

EXHIBIT A-1

SCOPE OF SERVICES

It is expressly understood and agreed by the parties hereto that it is the intention of this Agreement to provide for furnishing engineering services for the subject project:

MANOR, TX
2024 SANITARY SEWER EVALUATION STUDY

The City of Manor, Texas (CITY) has identified the need to remove sources of Inflow and Infiltration (I&I) from the sanitary sewer collection system. George Butler Associates (ENGINEER) will assist the CITY in achieving this through various means including this project.

The project will: inventory, inspect, and evaluate existing sanitary sewer lines and structures for both structural condition and inflow and infiltration (I&I) defects; analyze the extent of I&I in the project area; and provide rehabilitation recommendations for the studied assets.

Future phases of the project may provide engineering plans for rehabilitation design and follow-up inspections and monitoring.

The Scope of Services for this Project is organized into four (4) major Task Series:

- Task Series 100 – Project Management and Administration
- Task Series 200 – Field Investigations
- Task Series 300 – GIS Database Preparation and Data Entry
- Task Series 400 – Data Analysis and Rehab Recommendations

TASK SERIES 100 – PROJECT MANAGEMENT AND ADMINISTRATION

100. Project Management and Administration. Provide the management functions required to successfully complete the project, including project correspondence with the Client; a one-hour Kick-off meeting with the Client's staff to be held virtually via Microsoft Teams and attended by the Project Manager and one (1) Design Engineer; supervision and coordination of services, and quality control/assurance; scheduling and assignment of personnel resources, monitoring of work progress and invoicing for the work performed. ENGINEER shall prepare and distribute minutes of progress meetings with the Client including action items.

This project is anticipated to take 120 days to complete. One (1) project kickoff meeting and three (3) monthly one-hour progress meetings are anticipated as part of this project. The progress meetings will be held virtually via Microsoft Teams and attended by the ENGINEER's Project Manager and one (1) Design Engineer.

TASK SERIES 200 – FIELD INVESTIGATIONS

200. Field Investigations. The Consultant shall collect, compile, and evaluate pertinent and available data from the Client.

Field investigations will include:

- Simple manhole condition assessments of up to 50 sanitary sewer manholes.
 - Each simple manhole condition assessment will use a visual evaluation of the manhole to determine structural or I&I defects present in the manhole. The manhole will then

- be ranked on a zero (0) to four (4) scale for the most severe defect found, or if the manhole is not able to be assessed a score of five (5) will be given.
 - Deliverables will include at least three (3) photos: General Location Photo, Topside Photo, and Channel Photo.
- Internal condition assessments of up to five (5) sanitary sewer manholes, as deemed necessary by the ENGINEER.
 - Internal condition assessments will include manned entry into the structure to collect manhole dimensions, lamping photos of pipes, and defect photos. Hazardous environments are not expected to be encountered during these inspections and will be considered Additional Services if they are encountered.
 - Deliverables will include at least three (3) photos of the structure as well as one (1) photo of each connecting pipe; a sketch showing the orientation of the connecting pipes to the inspected asset; a GIS database of measurements collected during inspection.
- CCTV of up to 10,000 linear feet (LF) of sanitary sewers.
 - CCTV will follow NASSCO PACP coding standards.
 - Budget is allocated for up to eight (8) hours of heavy cleaning and coinciding CCTV of particularly dirty sewer lines.
 - Deliverables will include related media files (photos and videos), a GraniteNet database with the inspections, and an inspection summary pdf report.
- Smoke testing of up to 14,000 LF of sanitary sewers.
 - Deliverables will include a GIS database with smoke sources identified during testing and photos to show the location of the smoke source.
- Dyed water testing of up to five (5) suspect sources, as deemed necessary by the ENGINEER.
 - Deliverables will include a GIS database showing the locations of the dye tests performed, the results of the tests, and photos captured during the testing.
- Up to eight (8) hours for field verification of unusual or unclear conditions as well as communication with homeowners, as deemed necessary by the ENGINEER.

Manhole condition assessments, smoke testing, and dyed water testing (if needed) will be performed using ESRI Field Maps forms developed and owned by the ENGINEER. Data will be stored electronically and provided to the CITY in the form of a GIS geodatabase.

Internal condition assessments, if needed, will be performed using Survey 123 forms developed and owned by the ENGINEER. Data will be stored electronically and provided to the CITY in the form of a GIS geodatabase.

TASK SERIES 300 – GIS DATABASE PREPARATION AND DATA ENTRY

300. GIS Database Preparation and Data Entry. Based on the results of Task 200 ENGINEER shall develop, or modify the existing, GIS database structures and shapefiles for the purpose of mapping the data. Data to be mapped shall include:

- CCTV locations and data
- manhole inspection data
- smoke testing results and source locations

- dyed water testing results and source locations

Consultant shall meet with representatives of the CITY to review the completed mapping and databases at a Review Meeting to be held virtually via Microsoft Teams. The review meeting shall last one (1) hour and be attended by the Project Manager and one (1) Design Engineer. Consultant shall provide electronic files in shapefile or file geodatabase formats, as described above in Task Series 200, for the CITY's use.

TASK SERIES 400 – DATA ANALYSIS AND REHAB RECOMMENDATIONS

400. Data Analysis and Rehab Recommendations. Based on work completed in Tasks 200 and 300 ENGINEER shall perform analysis of the existing data to identify locations of inflow and infiltration; to quantify potential I&I volumes; identify assets based on condition assessment information that are candidates for rehabilitation or replacement. The results will be used to develop rehabilitation design plans that reduces I&I and align with the CITY's capital improvements budget in future phases.

ENGINEER shall deliver a draft report to the CITY in one (1) pdf format submitted to the CITY via thumb drive or email summarizing the available data as provided by the CITY, the results of the data analysis, the recommendations for rehabilitation or replacement, identification of data gaps and recommendations for additional data acquisition.

ENGINEER shall meet with representatives from the CITY to discuss the draft report and City comments. The review meeting shall be held virtually via Microsoft Teams and last up to two (2) hours. Project manager and one (1) design engineer shall attend from ENGINEER.

ENGINEER shall deliver a final report to the CITY in three (3) hardcopy and one (1) pdf formats.

ENGINEER shall be available to present the project and recommendations at a City Council meeting.

ASSUMPTIONS

- All assets selected for inspection will be made accessible to the Consultant.
- A Notice to Proceed will be received by the Consultant no later than February 29, 2024.

ADDITIONAL SERVICES

- Field investigations to resolve data discrepancies or acquire additional data beyond the hours provided for in Task 200.
- Survey services for acquisition of location and elevation information.
- Design services related to recommended improvements identified in Task 200 and/or Task 400.
- Services related to the modification of existing databases and/or creation of new databases for the purpose of future data collection.