

# REAL ESTATE WEEKLY

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## 8 WAYS TO THE GREEN AT OCTAGON PARK

Eric Ettinger, PE, President, Ettinger Engineering Associates

Remember the energy shortages of the early seventies? It wasn't fun watching gasoline prices sky rocket and waiting 45 minutes to fill up your car. It was during that era that the Energy Research and Development Administration (ERDA) became the Department Of Energy (DOE) which still exists today. The DOE, in response to the energy crunch at that time, supported energy conservation on a large-scale. This ultimately gave rise to energy conservation modeling and the evolution of many of our accepted and ever improving energy conservation codes. Not only has the architectural and engineering community had to embrace and keep pace with continuously more stringent energy efficiency requirements, but so have building developers, contractors and equipment suppliers.

The economics of providing energy conservation and sustainable design and the implementation of environmentally conscious buildings don't necessarily mesh with humanities desire to respect all that is green around us. Therefore, to bring these goals together LEED's and the United States Green Building Council (USGBC) programs have created ways for developers, the environment, and most importantly the people to benefit.

Through the USGBC and other programs such as Energy Star and New York State Energy Research & Development Authority (NYSERDA), incentives for tax credits have been made available. This has spurred the private sector to not only comply but also participate in the creative process of innovation and application. Developers have found ways to use new technology and systems to change how buildings function and alter the effect that new construction has on our environment.

In response, the development and manufacture of environmentally and energy conscious products and equipment has risen in order to keep pace with demand.

At Octagon Park Apartments, the first Green Building to rise on Roosevelt Island, the challenge of reducing energy usage by 35% (35% reduction below standard is required to qualify) as well as using sustainable materials, achieving environmental conservation and protection of air quality was met after considerable planning. The Developer and Architect, Becker & Becker; Construction Manager, Gotham Constuction; Consulting Architect, Schuman, Lichtenstein, Claman, Efron Architects; Mechanical, Plumbing, Electrical and Fire Protection Engineers, Ettinger Engineering Associates; and Energy Consultant, Stephen Winters Associates all participated in extensive discussion and analysis before reaching the desired design formula to make this magnificent new 13 story, 500 dwelling unit, 550,000 square foot rental apartment building certifiable as a Green Building.

In order to achieve the necessary energy conservation requirements the team chose to install high efficiency gas fired condensing boilers, high EER water source heat pumps, photo voltaic cells, air-to-air and water-to-water heat recovery equipment and occupancy sensors in order to reduce energy dependence and consumption. Variable frequency drives, premium efficiency motors and programmable thermostats were also employed to cut the buildings energy dependency. Passive building elements such as thermally improved walls and windows (Viracon VE-1-2M insulating glass with Argon) were chosen to greatly

reduce energy usage. One interesting innovation was achieved by preheating pool water via heat pump condenser water during the summer months.

Materials were selected to meet specific goals including recycled content, rapidly renewable sources and local manufacturing and harvest. The concrete, steel, insulation, and metalwork all contain recycled materials. All interior wood doors and millwork utilize formaldehyde free wood. Kitchen cabinets are to be constructed from wheatboard, a rapidly renewable material. The closest source for the project's building components weighed heavily in their selection. Indoor air quality will be maintained during construction by monitored air filtration to meet guidelines and after occupancy levels of CO<sub>2</sub>, CO, Formaldehyde, Radon, particulates and VOC will be monitored for 5 years to meet EPA guidelines.

Overall compliance will be insured during and after construction by Flack and Kurtz Engineers who will serve as commissioning agents for the project.

Obviously there were more than 8 ways to green at Octagon Park. The process entailed detailed comparison, analysis and research to find the unique mix which worked for this exceptional building. With the evolution of energy conservation and with the help and impetus provided by LEEDS, and Green Building programs it becomes possible to develop a sustainable, beautiful and beneficial building like Octagon Park Apartments. While preserving the original beauty and distinctiveness of the Octagon Building, Octagon Park is creating modern, energy efficient, clean, environmentally harmonious space for people.