

# INVITATION TO BID

BID DATE: 3/17/2022

**PLEASE REFER TO BID NO. 2022-034**

**QUOTE NOT LATER THAN: 04/06/2022 BY 4:00 PM  
(EST)**

TO:  
VENDOR NAME:  
ADDRESS:

FROM:  
PURCHASING DEPARTMENT  
COUNTY OF BERRIEN, MICHIGAN  
ADMINISTRATION CENTER  
701 MAIN STREET  
ST. JOSEPH, MICHIGAN 49085

CONTACT:  
TELEPHONE #:  
EMAIL:

**PLEASE INDICATE "BID NO. 2022-034" ON OUTSIDE OF SEALED ENVELOPE TO INSURE PROPER  
BID PLACEMENT.** DELIVERY REQUIREMENTS: AS PER SPECIFICATIONS

*The Berrien County Board of Commissioners reserves the right to reject any and all bids or make any deviations  
deemed in the best interest of Berrien County.*

Quality: All materials/services furnished must be the best of their respective kinds (unless otherwise specified) and will be subject to our inspection and approval after delivery. If materials are rejected it will be held for disposition at your risk and expense.

QUANTITY	DESCRIPTION	PER M PRICE	TOTAL
	<b><u>REQUEST FOR BID ON THE FOLLOWING:</u></b>		
	Bridge Inspection		
	PLEASE SEE ATTACHED SPECIFICATIONS		
	<b><u>PLEASE SEND TWO (2) COPIES OF BID PROPOSAL</u></b>		

QUANTITY	DESCRIPTION	PER M PRICE	TOTAL
	<p>PURSUANT TO MICHIGAN PUBLIC ACT 517 OF 2012, AN IRAN-LINKED BUSINESS IS NOT ELIGIBLE TO SUBMIT A BID FOR THIS RFP. FURTHER, <b>EACH BID SUBMISSION <u>MUST</u> INCLUDE WRITTEN CERTIFICATION BY THE BIDDER THAT THE BIDDER IS NOT AN IRAN LINKED BUSINESS (SEE ATTACHED FORM).</b> A BID SUBMISSION WITHOUT THE REQUIRED WRITTEN CERTIFICATION MAY BE REJECTED AS INCOMPLETE AND VIOLATIVE OF LAW. A SUSTAINED DETERMINATION BY THE COUNTY THAT A BIDDER HAS SUBMITTED A FALSE CERTIFICATION OF BEING AN IRAN LINKED BUSINESS MAY RESULT IN THE CANCELLATION OF AN EXISTING CONTRACT, A CANCELLATION OF INTENT TO ENTER INTO A NEW CONTRACT, AND/OR REPORTING OF THE BIDDER TO THE STATE ATTORNEY GENERAL, AND POSSIBLE FINES AND COSTS, AND BAR FROM FURTHER BIDDING ON COUNTY RFP'S FOR AN ADDITIONAL 3 YEARS, AS PROVIDED UNDER P.A. 517 OF 2012.</p> <p>MEMBER OF HPS (HOSPITAL PURCHASING SERVICES), STATE OF MICHIGAN MIDEAL PURCHASING PROGRAM, AND NATIONAL JOINT POWERS ALLIANCE</p> <p><b>ANY QUESTIONS REGARDING BID SPECIFICATIONS, PLEASE CONTACT David Juntunen at 514-512-3120 or <a href="mailto:david.juntunen@mottmac.com">david.juntunen@mottmac.com</a></b></p> <p>ALL OTHER QUESTIONS REGARDING THE BID PROCESS, PLEASE CONTACT THE PURCHASING DEPT. AT 269-983-7111 EXT. 8295</p>		

*Jake Litaker*

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JAKE LITAKER  
jlitaker@berriencounty.org  
FINANCIAL ACCOUNTANT/ANALYST  
PHONE: 269-983-7111 EXT. 8295  
FAX 269-982-8668

BIDDERS NAME: \_\_\_\_\_

BIDDERS PHONE NUMBER: \_\_\_\_\_

BID DATE: \_\_\_\_\_



# BERRIEN COUNTY

## ROAD DEPARTMENT

### SCOPE OF SERVICES FOR BRIDGE SAFETY INSPECTION

**Purchasing Department  
County of Berrien, Michigan  
Administration Center  
701 Main Street  
Saint Joseph, MI 49085  
1-269-983-7111  
[www.berriencounty.org](http://www.berriencounty.org)**

The Berrien County Road Department is seeking a proposal from qualified consulting engineering firms (CONSULTANT) to perform in-service safety inspection of bridge structures” on local owned bridges in accordance with National Bridge Inspection Standards (NBIS). This is termed “Bridge Inspection.” This project will be under the direction of the Berrien County Road Department Bridge Management Owner’s Representative (BMOR), Mr. David Juntunen, Mott MacDonald, phone: (517) 512-3120, email: david.juntunen@mottmac.com .

**I. LOCATION**

The bridges for this project are situated in various locations within Berrien County. See attached WORK PACKAGE LIST for specific bridge numbers.

**II. PURPOSE**

In accordance with the Code of Federal Regulations 23-CFR-650, subpart C, each bridge under Berrien County Road Department jurisdiction is periodically inspected following the Federal Highway Administration (FHWA) National Bridge Inspection Standards (NBIS). For the bridges identified on the WORK PACKAGE LIST, a “Routine” inspection will be performed by a qualified consultant. There are several steps in the process of this work and there may be a need for follow-up action.

