

# WINTERGREEN

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

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## ***Green Rehab for Affordable Housing***

Washington, D.C.'s Public Housing Scattered Site Demonstration Project targets vacant public housing that has fallen into disrepair for renovation into low-cost, energy-efficient housing. Steven Winter Associates, Inc. (SWA) is providing technical assistance through the **U.S. Department of Housing and Urban Development's Partnership for Advancing Technology in Housing**



**(PATH)** program. Seven nonprofit developers in the District have formed the Homeownership Group to rehabilitate approximately 75 apartments as affordable units. One nonprofit, **Manna**, is rehabilitating 36 units, comprised of two- and three-family townhouses (see photo). To date, Manna has completed construction on 16 units, about half of which have been sold. Five units are currently under construction. The remaining 15 units will form the University Place Cooperative (UPC), which is the focus of SWA's work. Manna's goal is to incorporate environmentally sustainable building materials into the project, optimize HVAC performance and energy conservation, and educate local subcontractors about new materials and construction methods. PATH is conducting initial plan reviews for one of the townhouses, which will be followed by site visits and the development of a preliminary list of PATH-identified technologies. The other units are in the schematic design phase, giving SWA the opportunity to integrate more fundamental alternatives such as entire MEP systems.

## ***Sustainability in the City***

The **City of New York** oversees a large volume of construction for its various facilities. Thanks to its **Department of Design and Construction's Office of Sustainable Design**, the effort to advance sustainability in the Big Apple has received a boost. In a move to incorporate green specifications in the City's Design Guide for Consultants—a standard document issued to all architects working on City projects—DDC contracted with SWA to incorporate indoor air quality and other environmental measures into the Guide. Last year, SWA included recommendations for recycled-content materials. Some of the items being investigated for inclusion in the new section include low-VOC paints, adhesives, and sealants; low-toxicity carpeting; engineered wood; non-CCA treated wood; and linoleum. With an emphasis on materials that do not substantially increase costs, SWA is establishing target environmental criteria, compiling lists of products that perform to these criteria, and providing appropriate specification language.

## Short Payback on Long Island

If you were considering energy-saving techniques in your project, how long would you be willing to wait for a payback? Thanks to incentives from the **Long Island Power Authority's EnergyWise Commercial Construction Program**, the Town of South Huntington will save over \$42,000 per year, resulting in a payback of only 1.6 years after initial occupancy of the South Huntington Public Library. **Beatty, Harvey and Associates, Architects** designed the library (see rendering), which incorporates extensive daylighting. SWA analyzed a raft of energy conservation measures (ECMs), using DOE-2.1E modeling software, and quantified the savings achievable through combining the following ECMs: low-E glazing, high-efficiency lighting, daylight dimming, occupancy sensors, high-efficiency packaged air conditioners, enthalpy control, night thermostat setback, discharge temperature reset, optimum start/stop, and warmest zone reset. LIPA hopes to meet electrical demand without building costly new power plants, while the public benefits from reduced emissions. For example, reducing carbon dioxide emissions by 154 tons per year (see table) is equivalent to that produced by 19 automobiles annually. LIPA's approach to "whole building design" is to fund an energy consultant, such as SWA, who will work together with the owner and the design team from concept to completion, to incorporate energy efficient measures into the building. In this case, LIPA will provide approximately \$118,000 in incentives as well as supporting SWA's analysis. More information on LIPA's rebate programs can be found on its website, [www.lipower.org](http://www.lipower.org).



| Annual Electricity and Emission Levels   | New York State Code | Library as Designed | Savings |
|--|---------------------|---------------------|---------|
| Electricity (kWh):                       | 1,062,456           | 714,285             | 348,171 |
| Carbon Dioxide CO <sub>2</sub> (tons)    | 469                 | 315                 | 154     |
| Oxides of Nitrogen NO <sub>x</sub> (lbs) | 1,417               | 952                 | 464     |
| Sulfur Dioxide SO <sub>2</sub> (lbs)     | 1,842               | 1,238               | 603     |

## The ABCs of Sustainable Schools

The **Sustainable Buildings Industry Council**, managed by SWA, has conducted two more successful *High Performance School Buildings* workshops on behalf of the **U.S. Department of Energy** and **Oak Ridge National Laboratory**. The two-day workshops, held in Washington, D.C. and Flint, Michigan, follow up on the first sessions conducted in New Hampshire, California, and Maryland covered in the August, 2001 issue of *WinterGREEN*. Presented in the context of a "whole building" integrated design approach while detailing the many components of good school design, the workshops teach school officials, superintendents, school board members, and other decision-makers about the benefits of school buildings that are healthy and productive for their occupants, cost effective, and sustainable. The workshops also provide specific design strategies for A/Es and school facility planners. Future workshops are planned for Indiana, Pennsylvania, and Missouri. For more information on SBIC's Schools Program, contact Ellen Larson at [el Larson@sbicouncil.org](mailto:el Larson@sbicouncil.org).

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

*WinterGREEN* is published monthly by Steven Winter Associates, Inc., 50 Washington Street, Norwalk, CT 06854. SWA is solely responsible for content and cost of publication. If you prefer to receive *WinterGREEN* by email, or for further information contact Michael J. Crosbie at SWA, phone 203-857-0200, fax 203-852\_0741, e-mail: [mcrosbie@swinter.com](mailto:mcrosbie@swinter.com). Visit us at [www.swinter.com](http://www.swinter.com).