

## CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

MDOT PROJECT MANAGER Oladayo Akinyemi			JOB NUMBER (JN) 106952 & 89095	CONTROL SECTION (CS) 82122
DESCRIPTION Dynamic Traffic Assignment Simulation Model For I-96 from Newburgh Road to US-24 Wayne County, Michigan				
<b>MDOT PROJECT MANAGER:</b> Check all items to be included in RFP  WHITE = REQUIRED GRAY SHADING = OPTIONAL			<b>CONSULTANT:</b> Provide only checked items below in proposal	
Check the appropriate Tier in the box below				
<input type="checkbox"/> <b>TIER I</b> (\$25,000-\$99,999)	<input checked="" type="checkbox"/> <b>TIER II</b> (\$100,000-\$250,000)	<input type="checkbox"/> <b>TIER III</b> (>\$250,000)		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Understanding of Service	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Safety Program</i>	
N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Organizational Chart	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Past Performance	
Not required As part of Official RFP	Not required As part of Official RFP	<input type="checkbox"/>	Quality Assurance/Quality Control	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Location:</b> The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.	
N/A	N/A	<input type="checkbox"/>	Presentation	
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)	
3 pages (MDOT Forms not counted) <b>(No Resumes)</b>	7 pages (MDOT Forms not counted)	19 pages (MDOT Forms not counted)	Total maximum pages for RFP <b>not including key personnel resumes</b>	

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is interested in providing services, please indicate your interest by submitting a Proposal, Proposal/Bid Sheet or Bid Sheet as indicated below. The documents must be submitted in accordance with the latest "Consultant/Vendor Selection Guidelines for Service Contracts" and "Guideline for Completing a Low Bid Sheet(s)", if a low bid is involved as part of the selection process. **Referenced Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

## RFP SPECIFIC INFORMATION

BUREAU OF HIGHWAYS       BUREAU OF TRANSPORTATION PLANNING \*\*       OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO       YES      DATED \_\_\_\_\_ THROUGH \_\_\_\_\_

**Prequalified Services** – See page 2 of the attached Scope of Services for required Prequalification Classifications.

**Non-Prequalified Services** - If selected, the vendor must make sure that current financial information, including labor rates, overhead computations, and financial statements, if overhead is not audited, is on file with MDOT's Office of Commission Audits. This information must be on file for the prime vendor and all sub vendors so that the contract will not be delayed. **(Form 5100J Required with Proposal)**

**Qualifications Based Selection** – Use Consultant/Vendor Selection Guidelines

**For all Qualifications Based Selections**, the section team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

**\*\*For RFP's that originate in Bureau of Transportation Planning only**, a priced proposal must be submitted at the same time as, but separate from, the proposal. Submit directly to the Contract Administrator/Selection Specialist, Bureau of Transportation Planning (see address list, page 2). The priced proposal must be submitted in a sealed envelope, clearly marked "**PRICE PROPOSAL.**" The vendor's name and return address **MUST** be on the front of the envelope. The priced proposal will only be opened for the highest scoring proposal. Unopened priced proposals will be returned to the unselected vendor(s). Failure to comply with this procedure may result in your priced proposal being opened erroneously by the mail room.

**For a cost plus fixed fee contract**, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

**Qualifications Review / Low Bid** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions for additional information.

For Qualification Review/Low Bid selections, the selection team will review the proposals submitted and post the date of the bid opening on the MDOT website. The notification will be posted at least two business days prior to the bid opening. Only bids from vendors that meet proposal requirements will be opened. The vendor with the lowest bid will be selected. The selected vendor may be contacted to confirm capacity.

**Best Value** - Use Consultant/Vendor Selection Guidelines. See Bid Sheet Instructions below for additional information. The bid amount is a component of the total proposal score, not the determining factor of the selection.

**Low Bid** (no qualifications review required - no proposal required.) See Bid Sheet Instructions below for additional instructions.

## BID SHEET INSTRUCTIONS

A bid sheet(s) must be submitted in accordance with the "Guideline for Completing a Low Bid Sheet(s)" (available on MDOT's website). The Bid Sheet(s) is located at the end of the Scope of Services. Submit bid sheet(s) separate from the proposal, to the address indicated below. The bid sheet(s) must be submitted in a sealed manila envelope, clearly marked "**SEALED BID.**" The vendor's name and return address **MUST** be on the front of the envelope. Failure to comply with this procedure may result in your bid being opened erroneously by the mail room and the bid being rejected from consideration.

**PROPOSAL SUBMITTAL INFORMATION**

REQUIRED NUMBER OF COPIES FOR PROJECT MANAGER 5	PROPOSAL/BID DUE DATE 11/29/10	TIME DUE 12:00 PM
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**PROPOSAL AND BID SHEET MAILING ADDRESSES**

Mail the multiple proposal bundle to the MDOT Project Manager or Other indicated below.

- MDOT Project Manager  MDOT Other

Oladayo Akinyemi, PE  
Project Manager  
18101 W. Nine Mile Road  
Southfield, MI 48075

Mail one additional stapled copy of the proposal to the Lansing Office indicated below.

Lansing Regular Mail	OR	Lansing Overnight Mail
<input checked="" type="checkbox"/> Secretary, Contract Services Div - B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Secretary, Contract Services Div - B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933
<input type="checkbox"/> Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation PO Box 30050 Lansing, MI 48909		Contract Administrator/Selection Specialist Bureau of Transportation Planning B470 Michigan Department of Transportation 425 W. Ottawa Lansing, MI 48933

**GENERAL INFORMATION**

Any questions relative to the scope of services must be submitted by e-mail to the MDOT Project Manager. Questions must be received by the Project Manager at least four (4) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT website as soon as possible after receipt of the questions, and at least three (3) days prior to the RFP due date deadline. The names of vendors submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal

The following two American Recovery and Reinvestment Act of 2009 (ARRA) notifications, **ARRA MONTHLY EMPLOYMENT REPORTS** and **REQUIRED CONTRACT PROVISIONS TO IMPLEMENT AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) SECTIONS 902 AND 1515**, are attached to this Request For Proposal for your understanding. These two notifications are only applicable for those projects/contracts funded with ARRA funds and will be included in contract Exhibits.

**MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION**

- 5100D** – Request for Proposal Cover Sheet
- 5100G** – Certification of Availability of Key Personnel
- 5100I** – Conflict of Interest Statement
- 5100J** - Consultant Data and Signature Sheet (Required only for Non-Prequalified Work)

**(These forms are not included in the proposal maximum page count.)**

**MICHIGAN DEPARTMENT OF TRANSPORTATION**

**SCOPE OF SERVICE  
FOR  
TRAFFIC AND SAFETY SERVICES**  
Dynamic Traffic Assignment (DTA) Simulation Model

**CONTROL SECTION:** 82122

**JOB NUMBER(s):** \*89095C: I-96 from Melvin Street to US-24 (Telegraph Road)  
106952C: I-96 from Newburgh Road to Melvin Street

*\*Note: This job number is included for project information purposes only. Any DTA work related charges will be applied to JN106952*

**LOCATION:**

The limit of the proposed reconstruction project is I-96 from Newburgh Road in the city of Livonia to US-24 in Redford Township, in Wayne County, Michigan.

**PROJECT DESCRIPTION:**

This project is to develop calibrated Dynamic Traffic Assignment (DTA) models of the Southeast Michigan Council of Government's (SEMCOG) Network that the Design Team can use to test construction staging and Maintenance of Traffic (MOT) alternatives for the I-96 reconstruction project. (See Additional Project Description on page 2)

**PRIMARY PREQUALIFICATION CLASSIFICATION(S):**

Traffic Capacity Analysis and Geometric Studies.

**ANTICIPATED SERVICE START DATE:** 12/01/2010

**ANTICIPATED SERVICE COMPLETION DATE:** 12/30/2014

**MDOT PROJECT MANAGER:**

Oladayo Akinyemi, P.E.  
Michigan Department of Transportation,  
18101 W. Nine Mile Road,  
Southfield, MI 48075  
(248) 483-5121  
(248) 569-0621 (Fax)  
[Akinyemio@michigan.gov](mailto:Akinyemio@michigan.gov)

**DBE REQUIREMENT:** N/A

## **CONSULTANT RESPONSIBILITIES:**

The Consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job and perform field operations in accordance with the Department's Personal Protective Equipment (PPE) policy as stated in the MDOT Guidance Document #10118.

