



AGENDA ITEM EXECUTIVE SUMMARY

Agenda Item:	Engineering service to prepare design and bidding specifications for HVAC system rehabilitation and modernization at Water Treatment Plant		
Presenter & Title:	Bob Van Gyseghem, Superintendent of Water & Wastewater		
Date:	December 19, 2022		
Please Check Appropriate Box:			
<input checked="" type="checkbox"/>	Committee of the Whole Meeting	<input type="checkbox"/>	Special Committee of the Whole Meeting
<input checked="" type="checkbox"/>	City Council Meeting	<input type="checkbox"/>	Special City Council Meeting
<input type="checkbox"/>	Public Hearing	<input type="checkbox"/>	Other -
Associated Strategic Plan Goal/Objective: EMSII, ESIII			
Estimated Cost: \$33,900.00	Budgeted?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Other Funding? <input type="checkbox"/> Yes <input type="checkbox"/> No
Executive Summary:			
<p>Staff is in need of Professional Engineering Services to provide bid documents and plans for the rehabilitation and modernization of the HVAC system at the Water Treatment Plant. The Water Treatment Plant has a complex HVAC system for heating and cooling that is 15 years old. The system has had several failures in the past year and is in need of modernization and rehabilitation. Staff is recommending that Engineering Solutions be hired to provide bidding documents due to staff's lack of knowledge in this specialty. The cost will be paid for within the existing budget and be reflected in a future budget amendment if necessary.</p>			
Attachments: <i>(please list)</i>			
<ul style="list-style-type: none"> • Resolution • Engineering Agreement 			
Voting Requirements:			
<p><i>This motion requires a simple majority of affirmative votes for passage.</i></p> <p><i>The Mayor may vote on three occasions: (a) when the vote of the aldermen or trustees has resulted in a tie; (b) when one half of the aldermen or trustees elected have voted in favor of an ordinance, resolution, or motion even though there is no tie vote; or (c) when a vote greater than a majority of the corporate authorities is required by state statute or local ordinance to adopt an ordinance, resolution, or motion.</i></p>			
Recommendation / Suggested Action: <i>(how the item should be listed on agenda)</i>			
Recommend approval of a Resolution authorizing the City Administrator to execute a Professional Engineering Service Agreement with Engineering Solutions at a cost not-to-exceed \$33,900.00			

RESOLUTION NO. 2022-104
RESOLUTION AUTHORIZING EXECUTION OF
Professional Engineering Services

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GENEVA, KANE COUNTY, ILLINOIS, as follows:

SECTION 1: That the City Administrator is hereby authorized to execute, on behalf of the City of Geneva, a Professional Engineering Service Agreement with Engineering Solutions Team, relating to HVAC rehabilitation and modernization at Water Treatment Plant.

SECTION 2: This Resolution shall become effective from and after its passage as in accordance with law.

PASSED by the City Council of the City of Geneva, Kane County, Illinois, this ____ day of _____, 2022

AYES: __ NAYS: __ ABSENT: __ ABSTAINING: __ HOLDING OFFICE: __

Approved by me this ____ day of _____, 2022.

Mayor

ATTEST:

City Clerk



November 04, 2022

Mr. Bob Van Gyseghem
Superintendent of Water and Wastewater
City of Geneva Public Works Department
1800 South Street
Geneva, IL 60134

SUBJECT: The Water Treatment Plant
HVAC System Rehabilitation and Modernization Project – Phase 2 Engineering
Proposal and Letter Agreement for Engineering Services

Dear Mr. Van Gyseghem:

Thank you for your request to have the Engineering Solutions Team continue to be of service to The City of Geneva with the required Phase 2 plan and specifications and contract document development for the Water Treatment Plant HVAC System Rehabilitation and Modernization Project. This Scope of Work will also include all the necessary Bid Assistance.

