KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, 1990 EDITION

NOTE: This special provision is generally written in the imperative mood. The subject, *"the Contractor"* is implied. Also implied in this language are *"shall"*, *"shall be"*, or similar words and phrases. The word *"will"* generally pertains to decisions or actions of the Kansas Department of Transportation.

Create a new Subsection in Section 1700, Miscellaneous Materials.

SECTION 1700

BONDBREAKER FOR PORTLAND CEMENT CONCRETE PAVEMENT DOWEL BARS

1.0 DESCRIPTION.

The bondbreaker is applied to dowel bars to be placed in contraction joints in rigid pavement prior to placement of the concrete. The material serves to prevent the concrete from bonding to the dowel bars, thus preserving the joint as a working one.

2.0 REQUIREMENTS.

a. The bondbreaker must have an average pull out resistance less than 15 kN.

b. The bondbreaker must not have any detrimental effects on portland cement concrete or the epoxy coating on the dowel bars.

c. Apply the bondbreaker according to the manufacturer's instructions. Do not apply the bondbreaker with a thickness value greater than 0.6 mm. The thickness value is the average of 3 measurements taken at ¼, ½, and ¾ bar length spaced 120 degrees apart. None of these measurements may exceed 0.6 mm.

d. Dowels that have bondbreaker applied in the plant by the dowel supplier must be stored in such a way as to prevent dust, dirt or any other contaminant which would impair the bond-breaking action, from accumulating on the treated surface. Pre-coated dowels that have been stored in the field for any length of time will be inspected to ensure that the coating is still active and will perform as required.

3.0 TEST METHODS.

Test pull out resistance using KDOT Test Method KT-MR-16, Testing of Dowel Bars Placed in Concrete for Resistance to Removal (Pull Out).

4.0 PREQUALIFICATION.

a. All bondbreakers intended for use under this specification must be prequalified prior to use. Submit a written request to the Chief of Materials and Research with the following information for each type and brand name:

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

(2) Brand name of the material.

(3) Information regarding recommended usage and application instructions.

(4) Material Safety Data Sheets.

b. Submit three smooth 28.575 mm diameter (No. 9) epoxy coated dowel bars and sufficient bondbreaker material to coat the bars prior to sample preparation and testing. Send the samples to the Engineer of Tests. The bars will be coated, then cast in concrete and the bond tested.

c. The information and test reports will be reviewed by the Chief of Materials and Research. The manufacturer will be advised as to whether or not the product is prequalified.

d. A list of prequalified bondbreakers will be maintained in the Bureau of Materials and Research. Products will remain prequalified as long as the formulation and manufacturing processes remain unchanged, and field experience indicates that the material 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 again considered for prequalification if the manufacturer can provide evidence that the cause of failure has been positively identified, and necessary formulation changes and quality control measures have been implemented to eliminate that cause. Complete prequalification testing will be required for products which have been removed from prequalified status.

5.0 BASIS OF ACCEPTANCE.

a. Prequalification as set forth under **subsection 3.0**.

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