



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

GFRC Cladding Systems, Inc.
118 North Shiloh Road
Garland ,TX 75042

Your application for Notice of Acceptance (NOA) of:

" Class 2 " Glass Fiber Reinforced Concrete Wall 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.

Raul Rodriguez
Chief Product Control Division

ACCEPTANCE NO.: 01-0216.05
EXPIRES: 05/31/2006

**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: 05/31/2001

GFRC Cladding Systems, Inc.

ACCEPTANCE No. : 01-0216.05

APPROVED : 05/31/2001

EXPIRES : 05/31/2006

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This approves a Glass Fiber Reinforced Concrete Wall Panel 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 load requirements, as determined by SFBC Chapter 23, do not exceed the design load values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

This Glass Fiber Reinforced Concrete Wall Panel and its components shall be constructed in strict compliance with the following documents: Drawing No. 1037, sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated January 29, 2001, signed and sealed by Warren W. Schaefer, P.E. on May 1, 2001, 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 must be protected against corrosion, contamination and damage at all times.

4. INSTALLATION

This Glass Fiber Reinforced Concrete Wall Panel 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".

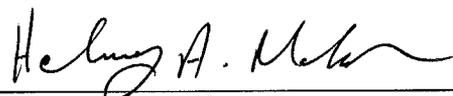
6. BUILDING PERMIT REQUIREMENTS

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

GFRC Cladding Systems, Inc.

ACCEPTANCE No. : 01-0216.05

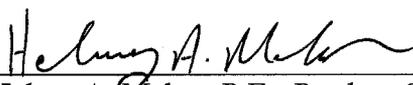
APPROVED : 05/31/2001

EXPIRES : 05/31/2006

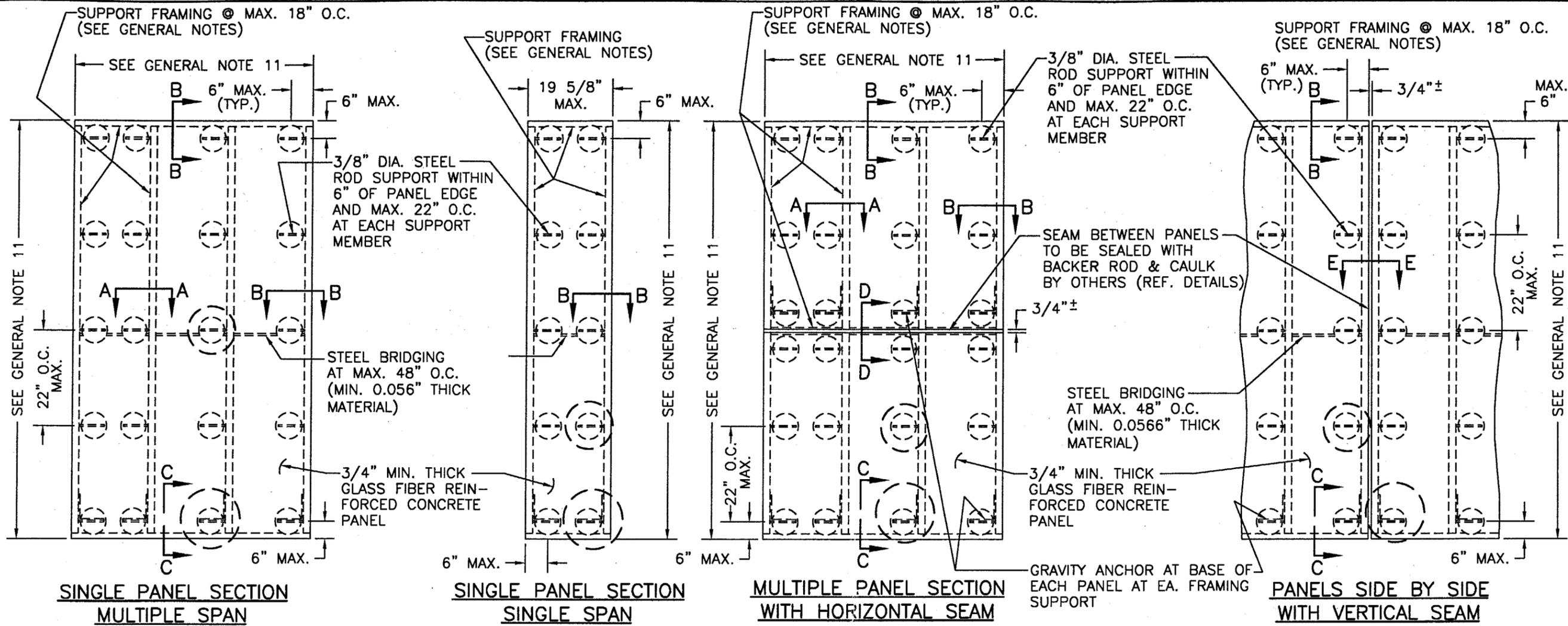
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

