



MIAMI-DADE COUNTY
BUILDING AND NEIGHBORHOOD COMPLIANCE DEPARTMENT (BNC)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
 11805 SW 26 Street, Room 208
 Miami, Florida 33175-2474
 T (786) 315-2590 F (786) 315-2599

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov/building

GFRC Cladding Systems, LLC
118 North Shiloh Road
Garland, Texas 75042

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County BNC-Product Control Section 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 Section (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. BNC reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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: "Class 2" Glass Fiber Reinforced Concrete Wall Panels

APPROVAL DOCUMENT: Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision B1 dated 05/11/2011, signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

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 #05-0901.03** and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

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



Helmy A. Makar
 06/16/2011

NOA No. 11-0513.03
Expiration Date: 05/31/2016
Approval Date: 06/16/2011
Page 1

GFRC Cladding Systems, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #01-0216.05

A. DRAWINGS

1. *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.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on GFRC Glass Fiber Reinforced Concrete Wall Panel, prepared by Hurricane Test Laboratory, Inc., Report No. 0250-1203-00, dated February 14, 2001, signed and sealed by Vinu J. Abraham, P.E.*

C. CALCULATIONS

1. *Calculations, dated February 2, 2001, 3 pages, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E. on February 5, 2001.*

D. MATERIAL CERTIFICATIONS

1. *Daracem ML 500 Superplasticizer ASTM Type A and Type F by Grace Construction Products.*
2. *Technical data and specifications.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #05-0901.03

A. DRAWINGS

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 01/29/2001, signed and sealed by Warren W. Schaefer, P.E. on 08/17/2005.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

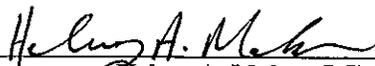
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. STATEMENTS

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E., stating that he is still in the engineering business, dated January 13, 2006.*



Helmy A. Makar, P.E., M.S.
BNC, Product Control Unit Supervisor

NOA No. 11-0513.03

Expiration Date: 05/31/2016

Approval Date: 06/16/2011

GFRC Cladding Systems, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 1037, titled "Class 2 Glass Fiber Reinforced Concrete Wall Panels ", sheets 1 through 4 of 4, prepared by W. W. Schaefer Engineering & Consulting, P.A., revision B1 dated 05/11/2011, signed and sealed by Warren W. Schaefer, P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on GFRC Glass Fiber Reinforced Concrete Wall Panel, prepared by Hurricane Test Laboratory, Inc., Report No. T250-0401-11, dated May 09, 2011, signed and sealed by Vinu J. Abraham, P.E.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

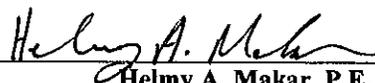
1. *By Miami-Dade County Building and Neighborhood Compliance department.*

E. MATERIAL CERTIFICATIONS

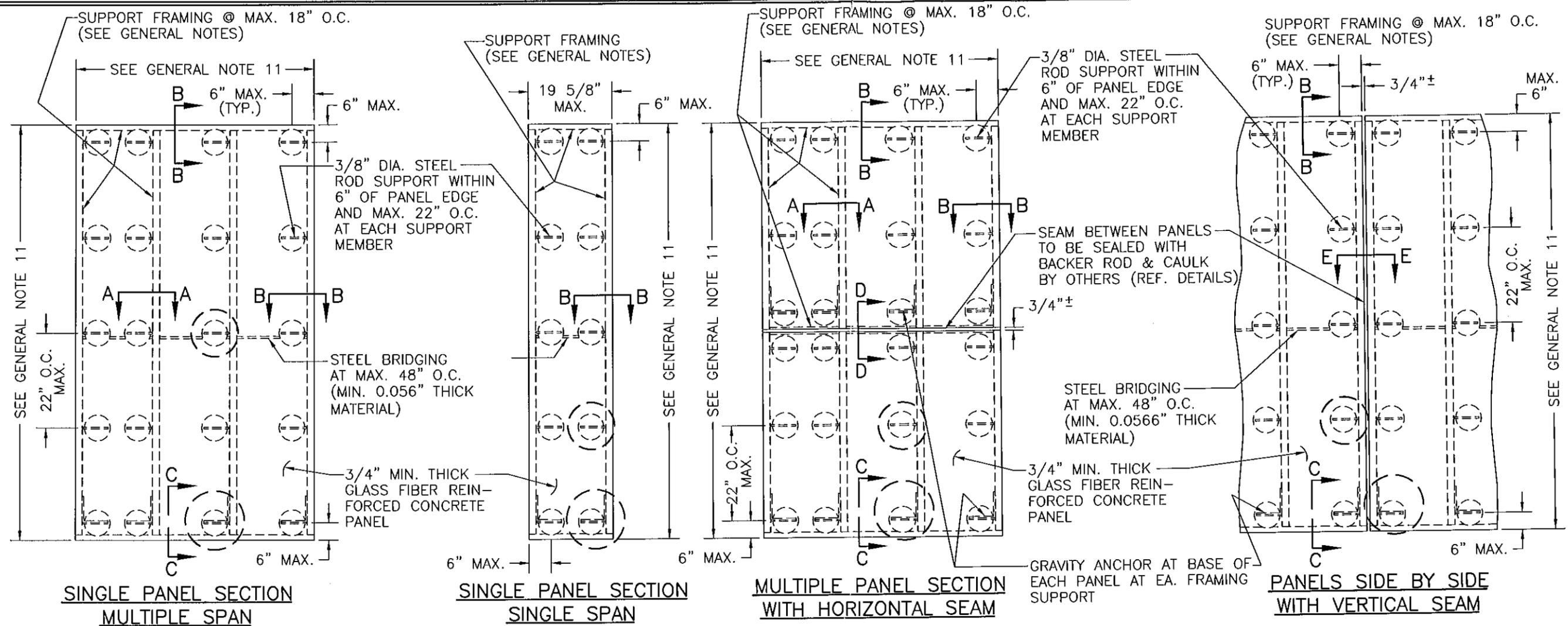
1. *None.*

F. STATEMENTS

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated May 11, 2011, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2007 Edition.*



Helmy A. Makar, P.E., M.S.
BNC, Product Control Unit Supervisor
NOA No. 11-0513.03
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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 FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- 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.

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 11-0513.03
 Expiration Date 05/31/2016
 By *Heather A. Mark*
 Miami Dade Product Control

