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December 19, 2023

Mr. Josh Schneuker
Executive Director
Seguin Economic Development Corporation
211 North River
Seguin, Texas 78155

**RE: Newquest Development
Water Pipeline Project
Engineering Services Proposal**

Dear Mr. Schneuker:

TRC Engineers, Inc. (TRC) has prepared this proposal for professional engineering services for the design of a water main project for the Newquest Development.

PROJECT DESCRIPTION

The project description and limits are as follows:

1. A 16" PVC water main beginning at the southeast corner of the Ackerman property (southwest corner of Caterpillar property) routed north to I-10, crossing under I-10 (jack-and-bore steel casing with PVC carrier pipe), extending 20 feet into the Newquest property and terminating, for a total length of 3,800 linear feet.
2. An 8" PVC water main extending from the 16" main (just south of I-10) routed in a northeasterly direction, running parallel to I-10, crossing CH Matthies, Jr. Drive, with connection to an 8" existing water main, for a total length of 2,300 linear feet.
3. Five (5) 16" and three (3) 8" isolation butterfly valves.
4. Twelve (12) fire hydrants with 6" PVC piping and isolation valves.
5. Connection to the proposed 16" water main (by others) at the southeast corner of the Ackerman tract.
6. Connection to the existing 8" water main on CH Matthies Drive.

SCOPE OF WORK

TRC will perform the following Scope of Work:

A. Topographical Survey

1. Acquire field topographical data for the design portion of the project on City's coordinate system, to include:
 - a. Detailed survey including utility locates (as furnished by the specific utility provider) within the project limits described above.

- b. Provide subsurface utility engineering (SUE) for utility locates (quality level C and D).
- 2. Set horizontal and vertical primary control points.
 - a. Primary control points shall be set at an approximate spacing of 500 ft. and inter-visible with each other where possible, away from possible disturbance from construction activity.
 - b. Primary control points shall be used as the primary horizontal and vertical control for the project and as benchmarks for the project.
 - c. Horizontal and vertical data for primary control shall be based on Static RTK observations using the Leica Smartnet Network.
 - d. The horizontal datum shall be based on NAD83 (2011) using the Texas Coordinate System, Central Zone (4203),
 - e. The vertical datum shall be based on NAVD88 using Geoid 12B.
 - f. Secondary control points shall be set as necessary for conventional ground surveying and terrestrial LiDAR scans
- 3. Provide design level topographic survey data within the project survey limits.
 - a. The survey will be performed on the ground utilizing a combination of terrestrial LiDAR with traditional field observation methods to locate found visible features, both horizontally and vertically, including existing on-site structures, drainage features, adjacent and onsite sidewalks, curb lines, pavement, roadway paint striping, driveways, fences and visible above-ground utility appurtenances within the survey limits.
 - b. The survey will obtain topographic field elevations throughout the project site at 50-foot station intervals for use in developing a digital terrain model.
 - c. Markings from franchise utility services and city utilities will be located at time of survey.
 - d. Flowline elevations of found storm water and sanitary sewer manhole inlet structures immediately adjoining the site will be identified.
 - e. The survey will field locate found protected trees 6 inches or greater in trunk diameter measured at breast height, in accordance with municipal code. Trees will be tagged in the field and shown on the survey noting trunk diameter, species and canopy size.
 - f. Survey deliverable will be an AutoCAD .dwg file showing topographic points, features and 1 ft contours, accompanied by a point file in .csv format and digital terrain model in .xml format.
- 4. Surveyor will perform necessary research to acquire ROW maps, current adjoining property deeds and subdivision plats for properties affected by the project limits.

- a. Field boundary reconnaissance will be performed to locate found subject property and adjoining property corner monumentation.
 - b. Results will be compared, and boundary resolutions determined for affected rights-of-way and properties adjoining the project limits.
 - c. Existing easements of record discovered during abstracting will be shown on the survey.
 - d. Deliverable will be PDF copies of property research and an AutoCAD .dwg file showing established ROW lines, adjoining property lines, found easements and record property ownership information.
5. Provide survey field notes.
- a. Provide a maximum of five (5) sets of easement field notes including permanent easement and construction access, to include ownership/existing easement title work.