The deliverable for this authorization will be the “Inspection Report.” This report will have several components as noted below and will be attested to be accurate and complete under seal of a professional engineer.

**III. DURATION & SCHEDULE**

**A. Schedule of Dates and Milestones**

The CONSULTANT is required to develop a project schedule for the inspection of the bridges shown on the attached WORK PACKAGE LIST. Each bridge must be inspected within the month of the due date, as established by the date of the previous inspection, and the frequency determined by the previous inspector. These dates are shown on the WORK PACKAGE LIST. In no case shall the inspection date exceed 24 months from the previous date.

Any changes to the schedule must be submitted to the BMOR for approval prior to the change. Failure to progress in alignment with the schedule will be considered as failing to meet the terms of this authorization and may result in the cancellation of the contract.

The CONSULTANT must be prepared to begin the field inspection work within one week after receiving the notice to proceed or an executed contract.

**IV. STAFF QUALIFICATION REQUIREMENTS**

Each bridge on the WORK PACKAGE LIST must be inspected by a CONSULTANT team composed of a Qualified Team Leader (QTL) and a staff person. The CONSULTANT must have these two individuals present on site during the inspection to fulfill the requirements of the contract. The CONSULTANT may utilize additional personnel on any given team, but the Berrien County Road Department will not pay for the additional staff. The CONSULTANT is required to have as many teams as necessary to complete the inspections by the required dates.

Following are the minimum qualifications necessary for the required personnel. This must be documented with resumes and submitted with the Fee Proposal.

**A. CONSULTANT Project Manager**

1. Administrative manager with authoritative control over the inspection teams and demonstrated project management experience.
2. Primary contact between the Berrien County Road Department and the CONSULTANT. One of the inspection QTLs may be delegated Project Manager responsibility.
3. Will perform project contract Quality Control as stipulated in VI-C

**B. CONSULTANT Qualified Team Leader, QTL(s):**

1. Must meet the requirements of NBIS for a QTL. See Code of Federal Regulations, 23-CFR-650 §650-309.
2. Professional registration as an engineer, licensed to practice in the State of Michigan.
3. Minimum of three years of documented experience in the in-service safety inspections of bridges.
4. Completed the NHI # 130055 “Safety Inspection of In-Service Bridges” class within the last five years. If the QTL(s) has attended this class more than five years ago, he / she must have taken the NHI #130053A three-day Bridge Inspection Refresher course within the preceding five years, or attended 24 hours of bridge inspection professional development in the preceding five years.

**C. Field Staff assisting the CONSULTANT QTL(s):**

1. A technical staff person with three years’ experience in inspection, design, or construction of bridges or:
2. Recent graduate engineer working at the staff engineer or entry level position.

The above listed classes for the QTL(s) are encouraged, but not required for the field staff.

If the QTL(s) that is approved under this authorization is unable to finish the work of the entire project, the authorization may be terminated. The CONSULTANT can submit a backup QTL(s) for approval with the initial submission of the proposal. However, if any one person identified in the proposal is rejected by Berrien County Road Department, the entire proposal will be considered non-responsive and rejected.

## V. GENERAL DESCRIPTION OF THE WORK

Bridge safety inspections are done to insure the safe use of the structures by the motoring public. To accomplish this, the National Bridge Inspection Standards (NBIS), AASHTO, *Manual for Condition Evaluation of Bridges* and, the *Bridge Inspection Reference Manual* are to be used as guidance to complete the inspection and provide necessary information. Additional guidance documents and manuals are listed in the appendix.

For the purposes of this project, bridge inspection is divided into four phases: bridge file review, inspection of the bridge in the field, completion of the reports, and communication of the findings to Berrien County Road Department. Each of these phases must be completed for successful completion of the project.

### A. **Bridge File review**

In this phase of the work the CONSULTANT will take several steps to review the documentation for each bridge and register on-line to be assigned the forms to complete.

1. The QTL must register on-line with the MDOT MiLogin/MiBridge bridge data collection application, at the “New Consultant / Inspector Registration”. This person’s name will appear on all inspection documents.
2. Find the Berrien County Road Department bridge owner’s name and add it to the list on the right.
3. Review the bridge files, and become familiar with the documentation on the structures and the respective load analysis for each bridge at the Berrien County Road Department office.
4. Obtain paper copies of the previous inspection reports for use in the field.

### B. **Field Inspection**

The CONSULTANT team will visit each bridge site and perform an inspection according to the NBIS and AASHTO Manual For Bridge Evaluation description for a “Routine” inspection. This will be done with a visual inspection and non-destructive tests (NDT).

Due to past deficiencies noted on the Napier Avenue Bridge over the St. Joseph River, Walton Road Bridge over the St. Joseph River, the Bertrand Road Bridge over the St. Joseph River a “Snooper” truck will be required to assist in the inspections. Reports, described below, will be completed by the QTL while performing this inspection.

## 1. Observations

The CONSULTANT QTL will observe all of the bridge components and elements and record General Condition Ratings (0 to 9 scale) for all major components as collected by the Michigan Department of Transportation (MDOT) and elements condition states for the appropriate elements on the structure. Findings will be marked in red ink on the appropriate inspection report. This information will be entered into the respective form using the Web based application MiBridge. The data can be downloaded to a laptop computer for use in the field, but this is not mandatory.

