

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, EDITION 2007**

Add a new SECTION to DIVISION 800:

ANTI-GRAFFITI COATING

848.1 DESCRIPTION

Prepare and apply the anti-graffiti coating to the surfaces to be protected, as designated in the Contract Documents.

BID ITEM

Anti-Graffiti Coating

UNITS

Square Yard

Note: If this bid item is not included in the Contract Documents, this work is subsidiary to other items in the contract.

848.2 MATERIAL REQUIREMENTS

See requirements below.

848.3 CONSTRUCTION REQUIREMENTS

Provide copies of the manufacturer's material safety and technical data sheets. The technical data must include detailed application instructions, minimum and maximum application temperatures and recommended time between coats.

Prepare the surfaces that will receive the anti-graffiti coating in accordance with the manufacturer's recommendations before applying the coating.

Store, mix, apply and cure the anti-graffiti coating as recommended by the manufacturer.

848.4 MEASUREMENT AND PAYMENT

When shown as a bid item in the contract, the Engineer will measure the anti-graffiti coating by the square yard. If the bid item for this work is not included in the Contract Documents, the Engineer will not measure the anti-graffiti coating for separate payment.

Payment for "Anti-Graffiti Coating" at the contract unit price will be full compensation for the specified work.

Add a new SECTION in DIVISION 1700:

ANTI-GRAFFITI COATING

1.0 DESCRIPTION

This specification covers anti-graffiti coatings, which are coatings applied to substrates to facilitate the removal of graffiti.

2.0 REQUIREMENTS

a. General.

(1) Anti-graffiti coatings must not react deleteriously with above grade concrete, concrete block, exposed aggregate concrete, brick, stonework, painted steel, or aluminum substrates.

(2) The applied coating must produce a firm, continuous, uniform film that is free of pinholes, cracks, or other film defects and exhibit satisfactory adhesion. The consistency must be such that the coating can be satisfactorily applied by spray, roller, or brush at atmospheric and material temperatures above 50°F without thinning. When applied properly to vertical surfaces, the coating must remain uniform during the required curing period and must not sag, disintegrate, check, peel, or crack.

(3) The VOC content of the coating must comply with the current national rule for industrial maintenance coatings.

(4) When the Contract Documents specify the coating as clear or translucent, the coating must cure clear or translucent, as appropriate.

b. Specific. In addition to the general requirements of **subsection 2.0a**, the coating must meet the requirements of Type II or Type III.

(1) Type II - Permanent. Type II coatings are chemically resistant coatings that allow removal of the graffiti with solvent or chemical graffiti removers. The use of graffiti removers, solvents, or both must not cause damage or pigment loss.

The color must match Federal Standard 595B, color number 35630 unless otherwise shown in the Contract Documents. When the Contract Documents specify another color, the color must match the color standard supplied by the Engineer. The Contract Documents may specify clear or translucent as a color.

Provide material complying with the requirements listed in **TABLE 1**.

TABLE 1: REQUIREMENTS FOR TYPE II COATINGS		
Property	Test Method	Requirement
Graffiti Resistance	ASTM D 6578	Cleanability Level 8, 9, or 10
Recleanability	ASTM D 6578	Min. 10 cycles
Fluid Resistance	ASTM D 1308 ^a	No blistering, discoloration, softening or adhesion loss
Set-to-Touch Time	ASTM D 1640 ^b	4 hr. maximum
Dry-Through Time	ASTM D 1640 ^b	24 hr. maximum

^a Spot Test using Paint Thinner and Gasoline

^b 3-mil wet film tested at 77°F.

(2) Type III – Permanent, Water Cleanable. Type III coatings allow for the removal of the graffiti with a high-pressure cold water wash. Coatings must be self-recoatible for the life of the coating.

The color must match Federal Standard 595B, color number 35630, unless otherwise shown in the Contract Documents. When the Contract Documents specify another color, the color must match the color standard supplied by the Engineer. The Contract Documents may specify clear or translucent as a color.

Provide material complying with the requirements listed in **TABLE 2**.

TABLE 2: REQUIREMENTS FOR TYPE III COATINGS		
Property	Test Method	Requirement
Graffiti Resistance	ASTM D 7089	Cleanability Level 1
Recleanability	ASTM D 7089	Min. 10 cycles
Set-to-Touch Time	ASTM D 1640 ^a	4 hr. maximum
Dry-Through Time	ASTM D 1640 ^a	24 hr. maximum

^a 3-mil wet film tested at 77°F.

3.0 TEST METHODS

Test in accordance with the requirements stated in **subsection 2.0**.

4.0 PREQUALIFICATION

a. Each anti-graffiti coating intended for use under this specification must be prequalified before use. Submit a written request for prequalification to the Chief of Materials and Research. Provide the following documentation:

(1) Name, address, and telephone number of the manufacturer. Include the name and e-mail address of the preferred contact person.

(2) Brand name of the anti-graffiti coating.

(3) A complete description, literature, and set of instructions for removal of graffiti.

(4) Material Safety Data Sheets.

(5) A copy of test results performed as outlined in **subsection 2.0b** from a recognized laboratory. Include evidence that the laboratory is regularly inspected. A recognized laboratory is one operated by any State Transportation Agency, the Federal Highway Administration, or any cement and concrete laboratory regularly inspected by the Cement & Concrete Reference Laboratory (CCRL) or the National Institute of Standards and Technology. Test results are to be no more than 24 months out of date.

(6) An infrared spectrum of the anti-graffiti coating which was used in the laboratory tests.

b. Submit a one gallon sample from production to the Engineer of Tests. All coatings will be fingerprinted using infrared spectroscopy for use in screening future verification samples to verify that materials submitted for use are of an identical formulation as originally approved.

c. The information, test reports and test results obtained at the Materials and Research Center on samples submitted, will be reviewed by the Chief of Materials and Research. The manufacturer will be advised of the results.

d. The Bureau of Materials and Research will maintain a list of prequalified products. Products that have been prequalified will remain prequalified as long as the formulation and manufacturing processes remain unchanged, and field experience indicates that the anti-graffiti coating functions appropriately. Changes in formulation or manufacturing processes will require new prequalification testing.

Failure of the material to function appropriately in the field will be cause for removal of the product from prequalified status. Products removed from prequalified status will be considered for requalification if the manufacturer can provide evidence that the cause of failure has been positively identified, and necessary formulation changes and/or quality control measures have been implemented to prevent future failures. Complete prequalification testing may be required for products that have been removed from prequalified status.

5.0 BASIS OF ACCEPTANCE

Prequalification as specified in **subsection 4.0**.

Receipt and approval of a Type C certification as specified in **DIVISION 2600**.

Verification samples will be taken by each District at the rate of 1 per project for each manufacturer supplying to that District. Samples will be forwarded to the Materials and Research Center for verification testing.