



UTC Project Information – Center for Transportation, Environment, and Community Health	
<i>Project Title</i>	Green Transportation Infrastructures in Desert Cities
<i>University</i>	The University of Texas at El Paso
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<i>Funding Sources and Amount Provided (by each agency or organization)</i>	USDOT: \$85,431 UTEP/Quantum Engineering: \$40,216/\$2,500
<i>Total Project Cost</i>	\$128,147
<i>Agency ID or Contract Number</i>	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
<i>Start and End Dates</i>	03/01/2021 – 08/31/2022
<i>Brief Description of Research Project</i>	<p>We propose to use the semi-arid urban environment of the City of El Paso to explore the transportation-ecologic-environment-community nexus of distributed, multi-objective Green Transportation Infrastructure (GTI). The overarching objective of the project will be to develop a framework for southwestern urban areas to identify locations for green infrastructure and rank them based on a series of criteria corresponding to the myriad benefits that can be taken from GTI. These benefits include, but are not limited to, stormwater management, groundwater recharge, traffic calming, pavement protection, reduction in heat island effects, and community stakeholder engagement, all while incorporating southwestern design elements and addressing the unique challenges of the region (e.g., flash floods surface drainage). We will implement the framework for El Paso as a demonstration case, identifying and ranking locations for GTI implementation. We will quantify the potential benefits for the city and the community, and we will conduct outreach activities focused on fostering community investment and excitement about GTI. The work will be scalable and transferable to other southwestern urban areas, and transformable to other regions of the United States. The following tasks will be undertaken in working toward this objective, with the overall goal of establishing a bottom-up, distributed approach to improving air quality of life that cuts across domains and stakeholders.</p> <p>Task 1: Literature review and data collection (months 1-3). Task 2: Advisory committee formation (months 1-3). Task 3: Develop a framework for GTI site selection and ranking (months 3-8).</p>

	<p>Task 4: Scalability and feasibility assessment (months 8-10). Task 5: Dissemination and stakeholder engagement (months 10-12).</p> <p>Outputs: We will produce a framework for GTI site selection and ranking for use on existing infrastructure networks that utilizes a quantitative decision-making approach to accommodate a multi-objective approach.</p> <p>Outcomes: This project will increase the understanding about the transportation/GI intersection. It will also help to increase adoption of new practices and techniques in practice.</p> <p>Impact: We expect this project to garner interest both at the neighborhood level, but also the district (city council) level, and throughout certain departments at the city (e.g., streets and maintenance, planning and construction, capital improvement). This could lead to pilot studies and demonstrated successes that will contribute to the state-of-the-art GTI in the southwest and beyond. We will seek partnerships locally to continue this work, both with nonprofit organizations to find new and creative ways to continue to implement (i.e., finance) these projects throughout the city.</p>
<p><i>Describe Implementation of Research Outcomes (or why not implemented)</i></p> <p><i>Place Any Photos Here</i></p>	
<p><i>Impacts/Benefits of Implementation (actual, not anticipated)</i></p>	
<p><i>Web Links</i></p> <ul style="list-style-type: none"> • <i>Reports</i> • <i>Project website</i> 	<p>http://ctech.cee.cornell.edu/final-project-reports</p>