Meet with the MDOT Project Manager to review the project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time.

## **ADDITIONAL PROJECT DESCRIPTION:**

1. Develop and calibrate a set of base or build year Dynamic Traffic Assignment Models on a DynasmartP, DynusT, or an approved equivalent software platform. In order to develop Origin Destination (OD) traffic matrices for input to the models, parts of the State Trunkline Network<sup>1</sup> outside of the immediate vicinity of the project will need to be included. These include network in Wayne, Oakland, Macomb, Livingston, Washtenaw and Monroe Counties. The network to be modeled is depicted in Exhibits A and B and C. They will include the following hierarchy of detail:
  - A Sub-Area Model of the State Trunkline System is depicted by Exhibit A. This Sub-Area extends to and includes the major junctions of Interstate Freeways: I-96/US-23 to I-94/M-14 to I-94/US23 on the West; I-96/US-23 to I-96/I-696/I-275 to I-696/I-75 to I-696/I-94 on the North; I-275/I-75 on the South, and the Detroit River on the East.
  - A smaller area that encompasses the entire SEMCOG Network in Wayne County. As noted, this is similar to the Federal Aid Network depicted in Exhibit B.
  - The system depicted in Exhibit C shall receive priority for geometric and signal timing detail. This system consists of the State Trunkline System plus Other Major Arterial Roads (National Functional Classes 1, 2, and 3).
1. Four Period Models shall be created: Morning Peak: 6 AM to 9 AM, Midday: 9 AM to 3 PM, Afternoon Peak: 3 PM to 7 PM, and Off Peak: 7 PM to 6 AM. The models shall run iteratively until User Equilibrium is achieved. The final deliverable shall be a set of calibrated User Equilibrium DTA Models of the project influence area that can be used by Design Engineers and other Region Staff to test scenarios.
2. Construction is expected to begin in spring of 2013.

3. The Project Manager will determine the base year to be modeled.
4. Commercial vehicles shall be modeled separately, as maintaining large truck mobility is an objective of this Project.
5. Models shall have sufficient details to support the analysis of the project impacts on the traffic operations at the Detroit-Wayne County Metropolitan Airport and the international border crossings with Canada.
6. The Consultant shall work with the Project Manager to identify the corridors and intersections that require precise signal timings and geometric coding. Exhibit C shows the Major (local) Arterial Road system plus the State Trunkline System that shall be considered priority corridors (National Functional Classes 1, 2, and 3.)
2. The Consultant shall develop a Sub-Area Model of the SEMCOG Model and extract Origin-Destination (OD) Matrices for input to the DTA Model. The Sub-Area will coincide with the limits depicted in Task 1, above. The time periods will be as described in Task 2, above.

Note: All travel demand modeling work shall be based upon the current version of the SEMCOG Model. Modifications to the SEMCOG Model network will utilize the Michigan Geographic Framework Version 5. Road referencing shall be based upon MDOT's Physical Reference (PR) and milepoint system. Caliper's TransCad 5.0 is MDOT's and SEMCOG's modeling platform.

3. Train MDOT staff on testing and evaluating scenarios using the already-created models.
9. Calibrate the DTA Models according to recognized guidelines similar to Volume III Guidelines for Applying Traffic Microsimulation Modeling Software (FHWA August 2003).
10. Provide a detailed documentation of the following: a.) How the DTA models were developed; b.) Underlying assumptions and limitations; c.) Requirements and/or limitations for use of the Models on specific applications, such as work zone scenarios. The final product should lend itself to future work zone or MOT scenario testing without further modification. All models, model inputs and products are the property of MDOT. All SEMCOG models, model inputs and products are the property of SEMCOG. Detailed documentation on modifications and assumptions of the SEMCOG Sub-Area Model must be provided to SEMCOG.
11. Participate in meetings with Project Teams, as necessary, to develop alternatives and scenarios to be modeled, and to clarify modeling issues and results.
12. The Consultant shall attend any project-related meetings as directed by the MDOT Project Manager. The Consultant may be required to prepare displays and other information materials such as maps, marked-up plans, etc.

