Green Infrastructure & Stormwater Management CASE STUDY

Mayfield Village Wetland Park

Location: Mayfield Village, OH
Client: Village of Mayfield, Ohio
Design Firm(s): URS Corporation, Cleveland
Landscape architect/Project contact: Thomas Evans, ASLA
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ASLA Chapter: Ohio

Project Specifications

Project Description: The Mayfield Village Wetland Preserve preserves, enhances and enlarges a 14-acre wetland complex to serve multiple stormwater management functions within a 25-acre wetland park.

Project Type:
Open space - park
Part of a new development

Design features: Stormwater wetland providing stormater management for a 40-acre project area.

This project was designed to meet the following specific requirements or mandates:
Local ordinance, meet local stormwater management code

Impervious area managed: greater than 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: greater than 5 acres. A 25-acre wetland preserve was created.

The regulatory environment and regulator was apprehensive about the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? The Village desired the creation of a 25-acre wetland park to provide an amenity to the adjacent and developing office campus for Progressive Insurance. The enhanced wetland complex provides significant filtration from runoff from adjacent I-271 and the upstream 300-acre watershed.

Cost & Jobs Analysis

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

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 project provided a cost effective way to solve stormwater management and wetland mitigation functions to offset impacts from a 500,000 sq/ft office campus development.

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). Grey infrastructure solution would have been cost prohibitive.

Number of jobs created: 5

Job hours devoted to project:

Planning and Design: 1,800
Construction: 2,000
Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:
The project created a 7-acre wetland basin serving a 300-acre suburban watershed, which HEC RAS modeling indicates reduced peak discharges by 25%.

Community & economic benefits that have resulted from the project: The 25-acre wetland park provides stormwater management, wetland mitigation, and an open space amenity for the economic development of the adjacent office campus for Progressive Insurance housing 2000 jobs.

Additional Information

Links to images: Additional project information, images, plans, and description are readily available from the landscape architect.