

# **Pavement Preservation Achievements, 2008-2009**

Connecticut Department of Transportation

# Overview

- Pavement Preservation Working Group
- Reaching out to Local and Regional Partners
- DOT Leadership Initiatives
- Impact of American Recovery and Reinvestment Act of 2009

# Pavement Preservation Working Group

- Completed first preservation project
  - Administered through Construction
  - \$1.8M
  - Four locations, two treatments
    - Ultra-thin hot-mix asphalt (Novachip)
    - Single-lift mill-and-fill (fine milling)
  - August 2009 execution

# Pavement Preservation Working Group

- Developed project-selection treatment matrix
  - Uses PMS distress data
    - Cracking
    - Rutting
    - Roughness
  - Traffic level considered
    - ADT cutoff for some treatments

# Pavement Preservation Working Group

- Working on 2010 program
  - “Interim program”
    - Crack sealing
    - Thin-surface project
- Integrated Business Process for 2011

# Reaching out to Local and Regional Partners

- Annual Pavement Preservation and Pavement Management class for municipalities (Conn. Transportation Institute – James Mahoney)
  - Audience: Public Works managers
  - One-day course focusing on treatments and preservation concepts
  - Sharing of best practices

# Reaching out to Local and Regional Partners

- Using ARRA to kick-start pavement preservation approach
  - On a regional and municipal basis

# DOT Leadership Initiatives

- 2009 Pavement Management Program Review
  - Built on 2003 PM review and 2006 Pavement Preservation Technical Assessment
  - Focused on steps for moving forward
  - Provided forum for executive-level discussion



# DOT Leadership Initiatives

- 2009 Pavement Management Program Review
  - Official Pavement Management Policy
  - DOT management instituting PM-driven programming business process
  - It is clear that executives are behind this approach
  - 2010 development of 2011 program

# DOT Leadership Initiatives

- Integrated Pavement Business Process
  - PMS to provide needs and candidate project lists
  - Financial decisions based on needs, program assignment
  - Engineering, Maintenance, Planning participation
  - Timelines and program performance measurement

# Impact of ARRA

- \$18M out of \$200 stimulus funds allotted for pavement preservation
  - \$1.5M crack sealing
  - \$16.5M for HMA preservation projects

# Impact of ARRA

- Crack Sealing and Filling Project
  - 4 expressways
  - Two treatments, two materials
    - Joint & crack sealing
    - Joint & crack filling
    - 1.5M s.y. of roadbed (170 lane-mi)
  - Bid as lump sum (price / s.y. on fixed square yard amount in contract)

# Impact of ARRA

- HMA Pavement Preservation Projects
  - Field review Spring 2009
  - Structurally sound expressways
    - Initially two locations
    - Grew to five locations based on prices
    - Milling to remove top lift
    - Apply joint adhesive to vertical faces, inlay with HMA

# Impact of ARRA

- Project Selection

- Constraints given for the ARRA funds
  - Treatments were given
  - Must fit pavement preservation criteria
- Project selection to fit preservation criteria
  - Multi-disciplinary field review (pavement management/design, highway design, FHWA representative, safety expert)

# Impact of ARRA

- Regional and Local Agencies
  - Two regions selected pavement preservation strategies
    - Prelim. Engineering simpler
    - Quick achievement of shovel-readiness
    - Allowed distribution of funds to many towns
    - One rural, one urban region

# Impact of ARRA

- Regional and Local Agencies
  - Urban region (\$9M)
    - All towns had PMS's
    - Selected mill-and-inlay functional overlays
    - CT-DOT scoped and estimated project costs



# Impact of ARRA

- Regional and Local Agencies
  - Rural Region (\$2M)
    - No towns had PMS's
    - Pavement Preservation project-selection criteria communicated to towns via web-site and in meetings
    - Selected variety of surface treatments

# Impact of ARRA

- Regional and Local Agencies
  - Other Regions
    - Some larger regions had projects ready
    - Other individual municipalities selected preservation projects (simpler PS&E, more pavement bang for buck)

# Summary

- Rapid progress built on continued effort
  - Pavement Preservation Working Group
  - Partnership with FHWA Division Office
  - DOT Leadership buy-in
  - Communication and outreach
- Moving Forward:
  - Measurement of Progress
  - Integration with Agency's Business Process









(before lane striping)