PROFESSIONAL SERVICES PROCUREMENT BULLETIN 2006-04 STATEWIDE/ GEOTECHNICAL DRILLING

COUNTY	Statewide
ROUTE	N/A
DISTRICT	Statewide
ITEM NO	N/A
PROJECT DESCRIPTION	To provide geotechnical drilling services.
PROJECT MANAGER	William Broyles, P.E.
USER DIVISION	Structural Design
APPROXIMATE FEE	< $750,000 upset limit (per contract)
PURPOSE AND NEED	To provide geotechnical drilling services; to help expedite the completion of projects and effectively handle estimated workload, on a statewide basis.
PROJECT LENGTH	N/A
METHOD OF DESIGN	The selected consultant shall utilize the CADD Standards for Highway Plans (version 2.04) policy in the development of the Highway Plans.
DBE REQUIREMENT	None
AVAILABLE STUDIES	N/A
PROJECT FUNDING	State Fund

2006 GENERAL SPECIFICATIONS

Region 1 - (Districts 1, 2 ,3 and 4)

Region 2- (Districts 5, 6, 7, 8 and 9)

Region 3 - (Districts 10, 11 and 12)

1. The Department of Highways will provide traffic control, the boring plan, and staking of holes for the projects. If the Department cannot provide traffic control, the drilling firms shall provide their own traffic control. The traffic control shall be provided by a certified traffic control firm. This shall be paid as invoiced by the vendor, plus an administrative fee of 10 percent to account for any overhead or administrative expenses. The drilling firms must obtain written permission from the Department prior to obtaining a traffic control firm. The drilling firms will be responsible for obtaining all utilities locations, right of entry from property owner; however, in case of refusal, the firm should request assistance from the refusal, the firm should request assistance from the Pre-Construction Engineer in the applicable District.

2. The work cannot be subcontracted without written approval from the Department and only to a prequalified firm.

3. Drilling shall begin on a project within ten (10) calendar days from the date of notification unless otherwise agreed to by the Department.

4. If the firm and the Department of Highways are in agreement, more than one drill crew may be utilized at the same time on larger projects. A minimum crew is considered to be two people, drill, and all equipment needed to perform drilling operations.

5. Drilling will not be required during the months of January and February, unless agreed to by the firm in their proposal.

6. Drilling and sampling procedures, materials, and all items necessary to complete the work shall meet the specifications as outlined in the Geotechnical Manual. All split spoon samples obtained on structure projects shall be obtained by use of a Standardized Automatic Hammer.

7. Firms are responsible for completing the scope of work on time. A time or date of completion will be established in writing for each project. If the Department delays drilling operations six months beyond the expiration date of the notification for drilling services (Form TC64-523), the firm is not obligated to complete the scope of work.

8. The contract is effective for one year. However, the expiration date may be extended one additional year if agreeable to the Department and firm.

9. The method of payment will be made as described in Section GT-903-3 Of the Geotechnical Manual for:

A. Mobilization of Equipment. Mobilization and demobilization of drill equipment will be paid per drill crew as follows: $250.00 administrative fee plus $3.50 per mile up to a maximum of 500 miles (round trip). A drill crew is defined as personnel, drill rig, equipment, materials, and all items necessary to drill and sample in accordance with the Specifications. Mileage will be determined using the Official Kentucky Highway Map.

B. Mobilization (including demobilization) costs for a subcontracted dozed or track hoe and operator shall be paid at the hourly rate bid price, for a total of two hours for each project.

C. Mobilization (including demobilization) costs for a company owned dozer or track hoe and operator shall be paid as follows: $250.00 administrative fee plus $3.50 per mile up to a maximum of 500 miles (round trip). Mileage will be determined using the Official Kentucky Highway Map.

D. Grouting intervals are paid for by price per foot and includes all labor and materials necessary to seal the hole. Grouting material shall be cement or bentonite.

E. Drilling operations on property of the railroad, Forest Service, Corps of Engineers, etc. may require additional time and effort. Any required costs or or fees (i.e., flagmen) shall be invoiced as charged. Also an administrative fee of $500.00 per project will be allowed for dealing with these entities.

