

**REQUEST FOR QUALIFICATIONS**

**CITY OF PORTSMOUTH**

**NEW HAMPSHIRE**

Public Works Department

**ENGINEERING SERVICES**

**PEIRCE ISLAND WASTEWATER  
TREATMENT FACILITY UPGRADE**

**VALUE ENGINEERING REVIEW**

**RFQ No. 59-14**

City of Portsmouth, NH  
Department of Public Works

RFQ # 59-14  
REQUEST FOR QUALIFICATIONS

ENGINEERING SERVICES

**PEIRCE ISLAND WASTEWATER TREATMENT FACILITY UPGRADE – VALUE  
ENGINEERING REVIEW**

Sealed Statements of Qualifications, plainly marked RFQ # 59-14, “Engineering Services, Peirce Island Wastewater Treatment Facility Upgrade – Value Engineering Review” on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until 2:00 pm on June 17, 2014.

The City of Portsmouth’s Department of Public Works is requesting Qualifications from consulting engineering firms who are on the NHDES roster of pre-qualified consulting engineers for the following project: To provide value engineering services for the City’s Peirce Island Wastewater Treatment Facility Upgrade.

Qualification packages may be obtained from the City’s web site at <http://cityofportsmouth.com/finance/purchasing.htm> or by contacting the Purchasing Coordinator at the above address, or by calling the Purchasing Coordinator at 603-610-7227. Addenda to this RFQ, if any, including written answers to questions, will be posted on the City of Portsmouth website under the project heading.

The City of Portsmouth reserves the right to reject any or all statements of qualifications, to waive technical or legal deficiencies, to proceed or not to proceed with any subsequent proposal process, or to negotiate without further process any contract as may be in the best interest of the City.

**Continue below for the complete Request for Qualifications document.**

City of Portsmouth, NH  
Department of Public Works

RFQ # 59-14  
REQUEST FOR QUALIFICATIONS

ENGINEERING SERVICES

**PEIRCE ISLAND WASTEWATER TREATMENT FACILITY UPGRADE DESIGN  
– VALUE ENGINEERING REVIEW**

**INVITATION**

Sealed Statement of Qualifications, plainly marked RFQ # 59-14, “Engineering Services, Peirce Island Wastewater Treatment Facility Upgrade – Value Engineering Review” on the outside of the mailing envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until 2:00 pm on June 17, 2014.

**FUNDING**

The value engineering of the design portion of this project will be funded either through a sewer enterprise bonds or revenues.

**PROJECT BACKGROUND/PURPOSE**

The City of Portsmouth is a regional provider of wastewater collection and treatment services to the City of Portsmouth, Town of New Castle and portions of the Towns of Greenland and Rye. The City has two wastewater treatment facilities (WWTF), the 4.8 MGD wet weather Peirce Island WWTF and the 1.2 MGD Pease International Tradeport WWTF. The Peirce Island WWTF serves downtown Portsmouth and the client communities. The Pease International Tradeport WWTF serves the collection system for the Pease International Tradeport. The Peirce Island WWTF was originally constructed in 1964 and included settling and disinfection. The WWTF was upgraded in 1992 to include grit removal, primary clarification, sand filtration and chlorine disinfection. The sand filtration system failed to operate as designed and was taken out of service. The plant was upgraded again in 2002 to provide chemically enhanced primary treatment (CEPT).

The Peirce Island WWTF serves the entire sewered area of Portsmouth except the Pease International Tradeport, which is served by the Pease WWTF. The WWTF also receives flow from the Town of New Castle and portions of the Towns of Rye and Greenland. The majority of the wastewater is residential and commercial in nature since there is limited industry in this portion of the City. The WWTF was designed to treat an annual average

flow of 4.8 million gallons per day (mgd). Portions of the sewer collection system in downtown Portsmouth were constructed in the late 1800's and is a combined collection system that receives significant stormwater during precipitation events. The plant was designed to treat a peak combined flow of 22 MGD. The majority of the wastewater is pumped to the WWTF from the Mechanic Street pumping station. New Castle's wastewater is pumped directly to the WWTF from a pump station located on River Rd in New Castle.

