Target Green East Marlborough Project

KANSAS CITY, MO

The primary objective of the Target Green East Marlborough project is to reduce combined sewer overflows at Outfall 069. Originally, the overflow frequency at Outfall 069 was more than 36 times per year. This project provided sufficient volume of storage, achieved through distributed green infrastructure techniques, to reduce the "typical year" activation frequency at Outfall 069 to seven (7) or less.

The previous Middle Blue River Basin Green Solutions Pilot Project, referred to as the Pilot Project, included approximately 135 vegetated best management practices (BMPs) and 27,490 square feet of non-vegetated BMPs, consisting of small distributed storage facilities scattered throughout a 100 acre watershed. This layout and implementation of green infrastructure worked well in the 100 acre Pilot Project Area. With this project, opportunities exist to increase the size of facilities while reducing the total number of storage facilities to the greatest extent practical while still capturing the runoff required and maintaining the distributed storage and green infrastructure concept.

The proposed improvements were designed to more efficiently capture runoff from lesser, more frequent storm events prior to entering the combined system, therefore subsequently reducing reliance on the existing aging system during not only frequent storm events, but larger events such as a 10-year storm. The green infrastructure capture areas along 74th Street and within Arleta Park and Rachel Morado Gardens will also promote groundwater infiltration and recharge, assisting in overall stormwater management and improvements to the neighborhood.

Design Storm D was utilized to size the proposed green infrastructure improvements that will completely drain in less than 24 hours. Using green infrastructure as the approach provides enviromental benefits to stormwater management including stormwater runoff quality improvement, reduction in stormwater runoff, promotion of groundwater recharge, and flood mitigation. It also offers neighborhood improvement benefits including green jobs, increased property values, and revitalized recreational green spaces.