



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
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

www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

GFRC 360, LLC; dba GFRC Cladding
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 RER- 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. RER 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 C1 dated February 03, 2016, signed and sealed by Warren W. Schaefer, P.E., on Feb. 11, 2021, bearing Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and the 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 **renews NOA #20-0622.09** and consists of this page 1, evidence submitted pages E-1, E-2, E-3, E-4 & E-5 as well as approval document mentioned above.

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



Helmy A. Makar
06/24/2021

NOA No. 21-0219.01
Expiration Date: 05/31/2026
Approval Date: 06/24/2021
Page 1

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.
Product Control Section Supervisor
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0513.03

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., 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.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-1110.07

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 05/11/11, signed & sealed by Warren W. Schaefer, P.E., 02/06/12.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).*



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E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 11/04/11, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2007 & 2010 Editions.

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 14-0423.08

A. DRAWINGS

1. None.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 04/14/14, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2014 Edition.

6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 16-0209.12

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 C1 dated February 03, 2016, signed and sealed by Warren W. Schaefer, P.E.

B. TESTS

1. None.

C. CALCULATIONS

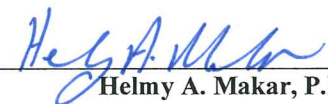
1. None.

D. QUALITY ASSURANCE

1. By Miami-Dade County Department of Regulatory and Economic Resources.

E. MATERIAL CERTIFICATIONS

1. None.



Helmy A. Makar, P.E., M.S.
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

7. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 17-0712.08

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. STATEMENTS

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 07/06/17, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2017 Edition.*

8. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 20-0622.09

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE


1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. STATEMENTS

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 06/04/20, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2020 Edition.*



Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 21-0219.01
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

9. 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 C1 dated February 03, 2016, signed and sealed by Warren W. Schaefer, P.E., on Feb. 11, 2021.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

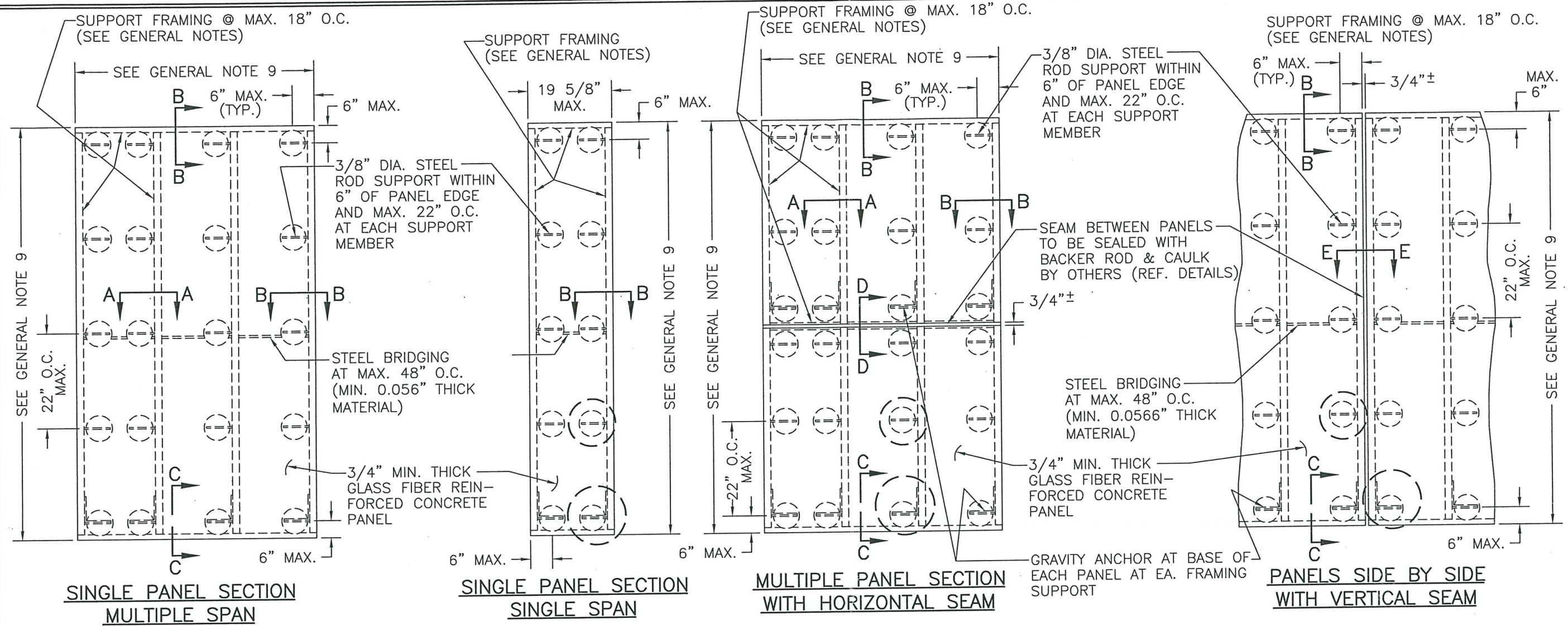
1. *None.*

F. STATEMENTS

1. *Letter from W. W. Schaefer Engineering & Consulting, P.A., dated 06/04/20, signed and sealed by Warren W. Schaefer, P.E., stating that this product is in compliance with the Florida Building Code, 2020 Edition.*



Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 21-0219.01
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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.

PANEL SPECIFICATIONS	
BRIEF DESCRIPTION: GLASS FIBER REINFORCED CONCRETE (GFRP) 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

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 21-0219.01
Expiration Date 05/31/2026
By *Warren W. Schaefer*
Miami Code Product Control

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	BY	REVISION DESCRIPTION	NO.
08/16/05	TWL	UPDATE GENERAL NOTES TO 2004 CODE COMPLIANT	A1
05/11/11	WRM	UPDATE TO CURRENT STANDARDS	B1
02/03/16	WWS	MANUFACTURER NAME CHANGE	C1