B. Geotechnical

1. All work will be performed by qualified personnel under the supervision of a registered professional engineer.
2. The test borings will be drilled by a local drilling subcontractor under the direction of TRC's geotechnical engineering staff. All field work will be conducted using truck-mounted drilling equipment. The City shall arrange for any necessary access and approvals from property owners required for the drill crew to work on the Project during normal daytime working hours (minimum 8 hours per day) without any interruptions. We assume that all test boring locations are open and accessible to standard truck-mounted drilling equipment.
3. The Texas811 One-Call utility locator service will be contacted to verify utility locations within public right-of-way and easements where these utilities may exist in the Project. TRC will work with the City to determine the locations of known existing on-site subsurface utilities before the start of our field work. Geophysical utility verification consisting of ground penetrating radar and EM induction to identify potential buried objects at the proposed test boring locations prior to drilling is not included in the current scope and costs.
4. TRC proposes a total of five (5) test borings to be drilled for this project. This includes three (3) borings to 20 feet below ground surface (bgs) and two (2) borings to 40 feet bgs. Drilling and sampling will be in accordance with ASTM D 1586. Soil sampling will be conducted every 2.5 ft in the upper 10 feet, and at 5-foot intervals below 10 feet. The borings will be drilled to the proposed target depths or to depth of auger refusal (hard rock), whichever is less. Rock coring will not be performed as it will be assumed that hard rock below auger refusal will not be able to be excavated with conventional hydraulic equipment and will need to be removed with hoe rams. It is anticipated that relatively undisturbed samples (Shelby tubes) will not be required for this Project.

5. Groundwater measurements will be recorded during drilling and/or shortly after completion of each boring. Borings will then be backfilled with the auger cuttings upon boring completion. Any excess soil materials which does not fit back down the holes will be spread out on the ground surface at the boring location. No additional restoration is included in the scope or cost provided herein.
6. The budget assumes that the drilling will be completed in two (2) working days. If additional days are required for the field drilling activities due to an increased number of borings or drilling depths, additional time to access boring locations, etc., TRC will discuss with the City the additional cost that can be realized for drilling and sampling beyond the assumed number of days of field work, if needed.
7. Upon completion of the field work the soil samples will be delivered to TRC's AMRL AASHTO/ASTM accredited laboratory where the field classifications will be verified by a member of TRC's geotechnical engineering staff and representative samples will be selected for laboratory testing to evaluate engineering characters and parameters, including, but not limited to moisture content, grain size distribution, and plastic characteristics (Atterberg Limits). Two (2) representative composite samples of the soil materials (5-10 ft bgs) encountered will be sent to an accredited laboratory for corrosivity testing (including electrical resistivity, pH, chlorides, sulfates). An estimated cost for laboratory testing services has been included in this proposal for budgeting purposes.
8. Upon completing the field and laboratory testing, our engineering staff will summarize the work completed and prepare a Geotechnical Engineering Report (electronic PDF copy). The geotechnical engineering report will summarize TRC's understanding of the proposed construction, site conditions, exploration activities, subsurface conditions and impacts on the proposed construction, and address project specific concerns including but not be limited to issues such as:
 - a. Earthwork recommendations for site preparation including placement, compaction and testing of fills, if applicable.
 - b. Groundwater conditions including perched conditions and control of groundwater during construction, as applicable.
 - c. Recommended side slopes and soil parameters for strength and lateral pressures/resistance (both above and below ground water table) considering active, at rest and passive conditions for use in excavation trench support design by others.
 - d. Seismic Site Class parameters as determined by the 2018 International Building Code (ASCE 7-16).
 - e. It is assumed that pavement design recommendations will not be required as pavement disturbed during waterline installation will be replaced in kind.
 - f. Other construction-related concerns, as warranted based on site subsurface conditions, based on the proposed construction.

Copies of typed test boring logs, a test boring location plan, and the laboratory test results will be included as appendices to the report.

C. Environmental

TRC will perform the following Environmental Scope of Work:

Task 1 – Cultural Resources Services: Desktop Study and Texas Historical Commission (THC) Consultation

TRC will perform a desktop review to identify existing conditions and identify documented cultural resources within the area of potential effects (APE). TRC will perform a site file search using the THC Archeological and Historic Sites Atlas (THC Atlas) to compile current information on recorded cultural resources that are situated within a one (1) kilometer of the APE. Other documents, including historic aerial photographs, U.S. Geological Survey (USGS) topographic maps, Sanborn maps, Texas General Land Office documents, Historic Texas Overlay Database maps, and cemetery records may also be reviewed, if available. The results of this site file search will be compiled in a letter of consultation for submission to the THC. THC will review the letter of consultation concurrently and provide a response within 30 days of submission.

