



Contractor does further understand and agree, said understanding and agreement also being of the absolute essence of the Agreement, that the total Maximum Compensation that Contractor may become entitled to and the total maximum sum that County may become liable to pay to Contractor under the Agreement shall not under any conditions, circumstances, or interpretations thereof exceed One Million Three Hundred Nine Thousand Three Hundred and 00/100 Dollars (\$1,309,300.00).

3. **Recitals.** The recitals set forth above are incorporated herein by reference and made a part of the Agreement.
4. **Human Trafficking.** BY ACCEPTANCE OF THIS AGREEMENT, CONTRACTOR ACKNOWLEDGES THAT FORT BEND 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.
5. **Modifications and Conflict.** Except as modified herein, the Agreement shall remain in full force and effect and has not been otherwise modified or amended. If there is a conflict among documents that make up the Agreement, this First Amendment shall prevail with regard to the conflict.

**{Execution Page Follows}**

**{Remainder of Page Intentionally Left Blank}**

**FORT BEND COUNTY, TEXAS**

**COBB, FENDLEY & ASSOCIATES, INC.**

\_\_\_\_\_  
KP George, County Judge

Steven Bak, P.E.  
Authorized Agent – Signature

\_\_\_\_\_  
Date

STEVEN BAK  
Authorized Agent- Printed Name

**ATTEST:**

VICE PRESIDENT  
Title

\_\_\_\_\_  
Laura Richard, County Clerk

7/23/2024  
Date

**APPROVED:**

J. Stacy Slawinski

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

**AUDITOR'S CERTIFICATE**

I hereby certify that funds are available in the amount of \$\_\_\_\_\_ to accomplish and pay the obligation of Fort Bend County, Texas under this Agreement.

\_\_\_\_\_  
Robert E. Sturdivant,  
County Auditor

i:\agreements\2024 agreements\engineering\cobb fendley (21-eng-100801-a1)\amendment 1 -- prof srvc agrmt (mobility bond no. 20303a -- sh99 nb frontage road extension) drp 07.05.24.docx

# **EXHIBIT A-1**

(Contractor's Proposal Follows Behind)

June 28, 2024

Mr. Matt Billiot, P.E.  
Binkley and Barfield | DCCM  
1710 Seamist Drive  
Houston, Texas 77008

Re: Supplemental Design and Survey Proposal for SH 99 Northbound Frontage Road  
from Cinco Ranch Blvd to Highland Knolls Drive/Bay Hill Blvd  
Fort Bend County Mobility Bond Project #20303a  
CobbFendley Project No. 2111-001-01

Dear Mr. Billiot:

Cobb, Fendley & Associates, Inc. (CobbFendley) is pleased to provide this proposal to Fort Bend County for the preparation of a revised roadway geometric design along the Northbound Frontage Road and Ramps for State Highway 99 (SH 99) in Fort Bend County. The work includes removal of existing ramps and providing new ramp designs that are reversed from their current configuration, mainlane modifications, coordination with adjacent mainlane widening segment designers, illumination design for relocating roadway lighting impacted by proposed improvements, preparation of right-of-way (ROW) maps and design survey of four (4) bridges at Cinco Ranch Blvd and Highland Knolls Drive/Bay Hill Blvd. Optional additional service (if necessary) includes preparation of ITS and CTMS design for relocating existing ITS and CTMS systems impacted by proposed improvements and additional survey control and right-of-way mapping services.

CobbFendley proposed budget for the referenced project as follows:

**Basic Services**

Supplemental Design (Lump Sum) ..... \$134,711.00

**Additional Services**

Survey Control and Right-of-Way Mapping (EHRA) (Lump Sum) ..... \$19,275.00

Design Survey – Bridge Widening (SAM) (Lump Sum) ..... \$25,600.00

**Optional Additional Services**

ITS and CTMS Relocation Design (Lump Sum) ..... \$23,952.00

Survey Control and Right-of-Way Mapping Additional Services ..... \$3,040.00

Recovery and Verification of Existing Survey Control..... \$2,715.00

---

---

**TOTAL FEE REQUESTED FOR COMPLETION OF PROJECT ..... \$209,293.00**

We respectfully request a total budget of \$209,293.00 for the above-mentioned professional services. Detailed scope of services and the level of effort for the basic, additional, and optional additional services are attached. Also attached are the proposals from subconsultant for surveying. Please note that optional additional services for ITS and CTMS relocation design and additional survey control and right-of-way mapping services are for budgetary purposes, if deemed necessary by the County and Texas Department of Transportation (TxDOT) Houston

District. Optional additional services will only be performed with prior written approval by the County Engineer or the Fort Bend County Managing Consultant (Binkley and Barfield | DCCM).

We appreciate the opportunity to submit this proposal and look forward to working with Fort Bend County throughout the remainder of this project. If you have any questions or require any additional information, I can be reached at 713-462-3242.

Sincerely,

**COBBFENDLEY**

A handwritten signature in blue ink, appearing to read "Javed Mahommed".

Javed Mahommed, P.E.

See Attachment A

# ATTACHMENT A

## SCOPE OF SUPPLEMENTAL SERVICES

### GENERAL DESCRIPTION

The supplemental work to be performed by the Engineer consists of providing Engineering services for preparation of a revised roadway geometric design along the Northbound Frontage Road and Ramps for State Highway 99 (SH 99) in Fort Bend County.

The additional work includes removal of existing Northbound SH 99 entrance and exit ramps and providing new ramp designs that are reversed from their current configuration between Cinco Ranch Blvd and Highland Knolls Road/Bay Hill Blvd. Additional services include coordination with adjacent outside mainlane widening segment designers, preparing Illumination design for relocating roadway lighting impacted by proposed ramps and frontage road improvements, and preparation of Right-of-Way (ROW) Maps for Proposed ROW acquisition.

Optional additional service includes preparation of ITS and CTMS design for relocating existing ITS and CTMS impacted by proposed ramps and frontage road improvements.

### SURVEYING SERVICES

#### Survey Control and Right-of-Way Mapping (EHRA)

Surveyor will perform additional surveying services for survey control and right-of-way mapping services (15.1.1) in substantial compliance with the Texas Department of Transportation (TxDOT) to recover and verify existing control, establish the existing right-of-way, and prepare the final right-of-way maps, parcel maps, and parcel descriptions to define the boundaries for parcels of land required for widening the existing right-of-way of SH-99 required for the final frontage roadway design. This will involve surveying the existing east right-of-way of SH-99 and adjacent property from 100-feet north of Cinco Ranch Boulevard to the intersection of the north bound exit ramp 100-feet south of Bay Hill Boulevard (approximately 4,600 linear feet).

The Scope of Services is more specifically described as follows:

1. Abstracting services to obtain records for the existing east right-of-way of SH-99 within the project limits, the existing property adjacent to the east right-of-way of SH-99, the current ownership of the adjacent property, and provide title reports with easements for tracts of land subject to parcel takings. Prepare an abstract map for submittal to TxDOT with copies of records and checklist.
2. Obtain copies of current TxDOT survey control datasheets for SH-99 Stations H-16, H-17, H-18, H-19, and H-20 established by BGE, Inc. in November 2020. Prepare a survey control index map based on the recovery and verification of the TxDOT survey control conducted by EHRA May, 2021 for submittal to TxDOT with copies of the checklist. Surveyor will not prepare datasheets for

# ATTACHMENT A

this project but will provide copies of the current TxDOT survey control datasheets for SH-99 Stations H-16, H-17, H-18, H-19, and H-20 established by BGE, Inc. in November 2020, if requested.

