



Green Infrastructure & Stormwater Management CASE STUDY

Saint Joseph Regional Medical Center

Location: Mishawaka, IN

Client: Adams Management Service Corporation

Design Firm(s): HOK

Landscape architect/Project contact: Rick Kacenski, ASLA

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ASLA Chapter: St. Louis



Photo: St. Joseph Regional Medical Center

Project Specifications

Project Description: The new SJRMC campus is located on an original 90-acre farmland site, gently sloping to Juday Creek, a cold water stream, at the northwest portion of the site. All stormwater from parking lots and building roofs is collected into bioswales and filtered along the vegetated channels before emptying into the on-site dry detention and wet detention basins. This stormwater management technique cleans and filters pollutants and chemicals out of the water and reduces the temperature of the water before it filters into the groundwater table and the creek. The majority of the open site is planted in native grass species suited to the specific soils and hydrological conditions of the site. The site work around the hospital offers many areas of outdoor respite for patients and visitors.

Project Type:

Healthcare facility

Part of a new development

Design features: Bioretention facility, rain garden, bioswale, and curb cuts. No curbs were used on the parking lots and interior drives. Unfortunately concrete headers along the drives were eliminated in VE.

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

Local ordinance

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**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?** Not applicable.**Cost & Jobs Analysis****Estimated Cost of Stormwater Project:** >\$5,000,000 (Public funding: None)**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: Curbs and most Inlets and piping were eliminated and replaced by bioswales, and dry and wet detention basins. There was a cost savings in the alternative stormwater approach and it is an integral part of the site open space.

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: Not available**Job hours devoted to project:**

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

Other:

Performance Measures

Stormwater reduction performance analysis:

The stormwater system is designed to contain a 100-year rain event on site.

Community & economic benefits that have resulted from the project: Landscape

Performance Benefits:

- Savings of 13% of the Green Guide for healthcare baseline
- System of vegetated bioswales, micro detention ponds, dry and wet detention ponds together help infiltrate stormwater while providing stormwater capacity for back-to-back 100-year storm events without increased run-off from site.
- Native Prairie plant mixes were selected based on soil type and soil moisture in order to maximize successful cover, while minimizing maintenance and water requirements after establishment.
- Irrigation of ornamental plantings is accomplished using pond water
- Native plantings and demonstration gardens provide opportunities for educational and social interaction.

Project Recognition

St. Louis ASLA Chapter 2006 Merit Award

Additional Information

Links to images: <http://www.sjmed.com/locations/newhospital/pdf/newspapertab.pdf>