

SECTION 04721

CAST STONE ORNAMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Standard cast stone ornament units, including medallions, friezes, and accessory units.
- B. Custom panels.

1.2 REFERENCES

- A. ASTM C 33 - Standard Specification for Concrete Aggregates.
- B. ASTM C 91 - Standard Specification for Masonry Cement.
- C. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
- D. ASTM C 150 - Standard Specification for Portland Cement.
- E. ASTM C 207 Type S - Standard Specification for Hydrated Lime for Masonry Purposes.
- F. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's descriptive literature and installation instructions for each specified product.
- C. Shop Drawings: Indicate designs, dimensions, connections, and installation details.
- D. Custom Designs: Furnish dimensioned line art of proposed custom designs to manufacturer.
- E. Samples: 2 pieces of each standard color for selection.
- F. Samples: Actual cast stone sample of custom color units, for verification of color and finish.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Comply with manufacturer's requirements for handling, inspection after delivery, and storage.
- B. Store packages and crates on a level area clear of the ground protected from weather and damage.
- C. After uncrating, store pieces on edge and secure on non-staining supports. Stack a maximum of one row high and protect from weather and damage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Pineapple Grove Designs; P.O. Box 112, Delray Beach, FL 33447-0112. ASD. Tel: (800) 771-4595, Fax: (407) 243-0577.
- B. Substitutions: Not permitted.

2.2 CAST STONE ORNAMENTS

- A. Cast Stone Ornaments: Pineapple Grove Designs SculptStone(tm) molded from matrix of cement, aggregate, fiber reinforcing, inorganic pigment, and admixtures; lightly etched to accentuate stone-like texture.
 - 1. Cement: ASTM C 150, Portland cement, Type I White.
 - 2. Aggregate: Graded, washed natural sand and crushed graded stone meeting ASTM C 33, except that gradation may vary to achieve desired finish and texture.
 - 3. Reinforcing Fiber: Virgin homopolymer polypropylene non-fibrillated fibers.
 - 4. Pigment: ASTM C 979, inorganic synthetic iron oxide, dispersed integrally throughout the mix.
 - 5. Admixtures: As required by manufacturer to achieve air entrainment, low permeability, accelerated cure, increased flexural and compressive strength, and freeze-thaw resistance.
 - 6. Provide units of uniform appearance and strength by maintaining manufacturer's guidelines for ingredient ratio, material mixing and consolidation, mold surface integrity, color and finish uniformity, and curing methods.
 - 7. Provide factory-drilled hole for fountain outlet where indicated.
 - 8. Designs: As indicated on drawings.
 - 9. Designs: To be selected from manufacturer's full selection.

- 10. Sizes: As indicated on drawings.
- 11. Color(s): As selected from manufacturer's standard selection.
- 12. Color(s): Custom color to match _____.
- 13. Color(s): Custom color to be determined later.
- B. Standard Cast Stone Ornament Units:
 - 1. Drawing Code ____: Catalog Item Code _____.
 - 2. Drawing Code ____: Catalog Item Code _____.
- C. Custom Panels: Drawing Code _____.
 - 1. Size: _____.
 - 2. Shape: _____.
 - 3. Design: _____.
 - 4. Lettering Style: _____.
 - 5. Color: _____.
- D. Custom Panels: Drawing Code ____; to be designed by manufacturer from Architect's drawing; size as indicated on drawings; color: _____.

2.3 ACCESSORY MATERIALS

- A. Anchor Pins: 1/4 inch (6 mm) diameter threaded stainless steel pins to be field installed into stainless steel anchor plates cast into back of each unit; pins of length required to project minimum of one inch from back of unit.
- B. Adhesive: Solvent based construction adhesive specifically formulated for cast stone installation.
- C. Setting Mortar: Cement mortar manufactured specifically for thinset vertical tile or masonry bonding and incorporating bonding agent in cement mix.
- D. Joint Sealant: Elastomeric type compatible with cementitious materials.
- E. Grouting and Pointing Mortar: One part ASTM C 91 non-staining cement, one part ASTM C 207 Type S hydrated lime, and four parts clean, washed ASTM C 144 sand.
 - 1. Color to match units using inorganic pigments.
 - 2. Obtain approval of Architect before proceeding with grouting or pointing.
- F. Paint: _____.
- G. Sealer: Silane sealer recommended by unit manufacturer.
- H. Patching Materials: As required by unit manufacturer.

- I. Cleaners: Powdered soap and water; do not use acid or prepared cleaners unless specifically approved by unit manufacturer.

PART 3 EXECUTION

3.1 INSPECTION

- A. Verify that conditions that would prevent proper installation and adhesion of units have been corrected.

3.2 INSTALLATION

- A. Install units true, plumb, and level, in accordance with manufacturer's installation instructions and shop drawings.
- B. Install units using experienced and qualified stone masons or tile setters.
- C. Prepare substrates to receive units as indicated in manufacturer's instructions.
 - 1. Clean substrates of oil, paint, dust, and debris.
 - 2. Make surface smooth, level, sound, and capable of permanent adhesion.
- D. Units to be set into adjacent finish (rather than mounted on surface): If units are not available at the time the finish is to be installed, install a plug (a piece of foamboard or wood 1/2 inch (13 mm) larger than the unit to be installed) in the unit's location. After finish is complete, remove plug and complete unit installation.
- E. On Concrete, Masonry, and Portland Cement Stucco: Set units with mortar:
 - 1. Drench units not already thoroughly wet with clear potable water and remove excess water prior to setting.
 - 2. Place anchor pins firmly in place and fill holes with mortar.
 - 3. Set each piece in full bed of mortar (100 percent coverage) with vertical joints and holes in substrate completely filled.
- F. On Exterior Insulation and Finish System: Use EIFS manufacturer's adhesive to attach units to insulation board.

1. Use anchor pins long enough to penetrate through insulation board into substrate.
 2. Place anchors firmly in place and fill anchor holes with adhesive.
- G. On Interior Gypsum Board and Plaster: Attach units with adhesive, 100 percent coverage; set anchor pins into holes in substrate.
- H. Maintain maximum 1/4 inch (6 mm) joint between units.
- I. If units will not rest on permanent mechanically-anchored supports, provide temporary vertical support prior to setting.
- J. After setting, brace each unit with a diagonal support pressing unit into substrate.
- K. Do not remove temporary supports until after full cure of setting material.
- L. Seal joints between units and between units and adjacent materials.
- M. Point joints between units and seal junction between units and adjacent materials.

3.3 CLEANING AND REPAIR

- A. Immediately after setting, clean face of each unit to remove splashed mortar and mortar smears.
- B. Protect units from splashing mortar and damage due to other work. Immediately remove foreign matter splashed or rubbed on units.
- C. Repair chipped and damaged units, using skilled mechanics and manufacturer-provided patching materials and directions. Repair so that no obvious repairs or imperfections show other than normal, minimal color variations when viewed with the unaided eye under good typical lighting.
- D. Clean units only when necessary, by scrubbing with a bristle fiber brush and specified cleaner. Do not use acid or prepared cleaners unless approved by manufacturer. Rinse thoroughly with clean running water.
- E. Seal surface of units with specified sealer.

1. Be sure cementitious setting materials have thoroughly cured (approximately 30 days).
2. Clean and dry surfaces.
3. Follow sealer manufacturer's instructions.
4. Apply to inconspicuous test area first to determine application rate.

END OF SECTION