

**State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: MARCH 31, 2008**

Program: SPR-0010(36) FFY99	Part: II Research and Development
Project Title: An Asset Management Approach for Drainage Infrastructures & Culverts	Project ID: MRUTC 06-08 (0092-07-19)
Administrative Contact: Jason Bittner	Sponsor: MRUTC
WisDOT Technical Contact: Shiv Gupta	Approved Starting Date: July 1, 2005
Approved by COR/Steering Committee: \$140,040	Approved Ending Date: June 30, 2008
Project Investigator (agency & contact): Michigan State University – Center for Underground Infrastructure Research and Education, Mohammad Najafi, Najafi@uta.edu	

Description:

Total study budget	Current FFY budget	Expenditures for current quarter	Total Expenditures to date	Percent Complete
\$140,040	133,923	0	75,389.99	95%

Progress This Quarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

- A combined final (UC, MSU, and UTA) report has been submitted to MRUTC for review.
- The UTA contract is being signed with MSU. There has been a delay in payment of UTA expenses, but efforts are made to resolve the subcontract for \$46,499 with the University of Texas at Arlington (UTA).
- We presented a paper at the 3rd Brazilian Congress of Trenchless Technology and 1st No-Dig Latin-American and Trenchless Technology Colloquium, February 13-15, 2008, in Sao Paulo, Brazil.
- Discussions were made via email about the content and format of the final report.

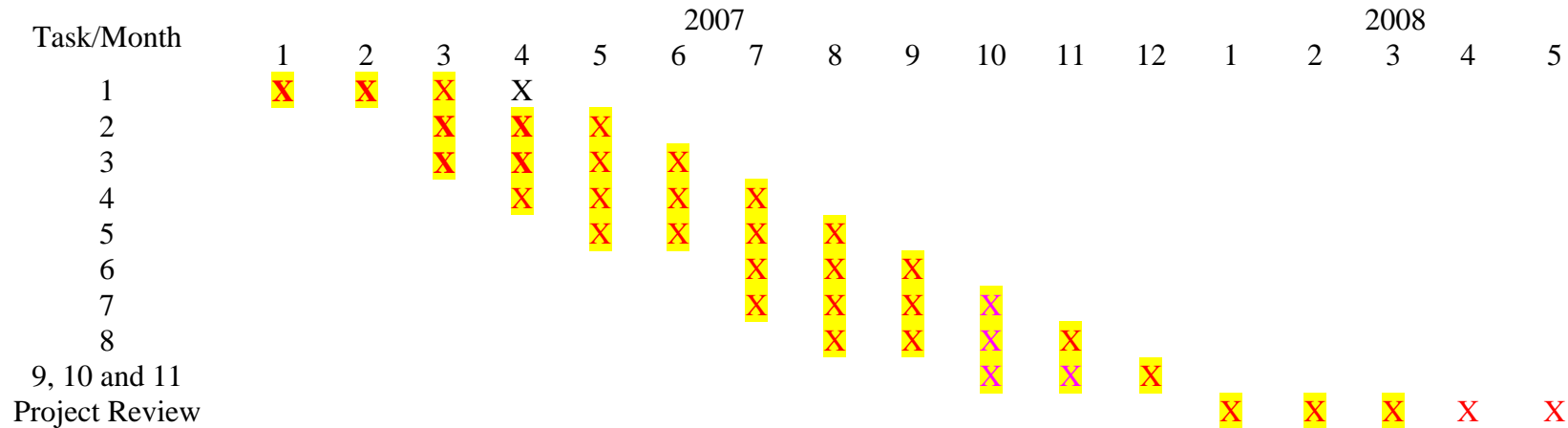
Work Next Quarter:

- A conference call meeting with Oversight Committee is planned for Friday, April 4, 2008, to review the final report.
- Work on the final report if any revisions are being made.
- Finalize the review the final report – final inventory and inspection protocols and manual.
- Finalize Power Point presentations to conduct workshops.
- Finalize UTA subcontract with MSU.

Circumstances affecting progress/budget:

Due to late signing of contract and availability of funds, the project finish date has been pushed back to May 31, 2008.

Gantt Chart:



X = Tasks completed or more than 80% complete.

1-Review of existing literature and conduct a national survey of best practices on drainage structures and culvert asset management efforts among the 50 state (specially the Midwestern states) DOTs and 10 Canadian provinces.

2-Review of various hydraulic, land-use changes and mechanical factors affecting the deterioration of drainage structures. Collected information will be checked against MDOT and ODOT documented history of failed, repaired, as-built and replaced drainage structures and culverts.

3-Review of existing inspection, data analysis and reporting methods for drainage structures and culverts and study of the modifications to be brought to buried pipes technologies to be implemented on drainage structures and culverts.

4-Develop an inventory and inspection protocols and business rules for MDOT and ODOT engineers and field operators.

5-Synthesize the research findings into a platform for a decision support system for culvert inspection, rehabilitation, maintenance, and asset management.

6-Project review

7-Perform pilot studies in Michigan and Ohio to validate the protocol and decision support platform

8-Collaborate with MDOT and ODOT engineers to write a section on inventory and inspection to be added to current best practices and business rules manuals.

9-Write a final report documenting all research findings.

10-Write several papers and articles to disseminate research results specifically for use of other Midwest states.

11-Offer educational workshops for MDOT and ODOT personnel to present results of this important research. Submit final report.