



**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](http://www.miamidade.gov)

## **NOTICE OF ACCEPTANCE (NOA)**

**Miami Dade Aluminum Supply, Inc.**  
1615 W. 31<sup>st</sup> Place  
Hialeah, Florida 33012

### **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: 0.063" (min.) Aluminum Storm Panels Shutter**

**APPROVAL DOCUMENT:** Drawing No. 3126, titled "0.063" min. Aluminum Storm Panels", sheets 1 through 4 of 4, prepared by Ramms Engineering, Inc., dated December 05, 2007, last revision dated May 28, 2008, signed and sealed by Robert S. Monsour, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the 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 and renews** NOA # 03-0417.02 and consists of this page 1, evidence submitted page(s) E-1 & E-2 as well as approval document mentioned above.

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



*Helmy A. Makar*  
07/10/2008

NOA No. 08-0123.06  
Expiration Date: 04/21/2009  
Approval Date: 07/10/2008  
Page 1

**Miami Dade Aluminum Supply, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 95-1220.01**

**A. DRAWINGS**

1. *Drawing No. 3126, Miami Dade Aluminum Supply, Sheets 1 through 4 of 4 prepared by Ramms Engineering, Inc., dated 12/06/95, revised 05/16/96, signed and sealed by Robert Monsour, P.E.*

**B. TESTS**

1. *Test report on Uniform Static Air Pressure Test, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-95-479, dated August 21, 1995, and Report No. HETI-95-481, dated August 24, 1995, signed and sealed by Hector M. Medina, P.E.*
2. *Test report on Large Missile Impact & Cyclic Wind Pressure Test, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-95-472, dated August 8, 1995, signed and sealed by Hector M. Medina, P.E.*
3. *Test report on Large Missile Impact Test, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-95-481i, dated August 24, 1995, signed and sealed by Hector M. Medina, P.E.*

**C. CALCULATIONS**

1. *Comparative Analysis and Anchor Calculations, dated 03/11/96, Pages 1 through 5 of 5 and Pages 1 through 8 of 8, dated 05/01/96, prepared by Ramms Engineering, Inc., signed and sealed by Robert Monsour, P.E.*

**D. MATERIAL CERTIFICATIONS**

1. *Mill Certified Inspection Reports issued by MSC Metals, dated 08/25/95.*
2. *Certified Tensile Test Report issued by Hurricane Engineering & Testing Inc., Report No. HETI-95-T104, dated 10/30/1995, signed and sealed by Hector M. Medina, P.E.*

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 00-0201.02**

**A. DRAWINGS**

1. *None.*

**B. TESTS**

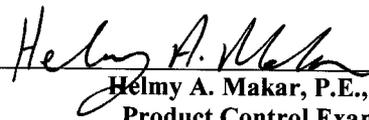
1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. MATERIAL CERTIFICATIONS**

1. *None.*



**Helmy A. Makar, P.E., M.S.**

**Product Control Examiner**

**NOA No. 08-0123.06**

**Expiration Date: 04/21/2009**

**Approval Date: 07/10/2008**

**Miami Dade Aluminum Supply, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**E. OTHERS**

1. Letter from Ramms Engineering, Inc., dated November 3, 1999, signed and sealed by Robert S. Monsour, P.E., certify that he is still in the engineering business.
2. Letter from Miami Dade Aluminum Supply, Inc., signed by Mr. Juan M. Delgado, certify that the product has not changed.

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 03-0417.02**

**A. DRAWINGS**

1. Drawing No. 3126, titled "0.063" min. Aluminum Storm Panels", sheets 1 through 4 of 4, prepared by Ramms Engineering, Inc., dated December 06, 1995, last revision dated October 13, 2004, signed and sealed by Robert S. Monsour, P.E.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. None.

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**

1. None.

**4. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. 3126, titled "0.063" min. Aluminum Storm Panels", sheets 1 through 4 of 4, prepared by Ramms Engineering, Inc., dated December 05, 2007, last revision dated May 28, 2008, signed and sealed by Robert S. Monsour, P.E.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. Anchor Calculations, dated 01/05/08, Pages 1 through 24 of 24, prepared by Ramms Engineering, Inc., signed and sealed by Robert Monsour, P.E.

