



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
 METRO-DADE FLAGLER BUILDING
 140 WEST FLAGLER STREET, SUITE 1603
 MIAMI, FLORIDA 33130-1563
 (305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

Ocean Shutters Manufacturing, Inc.
 4900 N.E. 11th Avenue
 Ft. Lauderdale, Florida 33334

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. 00-104, titled " 20 Ga. Galvanized Steel Storm Panel ", sheets 1 through 4 of 4, prepared by Knezevich & Associates, Inc., dated July 20, 2000, last revision #3 dated October 09, 2003, 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 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 # 00-0726.06 & consists of this page 1, evidence submitted as well as approval document mentioned above.

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

Helmy A. Makar
 10/30/03



NOA No 03-0807.05
 Expiration Date: 08/22/2008
 Approval Date: 10/30/2003

Ocean Shutters Manufacturing, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 96-0502.03

A. DRAWINGS

1. *Drawing No.95-592 – titled "20 ga. Steel Storm Panel", Sheets 1 through 4 of 4, prepared by Knezevich & Associates, Inc., dated 12/15/95, Revision No. 3, dated 07/19/96, signed and sealed by V.J. Knezevich, P.E.*

B. TESTS

1. *Test report on: Uniform Static Air Pressure Test, Large Missile Impact Test, and Cyclic Wind Pressure Test prepared by Construction Testing Corporation, Report No. CTC-95-038, dated December 5, 1995, signed and sealed by Christopher G. Tyson, P.E.*
2. *Test report on: Large Missile Impact Test and Cyclic Wind Pressure Test prepared by Construction Testing Corporation, Report No. CTC-96-016, dated March 25, 1996, signed and sealed by Christopher G. Tyson, P.E.*

C. CALCULATIONS

1. *Comparative Analysis and Anchor Calculations, 8 pages, dated 04/19/96 and 21 pages, dated 07/24/96, prepared by Knezevich & Associates, Inc., signed and sealed by V.J. Knezevich, P.E.*

D. MATERIAL CERTIFICATIONS

1. *Mill Certified Inspection Report.*
2. *Certified Tensile Test Report issued by Q C Metallurgical, Inc. Report Number QCM-5KM-2636, dated November 15, 1995, signed and sealed by Frank Grate, P.E.*
3. *Certified Tensile Test Report issued by Q C Metallurgical, Inc. Report Number QCM-6CM-720, dated March 25, 1996, signed and sealed by Frank Grate, P.E.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 99-0803.02

A. DRAWINGS

1. *None.*

B. TESTS

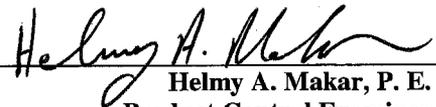
1. *None. See Product Approval # 96-0502.03.*

C. CALCULATIONS

1. *None. See Product Approval # 96-0502.03.*

D. MATERIAL CERTIFICATIONS

1. *None. See Product Approval # 96-0502.03*


Helmy A. Makar, P. E.

Product Control Examiner
NOA No 03-0807.05
Expiration Date: 08/22/2008
Approval Date: 10/30/2003

Ocean Shutters Manufacturing, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

E. OTHERS

1. *Approval #96-0502.03 needs to be revised first before it is renewed for three years (see letter in file). This approval, #99-0803.02, is issued to renew approval #96-0502.03 for one year only in which the manufacturer will submit the revised calculation and drawings for a revision and renewal of this approval #99-0803.02.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 00-0726.06

A. DRAWINGS

1. *Drawing No. 00-104, titled " 20 ga. Galvanized Steel Storm Panel", prepared by Knezevich & Associates, Inc., signed and sealed by V. J. Knezevich, P.E., dated July 20, 2000, last revision #2 dated August 29, 2000, sheets 1 through 4 of 4, signed and sealed by V.J. Knezevich, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Anchor Calculations, 22 pages, dated July 20, 2000, prepared by Knezevich & Associates, Inc., signed and sealed by V.J. Knezevich, P.E.*

