



# Green Infrastructure & Stormwater Management CASE STUDY

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## Hickory Woods Park Improvements

**Location:** Pittsfield Township, MI

**Client:** Pittsfield Township Parks & Recreation

**Design Firm(s):** Beckett & Raeder Inc.

**Landscape architect/Project contact:** Deb Cooper, ASLA

**Email:** [coop@bria2.com](mailto:coop@bria2.com)

**ASLA Chapter:** Michigan

### Project Specifications

**Project Description:** The project consisted of renovation to an existing park. Work included the installation of asphalt path trails, aggregate trails, bio retention areas, stormwater detention pond, playground area, parking improvements and restroom building.

**Project Type:**

Open space - park

A retrofit of an existing property

**Design features:** Bioretention facility, bioswale, and curb cuts.

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

State statute, local ordinance, to meet funding criteria

**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** indifferent to the project.

**Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements?** Usable green space was a priority with the client as the project was for the renovation of a Township Park space. The use of the space for public use was highest priority.

## Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** \$100,000-\$500,000 (Public funding: State, local, funded in part by Michigan Dept of Natural Resources Grant)

**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:** In order to provide for retention of stormwater on site, an existing pond was enlarged to provide for the storage capacity for back to back 100-year storm events. Since the pond was to also provide a permanent pool of water for aesthetic purposes, the pond included a much greater footprint than a traditional detention pond would incorporate.

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Slightly increased.

**Number of jobs created:** Not available

### **Job hours devoted to project:**

Planning and Design: 500

Construction: 5,000

Annual Maintenance: 80

## Performance Measures

### **Stormwater reduction performance analysis:**

Approximately 50% of the stormwater generated from the site will be retained and infiltrated.

**Community & economic benefits that have resulted from the project:** Community access to the park was increased with connections to adjacent residential housing communities. All public congregation points within the park have been relocated to the interior of the park to provide an adequate buffer for the residential properties. Stormwater runoff to neighboring communities has been greatly reduced or eliminated with stormwater concepts.