3. Perform field and office surveying necessary to recover and verify the existing east right-of-way for SH-99 and the existing boundary lines for the property adjacent to the east right-of-way for the project limits. Prepare a preliminary right-of-way map set for submittal to TxDOT with copies of the checklist.
4. Upon approval of the right-of-way map and the provided proposed right-of-way line for the project limits, prepare an initial parcel map set depicting the parcels of land required for widening SH-99 and submit to TxDOT with copies of the checklist.
5. Upon approval of the initial parcel map, prepare a final right-of-way set for the project limits depicting the parcels of land required for widening SH-99. This set shall include a cover sheet, parcel index sheets, survey control index and swing tie sketches, and the final alignment maps with the parcels of land required for the project limits. Submit to TxDOT with copies of the checklist.
6. Prepare a separate parcel map on 8 ½" x 11" sheet size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
7. Prepare a separate parcel metes and bounds description on 8 ½" x 11" paper size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
8. Prepare a separate parcel boundary closure report on 8 ½" x 11" paper size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
9. Prepare a survey report for the final ROW and parcel survey on 8 ½" x 11" paper size for submittal to TxDOT.
10. Upon approval of the final parcels required for the project limits, perform the necessary calculations and field surveying to stake the proposed ROW and parcel boundary corners. Provide records for the field stakeout for submittal to TxDOT.
11. Additional Services No. 1 will provide time and materials required to perform any revisions required by TxDOT beyond the routine and customary comments to products submitted under Tasks 1 through 10.
12. Additional Services No. 2 will provide time and materials for a current recovery and verification of the survey control for the project described under Task 2 should TxDOT require it.

## Design Survey – Bridge Widening at Cinco Ranch Blvd and Highland Knolls Dr/Bayhill Blvd (SAM)

The Surveyor will perform the following tasks for four (4) existing bridge locations along SH 99 crossings at Cinco Ranch Blvd and Highland Knolls Dr/Bayhill Blvd:

# ATTACHMENT A

1. Bridge Length, width, bridge joint, limit of wingwall and wingwall parapet, center line of column bent and abutment backwall location, top of bent cap elevation along center line and abutment cap elevation.
2. Bridge deck thickness and wearing surface thickness if any.
3. Limit of approach slab and thickness.
4. Deck elevations at the edge of deck along outside of existing bridge and along the centerline/profile grade of bridge.
5. Beginning and end of each span at the midpoint of each span.
6. Low chord at the four corners and the center of deck, Minimum vertical clearance of bridge & location of vertical clearance point.
7. Bridge rail type, dimension and height, and bridge rail transition to three beams.
8. Limits and type of riprap and riprap slope.
9. Front corners and face of backwall at abutment caps on all 4 corners of the bridge.
10. All Bents.
11. Toe of rail at abutments/bents (at top of deck).
12. Vertical clearance measurements over cross street and U-turn lanes.
13. Approximately thirty-seven (37) geotechnical borings (once Geotech is complete)
14. Top of curb and gutter line on Highland Knolls and Cinco Ranch under outside edge of bridge.

The surveyor will provide the following deliverables:

1. Microstation OpenRoads 3D file for each bridge.
2. POD LiDAR file for each bridge.
3. Surveyors Report (PDF)
4. Field Notes (PDF)

## **DESIGN SERVICES**

### Project Management

The Engineer shall provide the following additional project management services:

1. Direct and coordinate the various elements and activities associated with developing the revisions of the roadway design.
2. Additional coordination with government agencies including Fort Bend County and TxDOT for design revisions.

# ATTACHMENT A

3. Submit progress reports as needed and provide ongoing quality assurance and quality control to ensure completeness of product and compliance with the Fort Bend County and TxDOT procedures.

## Roadway Design and Miscellaneous Roadway

The Engineer shall provide the following additional roadway design services for proposed ramps:

1. Identifying additional items, including but not limited to, existing ramps and mainlane portions to be removed. These additional removal items will be included in originally scoped removal plan sheets or additional sheets (if necessary).
2. Prepare typical sections for all proposed and existing roadways and structures. Typical sections must include width of travel lanes, shoulders, outer separations, border widths, curb offsets, and ROW. The typical section must also include Proposed Profile Grade Line (PGL), centerline, pavement design, longitudinal joints, side slopes, sodding or seeding limits, concrete traffic barriers and sidewalks, if required, station limits, common proposed and existing structures including retaining walls, existing pavement removal, riprap, limits of embankment and excavation, etc.
3. Provide roadway plan and profile drawings for the proposed entrance and exit ramps. The drawings must consist of a planimetric file of existing features and files of the proposed improvements.

Plan view must contain the following items:

- a. Calculated roadway centerlines for mainlanes and cross streets, as applicable. Horizontal control points must be shown.
- b. The alignments must be calculated using Geopak or OpenRoads horizontal geometry tools. Pavement edges for all improvements, lane and pavement width dimensions.
- c. Proposed structure locations, lengths, and widths.
- d. Direction of traffic flow on all roadways.
- e. Lane lines and arrows indicating the number of lanes must also be shown.
- f. Drawing scale shall be 1"=100',
- g. Begin and end superelevation transitions and cross slope changes, and Limits of riprap, block sod, and seeding.
- h. ROW Lines, Radii call outs, curb location, Concrete Traffic Barrier (CTB), guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.

Profile view must contain the following items:

# ATTACHMENT A

- a. Calculated profile grade for proposed ramps (cite direction) and cross streets. Vertical curve data, including “K” values must be shown. The profiles must be calculated using Geopak or OpenRoads vertical geometry tools.
  - b. Existing and proposed profiles along the proposed centerline of the mainlanes.
  - c. Drawing vertical scale to be 1”=10’.
4. Develop an earthwork analysis for the proposed ramps to determine cut and fill quantities and provide final design cross sections at 100 feet intervals. Cross sections must be created from the 3D corridor model and must be delivered in the standard TxDOT format on 11”x17” sheets or roll plots and electronic files. The Engineer shall provide all templates and corridors used to generate the design cross sections. Annotation shall include at a minimum existing and proposed ROW, side slopes (front & back), profiles, etc.
  5. Prepare Traffic Control Plans (TCP) including TCP typical sections, for the addition of Ramp Reversals. Interface and coordinate phases of work, including the TCP, with adjacent Engineers.

As part of the TCP for the Ramp Reversals, the Engineer shall:

- a. Provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signals, etc.) to be used to handle traffic during each construction sequence.
- b. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing access. The Engineer shall notify TxDOT in the event existing access must be eliminated, and must receive approval from TxDOT prior to any elimination of existing access.
- c. Design temporary drainage to replace existing drainage disturbed by construction activities or to drain detour pavement. The Engineer shall show horizontal and vertical location of culverts and required cross sectional area of culverts.
- d. Prepare each TCP in coordination with the County and TxDOT. The TCP must include interim signing for every phase of construction. Interim signing must include regulatory, warning, construction, and route signs. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.
- e. Maintain continuous access to abutting properties during all phases of the TCP. The Engineer shall develop a list of each abutting property along its alignment.