There must be sufficient comments for each element in the reports to outline its condition and to justify the rating given. Some of the previous reports may not have complete comments. The lack of previous information does not exempt the CONSULTANT QTL from providing sufficient comments for each component and element to outline its condition. Follow the rating guidelines provided in the system, unless there are circumstances, particularly if they are safety related, that in the judgment of the QTL do not fit within these guidelines. In this case, the inspector will document the reason for the deviation in the respective comment section.

NBIS sets a maximum of 24 months between inspection intervals. However, structures in poor condition or with rapidly changing conditions may require inspection sooner than 24 months. It is the responsibility of the CONSULTANT QTL to determine the inspection frequency and notify the Berrien County Road Department PM when a frequency is to be changed. The MDOT *Bridge Inspection Frequency Guidelines* will assist the CONSULTANT QTL in setting the frequency.

The CONSULTANT QTL must render a professional judgment as to the need for structural analysis or loading rating of the given structure. It may also be necessary to recommend temporary load restrictions and/or changes to the inspection frequency.

If there is an area of concern that requires traffic control or special inspection / testing, the CONSULTANT must notify the Berrien County Road Department PM with a “Request for Action” (RFA) form. See “Notification for Unusual Situations” below.

Stream and riverbed scour must be evaluated to ensure the foundation for the bridge has adequate support. The CONSULTANT QTL will perform a scour inspection around all structural elements that are located in water up to six feet deep utilizing the wade and probe or the boat and probe methods. Substructure elements in water over six feet will be inspected by a diver under a separate contract.

Information on scour must be reported on the Bridge Safety Inspection Report (BSIR). If there is loss of bearing or undermining of a footing that is safety concern, this must be reported to the Berrien County Road Department PM using the RFA. If the loss of bearing is sufficient to be of immediate concern for the component to structurally support the bridge, the CONSULTANT will

notify the Berrien County Road Department PM on an emergency basis (See Section V-A-2, “Notification for Unusual Situations” below).

In addition, for every other routine inspection (maximum of every four years), the elevation of the stream or riverbed relative to an established datum must be measured for all structures over water. These measurements must be taken at locations along the length of the bridge spans that are over a stream or riverbed, and recorded on the “Stream Cross Section Report” form (See Worksheet Instructions). This information must be compared to the previous data in the form of a graph. Bridges requiring cross-sectioning are listed on the attached list.

The CONSULTANT QTL must determine if the structure has been hit by a vehicle and damaged. If the damage has occurred since the last inspection, this damage must be documented with a description and photographs.

During the inspection, the CONSULTANT QTL will evaluate the structure for long and short term maintenance and repairs, and record this information on the “Work Recommendations” form of the BIR.

## 2. Notification for Unusual Situations

One of the primary reasons for bridge inspection is to determine if there are any unusual circumstances or situations that could affect the continued safe operation of the bridge, or where it could be costly if repair action is delayed. The CONSULTANT QTL must determine whether the bridge can safely remain in service until the next inspection date. The CONSULTANT QTL must identify the cause of any unusual circumstances or situations and notify the Berrien County Road Department PM within a time frame appropriate for the situation.

Communication of these situations is accomplished formally by using an RFA. The CONSULTANT must properly complete this form and deliver it to the Berrien County Road Department PM in a timely manner to ensure this communication takes place.

This form does not preclude advising the Berrien County Road Department PM immediately by phone, or other means, of imminent circumstances. However, the CONSULTANT is still obligated to complete the form. If the situation warrants, the form should be delivered on an expedited basis, faxed or e-mailed, and the CONSULTANT must get confirmation of the delivery.

The RFA should not be used to convey the ordinary information that belongs on the BIR. Below are some of the situations that may trigger a RFA:

- Deficient Structural Conditions

If a condition exists on a structural component that warrants a structural analysis (see “Load Analysis” §V-C below) or further investigation to determine if the capacity of the component or element in question is capable of safely carrying the intended loads, the CONSULTANT is required to inform the Berrien County Road Department PM with a RFA form. An example is an exposed or broken prestressing strand in PCI beams or box beam super-structures.



- **Functional Conditions**

Situations that exist in and around the structure that are not a part of a structural Components or elements, but could require immediate attention are termed functional problems. Some of these are damaged approach guardrail, erosion of the shoulder, settled approach pavement, missing load posting or height restriction signs, damaged or broken light poles and sign supports.

- **Suspect Conditions Requiring Further Consideration or Testing**

The CONSULTANT QTL will perform the routine inspection in the best manner possible on these structures and document any areas that need further consideration or testing.

The CONSULTANT QTL will inform the Berrien County Road Department PM using an RFA form of the need to perform supplemental in-depth inspections on structures for such things as:

- ◆ Where a portion of the structure cannot be inspected by routine inspection methods.
- ◆ Where there are many structural members in need of measurement for excessive loss of section, or need NDT for evaluation.
- ◆ Where there is a need to mechanically remove a lot of scale to get measurements.
- ◆ Where there is a need to coordinate with others', such as closing a lane, to closely examine the structure.
- ◆ If there is a crack or suspected crack in a structural steel component, the CONSULTANT must clearly document this on paper with narrative and photographs.

If testing is to be performed in conjunction with the routine inspection, the CONSULTANT must inform the Berrien County Road Department PM prior to the testing so arrangements may be made to witness the process. The Berrien County Road Department PM will not delay the CONSULTANT in performing this work and will not require a return trip to perform the test.

