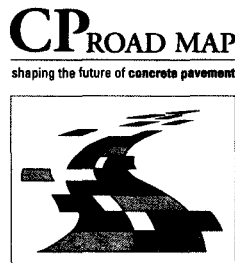


# About This Guide

This *Guide to Concrete Overlays* (second edition) is a product of the National Concrete Pavement Technology Center (CP Tech Center) at Iowa State University, with partial funding from the American Concrete Pavement Association. It was developed to fill a “knowledge gap” identified in the National Concrete Pavement Road Map, a coordinated, long-term research plan for improving concrete pavements. In September 2007, the Road Map’s national executive committee designated overlays as a priority topic for research and technology transfer.

In addition to serving a general industry need, this publication will be a major resource for a field application program, led by the National Concrete Pavement Technology Center. This program is intended to advance overlays’ effective use by answering pavement owners’ questions and increasing their knowledge about and confidence in concrete overlays.

With the advice and support of national expert teams, six regionally diverse states will design, construct, and demonstrate different types of concrete overlay solutions. Through this process, the six states will become regional hubs of concrete overlay expertise. They will share their knowledge and experience with surrounding states by hosting visits to the demonstration sites and/or making presentations at various events. Innovations learned from the field applications will be incorporated into annual updates of this guide.



## Acknowledgments

This document is a testimony to the value of agency-industry-university partnerships in research and technology transfer activities. The National Concrete Pavement Technology Center at Iowa State University is sincerely grateful to the knowledgeable, experienced, and dedicated

concrete pavement professionals, public and private, who contributed to the development of this guide, both the original version in 2007 and this expanded edition.

While the authors generated the overall content, it was the technical advisory committee’s reviews of drafts, thoughtful discussions, and suggestions for revisions and refinements that make this guide a comprehensive resource for practitioners. The members’ broad expertise regarding the use of concrete overlays as pavement resurfacing and rehabilitation solutions is reflected in every page. CP Tech Center staff appreciate the committee’s invaluable assistance. In particular, we thank Dan DeGraaf and Randy Riley, representing the Michigan and Illinois concrete pavement industry associations, respectively, for their tireless attention to this project.

## Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pavement Association
ASR	alkali-silica reactivity/reaction/reactive
ASTM	American Society for Testing and Materials
CRCP	continuously reinforced concrete pavement
CTE	coefficient of thermal expansion
FHWA	Federal Highway Administration
FWD	falling weight deflectometer
IRI	International Roughness Index
JPCP	jointed plain concrete pavement
M-E PDG	Mechanistic-Empirical Pavement Design Guide
MRD	material-related distress
MUTCD	Manual on Uniform Traffic Control Devices
NCHRP	National Cooperative Highway Research Program
PCA	Portland Cement Association
PCC	portland cement concrete
SCM	supplementary cementitious material
TRB	Transportation Research Board
TCP	traffic control plan

## National Concrete Pavement Technology Center



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### For Additional Copies

The American Concrete Pavement Association is distributing this guide. For additional copies, contact your state paving association/ACPA chapter (find contact information with the My Locator tool at [www.pavement.com](http://www.pavement.com)); ask for **ACPA publication no. TB021.02P**.

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### CP Tech Center Mission

The mission of the National Concrete Pavement Technology Center is to unite key transportation stakeholders around the goal of advancing concrete pavement technology through research, technology transfer, and technology implementation.