**D. QUALITY ASSURANCE**

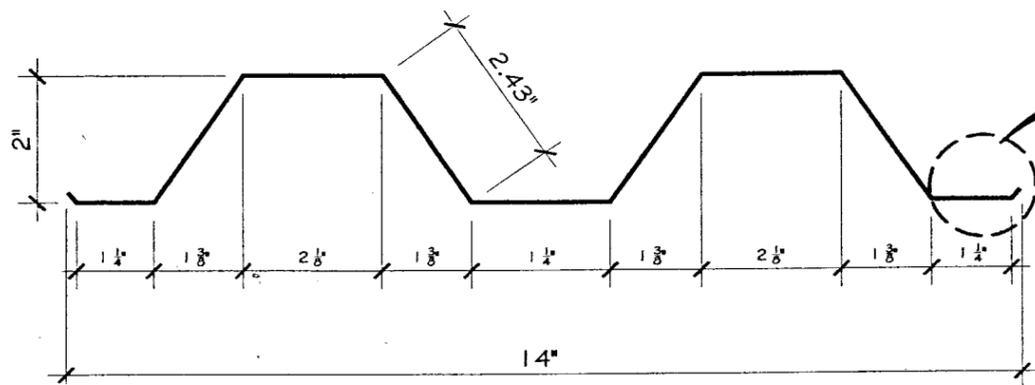
1. By Miami-Dade County Building Code Compliance Office.

**E. MATERIAL CERTIFICATIONS**

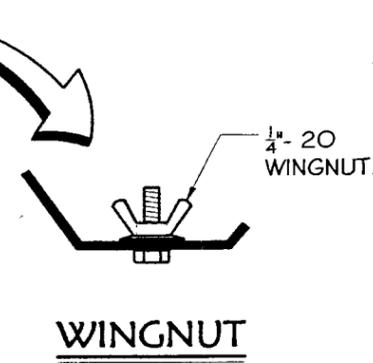
1. None.



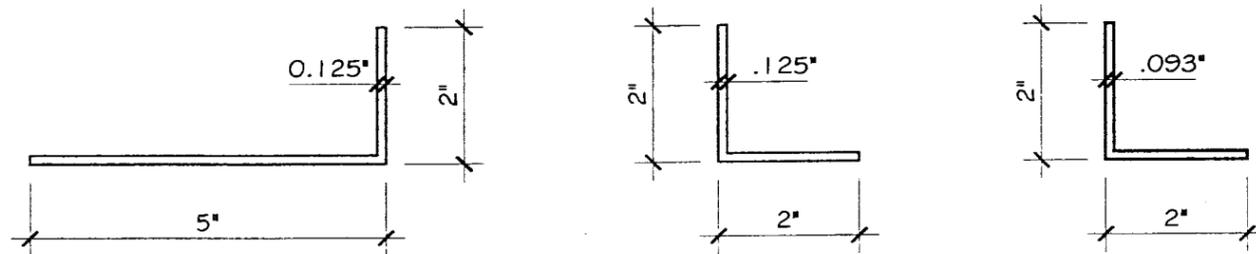
Helmy A. Makar, P.E., M.S.  
Product Control Examiner  
NOA No. 08-0123.06  
Expiration Date: 04/21/2009  
Approval Date: 07/10/2008



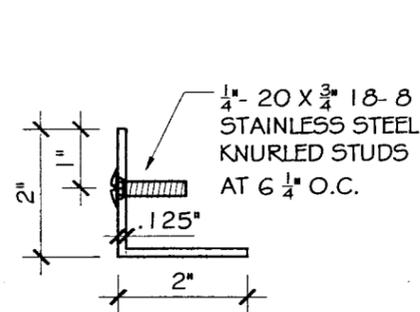
**TYPICAL PANEL SECTION** .063" ( MIN.) ALUMINUM STORM PANELS  
ALUMINUM ALLOY 5052-H32



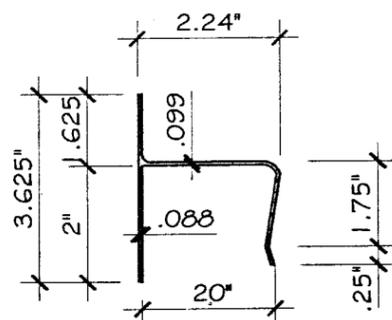
**WINGNUT**



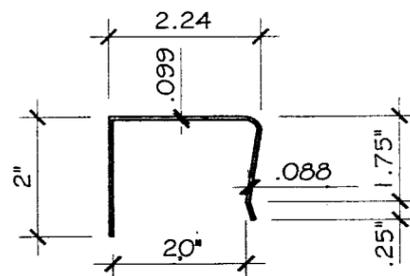
**VARIOUS ANGLES DETAIL**



**STUDED ANGLE**



**"h" HEADER**



**CEILING HEADER**

**DESIGN PRESSURE RATING:**

- FOR DESIGN PRESSURE RATINGS, REFER TO THE CHART OF PAGE 4 OF 4
- NOTE: NO INCREASE IN ALLOWABLE STRESS WAS USED IN THE DESIGN OF THIS PRODUCT AND ALSO IN THE FASTENER ANALYSIS.

