

<b>Title:</b>	Safety Assessment of Shared Use Paths at Roadway Crossings using Exposure-Based Models
<b>The Problem:</b>	<p>Shared use paths (SUPs) are one of the most commonly installed facilities in Texas for accommodating bicyclists and pedestrians for both transportation and recreational use. Although SUP users are separated from traffic, they remain vulnerable at roadway crossings. A pilot study of bicyclist crashes at or near SUPs in Houston and Austin showed that most crashes involving bicyclists occurred at intersections of the SUP with a roadway.</p> <p>Innovative intersection designs such as protected intersections, raised crosswalks, bicycle boxes, bicycle signals, leading pedestrian/bicyclist intervals, and flashing beacons can help to potentially curb this safety concern; however, their safety effectiveness have not been evaluated due to the limited number of such facilities across Texas. This research will support the Safe Systems Approach to safety evaluation. There is a need to:</p> <ul style="list-style-type: none"> <li>• Assess the SUP user crashes at roadway crossings.</li> <li>• Propose potential roadway design and planning strategies to prevent such crashes using data-driven methods.</li> <li>• Develop guidelines for implementing research results in systemic safety analysis, safety prioritization, and scoring tools such as Highway Safety Improvement Project (HSIP), Strategic Highway Safety Plan (SHSP), TxDOT's Urban Intersection Safety Scoring Tool, and Safety Performance for Intersection Control Evaluation (SPICE) Tool.</li> </ul>
<b>Technical Objectives:</b>	<p>This project will benefit TxDOT districts concerned with bicyclist and pedestrian safety and will enhance the implementation of a Safe Systems Approach across the state. The engineering and planning solutions developed in this project will be applicable upon completion of the project and will be used in safety prioritization and scoring tools such as HSIP, TxDOT Safety Scoring Tools, and SPICE.</p> <p>To meet the objectives of this project, the research team shall:</p> <ul style="list-style-type: none"> <li>• Collect and compile design, exposure and safety characteristics of SUPs and roadways where these two facility types intersect across Texas.</li> <li>• Identify target crash types and risk factors involving SUP users at roadway crossings to evaluate the safety effectiveness of SUPs.</li> <li>• Assess potential design and planning solutions for preventing target crashes at roadway crossings, including potential crash reduction.</li> <li>• Develop guidelines for implementing research findings to improve the mobility and safety of active transportation users at shared use paths in the context of other built environment elements (e.g., roadway design, land use, transit, socioeconomic and demographic characteristics).</li> </ul> <p>The expected technology readiness level (TRL) for this project is 8.</p>
<b>Anticipated Deliverables:</b>	<ol style="list-style-type: none"> <li>1. Technical memorandum for each task completed.</li> <li>2. Monthly progress reports.</li> <li>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.</li> <li>4. Research report documenting the findings of the research, including datasets, statistical models, and implementation guidelines.</li> <li>5. Project Summary Report</li> </ol>

<b>Proposal Requirements:</b>	<ol style="list-style-type: none"><li>1. Proposal Deadline: 12:00 p.m. Central Time, <b>Monday, March 6, 2023.</b></li><li>2. RFP#1 Q&amp;A Deadline: 12:00 p.m. Central Time, <b>Wednesday, February 1, 2023.</b></li><li>3. Use the current “ProjAgre” and “PA Forms” templates located at the <a href="#">RTI Forms webpage</a>.</li><li>4. 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 <a href="#">University Handbook</a>.</li><li>5. Proposals should be submitted in PDF format; (1) PDF file per proposal. File name should include project name and university abbreviation.</li><li>6. This project will be tracked during the life of the project using the Technology Readiness Level (<a href="#">TRL</a>) scale.</li><li>7. 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 <a href="mailto:RTIMAIN@txdot.gov">RTIMAIN@txdot.gov</a> 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.</li></ol>
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