



CITY OF WASHINGTON, ILLINOIS

City Council Consent Agenda Communication

Meeting Date: December 18, 2023

Prepared By: Dennis Carr – City Engineer

Agenda Item: Lagoon Feasibility Study Proposal

Explanation: During the Committee of the Whole meeting on December 11, the City Council gave direction to bring forth a proposal for Strand Associates, Inc. to perform a wet weather lagoon feasibility study in lieu of continuing with the Phase 2B Trunkline design. The feasibility study is to look at both the STP1 site as well as the farm to the northeast. Strand feels they could complete this initial feasibility study by May of 2024.

The initial feasibility study will use data collected in 2016, which would allow the City to determine whether a combination of an excess flow lagoon at the former STP-1 site or upstream site and removal of hydraulic bottlenecks in the existing Farm Creek Trunk Sewer (FCTS) has potential to sufficiently address projected sanitary conveyance needs with the intent of eliminating the proposed FCTS replacement project.

If there is a consensus to move forward with the Lagoon Study, Strand Associates, Inc. will begin to draw up the Engineering Agreement to be approved in January.

Fiscal Impact: The \$50,400 will be paid from Fund 516.

Recommendation Summary: Staff recommends that the City Council discuss and give direction on the proposal by Strand Associates, Inc. to perform a feasibility study for the potential of a wet weather lagoon at the old STP1 location or upstream from that location. The cost of the feasibility study is for a not to exceed price of \$50,400.

Action Requested: Staff request discussion and a direction forward.



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December 15, 2023

Mr. Dennis Carr
City Engineer
City of Washington
301 Walnut Street
Washington, Illinois 61571

Re: Proposal for Engineering Services – Excess Flow Lagoon Feasibility Study

Dear Mr. Carr:

This proposal presents Strand Associates, Inc.®'s anticipated *Scope of Services* and associated *Compensation* for providing engineering services to the City of Washington for a feasibility study of a potential sanitary sewer excess flow lagoon associated with the Farm Creek Trunk Sewer (FCTS) system.

Project Understanding

This project involves performing a preliminary study from available information to-date to evaluate whether a combination of an excess flow lagoon at the former Sanitary Treatment Plant No. 1 (Site A), or a property north of Glenwood Cemetery (Site B), along with removal of hydraulic bottlenecks in the existing FCTS has potential to sufficiently meet current and projected sanitary conveyance needs within the FCTS system.

We anticipate using the following existing information in performance of the study:

- Flow metering data gathered by our firm in 2016.
- The existing hydraulic model developed by our firm and modified for the purpose of this study.
- Existing sewer elevations at STP-1.
- The two soil borings collected by the City on the STP-1 site.

Scope of Services

Proposed services can be described as follows.

1. Attend a kickoff meeting with the City to gather additional data, including updated utility maps, plat maps, and available drawings of the potential lagoon sites. Prepare and distribute meeting minutes.
2. Review flow metering data collected by our firm in 2016 and the projected future flow data presented in the October 2019 Preliminary Engineering Study for the Farm Creek Trunk Sewer. Update the existing hydraulic model for the existing FCTS from this existing data.
3. Review excess flow volume needed to be removed from the system to mitigate conveyance deficiencies in the FCTS utilizing the updated hydraulic model. Determination of volume will be based on the August 30, 2016, storm event flow data.
4. Evaluate the two potential lagoon sites using existing topographic data and publicly available contour data and review potential excess flow lagoon volumes available at each site.

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5. Review subsurface soil conditions for Site A from two existing soil borings collected at the site and the geotechnical evaluation performed for the FCTS Replacement Project. Gather and review available county soil data for Site B. Evaluate potential impacts and limitations to an excess flow lagoon at each site from the available subsurface soil data.
6. Analyze conveyance modifications needed to convey excess flow into and out of a lagoon at each site.
7. Review the updated hydraulic model for residual capacity deficiencies in the existing FCTS and needed upgrades needed after implementation of the excess flow lagoons at each site, individually and together.
8. Evaluate ancillary modifications and maintenance needed by the City where segments of the existing FCTS would be retained.
9. Prepare a draft short report presenting study findings and an opinion of probable construction cost and provide to the City for review and comment.
10. Attend a virtual meeting with the City to discuss the draft report. Prepare and distribute meeting minutes.
11. Provide a short final report incorporating City comments, as appropriate.

Schedule

Services shall begin upon execution of an agreement, which is anticipated January 23, 2024. Services are scheduled for completion on May 1, 2024.

Compensation

City shall compensate us on a time and expense basis a not-to-exceed fee of \$50,400.

This letter is not to be considered an agreement between the City and Strand Associates, Inc.® Once selected, we will prepare an engineering agreement and submit to the City for review and signature. Following the execution of this agreement, work on the project will begin.

We look forward to working with the City of Washington on this project. If the City has questions, please let me know.

Sincerely,

STRAND ASSOCIATES, INC.®



Michael R. Waldron, P.E.

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