Green Streets & Sustainability

Green streets integrate stormwater management techniques into the right-of-way in order to mimic pre-development hydrology.

By emphasizing the use of vegetated practices, green streets enhance the local environment, aesthetics, and livability.

What is a Green Street?
Public roads are vital to the well-being of any community. They also create one of the most visible signatures on the urban landscape. However, the massive amount of impervious surface associated with roads and their proximity to storm drains also makes them all too good at conveying large quantities of stormwater runoff and pollutants directly into local streams and waterways. Urbanization and the land use changes that accompany it are primarily responsible for the stormwater pollution that is one of the leading causes of water quality impairment. The past and continued conversion of undisturbed, native land to urbanized land alters its hydrologic function and the manner in which water moves through the environment. The volume of runoff from roads is largely dependent upon the total area of impervious and compacted surfaces associated with roads and rights-of-way. An investment into green streets provides an opportunity not just to address environmental concerns related to stormwater runoff, but to enhance or correct other factors, such as pedestrian and road safety and quality of life issues.

Multiple benefits related to...

- Air Quality
- Climate Change
- Urban Heat Island Effect Reduction
- Water Quality + Habitat
- Groundwater Recharge
- Neighborhood Connectivity
- Pedestrian Safety
- Community Reference Points
- Avoided Treatment Cost
- Increased Property Values

City of Charlottesville
West Main Street
GoWESTMAIN.com

Green Streets

Nelson\Nygaard Consulting Associates
Bushman Dreyfus Architects
Code Studio
RCLCD
Schulze + Grassov
Sadler & Whitehead
Timmons Group
Low Impact Development Center

12/7/13
Stormwater Curb Extensions

Stormwater curb extensions are modified with calking at the curb to direct the runoff into the roadway to reduce traffic speed and pedestrian crossing distances. This design allows for stormwater retention and treatment within the roadway and public right-of-way. Stormwater curb extensions are both appropriate for new development and for retrofitting existing areas. This provides an opportunity to maximize stormwater treatment.

Urban Planting

Street trees provide an excellent opportunity for on-site stormwater management where sufficient space is available. Street trees can be planted mid-street or at intersections, sidewalks, median strips, and the stormwater management areas of certain intersections. Street trees help manage stormwater, and create an aesthetically pleasing pedestrian street.

Bioslopes and Stormwater Curbs

Bioslopes and stormwater curbs are cost-effective and easy to implement. These surfaces are constructed to slow stormwater runoff and allow for infiltration to occur. Stormwater curbs can be installed mid-street or at intersections, and can be placed in a single location along a crossing, and they provide an opportunity to control stormwater using different management practices where stormwater already exists or is being considered for improved pedestrian areas. Stormwater curbs enhance the aesthetics and urbanization of stormwater collection and treatment.

Green Streets Techniques

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