

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

	REQUISITION NUMBER	DUE DATE	TIME DUE
MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)	
DESCRIPTION			
MDOT PROJECT MANAGER: Check all items to be included in RFP WHITE = REQUIRED ** = OPTIONAL Check the appropriate Tier in the box below		CONSULTANT: Provide only checked items below in proposal	
<input type="checkbox"/> TIER I (\$50,000 - \$150,000)	<input type="checkbox"/> TIER II (\$150,000-\$1,000,000)	<input type="checkbox"/> TIER III (>\$1,000,000)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Understanding of Service **
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Innovations</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Organizational Chart
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
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 type="checkbox"/>	<input type="checkbox"/>	Location: The percentage of work performed in Michigan will be used for all selections unless the project is for on-site p=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) (No Resumes)	7 pages (MDOT Forms not counted)	14 pages (MDOT forms not counted)	Total maximum pages for RFP not including key personnel resumes. Resumes limited to 2 pages per key staff personnel.

PROPOSAL AND BID SHEET EMAIL ADDRESS – mdot-rfp-response@michigan.gov

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 five (5) 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 firms not currently prequalified with MDOT)

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

REQUEST FOR PROPOSAL

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 Services Contracts" and "Guideline for Completing a Low Bid Sheet(S)*, if a low bid is involved as part of the selection process. **Reference Guidelines are available on MDOT's website under Doing Business > Vendor/Consultant Services > Vendor/Consultant Selections.**

RFP SPECIFIC INFORMATION

ENGINEERING SERVICES BUREAU OF TRANSPORTATION PLANNING OTHER

THE SERVICE WAS POSTED ON THE ANTICIPATED QUARTERLY REQUESTS FOR PROPOSALS

NO YES DATED _____ THROUGH _____

Prequalified Services – See 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 is required with Proposal for firms not currently prequalified with MDOT**

Qualifications Based Selection – Use Consultant/Vendor Selection Guidelines

For all Qualifications Based Selections, the selection team will review the information submitted and will select the firm considered most qualified to perform the services based on the proposals. The selected firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

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.

Qualification Based Selection / 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. The vendor that has met established qualification threshold and with the lowest bid will be selected.

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

Bid Sheet(s) must be submitted in accordance with the "Guidelines for Completing a Low Bid Sheet(s)* (available on MDOT's website). Bid Sheet(s) are located at the end of the Scope of Services. Submit bid sheet(s) with the proposal, to the email address: mdot-rfp-response@michigan.gov. Failure to comply with this procedure may result in your bid being rejected from consideration.

PARTNERSHIP CHARTER AGREEMENT

MDOT and ACEC created a Partnership Charter Agreement which establishes guidelines to assist MDOT and Consultants in successful partnering. Both the Consultant and MDOT Project Manager are reminded to review the [ACEC-MDOT Partnership Charter Agreement](#) and are asked to follow all communications, issues resolution and other procedures and guidance's contained therein.

**NOTIFICATION
MANDATORY ELECTRONIC SUBMITTAL**

Proposals submitted for this project must be submitted electronically.

The following are changes to the Proposal Submittal Requirements:

- Eliminated the Following Requirements:
 - Safety Program
 - Communication Plan
 - Past Performance as *a separate section*
 - Separate section for DBE Statement of goals. Include information in Qualification of Team section

- Implemented the Following Changes:
 - All proposals require an Organization Chart
 - Resumes must be a maximum of two pages
 - Only Key (lead) staff resumes may be submitted
 - Tier III proposal reduced from 19 to 14 pages
 - Forms 5100D, 5100I, and 5100G combined – 5100D
 - Forms 5100B and 5100H combined – 5100B
 - RFP's will be posted on a weekly basis -- on Mondays

The following are Requirements for Electronic Submittals:

- Proposals must be prepared using the most current guidelines
- The proposal must be bookmarked to clearly identify the proposal sections (See Below)
- For any section not required per the RFP, the bookmark must be edited to include “N/A” after the bookmark title.
Example: Understanding of Service – N/A
- Proposals must be assembled and saved as a single PDF file
- PDF file must be 5 megabytes or smaller
- PDF file must be submitted via e-mail to MDOT-RFP-Response@michigan.gov
- MDOT's requisition number and company name must be included in the subject line of the e-mail. The PDF shall be named using the following format:
 - Requisition#XXX_Company Name.PDF
- MDOT will not accept multiple submittals
- Proposals must be *received* by MDOT on or before the due date and time specified in each RFP

If the submittals do not comply with the requirements, they may be determined unresponsive.