### **C. Inspection Reports**

As stated in Section II, "PURPOSE", the deliverable for this authorization will be the Inspection Report. The CONSULTANT will be assigned the structures for inspection in MiBridge. The assignment will last for 90 days.

A Bridge Inspection Report (BIR) has several components that will vary from bridge to bridge, but that will include at least the "*Bridge Safety Inspection Report*", MDOT form 2502 (BSIR), the "*Culvert Safety Inspection Report*" (CSIR), the "*Structure Inventory and Appraisal*", MDOT Form 1717a (SI & A), and the "*Work Recommendations*". Additional documents may also be necessary depending on the circumstances at the bridge and its condition. Some of these are the RFA form, the "*Streambed Profile*" form, field notes, sketches, and pictures. The BSIR, SI&A, and the work recommendations are to be completed and the data saved on-line in MiBridge. All of the documents

created by the inspection will be assembled in a binder and presented under cover of a letter stating that the inspections have been performed in accordance with this scope of services, and that all appropriate procedures and guidelines have been followed. This letter will also have the professional registration seal of the QTL or CONSULTANT PM. An additional unbound black and white copy will be presented with the information separated for each bridge for the bridge owner's bridge files.

The following documents are typical for each bridge. Other reports may be necessary as conditions warrant.

1. Bridge Safety Inspection Report (BSIR), MDOT form 2502

This is the primary inspection report form and is incorporated into MiBridge. The CONSULTANT QTL must complete this form in the field at the specific bridge site. This is usually done by red lining a copy of the previous report. MiBridge has a "Field Copy" print option that creates white space on the previous report for noting changed conditions at the site. It is recommended that the CONSULTANT retain this copy in their records as backup in case of failure of the electronic copy.

A new inspection record is created in MiBridge using the information from the site visit. This can be done in the field using the field application with downloaded data or entered in the office using the on-line application.

2. Structure Inventory & Appraisal Form (SI&A), MDOT form 1717a

A copy of the previous SI&A will be available to the CONSULTANT from MiBridge. The CONSULTANT QTL will verify the information on the SI&A during the inspection. Most of the data on the SI&A is static from inspection to inspection; therefore, MiBridge will bring the data forward for the new inspection. However, the CONSULTANT QTL is responsible and accountable for all the information as though entered directly at the time of the inspection.

3. Work Recommendations Report

A key element of the NBI program is the communication of the inspector's judgment of the need for maintenance or rehabilitation work necessary to keep the structure in service. The Work Recommendation Report is completed in MiBridge.

4. Stream Cross Section Report Form

The CONSULTANT will record the elevation of the stream bed with reference to an established datum on this form. The data collected must be entered on the form electronically, and the hard copy and electronic form will be submitted to the Berrien County Road Department and input into MiBridge document storage.

5. Photographs and Posting Document

Photographs must be taken and submitted as part of the Inspection Report to document deficiencies and any unusual conditions. The photographs will be digital images insert into a document with a description of what the photo is showing. Photos that are over or under exposed so the details in question cannot be seen will be returned to the CONSULTANT, and will have to be taken again until the photos are legible. A copy of the electronic files will also be submitted in .pdf format on flash drive with the Inspection Report, and they shall be uploaded to the MiBridge document storage.

Bridges that are load posted must have a digital picture taken of the correct load posting sign with the bridge in the background. The digital picture will be uploaded to MiBridge along with the “*Load Analysis Summary*” form.

#### 6. Request for Action Report

As noted above, the CONSULTANT will use this report to document communication to the Berrien County Road Department of circumstances that need more urgent attention than otherwise noted in the Work Recommendations.

### **D. Load Analysis**

The NBIS requires that all bridges have an initial load rating calculated, and the rating re-evaluated when the condition or loading of the bridge has changed. Deterioration of structural components over time may get to the point where the structure may have to be load restricted. Overlays, attachment of appurtenances, or situations may also trigger the need to re-evaluate the load rating. It is the Inspection QTL’s responsibility to assess the overall condition of the structure, render a judgment as to need for a reevaluation, and document his/her judgment in the general comments section of the BSIR.

Load rating analysis is not required at every routine inspection and is dependent on conditions determined during the inspection. Therefore, the Berrien County Road Department PM will evaluate the inspector’s recommendations and decide on the best course of action based on the circumstances. The CONSULTANT will not proceed with the calculations until authorized by the Berrien County Road Department BMOR. If the load rating is necessary, based on the information provided during the inspection, the CONSULTANT will provide the Berrien County Road Department PM the information below.

1. Qualifications of load rating engineer;  
NBIS requires a registered professional engineer be responsible for load rating calculations.
2. Statement of need;  
The CONSULTANT QTL will document the deterioration or conditions that are the cause of the need for load rating the structure. This will include all measurements of loss of section and location on the members where the deterioration is evident. This will be recorded in narrative and sketches with dimensions in sufficient detail that the load analysis can be completed.

Photographs will be taken, both panoramic and close-up with a ruler or other object in the frame which will give proportion. The photographs will be annotated with a description what is in the photo and it's location.

