



MASSACHUSETTS PORT AUTHORITY
CAPITAL PROGRAMS AND ENVIRONMENTAL AFFAIRS DEPARTMENT
SUITE 209S – LOGAN OFFICE CENTER SUITE 209S
ONE HARBORSIDE DRIVE
EAST BOSTON MA 02128-2909

REQUEST FOR QUALIFICATIONS

MPA PROJECT NO. M751

**WIND TECHNOLOGY TESTING CENTER
EXPANSION**

CHARLESTOWN, MASSACHUSETTS



SUPPLEMENTAL INFORMATION PACKAGE



LEGAL NOTICE
REQUEST FOR QUALIFICATIONS

The MASSACHUSETTS PORT AUTHORITY (Authority) is soliciting consulting services for **MPA CONTRACT NO. M751 CEC WIND TECHNOLOGY TESTING CENTER EXPANSION, CHARLESTOWN, MASSACHUSETTS**. The Authority is seeking qualified multidiscipline consulting firms or teams, with proven experience to provide architectural and engineering services for the Wind Technology Testing Center Expansion Project. This scope consists of professional design services for the ~40,000 SF expansion to the existing 47,000 SF testing facility, and modifications to the exiting blade test stands. The Consultant must be able to work closely with the Authority and other interested parties to provide such design services in a timely and effective manner.

The consultant shall demonstrate experience in several disciplines including but not limited to Architectural, Civil, Structural, Mechanical, Electrical, IT/Communications/Security, Fire Protection, Plumbing, Geotechnical, Environmental Permitting, Soil Management, Code Compliance, Lean Design, BIM, Cost Estimating, Construction Phasing, Sustainability and Resiliency.

The contract will be work order based, and the Consultant's fee for each work order shall be negotiated. The total project cost of the project is estimated to be **\$80,000,000**.

A Supplemental Information Package will be available, on **Wednesday, January 17, 2024** on the Capital Bid Opportunities webpage of Massport <http://www.massport.com/massport/business/bids-opportunities/capital-bids> as an attachment to the original Legal Notice, and on COMMBUYS (www.commbuys.com) in the listings for this project.

In recognition of the unique nature of the project and the services required to support it, the Authority has scheduled a Consultant Briefing to be held **10:00AM on Tuesday, January 23, 2024 via Zoom Meeting**. **All participants shall use the following Zoom Instructions. Link: <https://massport.zoom.us/j/83835970749> Meeting ID: 838 3597 0749 ; Dial In: 1-646-518-9805 or 1-646-558-8656**. At this session, an overview of the project will be provided, the services requested by the Authority will be described, and questions will be answered.

By responding to this solicitation, consultants agree to accept the terms and conditions of Massport's standard work order agreement. A copy of the Authority's standard agreement can be found on the Authority's web page at <http://www.massport.com/massport/business/capital-improvements/important-documents/>. Consultant shall specify in its cover letter that it has the ability to obtain requisite insurance coverage.

This submission shall be addressed to Luciana Burdi, Intl. Assoc. AIA, CCM, MCPPO, Director of Capital Programs and Environmental Affairs and received no later than **12:00 Noon on February 29th, 2024 Via Bid Express** <https://www.bidexpress.com/businesses/27137/home>. Any submission which is not received by the deadline shall be rejected by the Authority as non-responsive.

MASSACHUSETTS PORT AUTHORITY
EDWARD C. FRENI
INTERIM CEO & DIRECTOR OF AVIATION



INTRODUCTION:

The Authority is seeking a qualified multidiscipline consulting firm or team, with proven experience to provide professional services including planning, design, phase planning, environmental permitting, and construction-related services including resident inspection relative to the programming, design, and expansion for the Wind Technology Testing Center (WTTC) which is located at 80 Terminal Street, Charlestown, MA.

The WTTC is owned and operated by Massachusetts Clean Energy Center (MassCEC). WTTC, which was constructed in 2011, was developed in partnership with Wind Energy Technologies Office, Office of Energy Efficiency and Renewable Energy, US Department of Energy and National Renewable Energy Laboratory (NREL)'s National Wind Technology Center.

