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# Special Specification 3041

## Underseal Course

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### 1. DESCRIPTION

Construct an underseal course using a Tracking-Resistant Asphalt Interlayer (TRAIL), a Spray Applied Underseal Membrane, or a single layer of Seal Coat.

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### 2. MATERIALS

Furnish the materials for one of the following options:

2.1. **TRAIL.** Furnish asphalt material described as “seal” for typical use in the TRAIL Material Producer List.

2.2. **Spray Applied Underseal Membrane.** Furnish asphalt material meeting the requirements of Special Specification 3002, “Spray Applied Underseal Membrane.”

2.3. **Seal Coat.** Furnish asphalt and aggregate materials meeting the requirements of Item 316, “Seal Coat.” Furnish asphalt and aggregate as specified elsewhere in the plans.

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### 3. EQUIPMENT

3.1. **TRAIL.** Provide the equipment recommend by the producer.

3.2. **Spray Applied Underseal Membrane.** Provide in accordance with Special Specification 3002, “Spray Applied Underseal Membrane.”

3.3. **Seal Coat.** Provide in accordance with Item 316, “Seal Coat.”

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### 4. CONSTRUCTION

4.1. **Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before sealing. When shown on the plans, remove vegetation and blade pavement edges.

4.2. **TRAIL.** Perform the following construction methods when applying a TRAIL for an underseal course:

4.2.1. **Placement.** Uniformly apply the TRAIL material at the rate directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed by the Engineer, uniformly apply the TRAIL material at a minimum rate of 0.15 gallons per square yard (residual asphalt). The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.

4.3. **Spray Applied Underseal Membrane.** Place in accordance with Special Specification 3002, “Spray Applied Underseal Membrane.”

4.3.1. **Placement.** Unless otherwise directed, uniformly apply the membrane at a minimum rate of 0.15 gallons per square yard (residual asphalt). The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.

4.4. **Seal Coat.** Place in accordance with Item 316, “Seal Coat.”

- 4.5. **Informational Shear Test.** Obtain three core specimens within one working day of the time the lot placement is completed. Establish core locations in accordance to Tex-222-F. Provide the cores to the Engineer in a container labeled with the Control-Section-Job (CSJ) and lot number. The Engineer will take the cores to the District laboratory for shear testing. The district will determine the shear bond strength between the two bonded pavement layers in accordance with Tex-249-F. Results from these tests will not be used for specification compliance.
- 4.6. **Nonuniform Application.** Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.
- 4.7. **Test Strips.** The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- Non-uniformity of application continues after corrective action;
- Evidence of tracking or picking up of the TRAIL;
- In 3 consecutive shots, application rate differs by more than 0.03 gal. per square yard from the rate directed; or
- Any shot differs by more than 0.05 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

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## 5. MEASUREMENT

- 5.1. **Asphalt Material.**
- 5.1.1. **Volume.** Asphalt binder will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the distributor's calibrated strap stick. The Engineer will witness all strapping operations for volume determination.
- If the meter and readout device is accurate within 1.5% of the strapped asphalt volume, the Engineer may allow use of the meter and readout to determine asphalt volume used and application rate.
- The Engineer may require redetermination of meter readout at any time and will require volume determinations by strapping if the meter is not accurate to within 1.5% of strapped volume.
- 5.2. **Aggregate.** The work performed, materials furnished, equipment, labor, tools, and incidentals will not be paid for directly but will be subsidiary.
- 5.3. **Quantity Adjustments.** The measured quantity will be adjusted to compensate for variation in required application or residual rates for different types of asphalt. Quantity based price adjustment factors are not applicable to compensate for over and under runs resulting from the method chosen.

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## 6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Underseal Course." These prices are full compensation for surface preparation; furnishing, preparing, hauling, and placing materials; removing existing pavement markers and excess aggregate; rolling; cleaning up stockpiles; and equipment, labor, tools, and incidentals.