



Clean Water. Healthy Life.

BEST PRACTICES *for* STORMWATER MANAGEMENT IN METROPOLITAN KANSAS CITY

BIORETENTION SWALES|STORMWATER DETENTION

Quinton Heights Neighborhood Redevelopment, Topeka, Kansas

Goals

To implement a series of stormwater improvements that provide flood control, water quality treatment, and recreational features, with an emphasis placed on incorporating natural and multi-purpose systems rather than traditional structural approaches.

Description

The Quinton Heights residential area in Topeka, Kansas has a history of stormwater related problems including street and building flooding, excessive erosion, and isolated ponding. To address these issues, a retrofit development improvement project was constructed that included two multi-purpose stormwater bioretention swales designed to reduce flooding and provide water quality treatment.

The detention basins and bioretention swales feature underdrain systems using bio-fill material combined with native prairie and wetland vegetation to promote infiltration and provide water quality treatment. In addition, the outlet control structure of the detention basins were designed to address the smaller, more frequent rainstorms believed to transport the majority of pollutants and cause severe erosive impacts. As part of the neighborhood redevelopment effort, a walking trail was incorporated into the improvements to provide recreational benefits.

Community Benefits & Lessons Learned

This project provides an example of how stormwater Best Management Practices (BMPs) can be integrated into retrofit designs to enhance redevelopment efforts. The finished product provides a demonstration project and learning tool for future design and construction efforts.

The key lesson learned during the project included the need for close oversight during construction to ensure long-term functionality of the natural features.

Funding Sources and Partnerships

City of Topeka, Kansas, Water Pollution Control, and Engineering Services
Quinton Heights Neighborhood Association

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As part of the redevelopment effort, this street was closed to make space for the bioretention swale.



The finished bioretention swale immediately after construction.