

REQUEST FOR PROPOSALS

LTRC Project No. 22-3SA, SIO No. DOTLT1000432

Development of Statewide Design Guidelines for Improving Pedestrian Safety on High-Speed Arterials in Louisiana

PROBLEM STATEMENT

Pedestrian fatalities continue to increase at a worrying rate in the United States. Preliminary 2021 pedestrian traffic fatalities data published by the Governors Highway Safety Association (GHSA) show an alarmingly high pedestrian fatality rate per population and per vehicle miles traveled nationally. The trend is similar in Louisiana. Over the past 6 years, from 2015 to 2020, Louisiana reported a 35.2% increase in pedestrian fatalities. In 2020 alone, Louisiana recorded 146 pedestrian fatalities accounting for 17.6 percent of all traffic fatalities, a 19.7% increase from 2019. Furthermore, over the first half of 2021, pedestrian fatalities continued along this increasing trend, almost 21% from 2020. Therefore, we need to find effective countermeasures to reverse this trend and make the roadways safer for pedestrians.

Research shows that pedestrian crashes occur not only on low speed roads, which are more likely to be designed for pedestrians, but also on high-speed arterials. A previous LTRC study (18-5SA Evaluating Pedestrian Crossings on High-Speed Urban Arterials) provided a preliminary assessment of Louisiana's pedestrian crashes on high-speed arterials. Analysis of pedestrian crash data from 2013 to 2017 showed that 26% pedestrian crashes occurred on high speed roadways. However, fatal pedestrian crashes on these roadways accounted for two-thirds of the total pedestrian fatalities in the state making them less safe for pedestrians. Some of the findings of this research showed more pedestrian crashes on roadways without shoulders and sidewalks for urban areas, and on roadways with high ADT and no sidewalks for urbanized areas. In this study, high-speed arterials were defined as roadways with posted speeds of 45 mph or greater.

Several existing national guidelines provide information on installing pedestrian safety treatments at midblock and uncontrolled locations along low-speed roadways. However, limited information is available for high-speed arterials. The Louisiana Department of Transportation and Development (DOTD) is looking to develop system-wide solutions that guide the provision of safe pedestrian crossing facilities on the state's high-speed arterials.

OBJECTIVES

The objectives of this proposed research are to recommend which pedestrian facilities or countermeasures will be appropriate to improve pedestrian safety for various roadway characteristics, develop a statewide guideline on the provision of pedestrian facilities on Louisiana's high-speed arterials, and make proposal to modify, as needed, DOTD's complete streets policy and relevant Engineering Directives and Standards Manuals (EDSMs).

RESEARCH APPROACH

The Louisiana Transportation Research Center (LTRC) is seeking the insight of proposers on how best to achieve the research objectives. Proposers shall describe research plans that can be

realistically accomplished within the constraints of available funds and contract time as allowed in this Request for Proposal (RFP). Proposals must present the candidate's current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach in meeting the research objectives.

For each phase of the proposed research, itemize and discuss the tasks necessary to fulfill the objectives. Task descriptions are intended to provide a framework for conducting the research and identifying deliverables. *Refer to section 3.3.5 of the LTRC Manual of Research Procedures (2019 edition) for more guidance.*

(https://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf)

The research shall address, at a minimum, the following issues:

- Review literature for relevant studies, including [LTRC report 18-5SA "Evaluating Pedestrian Crossings on High-Speed Urban Arterials"](#) and also, determine whether the 45mph threshold for high-speed arterials is appropriate.
- Group roadway types into appropriate classes (roadways type by context, speed, ADT, pedestrian volumes, intersection density transit, number of lanes, presence or absence of medians, driveway frequencies, surrounding land use, etc.);
- Develop a matrix of design features for the safe movement along and across roadways, based on roadway classes using available literature from state and national resources, including NACTO resources;
- Identify crossing design features based on the variety of needs and conditions (midblock, intersection, low intersection density);
- Consider state and local statutes with regards to legal crossing locations, solicit input from Louisiana transportation professionals (state and local), and if necessary, identify conditions in which pedestrian access should be prohibited;
- Note conflicts with existing DOTD policies and/or guidance (as it relates to the complete streets policy and relevant EDSMs and design guides related to pedestrian activity), seek to balance needs of all road users, and make recommendations for priority of pedestrian facilities based on pedestrian volume and safety;
- Develop statewide guideline on the provision of pedestrian facilities on Louisiana's high-speed arterials; considering conditions for adjusting vehicle speeds if necessary, and including cross-section drawings of countermeasures for typical road layouts where possible.

