Michigan Department
Of Transportation
5100B (03/10)

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

Exhibit B

MDOT PROJECT MANAGER	JOB NUMBER (JN)	CONTROL SECTION (CS)
Mark Sweeney, P.E.	59564A,etc	58052&58609

DESCRIPTION
Full Construction Engineering on US-24 in Monroe County

MDOT PROJECT MANAGER: Check all items to be included in RFP

WHITE = REQUIRED
GRAY SHADING = OPTIONAL

Check the appropriate Tier in the box below

CONSULTANT: Provide only checked items below in proposal

☐ **TIER 1 ($25,000-$99,999)**	☐ **TIER II ($100,000-$250,000)**	☑ **TIER III (>$250,000)**	
☐	☐	☑	Understanding of Service
☐	☐	☐	*Innovations*
☐	☐	☑	*Safety Program*
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**

REQUEST FOR PROPOSAL

Clear Form

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 _____

Prequalifed Services – See page 1 of the attached Scope of Services for required Prequalification Classifications.

☐ **Non-Prequalifed 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 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
4	12/28/11	2:00 PM

PROPOSAL AND BID SHEET MAILING ADDRESSES

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

☑ MDOT Project Manager

Mark Sweeney, P.E.
University / Brighton TSC
10321 East Grand River, Suite 500
Brighton, MI 48116

☐ 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 firms not currently prequalified with MDOT)

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

Michigan Department of Transportation

SCOPE OF SERVICE
FOR
CONSTRUCTION SERVICES
Full Construction Engineering

CONTROL SECTION(S): 58052, 58609

JOB NUMBER(S): 59564A, 87546A, 103333A, 108838A

PROJECT LOCATION: US-24 in Frenchtown Township, in Monroe County, Michigan

PROJECT DESCRIPTION(S):
#59564A-Replacing three large culverts (C03)
#87546A- Widening and resurfacing enclosed drainage, relocating water main
#103333A-Construct offset right turn
#108838A-Add center left turn lane

Project is to be constructed during the 2012 and 2013 seasons.

The Consultant Construction Engineering Services for oversight are as follows: project administration; inspection; quality assurance testing and reporting; measurement, computation, and documentation of quantities; reporting and record keeping; and finalizing all project documentation.

OEC plans and proposal are available for review by appointment. Please contact the project manager to make arrangements.

The selected consultant will be required to submit a staffing / overtime management plan. This will be part of the price proposal process.

ANTICIPATED START DATE: March 1, 2012

ANTICIPATED COMPLETION DATE: March 1, 2014

PRIMARY PREQUALIFICATION CLASSIFICATION:
Road Construction Engineering

SECONDARY PREQUALIFICATION CLASSIFICATION:
Density Inspection and Testing
Portland Cement Concrete Inspection and Testing
Bridge Construction Engineering

DBE REQUIREMENT: 10%

ESTIMATED CONSTRUCTION COST: $6,717,000.00

MDOT PROJECT MANAGER:
James R. Daavettila, P.E.
University / Brighton TSC
Address: 10321 East Grand River, Suite 500, Brighton MI 48116
Phone: 810-227-4681
Fax: 810-227-7929
E-mail: daavettilaj@michigan.gov

The Consultant shall contact the Project Manager prior to beginning any work on this Project.

GENERAL INFORMATION:

The Consultant shall provide, to the satisfaction of the Department, Construction Engineering Services as generally described herein: project for construction work to be performed by the Construction Contractor until completion of work by the Construction Contractor and acceptance of the Project and construction engineering services by the Department.

The Consultant shall furnish all services and labor necessary to conduct and complete the Construction Engineering Services described herein. The Consultant shall also furnish all materials, equipment, supplies, and incidentals necessary to perform the Services (other than those designated in writing to be furnished by the Department), and check and/or test the materials, equipment, supplies, and incidentals as necessary in carrying out this work. The Services shall be performed to the satisfaction of the Department consistent with applicable professional standards.

