

CP Road Map Framework

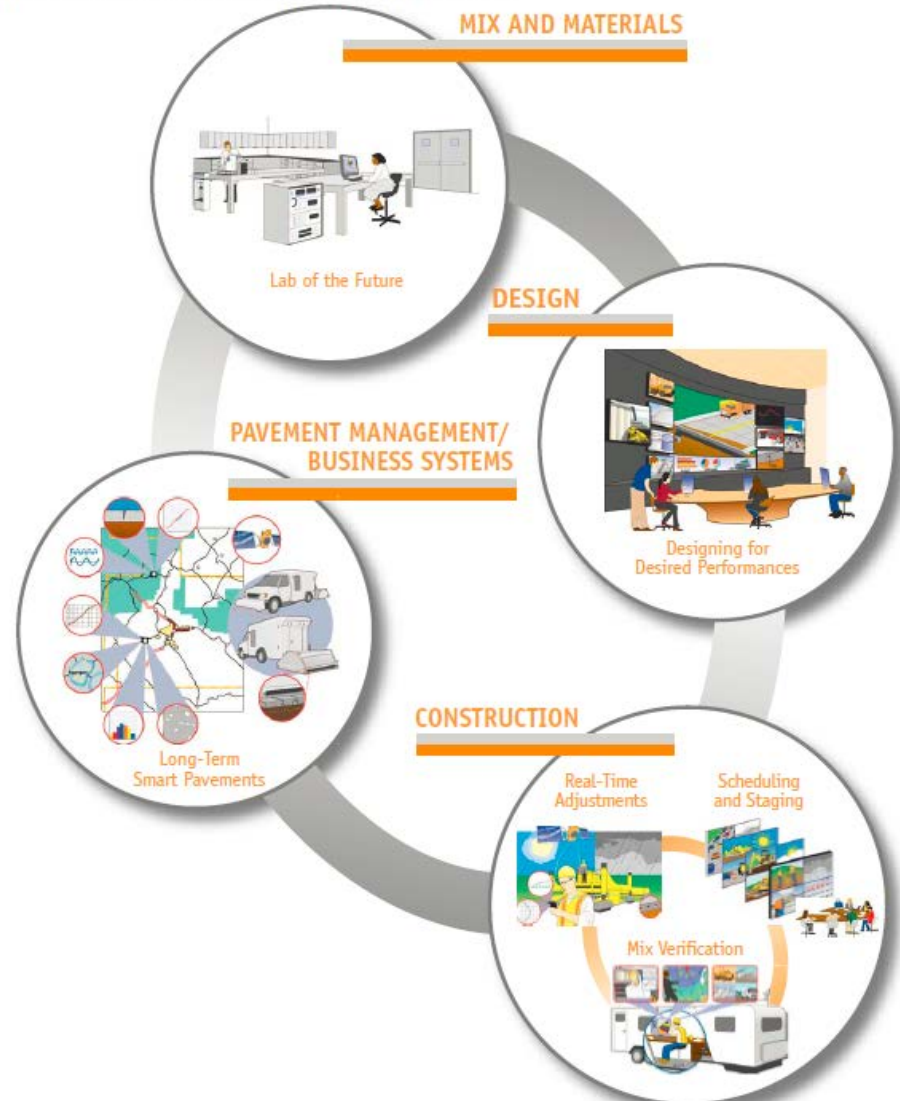
August 29, 2016

By 2015, the highway community will have a comprehensive, integrated, fully functional system of concrete pavement technologies that provides innovative solutions for customer-driven performance requirements.

CP ROAD MAP
shaping the future of concrete pavement



it's your move!



Purpose of the Original CP Road Map

- First published in September 2005 and updated in April 2012.
- 12 Tracks with 270 problem statements.
- Purpose was to identify and strategically prioritize gaps in concrete pavement research, technology transfer and implementation.



FRAMEWORK FOR STREAMLINING
OF THE
CONCRETE PAVEMENT (CP)
ROAD MAP
SHORT AND LONG TERM PLAN



Streamline Plan

- New streamlined strategic plan needs to be developed.
- Use the 12 CP Road Map 2012 tracks with modifications for each track.
- In order to effectively comprehend and improve prioritization efficiency, only a select number of projects will be identified.
- These will be reviewed annually by TTCC.



Framework for Streamlining Concrete Pavement (CP) Road Map

Prioritization System –

- The TTCC states to identify regional research, technology transfer, and implementation needs.
- These needs will be collated and based on the number of states expressing interest on any given topic in a region.
- Projects will be selected that cover both:
 - short term (1 to 2 year)
 - long term (3 to 5 year)

- The concept is to select up to 3 problem statements per track.