D. MATERIAL CERTIFICATIONS

1. *None.*

E. OTHERS

1. *Approval #99-0803.02 is revised first (because the anchor calculation) before it is renewed for three years. This approval, #00-0726.06, is issued to revise and renew approval #99-0803.02.*

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS:

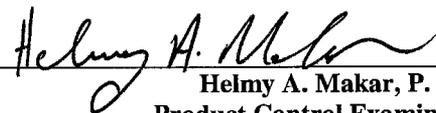
1. *Drawing No. 00-104, titled " 20 Ga. Galvanized Steel Storm Panel ", sheets 1 through 4 of 4, prepared by Knezevich & Associates, Inc., dated July 20, 2000, last revision #3 dated October 09, 2003, signed and sealed by V. J. Knezevich, P.E.*

B. TESTS:

1. *None.*

C. CALCULATIONS:

1. *None.*


Helmy A. Makar, P. E.

Product Control Examiner

NOA No 03-0807.05

Expiration Date: 08/22/2008

Approval Date: 10/30/2003

Ocean Shutters Manufacturing, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

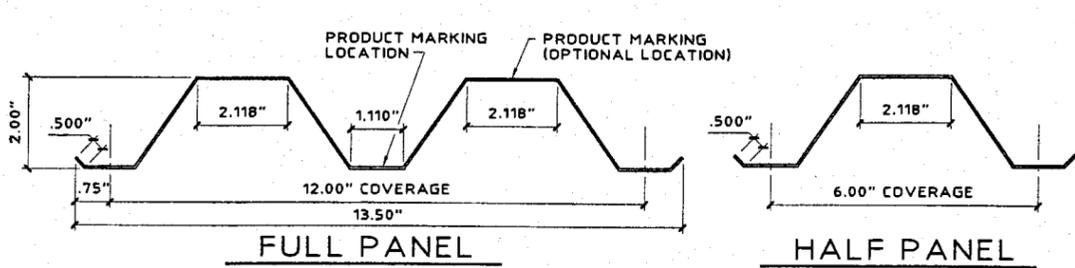
1. *By Miami-Dade Building Code Compliance Office.*

E. MATERIAL CERTIFICATION:

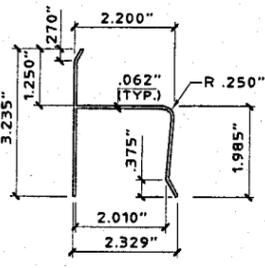
1. *None.*



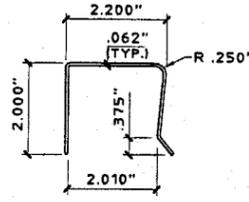
Helmy A. Makar, P. E.
Product Control Examiner
NOA No 03-0807.05
Expiration Date: 08/22/2008
Approval Date: 10/30/2003



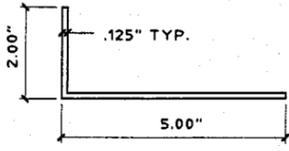
1 STORM PANEL
SCALE: 3" = 1' - 0"



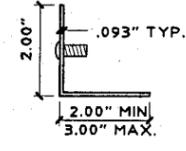
2 "h" HEADER
SCALE: 3" = 1' - 0"



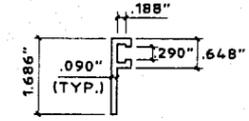
3 "U" HEADER
SCALE: 3" = 1' - 0"



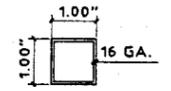
4 ANGLE
SCALE: 3" = 1' - 0"



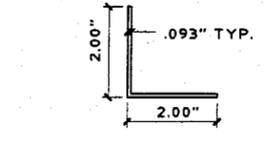
6 STUDDED ANGLE
SCALE: 3" = 1' - 0"



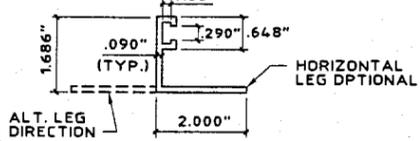
7a "F" TRACK
SCALE: 3" = 1' - 0"