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



GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE PANELS.
- THIS PANEL SYSTEM HAS BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE 1994 EDITION AND MIAMI-DADE COUNTY PROTOCOLS PA-201, 202 & 203.
- THE PANELS AND THEIR 3/8" STEEL ROD ATTACHMENT TO THE FRAMING/STRUCTURE ARE PART OF THIS NOTICE OF ACCEPTANCE. ALL SUPPORTING STUDS OR STEEL FRAMING MEMBERS ARE NOT PART OF THIS APPROVAL & THEY SHALL BE REVIEWED BY THE CORRESPONDING BUILDING DEPARTMENT FOR EACH JOB.
- ALL SUPPORT FRAMING SHALL BE MIN. 4" X 0.056" THK. (Fy = 50 ksi.) STUDS WITH 1 5/8" FLANGES & 1/2" RETURNS AND MIN. 4" X 0.056" THK. TRACK WITH 1 1/4" FLANGES.
- MAXIMUM ALLOWABLE DEFLECTION FOR THIS ASSEMBLY SHALL BE L/360.
- DETAILS ON SHEETS 2 THROUGH 4 ARE TYPICAL AND SHOW INTENT TO PREVENT WATER INFILTRATION INTO AND BEHIND THE SYSTEM.
- THIS SYSTEM IS A LARGE MISSILE IMPACT APPROVED SYSTEM.
- THIS WALL PANEL SYSTEM SHALL NOT BE CONSIDERED TO OR BE USED FOR TRANSFER OF DIAPHRAM ACTION OF WALL TO STRUCTURE.
- PANEL SIZES ARE LIMITED BY SHIPPING & HANDLING REQUIREMENTS (TYPICALLY LIMITED TO 12 FT. IN ONE DIRECTION) AND/OR JOB REQUIREMENTS ONLY AND ARE NOT LIMITED TO THE 55 5/8" X 96" SIZES TESTED.

PANEL SPECIFICATIONS

BRIEF DESCRIPTION:
 GLASS FIBER REINFORCED CONCRETE (GFRC) PANEL WITH MIN. THICKNESS = 3/4" MANUFACTURED BY THE SPRAY-UP PROCESS USING SPECIAL ALKALI RESISTANT GLASS FIBERS THAT ARE CHOPPED AND SPRAYED ONTO A MOLD WITH AN APPROPRIATE CEMENT/AGGREGATE SLURRY. A 20 OZ. HEAVY WEIGHT GLASS FIBER ALKALI RESISTANT MESH BY BAY MILLS IS EMBEDDED INTO PANEL 1/4" OFF THE OUTER PANEL FACE.

MIX DESIGN	
MATERIAL	AMOUNT
TYPE I PORTLAND CEMENT	94 LBS
SAND (1:1 RATIO TO CEMENT)	94 LBS
WATER	26 LBS
COPOLYMER DISPERSION COMPOUND BY BALL CONSULTING, LTD.	11 LBS
ALKALI RESISTANT GLASS FIBER BY NIPPON ELECTRIC GLASS AMERICA, INC.	4.5% BY WEIGHT MIN. OF TOTAL MIX
WR GRACE DURACEM ML500 PLASTICIZER	0-8 OZ. AS REQ'D TO OBTAIN CORRECT SLUMP TO PUMP

THE CEMENT AND THE SAND AGGREGATE ARE COMBINED WITH WATER AND THE THERMOPLASTIC COPOLYMER DISPERSION AGENT IN A HIGH SHEAR MIXER. AFTER MIXING, SLURRY IS PUMPED THROUGH A HOSE TO A CONCENTRIC SPRAY GUN, WHERE THE CHOPPED GLASS FIBER IS ADDED & SPRAYED ONTO THE MOLD.

