

TESTING RESEARCH IN THE REAL WORLD

27 STATES PARTICIPATE IN 74 SHRP 2 ACTIVITIES

To become resources that transportation agencies can use with confidence, research results must be tested rigorously, refined, and tested again. With that goal in mind, SHRP 2 is working in partnership with transportation agencies and other partners to learn together how the products of new ideas and strategic research can help meet today's challenges. Examples of such partnerships, including pilot tests and field demonstrations, are noted here. More details are available in the projects database at www.TRB.org/SHRP2.



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES



CAPACITY PROJECTS FOR PLANNING DECISIONS THAT STICK

Integrate Traveler Choice and Network Conditions into Travel Demand Estimates (project C10)

FLORIDA, CALIFORNIA

An advanced model for estimating travel demand that integrates traveler choice and network conditions is being tested under real-world conditions in two pilot tests. In Florida, the choices of non-highway modes are limited and the model emphasizes the changes a traveler makes in response to highway conditions. In California, the community has more mode choices.

Pilot Test the Collaborative Decision-Making Framework (project C18)

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
PUGET SOUND REGIONAL COUNCIL, WASHINGTON
MINNESOTA DEPARTMENT OF TRANSPORTATION
PIKES PEAK AREA COUNCIL OF GOVERNMENTS, COLORADO

Four pilots were undertaken to test different aspects of TCAPP*, including performance measurement, integrating economic systems and land use decisions with transportation project planning, considering greenhouse gas emissions in the planning process, and community visioning.

Pilot Test Ecological Approaches to Environmental Protection (project C21)

CALIFORNIA, COLORADO, OREGON, WEST VIRGINIA

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

Application of Geospatial, Ecological Tools and Data in the Planning and Programming Phases of Delivering New Highway Capacity (project C40-B)

LOCATIONS TBD

In this project, existing or evolving geospatial tools will be applied to early transportation planning, corridor planning, or programming.



RELIABILITY PROJECTS TO REDUCE CONGESTION AND IMPROVE TRAVEL TIME RELIABILITY

Incorporating Reliability Performance Measures in Operations and Planning Modeling Tools (project L04)

NEW YORK

In this pilot, the research team is adapting and calibrating existing traffic simulation models and applying them to an urban network.

Improving Traffic Incident Scene Management (project L12)

LOCATIONS TBD, GEORGIA DOT, INDIANA DOT

DOTs in Indiana and Georgia, as well as people from other agencies that respond to roadway incidents in those states, participated in pilot tests to refine the incident management training course that was developed in this project.

“Train-the-Trainer” Pilot Courses for Incident Responders and Managers (project L32-A)

TENNESSEE, VIRGINIA

This project will conduct additional pilots of the Train-the-Trainer course for incident responders and managers, which was developed in Reliability project L12.

Piloting Implementation Projects (project L38)

LOCATIONS TBD

This project supports further pilot tests of the series of incident response products (train-the-trainer course, e-learning module, training and certification of traffic incident responders, post-course assessment tool) and the economic evaluation models to assess improvements in travel time reliability. These pilots will further develop the products and establish a peer-to-peer network of state DOT, MPO, and other local agencies.



SAFETY PROJECTS TO STUDY DRIVING BEHAVIOR

SHRP 2 Naturalistic Driving Study (NDS)

TAMPA, FLORIDA; BLOOMINGTON, INDIANA; RALEIGH/DURHAM, NORTH CAROLINA; BUFFALO, NEW YORK; STATE COLLEGE, PENNSYLVANIA; SEATTLE, WASHINGTON

DOTs in the six states where driving behavior studies are being conducted provide information to SHRP 2 regarding data on roadway characteristics and features and other data (such as data on incidents, work zones, traffic volumes, and safety campaigns) to support analyses of the NDS.



RENEWAL PROJECTS TO SPEED PROJECT DELIVERY

Improved Technologies for 3-D Utility Location Data (project R01A)

VIRGINIA

Virginia DOT, Virginia Utility Protection Services, and utility companies are participating in a field test of a 3-D utility location data system that was developed in this project.

Utility Locating Utilizing Multi-Sensor Platforms (R01-B)

VIRGINIA, GEORGIA

These pilots will test utility location devices with multiple sensors that are designed to advance the ability to rapidly and reliably locate and identify underground utility lines.

Expanding the Locatable Zone for Underground Utilities (R01-C)

VIRGINIA, GEORGIA

This project is testing prototype technologies for locating buried facilities that are of diverse composition, at depths of up to 20 feet, obstructed or “stacked,” and in the challenging road construction environment.

Geotechnical Solutions for Soil Improvement, Rapid Embankment Construction, and Stabilization of the Pavement Working Platform (project R02)

IOWA, KANSAS, OKLAHOMA, TEXAS

IowaDOT, KansasDOT, OklahomaDOT, and TexasDOT participated in field testing to evaluate the performance of stabilized subgrade.

Innovative Bridge Designs for Rapid Renewal (project R04)

IOWA, NEW YORK, VERMONT

The demonstration project in Iowa used accelerated bridge construction (ABC) design elements that were developed by SHRP 2. Additional demonstrations of the SHRP 2 toolbox for ABC will be conducted in New York and Vermont.

Modular Pavement Technology (project R05)

CALIFORNIA, DELAWARE, ILLINOIS, MICHIGAN, MINNESOTA, MISSOURI, NEW JERSEY, NEW YORK, TEXAS, VIRGINIA

These pilot tests included deflection testing of precast concrete pavement sections and a visual application survey of two precast concrete pavement test sections.

Nondestructive Testing to Identify Concrete Bridge Deck Deterioration (project R06A)

VIRGINIA

Various nondestructive testing technologies were evaluated on a bridge in Virginia.

