

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

SUPPLEMENTAL SPECIFICATION

**Section 445—Waterproofing Pavement Joints and Cracks**

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*Delete Section 445 and substitute the following:*

**445.1 General Description**

This work includes waterproofing joints and cracks in the pavement by cleaning the existing surface and placing a membrane over joints and random cracks as shown on the Plans.

**445.1.01 Definitions**

General Provisions 101 through 150.

**445.1.02 Related References**

**A. Standard Specifications**

[Section 150—Traffic Control](#)

[Section 400—Hot Mix Asphaltic Concrete Construction](#)

[Section 888—Waterproofing Membrane Material](#)

**B. Referenced Documents**

General Provisions 101 through 150.

**445.1.03 Submittals**

General Provisions 101 through 150.

**445.2 Materials**

Use membranes that meet the requirements of [Subsection 888.2.02](#). For a list of sources, see [QPL 22](#).

**445.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150.

**445.3 Construction Requirements**

**445.3.01 Personnel**

General Provisions 101 through 150.

**445.3.02 Equipment**

General Provisions 101 through 150.

**445.3.03 Preparation**

**A. Primer**

Place primer on:

- Portland cement concrete

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- Old asphaltic concrete surfaces

The Engineer will determine when to place primer on new asphaltic concrete surfaces.

Before placing the membrane:

1. Prime the surface according to the manufacturer's recommendations.
2. Correct spalls greater than 3 in. (75 mm) in diameter that will prevent the material from bonding to the pavement or that will leave a cavity under the material.

Repair spalls using asphaltic concrete that meets the requirements of [Section 400](#) or other materials such as cold mixes approved by the Engineer.

3. Place the primer on the surface at the rate specified by the primer manufacturer. Extend it 1 in (25 mm) wider than the membrane. Before applying the membrane, allow the primer to dry until it is tack-free.
4. Cover the sections that are primed with membrane within the same day or repriming will be required.

### 445.3.04 Fabrication

General Provisions 101 through 150.

### 445.3.05 Construction

#### A. Placing the Membrane

Place the membrane on joints and cracks **over concrete pavements on interstate** mainline and ramps **and designated state routes** that will be **surfaced with asphaltic concrete**, unless otherwise noted on the Plans.

1. Place the membrane only when the temperature is above 40 °F (4 °C) and the pavement surfaces are dry and free of dirt or debris.
2. Install the membrane in widths of at least 11-3/8 in (290 mm) and center them over the joint or crack within a 2 in (50 mm) tolerance.
3. Seal joints as follows:
  - a. Seal transverse joints and cracks first, starting at the outside edge of the pavement and extending the full length of the joints.
  - b. Seal the longitudinal joint(s) after the transverse joints, placing the membrane in the direction that the Project will be paved.If laps are needed, place them in the transverse and longitudinal membranes with an overlap of at least 2.5 in (65 mm).
4. Install the membrane straight and wrinkle-free with no curled or uplifted edges. Slit and fold down wrinkles over 3/8 in (10 mm) wide.
5. Press the membrane against the concrete or asphalt surface using a hand roller or other equipment to ensure proper bonding.
6. Bond the edges and corners of the strips securely to the surface. Before placing the overlay, rebond or replace strips that have loose edges or corners at no expense to the Department.
7. Place the asphaltic concrete overlay when the membrane surface is dry.
8. Traffic will be allowed to enter the section between the time of placing the membrane and placing the paving, for a maximum of 7 calendar days. Before paving, replace damaged or disbonded membrane at no additional cost to the Department.
9. Fill joints or cracks flush with the pavement if they are wider than 0.5 in (13 mm) or deeper than 3/8 in (10 mm) and not adequately filled to provide support for the membrane over the joint. Use PG 64-22 asphalt cement, hot pour, or other approved sealant material before placing the membrane as directed by the Engineer.

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10. Clean the joint to remove dirt and debris before filling the joint. Comply with the short-term pavement marking requirements of [Section 150](#).

### 445.3.06 Quality Acceptance

General Provisions 101 through 150.

### 445.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

## 445.4 Measurement

The membrane quantity, complete in place and accepted, is measured in linear feet (meters). The length for transverse joints waterproofed is based on the typical cross section in the Plans, except that, where widening occurs for extra lanes, field measurements are made to determine the exact length waterproofed.

The length for longitudinal joints and random cracks waterproofed are measured in place along the center line of the joint on the surface of the pavement. No allowance is made for laps.

### 445.4.01 Limits

General Provisions 101 through 150.

## 445.5 Payment

Payment will be made at the Contract Unit Price per linear foot (meter) of joint and crack waterproofed, which will include cleaning the surface and furnishing and placing the primer and membrane.

Payment will be made under:

Item No. 445	Waterproofing pavement joints and cracks ( <u>width</u> )	Per linear foot (meter)
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### 445.5.01 Adjustments

General Provisions 101 through 150.