



Research Progress Report

For Quarter Ending March 31, 2008

Today's Date

04/08/2008

Project Number		Project Title	
RT63		189.Smart Work Zone Deployment Initiative Administration	
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Percent of Dollars Paid	Dollars Allocated	Dollars Paid	Percent Project Completion
9	33,026.00	3,060.13	25
Original Project Start Date		Original Project End Date	Current Completion Date
01/01/2008		12/31/2008	
DESCRIPTION OF RESEARCH		Start Date of Task	Original Completion Date
Task Title		Completion Date	
Vendor solicitation		01/02/2008	03/20/2008
Dist group reports		01/02/2008	
Maintain website		01/02/2008	
TAC meetings		01/02/2008	
Maintain research rpt		01/02/2008	
Recommend rsch reimb		01/02/2008	
Solicit state partici		01/02/2008	
Inquiry contact		01/02/2008	



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TAC Meeting Dates	TAC Meeting Dates	TAC Meeting Dates	TAC Meeting Dates	TAC Meeting Dates	TAC Meeting Dates
05/02/2007					

Primary Investigator Concerns, Problems, Needs or No-Cost Extension Requests

None



Project Progress to Date and other pertinent information

Problem statements have been solicited, RFPs distributed, and proposals received for the 2008 program year. Work continues on past programs, one project from 2006 has been completed and distributed to the BOD for review and comment.

Status of Projects Under Contract, Not Yet Completed

2005 Program

#08588 Freeway Work Zone Lane Capacity: Microsimulation ☐ Horowitz

**Obtained 53 full documents, 15 abstracts, and 22 citations related to work zone capacity and microsimulation of freeway work zones. Shared these documents with Marquette.

*Completed our part of task #2 (with Marquette).

*Successfully compiled CORSIM, as intended.

Put in a request to Marquette for additional data analysis.

Continued with building simulations and doing sensitivity analysis. Finished draft final report.

08591 Freeway Work Zone Lane Capacity ☐ Drakopoulos

Additional work zone identified and analyzed. Work on upstream demand and diversion, comparison with normal traffic conditions, delay calculation, heavy vehicle influence, and comparison between work zones is underway.

2006 Program

09010 Evaluation of the Early Merge Left Concept ☐ ☐ Schrock

Video data reduction and analysis has been completed. Work on the final report has begun.

09011 Development of Guidelines for the Use of Multiple Arrow Panels in Short Term, Short Duration, and Mobile Work Zones ☐ ☐ ☐ Schrock

Dr. Weichao Wang was also a Co-PI for this research. His contact information is:

Project complete

09012 Evaluation of Rapid Deployment Mesh Networking for Work Zones ☐ Schrock

Dr. Weichao Wang is also a co-pi for this research. His contact information is at UNC-Charlotte.

Data analysis has been completed. Final report preparation is underway

Smart Work Zone Forecasting ☐ Hans

The project is currently inactive but may resume next quarter. Iowa DOT staff anticipate at least one or two projects this construction season that they may want evaluated and/or monitored.

2007 Program

09778 Identification of Work Zone Crash Characteristics ☐ Dissanyake

Crash data from all five states included in the smart work zone pooled fund study has been collected, the last from

Subject SWZDI Administration

Keywords



Project Progress to Date and other pertinent information

Missouri. Two research assistants are currently working on the project analyzing work zone data. General characteristics are being studied currently for all five states

09773 Evaluation of Technology Enhanced Flagger ☐ Schrock

Progress has been slow due to unexpected slow delivery of equipment for evaluation from vendors.

It is now likely that the focus groups will need to take place after the end of the spring semester, likely in early June. In order to still complete the remaining research tasks such as field trials at actual work zones, I am requesting an extension of this project until October 31, 2008. This will allow time to complete the field work during the summer and prepare the final report in the early fall

09809 Evaluation of Work Zone Speed Limits ☐ Bham

- A web-based survey of state DOTs was conducted. The survey consisted of 13 questions related to the regulatory speed limits used in work zones. To date, 27 states have responded to the survey.
- The study team, working in coordination with MoDOT has identified a work zone site on Highway 63 in Moberly, MO to test the different speed limit configurations. The team attend the pre-construction conference meetings with the contractor where it was decided to collect data at the end of May 2008.
- In preparation for the data collection effort, the study team has been testing the different data collection units - POST video surveillance system, traffic sensors, and speed gun.

09810 Synthesis and Evaluation of Markings for Truck-Mounted Attenuators ☐ Bham

A web-based survey of state DOTs was conducted. The survey consisted of 22 questions related to the use of truck mounted attenuators (TMAs) in work zones. Up to now 26 states have responded to the survey. The study team intends to send final reminders and place phone calls as necessary to increase the response rate. The driving simulator has been set up for testing of subjects and determining their perception of the patterns and colors used with the TMAs. Currently we are working on the setup of driving during day and night time conditions and plan to collect data at the end of April. Four and six lane highway conditions have been designed and TMA trucks have been set up. The subjects will be tested for driving through 6 and 4 lane highways. To include different age groups, we plan to collect additional driving simulator data during summer and fall of 2008.

09811 ☐ Development of Missouri Work Zone Capacity Guidelines ☐ Bham

- A survey questionnaire has been developed and will be deployed in the summer after the closure of two other surveys.
- Additional literature review on how states determine the capacities at work zone sites has been conducted
- Study site requirements for carrying out the field study have been submitted to MoDOT

The on going tasks are the literature review, evaluation of equipment for data collection, data collection requirements, and definition of capacity for work zone operations. We are also developing a questionnaire for survey of state DOTs regarding capacity guidelines. Also working with MoDOT to select sites for data collection. Mr. Dan Smith has suggested a probable site for data collection in the fall of 2008. Additional sites will be selected as planned.

Feasibility of Visualization

Strong

Work on this project is essentially complete and the final report should be issued soon.

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Project Progress to Date and other pertinent information

Synthesis of Work Zone Calming Hallmark

Gathering of data has been completed and a draft final report will be available in the near future.

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Keywords

For questions, please contact Ed Engle at (515) 239-1382, or at edward.engele@dot.iowa.gov.