STATE OF TEXAS §
§
COUNTY OF FORT BEND §

AMENDMENT TO AGREEMENT FOR
PROFESSIONAL ENGINEERING SERVICES

THIS AMENDMENT, is made and entered into by and between Fort Bend County (hereinafter "County"), a body corporate and politic under the laws of the State of Texas, and Zarinkelk Engineering Services, Inc., (hereinafter "Contractor"), a company authorized to conduct business in the State of Texas.

WHEREAS, the parties executed and accepted that certain Agreement for Professional Engineering Services on June 12, 2018, (hereinafter "Agreement") pursuant to SOQ 14-025; and

WHEREAS, the parties desire to amend the Agreement for additional engineering services to be provided and increase the total Maximum Compensation for such additional services.

NOW, THEREFORE, the parties do mutually agree as follows:

1. County shall pay Contractor an additional four hundred twenty-five thousand six hundred eleven dollars and 00/100 ($425,611.00) for the additional engineering services as described in Contractor's proposal dated September 3, 2020 attached hereto as Exhibit "A" and incorporated herein for all purposes.

2. The Maximum Compensation payable to Contractor for Services rendered is hereby increased to an amount not to exceed one million five hundred thirty-one thousand eight hundred ninety-four dollars and 00/100 ($1,531,894.00), authorized as follows:

   $1,106,283.00 under the Agreement; and
   $425,611.00 under this Amendment.

3. In no case shall the amount paid by County for all Services under the Agreement and this Amendment exceed the Maximum Compensation without further written agreement executed by the parties.

4. BY ACCEPTANCE OF AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT THE COUNTY IS OPPOSED TO HUMAN TRAFFICKING AND THAT NO COUNTY FUNDS WILL BE USED IN SUPPORT OF SERVICES OR ACTIVITIES THAT VIOLATE HUMAN TRAFFICKING LAWS.

Except as provided herein, all terms and conditions of the Agreement shall remain unchanged.

FORT BEND COUNTY

KP George, County Judge

Date

ATTEST:

Laura Richard, County Clerk

ZARINKELK ENGINEERING SERVICES, INC

Authorized Agent – Signature

Giti Zarinkelk

Authorized Agent – Printed Name

President

Title

9/24/20

Date

APPROVED:

J. Stacy Slawinski, P.E., County Engineer

APPROVED AS TO LEGAL FORM:

Marcus D. Spencer, First Assistant County Attorney

AUDITOR'S CERTIFICATE

I hereby certify that funds are available in the amount of $_____ to accomplish and pay the obligation of Fort Bend County under this contract.

Robert Ed Sturdivant, County Auditor

I:\Marcus\Agreements\Engineering\Road Construction\Fulshear-Gaston\17312\Amend 1 - Pro Eng Svcs.Fulshear-Gaston.ZEI.docx 9/22/2020. 18-Eng-500035-A1

EXHIBIT A

Zarinkelk
Engineering Services, Inc.

617 Caroline Street #2
Houston, Texas 77002
Phone 832-242-2426
Fax 832-242-2445

September 03, 2020

Mark Dessens, P.E.
Project Manager
SPI
11767 Katy Freeway, Suite 900
Houston, Texas 77079

RE: Fulshear-Gaston Road from FM723 to FM 359
Fort Bend Mobility Bond 2017; Project Number 17312

Dear Mr. Dessens:

Attached please find our fee proposal for the design of Fulshear-Gaston Road from FM723 to FM 359. Also attached is our level of effort spreadsheet. Our proposed fee including all subs for Phase I and Phase II of the project is $425,611.

Please call me at 832-242-2426 if you have any questions. We look forward to working with SPI and Fort Bend County on this project.

Sincerely,

Giti Zarinkelk

Giti Zarinkelk, P.E.

Enclosures: Scope of Services
Sub-consultants proposal
LOE

SCOPE OF SERVICES

Fulshear-Gaston Road from FM723 to FM 359
Fort Bend Mobility Bond 2017; Project Number 17312

PROJECT UNDERSTANDING

This project is an extension of the previously established project of the reconstruction of Fulshear-Gaston Road. The proposed project includes approximately 0.5 miles of reconstruction of a two-lane asphalt roadway to a four-lane boulevard section roadway with appropriate drainage conveyance extending from east of Kitty Hawk St E to FM 359. The proposed drainage will be underground storm sewers. The alignment of Fulshear-Gaston Road will also be modified to meet the alignment of the future FM 359. The existing right-of-way (ROW) is 80-feet and the proposed ROW will be 100 feet in width and land acquisition will be required.

SCOPE OF SERVICES

This scope includes a preliminary design and final design. Guidelines and overall scope of services are outlined in the 2017 Fort Bend County Mobility Bond Program Summary of Design Process document.