**.063 (MIN.) ALUMINUM STORM PANELS**

- ALUMINUM ALLOY 5052-H32

**COMPLIES WITH:**

- FLORIDA BUILDING CODE, 2004 EDITION AND ASCE 7-02 WIND CODE. (146 MPH)

**DESIGN CRITERIA:**

- WIND LOAD PER FLORIDA BUILDING CODE, 2004 PRESSURE REQUIREMENT CALCULATIONS MUST BE PERFORMED PER ASCE 7-02 "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES" DEFLECTION - L/30 W/2" MAX (POSITIVE LOAD)

**GENERAL NOTES:**

- ALL ALUMINUM EXTRUSIONS TO BE ALLOY 6063-T6 OR EQUAL.
- STORM PANELS SHALL BE .063 (MIN.) 5052 H32 ALUMINUM.
- THE STORM PANEL SHUTTER MAY BE INSTALLED VERTICALLY OR HORIZONTALLY, IN ACCORDANCE TO THE DETAILED SPECIFICATIONS HEREIN.
- ANCHORAGE OF THE SHUTTER SYSTEM TO CONCRETE OR MASONRY SHALL BE AS SHOWN ON THESE SPECIFICATIONS.
- ANCHORAGE TO WOOD CONSTRUCTION SHALL BE 1/4" STEEL LAGS OR LARGER WITH 1 1/4" MIN. PENETRATION, 1/4-20 BRASS WOOD BUSHINGS.
- ALTERNATIVE ANCHORS AND CONDITIONS ON SHEET NO. 2 & 3.
- EACH STORM PANEL SHALL BEAR A PERMANENT LABEL SHOWING "MIAMI - DADE COUNTY PRODUCT APPROVED" (MIAMI-DADE ALUMINUM SUPPLY)
- WARNING TO OWNER OR TENANT: "STORM PANELS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL 1/4 -20 STITCHING IS PROPERLY INSTALLED DURING WIND VELOCITIES EXCEEDING 75 M.P.H.
- PERMANENT FASTENER COMPONENTS, EMBEDDED ANCHOR BOLTS, THREADED CONES OR METAL SHIELDS, NOT IN USE, MUST BE PROTECTED AGAINST CORROSION, CONTAMINATION AND DAMAGE AT ALL TIMES.

**GENERAL NOTES:**

POSITIVE = 55 PSF, NEGATIVE = 72PSF  
(\*FOR PANEL SPAN = 110")

*Handwritten signature and date: Juan Jara 12/5/07*

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No 08-0123-06  
Expiration Date 04/21/2009  
By *Helmy A. Mator*  
Miami Dade Product Control Division

