



**SPECIAL PROVISIONS
FOR
COLORED, STAMPED PORTLAND CEMENT CONCRETE SIDEWALK**

**Polk County
NHSX-069-4(139)--3H-77**

**Effective Date
January 22, 2025**

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

230287.01 GENERAL.

- A.** This work includes the construction of colored and/or stamped PCC sidewalk pavement to the lines and grades shown on the plans. The work shall include all labor, materials, equipment and transportation required to install the colored and/or stamped PCC sidewalk pavement.

- B. Quality Assurance.**
 - 1. Design Criteria.**

The concrete mix used with pigment added shall be Class C-4, Class 3 aggregate meeting the requirements of the Standard Specifications. The aggregate, cement and integral color shall be from the same source identical throughout the entire project. The material sources and mix proportions for this project shall be accurately recorded and furnished to the Engineer at the completion of the project.
 - 2. Product Data.**

Submit copies of manufacturer's specifications, installation instructions and samples of color to the Engineer for approval prior to building a mock-up section.
 - 3. Test Reports.**

Submit certified test reports of pigment showing compliance with ACI 303.1, ASTM C 979, ASTM C 494 and AASHTO M194.
 - 4. Manufacturer Qualifications.**

Manufacturer shall have minimum 5 years experience in the production of specified products. Submit proof of qualifications.
 - 5. Installer Qualifications.**

An installer shall have minimum 5 years experience with work of similar scope and quality and

shall be able to provide list of three projects similar in scope to this project which have been completed within the local area to prove qualifications. Submit proof of qualifications.

C. Mock-Ups.

1. Construct on the job site a mock-up of 4 foot by 4 foot concrete slab. A separate mock-up shall be constructed for each color planned for the project. Mock-up shall represent the final work in material, finish and texture. Leave the accepted mock-up in place until all pavement work is completed and accepted. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 2 cubic yards (or not less than 1/3 the capacity of the mixing drum on the ready-mix truck) and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations. Contractor may, at his own risk, use a portion of the colored concrete median as the mock-up construction. If mock-up is not acceptable, it shall be removed at the contractor's expense and redone until accepted.
2. Construct mock-up using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction and expansion joints in sample panels. Mock-up shall be produced by the individual workers who will perform the work for the Project.
3. This mock-up paving area shall be the standard from which the work will be judged.

230287.02 MATERIALS.

A. Concrete.

Materials for sidewalk pavement (5 and 6 inch thickness) shall comply with Article 2511.02, A of the Standard Specifications.

B. Integral Color.

1. Colored admixture shall conform to the requirements of ACI 303.1I, ASTM C 979, ASTM C 494 and AASHTO MI 94.
2. Color pigments shall be light fast, wettable, weather resistant, ultra-violet resistant, alkali resistant and free of deleterious fillers and extenders.
3. The integral colors shall be Sorrento Red from Scofield Chart for Chromix Integral Coloring Treatment or approved equal. The integral color admixture shall be added to the concrete mix at the batch plant as per manufacturer's recommendation. Exact color determination will be from manufacturer's standard color palate and from Job Mock-Up.

C. Textures.

Texture shall be Ashler Stone – Embossing Skin from Scofield Chart for Lithotext Pavecrafters Skins. The City of Ankeny shall supply the texture templates to the Contractor when requested.

D. Sealant.

1. Sealant shall comply with ASTM C 309 as a non-yellowing, curing membrane in accordance with the manufacturer's recommendations.
2. Sealant shall include TK-TRI-GRIP non-slip synthetic aggregate or approved equal.

230287.03 CONSTRUCTION.

A. Pre-Pour Conference.

1. A pre-pour conference shall be scheduled a minimum of 14 days prior to first colored concrete pavement placement. Conference shall be conducted by Contractor. Contractor shall insure representatives of the paving contractor, concrete supplier, aggregate supplier, admixture supplier, City of Ankeny, and Engineer are present at meeting.
2. Purpose of meeting is to:
 - a. Discuss concrete mix proportions to ensure compliance with specifications and admixture supplier requirements.
 - b. Discuss contractor's paving sequence and operations.
 - c. Discuss finishing work, including jointing, surface texturing, release agent and sealing operations.
 - d. Discuss any other issues needing resolution prior to paving to ensure the quality of the final pavement product.