3. Provide an estimate of engineering hours to complete the necessary calculations. This will be used with the hourly rate stipulated in §VII-A.
4. Procedure  
The procedures in the MDOT Bridge Analysis Guide (BAG), latest edition, will be used to determine the Operating and Inventory ratings.
5. Documentation  
An Assumption Sheet and a Summary sheet will be completed. The Summary Sheet will be sealed by the professional Engineer doing the calculations. All calculation sheets / computer output sheets, etc. become the property of the bridge owner and will be delivered under letter of transmittal for inclusion in the Bridge File.

## **VI. CONTRACT ADMINISTRATION**

### **A. Project Quality Control**

The CONSULTANT will submit a project quality control plan with their proposal that will accomplish at a minimum the following:

1. Confirm that all QTLs have the required documents and certificates to substantiate their qualifications.
2. Confirm that the inspection process and procedures meet the requirements of the NBIS.
3. Review 10% of the completed work to ensure that all reports are complete, accurate, and consistent.

### **B. Responsibilities of Berrien County Road Department**

The following activities and information will be provided by the Berrien County Road Department PM, where applicable, to the CONSULTANT.

- Assign the structures to be inspected to the CONSULTANT in MiBridge.
- Provide access to electronic or hard copy bridge files which will have:
  - o Previous stream bed cross section reports.
  - o Previous work recommendations.
- Blank "Request for Action" form

The Consultant will be responsible for performing QC evaluations on ten percent of the bridges inspected. These evaluations are to be forwarded to the Berrien County Road Department upon completion.

Provide access for the CONSULTANT to any pertinent information in the Berrien County Road Department bridge files and database that may be necessary to complete the inspection. See Section VII-D, **Release of Information**, for restrictions on dissemination of the material.

## VII. PROPOSAL AND AUTHORIZATION GUIDELINES

### A. **Contract Terms**

#### Lump Sum Authorization

This will be a “LUMP SUM“ type of contract based on each structure shown on the “Work Package List” below, with payment upon the completion of all services required on each bridge. The Lump Sum price will include all of the engineering costs and expenses to inspect a given bridge as well as provide the report(s) required above. No added cost will be paid for overtime, weekend, or holiday work.

#### Stream Bed Cross-Sectioning

Stream bed cross-sectioning will be done on structures as shown on the WORK PACKAGE LIST, and reimbursed for each structure cross-sectioned.

#### Bridge Load Rating

Bridge Load Rating will be done on bridges as recommended by the Consultant and approved by the Berrien County Road Department.

#### Load Rating calculations

Provide an hourly rate for a registered Professional Engineer (Michigan) for the purpose of performing load rating calculations. This will be utilized on a case by case basis and only after approval of the need and estimate by the Berrien County Road Department PM.

#### Additional Inspection Needs

It is recognized that the inspection process may uncover the need for additional investigation requiring special non-destructive testing and traffic control. The CONSULTANT will submit a recommendation with justification and documentation of the need for this work, and an estimated cost after completion of the routine inspection.

If approved by the Berrien County Road Department Project Manager, a separate contract for this work will be issued. The CONSULTANT will be required to perform this work expeditiously utilizing the same inspection team. Failure to respond in the necessary time frame will cause Berrien County Road Department to get the work done by other means and could result in cancellation of the remaining work of this contract.

The Berrien County Road Department reserves the right to seek a new RFP for this work.

## **B. Proposal Requirements**

The following information is required of the CONSULTANT in response to this Scope of Services. Failure to provide all of the information will be cause to consider the proposal non-responsive and reject the proposal.

### **1. Proposal Letter and Fee Estimate**

The CONSULTANT must submit a letter agreeing to the stipulations in this Scope of Services. The letter must be signed by officer of the company as stated in the “Guidelines”

### **2. Resumes**

Resumes of the CONSULTANT’s staff who will be assigned to the project must be appended to the Proposal Letter. These resumes must document the requirements stated in Section IV, STAFF QUALIFICATION REQUIREMENTS.

Copies of training certificates attesting to re-current training requirements are required.

Previous project information should not be included.

### **3. Equipment**

Appended to the Proposal Letter must be a description or fact sheet of the equipment that will be used during the inspection.

### **4. Schedule**

The CONSULTANT must develop a schedule for the inspections as stated in Section III-A, “Schedule of dates and milestones” and append this to the Proposal Letter.

## **C. Billing Submittals**

The CONSULTANT must submit all invoices to the Berrien County Road Department for approval. Payment will be monthly based on the work complete to that date.

All invoices will be numbered sequentially and will indicate the invoice period. They must also indicate the Work Package number and the Berrien County Road Department work order number. All invoices are to include the specific bridges completed and a listing of hours and rates for additional services, such as load ratings. Invoices must separate Primary Road Bridges and Local

Road Bridges for the Berrien County Road Department to clearly see the invoice amount for all Primary and Local bridges.

All invoices will be sent to: Kevin Stack  
Berrien County Road Department  
2860 E Napier Avenue  
Benton Harbor, MI 49022

Questions pertaining to billing and payment may be directed to Berrien County Road Department.

## **VIII. GENERAL**

### **A. Personal Safety Equipment**

The CONSULTANT will be required to provide all personal safety equipment for those people working in the field. Some of the required items are hardhats, safety shoes, safety vests, gloves, safety harnesses, eye protection, etc.

Any person found to not have the required safety equipment will be asked to leave the Berrien County Road Department right of way. If there are repeated cases of this, the authorization with the CONSULTANT will be terminated.

