



Request for Proposals: 2020 TREATMENT PLANT HVAC IMPROVEMENTS PROJECT STUDY

Introduction

The Madison Metropolitan Sewerage District (MMSD) is requesting proposals for engineering study and evaluation services associated with our 2020 Treatment Plant HVAC Improvements Project.

The District is requesting all deliverables to be completed by December 31, 2020.

Background

At the Nine Springs Wastewater Treatment Plant HVAC systems are critical to individual building function, and thus treatment plant function. Many systems have reached the end of their useful life and are either in a failed state or are in constant need of repair. Equipment within process buildings has seen mild to major deterioration as a result, reducing reliability and creating additional work for staff. Equipment replacements in many cases have been deferred or staff have and still are operating “as-is”. The downside to continued deferment or denial of projects depends on the HVAC system but generally could be classified as continued degradation of material condition, or continued operation in a less than optimal means (with respect to important operating considerations such as energy use, labor, sustainability or safety). These HVAC systems present a significant risk to plant function and staff safety if a failure occurs.

In lieu of performing single HVAC projects as they arise, District staff want to approach HVAC system maintenance and repair proactively by performing a comprehensive HVAC study that will provide a roadmap for systematic repair and replacement of HVAC infrastructure. This study will assess current HVAC systems within the Nine Springs campus for condition & remaining useful life, code compliance, and individual building and equipment needs. The study will provide a list of recommended projects for District staff to budget and complete in subsequent years.

The HVAC systems to be evaluated in this project serve buildings that were constructed prior to the Nine Springs 11th Addition Project. If a building was constructed prior to the 11th Addition but the HVAC system has since been updated after 2015, the building will not be part of the evaluation.

Project Scope and Deliverables:

I. Overall Project Management

- A. Manage and carry out the overall study.
- B. Hold a kickoff meeting that includes development of project goals and objectives. The kickoff meeting will also include identification of key project personnel, review of scope of services and schedule, and an introduction to the preparation of reports and the process for review.
- C. Regularly meet and interact with MMSD throughout the project. During the project, it is recommended that the consulting firm meet with the Owner once per month.
- D. Hold a project completion meeting to review the study with MMSD staff.

II. Existing HVAC Equipment Review and Project Recommendations

- A. Inspect and become closely familiar with the current HVAC equipment. Document existing equipment conditions. A list of buildings and structures to be evaluated is provided at the end of this document.
- B. Review and document current HVAC equipment for appropriate design intent.
- C. Review and document current HVAC ventilation rates.
- D. Review systems for compliance with current codes.
- E. Review systems for opportunities to improve HVAC system layout and function.
- F. Evaluate and recommend specific designs for all improvements. Improvements should consider the following:
 1. Energy efficiency
 2. Maintainability
 3. Resiliency
 4. Safety

III. Study Report: At A Minimum Include the Following

- A. A description of the project methodology.
- B. Reference to the current codes used as the basis for design.
- C. Description of typical ASHRAE equipment service life.
- D. Basis for budgetary costs calculated.
- E. Project prioritization methodology.
- F. HVAC system evaluations. Evaluations must include:
 1. Existing equipment descriptions divided by building.
 2. Applicable code description and requirements.
 3. System airflow determination.
 4. Proposed HVAC system improvements with detailed opinion of probably cost.
- G. Project prioritization matrix.

Visits to the Wastewater Treatment Plant

Firms are invited to tour the wastewater treatment plant with MMSD staff and view the buildings that are included in the study. Attendance is NOT mandatory, and the consultants can choose

whatever date/time is most convenient for them. Consultant team members must provide their own PPE for the tour including hard hats, face coverings and safety glasses. The tours will begin and end outside of the MMSD operations building at the Nine Springs WWTP, located at 1610 Moorland Rd, Madison, WI 53713. During the tour, it is expected of participants to practice social distancing. The following tour times have been arranged.

- Tuesday August 25, 2020 at 9:00 a.m.
- Thursday August 27, 2020 at 9:00 a.m.

Proposal Submittal

Written proposals are to be submitted by email before 3:30 p.m. on September 4th, 2020. Proposals shall not exceed ten pages not including appendices; resumes of key personnel shall not exceed two pages each. Send proposals to:

Erik Rehr, PE
Maintenance and Reliability Manager
erikr@madsewer.org
608.709.1833

The proposals shall include the following sections:

- **Project Approach.** Show how you would organize the project and carry out the work. Include timelines and milestones for key tasks. Also describe your approach to achieving project requirements in the event on-site visits are disallowed due to the current pandemic or visits require social distancing or mask use, for all or part of the project.
- **Key Technical Issues.** Comment on key technical aspects or components of this study that you believe will be particularly important to its success.
- **Strength of the Project Team.** Show the specialized experience and skills of the individuals to be assigned. Include a chart or table showing the anticipated hours from each individual, organized by the areas or tasks where each would be involved. Attach resumes of proposed personnel. For past project experience, emphasize the specific responsibilities carried out by the individual.
- **Qualifications of Firm.** Briefly summarize your firm's qualifications and past experience with this type of work.
- **Pricing.** Provide an estimated price and detailed breakdown for the services to be provided. Show billable rates and estimated hours for the individuals to be involved. Indicate salary multipliers to be used for the project and define the additional expenses that are billed outside of the multiplier.
- **Schedule.** Break down the project into tasks and show how and when the various tasks will be completed to meet major milestones.

Evaluation of Proposals, Consultant Selection, and Contracting

Proposals will be evaluated by a committee composed of District staff. Proposals will be scored based on 100 possible points, with the evaluation criteria weighted as follows:

- Project Approach (20%)
- Key Technical Issues (20%)
- Strength of Project Team (20%)
- Qualifications of the Firm (20%)
- Pricing (10%)
- Schedule (10%)


Due to the concerns with the current pandemic and to promote social distancing, following the review of proposals, MMSD staff will select a firm. Award shall be made to the consultant determined to be the best qualified by the review committee, based on the evaluation criteria set forth in the Request for Proposals and upon negotiation of compensation determined to be fair and reasonable. If compensation cannot be agreed upon with the best qualified consultant, negotiations may be conducted with such other consultant or consultants in the order of their respective ranking; and the contract may be awarded to the consultant then ranked as best qualified. The District reserves the right to contract for all or part of the project. The contract and associated scope of work will be a “not-to-exceed” contract. The expectation is that the selection process will be completed, and the selected consultant informed by Friday September 11th, 2020. The District desires to have the final deliverable completed by December 31, 2020.

Additional Documentation

Original plans, specs and technical data on existing HVAC systems will be available for review. There may not be data available for all systems and available data might be in a variety of formats. The treatment plant asset management plan will also be available for review.

Buildings To Be Evaluated

- Aeration Building 1
- Aeration Building 2
- Aeration Building 3
- Aeration Building 4
- Blower Building 1
- Blower Building 2
- Boiler Building
- DAF Building
- DAF Thickener
- East Aeration Gallery
- East Primary Gallery
- Effluent Building
- Gas Control Building

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- GBT Building
 - GBT Polymer Building
 - Headworks Building
 - Metrogro Pump Station
 - Primary Building 1
 - Primary Building 2
 - Service Building
 - Shop Building 2
 - Shop One
 - Sludge Control Building 2
 - Sludge Dewatering
 - Solids Gallery
 - Storage Building 2
 - Storage Building 3
 - Substation U1
 - Substation U15
 - Vehicle Loading Building
 - West Aeration Gallery
 - West Primary Gallery
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