B. Construction and Installation.

1. Concrete placement shall be in accordance with Section 2301 of the Standard Specifications and manufacturer's recommendations.
2. **Environmental Requirements.**
 - a. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.
 - b. Avoid placing concrete if rain, snow or frost is forecast within 24 hours. Protect fresh concrete from moisture and freezing.
 - c. Comply with professional practices described in ACI 305R and ACI 306R.
3. Schedule delivery of concrete to provide consistent mix times from batching until discharge. Mix times shall meet manufacturer's written recommendations.
4. Do not add water to concrete mix in field.
5. **Admixture.**
The Engineer must approve the use of admixtures. Calcium chloride admixture is not allowed.
6. **Integral Mix.**
Mix color pigment into the designated mix at the rate recommended by the manufacturer to produce the specified color.
7. Slump shall be maintained at 3 to 4 inches. Addition of a super-plasticizer is acceptable to improve the placing and finishing of concrete. While concrete is still in the plastic stage of set, tooling and finishing shall be done to make the desired surface.
8. **Concrete Placement.**
 - a. Move concrete into place with square-tipped shovels or concrete rakes.
 - b. Vibrators, when used, shall be inserted and withdrawn vertically.
 - c. Concrete shall be struck to specified level with wood or magnesium straight edge or mechanical vibrating screed.
 - d. The concrete surface shall be further leveled and consolidated with highway magnesium straight edge and/or magnesium bull float.
 - e. Mechanically float concrete surfaces as soon as concrete surface has taken its initial set and will support weight of a power float machine equipped with float shoes or combination blades and operator.
10. **Cleaning.**
Prior to sealing, the entire surface of the pavement shall be thoroughly cleaned to ensure no foreign material is sealed with the pavement. This may require the use of hand tools, detergent,

power-washing and/or other tools as needed to ensure the surface is clear of all debris, effervescence, concrete dust and all other materials.

11. Curing.

- a. Textured concrete shall be cured with liquid membrane curing compound as recommended by manufacturer.
- b. Apply curing compound for integrally colored concrete according to manufacturer's instructions using recommended application techniques.
- c. Apply curing compound at consistent time for each pour to maintain close color consistency.
- d. Curing compound shall be of the same color as the colored concrete and be supplied by the same manufacturer.
- e. As soon as possible after antiquing release has been removed and after moisture content of concrete is low enough that alkali and other salts do not become trapped beneath sealer, normally a minimum of 14 to 28 days after placement, apply two coats of specified sealer according to manufacturer's written instructions.
- f. There should be no free water on the surface at time of application.
- g. Contractor shall provide the Owner unopened sealer compound for the Owner's use in the future application.

12. Finishing.

- a. Provide light broom finish as approved by Engineer.
- b. Protect finish work.
- c. Prohibit foot or vehicular traffic on the newly textured concrete surface.
- d. Barricade area to protect newly textured concrete.
- e. Protect surface from damage until final inspection and acceptance by the Engineer.

230287.03 METHOD OF MEASUREMENT.

The quantity of Colored, Stamped Portland Cement Concrete Sidewalk constructed will be computed in square yards by the Engineer from measurements of the finished surface. Deductions will not be made for fixtures having an area of 1 square yard or less. Initial mock-up areas will be measured and included for payment. If planned overlooks are used as job mock-up areas, these areas will only be measured once.

230287.03 BASIS OF PAYMENT.

For the area of Colored, Stamped Portland Cement Concrete Sidewalk measured, the contractor will be paid the contract unit price per square yard. This payment shall be full compensation for all equipment, tools, labor and materials necessary to construct colored, stamped PCC sidewalk pavement as specified in the contract documents. Removal of mock-up will not be measured or paid for separately but shall be considered incidental to this bid item.