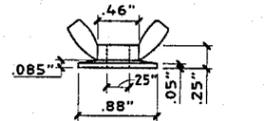
9 STEEL TUBE
SCALE: 3" = 1' - 0"



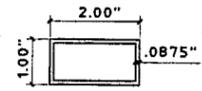
5 ANGLE
SCALE: 3" = 1' - 0"



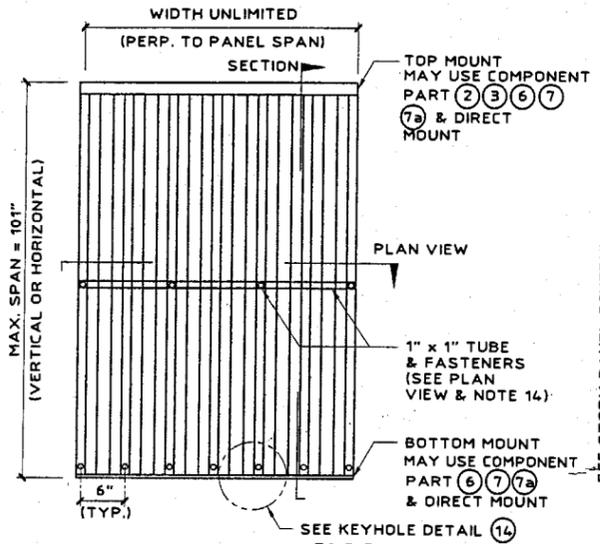
7 "E" TRACK
SCALE: 3" = 1' - 0"



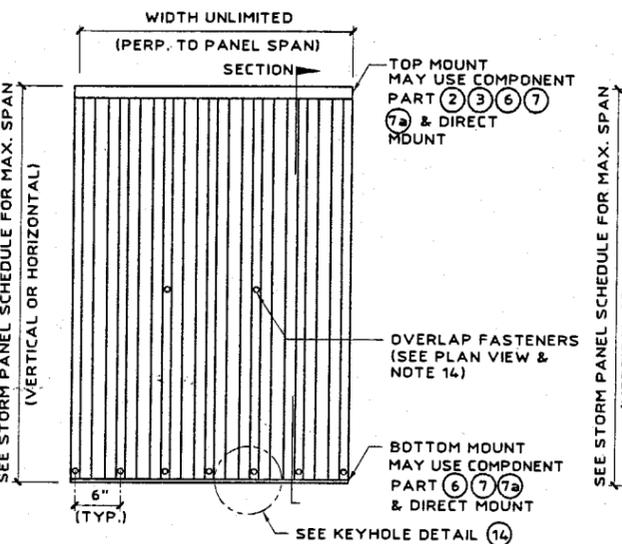
8 WINGNUT
SCALE: HALF SIZE



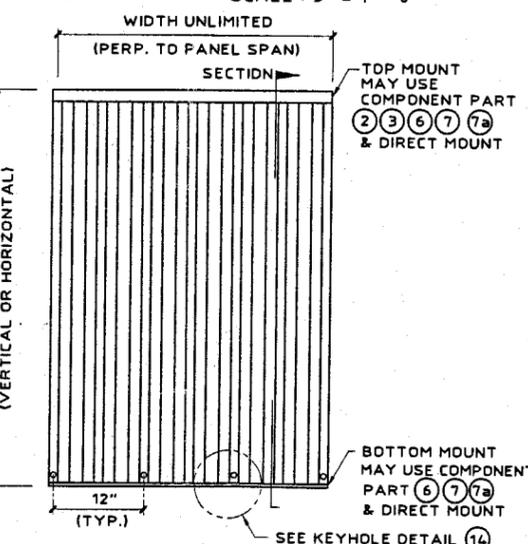
10 ALUM. TUBE
SCALE: 3" = 1' - 0"



