

## **SECTION 332**

### **TYPE II ASPHALTIC CONCRETE**

#### **332-1 Description.**

Construct a Type II Asphaltic Concrete pavement.

Meet the plant and equipment requirements as specified in Section 320. Meet the general construction requirements, including the methods of calculation for thickness of pavement to be paid for, as specified in Section 330.

The Engineer will accept work on a LOT to 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 the material accepted on the roadway.

#### **332-2 Materials.**

332-2.1 Bituminous Material: Use Asphalt Cement, Viscosity Grade AC-20 or AC-30 meeting the requirements of 916-1.

##### **332-2.2 Aggregate:**

**332-2.2.1 General:** Use aggregate containing no appreciable amount of phosphate and consisting of either crushed slag, crushed stone, crushed gravel, coquina shell, oyster shell, or other crushed aggregate screenings from a Department-approved source. The Contractor may use any combination of these aggregates with sand that meets the gradation and Marshall properties requirements specified, except shell in the surface course.

**332-2.2.2 Special Requirements for Gravel:** Use crushed gravel containing no less than 85% particles which possess a minimum of three crushed faces, produced from gravel that is free of clay balls and excessive quantities of loam, roots, or other deleterious materials.

**332-2.2.3 Sand:** Use sand composed of hard, durable grains, containing no excessive quantities of loam or other deleterious substances. If clay is present, ensure that the quantity does not exceed 7%. Ensure that any clay present is the type which will not produce clay balls in the mixture. Use nonplastic sand suitable for use in bituminous mixtures as determined by laboratory tests. If the sand deposit consists of stratified layers of varying characteristics and gradation, employ such means as necessary to secure a uniform material.

**332-2.3 Mineral Filler:** If needed, meet the requirements of Section 917.

**332-2.4 Testing:** The Engineer will sample all materials shipped to the asphalt plant at their destination.

#### **332-3 Composition of Mixture.**

**332-3.1 General:** Use a bituminous mixture composed of a combination of aggregate (coarse, fine, or mixtures thereof), mineral filler if required, and bituminous material. Size, uniformly grade, and combine the several aggregate fractions in such proportions that the resulting mixture meets the grading and physical properties 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.

##### **332-3.2 Grading Requirements:**

**332-3.2.1 General:** Use a mix design that has been verified by the Engineer and meets the design range specified in Table 331-1.

**332-3.2.2 Gradation:** When tested before entering the asphalt plant in the combination to be used, ensure that the aggregate, including any mineral filler, does not contain more than 12% by

weight of material passing the No. 200 [75 µm] sieve. Do not use any screenings in the combination of aggregate that contain more than 15% of material passing the No. 200 [75 µm] sieve. When blending two screenings to produce the screenings component of the aggregate, the Contractor may allow any component of such screenings to contain up to 18% of material passing the No. 200 [75 µm] sieve. The Contractor may wash screenings to meet these requirements. Use screenings that are free from lumps and foreign matter.

**332-3.2.3 Percentage of Sand:** Allow no more than 40% by weight of the total aggregate used to be sand.

When using RAP as an aggregate, do not allow the sand size portion of the RAP material plus the sand introduced as a separate component to exceed 40% by weight of the total aggregate.

**332-3.3 Mix Design:**

**332-3.3.1 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.

**332-3.3.2 Stability:** Combine the constituents of the mixture in such proportions as to produce a mix having Marshall properties within the limits shown in Table 331-2.

**332-3.4 Contractor's Quality Control:** Provide the necessary quality control of the bituminous mixture and construction in accordance with the provisions of 330-2.2 and 331-4.4. Furnish materials that meet the verified mix design. For the 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.

**332-4 Acceptance of Mixture.**

**332-4.1 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 requirements of 331-5.

**332-4.2 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 applicable provisions of 330-11 and 330-13.

**332-4.3 Additional Tests:** The Engineer will apply the provisions of 331-5.5 to Type II Asphalt Concrete.

**332-5 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.

**332-6 Basis of Payment.**

Price and payment will be full compensation for all work specified under this Section.

Payment will be made under:

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|----------------|----|--|
| Item No. 332-  | 2- | Type II Asphaltic Concrete - per ton.        |
| Item No. 2332- | 2- | Type II Asphaltic Concrete - per metric ton. |