Evaluating the Application of Field Spectroscopy Devices (project R06-B)

LOCATIONS TBD

This project will conduct evaluations of field spectroscopy devices that are used to fingerprint commonly used construction materials.

Using Both Infrared and High-Speed Ground Penetrating Radar to Measure Uniformity of New HMA Layers (project R06C)

FLORIDA, MINNESOTA, TEXAS, TWO ADDITIONAL PILOT TEST LOCATIONS TBD

These sites provided access to paving sites for field demonstrations in infrared and ground-penetrating radar NDT techniques to assess hot-mix asphalt density and segregation; two additional pilot tests are planned.

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, MICHIGAN, 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.

Performance Specifications for Rapid Renewal (project R07)

LOUISIANA, MISSOURI, VIRGINIA

Missouri DOT participated in field testing a specification for performance-based earthworks/pavement foundation using intelligent compaction technology, and Missouri and Virginia will participate in additional field tests.

Innovative Strategies for Managing Complex Projects (project R10)

COLORADO, MINNESOTA, TWO VALIDATIONS (TBD)

This project conducted a pilot test of a training course in Colorado on five-dimensional project management methods. Another pilot is planned in Minnesota, and two validations are also planned (location TBD).

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

TWO VALIDATIONS AND TWO PILOT TESTS (TBD)

This project will conduct validations and pilot tests of a tool to assess optimal project sequencing and determine cost-effectiveness of strategies to minimize, mitigate, and manage road-user costs.

Composite Pavement Systems (project R21)

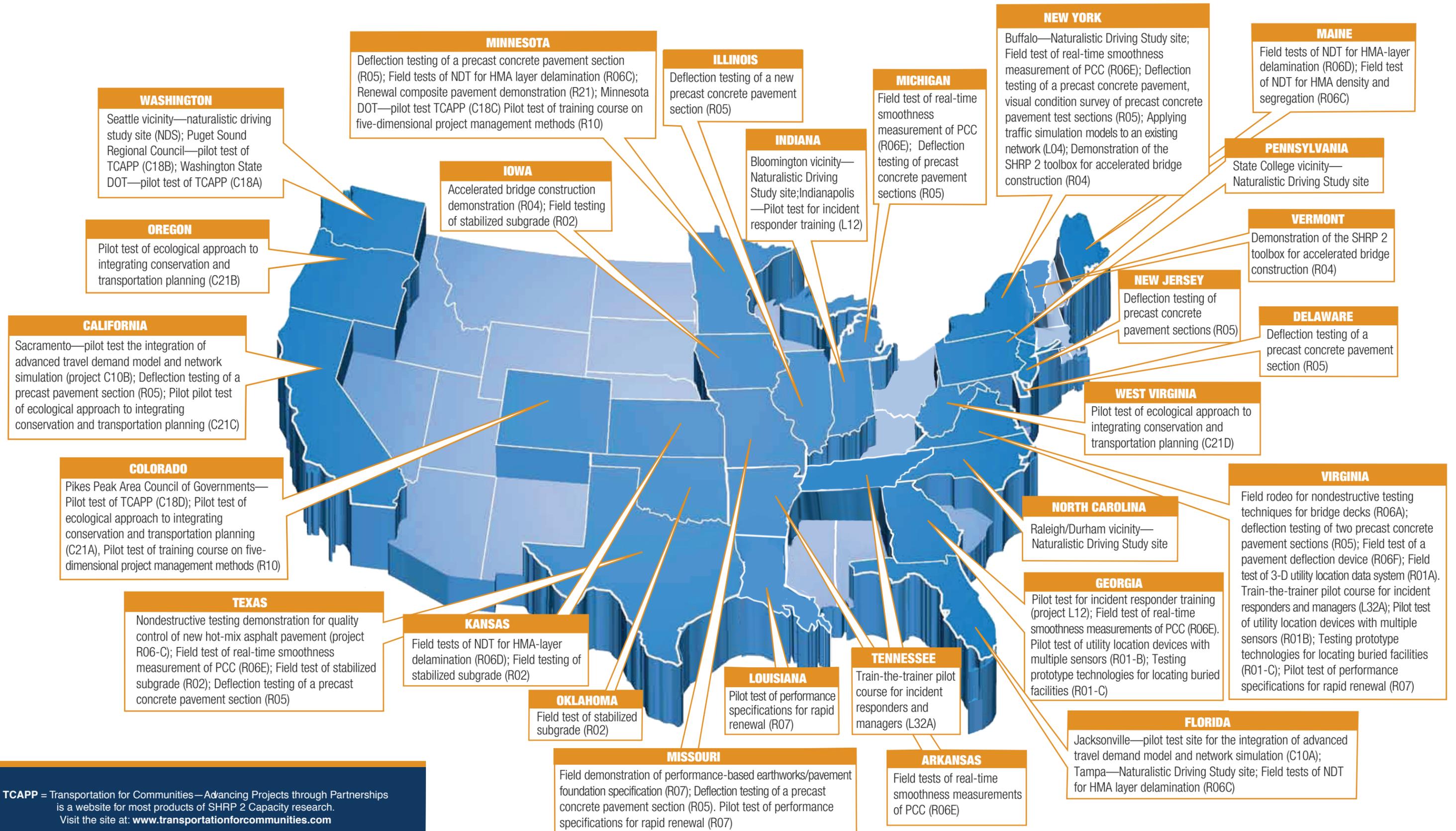
MINNESOTA

Minnesota DOT participated in a demonstration project that included the construction, data collection, and monitoring of PCC/PCC and HMA/PCC test cells.

* TCAPP is Transportation for Communities—Advancing Projects through Partnerships, a website that integrates many products of SHRP 2 Capacity research. We encourage you to explore the site at www.transportationforcommunities.com and share your comments in the Colleagues Corner section of the site.

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