EXHIBIT A

ENGINEERING SERVICE

ROUTE AND DESIGN STUDIES (Function Code 110)

The work to be performed by the ENGINEER under this contract consists of providing engineering services required for the schematic development for the reconstruction of Rancier Ave from S. Fort Hood Road (SH 195) to west of N 38th St. The project consists of reconstructing approximately 2.5 miles of the existing 4-lane roadway section including full depth pavement, 6-ft sidewalks, storm drain, upgrade traffic and pedestrian signals, relocation of water and dry utilities, illumination, and landscaping. This project involves surveying, utility coordination, environmental, public involvement, engineering analyses, and associated details necessary to produce a design schematic.

The ENGINEER shall perform all work and prepare all deliverables in accordance with the latest version of the City of Killeen criteria.

The ENGINEER shall perform quality control and quality assurance (QA/QC) on all deliverables associated with this project.

1. Data Collection

A. The determination of data requirements, availability, and sources will be coordinated with the City's designated PM. Once the data needs and sources are identified, the ENGINEER will contact the appropriate agencies and organizations to obtain the data. Data collection will focus on existing publicly available information primarily for issues that could substantially influence project alternatives, including potential fatal flaws. Data to be collected will include, but not be limited to:

B. "As-built plans", right-of-way maps, and previous corridor studies, existing channel and drainage easement data, existing traffic counts, accident data, zoning and future land use maps, available Economic Development Plans, jurisdictional boundaries, City ETJ boundaries.

C. Existing utility information and mapping obtained from a GIS database and/or provided by the City and/or utility owners. Planned infrastructure such as transmission lines and major utilities.

D. Readily available floodplain information and studies from the Federal Emergency Management Agency (FEMA), the Corps of ENGINEERs (USACE), local municipalities and/or other governmental agencies.

E. Graphic files, plans, documents, and other data for existing and proposed improvements along corridor.

F. Photographic record of notable existing features collected during field reconnaissance

from public right-of-way locations.

2. Review of Data

A. The ENGINEER will review the data collected and organize the information into design files.

3. Complete Design Summary Form

A. Design criteria shall be in accordance with the City of Killeen criteria.

4. Route Studies

A. The ENGINEER, with input from the City, shall develop key issues and evaluation criteria to assist in evaluating project alternatives and typical sections, e.g., varying lane widths, on-street parking, median alternatives, driveway widths.

B. Attend and document kickoff meeting. The meeting will provide for a brainstorming session in which decision makers, stakeholders and technical personnel may discuss and agree on roadway and drainage design parameters, engineering and environmental constraints, landscape and urban design approach, project development schedule and other identified issues.

ENVIRONMENTAL COMPLIANCE (Function Code 120)

This project is projected to be locally sponsored by the City of Killeen and is not on the TxDOT system; however, Federal Highway Administration (FHWA) funds, administered by the Killen-Temple Metropolitan Planning Organization (KT MPO), are anticipated. Therefore, the project will be subject to Texas Department of Transportation (TxDOT) review and NEPA requirements per 23 U.S.C 327 and a Memorandum of Understanding (MOU) dated December 9, 2019, and executed by FHWA and TxDOT. The project is anticipated to be environmentally cleared through TxDOT as a Categorical Exclusion (CE).

As the project is anticipated to be a locally sponsored project subject to TxDOT's environmental review procedures, an Advanced Funding Agreement (AFA) between TxDOT and the City of Killeen will be required. In addition, the project will require issuance of one or more Control-Section-Job numbers (CSJs). Following the execution of an AFA and issuance of a CSJ, environmental compliance documentation will be prepared in TxDOT's format and according to current TxDOT guidance found in TxDOT's Environmental Compliance Toolkits.

1. TxDOT Environmental Scoping

Proposed improvements to Rancier Avenue will require environmental approval. The TxDOT Waco District will be responsible for review and approval of environmental documentation. This scope of Services is based on TxDOT's current published TxDOT CE guidance in the TxDOT Environmental Toolkits. The ENGINEER will prepare TxDOT's Work Plan Development (WPD) Section I – Project Definition, WPD Section II – Work Plan Development, and supporting project area maps. These documents will be submitted to the TxDOT Waco District for review and approval.

Deliverables:

- Draft and Final WPD Section I and WPD Section II
- Draft and Final Project Area Maps

2. Archeological Studies

The ENGINEER will prepare an Archeological Background Study per the TxDOT Environmental Toolkit and submit to the TxDOT Waco District for review and approval. The Background Study shall be produced by a professional archeologist as defined in 13 TAC 26.5(52)(B). Background studies comprise a review of existing data, including – but not limited to – the Texas Archeological Sites Atlas, geologic maps, soil maps, aerial photographs, and historic maps. Based on this review, the ENGINEER will identify if there are any locations that may require field investigation to evaluate the project's effects on archeological resources. As the proposed project would occur within a highly developed urban area, a need for additional archeological investigations is not anticipated. This scope of services excludes site visits, surveys, and coordination with the Texas Historical Commission (THC).

Deliverables:

- Draft and Final Archeological Background Study

3. Historical Studies

The proposed project is within an aging part of the City of Killeen, new Right of Way (ROW) is anticipated and structures 50 years of age or older are anticipated along the project limits. It is anticipated that the THC and TxDOT will require a Historical Resource Project Coordination Request (PCR) Historical Studies Research Design, and Historic Resources Reconnaissance Survey to identify historic resources that may be impacted by the proposed project and to assess potential impacts to historic properties, if identified.

The ENGINEER will prepare a Historical Studies PCR per the TxDOT Environmental Toolkit and submit to the TxDOT Waco District for review and approval. This task includes data collection, exhibits and documentation using the TxDOT format standards.

The ENGINEER shall prepare a research design for review and comment by TxDOT-ENV. The research design shall conform to the TxDOT SOU: Non-Archeological Historic-Age Resource Research Designs Review checklist (January 2020 version).

