

MEMORANDUM

To: RRC Members
D. John Blacker, Administrator/Maintenance Division
Monte N. Brown, Administrator/Administration Division
Jim Currie, Deputy Director/Department of Transportation
Dave Galt, Director/ Department of Transportation
Joel M. Marshik, P.E., Administrator/Highway and Engineering Division
Drew F. Livesay, Administrator/Motor Carrier Services Division
Patricia Saindon, Administrator/Transportation Planning Division
Robert Burkhardt/Federal Highway Administration

From: Susan C. Sillick
Research Section

Date: February 5, 2003

Subject: Summary of Minutes from Tuesday, January 28, 2003 RRC meeting

The following RRC members were present: John Blacker, Bob Burkhardt, Monte Brown, Jim Currie, Drew Livesay, Joel Marshik, and Sue Sillick.

Champion's Presentation of Research Proposals:

Champions for research submittals (with champion and sponsor support) resulting from MDT's recent Research Solicitation were present to support their topics.

These topics will be ranked by the RRC and DA's. The RRC will decide at its February meeting which topics will move forward to technical panels.

SUBJECT AREA	PROB NO.	PROBLEM TITLE	CHAMPION
Construction	03.002	Impact Analysis of Construction Quality on Life-Cycle Performance of Pavements	Paul Jagoda
Maintenance	03.008	Pavement Marking Condition Assessment	Mike Bousliman
Maintenance	03.009	Pavement Marking Materials and Techniques	Mike Bousliman
Transportation Planning	03.011	Development of Site-Specific Traffic Loading and Classification Estimates	Dan Bisom
Administration	03.012	Determine the Current Rates of Motor Fuel Tax Evasion in Montana	Bob Turner
Environmental	03.013	New Bioengineer Stream Restoration Method to Correct Channel Alignment at Bridge Crossings	Gordon Stockstad
Right-of-Way	03.014	Integrated Right-of-Way Permit Management Platform for MDT	Walter Scott
Transportation Planning	03.015	Determine Passenger Transportation Funding and Reporting Procedures	Dick Turner

Paul Jagoda, and Matt Strizich, Champions – *Impact Analysis of Construction Quality on Life-Cycle Performance of Pavements* – 03.002

A ride specification is currently incorporated into the majority of MDT paving projects. The specification was developed four years ago and was based on the limited information available at the time. Data is currently available to optimize the tolerance used in the specification. MDT emphasizes surface smoothness for the traveling public through the ride specification. Adjusting the tolerances to ensure the smoothest ride possible gives the traveling public an improved traveling surface and ensures the Department is getting the most benefit out of the money spent on the ride incentives.

Mike Bousliman, Champion – *Pavement Marking Condition Assessment* – 03.008

MDT is currently developing a Pavement Marking Management System. Three parameters will be assessed: retroreflectivity, durability, and coloration. This project will provide MDT with the knowledge to employ the best techniques when conducting these condition assessments.

Mike Bousliman, Champion – *Pavement Marking Materials and Techniques* – 03.009

Various factors influence pavement marking performance. MDT needs to investigate the various pavement marking products and available techniques, as well as the detrimental external influences to maximize pavement marking performance.

Dan Bisom, Champion - *Development of Site-Specific Traffic Loading and Classification Estimates* – 03.011

As AASHTO shifts its emphasis from ESALs to load spectra as a mean for defining pavement loading, MDT will need to have the ability to improve traffic data in terms of the quality and quantity by using more site specification traffic data.

The proposed research is to improve the accuracy of the existing traffic loading and classification estimates and develop more accurate traffic classifications and loading forecasts.

Bob Turner, Champion – *Determine the Current Rates of Motor Fuel Tax Evasion in Montana* – 03.012

The objective of this project is to determine the motor fuel tax evasion rates in Montana, which in turn will determine the loss of revenue to the state. The project would include looking at surrounding state's motor fuel tax evasion rates in determining the Montana's tax evasion rates.

This study could have an enormous impact on gaining additional revenue into the state's Highway Special Revenue Account by closing currently used loopholes to avoid paying Motor Fuel Taxes.

Gordon Stockstad, Champion – *New Bioengineer Stream Restoration Method to Correct Channel Alignment at Bridge Crossings - 03.013*

Tom Hughes, Montana Department of Natural Resources, has created a new bioengineered method to realign stream channels through bridge openings to ensure optimal performance of bridge hydraulics and minimize stream bank erosion above and below bridge crossing.

MDT is currently exclusively using riprap to train stream channels, however due to increased public and resource agency concerns, permits may be harder to obtain in the future. This new method would use reusable pre-cast blocks for approximately two years, while planted vegetation becomes established providing a strong stream bank resistant to erosion. These blocks would be installed at bank full elevation and removed in two years or when vegetation is sufficiently established to protect the new stream bank.

The expected benefit of this project is to develop a method to mitigate impacts of bridges both upstream and downstream using low cost bioengineered alternatives to channel restoration.

Walter Scott, Champion – *Integrated Right-of-Way Permit Management Platform for MDT – 03.014*

A need exists for applied research to develop and implement an automated process to improve and speed up ROW-related permitting at MDT. A prototype Internet-based permit processing system and GIS platform for utilities within highway ROW was developed by Texas Transportation Institute. This system is adaptable for MDT utility permitting and can be adapted to handle other ROW regulated permits, such as approach permits. This would speed up the issuance of ROW permits and accessible data.

Dick Turner, Champion – *Determine Passenger Transportation Funding and Reporting Procedures – 03.015*

This project would develop a detailed description of federal, state, and local funding sources and match requirements that are used by various agencies and organizations throughout Montana to transport its disadvantaged citizens.

