



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)

Miami Dade Aluminum Supply, Inc.
1615 W. 31st 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 January 08, 2009, 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 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 # **08-0123.06** 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., M.S.**



Helmy A. Makar
 04/01/2009

NOA No. 09-0114.02
Expiration Date: 04/21/2014
Approval Date: 04/01/2009
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. 09-0114.02
Expiration Date: 04/21/2014
Approval Date: 04/01/2009

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. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 08-0123.06

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

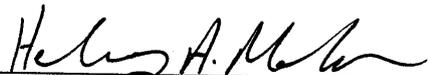
1. Anchor Calculations, dated 01/05/08, Pages 1 through 24 of 24, prepared by Ramms Engineering, Inc., signed and sealed by Robert Monsour, P.E.

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. 09-0114.02
Expiration Date: 04/21/2014
Approval Date: 04/01/2009

Miami Dade Aluminum Supply, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

5. 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 January 08, 2009, signed and sealed by Robert S. Monsour, P.E.*

B. TESTS

1. *Test report on Uniform Static Air Pressure Test, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-08-2231A, dated December 30, 2008, signed and sealed by Candido F. Font, P.E.*
2. *Test report on Large Missile Impact & Cyclic Wind Pressure Test, prepared by Hurricane Engineering & Testing Inc., Report No. HETI-08-2231B, dated December 30, 2008, signed and sealed by Candido F. Font, P.E.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

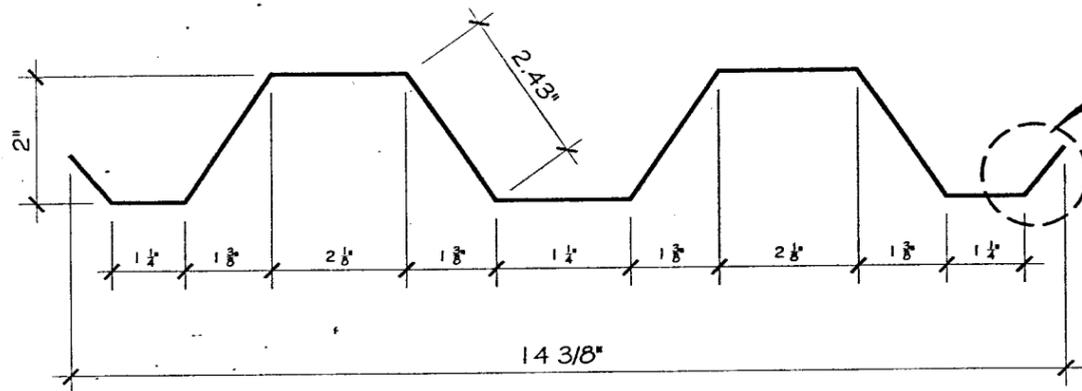
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *Certified Tensile Test Report issued by Hurricane Engineering & Testing Inc., Report No. HETI-08-T177, dated 12/30/2008, signed and sealed by Candido F. Font, P.E.*

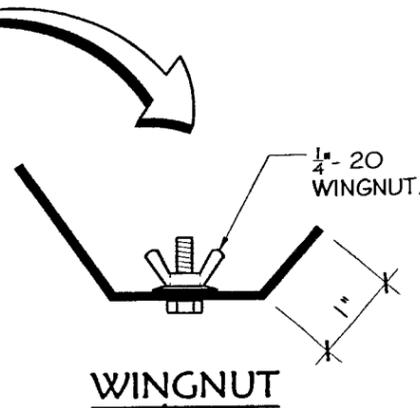


Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 09-0114.02
Expiration Date: 04/21/2014
Approval Date: 04/01/2009

