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June 7, 2021

VIA EMAIL

Mr. David deGeneres, Assistant Director St. Charles Parish Department of Wastewater 100 River Oaks Drive Destrehan, LA 70047

EMAIL: <u>ddegeneres@stcharlesgov.net</u>

Re: St. Charles West Bank Sewer Master Plan

A/E Project No. 20-2033

Dear Mr. deGeneres,

Enclosed is Exhibit A to provide Phase 2 services for the above referenced project. If acceptable, please prepare Amendment No. 1 to our contract. Should you have any questions or concerns, please advise.

Sincerely,

Meyer Engineers, Ltd.

Donovan P. Duffy, P.E.

DPD/bgc

Enclosure

cc: Mr. Miles Bingham, Director, St. Charles Parish Department of Public Works, EMAIL: mbingham@stcharlesgov.net

EXHIBIT A TO AMENDMENT NO. 1 BETWEEN OWNER AND ENGINEER FOR PROFESSIONAL ENGINEERING SERVICES

FURTHER DESCRIPTION OF CONSULTING AND RELATED MATTERS

This Exhibit A is attached to and made part of Amendment No. 1 to the Standard Form of Agreement dated July 14, 2021, between St. Charles Parish (OWNER) and Meyer Engineers, Ltd. (ENGINEER) for the provision of the West Bank Sewer Master Plan (Hahnville Plant System), referred to as "the Project."

Delete Phase 2 services in Exhibit A to the Agreement between Owner and Engineer for Professional Engineering Services and replace with the following:

PHASE 2: INFILTRATION & INFLOW (I&I) ANALYSIS AND HYDRAULIC MODEL

Task 2.1: Flow Monitoring Data Assembly

During Phase 1 Engineer developed a list of locations that will be required for a flow monitoring plan to collect pertinent flow and rainfall data for the Parish's Westbank service area. Per the technical memorandum:

Due to the size of the sanitary sewer collection system that the Hahnville plant treats, Engineer's recommendation is to focus primarily on Class 3 lift stations. We recommend an extensive flow monitoring and data collection program for the following lift stations:

Lift Station	Existing Telemetry	Proposed Telemetry
3127 Booster	Run Time/Flowmeter	Flow meter verification
Ashton 1	Run Time/Flowmeter	Flow meter verification
Bourg*	None	Temporary Flow Meter
Boutte Booster	Run Time/Flowmeter	Flow meter verification
JB Green	Run Time	Temporary Flow Meter
Lincoln/Sycamore*	None	Run Time Recorder
Paradis L/S	Run Time/Flowmeter	Flow meter verification
Snowball	Run Time/Flowmeter	Flow meter verification
Killona Jail*	Run Time	Temporary Flow Meter
Adams/Railroad*	None	Temporary Run Time Recorder
Courthouse Lane*	None	Temporary Run Time Recorder

* CES Monitored

SCP shall provide flow data from all lift stations with existing flow meters. These flow meters have been verified by a third-party vendor for accuracy.

Compliance Envirosystems entered into a contract with St. Charles Parish for a flow-monitoring program to include temporary flow monitors and pump station monitors for 60 days. Should the flow monitoring require a time extension due to lack of rainfall, additional weeks may be added to the contract at an additional cost.

The temporary flow monitoring equipment will be capable of measuring the depth and velocity of wastewater flows at synchronized time intervals of 5 minutes. Pressure sensors will be installed with the capability of measuring depth of surcharging at flow monitoring locations. Temporary depth monitors will be capable of measuring depth of flow at 5-minute time intervals. Temporary pump station monitors will be installed at select stations to provide a continuous record of pump starts and stops during the monitoring period. Pump drawdown tests will be conducted at these stations to calibrate the pump station monitor and translate pump run times into estimated flow rates to the nearest 1 gallon per minute.

Engineer will review the raw data from all temporary meters at the start date of the flow monitoring period to ensure that the flow monitor site hydraulics are conducive to collection of quality data and that the equipment is functioning properly. During the flow monitoring period, Engineer will also review data bi-weekly thereafter to monitor any potential change in conditions.

Task 2.2: Hydraulic Model Development

Engineer will create a dynamic hydraulic model of the Parish's Westbank sanitary sewer system for the major pump stations in the sewer network. Available information regarding these modeled stations, including pump curves, hydraulic capacity information, wet well volumes or drawings, pump on/off settings, and force main information, will be provided by the Parish for use in the model. It is assumed that the information provided will be adequate to describe the stations' operation.

Task 2.3: Identify Infiltration and Inflow Problem Areas

Engineer will identify the areas of I&I using the existing lift station run times and overflow data provided by the Owner and CES. Engineer's report shall include approximate dry and wet weather flows for each lift station in the study area. The report shall also make suggestions as to which areas should be prioritized and the necessary process to determine the I&I in those specific areas (smoke testing, etc.).

Task 2.4: Identify and Evaluate Improvement Alternatives

The flow monitoring data and hydraulic model will be used to evaluate planning level improvement alternatives needed to meet existing and future sewer requirements. The improvements will focus on addressing sewer system capacity concerns identified by the flow monitoring. Improvements may consist of increased system capacity (relief sewers and/or pump stations), I/I reduction through sewer rehabilitation, flow equalization storage, or various combinations of these improvements. Planning level conceptual cost estimates will be developed as a means of comparing viable alternatives under consideration.

Engineer will identify potential implementation problems or other non-cost related factors for improvement alternatives, such as permitting, constructability, operational flexibility, etc. A meeting will be held with Parish staff to review the results of the alternatives analysis. With Parish staff member input, Engineer will select and recommend appropriate improvement alternatives to meet overall planning objectives.

Planning level recommendations for sewer system improvements will include preliminary routing, pipe lengths, and diameters of gravity sewer alternatives, capacities of pump station alternatives, and length of sewers to be rehabilitated.

Task 2.5: Prepare Technical Memorandum

Engineer will prepare a draft technical memorandum that will present the results of the study and the recommended improvements to the system. The report will serve as a reference document that the Parish can use as a guide to focus future sewer collection system improvements. Comments received from the Parish on the draft memorandum will be incorporated into a final memorandum, which will be electronically submitted in pdf format. In addition to a CD of the report, two (2) hard copies of the draft and final report will be given to the Parish.

Task 2.6: Sanitary Sewer Design

Engineer will provide final design of recommended improvements on an as-needed basis.

The Responsibilities of OWNER as described are amended and supplemented as follows:

The Responsibilities of OWNER are as follows:

OWNER will make available any information required to complete this project.

The Time for Rendering Services are amended and supplemented as follows:

The Time for Rendering Services shall be four (4) months from the notice to proceed.

Compensation to ENGINEER

Partial payments are to be made monthly in proportion to the percentage of work completed.

Total lump sum payments are not to exceed the fee amounts in the following table.

Task	Lump Sum Fee
Task 2.1: Flow Monitoring Data Assembly	\$15,000
Task 2.2: Hydraulic Model Development	\$15,000
Task 2.3: Identify Infiltration and Inflow Problem Areas	\$22,500
Task 2.4: Identify and Evaluate Improvement Alternatives	\$25,000
Task 2.5: Prepare Technical Memorandum	\$15,000
Task 2.6: Sanitary Sewer Design	TBD
Lump Sum Fee Total	\$92,500