SECTION 09 24 43
DECORATIVE CEMENTITIOUS OVERLAY

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Contracting Requirements and Division 01 General Requirements apply to this Section.

1.02 SUMMARY

A. This Section includes stamped polymer-modified cementitious overlay for vertical surfaces.

1.03 SUBMITTALS

A. Product Data: For each type of product indicated. Include material descriptions, chemical composition, physical properties, test data, and mixing, preparation, and application instructions.

B. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

C. Verification Samples:
1. Patterns: For each pattern, full-size sample of selected pattern at minimum 24 inches square.
2. Colors: For each finish product specified, two samples, minimum size 6 inches square, representing actual product, color, and patterns.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: Installer that employs workers trained and approved by manufacturer to apply decorative cementitious overlays.

B. Source Limitations: Obtain decorative cementitous overlays, stamp mats, primers and stains through one source from a single manufacturer, or as approved by the cementitous overlay manufacturer.

C. Mockups: Build mockups to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original and unopened containers, labeled with type and name of products and manufacturers.

B. Comply with manufacturer's written instructions for minimum and maximum temperature requirements and other conditions for storage.

C. Store cementitious materials off the ground, under cover, and in a dry location.

D. Store aggregates, covered and in a dry location, where grading and other required characteristics can be maintained and contamination avoided.

1.06 PROJECT CONDITIONS

A. Cold-Weather Requirements for Cementitious Materials: Do not apply unless air temperature is above 40 deg F and will remain so for at least 48 hours after completion of Work.

B. Hot-Weather Requirements for Cementitious Materials: Protect repair work when temperature and humidity conditions produce excessive evaporation of water from patching materials. Provide artificial shade and wind breaks, and use cooled materials as required. Do not apply to substrates with temperatures of 90 deg F and above.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Latex Bonding Agent: Manufacturer’s standard vinyl bonding agent and primer.

B. Polymer-Modified, Cementitious Overlay: Packaged, dry mix, that contains a non-redispersible latex additive as either a dry powder or a separate liquid that is added during mixing.
   1. Thickness: 1/4 to 1/2 inch, as required by selected stamping pattern.
   2. Color: Provide medium gray or white base as selected by the Architect.
   3. Basis-Of-Design Subject to compliance with requirements, provide Butterfield Color, Inc.; Cantera, or comparable product from one of the following or equal:
      a. Architectural Enhancements.
      b. SureCrete Design Products.

C. Colorant: ASTM C 979, manufacturer’s recommended factory-measured powdered mix or liquid in self-dissolving packaging, consisting of non-fading finely-ground synthetic mineral-oxide coloring pigments and water reducing wetting agent.
   1. Color: As selected by the Architect from manufacturer’s full range.

D. Form Release Agent: Manufacturer’s standard form release agent for use with stamp mats.

E. Stamp Mats: Polyurethane mats with projected texture capable of imprinting texture and joint patterns to plastic concrete. Provide stamp tools, textured rollers, and other accessories needed to provide complete system.
   1. Pattern: Butterfield Color; Weathered Edge Wall, BWS1100/110BL

F. Concrete Stain: Water based penetrating stain designed for permanently color concrete.
   1. Basis-of-Design Product: Butterfield Color; Elements Transparent Concrete Stain.
   2. Colors: As selected by Architect from manufacturer's full range.

2.02 MIXES

A. Mix products, in clean containers, according to manufacturer's written instructions.
   1. Do not add water or additives except in quantities recommended by manufacturer.
   2. Use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovel or trowel as unit of measure.
   3. Do not mix more materials than can be used within recommended open time. Discard materials that have begun to set.

PART 3 - EXECUTION

3.01 PREPARATION

A. Surface Preparation: Clean concrete by shot blasting or low-pressure water cleaning to remove dirt, oils, films, laitance, and other materials detrimental to sealer application.

B. Bonding Agent Primer: Apply to concrete by brush or roller. Allow to dry before placing patching mortar or concrete. On rough surfaces, apply second coat.

C. Joints: Mark location of existing substrate working joints for transfer to decorative cementitious overlay.

3.02 CEMENTITIOUS OVERLAY APPLICATION

A. General: Comply with manufacturer's written instructions and recommendations.

B. Scratch Coat: Apply 1/16 to 1/8 inch-thick scratch coat to substrate. Roughen surface for bonding subsequent coat.

C. Cementitious Overlay: Place overlay by troweling tightly to substrate in consistent thickness necessary for stamping pattern. Maintain wet edge. Apply in multiple lifts to prevent sagging.

D. Protect from drying in windy or hot conditions.

3.03 STAMPING

A. Mat Stamping: Apply form release to surface of overlay or stamp mat as recommended by the manufacturer. While concrete is plastic, accurately align stamp mats in sequence and uniformly press into concrete to produce imprint pattern, texture, and depth of imprint, according to manufacturer's instructions. Remove stamps from concrete immediately.

B. Joints: Transfer joints through overlay.

C. Detailing: Using detailing tools, flexible stamping mats, and manual carving, continue stamping pattern to provide continuous design to entire surface. Carve joints at ends of runs, joints, and other locations to create realistic appearance.

3.04 STAINING

A. Preparation for Staining:
1. Allow decorative cementitious overlays to cure for a minimum of 7 days before staining.
2. Protect surfaces not to be stained from over-spray, run-off, and tracking.
3. Clean substrates thoroughly according to manufacturer's instructions. Do not use muriatic acid cleaners to clean substrates before staining. Rinse and allow to dry thoroughly.
4. Divide substrates into small areas by natural stopping points, such as walls and joint lines.

B. Application of Stain:
1. Apply stain to concrete surfaces by high volume, low pressure sprayer, airless sprayer or foam brush, applying onto surface in a random motion, according to manufacturer's instructions.
2. Maintain wet edge, working newly applied stain into edges of adjacent wet edges of previously treated surfaces. Maintain consistent saturation throughout application. Do not splash, drip, or puddle stain on substrates to prevent darker effects, unless desired. Apply from bottom working upward avoiding excessive rundown of material on substrates to prevent darker streaks.
3. After initial application of stain has dried 8 hours minimum, evaluate surface to determine if sufficient color has been applied to match field samples. If evaluation indicates color is not sufficient, apply additional stain, allow to dry and evaluate.

END OF SECTION 09 24 43