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

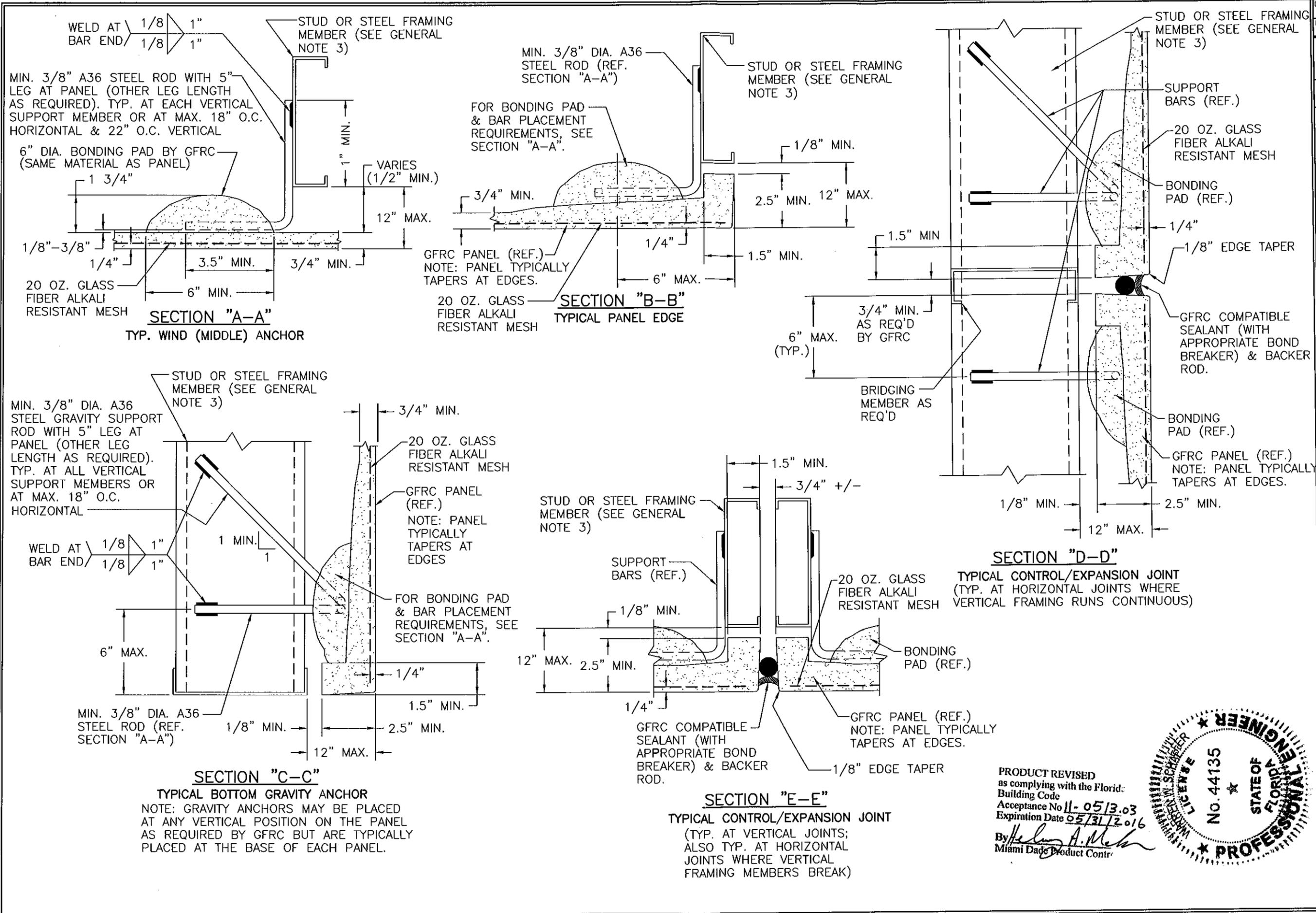
LARGE MISSILE IMPACT APPROVED

EXTERIOR ELEVATIONS



THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 01/29/01
DATE: 08/16/05	DATE: 05/11/11
BY: TML	BY: WRM
REVISION DESCRIPTION	REVISION DESCRIPTION
A1 UPDATE GENERAL NOTES TO 2004 CODE COMPLIANT	B1 UPDATE TO CURRENT STANDARDS
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS MANUFACTURER: GFRC CLADDING SYSTEMS, INC. 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000 CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH, 33418 PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	MAY 11 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1037	REV. B
SHEET NO. 1	OF 4



DRAWN BY:	W.W.S.	CHECKED BY:	W.W.S.
PLOT:	1=4	DATE:	01/29/01
NO.		REVISION DESCRIPTION	
BY			
DATE			

DRAWING TITLE
 CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS

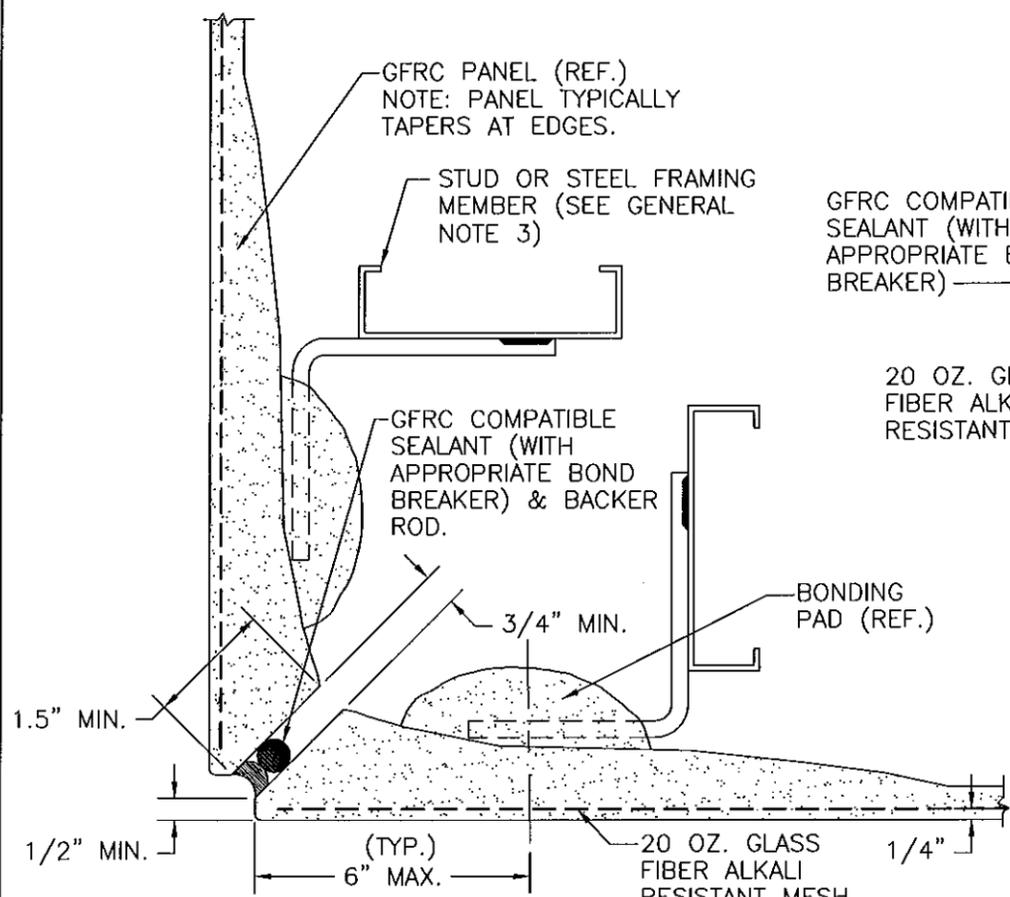
CONSULTANTS
 W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
 7480 150TH COURT NORTH
 PALM BEACH GARDENS, FL 33418
 PHONE: 561-744-3424

