



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)

Florida Storm Panels, Inc.
14475 N. W. 26th Avenue
Opa Locka, Florida 33054

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: 0.035" (min.) Galvanized Steel Storm Panels Shutter

APPROVAL DOCUMENT: Drawing No. 05-536, titled " 20 Ga. Galvanized Steel Storm Panel ", sheets 1 through 4 of 4, prepared by Thornton-Tomasetti Group, dated January 06, 2006, last revision #0 dated January 06, 2006, signed & sealed by J.W. Knezevich, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and 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 renews NOA # 06-0110.03 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
 11/01/2007

NOA No. 07-0817.02
Expiration Date: 01/04/2009
Approval Date: 11/01/2007

Florida Storm Panels, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVALS

A. DRAWINGS

1. *Drawing No. 95-498, Florida Storm Panels, Inc., 20 gage Storm Panels, Sheets 1, 2, 3 and 4 of 4, prepared by Knezevich & Associates, Inc., dated 02/26/97, 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 gage storm panels, prepared by Construction Testing Corporation, Report No. CTC-95-032, dated September 26 through 29, 1995, signed and sealed by Christopher G. Tyson, P.E.*
2. *Test report on Large Missile Impact and Cyclic Wind Pressure Test, of 20 Gage Steel Storm Panels, prepared by Construction Testing Corporation, Report No. CTC-96-009, dated February 26 & 28, 1996, signed and sealed by Christopher G. Tyson, P.E.*

C. CALCULATIONS

1. *Storm panel calculations and comparative analysis, Sheet 1 through 24, Knezevich and Associates, Inc., signed and sealed by V.J. Knezevich, P.E., dated October 2, 1995.*
2. *Storm panel calculations and comparative analysis, by Knezevich and Associates, Inc., signed and sealed by V.J. Knezevich, P.E., dated 06/14/96 and 02/26/97.*

D. MATERIAL CERTIFICATION

1. *Mill Certified Inspection Report, dated 5/26/95, for Hot Dipped Galvanized Steel, ASTM A446 by Productor de Acero Laktbal, C.A., with chemical composition and physical properties.*
2. *Tensile Test Reports from QC Metallurgical, Inc., Job No. 5IM-2162 dated 09/26/95 for galvanized steel, tested per ASTM E8-93, signed and sealed by James W. Roese, P.E.*
3. *Tensile Test Reports from QC Metallurgical, Inc., Job No. 6CM-719 dated 03/25/96 for galvanized steel, tested per ASTM E8-93, signed and sealed by Frank Grate, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-0105.03

A. DRAWINGS

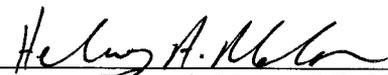
1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-0817.02
Expiration Date: 01/04/2009
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Florida Storm Panels, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. MATERIAL CERTIFICATIONS

1. *None.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-0804.01

A. DRAWINGS

1. *Drawing No. 99-097, Florida Storm Panels, Inc., titled "20 Ga. Galvanized Steel Storm Panel", Sheets 1, 2, 3 and 4 of 4, prepared by Knezevich & Associates, Inc., dated 07/19/99, last revision #2 dated 12/23/99, signed and sealed by V.J. Knezevich, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Anchor calculations, sheets 1 through 28, prepared by Knezevich and Associates, Inc., signed and sealed by V.J. Knezevich, P.E., dated July 21, 1999.*
2. *Revised anchor calculations, sheets 1 through 8, prepared by Knezevich and Associates, Inc., signed and sealed by V.J. Knezevich, P.E., dated December 29, 1999.*

D. MATERIAL CERTIFICATIONS

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0531.02

A. DRAWINGS

1. *Drawing No. 99-097, titled "20 Ga. Galvanized Steel Storm Panel", sheets 1 through 4 of 4, prepared by Knezevich & Associates, Inc., dated July 19, 1999, last revision #3 dated May 22, 2002, signed and sealed by V.J. Knezevich, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0826.07

A. DRAWINGS

1. *None.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-0817.02
Expiration Date: 01/04/2009
Approval Date: 11/01/2007

Florida Storm Panels, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. MATERIAL CERTIFICATIONS

