GREEN STREETS | GREEN JOBS | GREEN TOWNS INITIATIVE

The Green Streets, Green Jobs, Green Towns Partnership (G3) aims to stimulate the green jobs market and enable families to work where they live and play. Small to mid-sized communities can boost their local economies and protect water resources through the use of watershed planning, design and construction of stormwater best management practices.

City of Greenbelt, MD: Cherrywood Lane Green and Complete Streets Design

The City of Greenbelt is developing a green street concept retrofit design to reconstruct the 1.5 mile long Cherrywood Lane

Existing Conditions:

- 1.5 miles long
- 66 acre drainage area
- 65% impervious surface
- 45 million gallons runoff annual

Proposed Design:

- 36 million gallons runoff annual reduction

Cherrywood Lane lies within the Indian Creek subwatershed, which is a heavily populated and industrialized subwatershed within the Anacostia watershed. West of Cherrywood Lane is the Indian Creek Stream Valley – the sole remaining un-channeled section and one of the last natural floodplains inside the beltway. Portions of the surrounding area have long been designated by the City of Greenbelt and Prince George's County as important environmental areas. However, the majority of development along Cherrywood Lane occurred before modern requirements for stormwater management, and little consideration was given for the problems that stream bank erosion, sedimentation, and an abundance of impervious surfaces would bring.

The combination of development without innovative/modern stormwater management features and a high percentage of impervious surfaces (Indian Creek subwatershed is 42.14% impervious) has resulted in water quality conditions that need to be addressed through the installation of new stormwater management features, structural stabilization of streams, and the re-establishment of natural drainage and flow patterns wherever possible.

The development of a green street concept design for Cherrywood Lane is expected to achieve several positive results. The green street concept design will significantly reduce annual runoff levels by at least 36 million gallons per year. Permeable pavement, rain gardens, landscaped filtration areas, and bioswales will all be included in the final project. The project will also integrate complete street concepts to provide a safer route for all modes of transportation and provide better pedestrian and bicycle access to the Greenbelt Metro Station. Finally, the concept design report will include a phasing plan, calculations of stormwater benefits, and a preliminary opinion of cost for roadway and Best Management Practice (BMP) construction.

PROJECT ELEMENTS

- **Concept Design–** Detailed designs for the project design will allow smooth construction and a better sense of scope for expected outcomes.
- **Impervious pavement removal** – Removal of pavement allows installation of other practices that treat stormwater.
- **Bioretention and bioswales** – These features filter and reduce stormwater runoff, allowing it to infiltrate into the ground before it enters into the storm drain system.
- **Pedestrian access** – Better pedestrian and bicycle access to the Greenbelt Metro Station will encourage sustainable modes of transportation while enhancing livability and walkability of communities.
- **Preliminary Estimates**—Calculations will be made in order to estimate the environmental benefits and costs of the project. It is important to have an idea of how a project will impact its local surroundings as well as how much the implementation will realistically cost *before* construction in order to avoid unexpected results.

SUSTAINABILITY & GROWTH: ADDITIONAL GREEN ACTIVITIES

The Low Impact Development Center has worked on many similar environmental design projects in recent years. Here are just a few:

Town of Bladensburg, Maryland Green Streets and Green Highways Assistance: The LID Center, under contracts and grants from U.S. EPA Region 3, developed a Green Infrastructure Master Plan along the State Highway Route 450 corridor. This effort included the development of outreach materials, charrettes, and participation in the State Highway design process.

The Greening of the Town of Edmonston, Maryland: The LID Center designed a Green Infrastructure Master Plan and Green Street Design for the town of Edmonston, MD. This involved working closely with the town to provide design support, assisting in public outreach meetings, developing a plan for monitoring locations, and documenting the project through a final report.

Anacostia Waterfront Initiative Transportation Master Plan Design Standards: The LID Center developed strategies and concept plans that integrated stormwater quality protection into the streetscape design.

U.S. Department of Interior Parking Lot Retrofit: As part of a larger reconstruction effort of the DOI parking lot, the LID Center conducted an LID retrofit concept study. The concept plan details how bioretention, tree box filters, and permeable pavement can be used to reduce stormwater discharges.

G3 Grant Award Amount:
$46,935
Total Match:
$29,157
Status:
Approved and in progress

Above: Current Cherrywood Lane Conditions.
Below: Examples of roadside bioretention areas.

For additional information: visit www.epa.gov and www.cbtrust.org.

Project Partners: Low Impact Development Center; Chesapeake Bay Trust; U.S. Environmental Protection Agency