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AASHTO Subcommittee on Construction

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Federal Highway Administration



Today's Session

- **Rhode Island's Engagement** in the Implementation Assistance Program
- **Opportunities** in Round 2 FHWA/AASHTO Implementation Assistance Program
- **Role of Committee** Going Forward



Rhode Island's Engagement in SHRP2 Implementation Assistance Program

- Innovative Bridge Designs (R04)
- Preservation Techniques for Heavily Traveled Roadways (R26)



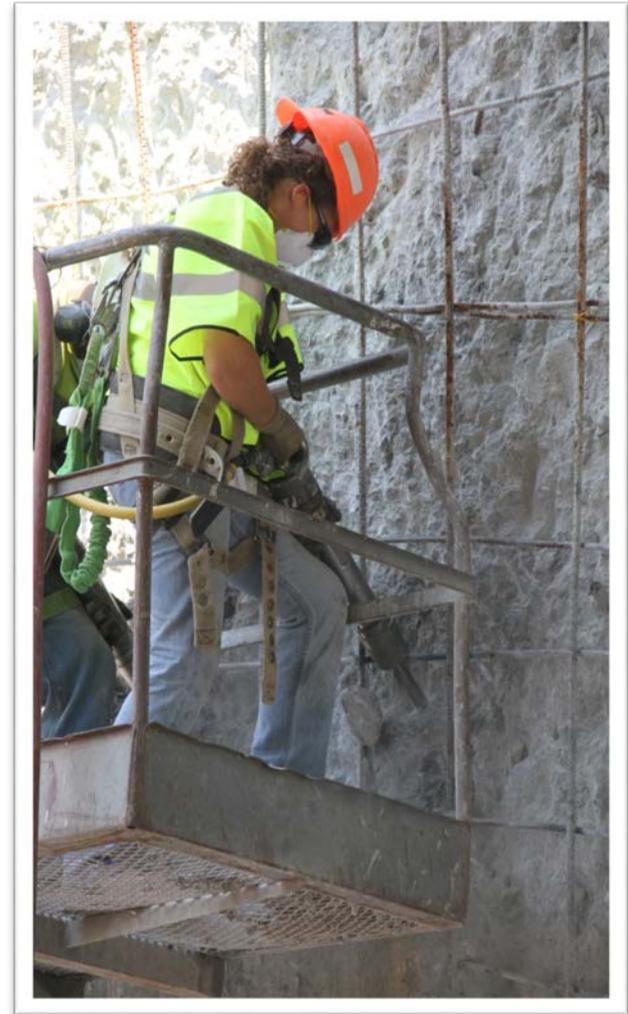
Innovative Bridge Designs: Prefabrication of Bridges

- Standardized design concepts (R04)
- Small-to-medium sized bridges
- No special cranes or equipment needed
- Toolkit (R04) includes:
 - Standard design plans & details
 - Design examples
 - Design specifications
 - Construction specifications
 - Training materials



Opportunities for Rhode Island

- Increased worker safety
- Increased durability and quality
- Reduced traffic impacts and cost



Rhode Island's Approach



- Standardize ABC concepts and designs
 - Precast systems
 - Precast substructures
 - On-site contractor precasting
 - Modular superstructure systems
 - SPMT's and bridge slides
- Simplify Design and Construction
 - Fewer girders, field splices, bracing and cast in place operations
 - No false work
 - Simple geometry

SHRP2 Value to Rhode Island

Implementation Goal: Projects with greater durability, better quality, and reduced cost and traffic delays that result in enhanced public satisfaction

- **Time savings:** Reduce construction time from years to months, and months to weeks and even days
- **Cost savings:** Up to 15 percent in 5 years; right now we are experiencing a 10-25 premium
- **Minimize use of detours:** Deliver projects more rapidly and reduce impact to traveling public
- **Advance state of practice:** Add to existing knowledge and experience using accelerated bridge construction
- **Collaborate:** Opportunity to share experiences with other states

Preservation Techniques for High-Volume Roadways

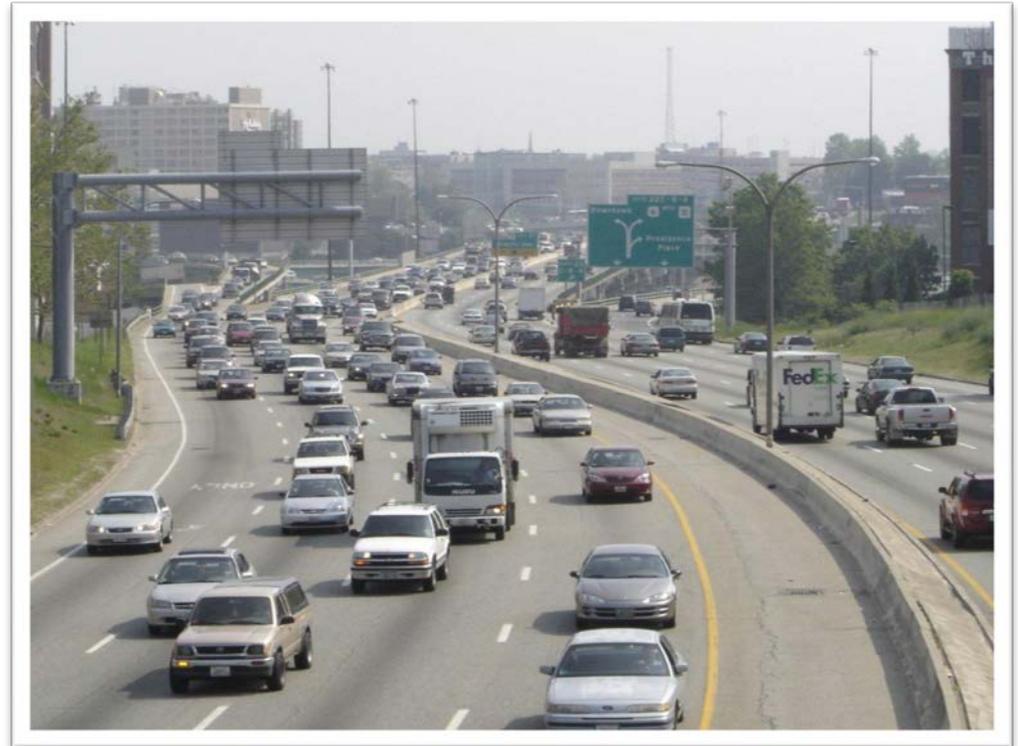
- Step-by-step process to identify the best repair techniques based on specific pavement needs and conditions (R26)
- Method for weighing various technical inputs and selecting the most appropriate treatments
- Decision matrices
- Summaries of treatment options and examples



Opportunities for Rhode Island

Raise the bar of the RIDOT Pavement Preservation Program by treating high-volume roads

- Determine treatments that will be suitable
- Improve overall condition rating and enhance longevity (MAP-21)

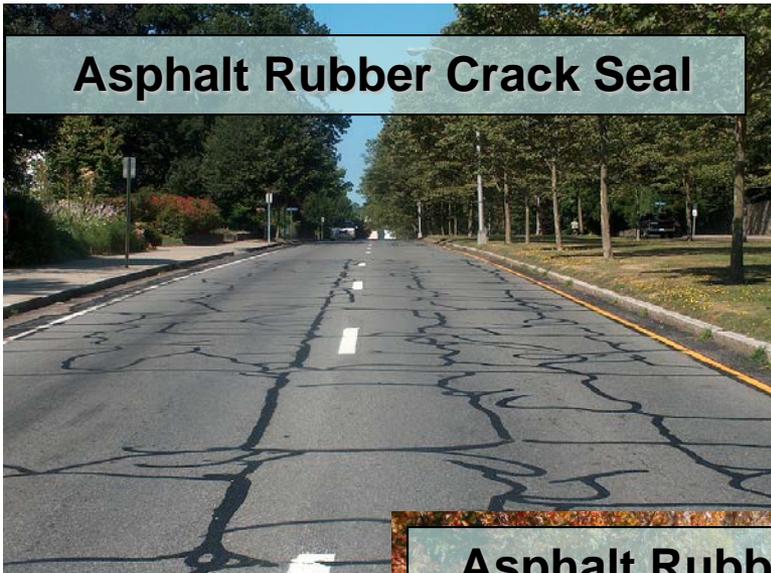


Rhode Island's Approach

- Use the **(R26)** guidelines for the preservation of high volume roads and our pavement management database to identify four roads to test treatments
 - Field verification of candidate sites and pavement conditions
- RIDOT will use four treatments utilizing green asphalt technology
 1. Asphalt Rubber Gap-Graded Overlay
 2. Asphalt Rubber Chip Seal
 3. Asphalt Rubber Stress Absorbing Membrane Interlayer (Chip Seal and Asphalt Rubber Gap Graded Overlay)
 4. Asphalt Rubber Crack Seal

RIDOT Pavement Preservation Treatments

Asphalt Rubber Crack Seal



Asphalt Rubber Chip Seal



Asphalt Rubber Gap-Graded Overlay



SAMI

A Chip Seal followed by a Gap-Graded Overlay

SHRP2 Value to Rhode Island

- **Improve the performance** of preservation treatments
- **Improve safety** and make our roads last longer
- **Reduce traffic disruption** due to construction
- **Help develop formal process** for preventative maintenance project selection
- **Stretch our dollars**



Other State DOT Approaches

- PennDOT is using three strategies
 - **Asphalt Rubber Gap-Graded Overlay**
 - **Flexible Micro-Surfacing**
 - **Polymer Modified Thin Overlay**
- Kentucky Transportation Cabinet is using four or more treatments on a single stretch of highway to identify best solutions
 - Using **SHRP2 matrix** (ADT, distress number, etc) and **pavement management database** to identify possible candidate segments
 - Currently **assessing different sites** – and different pavement conditions
 - Conducting **visual inspection of treatment sites** for candidates



Potential Benefits to Users

- **Smarter selection** of pavement options for high-traffic volume roadways
- **Save money** by reducing the frequency of major pavement reconstruction and extending asset service-life
- **Reduce risk** through better technique selection process
- Support shorter-duration maintenance and rehabilitation, **reducing worker exposure**



Product Implementation Assistance Opportunities – Round 2

Product	Lead Adopter Incentive	User Incentive
Expediting Project Delivery (C19)	5 - Up to \$250k	5 – Up to \$50K
Performance Specifications for Rapid Renewal (R07)	4 – Up to \$75 K	
Managing Risk in Rapid Renewal (R09)	4 – Up to \$100 K	
Railroad-DOT Mitigation Strategies (R16)	4 – Up to \$75K	4 – Up to \$25 K

Closing Date: September 6; Announcement: Mid-October
Applications at www.fhwa.dot.gov/goSHRP2

Assistance Opportunities

Second Round - Aug 2013	Lead Adopter Incentive
Performance Specifications – R07	4 – Up to \$75,000

- Lead adopters will evaluate and validate (R07) by applying process to transportation projects
- State DOT will provide feedback on process and benefits of product
- State DOT will become champion for product implementation in other states or to other agencies

Performance Specifications for Rapid Renewal

Goal of the Product (R07):

- New specifications support fast construction and improved quality, and cover an array of project delivery methods
- Specifications promote innovation and reduce prescriptive method requirements

Elements of Product:

- Model performance specifications
 - 5 categories with 23 different specs
- Decision Tree
- Spec Writing Guide



Performance Specifications

Specs in Four areas:

- Pavement Performance Specs, both flexible and rigid
- Specs for Concrete Bridge Decks
- Geotechnical Specs
- Work Zone Traffic Control Specs



Potential Benefits to Users

- Provides **cost savings** across the board – from change orders to improved travel-time reliability
- **Improves performance** of the overall project
- Adds **flexibility** and options to your specifications toolbox
- Has the potential to **improve contractor performance** while closing loopholes
- Promotes **contractor innovation**
- **Reduces risk** of trying innovation both for the DOT and contractor
- **Reduces costly construction oversight** and change orders

Assistance Opportunities

Second Round - Aug 2013	Lead Adopter Incentive
Managing Risk (R09)	4 – Up to \$100,000

- Implementation assistance includes training courses, demonstration workshops, peer exchanges, and technical assistance
- DOT will become champion for product implementation in other DOTs

Managing Risk on Rapid Renewal Contracts

Goal of the product (R09):

- Offers diagnostic tools to identify and evaluate performance risks
- Ranks severity of risks to determine strategies
- Identifies options to improve performance and mitigate risks through recovery plans

Elements of the product:

- Formal risk management process
- Training course
- Workshop, Excel workbook templates, checklists, forms, training modules

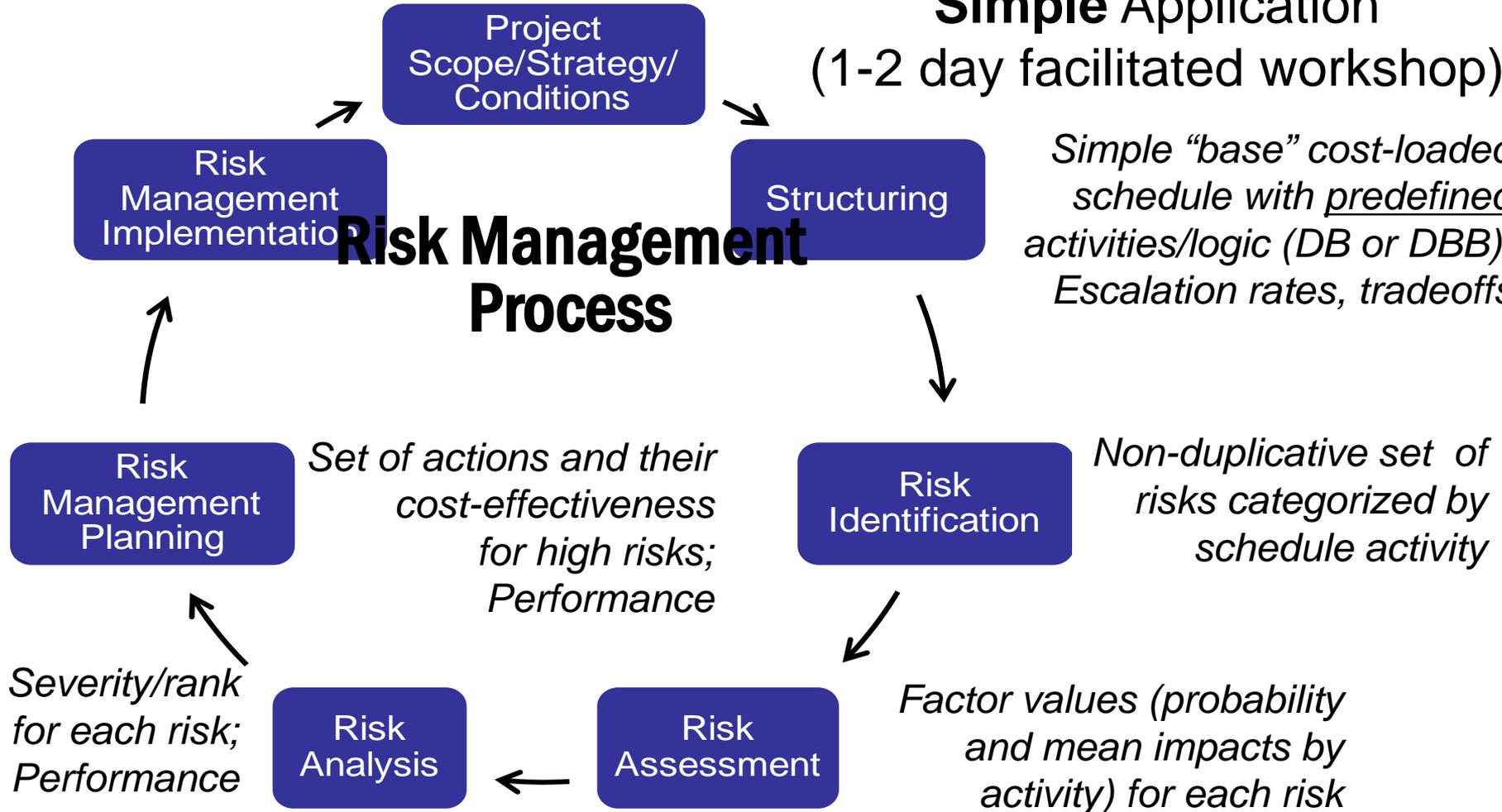


Managing Risk in Rapid Renewal Projects

Simple Application

(1-2 day facilitated workshop)

Simple “base” cost-loaded schedule with predefined activities/logic (DB or DBB); Escalation rates, tradeoffs



Potential Benefits to Users

- **“Next Gen”** of risk management
- **Scalable** – can be used for a range of project sizes
- Provides a **more rigorous and structured approach** to support your existing risk management program
- Generates **efficient, defensible, flexible solutions** through the use of better tools, training, and analysis
- Enables you to **better manage your budgets and schedules**
- **Improves trust** and partnering with entities