A. The Consultant's principal contact with the Department shall be through the designated Project Manager.

B. The Services described herein are financed with public funds. The Consultant shall comply with all applicable Federal and State laws, rules, and regulations

C. The Consultant agrees to demonstrate knowledge of, and performance in compliance with, the standard construction practices of the Department; the Project construction contract, proposal, and plans; the Standard Specifications for Construction and all applicable publications referenced within; the Michigan Construction Manual; the Materials Sampling Guide; the Materials Quality Assurance Procedures Manual; the Density Control Handbook; and any and all other references, guidelines, and procedures manuals needed to carry out the work described herein in an appropriate manner.

CONSULTANT RESPONSIBILITIES:

A. **Safety:** 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.

B. **Project Engineer:** Perform as the Project Engineer for the Project consistent with the Department's practice and in accordance with the Specifications, Plans, Proposal, the Michigan Construction Manual, the Materials Sampling Guide, and any and all other applicable references, guidelines, and/or procedures manuals. Assign the Project Engineer as liaison between the Consultant and Department-designated Project Manager.

C. **Inspectors:** Perform as the Inspector for the Project consistent with the Department's practice and in accordance with the Specifications, Plans, Proposal, the Michigan Construction Manual, the Materials Sampling Guide, and any and all other applicable references, guidelines, and/or procedures manuals. The consultant shall assign a sufficient number of qualified and experienced technicians to this Project to perform the services in a quality manner to avoid any delay to the Construction Contractor. Personnel performing inspection and testing on bituminous, Portland cement, aggregate or for density must have the appropriate certification and level for the inspection and testing that is being performed.

D. **Office Support and Equipment:** Provide an experienced office technician knowledgeable about all aspects of the Field Manager system, and procedures regarding project record documentation. Provide administrative support. Provide all computer equipment necessary to run Field Manager system.

E. **Meetings:** Arrange and conduct conferences and meetings required carrying out the services or as may be required by the Project Manager. Prepare and distribute minutes of all meetings except the Preconstruction meeting.

F. **Coordination:** Provide appropriate coordination and contact, public relations, and cooperation with all affected local, state, and/or federal agencies including the Federal Highway Administration; other Consultants and other Contractors; the general public; utilities and railroad companies; and local police, fire, and emergency services which may be affected by the Project and which are deemed to be the responsibility of the Consultant by the Department.

G. **Staking:** Perform road and bridge staking in accordance with Department specifications, standards, and special provisions including mitigation staking to ensure accuracy and compliance with the contract documents. Resolve any plan errors, discrepancies or omissions identified by the Contractor and/or Consultant and notify the Project Manager. This project requires the following staking services:

a. **Engineer and Construction Staking (all project staking for Engineer and Contractor)**

H. **Progress**: Keep daily diaries, sketches, logs, and records consistent with Department practice as may be needed to record the Contractor's progress. Notify the Project Manager of any anticipated Contractor's requests for extensions of time. Notify the Project Manager upon receipt of any Contractor's requests for extensions of time.

I. **Changes/Extras/Adjustments**: Notify the Project Manager immediately of any unanticipated Project conditions and any changes, extras, or adjustments to the contract before processing a Work Order and/or Recommendation.

J. **Contentious Issues:** Resolve any problems, issues, discrepancies, or other items brought to the attention of the Consultant by the Contractor. Provide written documentation of the resolution of such issues. Keep the Project Manager informed of all such issues.

K. **Contractor Claims**: Represent the Department as the Project Engineer on any and all claims for extra compensation and denied extensions of time requests filed on behalf of the Construction Contractor and/or Subcontractor on the Project against the Department. These claims shall be represented by the Consultant in accordance with Section 104.09 of the most current Standard Specification for Construction and/or the Department's Written Claim Procedures in effect at the time the Construction Contractor files the claim.