Following are the basic service phases that will be required for this project:

Phase I - Preliminary Design

The preliminary design will include the following:

- Coordination with sub consultants and private and public entities
- Preliminary alignment
- Field investigation
- Drainage study
- Topographic survey
- Geotechnical investigation
- Sight distance triangle evaluation
- Topo verification meeting
- ROW meeting
- Client presentation meeting
- Preparation of preliminary cost estimate
- Preparation of summary report and exhibits
- 30% design plan set

Phase II - Design

The design phase will include the following:

- Utility coordination will continue with private and public entities contacted during the preliminary design phase
- Coordination with client, TXDOT and private developers as necessary.
- Traffic control concept plan

- Design plans including: cover sheet; general notes; index; typical sections; overall layout; P&P drawings at 20 scale; cross sections; survey control; drainage areas and calculations; drainage design of extension portion; advanced warning signs; construction phasing and traffic control; signing and stripping; SWPPP and standard details
- Outfall design
- Design drawing submittals (at 70%, 95% and Final)
- Final cost estimate and bid sheet will be prepared in a format as directed
- Technical specifications utilizing provided Fort Bend County table of contents and bid documents

Survey services will include establishment of control, a route topographic survey, and coordination with pipeline companies.

Geotechnical services will include field explorations at 4 locations with borings 15 feet in depth, laboratory testing of gathered samples, engineering analysis and geotechnical recommendations for the roadway and drainage facilities.

Public/private utility design, coordination, pipeline coordination/design, quantity sheet, environmental services, design phase during construction, construction phase services, land acquisition, permitting are not included with this effort.

Plans will be done in Microstation format. Land acquisition services are not included.

SCHEDULE

The Preliminary Design Report will be submitted for review within 150 days from NTP. Phase II design will take 180 days not including County review time.

FEE BREAKDOWN

The fees for Phase I and Phase II will be paid on a lump sum basis. The following table gives a breakdown of the total fee by phase:

Phase	**Fee**
Phase I	$192,006
Phase II	$183,339
Surveying	$42,600
Geotechnical	$7,666
Total	**$425,611**

Amani Engineering, Inc.
• Engineers • Surveyors • Construction Managers

August 27, 2020
Zarinkelk Engineering Services, Inc.
617 Caroline St.
Houston, Texas 77002

VIA EMAIL: Giti.Zarinkelk@Zarinkelk.com

Re: Fee Proposal for Surveying Services – Fulshear-Gaston Road from FM 723 to FM 359 – Fort Bend County 2017 Mobility Projects, Fort Bend County, Texas- Additional Surveying Services-Revision 2.

Dear Ms. Zarinkelk:

Amani Engineering, Inc. is pleased to submit this revised fee proposal for surveying services for the above referenced project. We propose the following scope of work, deliverables, schedule, fee and exclusions for our services.

I. SCOPE OF WORK – ROADWAY SURVEY

DESIGN CRITERIA
Field survey will be performed in accordance with the following design criteria: Applicable design criteria include, in order of priority, (1) *Fort Bend County Drainage Criteria Manual* (Fort Bend County Drainage District, November 1987, revised April 1999), (2) municipal design criteria if the project is located within the limits of a municipality and/or ETJ that has design criteria, (3) *Guidelines for Engineers Having Contracts with Harris County, Texas* (Harris County Public Infrastructure Department, 1987), (4) applicable Texas Department of Transportation design criteria (all County-maintained traffic signals, other items as applicable), and (5) the *Infrastructure Design Manual* (City of Houston Department of Public Works and Engineering, current version, used for infrastructure for which design criteria do not exist in the preceding criteria documents)

CONTROL SURVEY
Temporary benchmarks and baseline control will be set, both with 1,000-foot maximum spacing between points. Existing Fort Bend County monuments will be rehabilitated by re-observing with GPS instrument as needed. New Fort Bend County monuments will be installed as needed.

UTILITY COORDINATION
All private utility and pipeline providers will be contacted via the current utility coordination process and all on-site utility markings and other information provided to Amani by these utility and pipeline providers will be collected by standard survey methods and incorporated into the topographic survey base map.

RIGHT-OF –ENTRY COORDINATION
Coordinate and obtain right-of-entry for topographic survey.

