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LEED PROJECTS

A Multi-family Project Transformed

The Courtyards at Twin Ponds achieves LEED® Silver



The **Courtyards at Twin Ponds** began as a typical multi-family construction project until the owner's interest was piqued when he read an article about high performance



The Courtyards at Twin Ponds Nashua, NH

Infill lot
Old HUD housing
demolished and new
buildings built on the
upgraded foundation

Reused Infrastructure
Roads, parking, water,
sewer

Heat Recovery
Ventilation

Heating/Cooling
Variable refrigerant flow
Air to Water to Air heat
pumps from Daikin. This
system provides heat
and hot water.

Water Management
Porous pavers at
courtyards promote
drainage and deliver
water to recreations
ponds.

Wall Insulation
Blown-in blanket
insulation with XPS foam
board on the exterior

Attic Insulation
A thin layer of spray
foam on top of the
ceiling drywall for air
sealing together with
loose cellulose in the
attic above

Low VOC paints, carpets

buildings written by Paul Leveille of The Jordan Institute. After inviting Paul to take a look at the plans and getting feedback about the advantages, the owner was convinced that **LEED®** certification would benefit both the project and the tenants in terms of healthy, comfortable, energy efficient buildings. By partnering with The Jordan Institute, the project team learned why green buildings make sense and how to best accomplish it within their budget.

For example, the first out of eighteen buildings had a steel stud structural insulated panel wall system that, upon further investigation, did not meet structural or thermal performance needs and was replaced with a wood framed version. The design continued to improve and ended up including a blown-in blanket system for the walls which were then wrapped with an inch of extruded polystyrene foam board on the exterior.

Learning about the advantages and savings of high performance buildings empowered the team to make informed decisions which earned the project a **LEED® Silver** certified designation. To read the full story, [click here](#) and scroll down, if needed.

For more information on Jordan's ability to improve your multi-family housing projects please contact Paul Leveille, High-Performance Building Specialist at 226-1009 ext 205 or pleveille@jordaninstitute.org.

Nashua City Hall

Happier occupants, happier taxpayers

In 2008, Nashua City Hall was often an uncomfortable place to work. Built in 1938 and poorly maintained over the years, the heating system had limited controls. During the heating season, it was not unusual for the heat and air conditioning to be on at the same time, in the same room. While some of the building occupants were too hot others were cold, all at the same time. And the original steel-framed single pane windows added to the discomfort during the cold winter days.



Left: old, single pane window with AC unit Right: new Energy Star, operable window

That's when **The Jordan Institute** was called in to assess the building and its systems, and then make recommendations for energy improvements. Jordan's team, led by David Bryson, has been working with the City of Nashua for the past 2 years to manage the renovation from beginning to end. As the Project Manager and the single point of contact, he has been responsible for pre-construction management, quality control and quality assurance, project coordination, oversight and communications.

To begin with, a full building inspection was performed, including a blower door test to assess air infiltration and IR thermal imaging to determine the insulation needs. Working with the city, The Jordan team brought in various consultants including mechanical engineers and contractors and a lighting designer to further determine the existing conditions, brainstorm energy efficient solutions and a concept design, and provide



l to r: Jay Hunnewell, Bldg. Mgr.,
Nashua Mayor Lozeau, and Patti
Rogers, Citizen Services
Director, inspect the cupola atop City
Hall.

estimates to complete the project.

After pre-qualifying the best-in-class resources in the region - architects, engineers and contractors, Jordan's team worked closely with the City's Purchasing Department to prepare the Requests for Proposals for the design team and then managed the ensuing bidding process for the Contractors. **The Jordan Institute** is now overseeing and coordinating the implementation of the energy improvements, which are underway and slated for completion by the end of 2010.

New roofs with added foam insulation, Energy Star windows, replacement of all steam traps, an upgraded HVAC system with heat pumps and ERVs, and an automated building controls system will all contribute to increased occupant comfort, and reduced energy and maintenance bills.

