



Green Infrastructure & Stormwater Management CASE STUDY

Carriage House Garden

Location: Amherst, MA

Client: Private

Design Firm(s): Joseph S. R. Volpe ASLA Landscape Architect

Landscape architect/Project contact: Joseph S. R. Volpe, ASLA

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ASLA Chapter: Boston

Project Specifications

Project Description: Transformation of an in-town barn, part of a home built in 1890, into a living unit. The steep site was damaged by repeated stormwater runoff from street during cloud bursts. The three-story barn sits on a steep site with the lowest floor near the bottom of the site, the second floor—the main floor of the barn with horse and carriage stalls— connected to an upper terrace, and the third floor, a storage for hay and grain, above all. Rainwater management was a key component in the design of a series of garden terraces with infiltration gardens including sculpted drainage ways as environmental art, gravel absorbing garden floors, rain gardens, and a small fountain with the collected rainwater as its source. Existing maple trees were saved, granite found on site and old foundation planting was recycled. The Carriage House Garden, as the choreographic sequence, reveals the course of the rain water as the participant strolls through the small terraced garden.

Project Type:

Multifamily residential

A retrofit of an existing property

Design features: Rain garden, bioswale, downspout removal, and porous pavers.

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

Developer/client preference

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 - asphalt driveway removal and replaced with a gravel garden terrace.

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? All the above.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$10,000-\$50,000 (Public funding: None)

Related Information: Trades persons,labor \$25,000. Materials \$20,000

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: No.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Significantly reduced costs (10% or greater savings).

Number of jobs created: 2

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:

80 % retained

Community & economic benefits that have resulted from the project: Increased property value effects

Project Recognition

BSLA award

Additional Information

Images will be on line soon



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