1. *None.*

6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #06-0110.03

A. DRAWINGS

1. *Drawing No. 05-536, titled " 20 Ga. Galvanized Steel Storm Panel ", sheets 1 through 4 of 4, prepared by Thornton-Tomasetti Group, dated January 06, 2006, last revision #0 dated January 06, 2006, signed & sealed by J.W. Knezevich, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Revised Anchor Calculations and details for 20 Ga. Galvanized steel Storm Panels, dated December 20, 2005, pages 1 through 24 of 24, prepared by Thornton-Tomasetti Group, signed and sealed by J. W. Knezevich, P.E.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *None.*

7. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

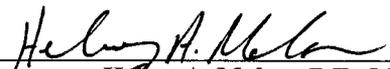
1. *None.*

D. QUALITY ASSURANCE

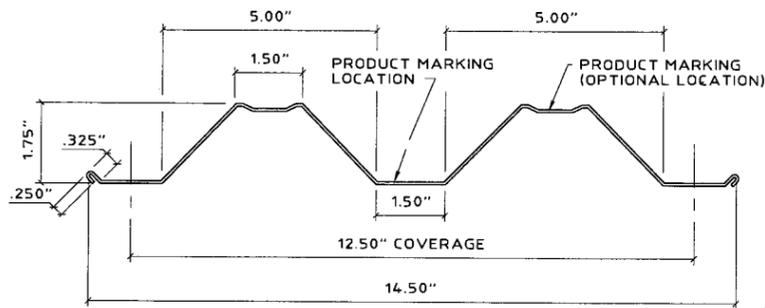
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

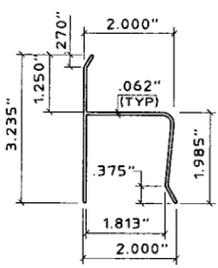
1. *None.*



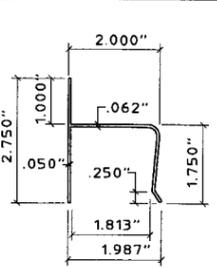
Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 07-0817.02
Expiration Date: 01/04/2009
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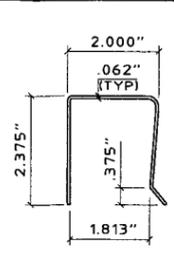
1 STORM PANEL
SCALE: 3" = 1'-0"



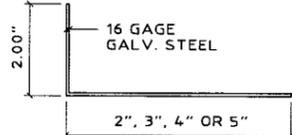
2 "h" HEADER
SCALE: 3" = 1'-0"



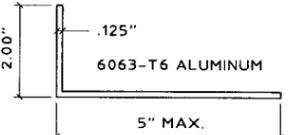
3 "h" HEADER
SCALE: 3" = 1'-0"



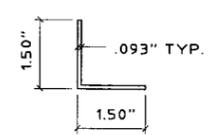
4 "U" HEADER
SCALE: 3" = 1'-0"



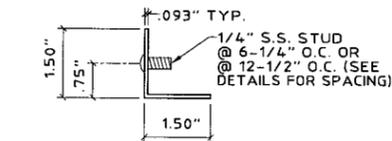
5 ANGLE
SCALE: 3" = 1'-0"



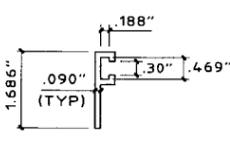
5a ANGLE
SCALE: 3" = 1'-0"



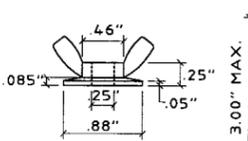
6 ANGLE
SCALE: 3" = 1'-0"



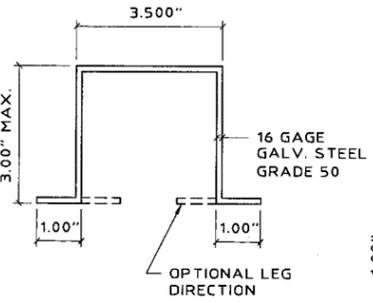
7 STUDDED ANGLE
SCALE: 3" = 1'-0"



