

**ENGINEERING AND RELATED SERVICES**  
**July 10, 2009**

**STATE PROJECT NO. 700-99-0499**  
**F.A.P. NO. BR-9908(508)**  
**TESTING OF UNKNOWN FOUNDATIONS**  
**STATEWIDE**

Under Authority granted by Title 48 of Louisiana Revised Statutes, the Louisiana Department of Transportation and Development (DOTD) hereby issues a Request for Qualification Statements (RFQ) on Standard Form 24-102 (SF 24-102), "Professional Engineering and Related Services", revised January 2003, from Consulting Firms (Consultant) to provide engineering and related services. **All requirements of Louisiana Professional Engineering and Land Surveying (LAPELS) Board must be met at the time of contract execution.** One Prime-Consultant/Sub-Consultant(s) (Consultant/Team) will be selected for this Contract.

**Project Manager** – M. David Nash may be reached at (225) 379-1060.

**PROJECT DESCRIPTION**

The project as covered by this contract shall consist of providing all necessary engineering services required to perform field data collection using dispersive wave testing and dispersive side sonic testing methodologies or other proven Non Destructive Testing methods on a list of bridges with unknown foundations and to screen the list of existing bridges and perform a detailed scour analysis on a selected number of these bridges.

**SCOPE OF SERVICES**

The services to be rendered for this Project shall consist of the following Stages and Parts:

**Stage 1: Perform field data collection on bridges with unknown foundations using Non Destructive Testing**

**Part 1:** Consists of performing Field data collection using the dispersive wave testing methodology and or dispersive side sonic wave testing or other proven Non Destructive Testing methods. Pile selection will be the responsibility of the consultant, however LADOTD will reserve the right to designate particular piles on any bridge the engineer deems necessary. A minimum of three (3) test piles per bridge is required [one (1) nearest the deepest point of the channel profile and one (1) nearest the shallowest point of the channel profile]. A maximum number of test piles for each bridge

will be determined by dividing the number of bents by two (2), unless authorized by the engineer in writing.

**Part 2:** Consists of sketching the bent and pile layout giving geographic references and nomenclature of test piles. This sketch (or a computer generated model) is to be included in the report. Numbering of bents shall begin at the abutment at the beginning of the bridge in the direction of control. Numbering of piles shall be from left to right when facing the bent in the direction of control. The route's direction of control is generally accepted as South to North or West to East. A control section manual containing beginning and ending points can be provided by DOTD.

**Part 3:** Consists of measuring the length of pile exposure to determine the deepest point along the profile of the bridge (either up-stream or down-stream). This measurement will be used to calculate the minimum pile penetration. Also, any channel or abutment revetment (stone or concrete) found must be documented and reported along with the length test results. Any site location that has both concrete revetment and channel should not be tested, but brought to the Project Engineer's attention.

**Part 4:** Consists of producing all testing reports in Portable Document Format (PDF) recorded on a CD with files named using the LADOTD bridge Recall Number, and organized by District number on a monthly basis not to exceed 36 months after the Notice To Proceed (NTP) as issued by the DOTD. A copy of the raw data for each pile tested, arranged in a format acceptable to the engineer, and organized by pile name, recall number, and District number will be submitted by the end of 36 months after the Notice To Proceed (NTP) was issued by the DOTD.

**Stage 2: Screening of Scour Susceptible Bridges (Phase 1 Scour)**

**Part 1:** Consists of obtaining any additional plans or information missing from the information supplied by the DOTD and organizing the bridges by river or stream.

**Part 2:** Will consist of determining the drainage areas for the bridges, computing the 100 year frequency discharge for bridge sites with drainage areas greater than 25 square miles and performing a scour analysis using the factors established by DOTD.

The DOTD required factors are identified in the Phase I Scour Assessment Worksheet (under development) and shall be included in the reports. An example can be found in Appendix A to this Scope of Services.

The Consultant will determine the hydrologic characteristics of each bridge site, including drainage area, discharge and pile penetration. The hydrologic information (drainage area and discharge) computed for each site will be gathered and catalogued for future reference by DOTD and other users requiring such information. The Consultant will provide all quadrangle maps required under this Phase and they will become part of the records for each site.

From information gathered from the reports, a list of scour susceptible bridges will be prioritized based on the Annual Average Daily Traffic (AADT) of the highway crossing the stream. This list will be used to determine the order in which the bridges will be analyzed in the next Stage. The AADT information can be found in the current issue of the DOTD Highway Needs Summary for each district.

