



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

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Ocean Shutters Manufacturing, Inc.
4900-B N.E. 11th Avenue
Fort Lauderdale ,FL 33334

Your application for Notice of Acceptance (NOA) of:

20 Ga. Galvanized Steel Storm Panels.

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 00-0726.06
EXPIRES: 08/22/2003

Raul Rodriguez
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 09/28/2000

Ocean Shutters Manufacturing, Inc.

ACCEPTANCE No. : 00-0726.06

APPROVED : SEP 28 2000

EXPIRES : 08/22/2003

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This revises and renews the Notice of Acceptance No. 99-0803.02, which was issued on September 2, 1999. It approves a 20 ga. Galvanized Steel Storm Panel Shutter, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code, 1994 Edition for Miami-Dade County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

This 20 ga. Galvanized Steel Storm Panel Shutter and its components shall be constructed in strict compliance with the following documents: 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, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

All permanent set components, included but not limited to embedded anchor bolts, threaded cones, metal shields, headers and sills, must be protected against corrosion, contamination and damage at all times.

4. INSTALLATION

This 20 ga. Galvanized Steel Storm Panel Shutter and its components shall be installed in strict compliance with the approved drawings.

5. 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".

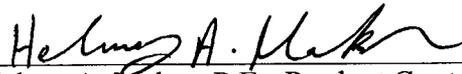
6. BUILDING PERMIT REQUIREMENTS

6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance.

6.1.2 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.



Helmy A. Makar, P.E. -Product Control Examiner
Product Control Division

Ocean Shutters Manufacturing, Inc.

ACCEPTANCE No. : 00-0726.06

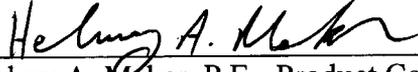
APPROVED : SEP 28 2000

EXPIRES : 08/22/2003

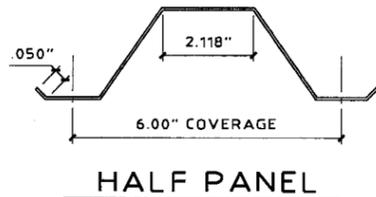
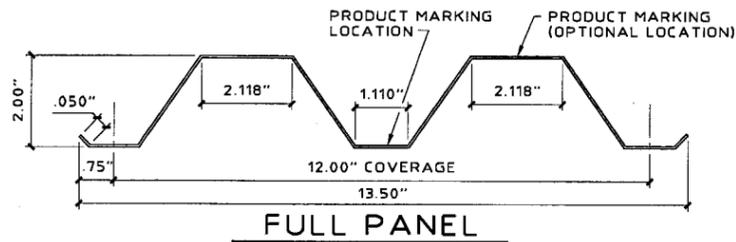
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documents, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
 - a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
 - b. The product is no longer the same product (identical) as the one originally approved.
 - c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
 - d. The engineer, who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
 - a. Unsatisfactory performance of this product or process.
 - b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer needs not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.

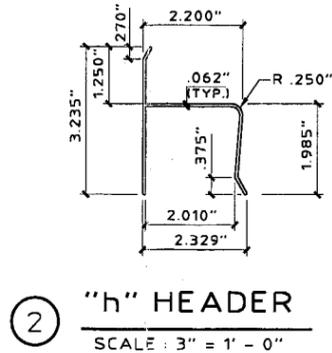
END OF THIS ACCEPTANCE



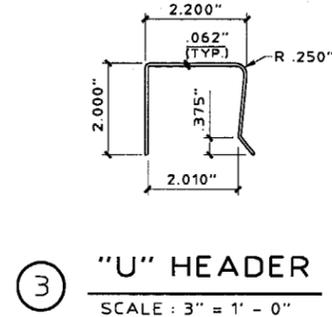
Helmy A. Makar, P.E. -Product Control Examiner
Product Control Division



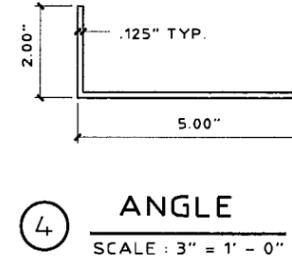
1 **STORM PANEL**
SCALE: 3" = 1' - 0"



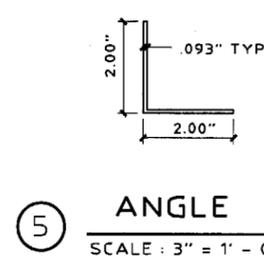
2 **"h" HEADER**
SCALE: 3" = 1' - 0"



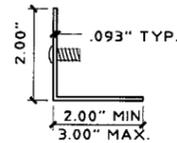
3 **"U" HEADER**
SCALE: 3" = 1' - 0"



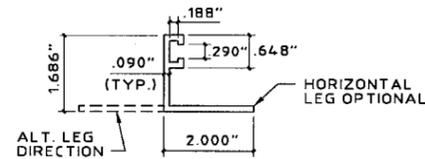
4 **ANGLE**
SCALE: 3" = 1' - 0"



