

Prior to application, the aggregate shall be pre-heated to a temperature between 120 °C to 150° °C and coated with 0.5 to 1.0% of asphalt, grade AC-20.

**3. Rolling.**

Rolling shall commence immediately following spread of aggregate. There shall be at least three complete passes by the pneumatic tired rollers to embed the aggregate particles firmly into the rubberized asphalt, followed by an additional pass of the steel roller.

**4. Sweeping.**

When the maximum of aggregate has been embedded into the rubberized asphalt and the pavement has cooled, all loose material shall be swept or otherwise removed at such time and in such a manner as will not displace any embedded aggregate or damage the rubberized asphalt.

**5. Curing.**

The rubberized asphalt surface treatment should be overlaid immediately following completion of sweeping. If traffic must travel over the surface treatment, it shall be allowed to cool and speed controlled so as not to exceed 40 kilometers per hour.

**COMPENSATION**

**466.80 Method of Measurement.**

Stress Absorbing Membrane Interlayer will be measured by the square meter and shall be the actual number of square meters applied as directed by the Engineer.

**466.81 Basis of Payment.**

Stress Absorbing Membrane Interlayer shall be paid at the contract unit price per square meter and payment shall be full compensation for all labor, materials and equipment required to complete the work to the satisfaction of the Engineer.

**466.82 Payment Items.**

460.	Class I Bituminous Concrete Pavement Type I-1	Metric Ton
466.	Stress Absorbing Membrane Interlayer	Square Meter

**SECTION 468**

**PEASTONE COVER FOR BITUMINOUS CONCRETE PAVED SHOULDERS**

**DESCRIPTION**

**468.20 General.**

Peastone cover for bituminous concrete paved shoulders will consist of an application of bitumen on the finished surface of the shoulder and then a cover of peastone spread and rolled in accordance with these specifications.

**MATERIALS**

**468.40 General.**

Materials shall meet the requirements of the following Subsections of Division III, Materials:

Crushed Stone Aggregate	M2.01.0
Peastone Cover (Gradation)	M2.01.6
Bituminous Material	
Asphalt Cement	M3.01.0
Asphalt Emulsion	M3.03.0
Cationic Emulsified Asphalt	M3.03.1
Cutback Asphalts	M3.02.0

## CONSTRUCTION METHODS

### 468.60 General.

The width of the treatment shall be as shown on the plans and as directed. The surface to be treated shall be clean and cleared of all leaves, twigs, and other foreign or objectionable material with brooms or other approved method.

### 468.61 Applying Bitumen.

The bitumen shall be applied uniformly at the specified rate with a pressure distributor. Distributors shall be in good mechanical condition, with an accurate tachometer, and capable of spraying satisfactorily for a width of not less than 4.5 meters at a pressure of between 275 and 400 kiloPascals. The distributor shall be equipped with a system for heating evenly the entire volume of the bitumen under efficient and positive control at all times.

Distributors shall also be equipped with satisfactory thermometers for measuring the temperature of the material to be applied and shall have either a steam or air-kerosene system for the clearing of the lines and pumps. Evidence of fluxing with kerosene or emulsification by steam will be sufficient cause for rejection of the delivery.

Deliveries of bitumen will be refused when the above conditions are not fulfilled.

A hose attachment on the distributor shall be used to apply bitumen wherever necessary to touch up any areas missed or inaccessible to the distributor.

The bitumen shall be applied at the temperature recommended in Section M3, Division III, for the type of asphaltic material being used.

No bituminous work shall be done during rainy weather or when weather conditions as to temperature or otherwise are, in the Engineer's judgment, unfavorable for obtaining satisfactory results.

### 468.62 Spreading and Rolling Stone.

The bitumen shall be immediately covered with a sufficient amount of 10 millimeter peastone to take up the excess bitumen and then thoroughly rolled. The peastone shall be spread evenly by means of a mechanical or box type chip spreader. Spreading shall not be done with a power grader or directly from trucks. The application of peastone shall be performed in conjunction with the application of the bitumen and at a rate to assure proper bonding before cooling takes place.

Rolling shall be performed with a steel wheel roller having a mass of not less than 4.3 kilograms per millimeter of tread or an approved pneumatic tired roller. The surfaces of the wheels of the roller shall be kept clean at all times. Precautions shall be taken to prevent the depositing of dirt or other foreign material on the shoulders. Only enough rolling will be done to set the stone and bond it to the shoulder. Excess rolling that will crush the stone will be permitted.

The stone shall be free of all deleterious materials and if, in the opinion of the Engineer, it is deemed necessary for the proper bonding to the bitumen, the stone shall be lightly treated at the plant with a cut-back asphalt or other suitable vehicle.

No trucks or other vehicles shall be allowed to pass over a section for at least 12 hours after the stone has been placed.

## COMPENSATION

### 468.80 Method of Measurement.

Peastone for cover will be measured by the metric ton.

The weight slips shall be countersigned on delivery by the Engineer, and no weight slip not so countersigned shall be included for any payment under the contract.

Bitumen delivered in tank trucks or tank feeders shall be weighed on scales and the volume computed on the basis of the current tabulation of Mass per Liter of Bituminous Materials, as approved by the Department.

Scales used in weighing shall be standard scales furnished by and at the expense of the Contractor. Such scales shall be sealed as often as necessary to insure their accuracy, at the expense of the Contractor. A sworn weigher to be compensated by the Contractor shall weigh all bitumen required to be weighed. The weighing of such materials may be witnessed by the Engineer.

Bitumen delivered in tank cars, when not actually weighed shall be measured by volume at the loading temperature, and this quantity converted to the volume at the applying temperature. The coefficient of expansion or contraction per degree C, shall be 0.00063 for asphalt, 0.00045 for asphaltic emulsions, 0.00072 for cut-back asphalt and 0.00054 for tar.

In no case shall the total number of liters of bituminous material for any car be in excess of the United States Interstate Commerce Commission's rating for the car, plus the expansion based on the volumetric change between the loading and the specific application temperature.

**468.81 Basis of Payment.**

Peastone for Cover will be paid for at the contract unit price per metric ton under the item for Crushed Stone for Peastone Cover.

Bitumen for Peastone Cover will be paid for at the contract unit price per liter, under the item for Bitumen for Peastone Cover, applied, complete in place.

**468.82 Payment Items.**

468.	Crushed Stone for Peastone Cover	Metric Ton
469.	Bitumen for Peastone Cover	Liter

**SECTION 470**

**CLASS I BITUMINOUS CONCRETE BERMS**

**DESCRIPTION**

**470.20 General.**

Bituminous concrete berms shall consist of Class I Bituminous Concrete, Type I-1, in accordance with the details of design as shown on the plans.

**470.40 Composition of Mix.**

The materials to be incorporated in the mix and the composition of the mix shall conform to the relative requirements of Section M3.11.00 for either top course or dense mix.

**CONSTRUCTION METHODS**

**470.60 Foundation.**