L. **Staff Reductions**: Withdraw any personnel or halt any services no longer required, at the request of the Department, or within a reasonable time after the lack of need becomes apparent to the Consultant or the Project Manager. The consultant will not be reimbursed for the cost of personnel charged to a project that the Project Manager has determined was unnecessary.

M. **Consultant Deliverables**: Collect, properly label or identify, and deliver to the Department all original diaries, logs, notebooks, accounts, records, reports, other documents, and Project files prepared by the Consultant in the performance of the Agreement, upon completion or termination of the Agreement. Return, upon completion or termination of the Agreement, all Specifications, Manuals, guides, written instructions, construction contracts and plans, unused forms, and all other documents and materials furnished by the Department. The Consultant may be responsible for replacing lost documents or materials at a fair and reasonable price.

N. Design Changes: Due to the complexity of this project, the consultant shall be responsible for all necessary design changes with approval from the Project Engineer Manager.

<u>For Environmental Issues the Consultant Shall</u>:

1. Soil Erosion and Sedimentation Control: Have a thorough working knowledge of the Department's SESC Manual and other contract documents regarding soil erosion and sedimentation control. Assign personnel that possess a current SESC training certificate and NPDES construction stormwater operator certification to perform inspection on areas where soil erosion and sedimentation controls are needed. Ensure that a person in possession of a current SESC training certificate is onsite at all times during normal working hours and available to meet with MDEQ personnel who may visit the site. Request that the MDEQ personnel provide a copy of any inspection report that may be generated as a result of the visit to the Project Manager.

Perform inspection of the construction site to assure that specified soil erosion and sedimentation controls are installed correctly, performing as intended, and maintained daily. Provide recommendations to the Project Manager for modification of the control measures shown on the plans as may be required to improve their effectiveness. Immediately report to the Project Manager any deficiencies in the soil erosion and sedimentation control measures or non-compliance by the Contractor with the specifications governing soil erosion and sedimentation control. If corrective action is necessary, document the action and the required timeframe for completion. Follow up to document that the action is completed within the statutory and/or MDOT-specified timeframes. Report the Contractor's failure to complete the corrective actions within the required timeframe to the Project Manager.

2. Storm Water Management: Have a thorough working knowledge of the Department's Storm Water Management Plan. Perform inspection of the construction site to ensure that the Contractor's operation is following pollution prevention and good housekeeping best management practices conforming to the Department's Storm Water Management Plan. Notify the Project Manager immediately of the occurrence of, or potential for, release of polluting material to the ground, groundwater, surface water, or storm water drainage system including open ditches, culverts, and enclosed storm sewers.

3. Environmental Permits: Have a thorough working knowledge of the construction requirements of all project specific environmental permits issued to MDOT by the MDEQ Land & Water Management Division, US Corp of Engineers, or other permitting agency. Inspect project areas covered by these permits and assure that the Contractor complies with the permit requirements. Report to the Project Manager any potential for or occurrence of violation of these permits. Fully document all site conditions and actions taken regarding potential or actual violations of the permit requirements.

4. Other Environmental Issues: Have a thorough working knowledge of the Department's specifications regarding bridge painting, diamond grinding, hydrodemolition, and hazardous

materials. Ensure that the Contractor complies with these specifications, and maintain proper documentation.

5. Inspection Reports: Complete inspection reports, including but not limited to, Inspector's Daily Report (Form 1122) and NPDES/SESC Inspection Report (Form 1126), as necessary to fully document all site conditions and any corrective action required and completed related to environmental issues. Provide digital photos as necessary to document conditions and all corrective actions.

PROJECT INSPECTION

A. **Ongoing Inspection**: Provide inspection of all Contractor field construction work, provide quality control, and confirm substantial conformance with the Specifications, Plans, and Proposal. Arrange for non-compliance work to be made whole by the Contractor or to find the non-compliance work acceptable to the Consultant and, where necessary, to the MDOT Design Project Manager. Inform the above Project Manager of non-compliance work and trends toward borderline compliance.