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

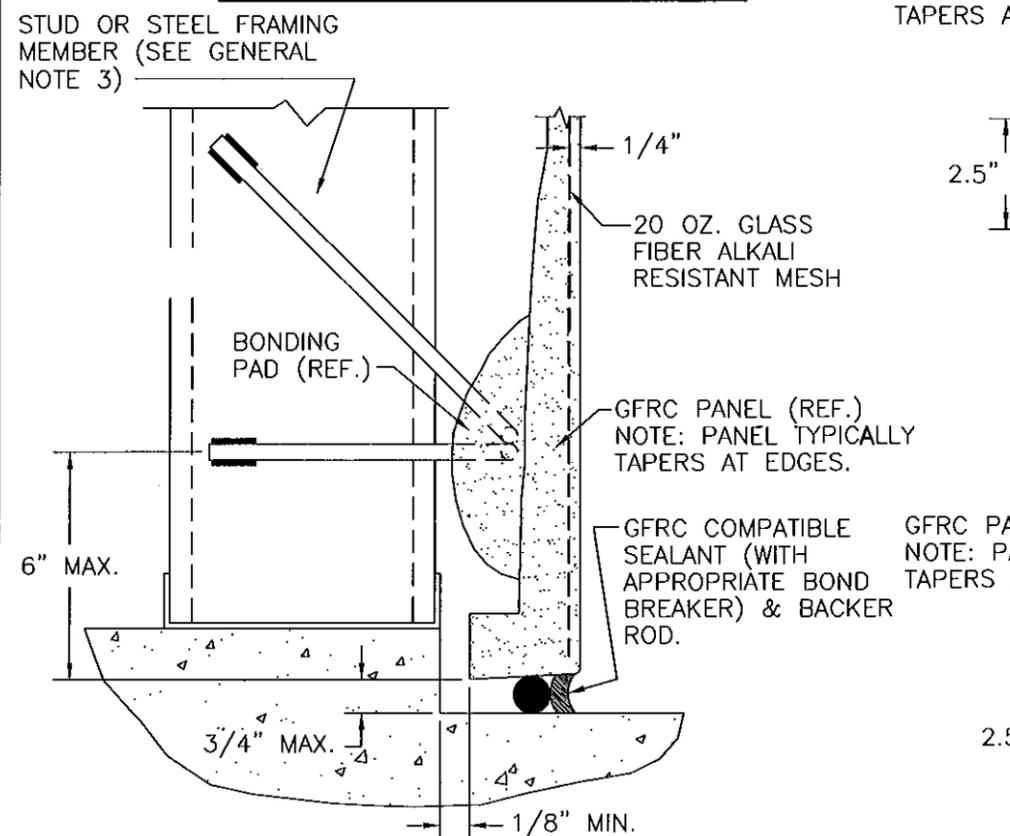
CERTIFICATION	
MAY 11 2011	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO.	REV.
1037	B
SHEET NO.	
2	OF 4

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 11-0513.03
 Expiration Date 05/31/2016
 By *Warren W. Schaefer*
 Miami Dade Product Contr.