The ENGINEER shall perform a reconnaissance survey conforming to the methodology outlined in Appendix B of the Draft CRM Guide for Accurately Identifying Non-Archeological Cultural Resources (Texas Department of Transportation, January 2020). The survey shall document each historic-age resource (defined by TxDOT as a building, structure, object, historic district or non-archeological site at least 45 years old at the time of letting) within the Study Area. The Study Area shall consist of the Area of Potential

Effects (APE) plus all parcels that are wholly or partially within the APE and those parcels where new ROW will be acquired.

The ENGINEER shall provide a report detailing the results and findings of the reconnaissance survey including effects to historic properties and the need, if any, to conduct future intensive survey efforts. The report shall have sufficient detail and clarity to provide THC with the basis for making determinations of National Register of Historic Places (NRHP) eligibility or shall have sufficient detail and clarity to make recommendations concerning the scope of the intensive survey. The report shall conform to the TxDOT Standards of Uniformity for Non-Archeological Historic-Age Resource Reconnaissance Survey Reports Review Checklist (January 2020 version).

TxDOT Waco District will be responsible for coordination with the THC per the 2013 MOU between TxDOT and the THC.

Deliverables:

- Draft and Final Historical Studies PCR
- Draft and Final Historical Studies Research Design
- Draft and Final Historical Resources Reconnaissance Survey

4. Threatened and Endangered Species

The ENGINEER shall conduct a habitat assessment and biological resources summary utilizing TxDOT's Species Analysis Summary and Species Analysis Form according to current guidance in the TxDOT Environmental Toolkits to document compliance with applicable state and federal requirements. U.S. Fish and Wildlife Service or Texas Parks and Wildlife Department coordination is not anticipated. Agency coordination for protected species is excluded from this scope of services.

Deliverables:

- Draft and Final Species Analysis Summary
- Draft and Final Species Analysis Form

5. Water Resources

Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act regulate activities with the potential to impact Navigational Waters and Waters of the U.S., including wetlands. Regulatory oversight of Section 10/Section 404 is within the purview of the U.S. Army Corps of Engineers (USACE) and impacts to USACE jurisdictional waters require USACE authorization. Based on the proposed design, it is anticipated that if jurisdictional waters are present, the project would qualify for a Nationwide Permit (NWP) #14, and impacts to jurisdictional waters would fall below the thresholds requiring USACE notification. The ENGINEER would conduct surface water analysis documenting the presence or absence of jurisdictional waters and potential

impacts to those waters by the proposed project. The ENGINEER shall document the results and compliance with the conditions of NWP 14 on a Surface Water Analysis Form and Section 404/10 Impacts Table according to current TxDOT guidance in the Environmental Compliance Toolkits. USACE coordination is excluded from this scope of services.

Deliverables:

- Draft and Final Surface Water Analysis Form
- Draft and Final Section 404/10 Impacts Table

6. Hazardous Materials

It is anticipated that the proposed project would require work outside of the existing Rancier Avenue ROW; therefore, TxDOT guidelines require preparation of a Hazardous Materials Initial Site Assessment (ISA). The ENGINEER shall perform an ISA for potential hazardous materials that may impact the proposed project according to current TxDOT guidance in the Environmental Compliance Toolkits. Should the findings of the ISA conclude that additional investigation, special considerations, or other commitments are required during future stages of project development, the ENGINEER shall review those findings and commitments with TxDOT prior to completing the hazardous materials discussion for the environmental document. Additional investigations, special considerations, or other commitments will be the responsibility of the City and are excluded from this scope of services.

Deliverables:

- Draft and Final Hazardous Materials ISA

PUBLIC INVOLVEMENT (Function Code 121)

1. TxDOT Public Involvement

The ENGINEER shall perform Public Involvement Analysis according to current guidelines in TxDOT's Environmental Compliance Toolkits and communicate the results to the TxDOT Waco District to be documented into ECOS. It is anticipated that the proposed project will require a Notice and Opportunity to Comment (NAOTC) to all affected property owners, using TxDOT's current template on the Environmental Compliance Toolkit. The ENGINEER will develop and maintain a mailing list of all affected property owners based on current Bell County Appraisal District data, prepare a NAOTC and distribute the NAOTC according to current TxDOT guidelines. The ENGINEER will provide documentation of the NAOTC and any comments received according to current TxDOT guidelines and provide documentation to the TxDOT Waco

District.

Deliverables:

- Draft and Final NAOTC Mailing List
- Draft and Final NAOTC
- Draft and Final NAOTC Documentation

2. Additional Public Involvement

At the request of the City, the ENGINEER will develop a public engagement plan and provide general public outreach and engagement throughout the project. A database will be developed which includes nearby property owners and residents, businesses, churches, educational/community organizations, elected/public officials, and any interested individuals. ENGINEER will identify and reach out to key stakeholders and community groups (HOAs, etc.) that may be interested and will collect email addresses for email updates. We will arrange and attend meetings with stakeholders and respond to questions and comments in a timely manner. Project materials such as maps and handouts will be developed and shared with stakeholders. Finally, email updates will be sent out to keep the public updated on the project progress.

A. Public Meeting. The ENGINEER will plan, schedule, conduct and facilitate one (1) public meeting to share project information with and collect feedback from citizens and stakeholders as determined by the City and the team. The meeting will be held at a time decided by the City, and will include a virtual attendance option. Tasks may include, but not limited to: calling and/or visiting potential meeting sites; reserving meeting space; announcing the meetings by distributing meeting information and coordinating with attendees; holding and participating in meeting rehearsals; facilitating meetings; and providing a summary report of the meeting including public input received. The ENGINEER will develop meetings materials and provide Spanish translation as needed.

B. Individual Stakeholder Meetings. The ENGINEER will organize and conduct one-on-one stakeholder meetings over a period of three-days, at a time and place determined through coordination between the ENGINEER and the City. Notices will be provided to key stakeholders identified during development of the public engagement plan, and stakeholders will be provided the opportunity to sign-up in advance for 30-minute blocks of time throughout the designated 3-day period.

C. Online Project Information Portal. The ENGINEER will create, host and maintain an online project information portal to provide the public with project information and an opportunity to provide feedback. The online portal will contain links to a pre-recorded virtual public meeting, to run concurrently with the in-person public meeting. A public opinion survey and opportunity to comment on the virtual public meeting will be provided through the portal for a

period of time to be specified through coordination between the ENGINEER and City.

