



Green Infrastructure & Stormwater Management CASE STUDY

Greenstreets - Sagamore St & Cruger Ave, Bronx

Location: Sagamore St & Cruger Ave, Bronx, New York City, NY

Client: NYC Parks & Recreation

Design Firm(s): NYC Parks & Recreation

Landscape architect/Project contact:

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ASLA Chapter: New York



Project Specifications

Project Description: The Greenstreet at Sagamore St. and Cruger Ave, Bronx, is a bioretention area that actively captures stormwater with one trench inlet allowing stormwater runoff to enter from the street. The profile of the bioretention area, installed in 2009, consists of three inches of mulch, two feet of Greenstreet soil mix, and one foot of ¾-inch crushed blue stone situated on top of shallow fractured bedrock. The bioretention area is planted with a variety of trees, shrubs and grasses. The site disconnects 4,204 sq/ft of previously impervious area from the combined sewer system. Intensive monitoring of the hydrologic performance of the bioretention area is being conducted through collaboration between Drexel University and NYCDPR including the collection of time series data of precipitation, street runoff, and soil moisture content within the bioretention area.

Project Type:

Transportation corridor/streetscape

A retrofit of an existing property

Design features: Bioretention facility, gravel reservoir, and trench inlet with Diamond Plate cover.

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

Impervious area managed: less than 5,000 sq/ft

Amount of existing green space/open space conserved or preserved for managing stormwater on site: less than 5,000 sq/ft

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? No.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$500,000-\$1,000,000 (Public funding: Local - NYC Parks Dept - Capital Budget)



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 – the site was located on existing impervious roadbed.

Cost impact of conserving green/open space for stormwater management over traditional site

design/site development approaches (grey infrastructure)? Not applicable - no existing green space

Number of jobs created: 0.6

Job hours devoted to project: Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

Disconnected 4,204 sq/ft of impervious surface from sewers

Community & economic benefits that have resulted from the project: Greenstreets not only beautify the urban landscape, but also calm busy traffic, clean the air, cool the city, sequester

carbon, increase pedestrian safety, provide environment for wildlife, mitigate flooding, and capture stormwater for irrigation.

Additional Information

Links to images: http://www.nycgovparks.org/sub_your_park/trees_greenstreets.html

http://www.nycgovparks.org/sub_your_park/trees_greenstreets/images/NYC_Greenstreets-Green_Infrastructure_for_Stormwater_Management.pdf