

SHRP2 MILESTONES

Transportation Projects Powered by SHRP2

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The second Strategic Highway Research Program (SHRP2) is providing transportation agencies with new and innovative ways to improve safety, rebuild aging infrastructure, and increase mobility for the traveling public. This news brief highlights significant project developments, case studies, and best practices from around the country. There are more than 300 SHRP2 projects underway across all 50 States, the District of Columbia and Puerto Rico.

Capacity Bringing greater collaboration to road building.

PlanWorks Promotes Collaborative Decision Making in Transportation Planning

Launched in May 2015, [PlanWorks \(C01\)](#) is a Web resource that supports collaborative decision making in transportation planning and project development. PlanWorks is built around key decision points in long-range planning, programming, corridor planning, and environmental review. PlanWorks suggests when and how to engage cross-disciplinary partners and stakeholder groups. This system can help build consensus throughout these processes. Transportation agencies are encouraged to visit [PlanWorks](#).



The [PlanWorks Web site](#)

On-Call Team Offers Technical Assistance for Agencies Implementing Eco-Logical

SHRP2 has developed an [Integrated Ecological Framework \(IEF\)](#), a nine-step, science-based process that helps practitioners identify ecological priorities within a region and make timely decisions about highway enhancements. Through SHRP2 implementation, 14 State departments of transportation (DOT) and Metropolitan Planning Organizations (MPOs) received assistance to advance implementation of the Eco-Logical approach in their agencies. An [On-Call Technical Assistance Team](#) is available to provide responsive, individualized guidance and support to State DOTs, MPOs, resource and regulatory agencies as they implement the Eco-Logical approach. This effort is in support of the implementation plan for the SHRP2 Solution, [Implementing Eco-Logical \(C06\)](#). The Team can assist with organizational, technological, regulatory, or scientific issues. An increasing number of agencies are requesting and receiving technical assistance.



9 Steps to Implementing Eco-Logical



Scan for the latest SHRP2 Milestones on GoSHRP2

Renewal Enabling faster, minimally disruptive, and longer-lasting improvements.



[Gila River Slide-In Bridge](#)

Photo credit: FNF Construction, Inc.

SHRP2 Implementation Assists Rapid Replacement of 13 Bridges in 8 States

[Innovative Bridge Designs for Rapid Renewal \(R04\)](#)

is a design [toolkit](#) for prefabricated bridge projects that allows agencies to streamline activities required

to get bridge replacement systems designed, fabricated, and erected. Beginning in early 2014, this SHRP2 Solution has been employed in the replacement of 13 bridges in 8 States. The bridges range from a single-lane timber bridge in Upper Michigan to a concrete ridged frame bridge in Maine completed in 29 days. In Arizona, the Gila River Indian Community DOT replaced an aging four-span bridge with a two-span prestressed girder bridge, shortening road closure from an expected 4-6 months to just 11 days. In addition, from the fall of 2014 through the summer of 2015, Wisconsin DOT is replacing five bridges using an accelerated precast pier technique.



Read Tennessee DOT's [project report](#).

Photo credit: Tennessee DOT

Tennessee Case Study Highlights Use of New Composite Pavement Systems

Tennessee DOT (TDOT) expressed interest in the construction of a two-lift (wet-on-wet) concrete composite pavement. In a detailed project study, TDOT

outlines its use of SHRP2 Solution, [New Composite Pavement Systems \(R21\)](#). TDOT integrated the construction of the two-lift concrete composite pavement into an existing full-depth concrete replacement project in the fall of 2014. The two-lift pavement was constructed as a part of the 10-foot outside shoulder in the northbound lanes of Interstate 65 just north of downtown Nashville, TN. Placement included approximately 5,000 lineal feet of two-lift concrete pavement. TDOT conducted a cost evaluation of the use of polish-resistant aggregate in the full-depth concrete pavement compared to using polish-resistant aggregate only in the top lift of the two-lift concrete composite pavement.