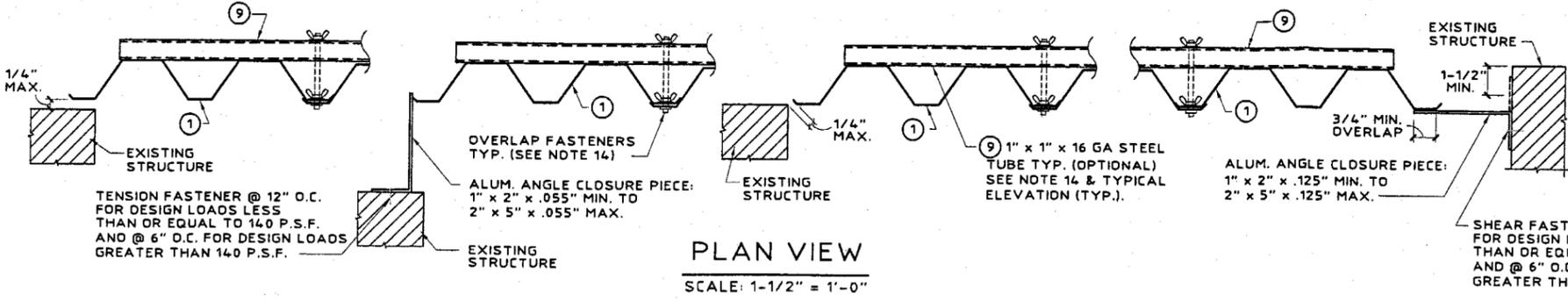
11 TYPICAL ELEVATION
OVERLAP FASTENERS AND STEEL TUBE REQUIRED FOR INSTALLATIONS W/ 2, 3, 6, 7, 7a W/ STUDS @ 6" O.C. OR DIRECT MOUNTS W/ ANCHORS @ 6" O.C.



12 TYPICAL ELEVATION
OVERLAP FASTENERS AT MIDSPAN REQUIRED FOR INSTALLATIONS W/ 2, 3, 6, 7, 7a W/ STUDS @ 6" O.C. OR DIRECT MOUNTS W/ ANCHORS @ 6" O.C.



13 TYPICAL ELEVATION
W/ NO OVERLAP FASTENERS OR STEEL TUBE FOR ALL INSTALLATIONS W/ 2, 3, 6, 7, 7a W/ STUDS @ 12" O.C. OR DIRECT MOUNTS W/ ANCHORS @ 12" O.C.

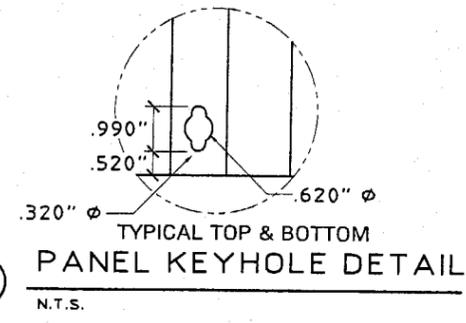


PLAN VIEW
SCALE: 1-1/2" = 1'-0"

GENERAL NOTES:

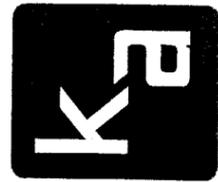
- THESE APPROVAL DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISION SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE, 2001.
- TO VERIFY THAT THE ANCHORS AS TESTED, ARE NOT OVERSTRESSED IN THESE APPROVAL DOCUMENTS A 33% INCREASE IN ALLOWABLE STRESS WAS USED IN THE FASTENER ANALYSIS.
- 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 7-98, A DIRECTIONALITY FACTOR OF $K_d = 1.0$ SHALL BE USED.
- THESE APPROVAL DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
- THESE APPROVAL DOCUMENTS ARE TO 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.
- 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 MINIMUM OF ONE MARKING PER PANEL AND SHALL BE PERMANENTLY LABELED AS FOLLOWS:

OCEAN SHUTTERS MANUFACTURING, INC.
FORT LAUDERDALE, FLORIDA
MIAMI-DADE COUNTY PRODUCT APPROVAL
- ALL BOLTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 33 K.S.I.
- ALL TEK SCREWS SHALL BE 2024-T4 OR 7075-T73 WITH AN APPROVED COATING TO PREVENT CORROSION OR GALVANIC ACTION.
- STORM PANELS SHALL BE 20 GAUGE GALVANIZED STEEL WITH A BARE METAL THICKNESS OF 0.035" WITH A MIN. $F_y = 50$ K.S.I. GALVANIZING IN ACCORDANCE WITH ASTM G60.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N
- PANELS UTILIZING A STEEL TUBE SHALL BE FASTENED AT 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 (11)). PANELS NOT UTILIZING STEEL TUBE SHALL BE FASTENED AT MIDSPAN WITH 1/4-20 x 1" BOLTS WITH DIE CAST ALUMINUM WASHERED WINGNUTS OR JACKNUTS (SEE TYPICAL ELEVATION (12)). FOR PANEL SPANS LESS THAN 33" OVERLAP FASTENERS & TUBE ARE NOT REQUIRED. NO STEEL TUBE AND OR FASTENERS ARE REQUIRED FOR TYPICAL ELEVATION (13).
- 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.
- AT LEAST ONE WARNING NOTE PER OPENING SHALL BE PLACED IN A CONSPICUOUS LOCATION ON ANY OF THE COMPONENTS OF THE STORM PANEL SYSTEM ADVISING THE HOME OWNER OR TENANT THAT THE STORM PANELS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL REINFORCING BOLTS AND/OR TUBES ARE PROPERLY INSTALLED WHEN REQUIRED. WARNING LABEL SHALL BE FASTENED WITH PERMANENT ADHESIVE OR MECHANICALLY.



14 TYPICAL TOP & BOTTOM PANEL KEYHOLE DETAIL
N.T.S.

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 03-0807.05
Expiration Date 08/22/2008
By *Helmy A. Helmy*
Miami Dade Product Control Division



KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
TEL: (954) 382-2800 • FAX: (954) 382-2989 • FLORIDA COA #3205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
COPYRIGHT © 2003 KNEZEVICH & ASSOCIATES, INC.

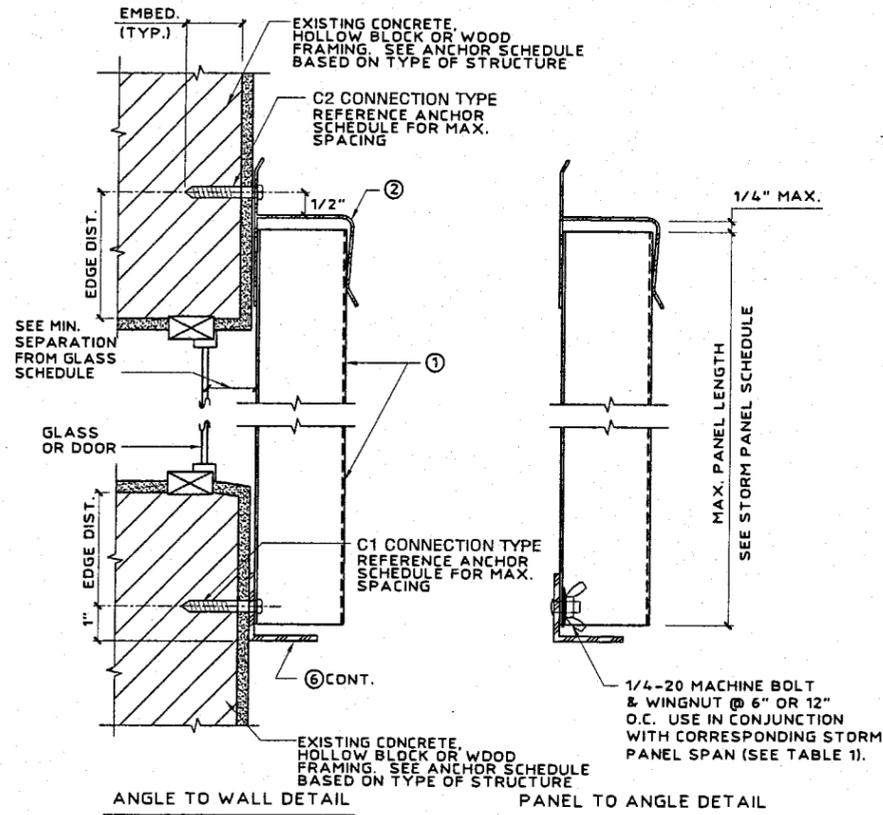
20 GA. GALVANIZED STEEL STORM PANEL
4900B N.E. 11th AVE.
FT. LAUDERDALE, FL 33304
(954) 489-9797
Ocean Shutters
MANUFACTURING, INC.

