DOC # 0688861
11/16/2006 02:10 PM Deputy: SD
OFFICIAL RECORD
Requested By:
DC/COMMUNITY DEVELOPMENT

Douglas County - NV
Werner Christen - Recorder
Page: 1 Of 8 Fee: 0.00
BK-1106 PG- 5841 RPTT: 0.00

Assessor's Parcel Number: N/A

Date: NOVEMBER 16, 2006

Recording Requested By:

Name: LYNDA TEGLIA, COMMUNITY DEVELOPMENT

Address: _____

City/State/Zip: _____

Real Property Transfer Tax: $ N/A

CONTRACT #2006.213
(Title of Document)

This page added to provide additional information required by NRS 111.312 Sections 1-2. (Additional recording fee applies)
This cover page must be typed or legibly hand printed.

APPROVED NOV 2, 2006 ITEM #9B
DOUGLAS CO COMMISSIONER MTG

FILED

No. 2006.223

2006 NOV 16 AM 10: 16

BARBARA REED
CLERK

AMENDMENT NO. 03

CONTRACT BETWEEN DOUGLAS COUNTY AND HDR Engineering

FOR NVWWTP Rapid Infiltration Basin Design

WITNESSED

Whereas, on October 13, 2005, Douglas County, a political subdivision of the State of Nevada, and HDR Engineering, Inc. an independent contractor, entered into a contract for certain services; and

Whereas, the County desires to amend the contract; and

Whereas, on November 2, 2006, the Douglas County Board of Commissioners took action to approve Amendment No. 03 to the original agreement.

Now, therefore, in consideration of the agreements herein made, the parties mutually agree as follows:

- Amend Scope of Services to include the Geotechnical Investigation per the attached Scope of Work from Kleinfelder, Inc. to be administered by HDR Inc. for the increased amount of $81,400.00.
- All other sections of the original agreement remain in effect.

Independent Contractor
Mark Hammer — Date 11/6/06

Community Development Director — Date 9N.v 06

Attest: Barbara Reed
County Clerk — Date 11-15-06

by Arold M Kulbeck DEPUTY

N/A
District Attorney — Date —

0688861 Page: 2 Of 8 11/16/2006
BK- 1106
PG- 5842

October 20, 2006
File: 30-YP6-R208

Mr. Craig Olson
HDR Engineering, Inc.
2365 Iron Point Road, Suite 300
Folsom, CA 95630

SUBJECT: Proposal for Geotechnical Investigation
Proposed Douglas County Effluent Storage Pond
Douglas County, Nevada

Dear Mr. Olson:

This letter presents our proposal to perform a design level geotechnical investigation for the proposed Douglas County Effluent Storage Pond, which will be located just east of the existing North Valley Wastewater Treatment Plant in Douglas County, Nevada. The purpose of our study is to explore and evaluate subsurface conditions at the project site, and to develop geotechnical engineering recommendations for project planning and design. Our study will be used by HDR in the design of the project.

Our proposed scope of services was developed after discussion with you and is based on our preliminary understanding of your needs. Kleinfelder is committed to providing a level of service to our Clients, which is commensurate with their requirements and subject to the standards of care to which we adhere as professionals. Kleinfelder stands ready to consider appropriate modifications such as changes in scope, methodology, scheduling, and contract terms; however, such modifications and conditions may result in changes to the risks assumed by you, as well as adjustments to our fees.

I. Project Description

Information regarding the proposed construction presented in this proposal was obtained from conversations with you and from a review of a preliminary plan, entitled Effluent Storage Basin Plan," undated. We have reviewed an Interim Geotechnical Report, prepared by Pezonella Associates, Inc. dated September 20, 2006. We have also visited the site and performed a preliminary reconnaissance. We understand that the project will include construction of a lined effluent holding pond. Preliminary plans indicate it will be approximately 1000 by 1500 feet in plan and will be designed to hold about 447 acre feet of effluent. It will be formed by balanced cut and fill, with borrow coming from the interior of the pond to construct the exterior embankments. The final grading plan has not been developed, but maximum embankment heights are anticipated to be in the range of 15 to 18 feet. Piping will allow effluent to be pumped

into the pond and withdrawn. The pond will be lined with a synthetic liner, probably HDPE. The existing site is generally vacant land, and slopes downward slightly from east to west with about 10 feet of elevation difference over the pond limits. Design and construction of the pond will be required to meet State of Nevada Dam Safety Regulations. In particular, we have reviewed and will address geotechnical requirements as outlined in Sections 3.3 Foundation and 3.4 Embankment of the Nevada Dam Safety Regulations