The Consultant's will receive an e-mail reply/notification from MDOT when the proposal is received. Please retain a copy of this e-mail as proof that the proposal was received on time. **Consultants are responsible for ensuring the MDOT receives the proposal on time.**

****Contact Contract Services Division immediately at 517-373-4680 if you do not get an auto response****

Required Bookmarking Format:

- I. Request for Proposal Cover Sheet Form 5100D
 - A. Consultant Data and Signature Sheet, Form 5100J (if applicable)
- II. Understanding of Service
 - A. Innovations
- III. Qualifications of Team
 - A. Structure of Project Team
 - 1. Role of Firms
 - 2. Role of Key Personnel
 - B. Organization Chart
 - C. Location
- IV. Quality Assurance / Quality Control Plan
- V. Resumes of Key Staff
- VI. Pricing Documents/Bid Sheet (if applicable)

2/14/12

**NOTIFICATION
E-VERIFY REQUIREMENTS**

E-Verify is an Internet based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring, under Public Act 200 of 2012, Section 381, that as a condition of each contract or subcontract for construction, maintenance, or engineering services that the pre-qualified contractor or subcontractor agree to use the E-Verify system to verify that all persons hired during the contract term by the contractor or subcontractor are legally present and authorized to work in the United States.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

The documentation supporting the usage of the E-Verify system must be maintained by each consultant and be made available to MDOT upon request.

It is the responsibility of the prime consultant to include the E-Verify requirement documented in this NOTIFICATION in all tiers of subcontracts.

9/13/12

Michigan Department of Transportation

**SCOPE OF SERVICE
FOR
DESIGN SERVICES**

CONTROL SECTION(S): 50092

JOB NUMBER(S): 116508C

PROJECT LOCATION:

The project is located on Gratiot Ave from north of 26 Mile Road to ¼ Mile North of the M-19/ New Haven Rd Intersection in the Village of New Haven, Macomb County.



PROJECT DESCRIPTION:

The purpose of the project is to remove the existing SB M-19 slip ramp at New Haven Road and replace with a non-motorized path connecting to the existing pedestrian crossing at New Haven High School.

A center left turn lane will be added to Gratiot Avenue at the New Haven Rd intersection. A CLT lane may be desired from POB to POE and will be evaluated as part of the design of the project. Right turn lanes for NB and SB Gratiot at New Haven Rd will be evaluated as well.

The signal at the M-19/New Haven intersection will be modernized. The pedestrian crossing at New Haven will be evaluated for a possible HAWK signal.

The double culvert below the jug handle will be evaluated for possible replacement.

ANTICIPATED SERVICE START DATE: March 2014

ANTICIPATED SERVICE COMPLETION DATE: October 2014

PRIMARY PREQUALIFICATION CLASSIFICATION(S):

Roadway Rehabilitation & Rural Freeways
Traffic Capacity Analysis and Geometric Studies
Traffic Signal Design

SECONDARY PREQUALIFICATION CLASSIFICATION(S):

Hydraulics (*Precautionary*)
Hydraulic Surveys
Utility Coordination
Maintaining Traffic Plans and Provisions
Pavement Marking Plans
Permanent Non-Freeway Traffic Signing Plans
Simple Traffic Signal Operations
Safety Studies

DBE PARTICIPATION REQUIREMENT: 5%

MDOT PROJECT ENGINEER MANAGER:

Steve Minton
Senior Contracts and Project Engineer - Design
Macomb-St. Clair TSC
26170 21 Mile Road
Chesterfield Twp, MI 48051
(586) 421-3957
minton@michigan.gov

CONSTRUCTION COST:

A. The estimated cost of construction is:

CONSTRUCTION TOTAL	\$1,306,000
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B. The estimated cost of real estate is: \$30,000

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, Published MDOT Design Advisories, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

The Consultant is required to use the current MDOT1 workspace 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.

MISCELLANEOUS INFORMATION:

The design survey for the project was completed in 2013 and will be provided to the Consultant.

The portion of Gratiot from north of 26 Mile Road to New Haven Road is Macomb County Department of Roads jurisdiction. The improvements to this section of Gratiot will be included in this scope of design services. The design and construction will be funded through an agreement with the MCDR.