# ATTACHMENT A

- f. Describe the type of work to be performed for each phase of sequence of construction and any special instructions (e.g. storm drain, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
  - g. Include the work limits, the location of channelizing devices, positive barrier, location and direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of construction.
6. Independently develop and report quantities and construction cost estimate necessary to construct the contract in standard TxDOT bid format at the specified milestones and Final PS&E submittals. The estimate shall be provided at each milestone submittal.

## Drainage Design

The Engineer shall perform a storm sewer analysis and design for the proposed Ramps. The storm sewer design will include inlet design and swales located behind the curb. The storm sewer design will be performed using Bentley Geopak Drainage software. The Engineer shall provide the following services:

1. Design and analyze storm drains using Geopak Drainage software.
2. Size inlets, laterals, trunk line and outfall. Develop Geopak Drainage models to size the storm sewer systems. Identify trunk lines that minimize the interference with the passage of traffic or incur damage to the highway with the TxDOT Hydraulic Design Manual, District criteria and any specific guidance provided by County and TxDOT.
3. Determine hydraulic grade line starting at the outfall for each storm drain design. Use the design water surface elevation of the outfall and receiving storm sewer systems as the starting basis (tailwater) for the design of the proposed storm sewer system.
4. Identify areas requiring trench protection, excavation, shoring, and de-watering.
5. Prepare the PS&E package in accordance with the applicable requirements of TxDOT's specifications, standards, and manuals, including the PS&E Preparation Manual. Incorporate the ramp storm sewer design in the following sheets and documents, as appropriate:
  - a. Overall Drainage Area Map
  - b. On-Site Drainage Area Maps
  - c. Storm Sewer Hydraulic Computations Sheets
  - d. Storm Sewer Plan & Profile Sheets

# ATTACHMENT A

- e. Storm Sewer Lateral Sheets
- f. Drainage Quantity Summary Sheets
- g. Special and Miscellaneous Drainage Detail Sheets
- h. Drainage Standard Sheets
- i. All other relevant sheets

## Traffic

The Engineer shall prepare drawings, specifications, and details for all signs necessary for the proposed Ramps and modifications to the mainlanes. The Engineer shall:

1. Prepare sign detail sheets for large guide signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide a summary of small signs to be removed, relocated, or replaced.
2. Designate the shields to be attached to guide signs.
3. Illustrate and number the proposed signs on plan sheets.
4. Select each sign foundation from TxDOT Standards.

The Engineer shall detail permanent pavement markings and channelization devices on plan sheets for the addition of proposed Ramps. The Engineer shall coordinate with TxDOT (and other Engineers as required) for overall pavement marking strategies.

## Illumination

The Engineer shall refer to TxDOT's *Highway Illumination Manual* and other deemed necessary State approved manuals for design of continuous lighting for all conventional lighting. The Engineer shall:

1. Provide a relocation design of the illumination for all existing Illumination poles, foundations, ground boxes, etc in conflict with the proposed improvements.
2. The Engineer shall prepare circuit wiring diagrams showing the number of luminaries on each circuit, electrical conductors, length of runs, service pole assemblies.
3. The Engineer shall coordinate with local power company to determine the locations and design of proposed electrical services within the project area. The Engineer shall incorporate the appropriate illumination and electrical state standards into the plans.

Computerized Transportation Management Systems (CTMS) and Intelligent Transportation Systems (ITS) (Optional Additional Service)

# ATTACHMENT A

1. Computerized Transportation Management Systems (CTMS), Intelligent Transportation System (ITS) / Tolling Systems are present and may require adjustment as part of the design. The Engineer will be required to prepare plans for the relocations of various CTMS, ITS, Tolling and Fiber Systems located within the Project Limits.

Services may include providing Fort Bend County with PS&E design documentation for the construction and/or relocation of various components of the CTMS and interconnections with TxDOT's existing fiber optic cable network system within the project limits.

The proposed CTMS relocations plans will consider the continuous CTMS device operations requirements. If required, the final PS&E design shall contain provisions for the temporary relocation of each trunk line. For the CTMS system, Closed Circuit Televisions ("CCTV") will be replaced if the proposed roadway interferes with the current location as directed by Fort Bend County/TxDOT.

Each CTMS device (CCTV, RVSD, Bluetooth Readers) will require 120/240 single phase power. The demarcation point will be the terminal blocks on the load side of the disconnect.

This proposal addresses the CTMS plan set development over the entire interchange limits, encompassing various design sections of the project. If needed, this CTMS plan set can be broken out into the various design sections for insertion into separate construction document packages. This request will be executed in the Final Plan set only.

Below is a list of tasks which will be performed by the Engineer:

Fiber Optic Communications and Duct Bank Design:

The Engineer will provide the design of a communication system consisting of fiber duct bank(s) and a fiber optic cable system along SH 99, where applicable. This communication system will consist of single-mode fiber optic cable, multi-mode fiber optic cable, fiber splices, splice enclosures, High-Density Polyethylene (HDPE) conduit, Polyvinyl Chloride (PVC) conduit, Rigid Metal conduit, ground boxes, junction boxes, duct bank, and various fiber termination and connection methods. This includes:

- a. Review of existing record drawings, utility records, aerial photography, and complete corridor walk-throughs to identify and document existing conditions and constraints.
- b. Design and layouts of fiber optic trunk line plans in accordance with the requirements of TxDOT re-establishing connections to existing Closed Circuit Television (CCTV) camera and Dynamic Message Signs (DMS)

# ATTACHMENT A

along the corridor. It is expected that the proposed duct bank alignment plans will be plan view with a typical proposed section and profile will be shown at roadway crossings.

- c. Assimilation of all applicable TxDOT standard and detail sheets

Each component selected for network communication system design shall be approved by TxDOT. Specifications for each system component shall be provided by TxDOT as well as an estimate for the cost of construction for the designed communication system.

## Relocation Design of Existing CTMS Devices:

The Engineer will provide the design for the relocation of existing CTMS devices that are considered reusable or salvageable. The Engineer will coordinate with the device owner to determine if the existing device shall be relocated to a proposed site within the project limits or salvaged and removed from service. This includes:

- a. Determining the location of each existing device and if relocation is warranted by the proposed roadway/bridge widening and construction,
- b. Structural and foundation designs as needed based on the type of device and field conditions,
- c. Design of power and communications connections for each relocated device,
- d. Assimilation of all applicable TxDOT standards and details

The design, as it pertains to the construction sequence, will consider the continuous operations of power selected devices. The design of temporary power and communication connections may be considered if the device is required for public safety messages and/or traffic monitoring.

## Proposed CTMS Device Design:

The Engineer will provide the design of Closed Circuit Televisions (CCTV) cameras within the project's design limits. This includes:

- a. Design and layouts of CCTV in accordance with the requirements of TxDOT guidelines.
- b. Structural and foundation designs as needed based on the field conditions.

## ATTACHMENT A

- c. Design of power and communications connections for each proposed device.
- d. Assimilation of all applicable TxDOT standards and details.
- e. All proposed CCTV shall be compatible with the TxDOT's network communications system.

All proposed CTMS devices being considered for this project shall be designed in accordance with the latest TxDOT specifications and guidelines. The Engineer will coordinate with Fort Bend County and TxDOT to determine the proposed device type, operational requirements, and installation procedures.

