



# Paving the Way for the Blossoming of a Bicycle Culture

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# Overview

- In the region of El Paso, Texas, bicycling is not yet a widespread mode of transportation.
- Among planners in the area there is currently a strong climate of support for making the region bike friendly.
- The region did not have a comprehensive inventory of bicycle facilities.
- Through GIS, TTI's compiled inventory is paving the way for significant improvements to the bike facility network.

# Overview

- The comprehensive inventory is allowing planners to clearly prioritize future investments to maximize the connectivity of bike routes.
- The inventory of bicycle facilities will also assist cyclists in being able to plan commutes.
- The GIS data will be used to create maps and a web-based tool for planning commutes and rides.

# Comprehensive Inventory of Bicycle Facilities: Existing and Planned

- We have documented existing and planned facilities for:
  - The Texas Department of Transportation
  - City of El Paso
  - County of El Paso
  - Horizon City
  - City of Sunland Park, New Mexico

The El Paso Region





# GIS Attributes for the Bike Facilities

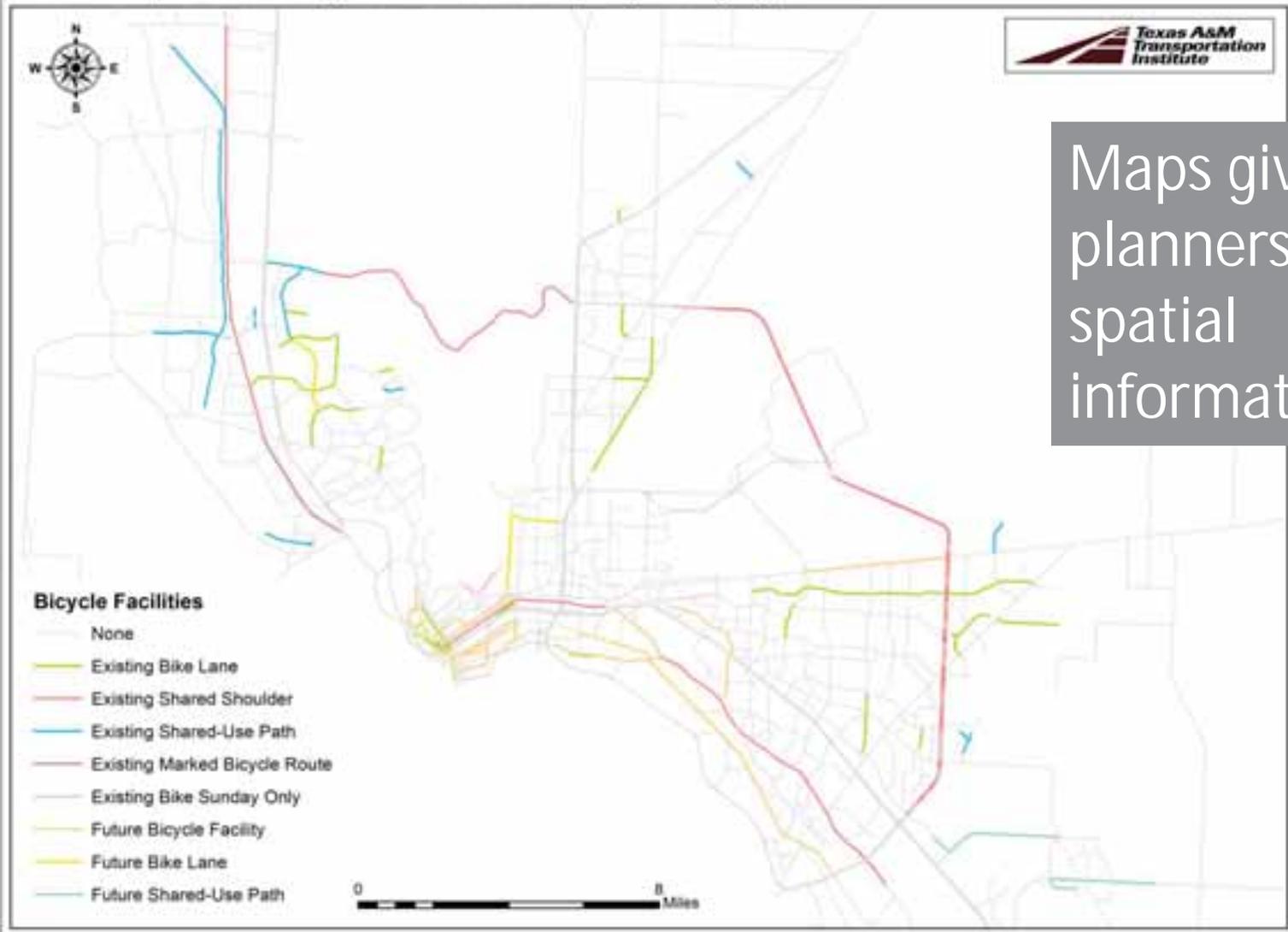
- Basic attributes
  - Bike facility type
  - Builder of the facility
  - Posted vehicle speed
  - Traffic volumes
  - Construction year
  - Width of the bike facility
  - Quality of existing striping



