

SECTION 02815

Glass Fiber Reinforced Concrete Planters



PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Glass fiber reinforced concrete (GFRC) planters as indicated on the drawings.

1.2 RELATED SECTIONS

- A. Division 04 Section "Cast Stone".
- B. Division 05 Section "Metal Fabrications" for supplementary supports for large items.
- C. Division 06 Section "Rough Carpentry" for supplementary supports for large items.
- D. Division 06 Section "Glass Fiber Reinforced Plastic Fabrications".
- E. Division 09 Section "Glass Fiber Reinforced Gypsum Fabrications".
- F. Division 09 Section "Paints and Coatings" for field painting and sealing prior to painting.

1.3 REFERENCES

- A. ASTM C 150 - Standard Specification for Portland Cement; 1999a.
- B. ASTM C 33-99 Concrete Aggregates
- C. ASTM C 666 – Standard test Method for Resistance of Concrete to Rapid Freezing and Thawing
- D. ASTM C 979-82(1993): Pigments for Integrally colored Concrete.
- E. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 1999.
- F. ASTM G 23 - Standard Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials; 1996.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including dimensions, finishes, storage and handling requirements and recommendations, and installation recommendations.

- C. Shop Drawings: For custom items, provide drawings showing dimensions, layout, joints, details, and interface with adjacent work; include field measured dimensions of the spaces where items are to be installed, if critical to proper installation.
- D. Samples: For each custom finish specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Obtain GFRC planter(s) as manufactured by a firm specializing in the manufacture of GFRC planter(s), with a minimum of ten years experience.
- B. Provide a list of projects comparable in size, scope, and complexity as indicated.
- C. Provide verification that glass fiber reinforced concrete planter meets or exceeds products specified.
- D. Installer Qualifications: Regularly engaged and experienced in the installation of glass fiber reinforced concrete products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Transport, lift, and handle units with care, avoiding excessive stress and preventing damage; use appropriate equipment.
- B. Store products in manufacturer's unopened packaging until ready for installation, in a clean dry area protected from weather, moisture and damage; store units upright and not stacked unless permitted by manufacturer. Product shall be stored clear of the ground on non-staining pallets or other temporary planking.
- C. Protect product from staining, chipping, and other damage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Stromberg Architectural Products Inc; PO Box 8036, I-30 West, 4400 Oneal, Greenville, TX 75404. ASD. Tel: (903) 454-0904. Fax: (903) 454-3642. Email: sales@strombergarchitectural.com. www.strombergarchitectural.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS

- A. Glass Fiber Reinforced Concrete Planters: High density concrete made of ASTM C 150 Portland cement, crushed stone, silica sand, and polymers reinforced with glass fiber and structural reinforcing as required; asbestos free.
 - 1. Color: As selected from manufacturer's selection.

2. Color: To match Architect's sample.
3. Surface Texture: Exposed surface as selected from manufacturer's selection
 - i.
4. Density: 140 pcf (2240 kg/cu m).
5. Shell Thickness: 3/8" to 3/4 inch (9.5 mm), nominal.
6. Surface Burning Characteristics: Flame spread index of 0, smoke developed index of 5; when tested in accordance with ASTM E 84. Fuel contribution of 3.
7. Weather Resistance: No significant loss in strength or change in appearance after 200 hours accelerated weathering conducted in accordance with ASTM G 23.
8. Flexural Strength: 1000 to 1800 psi (6.9 to 12.4 MPa).
9. Modulus of Elasticity: 2×10^5 psi (1370 MPa).
10. Compressive Strength: Over 5000 psi (34 MPa).
11. Variation from Dimensions Indicated on Drawings: Plus and minus 1/8 inch (3 mm), maximum.
12. Variation from Plane Along Edge or Surface: Plus and minus 1/16 inch per linear foot (1.5 mm in 300 mm), maximum.
13. Outside Corner Radius: 1/16 inch to 1/8 inch (1.5 to 3 mm).
14. Draft Angle: 3 degrees, minimum, on returns, setbacks, reveals, and grooves.
15. Provide non-corrosive anchors and reinforced anchoring points as indicated on drawings.
 - a. Concealed Anchors: Hot-dipped Galvanized Steel unless otherwise indicated.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly constructed; verify that substrates are plumb and true.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
 1. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Check field dimensions before beginning installation. If dimensions vary too much from design dimensions for proper installation, notify Architect and wait for instructions before beginning installation.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with applicable code and manufacturer's recommendations, plumb and true to line; shim where necessary.
- B. Patch exposed anchor points to match color and texture of unit.

C. Clean GFRC units according to manufacturer's written instructions.

1. Remove dirt, stains, or other residue.
2. Protect surrounding materials and surfaces during cleaning.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION