***ABS Center for Engineering, Science and Research***

***Maine Maritime Academy***

# Request for Commissioning Qualifications

***June 10, 2014***

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# Request for Qualifications – Commissioning Services for ABS Center for Engineering, Science and Research

***RFP Date:*** *June 10, 2014*

***Submit Questions by:*** *June 19, 2014*

***Proposals Due****: June 26, 2014 at 2:00 PM*

Maine Maritime Academy (Owner) requests written submissions to secure commissioning authority (CxA) services for the ABS Center for Engineering, Science and Research. Fees will be negotiated with the selected applicant. The owner is committed to commissioning this facility to systematically optimize the building and systems so that they operate efficiently and effectively in accordance with the Owners Project Requirements and the facility staff has adequate system documentation and training to maintain their ongoing effective operation. It is the intent of the Owner to ensure that the fundamental systems are calibrated and operating as required to deliver functional and efficient performance through the commissioning process.

## *Project Description*

***Square Footage:*** 31,000 +/-

***Building type:*** Three Story Classroom and Engineering Lab Building

***Location:*** Pleasant Street, Castine, Maine

***Project budget:*** $10 M total

***Schedule:*** Construction: December 2013 – December 2014
Occupancy: January, 2015

## *Submission Requirements*

Please submit an electronic copy of the completed Qualifications and the Proposal Review Form. Submissions must arrive no later than 2:00 p.m. EST on date as noted above. Submittals must also be submitted to the address below by the specified date and time. Submit to:

Adam Potter
Director of Facilities
Maine Maritime Academy
Pleasant Street
Castine, ME 04420
Email: adam.potter@mma.edu

Questions must be submitted to the address below by the specified date and time. Submit to:

David Reinheimer email:dreinheimer@harriman.com

## *Project Design Team*

*Architect:* Harriman, Auburn, ME; Mark Lee, AIA, Project Architect

*Mechanical Engineer:* Harriman, Auburn, ME; David Reinheimer, PE, Project Engineer

*Electrical Engineer:* Harriman, Auburn, ME; John Tarr, PE, Project Engineer

The management structure is design/bid/build with a lump sum price. Full design documents and specifications have been developed by the Architectural/Engineering team. The general contractor will be selected by bid and hired to complete construction. The commissioning authority will be hired by and report directly to the owner.

### *Terms and Conditions*

1. This RFP does not commit the Maine Maritime Academy to award a contract, issue a purchase order, or to pay any costs incurred in the preparation of a qualification in response to the RFQ.
2. Proposals will become part of the Maine Maritime Academy's official files without any obligation to the Maine Maritime Academy. All responses are considered public information and will available for release to the public without written authorization from the applicant.
3. Firms responding to this proposal shall not offer any gratuities, favors, or anything of monetary value to any officer, agent, contractor or employee of the Maine Maritime Academy for the purpose of influencing consideration of a qualification.
4. Firms responding to this proposal shall not collude in any manner, or engage in any practices that may restrict or eliminate competition or otherwise restrain trade. This does not preclude subcontracts and joint ventures for the purpose of responding to this RFQ and/or establishing a project team with the required experience and capability to provide the services specified herein.
5. Firms responding to this request, their authorized representatives, and their agents are responsible for obtaining, and will be deemed to have, full knowledge of the conditions, requirements, and specifications of this RFQ.
6. Firms responding to this proposal must promptly report to the Maine Maritime Academy any conditions, transactions, situation, or circumstances that would impede, impair or delay the submission of proposals, or the proper and timely performance of the work.
7. Maine Maritime Academy reserves the right to cancel this RFQ or to reject any or all proposals received prior to contract award.
8. Maine Maritime Academy reserves the right to request clarification of any proposal after all proposals have been received. The request can be in the form of oral presentation, written documentation or meetings.
9. Maine Maritime Academy reserves the right to open qualifications privately or unannounced and to reject any and all submittals and waive irregularities and informalities in any qualifications that are submitted and to be the sole and final judge of all qualifications.
10. Maine Maritime Academy reserves the right to discontinue its evaluation of submittals from any respondents who submit false, misleading or incorrect information.

