CONTRACT AMENDMENT

No. 2

Rancier Avenue Replacement and Streetscaping Improvement Project

This Amendment shall be part of the City of Killeen Rancier Avenue Replacement and Streetscaping Improvement Project Professional Services Agreement. This Contract was entered into on December 14, 2022. The change in the fee structure is as follows:

JUSTIFICATION:

On December 14, 2022, a Professional Services Agreement (PSA) was executed with BGE, Inc. in the amount of $813,453.73. The scope included schematic design service for the Rancier Avenue reconstruction. PSA Amendment No. 1, the consultant requested $35,169.00 for Supplemental Traffic Analysis. PSA Amendment No. 2 is a $2,037,006.37 proposal to respond to the request for Engineering design to 30%. The scope of work is defined in Exhibits B & D (Attached).

Scope of Services	Phase	Present Contract Amount (Original thru Amendment #1	Proposed Amendment #2	Proposed Contract Amount (Original thru Amendment #2)
Schematic Design	1	$813,453.73		
Traffic Analysis Supplemental	2	$848,622.73		
Route and Design Studies	3		$21,612.00	$870,234.73
Environmental Compliance	4		$31,935.00	$902,169.73
Grant Application Support	5		$63,502.42	$965,672.15
Right of Way Data	6		$771,286.70	$1,736,958.85
Project Management	7		$42,410.00	$1,779,368.85
Field Surveying	8		$20,000.00	$1,799,368.85
Roadway Design Controls	9		$241,870.00	$2,041,238.85
Drainage	10		$110,733.00	$2,151,971.85
Signing, Pavement Markings, and Signalization	11		$135,140.00	$2,287,111.85

Scope of Services	Phase	Present Contract Amount (Original thru Amendment #1	Proposed Amendment #2	Proposed Contract Amount (Original thru Amendment #2)
Miscellaneous (Roadway)	12		$146,421.00	$2,433,532.85
Landscape/Urban Design	13		$228,875.00	$2,662,407.85
Expenses	14		$49,596.25	$2,712,004.10
Unit Cost Expenses	15		$173,625.00	$2,885,629.10
	Total	$848,622.73	$2,037,006.37	$2,885,629.10

BGE, Inc.

By: _____

Signature: _____

Title: _____

Date: _____

City of Killeen

By: Edwin Revell

Signature: _____

Title: Exec. Dir. of Development Services

Date: _____

EXHIBIT B
ENGINEERING SERVICE

BGE, Inc. (ENGINEER) will provide staff to support the City of Killeen (Owner) with general construction and engineering support services for the Rancier Avenue project from Fort Hood Street to N 38th Street. The project consists of reconstructing 2.5 miles of existing 4-lane roadway section to a 3-lane facility with medians and left turn lanes.

The work to be performed by the ENGINEER under this contract consists of providing engineering services required for the preparation of plans, specifications, and estimates (PS&E) and related documents, as requested by the Owner. These services may include, but are not limited to, preparing roadway design, hydrologic and hydraulic design, storm sewer design, water and wastewater utility design, duct bank design, landscaping design, survey and ROW mapping, environmental, public involvement, and subsurface utility engineering investigation, geotechnical data collection, and right of way acquisition services.

For the funding availability, this scope of work pertains to advance the PS&E elements of this project to the 30% milestone until more funding can become available. The scope and fee assume a project management and design duration of up to 9 months. 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.

The ENGINEER shall provide traffic control in accordance with the Texas Manual on Uniform Traffic Control Devices (TMUTCD) when performing onsite activities associated with this contract.

ROUTE AND DESIGN STUDIES (Function Code 110)

1. Geotechnical Investigations

Perform borings, obtaining a boring sample at 1000-foot intervals to a minimum depth of 5 feet below existing grade and 4 borings to a minimum depth of 25 feet to support gateway feature structural design. Borings are estimated to consist of the following:

- 14 borings to a depth of 5 feet.
- 4 borings to a depth of 25 feet.

Upon completion of our field exploration, laboratory tests will be conducted to evaluate the classification, strength, and pavement support parameters of the predominant subsurface materials observed in the borings. The results of the field operations and lab tests will be evaluated by a Texas Licensed Professional ENGINEER specializing in

geotechnical engineering analysis. engineering evaluation and recommendations will be limited to providing the following services:

A. Description of field operations and laboratory tests;

B. Description of subsurface materials and conditions including boring logs;

C. Short-term groundwater observations during drilling operations;

D. Specialty horticulture testing via Texas A&M AgriLife Extension (Includes 8 samples: sampled, mailed to AgriLife, and test results)

E. Geotechnical foundation design criteria as follows:

   a. Volume change estimates of expansive soils (Potential Vertical Rise)

   b. Suitable foundation types and depths

   c. Allowable bearing values

   d. Geotechnical seismic criteria

F. Pavement thickness designs using new and/or recycled materials, to the extent practical; General earthwork and construction criteria including geotechnical material specifications.

ENVIRONMENTAL COMPLIANCE (Function Code 120)

This project is projected to be locally sponsored by the City of Killeen and is not on the Texas Department of Transportation (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 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) for the entire limits of the new proposed right-of-way (ROW).

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 has been executed. In addition, the project has been assigned a Control-Section-Job numbers (CSJs). ~~E~~nvironmental compliance documentation will be updated in TxDOT's format and according to current TxDOT guidance found in TxDOT's Environmental Compliance Toolkits.

1. TxDOT Categorical Exclusion

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 update 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:

A. Update Draft and Final WPD Section I and WPD Section II

B. Update Draft and Final Project Area Maps

2. Archeological Studies

The ENGINEER will update the Archeological Background Study per the TxDOT Environmental Toolkit and submit to the TxDOT Waco District for review and approval. The Background Study shall be updated 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.

Deliverables:

A. Updated Draft and Final Archeological Background Study

3. Historical Studies

The proposed project is within an aging part of the City of Killeen, new 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) and possibly a 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 update the 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:

A. Update Draft and Final Historical Studies PCR

4. Threatened and Endangered Species

The ENGINEER shall update the 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.

Deliverables:

A. Update Draft and Final Species Analysis Summary

B. Update 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 shall update 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.

Deliverables:

A. Update 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 update the 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.

Deliverables:

A. Update Draft and Final Hazardous Materials ISA

GRANT APPLICATION SUPPORT (Function Code 122)

1. RAISE Grant Application Preparation and Submission

ENGINEER to 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 4 – 6 weeks to complete. ENGINEER to provide support to the City to collect data from public sources, and other City departments. ENGINEER to provide miscellaneous support needed to complete the application. ENGINEER to develop a benefit cost analysis of the build and no-build options. Attend up to four (4) project coordination meetings with Stakeholders and other City departments.

2. Additional Grant Application Support

ENGINEER to support the City with grant evaluations, providing project information, cost estimates, descriptions, and graphics as needed to support the City's development and submittal of grant applications to support the funding of Rancier Avenue related projects.

RIGHT OF WAY DATA (Function Code 130)

1. Utility Engineering Investigation

The ENGINEER's subconsultant, The Rios Group, will perform Subsurface Utility Engineering (SUE) services for this project in general accordance with the recommended practices and procedures described in ASCE publication ASCE/UESI/CI 38-22 "Standard Guideline for Investigating and Documenting Existing Utilities". SUE Quality Level definitions and data limitations are included in Exhibit C, attached to this proposal.

The scope of this proposal includes QLB and QLA SUE services to include:

QLB SUE services within the limits of the Rancier Avenue project. QLB SUE services provided will be inclusive of QLC and QLD. The limits extend along Rancier Avenue from the intersection of North Fort Hood Street to just past Bundrant Drive.

This scope of work also includes up to twenty-five (25) QLA SUE test holes at a location that will be provided by the Utility Coordinator following a review of the QLB SUE information.

Deliverables

A. A utility file in CAD format depicting all SUE data documented on the project.

B. A summary sheet of all test hole coordinate data and depth information.

C. 8.5" x 11" Test Hole Data Forms for all test hole locations completed. These forms will be signed and sealed by a Professional Engineer and delivered to the Owner in electronic PDF form.

D. 11" x 17" SUE Plan Sheets depicting all SUE data documented on the project. These plans will be signed and sealed by a Professional Engineer and delivered to the Owner in electronic PDF form.

E. A Utility Report containing metadata (e.g. scope of work, work limits, dates of performance, survey control, etc.), information about the Utility Investigation not otherwise conveyed in other project deliverables, and recommendations to address data deficiencies.

2. Utility Adjustment Coordination

Utility Adjustment Coordination includes communicating, coordinating, and conducting meetings with anyone, combination, or all of the following: individual utility companies, Local Public Agencies (LPAs), City Project Manager, City Utility Staff. Utility coordination duties include but are not limited to: assisting in preparing utility agreement assemblies including utility agreements, utility reimbursable billings, joint use agreements, and assisting utility companies with utility permit submittals.

The Utility Coordinator shall perform utility adjustment coordination for approximately twelve (12) utilities as listed below:

- Atmos Pipeline Texas
- Atmos Energy – Mid-Tex
- Bell County WCID No. 1
- Brightspeed
- Spectrum
- Oncor Electric Distribution
- City of Killeen Water and Wastewater
- Lumen
- Millennium Telcom LLC dba OneSource Communication
- Unite Private Networks Llc
- City of Killeen ISD
- Fiberfirst Communications

A. **Utility Coordination** - The Utility Coordinator will perform utility coordination and liaison activities with involved utility owners, their consultants, and the Owner to achieve timely project notifications. In conjunction with formal coordination meetings, the Utility Coordinator will create meeting minutes, create, and update the utility conflict matrix, create action item log, perform document control, and assist with conflict analysis and resolution.