# ATTACHMENT A

## Supplemental Fee Summary

### 2020 Fort Bend County Mobility Program

#### Extension of SH 99 NB Frontage Road from Cinco Ranch Blvd to Bay Hill Blvd intersections

#### Fort Bend County Project No. 20303a

Sponsor: Fort Bend County

Description: Proposed SH 99 NB Frontage Roads from Cinco Ranch to Bay Hill intersections

#### **Basic Services**

Supplemental Design (Lump-Sum)	\$134,711.00
<b>Subtotal</b>	<b>\$ 134,711.00</b>

#### **Additional Services**

Survey Control and Right-of-Way Mapping (EHRA) (Lump-Sum)	\$ 19,275.00
Design Survey - Bridge Widening (SAM) (Lump Sum)	\$ 25,600.00
<b>Subtotal Additional Services</b>	<b>\$ 44,875.00</b>

#### **Optional Additional Services**

ITS and CTMS Relocation Design (if necessary)	\$23,952.00
Survey Control and Right-of-Way Mapping Additional Services (if necessary)	\$3,040.00
Recovery and Verification of Existing Survey Control (if necessary)	\$2,715.00
<b>Subtotal Additional Services</b>	<b>\$29,707.00</b>

<b>PROJECT GRAND TOTAL</b>	<b>\$ 209,293.00</b>
----------------------------	----------------------

# ATTACHMENT A

## 2020 Fort Bend County Mobility Program

Fort Bend County Project No. 20303a

Sponsor: Fort Bend County

Extension of SH 99 NB Frontage Road from Cinco Ranch Blvd to Bay Hill Blvd intersections

Consultant: Cobb, Fendley & Associates, Inc.

Task	Principal	Project Manager	Senior Engineer	Project Engineer III	Project Engineer I	Senior Technician	Technician	Total Labor Hours and Costs	Number of Sheets	Hours Per Sheet
<b>Labor Hourly Rate</b>	\$330.00	\$307.00	\$275.00	\$199.00	\$142.00	\$164.00	\$121.00			
<b>Project Management</b>										
Additional Coordination with Adjacent Mainlane Widening Consultants		24	10	10				44		N/A
Hours Subtotal	0	24	10	10	0	0	0	44		
Total Labor Costs	\$0.00	\$7,368.00	\$2,750.00	\$1,990.00	\$0.00	\$0.00	\$0.00	\$12,108.00		
<b>Roadway Design and Miscellaneous Roadway</b>										
Removal Plan										
Removal for Existing Ramps and Mainlane Shoulder Removal	2	6	2	8	8	6	8	40	4	10
Typical Sections										
Existing Typical Sections for Ramps	1	1	1	1	1	2	3	10	1	10
Proposed Typical Sections for Ramps	1	1	1	2	4	3	3	15	1	15
Roadway Design										
Ramp Plan and Profile Sheets (1"=100')	2	4	2	12	14	12	12	58	3	19
Cut and Fill Quantities										
Addition of Ramps in Cross Sections and 3D/OpenRoads Model		2	2	14	14			32		N/A
Traffic Control Plans (TCP)										
Addition of Ramp Reversals in Overall Phasing Layout	1	2	1	2	2	2	2	12	1	12
Addition of Ramp Reversals in Construction Sequencing		1		2	2	1	2	8	1	8
Addition of Ramp Reversal in TCP Typical Sections and Layouts	2	3	2	8	10	6	8	39	4	10
Plan Preparation										
30%, 60%, 90%, 100% Milestones	1	2	2	4	5	4	5	23		N/A
Compute and Tabulate Quantities and Estimate										
30%, 60%, 90%, 100% Milestones	2	2	2	5	8		4	23		N/A
Hours Subtotal	12	24	15	58	68	36	47	260		
Total Labor Costs	\$3,960.00	\$7,368.00	\$4,125.00	\$11,542.00	\$9,656.00	\$5,904.00	\$5,687.00	\$48,242.00		
<b>Drainage</b>										
Storm Drains										
Analyze and Design Storm Drains for Ramps (Geopak Drainage)		4	4	10	12			30		N/A
Plans, Specifications, and Estimates (PS&E) for Hydraulics										
Summary of Storm Sewer Quantities for Ramps		1		3	3		2	9	1	9
Addition of Ramps to Interior Drainage Area Maps	1	2	1	6	6	4	5	25	3	8
Addition of Ramps to Drainage Plan and Profile Sheets	2	5	2	6	6	5	6	32	3	11
Hours Subtotal	3	12	7	25	27	9	13	96		
Total Labor Costs	\$990.00	\$3,684.00	\$1,925.00	\$4,975.00	\$3,834.00	\$1,476.00	\$1,573.00	\$18,457.00		

# ATTACHMENT A

Task	Principal	Project Manager	Senior Engineer	Project Engineer III	Project Engineer I	Senior Technician	Technician	Total Labor Hours and Costs	Number of Sheets	Hours Per Sheet
<b>Traffic</b>										
Signing										
Addition of Ramps and Mainlane Modifications to Summary of Small Signs		1	1	1	2	1	2	8	1	8
Addition of Ramps and Mainlane Modifications to Signing Quantities		1	1	1	2	1	2	8	1	8
Pavement Markings										
Ramps and Mainlane Signing and Pavement Marking Layouts	1	3	2	8	8	8	10	40	4	10
Houston Subtotal	1	5	4	10	12	10	14	56		
Total Labor Costs	\$330.00	\$1,535.00	\$1,100.00	\$1,990.00	\$1,704.00	\$1,640.00	\$1,694.00	\$9,993.00		
<b>Illumination Relocation Design</b>										
Data Collection										
Field Investigation / Site Visit				8	8			16		N/A
As-Built Research			2	4	8			14		N/A
Conflict Resolution with Current Widening Project		4	4					8		N/A
Removal Sheets			5	16	32			53	3	18
Illumination Plan Sheets			10	30	60			100	3	33
Circuit Diagrams			5	12	32			49	1	49
Voltage Drop Calculations			3	6	12			21	1	21
Hours Subtotal	0	4	29	76	152	0	0	261		
Total Labor Costs	\$0.00	\$1,228.00	\$7,975.00	\$15,124.00	\$21,584.00	\$0.00	\$0.00	\$45,911.00		
<b>TOTAL HOURS</b>	<b>16</b>	<b>69</b>	<b>65</b>	<b>179</b>	<b>259</b>	<b>55</b>	<b>74</b>	<b>717</b>		
<b>ITS and CTMS Relocation Design (if necessary)</b>										
Data Collection										
Field Investigation / Site Visit				8	8			16	3	5
Agency Coordination			12	24				36	1	36
ITS Equipment Relocation Sheets			10	18	48			76	3	25
Hours Subtotal	0	0	22	50	56	0	0	128		
Total Labor Costs	\$0.00	\$0.00	\$6,050.00	\$9,950.00	\$7,952.00	\$0.00	\$0.00	\$23,952.00		
<b>TOTAL HOURS</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>50</b>	<b>56</b>	<b>0</b>	<b>0</b>	<b>128</b>		

Tasks Breakdown	Total
Project Management	\$12,108.00
Roadway Design and Miscellaneous Roadway	\$48,242.00
Drainage	\$18,457.00
Traffic	\$9,993.00
Illumination Relocation Design	\$45,911.00
<b>Basic Services Total</b>	<b>\$134,711.00</b>
ITS and CTMS Relocation Design (if necessary)	\$23,952.00
<b>Optional Additional Services Total</b>	<b>\$23,952.00</b>