II. Anticipated Conditions

In preparation of this proposal, we have reviewed the following sources of information regarding subsurface conditions in the project vicinity:

- The Interim Pezonnela Report referenced above.
- Genoa Quadrangle Geologic Map, Robert C. Pease, 1980
- U.S. Geologic Survey, Earthquake Hazards Computer Data Base

Based on this information, we anticipate that subsurface soil conditions will consist of sands with varying amounts of silt and clay. Groundwater appeared to be present at depths of 10 to 15 feet below existing ground. The site was vacant and should be accessible by conventional two-wheel drive vehicles and equipment.

The cohesionless subsoil and high groundwater are conditions that have the potential to liquefy during an earthquake. Since the Carson Valley is very seismically active and the State Regulations require the pond to be designed for a Maximum Credible Earthquake (MCE), a liquefaction potential analysis must be performed.

Our review of the USGS Earthquake Hazards computer database resulted in the discovery of a mapped fault trending in a north-south direction that intersects the proposed pond site approximately in the middle. Another north-south trending fault is mapped to the east of the east end of the pond. The data indicates the fault, within the pond, is believed to be Quaternary in age. However, the faults are interpreted and located based on review of photogeologic information (i.e., no field work was performed). There are faults in the area that are known to be more recent in their last movement. The scope we propose below includes an assessment of existing data and field review to better define the faults potential activity. Even if it is eventually determined that the fault must be considered active for State of Nevada design standards, the site can still be utilized. It will be necessary to design the embankment to withstand the potential displacement of the fault at the fault location.

III. Scope of Services

Our investigations will consist of the following tasks.

A. Fault Evaluation

We will review all published and, where available, unpublished data, meet with University of Nevada Bureau of Mines staff involved with fault mapping in the area, review available aerial photography and visit the site. If the results of this evaluation adequately confirm either the fault is not present or, if present, its last movement was such that it can be considered not potentially active for design purposes, we will recommend the design proceed without further consideration of the fault. However, if our evaluation is not conclusive, we will recommend field trenching to attempt to locate and estimate the relative dates of movement.

B. Field Exploration

We propose to investigate the project site by drilling four (4) 50 foot deep borings and eight (8) 30 foot deep borings within the proposed pond embankment locations. The 50 foot deep borings will be drilled with mud-rotary drilling techniques in order to acquire data for the liquefaction analysis. The 30 foot deep borings may be drilled using hollow stem auger techniques. Additionally, ten (10) to twelve (12) test pits will be excavated to depths of 10 to 15 feet deep within the impoundment area to evaluate the borrow material and depth to groundwater. Upon completion, borings and test pits will be backfilled with soil. The test pits will be filled with soil and wheel rolled at completion. The borings and test pits will be visually logged by a field engineer or geologist who will also obtain bulk samples for further laboratory testing. Planned in-situ testing methods include standard penetration tests.

The work scope and fee specified in this proposal are based upon the assumption that the site is accessible to the excavation equipment proposed (i.e., two wheel drive), and that the Client has obtained permission for site access from all land owners. If weather, access, or site conditions restrict our field operations, we may need to revise our work scope and our fee estimate. The drilling contractor will contact an underground utility clearance service (Call Before You Dig) prior to exploration. This proposal is based on the presumption that you will provide any and all available survey maps or other data to determine the location of tanks, existing structures, underground utilities and services. The Client should be aware that penetrating the site's surface is inherently risky. It is impossible to determine with certainty the precise location of all structures, which may be buried in the ground. Kleinfelder's fee is not adequate to compensate for both the performance of the services and the assumption of risk and of damage to such structures. Disruption of utilities or damage to underground structures will be the responsibility of the owner. Services rendered by Kleinfelder to repair them will be billed at cost.

96/4

C. Laboratory Testing

The purpose of the laboratory testing is to assess the physical and engineering properties of the soil samples collected in the field. We anticipate the laboratory testing program will consist of tests for soil classification (gradation and plasticity), hydrometer analysis, moisture content, dry density, moisture-density relation, direct shear and possible consolidation. In addition, we will contract with an outside analytical laboratory to perform pH, resistivity and soluble sulfate testing of selected soil samples to be used in evaluating concrete reactivity and corrosion potential.

