Impact Bahama Shutter", sheets 1 through 5 of 5, prepared by Ramms Engineering, Inc., dated December 01, 2007, signed and sealed by Robert S. Monsour, P.E., on March 27, 2008.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of "Bahama Shutters", prepared by American Test Lab of South Florida, report No. ATLSF #1130.01-05, dated 06/26/2006, signed and sealed by William R. Mehner, P.E., and Henry Hattem, P.E.*

C. CALCULATIONS

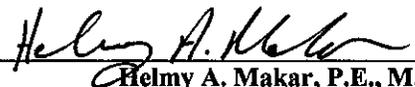
1. *Metal Tech Duraweld Bahama Shutter Calculations prepared by Ramms Engineering, Inc., dated March 11, 2008, signed and sealed by Robert S. Monsour, P.E., on March 27, 2008.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *Component Material Reports of Aluminum Bahama Shutters, prepared by MI Metals, Inc. with material specifications.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-1210.03
Expiration Date: 05/08/2013
Approval Date: 05/08/2008



METALTECH, INC.

MAXIMUM IMPACT™

DURAWELD BAHAMA SHUTTER

NOTES:

HIGH VELOCITY HURRICANE ZONE

THIS METAL TECH BAHAMA SHUTTER COMPLIES WITH THE FLORIDA BUILDING CODE

FBC CERTIFIED TESTING IN ACCORDANCE WITH TAS 201-94, AND 202-94 AND 203-94 PROTOCOLS ALSO IN ACCORDANCE WITH E 1886-02 AND E 1996-02 STANDARDS

MINIMUM DESIGN LOADS CALCULATIONS PERFORMED PER ASCE 7 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" ALL ALUMINUM EXTRUSIONS TO BE ALLOY 6063-T6

BACKING SHALL BE .093 THICK POLYCARBANATE SECURED WITH #64 or #68 S.S. POPRIVETS 15" O.C. MAX.

ANCHORAGE OF SHUTTER TO CONCRETE OR MASONRY AT HEADER SHALL BE WITH 1/4" MASONRY SCREWS WITH 1 1/4" MINIMUM EMBEDMENT.

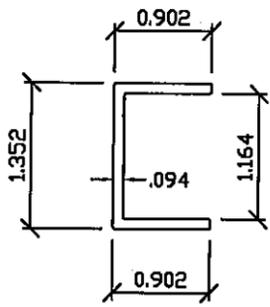
ANCHORAGE OF SHUTTER TO CONCRETE OR MASONRY AT BRACKETS SHALL BE 1/4-20 MACHINE SCREW ANCHOR WITH 7/8" MINIMUM EMBEDMENT OR FEMALE PANELMATE WITH 1/4-20 M/S (FLOOR PLUG) WITH 1 1/4" MINIMUM EMBEDMENT OR 1/4" MALE PANELMATE WITH 1/4-20 WASHERED WINGNUTS WITH 1 1/4" MINIMUM EMBEDMENT.

ANCHORAGE OF SHUTTER TO WOOD AT HEADER SHALL BE 1/4" WOOD LAGS WITH 1" MIN. EMBEDMENT OR 1/4" MASONRY SCREWS WITH 1 7/8" MINIMUM EMBEDMENT

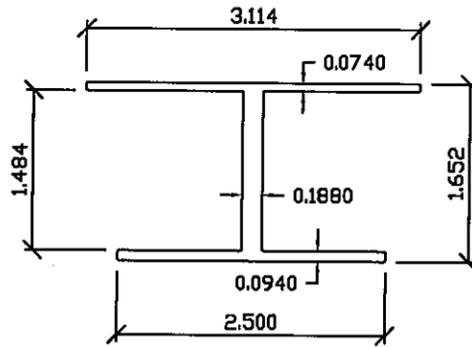
ANCHORAGE OF SHUTTER TO WOOD AT BRACKETS SHALL BE 1/4" MALE PANELMATES WITH 1/4-20 WASHERED WINGNUTS OR 1/4" FEMALE PANELMATE WITH 1/4-20 M.S. (FLOOR PLUG) WITH 1 7/8" MINIMUM EMBEDMENT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO INSURE PROPER ANCHORAGE.

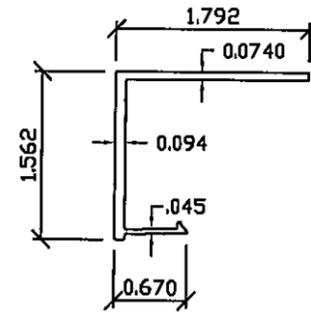
EACH BAHAMA SHUTTER SHALL BEAR PERMANENT LABEL SHOWING METAL TECH, INC. HIALEAH, FL - MIAMI DADE COUNTY PRODUCT CONTROL APPROVED