The Utility Coordinator will coordinate utility related activities with the Owner, or its designee, to facilitate the orderly progress and timely completion of the City's design phase. The Utility Coordinator is responsible for the following:

i. Initial Project Meeting: Attend an initial meeting and an on-site visit inspection (when appropriate) to ensure familiarity with existing

conditions and project requirements and prepare a written report of the meeting

ii. The Utility Coordinator shall provide initial project notification letters to all affected utility companies, owners and other concerned parties, if needed.

iii. External Communications. The Utility Coordinator will coordinate all activities with the Owner, its contractors, representatives and stakeholders, as authorized by the Owner

iv. Progress Meetings. The Utility Coordinator must implement a schedule of periodic meetings and milestone meetings with each utility company and owner or owner's representatives for coordination purposes. The Utility Coordinator will notify the Owner at least five (5) business days in advance of each meeting. The Utility Coordinator will provide and produce meeting minutes of all meetings with said utility companies, owners, or owners' representatives within seven (7) business days. The frequency of these meetings must be appropriate to the matters under discussion with each utility owner.

a. Milestone Meetings: The Utility Coordinator will hold one (1) milestone meeting at 30%. These meetings will be used to discuss project design updates with utilities and the Owner.

b. Shared Duct Bank Meetings: The Utility Coordinator will hold group and individual meetings anticipated to utilize the proposed telecom duct bank. These meetings will be to discuss project updates including project schedules, joint trench design, etc. This will consist of the initial project kick-off meeting and monthly meetings for the duration of the project (assumed 9 months).

c. Individual Utility Meetings: The Utility Coordinator will hold individual monthly utility meetings as needed. It is assumed that there will be 18 meetings.

d. Progress Meetings: The Utility Coordinator will meet with the Owner and, if applicable, design consultants, periodically to coordinate the work effort and resolve problems. The Utility Coordinator will also prepare a written report of all progress meetings and provide the report to the Owner. It is assumed that there will be a total of 9 monthly progress meetings. During the progress meetings, the Engineer must review:

i. Activities completed since the last meeting

ii. Problems encountered

iii. Late activities

iv. Activities required by the next progress meeting

v. Solutions for unresolved and/or anticipated problems

vi. Information or items required from other agencies/consultants

As required, the Utility Coordinator must coordinate with the local utility committees and councils to present a footprint of the Owner's projects with represented utility companies and owners. The Utility Coordinator will also coordinate with any other utility committees which might include county, city, or other officials, as needed.

The Utility Coordinator must provide the Owner and all affected utility companies and owners with a contact list, Utility Conflict Matrix (UCM), and utility conflict layout for each project with information such as:

a. Owner's name

b. Contact person

c. Telephone numbers

d. Emergency contact number

e. Email addresses, and

f. Pertinent information concerning their respective affected utilities and facilities, including but not limited to: size, number of poles, material and other information that readily identifies the utilities company's facilities.

The Utility Coordinator is responsible for updating the UCM and utility conflict layout throughout the project and at each milestone.

The Utility Coordinator must 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 by distributing the SUE plan sheets or project layout sheets.

The Utility Coordinator shall coordinate which utilities will conflict with roadway construction and make the utility company aware of those conflicts.

B. Utility Agreements for Utility Adjustments

The Utility Coordinator must coordinate with utility owners on the identified conflicts with proposed construction and ensure the Owner's rules and regulations are addressed. The Utility Coordinator must assist the utility companies in the preparation of required agreements associated with, but not limited to: cost estimates, plans, disposition of existing facilities and schedule.

Utility Agreement Assemblies are assumed for Atmos MidTex.

i. Utility Agreement Assemblies: A packaged agreement consisting of a Utility Joint Use Acknowledgement, Standard Utility Agreements, plans, proof of property, schedule of work, Buy America compliance Mill Test Reports (MTRs) or Certifications

    a. Utility Agreements: If a utility is located within an easement, the utility company might have a compensable interest. The utility company must furnish a copy of their easement to the Utility Coordinator. The Utility Coordinator must determine whether or not a compensable interest exists. The Utility Coordinator must review plans to ensure compliance with Owner rules and ensure the proposal will not conflict with roadway construction. The Utility Coordinator will review the cost estimate to ensure all listed items and quantities are clearly defined in the plan set. The Utility Coordinator must submit a copy of the easement(s), plans and estimate to the Owner via letter of recommending approval.

    b. Escrow Agreements: If it is determined that the utility will be adjusted as part of the roadway contract, the Owner's project manager must be notified immediately.

ii. The Utility Coordinator must determine which utilities will be installed by agreement between the utility and the Owner. The Utility Coordinator will coordinate utility agreements, determine the necessity of any escrow agreements, and forward these documents to the Owner for final approval.

iii. Coordination of Engineering Activities

    a. The Utility Coordinator must maintain a utility conflict layout utilizing the Existing Utility Layout. The Utility Coordinator must utilize the layout of existing utilities as prepared, if available, and of the following:

        i. Facilities in conflict with the proposed project that are to be relocated.

        ii. Facilities to be removed or abandoned in place.

iii. Facilities to remain in service and in place because of roadway design adjustments and meeting the current rules and regulations.

iv. If there are additional facilities not shown in the SUE documents which require relocation, the Utility Coordinator will coordinate this information with the Owner immediately upon discovery.

b. Review of Utility's Proposed Adjustments:

i. Evaluate Alternatives: The Utility Coordinator will evaluate alternatives in the adjustment of utilities balancing the needs of both the Owner and the Utility

ii. Review Estimates and Schedules: The Utility Coordinator will, with the assistance of the Owner, review the utility adjustment estimates for reasonableness of cost and the timely scheduling of the adjustment.

iii. The Utility Coordinator must review plans, Buy America materials, and proposed location data.

iv. The Utility Coordinator must ensure that utility owners are reviewing updates for the project design development so that the utility owners are reviewing the most current plants, quality and accuracy of utility adjustment data as it pertains to the plans. The responsibility for compliance, quality and accuracy of utility adjustment plans will remain with the utility company.

c. The Utility Coordinator will:

i. Ensure all facility conflicts have been resolved

ii. Ensure all stakeholders have concurred with the various alignments, including the undergrounding of their overhead assets (where applicable)

iii. Establish the sequence of construction for all utility relocation work. The Utility Coordinator will provide in the schedules provided by the utility to the ENGINEER to incorporate into the Traffic Control Plan and notes.

iv. Determine which utilities will be built as part of the contract.

d. The Utility Coordinator shall coordinate, and/or review PS&E for all utilities included in the construction contract.

e. The Utility Coordinator must submit, upon request from the Owner, Utility Certifications to certify that all utilities are clear for roadway construction. The Utility Coordinator must monitor the completion of the work, according to the utility clearance schedule signed by the utility owner. The formats for the certification and clearance schedule will be provided by the Owner.

f. Utility Coordinator shall coordinate the status of ROW acquisitions with the utilities to assist with scheduling accommodations.

Deliverables

A. Utility Conflict Matrix, including the identification of utility conflicts and resolutions

B. CAD-compatible file showing all existing utility conflicts and relocations

3. Utility Engineering

The ENGINEER shall maintain a utility layout in in a CAD-compatible software to be used by the Owner. This layout shall include existing utilities which are to remain in place or be abandoned, and adjusted utilities. This layout will be utilized to monitor and evaluate alternatives. The ENGINEER will utilize the layout of existing utilities as prepared, if available, and make a determination of the following:

a. Facilities in conflict with the proposed project that are to be relocated.

b. Facilities to be abandoned in place.

c. Facilities to remain in service and in place.

i. The ENGINEER shall be responsible for determining if there are additional facilities, not shown in the SUE documents, which require relocation. The ENGINEER shall coordinate this information with the City of Killeen immediately upon discovery.

A. Water and Wastewater Design – The ENGINEER will design the relocation of water and wastewater lines and appurtenances as required for the reconstruction of

Rancier Avenue. The locations of these facilities to be relocated will be determined during the roadway preliminary design. The following assumptions provide the extent of design to be performed within the project limits.

i. Water Utilities:

a. Relocation of up to 8,500 LF of water line

b. Relocation and/or adjustment of up to 100 water meters, valves, and fire hydrants

ii. Wastewater Utilities:

a. Relocation of up to 2,700 LF gravity wastewater line and associated manholes

b. Adjustment of up to 20 manholes to grade

B. Underground Telecommunication Relocation Coordination – The ENGINEER will manage the design and consolidation of overhead aerial telecommunication facilities into an underground duct space as required for the reconstruction for Rancier Avenue. The location of this facility will be determined during the roadway preliminary design. The following assumptions provide the extent of design to be performed within the project limits:

i. There will be up to two joint telecommunication duct banks for Rancier Avenue. Approximately 7,000 LF of overhead telecommunication assets will be coordinated and relocated into an underground space.

ii. All applicable telecommunication utility providers within Project Limits will elect to participate in the joint duct bank coordination for purposes of relocating their overhead or underground assets into the proposed joint duct bank via pull-through construction

iii. The telecommunication utility providers will be responsible for managing the splicing of their assets that service commercial and residential facilities. The telecommunication utility providers will be responsible for designing the services of broadband to their respective commercial and residential customers.

iv. The ENGINEER will design 30 access points to accommodate street crossing and telecommunication asset accessibility appurtenances.

C. Overhead Telecommunication Relocation Coordination – The ENGINEER will coordinate approximately 6,000 LF of pole re-alignments.

i. The ENGINEER to design 35 riser facilities as the proposed telecommunication underground alignment transitions to existing aerial alignments at street crossings.

Deliverables

A. Design plans showing the proposed water, wastewater, underground telecommunication and overhead telecommunication relocations and appurtenance relocations.

4. Right-of-Entry

The ENGINEER shall notify the Owner and secure permission to enter private property to perform any surveying, environmental, engineering, or geotechnical activities needed off Owner right-of-way. In pursuance of the Owner's policy with the general public, the ENGINEER shall not commit acts which would result in damages to private property, and the ENGINEER shall make every effort to comply with the wishes and address the concerns of affected private property owners. The ENGINEER shall contact each property owner prior to any entry onto the owner's property and shall request concurrence from the Owner prior to each entry.

