

## SECTION 475 SEAL COAT

### 475.1 Description

- (1) This section describes applying asphaltic material and an aggregate cover on a previously completed surface.

### 475.2 Materials

- (1) Furnish asphaltic materials for seal coat conforming to section 455.
- (2) Furnish aggregates conforming to section 460 except as follows:
  1. Aggregate retained on the No. 4 (4.75 mm) sieve shall have 10 percent, by weight, or less flat & elongated pieces based on a 5:1 ratio.
  2. The percent wear, measured according to AASHTO T 96, shall not exceed 40 after 500 revolutions.
  3. At least 60 percent, by count, of the aggregate retained on the No. 4 (4.75 mm) sieve shall have one or more fractured face.
  4. Conform to the following gradation requirements:

SIEVE SIZE	PERCENT PASSING BY WEIGHT
1/2 inch (12.5 mm)	100
No. 4 (4.75 mm)	0-60
No. 16 (1.18 mm)	0-5

### 475.3 Construction

#### 475.3.1 General

- (1) Construct seal coat to the full width of the existing surface unless the contract or engineer specify otherwise. Use asphaltic material of the type and grade the special provisions designate. Apply at the plan rate.
- (2) Apply asphaltic material only if the air temperature is 60 F (16 C) or more, and the surface is clean and dry. Do not apply before impending rains if rain might damage the material before placing and rolling the cover aggregates. Limit the surface area treated with asphaltic material in a single day to the amount that can be covered with aggregate and rolled during daylight hours.

#### 475.3.2 Equipment

- (1) Provide equipment to heat and distribute asphaltic material as specified for applying tack coat in 455.3.2.2.
- (2) Provide additional equipment as follows:
  - Power broom.
  - Mechanical spreader capable of applying aggregate uniformly at the plan rate.
  - Self-propelled steel-wheel roller weighing between 6 and 9 tons (5 and 8 Mg).
  - Self-propelled, pneumatic-tire roller.
- (3) Use pneumatic-tire rollers with tires on one axle arranged to cover the spaces between tires on the other axle. Ensure that all tires are the same size and uniformly inflated. During roller operation, ensure that the wheel load and tire contact pressure is 30 pounds per square inch (207 kPa) or greater, unless the contract specifies otherwise. If the engineer requests, furnish manufacturer documentation showing the contact areas and contact pressures for various wheel loadings and tire inflation pressures.
- (4) Ensure all rollers are in good mechanical condition, capable of operating both forwards and backwards, and the operating mechanism allows for starting, stopping, or reversing direction in a smooth manner, without loosening or distorting the surface being rolled.
- (5) Equip all rollers with a drum or tire lubricator. Do not lubricate with petroleum or tar products.

#### 475.3.3 Preparing the Surface

- (1) Immediately before applying the asphaltic material, clean the existing surface with a power broom or other suitable equipment to remove dirt, clay, or other objectionable matter.

#### 475.3.4 Heating and Applying Asphaltic Material

- (1) Heat and distribute asphaltic material as specified for applying tack coat in 455.3.2. Cover previously applied material as required to create transverse joints without overlapping. Close treated areas to traffic until after applying the cover aggregate.

#### **475.3.5 Applying and Rolling Aggregate**

- (1) After the asphaltic material develops sufficient tackiness, spread aggregate uniformly over the treated surface. Dry or moisten the aggregate to ensure that it is damp to surface dry. If the engineer directs, moisten the aggregate to control dust. The engineer will determine the appropriate application rate to completely cover the treated surface but limit the application to the amount easily embedded in and bonded by the asphaltic material.
- (2) Roll the surface immediately after spreading the aggregate with a steel-wheel roller. Begin at the edges and continue to the center, lapping 1/2 the roller width on each successive pass. After this initial rolling, perform subsequent rolling using both steel-wheel rollers and pneumatic-tire rollers until thoroughly embedding the aggregate and the surface is smooth and uniform in texture. Regulate the speed and take care when reversing roller direction to avoid displacing or loosening the cover aggregate, or damaging the asphaltic material.
- (3) If the engineer directs, lightly broom the surface to remove excess loose material.

#### **475.3.6 Maintenance**

- (1) Maintain the work until acceptance. Repair damage and correct areas with excess or deficient asphaltic material or aggregate cover during this maintenance period.

#### **475.4 Measurement**

- (1) The department will measure Seal Coat by the cubic yard or by the ton acceptably completed, measured as the quantity of seal coat aggregate. The department will measure volume or weight in the vehicle and deduct for material wasted or not actually incorporated in the work.

#### **475.5 Payment**

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
475.0100	Seal Coat	CY
475.0105	Seal Coat	TON

- (2) Payment for Seal Coat is full compensation for preparing the surface; for heating and applying asphaltic material; for drying or moistening, applying, and rolling the cover aggregate; and for brooming, finishing, and maintaining the surface.
- (3) The department will pay for asphaltic materials separately under the Asphaltic Material Seal Coat bid item as specified in 455.5.