

MEMORANDUM

To: RRC Members  
Steve Albert/WTI  
Debbie Alke, Administrator/Aeronautics Division  
Mike Bousliman, Administrator/Information Services Division  
Jeffery M. Ebert, P.E./District Administrator-Butte  
Larry Flynn, Administrator/Administration Division  
Dwane Kailey, Administrator/Highways and Engineering Division  
Bob Seliskar/FHWA  
Jerry Stephens, P.E./WTI MSU  
Jon Swartz, Administrator/Maintenance Division  
Mike Tooley/Director  
Duane Williams, Administrator/Motor Carrier Services Division  
Pat Wise/Deputy Director  
Lynn Zanto, Administrator/Rail, Transit, and Planning Division

From: Susan C. Sillick, Manager  
Research Programs

Date: July 2, 2013

Subject: 5/29/2013 RRC Meeting Notes

**RRC Members Present:** Steve Albert, Debbie Alke, Jeff Ebert, Dwane Kailey, Sue Sillick, Jerry Stephens, Jon Swartz, Duane Williams, Pat Wise, and Lynn Zanto.

**Other Attendees:** Craig Abernathy, Rob Ament/WTI, Danielle Bolan, Katy Callon, Kris Christensen, Mike Dyrdaahl, Dave Hand, Phil Johnson, Justun Juelfs, Holly Leckie/Research Intern, Doug McBroom, Kraig McLeod, and Roy Peterson.

**1. Solicitation**

Sue Sillick explained that the champions for each of the above potential research projects will discuss their project. After which, the RRC and DAs will vote as to whether to move each project forward to a technical panel for further investigation. Sue also noted no funds are being approved with this vote. Finally, Sue presented a spreadsheet listing all 26 research ideas submitted during the 2013 solicitation, including those that did not have a champion and/or sponsor and were not moved forward to the RRC during this meeting.

SUBJECT AREA	PROB NO.	PROBLEM TITLE	CHAMPION
Traffic/Safety	13-002	Safety Impact of Differential Speed Limits on Rural 2-Lane Highways in Montana	Kraig McLeod/ Roy Peterson
Traffic/Safety	13-006	Speed Limits Set Lower than Engineering Recommendations	Danielle Bolan/ Roy Peterson
Environmental	13-008	Testing Woolen "Made in Montana" Roadside Reclamation Products	Phil Johnson
Traffic/Safety	13-010	Special Event Traffic	Danielle Bolan/ Roy Peterson
Planning	13-021	Moving Ahead for Progress in the 21st Century Act (MAP 21): The Primary National Freight Network and Its Relationship to State Systems and Needs	Doug McBroom

**[13-002: Safety Impact of Differential Speed Limits on Rural 2-Lane Highways in Montana](#)**

Kraig McLeod was present to discuss this research topic. He indicated no research has been found on the safety impacts of differential speed limits on 2-lane facilities, especially those with limited passing opportunities. In addition, Kraig reported over 33% of all deaths on Montana’s highways in 2012 listed speed as a contributing factor. Also, several highway safety studies identified speed differential as a safety concern where platoons of cars were queued behind commercial vehicles. The purpose of this research is to evaluate the safety impacts of a statutory speed differential on higher volume rural 2-lane roadways.

Duane Williams and Steve Albert asked about how this study would be conducted and what data might be used in the study. Kraig agreed it will be difficult to accomplish and indicated some of the data used in this project would be accident, ADT, and % trucks, with corridor comparisons. In addition, the project will include a query to other states.

Dwane Kailey made a motion to move this research topic forward to the technical panel stage. Duane seconded the motion. All RRC members and District Administrators present voted in favor of the motion; the motion passed.

**[13-006: Speed Limits Set Lower than Engineering Recommendations](#)**

Danielle Bolan was present to discuss this research topic. Danielle stated that across the state, there are various speed limits set lower than the engineering recommendations, where we do not receive voluntary compliance. Danielle stated Traffic Engineering would like to know the: (1) level of enforcement required to obtain compliance and (2) effect this lack of compliance has on crashes in terms of the number of accidents and the crash severity.

Dwane also stated we do not know if we have an increase in risk and liability.

Dwane indicated this has been happening for a long time and it is good to focus on enforcement. Steve Albert asked if the lower speed limit is due to dynamic conditions, such as weather and stated Wyoming changes the speed limits based on weather conditions. Dwane indicated there is the perception of safety issues for the public and wildlife. Rob Ament added in some places speed limits are reduced in wildlife corridors in Colorado.

Jeff Ebert made a motion to move this research topic forward to the technical panel stage. Dwane seconded the motion. All RRC members and District Administrators present voted in favor of the motion; the motion passed.

