

CERTIFICATION OF PUBLICATION

CITY OF BALTIMORE
OFFICE OF BOARDS AND COMMISSIONS
PUBLIC NOTICE

PROJECT NO. 1352 - WET WEATHER FLOW PLANNING AND OPTIMIZATION STUDY

The City of Baltimore Office of Boards and Commissions has been requested by the Department of Public Works, Office of Engineering and Construction (OEC), to advertise for the services of engineering and technology-focused firms to provide data analytics, hydraulic modeling, design, and engineering services in order to design and implement an optimized wet weather control strategy for City of Baltimore's wastewater collection system and treatment facilities. The control strategy is expected to begin with a short term evaluation study followed by, at the sole discretion of the City, an implementation of the control strategy studied.

Baltimore City is planning to identify opportunities for wet weather sanitary sewer overflow (SSO) mitigation measures that would result from the application of a suitable control strategy. The overall goal is to develop control strategies that allow for real time operation and optimization of the existing collection system infrastructure thereby reducing capital expenditures associated with large scale sewer pipe enhancements.

The City plans to implement this project in two phases. Phase 1 consists of a short and limited desktop analysis to characterize the existing system, and identify opportunities for City-wide sewer system control and optimization. Additionally, Phase 1 is anticipated to look at optimization opportunities that minimizes the need for pipe upsizing through a highly congested downtown corridor. The results of the studies in Phase 1 would be owned by the City to be used as needed. The only exceptions would be intellectual property that is subject to non-disclosure agreements. Following evaluation of the control and optimization opportunities derived from Phase I, the City may elect to activate Phase 2. Phase 2 consists of a full implementation of the control and optimization strategy for the sanitary sewer system.

Phase 1 deliverables include a technical memorandum document that clearly depicts:

- Identification of control strategies that allow the real time operation of the system in an integrated, holistic fashion through the use of machine-learning, data analytics, and hydraulic modeling.
- Determination of Return on Investment (ROI) of the control strategies and the automated system,
- Reduction of sanitary sewer overflow (SSO) and basement backup incidences during large wet weather events that would result from the application of control strategies and automated systems,
- Reduction of SSO spills at treatment plants during large wet weather events that would result from the application of control strategies and automated systems,
- Optimization opportunities during dry weather flow based on facilities treatment capabilities, capacity, cost, and other criteria,
- Optimization opportunities of the existing and proposed collection system capacity during periods of large wet-weather events,
- Optimization opportunities of the operations of the existing pumping stations within

- the collection system both during dry and wet weather events,
- Other flow management and simulation scenarios that enhance the hydraulic performance of the City's collection system and treatment facilities.

The City intends to select a qualified firm who would be awarded contract to perform both Phase 1 and 2 services. Based on the results of Phase 1 and only at the discretion of the City, Phase 2 may be activated with the same firm that is selected. That is to say, there would be no further procurement process for Phase 2 services. All responders to this RFP should be prepared to fully implement the Phase 2 work in the event the City decides to proceed. Necessary contractual documents for the Phase 2 work will have to be agreed to by the City and the selected firm.

The firms interested in providing these services must demonstrate and document:

1. Expertise in developing control strategies that allow the real time operation of collection systems in an integrated, holistic fashion through the use of existing and new instrumentation, communication networks, and software.
2. Experience in the implementation of Real Time Decision Support System (RT-DSS) that will operate existing infrastructure with the ability to build out for future planned infrastructure.
3. Experience in the design and utilization of real time data and integrated control strategies that allow the City to optimize the performance of its existing and new facilities.
4. Experience in extracting the maximum value from existing or future storage, conveyance and treatment assets through a globally coordinated RT-DSS.
5. Experience in control strategy that generates actionable insights for a highly informed decision.
6. Experience in recommending physical improvements to existing, or planned, facilities required for the Modified Consent Decree compliance.
7. Experience in developing and recommending hardware/software and control system logic that integrates field I/O from remote sites, existing and planned, and weather forecasting information, to implement a coordinated, integrated system wide operational control strategy.
8. Experience in utilizing machine learning based algorithms to continuously integrate field data from remote instrumentation and generate real time operational recommendations for successful system operation during wet weather events.
9. Experience in recommending necessary instrumentation network, communications backbone, hardware, software, and operational control facilities, to include any hydraulic control points required to implement the operational control strategies in order to accurately characterize current system conditions, characterize system response to weather conditions, and inform system models to reduce uncertainty and conservatism.
10. Experience in providing a system-wide visualization of the collection system that allows City personnel to view system status during wet weather events, provides flow predictions at key locations, and allows staff to operate system in optimal fashion.
11. Experience in providing modeling capabilities that allow the City personnel to run what-if scenarios for operator training and to compare real time results from previous storms to simulation results.

12. Experience in the utilization of instrumentation data, probabilistic weather ensemble data, and real time operations models in modeling and wet weather operational system applications.
13. Experience in the use of advanced data analytics and machine learning to develop highly accurate system response predictions.
14. Experience in deploying an integrated smart sewer application in a web-based cloud platform and within a secure system on premises.
15. Experience in developing knowledge management processes, City staff training and project repositories.

The City reserves the right to have a second interview with eligible consulting firms.

The City intends to select the service of one (1) firm for a period of 3 months to execute Phase 1 at an estimated fee not to exceed \$50,000.00. Contingent on the results of Phase 1 and completely at the discretion of the City, Phase 2 will be activated with the same firm for a period of 2 years with an option to extend for a 2-year additional term. The estimated fee for Phase 2 should not exceed \$5,000,000.00.

