

Strategic Highway Research Program (SHRP 2)

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SHRP 2 Implementation

Federal Highway Administration (FHWA) will serve as the principal implementation agent for SHRP 2 , in partnership with the American Association of State Highway & Transportation Officials (AASHTO), the National Highway Traffic Safety Administration (NHTSA), & the Transportation Research Board (TRB).

SHRP 2 Implementation

Products from 4 Focus Areas –

- **Safety** – Improve by understanding driver behavior.
- **Renewal** – Develop design & construction methods that minimize disruption & produce long-lasting products.
- **Reliability** – Reduce congestion & improve travel-time reliability through incident management, response, & mitigation.
- **Capacity** – Integrate mobility, economic, environmental & community needs into the planning & design of new capacity projects to streamline project delivery.

Renewal Projects – SHRP 2

- **R01: Encouraging Innovation/Locating & Characterizing Underground Utilities.**
- **R02: Geotechnical Solutions for Soil Improvement, Rapid Embankment Construction, & Stabilization.**
- **R04: Innovative Bridge Designs for Rapid Renewal.**
- **R05: Modular Pavement Technology (Precast Concrete Pavement Technology).**
- **R06: High-Speed Nondestructive Testing Procedures for Design Evaluation & Construction Inspection.**
- **R07: Performance Specifications for Rapid Highway Renewal.**

Renewal Projects – SHRP 2

- **R09: Risk Manual for Rapid Renewal Contracts.**
- **R15: Strategies for Integrating Utility & Transportation Agency Priorities.**
- **R16: Railroad-DOT Institutional Mitigation Strategies.**
- **Bridges/Service Life Beyond 100 Years:**
 - **R19-A Innovative Systems, Subsystems.**
 - **R19-B Service Limit State Design.**
- **R21: Composite Pavement Systems.**
- **R23: Use Existing Pavement in Place/Achieve Long Life.**
- **R26: Preservation Approaches/High Traffic Roadways.**

SHRP 2 R05 (Precast Concrete Pavement Technology) Knowledge Transfer Workshop

- **April 17-18, 2012 in Washington, DC.**
- **Representatives from State Highway Agencies, Tollway & Thruway Authorities, Precast & Paving Industries, Academia, Consultants, SHRP2, AASHTO & FHWA.**
- **Strategy for implementation of products resulting from project R05.**

Implementation Plan (6/14/2012) – Precast Concrete Pavement Technology (R05)

- **Executive Summary.**
- **Overview.**
- **Precast Concrete Pavement
Technology Implementation.**
- **Resource Allocation.**
- **Marketing & Communications.**
- **Evaluation.**

Products developed under R05

- Overall findings/viability of PCP technology.
- Findings based on SHRP2 field testing.
- Guidelines for PCP –
 - Project selection.
 - System acceptance.
 - Design.
 - Fabrication.
 - Installation.
- Implementation plan for PCP technology.
- Long-term monitoring plan for PCP projects.
- Model specifications.

Key attributes of PCP

- **Constructability – Techniques & equipment.**
- **Concrete durability – Plant fabrication results in excellent concrete strength & durability.**
- **Load transfer – Reliable & economical.**
- **Panel support – Various techniques to provide adequate & uniform support.**
- **Efficiency – Thinner panels than cast-in-place concrete also last longer.**

Factors that will enhance future advancement of PCP

- Cost of PCP has dropped significantly.
- Model specifications available.
- Success of demonstration projects.
- Improved project selection criteria.
- Budget constraints encourage use of new technologies with significant savings over time.
- PCP technology adopted by several agencies.
- PCP provides performance comparable to or better than that of CIP alternatives.

Recommendations from KTW participants

- Document demonstration projects & create a broad awareness of successes.
- Present webinars that are widely promoted & have content to attract a wide range of audiences.
- Provide take-away materials participants can share.
- Identify action items & follow up with participants to ensure that all questions are addressed.

Thank you.