F. Mobilization (including demobilization) costs for Company-Owned Floating Equipment, shall be negotiated per project.

G. Subcontracted Towboat and/or Barge and crew shall be paid for at invoiced cost. An administrative fee of $1,000.00 shall be allowed to cover communications with towboat/barge contractor and all necessary coordination, permits, etc., required with the Corps of Engineers and/or others.

H. Company-Owned Towboat and/or Barge and its crew shall be negotiated per project. An administrative fee of $1,000.00 shall be allowed to cover all necessary coordination, permits, etc., required with the Corps of Engineers and/or others.

I. Reclamation Materials are paid for at actual cost (with receipts for materials) plus 10 percent markup to account for any overhead or administrative expenses. These materials include the following:

1. Seed
2. Straw
3. Rock (Crushed Aggregate #57)

The following materials or others, may also be used when necessary, but will require written approval from the Department.

1. Temporary Silt Fence
2. Bag of Top Soil
3. Sheet of 3/4" Plywood
4. Pipe

J. Pavement Cores-shall be paid at the unit price per foot. Unit bid price covers all diameter size samples (4",6",8"&10").

The price shall include back-filling the hole with asphalt or concrete.

K. Mobilization (including demobilization) costs for a company owned water truck and operator shall be paid as follows: $250.00 administrative fee plus $3.50 per mile up to a maximum of 500 miles (round trip). Mileage will be determined using the Official Kentucky Highway Map. Requires written approval from the Department before it can be Mobilized.

10. Rock cores and samples with logs shall be delivered to the Geotechnical Branch in Frankfort, Kentucky no later than seven (7) calendar days after the completion of the project unless otherwise specified by the Geotechnical Branch.

11. Pay estimates for the work shall be submitted directly to the Geotechnical Branch, Division of Structural Design. This shall include the following where applicable:

A. Tabulation of Soil and Subsurface Quantities for Pay Estimate.
B. Cost Items for Subsurface Investigation. Authorized personnel shall sign this form.
C. Subsurface Logs-All logs shall be typed.
D. Cased Observation Well Data, including 7 day readings.
E. Summary of Mileage for mobilization and demobilization routes, drill rig identification numbers and dates.
F. Documents of time records for the dozer or track hoe working time. If a subcontracted dozer or track hoe is used, an invoice of subcontracted dozer or track how working time is required.
G. Document of records for reclamation activity with receipts for materials.
H. A Company invoice letter on an official letterhead signed by the responsible party, and with a Company invoice number.

The pay estimate may be submitted monthly if desired. A percent retainage fee will not be applicable to this contract. Payment will only be permitted after delivery of cores, samples, logs, observation well data, etc. Approval of the final pay estimate will only be permitted after all reclamation is completed; a review by the Department and evaluation is completed.
12. The Department does not guarantee work will be assigned under this contract. The unit quantities indicated in this proposal are estimates only and are not to be implied or inferred as being guaranteed. The Department will order only those qualities required by the Project as determined by the Department.
13. Payment for labor, materials, equipment, and all items necessary to complete the work shall be made only at the contract unit prices.
14. Hole locations cannot be moved without prior approval from the Geotechnical Branch. Hole locations moved without prior approval of the Geotechnical Branch are subject to be re-drilled. The unapproved hole location will not be eligible for payment.
15. Drill crew supervisors shall be subject to the approval of the Geotechnical Branch. The company shall submit completed Drill Crew Supervisor Information for each supervisor.

16. Form TC 64-523, Notification for Drilling Services, must be signed indicating acceptance or rejection of the option and returned to the Geotechnical Branch within 7 working days. A verbal commitment must be offered within two working days. Failure to follow these procedures will result in forfeiture of the offered project.
17. Failure to comply with the General Specifications may result in cancellation of the contract in accordance with the penalty clause as outlined.
18. Bidders must be pre-qualified, have an office within the state or have an office within 100 miles of a region being bid upon, in order to be eligible for award of contract. Extra consideration will be given to firms that have Automatic Hammers on their drill rigs for doing Standard Penetration Test. To be eligible to do work in Region 1 provide evidence of having a drill rig with automatic hammer able to sample to 130 feet, and must demonstrate proficiency in mud drilling. To be eligible to do work in Region 2 provide evidence of sample 100 feet, demonstrate proficiency in mud drilling, and has at least one skid or track mounted drill rig. To be eligible to do work in Region 3 provide evidence of having at least one skid or track mounted drill rig with automatic hammer and tooling able to do a 300-foot core hole.