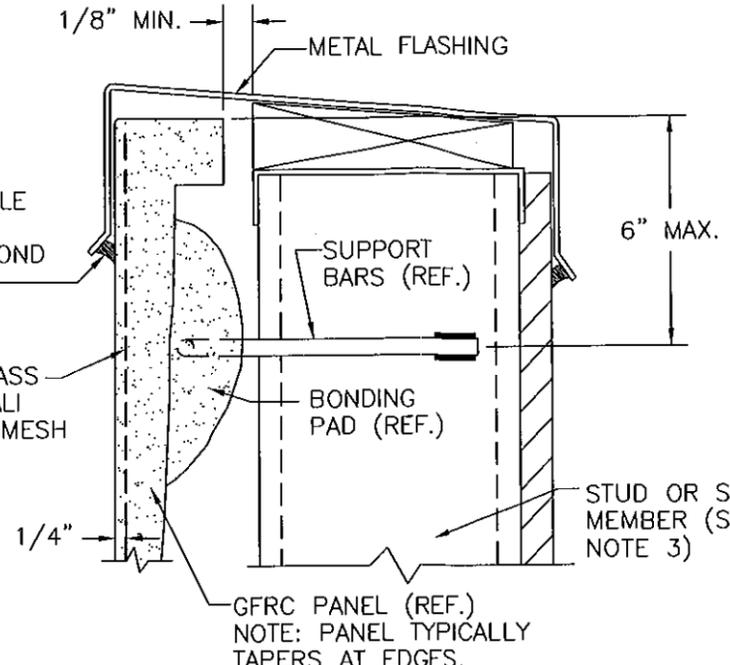




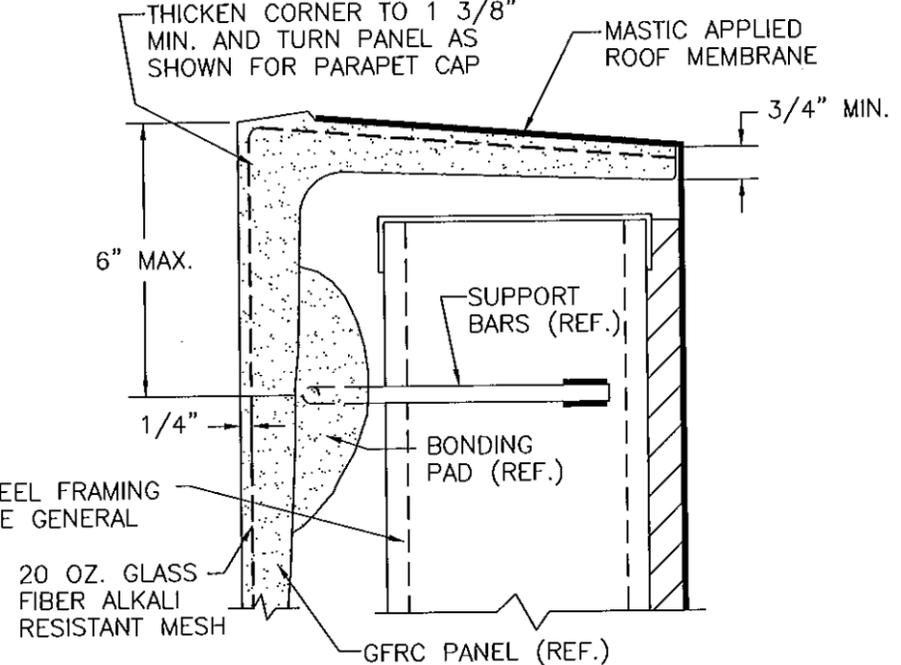
TYPICAL PANEL CORNER DETAIL



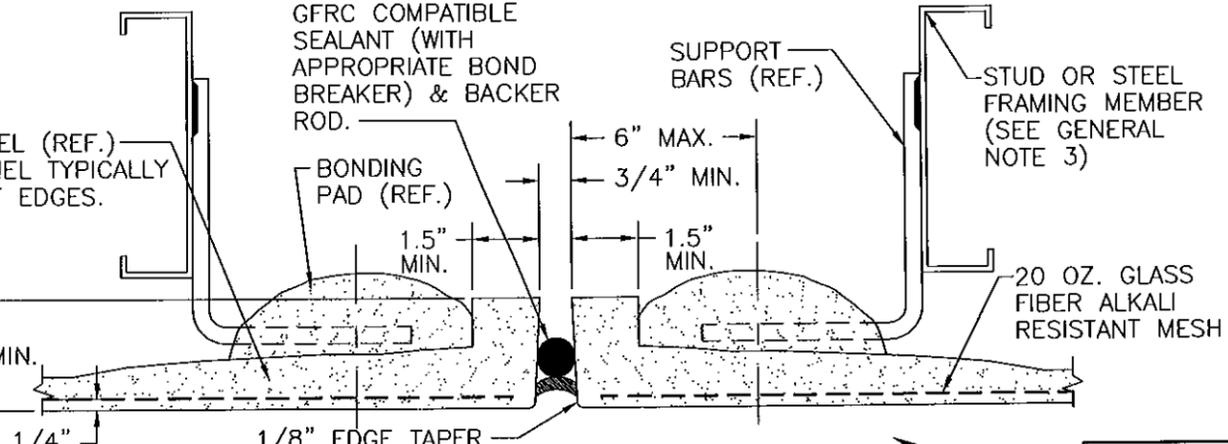
WALL BASE DETAIL



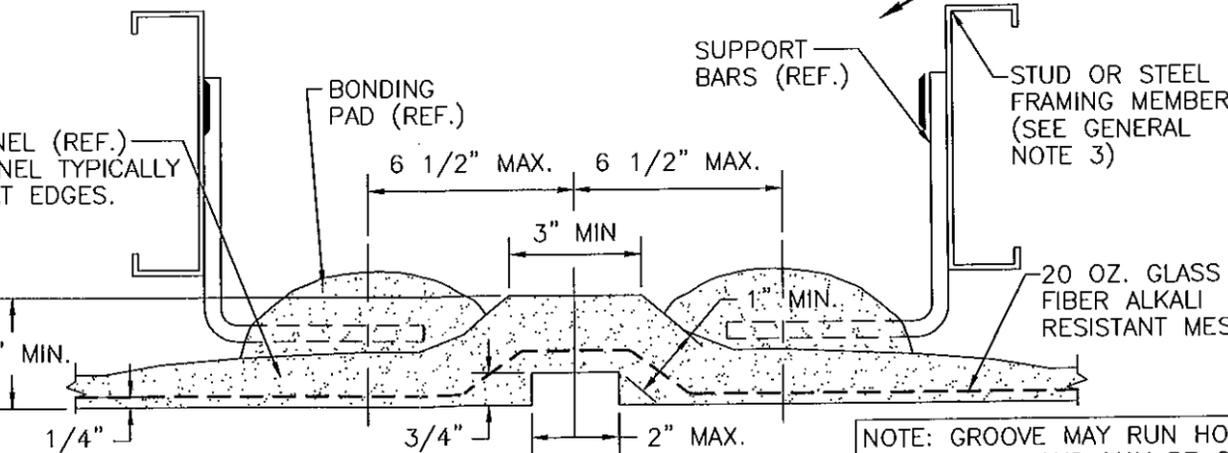
PARAPET DETAIL WITH FLASHING



PARAPET DETAIL WITH FLASHING



OPTION CONTROL/EXPANSION JOINT



TYP. PANEL GROOVE DETAIL

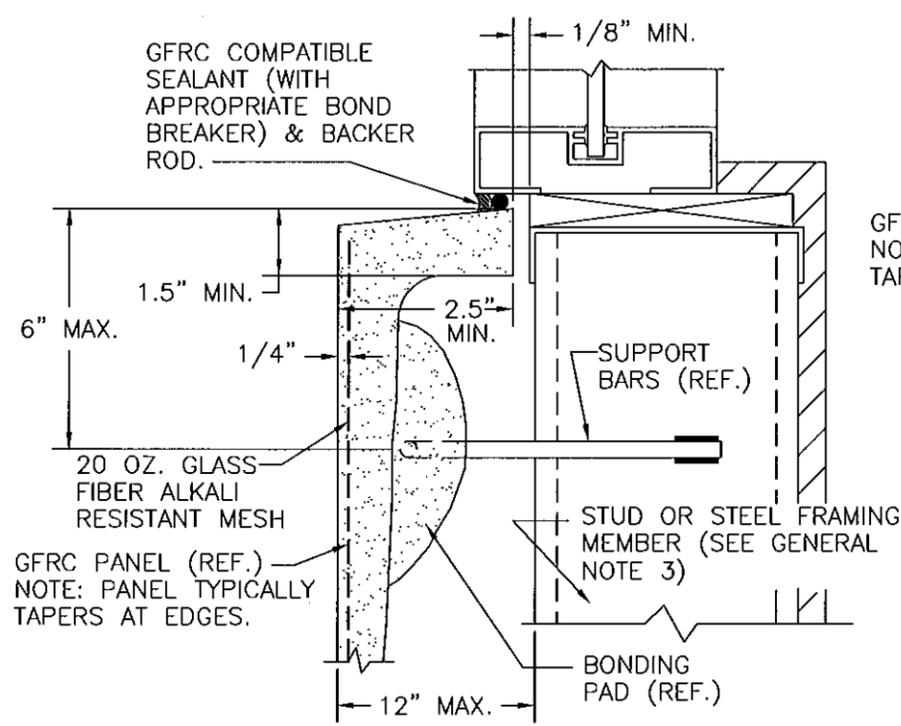
