LRRB
Local Road Research Board
Pavement Related Updates
and
Other Information

Joel Ulring
State Aid Pavement Engineer
CEAM Annual Conference – January 31, 2014
Joel Ulring
State Aid Pavement Engineer

Background

› 7 years County Engineer
  ◦ Murray and Wadena Counties
› 11 years Geotechnical Engr.
  ◦ St. Louis County

› 10½ years Geotechnical and Materials Engineer Consultant
  ◦ Minnesota, South Dakota, Iowa, Wisconsin & Alaska
**LRRB Updates**

**LRRB Pavement Related Projects**
- Integrated Tools for Pavement Design and Management.
- Implementation of TONN2010.
- System Preservation Strategies.
- System Preservation YouTube Video.
- Pavement Preservation Resource Center.
- Alt. Design Methods to Renew Lightly Traveled Paved Roads (*new*).
- Optimal RAP Content for Minnesota Gravel Roads (*new*).
LRRB Updates

Integrated Tools for Pavement Design and Management – Inv. 918

- Contract is complete.
- Reviewing final report.

Implementation of TONN2010.

- Present viewer tool with overlay calculator in training sessions around the state.
- Training sessions held for D1, D6 & D7.
- Sessions scheduled for D2, D3, D4, D8 & Metro.
LRRB Updates

› System Preservation Guide – Inv. 922

› Working with five pilot Counties
  ◦ Anoka, Dakota, Freeborn, Otter Tail & Stearns.

› Goals:
  ◦ Develop strategies leveraging available funds to meet critical transportation needs.
  ◦ Create a systems preservation guide including tools and plan template for use by other counties.

› Current status:
  ◦ Individual meetings with the pilot counties have been held.
  ◦ System plans & recommendations are being developed.
  ◦ Implementation and final report in winter/spring of 2015.
Pavement Preservation Resource Center

- Goal: To create a website and provide a staffed resource center to store pavement surface treatment methods, guides and projects for Minnesota local governments to assist them to better managing their roadway systems.

- Currently have had two TAP meetings. Surveys are being prepared to assess need of Cities/Counties and learn from existing centers.
System Preservation – YouTube Video

- Goal: To communicate to the public how pavement maintenance and construction decisions are made.
  - Why are you not fixing my road? It’s really bad.
  - Roads are a consumable product.
  - Less economical to fix the worst first.
  - Analogies: to vehicle oil changes, painting house.
  - Perspective: City/county resident asking questions.
  - Audience: General public & public officials.
NEW – Alternate Design Methods to Renew Lightly Traveled Paved Roads.

- Declining budgets is raising interest in low cost pavement maintenance technologies for low volume roads.

- Looking for alternatives to standard asphalt overlay.

- Develop a decision tree for base and surface treatments such as:
  - Thin & Ultra-thin HMA overlays
  - Seal coats
  - Micro-surfacing
  - Cold in-place Recycling – CIR
  - Full-depth Reclamation – FDR
**LRRB Updates**

NEW – Optimal RAP Content for Minnesota Gravel Roads.

- Objective: Assess benefit of utilizing recycled asphalt pavement (RAP) as a material to stabilize unpaved roads.
- RAP use would stabilize the road surface while reducing virgin aggregate demand, maintenance and dust.
- Determine optimal RAP content for unpaved roads.
- Develop a design guide for using RAP in unpaved roads.
Under Consideration – Study of Stripping Under Chip Seals.

- What is possible cause?
- What is right fix to preserve pavements showing this distress?
Low Binder/Coarse Mix Research

- Jerry Geib of Maplewood Pavement Research lab is leading this project.

- Several projects have been selected to review:
  - Pavement cores
  - Mix test results
  - Mix designs

- Expect preliminary results fall 2014.
Asphalt Pavement Quality and Technology Committee.

- Mission: To explore and evaluate new practices, technologies and methods of providing longer lasting asphalt pavements while increasing efficiency, sustainability, and safety on projects.

- Goal: Opportunity for MnDOT and Industry to partner in evaluating new specifications and practices that either party would like to consider.

- The committee has met three times.
Materials Advisory Committee
Glenn Engstrom, Acting Director of the MnDOT Office of Materials and Pavement Research desires to improve the products and services they provide.

- Improving communication
- Improving products and services
- Providing big-picture visioning
- Advocating change when and where necessary
- Aiding and speeding up the research implementation process
- Partnering to help move initiatives forward
MnROAD Phase – III

- Planning has started with construction in 2016
- Looking for both rigid and flexible pavement research ideas.
- Ideas submitted will be developed and prioritized.
- If you have ideas contact me or:
  
  Ben Worel, MnROAD Operations Engineer
  ben.worel@state.mn.us
  651-366-5522
Thank You!