PUBLIC NOTICE OF DESIGNER SELECTION

Designer Selection Board
One Ashburton Place | Boston, MA | 02108
Telephone: 617-727-4046 | www.mass.gov/dsb

	DSB List#:	21-27
	Notice Date:	October 13, 2021
	Submission Deadline:	November 3, 2021 At 2:00 PM
	Project Number:	MMA2201
	Project Title:	Science, Technology & Engineering New/Renovated Laboratories
	Project Location:	101 Academy Drive, Buzzards Bay, MA 02532
	Awarding Agency:	Division of Capital Asset Management and Maintenance (DCAMM)
	Estimated Construction Cost:	$26.8-30.6 million
Fee for:	**Draft Study**	$650,000
	Schematic Design/Certifiable Study	To be Negotiated
	Final Design	To be Negotiated

Contract Type:

X Study & Design Services

Prime Firm Requested:

X Architect
Landscape Architect
Engineer
Interior Designer
Programmer
Construction Manager
Other:

Immediate Services Authorized:

X Draft Study
Other:

It is intended that the following continued services will be required of the selected Designer's team following completion of the draft study and notification of the Board in accordance with M.G.L. c. 7C.

X Certifiable Building Study incl. Schematic Design
X Design Development Plans and Specifications
X Construction Plans and Specifications
X Administration of Construction Contract:

AGENCY INFORMATION

DCAMM is an agency within the Executive Office for Administration and Finance (ANF) responsible for capital planning, major public building construction, facilities management, and real estate services for the Commonwealth of Massachusetts. The agency was created by the legislature in 1980 to promote quality and integrity in the management and construction of the Commonwealth's capital facilities and real estate assets.

Established in 1891, the Massachusetts Maritime Academy (MMA) is the second oldest state maritime academy in the United States. Accredited by the New England Association of Schools and Colleges (NEASC), Mass Maritime is a co-educational state college that offers undergraduate, graduate, and non-credit programs in the maritime, engineering, emergency management & environmental fields.

MMA offers Bachelor of Science degree programs in Marine Transportation, Marine Engineering, Marine Science, Safety and Environmental Protection, Facilities Engineering, International Maritime Business, Emergency Management, and Energy Systems Engineering. They also offer a Master of Science in Emergency Management and Facilities Management as well as a wide array of professional/continuing education programs.

PROJECT OVERVIEW

General Scope of Work:

The Division of Capital Asset Management, working with the Massachusetts Maritime Academy seeks expert professional services for the study and final design for the Science, Technology and Engineering New/Renovated Laboratories Project (the "Project") at Buzzards Bay. The Project includes a new building with updated labs, support spaces and offices that will be relocated from other campus buildings, demolition of the existing sheds where the new building is proposed to be built, renovation and repurposing of existing labs, and relocation of the existing Aquaculture lab, possibly into the new building or the former Power Plant building.

The immediate scope of work will include, but is not limited to, the following:

- Review existing documentation, including previous studies (see **Supporting Documentation** section of this ad)
- Identify any gaps in the existing information that need to be investigated or revisited to update existing conditions assessments and complete the project scope
- Analyze instructional and support spaces
- Evaluate current and future programmatic needs
- Review best practices in the design of specialty lab buildings for the maritime disciplines (such as aquaculture), including current trends and use of technology
- Review latest, relevant sustainable design practices and measures to improve building resiliency, energy performance, and environmental comfort
- Finalize program and project scope
- Develop conceptual design alternatives and select a preferred alternative
- Develop a preferred alternative and finalize design, program, budget, and schedule

The Project will include study services initially, with the intent to continue into schematic design & a certifiable building study, design development, construction documentation and construction administration services for the recommended option identified by this Study, using a Construction Manager at Risk (CMAR) process.

Project Mission & Goals

The mission of Massachusetts Maritime Academy is to provide a quality education and produce graduates who serve in the merchant marines, the military services, the interests of the Commonwealth, the Nation, and the global marketplace. The Academy does so by combining a rigorous academic program with a regimented lifestyle that instills honor, responsibility, discipline, and leadership.

MMA has experienced 40% student enrollment growth over the last ten years. This growth can be attributed to expanding programs, increasing student access and an increased demand. To support this growth, significant campus infrastructure expansion has occurred, including the dormitory and dining hall expansion, new library/student union and the repurposing of older buildings. However, the expansion of academic space has not kept up with this growth, and many of the labs and classrooms have become substandard and outdated. The existing academic facilities do not adequately support the current enrollment needs, as confirmed by the 2021 Campus Master Plan Update by Sasaki Associates, nor modern approaches for STEM laboratory course instruction. Their study has found that to support the current enrollment, an additional 30,000 assignable square feet (ASF) of academic space is needed. The Project will help alleviate some of this need.

The goal of the Project is to build new state-of-the-art teaching labs consistent with best practices and renovate existing substandard labs. The expanded and renovated academic spaces will enable MMA to advance its mission to support high social mobility and workforce development, increase programs supporting women and under-served students of color, as well as expand outreach to the Massachusetts Gateway cities.

Key Design Objectives

Create Flexible Environments for Active Learning and Collaboration
Recognizing that space is at a premium on the MMA campus, state-of the-art multi-functional labs should be designed for maximum flexibility to adapt to a variety of uses and evolving needs, while addressing the specific requirements of the maritime disciplines. The Designer must be aware of current and emerging trends in designing for rapidly evolving instructional programs and technology-enabled environments.

Envision a Landmark Building
Prominently located along the pedestrian "Main Street" in the heart of campus, the new building will become a landmark for the Academy. Its design should celebrate the unique maritime campus culture, while speaking to the future and incorporating the latest technologies.

Integrate Resilient Design
Due to MMA's extremely vulnerable coastal location, climate resiliency will be critical to the design of the Project. The design team is expected to incorporate resiliency strategies and adhere to agency climate change vulnerability assessments and resiliency recommendations. The latest technologies for flood proofing are to be seamlessly integrated into the design.

Realize a Sustainable, High-performance Building
In support of MMA and DCAMM's commitment to sustainable design, the Project should strive to be net zero energy ready and achieve the highest USGBC LEED certification feasible. The design team is expected to identify and integrate carbon reduction strategies including, but not limited to low/no carbon fuel sources, high efficiency measures, and renewable energy sources such as geothermal and solar. Civil and landscape design should emphasize water conservation, integrated storm water management, and low-maintenance and ecologically appropriate planting design. Sustainable design goals, detailed in the Campus Master Plan and De-Carbonization Study, should be met or exceeded in the final design.

Foster a Welcoming and Inclusive Campus Experience
Students with disabilities who want to pursue STEM careers often face increased structural, operational, and attitudinal challenges because of the highly specialized nature of laboratory environments. The design must

anticipate how students and faculty with disabilities will receive equal opportunity to fully benefit from laboratories, prep areas and other specialized instructional spaces.

