



7" PORTLAND CEMENT CONCRETE WHITETOPPING:

DESCRIPTION.

The work covered by this section consists of the construction of a bonded Portland cement concrete overlay on an Asphalt Concrete Base Course surface in accordance with these provisions and the Standard Specifications. The final surface shall match the existing grade lines, superelevations and dimensions. These shall be determined by the Engineer or the contract surveyor if the item of construction surveying is included in the contract.

MATERIALS.

All materials shall meet the requirements of Division 10 shown below:

Portland Cement Concrete	Section 1000
High Early Portland Cement Concrete	Article 1000-6
Polypropylene Fibers admixture (3 lb/cy).....	Article 1034-3
Curing agents.....	Section 1026
Low modulus silicone sealant	Article 1028-4
Water	Article 1024-4

COMPOSITION OF CONCRETE.

The composition of the concrete shall be in accordance with the requirements of Class AA concrete as shown in Table 1000-1 of the Standard Specifications except that the concrete shall have a minimum compressive strength of 3000 PSI prior to opening to traffic.

POLYPROPYLENE FIBERS.

Use an approved polypropylene fiber meeting the requirements of ASTM C 1116—Type III fibers. Add fibers at a rate of 3.0 lb/yd³ (1.8 kg/m³) at the plant site to insure uniformity of distribution throughout the mix, unless otherwise specified by the Engineer.

ACCEPTANCE OF CONCRETE.

The concrete overlay shall be tested for acceptance in accordance with Section 1000-4 of the Standard Specifications. The minimum sampling will follow the Departments minimum sampling guide for Class AA concrete.

CONSTRUCTION METHODS.

The Portland cement concrete overlay shall be constructed in accordance with the applicable portions of Section 700 and the following:

Surface Milling:

The Contractor shall perform a shallow ¼" milling on the Asphalt Base Course to provide a rough surface for the Whitetopping to bond. Make a transverse saw cut at each end of the asphalt section to provide a clean vertical face and ensure proper concrete thickness.

After milling, thoroughly clean the area with compressed air to remove all laitance, dust, grit and all foreign material. Protect the area, as necessary, to prevent contamination until concrete placement. When areas are not adequately protected, additional cleaning will be required as directed by the Engineer.

Transition Slab Reinforcement:

The Contractor shall place Wire Mesh Reinforcement, Section 1070-3, to reinforce the first 10 feet of Concrete Whitetopping measured from the existing asphalt section.

Final surface preparation:

The Asphalt Base Course shall be cooled prior to milling and placement of concrete overlay.

After the surface has been cleaned but prior to placement of the overlay, the Contractor shall spray a water mist on the surface immediately ahead of the paving operation. The surface shall be maintained in a moist condition without excessive ponding or pooling of water.

Placing and Consolidating:

Use finishing machines or screeds that are mechanically operated supported outside the area of Whitetopping. Use transverse type screeds. Ensure screeds are equipped with surface vibrators sufficient to thoroughly consolidate the concrete full depth, unless other methods are approved by the Engineer. Screenshot vibrators may be supplemented with hand held vibrators to accomplish proper consolidation. Promptly after the moisture coat has been applied, deposit the concrete on the milled surface, consolidate it and strike it off. As placement proceeds, keep the concrete surface screeded to the required grade. Ensure that depressions are filled ahead of the screed, and that a small roll of mortar is kept on the leading edge of the screed. Ensure that

sound concrete is obtained at all joint edges during the concreting and screeding operation. Do not place excess grout or allow any excess grout to remain in these areas. Apply a broom finish as soon as the surface permits.

FINISHING.

Ensure that the surface of the Whitetopping does not deviate more than 1/8 inch when tested with a 10-foot straightedge placed in both directions. Finishing shall be performed as provided in Section 710-6 of the Standard Specification.

CURING.

Curing shall be performed as provided in Section 700-9 of the Standard Specifications.

CONTRACTION JOINTS.

Saw contraction joints at 6 ft. intervals throughout the entire placement in the transverse and longitudinal directions. Do not saw parallel joints in either direction closer than 2 ft. to any edge of any construction joint in the Whitetopping. Do not place any joint within 1 foot of a wheel path. Commence sawing as soon as the surface will permit without marring. Special saws made to cut concrete at or near initial set may be allowed by the Engineer to expedite sawing and control stresses that may produce wild cracking. Make saw cuts to a depth of 2.33 in. and 0.125 in. wide. Seal joints in accordance with the requirements of 700-12 of the Standard Specifications.

THICKNESS TOLERANCES.

Any Portland cement concrete Whitetopping that is deficient by more than 1/4" as determined by depth checks performed upon final screeding will be considered defective. All such defective overlay shall be removed and replaced by the Contractor at no cost to the Department.

OPENING 7" PORTLAND CEMENT CONCRETE WHITETOPPING TO TRAFFIC.

The bonded Portland cement concrete overlay shall not be opened to traffic until such time as a 3000 PSI compressive strength has been attained.

METHOD OF MEASUREMENT.

The quantity of bonded Portland Cement Concrete Whitetopping to be paid for will be the actual number of square yards of overlay, which has been completed and accepted. No measurement for payment will be made for any overlay determined by the Engineer to be defective.

BASIS OF PAYMENT.

(A) General:

The quantity of bonded Portland Cement Concrete Whitetopping, measured as provided above, will be paid for at the contract unit price per square yard for " 7" Portland Cement Concrete Whitetopping ".

(B) Compensation:

Payment at the contract unit price for "7" Portland Cement Concrete Whitetopping" will be full compensation for the work covered by this provision including but not limited to designing the concrete mix; Asphalt Concrete Base Course surface milling; cleaning; furnishing and placing concrete; furnishing of all admixtures and additives; furnishing and placing Wire Mesh Reinforcement; the construction of all joints and the furnishing of all joint materials; cleaning, curing the pavement and furnishing all curing materials; coring and patching the pavement; calibrating and checking the operation of any batching equipment; all actions necessary to prevent or to repair cracking; and removal and replacement of defective pavement.

(D) Pay Items:

Payment will be made under:

7" Portland Cement Concrete Whitetopping Square Yard