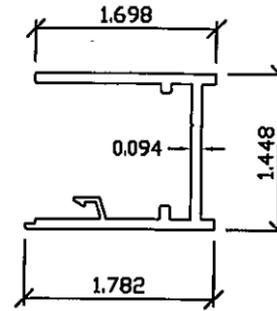
① MULLION INSERT



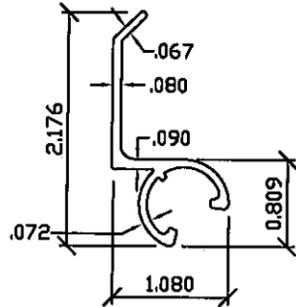
② MULLION



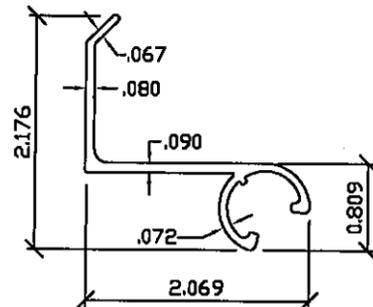
③ SNAP CAP



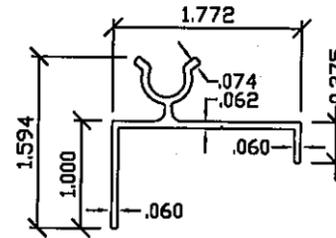
④ OUTER FRAME



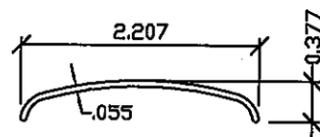
⑤A FEMALE HINGE



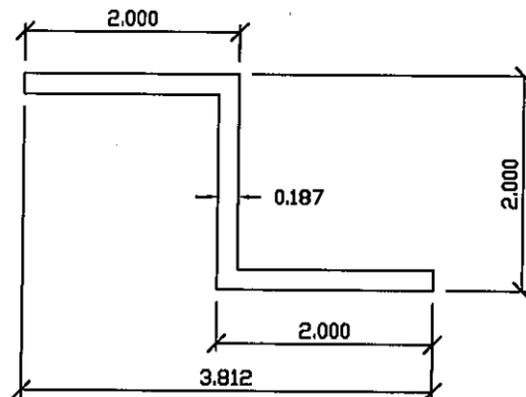
⑤B B/O FEMALE HINGE



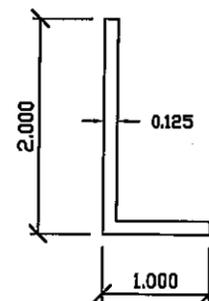
⑥ MALE HINGE



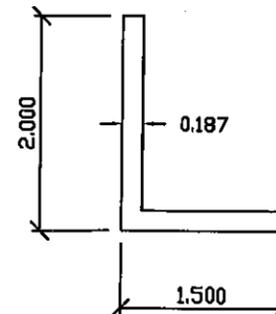
⑦ BLADE



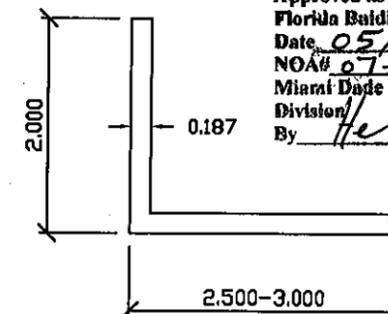
⑧ TIE DOWN Z BRACKET ALTERNATE TO ⑩



⑨ CORNER KEY



⑩ TIE DOWN ANGLE BRACKETS



Approved as complying with the Florida Building Code
 Date: 05/08/2008
 NOA# 07-1210-03
 Miami Dade Product Control
 Division
 By: *Helmy A. Helmy*

Monsour
 3/2/08
 ROBERT S. MONSOUR, PE
 11955
 RAMMS ENGINEERING, INC.

REVISIONS	BY

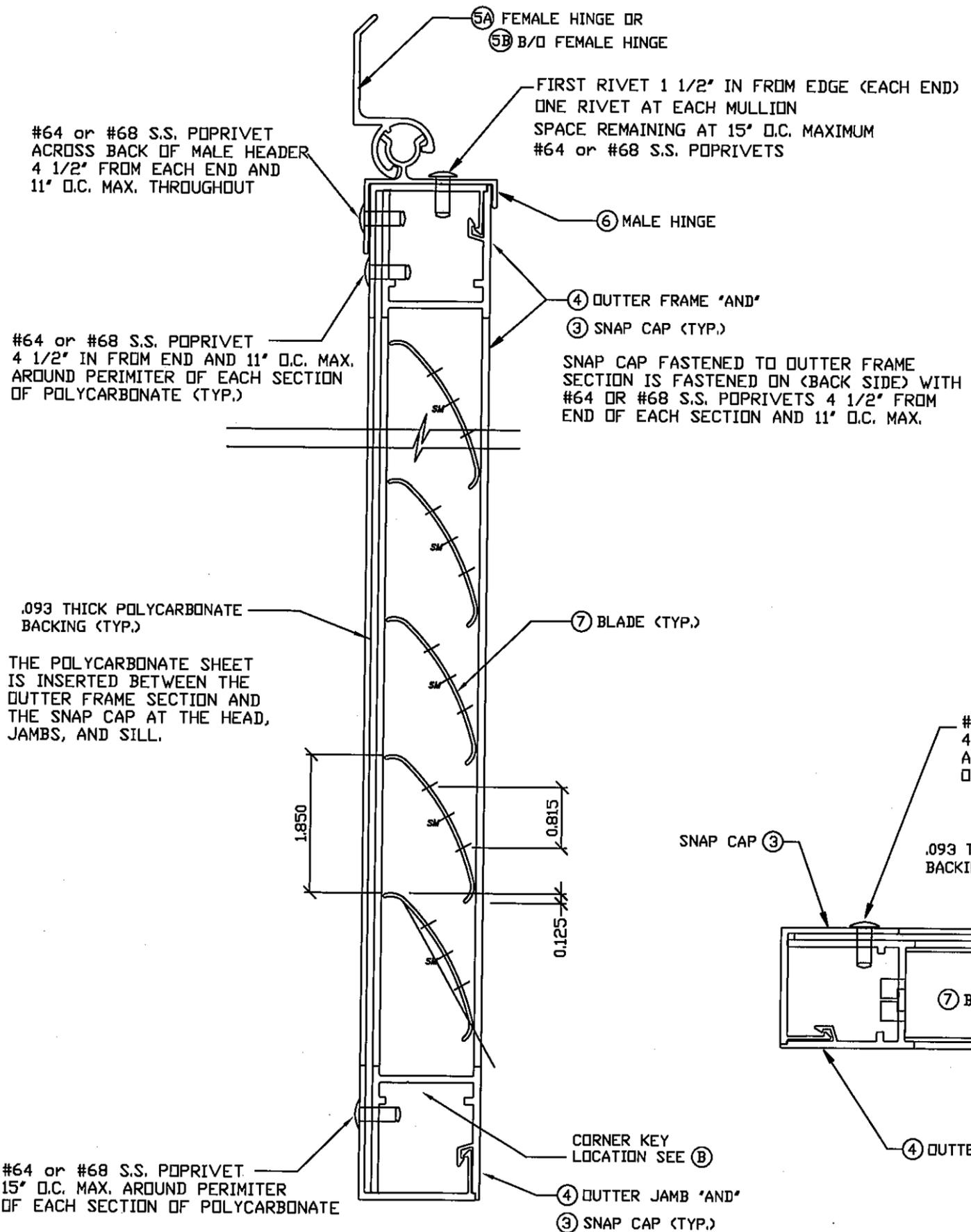
RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 78th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