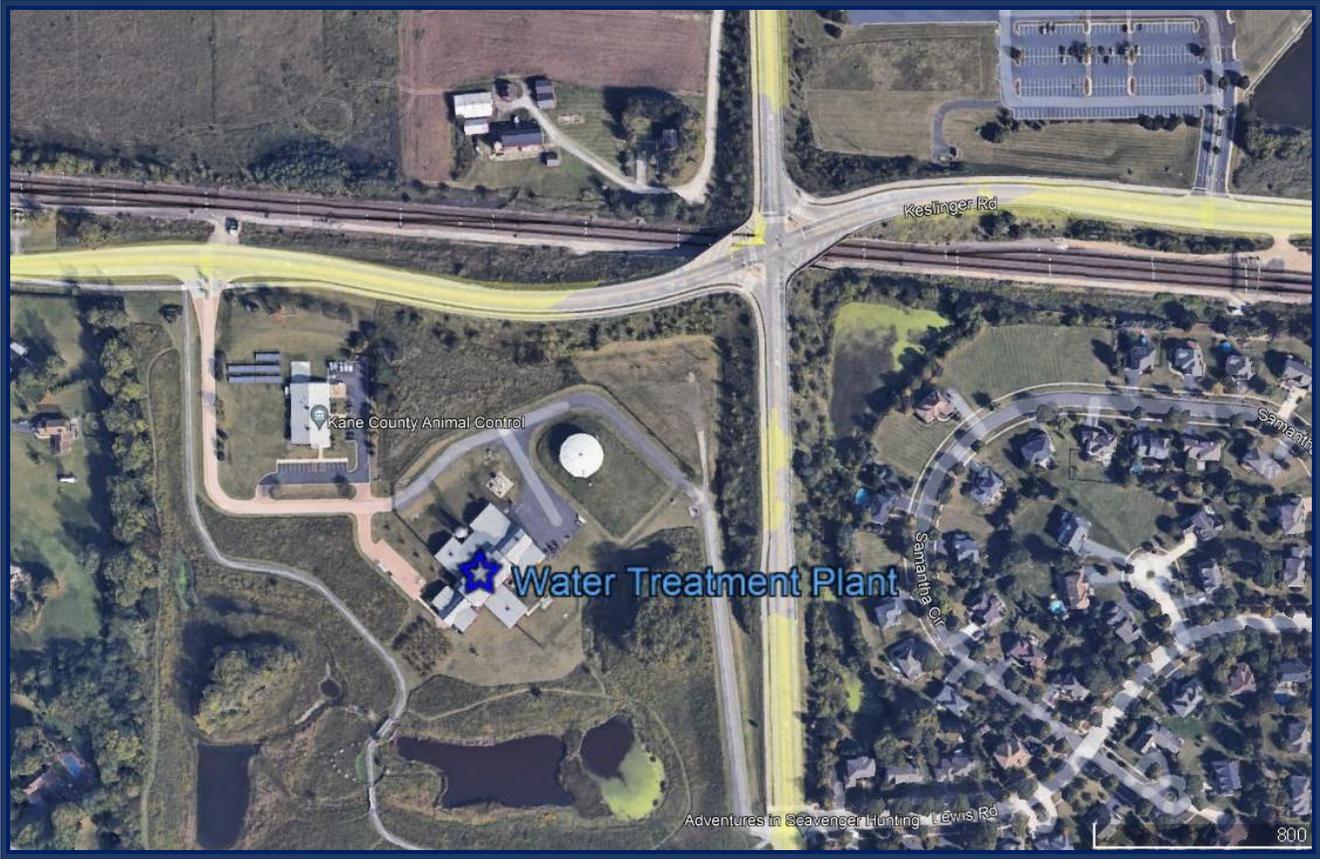
This proposal is based on the Phase 1 Report recently developed and completed by Engineering Solutions Team and discussions at the Team Meeting conducted on October 31, 2022.

Existing Conditions:

Built about 2008, this building has seen a service life of 15 years. Functioning as a public works facility – water treatment plant. The shape of the structure is a roughly rectangle in shape. The architectural style is reminiscent of a farm style with a replica corn silo that is used for material storage. The building is one story with a very large equipment mezzanine over the center portion. With a reception area, offices, labs and training rooms in the front and water treatment equipment located in the center portion of the building. The back spaces are used for chemical, maintenance, and garages. The floor plate area is approximately 23,614 sq ft for the garage/office space and another 6,600 sq ft for the equipment mezzanine. Most of the mechanical equipment resides on the mezzanine level. The architect firm was Black & Veatch of Chicago, IL. The original general contractor was Williams Brothers, and the mechanical contractor was J.A. Fritch (out of business). Due to the function of the building several large quantities of corrosive chemicals are used for treatment and processing of water.

