

TECHNICAL REPORT TITLE PAGE

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Bridge Deck Overlays for County Bridges**4. TYPE OF REPORT & PERIOD COVERED**

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8. ABSTRACT

The Iowa Method for bridge deck overlays has been very successful in Iowa since its adoption in the 1970s. This method involves removal of deteriorated portions of a bridge deck followed by placement of a layer of dense (Type O) Portland Cement Concrete (PCC). The challenge encountered with this type of bridge deck overlay is that the PCC must be mixed on-site, brought to the placement area and placed with specialized equipment. This adds considerably to the cost and limits contractor selection.

A previous study (TR-427) showed that a dense PCC with high-range water reducers could successfully be used for bridge deck overlays using conventional equipment and methods. This current study evaluated the use of high performance PCC in place of a dense PCC for work on county bridges. High performance PCC uses fly ash and slag to replace some of the cement in the mix. This results in a workable PCC mix that cures to form a very low permeability overlay.

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