MAXIMUM IMPACT BAHAMA SHUTTER
METALTECH, INC.
 7835 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957
 EXPORTED WORLD-WIDE

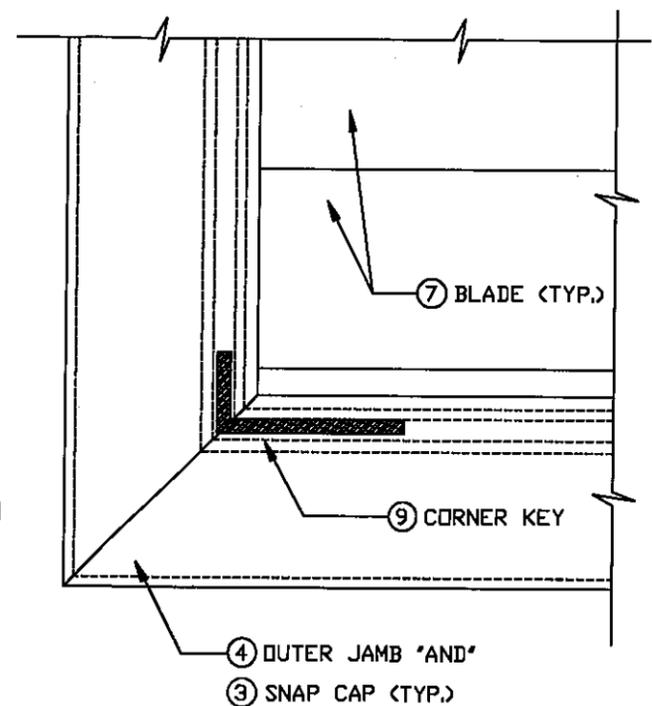
DATE	SEP / RSM
APPROVED	
DATE	12/01/2007
SCALE	AS SHOWN
JOB	270102
REV	1
	5

HIGH VELOCITY HURRICANE ZONE

REVISIONS	BY

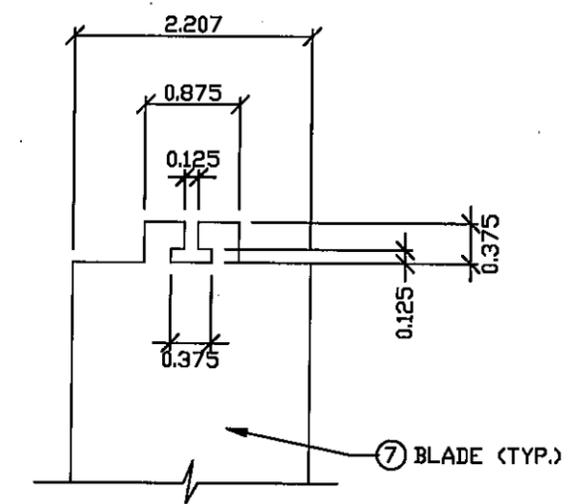


(A) TYPICAL CROSS SECTION ASSEMBLY

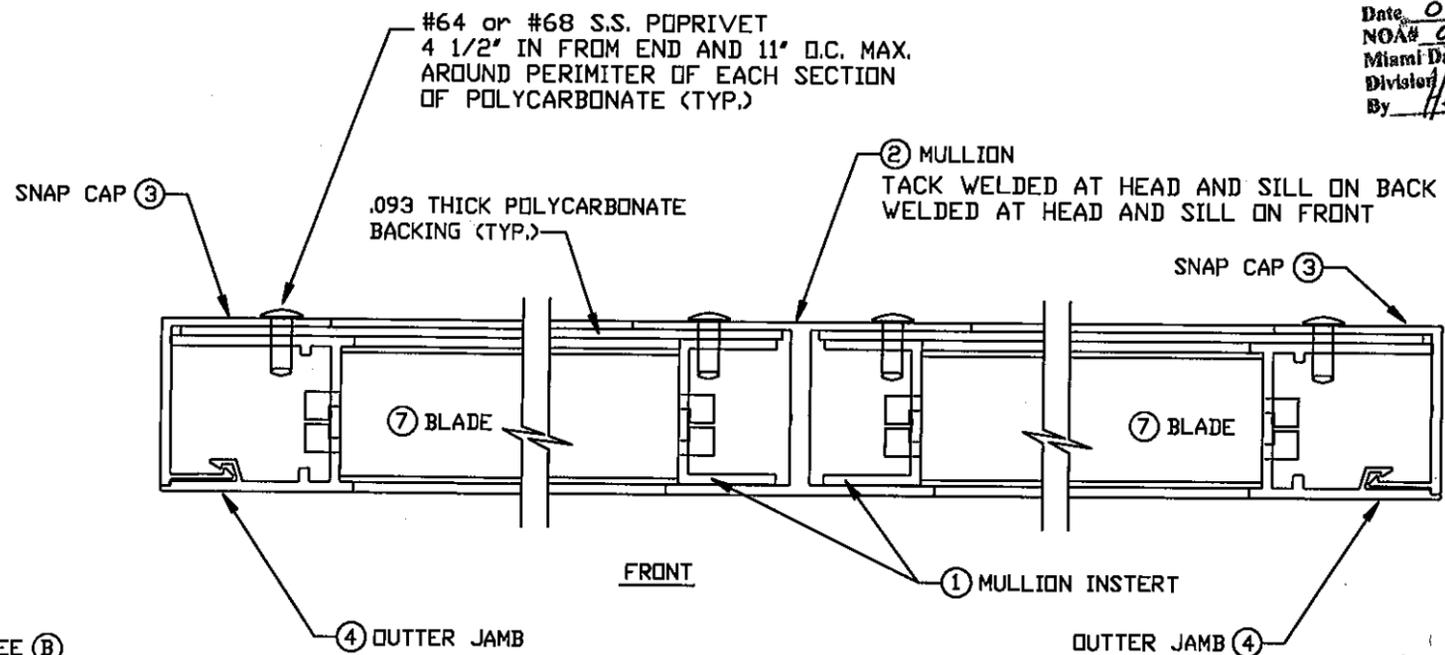


(B) CORNER KEY DETAIL ELEV.

