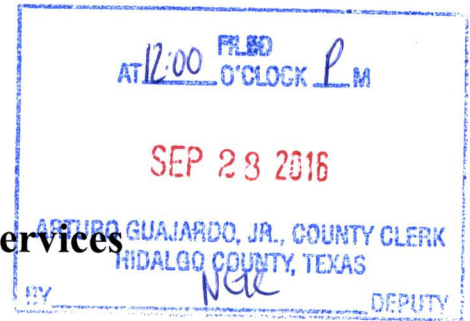


HIDALGO COUNTY
Professional Geotechnical Engineering Services
Agreement #C-15-301-09-15



WORK AUTHORIZATION NO. 6

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, **L&G CONSULTING ENGINEERS, INC.**, professional engineers of Mercedes, Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide **Geotechnical Engineering Services for "Exploratory Boring (Water Well Development) at Sunflower Park" Project located in Hidalgo County Precinct No. Four (4)**

The scope of services to be provided by the **Owner** is identified in **EXHIBIT "A" – Scope of Services to be Provided by the Owner** attached hereto.

The scope of services to be provided by the **Engineer** is identified in **EXHIBIT "B" – Scope of Services to be Provided by the Engineer** attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$19,393.84**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D"**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5.1 of the Agreement.

PART 4. FUNDING

This Work Authorization No. **6** shall be funded through funding source:

Account No. _ _ _ _ _

Requisition Number _____ (MUST BE INCLUDED AFTER CC APPROVAL)

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate **upon completion of scopes of the work authorization.**

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct No. 4 Commissioner Joseph Palacios as to content and detail of this Work Authorization No. # 6.

HIDALGO COUNTY
COMMISSIONER PRECINCT, NO. 4:

BY: Joseph Palacios

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____, 2016 as indicated below and effective as of the ____ day of _____, 2016.

THE ENGINEER:
L&G CONSULTING ENGINEERS, INC.

THE OWNER:
HIDALGO COUNTY

Jacinto Garza
By: Jacinto Garza, P.E.

Ramon Marcia
Hon. Ramon Garcia, County Judge

ATTEST:
Arturo Guajardo Jr.
Arturo Guajardo Jr., County Clerk

APPROVED BY
COMMISSIONERS' COURT
ON: 9/20/16



LIST OF ATTACHMENTS

- ATTACHMENT "A" - Service to be provided by the Owner
- ATTACHMENT "B" - Services to be provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Cost Proposal

**ATTACHMENT “A”
Scope of Services (Owner)**

PROJECT: “Exploratory Boring (Water Well Development) for Hidalgo County Pct. No. 4 Sunflower Park” Project in Hidalgo County Precinct No. Four (4)

SERVICES TO BE PROVIDED BY OWNER

The County of Hidalgo will provide **L&G Engineering with Documents, Plans, and Specifications** for ***“Exploratory Boring (Water Well Development) for Sunflower Park” Project in Hidalgo County Precinct No. Four (4)***

ATTACHMENT B

Services to be Provided by the Laboratory

GENERAL SCOPE OF WORK

The work to be performed by the **Laboratory** under this Work Authorization shall consist of; Geotechnical Drilling and Miscellaneous Field Services, Geotechnical Laboratory Testing Services and Geotechnical Engineering Services for Sunflower Park Exploratory Boring (Water Well Development) project hereinafter denoted as the **Project**.

The **Laboratory** shall provide all services required (as noted under this Work Authorization) for usage by the **Client** in the preparation of plans, specification and estimate, and related documents for the **Project**. The **Laboratory** shall maintain a direct line of communication and coordinate with the **Client** throughout the project.

The **Laboratory** shall furnish all equipment, materials, supplies, and incidentals as needed to perform the services required, except as otherwise specified to be provided by the **Client**.

Specific activities to be performed by the **Laboratory** include the following:

I. Geotechnical Drilling Services and Miscellaneous Field Services

The **Laboratory** will coordinate with the **Client** for verification of project vicinity map indicating general boring site locations.

The **Laboratory** will provide drilling/excavation and sampling of subsurface materials as follows in accordance with this Work Authorization and in conformance with ASTM guidelines:

- Borings – One (1) Boring will be drilled at approximate location of proposed water well (Boring will be advanced to a depth of approximately 150 feet below the existing top of natural ground)

The **Laboratory** will stake the boring locations and provide utility clearances prior to performing the field exploration portion of the project. The **Client** will be responsible to provide any necessary permits or authorization to access areas (right of entry) where borings are to be drilled. All borings will be located in the field by a representative of the **Laboratory**. All boring locations will be documented with GPS coordinates. Field survey and tie-down locations of all borings will be the responsibility of the **Client**.

