

MEMORANDUM

To: RRC Members
Debbie Alke, Administrator/Aeronautics Division
D. John Blacker, Administrator/Maintenance Division
Monte N. Brown, Administrator/Administration Division
Robert E. Burkhardt/Federal Highway Administration
Jim Currie, Deputy Director/Department of Transportation
Jeffery M. Ebert, P.E./District Administrator-Butte
Larry Flynn, Acting Administrator/Information Services Division
Loran Frazier, P.E., Administrator/Highway and Engineering Division
Drew F. Livesay, Administrator/Motor Carrier Services Division
Jim Lynch, Director/Department of Transportation
Priscilla Sinclair/Traffic Safety
Sandra S. Straehl, Administrator/Rail, Transit, and Planning Division

From: Susan C. Sillick, Manager
Research Programs

Date: April 10, 2006

Subject: Summary of Minutes from January 31, 2006 RRC Meeting

The following RRC members were present: Debbie Alke, John Blacker, Monte Brown, Bob Burkhardt, Jim Currie, Jeff Ebert, Larry Flynn, Loran Frazier, Drew Livesay, Jim Lynch, Priscilla Sinclair, Sandy Straehl, and Sue Sillick.

1. **2006 Solicitation** – Champions presented their research topics.

SUBJECT AREA	PROB NO.	PROBLEM TITLE
Bridge/Pavement Management	6.003	I-15 North Corridor - Canadian Truck Load Bridge and Roadway Analysis
Environmental	6.011	Montana Weeds to Web
Human Resources	6.010	Disparity/Availability Study
Materials	6.008	Evaluation of the Superpave Volumetric Specification
Roadway Design	6.006	Computerized 3 Dimensional Highway Design and Modeling
Traffic Safety	6.004	Traffic Codes and Adjudication in Indian Country

The District Administrators and Research Review Committee (RRC) will rate each of these problem statements with respect to their worth, timeliness, and attainability; these rating

forms are due February 10th. The RRC will then determine which problem statements will move forward to technical panel review at the February 27th RRC meeting.

1-15 North Corridor – Canadian Truck Load Bridge and Roadway Analysis - 6.003

Loran Frazier is the champion for this research topic.

The purpose of this research is to examine the impact the heavier Canadian trucks would have on existing pavements and bridges, and determine the social and economic impacts to Montana.

Montana Weeds to Web – 6.011

Jim Lynch is the champion for this research topic.

This proposal was removed from the solicitation process, because the submitter needs a commitment by February 15, 2006 in order to apply for additional funds. Director Jim Lynch and Deputy Director Jim Currie would like to commit \$250,000.00 to this effort.

The overarching propose of the Montana Weeds to Web proposal is to provide Montana citizens and state agencies with advanced geospatial data, state-wide data access, and built-in tools to utilize these powerful informational resources. Implementation of this broad vision requires an initial stage that can focus on demonstrating the vigor and potential of these utilities with real data and scenarios. Weed management was selected as the initial focus topic because of the number and diversity of stakeholders and the significant economic impacts and risks. However, this technology has a number of uses, including but not limited to: measurements of turbidity and pollutants, pavement oxidation, and beetle infestation.

Sandy suggested this research be brought to the IT Governance Board (ITGB).

John Blacker made a motion to contribute \$250,000.00. Sandy Straehl seconded the motion. All present voted in favor of the motion.

Sue will set up a technical panel. RRC members should send names to Sue.

Disparity/Availability Study – 6.010

Leslie Wootan is the champion for this research topic.

This proposal was removed from the solicitation process for immediate consideration by the RRC as it is an unfunded mandate that all State DOT's within the 9th Federal Judicial Circuit (Montana is part of this Circuit) immediately address the use of race conscious goals within their DBE Program.

Research proposed would be statewide availability study spanning a minimum of three years, including anecdotal evidence.

Sandy Straehl made a motion to move this project forward to a technical panel. Jim Currie seconded the motion. All present voted in favor of the motion

RRC members should send technical panel member names to Sue.

Evaluation of the Superpave Volumetric Specification – 6.008

Scott Barnes and Bob Weber are the champions for this research topic.

MDT has implemented the volumetric incentive system for Superpave Grade S plant mix. The Materials Bureau would like to determine how it has affected the quality and performance of the product, and the bid price.