The WTTC is ISO/IEC 17025 accredited and Renewable Energy Testing Laboratory (RETL) under IECRE scheme for testing wind turbine blades per the IEC 61400-23 standard. IEC 61400-23 standard is followed throughout the world for structural testing of wind turbine blades. The WTTC can perform all the required static strength testing and accelerated fatigue testing of wind turbine blades. These are required for turbine certification, improve blade reliability, reduce the risk of widespread failures, and reduce Cost of Energy (COE). The WTTC is designed to support additional research testing such as testing to failure and sub-component testing to support the development of new blades. The WTTC has tested more than 40 utility scale wind turbine blades since opening in 2011. The current WTTC has capabilities to support research and development projects for validation of wind turbine blades up to 90 meters in length.

Current offshore wind turbines are in the 10MW-15MW size range and use 90-110-meter-long blades. Several turbine manufacturers are already manufacturing 115-to-140-meter blades and designing larger turbines up to 20MW that require longer blades up to 170 meters. This project will support the expansion of the existing WTTC facility to provide world-class blade testing capabilities of large wind turbine blades up to 170 meters long.

BACKGROUND:

The existing WTTC facility consists of 47,000 GSF laboratory space designed for structural testing of wind turbine blades up to 90m in length. The clear-span high bay is a 108' wide, 238' long and 72' high structure, at the time of construction completion. In 2011, it was the largest facility of its kind in the world and has played an essential role of in the development of American wind energy. Structurally there are three, individual, post-tensioned concrete test stands within the laboratory supported by massive reaction footings on drilled concrete shafts. The blades are then mounted to the concrete test stands by means of faceplates to allow for static and dynamic load testing. There are currently 8 floor mounted winches that are designed to support structural testing of blades. The existing WTTC facility was constructed on a brownfield site over polychlorinated biphenyls (PCBs) contaminated soil. Construction of the existing building required extensive environmental remediation.



SCOPE OF WORK:

The Scope of Work comprises of two general components: (a) Modifications of the test stands to increase moment capacity (see figure 2 below) to accommodate a force of 180-200 MNm (Mega-Newton-Meter) and provide test stand tilt capability and (b) Expanding the existing 47,000 SF testing facility by an additional ~40,000 SF.

More specifically, as part of this projects scope of work the consultant will be expected to:

- Confirm there are no major technical barriers before this potential expansion is finalized (including the impact to the current WTTC operations during construction).
- Design the expansion in a manner that produces the least amount of impact to current operations occurring in the existing facility.
- Provide cost estimates, at 30% design level and subsequent design iterations that can be used to secure funding for the proposed project-
- Provide a detailed design that accommodates the movement and testing of blades up to 170m long.
- Provide design, calculations and specifications for the required test stand modifications.
- The primary function of this building will be industrial use. However, the design for the expanded facility may includes amenities such as, but not limited to, minimal office space, bathroom(s), break room, kitchenette, conference room/training room, stock room, and janitor's closets.

As part of the proposal submission, the consultant shall demonstrate experience in several disciplines including but not limited to Architectural, Environmental Permitting, Civil, Structural, Mechanical, Electrical, Communications/IT/Security, Plumbing, Fire Protection, Geotechnical, Code Compliance, Cost Estimating, Lean practices, BIM, Construction Phasing, Climate Resiliency and Sustainable Design, and Resident Engineering Services.