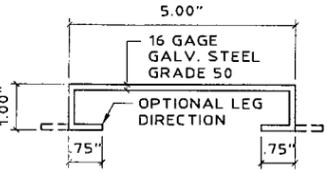
8 "F" TRACK
SCALE: HALF SIZE



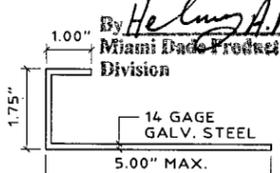
9 WINGNUT
SCALE: HALF SIZE



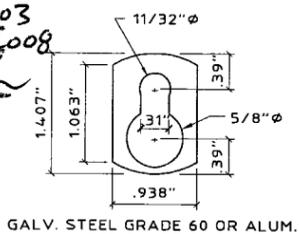
10 STANDARD CHANNEL
SCALE: HALF SIZE



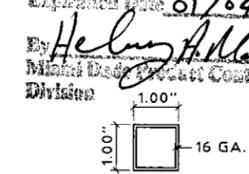
11 SOFFIT CHANNEL
SCALE: HALF SIZE



12 CLOSURE
SCALE: 3" = 1'-0"



13 KEYHOLE WASHER
SCALE: HALF SIZE



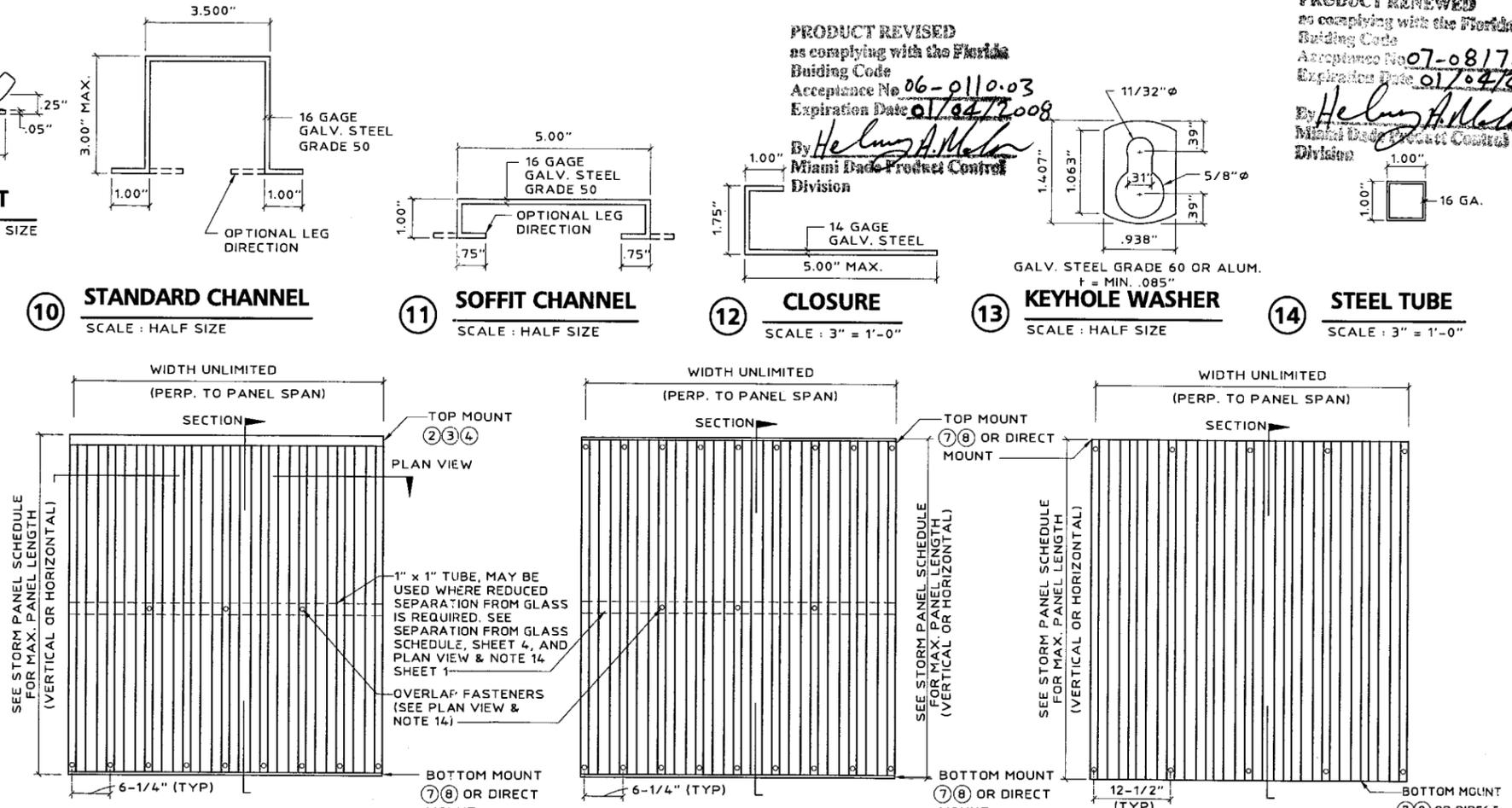
14 STEEL TUBE
SCALE: 3" = 1'-0"