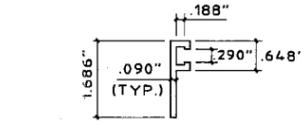
5 **ANGLE**
SCALE: 3" = 1' - 0"



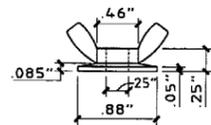
6 **STUDED ANGLE**
SCALE: 3" = 1' - 0"



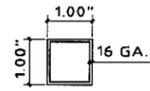
7 **"E" TRACK**
SCALE: 3" = 1' - 0"



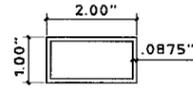
7a **"F" TRACK**
SCALE: 3" = 1' - 0"



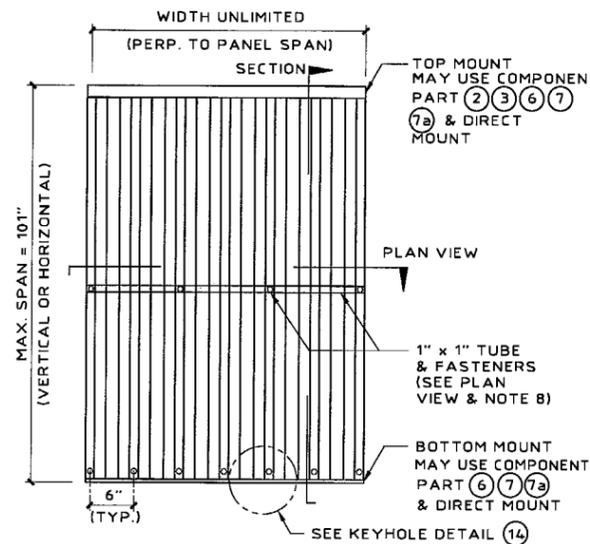
8 **WINGNUT**
SCALE: HALF SIZE



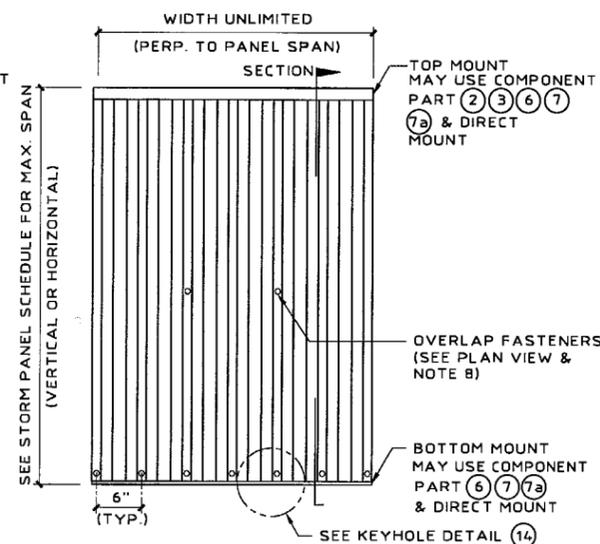
9 **STEEL TUBE**
SCALE: 3" = 1' - 0"



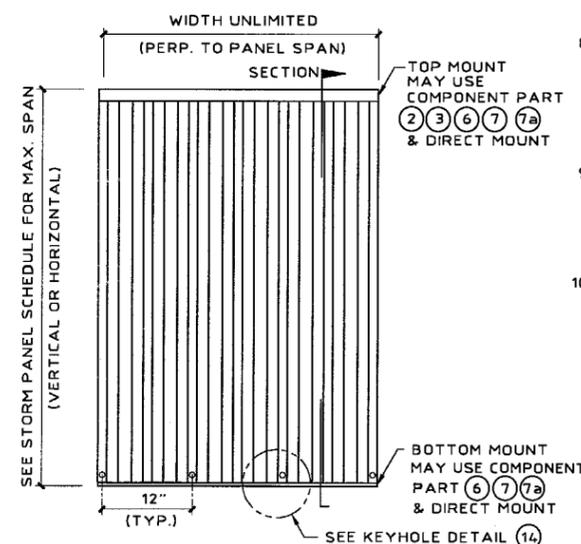
10 **ALUM. TUBE**
SCALE: 3" = 1' - 0"



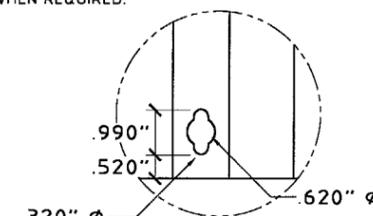
11 **TYPICAL ELEVATION**
OVERLAP FASTENERS AND STEEL TUBE REQUIRED FOR INSTALLATIONS W/ (2)(3)(6)(7)(7a) W/ STUDS @ 6" O.C. OR DIRECT MOUNTS W/ ANCHORS @ 6" O.C.



