

# Overview and Status of the Long-Term Plan for Concrete Pavement Research and Technology: The CP Road Map

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## EXTENDED ABSTRACT

### The CP Road Map

The Long-Term Plan for Concrete Pavement Research and Technology: The CP Road Map is a comprehensive and strategic plan for concrete pavement research that will guide the investment of approximately \$250 million over the next 10 years. It will result in technologies and systems that help the concrete pavement community meet the paving needs of today and the as-yet unimagined paving challenges of tomorrow. In short, the CP Road Map will result in a new generation of concrete pavements for the 21st century.

### Importance of the CP Road Map

**Strategic**—It combines more than 250 research problem statements into 12 fully integrated, sequential, and cohesive tracks of research leading to specific products that will dramatically affect the way concrete pavements are designed and constructed.

**Innovative**—From the way it was developed, to its unique track structure and cross-track integration, to the plan for conducting the research, the CP Road Map introduces a new, inclusive, and far-reaching approach to pavement research.

**Stakeholder involvement**—This CP Road Map plan is for the Federal, State, and private concrete pavement community. Peers helped create it, so it reflects all needs.

**No ties to one agency or pot of money**—Stakeholders with funds and expertise will pool their resources, jointly conduct and coordinate the research, and put the results into practice.

**Research implementation**—The plan incorporates innovative, effective research implementation to quickly move useful new products and systems to the field.

Figure 1 illustrates the CP Road Map unifying vision.

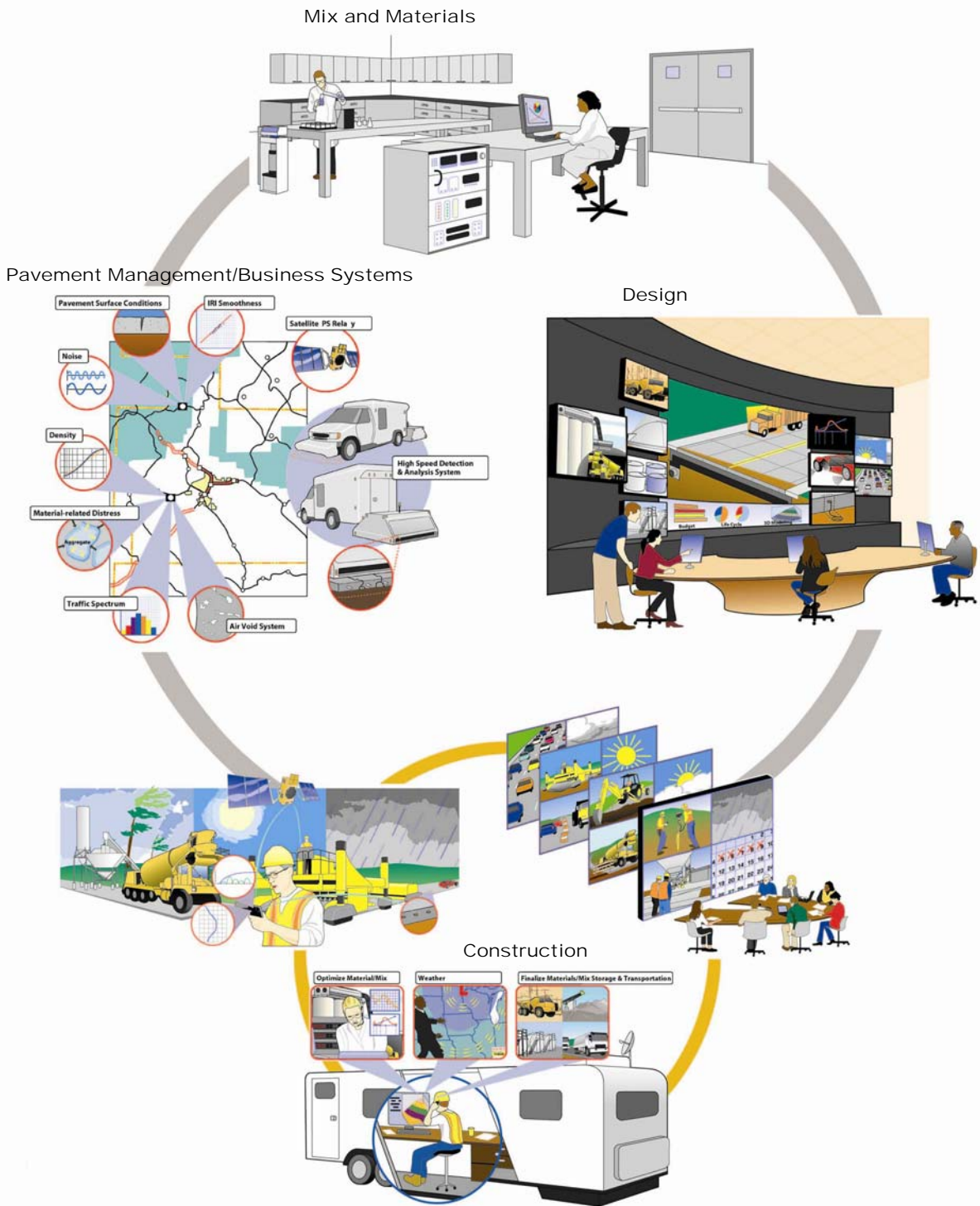


Figure 1. CP Road Map unifying vision

## **Research Tracks**

Over 250 problem statements are grouped into 12 tracks:

- Track 1. Performance-Based Concrete Pavement Mix Design System
- Track 2. Performance-Based Design Guide for New and Rehabilitated Concrete Pavements
- Track 3. High-Speed Nondestructive Testing and Intelligent Construction Systems
- Track 4. Optimized Surface Characteristics for Safe, Quiet, and Smooth Concrete Pavements
- Track 5. Concrete Pavement Equipment Automation and Advancements
- Track 6. Innovative Concrete Pavement Joint Design, Materials, and Construction
- Track 7. High-Speed Concrete Pavement Rehabilitation and Construction
- Track 8. Long-Life Concrete Pavements
- Track 9. Concrete Pavement Accelerated and Long-Term Data Collection
- Track 10. Concrete Pavement Performance
- Track 11. Concrete Pavement Business Systems and Economics
- Track 12. Advanced Concrete Pavement Materials

## **Management Philosophy**

- The CP Road Map is a national research plan, addressing Federal, State, and industry needs.
- The CP Road Map is not restricted to any single funding source. Coordinated sponsorship of research projects is proposed.
- It is possible—indeed, critical—for stakeholder groups to come together voluntarily. Federal, State, and industry research staff and engineers around the country are looking for more opportunities to pool their funds and other resources in win-win situations.
- The all-too-common disconnection between research results and implementation of those results must be fixed. Communication, technology transfer, and outreach activities must be elevated to the same level of importance as research itself.
- The CP Road Map is too comprehensive and too important for a part-time implementation effort. Managing the overall research program effectively and judiciously will require full-time, dedicated personnel with adequate resources.

## **Status of the CP Road Map**

The Federal Highway Administration has indicated that it is committed to supporting execution of the CP Road Map. The American Concrete Pavement Association has also made a commitment to the plan.

**Key words: concrete pavement—cooperation—management plan—research plan**