

CORING BRIDGE DECK OVERLAYS FOR THICKNESS

1. SCOPE: This method covers the procedure for obtaining drilled cores from bridge decks which have been overlaid and measuring the overlay thickness for determining conformity with the specified overlay thickness. This procedure is intended to apply to new construction only.
2. APPARATUS:
 - 2.1. Core Drill: A core drill of either the shot drill or diamond drill type capable of drilling a 1.7 inch diameter core.
 - 2.2. Measuring Devices: A scale or ruler having minimum graduations of 1/16 inch.
3. TEST SPECIMENS: Cores shall conform to Kentucky Method 64-308 and shall have a nominal diameter of not less than 1.7 inches.
4. PROCEDURE:
 - 4.1. Units to be considered separately for coring are defined as 50 lineal feet of the total bridge width starting at the bridge end bearing the smaller station number, except that the final unit may represent 75 lineal feet.
 - 4.2. One random core shall be taken from each unit except as hereinafter noted.
 - 4.3. Overlay thickness shall be measured to the nearest 1/16 inch at four equally spaced locations around the circumference of the core. The measurements shall be that distance from the top of the core to the point of contact between the overlay and the deck concrete. The thickness shall be the average of the four measurements and shall be reported to the nearest 1/16 inch.
 - 4.4. If the overlay thickness determined from the initial core is equal to or greater than the design thickness the unit is considered acceptable for full payment except as provided under 4.6.
 - 4.5. If the overlay thickness determined from the initial core is deficient from 1/16 to 1/2 inch inclusive, two additional cores shall be taken from within the unit so that neither of the three core locations is within less than 15 feet of the other two locations. The reported overlay thickness shall be the average of three thicknesses with the following exceptions: (1) Overlay thicknesses exceeding design thickness by more than 1/8 inch shall be considered as design thickness plus 1/8 inch for the purpose of calculating the average thickness. (2) Overlay thicknesses which are deficient by more than 1/2 inch shall not be used in computing the average thickness of units but shall require the drilling of additional cores as required in 4.6. Units or portions of units which are deficient from 1/16 to 1/2

inch inclusive shall be subject to a reduced price in accordance with Section V of the applicable Special Provision.

- 4.6. When any core taken indicated an overlay thickness deficient by more than 1/2 inch, additional cores shall be taken at 10 feet intervals beginning at the deficient core and drilling parallel and perpendicular to the centerline until in each direction a core is obtained which is not deficient by more than 1/2 inch or until the limits of the structure prevent the drilling of further cores. The area of overlay to be removed and replaced shall be bounded either by lines perpendicular and parallel to the centerline which are perpendicular to and bisect lines connecting the last core showing deficiency in excess of 1/2 inch and the core showing deficiency of 1/2 inch or less, or the limits of the overlay, or both. If the removal area extends into an adjacent unit for which a pay factor has been previously established, that pay factor shall be applicable only to the portion of the unit not within the removal area. If the removal area is within or extends to a unit for which a pay factor has not been previously established, the pay factor shall be established by determining the thickness of the non removal area remaining within the unit, by taking 1 random core per 500 square feet or less of non removal area remaining within the defined unit.
5. **REPORT:** The report shall document the measured length of all cores and the location of all cores with respect to project stationing and the centerline of the bridge. Additionally, station references or other descriptions shall be documented to establish location and extent of areas deficient by more than 1/2 inch or areas subject to price reduction. The average thickness for each unit subject to averaging shall be reported.

APPROVED

DIRECTOR
DIVISION OF MATERIALS

DATE

02/22/08

Kentucky Method 64-315-08

Revised 02/22/08

Supersedes 64-315-03

Dated 02/17/03

Km31508.doc