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Kentucky Implements New, Smarter Software to Manage Utility Conflicts

Annually, \$65 million is spent in Kentucky for utility relocations associated with highway, interchange, bridge replacement, and road widening projects. As a result, the Kentucky Transportation Cabinet (KYTC) is working to streamline and create standard procedures for its designers and utility experts, while minimizing utility conflicts. Although the KYTC has worked effectively with its utility companies in the past, SHRP2 opened the door to an opportunity to improve this coordination. By incorporating new methodologies developed through the SHRP2 Solution, [Identifying and Managing Utility Conflicts \(R15B\)](#), the agency is enhancing and upgrading its current tracking database while offering training to all potential users. The KYTC created the Kentucky Utilities and Rail Tracking System (KURTS). This database houses 340 active projects and is used by four utility companies and the 12 district offices in the State. With KURTS Release 2, the KYTC has offered to work with other States to share its experience to help minimize the costs of utility conflicts. Kentucky's SHRP2 implementation activities have led to the development of new, "smarter" software that may be applicable to other States. Read the SHRP2 Case Study [Managing Utilities in Kentucky](#).

For information on the SHRP2 implementation of Identifying and Managing Utility Conflicts, contact Matthew DeMarco at FHWA, Matthew.DeMarco@dot.gov or 720-963-3520, or Keith Platte at AASHTO, at kplatte@aaashto.org or 202-624-3697.



Early identification of underground utilities saves money.

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Reliability Championing predictable travel times.



Training more than 120,000 firefighters, police, and other first responders.



Webinars on the Capability Maturity Model are being offered through October 2015.

- 08.11.2015** [Organization and Staffing](#)
- 08.27.2015** [Performance Measurement](#)
- 09.08.2015** [Collaboration](#)
- 09.24.2015** [Systems and Technology](#)
- 10.07.2015** [Business Processes](#)

[National Operations Center of Excellence Web site](#)

SHRP2 TIM Responder Training Steadily Progressing on “March to the Million”

The end goal for the [National Traffic Incident Management \(TIM\) Responder Training Program \(L12/L32A/L32B\)](#) is to train all 1 million emergency responders in the United States over the next decade. This initiative, called the “March to the Million,” has crossed the threshold of 120,000 trained in 2015, and is aggressively pushing forward on the quest to train responders for safer, faster, and more integrated incident response. In addition to the more than 4,500 in-person sessions that have been conducted, a 4-hour no-cost [Web-based training course](#) was launched in October 2014 and is available through the [National Highway Institute](#). To ensure this valuable training program becomes institutionalized for future generations of emergency responders, outreach efforts already have engaged approximately a dozen public safety academies to adopt the 4-hour version of the TIM course as a training requirement for their new recruits.

Organizing for Reliability: Self-assessments from 40 Workshops Reveal Valuable Best Practices

[Organizing for Reliability Tools \(L01/L06\)](#) is fostering more reliable travel times by helping transportation agencies advance their business and organizational capabilities for operations. With funding and capacity constraints, many agencies are looking to operations solutions to help them get the most they can out of their existing facilities. As a result there was great interest in the Organizing for Reliability products and 27 projects received SHRP2 implementation assistance awards in 2013. With these sites, earlier pilot sites, and some new sites, 40 State and regional self-assessment workshops have been conducted using the L06 Capability Maturity Model (CMM) to help agencies identify their strengths and weaknesses along six key dimensions of transportation systems management and operations (TSM&O) and develop action plans tailored to improve their capabilities. For example, many States have begun development of a TSM&O Program Plan for their agencies.

Similar in concept to the Strategic Highway Safety Plan (SHSP), the vision of these plans is to align TSM&O with the agencies’ goals, objectives, and resources to improve mobility and reliability of their system. As part of its implementation effort, Ohio DOT (ODOT) recently did a series of benchmarking scan trips to eight States. From these trips, ODOT gained valuable insight to best practices from other States that would help guide the agency to strategically incorporate TSM&O into its mission.

To more broadly share the results from these 40 workshops, a series of Webinars and [whitepapers](#) were developed to provide for each of the six capability dimensions. These Webinars, held from July through October 2015, are being offered to raise awareness of national trends and best practices that will help agencies understand the value of the growing discipline of TSM&O.

SHRP2 Helps Spawn National Operations Center of Excellence

Building from SHRP2’s [Framework for Improving Travel-Time Reliability \(L17\)](#) an enhanced knowledge transfer system was developed that became the Web site for a new National Operations Center of Excellence (NOCoE). Launched in January 2015, the NOCoE is designed to provide the TSM&O community with knowledge and tools to fulfill their mission to enhance safety and reduce congestion. The [NOCoE’s Web site](#) contains a library of TSM&O resources, including [SHRP2 products](#). Since its launch, the NOCoE has conducted two peer exchanges, hosted four Webinars and a virtual peer exchange, and added numerous new TSM&O resources. The NOCoE is hosting the Webinar series on the findings from the SHRP2 Organizing for Reliability workshops.

