May 25, 2022

Mr. Steve Parker, City Manager
City of Seguin
205 N. River Street
Seguin, TX 78155

RE: City of Seguin, Texas: River Oak Interceptor and Pecan Orchard Lift Station Expansion Project
Preliminary Engineering Design Phase

Dear Mr. Parker:

Trihydro Corporation (Trihydro) is pleased to present this professional engineering scope of work and fee estimate for the preliminary design of the River Oak Interceptor and Pecan Orchard Lift Station Expansion Project for the City of Seguin (City). This project was identified to accommodate the increased wastewater demand in the vicinity of FM 725, SH 46, and BS 123 due to rapid residential and commercial growth. Trihydro's scope of work for preliminary engineering design phase is presented below. Final design, permitting, bidding, and construction administration and observation services will be presented in subsequent proposals. The following scope of work includes the engineering services and fees for the preliminary engineering phase of the River Oak Interceptor and Pecan Orchard Lift Station Expansion Project.

SCOPE OF WORK

The design services task involves the preparation of preliminary engineering design plans for the installation of approximately 8,700 linear feet of 24 inch wastewater line, 2,400 linear feet of 21-inch wastewater line, 5,800 linear feet of 18-inch wastewater line, expansion of an existing lift station to 6.2 MGD, and installation of approximately 4,700 linear feet of 18-inch sewer force main. The decommissioning of two existing lift stations is also proposed. Our proposed scope of work is outlined below for your review.

Mr. David Rabago will serve as the project manager (PM) and primary point of contact. Mr. Rabago will provide design oversight, management of subconsultants, quality control reviews of submittals, client updates, and project administrative duties. Mr. Jason Vreeland will serve as the Project Director supporting David with QA/QC reviews, staffing resources, and monitoring of the project scope, schedule, and budget.

Task A100 – Surveying and Field Investigation

Establishment of survey project control is important for accurate design mapping. Prior to surveying, right-of-entry permits will be obtained from property owners impacted by the project, with the assistance

of the City of Seguin. Trihydro will collect survey data including topography, visible features, property and ROW boundaries, and existing utilities within the estimated 60 feet-wide pipeline alignment corridor. The information obtained from surveying will be incorporated into a survey base map drawing. Trihydro will provide the following under this task:

- Trihydro surveyors will provide topographical, visible features, property and ROW boundary, and existing utility surveying services.
- Survey and data mapping information will also be obtained via use of Unmanned Aerial Systems (UAS) and terrestrial scanner.
- Preparation of a survey base map drawing.
- Easement exhibits and metes and bounds descriptions will be provided during final design phase.

Trihydro made the following assumptions for this task:

- City of Seguin will acquire right-of-entries
- The project area will not be in restricted airspace
- Base map will be prepared in AutoCAD
- Surveying work includes 30 days

It is anticipated that a limited amount of field investigation will be performed to the extent required to identify adjacent property owners for the route analysis as discussed in Task A300. Following final route selection, all surveying activities will be completed.

Task A200 – Natural Resources and Cultural Resources

Trihydro will coordinate with SWCA Environmental Consultants (SWCA) to conduct environmental services for the River Oak Interceptor and Pecan Orchard Lift Station Expansion Project, which include jurisdictional waters delineation, threatened/endangered species evaluation, and a cultural resources assessment.

Jurisdictional waters delineation includes:

- Field data collection.
- A narrative description of the methods utilized in conducting the field investigations.
- A results section that describes (1) the vegetation communities observed, (2) the soils observed, (3) the types of wetlands encountered and (4) the water bodies observed.

- A conclusion section including professional opinion of waters and/or wetlands anticipated to be considered by the U.S. Army Corps of Engineers (USACE).
- Maps illustrating locations of all jurisdictional waters in the project area. The maps will be aerial photo-based and prepared using ArcGIS.
- USACE Wetland Determination Data Forms for each sample point and representative photographs for each vegetative stratum.