# GIS Attributes for the Bike Facilities

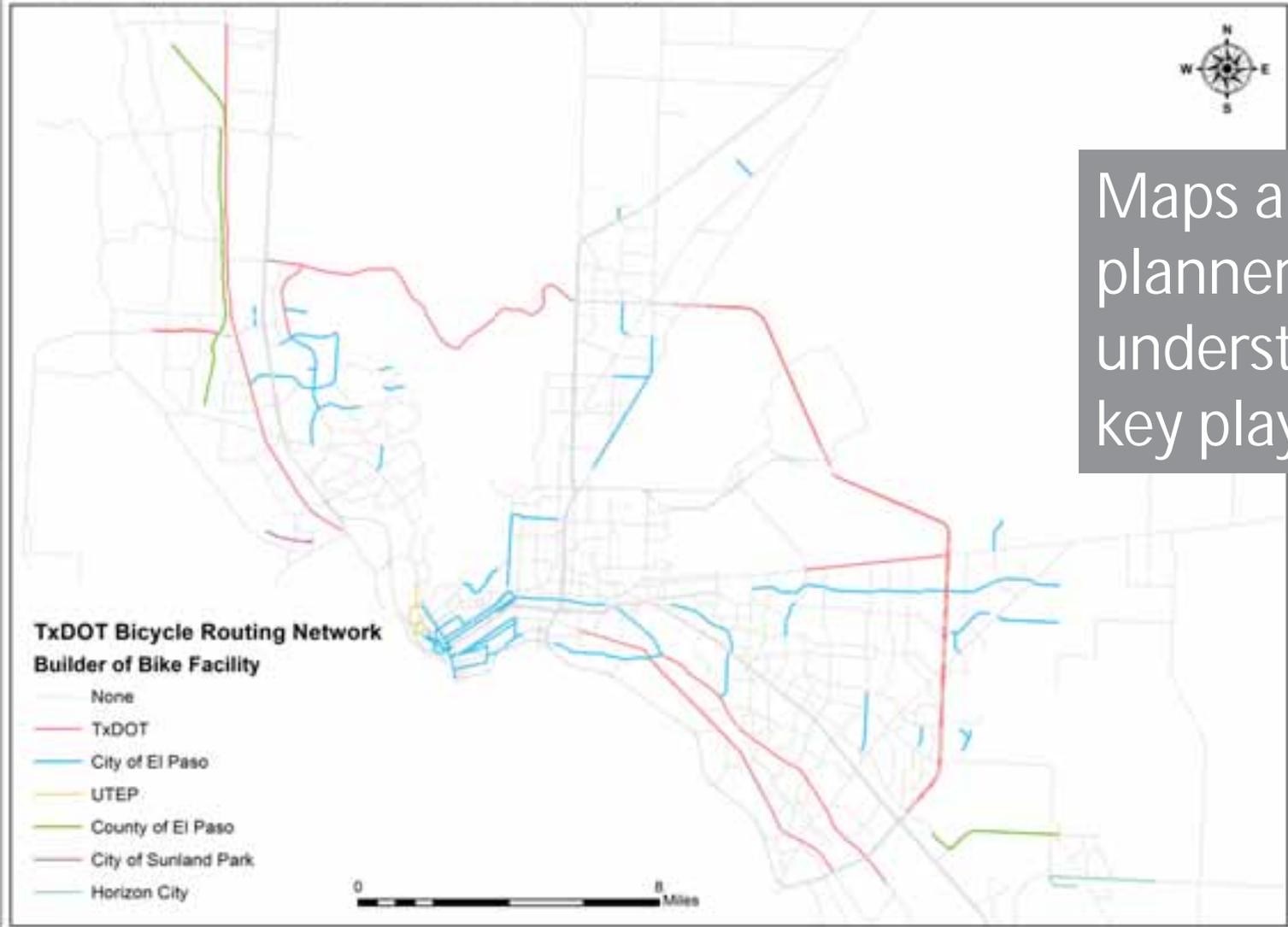
- Enhanced attributes
  - Grade
  - Nighttime illumination / lighting
  - Shade index
  - Number of stops
  - Roughness
  - Subjective aesthetics index

