



Green Infrastructure & Stormwater Management CASE STUDY

Arvest Bank - Joyce Street Branch

Location: Fayetteville, AR

Client: Arvest Architectural Group

Design Firm(s): McClelland Consulting Engineers, WD&D Architects

Landscape architect/Project contact: Christopher Suneson, RLA, ASLA

Email: christopher_suneson@hotmail.com

ASLA Chapter: Arkansas

Project Specifications

Project Description: The client undertook a branch expansion utilizing LEED certification for upgrades to their standard bank branch construction standards. In addition to meeting municipal stormwater quantity standards, the project captured stormwater to treat it for water quality. Roof water was captured into two underground cisterns: one for domestic supply to toilets and urinals and one for irrigation system distribution. Parking stalls were paved with pervious concrete with an under-drain system to help reduce peak flows for detention requirements. Surface flows not captured by pervious concrete were directed over vegetative and stone filter strips before entering one of two bioswale systems. The bioswale systems were design to further filter the water through a sand-compost-soil mixture before ultimate discharge to an adjacent creek.

Project Type:

Commercial

Part of a new development

Design features: Bioretention facility, rain garden, 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: 5,000 sq/ft to 1 acre

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? Yes.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$50,000-\$100,000 (Public funding: None)

Was a green vs. grey cost analysis performed? No

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: 15 full time employee of bank branch, 50 temporary construction jobs

Job hours devoted to project: Not available

Planning and Design: Not available

Construction: Not available

Annual Maintenance: Not available

Project Recognition

LEED Gold Certification