SILL AND HEADER ATTACHED TO EACH JAMB WITH CORNER KEY TACK WELDED TO SILL, JAMBS AND HEADER. EACH MITER CORNER CUT IS WELDED.



(C) BLADE PUNCH DETAIL



(D) PLAN VIEW CROSS SECTION WITH MULLION

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 Division
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Monsour
 3/2/08

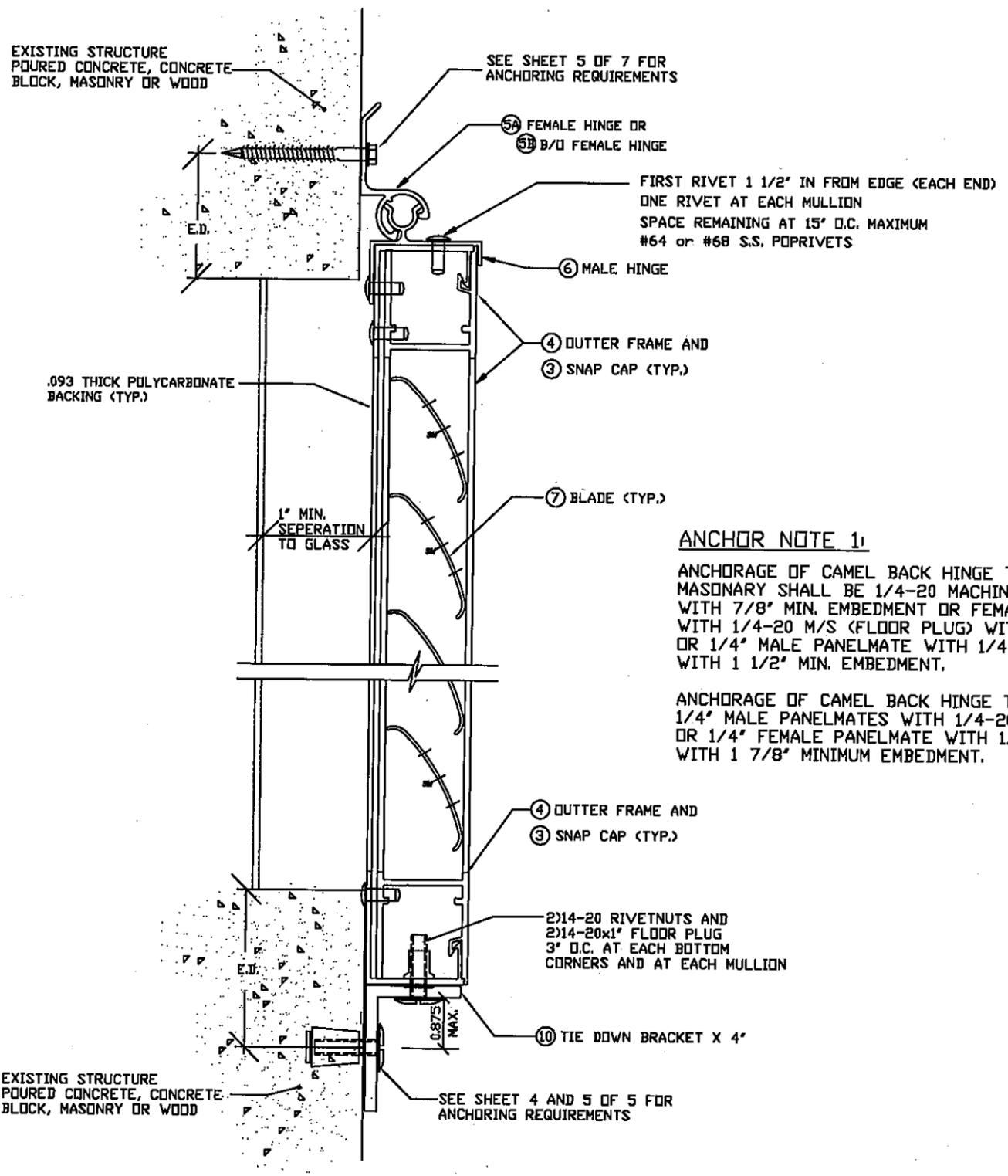
ROBERT S. MONSOUR, PE
 11955
 RAMMS ENGINEERING, INC.

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 79th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