CONSULTANT RESPONSIBILITIES:

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

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 Project Area Contamination Survey (PACS).
- 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, electronic copies (in Adobe PDF format) of the required specifications and plan set materials for distribution by MDOT for all reviews for this project.
- 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

Refer to Attachment B Scope of Services for Utility Coordination

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, Development Services 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:

Schedule and/or conduct the following:

1. Project related meetings
 2. Base Plan Review
 3. The Plan Review
 4. Omissions/Errors/Check
 5. Final Transport item cost estimates
- A. Furnish pertinent reference materials.
 - B. Furnish prints of an example of a similar project and old plans of the area, if available. Furnish the E.A.
 - C. Obtain all permits for the project as outlined in previous section.

D. Furnish FTP site for software download and instructions for the MDOT Stand Alone Proposal Estimator's Worksheet (SAPW).

E.

DELIVERABLES:

The Consultant shall deliver all computer files associated with the project in their native format (spreadsheets, CADD files, GEOPAK files, Roadway Designer Templates 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. 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 published monthly to the MDOT website. 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 capture a legally signed document or a hard copy version of a document is all that exists.

Plan sheets shall be printed to an Adobe PDF set in 11" x 17" format. For final Plan Turn-In, a title sheet shall be printed, signed, sealed, and then scanned for inclusion with the Adobe PDF set. The original title sheet shall be sent to the MDOT Project Manager.

At final Plan Turn-In, Reference Information Documents (RID) shall be delivered to MDOT with standard naming conventions and content. The RID files included will depend on the design survey and work type of the project. These files range from CADD, existing terrain, proposed cross sections, 3D models and files generated for Automated Machine Guidance (AMG) and automated inspection/stakeout activities.

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 removal, construction, and profile sheets will require a scale of **1"=80' or as approved by the Project Manager.**

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
P/PMS Form Only

**MDOT PRECONSTRUCTION
TASKS
CONSULTANT CHECKLIST**

Version 11
Updated
08-26-2013

*For questions on specific tasks, refer to the P/PMS Task Manual located on the [MDOT Website](#).
For assistance in accessing this manual, please contact:
Dennis Kelley: (517) 373-4614*

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. Scheduling assistance may be accomplished with estimated completion dates. While not part of P/PMS, an Authorization Milestone and Post-Design Tasks have been included for your reference.

STUDY (EARLY PRELIMINARY ENGINEERING)

	P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)	
	CONSULTANT CONTRACT AUTHORIZATION/EXECUTION	/	/
YES	<u>INFORMATION GATHERING/STUDIES</u>		
	1115 Traffic Data Collection for Studies	/	/
	1120 Prepare Traffic Analysis Report for Studies	/	/
	1125 Traffic Capacity Analysis for Studies	/	/
	1155 Request/Perform Safety Analysis for Studies	/	/
	1300 Traffic Impact Study	/	/
	1350 Determine Need for Interstate Access Change Request	/	/
	1400 Feasibility Study	/	/
	1500 Corridor Study	/	/
	1555 Interstate Access Change Request	/	/
	<i><u>155M FHWA Approval of Interstate Access Change Request</u></i>	/	/
	1600 Access Management Study Plan	/	/
	1700 Other Miscellaneous Studies	/	/
	<u>EPE SCOPING ANALYSIS</u>		
	2100 Scope Verification and Initiation of EPE Activities	/	/
	2115 Prepare Traffic Analysis Report for EPE/Design	/	/
	2120 Traffic Data Collection for EPE/Design	/	/
X	2125 Traffic Capacity Analysis for EPE/Design	/	/

	2130	Prepare Project Purpose and Need	/	/
	<u>213M</u>	<u>Concurrence by Regulatory Agencies with the Purpose and Need</u>	/	/
	2140	Develop and Review Illustrative Alternatives	/	/
X	2155	Request/Perform Safety Analysis for EPE/Design	/	/
	2160	Prepare and Review EIS Scoping Document	/	/
	<u>216M</u>	<u>Public Information Meeting</u>	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

STUDY (EARLY PRELIMINARY ENGINEERING) (cont'd)

