



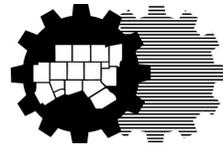
Recycled rubber surface at Katy Trail, Dallas (Photo Above: NCTCOG); recycled crushed concrete in the Fort Worth Nature Center and Refuge's parking lot (Photo Below: City of Fort Worth).



Recycled glass trail and rain gardens at the University of Texas at Arlington College Park Center, Arlington (Photo: NCTCOG).

The full Guidebook is available at

[www.nctcog.org/greeninfrastructure](http://www.nctcog.org/greeninfrastructure)



North Central Texas Council of Governments  
616 Six Flags Drive  
Arlington, TX 76011  
Phone: (817) 640-3300  
[www.nctcog.org](http://www.nctcog.org)

## NORTH CENTRAL TEXAS GREEN INFRASTRUCTURE RESOURCE GUIDEBOOK

PRODUCED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS  
MAY 2017

[WWW.NCTCOG.ORG/GREENINFRASTRUCTURE](http://WWW.NCTCOG.ORG/GREENINFRASTRUCTURE)



South Main Street Reconstruction Parking Lot, Carrollton (Photo: City of Carrollton).

## Green Infrastructure Guidebook: A Regional Resource

Many professionals are interested in implementing green elements such as energy-efficient lighting or permeable pavement in their transportation projects, but may not have enough information to make decisions.

The North Central Texas Council of Governments (NCTCOG) has created a guide to aid professionals in assessing their choices when integrating green practices into roadway, sidewalk, parking lot, and trail projects.

By examining the costs and benefits of these green practices, the guide aims to help provide key information related to the following factors:

1. Long-term cost effectiveness
2. Community improvement
3. Environmental impacts

The guidebook provides information about potential benefits, limitations and considerations, and available data for costs and life expectancies.

## What's Included in the Guidebook

The following topics are covered in the guidebook:

1. Energy-efficient LED and solar lighting
2. Green stormwater infrastructure elements such as permeable pavement and bioretention
3. Green trail materials and cool pavements
4. Recycled materials in roadways and trails
5. Urban forestry and native plants

Case studies across the U.S. were incorporated in the guidebook's research. The in-region case studies include projects such as:

1. Arlington - The Green at College Park
2. Carrollton - South Main Street Reconstruction Parking Lot
3. Cedar Hill - Red Oak Creek Trail
4. Dallas/Fort Worth Area - Oncor LED Streetlight Pilot
5. Denton - Rayzor Ranch
6. Fort Worth - Historic Handley Urban Village Streetscape
7. Fort Worth - Fort Worth Nature Center and Refuge Parking Lot
8. Grand Prairie - Mountain Creek Lake Park Trail
9. Keller - Timber Creek High School

Solar-Powered LED Street Light, Irving (Photo: [www.DFWSolarTour.org](http://www.DFWSolarTour.org))



Retention Pond, Timber Creek High School, Keller (Photo: Teague Nall & Perkins).

## Potential Benefits of Going Green

The following list is just a few of the potential benefits of going green.

- **Reduced costs:** Green practices can cost less than traditional practices initially, or they may reduce long-term maintenance and operation costs.
- **Reduced urban heat stress:** Using vegetation and removing pavement or using cool pavements can cool and shade urban neighborhoods.
- **Improved air quality:** Urban vegetation and green practices remove pollutants from the air.
- **Increased pedestrian safety and improved public health:** Green infrastructure techniques can slow traffic, increase livability, and improve health for children and the elderly.
- **Reduced erosion and risk of flash floods:** Increasing infiltration, evaporation of water from soil and plants, and storage of rainwater close to where it falls will reduce runoff and flooding.
- **Improved water quality:** Pollutant loads can be decreased by using vegetation, natural drainage, and other green infrastructure practices to treat the water that would otherwise run off into local waterways.