DRAWING TITLE
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS

MANUFACTURER
GFRP 360, LLC; dba GFRP CLADDING
118 NORTH SHILOH ROAD
GARLAND, TEXAS 75042
972-494-9000

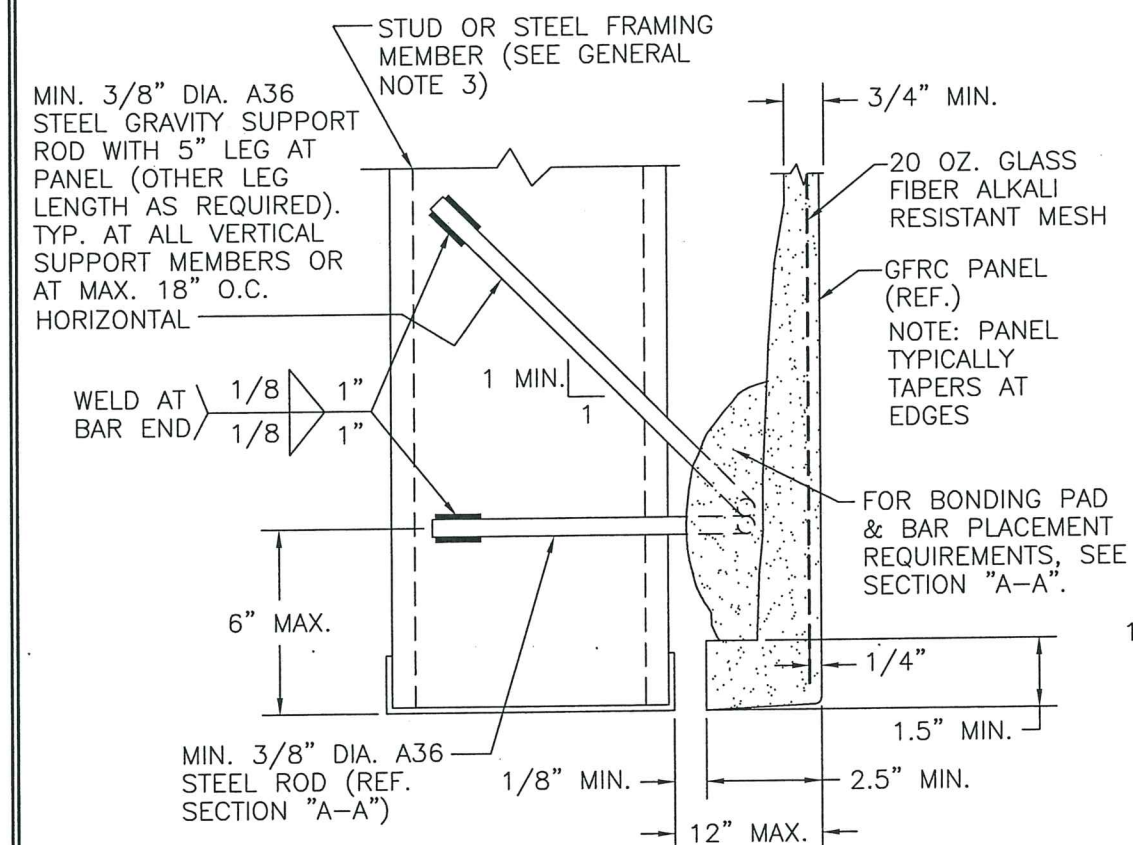
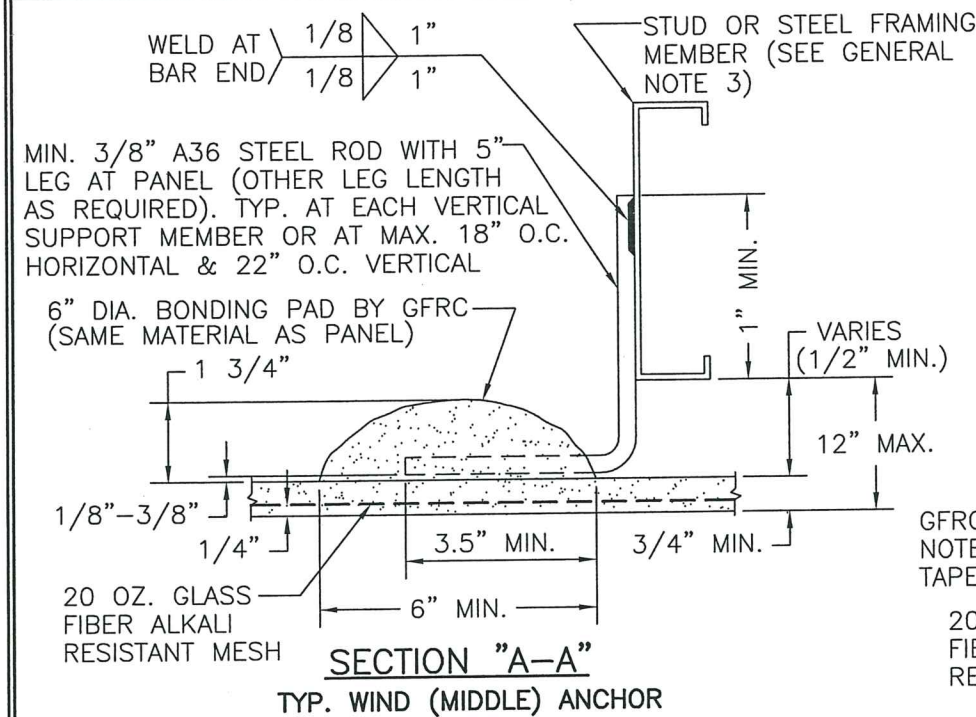
CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
FEB 17 2021
WARREN W. SCHAEFER, P.E.
P.E. NO. 44135