YES	P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
	<u>EPE DRAFT ANALYSIS</u>	
	2310	Conduct Technical SEE Studies / /
	2311	Cultural Resources Survey / /
	2312	Recreational Survey – Section 4(f)/6(f) / /
	<u>EPE DRAFT ANALYSIS (cont'd)</u>	
	2313	Endangered Species Survey / /
	2314	Wetland Assessment / /
	2315	Wetland Mitigation / /
	2316	Other Technical Reports / /
	2321	Prepare for Aerial Photography / /
	2322	Finish/Print Aerial Photography / /
	2330	Collect EPE Geotechnical Data / /
	2340	Develop and Review Practical Alternatives / /
	<u>233M</u>	<u>Aerial Photography Flight</u> / /
	2360	Prepare and Review EA / /
	<u>236M</u>	<u>Approval of EA by FHWA</u> / /
	2370	Prepare and Review Draft EIS / /
	<u>237M</u>	<u>Approval of Draft EIS by FHWA</u> / /
	2380	Distribute EA / /
	<u>238M</u>	<u>Public Hearing for EA</u> / /
	2390	Distribute DEIS / /
	<u>239M</u>	<u>Public Hearing for DEIS</u> / /
	<u>EPE FINAL ANALYSIS</u>	
	2510	Determine and Review Recommended Alternative / /
	<u>250M</u>	<u>Concurrence by Reg Agencies with Recom Alternatives</u> / /
	2525	Prepare and Review Engineering Report / /
	2530	Prepare and Review Request for FONSI / /
	<u>252M</u>	<u>Approval of FONSI by FHWA</u> / /
	2540	Prepare and Review FEIS / /
	<u>254M</u>	<u>Approval of FEIS by FHWA</u> / /

2550	Obtain ROD	/	/
<u>255M</u>	<u>ROD Issued by FHWA</u>	/	/
2570	ITS Concept of Operations	/	/

CONTAMINATION INVESTIGATION

2810	Project Area Contamination Survey (PCS)	/	/
2820	Preliminary Site Investigation (PSI) for Contamination	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING - DESIGN

	P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)	
YES	<u>DESIGN SCOPE VERIFICATION AND BASE PLAN PREPARATION</u>		
	3130 Verify Design Scope of Work and Cost	/	/
	3310 Prepare Aerial Topographic Mapping	/	/
	3320 Conduct Photogrammetric Control Survey	/	/
	3321 Set Aerial Photo Targets	/	/
	3325 Geotechnical Structure Site Characterization	/	/
	3330 Conduct Design Survey	/	/
	3340 Conduct Structure Survey	/	/
X	3350 Conduct Hydraulics Survey	/	/
X	3360 Prepare Base Plans	/	/
	<u>311M Utility Notification</u>	/	/
	3361 Review and Submit Preliminary ROW Plans	/	/
	<u>331M Preliminary ROW Plans Distributed</u>	/	/
	3365 Pre-Conceptual ITS Design and Meeting	/	/
	3370 Prepare Structure Study	/	/
	3375 Conduct Value Engineering Study	/	/
	3380 Review Base Plans	/	/
	3385 Preliminary Load Rating	/	/
	<u>332M Base Plan Review (Pre-GI Inspection)</u>	/	/
X	3390 Develop the Maintaining Traffic Concepts	/	/
	<u>PRELIMINARY PLANS PREPARATION</u>		
X	3500 Develop Transportation Management Plan	/	/
	3510 Perform Roadway Geotechnical Investigation	/	/
X	3520 Conduct Hydraulic/Hydrologic and Scour Analysis	/	/
X	3522 Conduct Drainage Study, Storm Sewer Design, and use Structural Best Management Practices	/	/
	3530 Geotechnical Foundation Engineering Report	/	/
	3535 Conduct Str. Review for Arch. & Aesthetic Improvements	/	/
X	3540 Develop the Maintaining Traffic Plan	/	/
X	3551 Prepare/Review Preliminary Traffic Signal Design Plan	/	/

X	3552	Develop Preliminary Pavement Marking Plan	/	/
X	3553	Develop Preliminary Non-Freeway Signing Plan	/	/
	3554	Develop Preliminary Freeway Signing Plan	/	/
X	3555	Prepare/Review Preliminary Traffic Signal Operations	/	/
	3570	Prepare Preliminary Structure Plans	/	/
X	3580	Develop Preliminary Plans	/	/
	3581	Review and Submit Final ROW Plans	/	/
	<u>351M</u>	<u>Final ROW Plans Distributed</u>	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING - DESIGN (cont'd)

