REQUEST FOR QUALIFICATIONS

Orange Water and Sewer Authority
Drinking Water Pump Stations Condition Assessment
CIP Project No. 272-65
Issue Date: August 4, 2023

Submittal Deadline: September 20, 2023 at 2PM

1. INTRODUCTION

Your firm is hereby invited to submit a written statement of qualifications to provide professional engineering and condition assessment services for the Drinking Water Pump Stations Condition Assessment project. This project includes condition assessments for three (3) drinking water pump stations within the OWASA system.

OWASA will conduct a Qualification-Based Selection process to identify the best qualified firm with which to negotiate a contract. All firms submitting qualifications must have demonstrated experience and expertise in design and construction services for water main replacement.

To be considered by OWASA, responses to this RFQ must be received by 2:00 p.m. Eastern Time on Wednesday, September 20, 2023. Refer to Section 5 – Submittal Requirements for details.

2. OBJECTIVES

The primary objectives of the project are to:

- **a)** Conduct detailed condition assessments of three (3) of OWASA's drinking water pump stations and associated assets
- **b)** Determine remaining service life for critical pump station assets
- **c)** Identify assets in need of repair and replacement
- **d)** Develop improvement plans for each pump station
- **e)** Establish cost and schedule estimates for pump station improvements
- **f)** Develop condition assessment templates and re-inspection intervals for integration into CMMS

3. BACKGROUND

OWASA's drinking water distribution system infrastructure includes several pump stations, a system of storage tanks, and interconnections with neighboring communities to deliver water to its customers. The topography of the OWASA service area varies widely; therefore, the distribution system has been divided into pressure zones. Most of the distribution system is in the 640-foot pressure zone, but the north-central and northwestern portions of OWASA's distribution system are in the 740-foot pressure zone.

a) Existing Facilities

OWASA primarily utilizes two (2) pump stations within its system to distribute drinking water to its customers: Nunn Mountain and Calvander. OWASA utilizes two additional pump stations, one at Interstate 40 and one at NC Highway 54, on an as needed or emergency basis to convey flow either to or from the City of Durham via an interconnect. Information for each pump station is provided below:

Nunn Mountain
The Nunn Mountain pump station is located at the base of the 740-foot zone elevated tank on Nunn Mountain, off Piney Mountain Road. This pump station contains two pumps rated at 4,200 gallons per minute (GPM) each and facilitates the transfer of water from the 640-foot pressure zone ground level storage tank (3.0 MG capacity) up to the adjacent 740-foot pressure zone elevated tank (0.5 MG capacity).

Calvander
The Calvander booster pump station is located at the intersection of Old Fayetteville Road and Hillsborough Road south of Calvander. This pump station was designed and constructed to provide water from the 640-foot pressure zone to Hillsborough. In 2013, OWASA re-purposed the pump station to provide a secondary source of water to the 740-foot pressure zone. The pump station contains three 660 gallons per minute (GPM) pumps with variable frequency drives (VFDs). With two pumps operating together the station can provide up to 1,400 GPM.

Interstate 40 (I-40)
The I-40 booster pump station is located at the intersection of Old Chapel Hill Road and I-40. OWASA replaced the existing pumps and installed a new 16-inch diameter water transmission line along Old Durham Road in 2008. The pump station contains two pumps rated at 2,700 GPM each. The total capacity of the I-40 pump station is 4,100 GPM.

NC Highway 54 (NC-54)
The NC-54 pump station is located along NC Highway 54 at Finley Golf Course Road. A 2002 interconnection capacity study recommended the installation of a new booster pump station at Barbee Chapel Road to replace the station at NC Highway 54 and Finley Golf Course Road. Condition assessment of the NC-54 pump station is not included in this scope of work.

b) Recent Studies

Hydraulic studies of the 740-foot and 640-foot pressure zones identified the need to conduct upgrades at the Nunn Mountain Pump Station to meet projected future water demands in the 740-foot pressure zone. Additionally, a subsequent study and modeling effort identified system improvements needed to enable us to temporarily take the Nunn Mountain ground and elevated storage tanks out of service for maintenance. OWASA is planning to execute tank maintenance on the Nunn Mountain elevated storage tank in FY24. In anticipation of tank maintenance, OWASA is conducting site improvements at

the Calvander Pump Station to facilitate the use of temporary pumps to meet fire flow demands within the service area.

In August 2022, a construction project at OWASA Jones Ferry Road Water Treatment Plant reduced plant capacity requiring assistance from Durham to provide water to OWASA through the I-40 OWASA-Durham interconnection. During this event, OWASA determined the existing I-40 pumps, which operate on constant speed (CS) motors, did not have the flexibility to deliver flow below the rated capacity. To improve operational flexibility, this event raised the need to consider installation of variable frequency drives (VFDs) at the station.

c) Current Needs

OWASA is seeking to better understand condition of drinking water pump stations by conducting condition assessments of the Nunn Mountain, Calvander, and I-40 pump stations. The overall goal of this project is to systematically evaluate asset condition, estimate remaining service life, identify repair, replacement and/or improvement projects at each pump station, and prioritize projects to reliably meet current and future customer demands.

OWASA seeks the assistance of a firm with expertise in conducting comprehensive condition assessments of pump stations.

Detailed design and construction of recommended improvements at each pump station is not included in this solicitation.

