

**CHECKLIST TO DESIGNATE AREAS OF EVALUATION
FOR REQUESTS FOR PROPOSAL (RFP)**
Research Administration University Use Only

MDOT PROJECT MANAGER Steve Kahl		JOB NUMBER (JN) TBD	CONTROL SECTION (CS) Statewide
DESCRIPTION Remote Monitoring of Fatigue Sensitive Details on Bridges OR10-041			
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			
<input type="checkbox"/> TIER I (\$25,000-\$99,999)	<input checked="" type="checkbox"/> TIER II (\$100,000-\$250,000)	<input type="checkbox"/> TIER III (>\$250,000)	
<input type="checkbox"/>	<input checked="" 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"/>	<i>Safety Program</i>
N/A	<input type="checkbox"/>	<input type="checkbox"/>	Organizational Chart
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Past Performance
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Quality Assurance/Quality Control
<input type="checkbox"/>	<input checked="" 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 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)
			Total maximum pages for RFP is 20 pages.

REQUEST FOR PROPOSAL

The Michigan Department of Transportation is seeking professional services for the project contained in the attached Research Problem Statement.

The prime consultant should exhibit qualifications to lead this work and can be a private firm or university. The prime consultant/vendor is responsible for the successful completion of the service and is expected to perform at least 40 percent of the services, by dollar value. The basis of payment is Actual Costs as defined in standard MDOT contracts.

If your organization is interested in providing services, please indicate your interest by submitting a proposal following the research guidelines near the top of MDOT's Request for Proposals Web page at http://www.michigan.gov/mdot/0,1607,7-151-9625_32842---,00.html.

RFP SPECIFIC INFORMATION

Problem Title: Remote Monitoring of Fatigue Sensitive Details on Bridge
OR Number: OR10-041

This is Best Value Selection which means the budget amount submitted with the proposal is a component of the proposal score, not the determining factor of the selection.

PROPOSAL SUBMITTAL INFORMATION

PROPOSAL AND BID SHEET EMAIL ADDRESS – mdot-rfp-response@michigan.gov , with a copy to mdot-research@michigan.gov	PROPOSAL DUE DATE 7/23/2012	TIME DUE noon
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BUDGET

Tier I
(\$25,000 - \$99,999)

Tier II
(\$100,000 - \$250,000)

Tier III
(>\$250,000)

GENERAL INFORMATION

Any questions relative to the Research Problem Statement must be submitted by e-mail to: mdot-research@michigan.gov. Questions must be received by 5 p.m. EST 5 business days prior to the RFP due date. All questions and answers will be placed on the MDOT RFP Web site as soon as possible after receipt of the questions and at least three (3) days prior to the due date listed above. The names of organizations 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 AND RESEARCH ADMINISTRATION FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION:

- 5100D – Request for Proposal Cover Sheet
- Research Proposal Budget Form Worksheet Appendix D
- Schedule of Research Activities Form- Appendix B
- Deliverables Table- Appendix A
- Initial Implementation Plan Form- Appendix C
- 5100J- Consultant Data and Presignature Sheet is required for signatory on this proposal

**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.**

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

Michigan Department of Transportation

SCOPE OF SERVICE FOR RESEARCH SERVICES

TITLE: Remote Monitoring of Fatigue Sensitive Details on Bridges
OR#: OR10-041

LOCATION: Statewide

WORK DESCRIPTION: Research on Remote Monitoring of Fatigue Sensitive Details on Steel Girder Bridges

ANTICIPATED START DATE: 10/1/2012

ANTICIPATED COMPLETION DATE: 9/30/2014

MDOT RESEARCH PROJECT ADMINISTRATION MANAGER:

Michael Townley, P.E.
425 West Ottawa Street
Lansing, Michigan 48933
E-MAIL: mdot-research@michigan.gov

GENERAL INFORMATION:

1. PROBLEM TO ADDRESS: Fatigue cracks on critical structural components under normal operating conditions may occur on steel girder bridges through their service lifetime. Environmental and peak loading conditions may advance the progression of fatigue cracks once they manifest. MDOT does special inspections of over 200 bridges having fatigue sensitive details, often requiring traffic control. When a fatigue crack is identified, it is repaired and monitored with compressed schedule bridge inspections. Identification and repair of a fatigue crack also creates an unscheduled maintenance scenario, which may lead to lapses in access to the bridge during peak operational hours, causing an unwelcome interruption in the flow of traffic and commerce. Structural health monitoring (SHM) of critical components would enhance traditional inspection methods and permit confirmation of repair success. It is desired to balance the SHM system with one that an inspector with minimal training can successfully operate and maintain, while complex enough to provide the necessary information to key decision makers. The proposed SHM system must be designed with as many commercially available components as practicable. The proposed SHM system would be validated with both structural analysis (such as Finite Element Modeling) and field installation on selected structures, in regards to prediction of fatigue damage and remaining service life.

2. RESEARCH OBJECTIVES:

- Prepare a synthesis report from a literature search and provide recommendations for the appropriate technology to use for remote monitoring steel bridges having fatigue sensitive details for fatigue cracking, and identify limitations of such monitoring systems, and if no such appropriate system exists, propose a SHM system for development.
- After selection of an appropriate SHM system using commercially available equipment to the extent possible as recommended from the synthesis report, perform an installation on selected bridge(s) for fatigue crack detection in one or two locations of critical components. Limit the equipment budget for the SHM to under \$40,000.
- Calibrate the SHM system as required by lab or field testing to quantify the data collected. Fatigue crack damage detection and quantification regarding the severity of the fatigue crack will be needed to determine if an immediate repair is required or if a repair can be scheduled when it will have the least impact on users of the bridge.
- One (1) year field monitoring to validate the system accuracy and robustness, with refinement of fatigue parameters through follow up testing and analysis as necessary. Publication of report and instruction/operating manual for expanding system use on other bridges.

3. URGENCY: There is no specific timeframe, however, with limited resources and aging infrastructure, the proposed project would be most beneficial presently.

4. IMPLEMENTATION: Other similar steel structures can be monitored and the data logger is portable.

5. BENEFIT TO MDOT: Remote monitoring of steel components would alert the owner to potential crack detection and could monitor the stress flow at critical locations to provide advanced warning as well as data for improvement to design details. MDOT's inspection procedures for fatigue sensitive details and use of traffic control could be modified and improved. The SHM system could be expanded to other types of steel components in congested areas to facilitate bridge inspection.

6. RISKS OR OBSTACLES TO RESEARCH: Cost and the need for calibrating any type of sensor to the particular structure (no one size fits all system). To overcome would require development of a robust and off the shelf type design, to minimize costs. Calibration could be simplified based on the laboratory work, possibly narrowing down to input selection of the bridge geometry and member thickness. One bridge may not be enough to represent the various types of structures, possibly

requiring instrumentation of more than one type of bridge or at least identify the types of bridges and fatigue sensitive details in the network so the researcher has a better understanding of experimental design and laboratory models needed.

7. POSSIBLE INVESTIGATOR(S): Experience in fatigue monitoring of steel bridges. Level II- Undergraduate degree in Statistics and working experience in statistical analyses, is required.

CONSULTANT RESPONSIBILITIES:

- Provide a synthesis report of state-of-the-art SHM systems from literature search most pertinent to monitoring steel girder bridges, and provide a recommendation for the instrumentation system to use for the field installation. A practical equipment budget limit for widespread SHM use would be to keep costs under \$40,000 per structure.
- Installation and initial calibration of system on one or two critical components of up to two selected bridge(s), monitor for one year, with continued validation through field and laboratory work as necessary.
- Laboratory work to calibrate field sensor readings, involving crack propagation and fatigue cycle estimation for time-to-repair, and to establish warning limits.
- Final report and instruction/operating manual/guide. The expectation is to have a complete working SHM system validated through analysis, lab and field work, within a 24 month period.