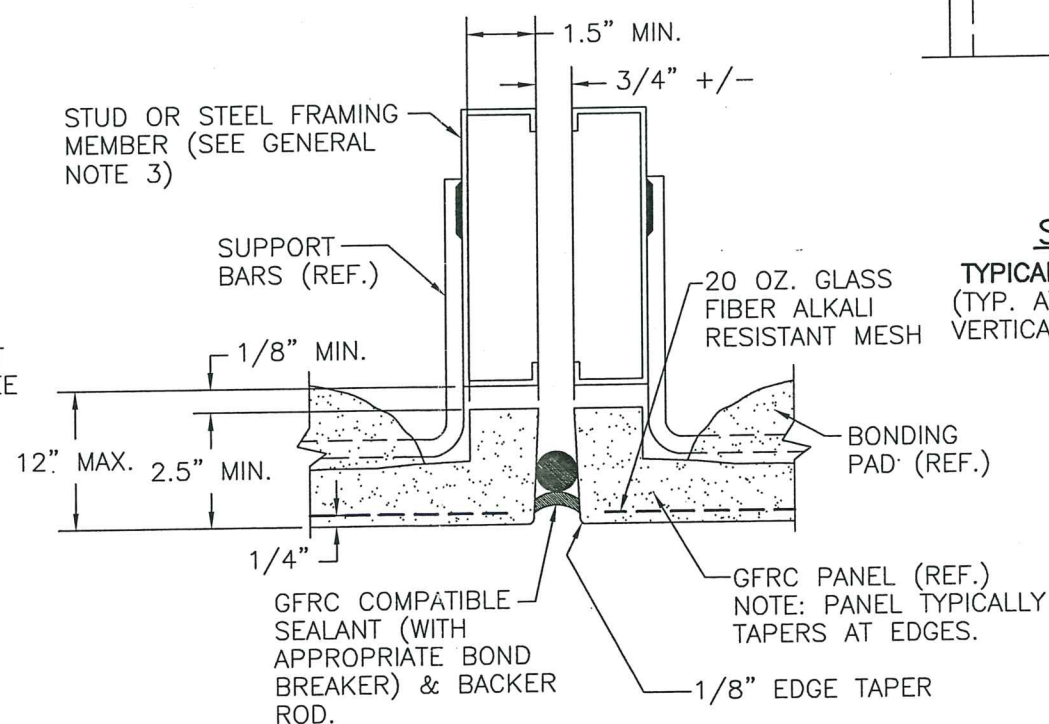
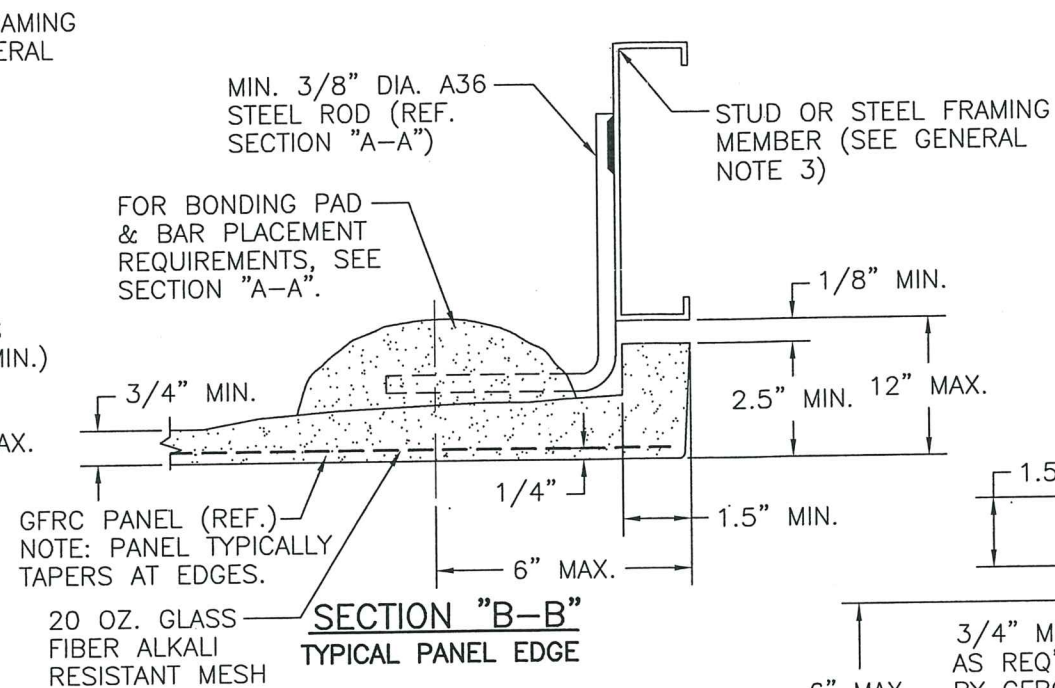
DRAWING NO.
1037

REV.
C

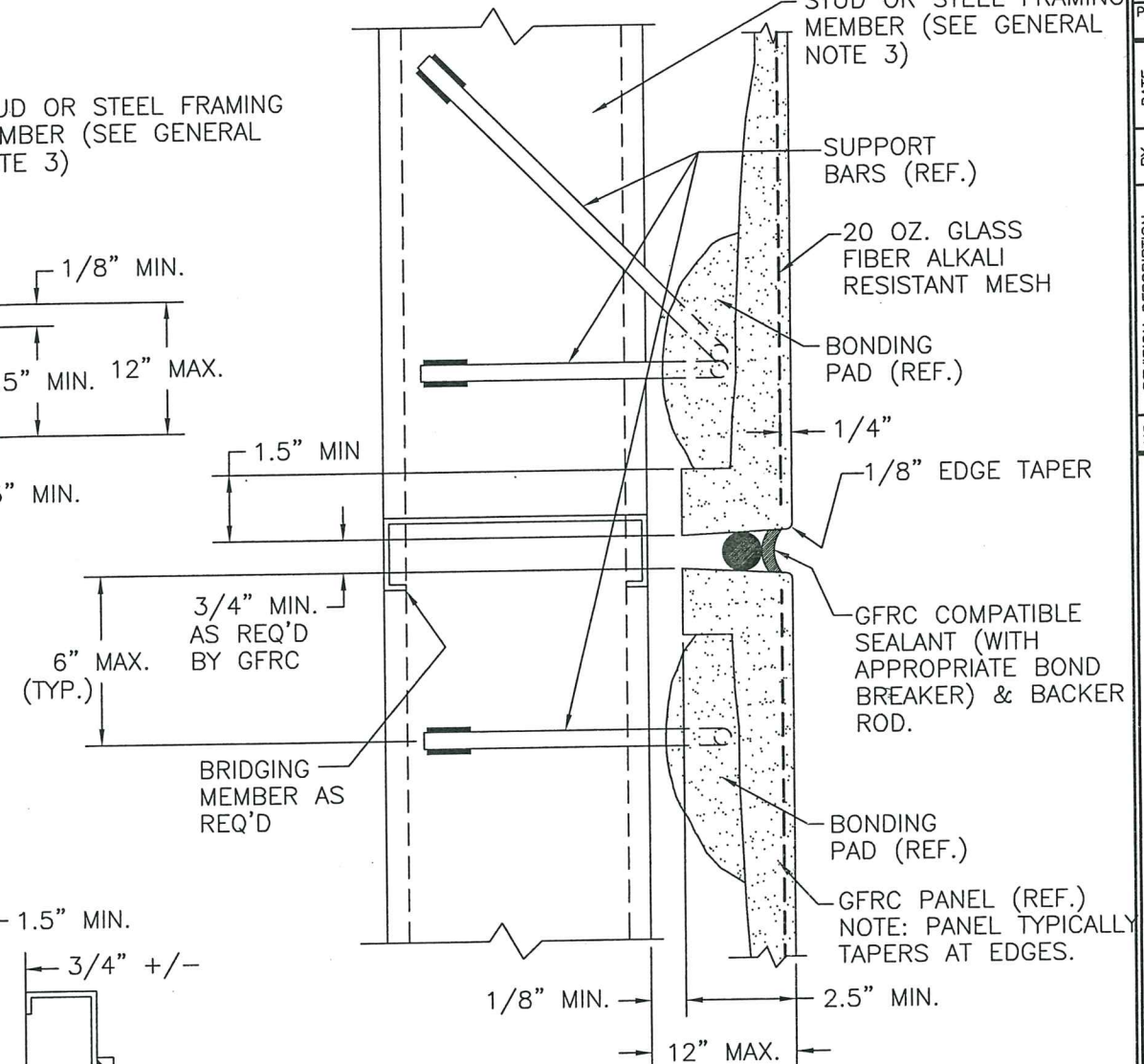
SHEET NO.
1 OF 4



SECTION "C-C"
TYPICAL BOTTOM GRAVITY ANCHOR
NOTE: GRAVITY ANCHORS MAY BE PLACED AT ANY VERTICAL POSITION ON THE PANEL AS REQUIRED BY GFRC BUT ARE TYPICALLY PLACED AT THE BASE OF EACH PANEL.



