

**Office of the Auditor General**  
Preliminary Survey Summary

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**Field Services System Operations Section**  
Michigan Department of Transportation

November 2016

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**The auditor general shall conduct post audits of financial transactions and accounts of the state and of all branches, departments, offices, boards, commissions, agencies, authorities and institutions of the state established by this constitution or by law, and performance post audits thereof.**

*Article IV, Section 53 of the Michigan Constitution*

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# OAG

Office of the Auditor General

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**Doug A. Ringler, CPA, CIA**  
Auditor General

November 1, 2016

Mr. Todd Wyett, Chair  
State Transportation Commission  
and  
Kirk T. Steudle, PE, Director  
Michigan Department of Transportation  
Murray Van Wagoner Transportation Building  
Lansing, Michigan

Dear Mr. Wyett and Mr. Steudle:

I am pleased to provide this preliminary survey summary of the Field Services System Operations Section, Michigan Department of Transportation. Because we did not identify significant concerns that would warrant the additional use of our audit resources, we have decided to terminate this performance audit.

We appreciate the courtesy and cooperation extended to us during our preliminary survey. If you have any questions, please call me or Laura J. Hirst, CPA, Deputy Auditor General.

Sincerely,

A handwritten signature in black ink that reads "Doug Ringler". The signature is written in a cursive, flowing style.

Doug Ringler  
Auditor General



# PRELIMINARY SURVEY SUMMARY

## FIELD SERVICES SYSTEM OPERATIONS SECTION

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### RESULTS

Our preliminary survey did not identify significant concerns that would warrant the additional use of our audit resources to complete a performance audit. Therefore, we have terminated this project and did not conduct sufficient testing to conclude on the overall effectiveness and efficiency of the Field Services System Operations Section (FSSOS), Michigan Department of Transportation (MDOT).

### FACTORS IMPACTING AUDIT TERMINATION

The Signal Operations Unit:

- Reviewed and prioritized signal study requests, monitored outstanding requests for signal studies, and approved signal installations only when eligibility criteria were met for 20 signal studies we reviewed.
- Appropriately documented signal design, installation, and inspection of new or modernized signals and obtained required cost-sharing agreements that appeared appropriate for the 10 new and modernized traffic signals we reviewed.
- Reasonably documented preventive and nonpreventive maintenance in accordance with MDOT's Signal Operations Unit guidance.

The Work Zone Safety and Mobility Unit:

- Participated in the required peer review of significant transportation management plans for the five significant projects we reviewed.
- Completed a federally required biennial process review of work zone safety and mobility procedures.
- Performed regular work zone safety reviews to assist in identifying training needs.
- Provided annual work zone safety and mobility training to MDOT staff and other stakeholders who worked in the roadway.
- Provided work zone safety and mobility guidance for MDOT staff, consultants, local government agencies, and contractors through the regular issuance of System Operations advisories and Bureau of Highways instructional memorandums.

- Accurately calculated Michigan's Dashboard information related to work zone crashes with fatalities or serious injuries and the duration of freeway closures for calendar years 2014 and 2015. The Unit used data provided by State Police's Traffic Crash Reporting System database and MDOT's transportation operation centers.

The Congestion and Mobility Unit had a process for prioritizing and completing the requests it received from MDOT's regional and transportation service center (TSC) offices to model areas of congestion and bottleneck to assist with identifying potential solutions.

## BACKGROUND

**Description:** The FSSOS provides support and training to MDOT's regional and TSC offices to promote consistency and the use of best practices related to signal operation, work zone safety and mobility, and congestion and mobility:

- The Signal Operations Unit's responsibilities include analyzing and completing requests for new signals; designing signal requirements for new and modernized signals, including the development of construction details and special provisions for traffic signals and other electronic traffic control devices used on State trunkline roadways under the State's jurisdiction; and inspecting newly installed signals to ensure that signals are installed in compliance with design requirements. The Unit also provides guidance to MDOT's regional and TSC offices for requesting signal studies and performing preventive maintenance for signals. There are approximately 3,300 traffic signals on State trunklines. MDOT provides maintenance for these signals through MDOT regional offices or by obtaining maintenance agreements with local units of government.
- The Work Zone Safety and Mobility Unit's responsibilities include preparing and updating the Work Zone Safety and Mobility Manual and work zone management processes and procedures; providing training and guidance related to work zone safety and mobility to MDOT regional and TSC staff and other stakeholders who work in the roadway; and conducting Statewide work zone safety reviews and training MDOT regional and TSC staff to conduct their own work zone safety reviews. The Unit also administers and provides training for traffic incident management to first responders. In addition, the Unit gathers and prepares information for presentation in Michigan's Dashboard related to fatalities and serious injuries in work zones and percentage of traffic incidents resulting in freeway closures lasting less than two hours.

- The Congestion and Mobility Unit's responsibilities include providing traffic and modeling ideas and solutions to MDOT's regional and TSC staff to help improve areas of congestion and bottleneck. The Unit also helps identify congested areas, determines when congestion occurs and the causes of congestion, and ranks the congestion corridor.

**Expenditures:** The FSSOS expended approximately \$2.0 million and \$2.4 million for operations during fiscal years 2014 and 2015, respectively.

**Employees:** As of June 30, 2016, the FSSOS had 32 full-time employees.

## SCOPE

Our preliminary survey generally covered October 1, 2014 through June 30, 2016 and included a limited review of the following FSSOS activities:

- Signal Operations Unit:
  - Traffic signal studies.
  - New traffic signal design, inspection, and cost-sharing agreements.
  - Traffic signal maintenance.
- Work Zone Safety and Mobility Unit:
  - Policy and procedure reviews.
  - Issuance of policy and procedure updates.
  - Peer review of transportation management plans.
  - Completion of the required biennial report.
  - Work zone safety reviews and training.
  - Compilation of performance metrics reflected in Michigan's Dashboard.
- Congestion and Mobility Unit:
  - Process for providing technical modeling services to MDOT's regional and TSC offices using specialized software for areas of congestion and bottlenecks.

## PURPOSE

Within a performance audit, we design the preliminary survey to obtain an understanding of the core activities within an entity or a program and to identify potential program improvements and/or deficiencies that could impair management's ability to conduct its operations in an effective and efficient manner. If the results of a preliminary survey do not identify significant concerns, our practice is to terminate the planned performance audit.

Preliminary survey procedures are limited in nature and should not be considered a completed performance audit in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States. In addition, our preliminary survey procedures would not necessarily disclose the presence or absence of any material conditions and/or reportable conditions. Given that the procedures we employed did not constitute a performance audit, we will not issue a performance audit report and we do not express conclusions regarding the effectiveness or efficiency of the FSSOS.