- Attractive for states using PPPs, design-build
- **Fewer surprises!**

Assistance Opportunities

Second Round - Aug 2013	Lead Adopter Incentive	User Incentive
Railroad-DOT Mitigation Strategies (R16)	4 – Up to \$75 K	4 – Up to \$25 K

- Selected lead adopters and users will evaluate and validate (R16) by applying process to transportation projects
- DOT will provide feedback on process and benefits of product
- DOT will become champion for product implementation in other states or to other agencies

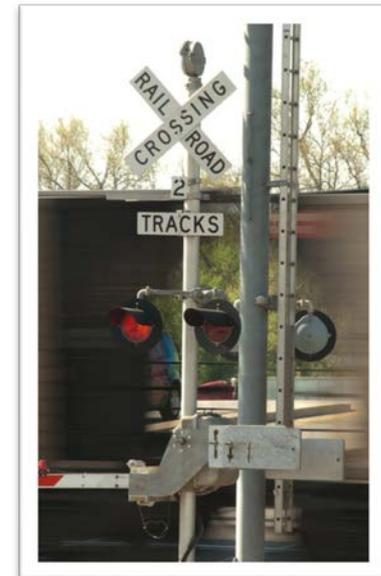
Railroad-DOT Mitigation Strategies

Goal of the Product (R16):

- A collaborative approach to address challenges associated with expediting roadway-rail road projects
- Recommended practices, model agreements, and training materials to help resolve potential conflicts.

Elements of the Product

- Best practices and streamlined processes
- Standardized (Master) agreements
- Dissemination and Outreach
- Training Courses



Potential Benefits to Users

- **Fewer project delays**
- **Reduced planning costs**
- **Safer projects** through standardized design requirements
- **Safer work zones** through standard work zone requirements



What Should the Committee's Role Be Going Forward?

- **What level of engagement?**
- **How should the Committee champion these products back home?**
- **How are the key technical stakeholders and advocates within your states and how do we reach them?**
- **Are you willing to provide panel members for upcoming Implementation Planning Workshops?**
- **Should we have more technical presentations on specific products at this committee in the future?**
- **Ideas? Suggestions?**

Questions?

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For more SHRP2 information:

<http://SHRP2.transportation.org>

**Contact Pam Hutton, AASHTO SHRP2 Implementation
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www.fhwa.dot.gov/goSHRP2

Save lives. Save money. Save time.