The ENGINEER will pursue right of entries for up to 116 parcels to complete survey. This will be completed in 2 phases. Phase 1 will include BGE sending certified letters to property owners and placing letters on appropriate properties. Phase 2 will include BGE's subconsultant, Dianna Tinkler, pursuing right of entries for the remainder of the unreached/unapproved parcels.

5. Right-of-Way Negotiations

The ENGINEER'S subconsultant, Dianna Tinkler, will perform the following services for up to 10 parcels:

- Prepare monthly status report for parcel acquisition as requested by City
- Participate in monthly project review meetings as determined by City, as needed
- Prepare owner contact list for project
- Order title commitments for each parcel
- Parcel files for acquisitions will be kept in ROW provider's office
- Maintain parcel files including correspondence and negotiator's log with property owner
- Maintain record of parcel payment amounts

- Maintain parcel files with original documentation related to the purchase of the real property or property interest.

- The ENGINEER will require surveyor to update parcel sketches as needed to show encumbrances listed in the title commitment

- Upon receipt of approved field note descriptions from the City, prepare letter of intent to acquire to property owner and provide landowner's bill of rights by Certified Mail-Return Receipt Requested (CMRRR)

- Analyze preliminary title report to determine potential title problems and propose methods to cure title deficiencies

- Completed appraisals will be reviewed by review appraiser with recommended appraised values approved by City prior to making initial offers

- Prepare initial offer letter, purchase contract, instrument of conveyance

- Field note description, written offer, purchase contract, instrument of conveyance, appraisal report, Landowner's Bill of Rights, Information about Brokerage Services and Consumer Protection Notice will be mailed to property owner by CMRRR

- Contact each property owner to meet and discuss the written offer, if practical

- Initiate and receive various phone calls throughout initial offer

- Prepare general correspondence to property owner

- Provide property owner questions/concerns with ENGINEER and City to resolve property owner questions/concerns

- Attend maximum of three (3) meetings with property owner during initial offer phase

- Submit any written counteroffer from property owner to City including supporting documentation, and recommendation with regard to counteroffer

- Secure necessary signed instruments upon acceptance of the offer by property owner for the closing.

- Provide purchase contract executed by the property owner to City for City's execution.

- Assist the City in the curative work necessary to provide clear title to City, including full and partial releases of liens. Curative title work for parcels with

abstracts of judgment, foreclosure, bankruptcy and tax liens will be invoiced as additional services.

- Prepare check request to City for acquisition costs including but not limited to fully executed purchase agreement total price amount, document preparation fee for lender consents/subordination to easement, lender's processing fee, recording fees, escrow fees, and any other applicable closing costs with supporting documentation (HUD Settlement Statement) provided.

- Attend closing with property owner.

- Title company will record original instruments after closing with the County Clerk's Office.

- Prepare final offer letter, documents of conveyance as necessary and mail by CMRRR.

- Attend one (1) meeting with property owner after final offer letter in an attempt to reach agreement in lieu of condemnation.

- Assist the City with securing a Possession and Use Agreement if acceptable with property owner.

- Provide copies of intent to acquire letter, initial offer letter, final offer letter and purchase contract to City condemnation attorney (not included with ENGINEER's contract).

- Provide summaries of project expenses for amounts authorized and paid.

- Prepare project close-out summary and scan recorded instruments and closing documents.

- Deliver file to City as requested: 1) Closed file, 2) Condemnation file.

-

6. Appraiser

The ENGINEER'S subconsultant, Dianna Tinkler, will perform the following services:

- Appraisals developed and reported in compliance with the 2022-2023 Uniform Standards of Professional Practice (USPAP)

- Appraisal reports will be written in conformance with Standard Rule 2-2(a) as defined by USPAP as well as applicable TXDOT reporting requirements and guidelines

- Appraisal completion date for each appraisal report will be 120 days from receipt of finalized field note description and a notice to proceed.

7. Review Appraiser

The ENGINEER'S subconsultant, Dianna Tinkler, will perform the following services:

- Appraisal reports will be written in conformance with applicable TXDOT reporting requirements and guidelines.

- Appraisal completion date for each appraisal report will be 45 days from receipt of appraisal report.

- **Coordination for Title, Acquisition Limits:** The ENGINEER to coordinate title and acquisition limits for up to 10 parcels.

PROJECT MANAGEMENT (Function Code 145)

1. Meetings

A. Attend and document up to 9Progress Meetings at the City of Killeen office or virtual. Engineer to prepare meeting minutes and distribute within 24-hours of the meeting.

2. General Contract Administration

A. Develop monthly invoices and progress reports.

B. Subconsultant coordination and management.

C. Develop and maintain design schedule.

FIELD SURVEYING (Function Code 150)

Surveys provided will be in accordance with the "Texas State Board of Land Surveying" and the applicable City of Killeen regulations.

Survey field notes will be submitted if requested by the City of Killeen.

Verify and compare previously located utility data with current ground conditions. The Surveyor will Contact the One-Call System in advance of performing field surveys to attempt 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. Historically, results in this task have been marginal and there may cause to seek additional compensation for repeated trips to the project site to complete this effort.

1. Topographic Surveys for Engineering Design and Hydraulic Analysis

A. Perform additional Topographic Survey to supplement survey performed in the schematic phase. Additional survey will generally be from existing Right-of-Way to proposed Right-of-Way. All improvements and visible utilities will be located as well as all hardwood trees 8 inches in diameter and greater in size and mulch beds/planters.

i. 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 roadway cross sections will be taken at intervals not to exceed 100 feet.

ii. Topographic information will include the limits of the existing concrete riprap upstream, beneath, and downstream of the existing drainage features.

iii. Profiles of intersecting driveways within the project limits will extend a sufficient distance beyond the existing right of way to ensure adequate data is available to determine tie-ins with proposed vertical alignment changes.

iv. 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.

v. Field surveys will provide an elevation and a horizontal tie to the soil boring locations or converted from data provided by the geotechnical subconsultant.

vi. 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 the TxDOT's 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.

vii. Surveyed data will be provided in a CAD compatible two-dimensional base map format. The survey shot point attributes will appear on separate levels.

viii. A Digital Terrain Model (DTM) will be provided in a CAD compatible three-dimensional format.

2. Right-of-Way Parcel Map Exhibits (Parcel Descriptions)

Title work will be completed for up to 10 properties adjacent to the subject right-of-way in areas that need the right-of-way defined within the project limits. Title work will include, at minimum, owner name, vesting deed information, record information of legal lot, and all easements that affect the tract. Additionally, all record documents referenced in the title work shall be provided to the Surveyor.

For each parcel of land to be acquired, an Exhibit (Property Description) shall be prepared for each parcel or tract consisting of two (2) parts: (1) a metes and bounds description of the property and (2) a parcel plat. Each part of a Property Description will be QA/QC'd and shall be signed and sealed by a RPLS. Scope assumes up to 10 Parcel Acquisitions.

Once finalized, boundary monumentation will be set to establish the new right-of-way

3. Survey Coordination (Up to 10 Parcels)

ENGINEER will coordinate with the surveyor, right of way agent, and Owner to develop parcel exhibits to demonstrate acquisition limits, easement requirements, parcel specific survey notes. These will be used to support the acquisition negotiations and final parcel descriptions for documentation.

ROADWAY DESIGN CONTROLS (Function Code 160)

1. PS&E Development

The ENGINEER to perform the following items for the project:

A. **Geometric Design** – Refine and develop the horizontal alignment; vertical profile; pavement cross slopes; medians, curb and gutter; bike lanes, driveway access, sidewalks, retaining wall needs, parking configuration; that meet acceptable design criteria and minimize the limits of the proposed ROW.

B. **Parcel Access** – Analyze parcel access and operation for up to 70 parcels that are being impacted with the proposed median.

C. **Limits of Proposed ROW** – Analyze the cross sections associated with the desirable design criteria to determine the limits of ROW necessary to accommodate the resultant configuration. Develop an exhibit providing the ROW footprint with the desirable configuration.

D. **Design Cross Sections** - Develop roadway cross sections associated with the proposed horizontal alignment and vertical profile every 50-foot at a minimum stretching across the entire ROW of the Project as necessary for the determination of cut and fill quantities and limits of disturbance in accordance with acceptable design criteria.

E. **Typical Sections** – Prepare existing and proposed typical sections.

F. **Plan & Profile Drawings (1"=50')** – Drawings to include critical base map information, control and benchmark data, proposed roadway improvements including horizontal and vertical roadway geometry, pavement edge geometry, drainage, grading and miscellaneous improvements.

G. **Alignment Data Sheets** – Prepare horizontal and vertical alignment data sheets with the Geopak baseline descriptions.

H. **Earthwork Quantities** – Prepare final cut/fill and general earthwork calculations to support design elements and roadway construction efforts.

I. **Driveway/Side Street Details** – Develop full details for each proposed driveway & minor cross street to ensure each meets design and functional features and requirements. There are approximately 130 driveways & minor cross streets along Rancier Ave included in this proposed PS&E.

J. **Intersection Details** – Develop full details for each proposed/existing intersection to ensure each meets design and functional features and requirements. Proposed intersections for this PS&E include Rancier Ave at the following streets:

i. Gilmer St

ii. Valley Rd

iii. N College St

iv. 2nd St

v. 4th St

vi. N Gray St

vii. 10th St

viii. Alexander St

ix. WS Young Dr

K. **Removal Plans** - Prepare sheets noting all existing improvements to be removed within the project limits.

L. **Prepare Title Sheet, Project Layout, and Index of Sheets**

DRAINAGE (Function Code 161)

1. PS&E Development

A. **Drainage Area Maps** – The ENGINEER shall refine the drainage area maps prepared in the schematic for overall drainage areas contributing to each cross culvert and for internal drainage areas contributing to the local stormwater collection systems. Drainage Area Maps will include Time of Concentration flow path delineations, contours, and points of analysis.