- GENERAL NOTES:**
- THESE APPROVAL DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISION SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE 2004 WITH 2005 SUPPLEMENT.
 - NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW DESIGN.
 - DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH ASCE 7-02, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ SHALL BE USED.
 - THESE APPROVAL DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
 - USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
 - THESE APPROVAL 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 APPROVAL DOCUMENTS WILL VOID THE APPROVAL DOCUMENTS.
 - WHEN THE SITE CONDITIONS DEVIATE FROM THESE APPROVAL 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

- STORM PANELS SHALL BE 20 GAUGE STEEL ($t = .035$) CONFORMING TO ASTM A653, STRUCTURAL QUALITY, GRADE 40, G 60 GALVANIZED COATING, WITH A MINIMUM $F_y = 46.7$ KSI.
- PRODUCT MARKINGS SHALL BE WITHIN 12" OF ONE END OF THE PANEL WITH A MINIMUM OF ONE MARKING PER PANEL AND SHALL BE PERMANENTLY LABELED AS FOLLOWS:

FLORIDA STORM PANELS, INC.
OPA LOCKA, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED

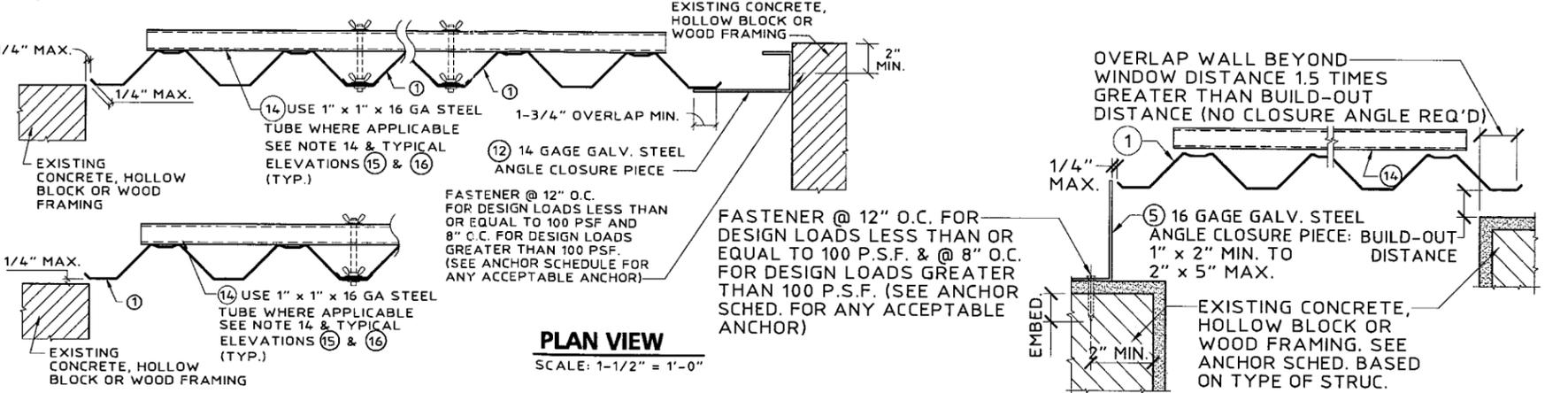
- ALL BOLTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE, EXCEPT FOR "h" AND "U" HEADER MOUNTING CONDITIONS.
- PANELS UTILIZING A STEEL TUBE SHALL BE FASTENED TO OVERLAPS AT MIDSPAN TO A 1" x 1" x 16 GAGE STEEL TUBE USING 1/4-20 x 3-1/2" BOLTS W/ DIE CAST ALUMINUM WASHERED WINGNUTS OR JACKNUTS (SEE TYPICAL ELEVATION (15) & (16)). PANELS NOT UTILIZING STEEL TUBE SHALL BE FASTENED AT MIDSPAN W/ 1/4-20 x 1" BOLTS WITH DIE CAST ALUMINUM WASHERED WINGNUTS OR JACKNUTS (SEE TYPICAL ELEVATION (15) & (16)) FOR PANEL SPANS LESS THAN 33" OVERLAP FASTENERS & TUBE ARE NOT REQUIRED. NO STEEL TUBE AND OR FASTENERS ARE REQUIRED FOR TYPICAL ELEVATION (17).
- AT LEAST ONE WARNING NOTE PER OPENING SHALL BE PLACED IN A CONSPICUOUS LOCATION ON ANY OF THE COMPONENTS OF THE STORM PANELS SYSTEM ADVISING THE HOME OWNER OR TENANT THAT THE STORM PANELS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL REINFORCING BOLTS AND/OR STRAPS ARE PROPERLY INSTALLED WHEN REQUIRED. WARNING LABEL SHALL BE FASTENED WITH PERMANENT ADHESIVE OR MECHANICALLY.