Task 2: Wetlands and Other Waters and Protected Species Desktop Review

The Project may be subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act if Waters of the United States (WOTUS) are present on-site and impacts to them cannot be avoided. The Endangered Species Act protects plants and animals that are listed as endangered or threatened by the USFWS and the National Marine Fisheries Service (NMFS). Bald and Golden Eagles are federally protected under the Bald and Golden Eagle Protection Act (BGEPA) and over 1,000 species of migratory birds are federally protected under the Migratory Bird Treaty Act (MBTA). Texas state laws and regulations provide additional protections to state listed species listed by the TPWD.

To facilitate Project planning and environmental due diligence and compliance with applicable federal laws and regulations protecting WOTUS and federal and state laws and regulations protecting plants and animals, TRC will perform a desktop-level review to assess the Project's potential for impacting potentially jurisdictional WOTUS and protected species and/or their habitat(s). The desktop review will include review of readily available data and resources including, but not limited to, the following:

1. Current and historic aerial imagery,
2. U.S. Geological Survey (USGS) topographic maps,
3. USGS National Hydrography Dataset (NHD) data,

4. U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data,
5. U.S. Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) soil survey data,
6. Federal Emergency Management Agency (FEMA) flood hazard maps and data,
7. USFWS Information for Planning and Consultation (IPaC) project planning tool,
8. Texas Parks and Wildlife Department (TPWD) Annotated County Lists of Rare Species,
9. TPWD Texas Natural Diversity Database (TXNDD), and
10. Other readily available resources and data.

Following the background desktop-level data review, a TRC biologist (1) will conduct an in-person site visit to confirm and verify the findings of the desktop review. During the site visit, the TRC biologist will document on-site conditions, the presence/absence of any on-site aquatic resources, and the presence/absence of potentially suitable protected species habitat(s).

Following the Site Visit, TRC will prepare a memorandum summarizing the results of the desktop review and site visit. The memo will address any regulatory considerations that may be applicable to the Project and will include TRC's recommended next steps, if necessary. If additional services are identified as necessary, TRC will prepare a separate scope of work and cost estimate for additional services, if requested. TRC will provide a draft TRC Summary Memo of Findings and Regulatory Considerations for the City to review in electronic PDF format and will provide one (1) round of edits following receipt of review comments to produce a final Summary Memo of Findings and Regulatory Considerations.

D. Engineering

1. Attend design kickoff meeting with city to discuss project goals and milestones.
2. Determine pipeline routing conflicts including franchise utility conflicts. Acquire information from the franchise utilities (gas, telephone, cable, electrical, etc.) and determine need for relocation. The City will provide direct correspondence with the franchise utilities. Design of existing utility relocations shall be provided by others.
3. Prepare preliminary site routing with landowner property designations.
4. Prepare opinion of probable project cost, with unit costs based on recent projects bid within the area, including discussions with contractors and pipe vendors on any expected cost fluctuations.

5. Attend a maximum of four (4) design meetings with City Staff throughout the design process.

E. Permitting

1. Submit applications and/or permits for:
 - a. Texas Commission on Environmental Quality (TCEQ) – summary transmittal letter.
 - b. TxDOT – utility crossing permit for I-10.

F. Construction Documents

1. Prepare construction documents for the proposed project, consisting of:
 - a. Technical specifications, bidding and contract documents.
 - b. General sheets, including general construction notes.
 - c. Water pipeline plan and profile drawing sheets.
 - d. Phased traffic control plan to maintain traffic during construction, if required.
 - e. Erosion control plan.
 - f. City of Seguin Standard Construction Details.
 - g. Miscellaneous details.
2. Submit 60%, 90% and 100% construction documents to City for review/approval, and meeting with City Staff to discuss each.
3. Provide final set of construction documents for bid.

G. Bidding Support

1. Organize and participate in construction pre-bid meeting.
2. Address contractor questions during the bidding process and submit bid addendums as applicable.
3. Assist the City in bidding process including preparation of advertisement document, opening and tabulation of bids, and award recommendation letter.
4. Attend City Council meeting for construction award.
5. Prepare construction contract documents.

H. Construction Support

1. Organize and conduct the pre-construction meeting.

2. Provide contractor correspondence, submittal review, request for information review, and pay request review.
3. Organize and attend monthly construction meetings (maximum of 10) and provide meeting minutes.
4. Organize and attend final inspection and prepare contractor punch list.
5. Prepare documents for project closeout including certificate of construction completion, which will set the construction warranty period.
6. Prepare record drawings based on information provided by the Contractor (3 sets of hard copies and one electronic copy PDF). TRC will not validate as-built conditions.

I. Construction Inspection

1. Provide inspections/meetings by a registered engineer on an as-needed basis to observe progress of the work and consult with the City and the Contractor concerning problems and progress of the work. The costs provided herein are based on a maximum of six (6) inspections.
2. Continuous construction inspection is included as a separate cost in the Compensation for Services provided below, and is described as follows:
 - a) Services will be provided for a consecutive 10-month construction period.
 - b) Services assume a maximum 50-hour work week, Monday through Friday.
 - c) TRC's on-site inspector will not be a registered professional engineer, but will have daily communication with the registered senior design engineer responsible for the project.

ASSUMPTIONS

As the basis for the preparation for this proposal and the associated cost of service, the following assumptions were made which, if found to be incorrect may result in request(s) from TRC for additional compensation:

1. Where necessary, the City will be responsible for arranging property access prior to commencement of the field survey and/or environmental investigations for properties not located within City right-of-way. TRC will not perform any field investigation on properties where access has not been granted.
2. Subsurface Utility Engineering provided will not relieve the contractor from the duty to comply with applicable utility damage prevention laws and regulations, including, but not limited to, giving notification to utility owners or "One-Call Notification Centers" before excavation.

3. Should the schedule be changed or put on "hold" by the City, all costs incurred by TRC up to notification of change of schedule or "hold" status will be billed to the City. Additional fees that TRC may incur as a result of the change of schedule or "hold" status will be billed to the City once the Project has resumed in addition to the cost of services included in this proposal.
4. The entire project will consist of one (1) bid/construction project.
5. The TxDOT I-10 bore will be installed by the Jack-and-bore method with steel casing pipe.
6. Right-of-way services is based on completing 30-year titles.
7. TRC's effort and costs for construction services are based on a ten (10) month construction project duration, starting from the date of the Contractor's notice to proceed. If the construction period extends beyond this time period, TRC may request additional compensation.

Geotechnical assumptions are as follows:

1. The geotechnical services do not include testing or other type of investigation regarding the possible presence of hazardous or toxic substances either on site or in imported materials. If required and upon request, our Environmental Services Group can provide this service.
2. Construction administration, observation and testing services, construction engineering support, or review of design or construction drawings or specifications are not included.
3. Test boring locations will be accessible to truck-mounted drilling equipment without the need for clearing or assistance from a dozer, and field work will consist of up to two (2) days of drilling up to a maximum of five (5) soil borings. Interruptions caused by others or impacts to the schedule or site accessibility related to the potential adverse weather conditions, if encountered, will result in additional charges to complete the field investigation or in a reduction to the number of test borings completed.
4. Some disturbance to the ground surface may result from the drilling operations. We will attempt to minimize any such damage, but the use of matting or restoration or repair of unavoidable damage to the site caused by moving equipment, such as rutting or vegetation disturbance, is not included in the estimate. Boreholes will be backfilled with auger cuttings following the final groundwater level check. All drilling spoils will be spread at the ground surface at the boring locations or in landscape areas upon completion of the field exploration. No funds have been allotted for off-site soil disposal.

5. Design considerations related to horizontal directional drilling (HDD) for the crossing under I-10 is not required as it is assumed that jack and bore methods will be utilized to install a steel casing pipe beneath the interstate and then the water main installed through the casing.
6. A secure place to temporarily store or park drilling equipment is available at the Project.
7. Soil samples collected during this exploration will be stored at our testing laboratory for thirty (30) days from the date of the geotechnical report. At that time, they will be destroyed. If the Client desires to have the samples stored for longer than thirty (30) days or delivered to an alternate location, TRC will make those arrangements for an additional fee.