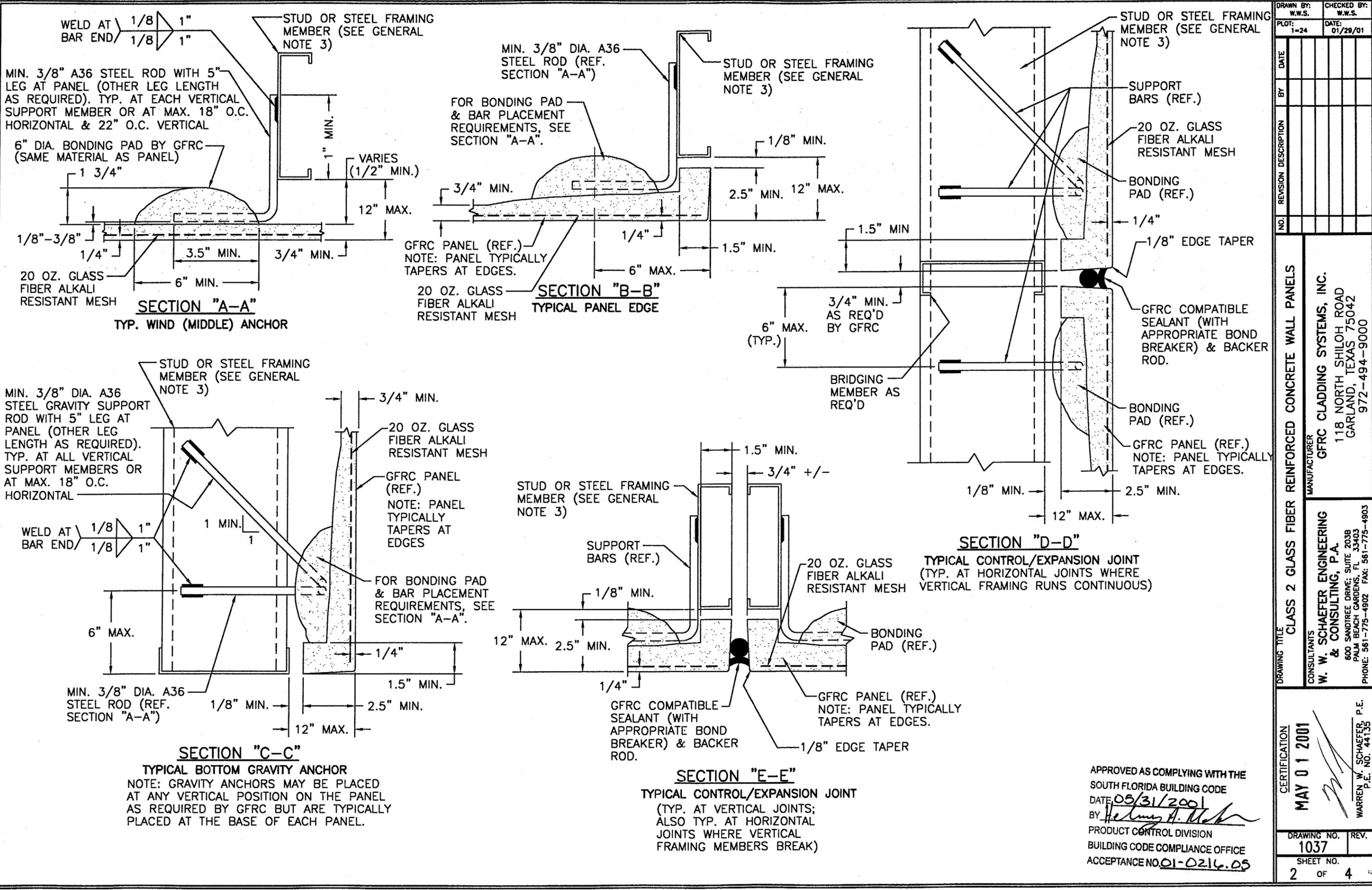
ALLOWABLE DESIGN PRESSURE	
POSITIVE	NEGATIVE
105 PSF	150 PSF

LARGE MISSILE IMPACT APPROVED

EXTERIOR ELEVATIONS

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE 05/31/2001
 BY *Warren W. Schaefer*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 01-0216.05

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 01/29/01
NO.	REVISION DESCRIPTION
BY	DATE
DRAWING TITLE CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 600 SANDTREE DRIVE, SUITE 203B PALM BEACH GARDENS, FL 33403 PHONE: 561-775-4902 FAX: 561-775-4903	
MANUFACTURER GFRC CLADDING SYSTEMS, INC. 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000	
CERTIFICATION MAY 01 2001	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1037	REV.
SHEET NO. 1 OF 4	



DRAWN BY:	W.W.S.	CHECKED BY:	W.W.S.
PLOT:	1-24	DATE:	01/29/01
NO.		REVISION DESCRIPTION	
DATE		BY	

DRAWING TITLE
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS

MANUFACTURER
GFRC GLADDING SYSTEMS, INC.
 118 NORTH SHILOH ROAD
 GARLAND, TEXAS 75042
 972-494-9000

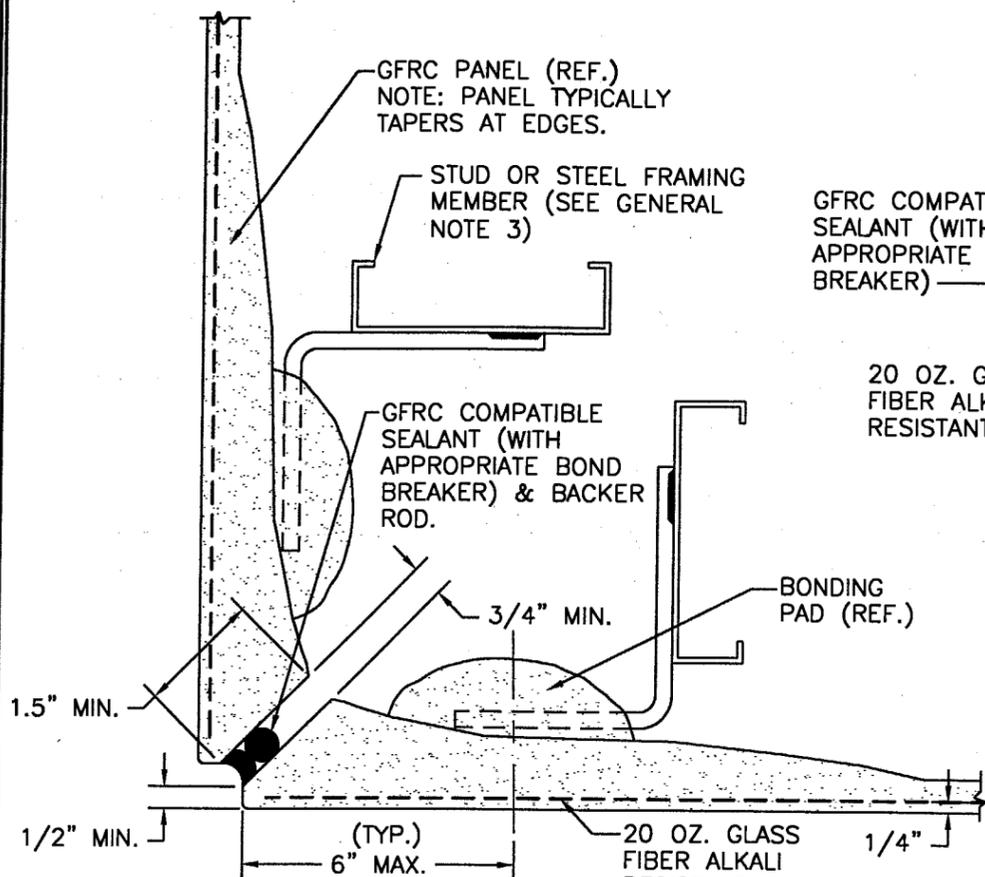
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 600 SANDTREE DRIVE, SUITE 203B
 PALM BEACH GARDENS, FL 33403
 PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION
MAY 01 2001