It was recommended to also investigate disincentives and to add a contractor to the technical panel if this topic moves forward.

Roadway Design – Computerized 3 Dimensional Highway Design and Modeling – 6.006

Mick Brown is the champion for this topic.

MDT construction contracts are being awarded to contractors who are either currently using machine control or are planning to use machine control in the future. The problem is that once the 3d model is generated, the approved plans, requiring a signature of the P.E. that's responsible and liable for the design, can be set aside and may have little influence on the construction leaving no quality control or oversight by the P.E. MDT could be exposed to considerable economic risk by any errors or omissions introduced to these 3d models. The focus of this research should be on the use and quality control of 3d modeling done by the contractor and/or creation of 3d models by MDT.

If this project moves forward, it was suggested that someone from ISD and EISS be placed on the technical panel.

Traffic Codes and Adjudication in Indian Country – 6.004

This proposal was removed from the solicitation process as there is another mechanism already in place to gather traffic codes used on the Reservations.

2. Department/Division Hot Topics – RRC Members Roundtable Discussion

Jim Lynch – We need to determine if there is a better method for setting speed limits on Montana's highways. Are variable speed limits a possibility?

Jim Lynch suggested a literature survey on more effective and different ways to market what we are about.

Jim Currie – Jim Currie noted that WTI received a growth in their funding with the new highway bill, and are interested in collaborating on projects with MDT.

Jim also wants to form a Department-wide ITS committee, so that MDT can be more innovative and proactive implementing ITS solutions. This topic will be taken to the ITGB.

Drew Livesay – Motor Carriers Service inherited the Motor Vehicle Safety Program October 1, 2005 from the Montana Highway Patrol. A certification process needs to be in place by 2007.

Sandy Straehl – Planning is in the process of changing how it does business by moving to corridor planning versus system and urban planning. Also, Planning is redesigning the transit delivery programs. Finally, Planning is part of a Department-wide team working on a comprehensive safety plan.

Larry Flynn – Currently, ISD is waiting for a Legislative Audit report on ITSD. Also, ISD is working on a needs analysis of GIS requirements.

John Blacker – Maintenance is expanding its composting project for road kills. There is a need to evaluate the efficiency and effectiveness (i.e., chronic wasting disease) of road kill composting. Also, Maintenance is currently testing about a dozen different winter maintenance chemicals at various locations throughout the state. Maintenance built a new brining operation in Whitefish and is testing salt brine in Kalispell. Finally, the use of electronic signs has increased throughout the state both on our highways and in our communities. How much can a driver read and what are the safety issues involved?

Monte Brown – The Fuel Tax Evasion research project is nearing completion. Integration of resource and financial planning is an ongoing issue. The USDOT needs to have a standardized set of rules and process for federal grants. Finally, transportation funding, including innovative funding, is always an issue.

Debbie Alke – More data needs to be collected for the Air Service research project as the industry is in a period of rapid change. Fuel tax is also an issue with Aeronautics. Finally, Aeronautics is working on a five-year capital improvement program.

Bob Burkhardt – MPO's need to discuss planning issues. Sandy indicated there is quite a bit of research on MPO structures. A literature search might be useful to pull this information together.

Priscilla Sinclair – Native American driver issues need to be addressed. Law enforcement equipment and overtime pay has been provided by Traffic Safety.

Jeff Ebert – The Districts are experiencing growth issues. MDT is having to fund traffic signals as a result of development. A synthesis of practice on this issue may be useful. The effectiveness of speed sign trailer signs are being evaluated through an experimental project.

3. **Budget Report** – No comments

4. **Research Project – current listing**

4a. **Developing a One-Stop Shop for Public/Specialized Transportation Information in Montana** (05.013) – Request for Approval-in-Concept

Tom Steyaert/Rail, Transit, and Planning Division met with the RRC to ask for an approval-in-concept so that an RFP can be issued.

Transportation is an essential service vital for keeping people connected with their community. Individuals need to get to jobs, medical facilities, and to access education, social services, and other related information. Integrating transportation information into a one-stop shop program, and other info-portals such as the Internet, 2-1-1 and/or 5-1-1 system will allow better access to transportation information needed by the public.

The purpose of this proposed project is to determine the most efficient and effective means to make transportation information accessible to the public.