TOPOGRAPHIC SURVEY
The topographic survey shall be along the existing alignment of Fulshear-Gaston Road from Kitty Hawk Street E to McKinnon Road as depicted in the enclosed EXHIBIT A. The topography survey will be taken within the existing and/or proposed right-of-way, if any and extend 20 feet beyond the right-of-way on each side. Proposed right-of-way including existing FM 359 not to exceed 150 LF wide and limits provided in CAD format by client prior to preforming topographic survey. Structures in clear view and within 60 feet of the existing right-of-way will be surveyed. The topographic survey is to include edge of pavements, driveways, signs, mailboxes, traffic signals, sidewalks, pavement markings, etc. Pavement material types

will be indicated as determined on the surface. Intersecting driveways will be obtained back 50 feet for the ROW and within the survey limits as depicted in the enclosed EXHIBT A. Existing underground utility toning, flagging, and paint markings will be collected as marked by others as well as visible surface features. Gravity sanitary and storm sewers will be located as to top of manholes and inlets, flow line elevations, type, size, and direction of pipes if found within the topographic survey area as depicted in EXHIBIT A. Water lines will be located by tops of valves, fire hydrants (flush valves) and visible surface features if found within the topographic survey area as depicted in EXHIBIT A. Cross section of the existing roadway will be obtained at 100-foot intervals. Apparent existing right-of way will be shown based on monumentation found during the topographic survey. A project base line will be established in concert with the design engineer. The existing condition 2-D planimetric topographic survey base map will be provided in Micro Station GEOPAK format with text, line types, and feature blocks scaled to be plotted at 1" = 20' when plotted on a full size 22" x 34" sheet will be updated as part of this additional survey work. Underground utilities will be located on the base map from resolution of field data and record information provided to the surveyor by others. An illustration of general location of the survey limits is provided the attached EXHIBIT A. The total length of the survey is approximately 3, 500 L.F. and will include:

- Along FM 359 approximately 200 LF south of the intersection of Fulshear Gaston Road to approximately 600 LF north of the intersection of McKinnon Road, 2,600 LF total.
- Along McKinon Road from the intersection of FM 359 west approximately 700 LF.
- Along Fulshear Gaston Road from the intersection of FM 359 east approximately 100 LF.
- Along Kitty Hawk St W from the intersection of FM359 north approximately 100 LF.

DIGITAL TERRAIN MODEL (DTM) / TRIANGULAR IRREGULAR NETWORK (TIN)
A three dimensional surface model or DTM will be created from a TIN which will be based on conventionally collected three dimensional survey point data including cross sections and other relevant surface elevation points. The TIN and DTM will be provided in Micro Station GEOPAK format.

GEOTECHNICAL BOREHOLE SURVEY
Survey geotechnical boreholes and provide coordinates, elevations, and station and offsets.

SURVEY CONTROL MAP
A survey control map will be provided on a full size 22" x 34" sheet.
Swing Tie Diagrams will be provided to provide details of the survey control points.

TOPOGRAPHIC SURVEY AT OUTFALL LOCATION
Topographic Survey at Outfall- Topographic survey of approximately 100 LF at proposed outfall location to be provided by client.

II. FEE

The estimated fee for the above mentioned Scope of Work, including roadway design survey, geotechnical borehole survey, survey control map and DTM/TIN model is **$42,600.00**. Below is a summary of the fee.

TOPOGRAPHIC SURVEY (900 LF ±) @ $9.00/L.F. (*100 ROW*)	= $ 8,100.00
TOPOGRAPHIC SURVEY (2,600LF ±) @ $10.00/L.F. (*up to 150' ROW*)	= $ 26,000.00
RIGHT-OF –ENTRY COORDINATION	= $ 4,000.00
TOPOGRAPHIC SURVEY AT OUTFALL	= $ 2,500.00
DIRECT EXPENSES (Mileage, Tolls, Reproduction, GPS)	= $ 2,000.00
Total Roadway Survey Fee	**$ 42,600.00**

Additional work not specifically provided in the above Scope of Work will be charged to the Client on a negotiated fee or hourly rate as defined in the attached EXHIBIT B – Labor Rate Schedule.

III. EXCLUSIONS

- Base profile drawing
- Construction staking
- Clearing
- Abstracting to determine easements and right-of-way verification.
- Easement or Parcel Acquisition Boundary Survey
- Subsurface utility engineering and locating
- Utility Coordination for permitting and approvals
- Overhead utilities will not be included
- Approved alignment of right-of-way and centerline will be provided by client before topographic survey will be started.

We appreciate this opportunity to propose on this project and look forward to working on the project shortly. Please call Christina Weaver, RPLS at 713-270-5700 ext. 116 if you have any questions or need additional information concerning this proposal.

