



Green Infrastructure & Stormwater Management CASE STUDY

Washtenaw Community College Campus Green Parking Structure

Location: Ann Arbor, MI

Client: Washtenaw Community College

Design Firm(s): Beckett & Raeder, Rich and Associates, A3C Collaborative Architects, Peter Basso Associates

Landscape architect/Project contact: Deborah Cooper, ASLA

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ASLA Chapter: Michigan

Project Specifications

Project Description: The project consisted of the construction of a new parking structure, campus roadway, surface parking area, pedestrian access, landscape architecture and stormwater management.

Project Type:

Institutional/education

A retrofit of an existing property

Design features: Bioswale, cistern, and porous pavers.

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: 1 acre to 5 acres

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? Pervious surface parking was included in the project to allow for the shared use of space for both parking and below grade stormwater storage and infiltration. Existing retention/detention ponds on site were used without further

expansion and thereby conserving open space surrounding the ponds for recreational and educational activities.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$50,000-\$100,000 (Public funding: Local)

Related Information: Costs only includes stormwater aspects of the project.

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: The campus had previously constructed stormwater ponds and enhanced adjacent wetland areas. The construction of this project employed methods to slow and treat the water prior to entry in the stormwater ponds to prevent the need for further expansion of the existing ponds.

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

traditional site design/site development approaches (grey infrastructure)? Slightly increased. Underground storage and pervious pavement was introduced to allow for use of the existing areas used for stormwater management.

Number of jobs created: Not available

Job hours devoted to project:

Planning and Design: 600

Construction: 30,000

Annual Maintenance: 80

Performance Measures

Stormwater reduction performance analysis:

The project was created to allow for infiltration of stormwater from underground storage facility and also from pervious pavement that was employed. The existing clay soils that were present were not conducive to infiltration so additional measures were employed to slow the stormwater and thereby allow for increase time for infiltration.

Community & economic benefits that have resulted from the project: The creation of the internal roadways within the campus allowed for some relief on the adjacent county roadway system. All stormwater from the campus is treated for both water quality and quantity to help protect the Huron River system.