B. **Hydrologic & Hydraulic Calculations** – The ENGINEER shall provide the following services:

i. Calculate external and internal peak discharges using appropriate hydrologic methods. ATLAS-14 rainfall data will be used.

ii. Obtain external and internal drainage area boundaries and hydrologic parameters such as impervious covered areas, and overland flow paths and slopes from appropriate sources including, but not limited to, topographic maps, GIS modeling, construction plans, and existing hydrologic studies. The ENGINEER shall not use existing hydrologic studies without assessing of their validity. If necessary, obtain additional information such as local rainfall from official sites such as airports.

iii. Gather information regarding existing drainage facilities and features from existing plans and other available studies or sources.

iv. Perform hydraulic design and analysis using appropriate hydraulic methods, which may include computer aided models.

v. Develop plan designs, at minimum, for all internal stormwater collection systems.

C. **Culvert Analyses & Design** – The ENGINEER shall provide the following services:

i. Analyze capacity of existing cross culverts.

ii. Analyze impact of culvert extensions.

iii. Determine mitigation for potential impact of extending existing cross culverts.

iv. Prepare construction plans for culvert extensions and/or culvert reconstruction.

D. **Storm Drain Plans** – The ENGINEER shall provide the following services:

i. Determine inlet placement, size, and type meeting City of Killeen drainage criteria.

ii. Determine captured and bypass flows for proposed inlets.

iii. Design lateral and trunk line storm sewer system meeting City of Killeen drainage criteria.

E. **Prepare Quantities and Engineer's Opinion of Construction Costs** – The ENGINEER shall prepare quantities and construction costs estimates for cross culvert and storm sewer improvements at the 30% submittal.

F. Details and Specifications – The ENGINEER shall review and revise as needed City of Killeen and TxDOT standard details and specifications related to drainage design plans. The ENGINEER shall work with the structural engineer to prepare specialized details related to stormwater infrastructure, if applicable.

G. **Coordination with Utilities –** The ENGINEER shall coordinate with the utility design engineer and utility coordinator to ensure proposed storm sewer does not conflict with proposed or existing utilities to remain.

H. **Coordination with City of Killeen –** The ENGINEER shall coordinate with the City of Killeen on proposed culvert design mitigation and storm sewer improvements.

Deliverables

A. Drainage Quantities

B. Drainage Area Maps (External and Internal)

C. Hydrologic Data Sheets (External and Internal)

D. Hydraulic Data Sheets (External and Internal)

E. Storm Drain Plan and Profile Sheets

F. Cross Culvert Sheets

G. Drainage Detail Sheets

SIGNING, PAVEMENT MARKINGS AND SIGNALIZATIONS (Function Code 162)

1. PS&E Development

A. **Signing & Pavement Markings –** Prepare signage and pavement marking plan sheets, layouts, and associated details.

B. **Traffic Signal Layouts -** The ENGINEER will prepare traffic signal plans for nine intersections and one pedestrian hybrid beacon along Rancier Avenue in Killeen, Texas. The signals will be designed to Texas Department of Transportation TxDOT standards, and subject to the review and ownership of the City of Killeen. Signal locations:

i. Gilmer St

ii. Valley Rd

iii. N College St

iv. 2nd St

v. N Gray St

vi. 10th St

vii. Alexander St

viii. WS Young Dr

ix. Pedestrian Hybrid Beacon (Approximately 130 feet east of Medical Dr.)

The ENGINEER shall design plans for traffic signal infrastructure improvements for the locations outlined above. Design elements shall include all elements as required by the Reviewer including signal poles, mast arms, signal heads, signage, striping, vehicle detection systems, wiring details, conduits, ground boxes, integrated communications, illumination, and electrical services. All design shall conform to TxDOT standards and those laid out in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). For this, the following plan sheets shall be include:

i. Existing intersection layout.

ii. Proposed traffic signal layouts, showing the proposed traffic signal features, signal pole schedules, vehicle detection systems, signal phasing, conduit and cable schedules, electrical service.

iii. Proposed traffic signal elevations.

iv. Proposed electrical schedule and phasing diagram.

v. Applicable standard drawings.

vi. General signal notes.

vii. Signal quantities.

C. **Miscellaneous Traffic Engineering –** The ENGINEER to prepare traffic standards, perform agency coordination, take one site visit and prepare summary sheets of all signing, pavement markings, and traffic signal quantities.

MISCELLANEOUS (ROADWAY) (Function Code 163)

1. Miscellaneous Roadway

A. **Cost Estimates -** Develop and assemble preliminary construction cost estimates at 30% submittals.

B. **Traffic Control Plans (TCP), Detours, Sequence of Construction –** Prepare Sequence of Phased Construction. Prepare TCP cross sections to identify temporary pavement needs. Identify impacts to existing drainage. 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. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing access. Road closures should be avoided. If a road closure is determined to be necessary, a Detour Layout and estimated closure duration shall be provided to the Owner for approval.

C. **Storm Water Pollution Prevention Plans (SW3P)** – The ENGINEER shall develop SW3P layouts, on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P layouts must include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control.

D. **Quantity Summaries –** Prepare summary sheets of all roadway, SW3P, signing, pavement markings, and traffic control quantities.

E. **Specifications and General Notes -** The ENGINEER shall identify necessary standard specifications, special specifications, special provisions, and the appropriate reference items. The ENGINEER shall prepare General Notes from the TxDOT Waco District's Master List of General Notes, Special Specifications and

Special Provisions for inclusion in the plans and bidding documents. In addition, the ENGINEER shall include applicable Owner general notes. The ENGINEER shall provide General Notes, Special Specifications and Special Provisions in the required format. Specifications will not be developed for the 30% submittal.

F. **Standard Details –** Incorporate applicable TxDOT and City standards into the plan set.

2. Illumination

A. **Illumination PER Package –** Coordinate with City of Killeen and Electrical Service Provider responsible for maintaining illumination systems upon completion of construction to select decorative street lighting assemblies to be utilized for illumination photometric design. ENGINEER will provide typical anticipated pole spacing for corridor, and anticipated construction cost for decorative illumination assemblies selected by City of Killeen f Solar powered illumination will be discussed with Oncor for street lights and will be utilized in appropriate locations.

B. **Illumination Photometric Study –** Continuous street illumination will be designed in accordance to requirements of Texas Department of Transportation Highway Illumination Manual utilizing Illuminance and Luminance Design Values for Minor Arterials with Commercial General Land Use. The photometric modeling will be completed utilizing AGI 32 lighting software. The photometric model and plan sheets will be refined per client review comments.

C. **Illumination Layout Roll Plot** – Prepare illumination roll plot showing illumination pole locations on proposed roadway and light intensity measurements on 10’ grid.

D. **Illumination Circuit Design, Electrical Service Design, Layouts, and Details**

i. Coordinate proposed electrical service locations with Electrical Service Provider. Conduct 8 meetings with electrical service provider. Conduct 3 meetings to coordinate electrical service location.

ii. Design conduit runs, circuits (Limit: 14),

iii. Design size conductors and electrical services (Limit: 4) in accordance to Texas Department of Transportation Highway Illumination Manual and National Electric Code (NEC).

iv. Prepare illumination plan sheets showing illumination pole location, conduit runs, conductor size and lengths, and proposed electrical services locations.

v. Prepare illumination circuit line diagrams for each illumination circuit.

LANDSCAPE/URBAN DESIGN (Function Code 164)

The current conceptual design approach, developed in the prior preliminary design phase, anticipates a coordinated mix of streetscape zones with varied levels of design and periodic community gateways. This scope will build upon the previous concepts utilizing information and feedback provided by the Client based on the anticipated landscape architecture construction cost developed in the schematic plus escalation. These Landscape Architectural Services will address the design of the following program elements within the designated streetscape zones, subject to compliance with the Client's directives and proposed construction budget. Coordination tasks listed are based on landscape architecture being performed in a supporting role to the engineering lead of these tasks.

- Integration of a unified streetscape design with the project engineering;
- Coordination of streetscape improvements with driveway consolidations;
- Coordination of sidewalk layouts with Engineer's proposed right of way and curbline geometry;
- Coordination of curblines to accommodate Landscape Planting Beds and Parallel Parking;
- Coordination of underdrains through landscape planting beds with tree plantings;
- Bike Lane design coordination with corridor design aesthetics;
- Pedestrian Curb Ramp facility design coordination;
- Schematic Lighting Design coordination;
- Light Standards, Traffic Signal Hardware and Street Signage hardware aesthetic coordination;
- Landscape Design coordination with proposed Signage;
- Coordination with local agencies regarding approval of Landscape Construction Documents;
- Sidewalk and Pedestrian Walkway layouts with periodic Special Paving;
- Special Pavement design at sidewalks, crosswalks and selective roadway areas;
- Planting design for medians, gateways, parkways and right of way planters;
- Landscape soil conditions, including soil cells and/or structural soil volumes;

- Landscape Irrigation system;
- Grading of landscape areas based on engineering design of Roadways and Right of Ways;
- Site Furnishings selections and designs;
- Gateway Feature layouts and elements design;
- Landscape Specification for plants, planters, landscape soils, specialty hardscapes and irrigation;
- Landscape Bid Item designations and quantities.