TxDOT Comprehensive Bicycle Infrastructure Map - By Facility Type



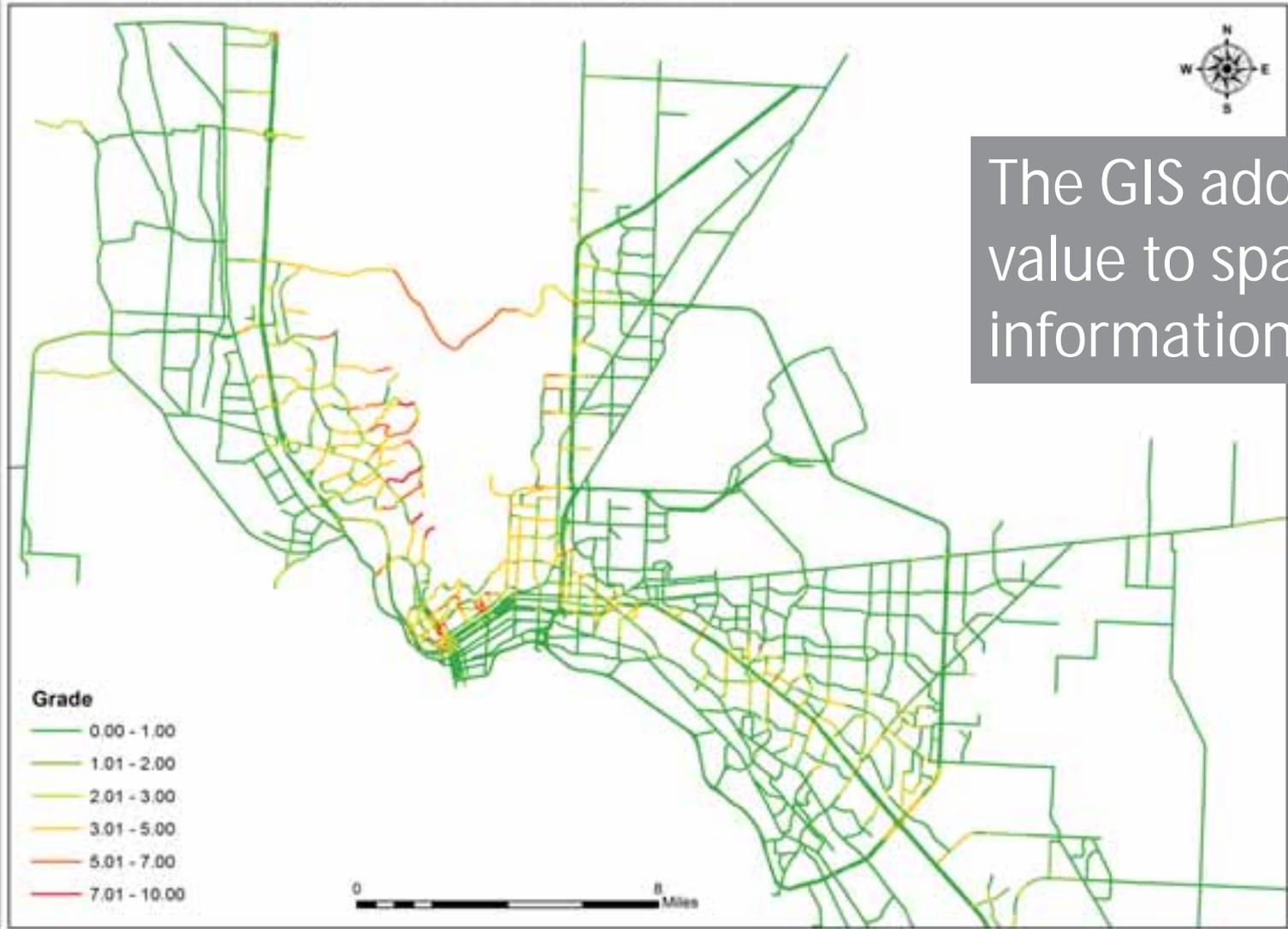
Maps give planners key spatial information.

