

**ITEM 559.1896 18 - PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON
NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS**

DESCRIPTION. Under this work the Contractor shall furnish and apply, in accordance with this specification, a protective sealer to concrete surfaces, at locations indicated on the plans or where directed by the Engineer.

MATERIALS. The protective sealer used on new concrete bridge decks shall be one appearing on the Department's Approved List, which does not contain an aqueous solvent/carrier and shall meet the requirements of the following subsection:

717-03 - Penetrating Type Protective Sealers

CONSTRUCTION DETAILS.

- A. General.** The Contractor shall provide the Engineer with the sealer manufacturer's written instructions for application and use, at least five (5) working days before the start of work. Only one (1) brand and specific type of sealer will be allowed for use on each deck.
- B. Surface Preparation.** All concrete bridge decks shall air dry for twenty-four (24) hours after the time of completion of saw cut grooving. If the concrete is subjected to rain or moisture from other project operations, the drying period shall be extended twenty-four (24) hours from the time that the concrete has stopped being wetted. All required surface texturing, saw cut grooving, barriers, parapets, sidewalks and safetywalks shall be completed, before the surface is cleaned. After the drying period has ended, the concrete surface shall be cleaned by vacuum methods, to remove loose particles.

After cleaning, no laitance, standing water, oil, dirt or other foreign particles shall be present, which may prevent penetration of the sealer. All surface preparation work shall be completed and approved by the Engineer before sealer application can commence.

- C. Weather Limitations.** Sealer materials shall not be applied during wet weather conditions or when adverse weather conditions are anticipated within twelve (12) hours of the completion of sealer application. Ambient and surface temperatures, during application, and until the sealed concrete is dry to the touch, shall be a minimum of 5_ C. Application by spray methods will not be permitted during windy conditions, if in the opinion of the Engineer, unsatisfactory results will be obtained.
- D. Sealer Application.** The protective sealer shall be used as supplied by the Manufacturer without thinning or alteration. Equipment for sealer application shall be clean of foreign materials and approved by the Engineer before use. The sealer shall be applied by brushing, spraying or rolling, as recommended by the Manufacturer.

A minimum of two (2) coats of the sealer shall be applied to achieve uniform coverage. The total quantity of sealer applied by all coats shall be equal to the quantity required at the application rate specified in the Approved List. The second and each additional coat shall be applied perpendicular to the previous coat. Care shall be taken when applying

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each coat, such that running or puddling does not occur. Each coat shall be allowed to dry for a minimum of two (2) hours before the next coat is applied. The final coat shall be allowed to dry according to the Manufacturer's instructions, before the removal of maintenance and protection of traffic.

METHOD OF MEASUREMENT. The work will be measured as the number of square meters of concrete sealed.

BASIS OF PAYMENT. The unit price bid per square meter shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.