V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No. FE 0010983

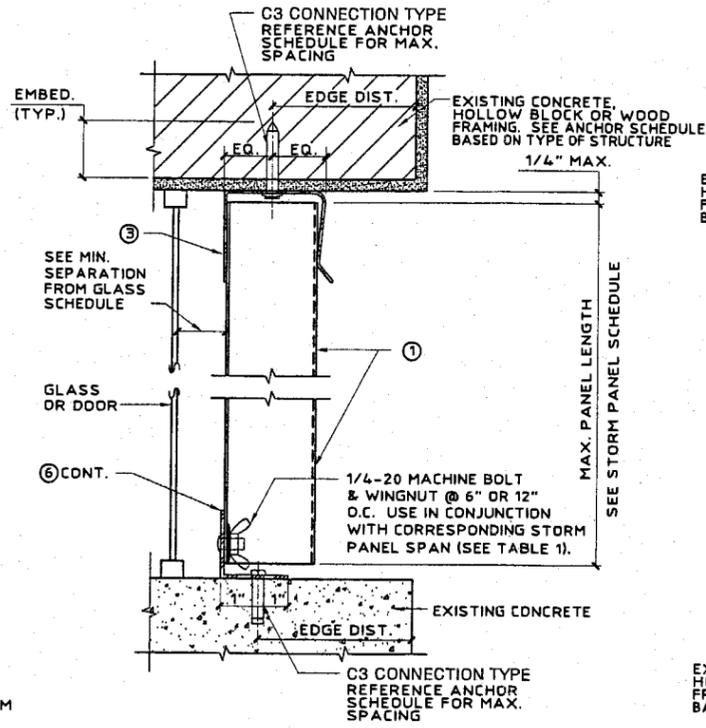
OCT 09 2003

REVISIONS	
no.	description
1	10/22/2003 JAP/REV. DRAWING NO. 95-592
2	08/22/2003 JAP/COUNTY COMMENTS
3	10/09/03 VJK/FBC2001 NOTES

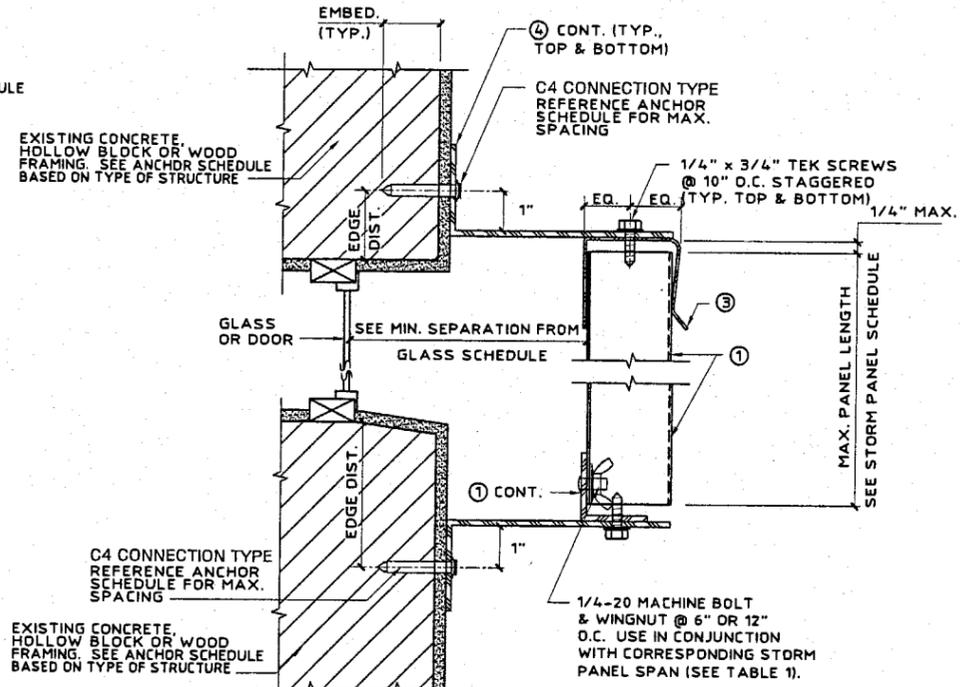
date 07/20/2000
scale AS NOTED
design by VJK
checked by VJK
drawing no. 00-104
sheet 1 of 4