15 TYPICAL ELEVATION (SYSTEM 1) OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP MOUNTS SHALL BE "h" OR "U" HEADERS. BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 6-1/4" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 6-1/4" O.C.

16 TYPICAL ELEVATION (SYSTEM 2) OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP & BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 6-1/4" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 6-1/4" O.C.

17 TYPICAL ELEVATION (SYSTEM 3) NO OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP & BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 12-1/2" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 12-1/2" O.C.



PLAN VIEW
SCALE: 1-1/2" = 1'-0"

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 06-0110.03
Expiration Date 01/04/2008
By He Long A. He Long
Miami Dade Product Control
Division

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 07-0817.02
Expiration Date 01/04/2009
By He Long A. He Long
Miami Dade Product Control
Division

Thornton-Tomasetti Group
330 N. Andrews Ave., Suite 450 • Ft. Lauderdale, FL 33301
Tel: (954) 522-3690 • Fax (954) 522-3691 • COA # 7519
Website: www.TheTTGroup.com
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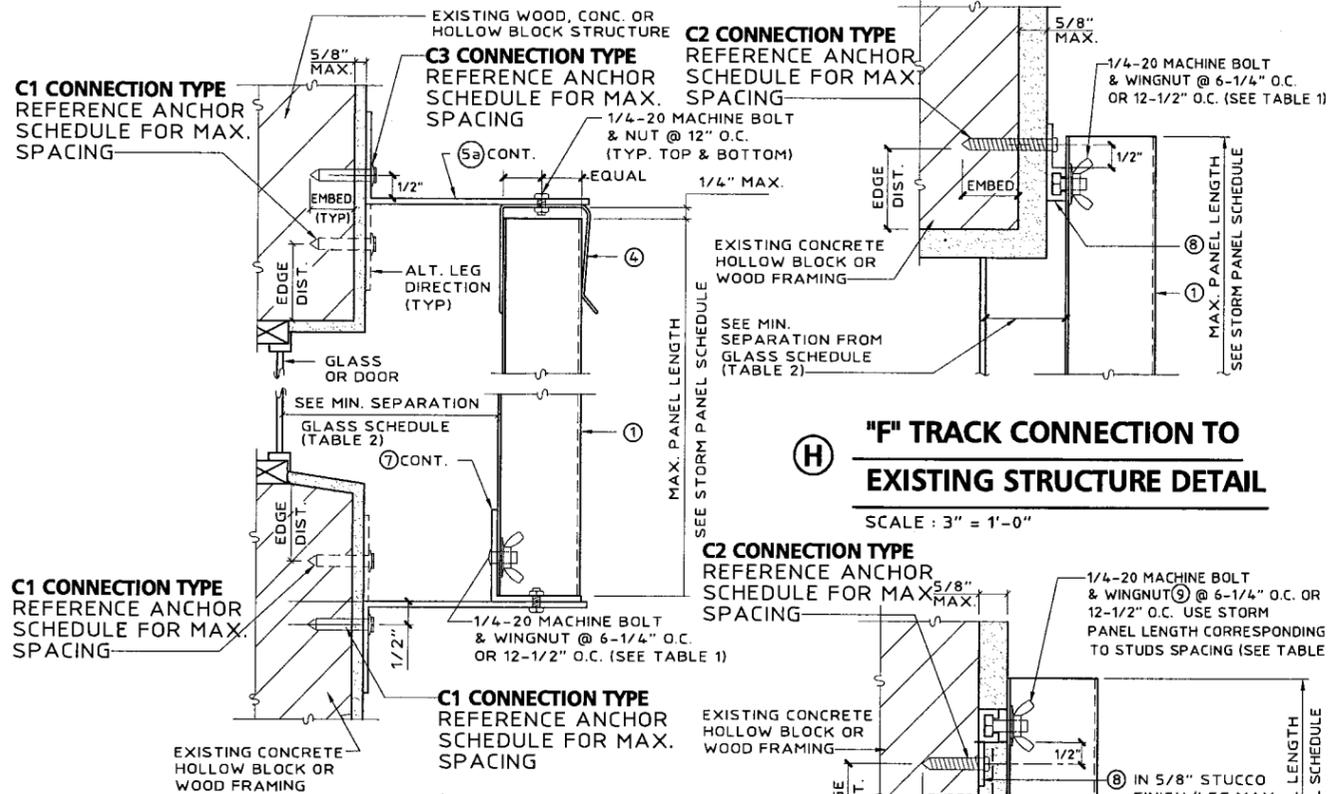
20 GA. GALVANIZED STEEL STORM PANEL
FLORIDA STORM PANELS, INC.
14475 N.W. 26TH AVE.
OPA LOCKA, FL 33054
PHONE: (305) 685-9000
FAX: (305) 685-7511

