



# Green Infrastructure & Stormwater Management CASE STUDY

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## 5 Boro Green Roof

**Location:** 5 Boro Complex,  
Randalls Island, New York City, NY

**Client:** NYC Parks & Recreation

**Design Firm(s):** NYC Parks &  
Recreation

**Landscape architect/Project  
contact:** John Robiloti & Artie  
Rollins

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**ASLA Chapter:** New York



### Project Specifications

**Project Description:** Twenty-five unique green roof systems side by side totaling over 29,000 sq/ft as of 3/2011. This is made up of 17 traditional systems, 6 non-traditional systems, as well as one green wall system and a 4,000 sq/ft vegetable farm. Stormwater retention system, some of which is dedicated to a specific system. All stormwater volumes can be linked into digital data collection systems. A sophisticated green roof monitoring system including a full weather station also tied into a digital data collection system.

### Project Type:

Government complex

A retrofit of an existing property

**Design features:** Green roof and cistern.

**This project was designed to meet the following specific requirements or mandates:** Not applicable

**Impervious area managed:** 1 acre to 5 acres

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** Not applicable

**The regulatory environment and regulator was** indifferent to the project.

**Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements?** Not applicable

### Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** \$100,000-\$500,000 (Public funding: Local - Long Island Sound Futures Fund LISFF provided two Grants, \$50,000 each, which funded two Xero-Flor Green roof Systems. The other 23 systems were funded with NYC Parks Expense funds estimated at \$100,000.)

**Related Information:** Labor: \$30,000 Material: \$70,000

**Was a green vs. grey cost analysis performed?** No

**Cost impact of conserving green/open space to the overall costs of the site design/development project:** Not applicable

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Slightly reduced costs (1-9% savings). water cost savings

**Number of jobs created:** All work done by in-house labor force and volunteers

**Job hours devoted to project:** Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Full time Seasonal line for 9 months

### Performance Measures

**Stormwater reduction performance analysis:**

100% of a 2-year storm is captured between the green roof and cisterns.

**Community & economic benefits that have resulted from the project:** Our green roofs have benefitted our own building in noticeable energy savings, substantial reduction of stormwater runoff, attracting wildlife, as well as providing a useable space for passive recreation.

### Project Recognition

"Long Island Sound Futures Fund" / "Best of Parks Greenest Initiative - 5 Boro Green Roof"

## Additional Information

Links to images: [http://www.nycgovparks.org/sub\\_about/sustainable\\_parks/green\\_roofs.html](http://www.nycgovparks.org/sub_about/sustainable_parks/green_roofs.html)

The 5 Boro Green Roof serves as a working laboratory for green roof design and construction not only for NYC Parks but also other governmental agencies, school groups, interested community groups, and the Press. It has not only garnered national interest but has gained international notoriety as well attracting visitors from England, France, Germany, the Ukraine, and the Netherlands.

