

SECTION 322

ASPHALT CONCRETE OVERLAY

322.1 DESCRIPTION:

Asphalt concrete overlay consists of the placing and compaction of plant mix asphalt concrete over existing asphalt concrete paving. The thickness of the overlay shall be as shown on the plans or as specified in the special provisions. Preliminary preparation of existing surfaces will be required except when accomplished by the Contracting Agency, and it is so stipulated in the special provisions. With the exception of those which have been preheated and remixed only, existing surfaces shall receive a tack coat.

322.2 MATERIALS:

The tack coat, asphalt concrete mix and transportation of the mix shall be as specified in Sections 710 and 321, except for the maximum size of aggregate and percentage of binder which shall be as specified in the following paragraph.

322.3 ASPHALT CONCRETE:

The aggregate gradation and percentage of asphalt binder shall be in accordance with Section 710 using a 1/2 inch Marshall-Low Traffic mix for overlay more than one and one-half inch in thickness and a 3/8 inch Marshall Low Traffic mix for overlay one and one-half inch or less in thickness, unless otherwise shown or specified in the special provisions.

322.4 PREPARATION OF SURFACES:
322.5

Except when they have been preheated and remixed, surfaces shall be prepared as follows:

Before placing asphalt concrete overlay, severely raveled areas or cracked areas that are depressed more than 3/4 inch from the adjoining pavement shall be cut out and patched at least 48 hours prior to the resurfacing operation. Over-asphalted areas or rough high spots shall be removed by burning or blading. Large shrinkage cracks shall be filled with asphalt sealing compound acceptable to the Engineer. The entire surface shall be cleaned with a power broom. Raveled areas that do not require removing shall be cleaned by hand brooming. The above are incidental, and the cost thereof shall be included in the bid items.

After surfaces have been prepared to the satisfaction of the Engineer, they shall receive a tack coat as specified in Section 321. Traffic will not be permitted over surfaces which have received a tack coat. When the overlay is to extend onto the concrete gutter, the gutter shall be thoroughly cleaned of loose dust and cement particles and shall be tack coated.

322.5 CONSTRUCTION METHODS:
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Placing and rolling on the asphalt concrete and the smoothness of the surface shall be as specified in Section 321.

322.6 MANHOLES:
322.7

Manholes shall be built up and the frames set flush with the finished surface of the new paving, and tops of valve boxes, clean-outs and other existing structures shall be adjusted to finish grade. In the event the base course and original paving have been removed or disturbed in order to build up the manhole, they shall be replaced with approved materials which shall be thoroughly compacted. The asphalt concrete around the manhole frame shall be completed and made flush with the adjacent overlay.

322.7 PAYMENT:
322.8

Payment for tack coat and asphalt concrete will be as specified in Section 321 except as noted above.

322.4 PAVEMENT FABRIC INTERLAYER:

Pavement fabric interlayer shall be used below an asphalt concrete overlay only when specified on the plans or in the specifications and shall not result in a reduction in the design asphalt concrete overlay section thickness.

Pavement fabric interlayer shall be in accordance with Class B in Table 796-1 unless otherwise specified on the plans or in the specifications.

Asphalt binder coat used to bond the fabric to the pavement shall be an asphalt cement conforming to the requirements of Section 711. Unless otherwise specified, the grade to be used shall be PG 70-10. The application of asphalt binder and distributing equipment shall conform to the requirements of Section 330. The asphalt binder coat shall be uniformly spray applied to the prepared pavement surface at the rate of 0.20 gallons per square yard for Class B fabric or at the rate of 0.25 gallons per square yard for Class A fabric. Some underlying surfaces may require a higher or lower application rate. A test strip may be necessary to determine the proper application rate. The width of liquid asphalt cement application shall be the fabric width, plus six inches.

Neither the asphalt binder coat or fabric interlayer shall be placed when weather conditions, in the opinion of the Engineer, are not suitable. Placement of the asphalt binder and fabric interlayer shall be placed either when (a) the ambient air temperature is above 50 degrees F and rising, or (b) the pavement is dry and pavement temperature is 40 degrees F and rising.

Equipment for placing the fabric shall be mechanized and capable of handling full rolls of fabric. The equipment shall be able to lay the fabric smoothly in order to maximize pavement contact and remove air bubbles. Stiff bristle brooms shall be used to smooth the fabric, scissors or blades to cut the fabric are also required. The equipment used to place the fabric shall be in good working order and is subject to approval by the Contracting Agency.

Pavement fabric interlayer shall not be placed if the in-place binder is hotter than 325 degrees F or has cooled to 180 degrees F or below (as determined by non-contact thermometer).

Pavement fabric interlayer shall be placed onto the asphaltic binder with the heat bonded side up with a minimum amount of wrinkling or folding. Large wrinkles (1-inch and larger) shall be slit and lapped in the direction of paving. Burning or torching of wrinkles is not allowed. Fabric joints shall overlap three to six inches to insure full closure of the joint. Transverse joints shall be lapped in the direction of paving to prevent edge pickup by the paver. A second application of hand-placed asphalt binder may be required at laps and repairs as determined by the Engineer to ensure proper binding of the narrow double fabric layer. No joints shall be lapped with more than two layers of fabric.

All areas where fabric has been placed shall be paved with asphaltic concrete during the same workshift. Placement of the asphaltic concrete shall closely follow fabric lay down. The temperature of the asphaltic concrete when delivered shall not exceed 325 degrees F. In the event that asphalt binder coat bleeds through the fabric causing construction problems before the overlay is placed, the affected areas shall be sanded with a sand blotter in compliance with Section 333. Excess sand shall be removed before beginning the paving operation. In the event of a rainfall on the fabric prior to the placement of the asphaltic concrete, the fabric must be allowed to dry completely before the asphalt concrete is placed.

Turning of the paving machine or of other vehicles on the fabric shall be gradual and kept to a minimum to avoid damage to the fabric. Should equipment tires stick to the fabric during pavement operations, small quantities of paving asphalt concrete shall be broadcast on the fabric to prevent pick-up. Decrease of binder rate in order to minimize pick-up on tires is not allowed.