

BAGBY STREET REIMAGINED

BLENDING SUSTAINABILITY WITH URBAN DESIGN

Project Details

The newly redeveloped Bagby Street in the Midtown District of Houston, Texas, enhances mobility for both vehicles and pedestrians while significantly improving the roadway's aesthetics. Features such as landscaped planter boxes, paver sidewalks, and hardwood seating areas create a welcoming and enjoyable pedestrian experience. Beyond its visual appeal, Bagby Street is also environmentally friendly, earning recognition as one of Texas' first certified Greenroads.

The Greenroads rating system, developed at the University of Washington, measures roadway sustainability similarly to how the U.S. Green Building Council's LEED program assesses buildings. A defining feature of Bagby Street's Greenroads certification is the integration of biofiltration planter boxes along both sides of the roadway. These planter boxes collect stormwater runoff, storing and filtering it through FocalPoint High-Performance Modular Biofiltration Systems (HPMBS).



What Convergent Water Technologies Provided

Convergent Water Technologies supplied the FocalPoint HPMBs, a high-flow biofiltration system that met the project's dual objectives: supporting street trees while efficiently treating stormwater.

One of the main challenges was ensuring that the biofiltration system did not interfere with the robust root systems of the street trees. Traditional biofiltration planter boxes posed the risk of root intrusion, which could clog the underdrain and lead to flooding. The solution was to position the biofiltration system outside the tree's drip zone, minimizing the potential for root interference while maintaining stormwater treatment efficiency.

Thanks to FocalPoint HPMBs's engineered high-flow media, the design team did not need to fill the entire planter box with bioretention media and an underdrain system. Instead, the HPMBs was strategically placed between two V-notch weirs, utilizing only 1/20th of the space required by a typical biofiltration system. This compact design allowed for the successful integration of both biofiltration and street trees, ensuring long-term performance and sustainability.

Why Midtown District Chose LID and FocalPoint

Bagby Street's redevelopment team selected Convergent Water Technologies and the FocalPoint HPMBs for several key reasons:

- Space Efficiency – Required a fraction of the footprint compared to conventional biofiltration systems, preserving space for street trees and other urban design elements.
- Effective Stormwater Treatment – Removed pollutants such as heavy metals, sediment, oil, and grease before runoff reached Buffalo Bayou.
- Root Protection – Prevented tree root intrusion, reducing maintenance risks and ensuring long-term system functionality.
- Sustainability and Certification – Played a crucial role in achieving Greenroads certification, aligning with Houston's environmental and urban planning goals.

By incorporating FocalPoint HPMBs, Bagby Street successfully balanced aesthetic, environmental, and functional needs, setting a new standard for sustainable urban roadway design.



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Convergent has decades of experience in developing and delivering problem solving stormwater innovations. Convergent believes that adopting new ideas quickly, and integrating the process of innovation into stormwater regulation, product development and distribution is the only answer to our looming water crisis.

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