Failure to complete any of the above tasks will result in noncompliance with the contract.

DELIVERABLES:

Within 24 months, completion of identification, installation, and one year operation of a remote monitoring system, including hardware, multiplexors, and software; analysis identifying critical parameters for monitoring and interpretation guidance; a report detailing the research findings, limitations, specifications, procedures to be employed for future monitoring, and in-situ 1 to 2 days training on the use of the equipment.

MDOT RESPONSIBILITIES:

As-built drawings and specifications for bridges having fatigue sensitive details, fatigue sensitive inspection reports, any traffic control needed to perform diagnostic testing and installation of equipment, operating cost of operating system such as electricity, phone line, providing equipment and labor for preparation of metal surface for instrumentation.

COORDINATION PROCEDURES

Work will be completed in compliance with the Research Implementation Manual

CONSULTANT PAYMENT

All billings for services must be directed to the Department and follow the current Research Implementation Manual. 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 increase is approved in accordance with the contract with the Consultant. Compensation for services will be reimbursed on **actual cost basis** to universities or as a **Loaded Hourly Rate** basis to consultants. **Universities** will complete and return with their proposal a **cost budget work sheet**. **Consultants** proposing will be responsible to use the **bid sheet** for the loaded hourly rate.

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 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 project manager.

PROPOSAL INFORMATION AND SCORING

Formal proposals are required and shall include the information as outlined in these Guidelines. This section is the information required in the proposal that will be used to score the qualifications of each consultant/vendor's proposal. The section numbering correlates to the score sheet. Therefore, the consultant/vendors should format their proposals consistent with the outline provided.

1. UNDERSTANDING OF SERVICE: 40 POINTS

Describe your understanding of the service and/or innovations and safety or other issues you intend to propose. This information is to be based on the scope of services.

Include any work item that you believe should be added to the scope of services, or any work item that is in the current scope of services which you believe should be altered. Describe the benefit to the service, the increase/decrease in hours and the increase/decrease to the cost of the research project due to the revision to this work item.

2. QUALIFICATIONS OF TEAM: 30 POINTS – The scoring for qualifications of team scoring will be one score based on the following information:

2.1 Structure of the Project Team (Personnel and Roles)

Describe the structure of the project team including the roles of all key personnel and subconsultant/vendors. For each subconsultant/vendor, describe role in service and include what percent of the named role that the subconsultant/vendor is expected to provide.

The consultant/vendor is contractually obligated to supply the key personnel proposed for this service. This includes maintaining them at the capacity level proposed. Any change in key personnel or their capacity level must have written approval of MDOT.

If applicable to the service, provide a communication plan of how the service team will communicate services information and resolve issues. Some RFPs may state that a communication plan is required.

2.2 Staff Service Experience

Provide resumes for each of the key staff of the prime and subconsultant/vendors. In addition to general resume information, the following information should be provided for service experience that is similar to the service being solicited:

- General description of the service
- Role of person in the service
- Service budget
- Year service was completed
- Name of client (agency or company)

- Role of consultant/vendors in the service (It is not required that the submitting consultant/vendors have a role)
- Name and phone number of person to contact for client
- If the service is a service related to a construction project, provide the route name, limits of construction, construction budget, general description of type of construction

The resume is limited to two pages per key staff member.

2.3. Organization Chart (Only include if required in RFP)

If required in the RFP, provide an organization chart of your service team including subconsultant/vendor(s). This chart must include the names of the key personnel selected for this service, their roles on the service, the name of the consultant/vendor by which they are employed, and lines of communication. The RFP may include a list of required key personnel for this service. The organization chart should show the personnel who meet these requirements. Also, indicate the people who will be points of contact with the MDOT project manager.