Yours sincerely,
For Amani Engineering, Inc.

for Prakash

H. Prasad Kolluru, P.E.
President

TBPE Firm Reg. No. F-4528
TBPLS Firm Reg. No. 100282-0

HPK: md:cw

Encl.: EXHIBIT A – Limits of Survey EXHIBIT B – Labor Rate Schedule

Amani Engineering, Inc.
• Engineers • Surveyors • Construction Managers

LABOR RATE SCHEDULE

(Effective January 1, 2020- December 31, 2020)

Category	Hourly Rate
• Principal Engineer (P.E)	$250.00
• Project Manager (P.E)	$195.00
• Senior Civil Engineer (P.E.)	$160.00
• Registered Pr2-man survey crew @ofessional Land Surveyor (R.P.L.S)	$170.00
• Civil Engineer (P.E.)	$140.00
• Structural Engineer (P.E.)	$155.00
• Mechanical/ HVAC (P.E.)	$155.00
• Electrical Engineer, (P.E.)	$155.00
• Graduate Engineer/E.I.T.	$110.00
• Senior Designer	$110.00
• Designer/ Estimator/ Scheduler	$100.00
• Construction Inspector	$ 95.00 *
• Senior Construction Inspector	$100.00 *
• CADD Operator	$ 95.00
• Survey Technician	$110.00
• SUE Technician	$110.00
• Secretarial	$ 90.00
• 4- Man Survey crew (6-hour minimum)	$195.00
• 3- Man Survey crew (6-hour minimum)	$170.00
• 2- Man Survey crew (6-hour minimum)	$155.00
• GPS Instrument (6-hour minimum)	$ 50.00
• SUE Crew w/ Vacuum Truck (8-hour minimum)	$495.00

* Hourly rates for Construction Inspector vary depending upon the duration of contract and the skill level.

Exhibit 1


Limits of Survey
not to exceed 150 '
in width
Covey Trails Airport-X09
Kitty Hawk St W
Kitty Hawk St E
McKinnon Rd
Fulshear-Gaston Rd
359

ALL-TERRA ENGINEERING
TBPE Firm No. 9770

All-Terra Engineering, Inc.

*Geotechnical Engineering * Construction Materials Testing*

August 17, 2020

Zarinkelk Engineering Services, Inc.
617 Caroline St.
Houston, TX 77002

Attn: Ms. Giti Zarinkelk, P.E.
President

Re: Proposal
Geotechnical Investigation
Proposed Fulshear-Gaston Road Extension
Project No. 17312
Precinct 3, Fort Bend County, Texas

All-Terra Proposal No.: APE19-677Rev

Dear Ms. Zarinkelk:

All-Terra Engineering, Inc. (All-Terra) appreciates the opportunity to provide this proposal to perform a geotechnical investigation for the above referenced project. This proposal outlines our understanding of the scope of services to be performed by All-Terra for this project and provides an estimate of a lumpsum fee for our services.

A. PROJECT INFORMATION

It is our understanding that an extension to Fulshear-Gaston Road had been proposed for design and construction by Fort Bend County. The roadway project extends the limit to FM 359. The proposed project includes the construction of a 4-lane divided roadway (2 lanes in each direction) with curb and gutter drainage system. The purpose of the geotechnical investigation will be to determine the subsoil and groundwater conditions within the project area and provide data/parameters/recommendations that can be used for the construction and design of the proposed roadway extension.

B. SCOPE OF SERVICES

Based upon our understanding of the project requirements, it is proposed that the scope of work for the geotechnical investigation consists of the following tasks:

- Drill/sample a total of 4 geotechnical borings to a depth of 15 feet beneath the surface within the length of the proposed roadway extension as shown on the attached Plate A. Pavement coring will be needed prior to drilling and sampling of the geotechnical borings. Thicknesses of the pavement layers will be measured and recorded as well. GPS coordinates of the actual boring locations will be obtained for documentation and inclusion on the boring logs of the report.

- Continuously sample each boring to the termination depth of 15 feet, with both disturbed (cohesionless soils) and relatively undisturbed (cohesive soils) samples being obtained, as applicable.

- Measure the depth to groundwater during drilling, approximately 10 minutes after the water is initially encountered, as applicable, and within 30 minutes after the completion of drilling.

- Backfill the boreholes with cement grout after the completion of the drilling activities.

- Clearly mark each boring location and coordinate with the project's surveyors to arrange for obtaining boring location survey elevations, stationing, and offset distances, as applicable.

- Perform laboratory testing on soil samples obtained such as moisture content tests, unit weight determinations, Atterberg limits tests, tests to determine the percent soil particles passing a No. 200 sieve, dry density tests, and unconfined compression tests in order to define soil classifications and physical soil properties of the site soils.

- Analyze the laboratory test data to define the engineering characteristics of each soil type.

- Prepare boring logs and soil profile based upon the results of laboratory tests and visual soil classifications.

- Perform a desktop review of the potential presence of known surface faults within the project area.

- Perform engineering analyses as necessary to develop recommendations pertaining to potential uplift of underground structures due to upward acting hydrostatic pressures caused by groundwater conditions, lateral earth pressures on underground structures, dewatering requirements for excavations, utility trench shoring and bracing requirements, OSHA soil type classifications pertinent to trench shoring and bracing design, excavation/backfill requirements, and utility bedding requirements.