### **B. Inspection Equipment**

The CONSULTANT must provide the following equipment as suitable for the inspection of the bridge. The use of this equipment during the inspection is considered part of the Lump Sum price.

#### **1. Inspection Vehicle**

The CONSULTANT will provide a vehicle with high visibility marking and or lighting for use during inspection. This vehicle will provide transportation for the inspection staff and the necessary equipment.

#### **2. Boat**

The CONSULTANT is required to have a small boat with a motor available for the purpose of inspecting those bridges which are over water and are too deep to wade. This is typically a small aluminum boat or inflatable Zodiac style of boat with a small motor.

The CONSULTANT will be responsible for ensuring the boat is safe for operation and is operated in a safe manner utilizing all required safety equipment.

#### **3. Computer**

The CONSULTANT is required to have a computer with internet connection. A laptop computer for use in the field would be helpful but is not required. The computer must have access to a printer to print the report documents for the field and the final report.

#### 4. Non-Destructive Testing (NDT)

The inspection process does not require a lot of testing but spot checking by sounding concrete for delamination's, checking for suspected cracks in steel, and measuring for section loss in areas of heavy corrosion is required.

The following equipment is necessary to perform these tests:

- Calipers and thickness gauges
- Dye penetrant test kit
- Chain drag or sounding rod or hammer

#### 5. Cell Phone

While in the field, the QTL must have a cellular telephone. The phone numbers must be provided to the Berrien County Road Department BMOR.

#### 6. GPS

The CONSULTANT must have a handheld Global Positioning Satellite (GPS) locator to determine the latitude and longitude of the bridge. This will be panned on to the SI&A form for the Berrien County Road Department PM to forward to MDOT, Bridge Management Unit.

#### 7. Camera

The CONSULTANT must have a digital camera that can clearly record images of pertinent items found during the inspection.

#### 8. Hand Tools

The CONSULTANT must provide the hand tools necessary to complete the inspection. Some of these are ladders, waders, hammers, lighting, marking paint, measuring tapes, etc.

### **C. Traffic Control**

Traffic control for closing a lane is not required for this project. The inspection is expected to be done from the shoulders or the median. Some safety equipment for working on the shoulder is necessary such as traffic cones, flashers on the vehicles, flexible roll-up sign for "Men Working Ahead", etc. If the shoulders are too narrow to do the inspection safely, the CONSULTANT is to recommend a supplemental in-depth inspection.

### **D. Release of Information**



The CONSULTANT may not release any information about the bridge or the Inspection to anyone outside of Berrien County Road Department or the BMOR. Failure to abide by this stipulation could result in penalties as a result of the Homeland Security Act.

The CONSULTANT is not allowed to make copies of the information in the bridge files unless given written approval from the Berrien County Road Department.

#### **E. References**

The CONSULTANT is to have the following reference material and be familiar with the content.

1. National Bridge Inspection Standards (NBIS) Federal Code of Regulations, 23 CFR 650.
2. AASHTO Manual for Condition Evaluation of Bridges, latest edition including interim updates.
3. Michigan Structure Inventory and Appraisal Coding Guide, latest edition.
4. FHWA Publications:
  - a. Bridge Inspector's Reference Manual (BIRM), latest edition.
  - b. Culvert Inspection Manual, Report No. FHWA-IP-86-2.
  - c. Inspection of Fracture Critical Bridge Members, Report No. FHWA-IP-86-26.
  - d. Recording and Coding Guide for the Structure Inventory and Appraisal of Nation's Bridges, Report No. FHWA-PD-96-001, December 95.

#### **F. Terms and definitions**

The following terms and definitions apply to this Scope of Services

1. Bridge Owner (Owner)  
The person within the local agency responsible for ensuring bridge inspection is completed to the requirements of the Nation Bridge Inspection Standards.
2. Berrien County Road Department  
The local government agency issuing the contract.
3. Berrien County Road Department PM (Project Manager)  
The person administering the contract for the local government agency.
4. CONSULTANT PM (Project Manager)  
The person responsible for administration of the contract for the consulting firm.

5. Inspection QTL  
Person meeting the qualifications of the NBIS to do bridge inspection.
6. NBIS  
National Bridge Inspection Standards, 23-CFR-650
7. MiBridge  
A MDOT web site for the entry of Bridge inspection reports and for the retrieval of bridge inspection data and standard reports.
8. Bridge Inspection  
Periodic safety inspection of bridge structures to “Routine” standards of the NBIS.

## APPENDICES

### **Forms**

Sample Bridge Safety Inspection Report (BSIR), MDOT form 2502

Sample Structure Inventory & Appraisal (SIA), MDOT form 1717a

Sample Work Recommendation Form

Sample Request for Action Form

**The following Publications and Guidelines can be found at the Michigan Department of transportation, Bridge Operations Manuals and Guides Webpage**  
[https://www.michigan.gov/mdot/0,4616,7-151-9625\\_24768\\_24773---,00.html](https://www.michigan.gov/mdot/0,4616,7-151-9625_24768_24773---,00.html)

MDOT Bridge Analysis Guide, including Assumption & Summary Sheets.

MDOT Bridge Inspection advisory notes.

MDOT Bridge Inspection Frequency Guidelines.

MDOT Bridge Deck Repair Matrix.

MDOT Bridge preservation work activity list.

MDOT Bridge Scour Cross Section Worksheet.