D. Virtual Public Meeting. The ENGINEER will create a pre-recorded public meeting with project materials (e.g., fact sheets, exhibits) to be hosted on the online project portal.

Deliverables:

- Public Engagement Plan
- Develop and maintain a stakeholder database throughout the project in Excel format
- Materials development and final electronic copies (fact sheet, exhibits)
- Web content (to be shared on the City's website)
- Develop one virtual public meeting (to be hosted on the online project portal)
- Provide 4 e-mail updates (outside of meeting notices)
- Arrange and facilitate one-on-one meetings with stakeholders over a 3-day period. Document responses and communications with stakeholders.
- Logistics and planning for one public meeting (Arrange meeting location and facility preparation)
- Coordinate meeting announcements and promotion such as letters, email notices, signage, media releases, posting, etc.
- Develop meeting materials and signage
- Facilitate meetings
- Provide summary report of each meeting
- The above information/deliverables will also be utilized to support the RAISE Grant effort but no additional public involvement tasks will be performed to support the grant.

RAISE GRANT (Function Code 122)

1. RAISE Grant Application Preparation and Submission

A. Prepare a draft of the application, review details from the application workshop and submit the final application. Submit the final application online on behalf of the City of Killeen. BGE will utilize the Detailed Instructions on "How to Apply" for RAISE Transportation Discretionary Grants found on the RAISE Website (www.transportation.gov/RAISEgrants). Applications must be submitted through Grants.gov. BGE will complete the Grants.gov registration process before submitting the Application, and this process usually takes 2 – 4 weeks to complete.
B. Provide support to the City to collect data from public sources, and other City departments.
C. Provide miscellaneous support needed to complete the application.
D. Develop a benefit cost analysis of the build and no-build options.

E. Attend up to four (4) project coordination meetings with Stakeholders and other City departments.

RIGHT OF WAY DATA / UTILITY COORDINATION (Function Code 130)

The Engineer shall perform all preliminary utility coordination including Utility Conflict Layout, and Utility Adjustment & Underground Conversion services for approximately ten (10) utilities.

1. Utility Coordination

A. Utility Conflict Layout

These services include obtaining record information on existing utilities from utility owners to identify all known existing public utilities, preparing a base map depicting the horizontal utility locations, and creating a Utility Conflict Matrix (UCM) identifying potential known conflicts based on the final schematic layout.

a. Initiate one-call (811) and coordinate with utility companies. BGE will survey all field markings.
   i. Quality Level D - Existing Records: Utilities are plotted from review of available existing records.

   ii. Quality Level C - Surface Visible Feature Survey: Quality level "D" information from existing records is combined with surveyed surface-visible features (performed by surveyor). Includes Quality Level D information. If there are variances in the designated work area of Level D then a new schematic or plan layout, if needed, is required showing the limits of the proposed project and limits of the work area required for this work authorization; including highway stations, limits within existing or proposed right of way, additional areas outside the proposed right of way, and distances or areas to be included down existing intersecting roadways.

B. Utility Adjustment & Underground Conversion Coordination

Utility Adjustment & Underground Conversion Coordination shall include the following services:

a. Organize and hold group utility coordination meeting with all utility companies.

b. Individual progress meetings (2 with each provider) and communication and coordination with utilities.

   i. The Utility Coordinator shall perform utility coordination and liaison activities with involved utility owners, their consultants, and the City of Killeen to achieve timely project notifications, formal coordination meetings, conflict analysis and resolution.

ii. The Utility Coordinator shall coordinate all activities with the City of Killeen, or their designee, to facilitate the orderly progress and timely completion of the preliminary design phase. The Utility Coordinator will be responsible for the following:
    1. The Utility Coordinator shall provide initial project notification letters to all affected utility companies, owners, and other concerned parties, if needed.
    2. The Utility Coordinator shall provide the City of Killeen and all affected utility companies and owners a Utility Contact List for each project with all information such as: (a) Owner's Name; (b) Contact Person; (c) Telephone Numbers; (d) Emergency Contact Number; (e) E-mail addresses; (f) as well as all pertinent information concerning their respective affected utilities and facilities, including but not limited to: size, number of poles, material, and other information which readily identifies the utilities companies' facilities.
    3. The Utility Coordinator shall advise utility companies and owners of the general characteristics of the Project and provide an illustration of the project footprint for mark-up of the utility facility locations that occupy the project area.
    4. The Utility Coordinator shall coordinate which utilities will conflict with roadway construction, which utilities will be proposed to underground conversion and make the utility company aware of these conflicts and conversion.
    5. The Utility Coordinator will develop conceptual joint trench layouts for the existing and future utilities. These will present general location of the utility trench and conduit layouts as discussed with the utility providers.

C. Water Utility Replacement

a. Engineer will evaluate the replacement of the existing water line from N. Park to 10th, and 18th to W.S. Young.

Deliverables:

- Scanned record information in .pdf format if received from each utility
- Surveyed visible and flagged utility locations in 2D topo files
- Utility Conflict Layout base map and Utility Conflict Matrix
- Conceptual Underground Utility plan view assignments/configuration and joint trench

PROJECT MANAGEMENT (Function Code 145)

1. Meetings

A. Attend and document up to eight Progress Meetings at the City of Killeen office or virtual.

2. General Contract Administration

A. Develop monthly invoices and progress reports.

B. Subconsultant coordination.

C. Design coordination with the City of Killeen.

FIELD SURVEYING (Function Code 150)

General

Surveys will be in accordance with the "Texas State Board of Land Surveying".

Survey field notes will be submitted if requested.

A. The City will obtain right-of-entry agreements with property owners for the required field surveys, if necessary.

B. The Surveyor will Contact the One-Call System in advance of performing field surveys to ensure data collection includes ties to location of marked utilities. This task does not always allow for timing of markings with the survey activities. Reasonable attempts to coordinate with utility owners will be made to achieve efficiency in data collection.

1. Topographic Surveys for Engineering Design within Apparent Right-of-Way

A. Scope listed below will be performed within the Apparent Right-of-Way of Rancier Drive. Sufficient property records research will be performed to identify existing right-of-way of Rancier Drive and incorporate into DTM.