1. 30% Schematic Design

BGE will develop the design of streetscape enhancement program elements based on engineering plan conditions depicted upon conclusion of the Preliminary engineering Design Package and as further coordinated through this design process. This will include:

- Evaluation of a prototypical design alternative plan layout for two (2) options within each of the four proposed improvement zones. Prototypical, partial area Concept Plans for each zone will be depicted in color rendered formats with supplemental sections, and basic layout notations. These plans will be depicted in more detail than the preliminary planning documents to address updated layout, paving patterns, colors and landscape types;
- Identification of aesthetic palettes to accompany the concept plans, including representative photos and/or product images illustrating general design intents;
- Prepare two (2) alternative plans for the four (4) Gateway feature locations along the corridor including hardscape and softscape landscape improvements depicted in site section format for each design;
- Prepare updated Opinions of Probable Construction Cost (OPCC) for the two (2) design alternatives within the four zones, totaling eight (8) pricing breakdown categories, including gateway features;
- Provide periodic review inputs on engineering design layout plans to accommodate the proposed landscape design concepts. Identify engineering coordination issues to be resolved in the course of the final design by plan mark-ups at two intervals within this design stage.

- Confirm irrigation water availability along the corridor based on water pressure readings and main line routings. Identify basic irrigation system recommendations for approval by client.

- Review the alternative concepts with the client and project team to solicit feedback.

- Consolidate the feedback with the current engineering plans to depict one proposed design solution by means of prototypical plans for each improvement zone. These layouts will be presented and reviewed with the client to obtain feedback and design direction to be addressed in the next phase of this scope of work.

The end goal of this phase is to set the streetscape conceptual directives to guide further development of the design through the remainder of this scope of work.

2. Landscape Meetings, Strip Map Preparation and Visualizations

Address relevant landscape design and documentation issues throughout the project process in online and in-person client-related meetings organized and managed by the client and BGE project manager. These meetings are each intended to be one (1) to three (3) hour duration, plus associated meeting coordination, depending on issues at the time of the meetings.

- Attend an in-person kick-off meeting with the client and project team to review final deliverables from the preliminary design phase and to obtain client directions for the project design.

- Participate in up to nine (9) monthly meetings with the client and project team to present and coordinate landscape related issues. Eighteen (18) of these meetings will be attended online with in-person attendance at five (5), intended as one per design stage.

- Participate in up to two (2) online meetings with client and outside agencies or organizations (such as utility providers, property associations, grant organization, etc.).

DELIVERABLES ITEMS REQUIRED FROM THE ENGINEER

The ENGINEER will make a 30% PS&E submittal. All submittals are intended as a means of obtaining City review comments which will be addressed in the subsequent submittals.

PS&E 30% Review Submittal

1. Design Plans

2. Minimal additional survey

3. Right of Entry Requests
4. Begin utility coordination
5. RAISE Grant Support
6. Finalize geotechnical engineering
7. Begin SUE
8. Preliminary Cross Sections
9. Preliminary culvert locations and sizes
10. Preliminary Geotechnical Report; including preliminary pavement design section based on stated assumptions which are based on known field conditions, historical or otherwise
11. Engineer's estimate of costs
12. Preliminary Drainage Tech Memo
13. ROW map
14. Up to 20 parcel evaluations

Assumptions

1. The 30% PS&E preparation scope and fee assume a project design duration of up to 12 months.
2. The utility design and coordination will advance to the 30% design submittal and not proceed to 60% until authorized by the Owner.
3. The design of schematic submitted January 26, 2024, shall be considered final. All design efforts will be based off this schematic.
4. The project is anticipated to be environmentally cleared through TxDOT as a Categorical Exclusion (CE) for the entire limits of the new proposed right-of-way (ROW)
5. The Drainage Report will be required for this project but excluded until the 90% design submittal
6. The Temporary Construction Phased Storm Drain Plans will be required for this project but excluded until the 90% design submittal.Up to 10 parcels will be negotiated and appraised during the 30% PS&E effort.
7. All telecommunication utilities will constructed in joint duct or trench facilities.

8. The private electric utility company Oncor will dedicate a conduit within their proposed duct bank to the City for purposes of illumination.

9. There will be up to two joint telecommunication duct banks designed for this Project.

10. There are twelve (12) utility owners within the Rancier Avenue Project Limits. All utility providers will be responsible for their own utility design and will coordinate with the Engineer to define and locate the conduits within the proposed duct bank. Utility providers will also coordinate with the Engineer to locate and limit the number of access points to 30.

11. The Rios Group and ENGINEER will perform records research and acquire available existing utility records within the project limits. This will include contacting the applicable One Call agency and associated utility owners/municipalities to request records and reviewing available utility record information obtained.

12. The Rios Group will attempt to designate the following utilities within this area: potable water, reclaimed water, chilled water, natural gas/crude oil/refined product pipelines, communication duct banks, fiber optic, cable television, telephone, traffic signal cables, street lighting, TxDOT CTMS cables, overhead utilities, and electric.

13. Wastewater and storm drain facilities will be inverted at manholes and will be depicted as QLC information.

14. The Rios Group will attempt to designate utility service lines, however, because these lines are often non-conductive and not shown on records the ENGINEER cannot guarantee all service lines will be included in the final deliverables.

15. The Rios Group will attempt to provide Electronic Depth readings calculated by The Rios Group's geophysical equipment. If Electronic Depth readings can be obtained, they will be provided every 50 feet. However, due to the inconsistency with Electronic Depth readings, The Rios Group cannot guarantee the accuracy of the information. Data will be provided for informational purposes only.

16. Test holes will be excavated using vacuum excavation equipment.

17. All test holes will be accessible to truck/trailer-mounted vacuum excavation equipment. Any improvements required to access test hole locations (clearing, grading, mat installation, etc.) will be provided by others at no cost to The Rios Group).

18. Right-Of-Way (ROW) permits from the Owner will be required. The Rios Group will obtain all required Owner permits and ensure that coordination and compliance with the Owner is provided.

19. Designed traffic control plans for test holes will not be required.

20. Traffic control measures will be required for test holes. The ENGINEER will ensure that adequate traffic control is provided.

21. Pavement coring/repair will be required at fifteen (15) locations. The Rios Group can core pavement up to a depth of 12 inches. The Rios Group will backfill with appropriate volume of sand, tamp each layer and place ready mix to repair asphalt surfaces or epoxy concrete cores in place, flush with the surrounding surface for concrete surfaces.

22. All bank processing fees for lienholder partial or full releases are paid by the Owner at parcel closing.

23. All attorney fees for preparation of partial or full releases of liens are paid by the Owner at parcel closing.

24. City of Killeen will purchase title insurance for all right of way acquisitions. Cost of title insurance and recording fees will be paid by the City at closing and are not included in this contract.

25. Attorney fees for preparation of partial or full lien releases paid by ROW Service Provider will be reimbursed at closing by the City. In addition, any processing fees charged by the lienholder for partial or full lien releases that are paid by ROW Service Provider will be reimbursed at closing.

26. City will issue payment to any property owners deemed eligible to receive relocation assistance payments by the relocation assistance agent.

27. Parcels requiring title curative work prior to closing by ROW Service Provider which include Abstracts of Judgments, bankruptcy, foreclosures and tax liens will be invoiced as additional services at $160 per hour, not to exceed $3,200 per parcel.

28. Meetings exceeding the maximum of three (3) meetings with the landowner during the initial offer phase invoiced at $160 per hour

29. Meetings exceeding the maximum of one (1) meeting with the landowner after the final offer letter invoiced at $160 per hour

30. This project will be awarded to its eventual contractor as a competitive sealed proposal.

31. It is assumed that one of the existing traffic signals will be remove. For this scope and fee the existing 4th Street signal has been removed.

32. There will be a single bid for utilities and roadway construction. The ENGINEER will work with the City during final design and after coordination with existing utilities to evaluate the need or preference to bid the utilities and roadway construction, requiring additional services.

33. The ENGINEER will coordinate with Atmos MidTex and the City to determine if Atmos can or should be relocated before the roadway and utility construction phase. .

Exclusions

1. Legal advice, recommendations, or analysis.
2. ROW hearing services.
3. Expert witness services.
4. Retaining wall design.
5. Temporary Traffic Signal layouts.
6. Redesign of photometric model to incorporate use of solar illumination assemblies.
7. TxDOT Utility Conflict Exhibits
8. Electrical distribution or transmission design of any kind
9. Splice diagrams of any kind
10. Any building-specific mechanical, electrical or plumbing engineering of any kind
11. The locating of private service lines, irrigation lines and detailed vault investigations.
12. Flowable fill for backfill of test holes,
13. Full-section pavement repair (including sidewalks) if test holes are located within a sidewalk section
14. Due to the risk of damage, the ENGINEER will not attempt to probe or excavate test holes on AC water lines unless approval is obtained from the Owner in advance.
15. Excavation in rock, or to a depth greater than 18 feet, is considered beyond the scope of this proposal.
16. Site visits, surveys, and coordination with the Texas Historical Commission (THC).
17. Agency coordination for protected species.
18. USACE coordination
19. Additional hazardous materials investigations outside of this scope of services, including special considerations, or other commitments will be the responsibility of the Owner and are excluded from this scope of services.

20. Changes to the parcel including but not limited to plan changes, splits of the parcel, re-appraisal, plat changes, survey changes, or other changes beyond the control of Right of Way Service Provider.