YES	P/PMS TASK NUMBER AND DESCRIPTION		DATE TO BE COMPLETED BY (mm/dd/yyyy)	
	<u>PRELIMINARY PLANS PREPARATION (cont'd)</u>			
	3585	Final ITS Concept Design and Meeting	/	/
	3590	Review Preliminary Plans (Hold Plan Review Meeting)	/	/
	<u>352M</u>	<u>THE Plan Review (Grade Inspection)</u>	/	/
	3595	Conduct ITS Structure Foundation Investigation	/	/
	<u>UTILITIES</u>			
X	3610	Compile Utility Information	/	/
	3615	Compile ITS Utility Information	/	/
	3650	Coordinate RR Involvement for Grade Separations	/	/
	3655	Coordinate RR Involvement for At-Grade Crossings	/	/
X	3660	Resolve Utility Issues	/	/
	<u>360M</u>	<u>Utility Conflict Resolution Plan Distribution</u>	/	/
	<u>361M</u>	<u>Utility Meeting</u>	/	/
	3670	Develop Municipal Utility Plans	/	/
	3672	Develop Special Drainage Structures Plans	/	/
	3675	Develop Electrical Plans	/	/
	3680	Preliminary ITS Communication Analysis	/	/
	3690	Power Design (Power Drop in Field)	/	/
	<u>MITIGATION/PERMITS</u>			
	3710	Develop Required Mitigation	/	/
X	3720	Assemble Environmental Permit Applications	/	/
	3730	Obtain Environmental Permit	/	/
	<u>FINAL PLAN PREPARATION</u>			
	3815	Geotechnical Structure Design Review	/	/
X	3821	Prepare/Review Final Traffic Signal Design Plan	/	/
X	3822	Complete Permanent Pavement Marking Plan	/	/
X	3823	Complete Non-Freeway Signing Plan	/	/

	3824	Complete Freeway Signing Plan	/	/
X	3825	Prepare/Review Final Traffic Signal Operations	/	/
X	3830	Complete the Maintaining Traffic Plan	/	/
X	3840	Develop Final Plans and Specifications	/	/
	<u>380M</u>	<u>Plan Completion</u>	/	/
	3850	Develop Structure Final Plans and Specifications	/	/
X	3870	Hold Omissions/Errors Check (OEC) Meeting	/	/
	3875	Final Load Rating	/	/

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

PRELIMINARY ENGINEERING - DESIGN (cont'd)

YES	P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
	<u>FINAL PLAN PREPARATION (cont'd)</u>	
	<u>387M</u> Omissions/Errors Checks Meeting	/ /
	<u>389M</u> Plan Turn-In	07/03/14
	3880 CPM Quality Assurance Review	/ /
	3890 Final ITS Communication Analysis	/ /

PRELIMINARY ENGINEERING – RIGHT OF WAY

	<u>EARLY RIGHT OF WAY WORK</u>	
	4120 Obtain Preliminary Title Commitments	/ /
X	4130 Prepare Marked Final Right Of Way Plans	/ /
	<u>413M</u> Approved Marked Final ROW	/ /
X	4140 Prepare Property Legal Instruments	/ /
	<u>ROW ACQUISITION</u>	
	4411 Preliminary Interviews	/ /
	<u>441M</u> Post-Decision Meeting	/ /
	4412 Real Estate Services Assignment Proposal and Fee Estimate (Form 633s) for Appraisal Work Authorization	/ /
	4413 Appraisal Reports	/ /
	<u>ROW ACQUISITION (cont'd)</u>	
	4420 Appraisal Review Reports	/ /
	4430 Acquire Right Of Way Parcels	/ /
	4510 Conduct Right Of Way Survey & Staking	/ /
	<u>ROW RELOCATION</u>	
	4710 Relocation Assistance	/ /
	4720 Prepare Improvement Removal Plan	/ /

MDOT PRECONSTRUCTION TASKS CONSULTANT CHECKLIST

POST LETTING/AWARD TASKS (for reference only)

YES	P/PMS TASK NUMBER AND DESCRIPTION	DATE TO BE COMPLETED BY (mm/dd/yyyy)
	4810 Complete Acquisition Process	/ /
	4820 Manage Excess Real Estate	/ /
	4830 Provide Post-Certification Relocation Assistance	/ /
	4910 Conduct ROW Monumentation	/ /
	5010 Construction Phase Engineering and Assistance	/ /
	5020 Prepare As-Built Drawings	/ /

CONSULTANT PAYMENT INFORMATION

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

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.

MDOT will reimburse the consultant for vehicle expenses and the costs of travel to and from project sites in accordance with MDOT's Travel and Vehicle Expense Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Travel_Guidelines_05-01-

[13_420289_7.pdf?20130509082418](http://www.michigan.gov/documents/mdot/Final_Travel_and_Vehicle_Expense_Reimbursement_Guidelines_05-01-13_420289_7.pdf?20130509082418). MDOT's travel and vehicle expense reimbursement policies are intended primarily for construction engineering work. Reimbursement for travel to and from project sites and for vehicle expenses for all other types of work will be approved on a case by case basis.