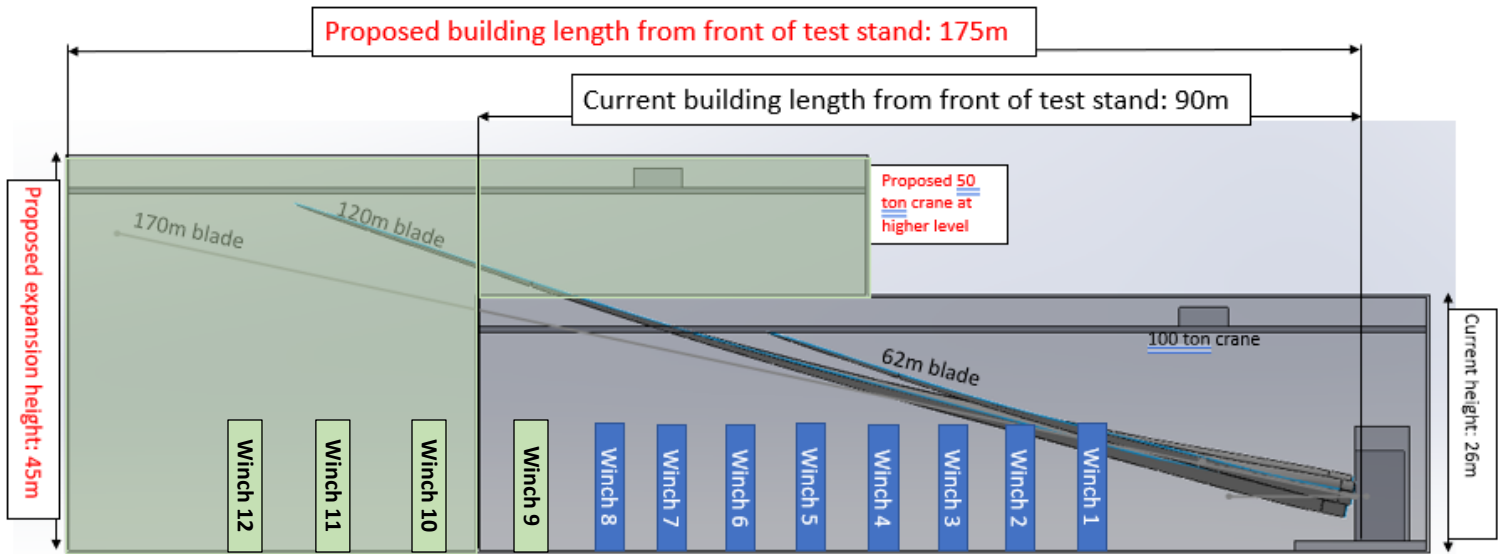


Figure 1: Proposed Expansion (Green) to Existing Structure (Gray)