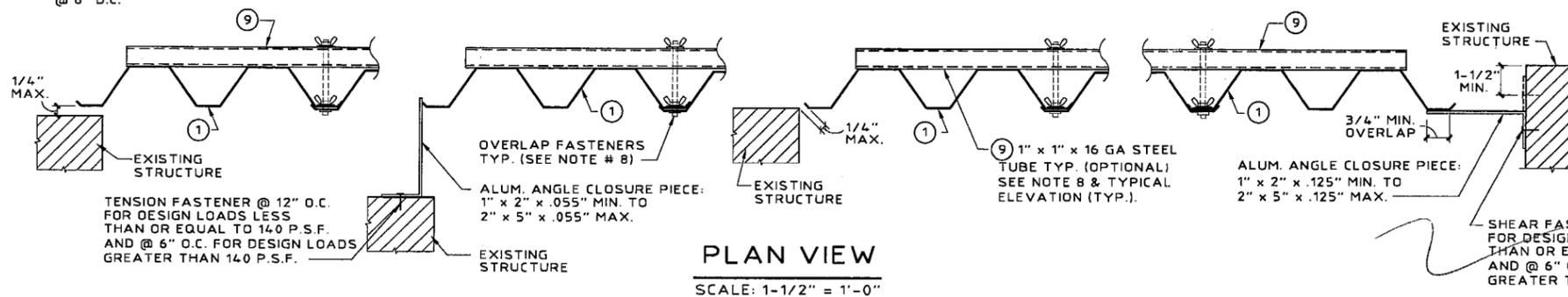
12 **TYPICAL ELEVATION**
OVERLAP FASTENERS AT MIDSPAN REQUIRED FOR INSTALLATIONS W/ (2)(3)(6)(7)(7a) W/ STUDS @ 6" O.C. OR DIRECT MOUNTS W/ ANCHORS @ 6" O.C.



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.



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



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

GENERAL NOTES:

- THIS SHUTTER SYSTEM IS DESIGNED IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE, 1994 EDITION FOR MIAMI-DADE COUNTY.
- POSITIVE AND NEGATIVE DESIGN PRESSURE CALCULATIONS SHALL BE PERFORMED FOR SPECIFIC JOBS IN ACCORDANCE WITH ASCE 7-88 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES". TABLES SHALL BE REFERENCED AT APPROPRIATE DESIGN LOADS.
- STORM PANELS SHALL BE 20 GAUGE STEEL (t = .035") CONFORMING TO ASTM A446. STRUCTURAL QUALITY, GRADE D, WITH A MIN. Fy = 50 K.S.I., GALVANIZED IN ACCORDANCE WITH ASTM G60. ALUM. ALLOY EXTRUSIONS SHALL BE 6063-T6, U.O.N.
- 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:
OCEAN SHUTTERS MFG. INC.
FT. LAUDERDALE, FL
DADE COUNTY PRODUCT CONTROL APPROVED
- ALL BOLTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM Fy = 33 KSI.
- MATERIAL SPECIFICATIONS NOTED HEREIN ARE THE MANUFACTURER'S REPRESENTATION OF MATERIALS USED IN PRODUCT TESTING. ALL TEK SCREWS SHALL BE 2024-T4 OR 7075-T73 WITH AN APPROVED COATING TO PREVENT CORROSION OR GALVANIC ACTION.
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE.
- 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 W/ 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).
- THE DETAILS AND SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED FOR IMPACT, CYCLIC AND UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH DADE COUNTY PROTOCOLS PA 201,202, AND 203.
DESIGN IS BASED ON CONSTRUCTION TESTING CORPORATION (C.T.C.) TEST REPORT No. 95-038 & 96-016.
- 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 OR TUBES W/ BOLTS ARE PROPERLY INSTALLED, WHEN REQUIRED."



KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1280 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
TEL: (954) 382-2800 • FAX: (954) 382-2889 • FLORIDA COA #9205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
COPYRIGHT © 2000 KNEZEVICH & ASSOCIATES, INC.

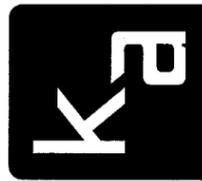
20 GA. GALVANIZED STEEL STORM PANEL
4900B N.E. 11th AVE.
FT. LAUDERDALE, FL 33334
(954) 489-9797
Ocean Shutters
MANUFACTURING, INC.

no.	date	description
1	07/20/00	JAP/REV. DRAWING NO. 95-592
2	05/29/00	JAP/COUNTY COMMENTS

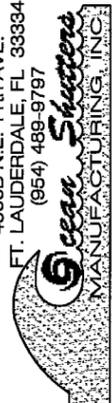
V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No: PE 0010983

