PROJECT PROFILE

KENDALL LIBRARY

Atlantis Raintank Biofiltration, Rainwater Harvesting & Detention

HOUSTON, TEXAS

PROJECT BACKGROUND

The new three-story Belle Sherman Kendall Library at 609 N. Eldridge not only replaces the existing Bell Sherman Kendall Library on Memorial, but it will also serve as a community center, complete with a classroom, after school and summer recreational programs, and a fully equipped half-gym. The new Kendall Library will also acquire a LEED® Silver Certification. Contributing to that certification is an Atlantis Raintank underground water harvesting system, which the design team incorporated to meet the requirements for mitigation and detention, and to provide landscape irrigation.

THE BUSINESS CASE

In June 2004, Houston City Council declared that new construction of any City of Houston-owned facility or building of more than 10,000 square feet of occupied space would be built to the LEED Silver status. In the wake of this, Houston has seen the implementation of innovative ideas regarding storm water management solutions skyrocket. Kendall Library's new facility is one such implementation, where a single solution strategy accomplishes three site requirements and earns the site multiple LEED points towards the required Silver certification.

LOW IMPACT DEVELOPMENT

The Atlantis Raintank underground system accomplishes three needs at the site: 27,000 CF of detention volume, 13,000 CF of mitigation volume, and water harvesting for irrigation. As an alternative to traditional parking where the lot slopes away from head-in parking and towards a central drain and catch basin, the lots were graded towards the head-in parking medians. The medians are bio-swales which receive storm water runoff through curb-cuts, where an engineered soil matrix filters hydrocarbons and TSS found in storm water runoff prior to being stored in Atlantis Raintank underneath the swales, where it is harvested for reuse. In this application, 30,000 gallons is stored and used as landscape irrigation.

1. Digging out soil that was contaminated during construction and replaced with Bioswale mix

2. Completed Bioswale with plants placed on top of Atlantis Raintank

Owner: Houston Public Library
Architect: English + Associates
Engineer: Othon Engineering
Landscape Architect: Asakura Robinson
Contractor: Teal Construction
Installer: Construction EcoServices
Harvested Volume: 30,000 Gallons
Detention Volume: 27,000 CF
Mitigation Volume: 13,000 CF
Completion: TBA

About Raintank

The Atlantis Raintank System is a modular storage system that can be used for detention, rainwater harvesting, or ground water recharge. The Raintank's modular design and compact footprint makes it ideal and cost effective for all types of applications.

CONSTRUCTION ECO SERVICES
www.ecosvs.com
1930 Aldine Western Rd
Houston, Texas 77038
832.456.1000

Credits Earned

- SS Credit 5.1: Site Development: Protect or Restore Habitat
- SS Credit 6.1: Storm Water Design: Quantity Control
- SS Credit 6.2: Storm Water Design: Quality Control
- SS Credit 7.1: Heat Island Effect: Non-Roof
- WE Credit 1.1: Water Efficient Landscaping: 50% Reduction
- WE Credit 1.2: Water Efficient Landscaping: 100% Reduction
- MR Credit 4.1: Recycled Content: 10%
- MR Credit 4.2: Recycled Content: 20%

PROJECT PROFILE

Raintank Stormwater Management

609 North Eldridge Parkway
Houston, Texas 77079

90% Removal of TSS

100% Rainwater Irrigation

100% Recycled Content

PROJECT TEAM

Design Team

Architect
English + Associates

Civil Engineer
Othon Engineering

Landscape Architect
Asakura Robinson

Construction Team

General Contractor
Teal Construction

Installation
Construction EcoServices

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