



Green Infrastructure & Stormwater Management CASE STUDY

Tempe Transportation Center

Location: Tempe, AZ

Client: City of Tempe, Arizona

Design Firm(s): architekton/otak architects of record; A DYE DESIGN; Baker Engineers; Coates Irrigation

Landscape architect/Project contact: Angela Dye, FASLA

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ASLA Chapter: Arizona, Colorado

Project Specifications

Project Description: The Transportation Center, Courtyard and Transit Center represent a confluence of transportation modes from light rail, bicycle, neighborhood and regional transit, and pedestrian. Located in the heart of Downtown Tempe, the transit center serves a light rail station, provides a bicycle valet and maintenance service, is within walking distance of Arizona State University and Downtown Tempe, and provides access to regional bus routes and extensive neighborhood circulators. The building is registered LEED Platinum with a vegetated roof. Stormwater is collected under the bus plazas for reuse in irrigating the roof and transit center plaza trees and plant material.

Project Type:

Government complex

Part of a redevelopment project

Design features: Green roof, cistern, and porous pavers.

This project was designed to meet the following specific requirements or mandates: This was an initiative by the city to promote green building and infrastructure

Impervious area managed: 1 acre to 5 acres

Amount of existing green space/open space conserved or preserved for managing stormwater on site: This was a redevelopment of an existing 2-acre parking lot with minimal existing landscape.

The regulatory environment and regulator was apprehensive about 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: \$100,000-\$500,000 (Public funding: Federal, regional, local)

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: Not applicable

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: 2 years by 8 firms + archeological recovery (8 months)

Construction: 2 years

Annual Maintenance: Not available

Performance Measures

Stormwater reduction performance analysis:

100% retention in underground storage tanks; approx. 20% siphoned off, filtered and stored for irrigation purposes. Local codes prohibit use of all the water: greywater system not allowed for irrigation use, even to the vegetated roof which has restricted access; stormwater retention must be fully drained within 36 hours per local codes even if underground.

Community & economic benefits that have resulted from the project: This project provides access to a light rail station by bus, pedestrian or bicycle; it has created 2 new businesses - a Bike Cellar and adjacent restaurant; it provides office space for city staff; leaseable space on the third floor is available to private organizations; retail space is available for a restaurant or retail shop.

Project Recognition

Merit Award, Arizona ASLA Chapter; EPA Smart Growth Achievement

Additional Information

Links to images: <http://www.tempe.gov/greenprograms/transitcenter.htm>