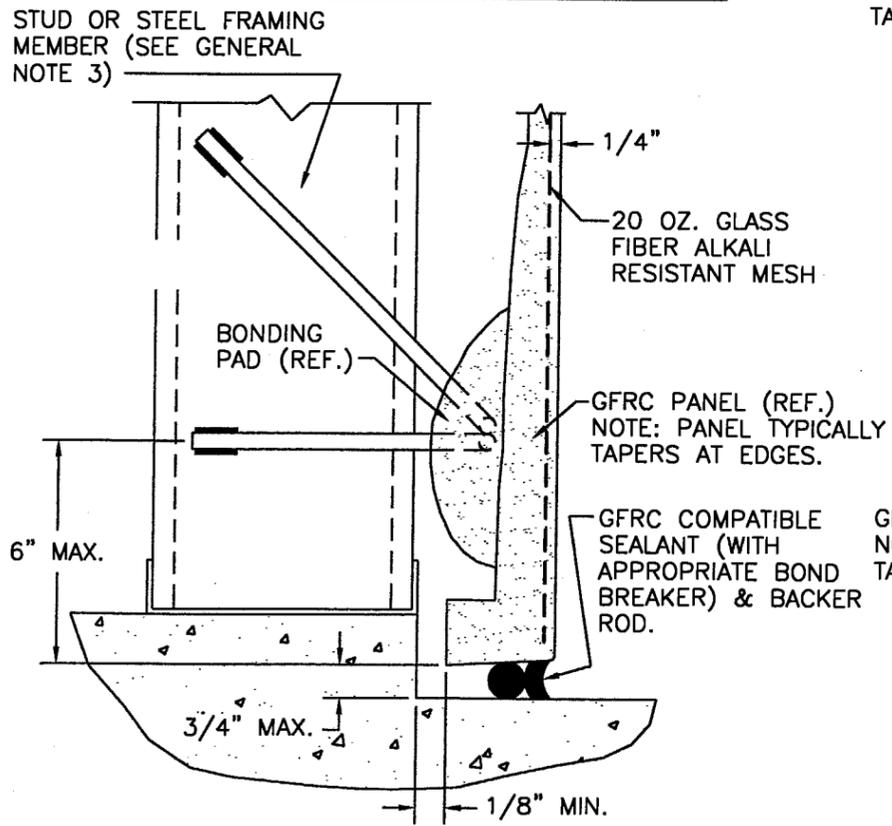
WARREN W. SCHAEFER, P.E.
 P.E. NO. 44135

DRAWING NO. 1037
 SHEET NO. 2 OF 4

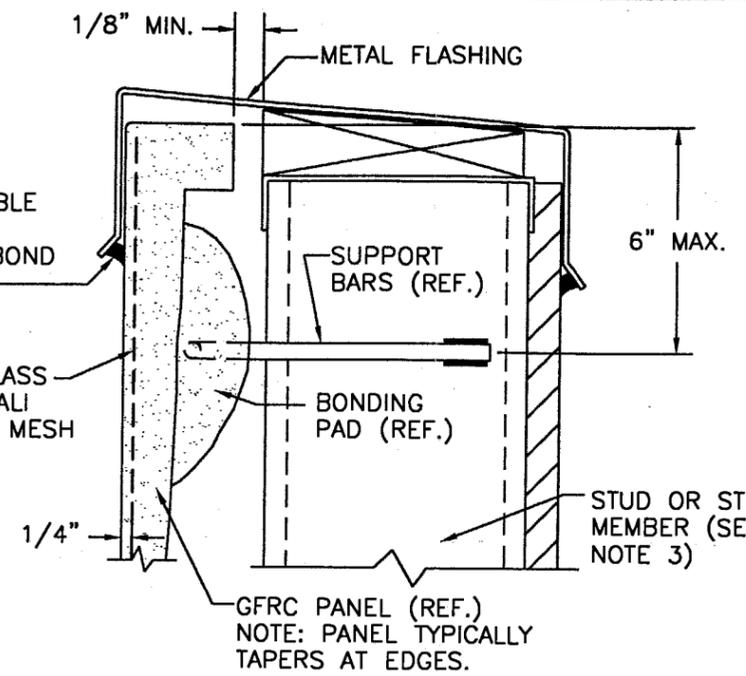
APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE 05/31/2001
 BY William H. Mack
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 01-0216.05



