



**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)**

**Hurst Awning Co., Inc.**  
**6865 NW 36<sup>th</sup> Avenue**  
**Miami, FL 33147**

**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: 0.050" Aluminum Storm Panels Shutter**

**APPROVAL DOCUMENT:** Drawing No. 08-133, titled "0.050" Aluminum Storm Panel", sheets 1 through 5 of 5, prepared by Knezevich Associates, dated July 08, 2008, last revision #1 dated August 12, 2008, signed and sealed by V. J. Knezevich, 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 & renews** NOA # **07-0322.03** and consists of this page 1, evidence submitted pages E-1, E-2, E-3 & E-4 as well as approval document mentioned above.

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



*Helmy A. Makar*  
 09/11/2008

**NOA No. 08-0717.03**  
**Expiration Date: 08/19/2013**  
**Approval Date: 09/11/2008**  
**Page 1**

**Hurst Awning Co., Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-0621.06**

**A. DRAWINGS**

1. *Drawing No. 99-109, titled "0.050" Aluminum Storm Panel", prepared by Knezevich & Associates, Inc., signed and sealed by V. J. Knezevich, P.E., dated June 8, 1999, last revision #1 dated July 20, 1999, sheets 1 through 4 of 4.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of 0.050" aluminum storm panels, prepared by Construction Testing Corporation, Report No. CTC-99-023, dated May 14, 1999, signed and sealed by Yamil G. Kuri, P.E.*

**C. CALCULATIONS**

1. *Comparative Analysis, Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated June 10, 1999, pages 1 through 33, prepared by Knezevich & Associates, Inc., signed and sealed by V.J. Knezevich, P.E.*

**D. MATERIAL CERTIFICATIONS**

1. *Mill Certified Inspection Report of coils, dated May 4, 1999, for Aluminum Alloy 5052-H32 by Amcrimet, with chemical composition and physical properties.*
2. *Certified Tensile Test Report by Certified Testing Laboratories, Report No. CTL-530E, dated May 13, 1999 for sample #99-023, in accordance with ASTM E8, signed and sealed by Ramish Patel, P.E.*

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0315.02**

**A. DRAWINGS**

*See NOA 99-0621.06*

**B. TESTS**

*See NOA 99-0621.06*

**C. CALCULATIONS**

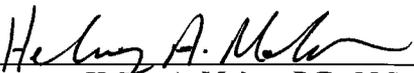
*See NOA 99-0621.06*

**D. MATERIAL CERTIFICATIONS**

*See NOA 99-0621.06*

**E. STATEMENTS**

*See NOA 99-0621.06*



Henry A. Makar, P.E., M.S.

Product Control Examiner

NOA No. 08-0717.03

Expiration Date: 08/19/2013

Approval Date: 09/11/2008

**Hurst Awning Co., Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**F. OTHER**

*See NOA 99-0621.06*

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0624.05**

**A. DRAWINGS**

1. *None.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. MATERIAL CERTIFICATIONS**

1. *None.*

**E. STATEMENTS**

1. *Statement letter of no change, issued by Hurst Awning Co., Inc., signed by Frank Cornelius, dated 6/21/02.*

**4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 02-0731.15**

**A. DRAWINGS**

1. *Drawing No. 02-373, titled "0.050" Aluminum Storm Panel", sheets 1 through 5 of 5, prepared by Knezevich & Associates, Inc., dated July 19, 2002, last revision #1 dated August 26, 2002, signed and sealed by V.J. Knezevich, P.E.*

**B. TESTS**

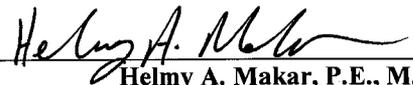
1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of 20 ga. Steel storm panels, prepared by Construction Testing Corporation, Report No. CTC-98-044, dated September 08, 1998, signed and sealed by Christopher G. Tyson, P.E.*

**C. CALCULATIONS**

1. *Comparative Analysis, Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated July 22, 2002, pages 1 through 16, prepared by Knezevich & Associates, Inc., signed and sealed by V.J. Knezevich, P.E.*

**D. MATERIAL CERTIFICATIONS**

1. *None.*



Helmy A. Makar, P.E., M.S.  
Product Control Examiner  
NOA No. 08-0717.03  
Expiration Date: 08/19/2013  
Approval Date: 09/11/2008

**Hurst Awning Co., Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 06-0424.01**

**A. DRAWINGS**

1. *Drawing No. 06-342, titled " 0.050" Aluminum Storm Panel", sheets 1 through 5 of 5, prepared by Thornton-Tomasetti Group, dated April 04, 2006, last revision #0 dated April 04, 2006, signed and sealed by J. W. Knezevich, 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.*

**6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #07-0322.03**

**A. DRAWINGS**

1. *None.*

**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.*

**7. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 08-133, titled " 0.050" Aluminum Storm Panel", sheets 1 through 5 of 5, prepared by Knezevich Associates, dated July 08, 2008, last revision #1 dated August 12, 2008, signed and sealed by V. J. Knezevich, P.E.*



Helmy A. Makar, P.E., M.S.  
Product Control Examiner  
NOA No. 08-0717.03  
Expiration Date: 08/19/2013  
Approval Date: 09/11/2008

**Hurst Awning Co., Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of 0.050" Aluminum Storm Panels, prepared by Construction Testing Corporation, Report No. CTC-08-008, dated June 11, 2008, signed and sealed by Yamil G. Kuri, P.E.*

**C. CALCULATIONS**

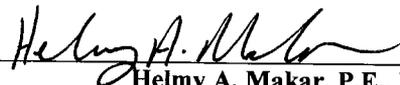
1. *Comparative Analysis, Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated July 09, 2008, pages 1 through 36, prepared by Knezevich Associates, Consulting Engineers, signed and sealed by V.J. Knezevich, P.E.*

**D. QUALITY ASSURANCE**

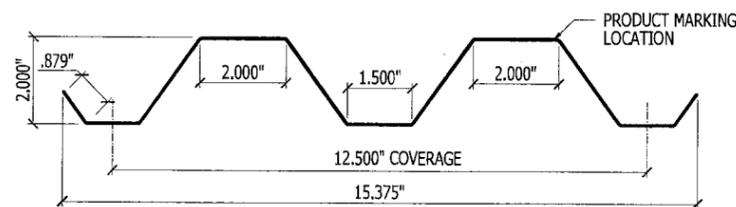
1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATION:**

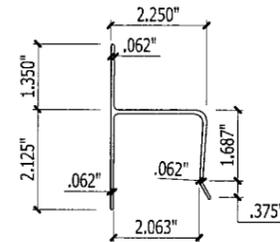
1. *None.*



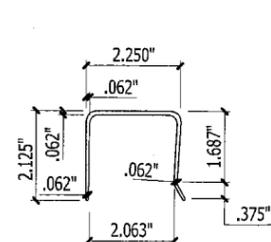
Helmy A. Makar, P.E., M.S.  
Product Control Examiner  
NOA No. 08-0717.03  
Expiration Date: 08/19/2013  
Approval Date: 09/11/2008



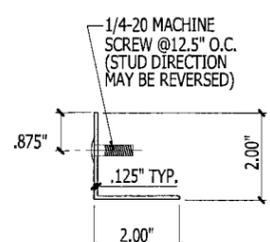
**1 STORM PANEL**  
SCALE: 3" = 1'-0"



