JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
LANSING

KIRK T. STEUDLE
DIRECTOR

March 28, 2008

The Honorable Bill Hardiman, Chair
Senate Appropriations Subcommittee
on Transportation
Michigan State Senate
P.O. Box 30036
Lansing, Michigan 48909

The Honorable Lee Gonzales, Chair
House Appropriations Subcommittee
on Transportation
Michigan House of Representatives
P.O. Box 30014
Lansing, Michigan 48909

Dear Senator Hardiman and Representative Gonzales:

Pursuant to section 264 of 2007 PA 129, enclosed is the Michigan Department of Transportation's report on the progress made toward increased efficiencies in department programs.

If you have any questions, please contact either me or Myron Frierson, Bureau Director, Finance and Administration, at (517) 373-2117.

Sincerely,

Jacqueline Shunk for

Kirk T. Steudle
Director

Enclosure
cc: Senate & House Appropriations
Subcommittees on Transportation
B. Emerson, State Budget Director
D. Hollon, Senate Fiscal Agency
B. Hamilton, House Fiscal Agency

Safety Program

The Michigan Department of Transportation (MDOT) continues to focus on improving safety for the traveling public. Increased efficiencies and improved traffic control devices and driver information systems are part of these efforts.

A comprehensive program was implemented to improve driver guidance and visibility during hours of darkness through improved pavement markings and signing. MDOT is working with private industries to produce pavement markings with longer life expectancy and improved reflectivity, particularly during wet, inclement night conditions. In this program, the widths of all edge lines and interchange gore markings have been increased for the benefit of the senior driver and improved driver guidance. High quality pavement markings are also being used by MDOT on its long-term pavement fixes.

MDOT recognizes the influence of the senior driver and their impact on the safety and traffic operations on Michigan's roadways. From this effort, the department has implemented the following initiatives: Clearview font and brighter sign legends for freeway guide signs, LED traffic signals, fluorescent yellow warning signs, increased sign reflectivity standards, wider pavement markings, and various improved traffic signal displays, including box span signal displays as the standard signal design, and countdown pedestrian signals. The box signal display design provides enhanced motorist visibility and is a positive contribution to senior mobility.

A benefit to motorists is the use of reflective backgrounds and legends on all new signs. To assure visibility at night, signs are replaced based on age. MDOT uses a replacement cycle of 15 years to maintain uniformity along our corridors. As part of this program, MDOT has revised its standard for freeway guide signs increasing the reflectivity and legibility (Clearview font) of the sign legends to accommodate senior drivers. Clearview font is the first highway sign font to be developed from research aimed specifically to meet the increasing needs of the senior driver. This revision will improve overall driver guidance on our freeways. Other signing changes include the increased reflectivity standard for signs being replaced and the upgrade of all warning signs to fluorescent yellow in order to provide an inclement weather warning sign system that is effective during low light conditions.

Another efficiency improvement was focused on ensuring that signal systems are properly timed. Studies have shown properly timed signal systems improve corridor travel time, reduce individual intersection delay by five to 20 percent, and result in a nine percent fuel savings. One significant operational change in the area of traffic signals is the flashing yellow arrow signals. The flashing yellow arrow is a new type of display for left turns replacing the flashing red ball as seen on Michigan's roadways. This new display is being introduced nationwide and ultimately will be required at all intersections where there is a separate left turn arrow signal. This change is the result of a national study conducted for the Federal Highway Administration, which demonstrated the new signals help prevent crashes, move more traffic through an intersection, and provide additional traffic management flexibility for road agencies. At most locations, the flashing yellow arrow left turn signal head has four separate lenses. The lens at the top is a solid red arrow. The next signal below it is a solid yellow arrow, then a flashing yellow arrow, and finally, a solid green arrow at the bottom. Each arrow specifies what actions are permitted.

Rumble strips are a proven and cost effective countermeasure to lane departure crashes brought on by driver drowsiness, distraction, and/or inattention. Based on the success of this low cost safety countermeasure, in 2007, MDOT adopted a non-freeway shoulder and centerline placement standard and will expand the application of rumble strips onto the rural, non-freeway system, as part of a three-year effort starting in 2008.

In addition to existing strategies to keep vehicles from leaving the road, several efforts have been undertaken to minimize the consequences if a vehicle does leave the road. One such effort is cable median guardrail. MDOT conducted a study in 2007 to evaluate the impact cable median guardrail would have on freeways where no median guardrail is present. Based on the results of this study, MDOT will be utilizing cable as a means for median protection on 300 miles of critical freeway corridors experiencing a higher than expected history of crossover crashes.

FieldManager

Another major improvement to MDOT's construction program was achieved by creating a system known as FieldManager. Through a creative combination of cooperative development and co-ownership between state government and the private sector, MDOT and Info Tech, Inc., (ITI), formed a partnership to build FieldManager, a software suite that dramatically increases efficiencies for managing infrastructure construction projects.

ITI, a software development firm from Gainesville, Florida, already owned and marketed a product which contained a subset of MDOT's required functionality. It made good business sense to combine MDOT's construction management knowledge with ITI's existing software and their information technology expertise. MDOT and ITI entered into an unprecedented public/private partnership agreement to develop FieldManager. The creative partnership consists of a joint 50/50 split in ownership between MDOT and ITI. The partnership allows ITI to market and license the software. MDOT, in return, receives technical support and software upgrades from ITI at no cost. The American Association of State Highway and Transportation Officials (AASHTO) became a primary partner several years ago when FieldManager became an AASHTOWare product.

Today, the innovative FieldManager suite of software is achieving outstanding success at construction sites and offices in Michigan and across the country. FieldManager has revolutionized the management of infrastructure construction projects. The software saves time, eliminates errors, and easily handles the various aspects of the business, many of which were daunting and required a mountain of paperwork under the old manual process.

FieldManager continues to experience significant growth, providing further benefits and efficiencies for user organizations. Data is captured one time at its source dramatically increasing efficiency while eliminating errors and corrective follow-up. FieldManager standardizes processes statewide, enforces business rules and procedures, and provides numerous inquiries and reports at the touch of a key.

Electronic Bidding Project

In collaboration with BidX, a Florida-based specialist in electronic bidding, MDOT implemented an end-to-end bidding system that reduces bid errors, saves money by decreasing low bid rejections, and shortens processing time. The BidX project was developed in support of the e-Forms Initiative of the e-Michigan Office (established to lead the reinvention and streamlining of State government services delivery) and in alignment with goals included in the state's technology plan.

Efficiencies being realized include a shortened approval time, reduced errors, and minimal misinterpretation of ambiguous material.

Costs to the state are reduced because the program used to develop the bids automatically alerts contractors to errors or omissions in the bid before it is submitted. Having employees work through bids only to discover that information was missing or incorrect was common before, but is now extremely rare. Costs for paper, filing and handling, postage, and data storage are also reduced.