

TECHNICAL REPORT TITLE PAGE

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Development of Standard Plans for the Design
of Single Span Pretensioned, Prestressed Concrete
Beam Bridges with Concrete Abutments

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5. AUTHOR(S)

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7. ACKNOWLEDGMENT OF COOPERATING ORGANIZATIONS/INDIVIDUALS

8. ABSTRACT

Standard bridge designs have been prepared through past engineering studies for many common types and sizes of bridges in Iowa. These bridge standards provide cost savings to the Iowa DOT and to Iowa's local jurisdictions through reduced design cost and even in reduced construction cost as contractors reflect their familiarity with the designs and reuse of forms in their bids.

As many bridges in service reach the end of their design life, it has been noted that the concrete superstructures remain in serviceable condition, whereas the timber substructures are deteriorating and require operating restrictions or replacement of the structures. The current H24S and H30S Single Span, Pretensioned, Prestressed, Concrete Beam (PPCB) Bridge Standards, currently in use in Iowa, only have a timber abutment design available for use.

To extend the design life of the next generation of single span PPCB bridges, many counties have hired structural consultants to design concrete abutments to place under the single span bridge standards. The custom design reduces the cost effectiveness of these bridge standards. There is a need for a standard concrete abutment for use with the single span PPCB bridge standards.

The objective of this project is to perform an engineering study to update the existing H24S and H30S bridge standards and to create a new standard (H24IS and H30IS) utilizing concrete abutments.

The standards will be available in MicroStation at <http://www.dot.state.ia.us/bridge/countybrgstd.html> after August 12, 2005.

9. KEY WORDS

Structure, Engineering Study,
Simple Span Secondary Bridge Standards, PPC

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