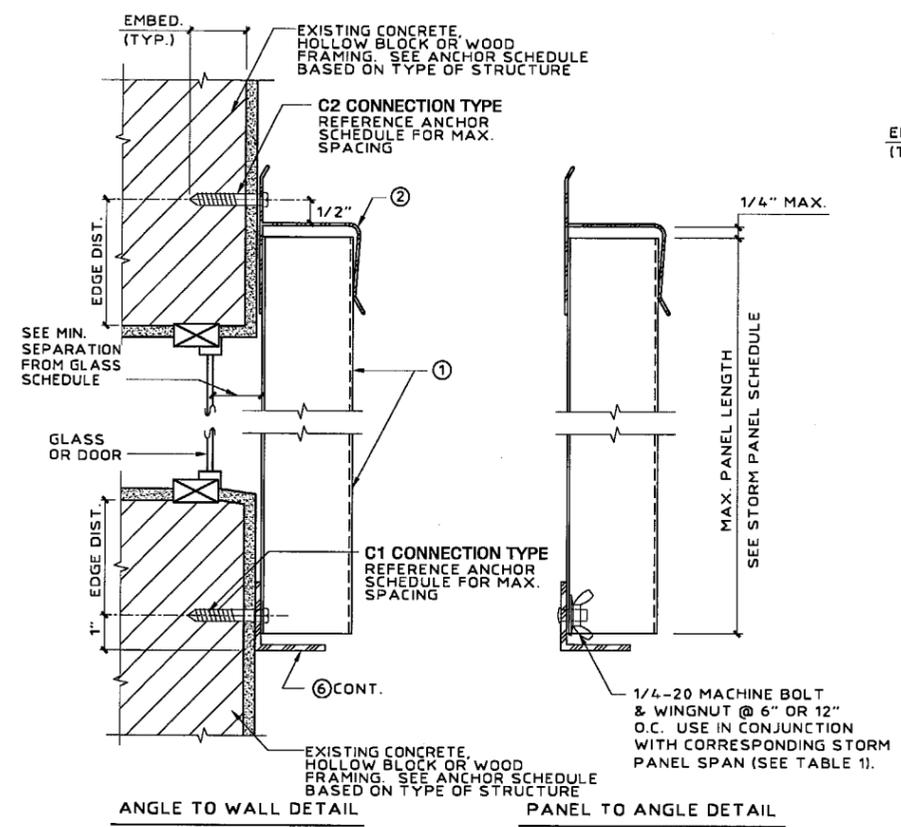
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE September 29, 2000
BY Helmuth H. Meier
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0726.06

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

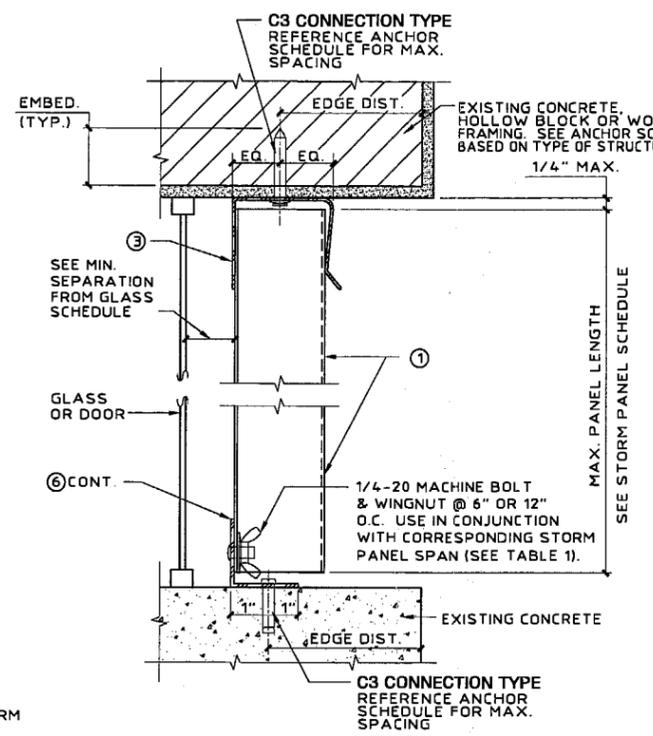


KNEZEVICH & ASSOCIATES, INC.
 CONSULTING ENGINEERS • PRODUCT TESTING
 1280 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
 TEL: (954) 382-2800 • FAX: (954) 382-2889 • FLORIDA COA #3205
 WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
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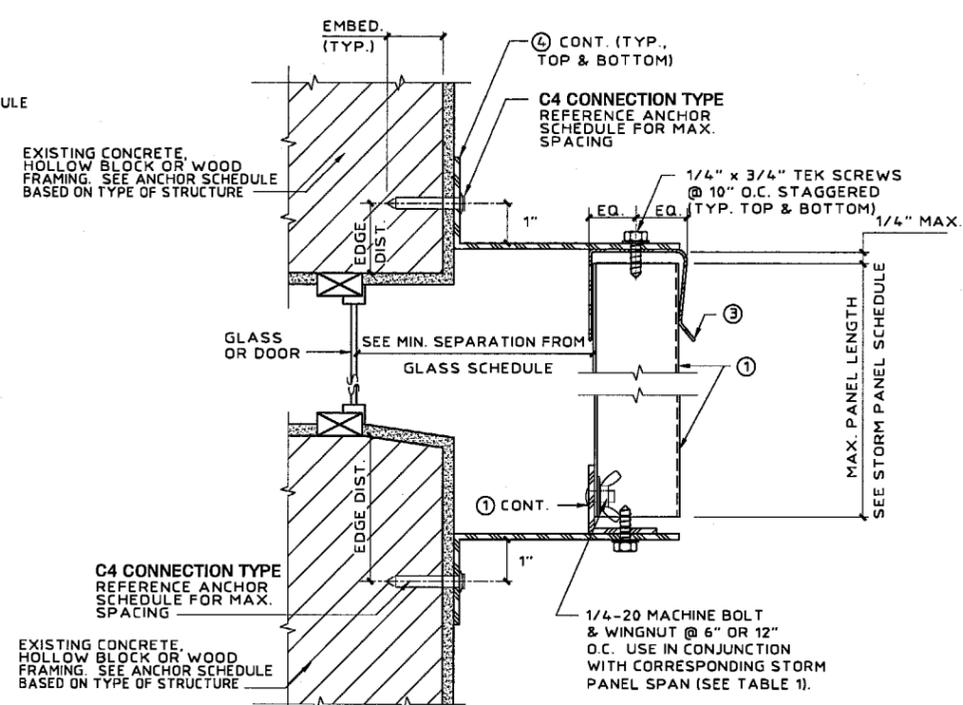
20 GA. GALVANIZED STEEL STORM PANEL
 4900B N.E. 11th AVE.
 FT. LAUDERDALE, FL 33334
 (954) 489-9797