B. **Final Inspection**: Complete a final inspection of all work included in the Project, or such portions thereof eligible for acceptance, after notification by the Contractor that the work is completed or after the Consultant's records show the work is completed. The final inspection shall include notifying the Contractor in writing of particular defects to be remedied if work is not acceptable to the Consultant.

C. **Final Acceptance**: Ascertain that each and every part of the Project has been performed in accordance with the plans and specifications, or such modifications thereof as may have been approved, and accept the Project. Invite the Project Manager and other Department personnel, as directed by current Department policy, to participate in the final acceptance.

TESTING AND REPORTING

A. **Material Quality Assurance Sampling and/or Testing and Density Control**: Conduct quality assurance sampling and/or testing of materials including but not limited to, Portland cement concrete, bituminous mixtures, aggregates, and density testing and reporting in accordance with MDOT's Materials Source Guide, Materials Quality Assurance Procedures Manual, Density Control Handbook, and any or all other applicable referenced or included Contract Documents. Determine the acceptability of materials based on their respective specification requirements. Immediately inform the Project Manager of non-compliance work and trends toward borderline compliance. Reject Contractor's work and materials not in compliance with the Contract Documents or as directed by MDOT. **The Prime Consultant <u>will</u> be held accountable for all quality assurance activities and will be reimbursed for these activities unless otherwise indicated in writing by the MDOT project manager that the Prime Consultant is not responsible for these services.**

B. **Material Certification**: Make certain that acceptable test reports and/or material certifications from the supplier have been received, prior to the incorporation of materials in the work, for materials tested off the Project site.

C. **Material Reports**: Submit Material test reports, including but not limited, the Inspector's Report of Concrete Placed 1174A, Aggregate Inspection Reports 1900 & 1901, Bituminous QA reports, Concrete QA reports, and the "Moisture and Density Determination, Nuclear Method", Form 582B, etc. to the distribution list within one day of the testing. The efficiency of the consultant in getting the "Moisture and Density Determination, Nuclear Method", Form 582B, copy to the Lansing, Density Technology Unit, 8885 Ricks Road, Lansing, MI 48909 will be measured by that unit and reflected on the consultant's evaluation.

The consultant and any sub-consultants contracted by the Michigan Department of Transportation (MDOT) to perform density testing services that use equipment regulated by the Nuclear Regulatory Commission (NRC) shall:

1. **Possess a valid license issued by the NRC, or recognized Agreement State, for ownership and use of sealed sources contained within portable nuclear density gauges.**

2. **Provide the Radiation Safety Office (RSO) of MDOT with a copy of the aforementioned license.**

3. **Comply with all rules and regulations set forth by Title 10 (Energy) and 49 (Transportation).**

Failure of any of the above will be found in noncompliance with the contract.

MEASUREMENT, COMPUTATION AND DOCUMENTATION OF QUANTITIES

A. **Documentation**: Measure and compute quantities, and provide appropriate documentation of all materials incorporated in the work and items of work completed, and maintain an item record account using Field Manager software.
The Consultant must obtain and be able to use the FieldManager Suite of Software for this project. Contact Info Tech, Inc. at (352) 381-4400 or fax (352) 381-4444 or (www.fieldmanager.com) to obtain software and information on training. Since this software will be used on all MDOT projects in the future, the cost of this software cannot be charged as a direct expense for this project.
Consultants must keep their version of the FieldManager Suite of software current with the version being used by MDOT.