The boring will be advanced to the specified depth(s) and in-situ soil testing will be performed in general accordance with ASTM and/or TxDOT Standard Test Procedures and Geotechnical Manual (ASTM D1586 – Standard Penetration Testing (SPT) and/or Tex-132-E – Texas Cone Penetration (TCP)). In addition, where applicable, thin-walled Shelby tube samples may be collected (ASTM D1587 – Thin Walled Tube Sampling). The soils will be sampled as needed to verify subsurface materials and strata changes. Final drilling depths and elevations will be based on topographic conditions at the time of drilling operations.

Laboratory: L&G Consulting Engineers, Inc. (Lab Division)
Client: Hidalgo County Pct. 4

All samples will be removed from the sample apparatus during drilling operations. The **Laboratory** will conduct various field tests on the recovered samples, visually classify the samples, and record the appropriate data on a field boring log. The samples will be appropriately packaged to minimize loss of natural moisture content and to reduce the possibility of damage during transportation to the soil testing laboratory facility.

Drilling services will include an initial water strike depth and a 24-hour water level reading at each boring location. Following completion of drilling and sampling, all boreholes will be backfilled with soil cuttings from the completed borings. If there is insufficient soil cuttings available, alternate fill will be used to backfill the completed boreholes.

This proposal does not include activities and corresponding costs that may be associated with the following:

- Providing an ATV mounted drill rig, dozer or special equipment to clear areas of vegetation and debris or re-grading the site to gain access to the boring locations;
- Re-grading the site or portions of the site after drilling activities are completed;
- Site safety meetings that may be required;
- Encountering hazardous or contaminated soils or substances during our field activities.

The **Laboratory** will notify the **Client** should these services become necessary to complete field exploration activities, and if approved by the **Client**, additional negotiated fee and scope will be incorporated through Supplemental Work Authorization.

II. Geotechnical Laboratory Testing Services

Geotechnical Laboratory Testing will be performed by the **Laboratory** on the samples recovered during the field study to evaluate their physical and engineering properties. Laboratory testing will be performed in general accordance with ASTM and/or TxDOT Standard Test Procedures. Testing shall include the following test procedures:

- (1) Atterberg Limits (ASTM D4318 or Tex-104-E, 105-E, 106-E)
- (2) Gradation (-200) (ASTM D1140 or Tex-111-E)
- (3) Lab. Determination of Moisture in Soils (ASTM D2216 or Tex-103-E)

III. Geotechnical Engineering Services

The **Laboratory** will utilize information gathered from the field and laboratory testing to provide the **Client** with Geotechnical Engineering results and analyses for the **Project**. The findings and conclusions derived from the results and analyses will be presented in a written engineering report and provided to the **Client** (three (3) copies). The report will include a boring location plan, boring logs with laboratory classification of recovered soil samples at the boring locations and subsurface water conditions encountered.

The report will provide general comments and applicable recommendations regarding construction methods, sequences, and potential difficulties that may arise during overall construction as it relates to the soil aspects of this project. This information may serve to guide both geometric modeling and foundation selection and design as well as provide assistance in the preparation of specifications for the project.

**ATTACHMENT “C”
Work Schedule**

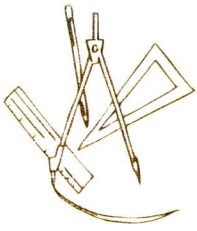
PROJECT: Geotechnical Engineering Services for “*Exploratory Boring (Water Well Development) for Sunflower Park*” Project in Hidalgo County Precinct No. Four (4)

Work Schedule

L&G Engineering will provide **Hidalgo County Pct. # 4** with **Geotechnical Engineering Services** as outlined in **Contract Agreement C-15-301-09-15**.