21. Changes in the scope for right of way services not included in this fee proposal.

22. Revised or updated offer letters as a result of appraisal updates

FEE BREAKDOWN PER DESIGN SUBMITTAL

The fee for the 30% deliverable for this project is $2,037,006.37. The fee is summarized per Function Code as follows:

FC	LABOR DESCRIPTION	DESIGN SUBMITTAL ($)	TOTAL
		30%	
110	ROUTE AND DESIGN STUDIES	$21,612.00	$21,612.00
120	ENVIRONMENTAL COMPLIANCE	$31,935.00	$31,935.00
122	GRANT APPLICATION SUPPORT	$63,502.42	$63,502.42
130	RIGHT OF WAY DATA	$989,661.70	$989,661.70
145	PROJECT MANAGEMENT	$42,410.00	$42,410.00
150	FIELD SURVEYING	$20,000.00	$20,000.00
160	ROADWAY DESIGN CONTROLS	$241,870.00	$241,870.00
161	DRAINAGE	$110,733.00	$110,733.00
162	SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION	$135,140.00	$135,140.00
163	MISCELLANEOUS (ROADWAY)	$146,421.00	$146,421.00
164	LANDSCAPE/URBAN DESIGN	$228,875.00	$228,875.00
BGE OTHER DIRECT EXPENSES		$4,846.25	$4,846.25
SUBTOTAL		**$2,037,006.37**	
TOTAL			**$2,037,006.37**

The fee is summarized per Function Code, Task and Phase as follows:

TASK DESCRIPTION			DESIGN SUBMITTAL ($)	FC TOTAL TASK TOTAL
			30%	PHASE TOTAL
FC 110	**ROUTE AND DESIGN STUDIES**		$21,612.00	**$21,612.00**
FC 120	**ENVIRONMENTAL COMPLIANCE**		$31,935.00	**$31,935.00**
FC 122	**GRANT APPLICATION SUPPORT**			**$63,502.42**
1.	RAISE Grant Application Preparation and Submission		$54,412.42	$54,412.42
2.	Additional Grant Application Support		$9,090.00	$9,090.00
FC 130	**RIGHT OF WAY DATA**			**$989,661.70**
1.	Utility Engineering Investigation (Provided by The Rios Group)		$152,321.70	$152,321.70
2.	Utility Adjustment Coordination			$156,350.00
A.	Utility Coordination		$62,675.00	$62,675.00
B.	Utility Agreements for Utility Adjustments		$19,970.00	$19,970.00
C.	Coordination of Engineering Activities		$73,705.00	$73,705.00
3.	Utility Engineering			$282,985.00
A.	Water and Wastewater Design		$110,960.00	$110,960.00
B.	Underground Telecommunication Relocation Coordination		$130,085.00	$130,085.00
C.	Overhead Telecommunication Relocation Coordination		$41,940.00	$41,940.00
4.	Right-of-Entry (Provided by BGE (Phase 1) and Tinkler (Phase 2))		$136,600.00	$136,600.00
5.	Right-of-Way Negotiations (Provided by Tinkler)		$105,950.00	$105,950.00
6.	Relocation Assistance Agent (Provided by Tinkler)		$6,250.00	$6,250.00
7.	Appraiser (Provided by Tinkler)		$120,790.00	$120,790.00
8.	Review Appraiser (Provider by Tinkler)		$18,900.00	$18,900.00
A.	Coordination for Title, Acquisition Limits		$9,515.00	$9,515.00
FC 145	**PROJECT MANAGEMENT**		$42,410.00	**$42,410.00**
FC 150	**FIELD SURVEYING**			**$20,000.00**
1.	Topographic Surveys for Engineering Design and Hydraulic Analysis (Provided by BGE Survey)		$20,000.00	$20,000.00
FC 160	**ROADWAY DESIGN CONTROLS**			**$241,870.00**
1.	PS&E Development			$241,870.00
A.	Geometric Design		$33,025.00	$33,025.00
B.	Parcel Access (up to 70 parcels)		$26,660.00	$26,660.00
C.	ROW Map		$5,775.00	$5,775.00
D.	Design Cross Sections		$19,685.00	$19,685.00
E.	Typical Sections		$14,730.00	$14,730.00
F.	Plan & Profile Drawings (50 scale)		$62,370.00	$62,370.00
G.	Alignment Data Sheets		$1,750.00	$1,750.00
H.	Earthwork Quantities		$1,750.00	$1,750.00
I.	Driveway Details (130 Driveways / side streets)		$44,230.00	$44,230.00
J.	Intersection Details (9 Intersections)		$14,320.00	$14,320.00
K.	Removal Plans		$10,920.00	$10,920.00
L.	Title Sheet, Project Layout, Index of Sheets		$6,655.00	$6,655.00
FC 161	**DRAINAGE**			**$110,733.00**
1.	PS&E Development			$110,733.00
A.	Drainage Area Map Refinement		$3,205.00	$3,205.00
B.	Hydrologic & Hydraulic Calculations		$19,998.00	$19,998.00
C.	Culvert Analyses & Design		$23,065.00	$23,065.00
D.	Storm Drain Plans		$31,155.00	$31,155.00
E.	Prepare Quantities & Cost Estimate		$8,745.00	$8,745.00
F.	Details and Specifications		$11,260.00	$11,260.00
G.	Coordination with Utilities		$9,190.00	$9,190.00
H.	Coordination with City of Killeen		$4,115.00	$4,115.00
FC 162	**SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION**			**$135,140.00**
1.	PS&E Development			$135,140.00
A.	Signing & Pavement Markings		$19,090.00	$19,090.00
B.	Traffic Signal Layouts		$6,260.00	$6,260.00
i.		Gilmer St	$11,600.00	$11,600.00
ii.		Valley Rd	$11,245.00	$11,245.00
iii.		N College St	$11,600.00	$11,600.00
iv.		2nd St	$11,600.00	$11,600.00
v.		N Gray St	$11,600.00	$11,600.00
vi.		10th St	$11,600.00	$11,600.00
vii.		Alexander St	$11,600.00	$11,600.00
viii.		WS Young Dr	$11,600.00	$11,600.00
ix.		PHB	$11,600.00	$11,600.00
C.	Miscellaneous Traffic Engineering		$5,745.00	$5,745.00

TASK DESCRIPTION			DESIGN SUBMITTAL ($) 30%	FC TOTAL TASK TOTAL PHASE TOTAL
FC 163	**MISCELLANEOUS (ROADWAY)**			**$146,421.00**
1.	Miscellaneous Roadway			$66,200.00
A.		Cost Estimates	$9,460.00	$9,460.00
B.		Traffic Control Plans, Detours, Sequence of Construction	$26,580.00	$26,580.00
C.		Storm Water Pollution Prevention Plan	$20,260.00	$20,260.00
D.		Quantity Summaries	$5,905.00	$5,905.00
E.		Specifications and General Notes	$2,585.00	$2,585.00
F.		Standard Details	$1,410.00	$1,410.00
2.	Illumination			$80,221.00
A.		Illumination PER Package	$5,485.00	$5,485.00
B.		Illumination Photometric Study	$22,618.00	$22,618.00
C.		Illumination Layout Roll Plot	$16,145.00	$16,145.00
D.		Illumination Circuit Design, Electrical Service Design, Layouts and Details	$35,973.00	$35,973.00
FC 164	**LANDSCAPE/URBAN DESIGN**			**$228,875.00**
1.	30% Schematic Design		$197,240.00	$197,240.00
2.	Landscape Meetings, Strip Map Preparation, and Visualizations		$31,635.00	$31,635.00
OTHER DIRECT EXPENSES			$4,846.25	**$4,846.25**
TOTAL				**$2,037,006.37**

PROJECT NAME: RANCIER AVE
FROM FORT HOOD ROAD (SH 95) TO 38th STREET

EXHIBIT D - FEE SCHEDULE

8/1/2024

FC	DESCRIPTION	BGE	BGE Survey	Langerman	The Rios Group	Dianna Tinkler	TOTAL
FC 110	ROUTE AND DESIGN STUDIES			$ 21,612.00			$21,612.00
FC 120	ENVIRONMENTAL COMPLIANCE	$31,935.00					$31,935.00
FC 122	GRANT APPLICATION SUPPORT	$63,502.42					$63,502.42
FC 130	RIGHT OF WAY DATA	$492,650.00	$60,940.00		$ 18,946.70	$ 198,750.00	$771,286.70
FC 145	PROJECT MANAGEMENT	$42,410.00					$42,410.00
FC 150	FIELD SURVEYING		$20,000.00				$20,000.00
FC 160	ROADWAY DESIGN CONTROLS	$241,870.00					$241,870.00
FC 161	DRAINAGE	$110,733.00					$110,733.00
FC 162	SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION	$135,140.00					$135,140.00
FC 163	MISCELLANEOUS (ROADWAY)	$146,421.00					$146,421.00
FC 164	LANDSCAPE/URBAN DESIGN	$228,875.00					$228,875.00
	SUBTOTAL LABOR EXPENSES	$1,493,536.42	$80,940.00	$21,612.00	$18,946.70	$198,750.00	**$1,813,785.12**
	EXPENSES	$4,846.25			$38,500.00	$ 6,250.00	**$49,596.25**
	UNIT COST EXPENSES				$94,875.00	$ 78,750.00	**$173,625.00**
	TOTAL	$1,498,382.67	$80,940.00	$21,612.00	$152,321.70	$283,750.00	**$2,037,006.37**