The City operated the WWTF under a 301(h) waiver from 1985 until 2005. The waiver was rescinded and a new permit was issued in 2007 and the EPA issued a NPDES permit requiring secondary treatment standards. The City entered into a Consent Decree in September 2009, which stipulated interim permit limits until the WWTF was upgraded.

Following a piloting effort of multiple high rate treatment technologies, the recommended treatment technology for meeting secondary treatment limits at Peirce Island with the ability to treat to total nitrogen of 8 mg/L was the Biological Aerated Filter (BAF) with an average annual design flow treatment capacity of 6.13 mgd. The final memorandum summarizing this work was completed and submitted to the EPA in September 2012. The City Council endorsed that technology recommendation in April 2013.

In June 2013 the City engaged AECOM Inc. of Wakefield, Massachusetts to prepare the design of the Peirce Island WWTF Upgrade. The design is being completed in phases. The major components of the project include:

1. New Headworks Building housing influent screens, electrical switchgear and standby generator.
2. Scum Building improvements and aerated grit chamber modifications.
3. Upgraded primary clarifiers.
4. New Secondary Influent Pump Station (located in new Solids Building).
5. New Stage 1 Biological Aerated Filter (BAF) for carbon removal and nitrification and Mudwell.
6. New Stage 2 BAF for denitrification and Mudwell.
7. Modification of the existing Administration Building to become the Solids Building and Secondary Influent Pump Station with rotary screw presses for sludge dewatering.
8. Modification of the existing Sludge Processing Building to become the Administration Building.
9. Upgrade existing gravity thickener.
10. New gravity thickener.
11. Upgrade existing and construct new sludge storage tanks.

AECOM has completed the first phase of the design with the preparation of the Phase 1 Summary Technical Memorandum, which represents the 10 percent complete conceptual design report. The Phase 1 Summary Technical Memorandum includes:

1. Purpose
2. Consent Decree Requirements
3. Site Investigations
4. Preliminary Permitting
5. Treatment Facility
  - 5.1 Existing Facility Modifications
  - 5.2 Design Flow & Loading
  - 5.3 Design Flows to Secondary Treatment
  - 5.4 Raw Influent Design Flows
  - 5.5 Design Loadings
6. Wastewater Pumping
7. Conceptual Process Flow Diagram
8. Conceptual Hydraulic Profile
9. Conceptual Solids Balance
10. Conceptual Process and Instrumentation Diagrams (P&IDs)
11. Conceptual Process Equipment List
12. Odor Control
13. Site Layout
14. Conceptual Building Layouts
15. Construction Methods
16. Sustainability
17. Recommended Plant Staffing

AECOM is currently completing the Phase 2 design effort which will culminate in the preparation of the Phase 2 Preliminary Design Report at the 30 percent complete stage of the project. The Phase 2 Preliminary Design Report is expected to contain:

1. Project Description
2. WWTF Flows, Loading and Effluent Limits
3. Solids and Flow Balances
4. Basic Design Data
5. Architectural Preliminary Design Summary
6. Structural Preliminary Design Summary
7. Mechanical—Process Design Summary
8. Mechanical—Chemical Feed Process Design Summary
9. Mechanical—HVAC Design Summary
10. Mechanical—Plumbing Design Summary
11. Instrumentation and Control Preliminary Design Summary and Preliminary P&IDs
12. Electrical Preliminary Design Summary and Single Line Diagram
13. Geotechnical Data Report
14. Civil Design Summary

15. Preliminary Civil, Architectural, Mechanical Process Drawings
16. Projected Construction Drawing List
17. Projected Construction Specification List
18. Preliminary Design Opinion of Cost

The intent of this Request for Qualifications is to select up to three qualified firms to submit detailed proposals and interview for selection of a value engineering (VE) review. The VE review will be of the proposed scope, elements, and approach to the WWTF Upgrade as defined in the Preliminary Design Report.