**Part 3:** Consists of general project management including meetings with DOTD to discuss progress, resolve any problems, and to file and organize the data. The use of DOTD microfilm files, microfilm reader/printers, construction plans, and Bridge Maintenance files should be scheduled as to not interfere with normal DOTD operations.

**Stage 3: Scour Analysis of Selected Bridges (Phase 2 Scour)**

**Part 1:** Part 1 involves evaluation of the anticipated scour for the bridges identified as scour susceptible (SI&A Item 113 = 6) selected in Stage 2. The Consultant will analyze the selected bridges in accordance with Federal Highway Administration (FHWA) Publication No. FHWA-NHI-01-001, May 2001, Hydraulic Engineering Circular (HEC) No. 18, Evaluating Scour at Bridges, Fourth Edition with applicable Errata, and will provide Water Surface Profile Analysis (WSPRO) as established in FHWA Publication No. FHWA-SA-98-080, June 1998, Hydraulic Computer Program HY-7, User's Manual for WSPRO.

The WSPRO analysis requires a cross section of the flood plain. This cross section may be determined from the stream cross section available from the Bridge Inspection

files and the quadrangle maps for the site. Actual field survey data may be required if this information is not available or if the complexity of the site warrants a more detailed analysis.

The DOTD Phase II SCOUR ANALYSIS OF SCOUR SUSCEPTIBLE BRIDGES worksheet shall be included in the report.

## **REFERENCES**

All services and documents will meet the standard requirements as to format and content of the DOTD; and will be prepared in accordance with the latest applicable editions, supplements and revisions of the following:

1. AASHTO Standards, ASTM Standards or DOTD Test Procedures
2. DOTD Location and Survey Manual
3. DOTD Roadway Design Procedures and Details
4. DOTD Hydraulics Manual
5. DOTD Standard Specifications for Roads and Bridges
6. Manual of Uniform Traffic Control Devices
7. DOTD Traffic Signal Design Manual
8. National Environmental Policy Act (NEPA)
9. National Electric Safety Code
10. National Electric Code (NFPA 70)
11. DOTD Environmental Impact Procedures (Vols. I-III)
12. Policy on Geometric Design of Highways and Streets
13. Construction Contract Administration Manual
14. Materials Sampling Manual
15. DOTD Bridge Design Manual
16. Consultant Contract Services Manual
17. Geotechnical Engineering Services Document
18. Bridge Inspectors Reference Manual
19. DOTD Stage 1 Manual of Standard Practice
20. Code of Federal Regulations 29 CFR 1926 (OSHA)

## **COMPENSATION**

Compensation to the Consultant for services rendered in connection with this Contract shall consist of the proposed price by the Consultant for all services (Attachment "A").

All travel related expenses will be compensated under direct expenses, and will be in accordance with Louisiana Office of State Travel regulations found at:

<http://www.doa.louisiana.gov/osp/travel/travelpolicy/travelguide.pdf>. Vehicle rental rates will require prior approval from the DOTD Project Manager.

### **CONTRACT TIME**

The Consultant shall proceed with the services specified herein after the execution of this Contract and upon written Notice-To-Proceed from the DOTD. The overall contract time to complete this project is estimated to be **four years**. The delivery schedule for all project deliverables shall be established by the Project Manager.

During the completion of Stage I, the consultant will submit a monthly progress report to the project engineer. During Stage II, the Consultant will submit two (2) draft copies of the final report, with results, conclusions and recommendations, twelve (12) months after the invoice date of the bridges for Stage I work. Contract time for Stage III shall be twelve (12) months after the satisfactory completion of Stage II. Total contract time for all stages shall not exceed 1461 calendar days after the NTP from DOTD has been issued.