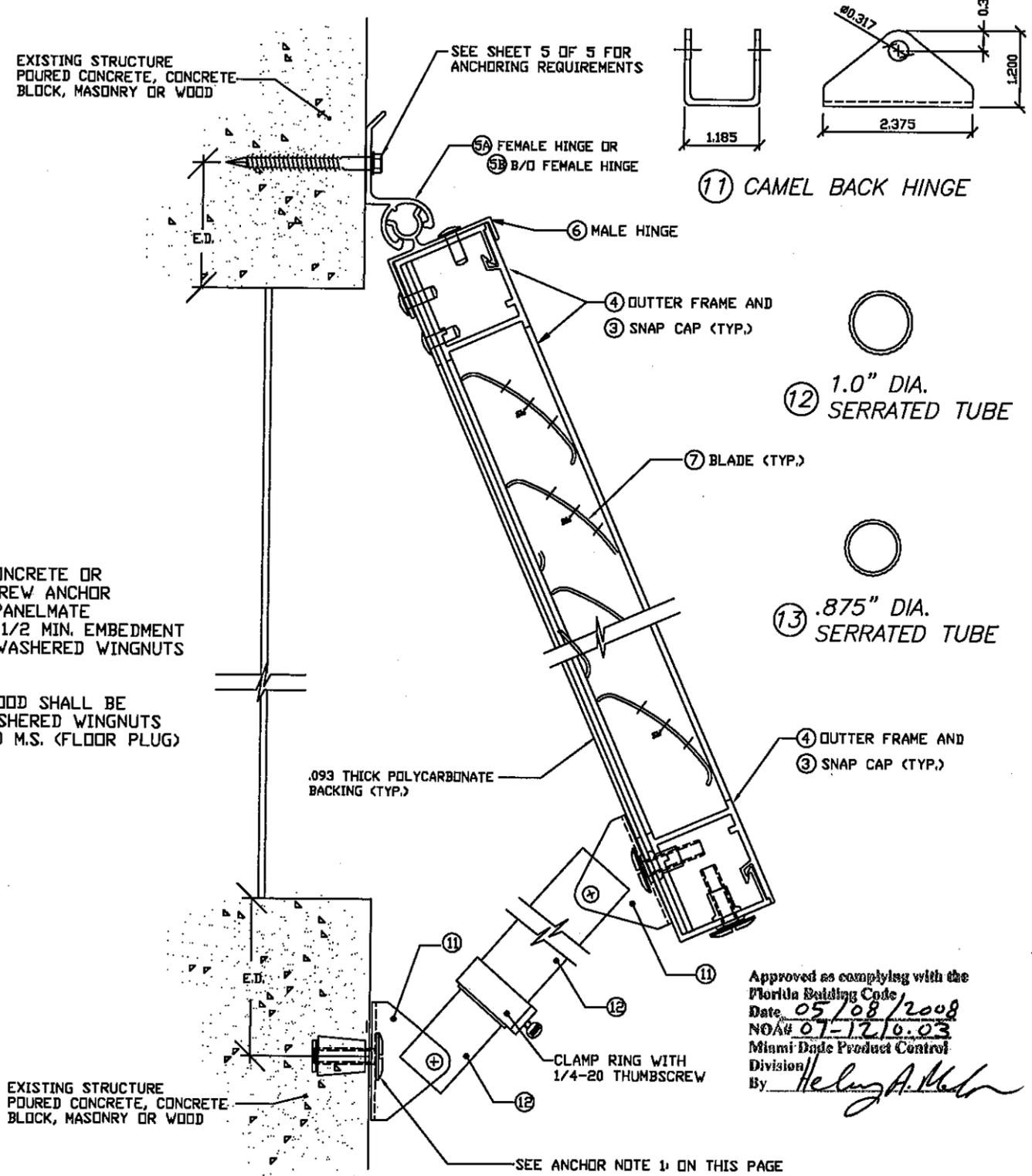
METALTECH, INC.
 EST. 1957
 7635 W. SECOND CT. HIALEAH, FL 33014
 EXPLORED WORLD-WIDE

DATE	SEP / RSM
APPROVED	
DATE	12/01/2007
SCALE	AS SHOWN
NO.	27102
SHEET	2
TOTAL SHEETS	5

HIGH VELOCITY HURRICANE ZONE

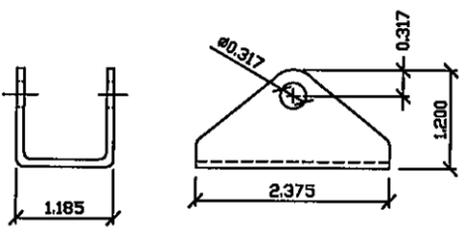


D) WALL MOUNT SECTION HURRICANE POSITION



E) WALL MOUNT SECTION NON HURRICANE POSSISION

ANCHOR NOTE 1:
 ANCHORAGE OF CAMEL BACK HINGE TO CONCRETE OR MASONRY SHALL BE 1/4-20 MACHINE SCREW ANCHOR WITH 7/8" MIN. EMBEDMENT OR FEMALE PANELMATE WITH 1/4-20 M/S (FLOOR PLUG) WITH 1 1/2 MIN. EMBEDMENT OR 1/4" MALE PANELMATE WITH 1/4-20 WASHERED WINGNUTS WITH 1 1/2" MIN. EMBEDMENT.
 ANCHORAGE OF CAMEL BACK HINGE TO WOOD SHALL BE 1/4" MALE PANELMATES WITH 1/4-20 WASHERED WINGNUTS OR 1/4" FEMALE PANELMATE WITH 1/4-20 M.S. (FLOOR PLUG) WITH 1 7/8" MINIMUM EMBEDMENT.



11) CAMEL BACK HINGE



12) 1.0" DIA. SERRATED TUBE



13) .875" DIA. SERRATED TUBE

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 Miami Dade Product Control Division
 By: *Helmy A. Helmy*

Robert S. Monsour
 2/2/08

ROBERT S. MONSOUR, PE
 11955
 RAMMS ENGINEERING, INC.

