



Transportation System Preservation Research and Implementation Roadmap

Northeast Pavement Preservation
Partnership
December 11, 2007

Need

- Preservation research identified as a need during program appraisals
- Individual projects have been sought in the past
- No coordinated approach to address preservation research needs

Process

- Technical Panel
- White Paper Development and Review
- Workshops
- Pavements and Bridges
- Research Needs Statements
- Overall Joint Roadmap

Pavements Whitepapers/ Breakouts

- Asset Management
- Design
- Materials
- Construction
- Contracting Methods
- Performance
- Also discussed
 - PCC Pavements
 - Surface Texture

Asset Management

- Development of a Process for Estimating the Remaining Service Life (RSL) for Transportation Infrastructure
- Improved Decision Making Through Effective Transportation System Preservation
- Adaptable National Guidelines to Identify the *Right Pavement/ Right Time/ Right Treatment*
- New Technologies to Determine Preservation Indicators
- Evaluate Safety Aspect of Pavement Preservation
- Data and Performance Requirements Needed to Incorporate Pavement Preservation into Asset Management Systems
- Integration of Transportation System Preservation (TSP) into the Asset Management Framework
- Convincing the Stakeholders: Communications and Institutional Issues

Design

- Determine the Economic Benefits of Pavement Preservation Strategies
- Determining Pavement Preservation Treatment Lives and Related Pavement Life Extension
- Validate a Methodology for Determining Optimal Timing of Pavement Preservation Treatment Applications
- Develop Appropriate Pavement Preservation Treatments and Practices for Urban Areas
- Framework for a Coordinated Approach to Pavement Preservation Process from an Agency Perspective
- Integrating Pavement Preservation into the Design Process
- Integration with a Pavement Management System (PMS)
- Develop Pavement Preservation (PP) Strategies and Practices for Urban Areas
- Integration of Pavement Preservation (PP) into the Pavement Design Process

Construction

- Development of Innovative Pavement Preservation Products, Equipment & Construction Methods
- Performance Related Specifications (PRS) for Pavement Preservation treatments
- Improving the Timeliness of Acceptance Testing Results
- Pavement Preservation Contractor Qualification Program
- Pavement Preservation: Contractor/Agency Training and Certification
- Construction— Equipment
- QA/QC Guidelines for Pavement Preservation Projects

Materials

- Mechanical Binder Properties to Predict Surface Treatment Performance
- Acceptance Criteria for Surface Treatments
- Appropriate Installation Geometry for Crack Treatments
- Cost-Effectiveness of Quality Aggregates
- Performance Grading System for Asphalt Emulsions
- Performance-Graded Aggregate System for Pavement Preservation Surface Treatments
- Triggers for the Timing of Surface Treatments

Contracting Methods

- Analysis and Synthesis of Pavement Preservation Contracting Methods
- Performance Measures and Contracting Methods for Pavement Preservation Treatments
- Development of Model Specifications and Testing Requirements for Pavement Preservation Contracting Methods

Performance

- Synthesis: Pavement Preservation Data Sources
- Development of Distress Identification System for Pavement Preservation Treatments
- Quantify Performance and Benefits of Various Pavement Preservation Treatments and Develop Pavement Preservation Treatment Performance Models
- Quantifying the Benefits of Pavement Preservation Treatments
- Factors Affecting Pavement Preservation Treatment Performance and Expanded Treatment Selection and Design Guidance
- Guidelines for Pavement Preservation

Interim results

- Research needs statements generated
- Compiling and comparing
- Bridge preservation workshop in May 2007

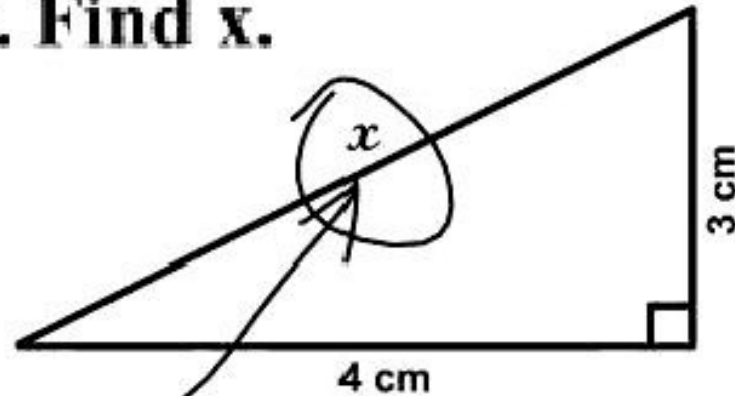


Next Steps/ Implementation

- Short-and long-term research needs for pavement preservation and bridge preservation
- Presented to AASHTO Subcommittee on Maintenance, Materials, Asset Management and others

Questions?

3. Find x .



Here it is

- Chris Newman
- FHWA Office of Asset Management
- (202) 366-2023
- Christopher.newman@dot.gov