D. Analysis and Report

We will analyze all data, perform a liquefaction potential analysis, perform static and pseudo-static slope stabilities, estimate post construction embankment settlement, provide grading recommendations, and provide all other recommendations required for this pond project as listed in Section 3.3 Foundation and 3.4 Embankment requirements from the Nevada Division of Water Resources.

Liquefaction is a phenomenon whereby loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup resulting from dynamic loading, such as that caused by an earthquake. Among other effects, liquefaction can result in densification of such deposits causing settlements of overlying layers after excess pore water pressures are dissipated. The primary factors affecting liquefaction potential of a soil deposit are: (1) level and duration of seismic ground motions; (2) soil type and consistency; and (3) depth to groundwater. Liquefaction potential and related settlements would be analyzed using corrected field blow counts and data in accordance with the methods by T. L. Youd and I. M. Idriss, et al. (2001), and K. Tokimatsu and R. B. Seed (1987). All field, laboratory, fault evaluation, analysis and recommendations will be summarized in a written report.

E. Environmental Concerns

The proposed investigation specifically excludes the assessment of environmental characteristics, particularly those involving hazardous substances. A separate or concurrent environmental assessment may be appropriate prior to development. Kleinfelder would be pleased to outline a scope of services for such an assessment in a separate proposal, if desired.

During the course of the performance of Kleinfelder's services, hazardous materials may be discovered. Kleinfelder will assume no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury which results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials.

In the event that obviously suspicious subsurface materials are encountered visually or by odor in geotechnical explorations, they will be immediately terminated. Kleinfelder will notify you as soon as possible of such an occurrence and we will mutually decide whether to continue, modify, or cease the remainder of the exploration program and whether an environmental assessment should be conducted. All added costs incurred as a result of suspected hazardous substances would be charged on a time-and-expense basis over and above the estimated fee for the site investigation.

IV. Subsequent Services

Our geotechnical investigation is a part of the full range of services which are necessary throughout the project design and construction of the project. Subsequent services that we offer include:

- Review of the project plans and specifications;
- On-call consultation and liaison with your design consultants as the project design evolves; and
- Construction observation and testing.

To help the project proceed in an orderly manner and to protect your investment in this investigation, it is critical that Kleinfelder provide the services described above. We will mutually develop budgets for construction testing and inspection services as the project progresses.

V. Schedule

We can begin our investigation, depending on drill rig availability, within one week of your authorization to proceed. We anticipate submitting our final written report within six weeks of completion of our field exploration. We could provide verbal information to you as it is developed in order to reduce project delays. We will drill the four 50 feet deep borings first, in order to perform the liquefaction potential analysis first.

VI. Fee and Payment

Costs for the investigations described above would be as follows:

Item	Cost
Fault Evaluation*	$ 6,500
Field Investigations	$28,000
Laboratory Investigations	$ 8,500
Analysis and Report	$16,000
Total	$59,000
Optional Fault Trenching	$15,000

*Does Not Include Trenching

74,000
+ 7,400 contract administration
81,400

96/6

Our fees for subsequent services described in Part IV will be charged on a time-and-expense basis in accordance with the fee schedule in force at the time the services are provided.

The proposed fee will remain in effect for 90 days from the date shown on the proposal. We reserve the right to renegotiate our fees if the 90-day period has expired.

An invoice for our services will be submitted upon completion of our report or on an end-of-the-month basis, whichever occurs first. If our field exploration indicates that unanticipated conditions are present we will contact you and revise our schedule and fee if necessary.

The fees presented in this proposal are based on prompt payment for services presented in our standard invoicing format. Additional charges will be applied for specialized invoicing if backup documentation is needed. These special services will be charged on a time and expense basis. Late fees will be charged if payment is not received in accordance with terms attached.

VII. Authorization

We understand the work would be completed under your contract. Please forward a draft copy of your contract language for our review.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or need additional information, please contact the undersigned in our Reno office.

Sincerely,

KLEINFELDER, INC.

Scott Smith, P.E.
Regional Senior Engineer

CERTIFIED COPY SEAL
The document to which this certificate is attached is a full, true and correct copy of the original on file and on record in my office.
DATE: November 16, 2006
B. REED Clerk of the 9th Judicial District Court of the State of Nevada, in and for the County of Douglas.
By Deputy

Mike Klein, P.E.
Geotechnical Department Manager

BK- 1106
PG- 5848
0688861 Page: 8 Of 8 11/16/2006

9b/7