### **REQUIRED CONTENTS OF THE STATEMENT OF QUALIFICATIONS (SOQ)**

A sealed SOQ, plainly marked RFQ #59-14 “Engineering Services, Peirce Island Wastewater Treatment Facility Upgrade – Value Engineering Review” on the outside of the envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, NH 03801 will be accepted until 2:00 pm on June 17, 2014. Six (6) copies of the SOQ shall be submitted and include the following information:

1. Firm Experience (for each firm in the team):

Describe relevant experience in each of the following primary areas of focus:

- a. Wastewater Treatment Facility Upgrade Design and Construction.
- b. WWTF upgrades for low effluent nitrogen concentrations (5 to 8 mg/L) in cold climates
- c. WWTF Upgrades using the Biological Aerated Filter (BAF) technology
- d. Programs with consent decree-driven implementation schedules
- e. Value Engineering/Peer Reviews of major WWTF Upgrade projects
- f. Value Engineering with respect to energy efficiency, carbon footprint and LEED construction.

The firm’s experience shall be summarized in a matrix format. In addition, detailed project descriptions of no more than five reference projects containing the majority of the focus areas listed above shall be included in Appendix 1. The project descriptions shall be current and limited to a maximum of one full page per project, along with client references and up-to-date contact information (name, title, organization, phone, cell and email).

2. Project Team:

List each member of the proposed Project Team along with their:

- a. Firm affiliation
- b. Area of specialty
- c. Office location
- d. Total years of experience
- e. Years with current firm
- f. Specific involvement/role in projects used as references

One member of the Project Team must be assigned as the Project Manager and another as the Value Specialist certified VE Team Leader. All resumes shall be included in Appendix 2 limited to a maximum of two pages per team member.

**RANKING OF QUALIFICATIONS**

Each SOQ will be reviewed and ranked according to the following criteria:

- |                                    |                      |
|------------------------------------|----------------------|
| a. Firm experience                 | Maximum of 30 points |
| b. Overall Project Team experience | Maximum of 30 points |
| c. Project Manager experience      | Maximum of 20 points |
| d. VE Team Leader experience       | Maximum of 20 points |

**PAGE RESTRICTIONS**

1. The Statement of Qualifications, excluding maximum of two-page cover letter and all appendices, shall be limited to 15 letter-sized (8-1/2" by 11") pages: single spaced, size 12-font and double sided. Larger paper (11" by 17") can be used for figures and matrices.
2. Additional appendices can be used to supply other relevant information not specifically called for above including, but not limited to: reprints of professional papers, general company qualification materials, etc.

## SCOPE OF SERVICES

The scope of work will be negotiated with the successful proposer and is anticipated to address the following:

- Identify a Value Engineering Team Leader (VETL) that will be responsible for coordinating all communications and leading the VE effort. The VETL must be a Certified Value Specialist (CVS).
- Conduct a preliminary evaluation to become familiar with the Design Team and the Owner and to review the key objectives of the design. During this process the Value Engineering Team should, with the assistance of the Owner, identify a list of key disciplines required for the VE effort.
- Arrange for collection of project study material including, but not limited to:
  - Plans of existing Peirce Island WWTF
  - Peirce Island WWTF Upgrade Design – Phase 1 Summary Technical Memorandum
  - Peirce Island WWTF Upgrade Design – Phase 2 Preliminary Design Report
  - Project schedules
  - Applicable codes and standards
  - NPDES permit
  - Other relevant documents
- Coordinate the Value Engineering schedule with the Owner and Project Team to best suit the overall project schedule.
- Conduct a review of cost estimates provided by the Project Team.
- Prepare a sample Value Engineering format for review and approval of the Owner.
- Coordinate and conduct a four day VE workshop to include the Owner, and Design Team. The VETL shall provide a VE study Agenda and coordinate presentation and outline with the Design Team.
- The session shall be based upon standard VE Methodology and shall include the following phases:
  - Information Phase: Collection of all facts, background and data that is pertinent to the design, including preparation of a cost model.
  - Speculative/Creative Phase: Evaluation of the feasibility of alternative ways to perform essential functions found during the information gathering phase, concentrating on the areas with the highest potential savings.
  - Evaluation/Analytical Phase: Evaluation of the feasibility of alternatives generated during the creative phase.
  - Investigation Phase: Complete evaluation of the most feasible alternatives.