### **13-008: Testing Woolen "Made in Montana" Roadside Reclamation Products**

Phil Johnson was present to discuss this research topic. Brookside Woolen Mill of Malta, MT produces wool matting, batting, and soil-seed packets from wool rejected by clothing mills. Phil would like to test these green, locally-available materials to determine their effectiveness for roadside reclamation materials in erosion control, soil retention, and vegetation establishment. These made-in-Montana woolen fiber materials may be stronger and store more moisture than the standard coconut-straw mats and other synthetic petroleum-based materials. They can be placed where synthetic materials are not allowed, such as a separation material placed under riprap. In addition, these materials can act as a pool for the slow release on fertilizer and can absorb oil.

Jeff made a motion to move this research topic forward to the technical panel stage. Debbie Alke seconded the motion. All RRC members and District Administrators present voted in favor of the motion; the motion passed.

### **13-010: Special Event Traffic**

Danielle Bolan was present to discuss this research topic. Non-recurring congestion occurs, overloading local transportation networks, when special event attendees arrive and then leave these special events. The purpose of this project is to document best practices for handling special event traffic at the MetraPark in Billings, MSU in Bozeman, and UM in Missoula. Limited traffic management strategies have been employed; however, a coordinated effort needs to occur to maximize benefit. Factors to consider include: signal timing, adaptive traffic control, traffic safety requirements, and coordinated implementation, with as much automation as possible.

Steve indicated implementation should go beyond traffic signals, including a public education campaign which will require interagency collaboration. He also stated WTI developed a plan for MSU.

Dwane made a motion to move this research topic forward to the technical panel stage. Jon Swartz seconded the motion. All RRC members and District Administrators present voted in favor of the motion; the motion passed.

**13-021: Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21): The Primary National Freight Network and its Relationship to state Systems and Needs**

Doug McBroom was present to discuss this research topic. By identifying freight needs, issues, and data gaps, particularly with respect to military transportation systems, ports of entry and border crossings, existence of recent road projects currently underway in Montana, and trends in commodity growth (including energy extraction and processing), MDT will be positioned to participate in the development of the national Rural Freight Network for the next highway funding bill.

Dwane stated Montana serves as a pass-through state for freight, but not as a large producer of freight. Doug responded that it can be difficult to determine the content of the freight that does pass through Montana, but this is a part of the research. Doug also stated the two Multistate Corridor Operations and Management (MCOM) Programs grants MDT received will dovetail nicely with this research.

Dwane made a motion to move this research topic forward to the technical panel stage. Duane seconded the motion. All RRC members and District Administrators present voted in favor of the motion; the motion passed.

2. **Budget Report:** Attached

No discussion.

3. **Research Projects – current listing:** Attached

- a. **Montana Weigh-in-Motion (WIM) and Automated Traffic Recorder (ATR) Strategy** project update

Sue informed the RRC this project was approved via e-mail ballot. The contract is signed and the kick-off meeting will be held on June 6, 2013.

4. **Reports:** Available on Research [website](#)

No discussion.

- a. **Assessing the Extent and Determinates of Induced Growth** (10-016) – Tasks 7 and 8 Reports
- b. **Evaluation of Wildlife Vehicle Collisions and Habitat Connectivity in the Madison Valley** (11-007) – January and April 2013 Progress Report
- c. **Impacts to Montana State Highways Due to Bakken Oil Development** – Final Report
- d. **Montana Rest Area Use: Data Acquisition and Estimation** – Performance Measures Report
- e. **Peer-to-Peer Traffic Safety Campaign Program** (11-009) – January and April 2013 Progress Reports
- f. **Performance of Steel Pipe Pile to Concrete Bent Cap Connections Subjected to Seismic Loading or High Transverse Loading** – Final, Project Summary, Implementation, and Performance Measures Reports

- g. [Re-evaluation of Montana's Air Quality Program](#) (11-006) – Task 6 Report
- h. [Relative Operational Performance of Geosynthetics Used as Subgrade Stabilization](#) (10-008) – Task 2 and February 2013 Quarterly Progress Reports
- i. [US 93 N Post Construction Wildlife Vehicle Collision and Wildlife Crossing Monitoring and Research](#) - 2012 Annual Report and January 2013 Progress Report
- j. [US 93 S Wildlife Structure Monitoring](#) (04-016) – 2012 Annual Report
- k. [LTAP](#)- January and April 2013 Progress Reports
- l. [Information/Educational Campaign for Roundabouts](#) (12-0023)- April 2013 Progress Report
- m. [Recycling Recovered Traction Sanding Material](#) (09.008)- Final and Implementation Reports

5. **Proposals:** Attached

a. [2013-14 Local Technical Assistance Program](#)

Jerry Stephens was present to discuss the LTAP proposal and request funding for FFY 2013 and SFY 2014. LTAP is a federally program that supports local transportation agencies with training, technology transfer, library materials, etc. Jerry highlighted the four federally-mandated focus areas for LTAP and the percent of effort in each of these areas: safety (48%), Workforce Development (22%), Infrastructure Management (18%), and Organizational Excellence (12%). He also highlighted a graphic showing training across the state for the current year's program. Funding is as follows: \$150,000 federal, \$100,000 state gas tax, and \$80,000 SPR, with the \$80,000 up for approval by the RRC today.

