Integrating Traveler Choice and Network Conditions into Travel Demand Estimates (projects C10A and B)

California, Pennsylvania

An advanced model for estimating travel demand that integrates traveler choice and network conditions was tested under real-world conditions in two pilot tests. In Jacksonville, Florida, the choice of routing was fixed; in Davis, California, the model includes more mode choices. (The parameters from the Jacksonville model are also being transferred onto a Tampa, Florida model as an experiment to develop an advanced model that more closely integrates traveler choice and network conditions.)

Development of Improved Economic Analysis Tools (project C11)

California, Washington

The tools will be used to compare different aspects of transportation projects, including performance measurement, integrating economic systems, and land use decisions with transportation planning project planning, considering greenhouse gas emissions in the planning process, and community valuations.

Pilot Test of the Collaborative Decision-Making Framework (project C16)

Washington State Department of Transportation

This project involved the use of computer simulation and decision-making tools to develop a collaborative decision-making framework that is being used to test different aspects of Transportation for Communities—Advancing Partnerships through Projects (TCPs), web portal, including performance measurement, integrating economic systems, and land use decisions with transportation planning project planning, considering greenhouse gas emissions in the planning process, and community valuations.

Additional Pilot Tests to Improve the Wellbore Inspection Process (project C20)

California, Colorado, Nevada, West Virginia

In these pilot tests, products for integrating conservation and transportation planning—such as the collaboration guidelines elements of TCPs—were applied to improve the integration of conservation and transportation planning approaches to a project, set of projects, or plan.

Pilot Projects to Evaluate the Benefits of T-PICS (project C30)

Missouri

About 20 projects from Minnesota and other states will be used to test Transportation Planning Impact Case Studies (T-PICS). Minnesota DOT will also assess the usability of the web tool and suggest improvements.

Establishing Monitoring Programs for Mobility and Travel Time Reliability (project L12)

California, Tennessee, Virginia

The DOTs for these states have provided input on procedures for gathering, storing, processing, and displaying data prepared for inclusion in the Travel Demand Models (TDMs) that are used to model traffic problems the public can see. These DOTs are working with the project team to evaluate and test the assessment tools developed in project C10A (Integration of National-Level Geospatial, Ecological Tools and Data) and the new capacity for evaluating transportation conditions.

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37 STATES PARTICIPATE IN 119 SHRP 2 ACTIVITIES

Nondestructive Testing to Identify Delaminations between HMA Layers (project R06D)

**Kansas, Maine**

Kansas DOT and Maine DOT participated in field tests of NDT techniques to detect HMA-layer delamination.

Real-Time Smoothness Measurements on Portland Cement Concrete Pavements During Construction (project R06E)

**Arkansas, Georgia, Minnesota, New York, Texas**

In each of these states, the DOT hosted field evaluations of real-time smoothness measuring devices for portland cement concrete (PCC).

Development of Continuous Deflection Device (project R06F)

**Virginia**

Virginia DOT participated in field tests of a continuous pavement deflection device.

Nondestructive Testing Methods for Mapping Defects behind or within Tunnel Linings (project R06G)

**Colorado, Texas, Virginia**

NDT technologies for tunnel lining inspections were tested on Chesapeake Bay Bridge Tunnel in Virginia, Washburn Tunnel in Harris County, Texas, and Colorado DOT’s Eisenhower Memorial Tunnel, Hanging Lake Tunnel, and No Name Tunnel.

Performance Specifications for Rapid Renewal (project R07)

**Louisiana, Missouri, Virginia**

Missouri DOT field tested a specification for performance-based earthworks/pavement foundation using intelligent compaction technology. Performance specifications for concrete bridge decks were tested in Virginia. Louisiana DOT assisted on field demonstration of intelligent compaction technology on an entire pavement section, including soil subgrade, subbase, and HMA layers.

Innovative Strategies for Managing Complex Projects (project R10)

**Colorado, Missouri, Two Additional Validations TBD**

This project conducted pilot tests of the five-dimensional complex project management tool in Colorado and Michigan. Two validations are also planned with other states (location TBD).

Strategic Approaches at the Corridor and Network Level to Minimize Disruption from the Renewal Process (project R11)

**Arizona, Iowa, Additional Pilots Planned for New York and Florida**

Arizona and Iowa conducted validation tests of a tool to assess optimal project sequencing and determine cost-effectiveness of strategies to minimize, mitigate, and manage road-user costs. Pilot tests in New York and Florida will use the software to analyze projects currently in the planning phase.

Identification of Utility Conflicts and Solutions (project R15B)

**Arkansas, South Dakota**

The Arkansas State Highway and Transportation Department and South Dakota DOT hosted sessions to pilot training materials that were developed as part of this project.

Composite Pavement Systems (project R21)

**Illinois, Minnesota**

The Illinois Tollway Authority designed and constructed composite pavements using the guidance developed in this project. Minnesota DOT participated in a demonstration project that included the construction, data collection, and monitoring of PCC/PCC and HMA/PCC test cells.

Achieving Long Life with Existing Pavements (project R23)

**Washington State**

Washington State DOT pilot tested guidelines for achieving long life with existing pavements, which were based on this research, on a major highway reconstruction project.