- Recommendation Phase: Comprehensive description of the VE recommendation complete with rationale and associated capital and O&M cost benefits.
- The session shall include a verbal debriefing and presentation to the City and its Project Team on the last day of the workshop.
- Coordinate all activities of the Value Engineering session including notes, minutes and key decisions for incorporation in a VE study Report.
- Prepare a Preliminary VE Study report for submittal to the Owner within two weeks of the completion of the session. The Study Report shall include the following:
  - Project goals and objectives
  - Program/project description
  - Scope of Analysis
  - VE methodology
  - Summary of VE alternatives and associated cost savings
  - Complete description of the review process based on VE methodology, including results of each phase outlined above.

## **SCHEDULE**

Shall be negotiated with the successful firm. It is anticipated that the value engineering workshop will take place in July of 2014.

## **CITY ROLE**

City staff will be responsible for administering the project and overseeing the Value Engineering effort. City personnel will play a key role in all VE efforts. Representatives of the City's Public Works Department will provide input to VE decisions and review all deliverables from the VE effort. The primary contact at the City will be Terry Desmarais, City Engineer Water and Sewer Divisions.

## **SELECTION AND CONTRACT**

Upon review of all responsive SOQs using the criteria outlined above, the City may select up to three (3) firms to submit proposals and interview. Upon completion of the interviews, the City anticipates negotiating a final Scope of Services and fee with the highest ranking firm.

## **RESERVATION OF RIGHTS**

The City of Portsmouth reserves the right to reject any or all statements of qualifications, to waive technical or legal deficiencies, to proceed or not to proceed with any subsequent

proposal process, or to negotiate without further process any contract as may be in the best interest of the City. The City also reserves the right to negotiate directly with the selected firm for additional project work.

The City reserves the right to make such inquiries regarding the firm's qualifications and reputation as it deems necessary to evaluate the firm. The firm may be requested to execute releases to obtain information from third parties. Failure to execute a release upon request may result in disqualification.

## **CONTRACT DOCUMENTS**

All information, data, documents, photos, computer records and other materials of any kind acquired or developed by the consultant pursuant to this project shall be the property of the City of Portsmouth.

## **ADDITIONAL INFORMATION**

If you have any questions please contact the Finance/Purchasing Department at 603-610-7227 or Terry Desmarais, PE, City Engineer, Water and Sewer Divisions at 603-766-1421. Addenda to this request for proposal, if any, including written answers to questions, will be posted on the City of Portsmouth website at the City's web site at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Firms submitting proposals should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

## **INDEMNIFICATION AND INSURANCE REQUIREMENTS**

The Contract will require the Consultant to agree to pay on behalf of and hold harmless the City of Portsmouth for all claims arising in whole or in part from its work on behalf of the City. Consultant will be required to maintain insurance in such form as will protect the Consultant from claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract. Consultant shall also be required to maintain professional liability insurance. Amounts and coverage shall be subject to contract negotiations.

**APPENDIX A**

**RELEASE OF ALL CLAIMS FOR PURPOSE OF REFERENCE CHECK TO:**

\_\_\_\_\_  
Name of Reference (“Reference”)

\_\_\_\_\_  
Name of Employer/Organization (“Entity”)

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

On behalf of the undersigned Firm I hereby agree to release and hold harmless the above-named Reference and Entity from any and all claims and causes of action including without limitation actions for defamation, slander or interference with contractual relations for any statements made to the City during the course of the City’s investigation of Firm’s qualifications.

Dated: \_\_\_\_\_  
\_\_\_\_\_

Firm:

By:

\_\_\_\_\_  
Print Name:

\_\_\_\_\_  
Title: