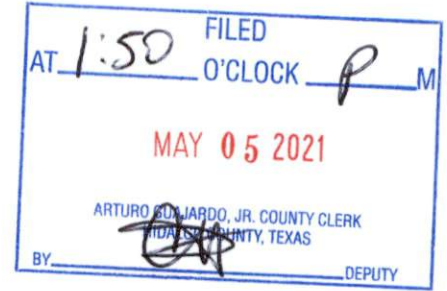


EXHIBIT "D"
HIDALGO COUNTY
Agreement #C-21-393-04-06
Work Authorization Form

WORK AUTHORIZATION NO. 1



THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section 7 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.**, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the Engineer to provide construction material testing services for the Las Milpas Road Project.

The **Engineer** is to provide the Services as required by the Agreement with Owner for Geo-Technical & Construction Material Testing Services. 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 **\$41,783.60**. 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. 1 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 the scope of work provided in this work authorization or (DATE).

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. 2 Commissioner Eduardo Cantu, as to content and detail of this **Work Authorization No. 1.**

**HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 2:**

BY: *Eduardo Cantu*

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 _____, 20__.

**THE ENGINEER:
TERRACON CONSULTANTS, INC.**

**THE OWNER:
HIDALGO COUNTY**

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

Richard F. Cortez
By: **Richard F. Cortez, County Judge**

ATTEST:

Arturo Guajardo Jr.
By: **Arturo Guajardo Jr., County Clerk**



APPROVED BY
COMMISSIONERS COURT
ON: *4/27/21*

EXHIBIT "A"

Scope of Services to be provided by the Engineer

Terracon will perform materials testing in general accordance with the project specifications. The time required for quality control testing during the construction phase on the project is directly related to the contractor's scheduling and performance. Therefore, our fee for materials testing and observation services will be based upon applicable unit prices and hourly rates. Our anticipated scope of services is as follows:

- Field density/moisture testing and laboratory evaluation of soils;
- Field observation of construction techniques and installation procedures of the concrete driven piles;
- Field testing and laboratory evaluation of concrete, observation of reinforced concrete; and
- Field testing and laboratory evaluation of asphaltic concrete materials used during pavement construction;

Experienced field/laboratory personnel will be provided for testing services. All field/laboratory materials testing/inspection will be performed under the direction of a Texas Registered Professional Engineer. A detailed scope of services envisioned to complete the testing is as follows:

SOILS

The field services will be supported by appropriate laboratory evaluation of soils used as fill or backfill on the site. The laboratory testing will include laboratory moisture-density relationship (Proctor), with sieve analysis and Atterberg limits determinations for classification and/or determination of import fill suitability. Laboratory material evaluations will be conducted as specified for each type of soil encountered during fill placement. The testing will be performed to check compliance with project specifications. The project contractor and construction manager personnel on the site will be informed of our field observations and test results. Written reports of test results will be prepared on a regular basis throughout the project duration and distributed per your directive.

FOUNDATION

A Certified Engineering Technician will be provided on a full-time basis to observe the construction techniques and installation procedures of the driven piles. Observations will include pile identification, diameter and depth.

CONCRETE

American Concrete Institute (ACI) or equivalent qualified engineering technicians will be provided on an as-requested basis to sample the plastic concrete used during construction. The concrete will

be tested for slump, air content and temperature at the time of placement. Sets of concrete cylinders will be molded at each sampling.

Concrete specimens will have initial field curing as recommended by the ACI standards at the site and returned to our local or portable laboratory for completing final curing prior to testing. Compressive strength testing will be conducted at 7-days (1 or 2 specimens), 28-days (2 or 3 specimens) intervals to determine compliance with project specifications. All test results will be conveyed after testing is completed

ASPHALT

Observations/testing will be performed by, or under the direction of a TxDOT Level 1A and 1B Certified Technician on as requested basis during placement of asphalt at the project. The asphalt will be sampled and submitted to our laboratory for Mix Properties, asphalt content and aggregate grain size distribution to verify compliance with project specifications. Asphalt cores will confirm thickness and density.

PROJECT MANAGEMENT

The project manager will be the point of contact for the project and his duties include as related materials testing and observation services the following:

- a) Attend construction meetings, on as scheduled basis;
- b) Review concrete mixes submitted, on as scheduled basis;
- c) Coordinate field and laboratory testing;
- d) Communicate with Terracon field technicians, Contractor, and Owner's site representative;
- e) Review laboratory and field test reports;
- f) Control our budget and invoice;
- g) Performing site visits to the project site; and
- h) Provide technical assistance.

EXHIBIT "B"
Cost Proposal

Earthwork Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Moisture/Density Curve (TEX 114)	6	Each	\$225.00	\$ 1,350.00
Moisture/Density Curve (TEX 113)	2	Each	\$ 275.00	\$ 550.00
Atterberg Limits (TEX-106-E)	8	Each	\$ 75.00	\$ 600.00
Sieve Analyses, -200 Sieve (TEX-111-E)	8	Each	\$ 60.00	\$ 480.00
Sieve Analyses (Tex-110-E)	3	Each	\$ 85.00	\$ 255.00
Nuclear Density Gauge Daily Fee (TEX-115-E)	50	Each	\$ 35.00	\$ 1,750.00
Soil Technician	230	Hour	\$ 50.00	\$ 11,500.00
Vehicle (per mile)	2200	Mileage	\$ 0.58	\$ 1,276.00
Subtotal, Earthwork				\$ 17,761.00

Driven Pile Observation				
Service	Quantity	Unit	Unit Rate	Estimate
Senior Technician, Regular Rate	32	Hour	\$ 60.00	\$ 1,920.00
Vehicle (per mile)	160	Mileage	\$ 0.58	\$ 92.80
Senior Engineer /Professional Engineer P.E.	3	Hour	\$ 135.00	\$ 405.00
Subtotal, Driven Piles				\$ 2,417.80

Concrete Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Engineering Technician, Regular Hours	65	Hour	\$ 50.00	\$ 3,250.00
Engineering Technician, Overtime Hours	10	Hour	\$ 75.00	\$ 750.00
Concrete Cylinders, (ASTM C31 & C39)	50	Each	\$ 15.00	\$ 750.00
Vehicle (per mile)	1000	Mileage	\$ 0.58	\$ 580.00
Subtotal, Concrete				\$ 5,330.00

Hot-Mix Asphaltic Concrete Observation/Testing				
Service	Quantity	Unit	Unit Rate	Estimate
Engineering Technician (TX DOT Level 1A/1B)	180	Hour	\$ 50.00	\$ 9,000.00
Engineering Technician O/T (TX DOT Level 1A/1B)	90	Hour	\$ 75.00	\$ 6,750.00
Extraction/Gradation/Asphalt Content (TEX-236-F)	4	Each	\$ 175.00	\$ 700.00
Asphalt Cores (Patch Holes include)	20	Each	\$ 44.00	\$ 880.00
Coring Equipment	4	Per Trip	\$ 150.00	\$ 600.00
Theoretical Maximum Specific Gravity	10	Each	\$ 110.00	\$ 1,100.00
Vehicle (per mile)	720	Mileage	\$ 0.58	\$ 417.60
Subtotal, Hot-Mix Asphaltic				\$ 19,447.60

Project Management	20	Hour	\$ 90.00	\$ 1,800.00
Principal / Professional Engineer P.E.	15	Hour	\$ 185.00	\$ 2,775.00
Subtotal, Project Manager				\$ 4,575.00

ESTIMATE TOTAL				\$ 41,783.60
-----------------------	--	--	--	---------------------