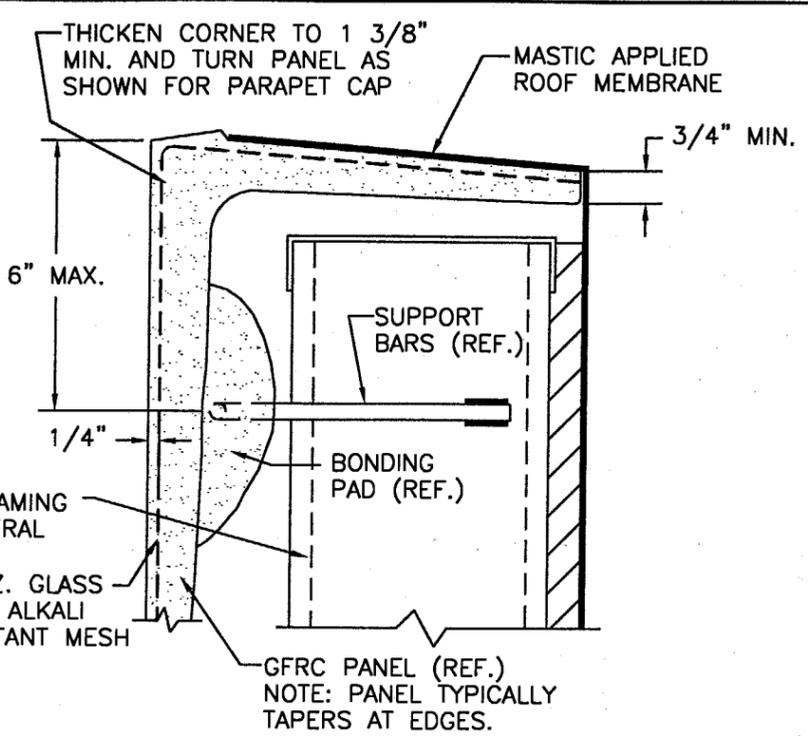
TYPICAL PANEL CORNER DETAIL



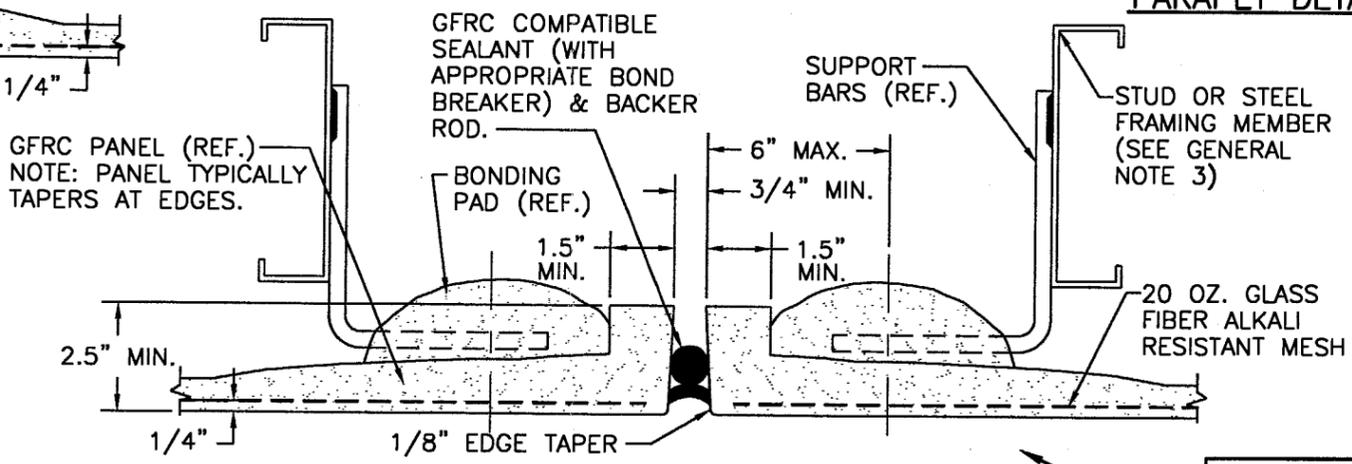
WALL BASE DETAIL



PARAPET DETAIL WITH FLASHING

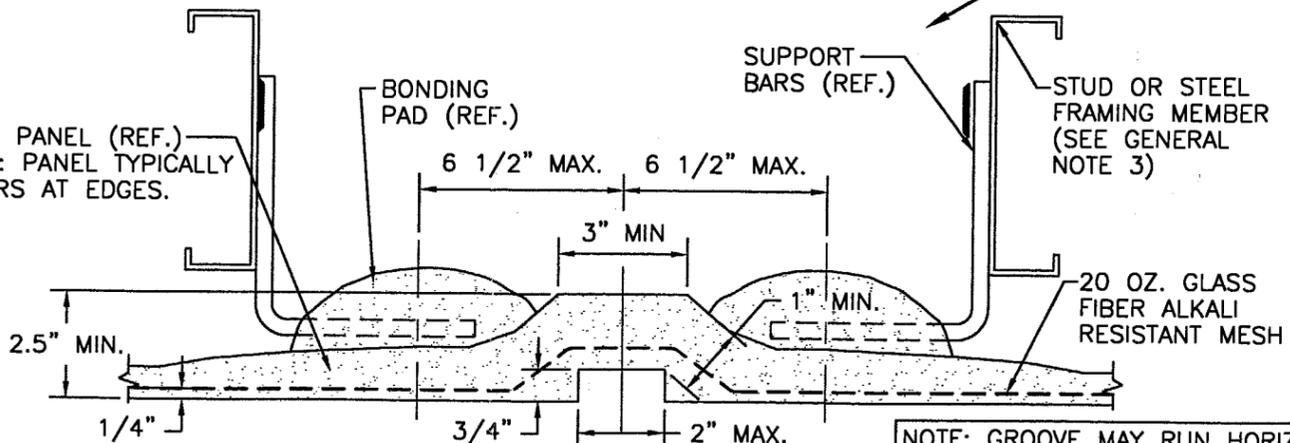