NOTE: GROOVE MAY RUN HORIZONTAL OR VERTICAL AND MAY BE OF ANY SHAPE WITHIN DIMENSION PERIMETERS.

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

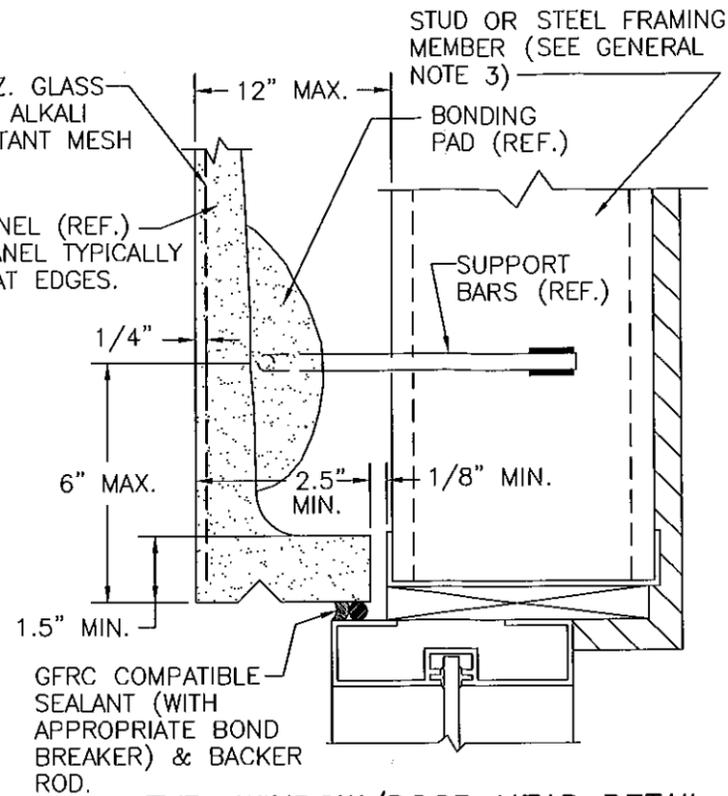
PRODUCT REVISED as complying with the Florida Building Code Acceptance Noll-0513.03 Expiration Date 05/31/2016
By *Heather A. Mels* Miami Dade Product Control