2.4 Required Statistical Qualification

In general, MDOT's research is in the category of applied research. Regardless what is the primary field of an applied research project, statistical analysis tools are the typical ones for handling the data to conduct applied research. For this reason, the research team must have the needed statistical knowledge and experiences for conducting applied research. The required knowledge level for a research team in statistical analyses, if defined in the RFP under the heading possible investigators, is classified into one of the following four categories:

- Level I: Master Degree or higher in Statistics and working experience in statistical analyses is required
- Level II: Undergraduate degree in Statistics and working experience in statistical analyses is required
- Level III: At least one college series of statistics courses and working experience in statistical analyses is required
- Level IV: at least one college statistics course and working experiences under statisticians is required
- Level V: No statistical analysis

Proposals not documenting statistical training and experience levels required in the RFP may be classified as non-responsive.

3. PAST PERFORMANCE: 30 POINTS

MDOT will review relevant performance evaluations for the past five years for prime and subconsultant/vendors that are being proposed. If the consultant/vendor has not previously worked for MDOT or has only had a few services opportunities that have been evaluated, this area should

be used to provide other references for the selection team to contact. At a minimum, a phone number should be supplied for every reference. These would be in addition to those provided in the resumes in Section 2 and are limited to work completed in the past five years by the consultant/vendor.

Consultant/vendors are not required to submit prior evaluations with proposals, but should be aware that MDOT is reviewing prior evaluations.

4. QUALITY ASSURANCE/QUALITY CONTROL (QAQC) PLAN: 5 POINTS

Outline your consultant/vendor's QAQC plan for this service. Include background information of your selected QAQC manager for this service. The person performing the quality control review must have extensive experience with MDOT standards and practices.

5. LOCATION: 5 POINTS

This section will be scored for all solicitations. The consultant selection criteria will include a consideration of what percentage of the contracted work will be performed in Michigan. Consultant/vendor is required to provide the location of where the work will be performed by prime and/or subconsultant/vendors. The percentage of work performed in Michigan must be listed for prime and/or subconsultant/vendors. The selection team will score the percentage of work performed in Michigan on all selections unless the project is for on-site inspection or survey activities. For those services, provide the location of the office(s) and key staff and where the service work will be managed/coordinated (indicating how far key personnel will have to travel to get to the site). If the work will be performed at various locations, provide this information.

As a guideline for the scoring percentage of work performed in Michigan, please use the following:

<u>Percentage of Work To Be Done in Michigan</u>	<u>Score</u>
95% to 100%	5
80% to 94%	4
50% to 79%	3
25% to 49%	2
10% to 24%	1
Less than 10%	0

6. PRICE: 40 POINTS

The total price of the proposal will be scored using a scale determined by the MDOT selection team.

TOTAL POINTS: 150

Research Proposal Budget Form Worksheet

Project Title

Research Organization

Project Duration

									FY1	FY2	FY3	FY4	TOTAL	
SALARIES & WAGES -- MUST COMPLY WITH OMB CIRCULAR A-21														
Specify number of hours to be worked and hourly rate for each individual below: Examples of role of individual are PI, Technician, Grad Student, etc.														
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
(role of individual)														
Name of individual														
Enter FY														
rate & hrs														
	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-Total Salary & Wages									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

FRINGE BENEFITS -- MUST COMPLY WITH OMB CIRCULAR A-21										
Indicate Employee, appropriate negotiated rate for each and description of who the rate applies to. (e.g. - Sam Smith, 25%, Summer Faculty.)										
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name										
(Rate Description)										
(% rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Sub-Total Fringe Benefits					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
SUBCONTRACTOR -- MUST COMPLY WITH OMB CIRCULAR A-21										
A copy of the subcontractor's budget must be attached. An MDOT approved subcontract is required for subcontractor costs in excess of \$25,000 prior to payment of invoices that contain subcontractor work. List all subcontractors on a separate line.										
Subcontractor Name & Amt.										\$0.00
Subcontractor Name & Amt.										\$0.00
Subcontractor Name & Amt.										\$0.00
Sub-Total Subcontractor					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TRAVEL -- MUST COMPLY WITH OMB CIRCULAR A-21										
Must be in accordance with IDS contract requirements.										
In-State Travel (Destinations within Michigan)										
Provide destination, purpose, total mileage, total # of days, total # of meals, total # trips, names of individual(s) traveling										\$0.00
Out-of-State Travel (Prior approval required)										
Provide destination, purpose, total mileage, total # of days, total # of meals, total # trips, names of individual(s) traveling										\$0.00
Sub-Total Travel					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