MDOT will pay overtime in accordance with MDOT's Overtime Reimbursement Guidelines, dated May 1, 2013. The guidelines can be found at http://www.michigan.gov/documents/mdot/Final_Overtime_Guidelines_05-01-13_420286_7.pdf?20130509081848. MDOT's overtime reimbursement policies are intended primarily for construction engineering work. Overtime reimbursement for all other types of work will be approved on a case by case basis.

ATTACHMENT A
SCOPE OF SERVICE
FOR
HYDRAULICS SURVEY

Consultant Analysis
PPMS Task 3350
04.29.13

C.S. 50092 Job No. 116508
M-19 (jug handle) over Shook Drain
Macomb County

The Consultant shall perform a hydraulics survey, which provides geometric data on the stream channel upstream and downstream of the structure. **Two weeks** prior to starting the hydraulics survey, the Consultant surveyor shall schedule a site visit with an MDOT Hydraulics engineer by contacting the Design Engineer-Hydraulics/Hydrology Chris Potvin at 517-335-1919 or Assistant Design Engineer-Hydraulics/Hydrology Larry Wiggins at 517-373-1713. The purpose of the site visit is to discuss details of the survey and to clarify the intent of the survey. Notes must be taken at the site visit and submitted promptly to the MDOT Project Manager, and MDOT Survey Coordinator or Region Surveyor.

Prior to performing the survey, the Consultant must contact all landowners upon whose lands they will enter. The contact may be personal, phone or letter, but must be documented. This notice must include the reasons for the survey on private land, the approximate time the survey is to take place, the extent of the survey including potential brush cutting, and an MDOT contact person (the MDOT Project Manager or Consultant Survey Coordinator or Region Surveyor).

The Consultant must make every effort to minimize brush cutting on private property. The use of paint on private property is prohibited.

Cross-sections shall be taken at the limits and intervals specified by the MDOT Design Engineer-Hydraulics/Hydrology as shown in Attachment A. Channel cross-sections shall be taken normal to the direction of *flood* flow and tied to the project coordinate system so they can be accurately plotted. The sections shall be extended to the edge of the floodplain, to the elevation of the top of the road at the structure, or to a distance beyond the river bank agreed upon with the MDOT Hydraulics engineer at the site visit. Shots must be taken at approximately six foot intervals through the stream, and at significant break points. Any high water marks and date of occurrence (if available) shall be noted.

Since the hydraulics analysis is to be performed by Consultant staff, the Consultant shall meet the following requirements for hydraulics cross-sections:

1. Cross-sections shall be submitted electronically in a format acceptable to the Design Engineer-Hydraulics/Hydrology.

2. The highpoints of all berms such as roads, railroads, or driveways that cross the stream must be included as a separate chain. Each highpoints chain must also have a description or comment that identifies the type of centerline, such as “railroad berm” or “farm drive.” Each individual shot in the highpoints chain should have its own identifying Feature Code or description, such as centerline, sidewalk or top of wall.
3. Each cross-section shall be submitted with the points in the chain running all left to right, looking downstream.
4. The cross-sections generally must extend a minimum of 100 feet into the floodplain from the stream top of bank.
5. For each cross-section, the vegetation break point (the “friction point” between the natural channel and the surrounding vegetation) shall be shot. It should have a comment or description of “break point.”
6. Subsequent vegetation break points, if applicable, shall be shot with a comment or description such as “friction point – grass to shrub,” or “friction point – shrub to trees” as appropriate.
7. The water surface elevations at each cross section shall be taken at the left edge of water and right edge of water looking downstream. The Consultant must note if any stream bed cross sections were dry, and water surface elevation shots were unavailable.

The project surveyor must ensure that all required information is legible and in a form which is easily accessible to the Hydraulics/Hydrology Unit. A HEC-RAS file is acceptable. Other formats must be discussed in advance with the Survey Project Manager or MDOT Hydraulics Engineer.

All elevations shall be referenced to the North American Vertical Datum of 1988 (NAVD88), or project datum, if established and different. If a project datum is used, the MDOT Hydraulics Engineer may require a reference to NAVD88 or National Geodetic Vertical Datum of 1929 (NGVD29). Two benchmarks must be established at the stream crossing, one on each side of the stream. All benchmarks must be accurately described. Benchmark leveling shall be a closed loop of at least third-order accuracy, which requires an error of closure between known benchmarks of not more than 0.06 feet times the square root of the distance in miles.