- Perform pavement design analyses for the proposed roadway extension using the requirements and guidelines of the American Association of State Highway and Transportation Officials (AASHTO) "AASHTO Guide for Design of Pavements" as well as the requirements and guidelines of Fort Bend County.

- Submit 1 copy and a pdf file of a report that presents the results of the geotechnical engineering study. The report will be prepared and sealed by a Licensed Professional Engineer trained and experienced in the practice of geotechnical engineering.

C. CONDITIONS

If there are any other restrictions, unusual circumstances, or special requirements regarding the site or this proposed geotechnical study, the Client shall communicate these to All-Terra prior to our commencing our field activities.

D. SCHEDULE

Our field investigation assumes that we will have the right-of-entry to the project area and that the boring locations will be readily accessible and be drilled utilizing a truck mounted drilling rig. We can initiate our field operations within several working days following authorization to proceed, weather permitting. We anticipate completion of our services and submittal of our report within 2 to 3 weeks after the completion of drilling.

E. ESTIMATED COST

For the scope of services outlined within this proposal, we estimate a total cost of about **$7,666.00**. The breakdown of the estimated cost is as follows:

Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
Field Activities:				
Mobe/demobe of drill rig	1	Lump Sum		$ 300.00
Drilling/sampling of 4 borings to 15'	60	feet	$ 18.00	$ 1,080.00
Locate/identify/mark borings by graduate engineer/EIT	2	hours	$ 83.00	$ 166.00
Coring of existing pavement	4	each	$ 80.00	$ 320.00
Field logging/supervising of drilling by field technician	6	hours	$ 65.00	$ 390.00

Item	Estimated Quantity	Unit	Unit Price	Estimated Cost
Limited traffic control (cones, signs, technician as flagman during coring and drilling)	1	Lump Sum		$ 800.00
Grouting of roadway boreholes after drilling	60	feet	$ 8.00	$ 480.00
Vehicle Charge	8	hours	$ 7.50	$ 60.00
Sub-Total				**$ 3,596.00**
Laboratory Testing:				
Atterberg Limits (ASTM D4318)	12	each	$ 60.00	$ 720.00
% Pass No. 200 Sieve (ASTM D1140)	12	each	$ 46.00	$ 552.00
Moisture Content (ASTM D2216)	32	each	$ 9.00	$ 288.00
Unconfined Compression (ASTM D2166)	4	each	$ 44.00	$ 176.00
Sub-Total				**$ 1,736.00**
Engineering, coordination, supervision, analysis, and report preparation:				
Senior engineer, P.E.	4	hours	$ 150.00	$ 600.00
Graduate engineer/EIT	18	hours	$ 83.00	$ 1,494.00
Clerical/Drafting Support	4	hours	$ 60.00	$ 240.00
Sub-Total				**$ 2,334.00**
GRAND TOTAL FOR THE GEOTECHNICAL INVESTIGATION				$ **7,666.00**

* includes desktop review of surface faults within the project area.

F. CLOSURE

We appreciate the opportunity to offer our services on your project. We look forward to serving you, and welcome any questions or comments you may have concerning this proposal or our services.

Respectfully submitted,

ALL-TERRA ENGINEERING, INC.
(TBPE F-9770)

_____
Bonni F. Musngi, Jr., P. E.
Senior Geotechnical Engineer

ACCEPTANCE AND AUTHORIZATION Upon acceptance, this proposal constitutes the agreement between All-Terra and you, the Client. You have the option to accept or reject this agreement, or to propose modification to any element of the agreement.