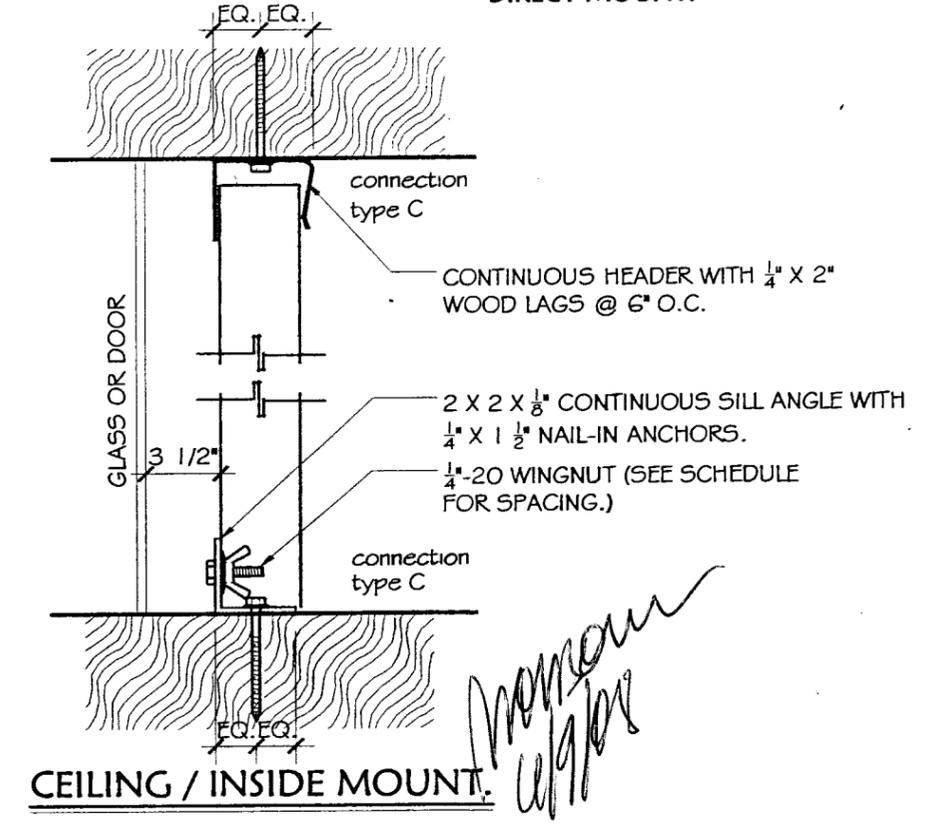
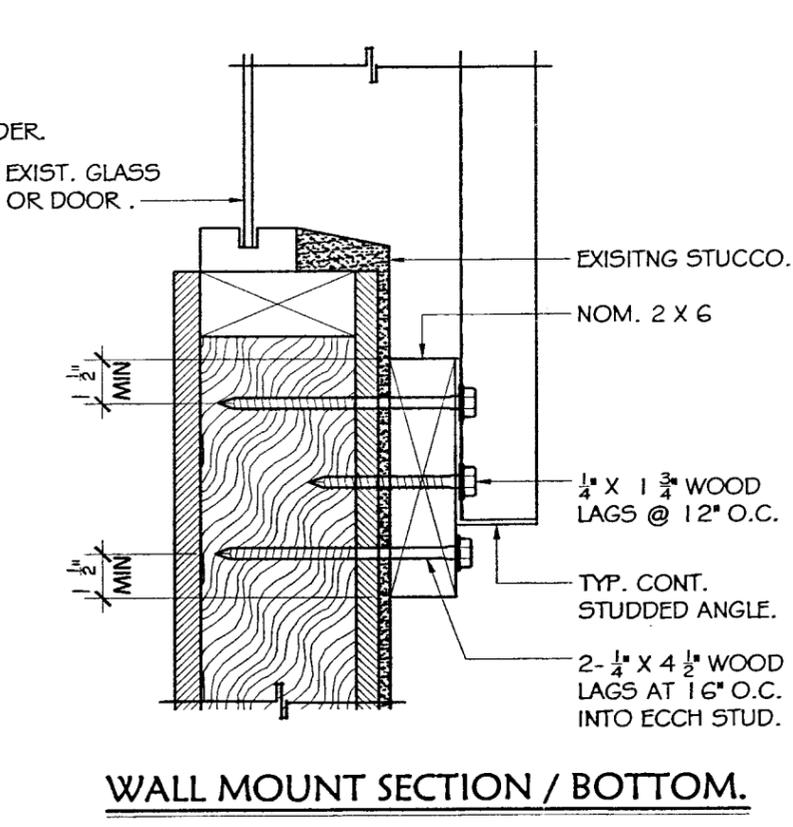
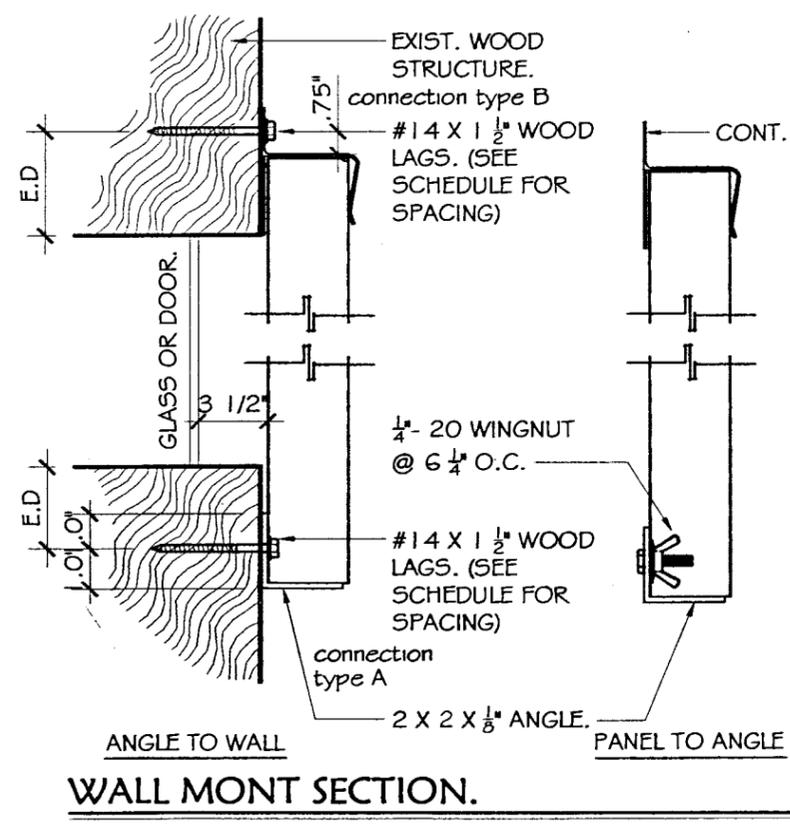
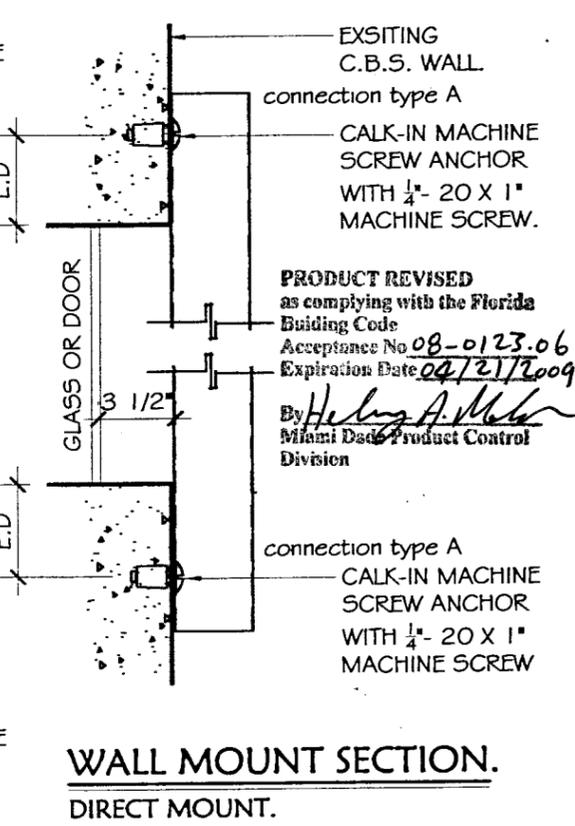
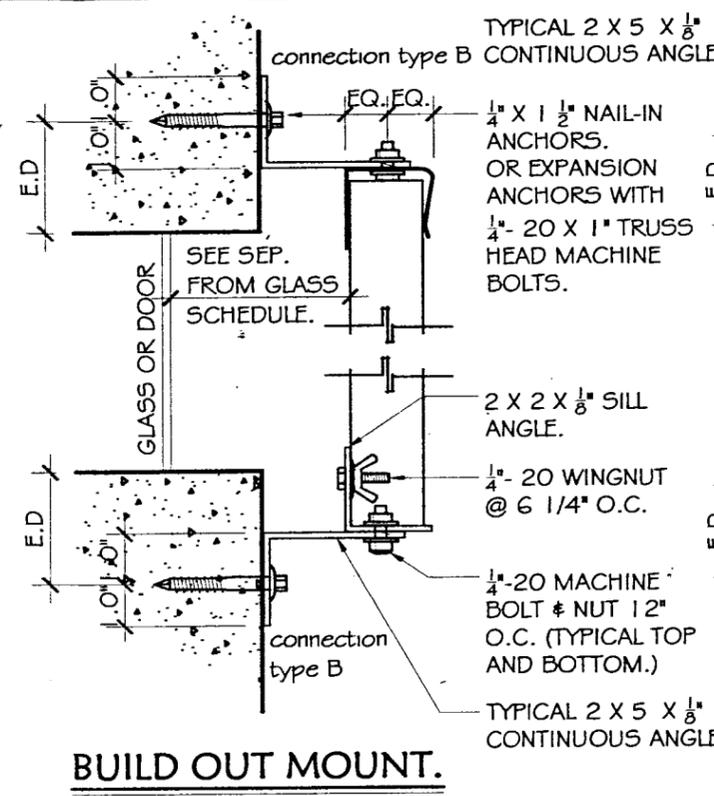
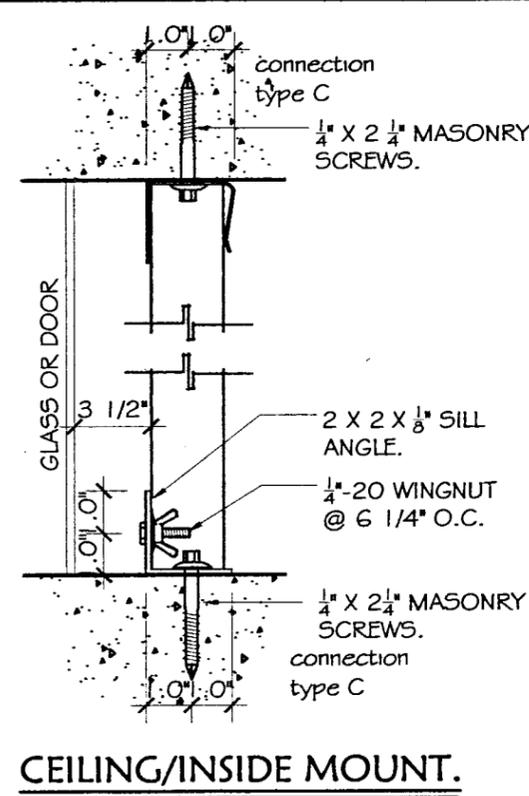
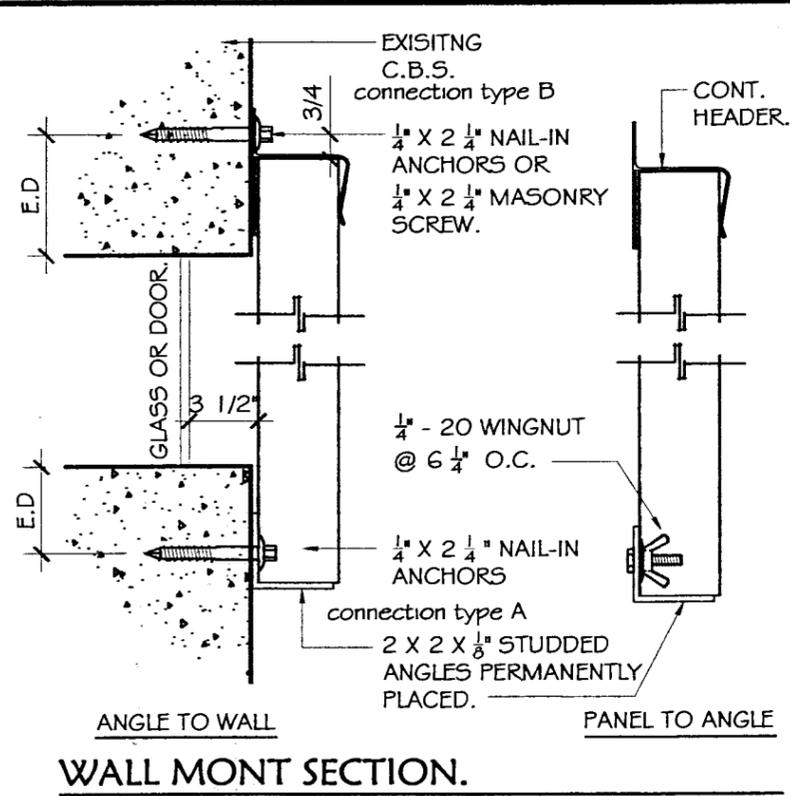
REVISIONS	BY:
2/26/96	
4/30/96	J.J.
10/13/04	J.J.
12/5/07	J.J.
5-13-08	J.J.
5-28-08	J.J.

**RAMMS ENGINEERING, INC.**  
*Structural Design*  
Robert S. Monour  
2100 W. 78th STREET, SUITE 311  
HIALEAH, FLORIDA 33018  
PH: 305-822-3141  
EB 0006024  
Lic. # 11955

**Miami Dade Aluminum Supply**  
1615 WEST 31 PLACE  
HIALEAH, FLORIDA

DESIGNED BY: <b>JUAN JARA</b>
DATE: <b>12-5-07</b>
SCALE: <b>N.T.S.</b>
JOB NO: <b>3126</b>
SHEET <b>1</b>
OF: 4

**.063 ALUMINUM STORM PANELS**



**.063 ALUMINUM STORM PANELS**

REVISIONS	BY:
2/26/96	
4/30/96	J.J.
10/13/04	J.J.
12/5/07	J.J.
5-13-08	J.J.
5-28-08	J.J.

**RAMMS ENGINEERING, INC.**  
Structural Design

2100 W. 78th STREET, SUITE 311  
HIALEAH, FLORIDA 33018

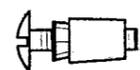
Robert S. Moreau  
PH: 305-822-3141

EB 000624  
Lic. # 11955

**Miami Dade Aluminum Supply**

1615 WEST 31 PLACE  
HIALEAH, FLORIDA

DRAWN BY:	JUAN JARA
DATE:	12-5-07
SCALE:	N.T.S.
JOB No:	3126
SHEET	2
Of: 4	

HARDWARE SCHEDULES			59.5 PSF						71.5 PSF						
			POURED CONCRETE			CONCRETE BLOCK			POURED CONCRETE			CONCRETE BLOCK			
	PANEL	E.D.	A	B	C	A	B	C	A	B	C	A	B	C	
	$\frac{1}{4}$ " MASONRY SCREWS $1\frac{1}{2}$ " EMBEDMENT.	68" SPAN	3"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
2"			6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	
88" SPAN		3"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	5"
		2"	6"	6"	6"	6"	6"	6"	5"	6"	6"	6"	6"	6"	4"
104" SPAN		3"	6"	6"	6"	6"	6"	6"	5"	6"	6"	6"	6"	4"	4"
		2"	6"	6"	6"	6"	6"	6"	4"	6"	6"	6"	6"	4"	4"
	PANEL		A	A	C	A	B	C	A	B	C	A	B	C	
	68" SPAN	3"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
		2"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"
	88" SPAN	3"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	5"
		2"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	5"
	104" SPAN	3"	6"	6"	6"	6"	6"	5"	5"	6"	6"	6"	6"	4"	5"
		2"	6"	6"	6"	5"	6"	5"	5"	6"	6"	6"	6"	4"	4"

HARDWARE SCHEDULES WOOD APPLICATIONS			59.6 PSF			71.5 PSF		
			CONNECTION TYPE			CONNECTION TYPE		
	DIA.	PANEL	A	B	C	A	B	C
	WOOD LAGS	1/4"	68" SPAN	6"	6"	6"	6"	6"
88" SPAN			6"	6"	6"	6"	6"	5"
104" SPAN			6"	6"	5"	6"	5"	4"
WOOD LAGS	3/8"	68" SPAN	6"	6"	6"	6"	6"	6"
		88" SPAN	6"	6"	6"	6"	6"	6"
		104" SPAN	6"	6"	6"	6"	6"	5"

\* ALL WOOD FASTNERS TO HAVE A MINIMUM EDGE DISTANCE OF 2 1/2"

NOTE:  
A SAFETY FACTOR OF 4.0 WAS TAKEN FOR ALL HARDWARE WITH NO INCREASE IN ALLOWABLE STRESS USED IN THE DESIGN OF THIS PRODUCT.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 08-0123.06  
Expiration Date 04/21/2009  
By *Robert S. Moncor*  
Miami Dade Product Control  
Division

REVISIONS	BY:
2/26/96	
4/30/96	J.J.
10/13/04	J.J.
12/5/07	J.J.
5-13-08	J.J.

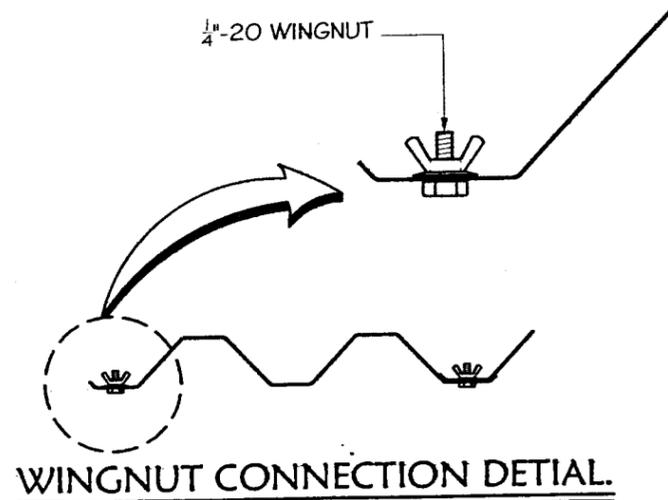
RAMMS ENGINEERING, INC.  
*Structural Design*  
Robert S. Moncor  
2100 W. 76th STREET, SUITE 311  
HIALEAH, FLORIDA 33016  
PH: 305-822-3141  
EB 000024  
Lic. # 11855