DEPARTMENTAL POLICY
(for Regional Drilling Service Contracts)

All subsurface borings shall be completely back-filled to prevent damage to property or injury to people or animals. Sealing drill holes shall be in accordance with the Department's plan (see attachment) with the following exceptions.

1. Drill holes within 100 feet of a private well shall be sealed with grout through the water-bearing strata (Must get department permission before hand).
2. By a special request of coal companies, core holes penetrating commercial coal seams shall be sealed with grout. Packers may be required.

RECLAMATION

Reclamation of drill sites, dozer and/or track hoe roads shall be protected from erosion by utilizing grass seed and straw. The cost shall be paid by the daily 8 hour bid rate price for two man crew plus actual material cost (with receipts for materials) plus 10 percent markup of material cost only, to account for any overhead or administrative expenses. A receipt of materials shall reflect the actual cost of materials.
Cut off trenches, water bars, or ditches may be required for long, steep grades of dozer and/or track hoe roads to prevent excessive erosion. Dozer and track hoe time required for these functions will be paid by the bid price and documented within the form for Dozer Working Time or Track Hoe Working Time.
Reclamation costs for negligent operations (cut fences, deep ruts in soft ground, crop damages, and clean up (trash) operations) are the responsibility of the firm and are not included in this item.

PLAN FOR SEALING GEOTECHNICAL BORINGS

The Groundwater protection Regulation: 401KAR 5:307 defines a bore hole as (1) "a hole drilled in the soil for exploratory or sampling purposes" and (2) a core hole as "a hole drilled for the purpose of obtaining a rock core. "The Geotechnical Branch routinely drills these type holes for purposed roadway projects.

A boring plan is made for each roadway project by engineers and geologists and reviewed in the field before any drilling operations begin. If, during the field review, any contaminated areas, close proximity to water wells, springs, septic tanks, or any geologic hazards are noted, then the boring plan is altered accordingly. Most of these borings are cut out or filled over when the project is constructed.

Borings are not made by Geotechnical Branch in areas where soil contamination is present or suspected. If contamination of any type is noted while drilling, the work is immediately stopped and the Division of Environmental Analysis is notified. Environmental Bore Holes, if deemed necessary by the Geotechnical Branch, will be furnished by certified drilling consultants.

I. BORE-HOLES

Bore-holes are made for the purpose of obtaining a soil sample or to define a rock line profile. These borings are usually made with a 4-inch auger and will normally be 5 feet or more in depth unless rock is encountered first.
The present procedure for back-filling these holes is to use drill cuttings from the hole or adjacent soils that have a texture and permeability similar to the materials encountered in the hole. The bore hole is completely filled from the bottom depth to the original ground surface, and tampering or compacting of the backfill material is performed as necessary to minimize voids or backfill subsidence. Back-filling is performed in a timely manner after completion of the bore hole in order to prevent groundwater contamination.

The Department reserves the option to modify the selected consultant's agreement to include any necessary engineering and/or related services for this project. At that time, the firm(s) will be pre-qualified by the Department in the required area(s).

Four (4) Firms will be selected to provide these services per region. A separate proposal is to be submitted for each region a firm wants to be considered. The contract period is for a one-year period with the option of extending the period for one (1) additional year. The firms will be ranked in consecutive order (1-4). Each criterion will be assigned a Maximum point value. The best proposal for each criterion will receive the maximum number of points assigned for that criterion. The best proposal will the be divided into each of the other offers and the result multiplied times the possible points to determine its point value. This process will be conducted for all line items within a group. The highest composite score thus calculated, for supplying all requested line items within a group will be considered the best value and be awarded the number one contract. The second highest score will receive the number two contract and so until all four contract for that region are awarded. This will determine the numerical order in which projects will be offered to firms with then number one proposal for that region having the first right of refusal. If that firm turns down the project, it will be offered to the number two firm and so on until the project is accepted.

