

SOLUTIONS!

By Randell C. Riley, P.E.

Making concrete the pavement of choice and a critical solution to an owner's problems has always involved reaching for and understanding new and better technology. Though you may not be aware of it, over the last three years the national concrete paving industry has been engaged in forming its own research institute.

The result of this effort is the National Concrete Pavement Technology Center (NCPTC or CP Tech Center), which is dedicated to the development of technology and information to improve the quality and expand the use of concrete in assorted paving applications.

Many of you, particularly in the urban areas, have been following the development of pervious pavement technology and techniques, which has been a focus of the NCPTC as well. One of their reports is based on the freeze-thaw characteristics of pervious pavement placed at the Iowa State University campus in Ames, Iowa. Recognizing freeze-thaw durability as a potential obstacle to long-term use of the product in the Midwest, the report details some of the findings and strategies to ensure freeze-thaw durability and enhance the mixture properties. The report can be downloaded at www.ctre.iastate.edu/reports/mix_design_pervious.pdf. It is a good piece to have in your promotion handbag for promoting pervious pavement. And your director of marketing and promotion, John Reed, can provide further information.

There are also a number of other projects that apply to the higher level traffic market. These have to do with noise, friction, dowel bars, etc., but many of these are outside the typical market of streets and local roads pursued by most of the ready mix concrete industry (www.cptechcenter.org/projects/reports.cfm). However, one of the latest publications released in January 2007 should be of use and in the hands of every ready mix concrete producer in the state. This publication addresses a market all of us wish to move into; the concrete overlay market (see Figure 1).

This unassuming title, *Guide to Concrete Overlay Solutions*, is a first of its kind comprehensive look at all of the various concrete resurfacing and overlay solutions for almost any situation imaginable in the highway, city street and parking lot market. Its 28 pages of text and graphics aide the engineer and designers in understanding the application of different overlay strategies over concrete, asphalt and composite (asphalt over concrete) pavements. The *Guide* provides the essential information to the user to understand when one particular type of overlay might be favored over another.

Understanding how a concrete overlay is built and what the critical parameters are for each of the types of overlays is also essential for their successful use. In the *Guide*, general construction sequences are laid out with emphasis on those items that are more critical. For example, when should a concrete overlay be bonded to the underlying layers and when should efforts be taken to eliminate or minimize bond? What type of preparation should

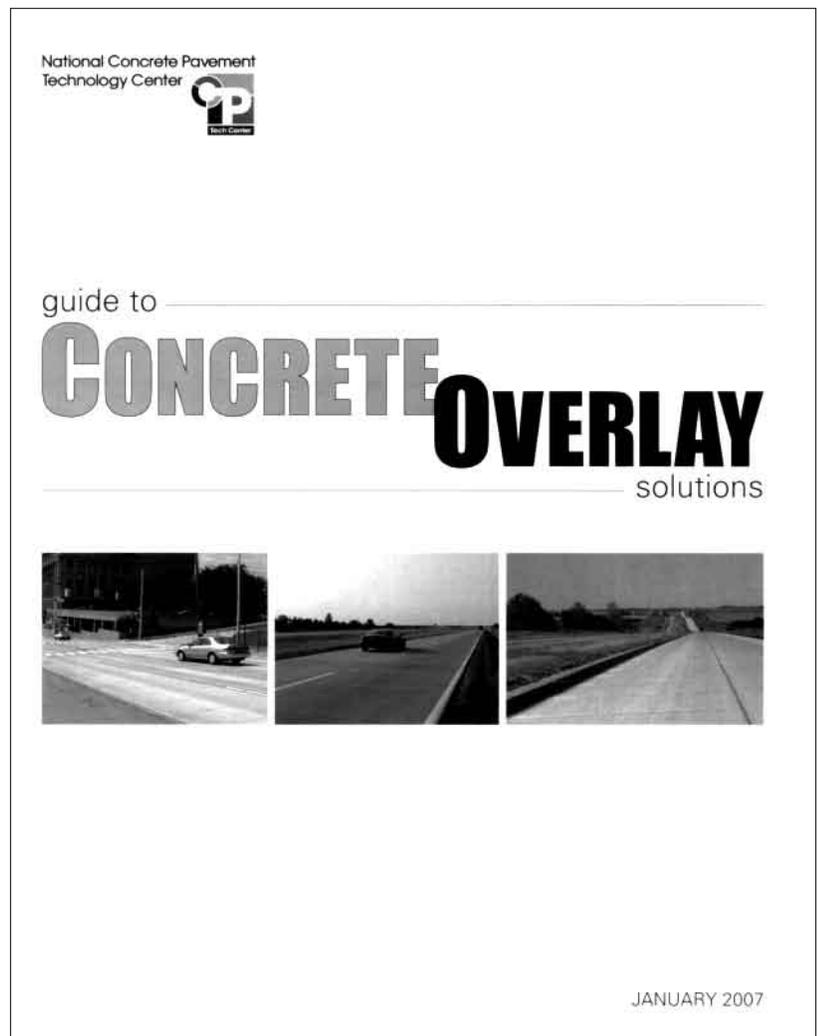


Figure 1: One of the many publications available from the National Concrete Pavement Technology Center (NCPTC/CP Tech Center).

be used? How do you deal with manholes, existing curb and gutter and elevation transition issues? All of these are questions answered as completely as possible to give the reader an understanding of the basic concepts so that what is learned can be put into practice. Design of concrete overlays is also addressed through pointing the reader to specific tools and techniques to generate the design thickness required.

The *Guide* is a good handout to any engineer, architect or potential owner for understanding how concrete overlays can be put to use for a particular project. Copies of the *Guide* are currently available either through IRMCA (800.235.455) or through the Illinois Chapter, Inc. - American Concrete Pavement Association (217.793.4933). Call and request yours today!

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