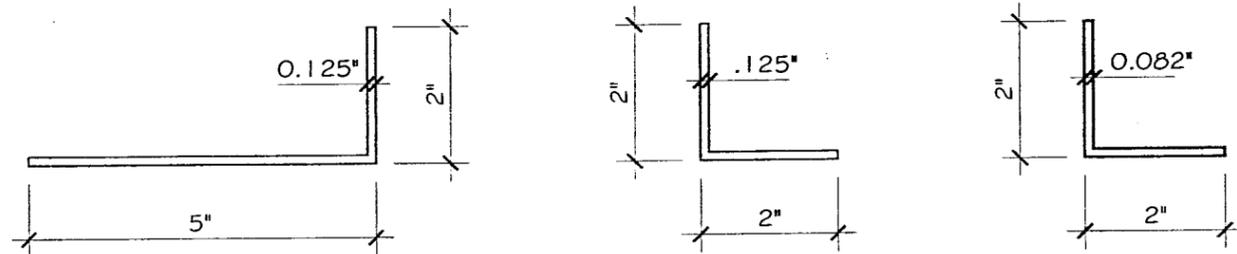


TYPICAL PANEL SECTION

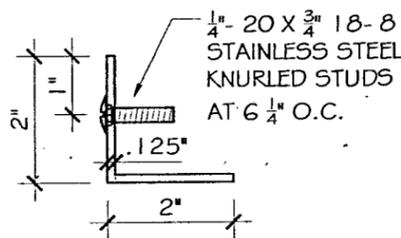
.063" (MIN.) ALUMINUM STORM PANELS
ALUMINUM ALLOY 5052-H32



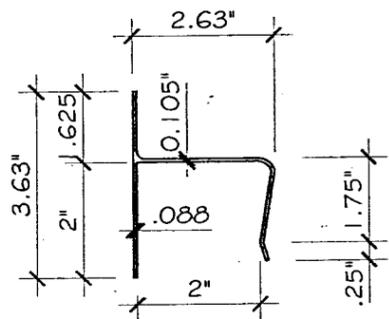
WINGNUT



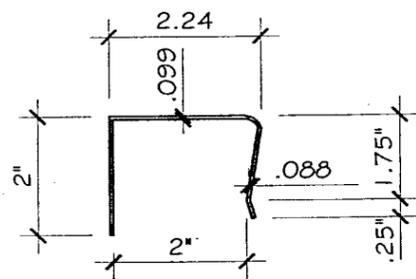
VARIOUS ANGLES DETAIL



STUDDED 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, 2007 EDITION AND ASCE 7-05 WIND CODE. (146 MPH)

DESIGN CRITERIA:

- WIND LOAD PER FLORIDA BUILDING CODE, 2007 PRESSURE REQUIREMENT CALCULATIONS MUST BE PERFORMED PER ASCE 7-05 "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 = 107")

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-0114.02
Expiration Date 04/21/2014
By *Helmut A. Mohr*
Miami Dade Product Control
Division