## I. Base Scope of Work

The Commissioning Authority (CxA) will plan, manage, perform and report on the commissioning activities. Reporting formats and standardized commissioning forms shall be developed and provided by the CxA. The CxA will be responsible for maintaining knowledge of the project schedule and shall coordinate the commissioning activities with members of the project design and construction teams to ensure timely completion of commissioning work. All commissioning tasks shall be conducted in a transparent manner and shall include building operations personnel when possible.

The CxA shall provide all engineering, testing and administrative services needed to execute the following commissioning tasks:

### *A. Construction Phase Commissioning Activities*

The commissioning process activities accomplished by the commissioning authority during the construction phase shall include:

1. Commissioning Plan
   a. Develop and distribute a Commissioning Plan to the project team describing commissioning activities, roles and responsibilities and addressing commissioning activities during the Construction and Warranty and Operations periods
   b. Provide construction pre-functional checklists and at least one functional performance test with the Commissioning Plan.
2. Commissioning Planning
   a. Organize, coordinate and direct commissioning activities in a logical, sequential and efficient manner using consistent protocols, clear and regular communications and consultations with all necessary parties. Provide regularly updated timelines and schedules for commissioning activities.
   b. Conduct a construction commissioning kick-off meeting to review the commissioning process requirements, roles, responsibilities, schedules, and deliverables with the construction commissioning team.
   c. The Commissioning Team includes the Architect/Engineer of record, the Superintendent for the General Contractor, the Owner's Representative, Clerk of the Works, the forepersons for Mechanical, Controls, Test and Balance, and Electrical Contractors and is led by the Commissioning Authority.
3. Submittal Review
   a. Review submittals including the Testing, Adjusting and Balancing (TAB) Plan and contractor developed IAQ plan concurrent with the design professional's review.
4. Site Visits
   a. Perform site visits, as necessary, to observe component and system installations. Accomplish a statistical review of construction focusing on the owner's design intent and the quality process. Attend selected planning and job-site meetings to obtain information on construction progress. Review construction-meeting minutes for revisions/substitutions relating to the owner's design intent. Provide Field Reports for each site visit to the Owner, Architect, and General Contractor.
   b. Attend planning and job-site meetings as required to obtain information on construction progress and to coordinate commissioning activities. Organize and conduct periodic commissioning team meetings as necessary to plan, develop the scope, coordinate, schedule activities and resolve problems.

5. Construction Checkout

a. Develop construction pre-functional checklists based on construction documents and submittals, and provide them to the General Contractor for distribution and tracking.

b. Statistically sample completion of pre-functional checklists on a periodic basis to verify the contractor's quality process is achieving the owner's project requirements for all major equipment.

c. Verify systems start-up by reviewing contractor start-up reports and selected site observation. Describe in the proposal all equipment and systems for which your proposal includes on-site observation of start-up.

6. Thermal Scan of Building Envelope

a. Coordinate and witness an infrared thermal scan of the completed building envelope.

b. The thermal scan shall be performed after the building envelope is completed and prior to completion of the interior systems of the building envelope.

c. Review the thermal scan report and provide comments as necessary.

d. Coordinate follow-up site visits as necessary for a complete building envelope thermal scan.

7. Functional Performance Testing

a. Develop functional performance testing documents, based on construction documents and final approved submittals and provide to the contractors in advance of acceptance testing.

b. Coordinate with the contractors and Owner for performance of acceptance testing to ensure that appropriate personnel are available on site to participate.

c. Observe and oversee the performance of acceptance testing of all equipment and systems to be commissioned. Tests shall be executed by the responsible contractors and witnessed by the CxA. All acceptance tests shall be signed by the witnessing parties and retained as part of the building documentation. Functional tests shall be designed to be pass/fail with clear acceptance criteria based on the performance requirements established in the contract documents. The CxA shall document test results and assist the team in identifying possible approaches to resolve deficiencies or test failures.

d. Coordinate retesting as necessary until satisfactory performance is achieved. Issue Field Reports to document the functional performance testing process.

