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MAR 22 2017
ARTURO GUAJARDO, JR/COUNTY CLERK
HIDALGO COUNTY, TEXAS
BY _____ DEPUTY

HIDALGO COUNTY
Professional Engineering Services
Contract # C-16-208-07-19
Work Authorization Form

WORK AUTHORIZATION NO. 2

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, Terracon Consultants, Inc., professional engineers of Pharr, 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 the Hidalgo County Pct. 2 County Wide Service Shop Project.

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 **$ 3,994.00**. 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 _____ of the Agreement.

PART 4. FUNDING

This Work Authorization No. 2 shall be funded through funding source:
Account No. 7-1350-431-00-122-122-0-730
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 project completion as indicated in the "Exhibit C-Preliminary Work Schedule".

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 #2,** as to content and detail of this **Work Authorization No. 2.**

HIDALGO COUNTY PRECINCT #2 _____

BY: _____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below and effective as of ___ day of _____, 2017.

THE ENGINEER:
Terracon Consultants, Inc.

_____
By: Alfonso A. Soto, P.E.

THE OWNER:
HIDALGO COUNTY

_____
By: Ramon Garcia, County Judge

ATTEST:

_____
By: Arturo Guajardo, Jr., County Clerk

COMMISSIONERS COURT HIDALGO COUNTY, TEXAS

APPROVED BY COMMISSIONERS COURT ON: 3/21/17

LIST OF ATTACHMENTS

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

EXHIBIT "A"

Services to be Provided by County

The following provides an outline of the services to be provided by the Owner in the development of Projects (as defined and more particularly identified in Exhibit "A" attached to this Agreement).

General:

The Owner will provide to the Laboratory the following:

1) Provide the authorization to proceed with services through coordination with the project consulting and design Laboratory.
2) Payment for work performed by the Laboratory and accepted by the Owner in accordance with Article 3 of this Agreement.
3) Assistance to the Laboratory, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the Laboratory cannot easily obtain.
4) Provide any available relevant data the Owner may have on file concerning the projects.
5) Provide timely review and decisions in response to the Laboratory's request for information and/or required submittals and deliverables, in order for the Laboratory to maintain the agreed upon work schedule prepared in accordance with Exhibit "A" attached to this Agreement.
6) Attend and participate in progress meetings as required and as coordinated and conducted by Laboratory.
7) Provide the authorization to proceed with services on project by project basis through consulting design and construction Laboratory.

EXHIBIT B

Scope of Services to be provided by the Engineer

The purposes of this study is to develop geotechnical engineering recommendations and guidelines for use in preparing appropriate design and related construction documents for this project. Our geotechnical engineering study will involve three phases of work: 1) Field, 2) Laboratory, and 3) Report Preparation. Unless stated otherwise in this proposal, we will provide the necessary personnel, equipment, and materials to complete the requirements of this geotechnical engineering study. Our plan for performing each major work category is outlined in the following sections.

Field Program – Based on the existing site conditions, the site plan provided by the client, we are providing the following exploration at this site as noted below:

Boring Locations	No. of Borings	Approximate Depth Below Existing Grade, ft.
County Wide Shop	**2**	**20**
Pavements	**1**	**5**

Sampling will be in general accordance with industry standard procedures wherein Shelby tube samples or split-barrel samples are obtained. Five samples will be obtained in the upper ten feet of each boring and at intervals of five feet thereafter. In addition we will observe and record groundwater levels during and after drilling. Once the samples have been collected and classified in the field, they will be placed in appropriate sample containers for transport to our laboratory.

Conditions/Items to be provided by Client: We have been provided with a scaled drawing that depicts the tentative layout of the proposed development. The locations of the borings will be established using this tentative project layout by our field personnel upon arrival at the site. The boring layout will be approximate. Our field personnel will locate the borings by measuring distances and estimating right angles from available reference points on or adjacent to the site. Additional items to be provided by the client include the right of entry to conduct the exploration and an awareness and/or location of any private subsurface utilities existing in the area. We will contact Texas One Call service for location of utilities in public easements. Location of private lines on the property is not part of the Texas One Call or Terracon scope. All private lines should be marked by others prior to commencement of drilling.

Terracon will take reasonable efforts to reduce damage to the property, such as rutting of the ground surface. However, it should also be understood that in the normal course of our work some such disturbance could occur. We have not budgeted to restore the site beyond backfilling our boreholes. If there are any restrictions or special requirements regarding this site or exploration, these should be known prior to commencing field work.

Our fee is based on the site being accessible to our truck-mounted drilling equipment and Terracon providing layout of the borings; additional costs may result if this is not the case. It does not include services associated with site clearing or location of underground utilities beyond contacting a "one-call" locate service. If such conditions are known to exist on the site, Terracon should be notified so that we may adjust our scope of services and fee, if necessary. We understand that the client will obtain permits required to access boring locations, if needed.

For safety purposes, all borings will be backfilled immediately after their completion. Excess auger cuttings would be disposed of on the site. Because backfill material often settles below the surface after a period of time, we recommend the boreholes be checked periodically and backfilled if necessary. We could provide this service at your request or grout the holes, but this would involve additional cost.

Laboratory Testing – The samples will be tested in our laboratory to determine physical engineering characteristics. Testing will be performed under the direction of a geotechnical engineer and will include visual classification, moisture content, dry density, Atterberg limit, and strength tests (unconfined compression/calibrated penetrometer), as appropriate.

Engineering Analysis and Report – The results of our field and laboratory programs will be evaluated by a professional geotechnical engineer licensed in the State of Texas. Based on the results of our evaluation, an engineering report will be prepared that details the results of the testing performed, provides logs of the borings, and a diagram of the site/boring layout. The report will include the following:

- Computer generated boring logs with soil stratification based on USCS.
- Summarized laboratory data.
- Groundwater levels observed during and after completion drilling
- Boring location plan.
- Subsurface exploration procedures.
- Encountered soils conditions.
- Parameters for foundation design.
- Estimated settlement of foundations;
- Subgrade preparation/ earthwork recommendations; and,
- Pavement design recommendations.

EXHIBIT C – Work Schedule

Schedule - We can generally begin the field exploration program within three days after receipt of notice to proceed, if site and weather conditions permit. We estimate the final geotechnical report can be completed within about two to three weeks after the soil borings are completed. In situations where information is needed prior to submittal of our report, we can provide verbal information or recommendations for specific project requirements after we have completed our field and laboratory programs.

EXHIBIT D – PROPOSAL

Our fee estimate is in accordance with the time and tests performed as shown below.

Mobilization, Drill Crew	$ 300.00
Estimate 45 soil borings, 0 to 50 ft., per lineal foot @ $10.50/each	$ 472.50
Estimate 17 water content determination @ $9.50/test	$ 161.50
Estimate 4 percent finer than 200 sieve (washed, soil only, each) @ $55/test	$ 220.00
Estimate 8 liquid and plastic limit tests (Single Point Test) @ $75/test	$ 600.00
Estimate 1 unconfined compression tests (soil) @ $50/test	$ 50.00
Estimate 8 hours Laboratory/Field Supervisor @ $75/hour	$ 600.00
Estimate 2 hours In-House Consultant, Principal Engineer @ $175/hour	$ 350.00
Estimate 2 hours Project Manager @ $135/hour	$ 270.00
Estimate 8 hours Project Engineer @ $110/hour	$ 880.00
Estimate 2 hours Project Secretary @ $45/hour	$ 90.00
Total Cost	***$ 3,994.00***