

## RESEARCH ADVISORY COMMITTEE MEETING MINUTES

The Research Advisory Committee met in Cheyenne, Wyoming, in the Commissioner's Conference Room, on Monday, April 7, 2014. The meeting commenced at 1:00 p.m. The following members were present, constituting a quorum.

Keith Fulton, P.E., Bridge Program.  
Tim McDowell, P.E., Programming.  
Joel Meena, P.E., State Traffic Engineer.  
Martin Kidner, P.E., State Planning Engineer.  
Tory Thomas, P.E., District 3 Maintenance Engineer.  
Tony Laird, P.E., Highway Development.  
Lowell Fleenor, P.E., District 2 Engineer.

Also present at and participating during the meeting were: Mehmet E Ozbek, Ph.D., Assistant Professor, Colorado State University; Kent Ketterling, P.E., Maintenance Department; Marc Anderson, P.E., Maintenance Department; Marc Maquire, Utah State University; Paul Cortez, P.E. Bridge Department; Khaled Ksaibati, University of Wyoming; Mohammed Ahmed, University of Wyoming; and Matt Carlson, P.E., State Safety Engineer.

1. Minutes: Minutes from the January 8, 2014 RAC meeting were reviewed and changed, as per the suggestions from the RAC members. The revised minutes were approved by an e-mail vote.
2. Proposals and Updates: The following updates and proposals were heard:
  - A. **Update** Multi-Measure Performance Assessment and Benchmarking of the Divisions of the Wyoming Highway Patrol. Mehmet Ozbek.

In January 2014, Mr. Ozbek provided an interim report on this project. At that time, Mr. Ozbek believed that the project was moving forward smoothly. Unfortunately, due to the inaccuracy of some data, the project cannot be completed as proposed. Mr. Ozbek explained that the original proposal was to incorporate two (2) years worth of data (calendar year 2011 and 2012). Quality control over sight showed that citation data pulled had been attached to the trooper's current location and not to the location he/she was assigned to at the time the citation was written. In order to rectify this issue, Mr. Ozbek requested a six (6) month time extension and an additional \$29,786. Without the time extension and additional funding, Mr. Ozbek may only be able to review data from one (1) calendar year. With the extension and additional funds, Mr. Ozbek will be able to analyze the data for three (3) full calendar years (2011, 2012, and 2013). Further, the scientific integrity of the project will be maintained.

### **Discussion and questions from RAC:**

Discussion was held on the original cost of the project; how this request is less than a fifth of the original budget; and how the highway patrol and WYDOT IT department are working on cleaning the data. Mr. Ozbek did relate to the RAC that he does not place blame on anyone or any agency.

- B. **Proposal** – Developing Wyoming Specific Bridge Deterioration Models for Bridge Management. Marc Maguire, and Paul Cortez.

Paul Cortez introduced Marc Maguire and noted that the Bridge Department was in favor of this research project. Mr. Maguire introduced himself and provided the RAC with background information about his past research and his education. Mr. Maguire discussed the project deliverables, and why he chose to use the experimental process that he did. He further discussed how this project can assist the bridge department in choosing the right maintenance process for the right price in the future, and how this project could bring all the data collected in one area so that the bridge department can stream line their process even further.

#### **Discussion and questions from RAC:**

Discussion was held on how critical this project is and how it will help WYDOT in the future; how this project may allow the bridge department to forecast on the future; how the models can be used for future funding; how different preservation practices work over time; how there could be different formulas for different types of bridges – possibly regionalization; and how this project will use both deterministic and problematic studies. Mr. Maguire did mention that the results from this project would not be able to be transferred outside of Wyoming. Further discussion was held on subgroups of bridges and how many bridges would be needed for this study.

Funding Requested: \$82,973

Project Length: 24 months.

- C. **Proposal** – Safety Effectiveness of Regulatory Headlights Signs in Wyoming. Mohamed M. Ahmed, Khaled Ksaibati, Kent Ketterling and Matt Carlson.