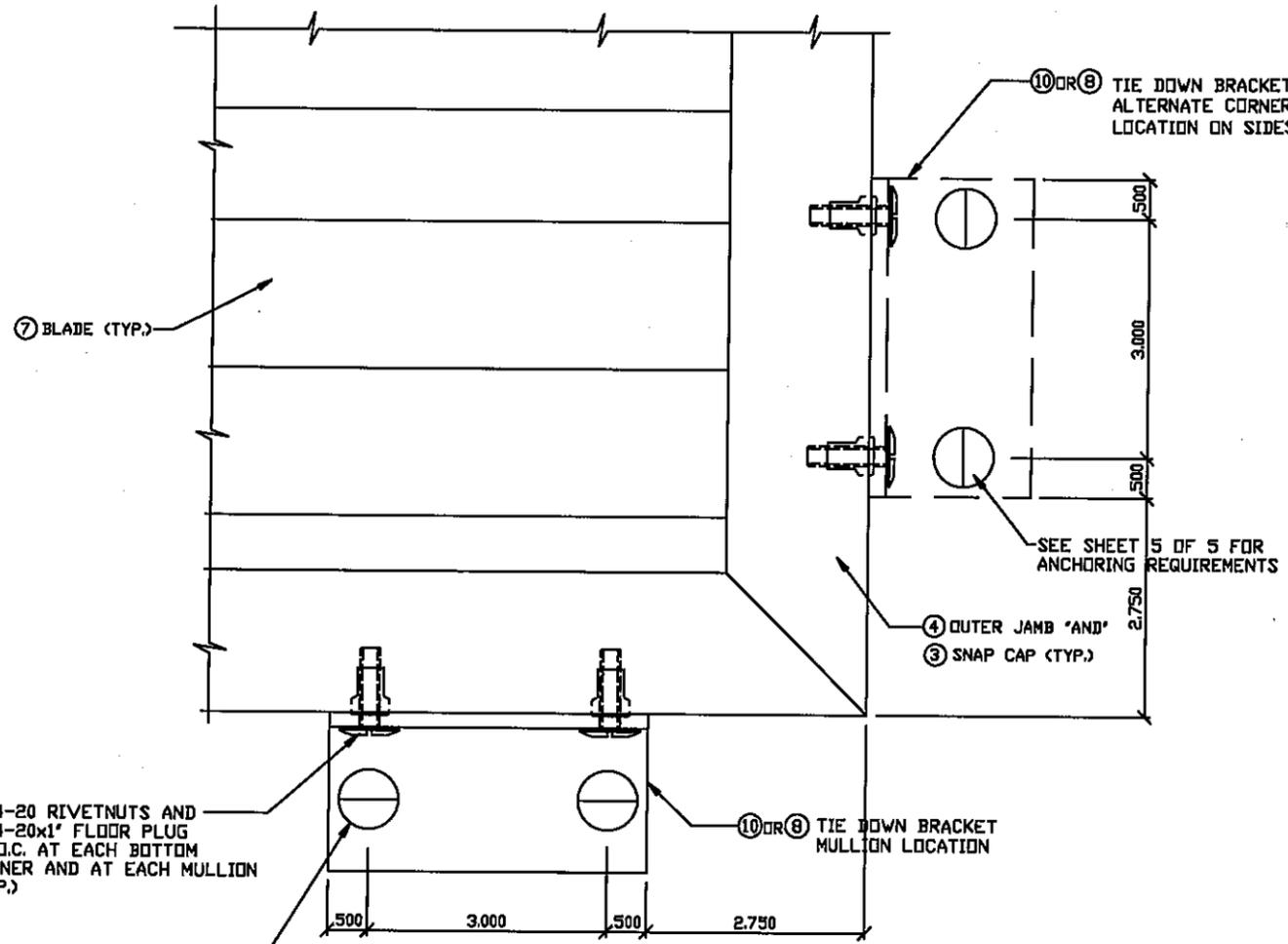
REVISIONS	BY

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 76th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

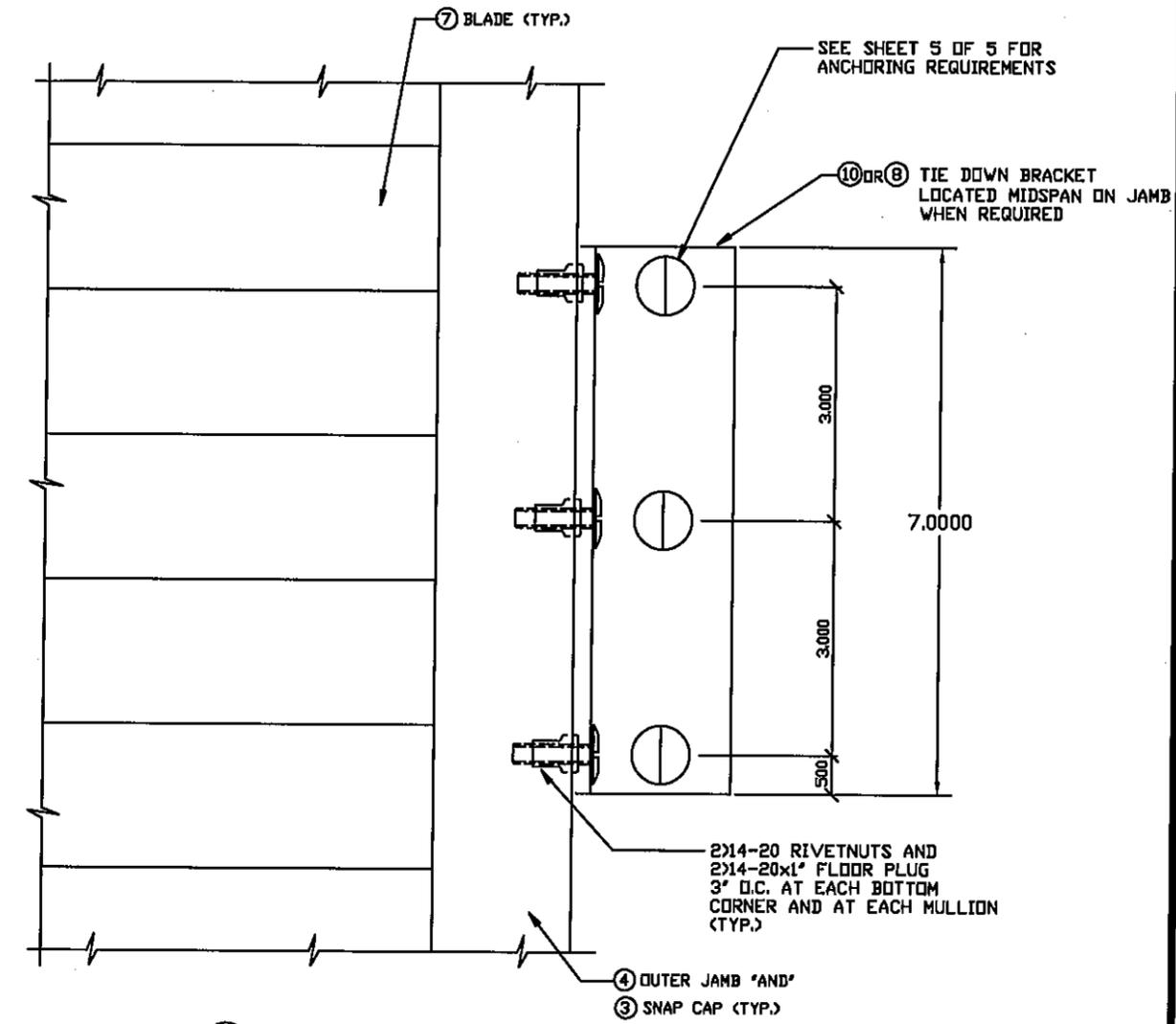
METALTECH, INC.
 7635 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957
 EXERCISE WORLD-WIDE