 G Seal Shutters
 MANUFACTURING, INC.



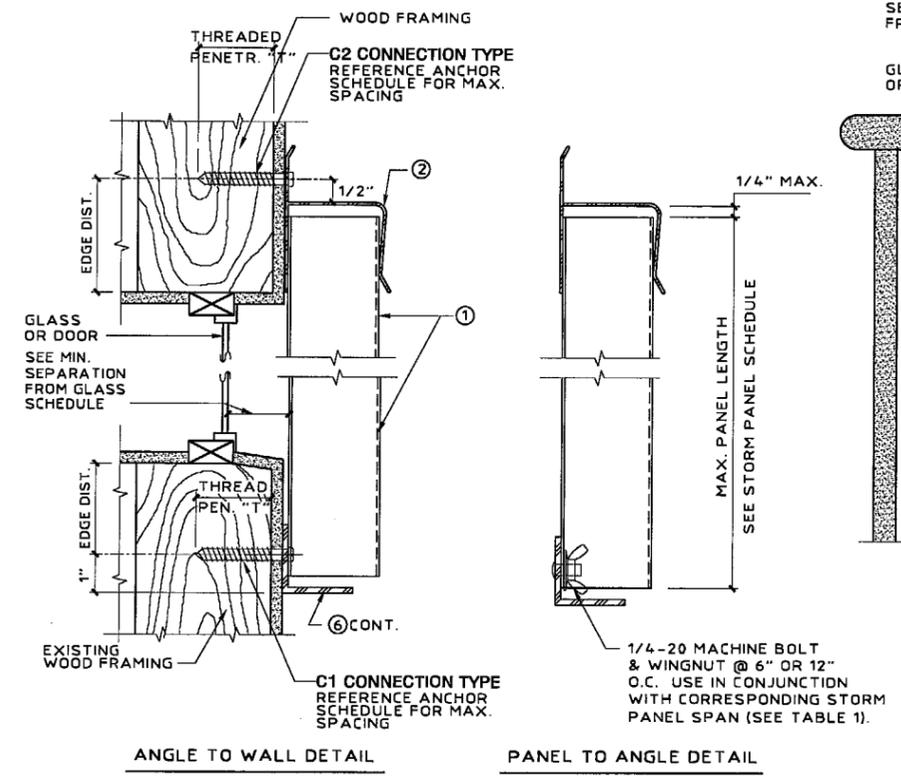
A WALL MOUNT SECTION
 SCALE: 3" = 1'-0"



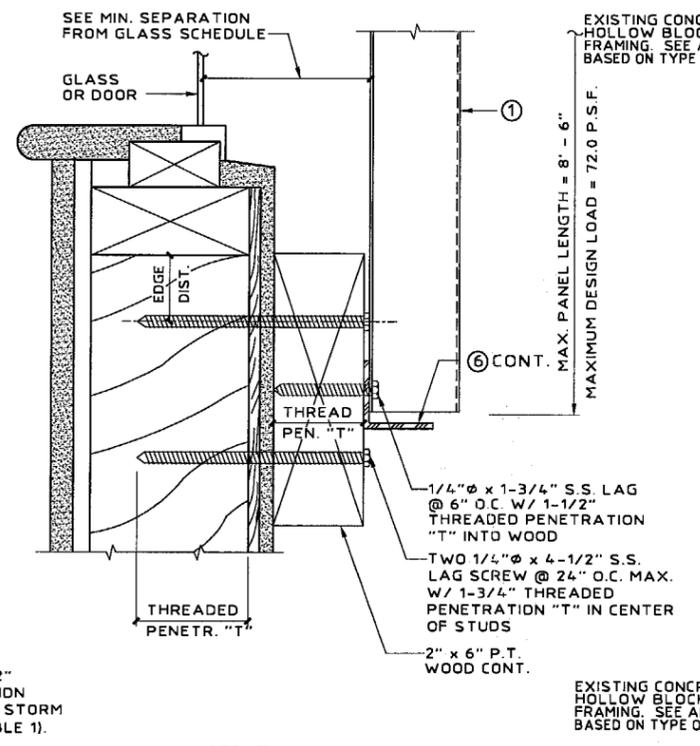
B CEILING/INSIDE MOUNT SECTION
 SCALE: 3" = 1'-0"