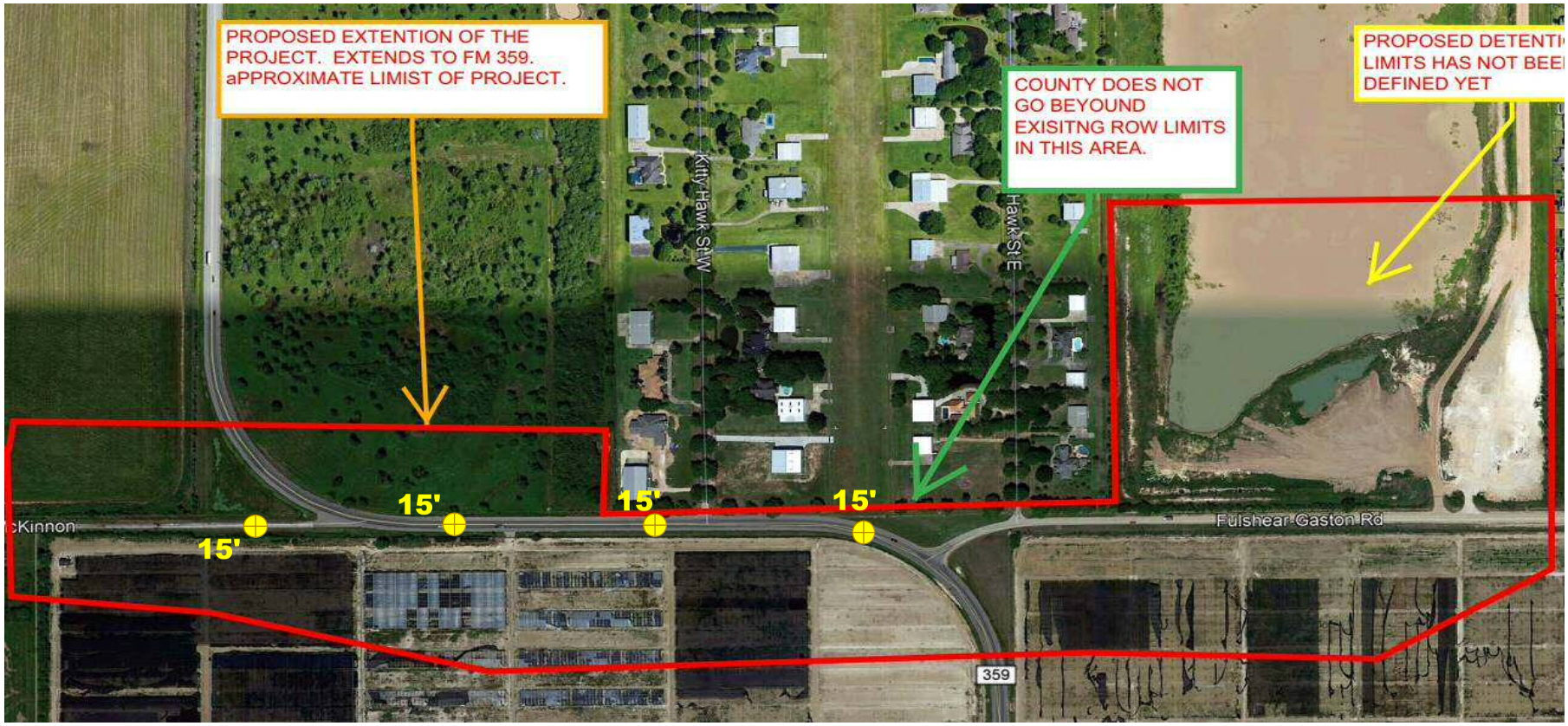
Agreed to this_____ day of _____, 2020

By: _____ _____
(Signature) (Printed Name)

_____ _____
(Firm Name) (Title or Position)

Attachment: Plate A – Proposed Boring Locations

File:/server/proposals/APE19-677Rev_fulshear_gaston_extension.docx



⊕ - geotechnical borings proposed for the study.

ALL-TERRA ENGINEERING	N	Proposed Fulshear-Gaston Road Extension Project No. 17312, Precinct 3 Fort Bend County, Texas	Proposal No.: APE19-677Rev
6200 Rothway, Ste 140 Houston, Texas 77040	Date: 08/17/20	**PROPOSED BORING LOCATIONS**	**Plate A**

