



PROFESSIONAL SERVICES
 PROCUREMENT BULLETIN
 2009-06
 MARSHALL/TRIGG COUNTIES

COUNTY	Marshall/Trigg
ITEM NO.	1-180.60 & 1-180.70
PROJECT DESCRIPTION	Geotechnical Services for Final Design for New Bridges over Lake Barkley and Kentucky Lake.
PROJECT MANAGER	Bart Asher, PE, PLS
USER DIVISION	Division of Structural Design
APPROXIMATE FEE	\$2,000,000.00 Engineering & Laboratory Testing (Unit Price) \$2,000,000.00 Drilling * (See Scope)
PURPOSE AND NEED	To provide geotechnical services to support the design and analysis of the lake bridges and causeways.
PROJECT FUNDING	Federal Bridge Replacement (BRO)
PROJECT LENGTH	0.6/1.2 miles
METHOD OF DESIGN	The bridges will be designed using the Load and Resistance Factor Design (LRFD) method and geotechnical analyses must be performed accordingly.
DBE REQUIREMENT	Consultant team may include a DBE participation plan with their response to announcement. An additional page will be allowed with the Project Approach (page 7) in the response to announcement to convey this plan. A maximum of 2 points will be considered in the evaluation factors for the DBE participation plan.

SCOPE OF WORK

Services will be required to be performed in general accordance with the KYTC Geotechnical Manual, AASHTO LRFD Bridge Design Specifications, and other applicable documents as directed by the Department. The selected geotechnical consultant will be expected to coordinate with the Department and the bridge design team regarding scheduling and prioritization of specific work tasks.

Reports documenting seismic geotechnical engineering analyses performed in conjunction with the bridge type study for both the Lake Barkley and Kentucky Lake bridges are referenced in "Available Studies" below (SA-022-2007 & SA-023-2007). The selected geotechnical consultant (and sub-consultant(s) if applicable) will be required to provide geotechnical engineering services to support the final design and analysis of the bridges and causeways for these projects and to use the type study reports as references. The scope may include but is not necessarily limited to performing: land and barge drilling* (see below), in-situ/geophysical testing on land and on water, surveying all boring and field test locations, laboratory testing, conventional and seismic geotechnical engineering analyses for the design of the structures and causeways, entering data into gINT, drafting subsurface data sheets, and preparing geotechnical engineering reports.

* It is currently the Department's intent to perform the drilling, rock core logging, and laboratory testing on rock, for this project in-house. However, the geotechnical branch may elect to require the consultant to perform these services and reserves the right to make the final decision at a later time. In either case, the geotechnical consultant will be required to provide a rented barges, including incidental equipment, tooling, supplies, etc., as directed by the geotechnical branch to support the drilling operations. Additionally, the geotechnical consultant will be required to provide or subcontract any required traffic control services. The costs associated with barge rental and subcontracted traffic control will be reimbursed as direct pass-through costs with allowances for labor costs associated with administrative time.

SPECIAL INSTRUCTIONS

Instructions for Response to Announcement can be found at:

[http://transportation.ky.gov/progperform/
instructions_for_response_to_kentucky_transportation_cabinet_10-10-08.pdf](http://transportation.ky.gov/progperform/instructions_for_response_to_kentucky_transportation_cabinet_10-10-08.pdf)

SPECIAL INSTRUCTIONS continued

Identify any sub-consultants expected to be used in the response to this bulletin. Generally, all sub-consultants must be pre-qualified in the applicable categories. However, prequalification may not be required for some sub-consultants performing highly specialized services. The use of any and all sub-consultants is subject to the approval of the Department and the prime geotechnical consultant will be responsible for their sub-consultants' work.

The selected prime consultant and/or its sub-consultants are expected to have significant experience performing work on projects with similar complexity to this one. As a minimum, the project team should have the experience and capabilities below.

Conventional Geotechnical Engineering Experience and Capabilities

- Preparing geotechnical submittals in accordance with KYTC format.
- Preparing geotechnical CADD drawings using Microstation in accordance with KYTC format.
- Preparing and Interpreting Subsurface Logs in accordance with KYTC format.
- Entering geotechnical data into gINT.
- Performing geotechnical engineering analyses for deep foundations (e.g., driven piles and drilled shafts) for bridges over navigable streams and embankments for transportation facilities.
- Performing geotechnical engineering analyses and providing geotechnical recommendations for deep foundations in karst geology.
- Performing and presenting the results of geotechnical engineering analyses in Load and Resistance Factor Design (LRFD) format. Evidence of continuing education training related to LRFD is highly desirable.
- Preparing Geotechnical Engineering Reports in accordance with KYTC format.

