



DEC Architectural Composites

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**SECTION 092713
GLASS FIBER REINFORCED GYPSUM (GRG)**

PART 1. GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, Conditions of the Contract and Division 1 Specifications sections, apply to work of this section.

1.02 WORK COVERED

Manufacturer of Glass Fiber Reinforced Gypsum (GRG) Forms – For Interior Use Only

1.03 RELATED WORK IN OTHER SECTIONS

- A. Section 05400- Cold – Formed Metal Framing
- B. Section 07900- Joint Sealers: Sealant materials for open joints
- C. Section 09250- Gypsum Board
- D. Section 09255- Gypsum Fabrications
- E. Section 09910- Painting

1.04 SUBMITTALS

Samples and shop drawings to conform to Section 01200

- A. Samples: Submit four (4) each, 12" x 12" samples demonstrating finish to be supplied (finish per contract).
- B. Shop Drawings: Submit shop drawings delineating all details required for fabrication and installation. Shop drawings to indicate the necessary blocking and attachment to the building or framing as required to support and secure the GRG material only. Framing details and structural support of framing is not the responsibility of the GRG manufacturer, and it is to be engineered by others unless previously agreed to by contractor/subcontractor and DEC, and noted accordingly in the material supply contract..

1.05 QUALITY ASSURANCE

- A. Manufacturer: Firm with manufacturing and delivery capacity required for the project, shall have successfully completed at least ten projects within the past five years, utilizing systems, materials and techniques as herein specified.

- B. Fabricator must own and operate its own manufacturing facilities for all material components. "Stick Built" or "Kit of parts Systems" consisting of components from a variety of manufacturers will not be considered or accepted.
- C. All GRG forms shall match approved samples.
- D. All GRG forms will be installable according to details submitted in shop drawings.

1.06 MANUFACTURER'S QUALIFICATIONS

- A. Firms specified in Approved Manufacturers (section 2.01) must demonstrate their capabilities and experience by including lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.07 DELIVERY, STORAGE AND HANDLING

- A. All materials shall be protected during fabrication, shipment, site storage and erection to prevent damage to the finished work from other trades. Store materials inside a well-ventilated area, away from uncured concrete and masonry, and protected from weather moisture, soiling, abrasion, and extreme temperatures.
- B. Protect fabrications from damage by retaining shipping protection in place until installation.
- C. Damage Responsibility: Except for damage caused by others, the installer is responsible for chipping, cracking, or other damage to glass fiber reinforced concrete parts, after delivery to the job site and until installation is completed and inspected and approved by the contractor and architect.

1.08 WARRANTY

- A. Warrant fabrications to be free from defects due to materials and workmanship for one year.

PART 2. PRODUCTS

2.01 APPROVED MANUFACTURERS

- A. **DEC ARCHITECTURAL COMPOSITES**
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- B. The listed manufacturer shall not be construed as closing the specifications to other prospective manufacturers, but rather as establishing a level of quality in a composite fabrication system. Other manufacturers may be submitted for approval, as provided for in the specifications at least 14 working days prior to submission of bids. Companies desiring to submit a proposal shall submit all descriptive information of the system proposed including photographs and shop drawings of at least three projects similar in detail and scope.

2.02 MATERIALS

- A. Description: Glass Fiber Reinforced Gypsum (**GRG**)
 - 1. Pre-molded GRG parts are fabricated to details and dimensions shown and shall conform to the standards set forth in Section 2.03.

2.03 PHYSICAL PROPERTIES

<u>Property Value</u>	<u>Test Method/Result</u>
Barcol Hardness	ASTM-D-2583 105 Points
Compression	ASTM-C-39 5,800 psi
CTE Average	ASTM-D-696 5.4 x 10 ⁻⁶ in./in./F°
Density	ASTM-D-792 110 lbs/cu.ft.
Flammability – Class I Materials	ASTM-E-84 0 Flame/ 0 Smoke
Flexural Strength	ASTM-D-790 4,192 psi
Impact Strength	ASTM-D-256 12.9 ft. lbs./in
Tensile	ASTM-D-638 1,340 psi
Unit Weight (lbs./sq.ft. at ½")	2 lbs.

- A. All parts to contain supports as required to keep within allowable tolerances.
- B. Finish surfaces shall be true or textured, according to design requirements.

2.04 FABRICATION

- A. Molds to be constructed and properly reinforced to produce units conforming to the required profiles, dimensions and tolerances.
- B. Shell thickness: 1/4" minimum except for small components, which may be 1/8" minimum, large components such as panels shall be the thickness recommended by the manufacturer for the size and location of components.
- C. Allowable tolerances:
 - 1. Dimensional Tolerances: ± 1/8"
 - 2. Shell Thickness: Nominal 1/8"
 - 3. Out of Plumb: ± 1/8"
 - 4. Bowing: L/360 Maximum

PART 3. EXECUTION

3.01 INSTALLATION

- A. General
 - Employ only workmen experienced, skilled and trained on this type of quality erection work.
- B. Workmanship
 - Install work of this section complete, straight, plumb, level, in true alignment and securely anchored.
- C. Erection
 - GRG forms shall be installed per drawings, including the approved shop drawings, and the manufacturer's written recommendations and instructions for this project.
- D. Sealing and Caulking
 - Shall conform to requirements of Caulking and Sealing Section 07900 and requirements indicated and specified herein.
- E. Joints and Sealants
 - Joints (quantity, sizes, and shapes) indicated on contract drawings are minimum requirements.
- F. Finishing Materials
 - 1. Fasteners

As indicated on approved shop drawings and in accordance with manufacturer's printed recommendations.

2. Joint treatment materials
 - a. General: ASTM C-475; type recommended by the manufacturer for the application indicated, except as otherwise indicated.
 - b. Joint tape: Perforated type.
 - c. Joint Compound: Ready Mixed vinyl-type for interior use.
 - d. Grade: Two separate grades: (1) one specifically for bedding tapes and filling depressions, and (2) one for topping and sanding.
3. Miscellaneous Materials
 - a. General: Provide auxiliary material for work of types and grades recommended by manufacturer.
 - b. Adhesive: Special adhesive recommended for laminating gypsum plaster.

G. Priming

1. All GRG material shall be primed with a primer recommended for gypsum board or gypsum plaster. More than one coat of primer may be required.
2. Sanding after each coat of primer may be required.
3. If the GRG material is to be installed in an area subject to "critical lighting", the entire surface of the material may need to be skim coated.
4. If the GRG material is to receive a semi-gloss or gloss paint, the entire surface of the material may need to be skim coated.

H. Replacements

1. GRG forms may be rejected for the following reasons:
 - a. Nonconformance to detail requirements specified previously.
 - b. Nonconformance with approved samples.
 - c. Nonconformance to specified fabrication or installation tolerance.
 - d. Damage beyond satisfactory field repair, as determined by the Architect.

3.02 CLEAN-UP

A. General

Perform cleaning procedures as recommended by GRG unit manufacturer.

3.03 PROTECTION OF INSTALLED FABRICATIONS

- A. Comply with General Contractor's recommendations and instructions for protecting installed Fabrications during constructions activities.

END OF SECTION