

CASE STUDY



The Solaire Sets Standard for Sustainability

Coordination, innovation and concrete make landmark building possible

Since late summer 2003, hundreds have called The Solaire home. The nation's first green residential high-rise building is just blocks away from ground zero in lower Manhattan's Battery Park City, and is the product of a first-ever coordination of three green-building guidelines. A concrete structural system is at the core of the environmentally engineered and sustainable building.

The \$120-million Solaire stands 27 stories tall with 293 rental units. A reinforced concrete structural system was chosen in large part because its thermal mass moderates daily temperature swings and reduces energy needed for heating and cooling. Among its many environmental benefits, the building is designed to consume 35 percent less energy, a savings that is potentially worth five points toward the Leadership in Energy and Environmental Design (LEED) energy and atmosphere credit.

To make the project possible, developer Albanese Organization took advantage of New York State's Green Building Tax Credit, enacted in January 2001 to provide assistance to new projects. The Solaire also follows LEED certification requirements set by the U.S. Green Building Council (USGBC), and Residential Environmental Guidelines for New Construction set forth by Battery Park City. The Solaire is registered with USGBC with intent to become LEED-certified.

Marty Dettling, vice president of Albanese Organization and project manager for the building, says the combination of private and public desires to build green gave his company an added incentive to set a new standard. "We set an example that this is something realistic, that it can be achieved," he says.

To help meet recycled content standards for all applicable green guidelines, the project team designed a concrete mix with 3 to 4 percent fly ash. About 50 percent of the total building material was recycled content, and nearly 50 percent of all material was manufactured within 500 miles of the job site.

"The advantages of concrete are tremendous," says Silvan Marcus of The Cantor Seinuk Group, structural consultants on The Solaire. Construction standards in the New York area demand two-day cycles, and he says concrete can help project teams meet aggressive schedule goals. "There is no comparison with any other system in terms of speed of construction," he says.

With The Solaire a success, Albanese Organization is poised to start a new companion project: a sustainable high-rise residential building that will have concrete as its backbone. Construction will begin early in 2005.

Project Team:

Developer: Albanese Organization, Garden City

Design Architect: Cesar Pelli & Associates Architects

Architects: SLCE Architects

Structural Consultant: The Cantor Seinuk Group

General Contractor: Turner Construction Company

Concrete Producer: Empire Transit Mix