### **MINIMUM PERSONNEL REQUIREMENTS**

The following requirements must be met by the Prime-Consultant at the time of contract execution:

1. At least one Principal of the Prime-Consultant must be a Professional Engineer registered in the State of Louisiana.
2. At least one Principal or other Responsible Member of the Prime-Consultant must be a Professional Civil Engineer, registered in the State of Louisiana.
3. In addition to the above, the Prime-Consultant must employ on a full-time basis a minimum of six Professional Engineers, registered in the State of Louisiana, four with a minimum of five years experience in Bridge Structural Design, and two with a minimum of five years experience in Hydraulic Engineering, with corresponding support staffs.
4. The Prime-Consultant must also employ on a full-time basis, or through the use of a Sub-Consultant(s):
  - a. A minimum of two Professional Engineers, registered in the State of Louisiana, one with a minimum of five years experience in Bridge Structural Design, and one with a minimum of five years experience in Hydraulic Engineering,
  - b. A minimum of two Professional Engineers, registered in the State of Louisiana, one with at least five years experience in responsible charge of geotechnical services, and one with at least five years of experience in producing FB Pier input from boring and ECPT data, and a corresponding support staff.

## **ELECTRONIC DELIVERABLES**

The Consultant hereby agrees to produce electronic deliverables in conformance with “DOTD Software and Deliverable Standards for Electronic Plans” as outlined at [http://www.dotd.louisiana.gov/highways/project\\_devel/design/electronic\\_standards\\_disclaimer.asp](http://www.dotd.louisiana.gov/highways/project_devel/design/electronic_standards_disclaimer.asp). The Consultant shall download and apply the latest CAD standards. The Consultant hereby agrees to install incremental updates to software and CAD standards as instructed by the Project Manager. Such updates will not have a significant impact on the development time or delivery date for project plans, or require the Consultant to purchase additional software. Prior to proceeding with plan development, the Consultant shall contact the Project Manager for any special instructions regarding updates to standards or project-specific requirements if this information has not already been provided.

In the event that any electronic standard conflicts with written documentation, including DOTD plan-development manuals, the electronic standard typically governs. The Consultant is responsible for contacting the Project Manager should questions arise.

Plan deliveries shall be made on CD or DVD media and labeled with media-compatible indelible ink on separate lines as follows:

State Project Number

“Final Plans Submittal”, “60% ACP Submittal” (or other milestone)

“Electronic Deliverables”

Consultant Firm Name

The CD/DVD shall be delivered with a signed cover letter that includes, among the formalities, a deliverable “hash” code that is documented in a report generated by the ControlCAD Indexer Submittal tool. The hash code is used to verify that the CD is authentic. At any stage of the plan development process, the Project Manager may require plan delivery by other methods including, but not limited to, upload to the DOTD ProjectWise repository.

The prime Consultant is responsible for ensuring that Sub-Consultants are prepared to produce electronic deliverables in conformance with DOTD electronic standards for plans.

## **QUALITY CONTROL/QUALITY ASSURANCE**

The DOTD requires the Consultant to develop a Quality Control/Quality Assurance program; in order to provide a mechanism by which all contracted services can be subject to a systematic and consistent review. Consultants must ensure quality and adhere to established design policies, procedures, standards, and guidelines in the preparation and review of all design products. The DOTD shall provide limited input and technical assistance to the Consultant.

## **EVALUATION CRITERIA**

The general criteria to be used by DOTD (when applicable) in evaluating responses for the selection of a Consultant to perform these services are:

1. Consultant's firm experience on similar projects, weighting factor of 3;
2. Consultant's personnel experience on similar projects, weighting factor of 4;
3. Consultant's firm size as related to the estimated project cost, weighting factor of 3;
4. Consultant's past performance on similar DOTD projects, weighting factor of 6; \*\*
5. Consultant's current work load with DOTD, weighting factor of 5;
6. Location where the work will be performed, weighting factor of 4; \*
7. Cost (Consultant's proposed price - Attachment "A"), weighting factor of 4.

\* All respondents will receive a 4 in this category

\*\* The Bridge Inspection (BI) performance rating will be used for this project.

The complexity level for this project is **complex**.

Consultants will be evaluated as indicated in Items 1- 7. The evaluation will be by means of a point-based rating system. Each of the above criteria will receive a rating on a scale of 0-4. The rating will then be multiplied by the corresponding weighting factor. The firm's rating in each category will then be added to arrive at the Consultant's final rating.

If Sub-Consultants are used, each member of the Consultant/Team will be evaluated on their part of the contract, proportional to the amount of their work. The individual team member ratings will then be added to arrive at the Consultant/Team rating.

The Project Selection Team will be responsible for performing the above described evaluation, and will present a short list of the three (if three are qualified) highest rated Consultants to the Secretary of the DOTD. The Secretary will make the final selection.

