

# WINTERGREEN

Volume 10, Issue 4

April 2009

A monthly update on Steven Winter Associates, Inc.'s work in the realm of Energy Efficient, Sustainable, and High-Performance Buildings

## Greening Brooklyn with The Hudson Companies Incorporated



Panelized Wall System



Dual Flush at Hudson's office

When **The Hudson Companies Incorporated** launched an initiative to develop more sustainable buildings they called on SWA to lead a series of green design charrettes. As a result, SWA worked closely with the development and design teams to customize a set of cost-effective measures to achieve ENERGY STAR performance and capture incentives through **NYSERDA's Multifamily Performance Program** as well as certification under the **LEED for Homes Mid-rise Pilot** rating system. Two of the projects have recently begun construction and are profiled here.

**Third & Bond** located at the intersection of the Carroll Gardens and Gowanus neighborhoods is expected to achieve a Gold rating through the LEED for Homes Pilot as well as Multifamily ENERGY STAR.

The 44-unit building features abundant daylighting utilizing Energy Star windows along with a high-performing building envelope using **Signature Metals** panelized walls fabricated locally in New Jersey. Mechanical design includes high-efficiency heating and domestic hot water systems along with non-HCFC cooling units. The building will also feature ERV's (Energy Recovery Ventilators) with continuously filtered fresh air to apartments. Interior finishes include low-VOC products as well as FSC-certified wood flooring.

Not content to simply specify low-flow fixtures, Hudson did their homework on dual-flush toilets using the Maximum Performance (MaP) testing publications and had the **Toto** dual-flush unit (pictured on the left) installed at their office last year. With no issues reported Hudson is confidently moving ahead with their choice for the 80 water closets in the project.

**Knickerbocker Condominiums** is slated to be the first substantial renovation project to achieve both Multifamily ENERGY STAR as well as LEED for Homes certifications. This innovative re-use project in Bushwick consists of three previous mixed-use structures for a total of 49 residential units. Features here include individually-controlled, high-efficiency, combined heating and domestic hot water boilers, and air conditioning units. As part of the compartmentalization strategy, all apartments will utilize Energy Star windows with integrated trickle ventilators for fresh air supply. Additional features include re-use of existing structural walls and foundations, bicycle storage, and the use of natural and recycled materials throughout the building.

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Rogers Marvel Architects, PLLC



Oaklander Coogan and Vitto, P.C

## Land Fill Gas Recovery Facility Receives Award from EPA



Caterpillar engine generator



Ventilation system



Solar panels

## Walking the Walk

For more information  
visit the SWA Website:  
[swinter.com](http://swinter.com)

PPL Renewable Energy of Allentown, PA is the owner and operator of the 3.2-megawatt methane-to-electricity plant at the **Greater Lebanon Refuse Authority (GLRA) Landfill** in Lebanon, PA. The plant uses methane gas collected from the GLRA Landfill to fuel two **Caterpillar** engine generators, which convert the methane gas to electricity – sufficient to power approximately 2,000 homes in Lebanon.

Steven Winter Associates, Inc., provided coordination services for the 3,000 square foot building which contains the two engine generators and associated mechanical equipment, an electrical switchgear room, and numerous outside concrete pads and steel framed structures that support mounted mechanical equipment. The building also has a **Renewable Energy Education Facility** which has hosted more than 2,000 students, teachers, and community groups since it became operational in September 2007. **SCS Engineers, PC**, are the lead environmental engineers for the landfill gas (LFG) recovery systems on the site and within the building. **Kafrouni Engineering** was the structural engineer for the reinforced masonry and steel frame structures. Close integration by all designers and equipment suppliers was necessary to coordinate the equipment requirements for air intake and generator exhaust.

The LFG recovery facility, with its 2,000 watt wind turbine and 1,000 watt solar array to generate power, demonstrates the cost-effectiveness of renewable energy resources. The LFG Facility benefits the environment by reducing greenhouse gas (GHG) emissions of methane by 6,375 tons per year and carbon dioxide by 19,500 tons per year. Methane is approximately 20 times worse than carbon dioxide as a heat trapping GHG. In addition the plant improves local outdoor air quality and reduces landfill odor emissions. The project received a Community Partner of the Year Award under the Landfill Methane Outreach Program (LMOP) of the U.S. Environmental Protection Agency (EPA). According to the EPA award notice, emissions reductions are estimated at 0.0375 million metric tons of carbon equivalents. This is roughly equal to the carbon sequestered annually by 31,200 acres of pine or fir forests or the annual greenhouse gas emissions from 25,200 passenger vehicles. This project shows GLRA and PPL's commitment to energy and environmental education.

For more information, contact Ed Acker, [acker@swinter.com](mailto:acker@swinter.com).

SWA Senior Architect Bill Zoeller has just received a LEED Silver Certification for the new home he designed and built for his family in Wilton, CT. The 2,500 square foot, four-bedroom home utilizes modular construction, a pre-insulated precast foundation, a 93% AFUE condensing oil boiler, and a 2-ton variable-speed 16 SEER cooling system. Also incorporated are foam-covered, insulation-buried ducts and hydronic radiation matched to low-temperature hot-water delivery with outdoor reset controls assuring that the boiler operates in condensing mode nearly 100% of the time. Along with excellent air-sealing and passive design strategies (60% of the glass and all the major rooms except the guestroom/office face south), the home received a HERS Index of 54. Like all homes architects build for themselves, it's almost done.

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GLRA in Lebanon, PA



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