



Florida Department of Transportation

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GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT, P.E.
SECRETARY

July 21, 2021

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
3500 Financial Plaza, Suite 400
Tallahassee, Florida 32312

Re: State Specifications Office
Section: **523**
Proposed Specification: **5230100 PATTERNED PAVEMENT.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Sarah Smith to move all material requirements and APL to Division III. This proposed revision is associated with the proposed 9740000.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to daniel.strickland@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 850-414-4130.

Sincerely,

Signature on file

Daniel Strickland, P.E.
State Specifications Engineer

DS/dh

Attachment

cc: Florida Transportation Builders' Assoc.
State Construction Engineer

PATTERNED PAVEMENT.
(REV 6-8-21)

SECTION 523 is deleted and the following substituted:

SECTION 523
PATTERNED PAVEMENT

523-1 Description.

~~Install patterned pavement on asphalt or concrete pavement areas at locations and with the color and pattern as specified in the Plans. Use products listed on the Approved Product List (APL), as approved for use in areas subject to vehicular traffic or non-vehicular traffic, respectively, as specified herein. Install products in accordance with manufacturer's recommendations.~~

~~For the purpose of this Specification, Patterned pavements are defined as a post applied surface marking overlay to either the pavement surface or to an imprinted pavement surface. Vehicular traffic areas are defined as those areas subject to vehicles within the traveled way, shoulders and bicycle lanes. Non-vehicular travel traffic areas include medians, islands, curb extensions, sidewalks, borders, plazas and other areas typically subject to foot traffic only.~~

~~Install overlay products in areas subject to vehicular traffic to a thickness not exceeding 180 mils. Do not use products requiring removal of pavement or requiring blockouts or trenches below the top of pavement.~~

~~Variations within a pattern shall comply with ADA requirements.~~

523-2 Materials.

~~**523-2.1 General:** Use only patterned pavement products approved for use in vehicular and non-vehicular areas, as appropriate, and listed on the APL. Meet manufacturer's specifications for all patterns, textures, templates, sealers, coatings and coloring materials.~~

~~Use patterned pavement products listed on the Department's Approved Product List (APL) in accordance with meeting the requirements of Section 974. Material coatings used to achieve the pattern and color shall produce an adherent, weather resistant, skid resistant, wear resistant surface under service conditions. Color shall be integral and consistent throughout the installation. The composition of materials is intended to be left to the discretion of the manufacturer.~~

~~Prior to installation, submit pattern and color samples to the Engineer for confirmation that the product meets the pattern and color specified in the Plans. Do not begin installation until acceptance by the Engineer.~~

~~Materials shall be characterized as non-hazardous as defined by Resource Conservation and Recovery Act (RCRA), Subpart C, Table 1 of 40 CFR 261.24 "Toxicity Characteristic". Materials shall not exude fumes which are hazardous, toxic or detrimental to persons or property.~~

~~**523-2.2 Approved Product List (APL):** Manufacturers seeking evaluation of their product shall submit an application in accordance with Section 6 along with the following documentation:~~

~~1. Manufacturer's recommendations for applicability of use on concrete or asphalt surfaces.~~

~~2. Manufacturer's recommendation for applicability of use in vehicular or non-vehicular travel areas.~~

~~3. Manufacturer's specifications and procedures for materials and installation for each use above.~~

~~4. For products proposed for use in vehicular traffic areas, independent test data verifying the material meets the requirements of this Section including verification that the product, installed in accordance with the manufacturer's specifications and procedures, has been tested in accordance with either:~~

~~a. ASTM E 274, Skid Resistance of Paved Surfaces using a standard ribbed full scale tire at a speed of 40 mph (FN40R), and has a minimum FN40R value of 35, or~~

~~b. ASTM E 1911, Measuring Paved Surface Frictional Properties Using the Dynamic Friction Tester (DFT), at a speed of 40 mph (DFT40), and has a minimum DFT40 value of 40.~~

~~5. For products proposed for use in non-vehicular traffic areas, independent test data verifying the material meets the requirements of this Section including verification that the product, installed in accordance with the manufacturer's specifications and procedures, has been tested in accordance with ASTM E 303 using the British Pendulum Tester and has a British Pendulum Number (BPN) of at least 40.~~

~~**523-2.3 Performance Requirements for Products in Vehicular Travel Areas:** In addition to the submittal requirements of 523-2.2, APL approval will be contingent on a field service test demonstrating that the patterned pavement product meets the following performance measures at the end of three years from opening to traffic:~~

~~1. The average thickness shall be a minimum of 50% of the original thickness.~~

~~2. Wearing of the material coating shall not expose more than 15% of the underlying surface area as measured within the traveled way.~~

~~3. Friction performance of patterned/textured pavement materials shall meet or exceed one of the following test method values:~~

~~a. FN40R value of 35 in accordance with ASTM E 274; or,~~

~~b. DFT40 value of 40 in accordance with ASTM E 1911~~

~~Manufacturers shall provide a field service test installation of each product within a marked crosswalk on a roadway with an ADT of 6,000 to 12,000 vehicles per day per lane, on a site approved by the Department. The test installation shall be a minimum six feet wide and extend from pavement edge to pavement edge across all traffic lanes and shoulder pavement at the crosswalk location. The test installation shall be tested by the manufacturer in accordance with FM 5-592.~~

523-3 Construction Requirements.

