UGPTI COUNTY ASSET INVENTORY TOOLKIT

KICKOFF WEBINAR

Dale Heglund, Brad Wentz, Tim Homer
Upper Great Plains Transportation Institute
Today’s Agenda:

• Introduce UGPTI Team and County Steering Committee Team & Other Attendees (Dale Heglund)
• Purpose of the Steering Committee (Dale)
• History of Past Studies (Tim Homer)
• Review Past Interactive Maps (Tim)
• Initial objectives of Roadway Inventory Tool
• Demonstration of “Beta/Draft” Roadway Inventory Tool (Brad Wentz)
• Discuss additional items needed by each county
• Discuss/Schedule Next meeting (August 26th and Possible Face to Face Meeting) (Dale)
Steering Team

- Sharon Lipsh - Walsh
- Shirley Murray - Sheridan
- Dana Larsen - Ward
- Ken Miller - Mercer
- Todd Miller - Stark
- Tom Soucy - Cass
- Jana Heberlie - Mountrail
- Kevin Fieldsend - Ramsey
- Dan Schriock - Burleigh
- Tyler Michel - Stutsman
Upper Great Plains Transportation Institute

- Infrastructure Needs Studies History
  - 2007: NDDOT
  - 2009: NDDOT Level of Service Study
  - 2010: ND Association of Oil and Gas Producing Counties/ND Commerce Department
  - 2011-13: North Dakota Legislature
  - 2013-15: North Dakota Legislature
  - 2015-17: North Dakota Legislature
On-line Interactive Map – Pavement Condition

2013 County Road Information

Layers
- Pavement Condition (PSR)
  - PSR_comb
    - 0.1 - 2.0
    - 2.1 - 3.0
    - 3.1 - 4.0
    - 4.1 - 5.0
- Strength Testing (Sub E)
  - Subgrade_E
    - Not Tested
    - 0.1 - 6.0
    - 6.1 - 10.0
    - 10.1 - 20.8
- Bridge (Suf Rating - Projects)
  - Sufficiency Rating (0 to 100)
    - 0.0 - 50.0
    - 50.1 - 70.0
    - 70.1 - 90.0
    - 90.1 - 100.0
- Bridge (Suf Rating - Non Projects)
  - Sufficiency Rating (0 to 100)
    - 21.5 - 50.0
    - 50.1 - 70.0
    - 70.1 - 90.0
    - 90.1 - 100.0
- Truck Traffic - Class Counts
  - TOT_TRUCKS
On-line Interactive Map – Pavement Condition
On-Line Interactive Map
Local Roads Asset Inventory Toolkit

• UGPTI Advisory Council Advanced the Concept of Road and Bridge Asset Management Tool Development

• 2015 Legislature Appropriated Funds for an Asset Management Initiative.
  – Intended to focus on providing tools for local governments to preserve and maintain roads and bridges.
Local Roads Asset Inventory Toolkit

Initial Steps:
- Establish an Advisory Group of County Representatives.
  - Try to get regional representation
  - Ask NDAoC to participate as well
- Focus on building data inventory important to county road managers
  - Build so it links to on-line mapping built for past study
Local Roads Asset Inventory Toolkit

• Building Data Inventory Examples:
  – Initial Items to Develop:
    • Web/Map based input system
    • Paved Roadways Data Set
    • Gravel Roads Data Set
    • Bridges
      – Explore Adding Minor Structures (less than 20 ft.)
    • Other critical infrastructure items
Asset Inventory Tool Objectives

- Easy to use software – free
- Map based – Google Maps
- Web browser based – any platform
  - Mobile/touchscreen capable with GPS
- Linear Referencing or compatible with...
- Compatible with existing interactive map
- County independent data editing
- Initial data to support Needs Study
Demonstration of “Beta/Draft Roadway Inventory Tool

Brad Wentz
Discuss Additional Items Needed by Each County

Dale Heglund
Asset Inventory Tool Data Items

- **Construction History Layer**
  - Last Project Surface
    - Project Type, Surface Type, Year, Last project surface depth, Total surface depth, LP $/mile.
  - Base
    - Type, Depth, Year, Subgrade Strength
  - Cross Section
    - Lane Width, rt shoulder total, rt shoulder paved, Curbs, Inslope Ratio, Safety Edge
Asset Inventory Tool Data Items

- **Maintenance History Layer**
  - **Seal Coat**
    - Type, Year, Cost per mile, Previous year 1 and 2.
  - **Crack Seal**
    - Type, Year, Cost per mile, Previous year 1 and 2.
  - **Patching**
    - Type, Year, Cost per mile, Previous year 1 and 2.
Asset Inventory Tool Data Items

• Ownership/Load Limits
  – Ownership
    • Owner, Functional Class, Maintenance, Roadway Type
  – Load Limits
    • Seasonal Limit, Seasonal Gross Weight, Year Round Limit, Year Round Gross Weight
Asset Inventory Tool Data Items

• **Minor Structures**
  – **Structure**
    • Type, Material, Span Length, Cell Size, Cell Length, number of Cells, Year installed, Cover Depth, Aprons
  – **Condition**
    • Erosion, Roadway, Waterway Flow, Overall Structure, Rating Date
  – **Signing**
    • Posted Weight Limit, Sign Type, Bridge end markers.
Local Roads Asset Inventory Toolkit

• Future Possible Steps:
  – Pavement Deterioration/Cost Analysis Tools
    • Predict Future Pavement Condition
  – Gravel Cost Tracking Tools
  – Bridge Planning/Costing Tools
  – Jurisdictional Tracking
    • Roadway and ROW Ownership
    • Maintenance Responsibility
  – Others as suggested by advisory group
Discuss/Schedule Next meeting (August 26th) and Possible Face to Face Meeting

Dale Heglund
Adjourn