TxDOT Comprehensive Bicycle Infrastructure Map - By Builder



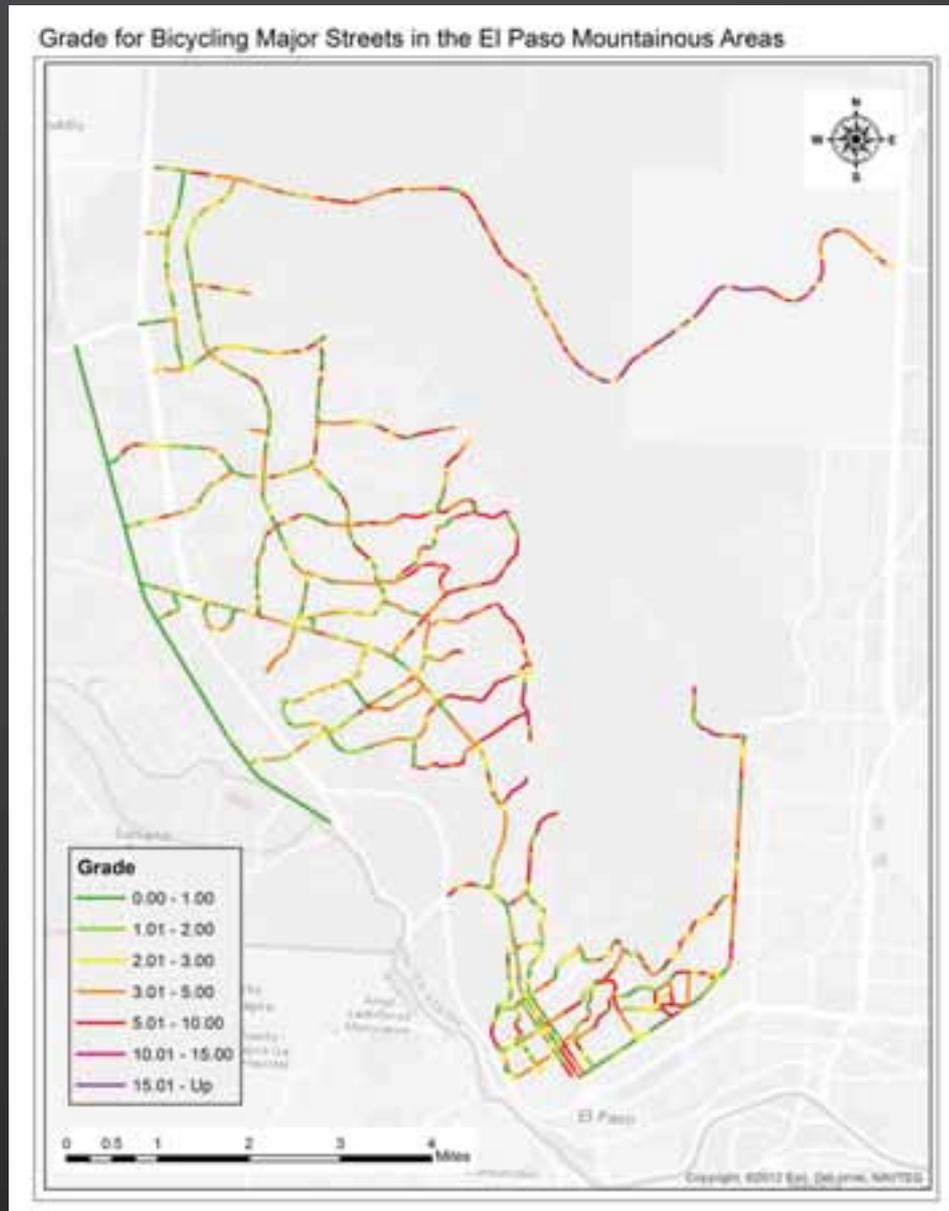
Maps allow planners to understand key players.

TxDOT Comprehensive Bicycle Infrastructure Map - By Grade



The GIS adds value to spatial information

Cyclists will be able to use the rich information to plan rides.



## Working with Stakeholders





Using the maps to plan

An interactive process





# Interactive Web Routing Tool

- The website tool is envisioned to use the full richness of all the data.
  - Users will be able to visualize routes by attributes like type of route, shade, grade, nighttime lighting.
- Envisioned to have crowdsourcing capabilities.
  - Users will be able to propose changes or additions to attributes for existing links.
  - Users will be able to recommend new routes.



# The Blossoming of a Bicycle Culture

- The GIS inventory facilitates the best possible planning decisions regarding where to invest in new bicycle infrastructure projects.
- With the infrastructure in place, promotion and education can get people riding.
- Ultimately, increased bicycling can help problems such as motor vehicle pollution and congestion, and can benefit people's health.



# Questions?