Figure 2: Existing Facility - Blades Affixed to Test Stands



Figure 3: Existing Facility



Figure 4: Existing Facility - Test Stands with Blades Affixed

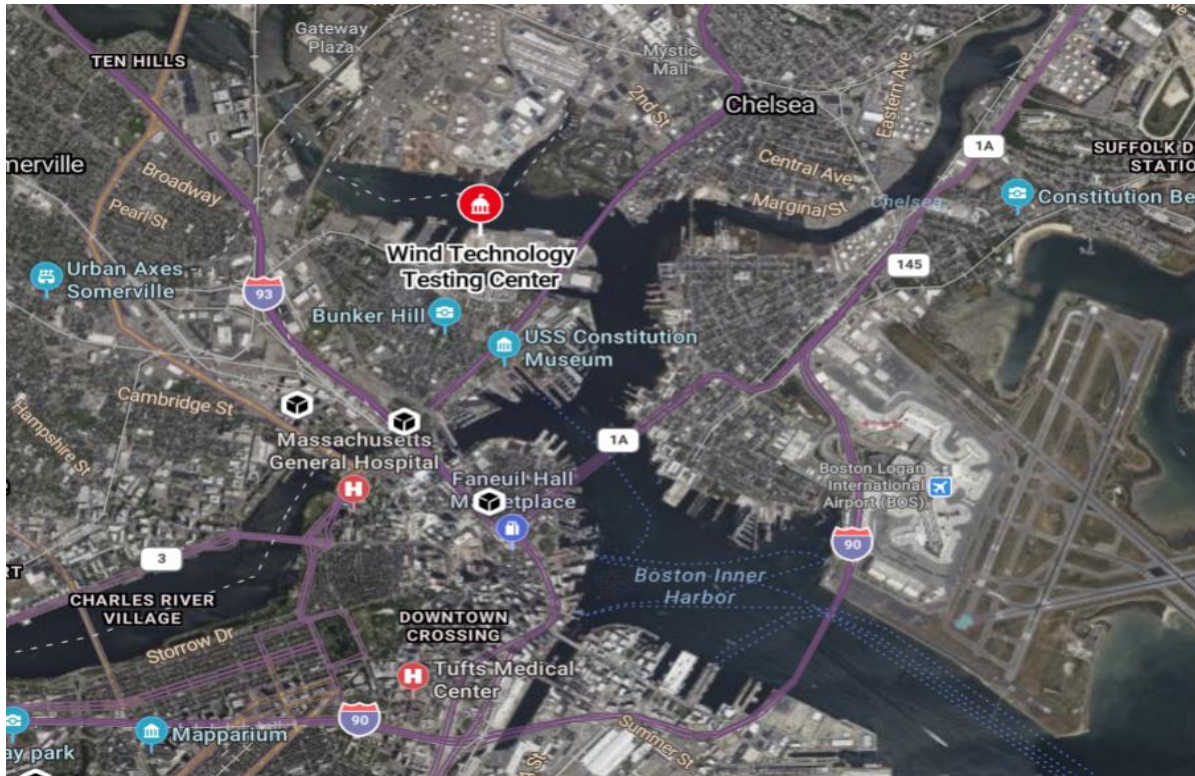


Figure 5: Location of the Existing Wind Technology Testing Center (General Reference

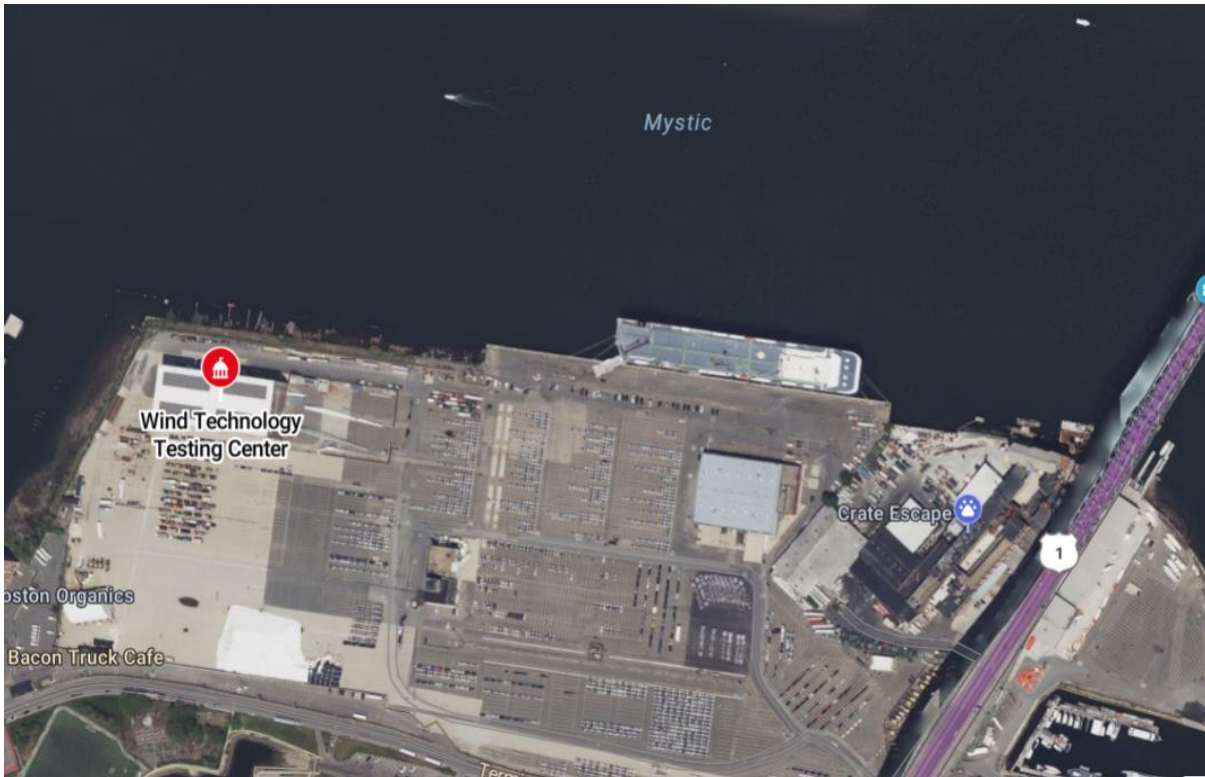


Figure 6: Location of the Existing Wind Technology Testing Center



The scope of work shall include, but not be limited to the following:

- (1) **Programming:** The Authority seeks to design, permit and construct the aforementioned WTTC Expansion and Test Stand Modifications. The ultimate function of the building is to accommodate the testing of wind turbine blades that will be affixed to the tilt stand with static and dynamic forces applied that are required for validating blade design. Besides the building expansion and test stand modifications, other project requirements include; an interior bridge crane and seamless movement of blades in and out of the building.
- (2) **Design and Permitting:** The Consultant shall prepare design submissions showing the progression of the work at stages determined by the Authority. Coordination with ongoing operations within the facility will be required. BIM/VDC models shall be the basis of design for the WTTC Expansion and Test Stand modifications. The design and permitting efforts shall take into consideration the presence of PCB contaminated soil onsite.
- (3) **Sustainable Design, Resiliency, and Net-Zero Emissions:** The existing WTTC building contains roof-top solar panels. This project will modify and expand the existing photovoltaic system. The Authority places high value in sustainable design and resiliency, and actively strives to achieve net-zero emissions. Therefore, the prospective consultant(s) will be expected to consider a creative approach to the development of the design of this project to optimize energy efficiency, innovative elimination of carbon emissions and indoor air quality improvements and management, permitting, building infrastructure resiliency and sustainability.
- (4) **Constructability and Phasing:** The construction phase of the project will be developed to ensure constructability in coordination with ongoing operations. The Consultant will need to incorporate the necessary phasing elements to requirement for maintaining the facility's operations. The Consultant shall have expertise in phasing techniques and in Lean Design & Construction Methodology to provide an overall construction duration and durations for specific construction activities. The Consultant shall be capable of preparing schedules with sufficient detail to advise the Authority and other Stakeholders of durations for activities that may result in impacts to adjacent projects and/or nearby operations. This information will be utilized to identify potential project milestone completion dates and other long-term operational planning.
- (5) **Cost Management & Estimating:** The Consultant will prepare cost estimates for each design submission with appropriate design contingency included for the level of completion. The Consultant shall be prepared to participate in Target Value Design (TVD) exercises to identify causes of potential cost over-runs, and areas to contain costs, and should be capable of working with Target Value Delivery as a cost control measure. The prospective consultant(s) should note that PMWeb is the Authority's Project Management Information System and all parties associated with the Project will be expected to make use of it.



- (6) Procurement: The Consultant shall provide services related to Construction Manager-at-Risk or General Contractor procurement as well as developing trade partner procurement packages. Such procurement will include but is not limited to, response to bidders' inquiries, participation at the Pre-bid Meeting, and analysis of bid results in comparison to the Engineer's Estimate.
- (7) Construction Administration: The Consultant shall support the Authority with performance of construction phase duties to maintain the pace and schedule of the project as well as the highest quality. The Consultant shall pay special attention to long lead items and partner with the Authority and Contractor to seek ways to streamline the acquisition of materials or structures.
- (8) Resident Engineering: The Resident Engineering Team will be on-site Full Time and will need to work closely with the Authority, Design Consultant(s), and Contractor(s) on impacts, stakeholder management, utility cut-overs/tie-ins, construction QA/QC, and Contractor adherence to the Contract Documents.
- (9) Code Compliance: As an industrial use building, the detailed review of all building elements from a code perspective and the development of a detailed plan for code compliance will be fundamental to the successful completion of this project.
- (10) Project Closeout: The Consultant shall perform a thorough reconciliation of all required closeout documents and financial obligations in order to avoid a protracted closeout phase. A final BIM model will be required for this project. In addition, the prospective consultant(s) will be required to collect, package, and submit the conformed record documents upon the final close out of the project.

In recognition of the unique nature of the project and the services required to support it, the Authority has scheduled a Consultant Briefing to be held at **10:00AM on Tuesday, January, 23, 2024 via Zoom Meeting. All participants shall use the following Zoom Instructions. Link <https://massport.zoom.us/j/83835970749> Meeting ID: 838 3597 0749 ; Dial In: 1-646-518-9805 or 1-646-558-8656.** At this session, an overview of the project will be provided, the services requested by the Authority will be described, and questions will be answered.