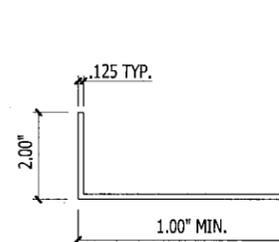
**2 "h" HEADER**  
SCALE: 3" = 1'-0"



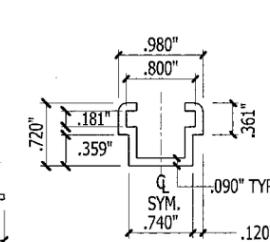
**3 "U" HEADER**  
SCALE: 3" = 1'-0"



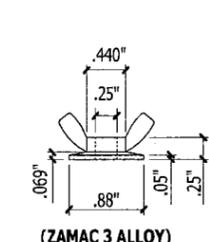
**4 STUD ANGLE**  
SCALE: 3" = 1'-0"



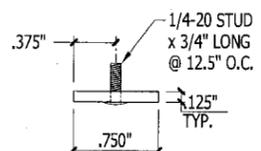
**5 ANGLE**  
SCALE: 3" = 1'-0"



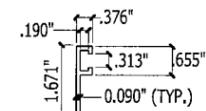
**6 C / SLIDE TRACK**  
SCALE: HALF SIZE



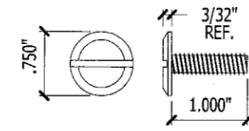
**7 WING NUT**  
SCALE: HALF SIZE



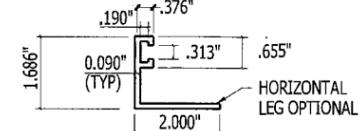
**8 STUDDED STRAP (SLIDER)**  
SCALE: HALF SIZE



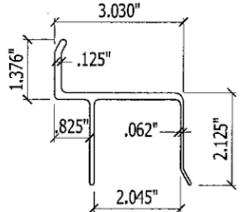
**9 "F" TRACK**  
SCALE: 3" = 1'-0"



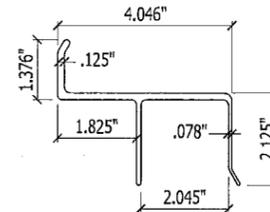
**10 1/4-20 SIDEWALK BOLT FOR SLIDE TRACK**  
SCALE: HALF SIZE



**11 E-TRACK**  
SCALE: 3" = 1'-0"



**12 NOMINAL 1" BUILD-OUT HEADER**  
SCALE: 3" = 1'-0"

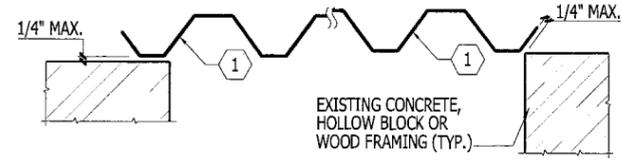


**13 NOMINAL 2" BUILD-OUT HEADER**  
SCALE: 3" = 1'-0"

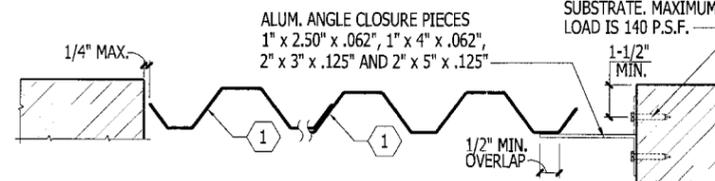
**GENERAL NOTES:**

- THESE 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 2007 EDITION.
- NO ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD LAG SCREW DESIGN.
- 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 7-05, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  SHALL BE USED.
- THESE EVALUATION DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
- USE OF THESE EVALUATION DOCUMENTS COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
- THESE EVALUATION DOCUMENTS, 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.
- ANY MODIFICATIONS OR ADDITIONS TO THESE EVALUATION DOCUMENTS WILL VOID THESE EVALUATION DOCUMENTS.
- WHEN THE SITE CONDITIONS DEVIATE FROM THESE EVALUATION DOCUMENTS, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS:
  - 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.
  - 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.
- PRODUCT MARKINGS SHALL BE WITHIN 12" OF ONE END OF THE PANEL WITH A MIN OF ONE MARKING PER PANEL AND SHALL BE LABELED AS FOLLOWS:
 

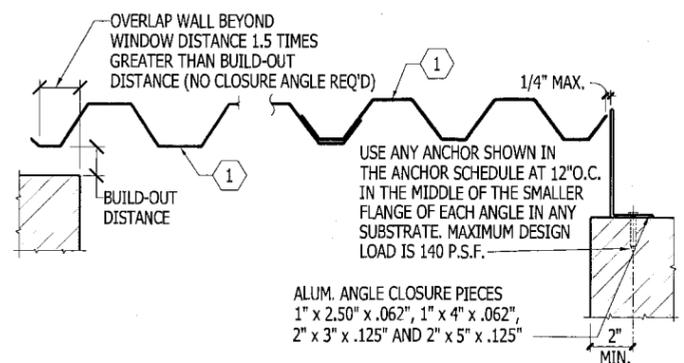
**HURST AWNING CO., INC.**  
**MIAMI, FLORIDA**  
**MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED**
- STORM PANELS SHALL BE 5052-H32 WITH THE FOLLOWING BARE METAL THICKNESS AND MECHANICAL PROPERTIES: NOMINAL 0.050" (0.0485" MIN. BARE METAL THICKNESS), WITH A MIN.  $F_y = 29.2$  KSI
- ALL BOLTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 K.S.I., U.O.N.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE, EXCEPT FOR "h" AND "u" HEADER MOUNTING CONDITIONS.



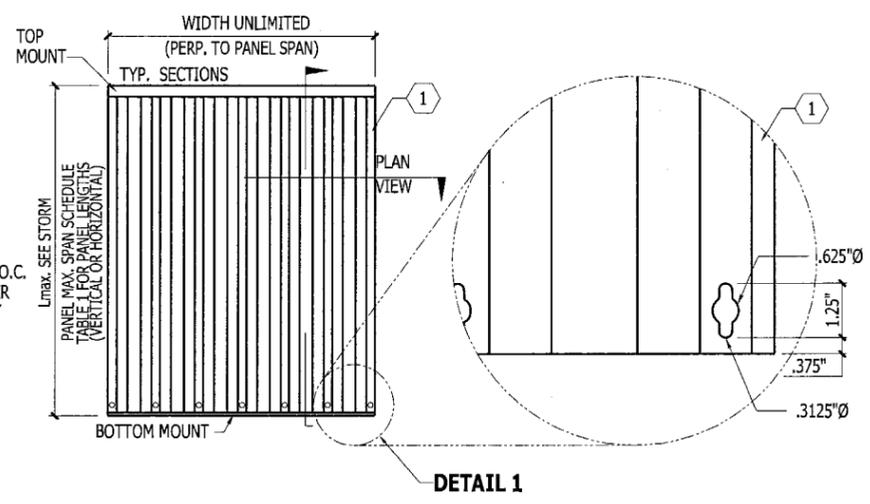
**WALL / DIRECT MOUNT CLOSURE DETAIL (PLAN VIEW)**  
SCALE: 1-1/2" = 1'-0"