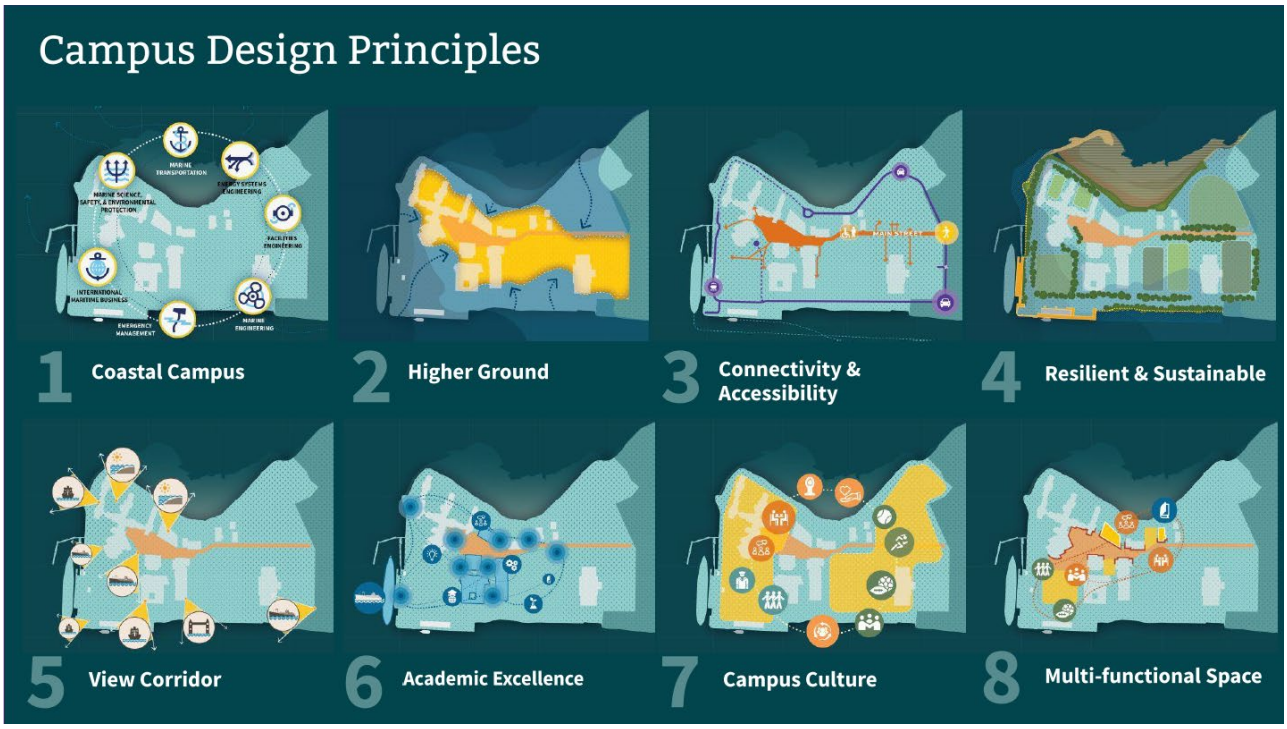
The new building presents an opportunity to integrate architecture, site, and landscape into a single, universally accessible design. Designers are expected to go beyond minimum federal and state accessibility compliance to create an inclusive design that promotes opportunities for all students and faculty, regardless of age, ability, gender, or background.

Project Location & Background

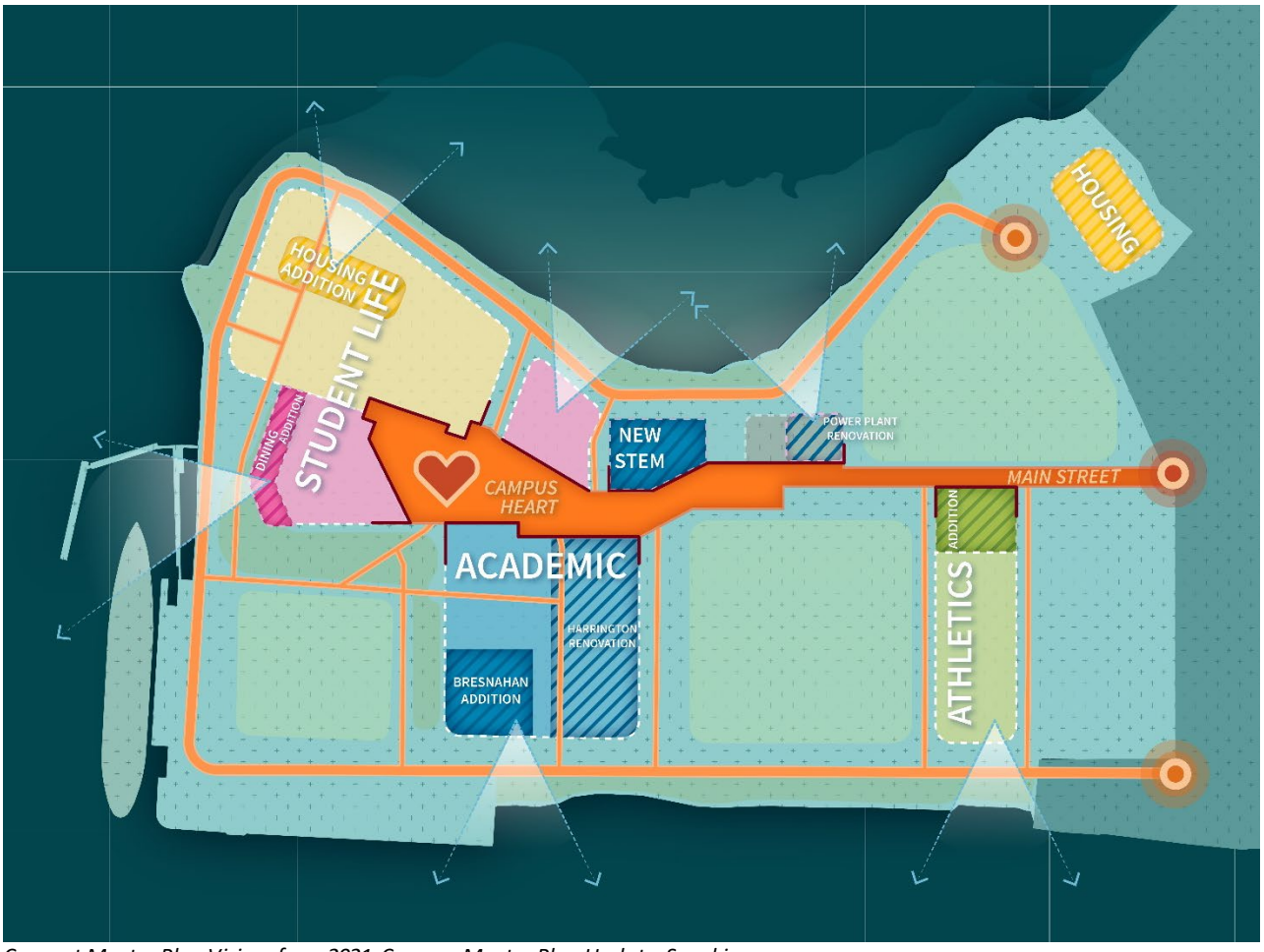
The Mass Maritime Academy campus is located on approximately 55 acres in an environmentally sensitive coastal area. Bordered on three sides by water and one edge abutting a residential community on the east side, the campus has an intimate relationship with the surrounding bay and canal. Located within flood zones, the campus has vulnerabilities based on its topography, which are extremely important to consider when designing or upgrading a facility.