4. SCOPE OF SERVICES

The engineering services required for this project are expected to be completed to meet the objective outlined above and in general accordance with a scope of services as needed to accomplish the tasks listed below. **However, the final scope of services will be negotiated with the selected engineering firm and may include modified and/or additional tasks.**

1. Evaluation services may include:
    a. Execution of condition assessments on pump station assets, including but not limited to pumps, motors, piping, valves, electrical, and structural components
    b. Execution of pump performance testing to determine and document current operating conditions
    c. Review of operations and maintenance (O&M) practices
    d. Development of asset remaining service life
    e. Identification of obsolete assets
    f. Development of list of assets in need of repair or replacement at each pump station
    g. Prioritization of repair and replacement activities at each pump station

2. Preliminary Engineering services may include:
    a. Evaluation of pump station improvements including but not limited to conversion of pumps to Variable Frequency Drives (VFDs)
    b. Development of conceptual site and facility layouts to accommodate improvements
    c. Development of budgetary cost estimates and schedules
    d. Recommendations for pump station re-inspection intervals
    e. Development of a pump station condition assessment template for incorporation into CMMS
    f. Engineering Report Development

The draft and final plans, reports, etc. will be provided in electronic and hard copy formats in a manner acceptable to and usable by OWASA. The actual list and format of deliverables will be negotiated with the selected firm.

5. SUBMITTAL REQUIREMENTS

All firms interested, are encouraged to attend a non-mandatory virtual Pre-Proposal meeting at 10:00 AM and an in-person (limited to 2 people) pump station site visit at 1:00 PM on August 23, 2023, when OWASA staff will review the RFQ and answer question about the project. **Interested firms shall send an email to Allision Spinelli (aspinelli@owasa.org) by August 18, 2023 for the MSTeams invite**. The site visits will include the three pump stations included in this project.

No additional site visits to the pump stations will be allowed or provided to prospective consultants. All questions regarding the RFQ must be directed to Mrs. Spinelli via email (aspinelli@owasa.org). OWASA staff will not meet in person with any consultant before the Pre-Proposal Conference.

Responses to this RFQ must be received by OWASA no later than 2:00 p.m. Eastern Time on Wednesday, September 20, 2023. To be considered, please submit four (4) hard copies and one (1) electronic copy in PDF format of the required qualifications to:

Allision Spinelli, P.E.
Engineering Manager – Capital Projects
Orange Water and Sewer Authority
400 Jones Ferry Road
Carrboro, North Carolina 27510

Submittals (**including** resumes, **excluding** front and back cover) shall be limited to a maximum of 10 double-sided pages (i.e., 20 pages printed double-sided onto 10 sheets of 8-1/2”x11” paper). Please note that all Submittals shall become public documents upon delivery to OWASA. If there is sensitive or confidential information that cannot be shared publicly, please include additional documentation along with your submittal.

Each submittal must include the following in order to be considered:

a) ***Statement of Interest*** **[5 points]:** This shall explain your firm's interest in performing the work on this project, including how the project aligns with your firm's capabilities.
b) ***Project Team*** **[25 points]:** This shall include a listing or organization chart of the proposed project team members, including sub-consultants (if any), identifying their respective roles on the project, and indicating their availability to support this project. Each proposal shall include resumes of key team members. The primary contact shall be clearly identified.
c) ***Project Approach*** **[30 points]:** Clearly describe your proposed approach to accomplish the work to meet the project objectives, identifying how your team will prioritize condition assessments to meet schedule and budget constraints.
d) ***Past Experience and References for Similar Projects*** **[25 points]:** Provide references (including name and contact information for the client) and summaries for the three (3) similar projects your firm/team has completed in the last five (5) years for other clients. Identify who served as project manager and key lead technical roles in those projects.
e) ***Project Schedule*** **[10 points]:** The proposal shall include anticipated project schedule clearly describing and demonstrating your understanding of the necessary project activities, reasonable durations and sequencing in meeting the project's schedule. It is OWASA's intention to complete this project within FY24.
f) ***Project Concerns*** **[5 points]:** Identify any potential concerns or hinderances to successful competition of the project.
g) ***Contract Objections:*** It is OWASA's intention to use a contract similar to the one included as Attachment 2. If your firm objects to any element of the contract, please state the objections in the submittal.

6. SELECTION PROCESS AND CRITERIA

OWASA intends to select a firm on a qualifications basis within two weeks of receiving the responses to this RFQ, and expects to complete final scoping and contract negotiation in October 2023. OWASA staff will review and evaluate the submittals based on:

a) responsiveness to the RFQ,
b) experience, qualifications and availability of the proposed Project Manager,
c) makeup of the rest of the project team, including the experience and qualifications of key project staff,
d) firm's related experience and performance on other projects, especially the quality of work, budget control, project schedule, overall cooperation and responsiveness,
e) references on past similar projects, and
f) proposed project approach.

Note: OWASA may elect to conduct face-to-face interviews with two or more firms being evaluated prior to making a final selection. If OWASA cannot reach an agreement with the initially selected firm, OWASA will then proceed to negotiate with other firms that

submitted proposals or will reissue the RFQ. OWASA reserves the right to make an award in whole or in part, or to reject any and all proposals and not award a contract for the services described in this RFQ.

7. OWASA POINT OF CONTACT

Allison Spinelli will be OWASA's primary point of contact for all consultant selection matters relating to this project. **All questions regarding this Request for Qualifications must be emailed on or before Wednesday, September 13, 2023** to Mrs. Spinelli at aspinelli@owasa.org.

8. SUPPLEMENTAL INFORMATION

Attachment 1 Contract Agreement Template