**DESIGN SCHEDULE**  
**SH 99 NB FRONTAGE ROAD**  
**(FROM CINCO RANCH BLVD TO BAYHILL BLVD)**  
**CSJ 3510-04-072**

**ATTACHMENT A**

Project No. 20303a  
 PO Number 201121

Activity Name	Original Duration	Start	Finish	2021												2022												2023												2024												2025												2026											
				J	J	A	S	O	N	J	F	A	J	J	A	S	O	D	J	F	A	J	J	A	S	O	D	J	F	A	J	J	A	S	O	D	J	F	A	J	J	A	S	O	D	J	F	A	J	J	A	S	O	D	J	F	A	J	J	A	S	O													
<b>SH 99 Northbound Frontage Road Extension</b>	<b>1380</b>	<b>22-Jun-21</b>	<b>05-Oct-26</b>	[Gantt bars for 2021-2022]												[Gantt bars for 2022-2023]												[Gantt bars for 2023-2024]												[Gantt bars for 2024-2025]												[Gantt bars for 2025-2026]																							
<b>PRELIMINARY DESIGN PHASE</b>	<b>746</b>	<b>22-Jun-21</b>	<b>30-Apr-24</b>	[Gantt bars for 2021-2022]												[Gantt bars for 2022-2023]												[Gantt bars for 2023-2024]												[Gantt bars for 2024-2025]												[Gantt bars for 2025-2026]																							
Notice to proceed from FBC	0	22-Jun-21		[Gantt bar]																																																																							
Project Management and Coordination	604	06-Jul-21	27-Oct-23	[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]																							
Topographic Survey including establishing existing ROW	40	06-Jul-21	30-Aug-21	[Gantt bar]																																																																							
Geotechnical Investigation	472	06-Jul-21	26-Apr-23	[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]																							
Environmental Investigation	604	06-Jul-21	27-Oct-23	[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]																							
Hydrologic & Hydraulic Study and Review	595	06-Jul-21	16-Oct-23	[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]												[Gantt bar]																							
Preliminary Schematic Design with Alternatives	106	06-Jul-21	30-Nov-21	[Gantt bar]																																																																							
Receive Schematic Comments from TxDOT	0	15-Mar-23														[Gantt bar]																																																											
Address TxDOT Comments	30	16-Mar-23	26-Apr-23													[Gantt bar]																																																											
Public Meeting	0	05-Oct-23																										[Gantt bar]																																															
Address Final Comments (From Public Meeting)	10	09-Oct-23	20-Oct-23																									[Gantt bar]																																															
Submit Final Schematic	0		30-Nov-23																																					[Gantt bar]																																			
Environmental Study Approval	0		30-Apr-24																																					[Gantt bar]																																			
<b>DESIGN SURVEY AND ROW MAPPING</b>	<b>229</b>	<b>10-May-24</b>	<b>27-Mar-25</b>																																					[Gantt bars for 2024-2025]												[Gantt bars for 2025-2026]																							
Abstract ROW Map Submittal	0		10-May-24																																					[Gantt bar]																																			
Abstract Map Review Period (FBC)	11	13-May-24	27-May-24																																					[Gantt bar]																																			
Abstract Map Review Period (TxDOT)	24	13-May-24	13-Jun-24																																					[Gantt bar]																																			
Preliminary Submittal to TxDOT	0		21-Jun-24																																					[Gantt bar]																																			
TxDOT Review Period	24	24-Jun-24	25-Jul-24																																					[Gantt bar]																																			
Initial ROW Map Submittal to TxDOT	0		02-Aug-24																																					[Gantt bar]																																			
TxDOT Review Period	24	05-Aug-24	05-Sep-24																																					[Gantt bar]																																			
Prepare Metes and Bounds Descriptions	24	22-Aug-24	24-Sep-24																																					[Gantt bar]																																			
Final ROW Map Submittal to TxDOT	0		24-Sep-24																																					[Gantt bar]																																			
TxDOT Review Period	24	25-Sep-24	28-Oct-24																																					[Gantt bar]																																			
ROW Acquisition	132	25-Sep-24	27-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Design Survey for Bridge Widening	35	15-Jul-24	30-Aug-24																																					[Gantt bar]																																			
<b>UTILITY RELOCATION (BY OTHERS)</b>	<b>235</b>	<b>03-Jun-24</b>	<b>25-Apr-25</b>																																					[Gantt bars for 2024-2025]												[Gantt bars for 2025-2026]																							
Utility Relocation Designs	50	03-Jun-24	09-Aug-24																																					[Gantt bar]																																			
Utility Relocations	130	28-Oct-24	25-Apr-25																																					[Gantt bar]												[Gantt bar]																							
<b>DESIGN PHASE</b>	<b>367</b>	<b>03-Nov-23</b>	<b>31-Mar-25</b>																																					[Gantt bars for 2023-2024]												[Gantt bars for 2024-2025]																							
Project Management and Coordination	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Roadway Design	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Hydraulic Design	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Traffic Control Plans (TCP)	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Miscellaneous Details, General Notes, Cover, Etc	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Compute and Tabulate Quantities	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Utility Engineering	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Design Cross Sections and Earthwork	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Plan Preparation	367	03-Nov-23	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Signing and Pavement Marking Drawings	266	25-Mar-24	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Storm Water Pollution Prevention Plan (SW3P)	266	25-Mar-24	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
Standard Details	266	25-Mar-24	31-Mar-25																																					[Gantt bar]												[Gantt bar]																							
<b>PROJECT SUBMITTALS</b>	<b>266</b>	<b>22-Mar-24</b>	<b>31-Mar-25</b>																																					[Gantt bars for 2024-2025]												[Gantt bars for 2025-2026]																							
Project Submittal (30%)	0		22-Mar-24																																					[Gantt bar]																																			
TxDOT and FBC Review Period - 30% Submittal	40	25-Mar-24	03-May-24																																					[Gantt bar]																																			
Project Submittal (60%)	0		26-Jul-24																																					[Gantt bar]																																			
TxDOT and FBC Review Period - 60% Submittal	22	29-Jul-24	27-Aug-24																																					[Gantt bar]																																			
Project Submittal (90%)	0		15-Nov-24																																					[Gantt bar]																																			
TxDOT and FBC Review Period - 90% Submittal	22	18-Nov-24	17-Dec-24																																					[Gantt bar]																																			
Project Submittal (95%)	0		31-Jan-25																																					[Gantt bar]																																			
TxDOT and FBC Review Period - 95% Submittal	22	03-Feb-25	04-Mar-25																																					[Gantt bar]																																			
Project Submittal (100%)	0		31-Mar-25																																					[Gantt bar]																																			
<b>CONSTRUCTION PHASE</b>	<b>277</b>	<b>12-Sep-25</b>	<b>05-Oct-26</b>																																					[Gantt bars for 2025-2026]												[Gantt bars for 2026-2027]																							
Potential Letting Date	0		12-Sep-25																																					[Gantt bar]																																			
Construction Phase Services	277	12-Sep-25	05-Oct-26																																					[Gantt bar]												[Gantt bar]																							

█ Actual Level of Effort    █ Remaining Work  
█ Actual Work                █ Critical Remaining Work

April 30, 2024

**VIA E-MAIL: [JMahommed@cobbhendley.com](mailto:JMahommed@cobbhendley.com)**

Mr. Javed Mahommed, P.E.  
Principal  
Cobb Fendley & Associates, Inc.  
22316 Grand Corner Drive, Suite 100  
Katy, Texas 77494