8. Site Visit Observations or Issues Log

a. Maintain a Site Observations or Issues Log detailing deficiencies identified during site visits, construction checklists, start-up and functional performance testing. Log shall include a unique identifier and detailed description for each deficiency, the date found, a potential impact of the deficiency, recommendations for remediation and the CxA's assessment of the party primarily responsible for resolving the deficiency. Document the correction and retesting of non-compliance items by the contractor. Update the Action log on a regular basis and submit to the CM, Owner and Architect. The Action Log status shall be reviewed at construction and commissioning meetings.

b. Verify air and water systems balancing through sampling in the field. Recommend approval of the balancing upon satisfactory verification.

### *B. Warranty and Operations Commissioning Activities*

The commissioning process activities accomplished by the commissioning authority during the warranty and operations phase shall include:

1. O&M Documentation Review
   a. Review Operations and Maintenance manuals for completeness, clarity and adequacy in describing both regular maintenance and trouble-shooting; verify that each device and piece of equipment is specifically identified and that all periodically required maintenance is clearly documented.
   b. Review warranties and as-built drawings and control sequences for completeness and accuracy.
2. Training Plan Review and Support
   a. Review, recommend pre-approval, and verify the training provided by the contractors.
   b. The CA shall verify that training programs for school maintenance staff, administrators, teachers and other staff are developed and completed.
3. Commissioning Summary Report
   a. Provide a final Commissioning Summery Report.
   b. Organize and conduct a lessons-learned workshop to review the commissioning report, the commissioning process and lessons learned over the course of the project. Attendees should include key representatives of the design, construction and operations teams as well as the Maine Maritime Academy lead on the construction project.
4. Post Occupancy Review
   a. Schedule and verify deferred and seasonal testing by the contractor.
   b. Review and report on one week of DDC generated trend logs in each quarter.
   c. Return to the site at 10 months into the 12-month warranty period. Review with facility staff the current building operation and the condition of outstanding issues related to the original and seasonal commissioning. Interview facility staff to identify problems or concerns they have with operating the building as originally intended. Make suggestions for improvements and for recording changes in the project documentation including O&M manuals. Assist maintenance staff in identifying issues that may come under warranty or under the original construction contract. Assist facility staff in developing reports and documents and requests for services to remedy outstanding problems.

### *C. Base Systems to be Commissioned*

Commissioning in all phases of the project shall address all equipment, components, devices and controls associated with each of these systems and shall verify the specified interactions between these systems and all associated building systems (for example, commissioning of the HVAC Control System shall include verification of any inter-ties with the fire alarm system.) Every mode of systems operation, system equipment, components and zones, and every item in the automatic temperature controls sequence of operation description shall be proven operational under normal operational modes, including part and full load, and under abnormal or emergency conditions. This shall include, but not be limited to, the following Mechanical, Plumbing and Electrical systems:

1. Heat Recovery Units
2. Electric Radiant Panels
3. Electric Cabinet Unit Heaters
4. Exhaust Fans
5. Variable Refrigerant Volume (VRV) System Condensing Units and Evaporator Units
6. Domestic Electric Water Heater
7. Rain Water System
8. Emergency generator and system response in emergency generator mode.
9. Occupancy-based and Daylight Harvesting Controlled Lighting System
10. Fire Alarm System
11. Power Distribution System
12. Vapor Barrier installations
13. Thermal imaging to document integrity of installed building envelope systems
14. Each system shall be tested through all modes of system operation (for example, seasonal, occupied/unoccupied, warm-up/cool-down, as applicable) including every individual interlock and conditional control logic, control sequences, both full- and part-load conditions, and simulation of abnormal conditions for which there is a specified system or controls response.
15. Verify the performance of life safety devices and systems that interface with HVAC systems as required.
16. Verify proper calibration of thermostats and temperature sensors.
17. Verify readings of remote data and control systems, such as air temperatures, air flow and damper positions.

## II. Additional Services – Additional Commissioning Tasks

Provide separate proposal for each of the commissioning tasks described below.

A. Remote DDC Monitoring

1. Using a contractor provided remote hook-up to the school HVAC control system, provide remote monitoring during the first year of occupancy – monitoring shall be during all temperature and weather conditions and all occupancy modes. Summarize the results of remote monitoring in periodic reports to the Owner.

