# 5A

# Bridge deck Concrete sealer

Effective: June 17, 2010

Revised: July 10, 2019

Description: This work shall consist of the surface preparation and application of a concrete sealer or protective coat upon the entire top surface of the deck and the tops and inside vertical faces of the parapets of the structure(s), as outlined in the contract.

Materials: Materials shall be according to the following.

Item Article/Section

1. Concrete Sealer ………………………………………………............................1026
2. Protective Coat ………………………………………………………… …………1023

Concrete sealers shall be penetrating sealers from the Department’s approved list of concrete sealers.

**CONSTRUCTION REQUIREMENTS**

**General**: Surfaces which are to be sealed shall be thoroughly cleaned by brooming and blowing off with high pressure air. Mechanical scraping may also be required to assist in the removal of mud and other foreign material. The use of chemicals and other cleaning compounds to facilitate the removal of foreign materials shall be approved by the manufacturer or its representative before use. Traffic shall not be allowed on the cleaned surface prior to treatment. Cleaning and application equipment shall be fitted with suitable traps, filters, drip pans, and other devices in order to prevent oil and other foreign material from being deposited on the surface.

Deck drains shall be temporarily plugged before the bridge deck concrete sealer is applied to control run off. The material used to plug the drains shall be removed and disposed of upon the completion of the sealing treatment.

Existing pavement markings shall be temporarily covered prior to the application of the bridge deck concrete sealer. The temporary covering material used shall be such that it will not affect the marking’s retroreflectivity when removed. After application of the bridge deck concrete sealer and prior to opening to traffic, all temporary coverings shall be removed.

For new concrete, sealing shall be performed after all grinding and/or saw cut grooving is completed and before the deck is marked and open to traffic.

The concrete surface moisture condition state shall be dry. Pavement moisture shall be checked by the following procedure. Tape the edges of a square foot of plastic to the pavement surface. Allow the plastic to stand for 15 minutes. After 15 minutes, observe the plastic for drops of moisture. If moisture is present and the drop sizes are larger than a pencil eraser, the pavement moisture is too high and bridge deck concrete sealer shall not be applied. Do not apply when inclement weather is anticipated within 12 hours.

Bridge deck surfaces shall be flooded using a distribution sprayer, roller, brush or broom. Distribution sprayers shall include a skirting system to control overspray. Material shall be brushed or squeegeed for even distribution. When two applications are required, let the surface absorb the sealer and follow-up immediately with a second application before the surface dries; wet on wet method. Redistribute any puddles or free standing material. The bridge deck concrete sealer shall be applied according to the manufacturer’s instructions, and information provided on the approved list of concrete sealers. The final total coverage rate shall not exceed 400 sq.ft./gal.

Traffic will be allowed on the deck only after a treated area does not track.

**Method of Measurement**: This work will be measured for payment as follows:

1. Contract Quantities: When the project is constructed essentially to the lines, grades, or dimensions shown on the plans, and the Contractor and the Engineer have agreed in writing that the plan quantities are accurate, no further measurement will be required and payment will be made for the quantities shown in the contract for the various items involved, except if errors are discovered after work has been started, appropriate adjustments will be made.

When the plans or work have been altered, or when disagreement exists between the Contractor and the Engineer as to the accuracy of the plan quantities, either party shall, before any work is started which could affect the measurement, have the right to request in writing and thereby cause the quantities involved to be measured. When plan quantities are revised by the issuance of revised plan sheets that are made part of the contract, and the Contractor and Engineer have agreed in writing that the revised quantities are accurate, no further measurement will be required, and payment will be made for the revised quantities shown.

1. Measured Quantities: The quantity will be the actual coverage area in square foot of surfaces treated, and shall include all surface preparation, material, and application costs.

**Basis of Payment**: This work will be paid for at the contract unit price per square foot for BRIDGE DECK CONCRETE SEALER.

DESIGNER NOTES:

This special provision was developed by the Bridge Office in Springfield to establish a pay item used to track bridge deck sealing. It should be inserted into all contracts that require sealing of the entire bridge deck.