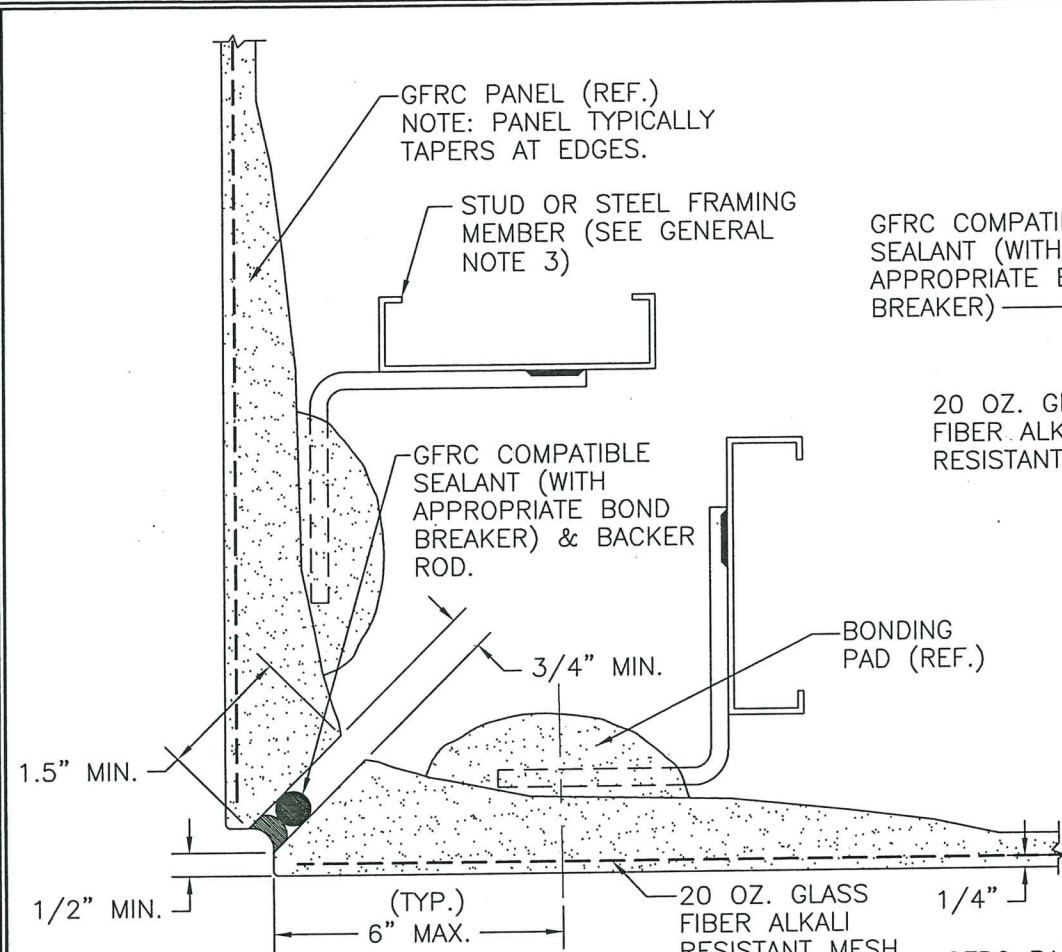
SECTION "E-E"
TYPICAL CONTROL/EXPANSION JOINT
(TYP. AT VERTICAL JOINTS; ALSO TYP. AT HORIZONTAL JOINTS WHERE VERTICAL FRAMING MEMBERS BREAK)



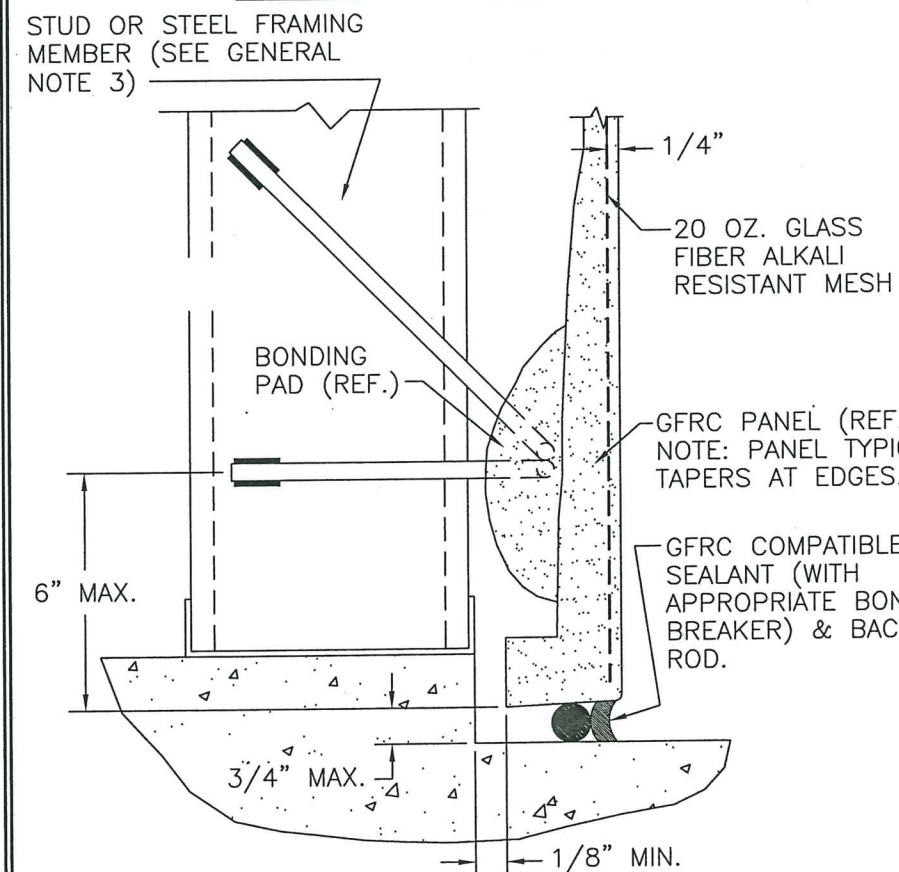
SECTION "D-D"
TYPICAL CONTROL/EXPANSION JOINT
(TYP. AT HORIZONTAL JOINTS WHERE VERTICAL FRAMING RUNS CONTINUOUS)