Summary:

With the building 15 years old, the mechanical systems are original. There are many comfort related complaints, in particular, from the office spaces located along the exterior walls. This type of system is inherently energy intensive and hard to control with no Building Automation System (BAS).



The Project Site Plan



The Water Treatment Plant.



Equipment List, Summary and Scope of Work:

Ground Floor

- AHU1** – Serves the administrative Office spaces at the south end of the building and laterally along the west. WILL BE REMOVED AND REPLACED.
- AHU2** – Serves the Conference Room, Lunchroom, and storage spaces at the south end of the building and laterally along the east. WILL BE REMOVED AND REPLACED.
- PAC1** – Located on an exterior pad on the west side of the building, services the 1st floor lab space located in the front along the west wall. This existing unit will remain as is.
- DEH1** – Services the large process treatment space on the 1st floor. It has a 10,000cfm capacity with direct fire heating. The unit was reported in good condition and is excluded from this Project.
- AHU3** – Serves as a makeup unit only for the chemical room. The unit does not have any heating or cooling capacity and is in good working order. This unit will remain as is.
- AHU4** – Services the rear hallway and both locker room spaces. WILL BE REMOVED AND REPLACED.
- MAU1** – Services the sodium hypochlorite storage and the fluoride storage/feed rooms. WILL BE REMOVED AND REPLACED.
- EHX Only** – Garage and service pumps areas. These spaces contain dedicated heating and no cooling. The unit is excluded from this Project.

Mezzanine

- PAH1** – Services the Mezzanine VFD [electrical room] in the southwest corner of the building. THE VERTICAL AIR HANDLER AND ITS ASSOCIATED CONDENSING UNIT WILL NEED TO BE REPLACED WITH A SMALLER UNIT.
- MS1** - Supplements cooling provided by PAH1 in the electrical room. The unit is in good condition and only 1 year old. This unit will be left as backup for the newly installed and larger PAH1.
- BAS** - The Building Control System is based around three control panels. THE PLAN AND SPECS WILL ADDRESS POSSIBLE IMPROVEMENTS TO THE CONTROLS AND BAS. THIS WILL BE PRESENTED AS AN ALTERNATE PORTION TO THE BID. THE CITY COULD THEN DECIDE THEIR DIRECTION AFTER THE BID OPENING.
- EXF1** – NORTH EXHAUST FAN TO HAVE A LINE ITEM ADD OF \$3000 ADDED TO THE BID FORM TO ADDRESS DEFICIENCIES IN THE DAMPER/LOUVERS.

Plan, Specification and Project Presentation:

The Engineering Solutions Project Design Team will prepare the Plan and Specifications and Bid Package utilizing the following criteria:

- The Plan Drawings will be developed utilizing the Autodesk Revit product. Revit drawings utilize the existing plan pdf files. The existing drawings are used as the base sheet. This base is then screened. The proposed equipment and plan are then drafted over the existing screened base sheet. It is anticipated that 6 – 9 drawings will be developed for this project.
- The Project Technical Specifications will utilize the AIA Project Specifications version 2017.



- The General Project Specifications. Engineering Solutions Team will utilize and customize the transmitted city of Geneva Specifications. These Customized Specifications will request that the Bidders submit with their bid, 5 similar recent local projects with references and the resumes of the Contractor’s Project Manage and Site Superintendent. These criteria will allow the City to select the contractor that it deems best suited for this project.
- The Contract Bid Documents will utilize the AIA Owner/Contractor Documents version 2017 or the City of Geneva Standard Bid Documents.
- As discussed at the Phase 1 Review Meeting, this Plan will be designed, and the Project Specifications will be developed to construct this project in a phased approach. Phase A Construction will be planned for 2023 and Phase B Construction will be planned for 2024. The successful bidder will be selected for both Phases of this project. However, the City will be given the option that if not satisfied with the Contractor’s performance after Phase A, the City does not have to renew the Contract for Phase B and is allowed to rebid the project for the remaining Phase B portion.
- The Project Documents will be advertised and distributed utilizing QuestCDN.com.
- An on-site MANDATORY Pre-Bid Meeting will be conducted.
- The Public Bid Opening will be conducted at City Hall on a Monday morning at 10:00 am.