Miami Dade Aluminum Supply  
1615 WEST 31 PLACE  
HIALEAH, FLORIDA

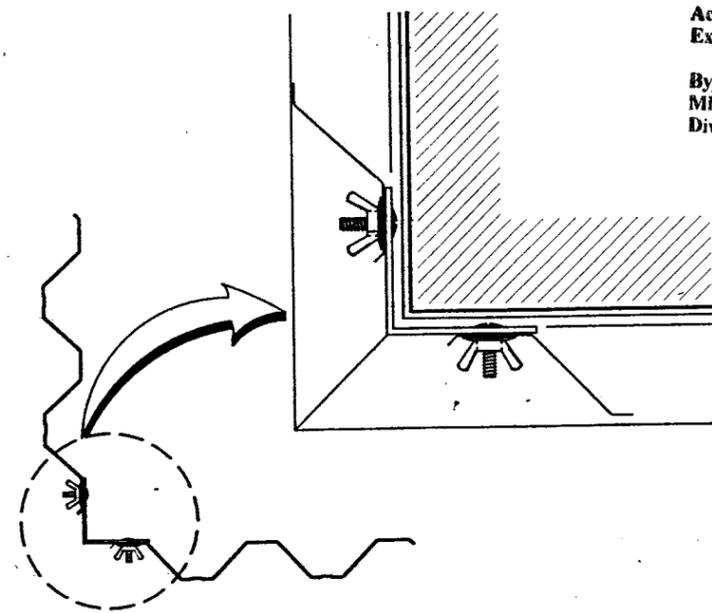
DESIGNED BY: JUAN JARA
DATE: 12-5-07
SCALE: N.T.S.
JOB NO: 3126
SHEET 3
OF: 4

.063 ALUMINUM STORM PANELS

*Moncor*  
5/16/08



**WINGNUT CONNECTION DETAIL.**

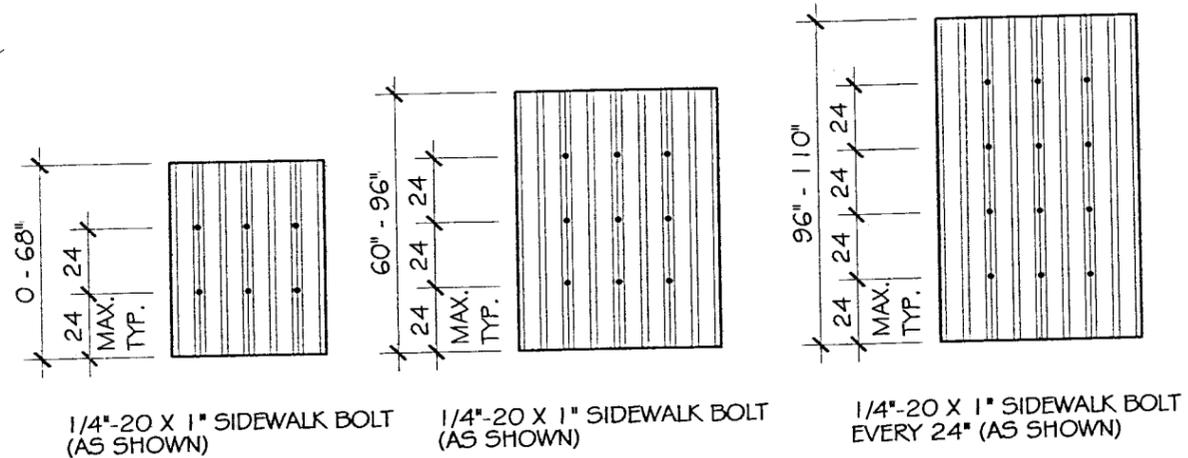


**CORNER CONNECTION**

**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
 Acceptance No. *08-0123.06*  
 Expiration Date *04/21/2009*  
 By *Heather A. Walker*  
 Miami Dade Product Control  
 Division

**ADDITIONAL HARDWARE**

1/4"-20 X 1" PAN OR TRUSS HEAD	1/4"-20 X 3/4" KNURLE STUD 18-8 STAINLESS STEEL	1/4"-20 WASHED WINGNUT 7/8" O.D.
1/4"-20 X 1" HEX HEAD.	1/4"-20 X 1" FLOOR PLUGS ( SIDEWALK BOLT ) 18-8 STAINLESS STEEL	1/4" I.D. 3/4" O.D. FLAT WASHER
1/4"-20 LOCK NUT.		KEYHOLE WASHER
1/4"-20 NUT.		



**VERTICAL ELEVATIONS.**

PANEL HEIGHT	0" - 68"	68" - 102"	102" - 110"
	MIN. DISTANCE BETWEEN GLASS AND PANEL		
WALL MOUNT	<b>3 1/2"</b>	<b>3 1/2"</b>	<b>3 1/2"</b>
INSIDE MOUNT	<b>3 1/2"</b>	<b>3 1/2"</b>	<b>3 1/2"</b>
BUILD OUT	<b>3 1/2"</b>	<b>3 1/2"</b>	<b>3 1/2"</b>
DIRECT MOUNT	<b>3 1/2"</b>	<b>3 1/2"</b>	<b>3 1/2"</b>

**GENERAL NOTES:**

- WHEN ANCHORING INTO WOOD, THE WOOD MUST BE A MINIMUM 2 X 4 EQUAL TO #2 SOUTHERN PINE AND STRUCTURALLY PART OF THE FRAMING STRUCTURE OR SECURELY ATTACHED TO FRAMING STRUCTURE.
- NOTE: NO INCREASE IN ALLOWABLE STRESS WAS USED IN THE DESIGN OF THIS PRODUCT AND ALSO IN THE FASTENER ANALYSIS.
- REFER TO SCHEDULES FOR MINIMUM DISTANCES BETWEEN GLASS AND PANEL, ANCHOR SPACING FOR SPECIFIC ANCHORS AND EDGE DISTANCE (E.D.) FOR SPECIFIC ANCHORS.

REVISIONS	BY:
2/26/96	
4/30/96	J.J.
10/13/04	J.J.
12/5/07	J.J.
5-13-08	J.J.

**RAMMS ENGINEERING, INC.**  
*Structural Design*  
 2100 W. 76th STREET, SUITE 311  
 HIALEAH, FLORIDA 33016  
 Robert S. Monstour  
 PH: 305-622-3141  
 EB 0006024  
 Lic. # 11955

**Miami Dade Aluminum Supply**  
 1615 WEST 31 PLACE  
 HIALEAH, FLORIDA

**.063 ALUMINUM STORM PANELS**

DRAWN BY:	JUAN JARA
DATE:	12-5-07
SCALE:	N.T.S.
JOB No:	3126
SHEET	<b>4</b>
OF: 4	