WORK PACKAGE LIST

Structure #	Facility Carried	Feature Intersected	Class	Inspection Req'd 2022	X-Section Req'd 2022
956	1120002000B010	FOREST LAWN ROAD	P	04/23/2022	X
957	1120002000B020	FOREST LAWN ROAD	P	04/23/2022	X
958	1120004000B010	BERTRAND ROAD	P	07/26/2022	X
959	1120006000B010	KRUGER ROAD	P	04/23/2022	X
960	1120006000B020	KRUGER ROAD	P	04/23/2022	X
962	11200013000B010	WARREN WOODS ROAD	P	06/19/2022	X
963	11200013000B020	WARREN WOODS ROAD	P	06/19/2022	X
964	11200014000B010	PUCKER STREET	P	07/11/2022	X
965	11200015000B010	GLENDORA ROAD	P	04/02/2022	X
966	11200015000B020	GLENDORA ROAD	P	08/06/2022	X
967	11200015000B030	GLENDORA ROAD	P	06/19/2022	X
969	11200019000B020	SNOW ROAD	P	06/20/2022	X
970	11200020000B010	SHAWNEE ROAD	P	06/20/2022	X
971	11200020000B020	SHAWNEE ROAD	P	06/20/2022	X
972	11200025000B010	HINCHMAN ROAD	P	06/20/2022	X
973	11200028000B010	GLENLORD ROAD	P	06/12/2022	X
974	11200029000B010	NAOMI ROAD	P	06/11/2022	X
975	11200033000B010	NAPIER AVENUE	P	07/25/2022	X
976	11200037000B010	TERRITORIAL ROAD	P	06/11/2022	X
977	11200038000B010	COLOMA ROAD	P	07/19/2022	X
978	11200042000B010	CARMODY ROAD	P	06/11/2022	X
979	11200043000R010	RED ARROW HIGHWAY	P	04/23/2022	X
980	11200043000B010	RED ARROW HIGHWAY	P	06/19/2022	X
981	11200048000B010	LAKESIDE ROAD	P	04/23/2022	X
982	11200049000B010	BASSWOOD ROAD	P	04/23/2022	X
983	11200049000B020	BASSWOOD ROAD	P	04/23/2022	X
984	11200050000B010	THREE OAKS ROAD	P	04/23/2022	X
985	11200051000B010	THREE OAKS ROAD	P	06/19/2022	X
986	11200054000B010	AVERY RD (MILL)	P	06/19/2022	X
987	11200063000B010	STEVENSVILLE BAROD	P	06/12/2022	X
988	11200064000B010	CLEVELAND AVE	P	06/20/2022	X
989	11200064000B020	CLEVELAND AVE	P	07/19/2022	X
990	11200067000B010	HOLLYWOOD ROAD	P	12/05/2022	X
991	11200068000R010	DAYTON ROAD	P	07/25/2021	X
992	11200081000B010	RIVER ROAD	P	06/20/2022	X
993	11200083000B010	HILLANDALE ROAD	P	06/11/2022	X

994	11200090000B010	WALTON ROAD	P	07/25/2022	X
995	11200092000B010	THIRD STREET	P	06/19/2022	X
996	11200094000B010	RED ARROW HIGHWAY	P	06/11/2022	X
997	11200097000B010	PARK ROAD	P	06/11/2022	X
998	11200105000B010	PAW PAW LAKE ROAD	P	07/19/2022	X
999	11200106000B010	N WATERVLIET ROAD	P	06/11/2022	
1000	11200113000B010	WASHINGTON AVE	P	06/12/2022	X
1001	11301H00031B010	HILL AVENUE	S	07/25/2022	
1002	11302H00008B010	MARRS ROAD	S	07/18/2022	
1003	11303H00030B010	EUCLID AVENUE	S	07/19/2022	X
1004	11304H00021B010	HIPPS HOLLOW ROAD	S	07/11/2022	
1005	11305H00024B010	COPP ROAD	S	07/11/2022	
1006	11306H00017B010	BOYLE LAKE ROAD	S	07/17/2022	
1007	11307H00004B010	ELM VALLEY ROAD	S	07/18/2022	
1008	11307H00054B010	FLYNN ROAD	S	04/24/2022	
1009	11307H00056B010	MINNICH ROAD	S	07/18/2022	
1010	11308H00018B010	DEFIELD ROAD	S	07/19/2022	
1011	11308H16021B010	NORTH MAPLE DRIVE	S	07/25/2022	
1012	11308H16031B010	WIL-O-PAW ROAD	S	07/25/2022	
1013	11308H21210B010	ISLAND COURT	S	07/25/2022	
1014	11310H00012B010	BUNDY ROAD	S	07/19/2022	
1015	11312H00003B010	LINCO ROAD	S	07/18/2022	
1016	11312H00008B010	MARQUETTE WOODS RD	S	06/12/2022	
1017	11312H00018B010	HOLDEN ROAD	S	07/18/2022	
1018	11312H00021B010	ROOSEVELT ROAD	S	07/19/2022	
1019	11313H00022B010	GLASSMAN ROAD	S	07/18/2022	
1020	11314H00008R010	WEISER ROAD	S	07/11/2022	
1021	11314H00019B010	KINZIE ROAD	S	07/11/2022	
1022	11314H00035B010	15TH STREET	S	07/11/2022	
1023	11314H10022B010	FERNDALE STREET	S	07/25/2022	X
1024	11316H00034B010	HOCHBERGER ROAD	S	07/11/2022	
1025	11316H00040B010	BAILEY ROAD	S	07/25/2022	X
1026	11317H19012B010	YELLOW CREEK DRIVE	S	07/18/2022	
1027	11318H00009B010	WATSON ROAD	S	07/11/2022	
1028	11318H00018B010	DOHM ROAD	S	07/11/2022	
1029	11319H00001B010	MAIDEN LANE	S	07/19/2022	
1030	11320H00001B010	MARTIN ROAD	S	07/17/2022	
1031	11320H00001B020	MARTIN ROAD	S	07/17/2022	X
1032	11320H00008B010	LAKESIDE ROAD	S	04/02/2022	
1033	11320H00010B010	WITT ROAD	S	07/17/2022	
1034	11321H00002B010	DAN SMITH ROAD	S	07/25/2022	