Re: Proposal for Additional Surveying Services for Texas Department of Transportation  
Survey Control and Right-of-Way Mapping Services  
for SH-99 North Bound Frontage Road from Cinco Ranch Boulevard to Bay Hill Boulevard  
Fort Bend County Precinct 3 Project No. 20303a  
EHRA Project No. 211-507-00 (41)

Dear Mr. Mahommed,

At your request, Edminster, Hinshaw, Russ & Associates, Inc. d/b/a EHRA (Surveyor) has prepared this proposal to provide professional surveying services for Cobb Fendley & Associates, Inc. (Client) as referenced above, in accordance with the following description of professional services, terms and conditions:

## **SCOPE OF SERVICES**

### Additional Surveying Services

Surveyor will perform additional surveying services for survey control and right-of-way mapping services (15.1.1) in substantial compliance with the Texas Department of Transportation (TxDOT) to recover and verify existing control, establish the existing right-of-way, and prepare the final right-of-way maps, parcel maps, and parcel descriptions to define the boundaries for parcels of land required for widening the existing right-of-way of SH-99 required for the final frontage roadway design. This will involve surveying the existing east right-of-way of SH-99 and adjacent property from 100-feet north of Cinco Ranch Boulevard to the intersection of the north bound exit ramp 100-feet south of Bay Hill Boulevard (approximately 4,600 linear feet). The Scope of Services is more specifically described as follows:

1. Abstracting services to obtain records for the existing east right-of-way of SH-99 within the project limits, the existing property adjacent to the east right-of-way of SH-99, the current ownership of the adjacent property, and provide title reports with easements for tracts of land subject to parcel takings. Prepare an abstract map for submittal to TxDOT with copies of records and checklist.

# ATTACHMENT A

Mr. Javed Mahommed, P.E.

April 30, 2024

Page 2

2. Obtain copies of current TxDOT survey control datasheets for SH-99 Stations H-16, H-17, H-18, H-19, and H-20 established by BGE, Inc. in November 2020. Prepare a survey control index map based on the recovery and verification of the TxDOT survey control conducted by EHRA May, 2021 for submittal to TxDOT with copies of the checklist. Surveyor will not prepare datasheets for this project but will provide copies of the current TxDOT survey control datasheets for SH-99 Stations H-16, H-17, H-18, H-19, and H-20 established by BGE, Inc. in November 2020, if requested.
3. Perform field and office surveying necessary to recover and verify the existing east right-of-way for SH-99 and the existing boundary lines for the property adjacent to the east right-of-way for the project limits. Prepare a preliminary right-of-way map set for submittal to TxDOT with copies of the checklist.
4. Upon approval of the right-of-way map and the provided proposed right-of-way line for the project limits, prepare an initial parcel map set depicting the parcels of land required for widening SH-99 and submit to TxDOT with copies of the checklist.
5. Upon approval of the initial parcel map, prepare a final right-of-way set for the project limits depicting the parcels of land required for widening SH-99. This set shall include a cover sheet, parcel index sheets, survey control index and swing tie sketches, and the final alignment maps with the parcels of land required for the project limits. Submit to TxDOT with copies of the checklist.
6. Prepare a separate parcel map on 8 ½" x 11" sheet size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
7. Prepare a separate parcel metes and bounds description on 8 ½" x 11" paper size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
8. Prepare a separate parcel boundary closure report on 8 ½" x 11" paper size for each individual parcel of land required for submittal to TxDOT with copies of the checklist.
9. Prepare a survey report for the final right-of-way and parcel survey on 8 ½" x 11" paper size for submittal to TxDOT.
10. Upon approval of the final parcels required for the project limits, perform the necessary calculations and field surveying to stake the proposed right-of-way and parcel boundary corners. Provide records for the field stakeout for submittal to TxDOT.
11. Additional Services No. 1 will provide time and materials required to perform any revisions required by TxDOT beyond the routine and customary comments to products submitted under Tasks 1 through 10.



# ATTACHMENT A

Mr. Javed Mahommed, P.E.

April 30, 2024

Page 3

12. Additional Services No. 2 will provide time and materials for a current recovery and verification of the survey control for the project described under Task 2 should TxDOT require it.

The services referenced above will be performed in conjunction with the original Proposal for Topographic Surveying Services dated March 8, 2021, and revised April 12, 2021.

## COMPENSATION

Surveyor proposes to provide the above-described services to Client on an **hourly basis, plus reimbursable expenses, for a total estimated fee of \$25,030.00, as shown on the attached man-hour projection sheet. This fee is to be combined with the original contract fee of \$59,975.00, for a total fee of \$85,005.00. Should we discover any unforeseen problems not routinely or customarily associated with the above-described Scope of Services, we will notify you of the circumstances and provide a separate proposal for Additional Services.** Surveyor will not proceed with any Additional Services without prior written authorization by Client. The cost of labor, materials, and equipment for performing the above Scope of Services includes deed research for the boundary, printing, and delivery of copies of the drawing, and metes and bounds description.

## PAYMENT

Surveyor shall submit invoice(s) for services rendered and for reimbursable expenses incurred in accordance with the attached Schedule of Hourly Rates. Client shall make prompt payment(s) in response to Surveyor's invoice(s).

Additional work beyond the Scope of Services described above will be considered an Additional Service and will subsequently be provided in accordance with the attached Schedule of Hourly Rates or negotiated to a fixed fee. Surveyor will not proceed with any Additional Services without prior written authorization by Client. Any Additional Services not contemplated under this Agreement can only be provided by a separate proposal or change order.

If all terms and provisions are acceptable to you, please signify so by executing this document in the appropriate space provided. Please retain one (1) executed copy for your records and return one (1) executed copy to the undersigned. We will consider receipt of this executed document as our authorization to proceed.



# ATTACHMENT A

Mr. Javed Mahommed, P.E.

April 30, 2024

Page 4

We thank you for the opportunity to provide professional surveying services and we look forward to working with you on this project.

## CLIENT AND SURVEYOR AGREE AS SET FORTH ABOVE.

CLIENT

SURVEYOR

**COBB FENDLEY & ASSOCIATES, INC.**

**EDMINSTER, HINSHAW, RUSS  
& ASSOCIATES, INC. d/b/a EHRA**

By: \_\_\_\_\_

Javed Mahommed, P.E.  
Principal

By: \_\_\_\_\_

*Robert L. Boelsche*

Robert L. Boelsche, R.P.L.S.  
Sr. Survey Project Manager  
Surveying and Mapping Services

Effective Date: \_\_\_\_\_

Date: 04 / 30 / 2024

By: \_\_\_\_\_

*Charlie Kennedy*

Charles Kennedy, Jr., R.P.L.S.  
Sr. Vice President | Practice Area Leader  
Surveying and Mapping Services