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	Irrigator PIC/QA-QC	Irrigator PM	Irrigation Designer	Stuctural Engineer	Sturctural Designer	Admin/ Clerical	Total Hours	**TOTAL LABOR HRS. & COSTS**
FC 110 ROUTE AND DESIGN STUDIES																												$0.00
1. Geotechnical Investigations (Provided by Langerman)																												
FC 120 ENVIRONMENTAL COMPLIANCE																												**$31,935.00**
1. TxDOT Categorical Exclusion																												
A. Draft and Final WPD I and WPD II	2												16													18	$2,710.00
B. Draft and Final Project Area Maps	1												26													27	$3,785.00
2. Archaeological Studies																												
A. Draft and Final Archaeological Background Study	2												26													28	$4,060.00
3. Historical Studies																												
A. Draft and Final Historical Studies PCR	2												24													26	$3,790.00
4. Threatened and Endangered Species																												
A. Draft and Final Species Analysis Summary	2											4	20													26	$4,130.00
B. Draft and Final Species Analysis Form												4	16													20	$3,040.00
5. Water Resources																												
A. Surface Water Analysis Form & 404 Table	2												20													22	$3,250.00
6. Hazardous Materials																												
A. Update Draft and Final Hazardous Materials ISA	2											8	36													0	$7,170.00
FC 122 GRANT APPLICATION SUPPORT																												**$63,502.42**
1. RAISE Grant Application Preparation and Submission	14	28	51											153	153											399	$54,412.42
2. Additional Grant Application Support	6	12	12																						12	42	$9,090.00
FC 130 RIGHT OF WAY DATA																												**$492,650.00**
1. Utility Engineering Investigation (Provided by The Rios Group)																												
2. Utility Adjustment Coordination																												
A. Utility Coordination	28	191		22																						241	$62,675.00
B. Utility Agreements for Utility Adjustments	7	59																							20	86	$19,970.00
C. Coordination of Engineering Activities	11	212		7			75																			305	$73,705.00
3. Utility Engineering																												
A. Water and Wastewater Design	7	49	110	36		214		297																		713	$110,960.00
B. Underground Telecommunication Relocation Coordination	4	73	182	24		218		308																		809	$130,085.00
C. Overhead Telecommunication Relocation Coordination	3	20	27	20		80		121																		271	$41,940.00
4. Right-of-Entry (Provided by BGE (Phase 1) and Tinkler (Phase 2))		40				240																				280	$43,800.00
5. Right-of-Way Negotiations (Provided by Tinkler)																												
6. Relocation Assistance Agent (Provided by Tinkler)																												
7. Appraiser (Provided by Tinkler)																												
8. Review Appraiser (Provider by Tinkler)																												
A. Coordination for Title, Acquisition Limits	3	13	25																							41	$9,515.00
FC 145 PROJECT MANAGEMENT																										0	**$42,410.00**
1. Meetings																												
A. Progress Meetings	3	6	6																						2	17	$3,945.00
2. General Contract Administration																												
A. Monthly Invoice and Progress Reports	4	15	15																						26	60	$12,050.00
B. Subconsultant Management	12	42	24			24																				102	$22,530.00
C. Develop and Maintain Design Schedule	3	12																								15	$3,885.00
FC 150 FIELD SURVEYING																												**$0.00**
1. Topographic Surveys for Engineering Design and Hydraulic Analysis (Provided by BGE Survey)																												
FC 160 ROADWAY DESIGN CONTROLS																												**$241,870.00**
1. PS&E Development																												
A. Geometric Design	3	13	25			120		61																		222	$33,025.00
B. Parcel Access (up to 70 parcels)	0		124																							124	$26,660.00
C. ROW Map	1	3	9			20																				33	$5,775.00
D. Design Cross Sections	1	2	13	3		61		61																		141	$19,685.00
E. Typical Sections	3	5	13	5		31		37																		94	$14,730.00
F. Plan & Profile Drawings (50 scale)	8	37	73	10		182		61																		371	$62,370.00
G. Alignment Data Sheets	0		2	2		3		3																		10	$1,750.00
H. Earthwork Quantities	0		2	2		3		3																		10	$1,750.00
I. Driveway Details (130 Driveways / side streets)	2	13	61	8		121		73																		278	$44,230.00
J. Intersection Details (9 Intersections)	2	3	13	8		37		25																		88	$14,320.00
K. Removal Plans	2	2	5	3		37		25																		74	$10,920.00
L. Title Sheet, Project Layout, Index of Sheets	2	2	5	4		10		18																		41	$6,655.00
FC 161 DRAINAGE																												**$110,733.00**
1. PS&E Development																												
A. Drainage Area Map Refinement	0	2	4	3		7																				16	$3,205.00
B. Hydrologic & Hydraulic Calculations	2	7	29	7		58		4								9										116	$19,998.00
C. Culvert Analyses & Design	2	8	25	10		49		49																		143	$23,065.00
D. Storm Drain Plans	3	5	37	10		73		73																		201	$31,155.00
E. Prepare Quantities & Cost Estimate	0	5	13	5		13		13																		49	$8,745.00
F. Details and Specifications	0	8	15	5		13		25																		66	$11,260.00
G. Coordination with Utilities	2	5	13			13		25																		58	$9,190.00
H Coordination with City of Killeen	3	3	5			8		3																		22	$4,115.00

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

EXHIBIT D - FEE SCHEDULE

FC 162 SIGNING, PAVEMENT MARKINGS, AND SIGNALIZATION																												**$135,140.00**
1. PS&E Development																												
A. Signing & Pavement Markings	2	5	25			37		61																			130	$19,090.00
B. Traffic Signal Layouts	1	3	8			25																					37	$6,260.00
i. Gilmer St	2	8	19	5		25																					59	$11,600.00
ii. Valley Rd	2	8	18	5		24																					57	$11,245.00
iii. N College St	2	8	19	5		25																					59	$11,600.00
iv. 2nd St	2	8	19	5		25																					59	$11,600.00
v. N Gray St	2	8	19	5		25																					59	$11,600.00
vi. 10th St	2	8	19	5		25																					59	$11,600.00
vii. Alexander St	2	8	19	5		25																					59	$11,600.00
viii. WS Young Dr	2	8	19	5		25																					59	$11,600.00
ix. PHB	2	8	19	5		25																					59	$11,600.00
C. Miscellaneous Traffic Engineering	2	7	8	2		8																					27	$5,745.00
FC 163 MISCELLANEOUS (ROADWAY)																												**$146,421.00**
1. Miscellaneous Roadway																												
A. Cost Estimates	3	8	13	4		19																					47	$9,460.00
B. Traffic Control Plans, Detours, Sequence of Construction	2	11	34	3		84		30																			164	$26,580.00
C. Storm Water Pollution Prevention Plan	2	5	19	4		37		73																			140	$20,260.00
D. Quantity Summaries	1	5		3		25																					34	$5,905.00
E. Specifications and General Notes	0	2	7	2																							11	$2,585.00
F. Standard Details	0		2			7																					9	$1,410.00
2. Illumination																												
A. Illumination PER Package	4	4	13	2																							23	$5,485.00
B. Illumination Photometric Study	2	8	25	8	7	67	10																				127	$22,618.00
C. Illumination Layout Roll Plot	2	3	7	3		25	46																				86	$16,145.00
D. Illumination Circuit Design, Electrical Service Design, Layouts and Details	6	11	39	14	7	68	44																				189	$35,973.00
FC 164 LANDSCAPE/URBAN DESIGN																												**$228,875.00**
1. 30% Schematic Design																	8	240	300	360	4	24	40	20	40	16	1052	$197,240.00
3. Landscape Meetings, Strip Map Preparation, and Visualizations	0																12	45	40	75							172	$31,635.00
HOURS SUB-TOTALS	199	1039	1308	284	14	2261	175	1449	0	0	0	16	184	153	153	9	20	285	340	435	4	24	40	20	40	76		8,528
CONTRACT RATE PER HOUR	$275.00	$255.00	$215.00	$285.00	$149.00	$140.00	$195.00	$110.00	$175	$195	$135	$220.00	$135.00	$88.39	$123.75	$97.00	$280.00	$255.00	$195.00	$120.00	$95.00	$280.00	$200.00	$150.00	$290.00	$150.00		
TOTAL LABOR COSTS	$54,725.00	$264,945.00	$281,220.00	$80,940.00	$2,086.00	$316,540.00	$34,125.00	$159,390.00	$0.00	$0.00	$0.00	$3,520.00	$24,840.00	$13,523.67	$18,933.75	$873.00	$5,600.00	$72,675.00	$66,300.00	$52,200.00	$380.00	$6,720.00	$8,000.00	$3,000.00	$11,600.00	$11,400.00		$1,493,536.42
SUBTOTAL																												**$1,493,536.42**

FUNCTION CODE	TOTAL COSTS	TOTAL DIRECT EXPENSE	TOTAL LABOR COSTS	Senior Project Manager	Project Manager	Project Engineer	QC Manager	Utility Engineer	EIT	Senior Engineer Tech	Senior CADD Operator	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	Irrigator PIC/QA-QC	Irrigator PM	Irrigation Designer	Stuctural Engineer	Sturctural Designer	Admin/ Clerical		TOTAL MH BY FC
	$1,498,382.67	$4,846.25	$1,493,536.42	199	1039	1308	284	14	2261	175	1449	0	0	0	16	184	153	153	9	20	285	340	435	4	24	40	20	40	76		8,528
SUBTOTAL LABOR HOURS				199	1039	1308	284	14	2261	175	1449	0	0	0	16	184	153	153	9	20	285	340	435	4	24	40	20	40	76		8,528
SUBTOTAL LABOR EXPENSES	**$1,498,382.67**	**$4,846.25**	**$1,493,536.42**	2.3%	12.2%	15.3%	3.3%	0.2%	26.5%	2.1%	17.0%	0.0%	0.0%	0.0%	0.2%	2.2%	1.8%	1.8%	0.1%	0.2%	3.3%	4.0%	5.1%	0.0%	0.3%	0.5%	0.2%	0.5%	0.9%		

OTHER DIRECT EXPENSES	QUANTITY	UNIT	RATE	
Mileage	1,350	mile	$ 0.67	$904.50
Hotel	4	night	$ 110.00	$440.00
Meals	4	day	$ 56.00	$224.00
Photocopies B/W (8 1/2"x11")	450	each	$ 0.10	$45.00
Photocopies B/W (11" X 17")	150	each	$ 0.20	$30.00
Photocopies Color (8 1/2" X 11")	150	each	$ 0.75	$112.50
Photocopies Color (11" X 17")	150	each	$ 1.25	$187.50
Large Format Plotting	3	SF	$ 2.25	$6.75
Foam core exhibit boards	4	each	$ 75.00	$300.00
Venue Rental	1	each	$ 250.00	$125.00
Postage	120	each	$ 0.55	$66.00
Certified Mail	120	each	$ 1.50	$180.00
Advertisements	0	each	$ 500.00	$0.00
Misc. (meeting supplies, signage, etc.)	1	each	$ 250.00	$125.00
Traffic Counts (Quality Counts)	1	LS	$ 4,200.00	$2,100.00
TDLR Review	0	each	$ 5,000.00	$0.00
TDLR Inspecton	0	each	$ 4,000.00	$0.00
SUBTOTAL DIRECT EXPENSES				**$4,846.25**