DELIVERABLES

The proposal shall include project deliverables for appropriate tasks. Deliverables shall be due as defined in the proposal. The proposal shall include at a minimum the following deliverables:

- Interim Report
- Biannual Reports
- Presentations to the Project Review Committee (PRC)
- Final Report and Technical Summary to include a guideline for pedestrian facilities on high speed arterials in Louisiana

SPECIAL NOTES

- A.** LTRC research projects will be conducted in accordance with the LTRC Manual of Research Procedures, 2019 edition.
(http://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf)
- B.** Any work that is anticipated to be required from LTRC or DOTD shall be specifically detailed in the proposal.
- C.** Any surveys or questionnaires developed by the research team shall be reviewed and approved by the PRC prior to distribution.
- D.** LTRC projects are intended to produce results that will be applied in practice. It is expected that the implementation of the results of this research into practice will evolve as a concerted effort during this project. The final report must contain an implementation plan to include, as a minimum, the following:
 - a. The “product” expected from the research;
 - b. A realistic assessment of impediments to successful implementation;
 - c. The activities necessary for successful implementation; and
 - d. The criteria for judging the progress and consequences of implementation.
- E.** To assist in the implementation process, the investigators of this research shall present the final results to LA DOTD officials in an oral presentation to be held in Baton Rouge, Louisiana at LA DOTD Headquarters after acceptance of the final report.
- F.** The proposal should include travel to meet with the Project Review Committee for a “kick off” meeting, presentation of interim report, and presentation of the final report at a minimum. Funds budgeted for travel shall be limited to what is necessary for the conduct of the research. Funds shall not be budgeted for conference travel. Funding for technology transfer of research results are available upon request subject to LTRC approval and available funds.
- G.** LTRC’s mission includes the support of higher education in Louisiana. Consultant and out-of-state institutions submitting proposals are encouraged to cooperate and collaborate with Louisiana universities for the purpose of sharing of knowledge and increasing transportation expertise in the academic community.
- H.** Graduate assistance stipends are allowed. Tuition reimbursement or tuition remission rates applied to stipends are not allowed.
- I.** To equitably answer any questions regarding this Request for Proposals, the Louisiana Department of Transportation and Development (LA DOTD) website will be updated with questions and answers and related documents regarding the project.
<http://webmail.dotd.louisiana.gov/AgreStat.nsf/BWebAdvertisements?OpenPage>
LA DOTD makes these documents available for informational purposes only to aid in the efficient dissemination of information to interested parties. LA DOTD does not warrant the documents against deficiencies of any kind. The data contained within this web site will be periodically updated. Interested parties are responsible to be aware of any updates. Questions regarding this RFP should be submitted in writing to the LTRC contact person. Questions must be received by close of business seven calendar days prior to deadline date.
- J.** Consultants and business entities shall be registered with the Secretary of State in order to be able to work in Louisiana prior to award of contract. <http://www.sos.la.gov/Pages/default.aspx>
- K.** If Sub-Consultants/Entities are used, the Prime Consultant/Entity must perform a minimum of 51% of the work for the overall project.
- L.** LTRC reserves the right to withhold invoice payments for delinquent deliverables as defined in the proposal.

Note: At Project Manager's discretion, all in-person meetings may be changed to virtual meetings.

ESTIMATED COST OF RESEARCH

\$175,000

ESTIMATED COMPLETION TIME

18 Months *(includes 3 months for review and approval of final report)*

LTRC PRIMARY CONTACT

Julius Codjoe, Ph.D., P.E.
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AUTHORIZATION TO BEGIN WORK:

September 1, 2022 (estimated)

PROPOSAL FORMAT

All proposals are required to be formatted according to LTRC Manual of Research Procedures. Section 3.3 provides guidance on proposal development. A copy of the Manual may be downloaded from our website (http://www.ltrc.lsu.edu/pdf/2016/LTRC_RESEARCH_MANUAL_FINAL.pdf).

PROPOSAL SELECTION

The Project Review Committee selected for this project will review, evaluate and rank all proposals received using the criteria established on the attached proposal review form.

DEADLINE FOR RECEIPT OF PROPOSALS

Ten copies of the proposal must be received by LTRC by the close of business day of July 1, 2022. Alternatively, an electronic copy may be submitted to Sheri Hughes via Sheri.Hughes@la.gov copying Samuel.Cooper@la.gov before the due date.

Proposals should be submitted to:

Samuel Cooper, Ph.D., P.E.
Director Louisiana Transportation Research Center
4101 Gourrier Ave.
Baton Rouge, LA 70808