

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

MDOT PROJECT MANAGER		JOB NUMBER (JN)	CONTROL SECTION (CS)
DESCRIPTION			
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED GRAY SHADING = OPTIONAL		CONSULTANT: Provide only checked items below in proposal	
Check the appropriate Tier in the box below			
TIER I (\$25,000-\$99,999)	TIER II (\$100,000-\$250,000)	TIER III (>\$250,000)	
			Understanding of Service
			<i>Innovations</i>
			<i>Safety Program</i>
N/A			Organizational Chart
			Qualifications of Team
			Past Performance
Not required As part of Official RFP	Not required As part of Official RFP		Quality Assurance/Quality Control
			Location: 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		Presentation
N/A	N/A		Technical Proposal (if Presentation is required)
3 pages (MDOT Forms not counted) (No Resumes)	7 pages (MDOT Forms not counted)	19 pages (MDOT Forms not counted)	Total maximum pages for RFP not including key personnel resumes

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 ___ 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	PROPOSAL/BID DUE DATE	TIME DUE
---	-----------------------	----------

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

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

Lansing Regular Mail	OR	Lansing Overnight Mail
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
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

MDOT FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION

5100D – Request for Proposal Cover Sheet

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
DESIGN SERVICES**

CONTROL SECTION: 58071

JOB NUMBER: 103287C

PROJECT LOCATION:

The project is located on M-125 from 440 ft north of Jones Rd to US-24. The project length is 5.227 miles.

PROJECT DESCRIPTION:

Work involved in the design of the project consists of: Cold milling and two-course HMA overlay, intermittent curb & gutter replacement, upgrade sidewalk ramps, minor drainage upgrades, intersection radius improvements, traffic signal staging, guardrail replacement

Miscellaneous

The Road Design Survey work has been completed through a previous consultant contract.

The original scoping document is available on the MDOT FTP Site:

<ftp://ftpmdot.state.mi.us/JN10327scope/>

ANTICIPATED SERVICE START DATE: 1/3/12

ANTICIPATED SERVICE COMPLETION DATE: 4/5/2013

PRIMARY PREQUALIFICATION CLASSIFICATION(S):

Roads & Streets

SECONDARY PREQUALIFICATION CLASSIFICATION(S):

Maintaining Traffic Plans and Provisions

Pavement Marking Plans

Permanent Non-Freeway Traffic Signing Plans

Traffic Signal Design

Geotechnical Engineering Services

DBE REQUIREMENT: 5%

MDOT PROJECT ENGINEER MANAGER:

Lynne Kirby, BTSC Cost & Scheduling Engineer
Brighton TSC
10321 E Grand River, Suite 500
Brighton, MI 48116
810-225-2627
810-227-7929
kirbyl@michigan.gov

CONSTRUCTION COST:

- A. The estimated cost of construction is: \$ 12,000,000
- B. The estimated cost of real estate is: \$100,000

The above construction total is the amount of funding programmed for this project. The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter to the MDOT Project Manager justifying the changes in the construction cost estimate.

REQUIRED MDOT GUIDELINES AND STANDARDS:

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

NOTE: A process change mandated by federal audit of MDOT's design process puts the Omissions and Errors Check Meeting after the Plan Completion. Please keep this in mind when preparing your schedule. See MDOT Road Design Manual, Chapter 14 – Procedures – Section 14.54 for corroboration. See “For Your Information” contacts at the end of this document for more info or questions.

Consultant is required to use MDOT's current version of Bentley MicroStation for CADD applications and Bentley GEOPAK for road design. Consultant shall comply with all MDOT CADD standards and file naming conventions.

CONSULTANT RESPONSIBILITIES:

Complete the design of this project including, but not limited to the following:

- A. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.
- B. Compute and verify all plan quantities.
- C. Prepare staging plans and special provisions for maintaining traffic during construction. (including traffic signal staging) The staging plans shall include

any required temporary pavement construction and removal plans required for the project.

- D. Traffic signal staging (Attachment A)
- E. Prepare pavement marking plans and special provisions
- F. Prepare permanent signing plans and special provisions for non-freeway signs.
- G. Prepare Right-Of-Way plans as required to locate, verify and purchase real estate and/or obtain construction access permits for this project.
- H.. Prepare a Traffic Management Plan (TMP) per the Work Zone Mobility Manual.
- I. Perform soil borings (Attachment B)
- J. Complete a CPM Network for the construction of the entire project.

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 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, such as geotechnical requirements, ROW submittal dates, Railroad coordination requirements, utility conflict resolution, local agency meetings, etc.