EVALUATION CRITERIA:

The submission shall be evaluated on the basis of the following equally weighted criteria:

- (1) Demonstrated experience and knowledge of the team for similar projects of similar size and complexity particularly important to demonstrate for the proposed Project Manager. Highlight the experience and expertise for major sub-consultants and their assigned staff. Familiarity with MGL, including filed sub-bid experience, and
- (2) Project understanding and proposed technical approach including QA/QC process during document preparation, cost management and scheduling capabilities, construction oversight, ability to plan and perform work with minimal disruption to operations, and



- (3) Demonstrated experience in integrating and managing BIM/VDC in the planning, design and construction. Experience of utilizing Lean Design & Construction (Last Planner System®, Scrum or other tools) to increase the reliability and significantly improve projects and teams' performance, and
- (4) Demonstrated project experience in sustainable and resilient high-performance building and infrastructure design and construction, including experience with low, net zero ready or net zero emissions, water, and waste, lifecycle analysis including embodied carbon, innovative renewable energy strategies, and building and infrastructure sustainability certification schemes relevant to this proposal. Firms are encouraged to demonstrate “outside of the box” thinking for examples of inclusion of sustainable practices into its projects and specify how those practices may be applied to this project proposal. Firms must demonstrate the capability to incorporate design features into any project type that reflect best practices in environmental stewardship, and
- (5) Proposed approach to enhance diversity and inclusion of the proposed team to increase the pool of consultants working on the Authority's projects. For those DBE firms proposed, please describe type and/or category of work (i.e. architecture, structural, Lean, etc.); include the specific roles to be played DBE, and the extent to which such DBE involvement is anticipated as of date of the proposal submission.

The Authority recommend that each evaluation criteria is addressed in the response as a separate section. The selection shall involve a two-step process including the shortlisting of a minimum of three firms based on an evaluation of the Statements of Qualifications received in response to this solicitation, followed immediately by a final selection of the consultant by the Authority. The Authority reserves the right to interview the firms prior to final selection, if deemed appropriate.

SUBMISSION REQUIREMENTS:

Each submission shall include a Statement of Qualifications that provides detailed information in response to the evaluation criteria set forth below and include Architect/Engineer & Related Services questionnaires SF 330 (www.gsa.gov/portal/forms/download/116486) with the appropriate number of Part IIs. DBE certification of the prime and subconsultants shall be current at the time of submittal and the Consultant shall provide a copy of the DBE certification letter from MassUCP, within its submittal.

In order to be eligible for selection, all aspects of Chapter 7C, Section 44 of the General Laws of the Commonwealth of Massachusetts shall be satisfied including the CEO/President and majority of the firm's Board of Directors or ownership shall be registered in the Commonwealth of Massachusetts in accordance with the applicable provisions of the statute. Consultants shall furnish professional registration status of the firm's board of directors or ownership. All individuals responsible for technical disciplines shall, upon commencement of the project, be registered Architects or Engineers, in that discipline, in the Commonwealth of Massachusetts.

The Authority may reject any application if any of the required information is not provided: Cover Letter, Insurance Requirements, Registration of the Prime “Designer” as defined in MGL Chapter 7C Section 44, and SF330 Part IIs for the Prime and every sub-consultant.

Make sure that the Cover Letter is signed “Under the pains and penalties of perjury”, and that you mention the Insurance Requirements and Registration of the Prime “Designer” as defined in MGL Chapter 7C Section 44 in the Cover Letter itself.



RFQ Instructions for Electronic Submission:

Electronic submissions will be via <https://www.bidexpress.com/businesses/27137/home>. Please refer to <https://www.massport.com/massport/business/bids-opportunities/capital-bids/> website for instructions on how to submit an electronic RFQ submittal.

1. Download RFQ documents in Bid Express and fully review them before submitting your electronic Statement of Qualifications.
2. Upload ALL required documents listed below in accordance with the instructions on Bid Express and those in the RFQ. Failure to include all required materials or to provide materials in a format different than that specified may have a negative effect on the evaluation or result in disqualification.
3. Click the “Submit” button in Bid Express to review your response for completeness and to encrypt/submit your response electronically.

File Naming Convention:

MPA project #_Company Name-YY-MM-DD.pdf
Example: L2302_Massport-23-04-24.pdf

Files submitted via Bid Express must follow the above filing naming convention specific in the “Description” field for each document in the “Required Document Upload” table in Bid Express. The file name and description entered during the file upload process ensures each file can be readily identified by Massport.

All submissions must be in .pdf format and must be in such a way that they can be read on a computer and printed on 8 ½” x 11” paper, unless otherwise specified.

