

Genesee-Finger Lakes Regional Performance Measurement Monitoring and Evaluation System

Scope of Work

A. Objective

This project will establish a program for evaluating regional transportation system performance data and reporting performance measures based on that data.

B. Background

This project will advance regional efforts to proactively manage the transportation system in accordance with the FAST Act's performance goals and associated performance measures. The purpose of this emphasis on performance measures is to focus federal-aid transportation investments on achieving concrete results in specific goal areas, including safety, infrastructure condition, congestion reduction, system reliability, freight movements and economic vitality, environmental sustainability, and reduced project delivery delays.

To date, there have been a number of efforts to address performance measurement in the region. Genesee Transportation Council (GTC) uses vehicle-probe based data to monitor transportation system performance and inform the Congestion Management Process; this data is available through GTC's contract with INRIX as well as from the Albany Visualization and Informatics Labs at the State University at Albany. The Monroe County Department of Transportation (MCDOT) collects continuous traffic operational data along many sections of the arterial network using system sensor inductance loops. The New York State Department of Transportation (NYSDOT) has deployed roadside sensors that collect travel data for use in calculating and displaying real-time travel times on regional Dynamic Message Signs. NYSDOT uses data from the Highway Emergency Local Patrol (HELP) roadway assistance program to understand the impact of incidents on traffic operations. However, there has not been a systematic assessment of how the data collected and stored at the Regional Traffic Operations Center (RTOC) can be used to analyze system performance, nor has there been any attempt to develop a reporting system to provide system operators, decision-makers, and the general public with a system "status report" generated from the RTOC's data.

This project will address this issue by establishing a program to evaluate the RTOC's transportation system performance data and report performance measures derived from that data. This program is timely because it will assist regional transportation management agencies with meeting the performance reporting requirements laid out in the FAST Act and will provide a tool for understanding and evaluating system operations. Given the current emphasis on performance-based planning at the federal level, and the ongoing interest among member agencies in maximizing the use of their transportation funding for the most effective projects, this program will provide actionable information that can be channeled into the development of the Transportation Improvement Program (TIP) and agency Capital Improvement Programs (CIPs). In addition, this program will implement several objectives in the Regional Transportation System Management and Operations Strategic Plan currently under development, including maximizing program efficiency through resource and cost sharing and promoting interoperability and value-added services through shared and open data.

The geographic scope of this project will be principal and minor arterials, along with selected collectors, in the Metropolitan Planning Area (MPA), which includes all or portions of Livingston, Monroe, Ontario, and Wayne counties. A consultant will be hired to conduct the project.

C. Study Tasks

Study Coordination and Consultant Solicitation

GTC staff will organize a Steering Committee consisting of representatives from NYSDOT, MCDOT, and GTC. The committee may also include representatives from the New York State Thruway Authority and the Rochester-Genesee Regional Transportation Authority. In coordination with the Steering Committee, GTC staff will prepare a Request for Qualifications (RFQ). The RFQ will be advertised and a suitable consultant will be engaged to conduct the project.

The consultant will be responsible for scheduling Steering Committee meetings, setting meeting agendas, and preparing meeting minutes. The consultant will conduct these activities in coordination with the Steering Committee. The consultant will be responsible for preparing and distributing meeting presentation and handout materials, as well as ensuring that materials are provided to the Steering Committee at times that allow for adequate review prior to meetings and/or comment deadlines. The consultant will be expected to establish and maintain a File Transfer Protocol (FTP) site, or similar, to allow for the efficient distribution of project materials to Steering Committee members.

Once a consultant has been engaged, the project will be advanced in two phases. The first phase of the project will identify what performance measures will be evaluated. The second phase will establish an automated performance measure reporting system. These phases will be implemented per the following tasks:

Phase I

1. The Steering Committee will hold a project initiation meeting with the consultant. The purposes of this meeting will be to review the project tasks and set participant expectations.
2. The consultant will review national best practices for transportation system performance, traffic incident management, and traffic management center data management, including data collection, evaluation, and reporting. The consultant will also review applicable FHWA regulations/requirements and guidance on this topic. The purpose of this review is to: 1.) identify what performance data traffic operations centers in other metropolitan areas use to monitor transportation system performance, 2.) how that data is collected, evaluated, and reported to agency personnel, decision-makers, and the general public, and 3.) applicable lessons from these areas. The review findings will be documented in a technical memorandum. A Steering Committee meeting will be held to discuss the review findings and their potential applications to RTOC data management.

3. Concurrent with Task 2, the consultant will conduct an inventory and assessment of current transportation system performance, traffic incident management, and transportation management center data collected, analyzed, and stored at the RTOC. In addition to looking at what data is currently available at the RTOC, this task will include an evaluation of what additional data is required for generating performance measures to evaluate transportation system performance. The inventory and assessment findings will be documented in a technical memorandum.

Phase II

4. Based on Steering Committee input, the best practices review findings, and the inventory and assessment findings, the consultant will identify the performance monitoring system's desired capabilities including what performance measures the system will generate.
5. The consultant will work with the Steering Committee to develop an automated performance measure reporting system. This system will take the performance measures identified in Task 4 and report (i.e., publish) them in a readily understood format. This system must be able to extract data from existing RTOC sources and calculate performance measures with minimal input from RTOC personnel.

The reporting system is anticipated to produce two outputs: 1.) a web-based dashboard that allows real-time monitoring of transportation system status, and 2.) a publishing subsystem that generates monthly (for internal review and evaluation) and quarterly (for reporting system performance to decision-makers and the general public) transportation system performance status reports.

This task includes all system development and testing activities; adaptation of an existing performance measure reporting system to the RTOC's needs is encouraged. One or more Steering Committee meetings will be held to review the reporting system functions and capabilities during the development process.

6. The consultant will develop a Draft Technical Report that outlines the process followed in Tasks 1 through 5 to develop the performance measure reporting system and provide it to the Steering Committee for review and comment. Upon concurrence by the Steering Committee, the consultant will revise the Draft Technical Report to produce the Final Regional Performance Measurement Monitoring and Evaluation System Technical Report. In addition, the consultant will prepare an Executive Summary of the Final Technical Report.

D. Products

1. Technical Memoranda
2. Draft and Final Technical Report
3. Executive Summary
4. Web-based Performance Measure Reporting System

E. Public Participation Plan

Per the GTC Public Participation Policy, this project is classified as a Technical/Data Collection Project. Accordingly, no public input component is required.

F. Schedule

Anticipated start: May 1, 2018
Anticipated completion: December 31, 2019

G. Project Budget

Sources of Funds		Uses of Funds	
	<u>FY 2018-19</u>		<u>FY 2018-19</u>
<u>Federal Funds</u>		<u>GTC</u>	
FHWA	\$155,142	Staff	\$0
FTA	0	Contractual	0
Subtotal	\$155,142	Subtotal	\$0
<u>Matching</u>		<u>Other</u>	
<u>Funds</u>		<u>Agency</u>	
State (In-kind)	\$0	Staff	\$0
Local (In-kind)	16,666	Contractual	155,142
Local (Cash)	0	In-kind Exp.	16,666
Subtotal	\$16,666	Subtotal	\$171,808
<u>Total</u>	<u>\$171,808</u>	<u>Total</u>	<u>\$171,808</u>