Because MMA has very limited buildable space on campus, a strategic approach to land use that prioritizes efficiency and resiliency is imperative to the design process and campus planning. The Campus Master Plan Update by Sasaki Associates and Decarbonization Study by Van Zelm Engineers are scheduled to be completed by Fall 2021. These studies should be reviewed, and their findings and recommendations incorporated into the design and site development of the Project.

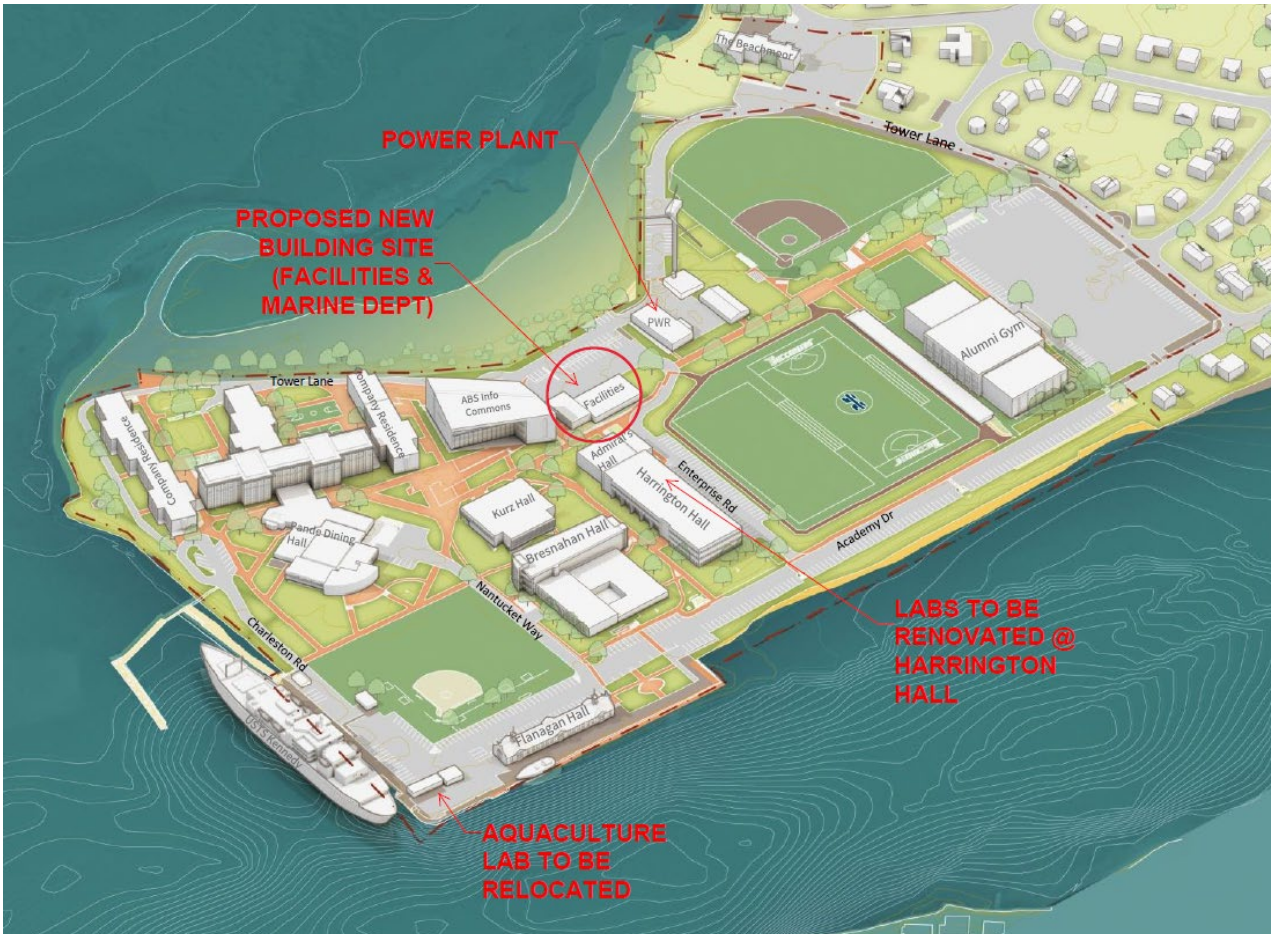
Aerial View of Campus Context



Campus Design Principles, from 2021 Campus Master Plan Update, Sasaki



Concept Master Plan Vision, from 2021 Campus Master Plan Update, Sasaki



Existing Campus Plan, adapted from 2021 Campus Master Plan Update, Sasaki Associates

The proposed site for the new STEM building is currently occupied by two metal sheds (9,030 SF) used by campus facilities and the marine department, which will both be demolished as part of the scope of the Project. These functions will be moved to an off-campus location by MMA outside of this project. As one of the few buildable sites remaining on campus, the proposed site was identified as the most suitable location for a new academic building in the master plan study. Ideally situated on the main campus pedestrian spline, the new building would help to reinforce the academic "heart" of campus due to its proximity to the ABS Information Commons and Harrington Hall which students and faculty use extensively.

Built in 1981, the nearby three-story Harrington Hall (74,500 GSF) contains classrooms, labs, and offices. The brick masonry building contains outdated physics and chemistry labs and support spaces which will be relocated to the new building. The 6,540 GSF third floor space vacated by the labs will be renovated and repurposed to new programs as part of the scope of the Project.

Adjacent to the proposed new building site is the Kelley Power Plant. Built in 1971, the single-story, brick masonry Power Plant was decommissioned in 2014 when the campus hot water system was decentralized. In 2020, the campus electrical switchgear was relocated from the Power Plant to a new elevated building. The Power Plant currently contains the makeshift Energy Systems Design lab, offices, and the wastewater treatment lab. Although it was originally intended to be demolished, MMA is interested in exploring an alternative use for the Power Plant building, such as a potential new location for the Aquaculture Lab.

The Aquaculture Lab is currently located at the southwest end of campus, close to the pier in a modular one-story building. As it is currently in a very vulnerable location, as part of the scope of the Project, MMA would like to study relocation of the Aquaculture program, including all support functions, to a more resilient site, possibly

inside the new STEM building or the Power Plant as a separate future project. The one-story 700 GSF modular building would be demolished once the program is relocated.