DATE	SEP / RSM
DATE	12/01/2007
WORLD SHOWN	
NO	27102
SHEET	3
OF	5

REVISIONS	BY

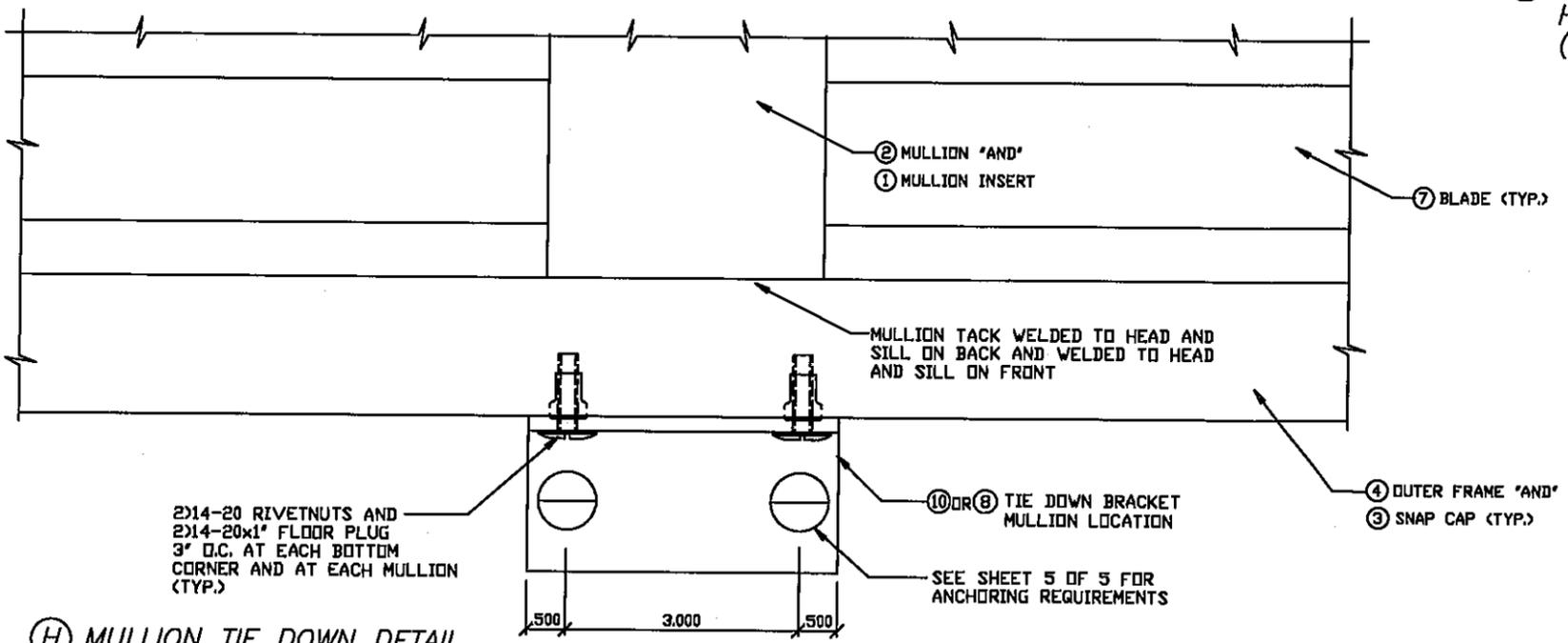


F CORNER TIE DOWN DETAIL
HURRICANE POSITION
(TYP.) RIGHT AND LEFT CORNERS



G JAMB TIE DOWN DETAIL
HURRICANE POSITION
(TYP.) RIGHT AND LEFT SIDE

NOTE:
WHEN #8 TIE DOWN Z BRACKET IS USED AS AN ALTERNATIVE TO #10 TIE DOWN BRACKETS, THE Z BRACKET IS NOT REQUIRED TO BE ATTACHED TO THE SHUTTER. THE Z BRACKET ONLY NEEDS TO BE ANCHORED TO THE WALL.



H MULLION TIE DOWN DETAIL
HURRICANE POSITION
(TYP.) EACH MULLION

Approved as complying with the
Florida Building Code
Date 05/08/2008
NOA# 07-1210-03
Miami Dade Product Control
Division
By Helmy A. Helmy

Monson
3/27/08
ROBERT S. MONSOUR, PE
11955
RAMMS ENGINEERING, INC.

RAMMS ENGINEERING, INC.
Structural Design
2100 W. 79th STREET, SUITE 311
HALEAH, FLORIDA 33016
EB 0006024

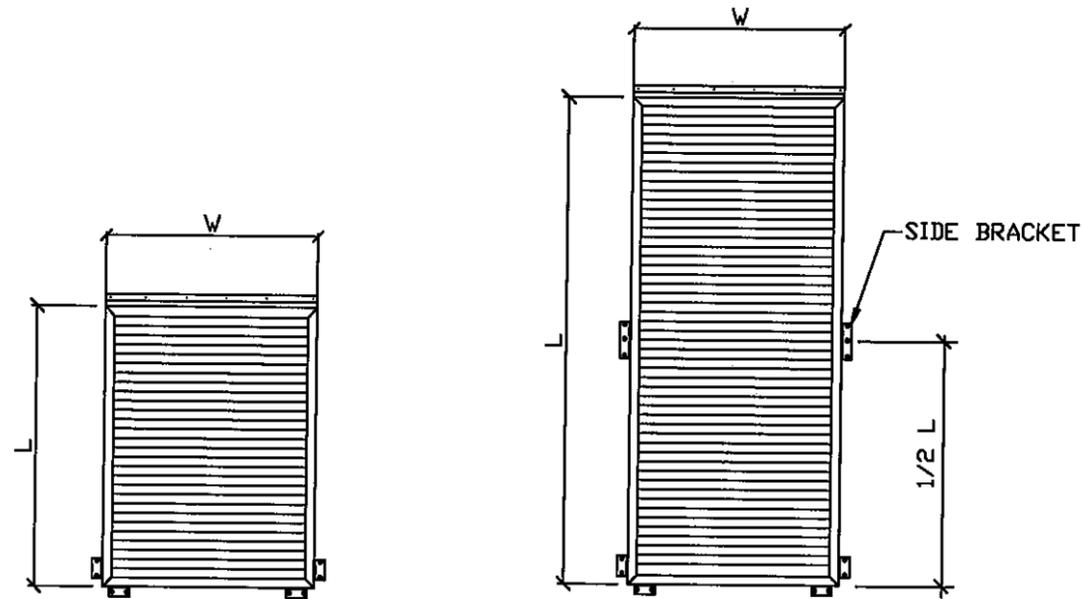
METALTECH, INC.
7635 W. SECOND CT. HIALEAH, FL 33014
EST. 1957
REGISTERED WORLD-WIDE