PARAPET DETAIL WITH FLASHING



OPTION CONTROL/EXPANSION JOINT

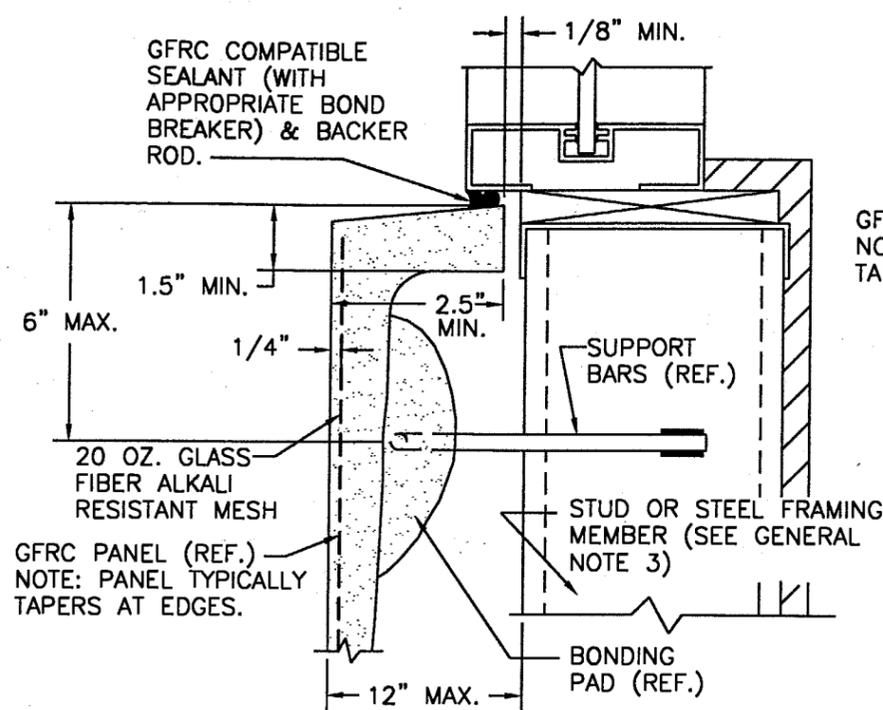
THESE DETAILS SHOWS A VERTICAL JOINT. HORIZONTAL JOINT SIMILAR EXCEPT JOINT RUNS PERPENDICULAR TO STUDS.



