OAK POINT ASSOCIATES | architecture engineering planning

April 9, 2014

Lucky D'Ascanio, Director of Community Programs
Town of Falmouth
271 Falmouth Road
Falmouth, Maine 04105

Dear Lucky:

Thank you for your request for a proposal to undertake an energy audit and assessment at the former Mason-Motz School. Our scope of work is based on Nathan Poore's e-mail dated March 25, 2014 and on our experience with other energy analyses that we have performed.

Oak Point Associates is highly qualified to perform this assessment. We are the key energy consultant for the Portsmouth Naval Shipyard and Hanscom Air Force Base, although we have provided energy audits, assessments and have designed energy efficiency renovations for clients of all project types. A selection is below:

- **University of Maine at Machias Torrey Hall / Merrill Library and Science Building Renovations and Energy Upgrades | Machias, Maine**
- **Norris Cotton Federal Building Renovation | Manchester, New Hampshire**
- **U.S. Custom House Renovation | Portland, Maine**
- **Michel Hall, HVAC Upgrade, U.S. Coast Guard Academy | New London, CT**
- **Collins Center for the Arts Renovation and Addition, University of Maine | Orono, Maine**
- **Hamel Recreation Center Renovation, University of New Hampshire, Durham | NH**
- **Hall-Dale High School Renovations | Hallowell, ME**
- **Gosnold Laboratory Addition, U.S. Geological Survey | Woods Hole, MA**
- **Energy & Building Renovation of West End Waterfront Support Facility, Building 174 | Portsmouth Naval Shipyard, Kittery, ME**
- **Evaluation of Historic Renovation Impacts of Mechanical, Electrical and Technology Systems on the Historic Richard C. Lee Courthouse | New Haven, CT**

Our energy team is led by Matt Albert, who is a mechanical engineer as well as a Certified Geoexchange Designer, a Certified Building Commissioning Professional, and a Certified Measurement & Verification Professional. He will be complemented by Diane Acheson, who has been the mechanical engineer on this project during the concept phase and is also a Certified Energy Manager. Bill Van Benthuysen will be the architect who will evaluate the building envelope, and Steve Weatherbie from our Electrical Engineering department will provide an analysis of the electrical and lighting systems.

Our Basic Services will consist of the following:

Task 1: Review Existing Data and Conditions

Our review of existing conditions will include an in-depth look at building envelope, electrical, and mechanical systems to have an understanding of what the current energy inefficiencies might be, but also to understand the extent to which existing systems might be able to be modified in order to improve energy efficiency. We will interview building maintenance/operations staff in order to better understand operating parameters. We would also like to review the past three years of utility bills in order to get a sense for what the overall energy costs have been. (We recognize that your utility bills include the Plummer Building and that the buildings have not been utilized optimally for the past several years but still feel a look at these bills would be useful.) Our record drawings of Mason-Motz do not include wall sections, so we may need to do a small amount of destructive testing in order to determine the construction of the envelope. We also have the ability to conduct infrared thermography of the building, which can help to pinpoint areas of the envelope that have greater leakage than others.

Task 2: Calculate Existing Energy Loads

Utilizing the building information that is already known by us, as well as additional information collected in Task 1, we will model existing building energy loads (heating/electricity). The purpose of this exercise is two-fold: to compare simulated energy loads and proposed energy saving improvements to evaluate the cost-benefit and to use in the sizing of proposed mechanical and electrical systems.

Task 3: Evaluating Energy Conservation Measures (ECM's)

With building energy loads in hand, we will be able to evaluate the overall effectiveness of different ECM's. We will analyze appropriate building envelope thermal improvements, plumbing system improvements, electrical/lighting system improvements and heating system improvements. For heating systems natural gas, wood pellets and air-to-air heat pumps will be included in that analysis. Cooling for the office area, the gymnasium and the entire building will be considered as part of the analysis. The goal of this task is to identify which ECM's have the ability to result in the best long-term cost savings for the initial investment.

Task 4: Phasing

We understand that you may wish to phase ECM's that are beyond the budget of the current project, and so Oak Point will assess which ECM's make sense to prioritize based on a number of factors (initial cost, greatest overall payback, constructability relative to the current project, quickly evolving technology, etc.). We will also consider the scalability of various heating/cooling systems relative to future growth. Finally, based on phasing, we will advise as to changes in the current concept design that we would recommend in order to implement the planned energy efficiency projects. We will meet with you during Task 3/4 to discuss our findings and to get input from you relative to phasing.
The result of our assessment will be a brief report that summarizes the work.