1. Maintain a Project Record that includes a history of significant events (changes, comments, etc.) which influenced the development of the deliverables, dates of submittals and receipt of information.
2. The Consultant representative shall record and submit type-written minutes for all project-related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees.
3. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project**. The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.
13. The Consultant shall contact the MDOT Project Manager whenever discoveries have the potential to require changes in the scope, limits, quantities, or costs affecting the project. At the discretion of the MDOT Project Manager, the Consultant may be asked to provide one-on-one assistance or instruction to MDOT personnel regarding how to upload the model files, and how to open, execute, change views and settings, review, and save and demonstrate the simulation products

### **TRAFFIC CONTROL**

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Scope of Design Services.

### **MONTHLY PROGRESS REPORT**

On the first of each month, the Consultant shall submit a monthly progress report to MDOT Project Manager, or as directed by the Project Manager.

### **MDOT RESPONSIBILITIES**

- . Schedule and/or conduct all project-related meetings.
- . Furnish Special Details and pertinent reference materials.
- . Furnish FTP site for software download and instructions for the MDOT Stand Alone Proposal Estimator's Worksheet (SAPW).

**Note:** MDOT will provide available existing traffic data, Michigan GeoRef GIS files, and 6" aerial photos consistent with the Michigan GeoRef system. Note that the 2005, 6" aerials are housed in the Michigan Center for Geographic Information and may be downloaded on the CONSULTANT's portable hard drive upon the request of the Project Manager. Michigan Geo-Ref map files in Caliper or Esri format may be obtained from MDOT's Asset Management Section, Framework and Systems Monitoring Unit. CONSULTANTS may also be given password restricted access to all Metro Region MITS and NAVTEQ-collected archived real time data, upon request of the Project Manager

to NAVTEQ. NAVTEQ and MITS Data may be downloaded in monthly files for daily files, and exportable to Excel formats. Arterial turning movement count data for Metro Region is stored on ProjectWise. The 6 inch aerial photos and the archived NAVTEQ data are only to be used on this project.

## **DELIVERABLES**

Unless otherwise specified by the Project Manager, the products will include the calibrated Base Models delineated in the sections below. All models developed for the project, and all model input files are the property of MDOT. All model enhancements and all data collected by the Consultant become the property of MDOT. These model files and all of the “Additional Products”, specified below, shall be saved to an immutable medium such as a DVD. Five copies of said medium shall be made and delivered to the Project Manager.

All CADD/GEOPAK files shall be created and identified with standard MDOT file names as shown in Appendix A of the Road Design Manual. It is the Consultant’s responsibility to obtain up to date MicroStation and GEOPAK seed/configuration files necessary to comply with MDOT’s CADD standards which are posted to the bulletin board system.

Proposal documents shall be submitted in their native format with standard naming conventions as well as combined into one Adobe PDF file in the sequence specified by MDOT. To provide text search capabilities the combined proposal shall be created by converting native electronic files to PDF. Scanning to PDF is discouraged except in instances where it is necessary to capturing a legally signed document or a hard copy version of a document is all that exists.

Technical report with detailed documentation of how the model was developed, including a description of technical issues or problems encountered and resolved, including details on all input files, supporting files and documents. This should include detail how the SEMCOC Sub-Area Model was created, including detail on all input files

Any additional items provided/prepared by the CONSULTANT, including graphics, data collected or other background materials.

All project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager. All plans, specifications, and other project related items are subject to review and approval by MDOT.

## **CONSULTANT PAYMENT:**

Compensation for this project shall be on an **actual cost plus fixed fee** basis. This basis of payment typically includes an estimate of labor hours by classification or employee, hourly labor rates, applied overhead, other direct costs, sub-consultant costs, and applied fixed fee.