Please consider the number of pages being submitted, including the following:

- Resumes of the top 10 key individuals, each limited to one (1) page under SF 330, Section E,
- No more than ten (10) projects each limited to one (1) page under SF 330, Section F,
- No more than ten pages (5 sheets) between SF 330 Section H and “other relevant materials” section of the submission

By responding to this solicitation, consultants agree to accept the terms and conditions of Massport’s standard work order agreement, a copy of the Authority’s standard agreement can be found on the Authority’s web page at <http://www.massport.com/massport/business/capital-improvements/important-documents/>. The Consultant shall specify in its cover letter that it has the ability to obtain requisite insurance coverage.

This submission, shall be addressed to Luciana Burdi, Intl. Assoc. AIA, CCM, MCPPO, Director of Capital Programs and Environmental Affairs and received no later than **12:00 Noon on Thursday, February 29, 2023** via **Bid Express** <https://www.bidexpress.com/businesses/27137/home>. Any submission which is not received by the deadline shall be rejected by the Authority as non-responsive. Any information provided to the Authority in any Proposal or other written or oral communication between the Proposer and the Authority will not be, or deemed to have been, proprietary or confidential, although the Authority will use reasonable efforts not to disclose such information to persons who are not employees or consultants retained by the Authority except as may be required by M.G.L. c.66.



The procurement process for these services will proceed according to the following anticipated schedule:

EVENT	DATE/TIME
Solicitation: Release Date and Supplemental Package Available	Wednesday, January 17, 2024
Consultant Briefing ZOOM	Tuesday, January 23, 2024 at 10:00 AM
Deadline for submission of written questions	Thursday, February 1, 2024 at 12:00 PM
Official answers published (Estimated)	Thursday, February 8, 2024
Solicitation: Close Date / Submission Deadline	Thursday, February 29th, 2024 at 12:00 PM (noon)

Times are Eastern Standard Time (US).

Questions may be sent via email to CPBidQuestions@massport.com subject to the deadline for receipt stated in the timetable above. *In the subject lines of your email, please reference the MPA Project Name and Number.* Questions and their responses will be posted on Capital Bid Opportunities webpage of Massport <http://www.massport.com/massport/business/bids-opportunities/capital-bids> as an attachment to the original Legal Notice and on COMMBUYS (www.commbuys.com) in the listings for this project.

PROJECT REQUIREMENTS:

Project requirements include, but are not limited to:

Massport, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, all bidders/proposers will be afforded full and fair opportunity to submit bids in response to this invitation and no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

Terms & Conditions:

By responding to this solicitation, consultants agree to accept the terms and conditions of Massport’s standard agreement, a copy of the Authority’s standard agreement can be found on the Authority’s web page at <http://www.massport.com/massport/business/capital-improvements/important-documents/>.

Additional Requirements and Guidelines:

As deemed appropriate and required by the Authority or the project’s needs, the consultant agrees to follow the requirements as set forth in the Guidelines and Standards that can be found on the Authority’s web page at <http://www.massport.com/massport/business/capital-improvements/important-documents/>.



DBE Participation:

The Authority is committed to helping address the disparity in the participation of minorities and women in design. Along with the DBE commitments which reflect ownership status set forth below, the Authority's Designer Selection Panel are interested in learning about the applicant firm's approach and commitment to diversity in its HR policy, its overall business practices and in assembling this Project team. Firms are encouraged to be creative in assembling their teams by considering dividing the work of a particular discipline, when appropriate, including work it would typically provide in house, partnering, offering opportunities to qualified firms with which it or its consultants have not previously worked or firms that may have less experience working on public projects, and other means that provide additional opportunities for DBE firms in new ways.

Applicants, as prime firm, and team lead, in their application, should directly address their approach to enhancing diversity in assembling the team for this Project, including a clear description of each working relationship, and in their overall HR and business practices. The Authority strongly encourages teams composed of firms that expand the overall breadth of different firms working on Authority Projects.

Applications from DBE firms as prime consultant are encouraged. Applicants that are themselves DBE certified may use their participation toward meeting the determined work order goal for the certification they hold and will be required to bring participation by additional firm(s) that holds the necessary certifications to meet or exceed the goals assigned. Applicants are strongly encouraged to utilize multiple disciplines and firms to meet the DBE goals. Consultants to the prime can team within their disciplines in order to meet the DBE goals, but must state this relationship.

Please note that only firms that are currently certified as DBE in the Commonwealth of Massachusetts be credited toward meeting Project DBE goals.

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