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

1/6/06

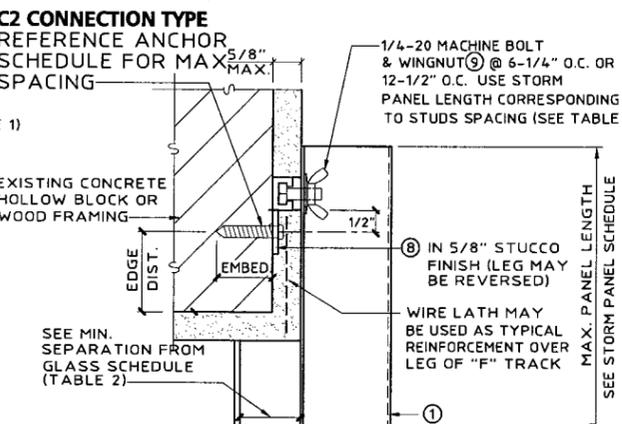
no.	date	by	description
0	01/06/06	NW	PREVIOUSLY DRAWING NO. 99-097

date 01/06/2006
scale AS NOTED
design by NW
checked by VJK
drawing no. 05-536
sheet 1 of 4

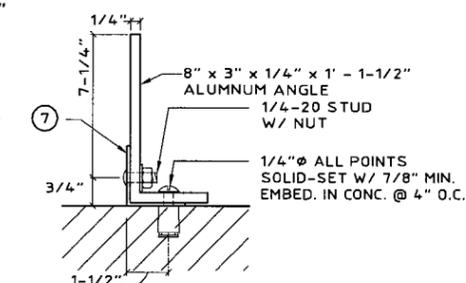


G BUILD-OUT MOUNT SECTION
SCALE : 3" = 1'-0"

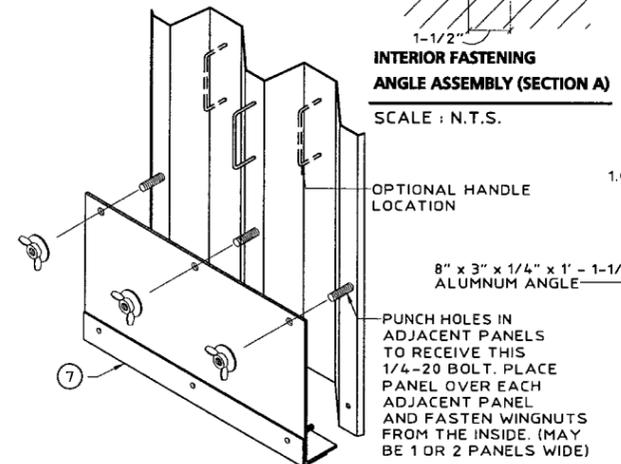
H "F" TRACK CONNECTION TO EXISTING STRUCTURE DETAIL
SCALE : 3" = 1'-0"



I "F" TRACK CONNECTION TO NEW STRUCTURE DETAIL
SCALE : 3" = 1'-0"

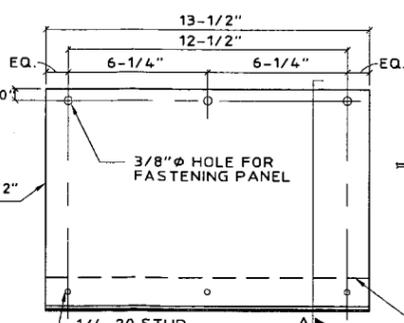


INTERIOR FASTENING ANGLE ASSEMBLY (SECTION A)
SCALE : N.T.S.