**TRAP MOUNT CLOSURE DETAIL (PLAN VIEW)**  
SCALE: 1-1/2" = 1'-0"



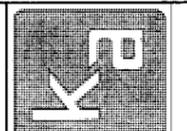
**BUILD-OUT MOUNT CLOSURE DETAIL (PLAN VIEW)**  
SCALE: 1-1/2" = 1'-0"



**TYPICAL VERTICAL MOUNT ELEVATION**  
N.T.S.

**DETAIL 1**  
SCALE: 3" = 1'-0"

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No 08-0717-03  
Expiration Date 08/19/2013  
By *Helmut A. Knezevich*  
Miami Dade Product Control Division



**KNEZEVICH ASSOCIATES**  
Consulting Engineers  
2590 S.W. 105th Terrace \* Davie, Florida 33324  
T (954) 821-6933 \* F (954) 452-7960 \* COA 27989  
website: www.knezevich.com \* email: VJK@knezevich.com  
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**0.050" ALUMINUM STORM PANEL**  
Manufacturers of Hurricane & Security Protection Products  
6865 N.W. 36th Avenue  
Miami, Florida 33147  
Phone: (305) 635-0900  
Toll Free: (800) 327-0905  
Fax: (305) 634-9078

no	date	description
0	07/02/2008	VJK
1	08/12/2008	VJK

**V.J. Knezevich**  
Professional Engineer  
FL License No.: PE 0109983

*Helmut A. Knezevich*

**AUG 12 2008**

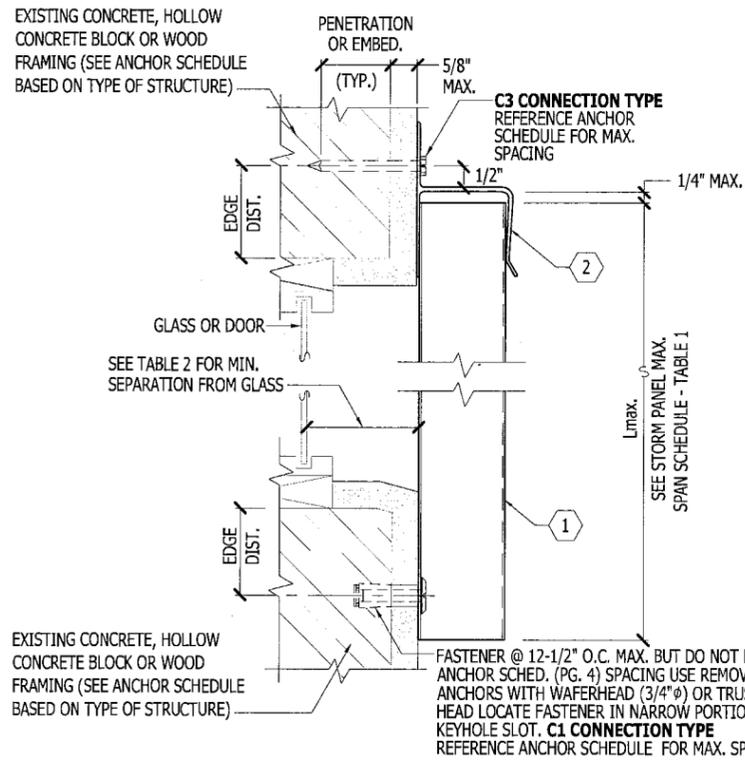
drawn by ARV scale AS NOTED

date 07/08/2008

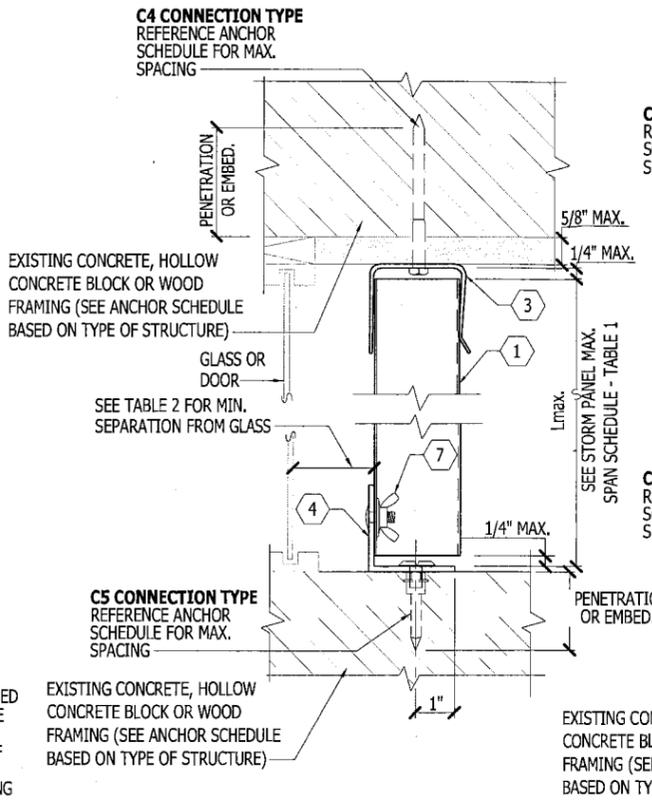
drawing no.

**08-133**

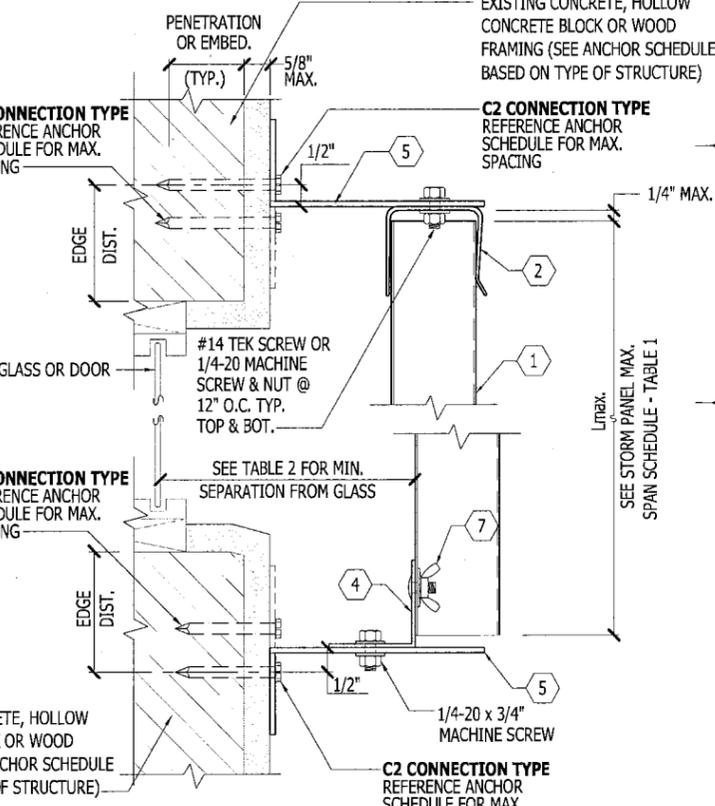
sheet 1 of 5



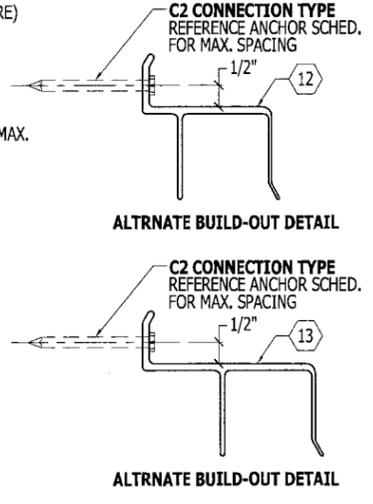
**A WALL MOUNT SECTION**  
SCALE: 3" = 1'-0"



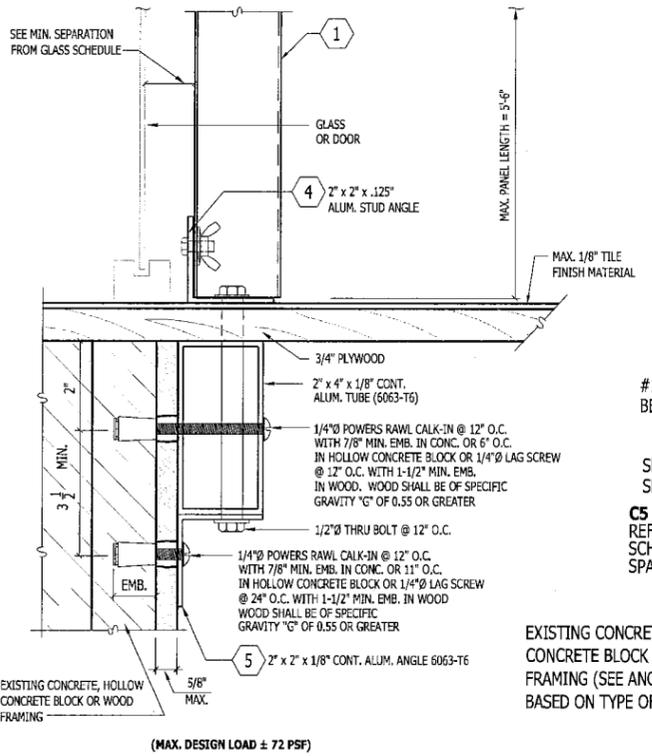
**B CEILING/FLOOR MOUNT SECTION**  
SCALE: 3" = 1'-0"



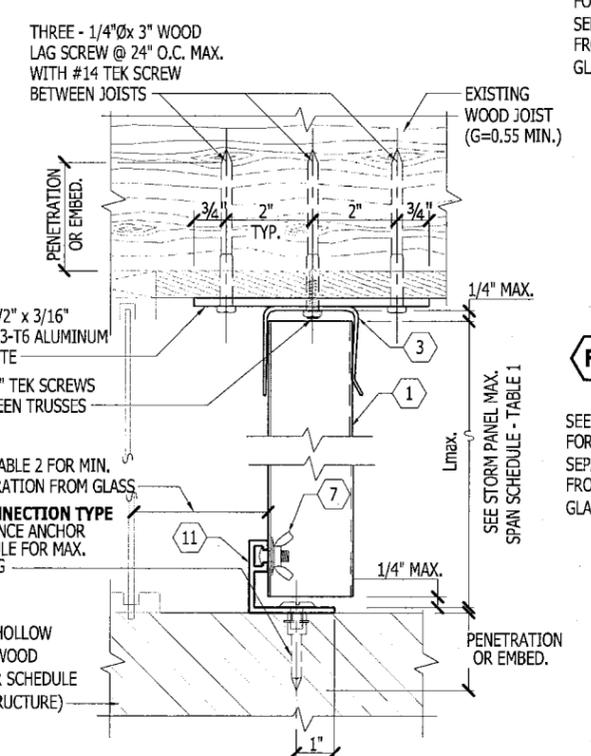
**C WALL BUILD-OUT MOUNT SECTION**  
SCALE: 3" = 1'-0"



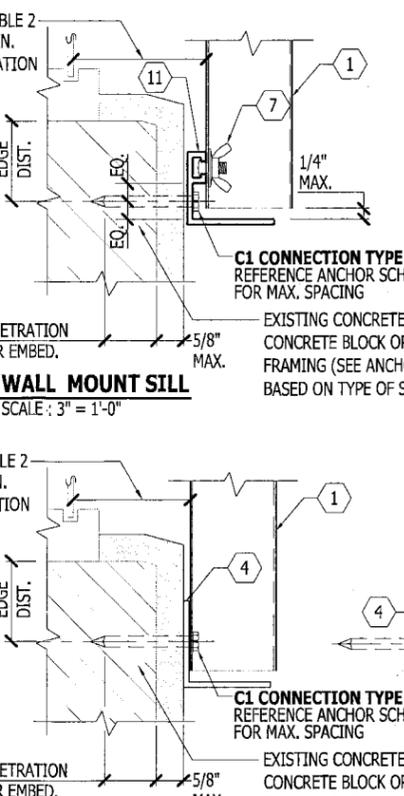
**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 08-0717-03  
Expiration Date 08/19/2013  
By *Helmut A. Knezevich*  
Miami Dade Product Control  
Division



**D "PASS THRU" DETAIL**  
SCALE: 3" = 1'-0"



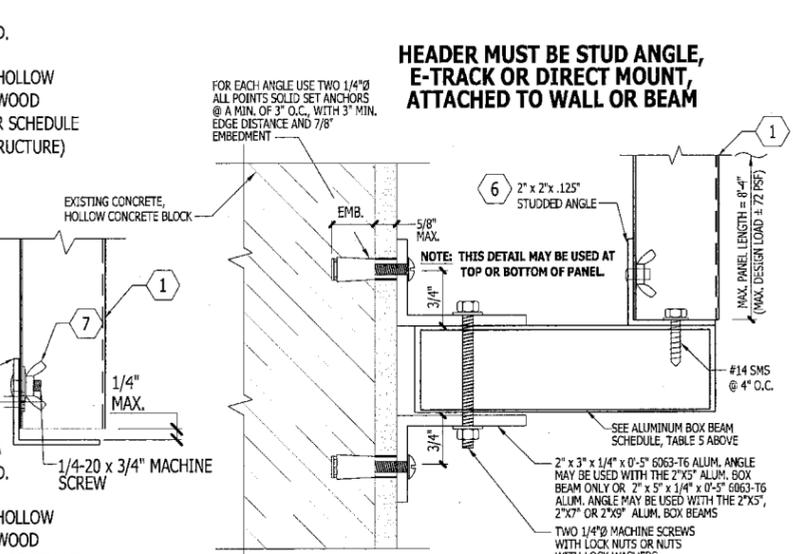
**E CEILING/FLOOR MOUNT SECTION**  
SCALE: 3" = 1'-0"



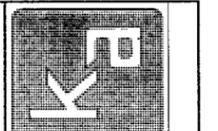
**F1 WALL MOUNT SILL**  
SCALE: 3" = 1'-0"

