PROJECT PROFILE

RICHLAND COLLEGE

Atlantis Raintank Filtration & Water Harvesting

DALLAS, TEXAS

PROJECT BACKGROUND

The inspiration behind the 98,000 gallons of water-harvesting at Richland Community College's new Science Building and parking lots came out of a design challenge extended to Linda Tycher & Associates, a landscape architecture firm in the North Texas. Tycher's challenge was to create a sustainable, water-efficient design in collaboration with the College's efforts to earn a LEED® Platinum certification at the new facility. By using bio-infiltration swales, green roofs, disconnected down-spouts, and Atlantis Raintank water harvesting system, all tools from the LID "toolbox", Tycher's firm was able to successfully accomplish the goals set before them.

LOW IMPACT DEVELOPMENT

The project included construction of a parking lot and of a science building, each of which incorporated distinctive Low Impact Development tools.

The parking lot included the use of bio-infiltration swales in landscape islands and underground water harvesting system, Atlantis Raintank. As an alternative to traditional parking, where stormwater is directed away from the parking medians towards a central drain and catch basin, the parking lots were graded towards bio-swales with curb cuts to receive stormwater runoff. Stormwater then infiltrates through an engineered soil matrix, filtering out such pollutants as TSS and hydrocarbons, and into a 6" perforated pipe draining into Atlantis Raintank water harvesting system, to be reused as irrigation for the bio-swales during dry times.

The science building incorporated the use of green roofs and Atlantis Raintank water harvesting system, in order to capture, treat, and reuse stormwater for landscape irrigation and as non-potable water for flushing toilets. The top of the science building was designed as a green roof, on which stormwater is captured, filtered through a vegetative media, again filtering out harmful pollutants, before draining through a downspout and into a rock bed. From the rock bed, stormwater percolates into the Atlantis Raintank water harvesting system where it is stored for reuse.

Owner: Richland College
Architect: Perkins + Will
Engineer: Jaster-Quantanilla
Landscape Architect: Linda Tycher & Associates
Contractor: Gilbane
Installer: ValleyCrest
Harvested Volume: 98,000 Gallons
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

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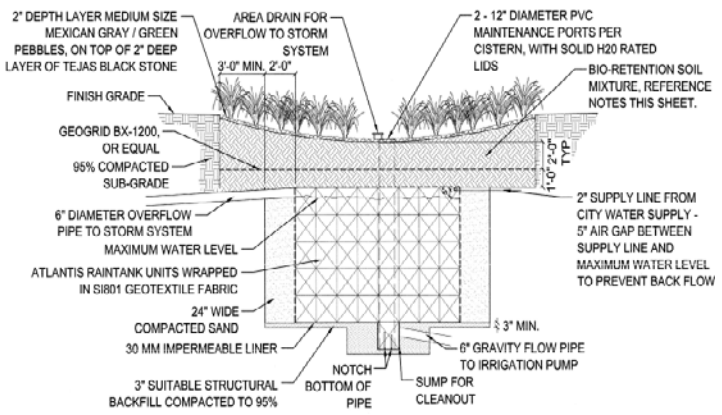

Credits Earned

- SS Credit 5.1: Site Development: Protect or Restore Habitat
- SS Credit 5.2: Site Development: Maximize Open Space
- 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
- SS Credit 7.2: Heat Island Effect: Roof
- WE Credit 1.1: Water Efficient Landscaping: 50% Reduction
- WE Credit 1.2: Water Efficient Landscaping: 100% Reduction
- WE Credit 2: Innovative Waste Water Technologies
- WE Credit 3.1: Water Use Reduction: 20%
- WE Credit 3.2: Water Use Reduction 30%
- MR Credit 4.1: Recycled Content: 10%
- MR Credit 4.2: Recycled Content: 20%

PROJECT PROFILE

Raintank Stormwater Management

12800 Abrams Road
Dallas, Texas 75243

100% Rainwater Irrigation

90% Removal of TSS

100% Recycled Content

PROJECT TEAM

Design Team

Architect
Perkins + Will

Civil Engineer
Jaster-Quantanilla

Landscape Architect
Linda Tycher & Associates

Construction Team

General Contractor
Gilbane

Installation
Valley Crest

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