## Qualifications

It is the owner's desire for the person(s) designated as the site commissioning authority (CxA) to satisfy as many of the following requirements as possible:

- Acted as the principal commissioning authority for at least three projects of comparable size, type and scope.
- Extensive experience in the operation and troubleshooting of HVAC systems and energy management control systems.
- Extensive field experience. A minimum of five full years in this type of work is required.
- Knowledgeable in building operation and maintenance and O&M training.
- Knowledge of all relevant federal, state and local codes and design standards, including but not limited to: building and fire codes, energy codes and equipment standards, indoor air quality standards.
- Knowledgeable in test and balance of both air and water systems.
- Experienced in energy-efficient equipment design and control strategy optimization.
- Knowledge of and past participation in Efficiency Maine programs.
- Direct experience in monitoring and analyzing system operation using energy management control system trending and stand-alone data logging equipment.
- Excellent verbal and writing communication skills. Highly organized and able to work with both management and trade contractors.
- Experienced in writing commissioning specifications.
- A bachelor's degree in mechanical or electrical engineering is strongly preferred, and P.E. license is desired. However, other technical training, past commissioning, and field experience will be considered as a substitute.
- Membership and certification as a Certified Commissioning Professional with the Building Commissioning Association or other commissioning organization is desired but not required.

# Specifications

SECTION 019113 - GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The intent of this section is to require the Contractor to provide qualified testing expertise to organize, schedule, coordinate, and perform functional performance testing prior to commissioning of building's mechanical systems.

B. The Commissioning Agent shall be contracted directly with the Owner. The Contractor shall coordinate with and provide assistance to the Commissioning Agent as described in this section. The Commissioning Agent shall be a Registered Professional Engineer in the State of Maine. The individual shall have close working knowledge of the systems in the building and shall be independent from the Installing Contractor.

C. Provide the services of Subcontractors as appropriate in planning and performing testing and troubleshooting of equipment and systems as described in these specifications prior to and during the commissioning of the mechanical systems.

D. Provide a complete commissioning of the School's HVAC systems, Plumbing systems, Electrical systems and the building envelope as applicable.

1.2 QUALITY ASSURANCE

A. References
1. ASHRAE Guideline 0-2005, The Commissioning Process.
2. ASHRAE Guideline 1.1-2007, HVAC&R Technical Requirements for the Commissioning Process
3. SMACNA HVAC Systems Commissioning Manual - First Edition - October 1994

1.3 DOCUMENTATION

A. Provide the Commissioning Agent with the following:
1. Project Plans and Specification (Contract Documents), including authorized revisions and addenda.
2. Final approved HVAC, Plumbing, Electrical and building envelope related Shop Drawings and Submittals.
3. Final approved Test and Balancing Report.
4. Equipment Start-up and Certification Reports.
5. Any other documentation deemed by the Commissioning Agent to be pertinent to the commissioning process.

1.4 SUBMITTALS

A. Prior to starting the commissioning process, the Commissioning Agent shall submit to Owner for approval a detailed commissioning schedule.

B. When the commissioning process is completed, the Commissioning Agent shall submit final copies of the commissioning report to the following:
   1. 2 copies to the Owner.
   2. 1 copy to the Contractor.
   3. 1 copy to the Architect.