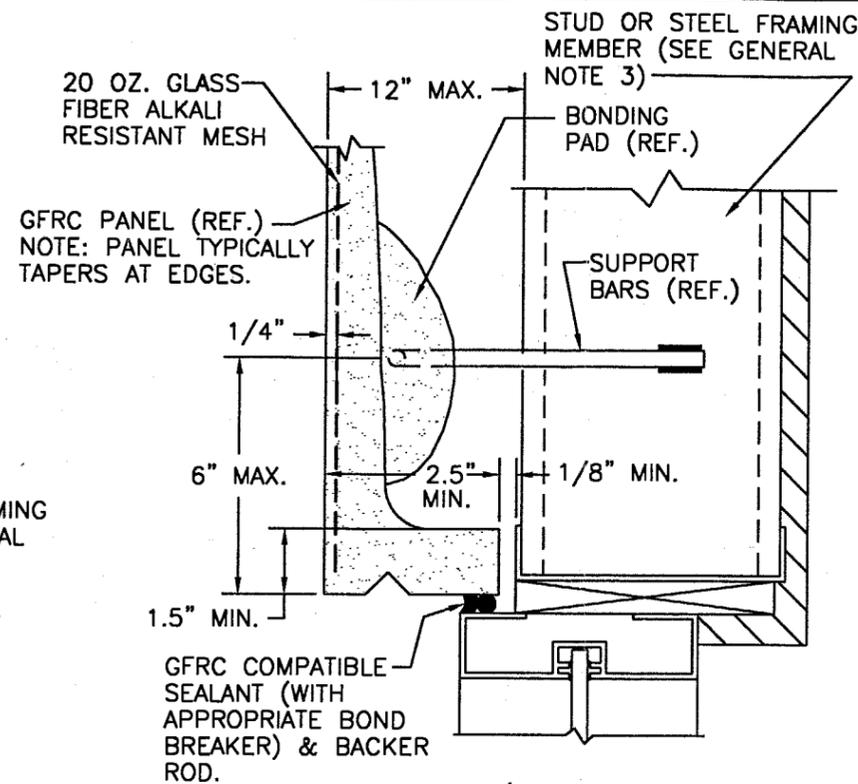
TYP. PANEL GROOVE DETAIL

NOTE: GROOVE MAY RUN HORIZONTAL OR VERTICAL AND MAY BE OF ANY SHAPE WITHIN DIMENSION PERIMETERS.

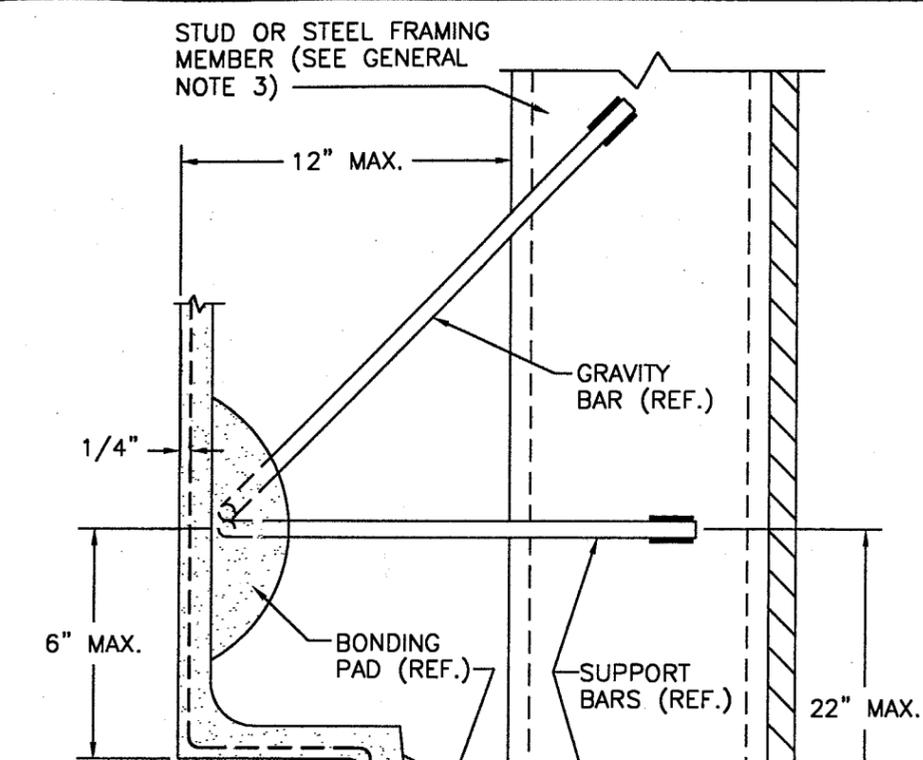
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 01/28/01	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		MANUFACTURER: GFRF CLADDING SYSTEMS, INC.	
600 SANDTREE DRIVE, SUITE 203B PALM BEACH GARDENS, FL 33403 PHONE: 561-775-4902 FAX: 561-775-4903		118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000	
CERTIFICATION: MAY 01 2001			
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE DATE 05/31/2001 BY <i>Warren W. Schaefer</i> PRODUCT CONTROL DIVISION BUILDING CODE COMPLIANCE OFFICE ACCEPTANCE NO. 01-0216.05			
DRAWING NO. 1037		REV.	
SHEET NO. 3		OF 4	