B. Data for the horizontal control will be based on Texas State Plane, Central Zone, NAD 83.

C. Vertical Data will be based upon NAVD 88 Datum.

D. Data collection will consist of spot elevations for improvements, edge of roadway, driveways, visible or marked utilities, drainage features, centerline of roadway, and grade breaks. Individual trees will not be located as a part of this effort.

E. Intersecting streets and driveways will be included up to the PC of the curb return, or the apparent right-of-way of Rancier Drive, whichever is more extensive.

F. Field surveys will provide the locations of all small signs, mailboxes, and other visible surface features. Sign text, color, dimensions, and standard sign design will be provided in accordance with the TMUTCD.

G. Except areas performed with Mobile LiDAR, survey shots will be assigned a unique point number which provides a positive identification of the point. Each point will be assigned a feature number or feature name using a standard feature table. An ASCII points file and a hard copy print out will be provided. Each line of the output data shall contain in this order: the point number, northing, easting, elevation, and the descriptive feature code.

H. Field surveys will locate horizontally crossings of power lines, telephone/cable lines, and visible above ground utilities and utility markings.

I. Location of existing utilities will be shown on the 2D files using field marked information designated by the utility companies and from surface evidence surveyed on the ground.

J. Surveyed data will be provided in a Microstation .dgn (V8) compatible two dimensional base map format. The survey shot point attributes will appear on separate levels.

K. A Digital Terrain Model (DTM) will be provided in a Microstation .dgn (V8) GEOPAK compatible three-dimensional format.

ROADWAY DESIGN CONTROLS (Function Code 160)

1. Schematic Development

Perform the following items for the project

A. Geometric Design – Layout horizontal alignment; vertical profile; lane configuration; pavement cross slopes; sidewalks that meet acceptable design criteria and remain within the limits of the proposed ROW. The Layout must consist of a planimetric file of existing features and the proposed improvements within the existing and any proposed ROW. The Layout must also include the following features: existing and proposed ROW, existing and proposed horizontal and vertical alignment and profile grade line, sidewalks, curb & gutter, storm drain, waterline, landscaping, illumination, signals, cross culverts, lane widths, cross slopes, berms, pavement structure, corner clips, and retaining walls (if applicable). Existing major subsurface and surface utilities must be shown on the Layout. The ENGINEER, with input from the City, shall utilize a recent area project pavement design for schematic development and cost estimates.

B. Verify ROW Needs – Analyze the cross sections associated with the desirable design criteria to analyze existing ROW. Develop an exhibit providing the ROW footprint with the desirable configuration.

C. 3D Corridor Model and Design Cross Sections - 3D corridor model will be created using Bentley's OpenRoads and GEOPAK tools. The 3D corridor model will have enough details to verify the feasibility of the proposed design. Develop roadway cross sections associated with the proposed horizontal alignment and vertical profile in accordance with acceptable design criteria.

D. Parking / Driveway Planning – Analyze up to 45 parcels where on-street parking is currently within the existing ROW and provide alternatives for driveway, sidewalk,

and modified parking configurations. Parking configurations may not be City code compliant. Preferred alternative to be presented in final schematic.

Deliverables:

- Design Summary Form
- Alternative Parking / Driveway Layouts (plan view only)
- Draft Schematic Roll Plot (plan and profile)
- Final Schematic Roll Plot (plan and profile)
- Cross Sections Roll Plot

DRAINAGE (Function Code 161)

1) Schematic Development

A. Data Collection Integration: Incorporate all design surveys into computer aided drafting and develop topographies and surfaces. This data shall be utilized to develop hydrology and hydraulic parameters. This shall include topographic working drawings to prepare the preliminary drainage design. BGE will attempt to obtain existing models associated with areas near (South Nolan Creek) or within the Project's limits. The City will provide BGE with all pertinent hydrologic and hydraulic models including, but not limited to, HEC-HMS, HEC-RAS, GeoPAK, and StormCAD.

B. Hydrologic and Hydraulic Analysis: Conduct a hydrologic analysis for the existing and proposed roadway section throughout the limits of the project. The analysis shall incorporate the 4% and 1% annual chance storm (25-year and 100-year) events. This analysis develops storm water flows to all cross culverts and points of analysis along the proposed design.

   Based on the hydrologic analysis results, a hydraulic analysis will be conducted to preliminarily size proposed trunk lines. The hydraulic analysis will be conducted using GEOPAK or StormCAD.

C. Conceptual Design Alignment: Drawings of the conceptual storm drain system alignment will be produced using Autodesk Civil 3D or Microstation. The conceptual design will represent approximate trunk line alignment. The conceptual alignment will be incorporated into the schematic roll plot.

MISCELLANEOUS (ROADWAY) (Function Code 163)

1) Schematic Development

A. Cost Estimates – Prepare construction cost estimate at draft and final schematic

submittals.

LANDSCAPE / URBAN DESIGN (Function Code 164)

BGE will assist in the conceptual development of the project to explore Context Sensitive Design (CSD) opportunities for hardscape enhancements and landscape solutions that create a sense of place, enhance pedestrian mobility/connectivity and user safety to complement community identity and economic development of the corridor. The purpose of this scope sub-section is to describe a context-based vision for urban design enhancement of the corridor, to explore CSD improvement opportunities, evaluate potential enhancement construction costs, and to confirm a program of improvements for further design development in subsequent phases of the project based on the preferred plan developed for the Project engineering.

BGE will evaluate the urban design of an additional 3,200 LF of roadway immediately east of WS Young Drive. This segment will be evaluated and designed concurrent to the remainder of the project corridor. All urban design scope tasks shall be applied to this additional segment with the exception that one (1) Street Section Illustration will be prepared for the additional roadway segment and one additional Perspective rendering will be added, for a total not to exceed three (3) for the entire project. Client requests that this added area be considered for a lesser level of urban design enhancement than the area west of WS Young Drive.