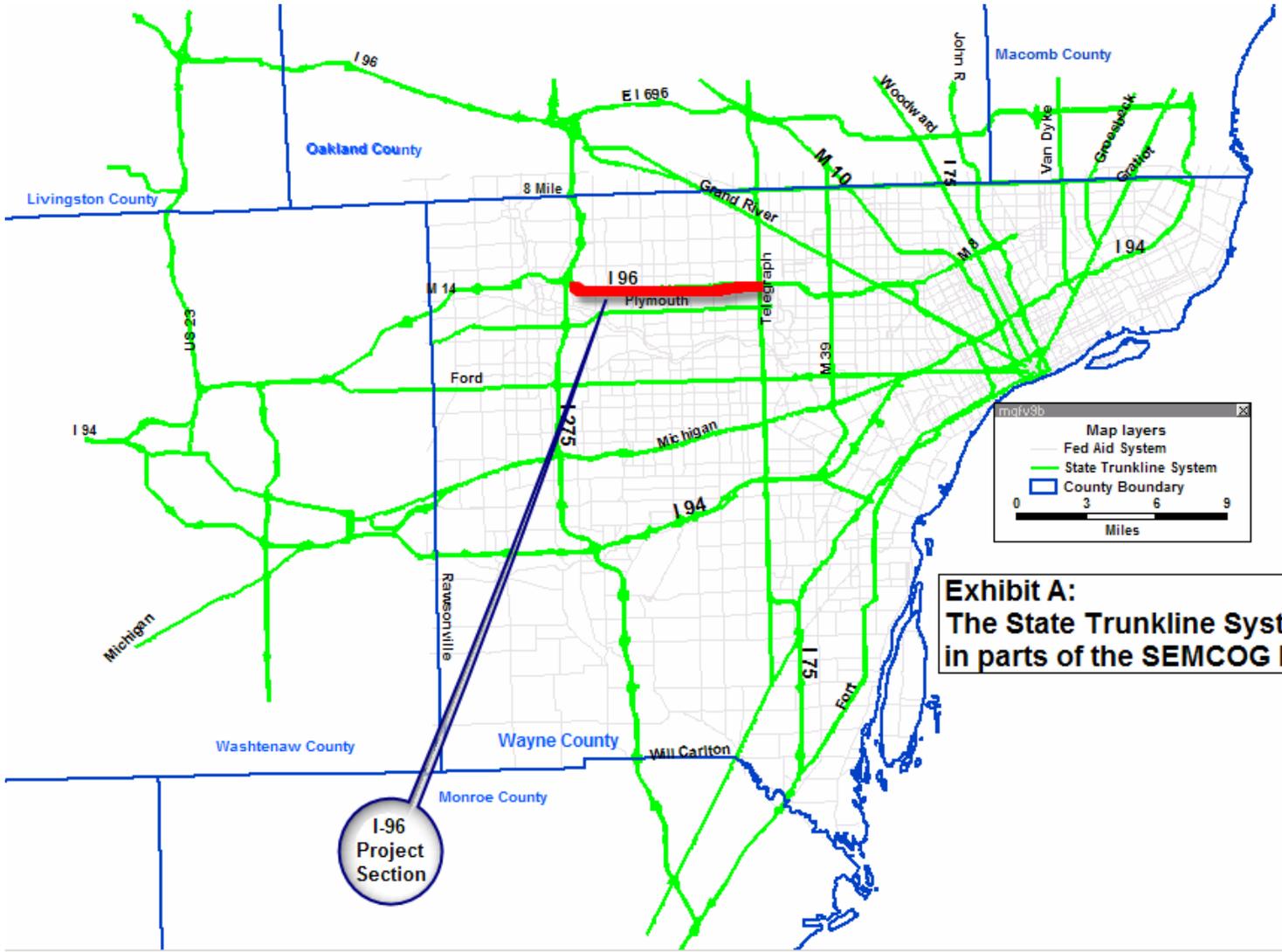
All billings for services must be directed to the Department and follow the current guidelines. The latest copy of the "Professional Engineering Service Reimbursement Guidelines for Bureau of Highways" is available on MDOT's Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant. Typically, billings must be submitted within 60 days after the completion of services for the current billing. The final billing must be received within 60 days of the completion of services. Refer to the contract for your specific contract terms.