Date: 04 / 30 / 2024

RLB/ol

Attachments: Man-Hour Projections  
2024 Schedule of Hourly Rates





# ATTACHMENT A

## EHRA ENGINEERING 2024 SCHEDULE OF HOURLY RATES

<b>Engineering, Design and Production</b>	<b>2024</b>	<b>Construction Phase Services</b>	<b>2024</b>
Engineer I/II	\$ 130	Construction Inspector I	\$ 120
Engineer III	140	Construction Inspector II	130
Project Engineer	150	Construction Inspector III	145
Assistant Project Manager	175	Contract Administrator	100
Project Manager	200	Contract Administration Manager	125
Senior Project Manager	250	Assistant Construction Project Manager	130
Practice Area Leader - Engineering	275	Construction Project Manager	180
Principal	325	Senior Construction Project Manager	215
CAD Technician I/II	115	Practice Area Leader - Construction Phase Services	275
CAD Technician III	125		
CAD Technician IV	135	<b>Planning and Visioning</b>	
Design CAD Technician I	120	Land Planner I/II	\$ 130
Design CAD Technician II	130	Land Planner III	145
Senior Design CAD Technician	150	Land Planner IV	170
Project Coordinator	150	Planning Project Manager	180
Assistant Design and Production Manager	170	Senior Planning Project Manager	200
Design and Production Manager	205	Platting Coordinator	130
GIS Technician I/II	115	Senior Platting Coordinator	150
GIS Technician III	125	Platting Manager	180
GIS Specialist	135	Practice Area Leader - Planning and Visioning	275
GIS Manager	170		
GIS Director	180	<b>Landscape Architecture</b>	
		Project Landscape Designer	\$ 125
<b>Surveying</b>		Assistant Landscape Architecture Project Manager	145
Survey Rod Person	\$ 60	Landscape Architecture Project Manager	175
Survey Instrument Person	70	Registered Landscape Architect	190
Survey Party Chief	100	Practice Area Leader - Landscape Architecture	275
Survey Field Supervisor	145		
1 Person GPS/Robotic Crew	150	<b>General</b>	
CAD Operator	105	Expert Witness	\$ 350
Survey CAD Technician	115	Accounting Administrator	130
Senior Survey CAD Technician	140	Bond Issue Supervisor	165
Survey Project Manager/RPLS	185	Bond Issue Coordinator	140
Senior Survey Project Manager/RPLS	240	Administrative Assistant	105
Practice Area Leader - Surveying	275	Clerical	90

# ATTACHMENT A



June 26, 2024

Mr. Javed Mahommed, P.E.  
Principal | Transportation Senior Project Manager  
CobbFendley  
1920 Country Place Parkway, Suite 400  
Pearland, Texas 77584  
Tel. 713-485-8172  
Email: [jmahommed@cobbfendley.com](mailto:jmahommed@cobbfendley.com)

## **RE: SH 99 Grand Parkway Bridge Widening - Supplemental Survey**

Dear Mr. Mahommed,

Surveying And Mapping, L.L.C.'s (SAM) understanding of the scope and project hours breakdown are as follows:

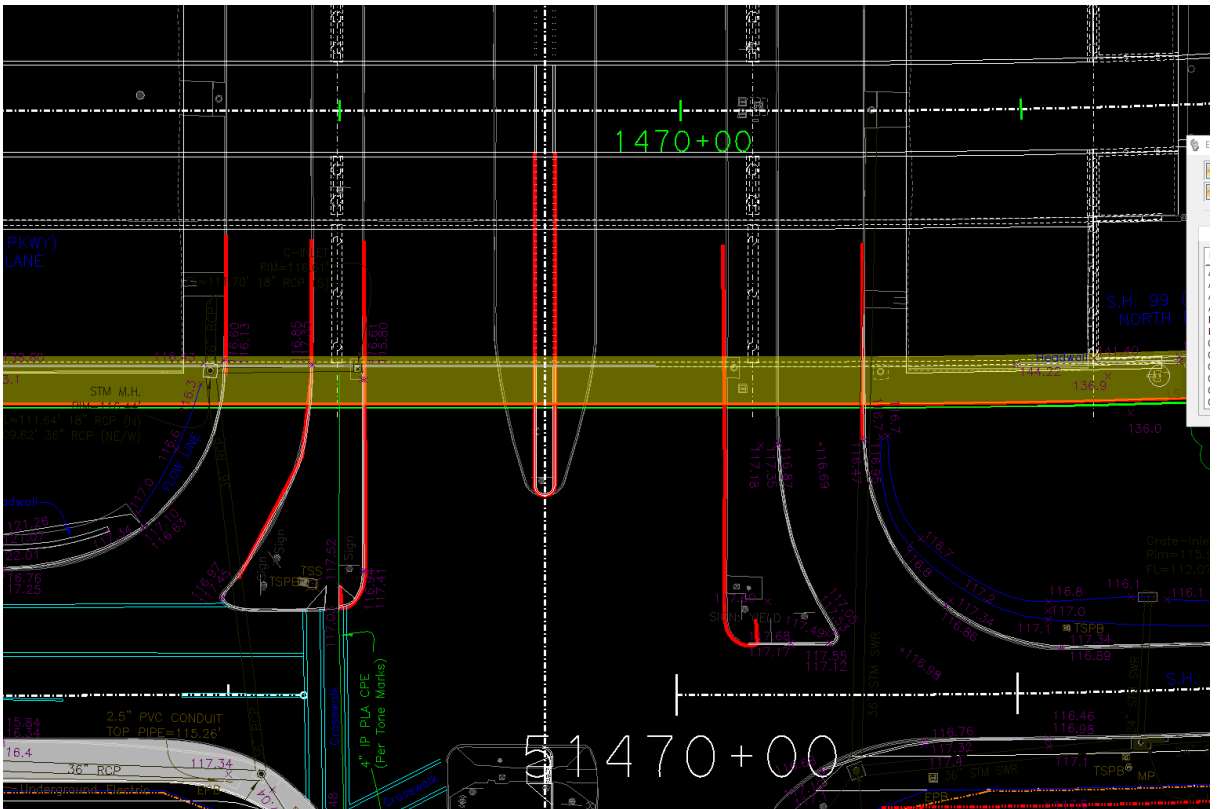
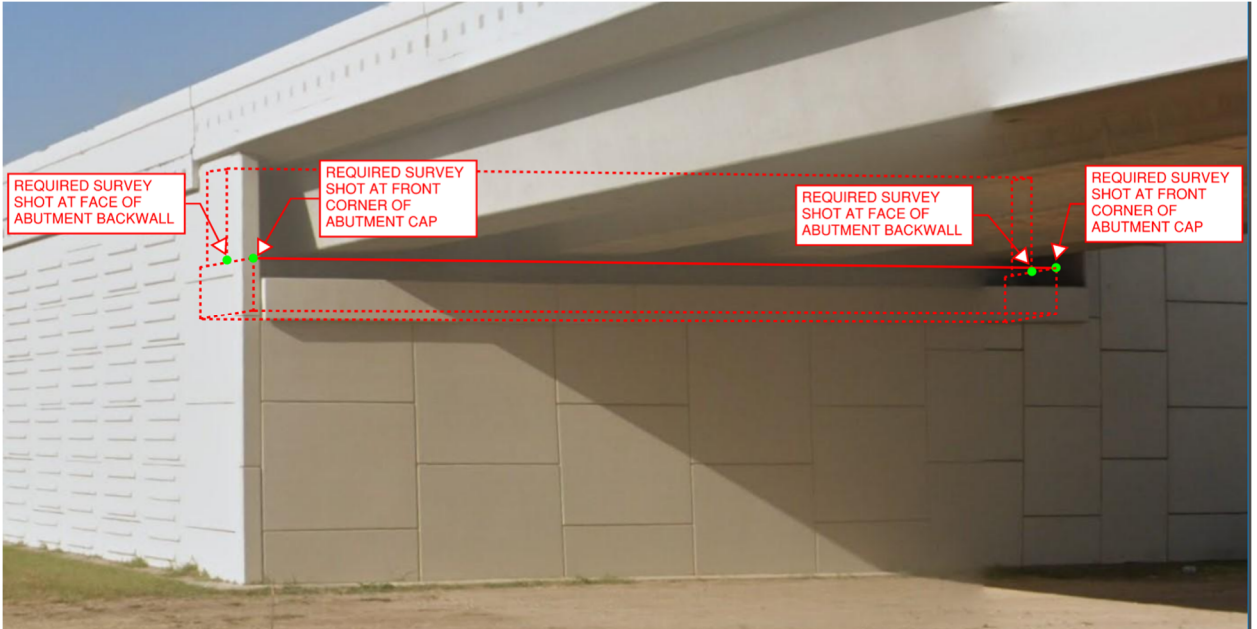
This task order will consist of four (4) 3D bridge models acquired by a Terrestrial LiDAR and compiled with Bentleys OpenRoads Designer.