Debbie Alke made a motion to proceed with this project. Monte Brown seconded the motion. The motion carried. Jim Currie abstained from voting, as he was not present during the discussion.

5. **Reports: Available Upon Request**

5a. **Evaluation of Organic Matter Addition and Incorporation on Steep Cut Slopes: Phase II** (98.019) – Progress Report – September 2005

5b. **Evaluation of Wildlife Crossing Structures on US Highway 93 Evaro to Polson: Phase I** – Progress Report – October 2005

5c. **The Association between Landscape Features and Transportation Corridors on Movements and Habitat-Use Patterns of Wolverines** – Progress Report – October 2005

5d. **Potential Effects of Highway Mortality and Habitat Fragmentation on a Population of Painted Turtles in Montana** – Progress Report – October 2005

5e. **Bozeman Pass Wildlife Channelization ITS Project** – Progress Reports – October and November 2005

5f. **Preventative Maintenance Treatments: A Synthesis of Highway Practice** – Progress Reports – September, October, and November 2005

5g. **Ride Specification Review** (03.002) – Progress Reports – September, October, and November 2005

5h. **Performance Prediction Models (98.003)** – Progress Report – October 2005

5i. **Field Evaluation of the Performance of Three Concrete Bridge Decks on Montana Route 243** – Progress Report – September 2005

5j. **Evaluation of Methods for Estimation of Bridge-Pier Scour for Streams with Coarse Bed Materials Based on Observed Pier Scour in Montana** – Progress Report – December 2005

5k. **Montana Local Technical Assistance Program** – Progress Report – September 2005

5l. **Warm Water Species Fish Passage in Eastern Montana Culverts** – Progress Report – December 2005

5m. **Fish Passage in Montana Culvert: Phase II Passage Goals** – December 2005

5n. **Effects of Defensive Vehicle Handling Training on Novice Driver Safety: Phase 1 Preparation for Advanced Driving Training** – Final Report – FHWA/MT-05-012/8183-001

5o. **Research, Development, and Technology Transfer Guidelines for the Montana Department of Transportation** – Final Report – FHWA/MT-05-006/8010-2

6. **Contract Extensions:** None

7. **Proposals:**

7a. **Axial Capacity of Piles Supported on Intermediate Geomaterials**

Brian Collins/Materials Bureau attended the meeting to discuss this proposal.

Most bridge foundations in eastern Montana are built on intermediate Geomaterials. The axial capacity, driving resistance, and long-term resistance of piles driven into these materials are not well established.

The primary objective of this study will be to develop empirically based guidelines for analysis and design of piles driven into intermediate Geomaterials.

Sandy Straehl made a motion to fund this project in the amount of \$40,041.00 (\$25,896.00 MDT and \$16,144.00 WTI). Jeff Ebert seconded the motion. The motion passed with all present voting in favor of the motion.

8. **Implementation/Technology Transfer:** None

9. MDT/WTI Partnering Working Groups

MDT and WTI staff met recently to discuss potential collaborative projects. The consensus was to form working groups for nine focus areas: Safety and Operations, Weather and Winter Maintenance, Road Ecology, Infrastructure Design and Materials, Systems Engineering Development & Integration, Mobility & Public Transportation, Logistics and Freight Management, Transportation Planning and Economics, and Education.

Vickie Murphy asked the RRC to recommend working group participants, and assign a chair to each.

Working groups will be formed and meetings will be scheduled. Progress will be reported to the RRC every three months.

cc: Craig L. Abernathy/Research Programs
Suzy Althof/Contract Plans Bureau
Kent M. Barnes, P.E./Bridge Bureau
Bruce H. Barrett/District Administrator-Billings
Lisa Durbin/Construction Administration-Bureau
Paul R. Ferry, P.E./Highways Bureau
John Horton/Right-of-Way Bureau
Paul Jagoda, P.E./Construction Engineering Bureau
Jennifer Jensen/Human Resources Division
Michael P. Johnson/District Administrator-Great Falls
Dwane Kailey, P.E./District Administrator-Missoula
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Victoria A. Murphy, CPA, CFE/Highway and Engineering Division
Jeanne Nydegger/Research Programs
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Jean A. Riley, P.E./Environmental Services Bureau
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