
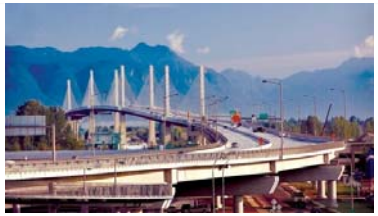


SHRP2 SOLUTIONS
STRATEGIC HIGHWAY RESEARCH PROGRAM

Kentucky Transportation Cabinet's Approach to the SHRP2 Implementation Assistance Program

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U.S. Department of Transportation
Federal Highway Administration

American Association of State Highway and Transportation Officials
AASHTO
The Voice of Transportation

TRB

Overview

Kentucky Transportation Cabinet – Lead Adopter for SHRP2 Solutions:

- Innovative Bridge Designs for Rapid Renewal
- Preservation Techniques to Treat High- Volume Roads

Innovative Bridge Designs: Economical Prefabrication of Bridges

- Standardized design concepts
- Small-to-medium sized bridges
- No special cranes or equipment needed
- Toolkit (R04) includes:
  - Standard design plans & details
  - Design examples
  - Design specifications
  - Construction specifications
  - Training materials

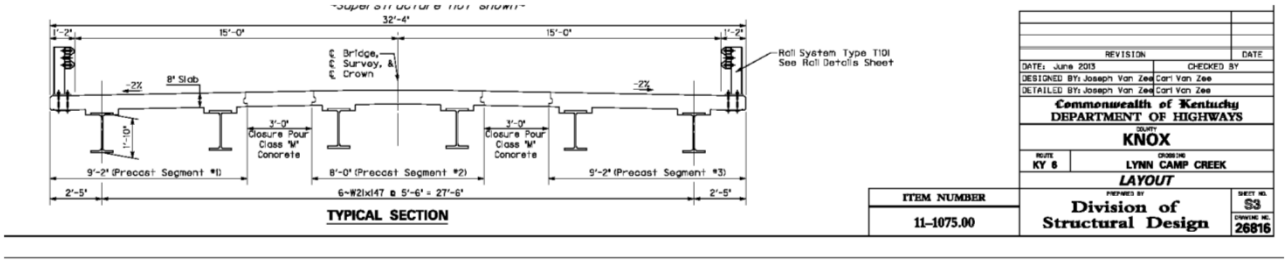
Bridge installation over Keg Creek, Iowa.

Opportunities for Kentucky

- Part of Bridge Replacement Program
- Two short-span bridges in Eastern Kentucky on KY 6, Knox County
- Conventional construction would require long detour routes or detours on substandard roadways
- Rural areas have fewer options

Kentucky's Approach

- Contract for bid in August, selection in September; construction to begin in October
- Bridges to be replaced one at a time
- Each bridge will be completed in approximately three weeks.



- Structure design:
  - Deck precast onto rolled steel girders in manageable sections to be placed onto precast pile end bents
  - Galvanized rolled beams to save time in construction by eliminating any field application of paint

SHRP2 Value to Kentucky

- **Time savings:** Reduce the construction time from 3 to 4 months to 3 weeks.
- **Cost savings:** By galvanizing the beams, future maintenance coatings may be eliminated.
- **Minimize use of detours:** Deliver projects more rapidly and less intrusively to our travelling public.
- **Advance state of practice**: Add to existing knowledge and experience using accelerated bridge construction
- Opportunity to **share our experiences** with other states

“The more time we spend carefully planning for rapid construction techniques, then less time is spent impeding the flow of our transportation system. ”

Preservation Techniques for High-Volume Roadways

- Step-by-step process to identify the best repair techniques based on specific pavement needs and conditions
- Method for weighing various technical inputs and selecting the most appropriate treatments
- Decision matrices
- Summaries of treatment options and examples

Opportunities for Kentucky

Preventive Maintenance Program within Pavement Management Program

- $5.5 million program annually
- Focused attention on new techniques
- Published Guidelines for Preventative Maintenance Treatments
- Increased awareness of treatments and benefits
- 2 -3 microsurface/ultrathin projects a year
- Statewide crack seal contract

Kentucky's Approach

- Opportunity to **expand program through studying a variety of techniques "in ground"**
- Used **SHRP2 matrix** (ADT, distress number, etc) and **pavement management database**, to identify possible candidate segments
- Potential to use **four or more separate techniques** on a roadway segment
- Currently **assessing different sites** – and different pavement conditions
- Conduct **visual inspection of treatment sites** for candidates

SHRP2 Value to Kentucky

- **Improve the performance** of preservation treatments
- **Improve safety** and make our roads last longer
- **Reduce traffic disruption** due to construction
- Help **develop formal process** for preventative maintenance project selection
- **Stretch our dollars**

US 127 B, Anderson County

Questions