SEP / RSM
DATE 12/01/2007
SCALE SHOWN
SHEET 27102
4
5

CHART 1 MAXIMUM SIZE VS DESIGN PRESSURE

CHART 2 MAXIMUM SIZE VS DESIGN PRESSURE

SINGLE UNIT (SECTION) ELEVATION



CORNER BRACKETS MAY BE INSTALLED ON BOTTOM OR SIDE ONE PER CORNER

DESIGN RATING PRESSURE IN P.S.F.	MAXIMUM WIDTH "W"	MAXIMUM SPAN "L"		
		W/O SIDE BRACKET	WITH SIDE BRACKET	MINIMUM SEPARATION TO GLASS
+67.2 , -75.6	42"	57 9/16"	N/A	3 1/4"
+67.0 , -90.0	42"	N/A	92 3/8"	3"

SEE SHEET 4 OF 5 FOR BRACKET SPECIFICATIONS

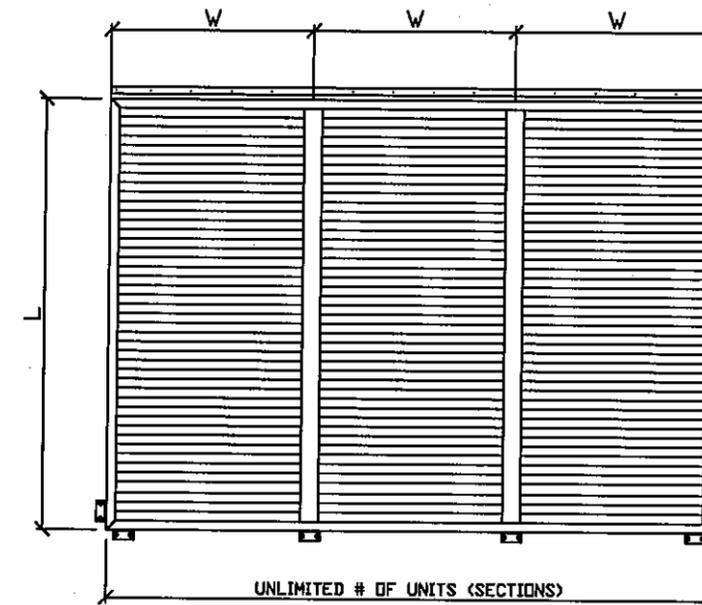
ANCHOR SPACING

ALL HEADER ANCHOR SPACING 8" O.C.
 ALL BRACKET ANCHOR SPACING 3" O.C.
 INTO POURED CONCRETE OR CONCRETE BLOCK

ANCHOR SPACING

ALL HEADER ANCHOR SPACING 6" O.C.
 ALL BRACKET ANCHOR SPACING 3" O.C.
 INTO WOODEN STRUCTURES

MULTIPLE UNIT (SECTIONS) ELEVATION



CORNER BRACKETS MAY BE INSTALLED ON BOTTOM OR SIDE ONE PER CORNER

DESIGN RATING PRESSURE IN P.S.F.	MAXIMUM WIDTH "W"	MAXIMUM SPAN "L"		
		W/O SIDE BRACKET	WITH SIDE BRACKET	MINIMUM SEPARATION TO GLASS
+54.0 , -70.0	30"	85 1/4"	N/A	3 9/16"

SEE SHEET 4 OF 5 FOR BRACKET SPECIFICATIONS

ANCHORAGE OF SHUTTER TO CONCRETE OR MASONRY AT HEADER SHALL BE WITH 1/4" MASONRY SCREWS WITH 1 1/4" MINIMUM EMBEDMENT.

ANCHORAGE OF SHUTTER TO CONCRETE OR MASONRY AT BRACKETS SHALL BE 1/4-20 MACHINE SCREW ANCHOR WITH 7/8" MIN. EMBEDMENT OR FEMALE PANELMATE WITH 1/4-20 M/S (FLOOR PLUG) WITH 1 1/2" MIN. EMBEDMENT OR 1/4" MALE PANELMATE WITH 1/4-20 WASHERED WINGNUTS WITH 1 1/2" MIN. EMBEDMENT.

ANCHORAGE OF SHUTTER TO WOOD AT HEADER SHALL BE 1/4" WOOD LAGS WITH 1" MIN. EMBEDMENT OR 1/4" MASONRY SCREWS WITH 1 7/8" MINIMUM EMBEDMENT

ANCHORAGE OF SHUTTER TO WOOD AT BRACKETS SHALL BE 1/4" MALE PANELMATES WITH 1/4-20 WASHERED WINGNUTS OR 1/4" FEMALE PANELMATE WITH 1/4-20 M.S. (FLOOR PLUG) WITH 1 7/8" MINIMUM EMBEDMENT.

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 Miami Dade Product Control
 Division
 By: Helmut A. M...

ROBERT S. MONSOUR, PE
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REVISIONS	BY

RAMMS ENGINEERING, INC.
 Structural Design
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 EB 0008024

METALTECH, INC.
 7635 W. SECOND CT. HIALEAH, FL 33014
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SEP / RSM
 12/01/2007
 SOLD SHOWN
 27102
5