B. Insufficient Tested Materials: Track insufficient tested materials and notify the Contractor on a bi-weekly basis.

REPORTING AND RECORD KEEPING

A. **Consultant Reports:** Prepare such periodic, intermediate and final reports and records as may be required by the Department and as are applicable to the Project, which may include, but are not limited to:

- **a. Inspector's Daily Reports,**
- **b. Work Orders,**
- **c. Construction Item and Tested Material Records using FieldManager,**
- **d. Transfer of Tested Materials,**
- **e. Monthly Report on Material Inspection,**
- **f. Moisture and Density Determination Reports (Form 582BM)**
- **g. Inspector's Report of Concrete Placed (Form 1174A-M)**
- **h. NPDES Storm water Operator Reports,**
- **i. Labor Compliance, such as the Weekly Employment and OJT Report (Form 1199),**
- **j. Construction Estimate Bi-Weekly Report,**
- **k. Bi-Weekly Construction Progress Report and Weekly Statement of Working Days Charged**
- **l. Force Accounts**
- **m. Contract Modifications (Recommendations and Authorizations)**
- **n. Extension of Time and Liquidated Damages**
- **o. Contractor Evaluation (Form 1182)**
- **p. Reduction in Reserve**
- **q. Complete Post Construction Review including form 285-2, if required by the Project Manager.**
- **r. Other records and/or reports as required for the individual Project by the Project Manager and/or as required by Specifications, Plans, Proposal, the Michigan Construction Manual, the Materials Sampling Guide, and any and all other applicable references, guidelines, and/or procedures manuals.**

B. **Reports-Contractor Generated**: Review, process, and/or approve Construction Contractor submittal of records and reports required by the Department as applicable to the Project which may include, but not limited to:

- a. Working Drawings,
- b. Weekly Employment Reports, Certified Payrolls
- c. Contractor's claims for additional compensation and extension(s) of time, and
- d. Other reports and records as required for the individual Project by the Project Manager.

C. **Project Files**: Maintain project files in accordance with the MDOT Office Manual and Departmental procedures. Send copies of select correspondence and documentation to the Project Manager.

CLOSING ALL PROJECT DOCUMENTATION

A. **Final Measure and Summarize**: Final field measure applicable items of work. Prepare final summaries for applicable items of work.

B. **Project Review/Certification**: Participate in and resolve items determined to be insufficient during the Department's review(s) of project records and/or during the Project Engineer Certification Process prior to submitting the Final Estimate. Within 45 calendar days of the actual project completion date, the project records shall be ready for the Final Records Review.

Final Documents: Prepare and submit the Final Estimate, Final Quantity Sheets, Final Marked As-Constructed Plans, and the Design/Construction Package Evaluation (Form 285-2). The Final Estimate Package shall be submitted to the Project Manager within 30 days of the Final Records Review.

MDOT RESPONSIBILITIES:

A. The Project Manager shall furnish to the Consultant all Project-specific construction contracts, proposals, plans, plan revisions, written instructions, and other information and/or data as deemed necessary by the Project Manager for the Services required herein. Unless such information is available to be downloaded on the MDOT web site.

B. The Department shall furnish off-site inspections and tests of steel, cement, bituminous mixture designs, sewer and drainage pipe, structural steel, prestressed girders and beams, traffic signs, and any other materials customarily tested in the Department laboratories with its own forces or by statewide contracts except concrete aggregates, aggregates, and concrete cylinders. The customary testing is described in the Materials Quality Assurance Manual with exceptions noted within the Specifications, Plans, and Proposal. The Consultant shall be responsible for the sampling and transportation of all the materials to be tested by Department personnel.

C. The Project Manager shall provide general monitoring and quality auditing inspection of the Project to assure that the Project has been completed in reasonable conformance with the plans and specifications for Project Acceptance and to determine that the work performed to date by the Consultant for Services rendered is reasonable and appropriate before approving the Consultant's requests for progress payments.

D. The Department shall provide the bituminous plant inspection required for Quality Assurance and will submit the QA reports to the Consultant Project Engineer for analysis and action. The Consultant shall still be responsible for all on-site bituminous inspection required, including, but not limited to, locating the required Quality Assurance cores, and coordinating with the contractor regarding this sampling.

E. The Department shall perform soil borings and subsurface investigation as necessary throughout the contract.

F. The Project Engineer/Manager will arrange and conduct the Preconstruction meeting as well as prepare and distribute the meeting minutes.