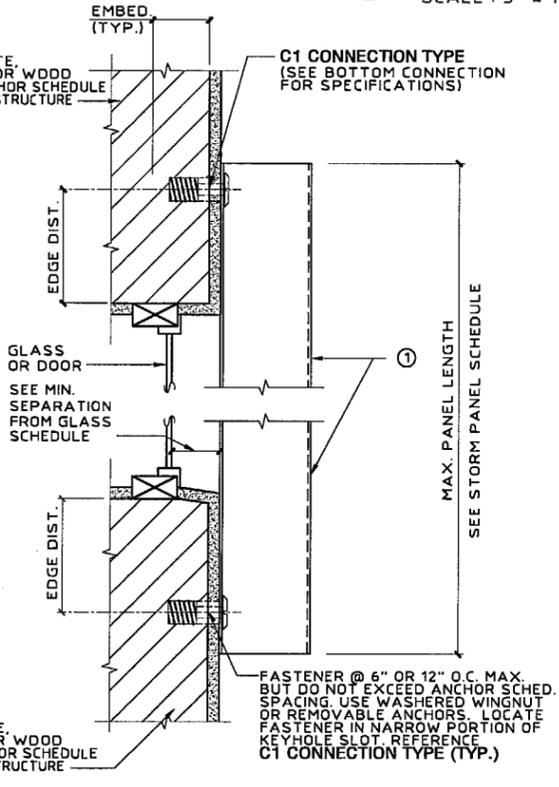
C BUILD-OUT MOUNT SECTION
 SCALE: 3" = 1'-0"



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"

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE *September 29, 2000*
 BY *Herb A. Mader*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. *00-0726-06*

NOTE: THIS DETAIL MAY BE USED AT TOP OR BOTTOM OF PANELS.
 * SIDE CLOSURE REQ'D. (SEE PLAN VIEW)

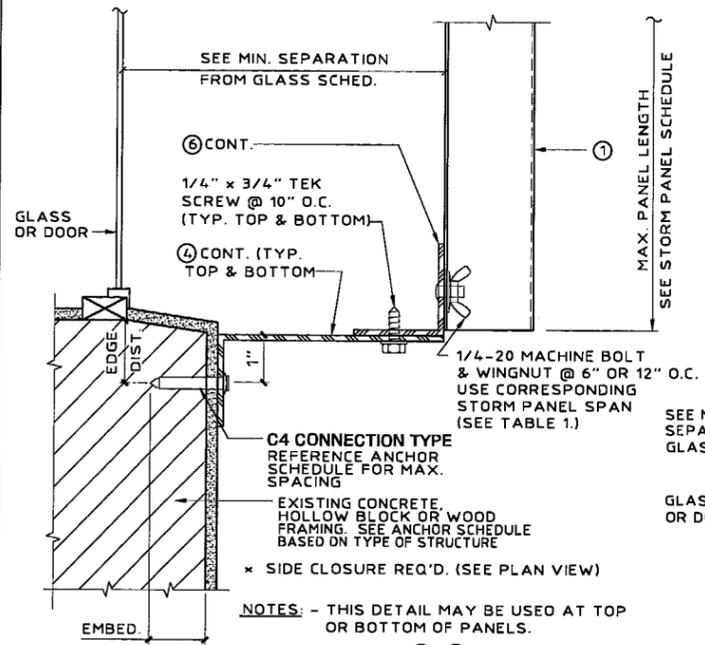
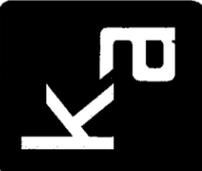
REVISIONS	
no	description
1	07/20/00 JAP/PPREV. DRAWING NO. 95-592
2	08/29/00 JAP COUNTY COMMENTS