## **CONTRACT REQUIREMENTS**

The selected Consultant will be required to execute the contract within 10 days after receipt of the contract.

**INSURANCE** - During the term of this contract, the Consultant will carry professional liability insurance in the amount of \$1,000,000. The Prime-Consultant may require the Sub-Consultant(s) to carry professional liability insurance. This insurance will be written on a "claims-made" basis. Prior to executing the contract, the Consultant will provide a Certificate of Insurance to DOTD showing evidence of such professional liability insurance.

**AUDIT** - The selected Consultant/Team will allow the DOTD Audit Section to perform an annual overhead audit of their books, or provide an *independent* Certified Public Accountant (CPA) audited overhead rate. This rate must be developed using Federal Acquisition Regulations (FAR) and guidelines provided by the DOTD Audit Section. In addition, the Consultant/Team will submit semi-annual labor rate information, when requested by DOTD.

The selected Consultant/Team will maintain an approved Project Cost System, and segregate direct from indirect cost in their General Ledger. Pre-award and post audits, as

well as interim audits, may be required. For audit purposes, the selected Consultant/Team will maintain accounting records for a minimum of five years after final contract payment.

Any Consultant currently under contract with the DOTD and who has not met all the audit requirements documented in the manual and/or notices posted on the DOTD Consultant Contract Services Website ([www.dotd.louisiana.gov](http://www.dotd.louisiana.gov)), will not be considered for this project.

### **SUBMITTAL REQUIREMENTS**

One original (**stamped original**) and **five** copies of the SF 24-102 must be submitted to DOTD. All submittals must be in accordance with the requirements of this advertisement and the Consultant Contract Services Manual. Any Consultant/Team failing to submit any of the information required on the SF 24-102, or providing inaccurate information on the SF 24-102, will be considered non-responsive.

Any Sub-Consultants to be used, including Disadvantaged Business Enterprises (DBE), in performance of this Contract, must also submit a SF 24-102, which is completely filled out and contains all information pertinent to the work to be performed.

The Sub-Consultant's SF 24-102 must be firmly bound to the Consultant's SF 24-102. In Section 9, the Consultant's SF 24-102 must describe the **work elements** to be performed by the Sub-Consultant(s), and state the approximate **percentage** of each work element to be subcontracted to each Sub-Consultant.

Name(s) of the Consultant/Team listed on the SF 24-102, must precisely match the name(s) filed with the Louisiana Secretary of State, Corporation Division, and the Louisiana State Board of Registration for Professional Engineers and Land Surveyors.

The SF 24-102 will be identified with State Project No. **700-99-0499**, and will be submitted **prior to 3:00 p.m. CST on Monday, July 27, 2009**, by hand delivery or mail, addressed to:

Department of Transportation and Development  
Attn.: Mrs. Dawn G. Picard, P.E.  
Consultant Contract Services Administrator  
1201 Capitol Access Road, **Room 405-T**  
Baton Rouge, LA 70802-4438 or  
Post Office Box 94245  
Baton Rouge, Louisiana 70804-9245  
Telephone: (225) 379-1989

## **REVISIONS TO THE RFQ**

DOTD reserves the right to revise any part of the RFQ by issuing an addendum to the RFQ at any time. Issuance of this RFQ in no way constitutes a commitment by DOTD to award a contract. DOTD reserves the right to accept or reject, in whole or part, all Qualification Statements submitted, and/or cancel this announcement if it is determined to be in DOTD's best interest. All materials submitted in response to this announcement become the property of DOTD, and selection or rejection of a submittal does not affect this right. DOTD also reserves the right, at its sole discretion, to waive administrative informalities contained in the RFQ.

**ATTACHMENT "A"**

I/We propose to furnish all labor, materials, equipment, incidentals, etc. necessary to provide the scope of services as outlined in this RFQ for the rates of (include in Section 14 of S.F. 24-102):

**TESTING OF UNKNOWN FOUNDATIONS**

**Stage 1: Field Data Collection**

**Cost of providing Non Destructive Testing of in-situ concrete and timber piles at bridges based on a minimum of three (3) piles per bridges**

\$ \_\_\_\_\_ Price per pile (Concrete/Timber)

\$ \_\_\_\_\_ Price per pile (Steel)

**Stage 2: Phase 1 Scour Screening**

Included in price for Stage 1

**Total Bid Amount: \$ \_\_\_\_\_**