**TABLE 5**  
**ALUMINUM BOX BEAM SCHEDULE**

BOX BEAM SIZE (IN.)	MAX. DESIGN LOAD (PSF)	BEAM SPAN (FT-IN)	SHUTTER SPAN (FT-IN)	THRU BOLTS REQ'D	NO. OF 1/4"Ø ALL POINTS ANCHORS PER ANGLE	LENGTH OF EACH ANGLE REQUIRED (IN.)
2" x 5" (Tw = .125", Tf = .125")	72.0	7'-0"	8'-4"	2	2	5"
2" x 7" (Tw = .125", Tf = .125")	72.0	8'-8"	8'-4"	2	2	5"
2" x 9" (Tw = .125", Tf = .125")	72.0	10'-3"	8'-4"	2	2	5"



**K STORM PANEL SUPPORT BEAM**  
SCALE: 3" = 1'-0"



**KNEZEVICH ASSOCIATES**  
Consulting Engineers  
2590 S.W. 105th Terrace \* Davie, Florida 33324  
T (954) 821-6933 \* F (954) 452-7960 \* COA 27989  
website: www.knezevich.com \* email: VJK@knezevich.com  
Copyright © 2008 VJKnezevich & Associates, LLC db/a Knezevich Associates

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**0.050" ALUMINUM STORM PANEL**  
Manufacturers of Hurricane & Security Protection Products  
6865 N.W. 36th Avenue  
Miami, Florida 33147  
Phone: (305) 635-0900  
Toll Free: (800) 327-0905  
Fax: (305) 634-9078

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**HURST**  
AWNING COMPANY, INC.  
"QUALITY SERVICE SINCE 1957"

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**revisions**

no.	description	by	date
1	PREVIOUS DRAWING (08-133)	VJK	08/12/2008
2	COUNTY COMMENTS	VJK	08/12/2008

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**V.J. Knezevich**  
Professional Engineer  
FL License No.: PE 0010983

**AUG 12 2008**

drawn by: ARV scale: AS NOTED  
date: 07/08/2008  
drawing no.: **08-133**  
sheet 2 of 5



**KNEZEVICH ASSOCIATES**  
 Consulting Engineers  
 2590 S.W. 105th Terrace \* Davis, Florida 33324  
 T (954) 821-6933 \* F (954) 452-7960 \* COA 27989  
 website: www.knezevich.com \* email: VJK@knezevich.com  
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**0.050" ALUMINUM STORM PANEL**  
 Manufacturers of Hurricane & Security Protection Products  
 6865 N.W. 36th Avenue  
 Miami, Florida 33147  
 Phone: (305) 635-0900  
 Toll Free: (800) 327-0905  
 Fax: (305) 634-9078

no.	date	description
1	07/08/2008	REVISED DRAWING NO. 08-133
2	08/12/2008	COMMENTS

**V.J. Knezevich**  
 Professional Engineer  
 FL License No. PE 0010983

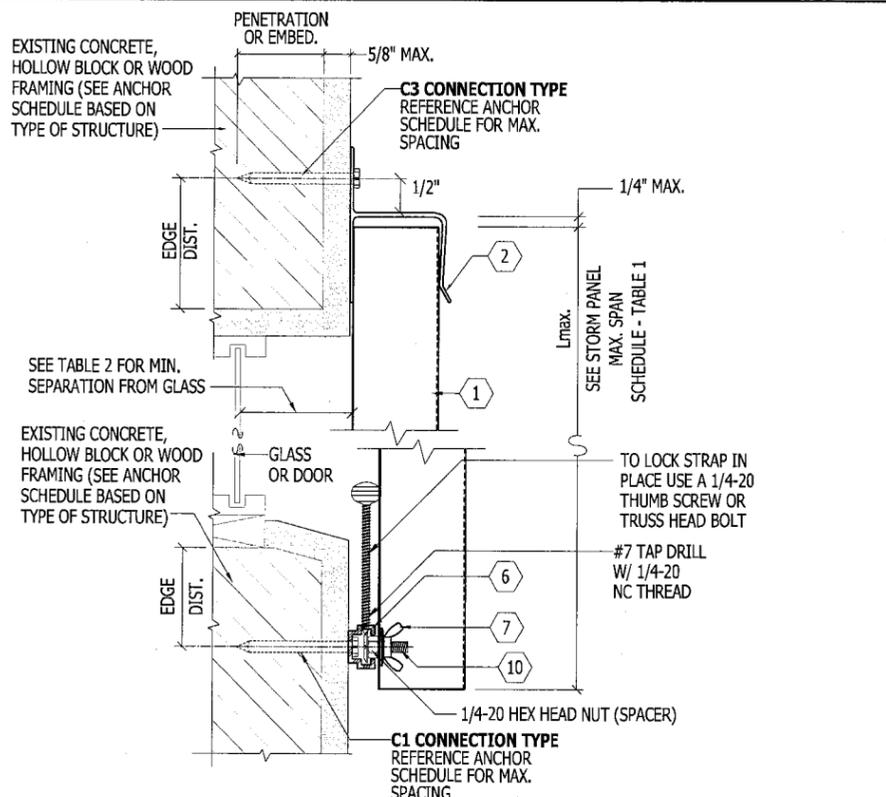
**AUG 12 2008**

drawn by ARV scale AS NOTED  
 date 07/08/2008

drawing no. **08-133**  
 sheet 3 of 5

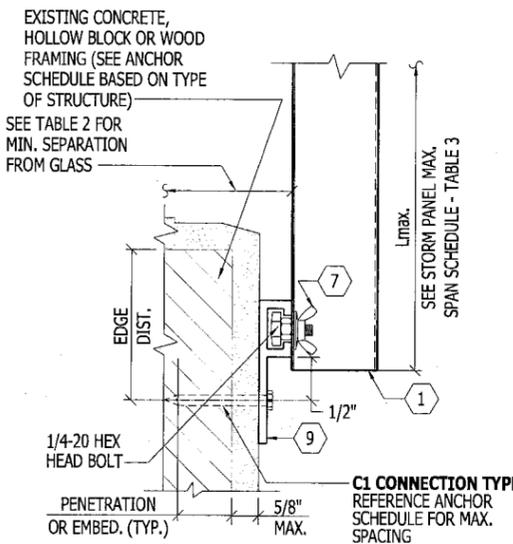
NEGATIVE DESIGN LOAD W (PSF)	FOR ALL MOUNTING CONDITIONS EXCEPT F-TRACK SEE DETAIL H
	L MAX. (FT-IN)
35.0	10 - 6
41.6	10 - 1
45.0	9 - 10
50.0	9 - 4
55.0	8 - 11
60.0	8 - 6
62.0	8 - 5
65.0	8 - 2
70.0	7 - 11
72.0	7 - 9
75.0	7 - 8
80.0	7 - 5
90.0	7 - 0
100.0	6 - 3
110.0	5 - 8
120.0	5 - 3
130.0	4 - 10
140.0	4 - 6
150.0	4 - 2
160.0	3 - 11
170.0	3 - 8
180.0	3 - 6
190.0	3 - 3
200.0	3 - 1