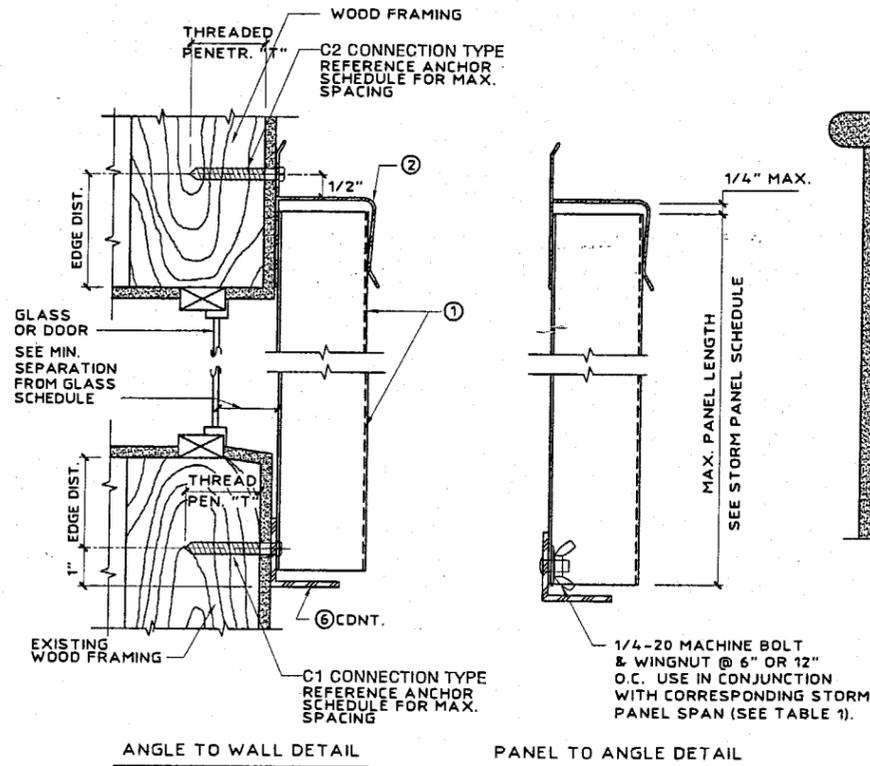
A WALL MOUNT SECTION
SCALE: 3" = 1'-0"