PRODUCT RENEWED
as complying with the Florida
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Expiration Date 05/31/2026
By *Healy A. Miller*
Miami Data Product Control

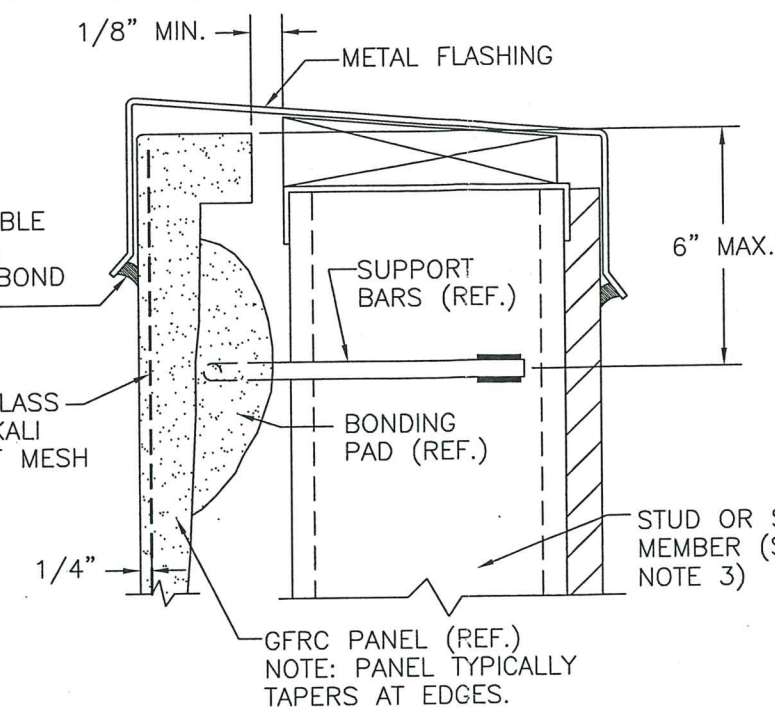
DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 01/29/01
DATE	BY
REVISION DESCRIPTION	NO.
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
MANUFACTURER	
GFRC 360, LLC; dba GFRC CLADDING	
118 NORTH SHILOH ROAD	
GARLAND, TEXAS 75042	
972-494-9000	
CONSULTANTS	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	
7480 150TH COURT NORTH	
PALM BEACH GARDENS, FL 33418	
PHONE: 561-744-3424	
DRAWING TITLE	CERTIFICATION
FEB 1 1 2021	WARREN W. SCHAEFER, P.E.
NO. 44135	P.E. NO. 44135
DRAWING NO. 1037	REV. C
SHEET NO. 2	OF 4