Facilities & Marine Department Sheds to be demolished

Harrington Hall, Chemistry Lab

Power Plant

Power Plant, Energy Systems Design Lab

Aquaculture lab

Aquaculture lab, interior

Program Components

The Project will accommodate MMA's growing need for general science, engineering, marine transportation, and specialty labs, as well as offices. In addition to the general science curriculum, MMA's curriculum has a strong focus on specialized, instructional spaces, known as 'Labs' (this term should not be confused with traditional

wet/dry science labs). These Lab courses differ from traditional classroom spaces in that they offer active, hands-on learning in specialized engineering subjects.

The final program and size of the Project is to be developed and confirmed during the Draft Study. This is the current understanding of MMA's needs for the Project:

New STEM Building
Approximately 30,000 GSF (to be confirmed by the study) of new construction will include:

- Labs
  - Chemistry & physics undergraduate teaching labs – the existing general science labs will be relocated from Harrington Hall
  - General biology labs – the existing labs will be relocated from Flanagan Hall
  - Energy Systems Lab - the existing makeshift lab will be relocated from the Power Plant
  - GIS CAD (Computer Aided Drafting) lab – the existing lab will be relocated from Harrington Hall
  - New lab spaces to support workforce development partnerships in the STEM, energy (including offshore wind and hydrokinetics) and biotechnology fields
  - Aquaculture lab, to be considered for relocation from its existing modular building
- Lab prep
- Offices
- Seminar rooms
- Storage

Renovation of Harrington Hall
After the chemistry and physics labs are relocated to the new STEM building, the 6,540 GSF of vacated space will be renovated and repurposed for:

- New 36-seat Dynamic Positioning/Workforce Development Lab to support the offshore wind industry
- Marine Transportation Capstone Seminar space, relocated from the Beachmoor (an off-campus residential facility currently being demolished and rebuilt), to support the existing Marine Transportation major as well as workforce development
- Additional seminar classrooms and larger computer labs

Although the scope of the renovations will be focused on the vacated lab space, any code required building upgrades triggered by the renovation work or possible opportunities to support the future campus De-Carbonization Plan should also be evaluated.

Power Plant
The 4,900 GSF Power Plant will be considered for renovation to house the Aquaculture lab. The Designer should assess the existing conditions and evaluate the benefits and drawbacks of locating the Aquaculture Lab to the Power Plant or new STEM building. If relocation of the Aquaculture to the Power Plant is found to be a feasible solution, it would become a separate project.

SCOPE OF WORK

The tasks identified below are representative for the purposes of this advertisement and are by no means fully inclusive.

Task 1 - Project Start Up & Work Plan

Task 2 - Program Development & Existing Conditions Documentation and Analysis

Task 3 - Development & Evaluation of Alternatives

Task 4 - Preferred Alternative

Task 5 – Draft Study Report

Task 6 - Schematic Design

Task 7 - Certifiable Building Study Report

Task 1 – Project Start Up & Work Plan

Project Start Up:

- Attend a DCAMM administrative conference to review all project requirements and DCAMM administrative and project management policies, procedures, and protocols.
- Conduct a kick off with DCAMM and user agency to review project goals and objectives, planning process, schedule of milestones, information and data requirements, etc.
    - Introduce all Designer team members (including subconsultants) to the user group
    - Clarify individual roles and responsibilities.
    - Participate in a site visit to project site
- Compile a Data Request, identifying any additional information needed

Work Plan:

Upon contract signing, DCAMM will generate a draft Project Work Plan that will provide a detailed scope of work (SOW) including all required tasks, deliverables, schedule, and fee breakdown for this Study. Both DCAMM and the Designer will review and approve this Work Plan. All study services authorized by any notice-to-proceed must comply with the Work Plan approved by the DCAMM Director of Planning, which will be incorporated into the Designer's contract. During the Study, new opportunities or constraints may be uncovered and require a re-thinking of original intentions. If necessary, a memo will be issued outlining any revisions to the Work Plan that might be required. The Work Plan at a minimum will include:

- A statement of understanding of the vision, goals, scope, budget, and schedule for the Project
- A statement of climate and energy, "best in class" energy (site) use intensity, zero-net energy, and/or climate resilience goals
- Confirmation of team members' roles and their expected participation including MBE/WBE participation
- Evaluation of the preliminary total project cost (TPC)
- Bi-weekly, online working sessions throughout the duration of the study phase unless otherwise notified. In-person meetings to be scheduled as needed.
- A detailed schedule of meetings and workshops through the study phase including key attendees, draft topics agendas, projected time frames for design and construction, and permitting timeline

Task 1 Deliverables:

- Presentation materials and meeting minutes from the administrative and study meetings
- Project Directory including stakeholder list
- Data Request
- Work Plan identifying project goals, key dates, deliverables, and project schedule

Task 2 – Program Development & Existing Conditions Documentation and Analysis

During this phase of the study, the emphasis will be on collecting and analyzing data and documentation which will inform the alternatives developed in Task 3. Review documentation provided by DCAMM and MMA and identify any additional material or information needed to complete this Study

Program

The Designer will confirm all program requirements for MMA. The program will be reviewed and endorsed by MMA and DCAMM before proceeding to the development of alternatives. The Designer will:

- Schedule and facilitate tours of comparable facilities to assist MMA and DCAMM in the planning process
- Review previous studies by Perry Dean Rogers and Sasaki and verify MMA's current and future program needs

- Review best practices for modern planning for buildings of this type, applicable regulations, future trends, and opportunities for space sharing
- Interview MMA representatives to gain a thorough understanding of their mission, programs, staffing, functional and technical requirements, and any other relevant planning-design considerations
- Provide a narrative which documents and presents a justification for all programmatic needs and requirements
- Develop detailed tabular space program broken down by individual functional area and sub-area and identifying all net useable square footage, and all gross space requirements, including existing, right-sized, and proposed program. Confirm program is detailed enough to ensure its accommodation in the new and existing building(s). Evaluate the program with respect to industry standards and norms as well as the established budget
- Review and confirm utilization data from the 2021 Master Plan Update
- Provide preliminary room data sheets, typical room layouts and spatial adjacency diagrams indicating key relationships, and technical requirements
- Compile equipment list identifying existing equipment and new equipment, including space and power requirements to inform the space program

Site

- Review and confirm the site location for the new building proposed in the master plan and de-carbonization plan studies. Consider pedestrian circulation, accessibility, vehicular circulation and parking, topography, infrastructure, open space, possible regulatory requirements, and potential build-out capacity
- Update survey information as needed
- Review previous resiliency investigations from the 2021 Master Plan Update and De-Carbonization Study and 2015 Resiliency Study and evaluate site vulnerability to flood, storm surge, rising sea level, increased precipitation & temperature fluctuations. Identify strategies to fix known problems and minimize risk (use Resilience Checklist & Resilient MA Action Team RMAT tool)

Building

- Perform a visual survey of Harrington Hall and the Power Plant, supplemented by destructive testing if needed to confirm existing building conditions and to support accurate conceptual pricing
- Evaluate the Power Plant for scope required upgrades including energy considerations, building envelope deficiencies, structural system, accessibility, code analysis and existing building systems
- Determine the scope of demolishing the Facility and Marine Department sheds and Aquaculture Lab. Assess potential Hazmat issues associated with the demo.
- Review existing deferred maintenance data of Harrington Hall and the Power Plant
- Review Executive Order 594 or the current Massachusetts Leading by Example Executive Order, LEED criteria, and sustainable design guidelines from the Master Plan and De-Carbonization Studies. Outline a basis of design consistent with MA climate goals and provide options for building systems requirements, including high performance envelope and right-sized systems
- Interview MMA team for input on condition, use and operation of existing and future buildings. Review operations and maintenance procedures with MMA facilities staff and identify areas of potential improvement and alignment with current best practices and MA climate goals
- Provide a preliminary code analysis of Harrington Hall & Power Plant as needed to identify all relevant deficiencies or concerns and propose approaches for resolution to be incorporated in the alternatives developed in Task 3
- Review and respond to any existing conditions accessibility audit findings from DCAMM or their accessibility consultant.

Cost

- Develop order of magnitude cost estimate for space program and building renovations to assist in prioritization

Schedule

Prepare preliminary design and construction schedule and phasing plan.

Task 2 Deliverables

- Existing Condition Report (for all tasks above) combining the analysis of site, building program, case studies, code analysis, budget, and schedule, with completed workshop material and meeting minutes collated in an appendix. The report should include a summary of findings, issues and factors expected to have an impact on design alternatives and costs
- Complete annotated list of all documentation provided to the Designer by DCAMM and MMA, as well as a list of additional documentation or information required to complete this Study
- Base document set including:
    - Site Plan
    - Dimensioned floor plans, elevations, and sections of areas of Harrington Hall being renovated and the Power Plant
    - Photographs documenting conditions of the site and existing buildings

Task 3 – Development & Evaluation of Alternatives

This phase of the study will focus on developing and analyzing a minimum of three conceptual building and site design alternatives that meet all programmatic needs and project goals. Each alternative will also include a preliminary approach to locating building systems and accommodating required space needs for each system.

- Include in each alternative:
    - Site plan, site planning diagrams, illustrative floor plans, building sections, elevations, digital three-dimensional views
    - Test fit of aquaculture program in the new building or Power Plant
    - Pros and cons analysis of alternatives based on criteria established by the Designer, MMA, & DCAMM
    - Project schedule for design through construction including review of swing space needs, phasing, and required permits and associated required regulatory review which can impact the schedule
    - Order of magnitude costs
- Develop a matrix to evaluate each option
- Conduct a Global Workshop to provide all project participants and stakeholders an opportunity to comment on the key issues identified by the Study, review the alternative concepts, and contribute to site planning and building design recommendations. An appropriate presentation should be prepared for the Workshop and the selected alternative refined and documented per the outcome.

Task 3 Deliverables

- Global workshop presentation
- Design Quality Memo summarizing pros and cons analysis for each alternative & the preferred alternative in regard to MMA & DCAMM goals for the project, costs, construction schedule, and potential implementation impact
- Meeting minutes

Task 4 – Preferred Alternative

During this phase of the project, the Designer will incorporate comments from the workshops and develop the preferred alternative.

Program

- Finalize detailed tabular program listing all programmed and support spaces
- Revise relationship diagram depicting important adjacencies
- Revise room data sheets for each space with room layout diagrams including furniture, equipment, and accessibility clearances
- Finalize equipment list and performance requirements

Site & Building

- Produce a site plan to scale showing building footprint(s) and all proposed site, civil, and landscape work included in the estimate
- Develop pre-schematic floor plans, exterior elevations, blocking and stacking diagrams, 3D views of key interior spaces and exterior perspectives
- Provide architectural, MEP systems, and site narratives
- Provide building code analysis, review of permits and compliance requirements
- Provide outline specification for preferred alternative
- Provide LEED checklist and energy and water use estimates as required for EO 594 compliance

Cost

- Develop detailed cost estimate per the DCAMM Cost Estimating Manual.
- Provide pricing narrative for all architectural, M/E/P, structural, civil, and landscape work, reconciled with the CM

Schedule

- Develop schedule of design and construction
- Develop implementation schedule including required permitting & regulatory reviews, construction phasing, required move and swing space coordination and other critical logistics, enabling projects, etc.

Task 4 Deliverables:

- Concise presentation explaining preferred option
- Narrative report that clearly outlines all program, scope, budget, and schedule of the preferred alternative, as well as the rationale for selection.

Task 5 – Draft Study Report

A draft study report that will include compiling and revisiting the products of Tasks 2-4 for review. Draft documentation of the Study process will include the following:

Task 5 Deliverables

- Draft Study Report incorporating all revisions as directed by DCAMM for final DCAMM review and approval
    - All drawings, tables, charts, and narrative required to record decisions and support the preferred alternative. Drawings, tables, and charts may be reformatted to make sure they are easily readable within an 8.5 x 11" portrait report format
    - The development of the preferred alternatives and the final renderings should also be included in the draft report

Note: The fee associated with the Tasks below will be negotiated during the study phase, following the determination of the building program. The Designer's contract will be amended to incorporate the final fee and scope for the Schematic Design/Certifiable Study phase.

Task 6 – Schematic Design

Prepare and submit a Schematic Design package in full accordance with DCAMM's Designer's Procedures Manual. Tasks under the Schematic Design Phase include, but are not limited to:

- Coordinate initial Schematic Design conference
- Review and update the workplan if necessary
- Conduct progress workshops with DCAMM, User Agency, Designer's team and, if applicable, CM
- Finalize Building Code analysis

- Coordinate with DCAMM's accessibility consultant to ensure the building is designed to Universal Design / MAAB / ADA standards and best practices and participate in a Universal Design Workshop organized by the assigned DCAMM accessibility consultant
- Integrate energy conservation and carbon reduction opportunities into project design
- Conduct a Life Cycle Cost Analysis to review building systems including alternatives for upgraded envelope and highest efficiency systems
- Finalize detailed cost estimate and conduct a cost estimating reconciliation workshop with the CM and/or other Commonwealth-contracted consultants/contractors
- Coordinate with the Construction Manager and the Commissioning Agent
- Participate in the procurement of the Construction Manager pursuant to Chapter 149A

Task 6 Deliverables
Schematic Design submission requirements include, but are not limited to:

- Design Premise upon which the design scheme is based, including sketches which illustrate indoor and outdoor program functional relationships, access, and future expansion
- Commissioning Plan describing the scope of the commissioning services incorporated
- An energy conservation scope plan including Life Cycle Cost Analysis, LEED plus analysis (or other required certification as required by Executive Order), narrative describing energy efficiency and carbon design of MEP systems and envelope
- Resiliency narrative
- Drawings:
    - Site plans of project addressing impact of accessibility, zoning, context, utilities, environment, parking, drainage calculations, planting, and other related program criteria
    - Floor plans of all levels identifying all program spaces, including security, and the proposed location of MEP systems (with appropriate space requirements).
    - Floor plans of all levels indicating the building's general mechanical, electrical, plumbing, and structural systems
    - Existing conditions and demolition floor plans for all trades
    - Four exterior elevations from the main orientation points of view indicating the relationship to site configurations
    - Two cross-sections with floor heights, including basement spaces identifying program spaces and relationship to site configurations
    - A three-dimensional axonometric or perspective aerial view showing the general massing of the project within the site context
    - Two rendered eye-level perspective drawings
    - The plan, section, and elevation drawings shall be 1/4" = 1'0". If the building is large or irregular in shape and will not adapt to the use of match lines, 1/8" = 1'0" scale may be approved for submission. Sheet size to be half-size.
- Outline of Specifications: Preliminary outline of project specifications
- Detailed cost estimate in Uniformat II Level 3 per the DCAMM Cost Estimating Manual, reconciled with the CM.
- Project implementation schedule
- All submittals must meet the requirements outlined in the Designer's Procedures Manual

Task 7 – Certifiable Building Study Report

Prepare draft study report compiling the products of all tasks. Incorporate comments from draft report into a final report for certification, including an executive summary and project narrative.

Task 7 Deliverables:

- Draft report compiling and revisiting the products of Task 2-6 for review and comment by DCAMM and MMA.
- Final Report that incorporates comments from the draft report for certification in required digital and hard copy formats. The report package should provide a sufficiently detailed information package that describes all relevant aspects of the proposed phased renovation strategy and includes: the executive

summary; project narrative; project justification and rationale for selection of preferred alternative; schematic design package; final ADA, operations, MEP and site narratives; code analysis; energy costs, sustainable and resilient design approach; a phased construction cost estimate and narrative; an operating cost analysis; and a proposed project schedule (Gantt chart).

- An Appendix to the Final Report may include:
    - Official survey drawings
    - Room data sheets, full cost estimates, meeting minutes, presentations, specifications, etc.
    - Geotech and Hazmat Reports
- Three (3), executive briefing presentations of the preferred solution in executive summary form with accompanying Power Point presentation, to pertinent state agencies, personnel, and board meetings.

APPLICATION EVALUATION

Applications will be evaluated based on the DSB criteria for selection of semi-finalist and finalist appearing on the DSB website https://www.mass.gov/files/documents/2018/12/19/criteria-for-selection-of-semi-finalists-and-finalists-160707.pdf.The specific Personnel and Project Experience required is listed below.

PERSONNEL

1. Architect **(Prime Firm)**
2. Mechanical Engineer (M/P/FP)
3. Electrical Engineer
4. Structural Engineer
5. Civil Engineer
6. Landscape Architect
7. Specifications Consultant
8. Cost Estimator (independent consultant required)
9. MA Building Code Consultant
10. Hazardous Materials Consultant
11. Higher Ed Laboratory Planner

- The title “Architect” refers to design professionals that maintain a current registration with the Massachusetts Board of Registration of Landscape Architects; and
- The title “Landscape Architect” refers to design professionals that maintain a current registration with the Massachusetts Board of Registration of Landscape Architects; and the title “Landscape Professional” refers to an individual who may not hold a certificate of registration from the Board of Landscape Architects, but can prove requisite experience, education and training that enable them to perform the landscape design services outlined herein; and
- The title “Engineer” refers to design professionals that maintain a current registration in any one of the engineering categories governed by the Massachusetts Board of Registration of Professional Engineers and of Land Surveyors.

EXPERIENCE FACTORS

Applications will be evaluated based upon the requirements of M.G.L. C. 7C, § 49 and the work listed on DSB Application Form Sections 4 and 5 which illustrate current qualifications in the following areas:

1. Diversity Focus Statement (Section 5): Approach to enhancing diversity in assembling the team for this project and the inclusion of firms that expand the overall breadth of different firms working on DCAMM projects including description of specific working relationships and responsibilities between and amongst team members for both MBE/WBE firms and those with which they will be teaming. If applicable, please highlight prior projects that have met MBE/WBE goals.

2. Significant project experience of the design team, in design and construction of higher education science lab buildings of similar size, program, scope and complexity. Key team members should have

documented expertise in evolving best practices in programming, design, and building systems for similarly programmed buildings, including marine labs.

3. Successful track history of the project team's commitment to design excellence in the built environment, demonstrating innovative design solutions that balance aesthetics, function, and efficiency.

4. Project leads for both the Designer and their consultants should have documented experience in Chapter 149A/Construction Manager at Risk projects of similar scale, type, and complexity, which demonstrate the ability to execute successful collaborations and lead the team and multiple stakeholders to arrive at a clear consensus and successfully constructed project.

5. Documented project experience of the design team in creative integration of sustainable and resilient building systems with site and building design. Key team members should demonstrate expertise in leading and facilitating projects which target climate resiliency and high efficiency design and systems, including knowledge of Net Zero building design principles, interfacing with campus district energy systems, considerations of site-specific resiliency design measures, alternatives to fossil fuel systems, strategic electrification, and high-performance envelopes.

SUPPORTING DOCUMENTS

The scope of work for this project is supported by the materials listed below.

- **MMA2101 Campus Master Plan Update Workshop Presentation #3 – Analysis of Future Needs, Sasaki Associates** (Note that this is an in-progress study. The final report is scheduled for completion in November 2021)
https://www.mass.gov/doc/dsb-21-27-mma2101-master-plan-worksession-3-analysis-of-future-needs/download

- **MMA2101 De-Carbonization Study Workshop Presentation #4 – Strategies to Address Future Needs, Sasaki Associates & Van Zelm Engineers** (Note that this is an in-progress study. The final report is scheduled for completion in November 2021)
https://www.mass.gov/doc/dsb-21-27-mma210-de-carbonization-worksession-4-strategies-to-address-future-needs/download

- **MMA2101 Campus Master Plan Update Workshop Presentation #5 – Consensus Solution, Sasaki Associates** (Note that this is an in-progress study. The final report is scheduled for completion in November 2021)
https://www.mass.gov/doc/dsb-21-27-mma2101-master-plan-worksession-5-consensus-solution/download

- **2019 MMA Study for Higher Ed Capital Planning 2, Perry Dean Rogers Partners, Inc.**
https://www.mass.gov/doc/dsb-21-27-2019-mma-study-for-higher-ed-capital-planning-2/download

- **MMA1501 HS1 New Academic Building Study & Appendix, Perry Dean Rogers Partners, Inc.**
https://www.mass.gov/doc/dsb-21-27-mma1501-hs1-new-academic-bldg-study-final-report/download

- **2015 MMA Resiliency Study, Book 1, AKF**
https://www.mass.gov/doc/dsb-21-27-b150090-mma-resiliency-study-final/download

PROJECT REQUIREMENTS

Project requirements, general conditions and/or requirements of this public notice include, but are not limited to:

Affirmative Marketing

MBE/WBE Participation

The Commonwealth is committed to helping address the disparity in the participation of minorities and women in design. Along with the MBE and WBE participation goals which reflect ownership status set forth below, the Designer Selection Board and DCAMM 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 MBE and WBE firms in new ways.

Applicants, as prime firm and team lead, should include in their application, under Section 5, a Diversity Focus Statement directly addressing 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 Designer Selection Board strongly encourages teams composed of firms that expand the overall breadth of different firms working on DCAMM projects. See also Evaluation Factors.

In accordance with M.G.L. C.7C, §6 and Executive Orders 526 and 565, the **Division of Capital Asset Management and Maintenance (DCAMM)** has established minimum MBE and WBE participation goals of **5.4% MBE and 10.4% WBE** of the overall value of the study and final design contracts for this Contract/project. Applicants must utilize both MBE and WBE firms whose participation meet these separate participation goals set for the Contract. The separate MBE and WBE participation goals must be met within the list of requested prime and sub-consultants and those MBE and WBE firms with which they team. MBE and WBE firms providing extra services, such as surveying or testing, can also contribute to the MBE and WBE participation on the project.

All applicants must indicate in their applications how it or its consultants will meet these goals and will be evaluated on that basis. Further information about the MBE and WBE Program appears in the "Participation by Minority Owned Businesses and Woman Owned Businesses," in the Commonwealth of Massachusetts Contract for House Doctor Services at Attachment F, and a list of firms currently MBE or WBE certified appears on the Supplier Diversity Office website: http://www.mass.gov/sdo.

Applications from MBE and WBE firms as prime consultant are encouraged. Applicants that are themselves MBE or WBE certified may use their participation toward meeting the goal for the certification they hold and will be required to bring participation by additional firm(s) that holds the necessary SDO certifications to meet or exceed the goals on this Contract. Applicants are strongly encouraged to utilize multiple disciplines and firms to meet the MBE and WBE goals. Consultants to the prime can team within their disciplines in order to meet the MBE and WBE goals, but must state this relationship on the organizational chart (Section 6 of the application form). Please note that only firms that are currently Massachusetts Supplier Diversity Office certified as MBE or WBE can be credited toward meeting project MBE or WBE goals.

Additional Diversity Programs:
Veteran Owned Business Participation Benchmark – Chapter 108 of the Acts of 2012; Executive Order 565
The Commonwealth encourages the participation of Service-Disabled Veteran-Owned Business Enterprises ("SDVOBE") and Veteran-Owned Business Enterprises ("VBE") on its design projects. The benchmark for combined SDVOBE and VBE participation on DCAMM and other Executive Branch agencies design projects is 3% of the contract price as set forth in the standard DCAMM Contract for House Doctor Services referenced herein.

In addition the Commonwealth encourages the participation of Disability-Owned Business Enterprises (DOBEs) and Lesbian, Gay, Bisexual, and Transgender Business Enterprises (LGBTBEs) firms on its design projects (see Executive Order 565 -No. 565: Reaffirming and Expanding the Massachusetts Supplier Diversity Program | Mass.gov.

Energy, Sustainability and Climate Change Adaptation

Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth

Projects undertaken under this contract shall comply with all applicable requirements of Executive Order 569 – see https://www.mass.gov/executive-orders/no-569-establishing-an-integrated-climate-change-strategy-for-the-commonwealth. Project teams will need to complete the DCAMM Resilience Checklist and the design requirements of the Resilient MA program (resilientma.org).

Executive Order 594: Leading by Example – Clean Energy and Efficient Buildings

Projects undertaken under this contract shall comply with all applicable requirements of Executive Order 594 (EO 594) or the most recent Leading by Example Executive Order (see, especially, Section 4 for information about requirements for existing buildings): see https://www.mass.gov/executive-orders/no-594-leading-by-example-decarbonizing-and-minimizing-environmental-impacts-of-state-government.

All building studies shall include preliminary estimates of the project's energy use, water use, and greenhouse gas emissions using protocols established by EOEAA or as determined by DCAMM. No building study shall be certified for final design unless all means, methods, and commitments required to mitigate the project's impact on the operating agency's plan for meeting goals of the relevant Executive Orders are documented in the consensus solution, implementation plan and estimated construction cost.

Universal Design/Accessibility

Universal Design

Design solutions provided under this contract are expected to meet the diverse and changing needs of users across age, ability, language, ethnicity and economic circumstance. **DCAMM** welcomes innovative design strategies that are usable by the widest range of people operating in the widest range of situations without special or separate design. The design team is expected to utilize the 8 Goals of Universal Design as guidance for applying Universal Design and accommodating people of all abilities.

Accessibility

The Designer's team must comply, at a minimum, with 521 CMR, The Rules and Regulations of the Architectural Access Board (http://www.mass.gov/ocabr/government/oca-agencies/dpl-lp/opsi/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations.html), as well as the 2010 ADA Standards for Accessible Design (http://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm). When the requirements of these two laws differ the Designer's team shall comply with the one that provides the greater degree of accessibility. The Designer's team is also expected to understand and reflect in its design the civil rights obligations of the Commonwealth under Title II of the Americans with Disabilities Act (http://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm) to provide equal access to programs, services, activities and comply with ADA scope requirements for alteration of primary function areas, as applicable. **DCAMM** will use its accessibility consultants to provide technical assistance and oversight for accessibility compliance during the study, design and construction process, including accessibility audits of existing buildings.

Financial Statement

M.G.L. c. 7C, §51 requires that on public design contracts where the total design fee is expected to exceed $30,000 and for the design of a project for which the estimated construction cost is expected to exceed $300,000 the Designer shall:

a) File its latest CPA or PA audited financial statement with the Division of Capital Asset Management and Maintenance (DCAMM), and continue to do so annually throughout the term of the contract;
b) Submit a statement from a CPA or PA that states that they have examined management's internal auditing controls, and expresses their opinion regarding those controls to the **DCAMM**.

DCAMM Procedures

The Designer must be familiar with the procedures established in DCAMM's Designer Procedures Manual dated August 2008 (https://www.mass.gov/files/documents/2017/12/19/designers-procedures-manual-aug08.pdf). Applicants are urged to review and become familiar with the following supplemental material, which is available on the web at: (http://www.mass.gov/dcam).

Electronic Project Management Information Systems

Consultants will be required to use DCAMM's electronic web-based project management information system as a repository for project correspondence, documentation, project budgeting, and scheduling. No special software is required.

Workshops

DCAMM and the Designer's team will hold periodic workshops to ensure that critical issues are not overlooked and that all team members have an opportunity to contribute their expertise, to anticipate potential obstacles, to identify potential solutions, and to expedite the decision-making process. Attendance by key members of the Designer's team will be required at all workshops.

Environmental and other supplemental services

Development of any hazardous materials assessments, specifications, and documents will be provided through the Hazardous Materials Consultant design team member identified above. **DCAMM** reserves the right to obtain supplemental services through independent consultants who will collaborate with the Designer's team. These supplemental services may include, but are not limited to, asbestos inspection and monitoring, and indoor air quality testing and monitoring.

Construction Specifications

The Designer shall utilize the DCAMM Standard Specification.

Cost Estimating

Cost estimates, cost models, and estimator participation in both the study and the design phases shall meet the requirements of the current DCAMM Cost Estimating Manual and will be submitted in Uniformat II in the study phase and in both Uniformat II to Level 3 and CSI Masterformat in the design phase. The Cost Estimating Manual can be found at https://www.mass.gov/files/documents/2017/12/19/cost-estimating-manual.pdf and Uniformat II can be found at http://fire.nist.gov/bfrlpubs/build99/PDF/b99080.pdf.

Building Information Modeling (BIM)

Building Information Modeling (BIM) will be used in the study, design, and construction phases of the project. The BIM List of Services can be found at http://www.mass.gov/anf/docs/dcam/pubbldgconstr/16-2-27-bim-list-of-services.pdf . This List of Services document is a general statement of DCAMM's current requirements regarding the use of Building Information Modeling technology in agency projects. The specific requirements regarding use of the BIM will vary depending on the nature of the project, the levels of development delineated in the DCAMM

approved BIM Execution Plan for the project, and the diverse purposes for which DCAMM will use the BIM during the life cycle of the facility from design through facility operations. In all instances, the language of the project contract(s) will be controlling.

Building Commissioning

DCAMM will include an independent third-party building commissioning agent as part of this project. The commissioning agent will develop in collaboration with DCAMM an operations and maintenance plan as a reimbursable expense during the building commissioning phase. The commissioning agent will meet with DCAMM and the Designer's team during planning, design and construction to evaluate design proposals and make recommendations to ensure the maintainability and operational efficiency of the new building.

CM at Risk

The construction of this project will be performed utilizing a construction management at-risk (CMAR, sometimes referred to as CM/GC) contract in accordance with M.G.L. c. 149A. It is anticipated that the CM will be on board during the Schematic Design phase of the project.

Integrated Project Delivery Approach/Lean Construction Tools

To the extent allowed under the Commonwealth public procurement laws and regulations, DCAMM may elect to use some aspects of an Integrated Project Delivery (IPD) approach, as generally described in the AIA document Integrated Project Delivery: A Guide (2007) – (see http://info.aia.org/SiteObjects/files/IPD_Guide_2007.pdf for informational purposes). To the extent the IPD approach and/or Lean Construction Tools conflict with DCAMM's contract terms or the laws governing DCAMM, then the contract documents and laws shall take precedence. DCAMM's preliminary approach to IPD will use CM procurement with the goal that DCAMM, client agency, Designer, CM, trade partners, and other key stakeholders will work as an integrated project delivery team within the existing statutory and contractual frameworks.

DCAMM may elect to use Lean Construction Tools as part of the IPD project delivery approach. The Lean Tools that DCAMM may use in connection with the project include Value Stream Mapping, Set Based Design, Target Value Design, A3 Decision-making, and Last Planner™ - (see http://www.leanconstruction.org/media/docs/LCI_Glossary12232015.pdf for informational purposes).

CONTRACT REQUIREMENTS

Contract for Study, Final Design, and Construction Administration Services

DCAMM uses one standard *Contract for Study, Final Design and Construction Administration Services* (January 2019) (Contract). If selected for study services, the applicant agrees to execute the Contract or its successor, without revisions or modifications. *No costs shall be incurred or work performed before all contract documents are properly executed and a project Notice to Proceed is issued in accordance with the terms of the Contract.*

If this Notice indicates that the Schematic Design/Certifiable Building Study fee is to be negotiated, following successful fee negotiations, the Contract will be amended to incorporate a scope and fee for schematic design and certifiable study services. If study certification pursuant to M.G.L. c. 7C is completed, the Contract may be amended to incorporate the design and construction administration scope of services and fee. At the conclusion of the study, if the applicant is requested by DCAMM to perform final design services, the applicant agrees to amend the Contract's scope of services to include final design and construction administration services (Attachment G – Design Phase Scope of Services), and the certified study, and any other documents as necessary. Designers awarded the Contract for Study and/or schematic design are not guaranteed to be awarded the Design Phase.

Study Phase: DCAMM has established a goal of **nine (9) months** to complete a Study, including Schematic Design.

Design Phase: DCAMM has established a goal of **nine (9) months** to complete design (DD and CD). The schedule for construction administration services will be established (if applicable, in consultation with the CM) as part of the study phase.

The Contract is available on the DCAMM website at: https://www.mass.gov/doc/contract-for-study-final-design-and-construction-administration-services-0/download.

Also available is a template Design Phase Amendment, which includes a sample form of Attachment G – Design Phase Scope of Services. https://www.mass.gov/doc/design-phase-amendment-to-contract-for-study-final-design-and-construction-administration/download.

Applicants are advised that certain documents are required as a condition of contract execution, including, without limitation, evidence of professional liability insurance in an amount equal to the lesser of $5,000,000 or 10% of the Project's Fixed Limit Construction Cost, but in no event less than $250,000 per claim (i.e., minimum coverage of $250,000 up to $5,000,000 per claim depending on the construction cost). Evidence of pollution liability coverage in compliance with the Contract requirements may be carried by the Hazardous Materials Consultant identified above. All other coverage must be carried by the Designer.

CONDITIONS FOR APPLICATION

Before a designer can apply for a project within DSB jurisdiction, they must file a written "disclosure statement" in accordance with M.G.L. c. 7C, § 48. The statement provides the basis for the DSB informational database and verifies that the designer meets certain general qualification and ownership requirements detailed in M.G.L. c. 7C, §§ 44 and 48. To help firms meet this requirement, the Designer Selection Board provides an online registration system that can be accessed at https://www.mass.gov/service-details/new-dsb-online-registration-process. Firms must register on this platform to submit the required disclosure statement; paper disclosure statement submissions are no longer accepted. As part of applying for a particular project, firms must verify that the information provided remains accurate and up-to-date or, if necessary, submit updated information.

APPLICANTS PLEASE NOTE

The Designer Selection Board has transitioned to a new online system for all of its operations on the AUTOCENE Enterprise Automation Platform. We encourage everyone in the design community to enter all their information and start getting used to this powerful new product! The board no longer accepts jurisdictional applications through our old application system and all new applications must be completed within Autocene. New users can request credentials through the system login screen: https://dsb-dev.formverse5.com/FORMVERSESERVER-DSB/WebApp/Login.aspx?ReturnUrl=%2fFORMVERSESERVER-DSB%2fWebApp%2fHome.aspx.