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

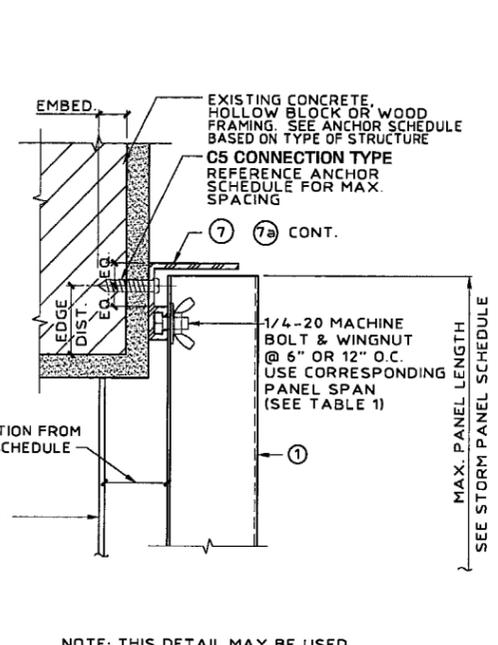
[Signature]
 date **AUG 29 2000**

date 07/20/00
 scale AS NOTED drawn by MC
 design by MD checked by VJK

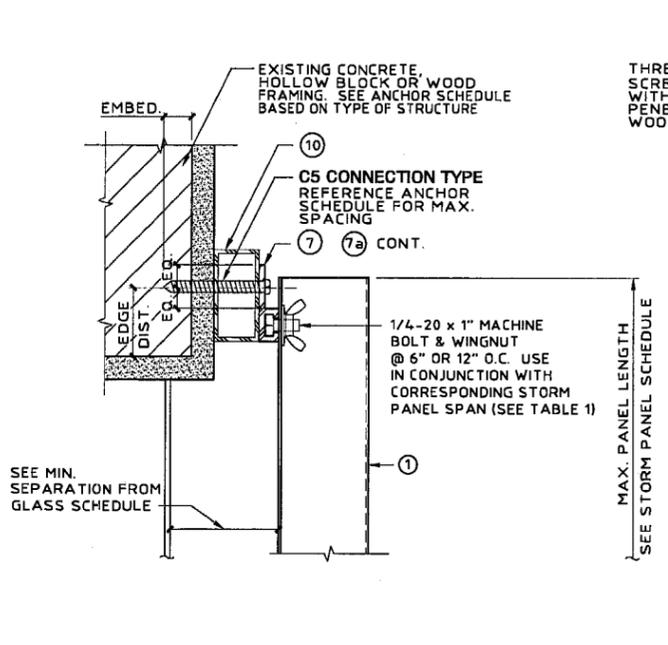
drawing no. **00-104**
 sheet 2 of 4



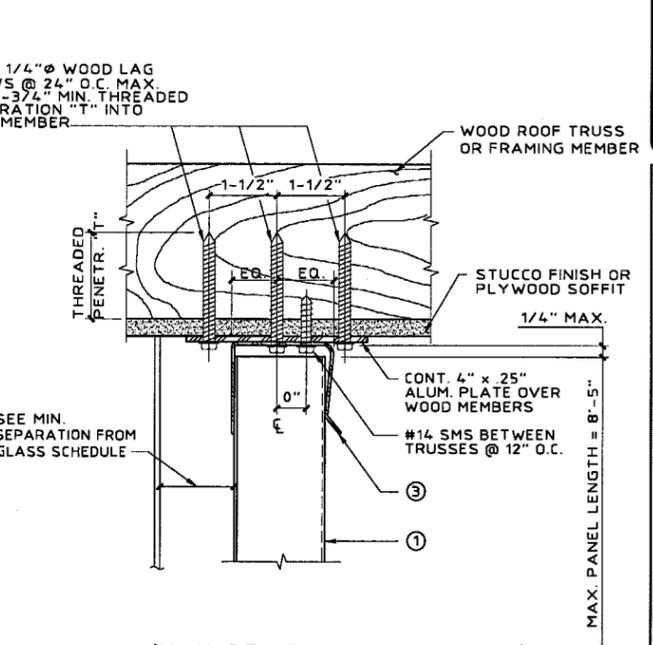
G ALT. BUILD-OUT MOUNT SECTION
SCALE: 3" = 1'-0"



H WALL MOUNT DETAIL
SCALE: 3" = 1'-0"



I ALT. BUILD-OUT MOUNT SECTION
SCALE: 3" = 1'-0"

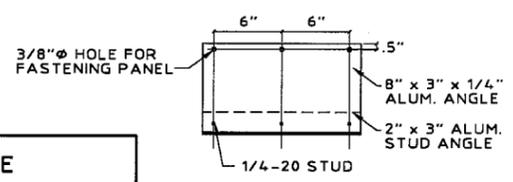


J SOFFIT CONNECTION DETAIL
SCALE: 3" = 1'-0"

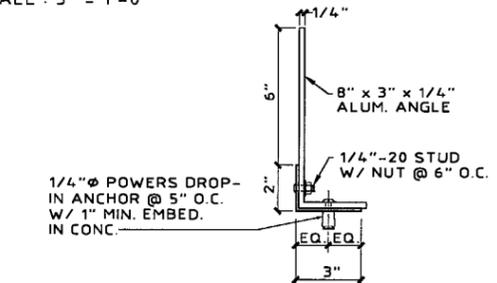
NEGATIVE DESIGN LOAD W (P.S.F.)	W/ BOLTS OR BOLTS AND TUBE	W/ BOLTS OR BOLTS AND TUBE	WITHOUT BOLTS OR TUBE
	SEE ELEV. (11) & (12) FOR ALL MOUNTING CONDITIONS W/ STUDS @ 6" O.C.	SEE ELEV. (11) & (12) FOR STUDDED ANGLE & "F" TRACK MOUNTS W/ STUDS @ 6" O.C. & DIRECT MOUNTS W/ ANCHORS @ 6" O.C. (TOP & BOTTOM)	SEE ELEV. (13) FOR STUDDED ANGLE, "F" TRACK, "H" HEADERS, W/ STUDS @ 12" O.C. & DIRECT MOUNTS W/ ANCHORS @ 12" O.C. (TOP &/OR BOTTOM)
	L MAX. (FT-IN)	L MAX. (FT-IN)	L MAX. (FT-IN)
40.0	11-5	11-5	8-8
50.0	11-1	11-1	8-8
60.0	10-1	10-1	8-8
70.0	9-4	9-4	8-8
80.0	8-9	8-9	8-1
90.0	8-1	8-3	7-2
100.0	7-3	7-10	6-6
110.0	6-7	7-5	5-10
120.0	6-1	7-1	5-5
130.0	5-7	6-10	5-0
140.0	5-2	6-7	4-7
150.0	4-10	6-4	4-3
160.0	4-6	6-2	4-0
170.0	4-3	6-0	3-9
180.0	4-0	5-10	3-7
190.0	3-10	5-8	3-5
200.0	3-7	5-6	3-3
210.0	3-5	5-3	3-1
220.0	3-3	5-0	2-11
230.0	3-2	4-9	2-9

