

GREEN BUILDINGS PROGRAM CASE STUDY



CHILDREN'S CENTER

MAKING NEW YORK CITY'S NEW CHILDREN'S CENTER A HEALTHIER PLACE TO BE

The New York State Energy Research and Development Authority (NYSERDA) worked with Steven Winter Associates and the New York City Department of Design and Construction to bring a mix of energy modeling, material recommendations, and life cycle cost analyses to renovate the historic Administration for Children's Services Center in New York City.

As a result of the study, the Center will use 33% less energy than a code-compliant building (saving more than \$99,500/year), eliminate 500 tons of CO₂ emissions annually, and improve indoor-air quality for the Center's occupants. The combined energy-efficiency strategies and systems recommended have a simple payback of 3.6 years, and will increase the construction budget by less than 0.5%.

The goal of this project was to renovate a building in an environmentally and economically responsible manner. Because the building is on the National Register of Historic Places, it was particularly challenging to preserve its historic character while incorporating modern technologies and ideas to improve its energy efficiency and environmental performance.



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Richard Dattner & Partners Architects and the Lakhani & Jordan Engineers implemented the following energy-efficiency improvements:

- Clear, argon-filled double pane windows, daylight dimming controls, and light shelves were installed to optimize the building's daylighting potential. These passive solar strategies were augmented with space-specific lighting to concentrate artificial light only where needed. This resulted in a reduced lighting load that allowed the cooling equipment to be down-sized. Lighting designs were provided by Ann Kale Associates.
- The building will use modular electric chillers and utility steam for heating, cooling and hot water. A variable-air volume (VAV) system with variable-speed drive will be installed to provide ventilation, which will be controlled by CO₂ sensors.
- Recycled cellulose insulation, heat recovery, resilient and hard-surface flooring, CFC-free insulation, low-emitting products such as paints, adhesives, finishes, and high recycled-content ceiling tiles will also be installed to reduce the building's impact on the environment.

NYSERDA's Green Buildings program provides computer modeling and materials analysis to building design teams to help make new and rehabilitated commercial, industrial, and institutional buildings environmentally responsible, economically viable, and healthier places in which to work. For more information about these services, contact NYSERDA toll free 1-866-NYSERDA, locally or e-mail: info@nyserdera.org