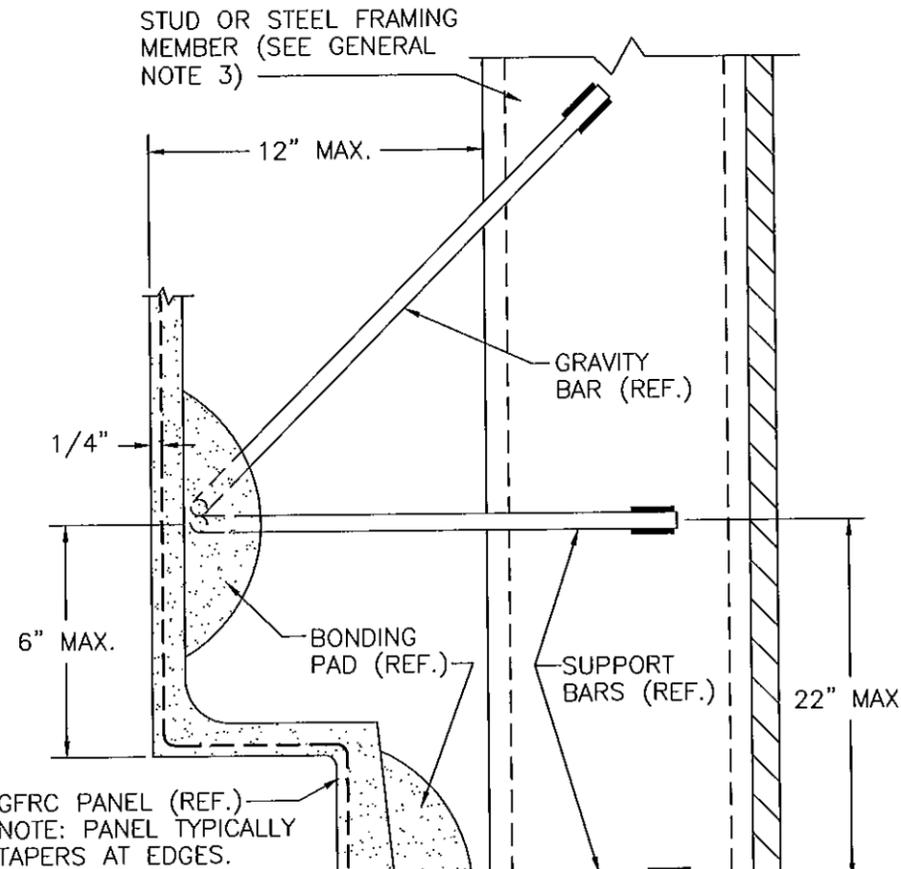
DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 01/29/01	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		MANUFACTURER: GFRF CLADDING SYSTEMS, INC.	
7480 150TH COURT NORTH, PALM BEACH GARDENS, FL 33418		118 NORTH SHILOH ROAD, GARLAND, TEXAS 75042	
PHONE: 561-744-3424		972-494-9000	
CERTIFICATION:	MAY 11 2011	P.E. WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1037	REV. B	SHEET NO. 3 OF 4	