Project Schedule:

• Anticipated Notice to Proceed	=	November 22, 2022
• Preliminary Plan Submission	=	December 19, 2022
• FINAL Plan and Specification Submission	=	January 16, 2023
• Budget Approval and Adoption	=	February 6, 2023
• Project Advertisement	=	February 16, 2023
• MANDATORY Pre-Bid Meeting	=	February 28, 2023
• Bid Opening	=	March 6, 2023
• Construction Start	=	after May 1, 2023

Owner Responsibility:

The **Owner** will provide the **Engineer** with:

1. The **Owner** will provide the **Engineer** with all existing Building Plans.
2. The **Owner** will openly communicate with the **Engineer** with all pertinent information to facilitate total project success.
3. The **Owner** will provide the **Engineer** with the Standard City of Geneva Project Specifications. WORD Document.
4. The **Owner** and the **Engineer** will both be present at the Pre-Bid Meeting.



Insurance:

The Engineering Solutions Team, Company carries \$1,000,000.00 / \$2,000,000.00 of Professional Liability Insurance with Continental Casualty Company the David Agency. The Engineering Solutions Team, Company also carries business liability insurance with an aggregate of \$4,000,000.00 with The State Auto Insurance Companies. If the **City of Geneva** would like to be listed as an additional insured for this project; please advise the Engineering Solutions Team.

Project Team:

Project Manager = Edward J Kalina, PE
Project Engineer / Mechanical Engineer = Larry McElheny, PE
Engineering Designer = Damon Bridges

Engineering Team Billing Rates:

Based on the described work, Engineering Solutions Team proposes to be compensated as follows:

Project Manager = \$ 150./hour
Project Engineer / Mechanical Engineer = \$ 150./hour
Engineering Designer = \$ 125./hour

Engineer’s Level of Effort and Compensation:

The described work will be performed as follows:

- Plan Development = PE/ME – 100 hours / ED – 8 hours / PM - 8 hours
- Project Technical Specifications = PE/ME - 16 hours / PM – 4 hours
- Project General Specifications and Bid Documents
= PE/ME - 16 hours / PM – 16 hours
- Advertise Project and Communicate with Contractors
= PE/ME - 8 hours / PM – 16 hours
- Pre-Bid Meeting and Addendum = PE/ME - 16 hours / PM – 8 hours
- Project Management and Coordination = PE/ME - 8 hours / PM – 8 hours

Total Projected Project Team Manhours
= PE/ME – 164 hours / ED – 8 hours / PM - 60 hours = 222 hours
Total Projected Project Team Professional Fee = ***\$ 33,600.***

The anticipated Direct Costs are projected as follows:

- Plots = \$ 150.00
- Mileage = 300 miles * \$ 0.50/mile = \$ 150.00
- Direct Cost Totals = \$ 300.00

TOTAL Projected Project Costs = ***\$ 33,900.00***



Term of This Agreement:

It is intended that all terms of this Agreement will apply for 1 month from the date of this proposal. Should the OWNER postpone concurrence with this Agreement beyond that specified date; then the ENGINEER reserves the right to review and adjust the required scope, schedule, efforts and fees for this Project.

Additional Services:

Although Engineering Solutions Team has the capability and would be pleased to perform the following services, our proposal considers the following listed services as "Additional Services":

- Phase 3 Engineering for this Subject Project.
- Any additional designs requested to be performed other than what is specifically described in this Agreement.

Close:

The **Engineering Solutions Team** again looks forward to the opportunity to provide Engineering Services and Solutions to **The City of Geneva** for the development and design and installation of a Rehabilitated and modernized and cost-effective HVAC System for the Water Treatment Plant.

Furthermore, The Engineering Solutions Team, ensures that the Said work will be performed as described. This letter is intended to act as our Agreement.

Thank you. Respectfully yours,

Edward J Kalina

Edward J Kalina, PE
President, Project Manager

Larry McElheny

Larry McElheny, PE
Project Engineer

Cc: Mr. Mike Anderson, City of Geneva, Project Manager

I have reviewed this letter, and hereby agree to the terms of this agreement.

Stephanie K. Dawkins

Name/Title [print]

Stephanie K. Dawkins

Signature and Date: City of Geneva