

Designer Note: Use to repair/replace an existing 4" (100 mm) concrete wearing surface on a bridge deck with a new 4" (100 mm) concrete wearing surface. See CADD Standard 503401 for generic detail. Do not use Bridge Special Provision "Bridge Deck Overlay".
Revised Article 9-23-96.

CONCRETE WEARING SURFACE

Effective July 1, 1990

Revised January 1, 2007

This item shall consist of a wearing surface of Class BD Concrete, welded wire fabric and slurry seal, constructed on a concrete deck in accordance with these specifications, as shown on the plans, as directed by the Engineer, and conforming to all applicable portions of Section 503 of the Standard Specifications.

Prior to placement of the Class BD Concrete Wearing Surface, the area to be surfaced shall be cleaned and a slurry seal of sand-cement grout placed as herein specified.

Cleaning of the area to be surfaced shall consist of the application of compressed air, followed by washing and brushing. Final cleaning with water under high pressure shall be done sufficiently ahead of concrete placement to permit the surface to become dry. If for any reason concrete placement does not follow immediately after cleaning, the area shall be carefully protected during the interim. The area shall be kept dry so that a final cleaning before surfacing may be accomplished with compressed air, followed by water under pressure.

Before placing the concrete, the area to be surfaced shall be thoroughly covered with a 1:1 sand-cement grout. The area shall be thoroughly scrubbed with the grout to wet it uniformly, to displace air films, and to incorporate any loose particles still on the surface. Sufficient grout for brushing may be mixed to provide material for about an hour. It shall be covered to reduce evaporation of water and remixed as it is being used. A water-cement ratio of 5.5 to 6 gallons (21.0 to 23 L) per sack of cement will produce a grout of proper consistency for use in cool cloudy weather. However, on hot sunny days, a grout of such consistency will not brush out well. Under such conditions, the water-cement ratio may be increased slightly to permit brushing, or the surface may be lightly sprayed to permit uniform spreading of the grout. Wetting of the surface shall be done carefully and free water will not be permitted to collect in hollows and depressions. In cloudy cool weather, the grout may be spread a considerable distance ahead of concrete placement; but in hot dry weather, the two operations will have to follow rather closely in order that the grout does not dry out excessively. Grout that has lost its sheen is in proper condition for concreting operations.

Welded wire fabric [6" X 6" (150 mm X 150 mm)] shall be placed in the concrete wearing surface as shown on the plans. The wire fabric shall conform to the applicable portions of Article 1006.10 of the Standard Specifications.

The Concrete Wearing Surface will be measured for payment as specified in Article 503.21 of the Standard Specifications, except that the sand-cement grout, wire fabric, and the work required for cleaning shall be considered included in the cost of this item. This work will be paid for at the contract unit price per Cubic Yard (Cubic Meter) for CONCRETE WEARING SURFACE.