HIDALGO COUNTY

Professional Engineering Services
Contract # C-21-393-04-06
Work Authorization Form

WORK AUTHORIZATION NO. 3

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section 4 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 for Hidalgo County Precinct # 2 Parking Lot

The **Engineer** is to provide the Services as required by the Agreement with Owner for Geo-Technical and Construction Material Testing. This includes but is not limited to the services identified in **EXHIBIT "A" – Scope of Services to be provided by the Engineer** which is attached hereto and incorporated by reference.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **$7,326.00**. This amount is based upon the costs outlined in the Estimated Cost Proposal attached hereto as **EXHIBIT "B"**.

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the On-Call Services Agreement between Owner and Engineer.

PART 4. FUNDING

This Work Authorization No. 2 shall be funded through funding source:
Account No. 2-1200-431-00-122-005-0-334
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 the scope of work provided in this 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 #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 _____, 202_.

THE ENGINEER:
Terracon Consultants, Inc.

_____
By: Jorge A. Flores, P.G.

THE OWNER:
HIDALGO COUNTY

_____
By: Richard Cortez, County Judge

ATTEST:

_____
By: Arturo Guajardo, Jr., County Clerk

COMMISSIONERS COURT
HIDALGO COUNTY, TEXAS

APPROVED BY
COMMISSIONERS COURT
ON: 11/15/22

EXHIBIT A - SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

TERRACON PROPOSAL NO. P88215145

Site Location and Anticipated Conditions

Item	Description
Parcel Information	The project site is located at 300 Hall Acres Road in Pharr, Texas. Approximate GPS coordinates: Latitude/Longitude: 26.168788°, -98.191228°. (See Exhibit D)
Existing Improvements	Existing buildings and pavements
Current Ground Cover	Rigid and flexible pavements.
Existing Topography	Relatively flat and level.
Site Access	We expect the site, and all exploration locations, are accessible with our truck-mounted drilling equipment.
Expected Subsurface Conditions	Based on the Geologic Atlas of Texas, McAllen – Brownsville prepared by The University of Texas, the site is located on the Beaumont Formation of the Pleistocene Period of the Quaternary Age. The soils are mostly composed of clay, silt, sand, and gravel and include mainly stream channel, point bar, natural levee and backswamp deposits. Concretions and massive accumulations of calcium carbonate (caliche) and concretions of iron oxide and iron-manganese oxides can be found in the zone of weathering. In particular, the site is located in areas that are dominantly clay and mud of low permeability, high water-holding capacity, high compressibility, high to very high shrink-swell potential, poor drainage, level to depressed relief, low shear strength and high plasticity. Geologic units include interdistributary muds, abandoned channel-fill muds, and fluvial overbank muds.

Planned Construction

Item	Description
Information Provided	By Mr. Christopher Rodriguez, P.E., C.F.M.from CDJ Engineering via email on September 23, 2021.
Project Description	The project will include the reconstructing of the existing pavement, reconfigure the parking striping, and possibly reconstruct and relocate the drainage elements.

Item	Description
Pavements	Both rigid (concrete) and flexible (asphalt) pavement sections may be considered.

SCOPE OF SERVICES

Our proposed Scope of Services consists of field exploration, laboratory testing, and engineering/project delivery. These services are described in the following sections.

Field Exploration

The field exploration program consists of the following:

Number of Borings	Planned Boring Depth (feet) [1]	Planned Location
12	6	Pavement areas

1. Below ground surface.

The drilling depths will be based on topographic conditions at the time of our drilling operations.

Boring Layout and Elevations: We will use handheld GPS equipment to locate borings with an estimated horizontal accuracy of +/-20 feet. Field measurements from existing site features may be utilized. If the locations and elevation of each boring requires more precise referencing, a survey firm should be engaged in order to develop the necessary information.

Subsurface Exploration Procedures: We advance soil borings with a truck-mounted drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions). three samples are obtained in the upper 6 feet of each boring. Soil sampling is typically performed using split-barrel sampling procedures. The samples are placed in appropriate containers, taken to our soil laboratory for testing, and classified by a geotechnical engineer. In addition, we observe and record groundwater levels during drilling and sampling.

Our exploration team prepares field boring logs as part of standard drilling operations, these include sampling depths, penetration distances, and other relevant sampling information. Field logs include visual classifications of materials encountered during drilling, and our interpretation of subsurface conditions between samples. Final boring logs, prepared from field logs, represent the geotechnical engineer's interpretation, and include modifications based on observations and laboratory tests.