1.5 RESPONSIBILITIES

A. Contractor Responsibilities:
   1. Verify completeness of the building envelope, perimeter and interior items which affect proper operation and control of HVAC, Plumbing and Electrical equipment and systems.
   2. Ensure participation and cooperation of specialty Subcontractors (including, but not limited to Electrical, Testing & Balancing and Controls) as required to facilitate the commissioning process.
   3. Ensure participation of the Controls Subcontractor in demonstrating, in the presence of the Commissioning Agent, the proper sequence of operation of all equipment associated with Division 23 – Instrumentation and Controls for HVAC.
   4. Provide labor, material, equipment, and appurtenances, required to facilitate the commissioning process, including seasonal testing required after the initial commissioning. Perform test and verification procedures required by the commissioning process when requested by the Commissioning Agent.
   5. Review functional start-up and performance tests and documentation required by the Contract Documents and equipment manufacturers, for equipment and systems, as performed by Subcontractors and vendors.
   6. Develop testing schedules, integrate testing into the master construction activity schedules, and coordinate Subcontractors' start-up procedures as required. Update as required.
   7. Follow manufacturer's start-up procedures and provide documentation of equipment start-up, system functional tests, and cross-system functional tests. Start-up procedures shall be in accordance with equipment manufacturer's recommendations, where applicable. Start-up procedures shall fully describe system configuration and steps required for each test, appropriately documented so that another party can repeat the procedure with virtually identical results.
   8. Submit start-up and test procedure schedule, procedures, forms, and other documentation to the Commissioning Agent and the Owner for approval two months prior to starting any testing.
   9. Provide written notice to Commissioning Agent and the Owner when systems have been successfully started in accordance with manufacturer's guidelines and project document requirements and are ready for commissioning.
   10. Coordinate Subcontractors on the project specific to their responsibilities and contractual obligations.
   11. Provide engineering and technical expertise to oversee and direct the correction of deficiencies found during the commissioning process.
   12. Observe the start-up and testing of equipment by Subcontractors.
   13. Manage cross-system testing such as HVAC, building automation, fire alarm, emergency power, and life safety.
   14. Note any inconsistencies or deficiencies in system operations and enforce system compliance or recommend to the Architect modification of system design which will enhance system performance.
   15. Coordinate with the Architect/Engineer (A/E), Commissioning Agent, and Owner during commissioning final test procedures, after verifying that pretests have been satisfactorily conducted and final tests are ready to be performed.
   16. In the event that a functional test performed by or in the presence of the Commissioning Agent fails, determine the cause of failure and rectify the problem as soon as possible, and then retest.

If more than two functional tests of the same system(s) are required, reimburse associated costs for the extraordinary participation of the A/E, Commissioning Agent, and Owner's staff, as required by the particular test being performed.

17. Review operations and maintenance information and as-built drawings provided by the various Subcontractors and vendors for verification, organization and distribution.
18. Obtain documentation from tests and assemble a final test report to be submitted to the Architect and the Commissioning Agent for approval.
19. As HVAC, Plumbing, Electrical systems along with the Building envelope become ready for commissioning, notify the Commissioning Agent by Asigning off@ on the commissioning readiness checklist, which shall be prepared by the Commissioning Agent and presented to the Contractor. Commissioning of HVAC and Plumbing systems shall not be performed until they have been "signed off" by the Contractor.
    a. If a HVAC, Plumbing, Electrical or Building envelope system has been "signed off" as "INSTALLATION COMPLETE PER DRAWINGS AND SPECIFICATIONS" and/or "OPERATING IN ACCORDANCE WITH SPECIFIED SEQUENCE OF OPERATION" and the Commissioning Agent discovers any obvious deficiencies which clearly indicate that good faith effort has not been made to confirm proper system installation and/or operation, the Contractor shall reimburse associated costs for the extraordinary participation of the A/E, Commissioning Agent, Construction Manager and Owner's staff. The reimbursement amount shall be, at a minimum, 1/2 hour of the Commissioning Agent's hourly billing rate.

B. Commissioning Agent Responsibilities:
1. Plan, organize, and implement the commissioning process as specified herein.
2. Prepare the commissioning plan and ensure its distribution for review and comment.
3. Revise the commissioning plan as required during construction.
4. Chair commissioning meetings and prepare and distribute minutes to commissioning team members, whether or not they attend the meeting,
5. Coordinate commissioning activities with the Contractor.
6. Ensure required instruction and demonstrations are provided to the Owner's designated operating staff.
7. Work with the Contractor in the development and execution of the commissioning program.
8. Review the Contractor's system start-up plans.
9. Review the Contractor's equipment and component test procedures.
10. Review the Contractor's systems and inter-systems functional performance test procedures.
11. Witness, verify, and approve satisfactory completion of equipment and component tests and systems and inter-systems functional performance tests.
12. Review and approve specified documentation.
13. Coordinate participation of Owner's personnel involved with equipment, component and system performance verification and participation in required training.
14. When commissioning has been successfully completed, recommend final acceptance to the Owner.
15. Communicate as follows:
    a. Formally communicate with the Contractor via approved project channels.
    b. Keep the Owner advised regarding commissioning activities, progress, problems that develop solutions to problems, systems performance, and schedules.