Note: It is not necessary to provide least squares analyses for horizontal and vertical control for a Hydraulics Survey upstream and downstream from the structure. Electronic evidence of horizontal and vertical closure is required. The surveyor must use professional judgment to determine whether the closures are acceptable for use on a Hydraulics Survey. It is necessary to provide accurate elevations for underclearances, road profiles, weirs, and anything that controls flow. It is not necessary to provide extremely accurate closures for vertical and horizontal control used for hydraulics cross-sections.

It is not necessary to provide a witness list of horizontal control points set for hydraulics cross-sections.

A list containing at least two benchmarks, one on either side of the bridge, with descriptions, elevations and datum, must be provided. Since these benchmarks will be used for road/bridge design and construction, least squares analysis is required.

THE PORTFOLIO FOR THE HYDRAULICS SURVEY MUST BE DELIVERED ELECTRONICALLY. All field measurements, notes, sketches, and calculations must be included in the final transmission.

ATTACHMENT AA

C.S. 50092 Job No. 116508
M-19 (jug handle) over Stream Name:
Macomb County

FINAL REPORT: DELIVERABLES FOR HYDRAULICS SURVEY

1. The **riparian owners and addresses** in the four quadrants of the structure and stream, clearly shown. It may be necessary to draw the stream on an Equalization map.
2. **First water access** of all buildings within the survey limits. These shots should use Feature Code **FF** in MicroStation. A description should be included noting exactly what element was shot, such as basement window, walkout basement, or first floor.
3. All **pertinent structure data** including water surface elevations, flow lines, invert or footing elevations, opening widths, length, pier thickness and underclearance elevations, both upstream and downstream, **at the stream structure**. Include an elevation view sketch of both sides of the structure showing this information. Note structure width across the road.
4. All **pertinent structure data** including water surface elevations, flow lines, invert or footing elevations, opening widths, length, and underclearance elevations, both upstream and downstream, **at any other structures** encountered within the reach of the survey. Include an elevation view sketch of both sides of all such structures showing this information. Note structure width across the roadway or railroad.
5. Water surface elevations at each section must be provided, with the date taken. The water surface elevations at each cross section shall be taken at the left edge of water and right edge of water. **All water surface elevations should be taken on the same day if possible.** If not, note the date taken and any event which may affect the evaluation.
6. A **profile of the highpoints of all berms** such as roads, railroads, or driveways that cross the stream must be included as separate chains, with a Feature Code of “HIPTC” and labeled as “HIPTC3, HIPTC1”, etc. These HIPTC chains need not be in numerical sequence, but each HIPTC chain must have a description of 10, 20, 30, etc., in sequence, starting with 10 at the downstream end. Each HIPTC chain must also have a description that identifies the type of berm, such as “railroad berm” or “farm drive.” The HIPTC chains are to have descriptions of 10, 20, 30, etc., sequenced separately from the HYDRO chains. Each individual shot in the HIPTC chain should have its own identifying Feature Code and alpha prefix such as CL, SW, or WALLT. Profile shots must be taken at the approximate reference lines of the structure, with an appropriate Feature Code and a description of “approximate reference line.”
7. One **road profile** for a minimum of 600 feet along the **highpoints of the state trunkline**, as determined by the MDOT Hydraulics Engineer with a description or “M-

19 centerline.” The chain Feature Code must be HIPTC, with a description of “10”, or as sequenced in #6 above if there are berms downstream in the survey area. Each individual shot in the HIPTC chain should have its own identifying Feature Code, such as CL, SW or WALLT. Shots must be taken at the approximate reference lines of a structure, with an appropriate Feature Code and/or point name, such as DECK or SW, and a description of “approx reference line.” In the case of a culvert, a road profile shot must be taken at the highpoint at the approximate center of the culvert, with a description of “centerline culvert” that is shown on the Hydraulics MicroStation file.

