

## 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  
Dick Clark, Administrator/Information Services Division  
Jim Currie, Deputy Director/Department of Transportation  
Jeffery M. Ebert, P.E./District Administrator-Butte  
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: September 27, 2005

Subject: Summary of Minutes from August 30, 2005 RRC Meeting

The following RRC members were present: Debbie Alke, Monte Brown, Bob Burkhardt, Dick Clark, Jeff Ebert, Drew Livesay, Priscilla Sinclair, and Bill Cloud (for Sandy Straehl).

1. **Budget Report** – No discussion
2. **Research Project – current listing** – No discussion
3. **Reports:** Available Upon Request
  - 3a. *The Association Between Landscape Features and Transportation Corridors on Movements and Habitat-Use Patterns of Lynx and Wolverines* – Progress Reports – April and July 2005
  - 3b. *Effects of Defensive Vehicle Handling Training on Novice Driver Safety. Phase 1: Preparation for Advanced Driver Training* – Progress Report – April 2005
  - 3c. *Determine the Current Rates of Motor Fuel Tax Evasion in Montana* (03.013) – Progress Reports – April, June, and July 2005
  - 3d. **LTAP** – Progress Reports – April and July 2005

3e. *Pavement Performance Prediction Models* (98.003) – Progress Reports – April, May, June, and July 2005

3f. *Ride Specification Review* (03.003) – Progress Reports – May, June, and July 2005

3g. *Preventive Maintenance Treatments: A Synthesis of Highway Practice* – Progress Reports – June and July 2005

3h. *Evaluation of Organic Matter Addition and Incorporation on Steep Cut Slopes* – Progress Reports – April and July 2005

3i. *Potential Effects of Highway Mortality and Habitat Fragmentation on a Population of Painted Turtles in Montana* – Progress Reports – April and July 2005

3j. *Evaluation of Wildlife Crossing Structures on US Highway 93 Evaro to Polson – Phase I* – Progress Report – July 2005

3k. *Fish Passage in Montana Culverts Phase II – Passage Goals* – Progress Report – July 2005

3l. *Warm Water Species Fish Passage in Eastern Montana Culverts* – Progress Report – July 2005

3m. *Development of High-Performance Concrete Mixtures for Durable Bridge Decks in Montana Using Locally Available Materials* – Final Report and Project Summary - FHWA/MT-05-005/8156-03

3n. *Montana Highway Reconfiguration Study* – Final Report and Project Summary – FHWA/MT-05-003/8164

4. **Contract Extensions:** None

5. **Proposals:**

5a. *Extending the Season for Concrete Construction and Repair* - Pooled Fund Study

Mac McArthur/Construction Engineering Service Bureau attended the meeting to discuss Phase III of this proposal.

MDT is very interested in Phase III of this pooled-fund study. The information from Phase I provided tools to design, mix, place, and cure concrete in below-freezing weather. Phase II used the results of Phase I to define other benefits of using off-the-shelf concrete admixtures that included enhanced durability and thermal safety. The purpose of Phase III is to develop criteria that will optimize mixture design and economize materials costs. The results of this research will be useful to MDT.

Debbie Alke made a motion to commit \$10,000.00 to this project. Monte Brown seconded the motion. The motion passed.

***5b. Comparative Analysis of Coarse Surfacing Aggregate Using the Micro-Deval, L.A. Abrasion, and Sulfate Soundness Tests***

Mike Lynch/Materials Bureau attended the meeting to discuss this project.

The primary objective of this study is to determine whether the Micro-Deval Test can be used to replace the Sulfate Soundness Test.

The toughness and durability of selected aggregates from Montana will be characterized using the L.A. Abrasion, Sulfate Soundness, and Micro-Deval Tests. Comparisons will be made between the results to determine the applicability of using the Micro-Deval test procedure to characterize coarse surfacing aggregates in Montana.

If this project is successful, the Micro-Deval Test will provide a more cost-effective and reliable means to characterize the toughness and durability of Montana's aggregates.

Dick Clark made a motion to fund this MPART Small Project for \$17,784.00. Drew Livesay seconded the motion. The motion passed.