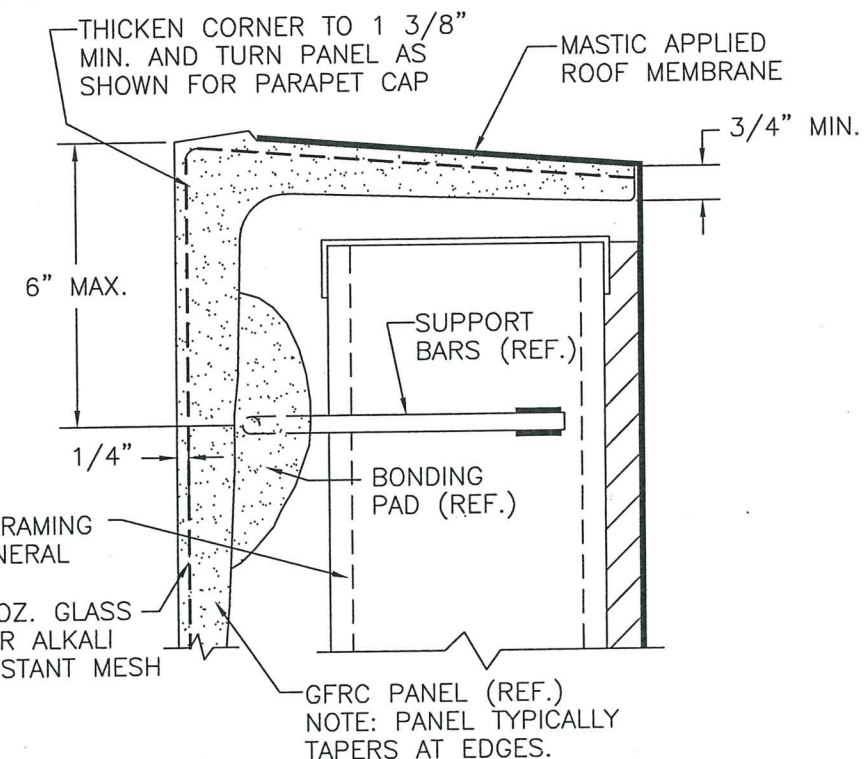
TYPICAL PANEL CORNER DETAIL



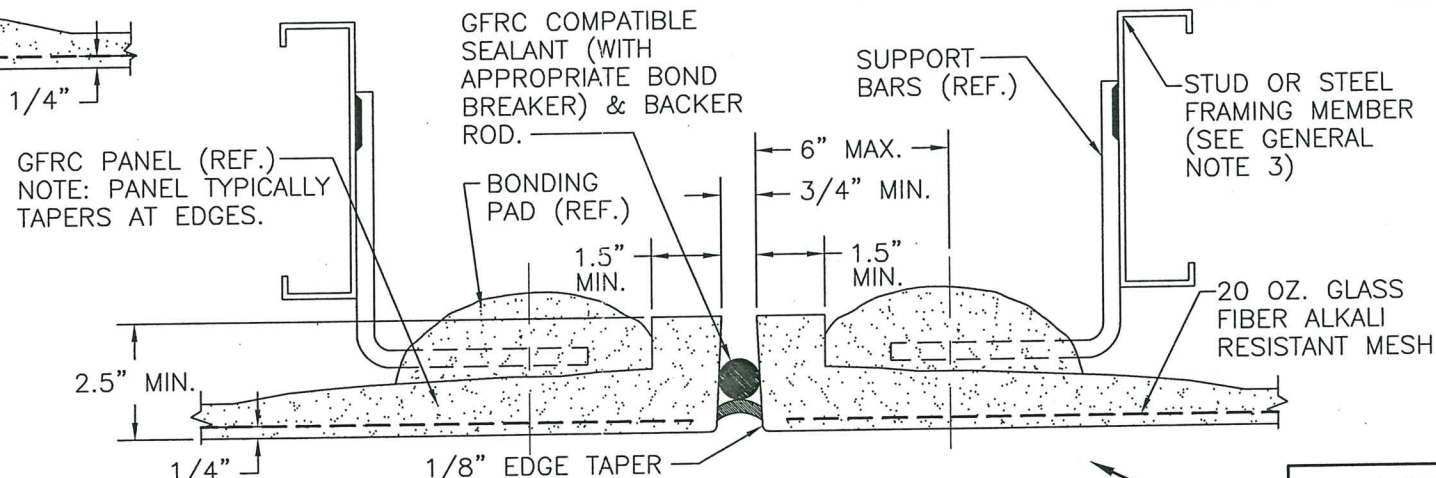
WALL BASE DETAIL



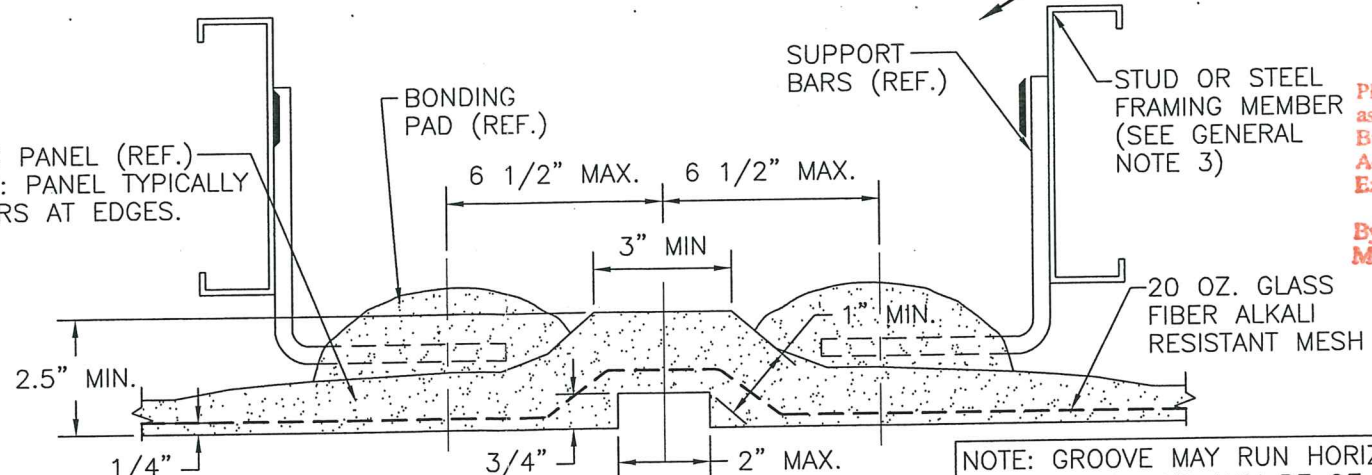
PARAPET DETAIL WITH FLASHING



PARAPET DETAIL WITHOUT FLASHING



OPTIONAL CONTROL/EXPANSION JOINT



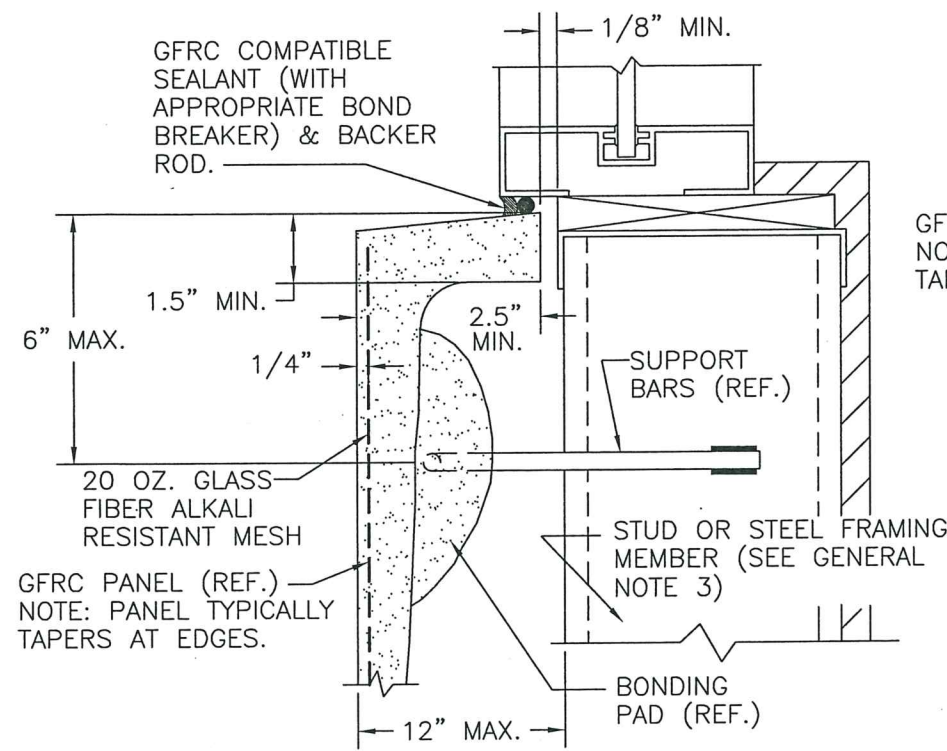
TYP. PANEL GROOVE DETAIL

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

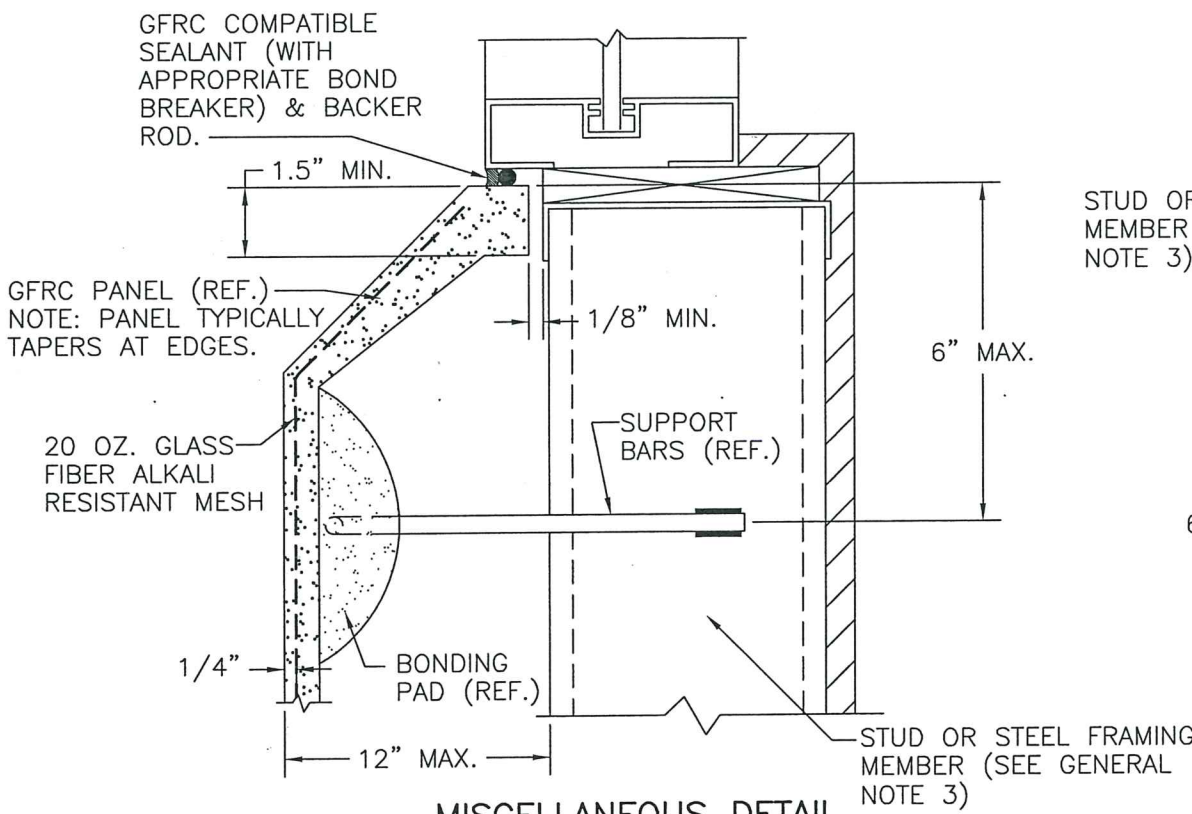
THESE DETAILS SHOW A VERTICAL JOINT. HORIZONTAL JOINT SIMILAR EXCEPT JOINT RUNS PERPENDICULAR TO STUDS.

