

SECTION 00539 - CONCRETE AND CRACK SEALING

(Follow all instructions and make all edits with "Track Changes" turned on. This Section is not published in the Oregon Standard. If there are no instructions [orange text] above a subsection, paragraph, sentence, or bullet, then include it in the project, unless the item(s) that are included in the subsection, paragraph, sentence, or bullet are not required on the Project and then they should be deleted. In general do not re-number or re-letter subsections when item(s) are deleted. Delete all orange text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Section 00539, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00539.00 Scope - This Work consists of furnishing and placing concrete and crack sealer on concrete Bridge decks, concrete overlays, and other concrete sections as shown.

Materials

(Fill in the blank with the words "Low Modulus", "High Modulus" or "High or Low Modulus". If none of these apply, remove the blank. Obtain information from the Bridge Designer.)

00539.10 Materials - Furnish a _____ concrete and crack sealer meeting the requirements of Section 02060.

Furnish a PCC repair material meeting the requirements of Section 02015 that is compatible with the sealer.

Construction

00539.40 General - Begin sealing work when all materials and equipment necessary to perform the work are at the job site and all required repairs are made.

(a) Placement Conditions - Apply the sealer when:

- The ambient temperature, surface temperature, and relative humidity (RH) meet the requirements on the manufacturer's written data sheet.
- The concrete substrate is dry, and has been dry for at least 24 hrs.
- During the hours of darkness, work areas are illuminated. Submit an illumination plan for approval at the pre-placement conference.

(b) Handling Materials - Store sealer at temperatures recommended by the manufacturer.

(c) Pre-Placement Meeting - Hold a pre-placement meeting with the Engineer at least 10 Calendar Days before applying the sealer. Submit for the Engineer's approval a manufacturer approved procedure for preparing the concrete surface, applying the sealer, and broadcasting the Sand. Include in the procedure the number of persons required, Equipment, installation sequence, sealer application rate, sealer dwell time, sealer gel time, broadcast Sand application rate, traffic control, and the estimated time schedule for installing the sealer and opening the Bridge to traffic. Do not proceed with the Work until the proposed procedure has been approved by the Engineer.

- Area of Application - Apply the sealer full width of the deck and roadway or as directed.
- Protect adjacent surfaces not to be covered with the sealer from spatter or coating.
- Applicator Qualifications - Provide a manufacturer authorized applicator. Re-certify the manufacturer authorized applicators yearly.

00539.42 Preparing Bridge Decks:

(a) Surface Removal - Remove the existing asphalt concrete wearing surface from the bridge decks, according to Section 00503.

(b) Surface Preparation - ~~Prepare all surfaces that are to receive a deck seal according to Section 00504. Remove all oil, grease, and all other contaminants from the concrete surface using a light shot blast or sweep blast as recommended by the manufacturer.~~

~~Remove all spalled and loose surface concrete to sound concrete.~~

~~Before placing the sealer, verify that the surface is free of loose rocks and other debris. Clean the surface with compressed air or as recommended by the manufacturer before placing the sealer.~~

~~Dispose of all removed materials according to 00290.20.~~

~~**(c) Patching** - When PCC repair material is used, allow it to cure as recommended by the manufacturer, before applying the sealer.~~

00539.45 Installation - Install sealer according to the following:

- Roll, squeegee, or broom the sealer at application rates and procedures recommended by the manufacturer.
- Allow sealer to dwell on the surface for the time recommended by the manufacturer.
- Remove all excess sealer from the surface with a squeegee, broom, or by other methods and within the time limitations recommended by the manufacturer before broadcasting the Sand.

- Before the sealer gels, broadcast the Sand at the rate recommended by the manufacturer or as required to reach refusal.
- Sweep the entire deck surface after the sealer has cured and remove all loose Material.

(Use one of the following Measurement and Payment options as instructed below. Obtain information from the Bridge Designer. Delete the option that does not apply.)

(Option 1: Use this option when sealing existing surfaces.)

[Begin Option 1]

Measurement

00539.80 Measurement - The quantities of concrete and crack sealer will be measured on the area basis, and will be the sealed surface area, excluding curb and rail faces, and will be limited to the Neat Lines and dimensions shown or directed.

(Use the following paragraph when removal of existing asphalt wearing surfaces is required.)

Removal of existing asphalt wearing surfaces will be measured according to 00503.80.

Payment

00539.90 Payment - The accepted quantities of concrete and crack sealer will be paid for at the Contract unit price, per square foot, for the item "Concrete and Crack Sealer".

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

(Use the following paragraph when removal of existing asphalt wearing surfaces is required.)

Removal of existing asphalt wearing surfaces will be paid for according to 00503.90.

[End Option 1]

(Option 2: Use this option when constructing new bridge deck surfaces (00540) or constructing new SFC and LMC overlays(00559).)

[Begin Option 2]

Measurement

00539.80 Measurement - No measurement of quantities will be made for Work performed under this Section.

Payment

00539.90 Payment - No separate or additional payment will be made for Work performed under this Section. Payment will be included in payment made for the appropriate items under which this Work is required.

[End Option 2]