- This task is comprised of four (4) bridge decks:

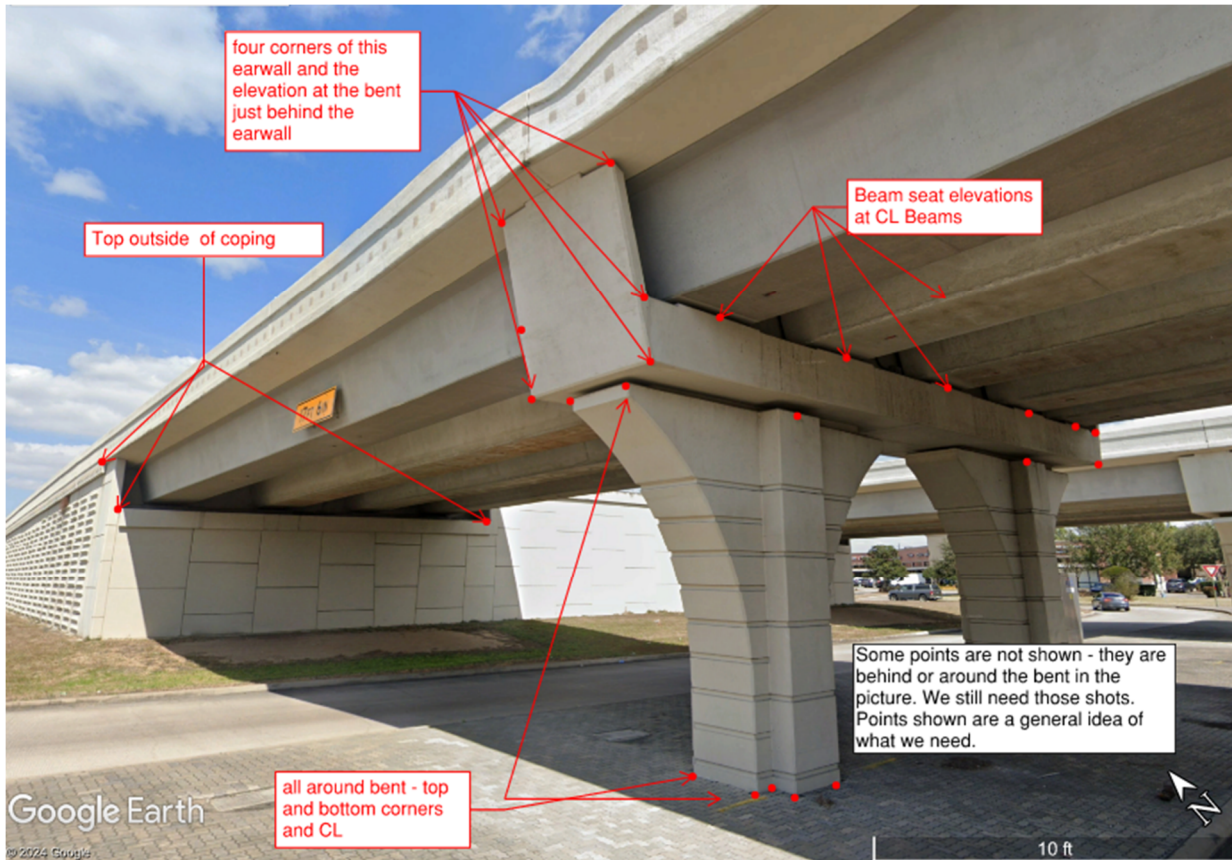
### **1. The Surveyor shall perform the following tasks:**

- Bridge Length, width, bridge joint, limit of wingwall and wingwall parapet, center line of column bent and abutment backwall location, top of bent cap elevation along center line and abutment cap elevation.
- Bridge deck thickness and wearing surface thickness if any.
- Limit of approach slab and thickness.
- Deck elevations at the edge of deck along outside of existing bridge and along the centerline/profile grade of bridge.
- Beginning and end of each span at the midpoint of each span.
- Low chord at the four corners and the center of deck, Minimum vertical clearance of bridge & location of vertical clearance point.
- Bridge rail type, dimension and height, and bridge rail transition to three beams.
- Limits and type of riprap and riprap slope.
- Front corners and face of backwall at abutment caps on all 4 corners of the bridge.
- All bents
- Toe of rail at abutments / bents (at top of deck)
- Vertical clearance measurements over cross street and U-turn lanes.
- Approximately thirty-seven (37) geotechnical borings (once Geotech is complete)
- Top of curb and gutter line on Highland Knolls and Cinco Ranch under outside edge of bridge.

# ATTACHMENT A



# ATTACHMENT A



The Surveyor shall conduct a QA/QC review and prepare a Checklist.

- a. The Surveyor shall prepare a Surveyor's Report regarding their survey procedures, findings, and decisions made.

## 2. Deliverables:

- Microstation Open Roads 3D file for each bridge
- POD LiDAR file for each bridge
- Surveyors Report PDF
- Field Notes PDF

## 3. QA/QC

- Completed and signed checklists.

## 4. GENERAL REQUIREMENTS AND ASSUMPTIONS

The following assumptions were made for the preparation of this Scope of Services. If these assumptions do not prove correct, a modification to the scope and budget for this project may be required.

- QA/QC Review in conjunction with CobbFendley and SAM.
- Correspondence and coordination with CobbFendley and SAM throughout the duration of the Task Order.

# ATTACHMENT A

- SAM will use previously flown airborne LiDAR performed by others to compile any above bridge data including the bridge deck and CTB barriers. SAM makes no assurances for the completeness and or accuracy of this LiDAR data.
- Airborne LiDAR by others will be provided to SAM in a timely manner as to not overly affect the schedule.
- All survey control will be based on survey control sheets provided to SAM by the client and or TXDOT.

## 5. Fee

SAM will provide the services described above for a lump sum fee: .....\$25,600.00

If the CobbFendley believes SAM has omitted any service that CobbFendley requires, or misinterpreted CobbFendley's request, please call. SAM shall be ready to begin this project as soon as SAM receives notice to proceed. SAM looks forward to working with CobbFendley on this project.

Sincerely,



Donald Barnes  
Project Manager | Transportation  
SAM Companies  
11111 Katy Freeway, Suite 200  
Houston, TX 77079  
Direct (713)-973-5152  
Cell (832)-390-8487  
[www.sam.biz](http://www.sam.biz)

## EXHIBIT A LIMITS