Property Disturbance: We backfill borings with auger cuttings after completion. Our services do not include repair of the site beyond backfilling our boreholes. Because backfill material often settles below the surface after a period, we recommend boreholes are checked periodically and

backfilled, if necessary. We can provide this service, or grout the holes for additional fees, at your request.

Safety

Terracon is not aware of environmental concerns at this project site that would create health or safety hazards associated with our exploration program; thus, our Scope considers standard OSHA Level D Personal Protection Equipment (PPE) appropriate. Our Scope of Services does not include environmental site assessment services, but identification of unusual or unnatural materials encountered while drilling will be noted on our logs and discussed in our report.

Exploration efforts require borings (and possibly excavations) into the subsurface, therefore Terracon will comply with local regulations to request a utility location service Texas 811. We will consult with the owner/client regarding potential utilities, or other unmarked underground hazards. Based upon the results of this consultation, we will consider the need for alternative subsurface exploration methods, as the safety of our field crew is a priority.

Private utilities should be marked by the owner/client prior to commencement of field exploration. Terracon will not be responsible for damage to private utilities not disclosed to us. If the owner/client is unable to accurately locate private utilities, Terracon can assist the owner/client by coordinating or subcontracting with a private utility locating services. Fees associated with these additional services are not included in our current scope of services and will be forwarded to our client for approval prior to initiating. The detection of underground utilities is dependent upon the composition and construction of the utility line; some utilities are comprised of non-electrically conductive materials and may not be readily detected. The use of a private utility locate service would not relieve the owner of their responsibilities in identifying private underground utilities.

Site Access: Terracon must be granted access to the site by the property owner. By acceptance of this proposal, without information to the contrary, we consider this as authorization to access the property for conducting field exploration in accordance with the Scope of Services. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any third parties, including Client's contractors, subcontractors, or other parties present at the site. In addition, Consultant retains the right to stop work without penalty at any time Consultant believes it is in the best interests of Consultant's employees or subcontractors to do so in order to reduce the risk of exposure to the coronavirus. Client agrees it will respond quickly to all requests for information made by Consultant related to Consultant's pre-task planning and risk assessment processes. Client acknowledges its responsibility for notifying Consultant of any circumstances that present a risk of exposure to the coronavirus or individuals who have tested positive for COVID-19 or are self-quarantining due to exhibiting symptoms associated with the coronavirus.

Laboratory Testing

The project engineer will review field data and assign laboratory tests to understand the engineering properties of various soil strata. Exact types and number of tests cannot be defined until completion of field work. The anticipated laboratory testing may include the following:

- Water content
- Atterberg limits
- Grain size analysis

Our laboratory testing program often includes examination of soil samples by an engineer. Based on the material's texture and plasticity, we will describe and classify soil samples in accordance with the Unified Soil Classification System (USCS).

Engineering and Project Delivery

Results of our field and laboratory programs will be evaluated by a professional engineer. The engineer will develop a geotechnical site characterization, perform the engineering calculations necessary to evaluate foundation alternatives, and develop appropriate geotechnical engineering design criteria for earth-related phases of the project.

Your project will be delivered using our ***GeoReport®*** system. Upon initiation, we provide you and your design team the necessary link and password to access the website (if not previously registered). Each project includes a calendar to track the schedule, an interactive site map, a listing of team members, access to the project documents as they are uploaded to the site, and a collaboration portal. The typical delivery process includes the following:

- Project Planning – Proposal information, schedule and anticipated exploration plan will be posted for review and verification
- Site Characterization – Findings of the site exploration
- Geotechnical Engineering – Recommendations and geotechnical engineering report

When services are complete, we upload a printable version of our completed geotechnical engineering report, including the professional engineer's seal and signature, which documents our services. Previous submittals, collaboration and the report are maintained in our system. This allows future reference and integration into subsequent aspects of our services as the project goes through final design and construction.

The geotechnical engineering report will provide the following:

- Boring logs with field and laboratory data
- Stratification based on USCS

- Groundwater levels observed during and after the completion of drilling
- Site Location and Exploration Plans
- Subsurface exploration procedures
- Description of subsurface conditions
- Subgrade preparation/earthwork recommendations
- Recommended pavement options and design parameters

Additional Services

In addition to the services noted above, the following are often associated with geotechnical engineering services. Fees for services noted above do not include the following:

Review of Plans and Specifications: Our geotechnical report and associated verbal and written communications will be used by others in the design team to develop plans and specifications for construction. Review of project plans and specifications is a vital part of our geotechnical engineering services. This consists of review of project plans and specifications related to site preparation, foundation, and pavement construction. Our review will include a written statement conveying our opinions relating to the plans and specifications' consistency with our geotechnical engineering recommendations.

