Local Street Performance Challenges

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Stripping

- Construction Related vs. Material Issue?
- Woodbury Perspective
- MnDOT Recommended Construction Practices
Local Street Performance Challenges

CEAM
Tony Kutzke
January 29, 2014
Agenda

- Pavement Management Challenges
- Woodbury’s Maintenance Methods
- Future Pavement Management Practices
Pavement Maintenance Objective

- Maintain public roadways at or above a pavement condition index rating of 70 residential / 75 non-residential and project a professional system
Pavement Management Program

- GoodPointe Annual Rating
- 1/3 of City Street Mileage/Year
Pavement Failure - Stripping
GoodPointe Rating and PCI Curve

**Expected PCI Rating Curve**

- PCI vs Pavement Age (Years)

**PCI Rating Curve - Stripping**

- PCI vs Pavement Age (Years)
Pavement Management Strategies

- City Maintenance
- Overlay
- Current CIP Rehab
STEP 1 – Initial Signs of Failure
STEP 2

Initial Signs of Failure STEP 2
Initial Signs of Failure, STEP 3
STEP 5

Step 5 Failure
STEP 6
Pavement Characteristics

- High Air Voids
  - 7-12% Air Voids
- High Variability in Air Voids
- Chip Seal Not Recommended
2010 City Altered Seal Coat Program

- No New Seal Coat
- No Re-Seal in Stripped Areas
Maintenance

- Localized – Spray Patch
- Widespread – Thin Overlays
- Complete Failure – Mill & Overlay
Spot Repair– Spray Patch
Spot Repair– Spray Patch
Patch Repair – Spot Overlay
Patch Repair – Spot Overlay
Future Pavement Changes

- **Specification Changes**
  - Eliminate RAP in Wear Course

- **Mix Design Changes**
  - Target Lower Air Voids

- **Citizen Task Force**
  - Review City Policy
  - Recommendations

- **LRRB Research Projects**
Pavements Installed in 1990’s
2340 MnDOT Specification Mix Designs
LRRB Ongoing Studies

- **NS 344**
  - Second Look at Stripping Under Chip Seals
  - Potential Review of Materials, Specs, Mix Designs, Construction Practices

- **RAP Research**
  - PG Binder Grade
  - RAP May Increases Thermal Cracking