***5c. OJT Program Evaluation***

Jim Phillips/Civil Rights Bureau attended the meeting to discuss this proposal.

The Montana Department of Transportation needs information about the experiences of trainees in the MDT On-the-Job-Training (OJT) Program. Obtaining this information is an important step in MDT's process of monitoring the quality of the OJT program, and will enable MDT to report this information to the Federal Highway Administration and to the contracting community. Bureau of Business and Economic Research (BBER) at The University of Montana-Missoula proposes administering surveys of individuals involved with the OJT process to gather this information.

Dick Clark made a motion to fund this project for \$18,315.00. Monte Brown seconded the motion. The motion passed.

***5d. Research Process Evaluation***

Sue Sillick/ Research Manager presented this proposal, requested at the March 2005 meeting by Jim Currie.

The Montana Department of Transportation needs information about the research solicitation, prioritization, and selection processes used by peer Departments of Transportation from around the United States. Obtaining this information is an important step in MDT's process of maintaining and improving the quality of its research processes.

Bureau of Business and Economic Research (BBER) at The University of Montana-Missoula proposes reviewing the web sites and hard copy publications of MDT's peer research organizations, conducting a web-based survey with key research staff in MDT's peer organizations, conducting in-depth interviews with selected key informants from MDT's peer organizations, and conducting in-depth interviews with selected key informants from within MDT to gather this information.

Jeff Ebert moved to fund this project for \$23,351.00. Monte Brown seconded the motion. The motion passed.

**5e. *Technology Transfer Toolbox* – Pooled Fund Study**

Sue Sillick/Research Manager presented this proposal to the RRC.

The main objective of this project is to develop an application-oriented, results-driven Interactive Systematic Approach to support the implementation of research results. This will be accomplished through the development of an Implementation Planning tool, which will include 4 modules (implementation plan module, marketing module, executive briefing module, and scheduling/tracking module).

Debbie Alke moved to fund Phase I of this project for \$20,000.00. Jeff Ebert seconded the motion. The motion passed.

**5f. *Dynamic Passive Pressure on Abutments and Pile Caps* – Pooled Fund Study**

Kent Barnes and Dave Johnson/Bridge Bureau attended the meeting to discuss this proposal.

Kent started off his presentation by showing the RRC anchor bolts from a bridge near Dillon that were recently sheared-off during an earthquake, noting that Montana is one of four major earthquake areas in the United States. Therefore, Montana needs to come up with a product that will help MDT be prepared to ward off serious bridge damage in the event a major earthquake.

The objectives of this proposal are to: 1) Develop passive force-deflection relationships for static and dynamic loads; 2) Measure damping coefficients for pile caps and back fills as a function of displacement; 3) Determine the effect of pile cap connection details on abutment stiffness; and 4) Evaluate existing design to recommendations and develop modifications to improve prediction of measured response.

Monte Brown moved that funds totaling \$30,000.00 (\$10,000.00 per year for three years) be allocated to this pooled-fund study. Dick Clark seconded the motion. The motion passed.

**6. Implementation/Technology Transfer:**

***6a. Development of High-Performance Concrete Mixtures for Durable Bridge Decks in Montana Using Locally Available Materials***

Kent Barnes/Bridge Bureau gave a presentation on this research.

Fourteen new mix designs were tested using locally available material. The results of this research have given the Department the ability to set new specification standards.

A new Specification Committee will be meeting within two weeks to begin addressing how MDT may conform to these proposed specifications. The Bridge Bureau will be the lead and will keep the Montana Contractors Association in the loop.

Being no further business the meeting adjourned.

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  
Ray Mengel/District Administrator-Glendive  
Victoria A. Murphy, CPA, CFE/Highway and Engineering Division  
Jeanne Nydegger/Research Programs  
Timothy W. Reardon/Legal Services  
Jean A. Riley, P.E./Environmental Services Bureau  
Matt Strizich, P.E./Materials Bureau  
James A. Walther, P.E./Highways and Engineering Division  
Duane E. Williams, P.E./Traffic & Safety Bureau  
Mark A. Wissinger, P.E./Highways and Engineering Division  
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