SUPPLIES -- MUST COMPLY WITH OMB CIRCULAR A-21 (Few items not allowed are: computers, printers, monitors, fax machines, printer paper, toner cartridges, pens, pencils, legal pads, clips, rubber bands, post-it notes, books, notebooks, binders, folders, diskettes, postage stamps, chairs, office furniture, calendars, paper punches, business cards, staplers, waste cans, etc.)

Provide details if cost exceeds \$2,000. Individual line items in excess of \$1,000 require a detailed explanation regardless of total cost.

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
Sub-Total Supplies		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

CAPITAL EQUIPMENT -- MUST COMPLY WITH OMB CIRCULAR A-21 - Purchased specifically for this project

List items with a value in excess of \$500. Equipment in excess of \$5,000 requires prior approval.

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
Sub-Total Equipment		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

OTHER EXPENSES -- MUST COMPLY WITH OMB CIRCULAR A-21 (Few items not allowed are: memberships in professional & scientific organizations, local telephone lines, cell phones, etc.)

Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs (e.g. graduate student tuition).

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
Sub-Total Other Expenses		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Total Sub-Totals \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

INDIRECT COSTS -- MUST COMPLY WITH OMB CIRCULAR A-21 (Subconsultant fees, tuition, & costs indirectly related to the project shall not have the indirect rate applied in accordance with Circular A-21.) Indirect cost rates are negotiated between the university and it's cognizant agency. Indicate the type of negotiated indirect rate used and the percentage. (e.g. On Campus Research, 52%)

(Type)		(%)							
	FY1	FY2	FY3	FY4					
Enter \$ Amt per FY						\$0.00	\$0.00	\$0.00	\$0.00
Total Indirect Costs		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

TOTAL PROJECT COSTS \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

UNIVERSITY MATCHING FUNDS \$0.00

TOTAL MDOT PROJECT COSTS \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

Consultant Bid Sheet

All entries on this page must be handwritten in ink or computer generated. This page provides for costs by payment category. This is provided as an example. Priced proposal costs will be required after selection, in accordance with the MDOT Priced Proposal Guidelines ([Guidelines](#)).

Employee Name	Project Role	(%) Time Working on Project	Total Hours	Fully Loaded Hourly Rate	Total Cost
Eg. Mike Brown	Principal Consultant	10%	100	\$85	\$8500

TOTAL ESTIMATED LABOR: \$ _____

ESTIMATED SUBCONSULTANTS: \$ _____

ESTIMATED DIRECT EXPENSES: \$ _____
(Listed by item at estimated actual cost)

TOTAL BID PRICE: \$ _____

COST DERIVATION SHEET

This is a sample cost derivation sheet.

All entries on this page must be handwritten in ink or computer generated. This page provides for costs by payment category. This is provided as an example. Priced proposal costs will be required after selection, in accordance with the MDOT Priced Proposal Guidelines ([Guidelines](#)).

PROJECT DESCRIPTION:

Classification	Person Hours	Hourly Rate	Labor Cost
----------------	--------------	-------------	------------

TOTAL ESTIMATED LABOR: \$ _____

OVERHEAD: \$ _____
(Total Labor Cost x _____ %)

Facilities Capital Cost of Money: \$ _____

ESTIMATED SUBCONSULTANTS: \$ _____

ESTIMATED DIRECT EXPENSES: \$ _____
(Listed by item at estimated actual cost)

FIXED FEE: \$ _____
(Total Estimated Labor + Overhead) x XX%

TOTAL BID PRICE: \$ _____

(This bid price should be the same amount as the total bid price on page 1 of 2 of this document.)