SECTION 04730

SIMULATED STONE VENEER (KEYSTONES)

PART 1 - GENERAL

1.01 SUMMARY

A. Provide stone veneer quoins to be used as keystones where indicated on the Drawings, as specified herein, and as needed for a complete and proper installation.

B. Related work:
   1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.02 SUBMITTALS

A. Comply with pertinent provisions of Section 01300.

B. Within 35 calendar days after the Contractor has received the Owner's Notice to Proceed, submit qualifications of the proposed subcontractor for review by the Architect.

C. Product Data: Submit for simulated stone veneer units to be used as Keystones, accessories, and other manufactured products specified.

D. Samples: Submit four full-size samples of each veneer unit specified to illustrate the full range of exposed color, texture and dimensions to be expected in the completed construction.

E. Material Test Reports: Signed by manufacturers certifying that each of the following items complies with requirements:
   1. Each type of masonry unit required.
   2. Each cement product required for mortar, including name of manufacturer, brand, type, and weight slips at time of delivery.
   3. Each type and size of joint reinforcement.
   4. Each type and size of anchor, tie, and metal accessory.

F. Manufacturer's Certificate: Submit data showing that veneer products meet or exceed specified requirements.

G. Manufacturer's Installation Instructions: Indicate surface cleaning instructions.

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use a subcontractor having not less than five years successful experience in installation of simulated stone veneer, as approved by the Architect.

C. Source Limitations for Masonry Units: Obtain exposed masonry units for a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.

D. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from once source of producer for each aggregate.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of Section 01600.

B. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

C. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.

1.05 WARRANTY

A. Manufacturer's standard warranty coverage against defects in materials when installed in accordance with the manufacturer's installation instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Simulated Stone Veneer.
   1. Manufacturer
      a. Basis-of-Design Product: The design for the simulated stone veneer systems is based on the manufacturer identified below. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:
         1. Basis-of-Design: Coronado Stone Products
         2. Eldorado Stone
   2. Products of equal quality in all respects shall be considered as noted in Section 01600.

B. Substrates: Installation of simulated stone veneer occurs at the following location:
   1. Steel Stud Wall with Exterior Sheathing.
      a. Provide underlayment with metal lath per Section 09200, Part 2.01.A;
      b. Provide scratch and brown coat of plaster per Section 09200, Part 3.02.
   2. Wood stud wall with exterior sheathing.
      a. Provide underlayment with metal lath per Section 09200, Part 2.01.A,
      b. Provide scratch and brown coat of plaster per Section 09200, Part 3.02.

C. Mortar Materials.
   1. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated or directed by mortar manufacturer.
   2. Mortar for Unit Masonry: Laticrete 272 Premium Floor N' Wall Thin Set Mortar.
   3. Mortar Additive for Thin-Set Mortar: Laticrete 3701 Mortar Admix.
      a. Shear Bond Requirement: 50 psi minimum.
   4. Water: Potable.
   5. Calcium Chloride: Not allowed.

2.02 OTHER MATERIALS

A. Anchorages: Nails, staples, or other approved metal supports, of type and size to suit application, galvanized to rigidly secure lath and associated metal accessories in place.

B. Powder Activated Fastener: 0.145 inch diameter SDM flat head nail with washer as manufactured by Hilti, Inc. ICBO Deport No. 2388.

C. Penetration Flashing: Type 1, Grade A building paper conforming to CBC Standard 14-1, 9 inch wide x length required.

D. Masonry Cleaners.
   1. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
      a. Available Manufacturers:
         1. Diedrich Technologies, Inc.
         2. EaCo Chem, Inc.
         3. ProSoCo, Inc.

E. Joint Sealant: Latti Sil by Latticrete.

F. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates upon which work will be installed.

B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Protection: Protect adjacent work from contact with mortar.

B. Surface preparation: Prepare substrate in accordance with manufacturer's installation instructions for the type of substrate being covered.

3.03 INSTALLATION

A. Installation – Lathing Materials
1. On vertical surfaces apply two plies of underlayment over substrate; weather lap horizontal edges 4 inches, vertical edges 6 inches. Fasten in place.
2. Install units to lines and levels.

B. Installation – Setting Bed
1. Apply setting bed scratch and brown coat over substrate, per Section 09200, to the thickness indicated on the drawings.
2. Allow scratch coat to cure for 48 hours.
3. Shall be designed to a bond strength with a working shear of 50 PSI.

C. Cutting, Placing and Bonding

1. Perform jobsite cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges. Cut units to the size and configuration shown on the drawings to achieve a tapered "keystone" unit.
2. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
3. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.

D. Tolerances
1. Maximum Variation From Plane of Wall: 1/4 inch in 10 feet (6 mm/3m) and 1/2 inch in 20 feet (13 mm/6m) or more.
2. Maximum Variation From Plumb: 1/4 inch (6 mm) per story non-cumulative; 1/2 inch (13 mm) in two stories or more.
3. Maximum Variation From Level Coursing: 1/8 inch in 3 fee (3mm/m) and 1/4 inch in 10 feet (6 mm/3m); 1/2 inch in 30 feet (13 mm/9.1 m).
4. Maximum Variation of Joint Thickness: 1/8 inch in 3 feet (3 mm/m).

3.04 FIELD QUALITY CONTROL

A. Manufacturer's Field Services: Manufacturer's field representative shall make periodic site visits for installation consultation and inspection as requested by Owner.

3.05 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners,

openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
   1. Remove large mortar particles and mortar smears by hand with wooden paddles and nonmetallic scrape hoes or chisels.
   2. Replace defective mortar. Match adjacent work.
   3. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
   4. Protect adjacent coated foam shapes and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
   5. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing the surfaces thoroughly with clear water.
   6. Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using manufacturer's recommended detergent solution.

END OF SECTION - 04215