

PROJECT PROFILE

R-Tank Underground Detention

City of Houston

Fire Station 37



Design Team

Architect

Natex Architects

Civil Engineer

Rheka Engineering

Construction Team

General Contractor

Gilbane

Installation

Joslin Construction

PROJECT PROFILE

ACF R-Tank Underground
Detention
Fire Station 37
Houston, Texas



Owner: City of Houston
Architect: Natex Architects
Engineer: Rheka Engineering
Contractor: Gilbane
Site Contractor: Joslin Construction
Detention Volume: 8,000 CF
Cost Per Cubic Foot: \$10.00 CF
Completion: November 2008

Project Background

On June 23, 2004, Houston City Council adopted the Green Building Resolution, which set a target of Silver level LEED certification for new construction, replacement facilities and major renovations of city of Houston owned buildings and facilities with more than 10,000 square feet of occupied space. The City of Houston saw the value in pursuing LEED certification and believed utilizing sustainable design practices would significantly reduce operations and maintenance costs and decrease the negative impact of buildings on the environment and occupant health in the City of Houston.

Natex Architects was chosen on this project, like many others in the past, because of her acute knowledge of LEED and her ability to make a traditionally unsustainable concept, into something that meets the LEED Silver status without compromising functionality or price.

The Business Case

Due to the restrictive size of the property, the design team for Fire Station 37 only had one option for detention, it had to go underground. After assessing all of the options, only one system fit within the confines of space allowed and help contribute to their LEED goals, the R-Tank. The R-Tank, although traditionally used as a water harvesting system for LEED projects, helped contribute to this project because it is manufactured out of 100% post-consumer recycled High Density Poly Propylene. Using the R-Tank as their underground detention system all ensured that they receive their Stormwater Quality point because all of the R-Tank systems are pretreated with a Suntree Technologies Grate Inlet Skimmer Baskets. These stormwater quality treatment systems prevent sediment and other contaminants from entering the R-Tank, which postpones maintenance to the system, and ultimately prevent more than 80% of Total Suspended Solids from entering the storm sewer.



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About R-Tank

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