Framework for Streamlining Concrete Pavement (CP) Road Map

Prioritization System –

- TTCC states will hold up to two web-based conference calls:
 - between fall and spring meetings
 - to confirm the subjects to be considered for prioritization at the spring meeting.
- The selected topics will be developed into project statements and submitted to funding agencies.



Framework for Streamlining Concrete Pavement (CP) Road Map

Coordination – Develop a system for the CP Tech Center to:

- Help agencies pool their resources to make research funding as efficiently as possible.

Communication – Develop a database tracking system that will allow:

- Interested people to monitor what work is being accomplished nationally .
- Who is doing the research.



Research Database

- Based on RIP
- Updated every 6 months
- Focus on 4 tracks
- <http://www.cptechcenter.org/technical-library/TTCC-NCC-search/>



TTCC/NCC Projects Search

This database of in-progress and recent research related to concrete pavements is supported by the [National Concrete Consortium](#) and the [CP Road Map](#). The data is organized by CP Road Map tracks and updated twice a year. Find research projects by state by clicking on any of the 12 CP Road Map tracks (below left). Find research projects by topic by using the search function (below right).

Structures Track »
1. Materials and Mixes for Concrete Pavements »
2. Performance-Based Design Guide for New and Rehabilitated Concrete Pavements »
3. Intelligent Construction Systems and Quality Assurance for Concrete Pavements »
4. Optimized Surface Characteristics for Safe, Quiet, and Smooth Concrete Pavements »
5. Concrete Pavement Equipment Automation and Advancements »
6. Innovative Concrete Pavement Joint Design, Materials, and Construction »
7. Concrete Pavement Maintenance and Preservation »
8. Concrete Pavement Construction, Reconstruction, and Overlays »
9. Evaluation, Monitoring, and Strategies for Long-Life Concrete Pavements »
10. Concrete Pavement Foundations and Drainage »
11. Concrete Pavement Economics and Business Management »
12. Concrete Pavement Sustainability »

Type in a word or phrase to search authors, keywords, sponsors, or titles.

Enter search term:

air void system

Select sort criteria:

Title

Search

Search results for "air void system"

Returned 5 records

Sorted by *title*

Filter your results

by state

All

by track

All

Comparison of Fresh Concrete Air Content Test Methods & Analysis of Hardened Air Content in Wisconsin Pavements

State	Wisconsin
Track(s)	1. Materials and Mixes for Concrete Pavements
Source	NC2
Dates	Start 10/01/2013 End 10/01/2015
Researchers	Steven Cramer University of Wisconsin-Madison
Other Parties	
Sponsors	Barry Paye WisDOT
Keywords	air void system
Description	The objective of this research is to evaluate accuracy of test methods for measurement of air content in fresh concrete in comparison to air content in



Framework for Streamlining Concrete Pavement (CP) Road Map

- Create and maintain a dashboard that communicates what has been accomplished through the prioritized project.
- The database would include a listing of the current project statements for reference purposes to assist in project development statements.

CP Road Map Tracks

1. Materials and Mixes for Concrete Pavements

- Enhance track to address:
 - a. Bridge Decks
 - b. Internal Curing, Oxychloride Prevention
 - c. Improved Material Characterization and Selection Procedures
 - d. Materials for Pavement Preservation Maintenance and Rehabilitation

2. Performance-Based Design Guide for New and Rehabilitated Concrete Pavements

- Enhance track to address:
 - a. Advance Understanding of Pavement Lifecycle Costs Procedures
 - b. Improve Design Methods for Pavement Preservation Maintenance and Rehabilitation
 - c. Validate and Redefined Design Inputs of Materials Values and Criteria in MEPDG
 - d. Advance Pavement Selection Approaches and Processes

CP Road Map Tracks

3. Construction System Evaluations and Implementation
 - Enhance track to include:
 - a. Entire QA spectrum
4. Optimized Surface Characteristics for Safe, Quiet, and Smooth Concrete Pavements
 - Enhance track to include:
 - a. Real-time smoothness
5. Concrete Pavement Equipment Automation and Advancements
6. Innovative Concrete Pavement Joint Design, Materials, and Construction
 - Enhance track to include:
 - a. Long-term research on performance of sealants
 - b. Implementation of sealant trials

CP Road Map Tracks

7. Preventative Maintenance, Preservation, and Rehabilitation (PMPR)
8. Concrete Pavement Construction and Reconstruction
9. Evaluation, Monitoring, and Strategies for Long-Life Concrete Pavement
10. Concrete Pavement Foundations and Drainage
11. Concrete Pavement Economics and Business Management
 - Modify track to include:
 - a. Pavement Management and Performance (asset management)
12. Concrete Pavement Sustainability