

## SECTION 335 SAND-ASPHALT HOT MIX

### 335-1 Description.

Construct a sand-asphalt hot mix base course, leveling course, or surface course.

Meet the requirements for plant and equipment as specified in Section 320. Meet the general construction requirements for all asphaltic concrete pavements and bases as specified in Section 330. Meet the sand-asphalt base course construction requirements as specified in Section 280.

The Engineer will accept work on a LOT by LOT basis in accordance with the applicable requirements of Sections 5 and 6. The Engineer will determine the size of the LOT as specified in 331-5 for the bituminous mixture accepted at the plant and as specified in 330-11 for material accepted on the roadway.

### 335-2 Materials.

**335-2.1 Bituminous Material:** Use Asphalt Cement, Viscosity Grade AC-20 or AC-30 meeting the requirements of 916-1.

#### 335-2.2 Aggregate:

**335-2.2.1 General:** Use aggregate material composed of one or more of the following:

- a. Local sand.
- b. A blend of local sands.
- c. A local sand with some additive, such as mineral filler, commercial sand, crushed shell, rock screenings, or other approved material. Meet the commercial material requirements specified in Division III.

d. Manufactured aggregate.

Restrict the maximum size of the aggregate material using scalping screens having an opening of 5/8 inch [16.0 mm] square. Ensure that the material is graded from coarse to fine, and that it all passes a 1/2 inch [12.5 mm] sieve. Do not use aggregate or mineral filler containing more than 1% of phosphate.

**335-2.2.2 Sand:** Use sharp and nonplastic local sand, containing not more than 7% by weight of clay, composed of hard, durable grains free of loam, roots, and other deleterious substances, and suitable for use in a bituminous mix, as determined by laboratory tests. If the local sand deposit consists of stratified layers of varying characteristics and gradation, employ such means as necessary to secure a uniform material. Should the loss of fines during drying operations be such that the stability of the mixture is reduced below the minimum specified, add mineral filler or other approved material in such quantities as necessary to compensate for the loss in stability. Ensure that any clay present is the type which will not produce clay balls in the mixture.

**335-2.3 Mineral Filler:** If needed, meet the requirements of Section 917.

**335-2.4 Testing:** The Engineer will sample all materials shipped to the asphalt plant at their destination.

### 335-3 Composition of Mixture.

**335-3.1 General:** Use a bituminous mixture composed of a combination of fine aggregate, mineral filler if required, and bituminous material. Size, uniformly grade, and combine the aggregate fractions in the proportions specified in Table 331-1 so that the resulting mixture meets the physical properties and the requirements of the verified mix design.

The Contractor may use RAP meeting the requirements of 331-2.2.4 as a substitution for a portion of the combination of aggregates. If using RAP, the Contractor may use a recycling agent in accordance with the requirements of 331-2.2.5 in the mix in lieu of asphalt cement.

The Contractor may use recycled crushed glass meeting the requirements of 331-2.2.6 as a substitution for a portion of the combination of aggregates.

### **335-3.2 Mix Design:**

**335-3.2.1 General:** Meet the mix design requirements of 331-4.3. In addition to these requirements, include, in the mix design, test data showing that the material as produced will meet the requirements of Table 331-2.

**335-3.2.2 Grading Requirements:** Meet the requirements of 332-4.2 for aggregate combination including mineral filler

**335-3.2.3 Stability:** Combine the constituents of the mixture in such proportions as to produce a mixture having Marshall properties within the limits shown in Table 331-2.

**335-3.3 Contractor's Quality Control:** Provide the necessary quality control of the bituminous mixture and construction in accordance with the applicable provisions of 330-2.2 and 331-3.4. Furnish materials that meet the verified mix design. For extraction gradation analysis, meet the provisions of 331-4.4.2 and Table 331-3. For plant calibration, meet the provisions of 331-4.4.3 and Table 331-3.

### **335-4 Acceptance of Mixture.**

**335-4.1 Acceptance at the Plant:** The Engineer will accept the bituminous mixture at the plant with respect to gradation and asphalt content in accordance with the applicable requirements of 331-4.

**335-4.2 Acceptance on the Roadway:** The Engineer will accept the bituminous mixture on the roadway with respect to compacted density and surface tolerance in accordance with the provisions of 330-11 and 330-13.

**335-4.3 Additional Tests:** The Engineer will apply the provisions of 331-5.5 to Sand-Asphalt Hot Mix.

### **335-5 Method of Measurement.**

The quantities to be paid for will be measured as specified for Type S Asphaltic Concrete under the applicable provisions of 331-6.

### **335-6 Basis of Payment.**

Prices and payments will be full compensation for all work specified under this Section.

Payment will be made under:

Item No. 335- 2-	Sand-Asphalt Hot Mix - per ton.
Item No. 2335- 2-	Sand-Asphalt Hot Mix - per metric ton.