DPW encourages consulting firms that have the experience and capacity to work on this scope submit their proposals. All firms must demonstrate and document their capacity and resources to deliver the required services on time.

Should you have any questions regarding the scope of the project, please contact **Jemil Yesuf at 443.400.4451** or by e-mail at Jemil.Yesuf@baltimorecity.gov.

Prequalification Requirement

All firms listed in the specific proposal for the Project **must** be prequalified by the Office of Boards and Commissions for each applicable discipline *at time of submittal* for this Project. *A copy of the prime and sub consultant's current Prequalification Certificate should be included in the bid submittal package.* Information regarding the prequalification process can be obtained by calling the Office of Boards and Commissions on 410-396-6883.

Submittal Process

Firms interested in submitting a proposal for this Project, shall address a "Letter of Interest" to the Office of Boards and Commissions, 4 South Frederick Street, 4th Floor, Baltimore, Maryland, 21202 (EMAIL: OBC.Consultants@baltimorecity.gov). Letters of Interest will be utilized to assist small minority and women business enterprises in identifying potential teaming partners and should be submitted within five (5) days of the date of the project's advertisement. The Letter of Interest must contain the name of number of your contact person. Failure to submit a "Letter of Interest" will not disqualify a firm submitting a proposal for the project.

The prime consultant applying for this Project will be required to complete and submit an original Federal Form 255, along with **five (5)** copies, to the Office of Boards and Commissions (**address above**). The Federal Form 255 and the five copies must be submitted on or before 12:00 P.M. (NOON) on **Friday April 16, 2021**. Submittals may not be accepted after this deadline.

Insurance Requirements

The consultant selected for the award of this project shall provide professional liability, auto liability, and general liability and workers' compensation insurances as required by the City of Baltimore.

MBE/WBE Requirements

It is the policy of the City of Baltimore to promote equal business opportunity in the City's contracting process. Pursuant to Article 5, Subtitle 28 of Baltimore City Code (2000 Edition) – Minority and Women's Business Program, Minority Business Enterprise (MBE) and Women's Business Enterprise (WBE) participation goals apply to this contract.

Phase 1:

The MBE goal is 0%

The WBE goal is 0%

Phase 2:

The MBE goal is 30%

The WBE goal is 15%

Both the proposed Minority and Women's Business Enterprise firms must be named and identified as an MBE or WBE within Item 6 of the Standard Form (SF) 255 in the spaces provided for identifying outside key consultants/associates anticipated for utilization for this project.

Any submittals that do not include the proper MBE/WBE (in some instances DBE) participation will be disapproved for further consideration for this project.

Verifying Certification

Each firm submitting a SF 255 for consideration for a project is responsible for verifying that all MBEs and WBEs to be utilized on the project are certified by the Minority and Women's Business Opportunity Office (MWBOO) prior to submitting the proposal. A directory of certified MBEs and WBEs is available from MWBOO. Since changes to the directory occur daily, firms submitting SF 255s should call MWBOO at (410) 396-4355 to verify certification, expiration dates and services that the MBE or WBE is certified to provide.

Non-Affiliation

A firm submitting a proposal may not use an MBE or WBE to meet a contract goal if:

- The firm has a financial interest in the MBE or WBE
- The firm has an interest in the ownership or control of the MBE or WBE
- The firm is significantly involved in the operation of the MBE or WBE (Article 5, Subtitle 28-41).

Local Hiring Law

Article 5, Subtitle 27 of the Baltimore City Code, as amended (the "Local Hiring Law") and its rules and regulations apply to contracts and agreements executed by the City on or after the Local Hiring Law's effective date of December 23, 2013 which is applicable to all vendors. The Local Hiring Law applies to every contract for more than \$300,000 made by the City, or on its behalf, with any person. It also applies to every agreement authorizing assistance valued at more than \$5,000,000 to a City-subsidized project. Please visit www.oedworks.com for detailed on the requirements of the law.

Additional Information

A firm submitting as a prime consultant that fails to comply with the requirements of Article 5, Subtitle 28 of Baltimore City Code when executing a contract is subject to the following penalties: suspension of a contract; withholding of funds; nullification of contract based on material breach; disqualification as a consultant from eligibility to provide services to the City for a period not to exceed 2 years; and payment for damages incurred by the City.

A resume for each person listed as key personnel and/or specialist, including those from MBE and WBE must be shown on the page provided within the application.

Please be advised that for the purpose of reviewing price proposals and invoices, the City of Baltimore defines a principal of a firm as follows:

A principal is any individual owning 5% or more of the outstanding stock of an entity, a partner of a partnership, a 5% or more shareholder of a sub-chapter 'S' Corporation, or an individual owner.

Out-of-State Corporations must identify their corporate resident agent within the application.

Firms will not be considered for a specific project if they apply as both a sub-consultant and prime consultant.

The applications for this Project (Form 255) cannot be supplemented with any additional information such as graphs, photographs, organization chart, etc. All such information should be incorporated into the appropriate pages. Applications should not be bound. Applications should imply be stapled in the upper left-hand corner. Cover sheets should not be included. Inclusion and/or submittal of additional material may result in the applicant being disqualified from consideration for this project.

PLEASE NOTE: Failure to follow instructions of this advertisement (RFP) or the application may cause disqualification of the submittal.

Deena Joyce, AEAC Executive Secretary
Chief, Office of Boards and Commissions

Issue of: 03/05/2021

The Afro-American
The Baltimore Times
The Daily Record
eMarylandMarketplaceAdvantage (eMMA)