Maintaining and operating older city buildings can be extremely challenging and costly. This is one example of how a well coordinated team of professionals with expertise in building systems and new technologies can produce results that benefit both people and the bottom line.

For full details on the scope of work, [click here](#).

Enterprise Energy Fund = Help for Business and Nonprofits

The [Enterprise Energy Fund](#), a low-interest revolving loan and grant program, is available to businesses and non-profit organizations to help finance energy improvements and renewable energy projects in their buildings. The Enterprise Energy Fund is administered by the [Community Development Finance Authority](#) (CDFA), [New Hampshire Community Loan Fund](#), and [The Jordan Institute](#) and funded by the [American Recovery and Reinvestment Act](#) through the US Department of Energy and the [NH Office of Energy and Planning](#). **Jordan** is pleased to be part of this team providing climate change solutions through reducing energy use in buildings.

Jordan is under contract with CDFA to serve as technical advisor to the Enterprise Energy Fund. We review all energy components of applications. If an applicant requests an energy audit, Jordan performs the audit. **The Enterprise Energy Fund** pays for half of the cost of these audits for for-profit businesses and three quarters of the cost for non-profit entities upfront, with the remaining portion of the audit cost forgiven if the project is financed through the Enterprise Energy Fund. Jordan helps borrowers determine the energy improvements to implement. When the audit is complete, the applicant is encouraged to seek a loan from the Enterprise Energy Fund to implement the recommendations.

The **Enterprise Energy Fund** is available for energy-related improvements to buildings owned by businesses and nonprofits. Examples of funded activities include:

- Improvements to the building's envelope, including air sealing and insulation in the walls, attics, and foundations;
- Improvements to HVAC equipment and air exchange systems;
- Installation of renewable energy systems; and
- Improvements to lighting, motors, pumps, and other electrical equipment.

Benefits include enhanced occupant comfort, lower operating and maintenance costs, and reduced green house gas emissions.

Interested building owners should apply on-line at www.nhcdfa.grants.org. For more information go to [The Energy Enterprise Fund](#).



New Hampshire
Community Development Finance Authority

LEED for Homes training

Introduction to LEED for Homes

4 AIA HSW/SD CEUs
Thursday, November 4th
10:30 AM to 3:00 PM
The Grappone Center, Concord, NH

This course will take place at the [Building NH Trade Show and Conference](#),

This training will introduce you to the basics of the [US Green Building Council's](#) LEED for Homes program (Leadership in Energy and Environmental Design). You'll learn the process and steps involved in getting a home certified and gain a clearer understanding of the importance of integrated design and durability planning. The course will give you a brief overview of how and why credits are awarded for each scoring category. A LEED project Case Review will be presented and discussed. See our [website](#) for details.



The training will be given by **Hilary Harris, AIA, LEED AP**, the LEED for Homes Program Manager at the Jordan Institute and **Paul Leveille, Assoc. AIA, CBCP, LEED AP**, a LEED for Homes Green Rater. Both Hilary and Paul are High Performance Building Specialists at *The Jordan Institute*.

Building NH Trade Show & Conference



BUILDING
NEW HAMPSHIRE

TRADE SHOW & CONFERENCE

Energy Efficient, Sustainable Building

November 2, 3 & 4, 2010

Grappone Center, Concord NH

Visit The Jordan Institute's booth in the Exhibit Hall to find out about EUI and recent LEED projects. We'll also be part of the "**Green Certification Roundtable**" discussion on Wednesday, Nov. 3rd at 8:30 AM. See you there!

For builders, architects, engineers, interior designers and anyone else involved in energy smart, healthy residential design and building, the Building NH Trade Show and Conference offers an abundance of educational presentations and trade exhibits as well as the opportunity to network. Visit www.buildingnh.com to see the full 3-day schedule.



About Us

Questions, comments, interested in learning more about what we do, email us at:
info@thejordaninstitute.org