1. **Site Visit / Inventory** - Conduct a one-day site visit to compile a photographic inventory of existing corridor conditions and surrounding community context. Compose representative photo images of key conditions on two presentation drawing sheets with bullet-form notes describing general conditions and characteristics.
2. **Issues & Opportunities Analysis** - Review the initial project plan alternatives and client provided project design criteria to identify CSD design issues and opportunities. Prepare diagrammatic corridor Partial Plan and/or Section sketches with color highlights or selective representative photo images with bullet-form notations to convey plan issues and opportunities. Improvements depicted will be prototypical and generic in nature with further definition to be performed in subsequent design phases for Project included features. Improvement concepts may include:
    a. Sidewalk Delineations
    b. Parkway Shoulders
    c. Driveway Consolidations
    d. Multi-use Paths
    e. Crosswalk Enhancements
    f. Enhanced Light Fixtures
    g. Street Furnishings
    h. Hardware Color Enhancement
    i. Landscape Plantings
    j. Special Paving
    k. Enhanced ROW Retaining Walls
    l. Enhanced ROW Fencing
    m. Community Gateways

Note - Street concepts such as complete streets, road diets, lane width reductions, landscape medians, multi-use trail inclusions, utility relocations/undergrounding, intersection tables and/or street edge parking will be evaluated and analyzed by the civil engineering team members.

3. **Street Section Illustrations** – Prepare illustrative street cross section view graphics based on the civil engineering roadway design in Sketch-Up depicting proposed prototypical roadway conditions. This task is based on provision of up to three (3) sections for two (2) roadway alternatives.
4. **Preliminary OPCC** - Prepare an order of magnitude Opinion of Probable Construction Cost (OPCC) with ballpark pricing of proposed improvements and potential additive features at a preliminary level of definition. This effort will include a low-end and a high-end quantity approach to identify a range of costs, where appropriate. One Excel format OPCC will be provided by BGE.
5. **Preliminary Review** - Attend an in-person meeting with the client and project team to present the deliverables from tasks 1-4. Obtain client feedback on the potential improvements and incorporate minor updates in the concept sketches, supplemental images and OPCC. Note - It is suggested that deliverables from Tasks 1-5 are best suited for an initial Stakeholder meeting presentation regarding the Draft Schematic.
6. **Perspective Renderings** - Based on client feedback, prepare two (2) enlarged plan detail color renderings of selected locations or conditions within the project. Create a preliminary 3d model of two (2) selected locations or conditions for client view selections. Based on client feedback and view selections, develop two (2) rendered 'Lumion' computer model views. Note - Imagery in the views will be prototypical and generic level of definition that can be updated in latter phase design when specific component design and product selections are confirmed. Buildings along the corridor will be shown as neutral background boxes without elevational detail specific to particular locations.
7. **Final Review** - Compile deliverables applicable to the final schematic. Attend an online meeting with the client and project team to solicit feedback on the deliverables from tasks 5 and 6. Incorporate minor updates to the client-selected deliverables and graphically format the deliverables on drawing sheets. Submit to Client in digital formats. Note - It is suggested that deliverables from Tasks 6 & 7 are best suited for a final Stakeholder meeting presentation regarding the Final Schematic.
8. **Stakeholder Meeting(s)** - Participate in two (2) online prep/preview meetings and two (2) subsequent in person, one day stakeholder meetings to represent landscape architectural/urban design issues, opportunities, and illustrations.
9. **Wrap-up Meeting** - Participate in one (1) final resolution conference call to discuss and verify improvements to be included in the next phase of plan development. Update the conceptual landscape OPCC based on feedback provided by client.

Exclusions

The following tasks are not covered in this scope of work and may or may not be necessary. If deemed necessary, these tasks could be conducted under a separate or supplemental work authorization.

A. Any tasks or services not indicated in Basic Services above.
B. Additional meetings and/or online conference calls.
C. Rework of previously performed tasks, in part or whole.
D. Off-site and/or out of Right of Way improvements, including cross streets.
E. Tree survey, verifications and/or mitigation.
F. Production of sealed OPCC estimates.
G. Photometric design and/or calculations.
H. Structural Design.
I. Historic Preservation assessments, activities or tasks.
J. Trails (AASHTO compliant) or Trail Planning.
K. Signage and/or Graphic Design.
L. Public Art design and/or coordination.
M. Tactical Urbanism mock-ups and/or strategies.
N. Stormwater management strategies and/or design
O. Security and/or Audio-Visual systems.
P. Design Development and/or Construction Documents.
Q. Funding requests and/or applications.
R. Agency permitting activities.
S. Independent verification of publicly available data.
T. Drive-through or fly-through animations.
U. Utility design (dry: communications, gas, electric; and wet: water and wastewater)
V. TAS (Texas Accessibility Standards) assessments and design.
W. Traffic Counts and/or Traffic Memo.
X. Traffic Control Plans.
Y. Drainage Report (No adverse impact analysis) (to be done in final design).
Z. Geotechnical explorations and/or Report.
AA. Pavement Design.
BB. Right of Entry (ROE) coordination.
CC. SUE Quality Level A and B.
DD. Formal Section 10(a) Endangered Species Act (ESA) consultation, including preparation of a stand-alone Biological Assessment or completion of HCP coordination.
EE. Presence/absence surveys for karst features or endangered species.
FF. Work extending beyond the specified limits of the project at the time of this work order.
GG. Noise workshops.
HH. Archeological Survey.
II. Public Hearing.
JJ. Hazardous materials Phase I & Phase II ESAs.
KK. Preparation of a USACE 404 permit

PROJECT NAME: RANCIER AVE **EXHIBIT A - FEE SCHEDULE**

FROM FORT HOOD ROAD (SH 95) TO 38th STREET

FC	DESCRIPTION	BGE	AMA	McGray and McGray	TOTAL
FC 110	ROUTE AND DESIGN STUDIES	$22,620.00			$22,620.00
FC 120	ENVIRONMENTAL COMPLIANCE	$35,095.00	$36,728.00		$71,823.00
FC 121	PUBLIC INVOLVEMENT	$77,628.00			$77,628.00
FC 121	RAISE GRANT APPLICATION SUPPORT	$35,042.48			$35,042.48
FC 130	RIGHT OF WAY DATA (Utility Coordination)	$92,580.00			$92,580.00
FC 145	PROJECT MANAGEMENT	$46,960.00			$46,960.00
FC 150	DESIGN SURVEY	$99,840.00		$51,000.00	$150,840.00
FC 160	ROADWAY DESIGN CONTROLS	$130,030.00			$130,030.00
FC 161	DRAINAGE	$69,960.00			$69,960.00
FC 163	MISCELLANEOUS (ROADWAY)	$18,360.00			$18,360.00
FC 164	LANDSCAPE/URBAN DESIGN	$90,635.00			$90,635.00
	EXPENSES	$5,504.75	$1,470.50		$6,975.25
	TOTAL	$724,255.23	$38,198.50	$51,000.00	**$813,453.73**

