

GREENHOUSE GAS EMISSIONS REDUCTION FUND
Quarterly Progress Report Form

The first quarter grant report is due March 1, 2010.

Instructions:

- *Please refer to Exhibits A & B of your contract.*
- *Exhibit A outlines the tasks that you agreed to complete. **Your report should explain the work done on each task to date and the percentage of completion.***
- *Exhibit B refers to your payment schedule. Invoices will not be processed without supporting documentation on hours worked. Payment will only be made on work that relates to the contract.*
- *Please submit the report electronically in a Word format. This will allow us to cut & paste for program summaries. Attachments and supporting documents can be provided in hard copy, but pdf versions, where appropriate, are greatly appreciated.*

1. Program Title: **New Hampshire Institute of Art
88 Lowell Street Project
Manchester, NH**

2. Program Type: **This project proposes to provide eleven (11) teaching spaces and fifty-five (55) dormitory beds in a renovated historic building and newly constructed addition on a single downtown property in Manchester. This project is pursuing LEED Gold Certification and the nature of the program fits more than one type of program listed on page 3 of the RFP including 6, 8, 9, 10 and 12.**

3. Summary of work completed during this reporting period **October 21, 2009 through January 31, 2010.**
 - *Provide a summary of activities relevant to this grant using Exhibit A of your contract as an outline.*The project, as described in the application, details four specific items that the Institute accomplished during the grant period. The Institute is proud to report that all items have been successfully completed and details are provided below for each aspect of the project.

Task 1: Place the historic building over a fully insulated basement, insulate the walls and ceiling, and install low energy double paned windows. The addition will have low energy tinted double paned windows, tight air and vapor barriers, and white reflective roofing.

In February 2009, the Institute moved the historic, two-story, brick building following extensive excavation of the foundation and immediately began the framing and concrete work to establish the full, insulated basement proposed. The “basement” of the historic building was originally a dirt crawl space that contributed to some of the environmental deterioration of the structure. By installing a full basement, the Institute not only gained educational space, but also helped to ensure the longevity of the building.

Within the complete scope of work, the Institute installed a high performance envelope in both the historic and contemporary buildings in an effort to minimize energy consumption. The superior building envelope reduces heating and cooling needs and makes the building more comfortable. Some envelope highlights include: continuous exterior insulation, high-density interior insulation, pressure equalized rain-screen siding strategy and multi-layered exterior wall composition. The use of regional and recycled materials promotes building performance and indoor air quality. Materials used

include: cellulose insulation made of recycled newspaper, cotton insulation made of recycled blue jeans, mineral fiber insulation made of recycled iron slag, linoleum flooring throughout the building made of linseed oil on jute backing and rubber flooring in high traffic areas made of natural rubber.

To honor the historic architectural elements, the Institute installed double-pane, Amoskeag-green windows that mirrored the original windows of the historic building. Double-pane windows were installed in the contemporary addition to compliment the energy saving efforts of the high performance envelope. Exterior horizontal sunshades and vertical sun fins were added to the contemporary structure to reduce interior solar heat creation.

On the contemporary building, a light-colored roof helps to reduce re-radiation of solar energy while the green roof on the connector between the buildings absorbs and retains rainwater, holding it back during a storm event when the rainwater collection system is overloaded. Both roofs help to limit the urban heat island effect, which is common in urban areas.

Each of these items are 100% complete.

Task 2: Install a geothermal heating and cooling system with two 1,500 foot deep geothermal wells.

In June 2009, the Institute began drilling for two geothermal wells for the heating and cooling system. The wells were successfully completed in July 2009, at which time the geothermal system was installed. Project uses two 1800' wells drilled into the site as a heat exchanger linked to a series of heat pumps within the building that respond to heating & cooling needs. Each major space has its own heat pump, which reduces energy use. With greater control and comfort, energy recovery ventilation units pre-heat incoming fresh ventilation air with outgoing stale exhaust air.

This item is 100% complete.

Task 3: Reduce water consumption and offsite runoff with a vegetated roof, low flow showerheads, toilets, and lavatories and harvested rainwater for flushing toilets.

The Institute installed in August 2009 a comprehensive rainwater collection system on the lot, which filters water from the roof and sides of the contemporary building, the sides and a portion of the roof from the historic building and the ground of the lot. The rainwater harvest system stores and uses rainwater coming off the roof to flush toilets thereby saving water and energy and further helping to not overload the city's combined sewer/stormwater system.

This item is 100% complete.

Task 4: Develop a diagrammatic description of the green energy system that will be displayed on the first floor corridors of the building. The diagrams and descriptions will be offered to K-12 school programs and the general public.

In November 2009, following a campus wide competition, the Institute installed a mural on the second floor of the contemporary building to promote the use of green energies. The mural describes both through visual art and written elements, the variety of alternative energies used, recycled materials used and energy impact of the project. Complimenting the mural are two, glass viewing cases in the mural to allow public viewing of the geothermal piping. In the boiler room, the Institute took great care in creating and displaying signage on each of the systems that support the building. The signage provides descriptions of the rainwater collection system, geothermal pumps, photovoltaic collection system and much more.

Since the opening of the facility, the Institute has hosted a variety of public events and meetings which include the Manchester Joint Sustainability Committee, Build Green NH, the Southern New Hampshire Planning Commission, public and private K-12 groups, the NH Business Committee for the Arts, and NHIA Board and committee meetings. In addition, the Institute hosted a “Topping Off” and grand opening celebration for the public.

This item is 100% complete and will continue to be provided to the public.

- *Discuss any benefit your activities may have had for low income residents.*

The project was not designed as a low-income residential project. However, the project will continue to serve residential and commuting students who are eligible for institutional or federal financial aid. Of the total enrolled Bachelor of Fine Arts student population, federal aid is distributed based on household income as defined by FAFSA rules. Of the student population, 91% receive institutional or federal student aid. Of that population 57% are residential students. Approximately 50% of the project will be designed for residential use and 50% for academic use, translating to 100% of aid-supported students living or taking courses within the building.

- *Note any problems or delays.*

The project was completed on time by Milestone Engineering and Construction.

- *Note any deviation from the work-plan. **If you have a deviation from the plan, you should contact us before proceeding.***

4. Summarize work to be completed next quarter: **February 1, 2010 – April 30, 2010.**

None

5. Please document any jobs created.

During the heaviest months of construction, the construction activity alone provided 65 full-time equivalent jobs. The Institute has added 3 full-time equivalent jobs to support the building and educational mission.

6. Explain any obstacles encountered or any milestones not reached.

None

7. If applicable, in a section labeled *Beyond the Contract* (or some other well defined title), please report other activities, partnerships, funding or other synergies that have occurred as a result of this funding.

8. If applicable, please include brochures, workshop announcements, or other materials developed to promote your grant activities. Attachments (and other documentation) are appreciated.

9. Budget vs. Actual Expenditures: (if you have included this with your invoicing, there is no need to repeat for the quarterly report.) *Using the budget you submitted for the final approved grant proposal, please add a column and provide actual expenditures as well as match dollars for this quarter. (Save this worksheet for future reporting as we will want to see your quarterly expenditures as the project continues.*

Provided with Invoices.