Data collection for the Naturalistic Driving Study (NDS) included 3,500-plus volunteer driver-participants logging over 5 million trips resulting in more than 32 million miles travelled.

The Roadway Information Database (RID), a geospatial database, provides the context for the millions of NDS trips. The two databases were linked in the first quarter of 2015.



Analyzing Driver Behavior
Photo credit: Virginia Tech Transportation Institute

Safety Identifying the behaviors that cause and avert collisions.

Phase 1 Implementation: State DOTs Using SHRP2 Databases to Research 11 Safety Topics

Highway safety is a top priority for transportation agencies, as demonstrated by the impressive number of applications received for the Safety offering in Round 4 of the [Implementation Assistance Program](#). In August 2014, 10 States were awarded a total of \$1.1 million in financial and technical assistance to conduct Phase 1 research on 11 safety topics using the [SHRP2 Safety Data](#): the Naturalistic Driving Study (NDS) and the Roadway Information Database (RID).

The State DOTs selected to participate in Phase 1 using sample NDS data sets include Florida, Iowa, Michigan, Minnesota, Nevada, New York, North Carolina, Utah, Washington, and Wyoming; as part of Phase 1 they are to complete Proof of Concept research on pedestrian-vehicle interaction, roadway departures, speeding, work zones, horizontal and vertical roadway curves, interchange ramps, adverse weather conditions, and roadway lighting. The results from Phase 1 will be presented to the American Association of State Highway and Transportation Officials (AASHTO) Safety Task Force in October 2015, when it will be decided which of these studies will advance to Phase 2, the full research study using the NDS and RID data sets.

Safety Training and Analysis Center Assists Researchers in Using SHRP2 Safety Data

The recently established [Safety Training and Analysis Center \(STAC\)](#) at the [Turner-Fairbank Highway Research Center](#) is continuing to make progress on accomplishing its goals to expand understanding of the NDS and RID; expand access to these data; expand usability of these data; and expand user base. The STAC in collaboration with the [National Highway Institute](#), is currently developing training for DOTs and researchers that will familiarize them with the data and how it can be used to address safety and other transportation issues. The STAC will soon begin pilot testing secure data access at TFHRC and developing data analysis tools and reduced data sets. The STAC is already providing research opportunities through Fellowships and Sabbaticals, with additional researchers expected in the fall.

Round 7 of the Implementation Assistance Program (IAP) Opens April 1, 2016

Established in 2013, the [SHRP2 IAP](#) offers transportation agencies financial and technical assistance in deploying SHRP2 Solutions. To date, six IAP rounds have been offered. Below are the products being considered for inclusion in Round 7—the final round. Applications for Round 7 will be available April 1, 2016.

- [Utility Bundle \(R01A/R01B/R15B\)](#)
- [Railroad-DOT Mitigation Strategies \(R16\)](#)
- [Techniques to Fingerprint Construction Materials \(R06B\)](#)
- [Advanced Methods to Identifying Pavement Delamination \(R06D\)](#)
- [Guidelines for the Preservation of High-Traffic-Volume Roadways \(R26\)](#)
- [Nondestructive Testing for Concrete Bridge Decks \(R06A\)](#)
- [Nondestructive Testing for Tunnel Linings \(R06G\)](#)
- [Service Life Design for Bridges \(R19A\)](#)
- [Service Limit State Design for Bridges \(R19B\)](#)
- [Reliability Data and Analysis Tools Bundle \(L02/L05/L07/L08/C11\)](#)
- [Reliability in Simulation and Planning Models \(L04\)](#)
- [Regional Operations Forum \(L36\)](#)

About SHRP2

SHRP2 is a partnership of the Federal Highway Administration (FHWA), American Association of State and Highway Transportation Officials (AASHTO), and the Transportation Research Board (TRB). TRB completed the research, and now FHWA and AASHTO are jointly implementing the resulting SHRP2 Solutions that will help the transportation community enhance productivity, boost efficiency, increase safety, and improve the reliability of the Nation's highway system.

If you would like additional information or have questions about SHRP2, please contact Carin Michel, FHWA SHRP2 Implementation Manager at goSHRP2@dot.gov, 410-962-2530, or Pam Hutton, AASHTO SHRP2 Implementation Manager at phutton@aaashto.org, 303-263-1212.

Visit the [GoSHRP2 Web site](#) for additional SHRP2 Milestones and updates.