Environmental assumptions are as follows:

1. TRC assumes funding for the project is from the City of Seguin and there are no state or federal funding sources.
2. TRC will provide one (1) electronic PDF draft version of the Summary Memo of Findings and Regulatory Considerations described in this scope of work for review by the City, and will provide one (1) round of edits following receipt of review comments to produce a final Summary Memo of Findings and Regulatory Considerations.
3. No additional environmental services or studies (e.g., formal wetland and other waters delineation; ASTM Phase I Environmental Site Assessment; species-specific surveys; biological monitoring; cultural resources surveys; regulatory agency permitting, planning, or coordination; etc.) beyond those specifically outlined in this scope of work will be performed. Should additional environmental or cultural resources services be required or requested, TRC will prepare a separate proposal and cost estimate for additional services not outlined in this scope of work.
4. This scope of work does not include migratory bird nesting surveys. Should the project need to clear vegetation between March 15 and September 15, migratory nesting bird surveys may be necessary to facilitate compliance with and avoid violation of the Migratory Bird Treaty Act. If requested, TRC will prepare a separate scope of work and cost estimate for additional services.
5. TRC will have timely, complete, and unobstructed access to the Project Area. Access to the Project Area will be coordinated by the City. Where necessary, the City will be responsible for arranging property access prior to commencement of on-site work for properties not located within public right-of-way. TRC will not perform any on-site work on properties where access has not been granted.

6. Should the Project schedule be changed or put on "hold", all costs incurred by TRC up to notification of change of schedule or "hold" status will be billed. Additional fees that TRC may incur as a result of the change of schedule or "hold" status will be billed once the project has resumed in addition to the cost of services included in this scope of work.

EXCLUSIONS

The following items are specifically excluded from the scope of work:

1. Any design services not listed above, including but not limited to design of landscape or irrigation, street total reconstruction, sidewalks or accessibility, electrical or lighting.
2. Land acquisition services or acquisition of right-of-entries.
3. Any services required by funding agencies.
4. Services for modeling of the water system.
5. Design of improvements or relocations for sanitary sewer lines, electrical lines, gas lines, telephone lines or other franchise utilities.
6. Attendance at or preparation for condemnation hearings, easements (not mentioned above) or plat documents, landowner contact or easement negotiations.
7. Preparation of permits, applications, etc. (not mentioned above).
8. Costs for permitting or application fees or review fees by regulatory authorities.
9. US Army Corps of Engineers (USACE) permit preparation or notification, if applicable.
10. Any design services not listed above.
11. Post-construction topographical survey or GIS system updates.
12. Construction staking or field staking for other purposes.

COMPENSATION FOR SERVICES

TRC will provide the professional engineering services as outlined herein and within the Master Services Agreement executed between the City and TRC (dated December 16, 2003), for a total lump sum fee as follows:

Environmental/Cultural Services:	\$5,775.00
Topographical Surveying:	\$8,921.00
Easement Field Notes including Title Work (5 Properties):	\$11,530.00
Geotechnical Services:	\$16,452.00
Engineering Design:	\$236,014.00
Bidding/Construction Administration:	\$44,621.00
Continuous Construction Inspection (max. 10-month period):	\$197,145.00
Contingencies ⁽¹⁾ :	\$30,000.00
Total (lump sum):	\$550,458.00

⁽¹⁾These funds represent a contingency allowance for additional services that may be required but are unforeseen at this time and would only be used upon TRC's receipt of written direction to proceed from the SEDC Executive Director.

This fee includes labor and material costs associated with the Scope of Work identified above. TRC's fee above is based on a continuous flow of work. Any delays or restrictions, caused by customer or customer's sub consultants, which result in idle-time or inefficiencies, could be cause for additional compensation. The payment schedule will be via monthly progress billing.

Changes in scope, including additional scenarios or modification to the scenarios identified above will be evaluated for additional services and/or materials cost through a formal change order process, which results in approval of the additional cost prior to executing the additional work. Fees for services quoted in this Letter of Agreement are valid for a period of time not to exceed 60 days from the date of this letter.

We appreciate the opportunity to assist with this project and are available to proceed immediately with your written approval. Please review this proposal and, upon acceptance, sign in the space provided below, returning a copy for our files.

Sincerely,



H. Craig Bell, P.E.
Austin Engineering Director – DMS

SEDC/City of Seguin

December 19, 2023

Date

Date

