



Research Project Statement 24-038 FY 2024 Annual Program

Title:	Select High Risk Pedestrian Midblock Crossings and Perform Safety Evaluations for Developing Pedestrian Crossings Countermeasures
The Problem:	<p>Pedestrians are among the most vulnerable roadway users. According to the Fatality Analysis Reporting System (FARS) in 2020, pedestrians accounted for approximately 17 percent of all roadway fatalities nationwide. According to the National Highway Traffic Safety Administration (NHTSA), pedestrians are especially vulnerable at non-intersection locations, where 75 percent of pedestrian fatalities occur.</p> <p>In 2020, Texas experienced 718 pedestrian fatalities, a 9 percent increase from 2019. Pedestrian safety is a key emphasis area in the Texas Strategic Highway Safety Plan and is drawing increased interest. The Federal Highway Administration (FHWA) designated Texas as a focus state with five focus cities; Austin, Dallas, Fort Worth, Houston, and San Antonio, for pedestrian and bicyclist focus areas in 2015. In 2020, 2242 of pedestrian crashes in Texas were in these five cities with 1340 of them being non-intersection or driveway related; i.e., midblock. San Antonio, Houston, and Dallas historically have the highest number of pedestrian crashes annually; consequently, there is a need to identify the high-risk locations within these cities and their optimal countermeasures.</p> <p>Several pedestrian midblock treatments, such as pedestrian signals, high intensity activated crosswalk beacons (HAWK) or pedestrian hybrid beacons, rectangular rapid flashing beacons, and flashing LED crosswalk signs can be implemented to improve pedestrian safety; however, their safety performance within Texas is not documented. There is a need to develop crash modification factors (CMFs) specific to Texas for these types of treatments.</p>
Technical Objectives:	<p>This project will develop a system to help TxDOT districts identify high risk pedestrian midblock crossings and select the most effective treatments for them. Ultimately, it will help districts implement pedestrian safety projects by answering questions like “Where are the highest risk midblock pedestrian crossings?” and “What treatments would best improve the safety of those crossings?”</p> <p>To achieve the project objectives, the research team shall:</p> <ul style="list-style-type: none"> • Review literature and summarize state-of-the practice and key findings. • Identify what midblock treatments and/or combination of treatments need to be considered. • Collect data at midblock crossing sites in up to three cities in Texas. • Identify countermeasures needing CMFs for use in Texas and determine which countermeasure will be considered for CMF development. • Develop statewide CMFs and benefit-cost ratios and, if necessary, develop a methodology to estimate pedestrian volume for crossings without available pedestrian counts as needed for the analysis. • Identify high-risk midblock crossing sites based on crossing characteristics in up to three cities in Texas. • Develop a midblock pedestrian crossing action plan to address critical locations. <p>The expected technology readiness level (TRL) for this project is 8.</p>
Anticipated Deliverables:	<ol style="list-style-type: none"> 1. Technical memorandum for each task completed. 2. Monthly progress reports. 3. Value of Research (VoR) that includes both qualitative and economic benefits, to be included in the final research report. This is not a stand-alone deliverable. 4. Research report documenting the findings of the research, including next steps on how to implement the midblock pedestrian crossing action plan. 5. Project Summary Report

Proposal Requirements:	<ol style="list-style-type: none">1. Project duration shall not exceed 18 months.2. Proposal Deadline: 12:00 p.m. Central Time, Monday, March 6, 2023.3. RFP#1 Q&A Deadline: 12:00 p.m. Central Time, Wednesday, February 1, 2023.4. Use the current “ProjAgre” and “PA Forms” templates located at the RTI Forms webpage.5. Proposals will be considered non-responsive and will not be accepted for technical evaluation if they are not received by the deadline or do not meet the requirements stated in RTI's University Handbook.6. Proposals should be submitted in PDF format; (1) PDF file per proposal. File name should include project name and university abbreviation.7. This project will be tracked during the life of the project using the Technology Readiness Level (TRL) scale.8. The 2021 Texas Legislative Session requires that universities be in compliance with Senate Bill 475 by submitting a completed and signed TxDOT Security Questionnaire (TSQ) to RTIMAIN@txdot.gov in advance of a proposal submission. Universities found to not submit a completed and signed TSQ in advance of proposal submitting will be held in non-compliance and unable to participate in the Program.
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