DESIGN LOAD (W) (PSF)	ACTUAL SHUTTER SPAN (FT - IN)	MINIMUM SEPARATION FOR INSTALLATIONS 30' OR LESS ABOVE GRADE (INCHES)	MINIMUM SEPARATION FOR INSTALLATIONS GREATER THAN 30' ABOVE GRADE (INCHES)
35.0	7 - 0	2-3/4	1-1/2
	8 - 6	3	2
	10 - 6	3-3/4	3
40.0	7 - 0	2-3/4	1-1/2
	8 - 6	3	2
	10 - 1	3-3/4	3
50.0	7 - 0	2-3/4	1-3/4
	8 - 6	3	2-1/4
	9 - 4	3-3/4	2-3/4
60.0	6 - 0	2-3/4	1-1/2
	7 - 0	2-3/4	1-3/4
	8 - 6	3	2-1/2
70.0	6 - 0	2-3/4	1-1/2
	7 - 0	2-3/4	1-7/8
	7 - 11	3-3/4	2-3/8

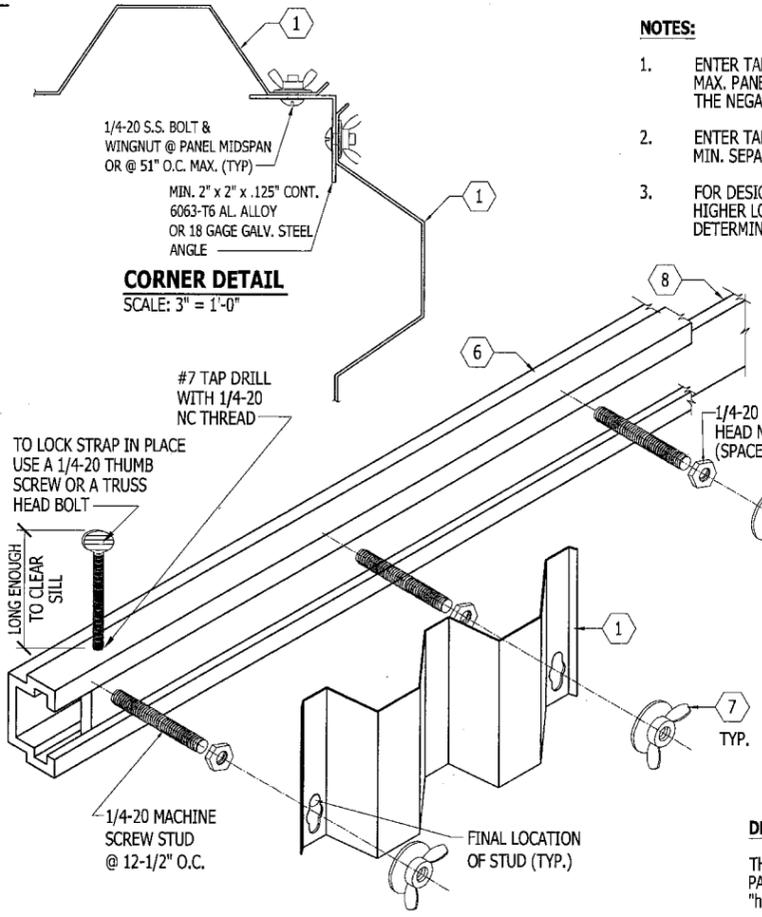


**G WAFFER HEAD BOLT ASSEMBLY**  
 SCALE: 3" = 1'-0"  
 1/4-20 NUT IS NOT NECESSARY IF NOT USED AS INSIDE MOUNT

DESIGN LOAD W (PSF)	L MAX. (FT-IN)
70.0	7 - 11
80.0	7 - 5
90.0	7 - 0



**H WALL MOUNT F-TRACK SECTION**  
 SCALE: 3" = 1'-0"



**I 3/4" STRAP ASSEMBLY (SILL ONLY - ISOMETRIC VIEW)**  
 N.T.S. SIDEWALK BOLT ASSEMBLY FOR G - SIMILAR (NO STRAP)

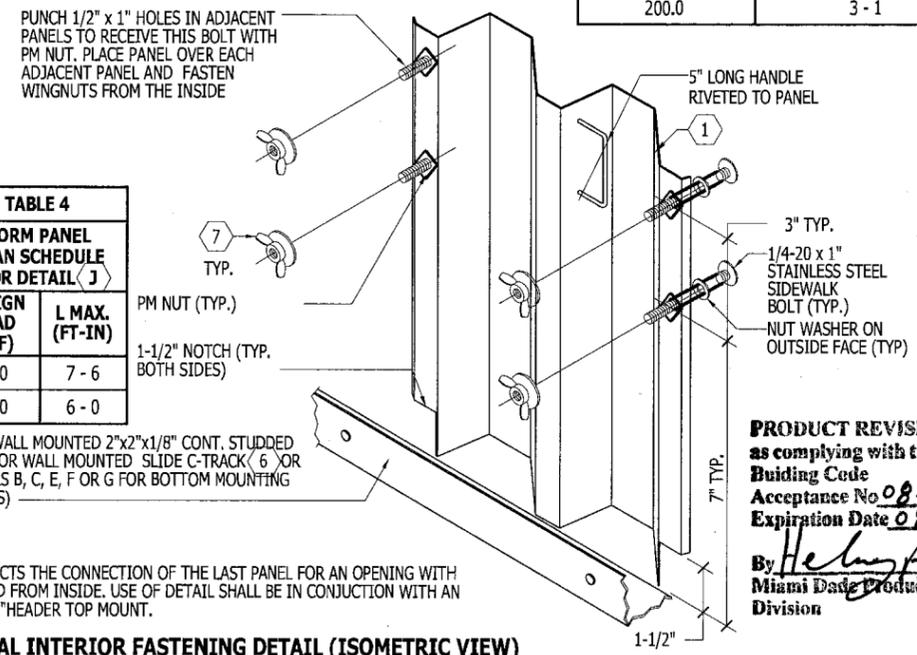
- NOTES:**
- ENTER TABLE 1 WITH NEGATIVE DESIGN LOAD TO DETERMINE MAX. PANEL SPAN. POSITIVE LOADS LESS THAN OR EQUAL TO THE NEGATIVE LOAD ARE ACCEPTABLE.
  - ENTER TABLE 2 WITH POSITIVE DESIGN LOAD TO DETERMINE MIN. SEPARATION FROM GLASS.
  - FOR DESIGN LOADS BETWEEN TABULATED VALUES, USE NEXT HIGHER LOAD OR LINEAR INTERPOLATION MAY BE USED TO DETERMINE ALLOWABLE SPANS.

DESIGN LOAD (PSF)	L MAX. (FT-IN)
60.0	7 - 6
75.0	6 - 0

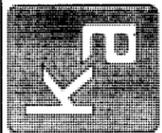
FLOOR OR WALL MOUNTED 2"x2"x1/8" CONT. STUDDED ANGLE, 4" OR WALL MOUNTED SLIDE C-TRACK 6" OR (SEE DETAILS B, C, E, F OR G FOR BOTTOM MOUNTING CONDITIONS)

**DETAIL J NOTE:**  
 THIS DETAIL DEPICTS THE CONNECTION OF THE LAST PANEL FOR AN OPENING WITH PANELS INSTALLED FROM INSIDE. USE OF DETAIL SHALL BE IN CONJUNCTION WITH AN "H" HEADER OR "U" HEADER TOP MOUNT.