Monsieur
1/9/09

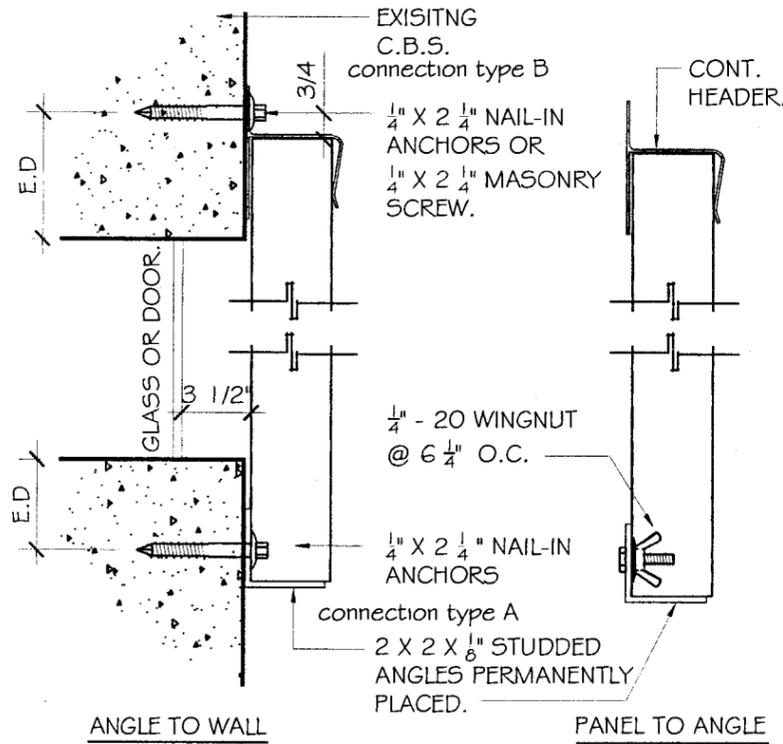
.063 ALUMINUM STORM PANELS

REVISIONS	BY:
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.
1-8-09	J.J.

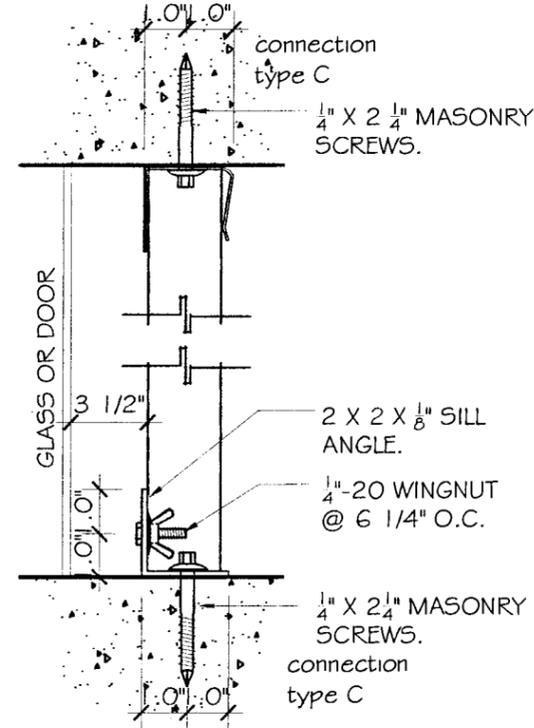
RAMMS ENGINEERING, INC.
Structural Design
Robert S. Monour
2100 W. 76th STREET, SUITE 311
HIALEAH, FLORIDA 33016
PH: 305-822-3141
EB 0006024
Lic. # 11955