SUMMARY	
TOTAL LABOR COSTS	$1,493,536.42
NON-SALARY (OTHER DIRECT EXPENSES)	$4,846.25
GRAND TOTAL	**$1,498,382.67**

Rancier Avenue Design Survey, Killeen, TX BGE, Inc.				
TASKS	Crew Rate	RPLS	Senior Tech	Total
	$175	$195	$135	
150.2 Design Survey				
Additional survey for areas outside existing ROW	60		8	$11,580
Update DGN and TIN/Terrain			48	$6,480
QAQC and Final Updated Deliverables		6	6	$1,980
Sub Total				**$20,000**
Parcel Descriptions (for 116 Parcel Acquisitions)				
Obtain Boundary Monumentation data	121			$21,175
Boundary Analysis		20	52	$10,920
Prepare exhibit maps		20	52	$10,920
Prepare exhibit Descriptions		35	35	$11,550
Address Comments		5	9	$2,190
QA/QC		9	18	$4,185
Sub Total				**$60,940**
Per Parcel				**$2,438**

Total Hours	181	95	228	
Total	**$31,675**	**$18,525**	**$30,780**	**$80,940**

Fee Schedule

Method of Payment: Lump Sum

Langerman

Highway: Rancier Ave

County: Bell

Subprovider: Langerman Engineering

Task Description	Senior Geotechnical Engineer	Graduate Engineer	Drilling Coordination & Field Logging	Drafting	Admin/ Clerical		
FC 110 ROUTE AND DESIGN STUDIES							
Geotechnical Borings and Investigations							
Coordinate Soil Bore Locations/Utility Call-ins		1					$ 150.00
Field Personnel During Drilling			25				$ 1,750.00
Sample Classification, Laboratory Coordination and Boring Log Generation		10		3			$ 1,710.00
Preliminary Geotechnocal Report with Pavement Design Recommendations	1	9					$ 1,570.00
Final Geotechnocal Report with Pavement Design Recommendations	1						$ 220.00
Invoicing/Admin					1		$ 70.00
Subtotal Labor Hour	2	20	25	3	1		$ 5,470.00
Contract Rate Per Hour	$ 220.00	$ 150.00	$ 70.00	$ 70.00	$ 70.00		
Subtotal Labor Costs	**$ 440.00**	**$ 3,000.00**	**$ 1,750.00**	**$ 210.00**	**$ 70.00**		**$ 5,470.00**

Other Direct Expenses						
Services to be Provided	Unit	Fixed Cost / Unit	Max Cost / Unit	Quantity		Subtotal
Travel						
Mileage	mile	$ 0.585				$ -
Lodging/Hotel - Taxes and Fees	day/person		$ 45.00			$ -
Lodging/Hotel (Taxes/fees not included)	day/person		$ 96.00			$ -
Per Diem (3 man drill crew)	day	$ 700.00		2		$ 1,400.00
Geotechnical / Materials						
Mobilization and Demobilization of Drilling Rig	each	$ 900.00	$ 900.00	1		$ 900.00
Traffic Control						
Traffic Control Services, Arrow Boards and Attenuator trucks - (Includes labor, equipment and fuel	day		$ 2,300.00	1		$ 2,300.00
Subtotal Other Direct Expenses						**$ 4,600.00**

Unit Costs						
Services to be Provided	Test Code	Unit	Cost / Unit	Quantity		Subtotal
Drilling & Sampling (Soil)		LF	$ 23.00	150		$ 3,450.00
N/X Rock Coring		LF	$ 28.00	20		$ 560.00
SPT or Texas Cone Penetration Tests		each	$ 40.00	22		$ 880.00
Determining the amount of material in soils finer than No. 200		each	$ 45.00	50		$ 2,250.00
Atterberg Limits		each	$ 125.00	22		$ 2,750.00
Unconfined Compression with Unit Weight		each	$ 50.00	10		$ 500.00
Unconfined Compression (rock)		each	$ 45.00	4		$ 180.00
Texas A&M Agrilife Ext. Horticulture Testing		each	$ 109.00	8		$ 872.00
Shipping Samples		each	$ 100.00	1		$ 100.00
						$ -
Subtotal Unit Costs						**$ 11,542.00**

Fee Schedule Summary	
Subtotal Labor Costs	$ 5,470.00
Subtotal Other Direct Expenses	$ 4,600.00
Subtotal Unit Costs	$ 11,542.00
Total Fee Corsair Consulting LLC	**$ 21,612.00**

The Rios Group

PROJECT NAME: Rancier Ave

PROJECT LIMITS: Fort Hood St to 38th ST

163.19 SUE Services

Labor	Rate	Assumed Quantity	Unit	SubTotal
Supervisory Engineer	$ 190.86	8	HR	$ 1,526.88
SUE Project Manager	$ 169.71	20	HR	$ 3,394.20
Professional Engineer	$ 165.19		HR	$ -
Asst. Project Manager	$ 118.30	30	HR	$ 3,549.00
EIT	$ 110.49		HR	$ -
CADD Tech	$ 74.84	100	HR	$ 7,484.00
Eng Tech	$ 74.67	6	HR	$ 448.02
Field Mgr	$ 127.23	20	HR	$ 2,544.60
Administrative	$ 81.39		HR	$ -
Subtotal				$ 18,946.70

Direct Expenses	Rate	Assumed Quantity	Unit	SubTotal
ROW Permit	$ 500.00	6	EA	$ 3,000.00
Traffic Control (Standard)	$ 1,000.00	6	DAY	$ 6,000.00
Traffic Control (Intersection)	$ 1,500.00	3	DAY	$ 4,500.00
Survey (RPLS)	$ 2,500.00	10	DAY	$ 25,000.00
				$ 38,500.00

QL "B" SUE Test Holes

Unit Rate - Depth	Rate	Assumed Quantity	Unit	Subtotal
One Designating Person	$ 160.00	220	EA	$ 35,200.00
Two Person Designating Crew	$ 250.00	60	EA	$ 15,000.00
Subtotal				$ 50,200.00

QL "A" SUE Test Holes

Unit Rate - Depth	Oustide Pavement Area	Assumed Quantity	Unit	Subtotal
0-5 Feet	$ 1,315.00	10	EA	$ 13,150.00
5-8 Feet	$ 1,600.00	10	EA	$ 16,000.00
8-13 Feet	$ 1,995.00	5	EA	$ 9,975.00
13-20 Feet	$ 2,575.00		EA	$ -
Over 20 Feet	$ 3,025.00		EA	$ -
Pavement Coring	$ 370.00	15	EA	$ 5,550.00
Subtotal				$ 44,675.00

Total Estimated Cost **$ 152,321.70**

Dianna Tinkler

PROJECT NAME: Rancier Avenue
PROJECT LIMITS: Fort Hood St to 38th ST

TASKS		SHTS	Project Manager	Right of Way Agent	Adminstrative Assistant	TOTAL HOURS	TOTAL COST
			$200.00	$160.00	$85.00		
FC 130 (130)	**Right-of-Way Data**						
	ROW Negotiations		20	600	70	690	$ 105,950.00
___	Right of Entry			580		580	$ 92,800.00
SUBTOTAL		0	20	1,180	70	1,270	**$ 198,750.00**
LABOR TOTALS		**0**	**20**	**1180**	**70**	**1,270**	**$ 198,750.00**
			1.6%	92.9%	5.5%		

OTHER DIRECT EXPENSES		# OF UNITS	COST/UNIT	UNIT		
	MILEAGE		0.58	mile		$ -
	RENTAL CAR (Includes taxes and fees; Insurance costs will notbe reimbursed)		$65.000	day		$ -
	RENTAL CAR FUEL		$100.00	day		$ -
	Air Travel - In State - Short Notice (Coach)		$420.00	Rd/Trip/person		$ -
	Lodging/Hotel (Taxes/fees not included)		$96.000	day/person		$ -
	Lodging/Hotel (Taxes/fees)		$30.000	day/person		$ -
	Meals (Excluding alcohol & tips) (Overnight stay required)		$50.000	day/person		$ -
	OVERNIGHT MAIL - OVERSIZED BOX		$40.000	each		$ -
	PHOTOCOPIES B/W (11" X 17")		$0.200	each		$ -
	PHOTOCOPIES B/W (8 1/2" X 11")		$0.100	each		$ -
	PHOTOCOPIES COLOR (11" X 17")		$1.25	each		$ -
	PHOTOCOPIES COLOR (8 1/2" X 11")		$0.75	each		$ -
	PLOTS (COLOR ON BOND)		$1.25	per sq. ft.		$ -
	Reimbursables	10	$625.00	each		**$ 6,250.00**
						$ -
						$ -
						$ -
						$ -
SUBTOTAL DIRECT EXPENSES (FC 164)						**$ 6,250.00**

UNIT COST EXPENSES		# OF UNITS	COST/UNIT	UNIT		
						$ -
	Appraisals	10	$5,985.000	Each		**$ 59,850.00**
	Review Appraisals	10	$1,890.00	Each		**$ 18,900.00**
						$ -
SUBTOTAL UNIT COST EXPENSES (FC 164)						**$ 78,750.00**

SUMMARY

TOTAL COSTS FOR SUBCONSULTANT 1	$	198,750.00
NON-SALARY (OTHER DIRECT EXPENSES) FOR SUBCONSULTANT 1	$	6,250.00
NON-SALARY (UNIT COST EXPENSES) FOR SUBCONSULTANT 1	$	78,750.00
GRAND TOTAL	**$**	**283,750.00**