Fulshear-Gaston Road from FM 723 to FM 359

Fort Bend Mobility Bond 2017; Project Number 17312

TASK DESCRIPTION	Principal	Project Manager	Senior Engineer	Sen. Hyd. Engineer or Structural Engineer	Design Engineer	Senior Designer/	CADD Operator Technician	QA/QC Review	Clerical	Total Labor Hours & Costs
ITEM A (SUB CONSULTANT SERVICES)										
PROPOSED RIGHT-OF-WAY SURVEY										
ROW SURVEY										$ -
(COST PLUS 10 PERCENT)										$ -
TOTAL ITEM A										$ -
ITEM B (SUB CONSULTANT SERVICES)										
TOPOGRAPHIC SURVEYING										
TOPOGRAPHIC SURVEY										$ 42,600.00
with Coordination										$ -
TOTAL ITEM B										**$ 42,600.00**
ITEM C (SUB CONSULTANT SERVICES)										
GEOTECHNICAL EXPLORATION										
GEOTECHNICAL EXPLORATION										$ 7,666.00
with Coordination										$ -
TOTAL ITEM C										**$ 7,666.00**
ITEM D (BASIC SERVICES PHASE I)										
FIELD VISIT / COORDINATION / MEETINGS										
SUBCONSULTANT COORDINATION	6	16	8		8				8	46
COLLECT AND REVIEW EXISTING DATA	1	6	16		24				4	51
CONDUCT FIELD RECONNAISSANCE		8	8	0	16	16	0			48
Preliminary ROW Investigation		8	8		8	8	8	8		48
Utility Coordination (map request only)		8	16		0	0	0		0	24
Pipeline Coordination(Map request only)		8	16		0	0	0		0	24
Progress Meetings-subs-client		24	20		8				8	60
HOURS SUB-TOTALS	7	78	92	0	64	24	8	8	20	301
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$735.00	$6,630.00	$5,980.00	$0.00	$3,200.00	$1,200.00	$280.00	$680.00	$500.00	$19,205.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$2,205.00	$19,890.00	$17,940.00	$0.00	$9,600.00	$3,600.00	$840.00	$2,040.00	$1,500.00	$ 57,615.00
TOTAL ITEM D										**$ 57,615.00**
ITEM E (BASIC SERVICES PHASE I)										
SITE TRIANGLES, FINALIZE ALIGNMENT & TYPICAL SECTION										
SITE TRIANGLES		2	4		24		24	2		56
Adjust Preliminary Alignment		4	16		24	0	24	4		72
Typical Section		2	4		8		16	2		32
HOURS SUB-TOTALS	0	8	24	0	56	0	64	8	0	160
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$0.00	$680.00	$1,560.00	$0.00	$2,800.00	$0.00	$2,240.00	$680.00	$0.00	$ 7,960.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$0.00	$2,040.00	$4,680.00	$0.00	$8,400.00	$0.00	$6,720.00	$2,040.00	$0.00	$ 23,880.00
TOTAL ITEM E										**$ 23,880.00**

Fulshear-Gaston Road from FM 723 to FM 359

Fort Bend Mobility Bond 2017; Project Number 17312

TASK DESCRIPTION	Principal	Project Manager	Senior Engineer	Sen. Hyd. Engineer or Structural Engineer	Design Engineer	Senior Designer/	CADD Operator Technician	QA/QC Review	Clerical	Total Labor Hours & Costs
ITEM F (BASIC SERVICES PHASE I)										
DRAINAGE STUDY										
Drainage Criteria and models	2	4		24						30
Outfall Design		2		2	6					10
SWMM model analysis		4		30	44			4		82
hydraulic analysis		4		16	24			4		48
Drainage Study Drawings		4		8		24				36
Prepare Drainage Study		8		24				4		36
HOURS SUB-TOTALS	2	26	0	104	74	24	0	12	0	242
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$210.00	$2,210.00	$0.00	$6,760.00	$3,700.00	$1,200.00	$0.00	$1,020.00	$0.00	$ 15,100.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$630.00	$6,630.00	$0.00	$20,280.00	$11,100.00	$3,600.00	$0.00	$3,060.00	$0.00	$ 45,300.00
TOTAL ITEM F										**$ 45,300.00**
ITEM G (BASIC SERVICES PHASE I)										
PRELIMINARY CONSTRUCTION COST										
HOURS SUB-TOTALS	2	4	8	0	24		0	4		42
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$210.00	$340.00	$520.00	$0.00	$1,200.00	$0.00	$0.00	$340.00	$0.00	$ 2,610.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$630.00	$1,020.00	$1,560.00	$0.00	$3,600.00	$0.00	$0.00	$1,020.00	$0.00	$ 7,830.00
TOTAL ITEM G										**$ 7,830.00**
ITEM H (BASIC SERVICES PHASE I)										
PRELIMINARY DESIGN REPORT										
HOURS SUB-TOTALS	2	8	24	16	16	4	8	4	16	98
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$210.00	$680.00	$1,560.00	$1,040.00	$800.00	$200.00	$280.00	$340.00	$400.00	$ 5,510.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$630.00	$2,040.00	$4,680.00	$3,120.00	$2,400.00	$600.00	$840.00	$1,020.00	$1,200.00	$ 16,530.00
TOTAL ITEM H										**$ 16,530.00**