1035	11321H00008B010	JOHN GOFF ROAD	S	07/25/2022	
1036	11322H00001B010	HESS ROAD	S	04/02/2022	
1037	11322H00002B010	ELM VALLEY ROAD	S	04/24/2022	
1038	11322H00004B010	KAISER ROAD	S	07/17/2022	
1039	11322H00012B010	LOG CABIN ROAD	S	04/02/2022	
1040	11322H00014B010	PARDEE ROAD	S	07/17/2022	
1041	11322H00014B020	PARDEE ROAD	S	07/17/2022	
1042	11322H00015B010	HOLDEN ROAD	S	07/17/2022	
1043	11322H00015B020	HOLDEN ROAD	S	04/24/2022	
1044	11322H00016B010	GARDNER ROAD	S	07/17/2022	
12823	11320A00002B010	STARR ROAD	S	07/17/2022	
13091	11311H00001B010	BROWNTOWN ROAD	S	07/25/2022	
13092	11200105000B020	PAW PAW LAKE ROAD	P	06/11/2022	X
13093	11200025000B020	HINCHMAN ROAD	P	06/20/2022	X
13094	11200061000B010	JERICO ROAD	P	04/24/2022	
13095	11200061000B020	LINCO ROAD	P	06/12/2022	
13096	11200066000B010	LINCOLN AVE	P	04/02/2022	X
13097	11200090000B020	WALTON ROAD	P	06/19/2022	X
13098	11308H00007B010	KINNE ROAD	S	07/17/2022	
13099	11309H00024B010	RICKERMAN ROAD	S	04/02/2022	
13100	11309H00021B010	NYE ROAD	S	09/10/2022	
13101	11311H00016B010	DATE ROAD	S	04/24/2022	
13147	11322H00015B030	HOLDEN ROAD	S	07/25/2022	
13193	11200116000B010	SODUS PARKWAY	P	06/11/2022	X
13484	11200024000B010	DEANS HILL ROAD	P	06/19/2022	X
13485	11310H00001P010	TOWER HILL PED	S	07/18/2022	
14316	11200027000C010	JOHN BEERS RD	P		X

## **TITLE VI**

The Berrien County Road Department, in accordance with Title VI of Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of gender, disability, race, color, or national origin in consideration for an award.

## **TITLE VI CONTRACT REQUIREMENTS:**

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor shall comply with the Regulations relative to non-discrimination in Federally-assisted programs of the Department of Transportation, Title 49, code of Federal Regulations, Part 21 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulation, including employment practices when the contractor covers a program set forth in Appendix B of the Regulations.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the **BERRIEN COUNTY ROAD DEPARTMENT** to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the State highway department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.
5. **Sanctions for Non-compliance:** In the event of the contractor's non-compliance with the non-discrimination provisions of this contract, the **BERRIEN COUNTY ROAD DEPARTMENT** shall
6. impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
  - (a) Withholding of payments to the contractor under the contract until the contractor complies, and/or
  - (b) Cancellation, termination or suspension of the contract, in whole or in part.

## **TITLE VI**

7. **Incorporation of Provisions:** The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the **BERRIEN COUNTY ROAD DEPARTMENT** may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the **BERRIEN COUNTY ROAD DEPARTMENT** to enter into such litigation to protect the interests of the County, and, in addition, the contractor may request the State highway department to enter into such litigation to protect the interests of the State and/or the United States to enter into such litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

### **Pertinent Non-Discrimination Authorities:**

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. §4601 ), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, ( 49 USC § 4 71, Section 4 7123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to -ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).



## Cost Estimating Worksheet

### STRUCTURES ON PRIMARY ROUTES

2022 Bridge Inspections and Reports 52 each @ \$ \_\_\_\_\_ = \$ \_\_\_\_\_

2022 Cross Sections 49 each @ \$ \_\_\_\_\_ = \$ \_\_\_\_\_

Meetings 1 lump sum @ \$ \_\_\_\_\_ = \$ \_\_\_\_\_

TOTAL \$ \_\_\_\_\_

Load Ratings \$ \_\_\_\_\_ per hour

### STRUCTURES ON SECONDARY ROUTES

2022 Bridge Inspections and Reports 52 each @\$ \_\_\_\_\_ = \$ \_\_\_\_\_

2022 Cross Sections 4 each @\$ \_\_\_\_\_ =\$ \_\_\_\_\_

Meetings 1 lump sum @\$ \_\_\_\_\_ =\$ \_\_\_\_\_

TOTAL \$ \_\_\_\_\_

Load Ratings \$ \_\_\_\_\_ per hour