

# Capitol Heights Case Study



## Project Information

Level of Certification: Four Stars  
NGBS Certified

Location: Fitchburg, WI

Size of Site: 4.4-acre infill site

Site Details: 35 lots added to existing  
development

Year Site Development Began: 2010

## Project Team

Developer: Schiel and Associates  
Design and Development

Designer: Schiel and Associates  
Design and Development

Verifier: PFS TECO

Meaningful Partnerships: JSD  
Profession Services (Civil Engineer)

## Key Features

Innovative Practices:

- Planned Development District reduced road width to 20 feet.
- Density is approximately eight units per acre.

Wildlife Habitat:

- Public parkland to create a wildlife habitat and serve as wildlife corridor.

## Specifics

Capitol Heights, located just south of Madison, Wisconsin, is a 4.4-acre infill site planned and prepared to become one of the first green land developments in the Midwest. Bill Schiel, President of Schiel and Associates, designed a neighborhood featuring seven acres of restored park land into natural oak savanna, smaller lots, nearby public transportation access and decentralized stormwater infrastructure. These features earned Capitol Heights the highest NGBS rating of four stars.

A site's topography or slopes is an important issue that impacts home foundations, erosion control, and stormwater management. A Grading and Erosion Control Plan (GEC) led to over 75 percent of the roads aligning with natural topography. The GEC also detailed plans to minimize soil disturbance and erosion for all phases of development. Limits of clearing, grading, and no disturbance zones around specimen trees were clearly demarcated with perimeter fencing.

When construction began, activities were scheduled to minimize the length of time that soils are exposed. Soil compaction from construction was mitigated by deep tilling, and the areas were restored within seven days of the final grading—a week less than the EPA-recommended guidelines.



Rain Garden

## Key Features Cont.

### Soil Disturbance and Erosion

- Limits of clearing and grading were demarcated in the GECP and incorporated into construction and design plan.
- Fencing was installed around specimen trees in addition to mulching and aerating the impacted ground.
- Trenching and other land disturbing activities were prohibited within the critical root zones.

### Stormwater Management:

- The natural hydrology and drainage features were well preserved and incorporated into the site's stormwater management and infiltration plan.

### Landscape Plan:

- Regionally appropriate grasses, trees and other vegetation.
- Restoration of 7 acres of public parkland.
- Less than 35 percent total turfgrass.

### Slope Disturbance:

- Avoided more than 75 percent of steep slopes.



Oak Meadow Park

The landscape plan is another crucial part of the GECP, which included the restoration of seven acres of land with oak savanna, native shade trees, and natural perennials. The restored land acts as a wildlife corridor and public open space adjacent to a city park. The open space also hosts site-specific stormwater management features such as rain gardens, infiltration swales, and infiltration basins.

Green design elements of the neighborhood were bolstered by the City of Fitchburg's Planned Development District (PDD), the governing zoning ordinance for Capitol Heights that allowed unique zoning ordinances for the neighborhood. The process for a PDD includes initial planning with city officials, comments from various city departments, and a public hearing. Innovative zoning from the PDD helped reduce street widths throughout the neighborhood and allowed for denser and smaller lot design.

A neighborhood like Capitol Heights benefits the city as much as it is benefits the developer, bringing in new residents and developing land in a way that fosters both community and ecological sustainability.



All information in this case study was provided by one or more members of the project team.  
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