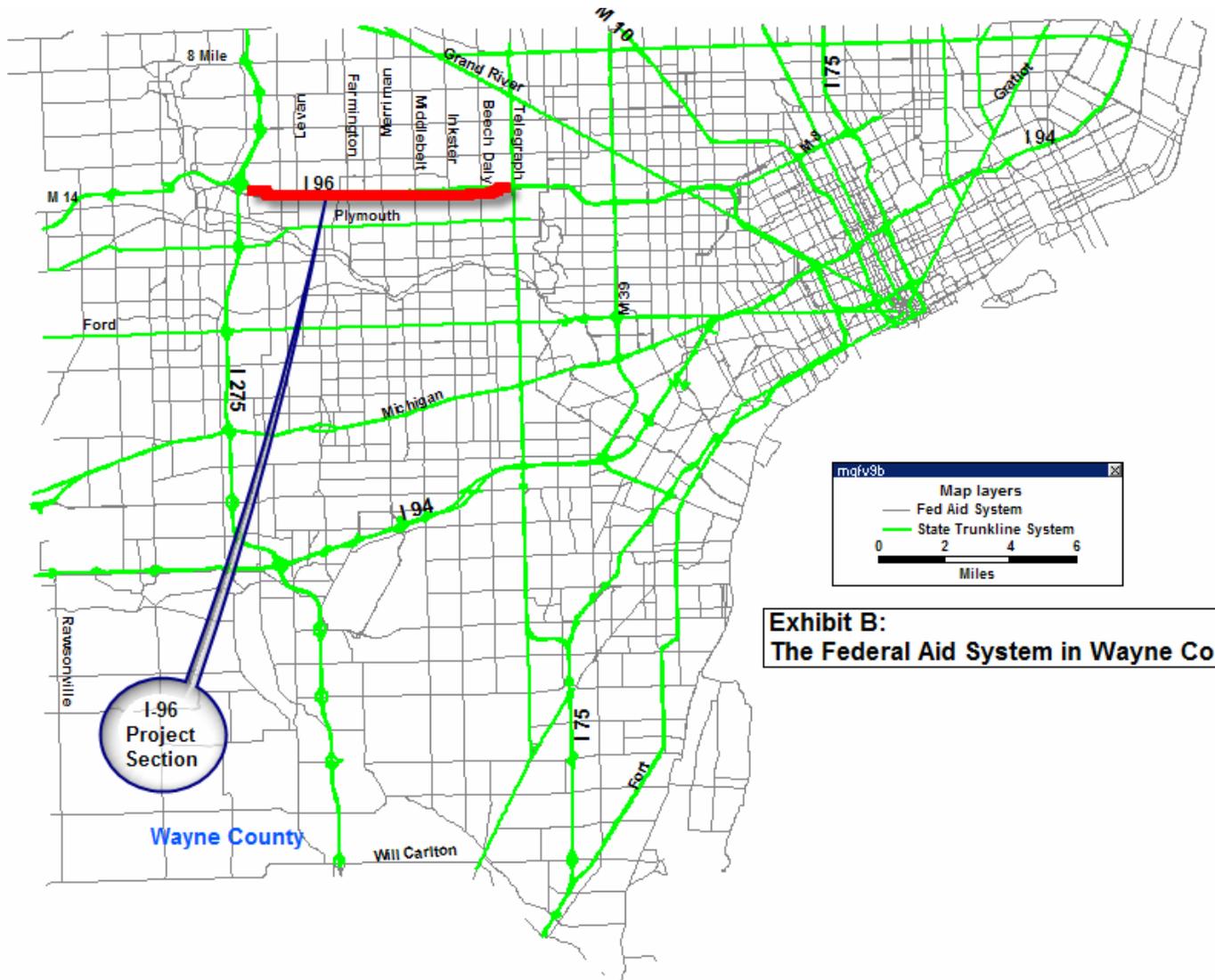
Direct expenses will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges are those that are directly attributable to the activities under these As-Needed Services, and the specific project Work Order awarded.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer and the MDOT Project Manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the price proposal submitted by the Consultant and must have prior approval by the MDOT Region Engineer and the MDOT Project Manager.

The fixed fee for profit allowed for this project is 11% of the cost of direct labor plus overhead. This scope is for "as needed" services, based on intermittent needs of MDOT. It must be noted that this is not a guarantee that MDOT will use the consultant's services.



**Exhibit A:  
The State Trunkline System  
in parts of the SEMCOG Region**



**Exhibit B:  
The Federal Aid System in Wayne County**