BGE, INC.
PROJECT NAME: RANCIER AVE
FROM FORT HOOD ROAD (SH 195) TO W S YOUNG DR

EXHIBIT D - FEE SCHEDULE

TASK DESCRIPTION	Senior Project Mgr	Project Manager	Project Engineer	QC Manager	Utility Engineer	EIT	Senior Engineer Tech	Senior CADD Op	Survey Crew	RPLS	Senior Tech	Senior ENV	ENV Scientist	Proposal/Grant Specialist I/II	Proposal / Grant Specialist III	GIS Specialist	LA/UD PIC	Senior LA / UD	LA/UD	LA Designer	Admin/ Clerical	TOTAL LABOR HRS. & COSTS
FC 110 ROUTE AND DESIGN STUDIES																						**$22,620.00**
1. Data collection		5	8			12	8	8														$5,595.00
2. Review of data		5	12			12	8															$5,515.00
3. Complete design summary form		2	4			8																$2,030.00
4. Route studies	8	16	16			16																$9,480.00
FC 120 ENVIRONMENTAL COMPLIANCE																						**$35,095.00**
1. TxDOT CE																						$0.00
SCOPING DOCUMENTS																						$0.00
a. WPD I and WPD II		3											21									$3,420.00
b. Required Maps		1	3										32									$4,995.00
2. ARCHEOLOGICAL RESOURCES																						$0.00
a. Archeological Background Study		2											32									$4,710.00
3. HISTORIC RESOURCES																						$0.00
a. Historic PCR		2											40									$5,790.00
b. Recon Survey (AmaTerra)																						$0.00
4. BIOLOGICAL RESOURCES																						$0.00
a. Species Analysis Summary		2										4	24									$4,510.00
b. Species Analysis Form												2	6									$1,250.00
5. WATER RESOURCES																						$0.00
a. Surface Water Analysis Form & 404 Table		2	2										16									$2,870.00
6. HAZARDOUS MATERIALS ISA FORM		2										8	40									$7,550.00
FC 121 PUBLIC INVOLVEMENT																						**$77,628.00**
1. TxDOT PUBLIC INVOLVEMENT ANALYSIS		1	2										6									$1,325.00
a. NAOTC		2	2										39									$5,975.00
2. ADDITIONAL PUBLIC INVOLVEMENT																						$0.00
PUBLIC MEETING																						$0.00
a. In-person Public Meeting																						$0.00
1. Logistics		4										5	7								7	$3,308.00
2. Notices (letters, emai, signage)		5										13	10								9	$5,806.00
3. Materials (PPT, maps, exhibits, handouts)		14										20	38								1	$12,329.00
4. Facilitation		8										8	9								7	$5,018.00
5. Meeting Summary		4										8	14								12	$5,258.00
b. Virtual Public Meeting		4	10										52									$9,400.00
ONLINE PROJECT PORTAL		4										16	74								1	$14,359.00
INDIVIDUAL STAKEHOLDER MEETINGS		28	30										34									$14,850.00
FC 122 RAISE GRANT APPLICATION SUPPORT																						**$35,042.48**
1. RAISE Grant Application Preparatation and Submission																					24	$1,656.00
RAISE Grant Application Preparatation and Submission	8		14	4		14									24							$9,680.00
Data gathering/data of other departments in the City as needed	4		12			4									12						8	$5,357.00
Miscellaneous support needed to complete the application	8		12			8									12							$6,205.00
Develop Benefit Cost Analysis of the Build and No-Build Option		4	16																			$3,340.00
Project Coordination Meetings with Stakeholders (4 meetings)	8		6			4																$3,260.00
Graphics as needed (maps and insets in Application)														32		28						$5,544.48
FC 130 RIGHT OF WAY DATA (Utility Coordination)																						**$92,580.00**
1. Utility coordination																						
Utility Conflict Layout / Matrix		14	20		58	48																$20,572.00
Utility Adjustment Coordination & Underground Conversion Coordination																						$0.00
Coordination meeting	8	18	18		24																24	$13,422.00
Progress meetings	8	24	24		80	80																$32,240.00
Joint Utility Trench Layouts	4	12	16		54		54															$21,406.00
Water Utility Replacement Evaluation		4	12				16															$4,940.00
FC 145 PROJECT MANAGEMENT																						**$46,960.00**
Meetings	16	32	32			8																$15,960.00
General contract administration	8	32	30			8																$13,840.00
Internal Project Management and Meetings	8	32	32			32																$17,160.00
FC 150 DESIGN SURVEY																						**$99,840.00**
Prelim Research, Deed Plotting, Project Setup										8	160											$23,160.00
Establish Horizontal and vertical control									60	2	8											$11,970.00
One-Call locates, coordination with Mobile Mapping										3	10											$1,935.00
Obtain Design Survey data									255		8											$45,705.00
Prepare DGN and DTM										2	100											$13,890.00
QA/QC and Final Deliverables										8	12											$3,180.00
FC 160 ROADWAY DESIGN CONTROLS																						**$130,030.00**
1. Schematic Development																						
Geometric design	8	45	24	12		100	32															$34,155.00
ROW Evaluation	2	10	10	6		10	10															$8,030.00
Typical Sections	5	6	20	8		28	16															$13,075.00
3D Model and Design cross sections	10	20	28	20		92	92															$39,610.00
Parking and Driveway Planning	4	28	45			72	90															$35,160.00
FC 161 DRAINAGE																						**$69,960.00**
Data Collection Integration			40			100		32														$21,780.00
Hydrologic and Hydraulic Design	1	24	80			180																$40,205.00
Conceptual Design Alignment	1	4	14			22		22														$7,975.00
FC 163 MISCELLANEOUS (ROADWAY)																						**$18,360.00**
Cost estimates	8	16	40	4		40	8															$18,360.00

