



# Green Infrastructure & Stormwater Management CASE STUDY

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## Pennsylvania Avenue SE

**Location:** Washington, D.C.

**Client:** District of Columbia Department of Transportation

**Design Firm(s):** Rhodesside Harwell; Athavale Lystad & Associates

**Landscape architect/Project contact:** Meredith Upchurch, ASLA

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**ASLA Chapter:** Potomac

### Project Specifications

**Project Description:** The Pennsylvania Avenue SE project is a D.C. Great Streets project, which promotes economic development through streetscape improvements. This 1.4-mile project meets stormwater requirements for part of the project by managing stormwater using low impact development. Stormwater management includes bioretention areas, permeable paving, and soil amendments. Additional green infrastructure includes impervious surface reduction, addition of a green median, improved street tree planting, and parkside natural plantings. Stormwater runoff from the street is reduced significantly before it flows into the Anacostia River and the Chesapeake Bay.

#### Project Type:

Transportation corridor/streetscape

A retrofit of an existing property

**Design features:** Bioretention facility, porous pavers, and curb cuts.

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

Local ordinance

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

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** 5,000 sq/ft to 1 acre

**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?** Adjacency to neighborhood, school, and park land were important considerations for finished product.

### **Cost & Jobs Analysis**

**Estimated Cost of Stormwater Project:** \$100,000-\$500,000 (Public funding: Federal, district)

**Related Information:** I can provide more detailed information.

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

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Slightly increased.

### **Performance Measures**

**Stormwater reduction performance analysis:**

LID Captures and treats 1.96 acres. 4 bioretention cells each provide at least ½ inch treatment and storage.

**Community & economic benefits that have resulted from the project:** Project under construction in 2010-2011.