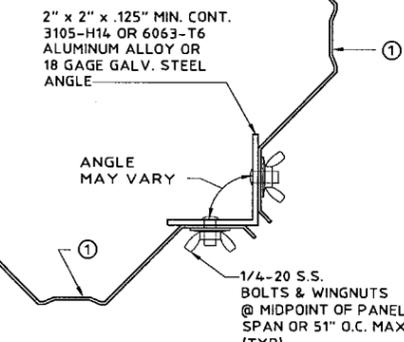
J ALT. "F" TRACK CONNECTION TO NEW STRUCTURE DETAIL
SCALE : 3" = 1'-0"

K STORM PANEL INTERIOR FASTENING (ISOMETRIC)
SCALE : 1-1/2" = 1'-0"



L ALT. CORNER DETAIL
SCALE : 3" = 1'-0"

TABLE 1	STORM PANEL SCHEDULE		
	SYSTEM 1	SYSTEM 2	SYSTEM 3
NEGATIVE DESIGN LOAD (W) (P.S.F.)	OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP MOUNTS SHALL BE "H" OR "U" HEADERS. BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 6-1/4" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 6-1/4" O.C.	OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP & BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 6-1/4" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 6-1/4" O.C.	NO OVERLAP FASTENERS OR REINFORCING TUBE REQUIRED. TOP & BOTTOM MOUNTS SHALL BE "F" TRACK OR STUDDED ANGLES WITH STUDS @ 12-1/2" O.C. OR DIRECT MOUNTS WITH ANCHORS @ 12-1/2" O.C.
	MAX. PANEL LENGTH (FT. - IN.)	MAX. PANEL LENGTH (FT. - IN.)	MAX. PANEL LENGTH (FT. - IN.)
30.0	11 - 0	11 - 0	8 - 8
40.0	11 - 0	11 - 0	8 - 8
50.0	10 - 6	10 - 6	8 - 8
60.0	10 - 1	10 - 1	8 - 8
70.0	9 - 8	9 - 9	8 - 8
80.0	8 - 7	9 - 5	8 - 1
90.0	7 - 8	9 - 1	7 - 2
100.0	6 - 10	8 - 9	6 - 6
110.0	6 - 3	8 - 4	5 - 10
120.0	5 - 9	7 - 11	5 - 5
130.0	5 - 3	7 - 8	5 - 0
140.0	4 - 11	7 - 4	4 - 7
150.0	4 - 7	7 - 1	4 - 3
160.0	4 - 3	6 - 11	4 - 0
170.0	4 - 0	6 - 8	3 - 9
180.0	3 - 10	6 - 6	3 - 7
190.0	3 - 7	6 - 3	3 - 5
200.0	3 - 5	5 - 11	3 - 3
210.0	3 - 3	5 - 8	3 - 1
220.0	3 - 2	5 - 5	2 - 11
230.0	3 - 0	5 - 2	2 - 9



PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 07-0817.02
Expiration Date 01/04/2009
By Helmut A. Moller
Miami Code Control Division

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 06-0110.03
Expiration Date 01/04/2008
By Helmut A. Moller
Miami Code Control Division

Thornton-Tomasetti Group
350 N. Andrews Ave., Suite 450 • Ft. Lauderdale, FL 33301
Tel. (954) 522-5690 • Fax (954) 522-3691 • COA # 7519
Website: www.TheTTGroup.com
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20 GA. GALVANIZED STEEL STORM PANEL
FLORIDA STORM PANELS, INC.
14475 N.W. 26TH AVE.
OPA LOCKA, FL 33054
PHONE: (305) 685-9000
FAX: (305) 685-7511

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

1/6/06

no.	date	by	description
0	01/06/06	NW	PREVIOUSLY DRAWING NO. 99-097

date 01/06/2006
scale AS NOTED
drawing no. 05-536
sheet 3 of 4

