



Green Infrastructure & Stormwater Management CASE STUDY

New Topfer Theatre at Zach Scott

Location: Austin, TX

Client: City of Austin

Design Firm(s): Resource Design

Landscape architect/Project

contact: Joan Hyde, ASLA

Email:

ResourceDesign@earthlink.net

ASLA Chapter: Texas

Project Specifications

Project Description: Construction began in February 2011 on a new 400-seat theatre located on a prominent corner just south of downtown Austin and adjacent to a riverfront park. The project is

funded by a public-private partnership, with anticipated completion in March 2012. A series of 6 rain gardens provide 100% of the water quality treatment for stormwater required by city code. The initial 1.1" of rainfall will be captured in the 12" deep rain gardens and treated within 48 hours (eliminating the risk of mosquito larvae) through percolation into the water table and transpiration. Native grasses and perennials which are able to withstand both drought and standing water conditions will supplement the existing trees to secure the soil and provide transpiration. The theatre's two-story lobby has glass walls oriented toward the two largest rain gardens, which are also used for primary pedestrian access and for educational purposes. Pervious paving in parking lot stalls and some walkways further contribute to water retention and quality.

Project Type:

Institutional/education

Part of a new development

Design features: Rain garden, porous pavers, and curb cuts.



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

Local ordinance - publicly funded projects must meet LEED Silver requirements and use innovative water quality controls.

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



PERSEPECTIVE RENDERING LOOKING SOUTH FROM LAMAR

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, the main rain gardens are designed as a feature/entry way on a prominent corner. Planting is designed to provide seasonal interest with a subtle palette of

blue/purple/white, connecting the building facade to the south with the river to the north. One side of the two-story theatre lobby is mostly glass overlooking the rain gardens.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$100,000-\$500,000 (Public funding: Local - public funding for theatre project as a whole through 2008 Bond)

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: No significant impact. This project is located on city land adjacent to a park, so preserving the open space would have been required whether or not rain gardens were present. The site design costs were slightly higher due to the specialized nature of rain gardens. These design costs were more than offset by construction cost savings.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly reduced costs (1-9% savings). Reduced costs for underground stormwater system.

Number of jobs created: Not applicable

Job hours devoted to project:

Planning and Design: 100

Construction: Not available

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

Rain gardens capture and treat the first 1.1" of stormwater from all impervious surfaces (roof, parking lots, service drive, and pedestrian paving). Rain gardens are 12" deep. On-site percolation tests indicate full treatment within 48 hours, eliminating the risk of mosquito larvae.

Community & economic benefits that have resulted from the project: When completed, the project is expected to provide a public amenity, educational value for the city's public works and parks departments to use in promoting use of rain gardens, and an important visual connection between downtown and South Austin (south of the river).

Additional Information

Links to images: <https://ResourceDesign.sharefile.com>