Attachment D
 Geotechnical Field and Laboratory Services
 Sunflower Park Exploratory Boring
 Prepared for Hidalgo County Pct. 4

	SERVICES		UNITS	UNITS	UNIT COST	TOTAL COST
I.	Project Management / Review					
	A. Principal / Project Manager / Review		Hours	4	\$ 217.74	\$ 870.96
	B. Senior Project Engineer (Staff)		Hours	16	\$ 180.41	\$ 2,886.56
	C. Typing and Clerical (Report)		Hours	4	\$ 62.21	\$ 248.84
	D. Lodging		Day			
	E. Mileage		Mile			
	F. Air Travel		Trip			
II.	Utility Clearances / Boring Locates					
	A. Technician (Locate Borings)(Util Clr)		Hours	3	\$ 52.88	\$ 158.64
	B. Staff Engineer/Geologist/Scientist		Hours			
	C. Rebar (stakes with impalement covers)		Cost +12.5%			
	D. Vehicle Charge		Mile			
	E. Mileage		Mile	60	\$ 0.55	\$ 33.00
	F. Survey Locate Borings (X,Y,Z)		LS			\$ -
	G. Clear Site for Access (Dozer)		LS			\$ -
III.	Field Exploration					
A	Mobilization/Demobilization		Day	3	\$ 454.91	\$ 1,364.73
B	Field Exploration					
	1. ASTM Drill & SPT/Tube Sampling (SS)		Feet	150	\$ 32.01	\$ 4,801.50
	2. TxDOT TCP Field Test (BL/ft)		Ea.			\$ -
	3. Field Logger/Eng Tech (Soil & Agg Tech)		Hour	36	\$ 52.88	\$ 1,903.68
	4. 24 Hr. Water Level Observations		Hour	0	\$ 52.88	\$ -
	5. Piezometers		Each			\$ -
	6. Supp. Vehicle-Trailer, Tools H2O Supply		Mile	180	\$ 1.70	\$ 306.00
	7. Vehicle Charge		Mile	240	\$ 0.55	\$ 132.00
C	Miscellaneous Field Services					
IV.	Engineering Data Analysis / Report					
	1. Staff Engineer		Hours			
	2. Sr. Eng Tech / Geo Eng (Soil Classification)		Hours	8	\$ 99.54	\$ 796.32
	3. Sr. Eng Tech / Geo Eng (Logs & Summ.)		Hours	8	\$ 99.54	\$ 796.32
	4. Moisture Content		Ea.	50	\$ 10.87	\$ 543.50
	5. Atterberg Limits		Ea.	25	\$ 82.05	\$ 2,051.25
	6. -200 Determination		Ea.	25	\$ 68.46	\$ 1,711.50
	7. Sieve Analysis (w/ Hydrometers)		Ea.	8	\$ 98.63	\$ 789.04
	8. UC Testing (w/ Unit Weight)		Ea.			\$ -
	9. Consolidation Testing		Ea.			\$ -
	10. Dry Unit Weight		Ea.			\$ -
	11. Soils Sulfate Content		Ea.	0	\$ 86.40	\$ -
	12. Determination of Soil pH		Ea.			\$ -
	13. Lime Series Testing (5 Pt.)		Ea.	0	\$ 518.40	\$ -
Project Sub-Total (Geo Field and Lab)						\$ 19,393.84



L&G Consulting Engineers, Inc.

August 30, 2016

Commissioner Joseph Palacios
Attn: Ms. Maria (Lulu) Lucio
Hidalgo County Precinct No. 4
1102 N. Doolittle Rd.
Edinburg, Texas 78539

RE: On-Call Geo/CMT Services Contract (C-15-301-09-15)
Work Authorization #6 – “Exploratory Boring for Hidalgo County Pct. No. 4 Sunflower Park”

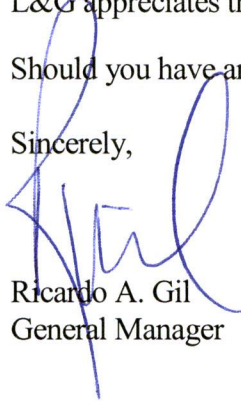
Dear Ms. Lucio:

Attached for your review and execution are two originals of Work Authorization #6 with all associated attachments, between L&G Engineering and Hidalgo County Precinct No. 4 for the **“Exploratory Boring (Water Well Development) for Hidalgo County Pct. No. 4 Sunflower Park”** Project.

L&G appreciates the opportunity and looks forward to working with Hidalgo County Precinct No. 4.

Should you have any questions, please feel free to contact me at (956) 585-1909.

Sincerely,



Ricardo A. Gil
General Manager

Attachments: Work Authorization #6