If a firm turns down the project, it will be offered to the number two firm and so on until the project is accepted. If a firm declines a project or does not respond to an invitation to perform services for a project within 2 workdays, from the date the Department offers a project, then documentation shall be placed in the project files noting the project was declined and the next firm in the list declines, the project shall be offered to the next firm, etc. Three consecutive times of declining a project may result in a negative past performance evaluation.

Floor (lowest allowable) bids have been established by the Department to prevent skewed bids in each region. These are included in the announcement. Bids below these rates will be deemed unacceptable and vendors bids for the region will not be accepted.

Cost of Drilling items on floating equipment shall be paid by taking the land rate for the company doing the drilling plus 50 percent.

SPECIAL INSTRUCTIONS

II. CORE HOLES

Core holes are made for the purpose of obtaining a rock core sample in proposed roadway locations where rock is encountered. These borings are made with a 6 inch auger from the surface to the rock line and then extended to a pre-determined depth with a 3 inch diamond core bit. The present procedure for back-filling these holes is the same as for a bore hole, except small rock fragments and soil are used to fill the hole to prevent backfill subsidence.

III. OBSERVATION WELLS

One-inch diameter PVC perforated pipe or casing is installed in holes where the water table is encountered and water table readings are needed over a period of time. Once the pipe is installed, the hole is back-filled with drill cuttings to the original ground surface. The pipes are capped to prevent the entrance of surface water.

IV. HOLES FOR INCLINOMETER CASING

Slope Inclinometer Casing is installed in 6-inch diameter holes to monitor slope movement. Gravel or chip stone is used to backfill around the casing to approximately 3 feet below the surface and the remainder of the hole is filled with cuttings from the boring and adjacent soil is necessary . The backfill material is sloped-off at the surface to prevent the infiltration of surface water.

V. IMPLEMENTATION, TRAINING, AND INSPECTION

The back-filling of geotechnical borings as described herein, is the current policy of the Geotechnical Branch and has already been implemented. The Groundwater Protection Plan has been explained and discussed with drillers and geotechnical personnel.

Training sessions are held with drillers on an annual basis. New employees are trained in the filed under an experienced driller for one (1) year or more before they become drillers. The chief driller is responsible for the activities of the crew and works directly under the supervision of an engineer or geologist.

An engineer or geologist will make spot checks to ensure that borings have been properly back-filled in accordance with the Groundwater Protection Plan.

CONCLUSION

Borings made for the design of a roadway project are destroyed (cut out) in the cut areas and filled over with compacted soils in the embankment areas when the project is constructed. Considering the small diameter of the holes (4-6inches) drilled by the Geotechnical branch and the extra effort made in back-filling these holes, there is little chance of any groundwater contamination resulting from geotechnical borings.

PREQUALIFICATION REQUIREMENTS

The project team shall be prequalified in all areas as follows:

GEOTECHNICAL SERVICES	• Drilling

PROPOSAL FOR GEOTECHNICAL SERVICES ON LAND

Region 1

Region 2

Region 3

PROJECT SCHEDULE & MILESTONES	
RESPONSE DATE	February 8, 2006 4:30 p.m. (Frankfort Time)
SELECTION COMMITTEE DATE MEETING	February 22, 2006
TENTATIVE DEADLINE FOR CONSULTANT FEE PROPOSAL	March 9, 2006
CONTRACT NEGOTIATIONS	March 23, 2006
NOTICE TO PROCEED	July 1, 2006
COMPLETION OF SERVICES	June 30, 2008

The selected consultant is expected to meet the scheduled milestone dates.

EVALUATION FACTORS

1. A low total bid on a subgroup basis for item 1 through 17 shall be submitted for each Region. (40 points) **Use the form provided on page 9 of this ad.**

2. Past record of performance by firm on projects of similar type and complexity. (45 points)

3. Ability to provide drilling services in January & February. (5 points)

4. Number of crews a firm can supply with automatic hammers up to a maximum of four. (A minimum crew is considered to be two people, drill and all equipment needed to perform drilling operations). (10 points)

SELECTION COMMITTEE MEMBERS

1. Michael Blevins, P.G., User Division
2. William Broyles, P.E., User Division
3. Chuck Allen, Secretary's Pool
4. Danl Hall, Secretary's Pool
5. Edwin Dyer, Governor's Pool