Green Infrastructure & Stormwater Management
CASE STUDY

Mill Creek Basketball Court

Location: 4700 Brown St., Philadelphia, PA
Client: Philadelphia Parks & Recreation
Design Firm(s): Philadelphia Department of Water
Landscape architect/Project contact: Jessica Brooks
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Photo Credit: Philadelphia Water Department

Project Specifications

Project Description: The Mill Creek Playground was built above the buried Mill Creek, which is now one of the largest combined sewers in Philadelphia. Before the porous basketball court project, the basketball courts at the playground were cracked and deteriorating with low spots that filled with water when it rained. To improve the quality of the courts and reduce the volume of stormwater that flows into the Mill Creek combined sewer, the basketball courts were retrofitted with porous asphalt over an infiltration bed. Rain that falls on the new basketball courts passes through the porous surface and is stored in a subsurface stone bed until it can soak into the ground. The porous basketball court system was designed to manage the rainfall that falls directly onto the two basketball courts, which occupy approximately 9,000 square feet of the playground.

Project Type:
Recreation Center / Open Space

A retrofit of an existing property

Design features: Porous pavement basketball court.

This project was designed to meet the following specific requirements or mandates:
Local ordinance

Impervious area managed: 5,000 sq./ft. to 1 acre.

Amount of existing green space/open space conserved or preserved for managing stormwater on site: N/A It was a project in an existing park.

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? Yes, use of existing green space, in the form of parks and floodplain areas was considered.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $100,000-$500,000 (Public funding: State, and Local)

Was a green vs. grey cost analysis performed? No

Number of jobs created: Not available

Job hours devoted to project:

Planning and Design:
Construction:
Annual Maintenance: 55 hours

Performance Measures

Stormwater reduction performance analysis; Philadelphia designs their systems to manage the first inch of every storm from the drainage area. The metric used is acre-inches. This project manages .38 acre-inches.

Community & economic benefits that have resulted from the project:

This site has served as an example for engineers and property owners who are considering porous asphalt on development projects. Having a successful local demonstration is giving designers the confidence to specify this material for their projects.

Additional Information

Links to images:

http://www.phillywatersheds.org/img/ASLA/Mill%20Creek%20Basketball%20Court_creditPWD.jpg