**J OPTIONAL INTERIOR FASTENING DETAIL (ISOMETRIC VIEW)**  
 N.T.S.



**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 08-0717-03  
 Expiration Date 08/19/2013  
 By *Helmut A. Meier*  
 Miami Dade Product Control Division



**KNEZEVICH ASSOCIATES**  
 Consulting Engineers  
 2590 S.W. 105th Terrace \* Davie, Florida 33324  
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revisions	description	date	by
1	PREVIOUS DRAWING NO. 08-92	07/08/2008	VJK
2	COUNTY COMMENTS	08/12/2008	VJK

**V.J. Knezevich**  
 Professional Engineer  
 FL License No. PE 7010983

*[Signature]*

**AUG 12 2008**

drawn by: ARV AS NOTED

date: 07/08/2008

drawing no. **08-133**

sheet 4 of 5

**ANCHOR SCHEDULE FOR CONCRETE**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 1" EDGE DISTANCE					MIN. 2-1/2" EDGE DISTANCE																											
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																						
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																						
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5																		
1/4"Ø ITW TAPCON WITH 1-3/4" MIN. EMBEDMENT (MIN. 3,192 P.S.I. CONCRETE)	36.0	16	16	16	10	11	16	16	10	6	6.25	16	16	7	5	5	16	16	16	16	16	16	16	16	11	13	15	16	16	8	10	12.5		
	48.0	16	16	16	8	8	16	16	6.25	4	5	16	14	5	3	4	16	16	16	16	16	16	16	16	16	7	9	11	16	16	5	8	9	
	63.0	16	16	9	6	6.25	16	10	4	3	3	16	6.25	3	3	3	16	16	11	12.5	15	16	11	5	7	8	16	7	4	6.25	7			
	75.0	16	16	7	5	5	16	6.25	3	3	3	16	6.25	3	3	3	16	16	8	10	12.5	16	7	4	6.25	7	16	7	4	6.25	7			
	200.0	16	6.25	3	3	3	16	6.25	3	3	3	16	6.25	3	3	3	16	7	4	6.25	7	16	7	4	6.25	7	16	7	4	6.25	7			
1/4"Ø ELCO MALE/FEMALE "PANELMATE" WITH 1-3/4" MIN. EMBEDMENT & 1/4-20 MACHINE SCREW WITH NUT (MIN. 3,350 P.S.I. CONCRETE)	36.0																16	16	16	16	16	16	16	16	16	16	10	12.5	15	16	16	8	10	12.5
	48.0																16	16	16	16	16	16	16	16	16	16	7	9	11	16	15	5	7	9
	63.0																16	16	10	12.5	15	16	11	4	7	8	16	7	4	6.25	7			
	75.0																16	16	8	10	12.5	16	7	4	6.25	7	16	7	4	6.25	7			
	200.0																16	7	4	6.25	7	16	7	4	6.25	7	16	7	4	6.25	7			

**ANCHOR SCHEDULE FOR CONCRETE**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 2" EDGE DISTANCE					MIN. 3" EDGE DISTANCE																										
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																					
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5																	
1/4"Ø ALL POINTS SOLID SET ANCHOR WITH 7/8" EMBEDMENT & 1/4-20 STAINLESS STEEL MACHINE SCREW (MIN. 3,000 P.S.I. CONCRETE)	36.0	16	16	16	16	16	16	8	11	13	16	16	6.25	9	11	16	16	16	16	16	16	16	16	16	16	10	14	16	16	16	8	12	14
	48.0	16	16	13	14	16	16	16	5	8	10	16	12	4	7	8	16	16	16	16	16	16	16	16	16	7	11	13	16	15	5	9	11
	63.0	16	16	8	11	13	16	8	3	6.25	7	16	5	3	5	6.25	16	16	10	14	16	16	11	4	8	10	16	7	4	7	8		
	75.0	16	16	6.25	9	11	16	5	3	5	6.25	16	5	3	5	6.25	16	16	8	12	14	16	7	4	7	8	16	7	4	7	8		
	200.0	16	5	3	5	6.25	16	5	3	5	6.25	16	5	3	5	6.25	16	7	4	7	8	16	7	4	7	8	16	7	4	7	8		

**ANCHOR SCHEDULE FOR CONCRETE**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 2-3/16" EDGE DISTANCE					MIN. 3-1/8" EDGE DISTANCE																										
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																					
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																					
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5																	
5/16"Ø ITW BUILDDEX TAPCON XL WITH 1-3/4" MIN. EMBEDMENT (MIN. 2,899 P.S.I. CONCRETE)	36.0	16	16	16	16	16	16	10	15	16	16	16	8	12.5	15	16	16	16	16	16	16	16	16	16	16	11	15	16	16	16	8	12.5	15
	48.0	16	16	16	16	16	16	16	7	11	13	16	15	5	9	11	16	16	16	16	16	16	16	16	16	7	11	14	16	16	5	9	11
	63.0	16	16	10	15	16	16	11	4	8	10	16	7	4	7	9	16	16	10	15	16	16	11	5	8	10	16	7	4	7	9		
	75.0	16	16	8	12.5	15	16	7	4	7	9	16	7	4	7	9	16	16	8	12.5	15	16	7	4	7	9	16	7	4	7	9		
	200.0	16	7	4	7	9	16	7	4	7	9	16	7	4	7	9	16	7	4	7	9	16	7	4	7	9	16	7	4	7	9		

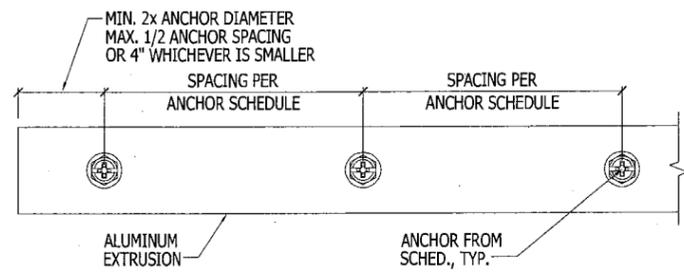
**ANCHOR SCHEDULE FOR WOOD**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 3/4" EDGE DISTANCE																			
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)									
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)									
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5					
1/4"Ø WOOD LAG WITH 1-3/4" MIN. THREAD PENETRATION SHEAR PARALLEL OR PERP. TO WOOD GRAIN G=0.42	36.0	16	16	16	15	16	16	16	10	9	10	16	16	7	7	8	16	16	7	7	8
	48.0	16	16	16	11	13	16	16	6.25	6.25	7	16	14	5	5	6.25					
	63.0	16	16	9	8	10	16	10	4	5	5	16	6.25	3	4	5					
	75.0	16	16	7	7	8	16	6.25	3	4	5	16	6.25	3	4	5					
	200.0	16	6.25	3	4	5	16	6.25	3	4	5	16	6.25	3	4	5					
1/4"Ø ELCO MALE/FEMALE "PANELMATE" WITH 1-7/8" MIN. EMBEDMENT & 1/4-20 MACHINE SCREW WITH NUT	36.0	16	16	16	16	16	16	9	9	11	16	16	6.25	8	9						
	48.0	16	16	14	12.5	14	16	16	5	7	8	16	13	4	6	7					
	63.0	16	16	8	9	11	16	9	4	5	6.25	16	6	3	4	5					
	75.0	16	16	6.25	8	9	16	6	3	4	5	16	6	3	4	5					
	200.0	16	6	3	4	5	16	6	3	4	5	16	6	3	4	5					