Mr. Ketterling explained that this project comes to the RAC at the request of Executive Staff. This is a two (2) phase research project with Phase 2 representing the field research and the simulation study. The request is to have both phases funded in FY2014 so that Phase 2 could run concurrently with Phase 1. Mr. Ksaibati and Mr. Ahmed discussed the current use of the headlight signs; how the project is set up to improve safety in the high target zones; the literature review which occurred prior to addressing the proposal; the manual versus automatic initiation of daylight running lights; how other states and countries address the daylight running lights issue; the laws in Wyoming regarding the daylight running lights; and the driving simulator which will be purchased for this project. Mr. Ksaibati and Mr. Ahmed also discussed the statewide implementation policies and the cost benefit plan. Using the simulator, the researchers will be able to look at sign spacing, weather, environmental factors and other issues in a safe environment. After Phase 1 is complete, the researchers shall provide WYDOT with a final report. Phase 2 will have its own report.

#### **Discussion and questions from RAC:**

Discussion was held on the different types of signs – color, shape, size and wording; how the signs could be set up and how they are placed now; whether there are any simulation labs in the area; how the simulator will allow for safety research in the future; how the simulator could be used to train commercial truck drivers in Wyoming; on hotspot identification and how new construction may hinder the reliability of some data gathered in the past; cost effectiveness and analysis of crashes; how to separate seat belt data from lights-on data; and additional instrumentation equipment and who will pay for it. Mr. Meena mentioned that additional instrumentation equipment costs will come from the safety department at WYDOT.

Funding Requested: \$194,167

Project Length: 60 months

## **BREAK**

### **3. Discussion on Research Library**

Ms. White provided a short presentation on the research library; the digital parts of the library; where final reports are housed on the WYDOT website; the new research area in the WYDOT webpage; and the access database.

### **4. Discussion on Funding**

Ms. White provided detailed information about the funding needed for each report and why full funding needs to come out of the FY2014 budget. It was moved by Mr. Kidner and seconded by Mr. Laird to fully fund the *Developing Wyoming Specific Bridge Deterioration Models for Bridge Management* project. Discussion was held on whether there was enough money built in the proposed budget for this project; and on where the tuition money for the grad students would come from. By a vote of 6 to 1, the motion passed.

It was moved by Mr. Fleenor and seconded by Mr. McDowell that the *Multi-Measure Performance Assessment and Benchmarking of the Divisions of the Wyoming Highway Patrol* project should be granted a six (6) month extension, and should receive the addition funding. Discussion was held on the time already put into this project; why the study was being performed in the first place; and how the RAC is a little handicapped because most members were not around when the study was originally proposed. Further discussion was held on the need for the time extension for statistical viability. By a vote of 5 to 2, the motion passed.

Discussion was held on the *Safety Effectiveness of Regulatory Headlights Signs in Wyoming* study and whether it could be funded in two (2) phases (Phase 1 in FY2014 and Phase 2 in FY2015); on the executive staff's request for the study; on the existing signage and crashes; and on whether this study could be partially funded with the research funding and other internal funds – specifically from funding from the safety and/or maintenance divisions. It was moved by Mr. Meena and seconded by Mr. Thomas that this project should be funded as follows: Any funds remaining in the research budget after funding the above two (2) projects shall go to this project; internal funds shall be used for the shortfall so that this project is fully funded. By a vote of 5 to 2 this motion was defeated.

### **5. Scoring Sheets**

Discussion was held on the scoring sheets; the points and the weighted scale; and how the proposal should match the scoring sheets. Ms. White explained the mitigating factors and the different areas in the scoring sheets. It was decided that that scoring sheets would be reworked.

It was moved by Mr. McDowell and seconded by Mr. Thomas that the meeting should be adjourned. The next meeting is scheduled for **Wednesday, July 9, 2014, at 9:00 p.m., in Cheyenne.**