

Revision Of Section 518 Bridge Compression Joint Sealer

Revise Section 518 of the Standard Specifications for this project as follows:

Subsection 518.01 shall include the following:

This work consists of replacing compression joint sealers in existing bridge joints or installing compression joint sealers in new bridge joints in accordance with these specifications and in conformity with the details shown on the plans or as directed by the Engineer. This work also consists of preparing existing or new bridge joint openings for the compression joint sealer installation.

Subsection 518.04 shall include the following:

Existing or new bridge joints consist of an elastomeric compression joint sealer and cover plates at the joints.

Elastomeric compression joint sealers shall meet the requirements of ASTM D3542. Adhesive lubricant shall meet the requirements of ASTM D4070.

The installed elastomeric compression joint sealer shall seal the pavement joint as indicated on the plans and prevent water from seeping through the bridge joint to the surface below.

The elastomeric compression joint sealer shall consist of a preformed polychloroprene compression seal and shall have a rated movement of ▲ [X] inches. Acceptable manufacturers and models include the following or an approved equal:

DS Brown
Model: Delastic - CV- ▲ [XXXX]
419-257-3561
www.dsbrown.com

Watson Bowman
Model: Wabo - WA- ▲ [XXXX]
800-677-4922
www.wbacorp.com

Erie Metal Specialties
Model: BR- ▲ [XXX]
716-542-3991
www.eriametal.com

In subsection 518.09, delete the first and second paragraph and replace with the following:

At least 10 working days before the start of work, the Contractor shall submit a Method Statement and Working Drawings in conformity with subsection 105.02 for all compression joint sealers bid under this section. The manufacturer's instructions for proper installation

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of the expansion joint device shall be included in the Method Statement. Working Drawings and Method Statement submittals which lack manufacturer's installation instructions will be returned for resubmittal.

Where applicable according to the plans, details of the expansion device through cover plates, and details of the cover plates and connections shall be shown on the working drawings.

The Method Statement shall include methods and equipment used to control the lines and grades of the concrete surface and installation of the new compression joint sealer to the tolerances listed herein. The Method Statement shall be approved by the Engineer prior to the start of work.

Subsection 518.09 shall include the following:

The Contractor shall take all steps necessary to avoid damage to all concrete. Any concrete damaged by the Contractor's operations shall be repaired or replaced at the Contractor's expense. No Contract time adjustment will be made for such repairs.

The initial concrete surface preparations and installations of the compression joint sealer shall be performed by the Contractor in the presence of a technical representative of the manufacturer. This representative shall be experienced in such installations and shall provide information to the Engineer for inspection and guidance for the Contractor on handling and installation procedures. The technical representative shall be on site until the Contractor has demonstrated successful installation of at least one joint. The technical representative shall be available for consultation upon request by the Engineer.

The installation of the new bridge expansion device shall conform to the staged construction required by the plans and Lane Closure Policy unless otherwise directed or approved by the Engineer.

(a) Surface Preparation:

For new or replacement compression joint sealers, the newly formed or sawcut joint opening blockout width shall be within 1/8 inch of the width shown in the Temperature Table or designated dimensions shown in the plans. The blockout width shall correspond to the appropriate ambient temperature at the time of concrete placement. The blockout depth shall be as shown in the plans.

Finished concrete joint surfaces shall be cleaned by use of sandblasting, or another method approved by the Engineer, until all unsound materials, adhesive, and contaminants are removed. The joint opening surfaces shall be smooth, true, and vertical. The opening faces shall be parallel, and the opening width shall not vary by more than 1/8 inch along the entire length of the joint. All vertical surface imperfections, including saw blade gouges, greater than 1/16 inch shall be patched with non-shrink epoxy grout from the CDOT

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Approved Products List or ground smooth.

(b) Sealer Installation:

The compression joint sealer shall be installed in accordance with the manufacturer’s instructions. After installation, the top of the compression joint sealer shall be ¼ inch from the top of the concrete surface.

Upturn and downturn bends shall be cut per the manufacturer’s instructions.

Existing cover plates shall be removed and reset as required. New cover plates are required as shown in the plans.

(c) Watertight integrity test:

After the compression joint sealer has been permanently installed the Contractor shall test the full length of the device for watertight integrity per section 518.09

Subsection 518.12 shall include the following:

Bridge Compression Joint Sealer will be measured as the actual quantity that is completely installed from curb face to curb face, watertight integrity tested, and accepted.

Subsections 518.13 shall include the following:

The accepted quantities of Bridge Compression Joint Sealer will be paid at the contract unit price.

Payment will be made under:

Pay Item	Pay Unit
Bridge Compression Joint Sealer	Linear Foot

Payment for Bridge Compression Joint Sealer will be full compensation for all labor, materials, tools, equipment and incidentals required to complete the item including saw cutting, sandblasting, surface cleaning and preparation, and installing of new compression joint sealers.

Surface preparation and adhesive lubricant will not be measured and paid for separately but shall be included in the work.

Costs for the on-site technical representative of the manufacturer will not be measured and paid for separately but shall be included in the work.

The cost for the watertight integrity test will not be measured and paid for separately, shall be included in the work.

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New cover plates or removal and resetting of existing steel cover plates will not be measured and paid for separately but shall be included in the work.

Instructions to Designers (delete instructions and symbols from final draft):

Use this project special provision when installing new or replacement bridge compression joint sealer. Approval by Staff Bridge required for new installations.

- ▲ Designer to determine joint movement requirements per latest AASHTO LRFD Bridge Design Specifications, Procedure A or B. The applicable movement range model number for each Manufacturer shall be determined using the midpoint, 50 degrees, of the calculated joint movement range. Requirements in the 2017 CDOT LRFD Bridge Design Manual, Section 14.4.3.3, shall also be applied when choosing specific models.

Permanent Changes to Project Dated Special Provisions

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Date	Author	Description of Change
1/14/19	BPM Cons.	Initial Website Issue
04.11.2023	M. Kayen	Revisions to make spec online accessibility-compliant. 5.22.23 Additional accessibility work.