C. Owner Responsibilities:
1. If desired, schedule personnel to participate in HVAC, Plumbing, Electrical and Building envelope commissioning process.

2. Work with the Commissioning Agent and the Contractor as required to schedule commissioning work in occupied areas.
3. Advise the Commissioning Agent regarding change in building occupancy and/or usage.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 DOCUMENTATION

A. The Commissioning Agent shall prepare a commissioning readiness checklist which shall be used by the Contractor as sign off of readiness of systems for commissioning. The commissioning readiness checklist shall list individually systems which shall be commissioned. Submit the commissioning readiness checklist to the Architect for approval. Once the Architect has approved the commissioning readiness checklist, furnish it to the Contractor for his use. As systems become ready for commissioning, the Contractor shall sign and date the appropriate areas and shall submit copies to the Architect and the Commissioning Agent. Commissioning of systems shall not be performed until they have been signed off by the contractor. Commissioning readiness checklist shall be similar to checklists developed by the Building Commissioning Association.

B. The Commissioning Agent shall submit the following to the Architect for approval before commissioning of mechanical systems begins:
   1. Detailed procedures for testing to be performed by each party in the commissioning process.
   2. Samples of report forms that will be used to submit test data and results.
   3. Calibration data for test equipment.
   4. Sequence and schedule of procedures.

C. The final commissioning report shall include the results of commissioning tests performed on the following systems:
   1. Every mode of systems operation, system equipment, components and zones, and every item in the automatic temperature controls sequence of operation description shall be proven operational under normal operational modes, including part and full load, and under abnormal or emergency conditions. This shall include, but not be limited to, the following Mechanical, Plumbing and Electrical systems:
      a. Heat Recovery Units
      b. Electric Radiant Panels
      c. Electric Cabinet Unit Heaters
      d. Exhaust Fans
      e. Variable Refrigerant Volume (VRV) System Condensing Units and Evaporator Units
      f. Domestic Electric Water Heater
      g. Rain Water System
      h. Emergency generator and system response in emergency generator mode.
      i. Occupancy-based and Daylight Harvesting Controlled Lighting System
      j. Fire Alarm System
      k. Power Distribution System
      l. Vapor Barrier installations
      m. Roof and wall flashing & sheathing systems
      n. Insulation systems
      o. Roof curb installations

p. Thermal imaging to document integrity of installed building envelope systems
q. Each system shall be tested through all modes of system operation (for example, seasonal, occupied/unoccupied, warm-up/cool-down, as applicable) including every individual interlock and conditional control logic, control sequences, both full- and part-load conditions, and simulation of abnormal conditions for which there is a specified system or controls response.

2. Verify the performance of life safety devices and systems that interface with HVAC systems as required.
3. Verify proper calibration of thermostats and temperature sensors.
4. Verify readings of remote data and control systems, such as:
   a. Air temperatures
   b. Air Flow (CFM)
   c. Damper positions

D. Any approved changes in system operation shall be documented by the Commissioning Agent.

END OF SECTION 019113

## Proposal Requirements

Proposals shall:

- Be limited to a maximum of 20 pages, including graphics. Letters of introduction, section dividers, detailed resumes and the sample work products are not included in this limit.
- Provide a clear description of the proposed scope. Clearly note any exceptions to the scope outlined in the RFQ. Describe the number of tests included in the scope, the sampling techniques that will be included and how retests will be handled and coordination of parties to achieve successful test results.
- Include the Commissioning Firm Experience and Commissioning Task Experience forms (Exhibits 1 and 2) for each firm on the team. Include no more than four projects in Exhibit 2.
- Include three references from recent projects; at least two references shall be Owner's representatives with direct knowledge of the firm's commissioning experience on the project.
- Describe your proposed approach to managing the project including staff member names and responsibilities, distribution of tasks, travel, and expected duration of time for on site work. Identify the lead CxA for the construction and operations phases of the contract. Identify the individuals who will work on the project and describe their roles in detail.
- Provide resumes for project staff and sub-consultants. The resumes shall include specific information about expertise in performing commissioning tasks, (e.g. design reviews, specification writing, commissioning management, troubleshooting, test writing, test execution, energy management, sustainable design, etc.).
- Briefly describe the team's "relevant" experience (project phasing, life cycle costing, testing, adjusting and balancing, building simulation, IAQ, etc.).
- Provide the following sample work products that represent the approach to be used on this project:
    - Construction phase commissioning plan that was executed
    - An actual functional test procedure form that was executed
- Liability insurance coverage shall conform to state requirements. Documentation of liability insurance will be required prior to the award of this contract to the winning proposal.

## Selection Process

Owner's staff will review all proposals and rank them based on the following criteria:

| | |
|---|---|
| Qualifications of firm and key project team members | 25 points |
| Comprehensiveness of proposed scope and consistency with RFQ | 20 points |
| Compatibility with the project team | 20 points |
| References | 20 points |
| Sample documents | 15 points |

The Owner's team will interview key staff of the teams submitting the two highest ranked proposals. The Owner will negotiate on the tasks, staffing, schedule, and fee of the top ranked consultant after the interview. Negotiations may be terminated if they fail to result in a contract within a reasonable time period. Negotiations will then ensue with the second ranked consultant, and if necessary, the third ranked consultant. The owner may reject any and all proposals with reason.

## Exhibit 1: Commissioning Firm Experience

Complete a separate form for each firm on the team.

Company Name:

Contact Person:

Title:

E-mail:

Phone:

Address:

Description of Business

Commissioning Activities

| | |
|---|---|
| Percentage of overall business devoted to commissioning services | % |
| How long has the firm offered commissioning services | years |
| Average number of commissioning projects performed each year | projects |
| Number of projects on which Design Phase Commissioning was provided by the firm | projects |

Number of registered engineers on staff who have directed commissioning projects: _____

The firm has provided commissioning services in the following: (indicate number of projects)

| Building Sector | New Construction or Major Renovation | Existing Building | Equipment Replacement |
|---|---|---|---|
| Office or retail | | | |
| Schools | | | |
| Laboratories | | | |
| Multi Family | | | |
| Museums, libraries, etc. | | | |

The firm has actively participated in Efficiency Maine Programs providing the following:

| Efficiency Work | Project Name & Date | Project Name & Date | Project Name & Date |
|---|---|---|---|
| Energy analysis | | | |
| Energy modeling | | | |
| Equipment information | | | |
| Other (describe) | | | |

## Exhibit 2: Commissioning Task Experience

Complete a separate form for each relevant project (not more than three projects per firm).

| | |
|---|---|
| Project<br>(Name, Date, Bldg Size,<br>Type, new or existing) | |
| | |
| Owner Contact<br>(Title, City, State, and Phone) | |
| | |
| | |
| Name & Role of Persons(s)<br>Assigned to Project by Firm<br>(identify any sub-consultants) | |
| | |
| | |

| ***Tasks*** | ✓ | ***Individual Responsible/Comments*** |
|---|---|---|
| Developed Owner's Project Requirements | | |
| Wrote commissioning plan | | |
| Wrote commissioning specs | | |
| Wrote construction checklists | | |
| Wrote functional test procedures | | |
| Witnessed and documented functional tests | | |
| Performed functional tests (hands-on) | | |
| Used data loggers or trend logs for testing | | |
| Developed staff training | | |
| Reviewed completed O&M manuals | | |

| ✓ | ***Systems and Equipment*** |
|---|---|
| | Central building automation system |
| | All equipment of the heating, ventilating and air conditioning systems |
| | Scheduled or occupancy sensor lighting controls |
| | Daylight harvesting lighting controls |
| | Life safety systems (fire alarm, egress pressurization, fire protection) |
| | Electrical |
| | Domestic and process water pumping and mixing systems |
| | Security system |
| | Other Systems (Describe) |