Miami Dade Aluminum Supply
1615 WEST 31 PLACE
HIALEAH, FLORIDA

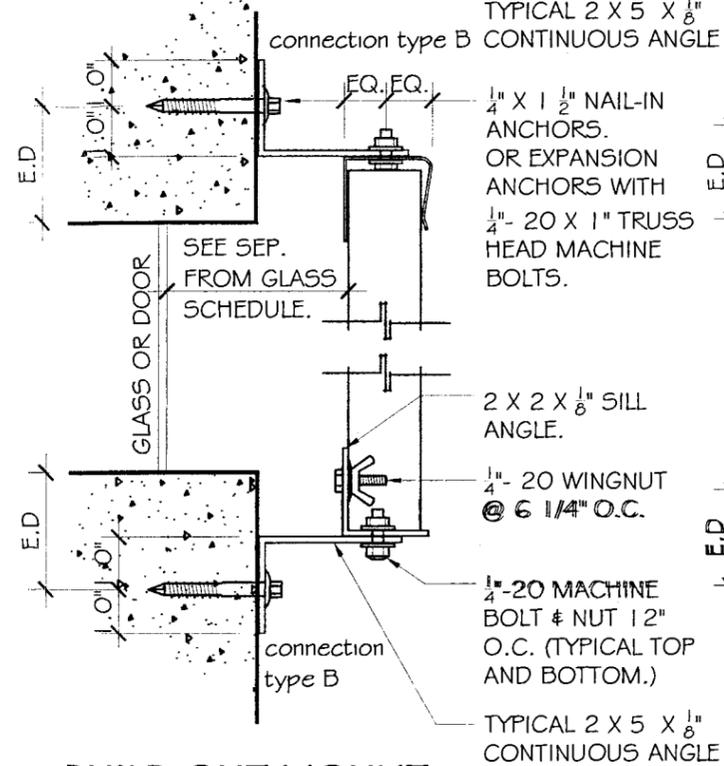
DESIGNED BY: JUAN JARA
DATE: 12-5-07
SCALE: N.T.S.
JOB No: 3126
SHEET 1
OF: 4



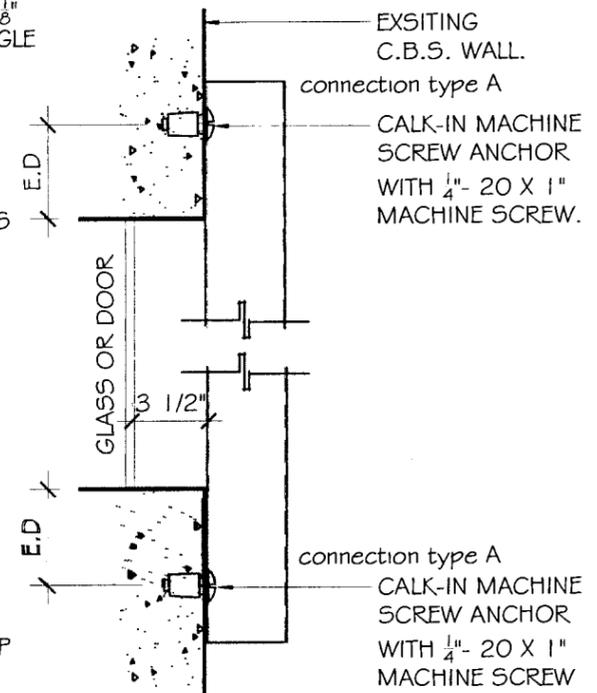
WALL MOUNT SECTION.



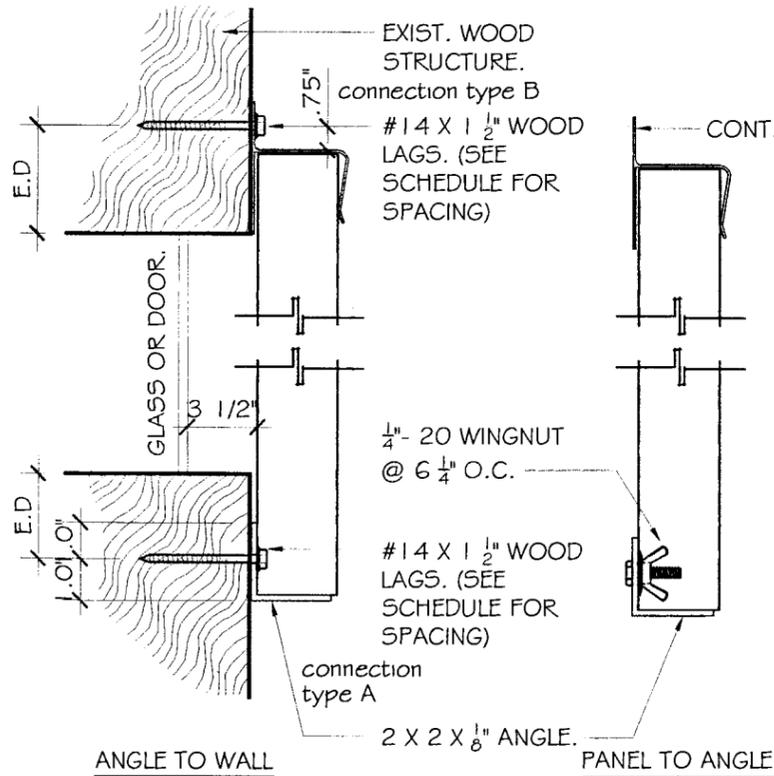
CEILING/INSIDE MOUNT.



