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A New Roof That Works for a Living

By ALISON GREGOR

THERE are green roofs, and then there are green roofs.

So when residents of Zeckendorf Towers, the condominium complex at One Irving Place on the east side of Union Square, voted to replace an aging conventional roof with an environmentally friendly one, they decided that a basic installation at \$10 square foot — essentially sod and unlandscaped greenery — would not do. Instead, they chose elaborate landscaping with small hills, a wide variety of vegetation, pathways with paving stones and dramatic lighting.

The result is one of the city's largest green roofs, at 14,000 square feet. Installation of the seventh-floor rooftop, over a branch of [Beth Israel Medical Center](#) and bookended by four 29-story condo towers, began in April and was finished in October.

Although it is in winter mode, residents are already enjoying the visual benefits of the roof, which cost \$330,000, or about \$23.50 a square foot (minus a \$60,000 one-time tax abatement from the city). The condominium paid for it from their reserve fund, said Hazel MacMurray, a board member at Zeckendorf Towers.

Residents, other than a handful who have private terraces, don't have access to the roof, but for the rest, "The beauty is looking at it," Ms. MacMurray said, adding, "You can see them just looking out. They're experiencing the garden, and it just changes their lifestyle."

Ms. MacMurray said she also anticipated that the green roof would benefit property values at Zeckendorf Towers. Currently, studio, one- and two-bedroom condos in the 670-unit full-block development, which was built in the 1980s, are listed at a median price of \$1,315 a square foot, according to [Streeteasy.com](#).

But any increase in values will last only as long as it takes for other buildings to catch on and retrofit their own rooftops, said Darren Sukenik, a managing director at Prudential Douglas Elliman and a top agent in Zeckendorf Towers. Many new residential develop



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Zeckendorf Towers' roof designer, New York Green Roofs, went to great lengths to make an all-season attraction for residents, said Amy Falder, a partner in the company. Witch hazel will burst into small yellow flowers in January, and striking plants like Japanese maple will have brilliant red foliage throughout summer and fall. Dogwood will display white blooms in spring, and anemones and balloon flowers will add to the profusion of color in summer and fall. Rhododendrons and upside-down ferns remain green year round. For the holidays, lights have been strung from tree branches.

Advocates say that green roofs, which have been common in Europe for years, offer a variety of benefits. First, the vegetation protects the roof's membrane from cycles of freezing and thawing that can tear it, as well as from ultraviolet light that can wear it out, Ms. Falder said. This doubles the life of a green roof over a conventional one.

Also, a green roof provides insulation that makes the building envelope more energy efficient. Vegetation protects the roof from the wind in winter, and when covered in snow, the rooftop can be particularly effective at retaining the building's heat, Mr. Brunner said. The rooftop's cooling effects are even more pronounced in summer, when the vegetation can cut rooftop temperatures in half.

An analysis of green and black roofs published this year by Columbia University found that an unshaded green roof of 1,000 square meters (about 10,750 square feet) could save \$330 to \$350 a year in heating costs and \$225 a year in cooling costs. In the case of Zeckendorf Towers, the energy benefits of its green rooftop will go to Beth Israel Medical Center, Ms. MacMurray said. The hospital space is a commercial condo, and Beth Israel is not paying for the roof.

Almost the entire rooftop at Zeckendorf Towers, even the tops of bulkheads, is covered in soil and mats of about a dozen species of sedum, which will transform into a carpet of green this spring, said Chris Brunner, another partner in New York Green Roofs, which has installed 35 green rooftops in the Northeast in the past five years, primarily in New York. Some species will take; others might not, he said, explaining that the roof will evolve over the years.

Ms. MacMurray said the whole city benefited when a green roof was built, because of their ability to retain storm water. According to a 2007 report by the environmental group [Riverkeeper](#), a 40-square-foot green rooftop can absorb 810 gallons annually. So each year Zeckendorf Towers' roof could prevent about 283,500 gallons of storm water from flowing into the city's sewers and its flood-prone subway system, which has a major station below the towers.

“This green roof was really done to try to progress this building from the 20th century into the

21st,” Ms. MacMurray said, “and there are enormous environmental benefits to doing that.”

This article has been revised to reflect the following correction:

Correction: January 2, 2011

Because of an editing error, the Posting column last Sunday, about the recent installation of a green roof at the Zeckendorf Towers condominium on Union Square, erroneously attributed a distinction to the roof. It is one of the largest green roofs in the city, not the largest.