8. A **point list in ASCII format** must be provided, containing columns for point number, North (or Y), East (or X), elevation, Feature Code, and description. The shots for each cross section must be grouped together in the same order that they are in the chain, and the cross section designation noted.
9. A MicroStation V8 drawing, **saved to .pdf format**, showing the relationship of the cross sections to the structure and the road, and noting the distance between cross sections. The stream footprint must be shown, as well as any first floor locations and elevations. A **MicroStation drawing, saved to .pdf format**, of the area at the stream crossing, showing a basic map of the bridge including abutments, the road(s), and cross section shots at the upstream and downstream faces of the structure (elevations in small text).
10. A **MicroStation drawing, saved to .pdf format**, of the area at the stream crossing, showing a basic map of the bridge including abutments, the road(s), and cross section shots at the upstream and downstream faces of the structure (elevations in small text).
11. **Benchmark list** with descriptions, elevations, and datum; and least squares analysis for benchmarks at the structure.
12. Two hydraulics cross sections, one at the upstream and one at the downstream face of the structure excluding roadway embankment.
13. **Upstream** of the structure, **hydraulics cross-sections must be defined by the MDOT Hydraulics Unit.**
14. **Downstream** of the structure, **hydraulics cross-sections must be defined by the MDOT Hydraulics Unit.**

ATTACHMENT B

**SCOPE OF SERVICE
FOR
UTILITY COORDINATION**

The Consultant is directly responsible for all aspects of the project's utility coordination. The Consultant is expected to provide technical assistance to MDOT, utilities and other stakeholders regarding utility identification, project utility coordination and utility conflict resolution.

A utility is defined as any privately, publicly, municipal or cooperatively owned line, facility, or system for producing, transmitting, or distributing communication, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or any other similar commodity, including any fire or police signal system or street lighting system.

MDOT shall -

- Provide a preliminary list of utilities, with contact information, that may have facilities located within the project limits. This list may not be 100% accurate and/or complete.
- Provide assistance, if necessary, in contacting utilities to obtain facility records.
- Provide Consultant with utility responses and facility records if utility information solicitation has been performed.
- Organize and host a kick-off meeting with Consultant and MDOT prior to Consultant beginning utility coordination services.

Consultant shall -

- Maintain a Utility Conflict Matrix* spreadsheet and deliver as the bi-weekly status report.
- Distribute form letters, plans, etc. as outlined in 14.16 (Request for Utility Information) and 14.26 (Distribution of Preliminary Plans to Utilities and Utility Coordination Meeting) of the MDOT Road Design Manual.
 - Identify existing/proposed utility owners and facilities.
 - Collect and compile utility responses.
 - Follow up with non-responsive utilities.
- Schedule and conduct utility meetings for the resolution of conflicts between utility facilities and proposed construction.
 - Identify conflicts, discuss possible design modifications, develop utility relocation schemes, discuss reimbursable relocations, and discuss project scope and schedule.
 - Identify the utility's design and construction contacts and ensure the plan's note sheet utility contact information is accurate.
 - Record meeting minutes and distribute to all attendees.
- Schedule and conduct field meetings with individual utilities to resolve conflicts.
- Schedule and conduct in meetings convened for the purpose of utility betterments.
- Ensure municipal utility relocations, betterments and reimbursements follow Chapter 9 of the MDOT Road Design Manual.

- Identify eligible reimbursable utility relocations, for public/private utilities, as outlined in 23 Code of Federal Regulations (CFR) Part 645 Subparts A and B – Utilities and ensure 23 CFR Part 635.410 - Buy America Requirements are met.
 - Collect documentation to evaluate reimbursable utility relocations.
- Evaluate utility relocation plans for compatibility with the proposed project.
- Ensure utility relocation schedules do not impact the project schedule.
- Confirm utility relocation permit applications are submitted to the TSC.
- Prepare the “Utilities Status Report” (MDOT Form 2286) and “Notice to Bidders - Utility Coordination” documents.
- Track and monitor utility relocation progress.

Deliverables (Provided to the TSC Utility Coordinator and Project Manager):

- Courtesy copies of all correspondence with the utilities
- Utility Conflict Matrix
- Utility coordination meeting minutes
- Reimbursable utility relocation documentation
- Utilities Status Report and Notice to Bidders - Utility Coordination

* The Utility Conflict Matrix (UCM) is located on the <http://www.trb.org/Main/Blurbs/166731.aspx> website under Training materials > Prototype 1 – Stand-alone UCM. The UCM was developed as part of the Transportation Research Board’s (TRB) second Strategic Highway Research Program (SHRP 2) Report S2-R15B-RW-1: Identification of Utility Conflicts and Solutions which provides concepts and procedures to identify and resolve utility conflicts. Tools described in the report include utility conflict matrices that enable users to organize, track, and manage conflicts that frequently arise.