Challenges Associated with the Implementation of a Pavement Preservation Program

Jim Moulthrop, Executive Director
FP², Inc.

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Program Outline

• What is FP², Inc.?
• Introduction to Pavement Preservation
• Benefits of a Preservation program
• Elements of a Preservation program
• Challenges to Program Implementation
  ✔ Issues and Barriers
FP² Inc

- Non-Profit trade association
- Supported by the pavement preservation industry, contractors, material suppliers, and equipment manufactures
advocates national policies, promotional activities and research programs that advance pavement preservation
What is Pavement Preservation?

• As defined by the US FHWA

✓“A program employing a network level, long term-strategy that enhances pavement performance by using an integrated, cost-effective set of practices that extend pavement life, improve safety and meet motorist expectations”
What is Preventive Maintenance?

• As defined by the US FHWA

✓“A planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system (without significantly increasing the structural capacity)”
Why Do I Need a Preservation Program?
Pavement Preservation Concept

Original Pavement

Optimal Timing

Preservation Trigger

Rehabilitation Trigger

Time / Traffic

Pavement Condition
Benefits of a Preservation Program

Current Pavement Deterioration

Time or Traffic

Condition

Preventive Maintenance Trigger

Rehabilitation Trigger

Benefit of Preventive Maintenance

Benefit of Rehabilitation

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Reported Benefits of Pavement Preservation

✓ Life extension to delay rehabilitation
✓ Lower treatment costs compared with rehabilitation and reconstruction
✓ Reduced user costs
✓ Improved safety to users
✓ Improved overall network health
✓ Protect the environment by using less natural resources and recycling
Benefits of a Preservation Program

- Not dramatic at first
- Good roads will be kept good
- Several years later they are still good and in better condition than those not treated

Life extension is the key
In other words

Keeping Good Roads Good!
How Do I get it?
Key Elements of a Pavement Preservation Program

1. Preventive Maintenance Program Guidelines
2. Feedback Mechanism
3. Determine Needs
4. Develop Analysis Procedures
5. Framework for Treatment Selection
Establish Program Guidelines

✓ “Policy Manual”
✓ Contains overall strategies and goals
✓ Safety issues
✓ Environmental issues
✓ Program coordinator named
✓ Technical elements
✓ Feedback loop
Determine Needs

- Condition Survey
- Manual Distress Survey or
- Automated survey
- Non-destructive testing (FWD, GPR)
- Cores, slabs, test pits
- Project data
  - Location, ADT, % trucks, environment,
Framework for Treatment Selection

• The “right” treatment on the “right” road at the “right” time
Preservation Candidate?
Preservation Candidate?
Preservation Candidate?

Shallow Swale

Center Line Cracking

Minor Raveling
Feedback Mechanism

✓ Generally a weakness in many management processes
✓ Need to know how the system is working
✓ A tool to adjust the program when needed
Strategy

A. Routine/Preventive
B. Preventive/Corrective
C. Defer action
D. Rehabilitation
E. Reconstruction
Strategies

• Elements of a Successful Preservation Program
  ✓ Commitment
  ✓ Funding
  ✓ Integrated Management Program
Strategies

- Commitment
  - Policy Makers
  - Top Management
  - Employees
  - Public
  - Industry
Strategies

➢ Funding
  ✔ Dedicated account for PP
  ✔ Continuous
  ✔ Pavement treatment strategies
Strategies

➢ Management Systems

✓ PMS + MMS = PPMS
✓ Provides objective strategies
✓ Maximizes Resources
  • $$$
  • People
Challenges to Implementation

• From the Agency Perspective
  ✓ Need top management commitment
  ✓ Need a champion
  ✓ Paradigm shift from “worst first” to “best first”
  ✓ Need a compelling message
Challenges to Implementation

• From the Public’s Perspective

✓ Why fix good roads?
✓ Reduce delays and vehicle operating costs with smoother roads
✓ Improved safety
Need Information?

• Contact

✓ The National Center for Pavement Preservation at Michigan State University
  
✓ www.pavementpreservation.org

✓ FP², Inc.

✓ www.fp2.org
Thank You
James S. Moulthrop, P.E. (PA, AZ)
Executive Director

FP², Inc.
7400 Anaqua Dr.
Austin, TX 78750