CONSULTANT PAYMENT – Actual Cost Plus Fixed Fee:

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.

Appendix A

This project includes the new Special Provision for Concrete Percent Within Limits (PWL). Since this Special Provision shifts much of the responsibility for Quality Assurance testing from the Contractor to the Department / Consultant, the following information is included to assist the Consultant in determining the required level of effort.

Concrete PWL Requirements

General

- Include field sampling and testing through initial jobsite cylinder storage/cure in all full CE Consultant contracts. The Consultant must supply and calibrate all equipment and molds. Back-up air meters must be available on the project site in case a discrepancy arrises between the Contractors QC meter.

- Cylinder storage, curing and testing will be accomplished at the Region C&T lab. Delivery to laboratory must be made after initial set on the jobsite or within a few days of the specimen being cast. MDOT will not pay the consultant for any storage/curing of the test specimens.

- A single coordinator of all concrete sampling and testing for this project is recommended. This person needs to be identified in the consultant proposal.

Pre-Placement Items

- Development of the QA plan which include specific project field and lab personnel plus sampling and testing protocol by the Region C&T.

- Schedule a pre-placement meeting with the Contractor(s), Region C&T will facilitate the meeting.

- Prepare random number selection sheets.

Pre-Placement Meeting

- Obtain Contractor mix designs and supporting mortar bar / mix compatibility laboratory testing. Review submittals for any Consultant conflict of interest issues.

- Obtain project specific Contractor Job Mix Formulas (JMF's) on the MDOT JMF form based upon the mix designs.

- Determine how MDOT/Consultant inspectors will be able to verify mix compatibility from Concrete delivery tickets. MDOT/Consultants must be able to verify sources

and constituency/dosage of aggregate (especially fine aggregate), cementitous materials and admixtures for all Concrete delivered.

- Obtain the Contractor(s) QC plan for later review.

- Facilitate signing of random number selection sheets by MDOT/Consultants and Contractor(s) staff.

- Determine which concrete items will be accepted via PWL and non-PWL (Small Incidental and Small Production) methods.

- Determine lot and sub-lot make up for project concrete mixes.

- Discuss Contractor supplied devices for initial cylinder cure and security, plus the means by which the storage compartment will maintain a temperature between 60 and 80 degrees.

- Review specification requirement for 24 hour Contractor notification prior to concrete placement. Determine how the notification will be accomplished.

- Determine how the Contractor will communicate QC results to MDOT/Consultant, this must be done prior to QA results being released to the Contractor.

- Determine how requests for dispute resolution will be made to the MDOT/Consultant project staff and Region laboratory.

- Determine how dispute resolution results will be communicated through MDOT/Consultant and then to the Contractor(s).

Sampling & Testing

- For PWL concrete, sub lot and lot sizes are quantified by volume in cubic yards. Multiply the random number (signed sheet from pre-placement meeting) by the sub lot quantity to determine when to sample.

- If the random number sampling location is missed on accident, apply the next random number to the remaining sub lot material that is being placed.

- If the random number sampling location occurs after concrete placement has ceased for the project or a major construction stage, group the partial sub lot materials with the previous sub lot and the lot test results.

- Location of sampling needs to be identified on MDOT form 1174.

- PWL material acceptance applies to a given mix with a given Job Mix Formula (JMF). The acceptance continues for the specific JMF concrete even if it is used for several different project items.

- Lot adjustments can only be made by the MDOT Project Manager.

- Concrete QA cylinders must be cast regardless of the outcome of the plastic concrete test results. QA re-testing after a supplier makes any field adjustment is not allowed.

- The test results stand unless the Contractor elects to remove the entire sub lot of material placed. QA re-testing is not allowed if a single material load is removed and or rejected.

Concrete Cylinders

- 6" diameter cylinders must be used for paving mixture.