Seismic Geotechnical Engineering Experience and Capabilities

- Performing seismic geotechnical engineering analyses for the design of bridges, embankments, dams and/or levees, and/or other major structures, including: Simplified Seismic Site Response, Equivalent-Linear One-Dimensional Site Response, Liquefaction, Earthquake Induced Settlement, Pseudo-Static Seismic Slope Stability, and other related analyses. Evidence of graduate level course work and/or continuing education training related to earthquake engineering is highly desirable.
- Interpreting the results of in-situ/geophysical testing and Standard Penetration Test (SPT) energy measurements to be used for seismic geotechnical engineering analyses.
- Performing and presenting the results of seismic geotechnical engineering analyses in Load and Resistance Factor Design (LRFD) format. Evidence of continuing education training related to LRFD is highly desirable.

SPECIAL INSTRUCTIONS continued

Geotechnical Laboratory Qualifications and Capabilities

- AASHTO Accredited for the following AASHTO test methods: T87, T88, T89, T90, T99, T100, T193, T208, T216, T296, T297, T265; and capable of performing KM 64-501 (CBR by Kentucky Method), KM 64-513 (Slake Durability), KM-64-514 (Jar Slake), and ASTM D 2938 or KM 64-523 (Unconfined Compression Test on Rock).

Drilling* (see below) and In-Situ/Geophysical Testing Experience and Capabilities

- Performing drilling for structures and embankment stability borings according to standard KYTC requirements.
- Performing floating plant drilling operations on navigable waterways with heavy barge traffic.
- Drilling and sampling in sandy and gravelly soils using drilling fluids to depths exceeding 100 feet.
- Obtaining rock cores in very hard limestone.
- Performing in-situ/geophysical testing.
- Obtaining standard penetration test (SPT) energy measurements as required to normalize SPT N-values to be used to evaluate liquefaction potential.

* Since the final decision regarding who will perform the drilling will be made at a later time, the consultant should be prepared to perform these services. Drilling capabilities/experience will be considered during the selection process

AVAILABLE STUDIES

Applicable Geotechnical Reports can be downloaded from the following URL:

<http://kgsweb.uky.edu/KYTC/search.asp>

These reports can be located by typing in each of the following in the "Project Number" field located on the right side of the screen:

R-005-1999

S-035-2006

S-039-2006

SA-022-2007

SA-023-2007

PREQUALIFICATION REQUIREMENTS

To respond to this project, the project team **must be** prequalified in the following areas by the date of this advertisement.

GEOTECHNICAL SERVICES

- Engineering
- Laboratory Testing
- Drilling

ROADWAY DESIGN SERVICES

- Surveying

PROJECT SCHEDULE & MILESTONES

The selected consultant is expected to meet the scheduled milestone dates and to coordinate with the department and the design team regarding the prioritization of specific tasks.

RESPONSE DATE	June 10, 2009, 4:30 p.m. (Frankfort time)
SELECTION COMMITTEE MEETING	July 1, 2009
SCOPING CONFERENCE	July 15, 2009
TENTATIVE DEADLINE FOR CONSULTANT FEE PROPOSAL	August 1, 2009
CONTRACT NEGOTIATIONS	August 15, 2009
NOTICE TO PROCEED	October 1, 2009
COMPLETION OF FIELD WORK & LABORATORY TESTING	October 15, 2010
DRAFT REPORT	February 15, 2011
FINAL REPORT	July 1, 2011

EVALUATION FACTORS

1. Relative experience of consultant personnel assigned to project team with highway projects for KTC and/or for federal, local or other state governmental agencies. (10 points)
2. Capacity to comply with project schedule. (10 points)
3. Past record of performance on project of similar type and complexity. (10 points)
4. Project approach and proposed procedures to accomplish the services for the project. (10 points)
5. **DBE Participation Plan (2 points)**
6. Consultant's Kentucky office where work is to be performed. (2 points)
 - 75%-100% of work accomplished in Kentucky offices (2 points)
 - 26%-74% of work accomplished in Kentucky offices (1 point)
 - 0%-25% of work accomplished in Kentucky offices (0 points)

SELECTION COMMITTEE MEMBERS

1. Kevin Sandefur , PE, User Division
2. Darrin Beckett, PE, User Division
3. Ryan Griffith, Secretary's Pool
4. Vicki Boldrick, Secretary's Pool
5. James Lile, Governor's Pool