Proposed Schedule:

We propose to complete this work within 4 weeks of Notice to Proceed.

Fee

We estimate the fees and expenses for this project to be as follows:

Basic Services	$15,000
Reimbursable Expenses	Per the attached rate sheet

The Basic Services fee outlined above represents Oak Point Associates' estimate for completion of the work. In the event that the final project varies from the assumptions that form the basis for this proposal, a new proposal and estimate fee schedule will be negotiated.

We look forward to working with you on this project. Please do not hesitate to contact me with any questions you may have.

Regards,

Allison Towne DiMatteo, MLLA, LEED AP
Project Manager

RATE SCHEDULE

Principal	$150.00/hour
Associate Engineer	$125.00/hour
Associate Architect	$125.00/hour
Senior Interior Designer	$110.00/hour
Senior Architect	$110.00/hour
Senior Engineer	$110.00/hour
Interior Designer	$100.00/hour
Landscape Architect	$100.00/hour
Project Coordinator	$100.00/hour
Project Architect	$ 90.00/hour
Project Engineer	$ 90.00/hour
Engineer	$ 80.00/hour
Senior Designer	$ 80.00/hour
Designer	$ 60.00/hour
Engineering Technician	$ 70.00/hour
Senior CAD Operator	$ 75.00/hour
CAD Operator/Drafter	$ 60.00/hour
Administrative Specialist	$ 70.00/hour
Typist	$ 50.00/hour
Mileage	$0.50/mile
Blueprints	$0.50/sf
Copies	$0.20 each
Expenses	At Cost + 10%
Consultants	At Cost + 10%

03/13

Allison Towne

From: Nathan Poore [npoore@town.falmouth.me.us]
Sent: Tuesday, March 25, 2014 3:54 PM
To: Allison Towne
Cc: Lucky D'Ascanio
Subject: Mason Motz

Hi Allison,

Lucky and I met with a Town Councilor, the Town's energy sustainability coordinator and two residents this morning to discuss how we might incorporate more emphasis on energy efficiency for the Mason Motz project. We developed a plan that will need assistance from Oak Point or a subcontractor to Oak Point. We thought about whether to hire a separate energy efficiency designer or engineer with highly qualified expertise but we decided that the process would be far more efficient to utilize the services of Oak Point. We believe that Oak Point has had great success with designing very energy efficient buildings but we are less familiar with your work in this area as it pertains to renovations. I believe we will have high expectations for whomever is assigned to this aspect of the project and will rely on your recommendation. I am hoping this additional service will not delay the project and offer you the following expectations for the additional service:

1. Obtain the services of a highly qualified energy efficiency designer/engineer with experience in building renovations similar to the Mason Motz building.
2. Develop a plan that could incorporate energy efficiency upgrades in phases. We believe that the improvements you have designed for the project will not preclude a subsequent phasing of energy efficiency improvements at a later date. We will need to know if this possible and what steps we may want to alter in the current design such as delay painting, carpet, other finish work due to additional construction in the future. Design should include an audit which identifies current issues and proposed solutions for insulation, windows, doors, roof, heating system options, renewable energy (geo-thermal, solar panels on the roof, etc), and any other items to consider.
3. The additional energy efficiency upgrades should be a stand alone decisions with the exception of a new heating system which will have to be part of the current project. In other words, we are hoping that the current design options can proceed and be completed with or without the future energy efficiency upgrades. Future decisions about energy efficient design options would be a stand alone project that will need pay-back analysis to determine the value of the investment.
4. We would like to have an analysis performed on heating options including natural gas, wood pellets, and heat pumps. Consideration should include whether the system could be added to or accommodate an addition and/or future heat source for the Plummer building. We think natural gas through a cascade system could accommodate growth but perhaps the other options will not but we need to have this verified through a design and analysis. We also do not want to overbuild the heating system initially in the event that energy efficiency upgrades require less output from the heating system.
5. Describe what changes, if any, must occur to the current design to accommodate future energy efficiency upgrades.

We would like you to offer us a scope and cost estimate for this service in advance of the April 16 Town Council meeting. We would also like to see a schedule that includes energy efficiency upgrade design, final design of current project design, bidding (including bid alts for energy efficiency upgrades), contract award, and construction. We have flexibility in the construction schedule for everything except the installation of a new heating system which should be operable by November 1, 2014.

I agreed to write this email to you while Lucky is attending a conference but we would like you to continue to rely on Lucky as your primary point of contact.

Thank you for your assistance with this project.

Best regards,

Nathan A. Poore, Town Manager
Town of Falmouth
271 Falmouth Road
Falmouth Maine 04105

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