POSITIVE DESIGN LOAD (W) (P.S.F.)	ACTUAL SHUTTER SPAN (L) (FT-IN)	MINIMUM SEPARATION FOR INSTALLATIONS - 30' ABOVE GRADE (INCHES)			MINIMUM SEPARATION FOR INSTALLATIONS - 30' ABOVE GRADE (INCHES)
		OVERLAP FASTENERS & BAR	OVERLAP FASTENERS W/O BAR	NO BAR, NO OVERLAP FASTENERS, STUDS @ 12" O.C.	
40.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	8-5	1-3/4	2-5/8	2-3/4	1-5/8
	8-8	N.A.	2-5/8	2-3/4	1-5/8
	11-5	N.A.	2-5/8	N.A.	2-5/8
50.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	8-5	1-3/4	2-5/8	2-3/4	1-5/8
	8-8	N.A.	2-5/8	2-3/4	1-3/4
	11-1	N.A.	2-3/4	-	2-3/4
60.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	8-5	1-3/4	2-5/8	2-3/4	1-7/8
	8-8	N.A.	2-5/8	2-3/4	1-7/8
	10-1	N.A.	2-5/8	N.A.	2-1/2
70.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	8-5	1-7/8	2-5/8	2-3/4	2
	8-8	N.A.	2-5/8	2-3/4	2
	9-4	N.A.	2-5/8	N.A.	2-3/8
80.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	8-5	2	2-5/8	2-3/4	2
	8-8	N.A.	2-5/8	2-3/4	2
	8-9	N.A.	2-5/8	N.A.	2-1/4
90.0	5-0	1-3/4	2-5/8	2-3/4	1-1/4
	7-0	1-3/4	2-5/8	2-3/4	1-5/8
	8-3	2	2-1/4	2-3/4	2
	8-5	1-3/4	2-5/8	2-3/4	1-1/4
100.0	6-0	1-3/4	2-5/8	2-3/4	1-3/8
	7-10	2	2-5/8	2-3/4	2
	4-0	1-3/4	2-5/8	2-3/4	1-1/4
	5-0	1-3/4	2-5/8	2-3/4	1-3/8
110.0	7-5	1-7/8	2-5/8	2-3/4	1-7/8

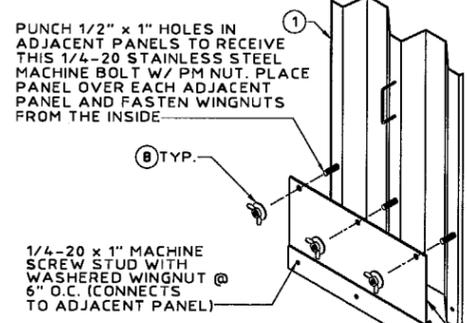
N.A. = NOT APPLICABLE



K ANGLE ASSEMBLY
SCALE 1-1/2" = 1'-0"



L ALT. ASSEMBLY MOUNT
SCALE 3" = 1'-0"



M STORM PANEL INTERIOR FASTENING ISOMETRIC
SCALE 1-1/2" = 1'-0"

DETAIL (K) NOTES:
1. THIS DETAIL DEPICTS THE CONNECTION OF THE LAST PANEL FOR AN OPENING WITH PANELS INSTALLED FROM INSIDE. USE OF THIS DETAIL SHALL BE IN CONJUNCTION WITH AN "H" HEADER OR "U" HEADER TOP MOUNT.
2. MAXIMUM PANEL LENGTH = 8' - 5" MAXIMUM DESIGN LOAD = 75.0 P.S.F.

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE *September 28, 2000*
BY *Helmut A. M...*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. *00-0726-06*

KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
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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
Green Shutters
MANUFACTURING, INC.

NO.	DATE	DESCRIPTION
1	07/20/00	JAP/PPREV. DRAWING NO. 95-592
2	08/29/00	JAP/COUNTY COMMENTS

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

AUG 29 2000

DATE	07/20/00
SCALE	AS NOTED
DRAWN BY	MC
DESIGN BY	MD
CHECKED BY	VJK
DRAWING NO.	00-104
SHEET	3 of 4

