



Transportation Consortium of South Central States

Key Points

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University of New Mexico

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\$50,000

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Tran-SET
University of New Mexico

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\$100,000

Evaluating how the Quality of Pedestrian Infrastructure Affects the Choice to Walk

Brief Project Description

This study aims to understand the effect of sidewalk and related pedestrian environment quality on the likelihood that a person chooses to make a trip by walking. This question will be evaluated through both an observational analysis and one that asks individuals about their perceptions of sidewalk quality and its relation to their travel preferences. Both analysis methods will use data collected from a questionnaire sent to individual respondents in the Albuquerque, New Mexico metropolitan area.

Problem Statement

Sidewalks are an important part of a multimodal transportation system. They enable walking in high traffic environments where walking in the street would be impractical or dangerous, and may encourage walking in other locations by providing a safer and more comfortable walking environment. Walking is an important mode of transportation for several reasons: (1) requires almost no out of pocket expense, (2) has minimal environmental impact, (3) active transportation such as walking improves public health, (4), requires relatively inexpensive infrastructure, (5) can be used by people who are too young to drive or by those that cannot drive due to certain disabilities or other circumstances, and (6) and encourages greater social interaction.

While the benefits of walking are well understood, the physical design of sidewalks and their maintenance needs generally receive much less attention in both research and practice than the infrastructure used by other modes of transportation. As a result, we know comparatively little about how the design of sidewalks and quality of the overall pedestrian environment affect the decision to walk.

Objectives

The overall aim of this study is evaluating how the quality of pedestrian infrastructure and the overall pedestrian environment affect a person's choice to walk. The specific objects of the study are to

- Evaluate how the quality of pedestrian infrastructure affects the decision to walk



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- Evaluate how the quality of the pedestrian environment affects the decision to walk
- Develop guidance for cost effective sidewalk design
- Collect data to support a potential prospective study

Intended Implementation of Research

Implementation will consist of several activities listed below designed to communicate the knowledge and information generated from the study to those who can use it to implement strategies in their municipalities or communities.

- The research team will distribute a white paper and make presentations to local community groups and staff from the City of Albuquerque, Bernalillo County and the Mid-Regional Council of Governments. To the extent that municipalities in the region do adopt new strategies, these can serve as implementation examples and for a prospective study that could be followed by other municipalities.
- The research team will also distribute the white paper more broadly by having it distributed by the Transportation Research Board's Pedestrian Committee, the New Mexico Local Technical Assistance Program (LTAP), and posting it on relevant websites.
- Study findings will also be used to develop lecture materials for undergraduate and graduate transportation engineering and urban planning courses currently offered the University New Mexico as well as materials for training courses focused on infrastructure management provided through the New Mexico LTAP.
- The research team will also submit a paper for presentation at the Annual Meeting of the Transportation Research Board, targeting the Pedestrian committee.

Anticipated Impacts/Benefits of Implementation

The study aims to implement new knowledge and information and significantly impact education, workforce development and outreach in several ways. Directly, the study will involve a graduate student research assistant. Furthermore, the study will use the city of Albuquerque, New Mexico as a case study. This collaboration with the city will also result in significant, local, workforce development and outreach. The participation of neighborhood associations in our survey may also help create local champions for distributing and discussing the study results in their communities.

Weblinks:

- [Tran-SET's website \(http://transet.lsu.edu/research-in-progress/\)](http://transet.lsu.edu/research-in-progress/)
- [TRB's Research in Progress \(RIP\) database \(https://rip.trb.org/View/1505458\)](https://rip.trb.org/View/1505458)