Data obtained from this project could address issues such as duplication of services, insufficient funds, unmet trip demands, regulatory constraints and lack of interagency coordination that have been identified as on-going problems within the passenger transportation industry.

MDT will use this information to better serve Montana's citizens by identifying opportunities for coordinating social services and rural public transportation programs.

1. **Budget Report:** Attached

The discrepancy between Research's federal appropriation and state budget authority was again discussed. Research's budget authority does not cover Research's federal appropriation. In addition, there is a bubble of unspent federal appropriation that makes this situation worse.

It was again decided to spend down the federal appropriation bubble and to align Research's federal appropriation with state budget authority in the next biennial budget cycle.

There was also some confusion about SPR funding. SPR is State Planning and Research. This is the federal appropriated funding to Planning and Research. 75% of SPR is Planning's appropriation and 25% of SPR is Research's appropriation.

2. **Research Project – current listing:** Attached

3. **Reports:** Available Upon Request

3a. *Use of Performance Based Warranties on Roadway Construction Projects - FHWA/MT-02-004/8131* – Final Report Completed

3b. *Valuation of Temporary Transportation Facility Use Losses* – FHWA/MT-02-005/8117-16 - Final Report Completed

3c. *Evaluation of Geosynthetic Reinforced Flexible Pavement Systems Using Two Pavement Test Facilities* – FHWA/MT/-02-008/20040 – Final Report Completed

3d. *Rehabilitation Techniques for Stripped Asphalt Pavements* – FHWA/MT-02-003/8123 – Final Report Completed

3e. *The Revenue Contribution of Montana Department of Transportation to the General Fund* – FHWA/MT-02-012/8170 – Final Report Completed

3f. *Develop Performance Prediction Models for Checking Designs Generated by a Flexible Pavement Design Procedure* – Progress Report – 8/1/02 – 11/30/02

3g. *Develop Performance Prediction Models for Checking Design Generated by a Flexible Pavement Design Procedure* – Progress Report – December 2002

3h. *Bat Use of Bridge Structures in the MDT Billings District: A Pilot Study* – Progress Report – December 2002

3i. *Fish Passage at Road Crossings in Montana Watersheds Providing Bull and Cutthroat Trout Habitat* – Progress Report – 10/1/02 – 12/31/02

3j. *A Study for the Economic Effects of Reconfiguring Montana's Two-Lane Highway* – Progress Report – November 2002

3k. *Evaluation of Wildlife Crossing Structures on US Highway 93 Evaro to Polson* – Annual Progress Report - December 31, 2002

3l. *Use of Dynamic Modulus (E*) in Hot-Mix Asphalt Designs* – Pooled Fund Study – Progress Report - 10/01/02 – 12/31/02

3m. *LTAP* – Quarterly Progress Report – 7/1/02 – 9/30/02

3n. *A Study for the Economic of Reconfiguring Montana's Two-Lane Highway* – Progress Report – December 2002

3o. *HITEC* - Pooled Fund Studies – Progress Reports

Sign Retroreflectometers

Alternative Dowel Bar Materials

FRP Systems for Concrete Structure Repair and Strengthening

Soil Stabilizers

Stormwater Runoff Treatment Systems

3p. *Construction of Crack-Free Concrete Bridge Decks* – Pooled Fund Study – Progress Report – 1/01/2002 – 12/31/2002

3q. *Cost-Effectiveness of Crack Sealing Materials and Techniques for Asphalt Pavements* – Progress Report – 10/01/2002 – 12/31/2002

3r. *Cooperative Training Program* – FHWA/MT-02-014/8168 – Final Report Completed

3s. *Deck Performance Model Feasibility Study* – FHWA/MT-02-009/8166 – Final Report completed

4. **Contract Extensions:** None

5. **Proposals:**

5a. *Rockfall Hazard Classification and Mitigation System* – (01.015) – Attached

Rich Jackson/Materials Bureau attended the meeting as chairman of the Technical Panel in support of this project.

This project was previously approved-in-concept. An RFP was issued; the Technical Panel chose Landslide Technology as the top consultant for this project. The purpose of this project is to develop a comprehensive database and rock slope management tool that will allow MDT to perform long-term planning and make practical and informed decisions when developing rockfall mitigation projects.

Joel Marshik made a motion to approve the proposal for \$436,082.00. Monte Brown seconded the motion. The motion passed.

6. Implementation:

6a *The Revenue Contribution of Montana Department of Transportation to the Montana General Fund* – FHWA/MT-02-012/8170

Dave Galt requested this project to provide information to the Legislature on the impact of highway spending to the general fund. The conclusion was that SFY 2002 MDT spending generated approximately \$14,000,000 for the general fund in that year.

6b. *Implementation of Deck Performance Model Feasibility Study* – (01.011)

This feasibility study was conducted as a Phase I project to determine if we should proceed with the development of a bridge deck performance model. The conclusion was that the study of the practice is not at such a point to justify moving forward with Phase II. Therefore, a Phase II will not proceed.

The next RRC meeting will be February 25, 2003.

cc: Craig Abernathy/Research Section
Debbie Alke, Administrator/Aeronautics Division
Brooke Amestoy/Research Section
Kent M. Barnes, P.E./Materials Bureau
Bruce H. Barrett/District Administrator-Billings
Jeffery M. Ebert, P.E./District Administrator-Butte
Linda Francis/Business Plan Administrator
Loran Frazier, P.E./District Administrator-Missoula
Dave Hill/Environmental Services
John Horton/Right-of-Way Bureau
Michael P. Johnson/District Administrator-Great Falls
Joseph P. Kolman, P.E./Bridge Bureau
William L. McChesney/District Administrator-Glendive
Russell G. McDonald/Human Resources Division
Robert D. Morgan, P.E./Traffic & Safety Bureau
Kenneth H. Neumiller/Engineering Oversight Bureau
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