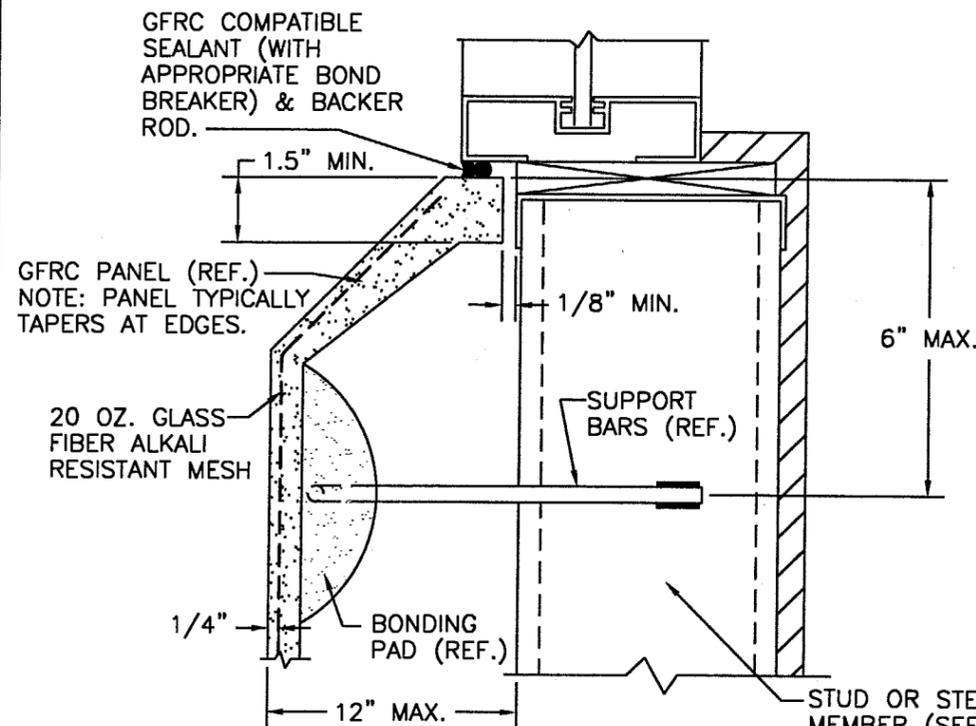
TYP. WINDOW SILL DETAIL
SIMILAR FOR SIDE JAMBS



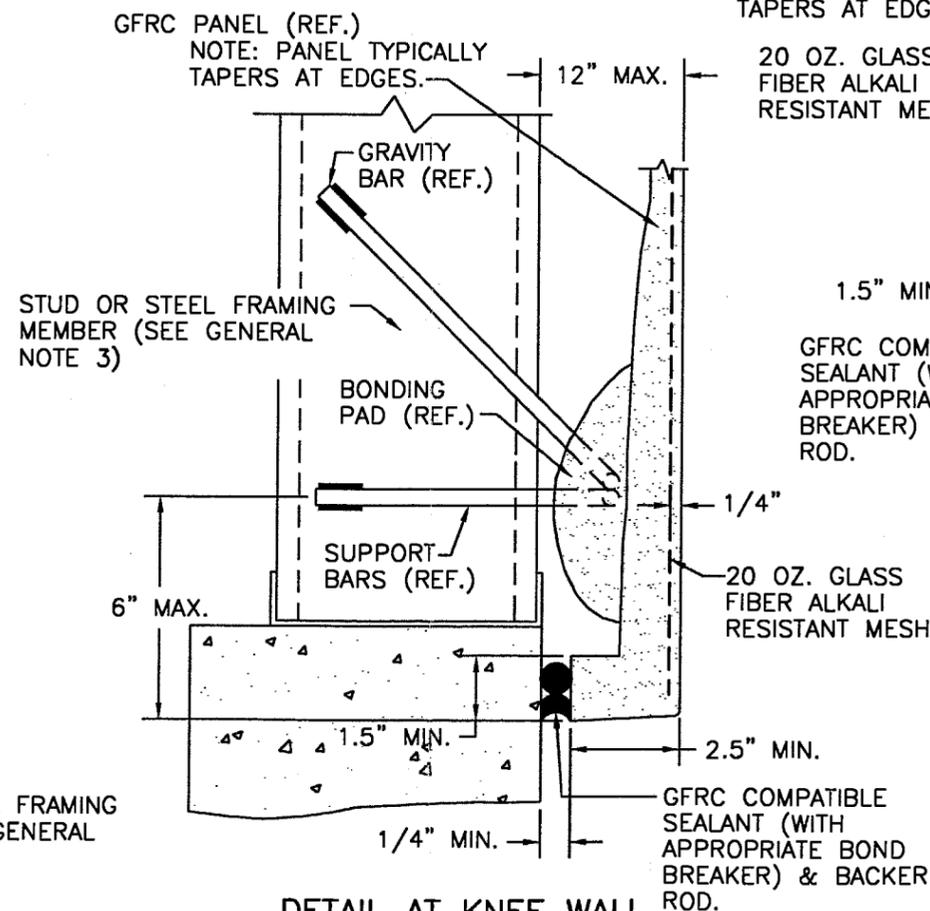
TYP. WINDOW/DOOR HEAD DETAIL



MISCELLANEOUS DETAIL



MISCELLANEOUS DETAIL



DETAIL AT KNEE WALL

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE 05/31/2001
BY *Warren W. Schaefer*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 01-0216-05

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MANUFACTURER GFRc CLADDING SYSTEMS, INC. 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 800 SANDTREE DRIVE, SUITE 203B PALM BEACH GARDENS, FL 33403 PHONE: 561-775-4902 FAX: 561-775-4903	
DRAWING TITLE	
CERTIFICATION MAY 01 2001 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1037	REV.
SHEET NO. 4	OF 4