BGE, INC.
PROJECT NAME: RANCIER AVE
FROM FORT HOOD ROAD (SH 195) TO W S YOUNG DR

EXHIBIT D - FEE SCHEDULE

FC 164	**LANDSCAPE/URBAN DESIGN**																					**$90,635.00**
	Site Visit / Inventory		3														2	14	6	14		$6,465.00
	Issues & Opportunities Analysis		6														6	24	16	56		$15,790.00
	Street Section Illustrations		6														3	22	6	28		$10,430.00
	Preliminary OPCC		3														3	22	10	28		$10,445.00
	Preliminary Review		6														3	22	6	28		$10,430.00
	Perspective Renderings		6														3	24	4	90		$16,470.00
	Final Review		3														3	18	10	28		$9,545.00
	Stakeholder Meeting(s)		3														3	26	3	10		$8,585.00
	Wrap-Up Meeting		3														2	4	2	2		$2,475.00
	HOURS SUB-TOTALS	127	480	634	54	216	898	334	62	315	23	298	84	494	32	48	28	28	176	63	284	93	4771
	CONTRACT RATE PER HOUR	$225.00	$195.00	$160.00	$230.00	$149.00	$125.00	$140.00	$90.00	$175	$195	$135	$220.00	$135.00	$88.39	$123.75	$97.00	$250.00	$225.00	$150.00	$95.00	$69.00	
	TOTAL LABOR COSTS	$28,575.00	$93,600.00	$101,440.00	$12,420.00	$32,184.00	$112,250.00	$46,760.00	$5,580.00	$55,125.00	$4,485.00	$40,230.00	$18,480.00	$66,690.00	$2,828.48	$5,940.00	$2,716.00	$7,000.00	$39,600.00	$9,450.00	$26,980.00	$6,417.00	$718,750.48
	SUBTOTAL																						**$718,750.48**

FUNCTION CODE	TOTAL COSTS	TOTAL DIRECT EXPENSE	TOTAL LABOR COSTS	Senior Project Manager	Project Manager	Project Engineer	QC Manger	Utility Engineer	EIT	Senior Engineer Tech	Senior CADD Operator	Survey Crew	RPLS	Senior Tech	Senior ENV	ENV Scientist				LA/UD PIC	Senior LA / UD	LA/UD	LA Designer	Admin/ Clerical	TOTAL MH BY FC
	$724,255.23	$5,504.75	$718,750.48	127	480	634	54	216	898	334	62	315	23	298	84	494				28	176	63	284	93	4771
SUBTOTAL LABOR HOURS				127	480	634	54	216	898	334	62	315	23	298	84	494				28	176	63	284	93	4771
SUBTOTAL LABOR EXPENSES	**$724,255.23**	**$5,504.75**	**$718,750.48**	2.7%	10.1%	13.3%	1.1%	4.5%	18.8%	7.0%	1.3%	6.6%	0.5%	6.2%	1.8%	10.4%				0.6%	3.7%	1.3%	6.0%	1.9%	

OTHER DIRECT EXPENSES	**QUANTITY**	**UNIT**	**RATE**	
Mileage	1,500	mile	$ 0.59	$877.50
Hotel	6	night	$ 110.00	$660.00
Meals	6	day	$ 56.00	$336.00
Photocopies B/W (8 1/2"x11")	750	each	$ 0.10	$75.00
Photocopies B/W (11" X 17")	900	each	$ 0.20	$180.00
Photocopies Color (8 1/2" X 11")	600	each	$ 0.75	$450.00
Photocopies Color (11" X 17")	600	each	$ 1.25	$750.00
Large Format Plotting	25	SF	$ 2.25	$56.25
Foam core exhibit boards	12	each	$ 75.00	$900.00
Venue Rental	1	each	$ 250.00	$250.00
Postage	400	each	$ 0.55	$220.00
Advertisements	1	each	$ 500.00	$500.00
Misc. (meeting supplies, signage, etc.)	1	each	$ 250.00	$250.00
Traffic Counts (Quality Counts)		LS	$ 4,200.00	$0.00
SUBTOTAL DIRECT EXPENSES				**$5,504.75**

SUMMARY	
TOTAL LABOR COSTS	$718,750.48
NON-SALARY (OTHER DIRECT EXPENSES)	$5,504.75
GRAND TOTAL	**$724,255.23**

BGE, INC.
PROJECT NAME: RANCIER AVE
FROM FORT HOOD ROAD (SH 195) TO W S YOUNG DR

EXHIBIT D - FEE SCHEDULE

TASK DESCRIPTION	Project Principle	Program Director	Architectural Historian IV	Architectural Historian III	Historian II	GIS Specialist	Production Supervisor	Technical Editor	ENV Scientist	Admin/ Clerical	TOTAL LABOR HRS. & COSTS
FC 120 ENVIRONMENTAL COMPLIANCE AND PUBLIC INVOLVEMENT											**$36,728.00**
1. TxDOT CE											$0.00
SCOPING DOCUMENTS											$0.00
a. WPD I and WPD II											$0.00
b. Reuired Maps											$0.00
ARCHEOLOGICAL RESOURCES											$0.00
a. Archeological Background Study											$0.00
HISTORIC RESOURCES											$0.00
a. Historic PCR											$0.00
b. Recon Survey	2	14	6	136	100	50	22	6			$36,728.00
BIOLOGICAL RESOURCES											$0.00
a. Species Analysis Summary											$0.00
b. Species Analysis Form											$0.00
WATER RESOURCES											$0.00
a. Surface Water Analysis Form & 404 Table											$0.00
HAZARDOUS MATERIALS ISA FORM											$0.00
PUBLIC INVOLVEMENT ANALYSIS											$0.00
a. NAOTC											$0.00
2. ADDITIONAL PUBLIC INVOLVEMENT											$0.00
a. Public Meeting											$0.00
1. In-person Public Meeting											$0.00
2. Virtual Public Meeting											$0.00
b. On-line website/portal											$0.00
c. Meetings with Affected Property Owners											$0.00
EPIC											$0.00
STAGEGATE CHECKLIST											$0.00
HOURS SUB-TOTALS	2	14	6	136	100	50	22	6	0	0	336
CONTRACT RATE PER HOUR	$251.00	$164.00	$147.00	$119.00	$89.00	$109.00	$93.00	$78.00	$135.00	$69.00	
TOTAL LABOR COSTS	$502.00	$2,296.00	$882.00	$16,184.00	$8,900.00	$5,450.00	$2,046.00	$468.00	$0.00	$0.00	$36,728.00
SUBTOTAL											**$36,728.00**

FUNCTION CODE	TOTAL COSTS	TOTAL DIRECT EXPENSE	TOTAL LABOR COSTS	Senior Project Manager	Project Manager	Project Engineer	QC Manger	EIT	Senior Engineer Tech	Senior CADD Operator	Senior ENV	ENV Scientist	Admin/ Clerical	TOTAL MH BY FC
	$38,198.50	$1,470.50	$36,728.00	2	14	6	136	100	50	22	6	0	0	336
SUBTOTAL LABOR HOURS				2	14	6	136	100	50	22	6	0	0	336
SUBTOTAL LABOR EXPENSES	**$38,198.50**	**$1,470.50**	**$36,728.00**	0.6%	4.2%	1.8%	40.5%	29.8%	14.9%	6.5%	1.8%	0.0%	0.0%	

OTHER DIRECT EXPENSES		QUANTITY	UNIT	RATE	
	Mileage	300	mile	$ 0.59	$175.50
	Hotel	4	night	$ 110.00	$440.00
	Meals	6	day	$ 56.00	$336.00
	Rental Car	4	day	$ 75.00	$300.00
	Photocopies B/W (8 1/2"x11")	340	each	$ 0.10	$34.00
	Photocopies B/W (11" X 17")		each	$ 0.20	$0.00
	Photocopies Color (8 1/2" X 11")	185	each	$ 1.00	$185.00
	Photocopies Color (11" X 17")		each	$ 1.25	$0.00
	Large Format Plotting		SF	$ 2.25	$0.00
	Traffic Counts (Quality Counts)		LS	$ 4,200.00	$0.00
SUBTOTAL DIRECT EXPENSES					**$1,470.50**

SUMMARY	

BGE, INC.

EXHIBIT D - FEE SCHEDULE

PROJECT NAME: RANCIER AVE

FROM FORT HOOD ROAD (SH 195) TO W S YOUNG DR

TOTAL LABOR COSTS	$36,728.00
NON-SALARY (OTHER DIRECT EXPENSES)	$1,470.50
GRAND TOTAL	**$38,198.50**

BGE, INC. **EXHIBIT D - FEE SCHEDULE**

PROJECT NAME: RANCIER AVE

FROM FORT HOOD ROAD (SH 195) TO W S YOUNG DR

TASK DESCRIPTION	Senior Project Mgr	Project Manager	Project Engineer	QC Manager	Utility Engineer	EIT	Senior Engineer Tech	Senior CADD Op	Mobile Mapping	RPLS	Senior Tech	Admin/ Clerical	Mobile Mapping	TOTAL LABOR HRS. & COSTS
FC 150 DESIGN SURVEY														**$51,000.00**
Prelim Research, Deed Plotting, Project Setup														$0.00
Establish Horizontal and vertical control														$0.00
One-Call locates, coordination with Mobile Mapping														$0.00
Obtain Design Survey data														$0.00
Mobile Mapping Effort									300					$51,000.00
Prepare DGN and DTM														$0.00
QA/QC and Final Deliverables														$0.00
HOURS SUB-TOTALS	0	0	0	0	0	0	0	0	300	0	0	0	0	300
CONTRACT RATE PER HOUR	$225.00	$195.00	$160.00	$230.00	$149.00	$125.00	$140.00	$90.00	$170	$195	$135	$69.00	$1.00	
TOTAL LABOR COSTS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$51,000.00	$0.00	$0.00	$0.00	$0.00	$51,000.00
SUBTOTAL														**$51,000.00**

FUNCTION CODE	TOTAL COSTS	TOTAL DIRECT EXPENSE	TOTAL LABOR COSTS	Senior Project Manager	Project Manager	Project Engineer	QC Manger	Utility Engineer	EIT	Senior Engineer Tech	Senior CADD Operator	Survey Crew	RPLS	Senior Tech	Admin/ Clerical		TOTAL MH BY FC
	$51,000.00	$0.00	$51,000.00	0	0	0	0	0	0	0	0	300	0	0	0		300
SUBTOTAL LABOR HOURS				0	0	0	0	0	0	0	0	300	0	0	0		300
SUBTOTAL LABOR EXPENSES	**$51,000.00**	**$0.00**	**$51,000.00**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%		

OTHER DIRECT EXPENSES	QUANTITY	UNIT	RATE	
Mileage		mile	$ 0.59	$0.00
Hotel		night	$ 110.00	$0.00
Meals		day	$ 56.00	$0.00
Photocopies B/W (8 1/2"x11")		each	$ 0.10	$0.00
Photocopies B/W (11" X 17")		each	$ 0.20	$0.00
Photocopies Color (8 1/2" X 11")		each	$ 0.75	$0.00
Photocopies Color (11" X 17")		each	$ 1.25	$0.00
Large Format Plotting		SF	$ 2.25	$0.00
Foam core exhibit boards		each	$ 75.00	$0.00
Venue Rental		each	$ 250.00	$0.00
Postage		each	$ 0.55	$0.00
Advertisements		each	$ 500.00	$0.00
Misc. (meeting supplies, signage, etc.)		each	$ 250.00	$0.00
Traffic Counts (Quality Counts)		LS	$ 4,200.00	$0.00
SUBTOTAL DIRECT EXPENSES				**$0.00**

SUMMARY	
TOTAL LABOR COSTS	$51,000.00
NON-SALARY (OTHER DIRECT EXPENSES)	$0.00
GRAND TOTAL	**$51,000.00**