Fulshear-Gaston Road from FM 723 to FM 359

Fort Bend Mobility Bond 2017; Project Number 17312

TASK DESCRIPTION	Principal	Project Manager	Senior Engineer	Sen. Hyd. Engineer or Structural Engineer	Design Engineer	Senior Designer/	CADD Operator Technician	QA/QC Review	Clerical	Total Labor Hours & Costs
ITEM I (BASIC SERVICES PHASE II)										
COVER, GENERAL NOTES, INDEX					4		8	2		14
TYPICAL SECTIONS			2		4		24	2		32
OVERALL LAYOUT			4		4		16	2		26
QUANTITIES			4	4	16			2		26
SURVEY CONTROL MAPS										
DRAINAGE AREA MAPS & RUNOFF CALCULATIONS		4	8	36	36		24	2		110
STROM SYSTEM IMPROVEMENTS FOR EXTENSION PORTION		4	4	16	36	8	36	2		106
SUPER ELEVATION DESIGN										0
PLAN AND PROFILES		8	16	24	36	40	80	6		210
COORDINATION WITH PIPELINE COMPANIES, UTILITIES		8	8		8					24
SITE TRIANGLES										0
OUTFALL DESIGN		2	6	6	10		12	4		40
STRIPPING AND SIGNAGE			4		16		48	2		70
SWPPP			4		16		48	2		70
STANDARD DETAILS			4		16	30	30	2		82
GEOPAC CROSS SECTIONS		8	8		48	48	48	4		164
HOURS SUB-TOTALS	0	34	72	86	250	126	374	4	0	946
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$0.00	$2,890.00	$4,680.00	$5,590.00	$12,500.00	$6,300.00	$13,090.00	$340.00	$0.00	$ 45,390.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$0.00	$8,670.00	$14,040.00	$16,770.00	$37,500.00	$18,900.00	$39,270.00	$1,020.00	$0.00	$ 136,170.00
TOTAL ITEM I										**$ 136,170.00**
ITEM K (SUB CONSULTANT SERVICES)										
TRAFFIC CONTROL, ADV WARNING										
HOURS SUB-TOTALS	0	4	36		72	72	96	4		284
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$0.00	$340.00	$2,340.00	$0.00	$3,600.00	$3,600.00	$3,360.00	$340.00	$0.00	$ 13,580.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$0.00	$1,020.00	$7,020.00	$0.00	$10,800.00	$10,800.00	$10,080.00	$1,020.00	$0.00	$ 40,740.00
TOTAL ITEM K										**$ 40,740.00**

Fulshear-Gaston Road from FM 723 to FM 359

Fort Bend Mobility Bond 2017; Project Number 17312

TASK DESCRIPTION	Principal	Project Manager	Senior Engineer	Sen. Hyd. Engineer or Structural Engineer	Design Engineer	Senior Designer/	CADD Operator Technician	QA/QC Review	Clerical	Total Labor Hours & Costs
ITEM L (SUB CONSULTANT SERVICES)										
TRAFFIC SIGNAL MODIFICATION										
TRAFFIC SIGNAL Design modification										
with Coordination										$ -
TOTAL ITEM L										$ -
ITEM N (BASIC SERVICES PHASE II)										
FINAL CONSTRUCTION COST										
HOURS SUB-TOTALS	2	4	4	4	16	2	4	2		38
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$210.00	$340.00	$260.00	$260.00	$800.00	$100.00	$140.00	$170.00	$0.00	$ 2,280.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$630.00	$1,020.00	$780.00	$780.00	$2,400.00	$300.00	$420.00	$510.00	$0.00	$ 6,840.00
TOTAL ITEM N										**$ 6,840.00**
ITEM O (BASIC SERVICES PHASE II)										
PROJECT MANUAL, SPECIFICATION OUTLINE & UNIT PRICE FORM										
HOURS SUB-TOTALS	1	4	8	0	16	0	0	2	8	39
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$105.00	$340.00	$520.00	$0.00	$800.00	$0.00	$0.00	$170.00	$200.00	$ 2,135.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$315.00	$1,020.00	$1,560.00	$0.00	$2,400.00	$0.00	$0.00	$510.00	$600.00	$ 6,405.00
TOTAL ITEM O										**$ 6,405.00**
ITEM P (BASIC SERVICES PHASE II)										
ADDRESS COMMENTS ON 70%, 95% AND FINAL SUBMITTALS										
HOURS SUB-TOTALS	1	16	24	24	46	30	48	8	24	221
LABOR RATE PER HOUR	$105.00	$85.00	$65.00	$65.00	$50.00	$50.00	$35.00	$85.00	$25.00	
DIRECT LABOR COSTS	$105.00	$1,360.00	$1,560.00	$1,560.00	$2,300.00	$1,500.00	$1,680.00	$680.00	$600.00	$ 11,345.00
JOB MULTIPLIER	3	3	3	3	3	3	3	3	3	
TOTAL LABOR COSTS	$315.00	$4,080.00	$4,680.00	$4,680.00	$6,900.00	$4,500.00	$5,040.00	$2,040.00	$1,800.00	$ 34,035.00
										$ 34,035.00
TOTAL ITEM P										**$ 34,035.00**
SUB CONSULTANTS										**$ 50,266.00**
PRELIMINARY DESIGN										**$ 192,006.00**
FINAL DESIGN										**$ 183,339.00**
EIGNIEERING SERVICES IN CONSTRUCTION										**$ -**
TOTAL ALL SERVICES										**$ 425,611.00**