Lynn Zanto commented that LTAP has been helpful in establishing pavement management systems in urban areas; she asked Jerry to pass this information back to Steve Jenkins at LTAP and mentioned the three new urban areas (Hamilton, Columbia Falls, and Glendive) may need training.

Dwane asked if LTAP was getting enough input from local entities with regards to needs. Jerry responded in the affirmative.

Jon made a motion to approve the LTAP proposal and \$80,000 in SPR funding. Lynn seconded the motion. All RRC members present voted in favor of the motion; the motion passed.

b. [Transportation Learning Network \(TLN\) Pooled-Fund Study](#)

Dwane was present to request funding for this pooled-fund study, which is a coalition of upper Great Plains states who share training, including graduate level courses, and conduct technology transfer activities through distance learning. Current participants include ND, SD, and WY. MDT had previously funded this program, but was not entirely satisfied and discontinued funding for a while. Dwane indicated the Engineering Division has taken another look at it and feel that the previous issues have been resolved. Dwane requested two years of funding at \$117,000 per year. After which, program benefits and further participation will be evaluated. All participating states contribute the same amount

annually. Dwane also shared that in any given year, funds that are not spent are sent back to the individual states.

Lynn made a motion to fund TLN at \$117,000 per year for two years. Jon seconded the motion. All RRC members present voted in favor of the motion; the motion passed.

**6. Implementation/Technology Transfer/Performance Measures**

a. **[Impacts to Montana State Highways Due to Bakken Oil Development Final Report](#)**

Doug McBroom was present to discuss this project. The Upper Great Plains Transportation Institute (UGPTI) at North Dakota State University (NDSU) conducted this study; they had previously conducted a similar study for NDDOT. NDSU developed a detailed regional truck traffic forecasting model and routable network. There has been a tremendous increase in the truck traffic in eastern Montana and this increase is expected to continue long into the future. Trucks are needed to transport water both in and out of the development area (four barrels of water are removed for every barrel of oil), sand, rig components, oil, etc. From NDSU's work, MDT calculated the infrastructure needs due to oil development at \$52 M per year for 20 years, with AADT almost doubling on some roads. All related materials (e.g., planning corridor studies, research, pavement impact, etc. reports are posted to the Research web page for this project (<http://www.mdt.mt.gov/research/projects/pave/oil.shtml>).

b. **[Recycling Recovered Traction Sanding Material Final and Implementation Reports](#)**

Justun Juelfs was present to discuss this completed research. MDT collects traction sanding materials to alleviate environmental and other issues. However, MDT is running out of space to store these materials and it is costly to discard. The recovery and reuse of this material represents a potentially desirable option to reduce the quantity of landfilled materials and to conserve natural resources. The purpose of this project was to determine the practical suitability and cost-effectiveness of recycling this material. The most cost-effective recycled use is as traction sanding material, which costs about 25% of the cost as compared to using virgin material. Recycled sanding material will be tested periodically to ensure it remains within specification. Justun stated this research will make an impact and recycling is expected to begin in 2014. Justun believes this research will pay for itself and then some within this first season.

c. **[Pile Cap Performance Measures Report](#)**

This agenda item was postponed to the June 2013 RRC meeting.

d. **[Rest Area Performance Measures Report](#)**

This agenda item was postponed to the June 2013 RRC meeting.

e. **[Spring Research Newsletter](#)**

This agenda item was postponed to the June 2013 RRC meeting.

**7. Department/Division Hot Topics – RRC Members Roundtable Discussion**

No discussion due to a lack of time.

cc: Craig Abernathy/Research Section	w/attachments
Audrey Allums/Grants Bureau	
Kent M. Barnes, P.E./Bridge Bureau	
Katy Callon/Research Section	w/attachments
Kevin Christensen/Highways and Engineering Division	
Kris Christensen/Research Section	w/attachments
Ryan Dahlke, P.E./Consultant Design Bureau	
Chris Dorrington/Data and Statistics Bureau	
Lisa Durbin/Construction Administration-Bureau	
Mike Dyrdahl/Highways and Engineering Division	
Paul R. Ferry, P.E./Highways Bureau	
Paul Jagoda, P.E./Construction Engineering Bureau	
Tom Martin, P.E./Environmental Services Bureau	
Doug McBroom/Multimodal Programs Bureau	
Shane Mintz/District Administrator-Glendive	
Ed Toavs/District Administrator-Missoula	
Roy Peterson, P.E./Traffic & Safety Bureau	
Suzy Price/Contract Plans Bureau	
Jim Skinner/Planning and Policy Analysis Bureau	
Rob Stapley/Right of Way Bureau	
Stefan Streeter, P.E. /District Administrator-Billings	
Matt Strizich, P.E./Materials Bureau	
James A. Walther, P.E./Highways and Engineering Division	
Dave Hand/District Administrator-Great Falls	
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