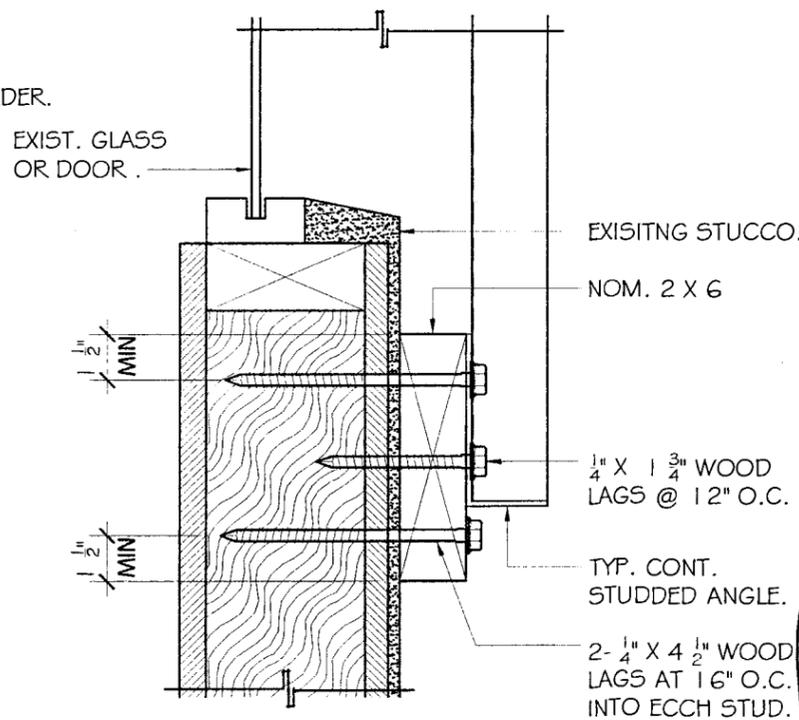
BUILD OUT MOUNT.



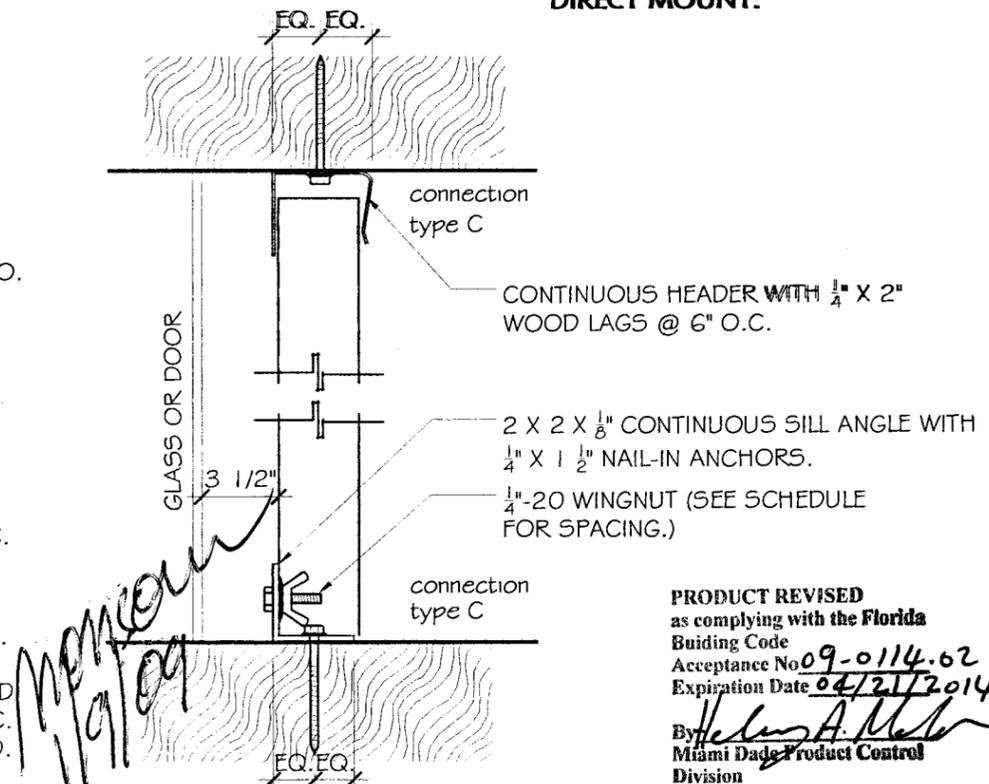
**WALL MOUNT SECTION.
DIRECT MOUNT.**



WALL MOUNT SECTION.



WALL MOUNT SECTION / BOTTOM.



CEILING / INSIDE MOUNT.

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No 09-0114.62
 Expiration Date 04/21/2014
 By *Helmut A. Meier*
 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. Monsour
 2100 W. 78th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 PH: 305-922-3141
 EB 0006024
 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

.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.

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	
	1/4" MASONRY SCREWS 1 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"

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	
	CALK-IN 1/2" MACHINE SCREW ANCHOR USED W/ 1/4"- 20 MACHINE SCREW	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"	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"	5"	6"	5"	5"	5"	6"	6"	6"	6"	4"	4"

HARDWARE SCHEDULES			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.

Manson
1/9/09

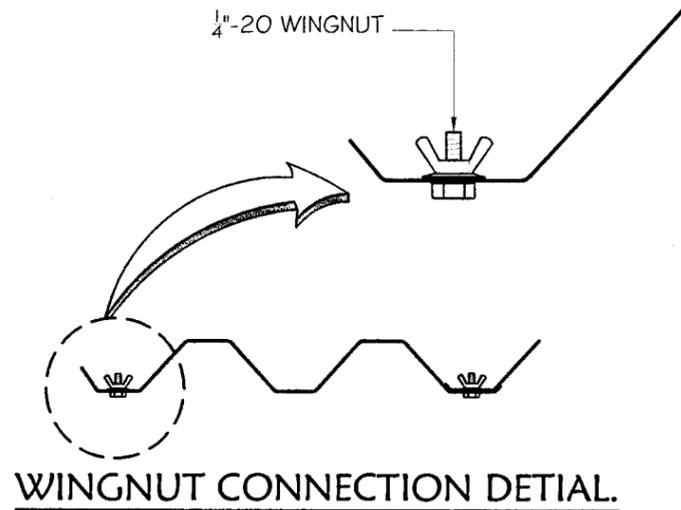
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 09-0114.02
Expiration Date 04/21/2014
By *Helmut A. Weber*
Miami Dade Product Control
Division

.063 ALUMINUM STORM PANELS

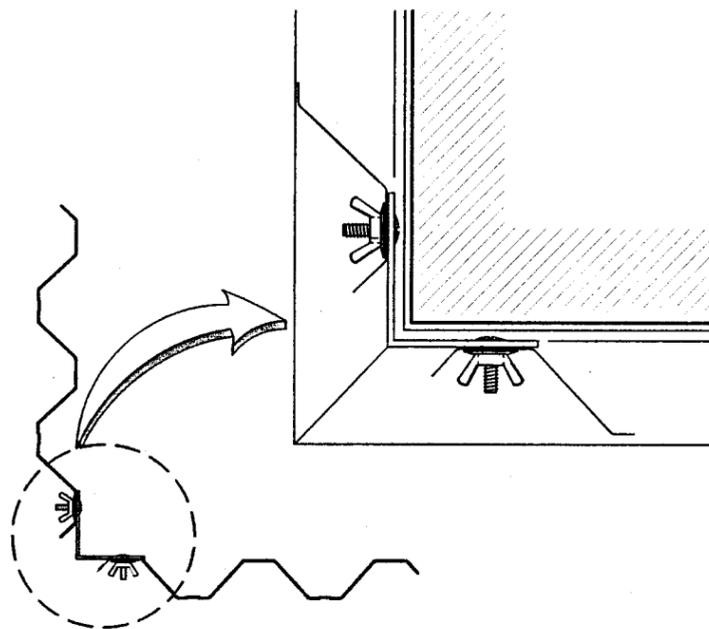
RAMMS ENGINEERING, INC.
Structural Design
Robert S. Moreau
2100 W. 78th STREET, SUITE 311
HIALEAH, FLORIDA 33016
PH: 305-822-3141
EB 0006024
Lic. # 11865