**ANCHOR NOTES:**

- SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM PANEL SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN TABLE 1.
- AN EFFECTIVE WIND AREA OF 10 SQ. FT. SHALL BE USED FOR DETERMINING WIND LOADS FOR ANCHORS.
- ENTER ANCHOR SCHEDULE BASED ON THE EXISTING STRUCTURE MATERIAL, ANCHOR TYPE AND EDGE DISTANCE. SELECT DESIGN LOAD GREATER THAN OR EQUAL TO NEGATIVE DESIGN LOAD ON SHUTTER AND SELECT SPAN GREATER THAN OR EQUAL TO SHUTTER SPAN.
- SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
- EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW CONCRETE BLOCK OR WOOD FRAMING. REFERENCE ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISH OR STUCCO.
- WHERE EXISTING STRUCTURE IS POST-TENSIONED CONCRETE CONTRACTOR SHALL LOCATE CABLES PRIOR TO ANCHORING AND COORDINATE ANCHORAGE SUCH THAT CABLES ARE NOT DAMAGED.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
- WHERE LAG SCREWS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" x 4" (MIN.) WOOD STUD. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING. WOOD STUD SHALL BE "SPF" G=0.42 OR GREATER DENSITY. LAG SCREWS SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD (SIDEWALK BOLT), U.O.N.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
- \* DESIGNATES ANCHORS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHERED WINGNUT.
- THE ALL POINTS SOLID SET ANCHOR MAY NOT BE USED IN CONCRETE CEILINGS OR FLOORS. ONE EXCEPTION IS THAT THIS ANCHOR MAY BE USED IN SLABS ON GRADE.



**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
 Acceptance No. 08-0717-03  
 Expiration Date 08/14/2013  
 By *[Signature]*  
 Miami Dade Product Control  
 Division

**ANCHOR SCHEDULE FOR CONCRETE BLOCK**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 1" EDGE DISTANCE					MIN. 2-1/2" EDGE DISTANCE																									
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																				
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																				
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5						
	36.0	12	12	5	4	5	7	7			3	5	5			16	16	9	8	10	11	11	3	4	6	9	9			3	4	
	48.0	9	9		3	3	5	5				4				15	15	4	6	7	8	8		3	4	7	4				3	
	63.0	7	7				4					3				11	11		4	5	6.25	3			3	5						
	75.0	5	5				3					3				9	9		3	5	5				3	5						
	200.0	3					3					3				5					5				5							
	36.0	16	16	10	8	9	13	13	3	4	5	11	11		3	4	16	16	10	9	12	13	13	3	5	7	11	11		4	6	
	48.0	16	16	5	6	7	10	10		3	4	8	5			3	16	16	5	7	9	10	10		4	5	8	5		3	4	
	63.0	13	13	3	4	5	7	3			3	6.25					13	13	3	5	7	7	3		3	4	6.25				3	
	75.0	11	11		3	4	6.25					6.25					11	11		4	6	6.25				3	6.25					3
	200.0	6.25					6.25					6.25				6.25				3	6.25				3	6.25						3

**ANCHOR SCHEDULE FOR CONCRETE BLOCK**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 1" EDGE DISTANCE					MIN. 2-1/2" EDGE DISTANCE																								
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																			
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																			
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5					
* 	36.0	16	16	15	11	14	16	16	4	6.25	8	16	16	3	5	6.25	16	16	16	11	14	16	16	5	6.25	8	16	16	3	5	6.25
	48.0	16	16	7	8	10	14	14	3	5	6	12	7		4	5	16	16	8	8	10	15	15	3	5	6	12	7		4	5
	63.0	16	16	4	6.25	8	11	5		3	4	9	3		3	4	16	16	5	6.25	8	11	5		3	4	10	3		3	4
	75.0	16	16	3	5	6.25	9	3		3	4	9	3		3	4	16	16	3	5	6.25	10	3		3	4	10	3		3	4
	200.0	9	3		3	4	9	3		3	4	9	3		3	4	10	3		3	4	10	3		3	4	10	3		3	4
* 	36.0	16	16	16	14	16	16	16	7	8	9	16	16	5	6.25	8	16	16	16	16	16	16	16	7	10	12	16	16	5	8	10
	48.0	16	16	11	10	12	16	16	4	6	7	16	10	3	5	6	16	16	12	13	16	16	16	5	7	9	16	11	3	6.25	7
	63.0	16	16	6.25	8	9	15	7	3	4	5	13	4		4	4	16	16	7	10	12	16	8	3	6	7	15	5		5	6.25
	75.0	16	16	5	6.25	8	13	4		4	4	13	4		4	4	16	16	5	8	10	15	5		5	6.25	15	5		5	6.25
	200.0	13	4		4	4	13	4		4	4	13	4		4	4	15	5		5	6.25	15	5		5	6.25	15	5		5	6.25

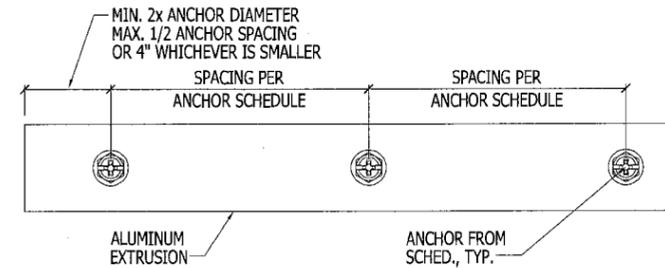
**ANCHOR SCHEDULE FOR CONCRETE BLOCK**

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	N/A					MIN. 4" EDGE DISTANCE																							
		SPANS UP TO 5'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 10'-6" (SEE NOTE 1)																		
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																		
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5				
	36.0															16	16	16	14	16	16	16	5	8	10	16	16		7	9
	48.0															16	16	8	11	14	15	15		6.25	8	12	7		5	6.25
	63.0															16	16	5	8	10	11	5		4	6.25	9			4	5
	75.0															16	16		7	9	9			4	5	9			4	5
	200.0															9			4	5	9			4	5	9			4	5

**ANCHOR NOTES:**

- 1. SEE ANCHOR NOTES ON PAGE 4 OF 5.

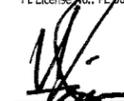


**KNEZEVICH ASSOCIATES**  
 Consulting Engineers  
 2590 S.W. 105th Terrace \* Davie, Florida 33324  
 T (954) 821-6933 \* F (954) 452-7960 \* COA 27989  
 website: www.knezevich.com \* email: VJK@knezevich.com  
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no.	date	by	description
0	07/08/2008	VJK	REVISED DRAWING NO. 08-133
1	08/12/2008	VJK	CONTRACT COMMENTS

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No 08-0717-03  
 Expiration Date 08/19/2013  
 By *Heather A. Miller*  
 Miami Dade Product Control Division

**V.J. Knezevich**  
 Professional Engineer  
 FL License No. PE 2010983  
  
**AUG 12 2008**  
 drawn by ARV scale AS NOTED  
 date 07/08/2008  
 drawing no. **08-133**  
 sheet 5 of 5