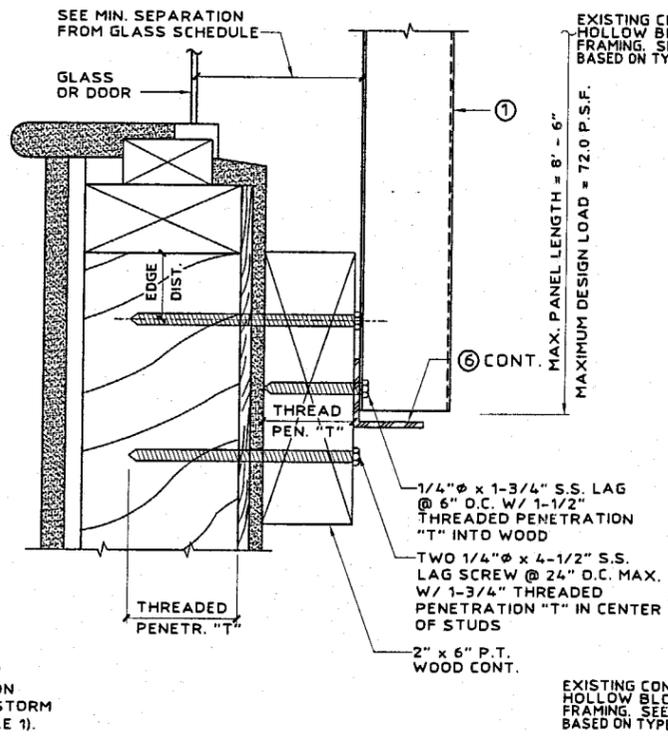
B CEILING/INSIDE MOUNT SECTION
SCALE: 3" = 1'-0"



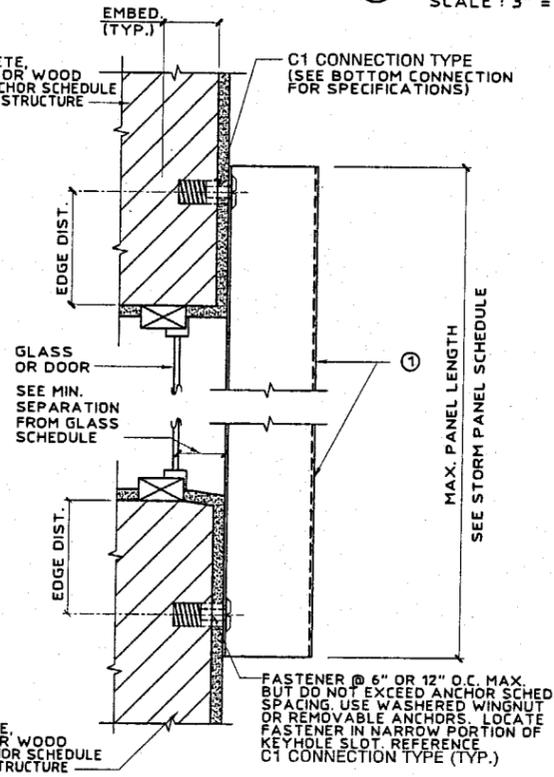
C BUILD-OUT MOUNT SECTION
SCALE: 3" = 1'-0"



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



E WALL MOUNT SECTION (BOTTOM)
SCALE: 3" = 1'-0"

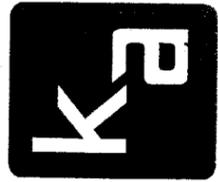


F WALL MOUNT SECTION (DIRECT MOUNT)
SCALE: 3" = 1'-0"

NOTE: THIS DETAIL MAY BE USED AT TOP OR BOTTOM OF PANELS.

* SIDE CLOSURE REQ'D. (SEE PLAN VIEW)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 03-0807.05
Expiration Date 08/21/2009
By *Helmut A. Miller*
Miami District Product Control Division



KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
TEL (954) 382-2800 • FAX (954) 382-2989 • FLORIDA COA #3205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
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20 GA. GALVANIZED STEEL STORM PANEL
4900B N.E. 11th AVE.
FT. LAUDERDALE, FL 33334
(954) 489-9797
Secure Sutures
MANUFACTURING, INC.

V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No: PE-0010983

[Signature]
OCT 09 2003

no.	date	by	description
1	07/20/00	JAP	PREV. DRAWING NO. 95-592
2	08/29/00	JAP	COUNTY COMMENTS
3	10/09/03	VJK	FB2001 NOTES

date	07/20/2000
scale	AS NOTED
design by	VJK
checked by	VJK
drawn by	MIC
drawing no.	00-104
sheet	2 of 4