PRODUCT RENEWED
as complying with the Florida
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Acceptance No. 21-0219-01
Expiration Date 05/31/2026
By *Heidi A. Miller*
Miami Date Product Control

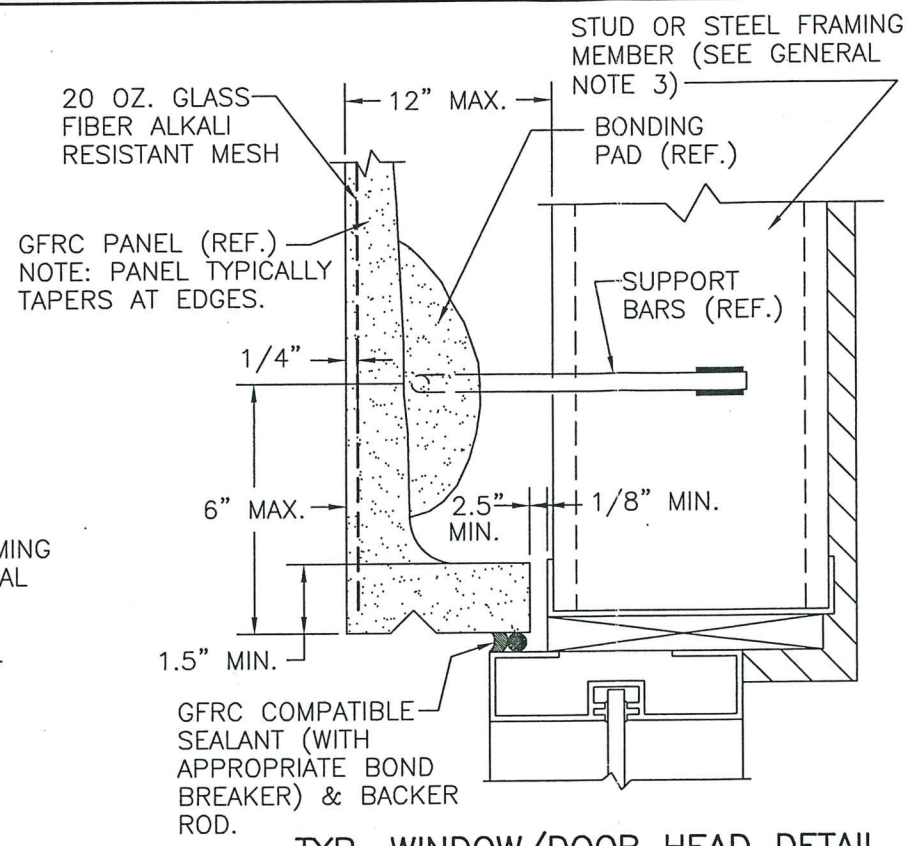
DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 01/29/01
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	MANUFACTURER GFRF 360, LLC; dba GFRF CLADDING 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000
CERTIFICATION FEB 1 1 2021 WARREN W. SCHAEFER P.E. NO. 44135	DRAWING NO. 1037 SHEET NO. 3 OF 4



