Green Infrastructure & Stormwater Management
CASE STUDY

Youngstown State University Gateway

Location: Youngstown, OH
Client: Youngstown State University
Design Firm(s): URS Corporation
Landscape architect/Project contact: Thomas Evans, ASLA
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ASLA Chapter: Ohio

Photo: Leann Andrews, ASLA

Project Specifications

Project Description: The Youngstown State University Gateway project represents the redevelopment of the dilapidated parking lots serving the University Visitor Center. The gateway project reorganized existing parking lots and incorporated bioswales and rain gardens

to treat runoff from 2 acres of parking lot runoff. The lushly planted bioswales and rain gardens provide a significant beautification boost to the first impression experience by visitors to the urban campus.

Project Type:
Institutional/education
A retrofit of an existing property

Design features: Bioretention facility, rain garden, and bioswale.

This project was designed to meet the following specific requirements or mandates:
Local ordinance - project was designed to comply with Mahoning County stormwater code.

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? Beautification, snow removal considerations, and low maintenance were primary goals of the University. The project also needed to skillfully work around an adjacent historic church, minimize impacts to a massive beech tree, and relate architecturally to adjacent University buildings.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $500,000-$1,000,000 (Public funding: State)

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)? Did not influence costs.

Number of jobs created: 10

Job hours devoted to project:

Planning and Design: 1,500
Construction: 3,000
Annual Maintenance: 500

Performance Measures

Stormwater reduction performance analysis:
HEC RAS modeling indicates that the project reduces runoff by more than 25% over pre-development levels, in compliance with the county stormwater code.

Community & economic benefits that have resulted from the project: The project significantly improves the first impression that visitors have when prospective students and families visit the campus. The surrounding historic church and University buildings have been significantly enhanced by the Gateway project.

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