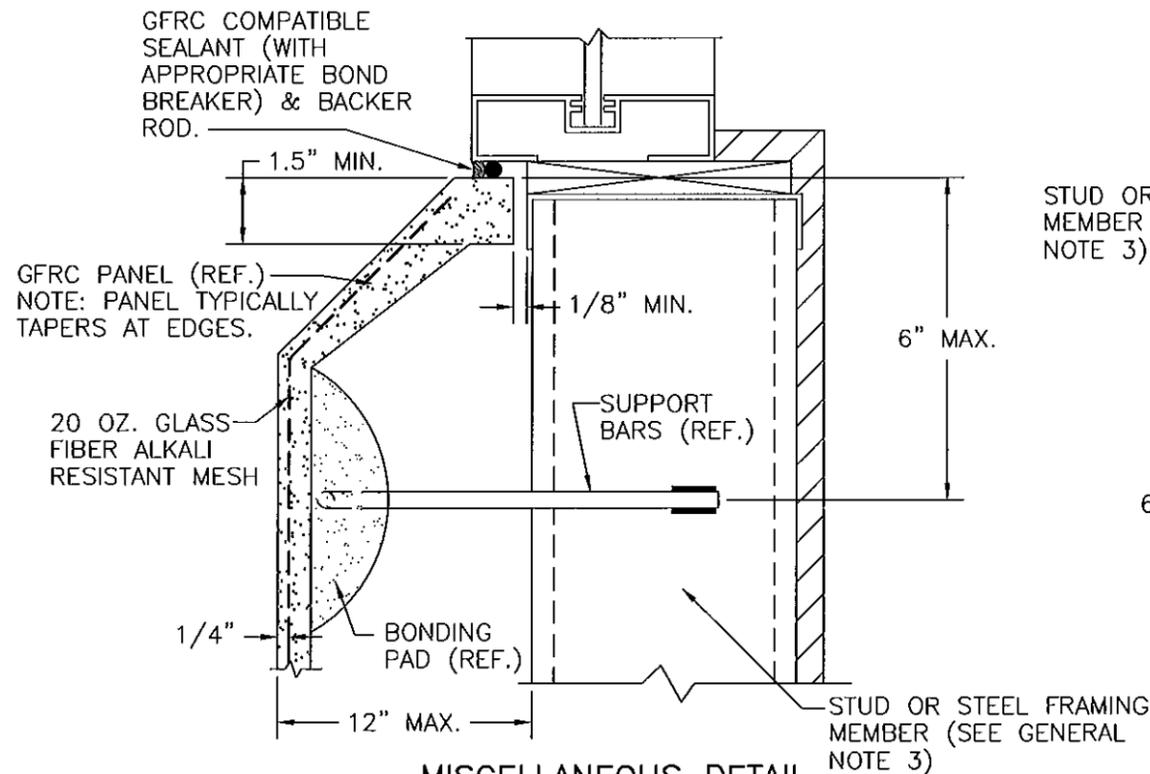
TYP. WINDOW SILL DETAIL
SIMILAR FOR SIDE JAMBS



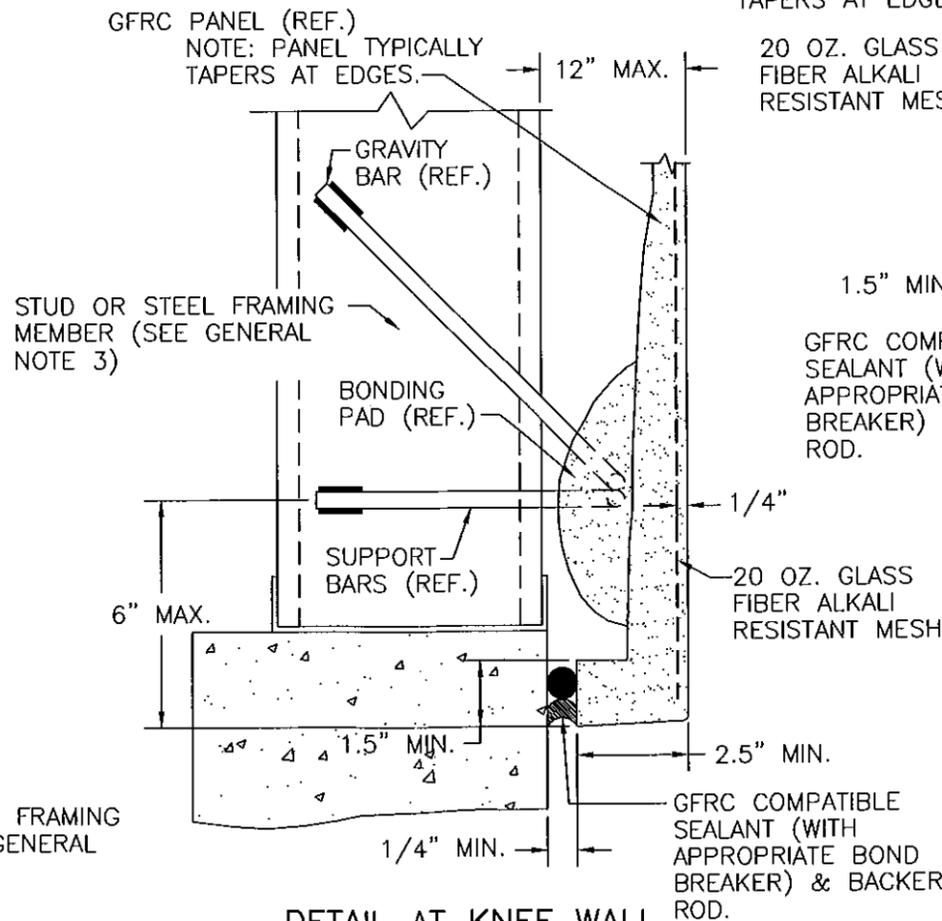
TYP. WINDOW/DOOR HEAD DETAIL



MISCELLANEOUS DETAIL



MISCELLANEOUS DETAIL



DETAIL AT KNEE WALL

PRODUCT REVISED
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Expiration Date 05/31/2016
By *Helmut A. Schaefer*
Miami Dade Product Control



DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 01/29/01
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
MANUFACTURER GFRF CLADDING SYSTEMS, INC. 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000	
CERTIFICATION	REV. B
DRAWING NO. 1037	SHEET NO. 4 OF 4