Observation and Testing of Pertinent Construction Materials: Development of our geotechnical engineering recommendations and report relies on an interpretation of soil conditions. This is based on widely spaced exploration locations, and assuming construction methods will be performed in a manner sufficient to meet our expectations, and is consistent with recommendations made at the time the geotechnical engineering report is issued. We should be retained to conduct construction observations, and perform/document associated materials testing, for site preparation, foundation, and pavement construction. This allows a more comprehensive understanding of subsurface conditions and necessary documentation of construction, to confirm and/or modify (when necessary) the assumptions and recommendations made by our engineers.

Perform Environmental Assessments: Our Scope for this project does not include, either specifically or by implication, an environmental assessment of the site intended to identify or quantify potential site contaminants. If the client/owner is concerned about the potential for such conditions, an environmental site assessment should be conducted. We can provide a proposal for an environmental assessment, if desired.

SITE LOCATION

Hidalgo County Court - Parking Lot
December 30, 2021 ■ Terracon Project No. P88215145

Terracon GeoReport

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: PHARR, TX (1/1/2002).

EXPLORATION PLAN

Hidalgo County Court - Parking Lot
December 30, 2021 ■ Terracon Project No. P88215145

Terracon GeoReport

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXHIBIT B
ESTIMATED PROJECT COST BREAKDOWN

Description of Services		Extended Subtotal
1. Utility Clearance - Site Reconnaissance Visit (Lump Sum)	$	250.00
2. Mobilization/Demobilization of Crew and Equipment (Lump Sum)	$	300.00
3. Drill 12 Borings to 6 feet		
a. Estimate 72 feet Soil Drilling at $10.50 per foot	$	756.00
b. Field Supervisor, Estimate 8 hours at $75.00 per hour	$	600.00
c. Coring, Estimate 8 hours at $55.00 per hour	$	440.00
c. Patching, Estimate 12 locations at $44.00 each	$	528.00
Subsurface Investigation Total:	**$**	**2,874.00**
4. Assume 36 Samples Recovered:		
a. Moisture Content, Estimate 36 Tests at $9.50 each	$	342.00
b. Percent Finer than No. 200 Sieve, Estimate 12 Tests at $55.00 each	$	660.00
c. Atterberg Limits, Estimate 14 Tests at $75.00 each	$	1,050.00
Laboratory Testing Total:	**$**	**2,052.00**
5. Engineering Analysis and Reports		
a. Principal Engineer: 2 Hours at $175.00 per hour	$	350.00
b. Project Manager: 8 Hours at $135.00 per hour	$	1,080.00
c. Project Engineer: 8 Hours at $110.00 per hour	$	880.00
d. Project Secretary: 2 Hours at $45.00 per hour	$	90.00
Geotechnical Consulting & Reporting Total:	**$**	**2,400.00**
TOTAL:	**$**	**7,326.00**

CHARGES FOR ADDITIONAL SERVICES (if necessary)

- Additional mobilization (truck-mounted rig) will be charged at rate shown above
- Additional per diem for delays at above rate per day
- Additional drilling deeper than 25 feet (up to 50 feet) will be charged per foot at rate shown above (drilling only; does not include backfill with grout, field hours, laboratory testing, nor engineering time).
- Our fee assumes all boring and test locations will be accessible at the same time.
- Traffic Control Services: $2,750.00

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY
CERTIFICATION OF FILING

Certificate Number:
2022-842698

Date Filed:
01/24/2022

Date Acknowledged:

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.
Terracon Consultants, Inc.
Pharr, TX United States

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.
Hidalgo County Precinct No. 2

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.
C-21-393-04-06
Geotechnical services for the Pct 2 Administration Building Park Lot Project

4 Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
		Controlling	Intermediary
Anderson, Tim	Tempe, AZ United States	X	
O'Grady, Mike	Olathe, KS United States	X	
Donald, Vic	Baton Rouge, LA United States	X	
Pavlicek, Bob	Olathe, KS United States	X	
Moussallem, Maroun	Denver, CO United States	X	
Packer, Gayle	Olathe, KS United States	X	

5 Check only if there is NO Interested Party. ☐

6 UNSWORN DECLARATION

My name is Jorge A. Flores, P.G., and my date of birth is 10/20/1972.

My address is 1506 Mid Cities Dr. (street), Pharr (city), TX (state), 78577 (zip code), USA (country).

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Hidalgo County, State of Texas, on the 24th day of January (month), 2022 (year).

Jorge A. Flores

Signature of authorized agent of contracting business entity
(Declarant)