- A. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.
- B. Compute and verify all plan quantities.
- C. Prepare staging plans and special provisions for maintaining traffic during construction.
- D. Provide solutions to any unique problems that may arise during the design of this project.
- E. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.
- F. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.

- G. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).
- H. The Consultant shall be required to prepare and submit a CPM network for the construction of this project.
- I. 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. MDOT will provide and distribute official meeting minutes for the Plan Review Meeting.
- J. The Consultant will provide to MDOT at the scheduled submittal dates, copies of the required specifications and plan set materials for distribution by MDOT for all reviews for this project with the exception of The Plan Review. The Consultant shall contact the project manager prior to the submittal dates for the exact number of copies that will be required for submittal. The following is an estimate of the number of copies that will be needed; 30 sets – Pre-OEC, 30 sets - OEC Review.
- K. Prepare and submit electronically (native format or Adobe PDF) any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (ie. NPDES, DEQ, etc), approvals (i.e. county drain commission) and related mitigation. MDOT will submit permit requests.
- L. Attend any project-related meetings as directed by the MDOT Project Manager.
- M. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.
- N. The Consultant shall assist in the review of utility permit requests, incorporate the information in the design plans, and respond within 2 weeks from receipt of the permit.
- O. 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.

- P. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.

UTILITIES

The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project. The Consultant will be responsible for miscellaneous staking of utilities.

TRAFFIC CONTROL

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

MDOT PERMITS

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Joe Rios, Utilities/Permits Section, Real Estate Division at (517) 241-2103.

MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the Project Manager.

MDOT RESPONSIBILITIES:

- A. Schedule and/or conduct the following:
1. Project related meetings.
 2. The Plan Review
 3. Utility Meetings.
 4. Quantity summary sheets and final item cost estimates.
 5. Packaging of plans and proposal.
- B. Provide survey information. Furnish Special Details and pertinent reference materials.
- C. Furnish prints of an example of a similar project and old plans of the area, if available.

- D. Obtain all permits for the project as outlined in previous section.
- E. Coordinate any necessary utility relocation.
- F. Furnish FTP site for software download and instructions for the MDOT Stand Alone Proposal Estimator's Worksheet (SAPW).

DELIVERABLES:

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, GEOPAK files, etc.) on DVD, CD or uploaded to ProjectWise, as directed by the MDOT 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. When the use of GEOPAK road design software is necessary to develop plans all pay items shall be placed into the CADD file using GEOPAK's Design and Computation Manager so that Quantity Manager can be used to transfer pay item information to SAPW/Trns*port. Any CADD/GEOPAK files that do not conform to MDOT standards will be returned to the Consultant for correction at the Consultant's expense.

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.

Plan files shall be submitted in their native dgn format with standard naming conventions as well as plotted into a combined Adobe PDF file. Plan sheets shall be plotted to Adobe PDF with full text search and level on/off capabilities in half size (11" x 17") formats. A full size title sheet shall be plotted stamped and signed then scanned for inclusion with the Adobe PDF set. The original title sheet will be sent to the MDOT Project Manager.

Stand Alone Proposal Estimator's Worksheet (SAPW) shall be used to generate the txt and csv files necessary for import into the Trns*port bid letting software. The SAPW files shall be transmitted electronically by the method specified by the MDOT Project Manager.

The project construction, removal and profile sheets will require a ratio (scale) of **1:40 (English Units)**.

Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

- A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that

- B. Note Sheet.
- C. Typical Cross-Sections.
- D. Project specific Special Details.
- E. Construction staging and traffic control plans.
- F. Detail grade sheets for critical areas.
- G. Pavement marking plan(s).
- H. Witness and benchmark sheet(s).
- I. Soil boring log sheet(s).

All plans, special provisions, estimates, and other 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.

PROJECT SCHEDULE:

The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports.

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Please indicate with a check in the box next to each task number whether you believe that task will require consultant involvement on the job. Milestones (a specific event at a point in time) are italicized and underlined. See the [P/PMS Task Manual](#) for more details.

Study (Early Preliminary Engineering)

		<u>P/PMS Task Number and Description</u>	<u>Date To Be Completed By</u>	
Yes	No		(mm/dd/yyyy)	
<u>EPE Scoping Analysis</u>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2120 Prepare Traffic Analysis Report	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2130 Prepare Project Justification	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>213M Concurrence by Regulatory Agencies with the Purpose and Need</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2140 Develop and Review Illustrative Alternatives	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2155 Request/Perform Safety Analysis	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2160 Prepare and Review EIS Scoping Document	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>211M Public Information Meeting</u></i>	/	/
<u>EPE Draft Analysis</u>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2310 Conduct Technical SEE Studies	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2321 Prepare for Aerial Photography	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2322 Finish/Print Aerial Photography	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2330 Collect EPE Geotechnical Data	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2340 Develop and Review Practical Alternatives	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>233M Aerial Photography Flight</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>234M Concurrence by Regulatory Agencies with the Alternatives for Study</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2360 Prepare and Review EA or DEIS	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>231M Draft Submission to FHWA</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2380 Circulate EA or DEIS	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>232M Public Hearing</u></i>	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Study (Early Preliminary Engineering)

		<u>P/PMS Task Number and Description</u>	<u>Date To Be Completed By</u>	
Yes	No		(mm/dd/yyyy)	
<u>EPE Final Analysis</u>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2510 Determine and Review Recommended Alternative	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>250M Concurrence by Regulatory Agencies with Recommended Alternative</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2525 Prepare and Review Engineering Report	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2530 Prepare and Review Request for FONSI or FEIS	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i><u>252M Final Submission to FHWA</u></i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2550 Obtain FONSI or ROD	/	/

Contamination Investigation

<input type="checkbox"/>	<input checked="" type="checkbox"/>	2810 Project Area Contamination Survey (PCS)	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2820 Preliminary Site Investigation (PSI) for Contamination	/	/

Preliminary Engineering

Design Scope Verification and Base Plans Preparation

<input checked="" type="checkbox"/>	<input type="checkbox"/>	3130 Verify Design Scope of Work and Cost	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3310 Prepare Aerial Topographic Mapping	/	/
		/	/	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3320 Conduct Photogrammetric Control Survey	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3321 Set Aerial Photo Targets	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3330 Conduct Design Survey	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3340 Conduct Structure Survey	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3350 Conduct Hydraulics Survey	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3360 Prepare Base Plans	2/13/2012	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>311M Utility Notification</u>	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3361 Review and Submit Preliminary ROW Plans	2/13/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>331M Preliminary ROW Plans Distributed</u>	2/13/2012	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3370 Prepare Structure Study	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3375 Conduct Value Engineering Study	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3380 Review Base Plans	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>332M Base Plan Review (Pre-GI Inspection)</u>	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3390 Develop the Maintaining Traffic Concepts	2/13/2012	
		<u>Preliminary Plans Preparation</u>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3510 Perform Roadway Geotechnical Investigation	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3520 Conduct Hydraulic/Hydrologic and Scour Analysis	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3522 Conduct Drainage Study, Storm Sewer Design, and use Structural Best Management Practices	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3530 Conduct Structure Foundation Investigation	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Preliminary Engineering (cont'd)

Date To Be Completed By
(mm/dd/yyyy)

P/PMS Task Number and Description

Yes No

Preliminary Plans Preparation (cont'd)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	3535 Conduct Structure Review for Architectural and Aesthetic Improvements	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3540 Develop the Maintaining Traffic Plan	4/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3551 Develop Traffic Signal Operations Plan	4/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3552 Develop Preliminary Pavement Marking Plan	4/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3553 Develop Preliminary Non-Freeway Signing Plan	4/2/2012	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3554 Develop Preliminary Freeway Signing Plan	/	/

<input type="checkbox"/>	<input checked="" type="checkbox"/>	3570 Prepare Preliminary Structure Plans	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3580 Develop Preliminary Plans	4/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3581 Review and Submit Final ROW Plans	4/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>351M Final ROW Plans Distributed</u>	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3590 Review Preliminary Plans (Hold Plan Review Meeting)	5/2/2012	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>352M THE Plan Review (Grade Inspection)</u>	/	/
<u>Utilities</u>				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3610 Compile Utility Information	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3660 Resolve Utility Issues	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>360M Utility Conflict Resolution Plan Distribution</u>	/	/
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>361M Utility Meeting</u>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3670 Develop Municipal Utility Plans	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3672 Develop Special Drainage Structures Plans	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3675 Develop Electrical Plans	/	/
<u>Mitigation/Permits</u>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3710 Develop Required Mitigation	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3720 Submit Environmental Permit Applications	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3730 Obtain Environmental Permit	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

Preliminary Engineering (cont'd)

			<u>Date To Be</u>
			<u>Completed By</u>
			(mm/dd/yyyy)
<u>P/PMS Task Number and Description</u>			
Yes	No		
<u>Final Plan Preparation</u>			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3821 Prepare/Review Traffic Signal Plan	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3822 Complete Permanent Pavement Marking Plan	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3823 Complete Non-Freeway Signing Plan	
		/ /	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3824 Complete Freeway Signing Plan	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3830 Complete the Maintaining Traffic Plan	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3840 Develop Final Plans and Specifications	8/2/2012
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>380M Plan Completion</u>	8/2/2012
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3850 Develop Structure Final Plans and Specifications	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3870 Hold Omissions/Errors Check (OEC) Meeting	9/02/2012
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>387M Omissions/Errors Checks Meeting</u>	/ /
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>389M Plan Turn-In</u>	10/11/2013
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3880 CPM Quality Assurance Review	/ /

Preliminary Engineering – Right Of Way

Early Right Of Way Work

<input type="checkbox"/>	<input checked="" type="checkbox"/>	4120 Obtain Preliminary Title Commitments	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4130 Prepare Marked Final Right Of Way Plans	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>413M Approved Marked Final ROW</i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4140 Prepare Property Legal Instruments	/	/

ROW Acquisition

<input type="checkbox"/>	<input checked="" type="checkbox"/>	4411 Preliminary Interviews	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>441M Post-Decision Meeting</i>	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4413 Appraisal Reports	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4420 Appraisal Review Reports	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4430 Acquire Right Of Way Parcels	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4510 Conduct Right Of Way Survey & Staking	/	/

ROW Relocation

<input type="checkbox"/>	<input checked="" type="checkbox"/>	4710 Relocation Assistance	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4720 Prepare Improvement Removal Plan	/	/
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>442M ROW Certification</i>	/	/

PAYMENT SCHEDULE

Compensation for this Scope of Services shall be on an **actual cost plus fixed fee** basis.

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, subconsultant 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 website. This document contains instructions and forms that must be followed and used for 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 your contract for your specific contract terms.

Direct expenses, if applicable, 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 for this contract are those that are directly attributable to the activities of this project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT Region Engineer/Bureau Director 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 priced proposal submitted by the Consultant and must have prior written approval by the MDOT Region Engineer/Bureau Director and the MDOT Project Manager.

The fixed fee for profit allowed for this project is 11.0% of the cost of direct labor and overhead.

FOR YOUR INFORMATION

For questions on specific tasks, refer to the P/PMS Task Manual located on the MDOT Bulletin Board System.

For assistance in accessing this manual, please contact one of following:

Dennis Kelley: (517) 373-4614

**ATTACHMENT A
TRAFFIC SIGNAL STAGING**

CONTROL SECTION: 58071

JOB NUMBER: 103287C

PROJECT LOCATION(S):

M-125 @ 6th (58071 - 002)
M-125 @ 3rd (58071 - 003)
M-125 @ 2nd (58071 - 004)
M-125 @ First (58071 - 005)
M-125 @ Front (58071 - 006)
M-125 @ Elm (58071 - 007)
M-125 @ Noble St (58071 - 008)
M-125 @ Stewart/Cole (58071 - 011)
M-125 @ Frenchtown Mall (58071 - 028)
*M-125 @ Nadeau (58071 - 026)-**Staging and Full Modernization**
US-24 @ M-125 (58053 - 001)

PROJECT DESCRIPTION:

Signal Staging Plans for the above mentioned existing signalized intersections.

The Signal Modernization Design consists of ; the design for upgrading **of the existing** traffic signal equipment including but not limited to traffic signal controllers ("EPAC" type controllers), traffic and pedestrian heads, pedestrian push button actuated (**if necessary**), embedded loop and/or camera design (**if necessary**), illuminated case signs, span wire, signal support poles and supporting structures (**if necessary**). Radio Interconnect Design (**if necessary**), Replace all **existing** traffic and pedestrian signal heads crossing all legs with 12" heads.

Note: First option for signal design should be "Box Span" design. The signal designs should incorporate the use of LED technology. The consultant identifies and notes the existing posted speed limit on all approaches of the intersection(s) on the plan. Design for Radio Interconnect requires performing the Radio Survey and submitting the Signal Radio Survey Form. The Signal Radio Survey Form can be found in the "Traffic Consultant Files" at the following website:

<http://mdotwas1.mdot.state.mi.us/public/tands/plans.cfm>

PROJECT MANAGER:

Lynne Kirby, BTSC Cost & Scheduling Engineer
Brighton TSC
10321 E Grand River, Suite 500
Brighton, MI 48116
810-225-2627
810-227-7929
kirbyl@michigan.gov

General Requirements:

Design and develop traffic signal contract plans, proposal package, engineering documents, and related work necessary for new installation or modernization of electronic traffic signal control devices to be accomplished by contract bid letting. New traffic signal work typically includes installation of: signal support poles and/or pedestals, span wire, traffic and pedestrian signals, and traffic signal controller. Modernization traffic signal work typically includes the replacement, as needed, of: signal support poles and/or pedestals, span wire (if appropriate), traffic and pedestrian signals, traffic loops, handholes, and traffic signal control equipment.

If steel poles are required for a location, soil borings need to be taken. The first step is to request soil borings from the Region soils engineer (provide the proposed pole locations). The Region soils engineer will inform the consultant if existing soil boring data is available, or if the Region soils engineer can perform the borings, or if the consultant must perform the soil borings.

If it is determined during construction, the design is not constructible due to consultant design error; the signal design consultant will be responsible for correcting the design at no additional cost to MDOT. If the constructability is based on changes made by MDOT, the consultant will be compensated.

CONSULTANT RESPONSIBILITIES:

A) Specific Responsibilities:

1) The designer shall arrange for an on-site design kick-off meeting with, MDOT University Region Electrician, MDOT Lansing Signals Unit, Brighton TSC Traffic & Safety Engineer, Brighton TSC Utility/Permit Engineer to review the proposed signal modernization design plans.

B) General Responsibilities:

- 1) **Proposed plan views must have a 1"=30' scale when plotted to 11"x17".**
- 2) Perform design service including the design and preparation of base plans, preliminary (75%) plans, final plans, "E proposal" package, specifications, wiring diagrams, interconnect drawings, bills of materials, measurement and payment items, and cost estimates for all construction work for this project, including necessary alterations to power, lighting, and interconnect facilities. Traffic signal work may include installation of: signal support poles and/or pedestals, span wire, traffic and pedestrian signals, and traffic signal controller, traffic loops, handholes, wireless interconnect, and video detection.
- 3) Although the Utility coordination for this project will be done by MDOT TSC staff through the Road project, the consultant must incorporate all the utility information received into the design plans (both existing and proposed plans). **The consultant should anticipate attending utility coordination meetings as required (including on-site field meetings with the utility engineer and the affected utility companies in the area), a plan review meeting, and an OEC meeting.** The consultant will provide meeting minutes of all meetings for matters pertaining to traffic signal design.
- 4) Perform Design Service for drilled shaft foundations as required including soil boring information, identification of any suspected contamination of the boring site, and preliminary foundation investigation. (Refer to MDOT's website.) The following information must be provided for proper analysis of strain pole foundations:
 - a) Accurate pole location information
 - b) Soil classification
 - c) Standard penetration values every 2.5 feet (750 mm) extending 20 feet (6.1 m) below the ground surface elevation (blows/foot in accordance with ASTM D1586)
 - d) Unconfined compressive shearing resistance (PSF, for cohesive soils)
 - e) Ground water table elevation
- 5) **Perform strain pole foundation design as required. The MDOT has developed a strain pole foundation design table for box span signals. This table can be found on the Traffic and Safety website in the signals correspondence and guidelines area. A special foundation design may be necessary depending on site specific soil properties and proposed signal layout and geometry.**

- 6) The Consultant shall contact the Region Materials/Testing Engineer or Soils Engineer before proceeding with any geotechnical work and submit the results of the preliminary subsurface investigation for their review, approval, and recommendations for foundation design.
- 7) In the performance of design service, govern all project design and plan work by the applicable codes, standards, and practices of the Michigan Department of Transportation, hereinafter referred to as the department, and the current *Michigan Manual of Uniform Traffic Control Devices*.
- 8) Supply all materials necessary for completion of the projects, except as hereinafter described, including incidental prints required.
- 9) All documents prepared by the Consultant, including, drawings, estimates, specifications, field notes, investigation studies, etc., are the property of the department.
- 10) All plan sheets shall be developed using computer-aided drafting technology. The system shall be Intergraph Microstation, or one that processes data exactly as Intergraph will, no translations or system revisions being necessary by the department.
- 11) Refer to Suggested Traffic Signal Design Procedure: MDOT website.
- 12) Refer to Requirements for Preliminary Geotechnical Investigations for Signal Foundations: MDOT website.
- 13) Plans are to be designed using the 2012 Standard Specifications.
- 14) Perform any design/coordination tasks with any railroad company involved within the project limits, including (but not limited to):
 - a) Determine railroad contact person(s)
 - b) Complete any applications required by the railroad company to perform the proposed traffic signal work.
 - c) Include related notes and special provisions as required in the proposal.
- 15) Any existing or proposed pedestrian pushbuttons and ramps must be accessible per ADA guidelines and MDOT design practices including:
 - a) Pushbutton must be within 24" from edge of sidewalk
 - b) The pushbutton must be located in the middle of a 4' pushbutton landing (maximum slope of 2%).
 - c) ADA ramps are required at every crosswalk controlled by a pedestrian signal head.
 - d) Sidewalk is required to connect ADA ramps on a quadrant.
- 16) Perform sidewalk and ramp survey and design if not included in scope of road project on an as-needed basis to comply with MDOT design practices and ADA requirements. For all stop and go traffic signals, all ADA ramps will be replaced unless the existing ramps are compliant with MDOT design practices and ADA guidelines. For flashing signals, pedestrian ramps will not be replaced unless they are disturbed.

- 17) The ADA ramp survey data must be sufficient for ramp and pushbutton design including (but not limited to):
- a) Relative elevations, including at least two horizontal and vertical control points for future layout control for construction staking
 - b) Curb (top back of curb) & gutter (at flow line and at edge) is to be collected through the curves with observations every 3 feet along the arc near existing or proposed ADA ramps. Outside existing or proposed ADA ramp areas, curb and gutter observations may be every 5 feet.
 - c) Drainage structures (and any other utility located in or adjacent to the curb and gutter) near existing or proposed ADA ramps must be located because they can affect ADA ramp design.
 - d) If an ADA ramp exists, enough information must be collected to properly define the existing conditions.
 - e) Both ends of existing sidewalk joints must be mapped to determine limits of sidewalk replacement during ADA ramp design.

Task 1: Base Plan Preparation

- 1) Design and develop contract base plans necessary for new installation or modernization of electronic traffic signal control devices to be accomplished by contract bid letting. Base plans include (but are not limited to):
- a) Existing road rights-of-way (ROW)
 - b) Field measured/surveyed road and lane geometry and posted speed limits
 - c) Field measured/surveyed locations of any visible utilities
 - d) Proposed types and locations of poles and controller
 - e) Proposed traffic and pedestrian signal head types and locations
 - f) Proposed pushbuttons, traffic loops, and antennas
 - g) Proposed traffic signal removal (if required) and installation plan(s)
 - h) Proposed phasing (as required)
 - i) POCH diagram for proposed attachments to wood poles (not required for steel pole attachments)
- 2) Where applicable, the intersection and ADA ramp survey will be used to develop base plans
- 3) If existing or proposed pole locations appear to be outside existing right-of-way, contact Douglas Adelman (517-373-2363), Traffic Signal Unit in Lansing.

Task 1: Deliverables (Base Plans):

1. All traffic signal plan and interconnect sheets (no details required) in the following formats:
 - a. One 11x17 paper copy
 - b. One 11x17 pdf file
 - c. Distribute as follows:
 - i. Traffic Signals Unit: One (1) 11x17 paper copy and pdf file
 - ii. TSC Delivery Engineer: Pdf file
 - iii. TSC Traffic & Safety Engineer: Pdf file

- iv. TSC Utilities Engineer: Pdf file
- v. Region Soils Engineer: Pdf file
- vi. Region Traffic & Safety Engineer: Pdf file
- vii. Maintaining Agency (if applicable) : Pdf file
- viii. Utility company supplying power: Pdf file

Task 2: Utility Documentation

1. Show existing utility information (as provided by utility companies) on both removal and proposed signal plans.
2. Identify and inform the TSC utility engineer of any utilities for which insufficient information was provided, and identify any utilities that may conflict with the proposed construction.
3. Attend utility coordination meeting(s) as required and document any additional utility information.

Task 3: Preliminary (75%) Plan Preparation

1. Design and develop preliminary (75%) contract plans necessary for new installation or modernization of electronic traffic control devices to be accomplished by contract bid letting. Preliminary (75%) plans include (in addition to base plan information):
 - (a) Location and types of utilities as provided by the utility companies and resulting from utility coordination meeting(s) as required.
 - (b) Separate Interconnect plan sheet (if the scope requires “**Radio Interconnect Design**”)
 - (c) List of Materials and Quantities
 - (d) Wiring diagram
 - (e) ADA ramp and pushbutton design (including existing and proposed elevations)
 - (f) Point of Contact Height (POCH) diagram(s)
 - (g) Appropriate note blocks for contact persons, etc.
 - (h) Proper file names, levels, and text sizes
 - (i) Any additional right-of-way required for existing and proposed traffic signal appurtenances
 - (j) Soil boring information including depths, soil description, water level, and depth of foundation (if required)
2. Attend plan review meeting at the local TSC.

Task 3: Deliverables Preliminary (75%) Plans:

- 1) All traffic signal plan and interconnect sheets including details.
- 2) All required special provisions, notices to bidders, and specifications in E-Proposal format including a draft progress clause, a draft coordination clause, and a draft special provision for maintaining traffic.
- 3) Checklist of "typical" signal details to be used
- 4) Format of Task 3 Deliverables
 - a) Nine (9) 11x17 paper copies
 - b) One electronic 11x17 pdf file (filename: Job#PLANHALF.pdf)
 - c) One electronic proposal pdf file (filename: Job#PROPOSAL.pdf)

- 5) Distribute Task 3 Deliverables as follows:
- i) Traffic Signals Unit: Two (2) 11x17 paper copies, and pdf file
 - ii) TSC Delivery Engineer: One (1) 11x17 paper copy, and pdf file
 - iii) TSC Traffic & Safety Engineer: One (1) 11x17 paper copy, and pdf file
 - iv) TSC Utilities Engineer: One (1) 11x17 paper copy, and pdf file
 - v) Region Soils Engineer: One (1) 11x17 paper copy, and pdf file
 - vi) Region Traffic & Safety Engineer: One (1) 11x17 paper copy, and pdf file
 - vii) Lansing Signal Shop: One (1) 11x17 paper copy
 - viii) Maintaining Agency (if applicable): One (1) 11x17 paper copy, and pdf file
 - ix) Utility company supplying power: One (1) 11x17 paper copy

Task 4: Utility Coordination

- 1) **Actively work with MDOT personnel until utility conflicts are resolved. This includes, but is not limited to:**
- a) **Staking proposed foundation locations in the field prior to the utility coordination field review**
 - b) **Documenting additional utility information on the plans**
 - c) **Revising plans to avoid utility conflicts**

Task 5: Final Plan and Proposal Preparation

- 1) Incorporate the department's comments on the plans and prepare complete detailed construction final plans, supplemental specifications, special provisions, measurement and payment items, estimates of quantities, span calculations, and engineer's final estimates of cost for all necessary construction and related work included in this project.
- 2) During preparation of the final plans, make such alterations, corrections, and revisions to said plans and supporting materials as are deemed necessary and desirable by the department to insure conformance of plans to good design and standard practices and to have said plans and other material in proper form for receiving bids.
- 3) During preparation of the proposal, work with the appropriate MDOT personnel to obtain final bid proposal documents including progress clause, coordination clause, special provision for maintaining traffic, and utility relocation status (form 2286).
- 4) Attend and provide electronic plans for the OEC meeting. Make any final changes necessary.

Task 5: Deliverables (Final Plans):

- 1. Upon completion of design services for this project and final approval thereof by the department, deliver to the department final plans, proposal and supporting documents compatible with **current "E- Proposal"** requirements (Refer to MDOT website: E-Proposal Training for MDOT Consultants Document). **All CAD files must be "Intergraph Microstation Version 8 file format" and all PDF files must be Adobe Acrobat version 6.**

Format of Task 5 Deliverables (Final Plans):

- a) Two (2) 11"x17" paper copies of the full plan set. The title sheets must have original stamps and signatures and include a map of the area with work locations identified, a list of locations, and other items as determined by Traffic Signal Unit
- b) Electronic files of all signal plans
- c) Electronic (pdf) 11"x17" plan file (filename: Job#PLANHALF.pdf)
- d) Electronic (pdf) proposal file (filename: Job#PROPOSAL.pdf)
- e) Electronic (pdf) files of all required supporting documents
- f) Editable electronic files of all supporting documents and of all files inserted into proposal document. For example, submit the progress clause as a word document in addition to the progress clause (pdf) which will also be inserted in the proposal pdf.
- g) One set of estimates of cost of construction (8-1/2" x 11" paper copy).
- h) One copy of all design computations as required for use by the department.
- i) Upon request by the department, make available thereto all notes utilized in preparation of the plans, supplemental specifications, and cost estimates.
- j) For all signal contracts, a "txt" or "csv" file compatible with Transport system detailing the materials used
- k) Checklist of "typical" signal details to be used
- l) All required checklists of MDOT Special Provisions extracted per E-Proposal format

Distribute Task 5 Deliverables to Lansing Traffic Signals Unit only as follows:

- i) Two (2) 11x17 paper copies
- ii) All electronic files to be delivered on a compact disk (CD) and sent via email

MDOT RESPONSIBILITIES:

Department Review:

The department will review and comment on the base plan, the preliminary (75%) plan, and the OEC plan submittals. Additional plan review may be required dependent on completeness and accuracy of the plans submitted.