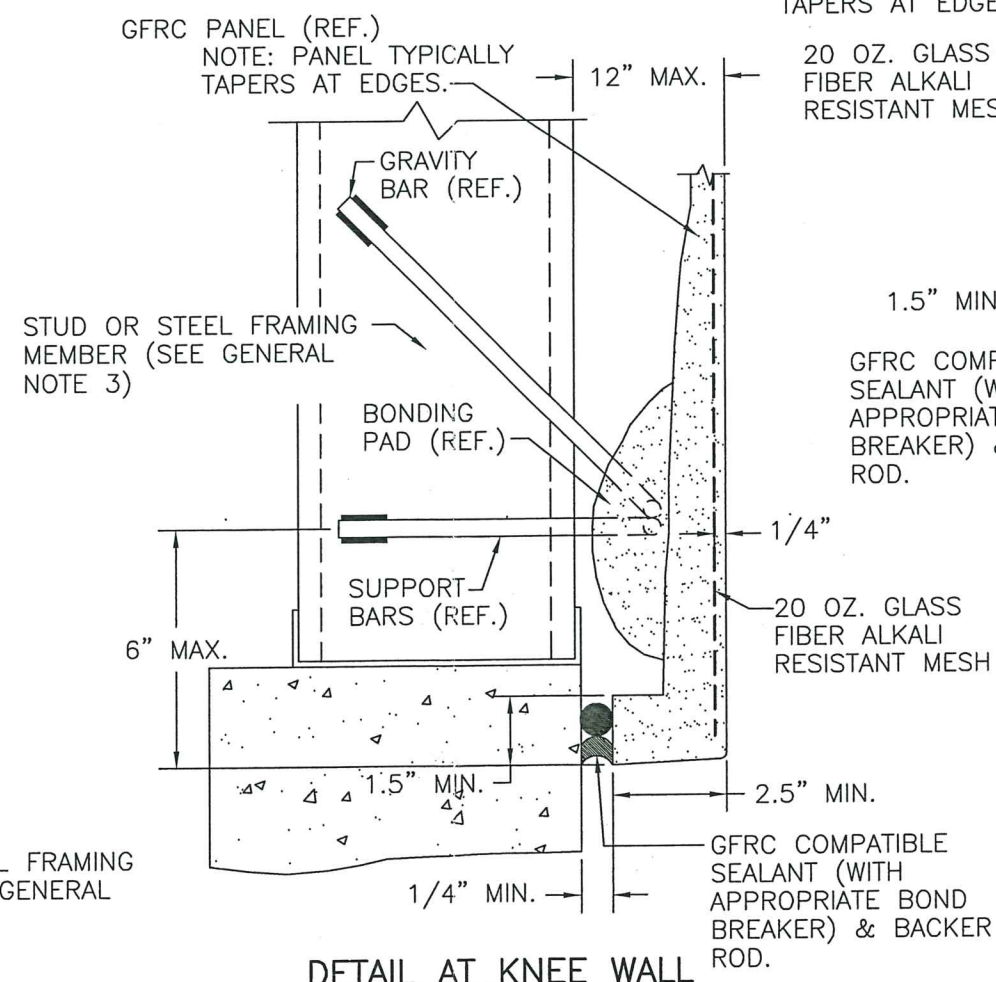
TYP. WINDOW SILL DETAIL
SIMILAR FOR SIDE JAMBS



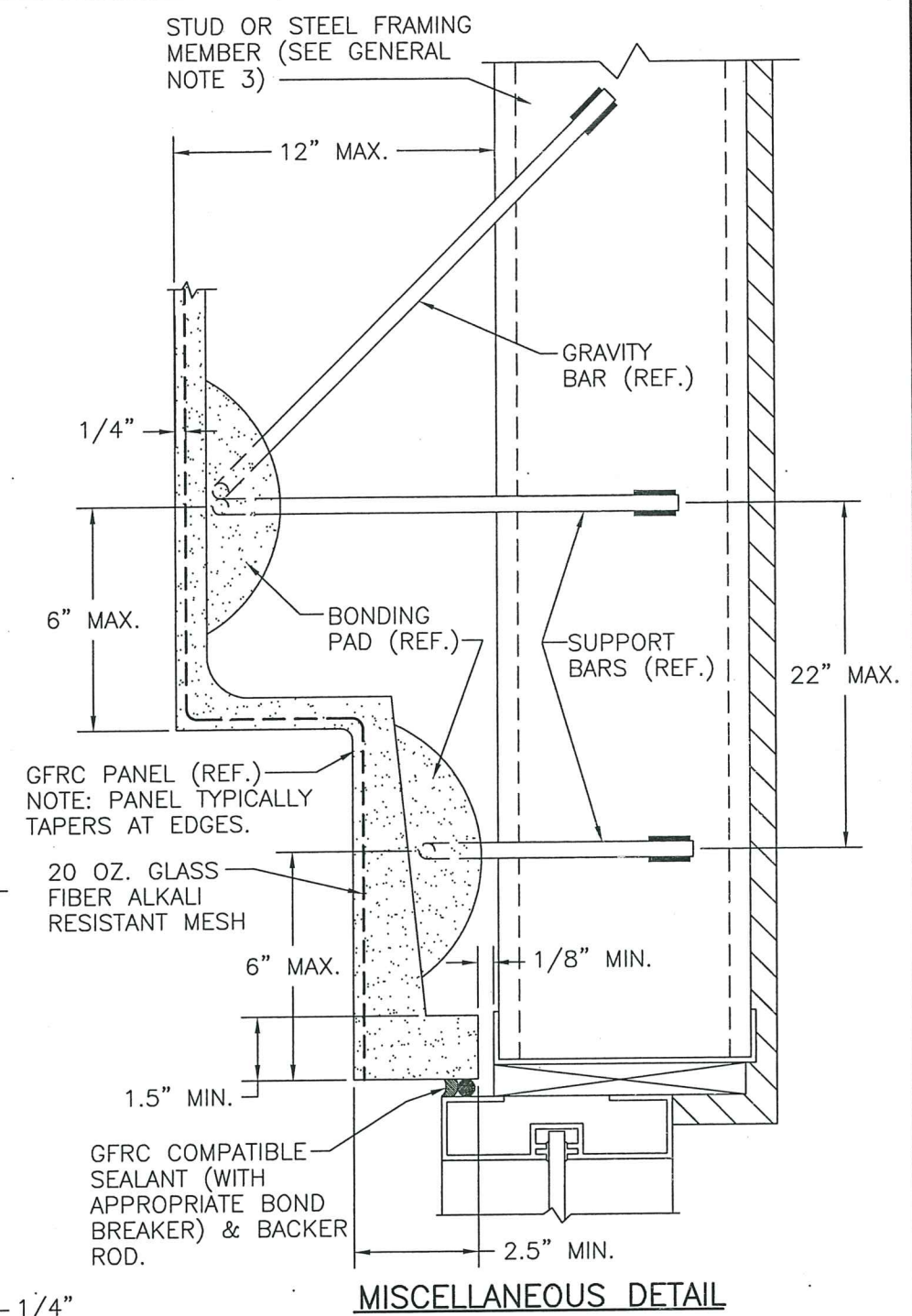
MISCELLANEOUS DETAIL



TYP. WINDOW/DOOR HEAD DETAIL



DETAIL AT KNEE WALL



MISCELLANEOUS DETAIL

PRODUCT RENEWED
as complying with the Florida
Building Code
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Expiration Date 05/31/2026
By *Warren W. Schaefer*
Miami Date Product Control



DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 01/29/01
DATE	BY
REVISION DESCRIPTION	NO.
CLASS 2 GLASS FIBER REINFORCED CONCRETE WALL PANELS	
MANUFACTURER GFRF 360, LLC; dba GFRF CLADDING 118 NORTH SHILOH ROAD GARLAND, TEXAS 75042 972-494-9000	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION FEB 1 1 2021	P.E. WARREN W. SCHAEFER P.E. NO. 44135
DRAWING NO. 1037	REV. C
SHEET NO. 4 OF 4	