~~Install patterned pavement on asphalt or concrete pavement areas at locations and with the color and pattern as specified in the Plans. Prepare the surface and in accordance with the manufacturer's recommendations. Install patterned pavement in accordance with the manufacturer's installation instructions, using materials and equipment recommended and approved by the manufacturer. Color shall be integral and consistent throughout the installation.~~

~~Install overlay products in areas subject to vehicular traffic to a thickness not exceeding 180 mils.~~

~~Variations within the installation shall comply with ADA requirements.~~

~~**523-3.1 Product Submittals:** Prior to installation, submit pattern and color samples to the Engineer for confirmation that the product meets the pattern and color specified in the Plans. Do not begin installation until acceptance by the Engineer.~~

~~**523-3.2 Pavement Cuts:** Complete all utility, traffic loop detector, and other items requiring a cut and installation under the finished surface, prior to product installation.~~

~~**523-3.3 Surface Protection:** Protect treated surfaces from traffic and environmental effects until the product is completely installed, including drying and curing according to the manufacturer's instructions.~~

~~**523-3.4 Installation Acceptance:** For installation on new asphalt roadways, apply patterned pavement a minimum of 14 days after placement of the adjacent pavement.~~

~~Upon completion of the installation, the Engineer will check the area at random locations for geometric accuracy. If any of the chosen areas are found to be deficient, correct the entire patterned area at no additional cost to the Department.~~

~~Submit certification to the engineer, with including the APL number and that the patterned pavement was installed in accordance with the manufacturer's installations requirements instructions and this Section. **523-3.1 Product Submittals:** Prior to installation, submit pattern and color samples to the Engineer for confirmation that the product meets the pattern and color specified in the Plans. Do not begin installation until acceptance by the Engineer.~~

~~**523-3.2 Pavement Cuts:** Complete all utility, traffic loop detector, and other items requiring a cut and installation under the finished surface, prior to product installation.~~

~~**523-3.3 Surface Protection:** Protect treated surfaces from traffic and environmental effects until the product is completely installed, including drying and curing according to the manufacturer's instructions.~~

~~**523-3.4 Installation Acceptance:** For installation on new asphalt roadways, apply patterned pavement a minimum of 14 days after placement of the adjacent pavement.~~

~~Upon completion of the installation, the Engineer will check the area at random locations for geometric accuracy. If any of the chosen areas are found to be deficient, correct the entire patterned area at no additional cost to the Department.~~

~~Submit certification that the patterned pavement was installed in accordance with the manufacturer's requirements.~~

523-4 Method of Measurement.

The quantity to be paid will be the plan quantity in square yards of patterned pavement, completed and accepted. No deduction will be made for areas occupied by landscaping, manholes, inlets, drainage structures, or by any public utility appurtenances within the area.

523-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- | | | |
|---------------|----|---|
| Item No. 523- | 1- | Patterned Pavement (Vehicular Areas) - per square yard. |
| Item No. 523- | 2- | Patterned Pavement (Non-Vehicular Areas) - per square yard. |

PATTERNED PAVEMENT.

(REV 6-8-21)

SECTION 523 is deleted and the following substituted:

SECTION 523
PATTERNED PAVEMENT

523-1 Description.

Patterned pavement is defined as a post applied surface marking overlay to either the pavement surface or to an imprinted pavement surface. Vehicular traffic areas are defined as areas subject to vehicles within the traveled way, shoulders and bicycle lanes. Non-vehicular traffic areas include medians, islands, curb extensions, sidewalks, borders, plazas and other areas typically subject to foot traffic only.

523-2 Materials.

Use patterned pavement products approved for use in vehicular and non-vehicular areas, as appropriate.

Use patterned pavement products listed on the Department's Approved Product List (APL) meeting the requirements of Section 974.

Prior to installation, submit pattern and color samples to the Engineer for confirmation that the product meets the pattern and color specified in the Plans. Do not begin installation until acceptance by the Engineer.

523-3 Construction Requirements.

Install patterned pavement on asphalt or concrete locations with the color and pattern as specified in the Plans. Prepare the surface and install patterned pavement in accordance with the manufacturer's installation instructions, using materials and equipment recommended and approved by the manufacturer. Color shall be integral and consistent throughout the installation.

Install overlay products in areas subject to vehicular traffic to a thickness not exceeding 180 mils.

Variations within the installation shall comply with ADA requirements.

Complete all utility, traffic loop detector, and other items requiring a cut and installation under the finished surface, prior to product installation.

Protect treated surfaces from traffic and environmental effects until the product is completely installed, including drying and curing according to the manufacturer's instructions.

For installation on new asphalt roadways, apply patterned pavement a minimum of 14 days after placement of the adjacent pavement.

Upon completion of the installation, the Engineer will check the area at random locations for geometric accuracy. If any of the chosen areas are found to be deficient, correct the entire patterned area at no additional cost to the Department.

Submit certification to the engineer, including the APL number and that the patterned pavement was installed in accordance with the manufacturer's installations instructions and this Section.

523-4 Method of Measurement.

The quantity to be paid will be the plan quantity in square yards of patterned pavement, completed and accepted. No deduction will be made for areas occupied by landscaping, manholes, inlets, drainage structures, or by any public utility appurtenances within the area.

523-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

- Item No. 523- 1- Patterned Pavement (Vehicular Areas) - per square yard.
- Item No. 523- 2- Patterned Pavement (Non-Vehicular Areas) - per square yard.