Information services to be provided by the MDOT are:

- Control section numbers
 - Job numbers
 - Contact information for TSC/Region/C&T personnel
 - Appropriate Traffic and Safety Notes
 - Available signal design plans and/or layout drawings for each location
 - Available signal phasing or operational information for each location
 - A Proposal file will be made available to be used as a template
 - **Items available on MDOT's website - www.michigan.gov/mdot**
(Select: Doing Business with MDOT, Traffic & Safety Services, Typical/Details/Guides)
1. Signal Details
 - a. MDOT Typical Signal Construction Detail Sheets

- b. MDOT Typical Signal Information Note Sheet
- c. MDOT Typical Signal Legend Sheet
- 2. Traffic Consultant Files
 - a. Cell libraries
 - b. Microstation information
 - c. CAD instructions for consultants
 - d. MDOT sample layouts
 - e. MDOT Suggested Traffic Signal Design Procedure
 - f. MDOT Requirements for Preliminary Geotechnical Investigations for Signal Foundations
 - g. Method of Measurement and Basis of Payment for Signal Contracts
 - h. Signal Span Calculation Program (non-disclosure statement required)
- 3. Traffic Guidelines
 - Traffic Signal Head Placement DiagramsSignal special provisions are now available on the Design IRS menu.

Reference Documents and Standards to be Used:

- *National Manual of Uniform Traffic Control Devices*
- *Michigan Manual of Uniform Traffic Control Devices (MMUTCD)*
- *Michigan Vehicle Code*
- Local and national electrical codes
- MDOT Standards, Specifications, and Construction Details
- MDOT Pay Item Code Book

From this list, the following documents can be ordered from MDOT Financial Services Division (517-335-2519). The Consultant must pay the cost.

- MMUTCD
- MDOT 2012 Standard Specifications for Construction
- MDOT Pay Item Code Book

PROJECT COORDINATION:

Coordinate design service with MDOT, Traffic and Safety Support Area, Traffic Signal Unit, Douglas Adelman (517-373-2363); overhead and/or underground utility/telephone companies; Miss Dig (800-482-7171).

ATTACHMENT B
SCOPE OF SERVICE
FOR
GEOTECHNICAL SERVICES
Coring and Testing Services

CONTROL SECTION: 81031

JOB NUMBER: 84004C

DESCRIPTION OF WORK:

The Consultant shall be prepared to perform geotechnical investigations for the above project location within the University Region. The investigations includes soil borings using hollow or solid stem augers, geoprobe or hand augers. Soil borings for the traffic signal modernization locations listed in Attachment A will be required. Borings shall be obtained at each quadrant for the box span design and to a depth of 25 feet. SPT testing is required for all signal foundation borings. All soil borings will be performed during normal working hours and off-peak traffic hours such as weekends and nights are not anticipated.

CONSULTANT RESPONSIBILITIES:

- A. The Consultant is responsible for contacting MISS DIG. The consultant is also responsible for location of other utilities not on the MISS DIG system.
- B. The consultant is responsible for traffic control during all operations. The Project Manager will supply the consultant with appropriate traffic control typicals to use for each specific project. In most cases the typicals will be drawn from the “MDOT Maintenance Work Zone Traffic Control Guidelines” available on the MDOT website.
- C. The Consultant shall perform field operations in accordance with the Department’s Personal Protective Equipment (PPE) Policy as stated in the MDOT Guidance Document #10118. A current copy of MDOT’s PPE Policy is available on the Bulletin Board System. The Consultant shall perform field operations in accordance with MIOSHA regulations and accepted safety practices.
- D. The Consultant is responsible for filling the auger holes with bituminous patching material or fast set concrete prior to leaving the specific location.
- E. The consultant is responsible for preparing all core and boring reports. The core/soil boring report shall consist of plan sheet(s) in Microstation and pdf formats graphically listing all cores/borings. Core/boring locations shall include lateral and longitudinal offsets referencing lanes and cross streets. In addition, the consultant will provide GPS coordinates in latitude/longitude format for all cores/borings locations.

MDOT RESPONSIBILITIES

- A. The Project Manager will provide the consultant with the appropriate traffic control scheme to use for each project. Traffic control may be changed during the work in response to unforeseen conditions, or as dictated by emergency or other events. MDOT will review traffic control measures being used at random times during performance of the contract.