Threatened/Endangered species evaluation services include the evaluation of published literature and a site visit along the project alignment to describe the structural and compositional elements of the vegetation and other habitat features in and adjacent to the project. Following the field visit, SWCA will prepare a report that provides a description of the vegetation communities and habitat features present and assessment of the potential for the occurrence of the species as considered by the United States Fish and Wildlife (USFWS) in Guadalupe County along the project area.

Cultural resources assessment will include the following:

- Background review, agency consultations, and antiquities permit application
- Archaeological fieldwork
- Survey meeting Texas Historic Commission (THC) and Council of Texas Archeologists (CTA) archaeological standards
- Reporting and curation

It is anticipated that only a desktop natural and cultural resources investigation will be performed to the extent required to identify possible environmental concerns along each proposed alignment for the route analysis in Task A300. Following final route selection, the natural and cultural resources investigation will be completed.

Task A300 – Preliminary Design

Following the survey and field investigation, Trihydro will evaluate the River Oak Drive Development Analysis prepared by Freese and Nichols, Inc. and begin the preliminary design phase to identify a preferred route. Trihydro will also evaluate the existing Pecan Orchard Lift Station and provide preliminary design for expansion to accommodate 6.2 MGD demand. The preferred wastewater interceptor line and force main alignment along with lift station expansion will be provided in the preliminary design submittal.

Following the route selection, Tasks A100 and A200 will be completed. Trihydro's preliminary design will include the following tasks:

- Trihydro will evaluate the River Oak Drive Development Analysis prepared by Freese and Nichols, Inc. and begin the preliminary design phase to identify a preferred route for wastewater interceptor line and force main.
- Evaluate existing Pecan Orchard Lift Station and provide preliminary design for expansion to accommodate 6.2 MGD demand.
- Attend up to six coordination meetings facilitated by City of Seguin's designated Project Manager.
- Prepare preliminary design plans for review. It is anticipated that construction of the wastewater interceptor, lift station expansion, and force main will be bid and constructed by a contractor hired by the City.
- Participate in up to six progress meetings with the City of Seguin. Trihydro will prepare an agenda.
- Prepare an opinion of probable construction cost.
- Submit the preliminary design submittal and attend a review meeting with the City to receive comments. Comments received during the preliminary design submittal meeting will be incorporated into the future design phase.
- Trihydro will provide preliminary permitting coordination with U.S. Army Corps of Engineers (USACE), Texas Department of Transportation (TxDOT), Texas Commission on Environmental Quality (TCEQ), and City of Seguin.

The following deliverables will be prepared during the preliminary design task:

- Preliminary alignments for review by City of Seguin.
- Meeting agendas for progress meetings.
- Preliminary design submittal to City of Seguin.

Trihydro made the following assumptions:

- Three preliminary routes will be provided.
- Total length of wastewater line infrastructure is 21,600 linear feet.
- Preliminary design includes plan view information for wastewater line and force main.

Comments received during the preliminary plan meeting with City of Seguin will be addressed and incorporated into the design.

FEE ESTIMATE

Estimated fee for design services is **$970,600**. Our fee is based on the tasks outlined above, hourly rates, and expenses. Invoices will be prepared on a time and materials basis with a cost not to exceed the estimated amount without written authorization. The fee by task includes:

- Task A100, Surveying and Field Investigation – $85,200
- Task A200, Natural Resources and Cultural Resources – $47,200
- Task A300, Preliminary Design – $838,200

SCHEDULE

We are prepared to proceed with this project immediately upon receipt of an approved contract with the expected delivery date of preliminary design within 180 days from written approval.

The services shall be governed by the terms and conditions of the Master Services Agreement between the Trihydro Corporation and City of Seguin dated June 7, 2022.

Upon your acceptance of this fee proposal, approved contract, and notice to proceed, we will schedule our team to commence work with design. Please call us at (830) 626-3588 if you have questions.

Authorized By: _____

City of Seguin

Authorized Date: _____

Sincerely,
Trihydro Corporation

David Rabago, P.E., CFM
Project Manager

Jason Vreeland, P.E.
Project Director

999-81P-004