Miami Dade Aluminum Supply
1615 WEST 31 PLACE
HIALEAH, FLORIDA

DESIGNED BY: JUAN JARRA
DATE: 12-5-07
SCALE: N.T.S.
JOB No: 3126
SHEET 3
Of: 4



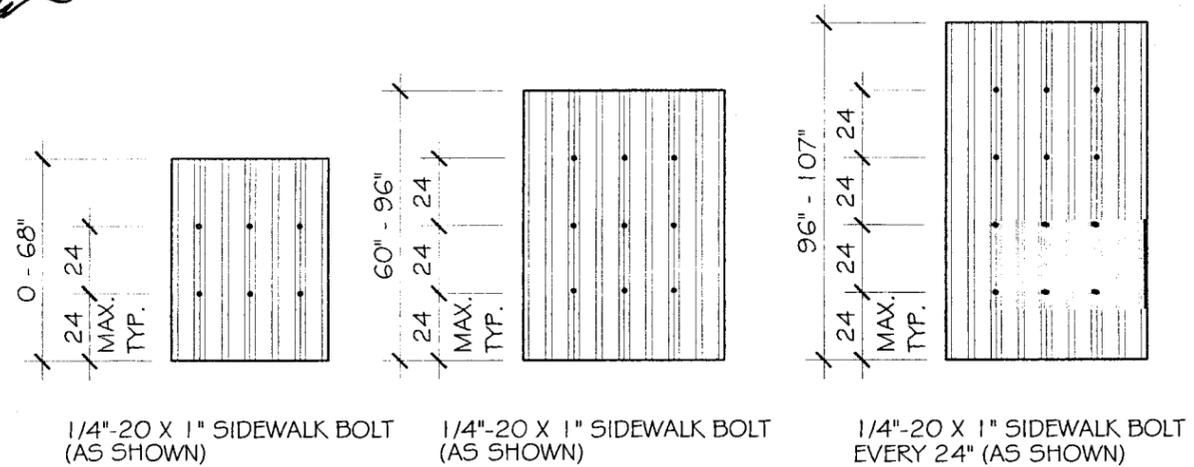
WINGNUT CONNECTION DETAIL.



CORNER CONNECTION

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 09-0114.02
 Expiration Date 04/21/2014
 By Robert S. Mansour
 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.

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.
- REFER TO SCHEDULES FOR MINIMUM DISTANCES BETWEEN GLASS AND PANEL, ANCHOR SPACING FOR SPECIFIC ANCHORS AND EDGE DISTANCE (E.D.) FOR SPECIFIC ANCHORS.

• NOTE: NO INCREASE IN ALLOWABLE STRESS WAS USED IN THE DESIGN OF THIS PRODUCT AND ALSO IN THE FASTENER ANALYSIS.

*Mansour
11/9/09*

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

.063 ALUMINUM STORM PANELS

REVISIONS	BY:
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.
1-8-09	J.J.

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 78th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 Robert S. Mansour
 PH: 305-622-3141
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 Lic. # 11955

Miami Dade Aluminum Supply
 1615 WEST 31 PLACE
 HIALEAH, FLORIDA

DRAWN BY: **JUAN JARRA**
 DATE: **12-5-07**
 SCALE: **N.T.S.**
 JOB No: **3126**
 SHEET
4
 OF: 4