- 4" diameter cylinders will be used for all non-paving mixture unless the coarse aggregate size is too large. MDOT makes this determination.

- Make sure proper consolidation rods, relative to cylinder mold diameter, are used. A smaller diameter rod is required for 4" diameter cylinders.

- For PWL acceptance 4 cylinders will be cast at every sample location, 2 for QA testing and 2 for potential dispute resolution.

- Continue to identify cylinders with metal identification tags.

Air Content

- As part of QC the Contractor must quantify air content loss after the paver or after pump discharge at least once per week. If the loss is greater than 2% the Contractor must suspend operations and make a correction.

- Air meters **must be** calibrated every 3 months.

- Have at least 1 spare QA air meter available on the project site or within ½ hours drive time to the project.

- Run correlation between QA and QC air meters at the beginning of each day's production. The test results must be with 0.8% of each other.

- If the QA and QC meters don't correlate (within 0.8%) at the beginning of the day or at any time during production call for the spare QA air meter for further comparison and resolution.

- If resolution is not obtained with the spare QA air meter, call for MDOT Region C&T staff to perform an Independent Assurance Test (IAT). This is required for consultant QA testing projects also.

Concrete Truck Tickets

- Every truck ticket must be signed by the agency QA inspector upon receipt.

- Through the tickets, verify that delivered concrete is the same mixture that had acceptable laboratory compatibility attributes. All sources of cementitous and aggregate materials must be identified with proportion amounts. Admixture manufacturer, supplier, trade name, type and dosage rates also must be clearly stated for comparison.

Cylinder Storage and Transport (Reference ASTM C-31)

- Newly cast cylinders must be stored on the jobsite in the following fashion;
    1. In a moist condition.
    2. Always between 60 and 80 ambient degrees.
    3. Out of direct sunlight.
    4. On a level surface. The cylinder surface can be refinished if the concrete is still plastic.
    5. In a secure container that only the QA personnel has access to.

  It is highly recommended the cylinders go directly into the Contractor supplied storage device immediately after casting.

- The Contractor must supply a maximum/minimum thermometer for temperature monitoring and items for the QA tester to maintain the cylinders between 60 and 80 degrees.

- The cylinders can not be transported from jobsite storage to cure tank storage until **8 hours** after initial set. If the initial set time is unknown it is advised to wait at least **16 hours** after casting before transporting.

- The cylinders must be transported to cure tank storage within **48 hours** from casting.

- Cylinder must be transported in the following fashion;
    1. In a moist condition.
    2. With adequate cushioning (proper diameter racks).
    3. At an ambient temperature between 60 and 80 degrees.
    4. With adequate insulation in cold weather.

5. Transport time not to exceed **4 hours.**

- Upon removing the cylinder mold the cylinder must be placed in the cure tank within **1 hour.**

Laboratory Test Results and Pay Calculations

- With PWL acceptance, payment is made based on the entire completed lot of material. All sub lot test results need to be obtained before pay is calculated.

- Pay is based on MDOT calculations using the MDOT spreadsheet only. Do not accept Contractor supplied assessment or spreadsheets.

- QA test results do not get reported to the Contractor until they provide their QC test results.

- Once QA test results are shared and a lot of material is complete the Contractor must communicate a desire for dispute resolution testing per the requirements in the special provision. They must prove proper QC protocol was followed and that they obtained more favorable test results.

- The Project staff needs to notify Region C&T when a Contractor has properly requested dispute resolution cylinder testing.

- Region C&T will transport dispute cylinders to Lansing C&T for testing. Lansing C&T will not be informed which project or Contractor the cylinders are from.

- Region C&T will obtain dispute test results from Lansing C&T and communicate the new test results which are to be included into the PWL pay spreadsheet.

- The project staff needs to inform Region C&T when a lot of material is accepted by MDOT/Consultant and the Contractor without going to dispute resolution testing. Region C&T will then dispose of the excess dispute resolution samples.