PURPOSE & PROJECT DESCRIPTION:
The purpose of this project is to perform a comprehensive analysis of crash data provided by the New Orleans Regional Planning Commission (NORPC). The project shall produce a listing of ten (10) locations with the highest crash rates (crashes per million vehicle miles). The study shall rank these locations and provide recommendations and a plan for an approach to studying the individual locations. The individual locations shall then each be studied and a Stage 0 Preliminary Scope and Budget Checklist developed for each. Each Stage 0 Preliminary Scope and Budget Checklist should provide specific recommendations for low cost safety improvements, as well as long term recommendations for safety improvements at each location or along the corridor. Cost estimates should be developed for each, and a cost-benefit analysis should be completed for each.

SCOPE OF SERVICES
All work performed as part of this study should follow all applicable LA DOTD policies and standards, any applicable federal standards or guidelines, and all MAP21 requirements and performance measures.

The services to be rendered for this contract shall consist of the following Stage(s) and Part(s):

TASK 1: Project Management Committee (PMC)
The RPC will form a Project Management Committee (PMC) to guide the study and evaluation process. PAC members will include the RPC, local parish or municipal departments of public works, as appropriate, and LADOTD District 02, and other stakeholders identified during the course of the study. The PMC will oversee the work in progress, review summary data and findings, and assist in the formulation of recommended improvements.

TASK 2: Comprehensive Crash Data Analysis
Part I: Coordinate data selection for analyses with the NORPC. This may include crash data, speed data, traffic volume data, geometric data, and other types.
Part II: Determine crash rates (crashes per million vehicle miles) for all locations with clusters of crashes or crash types
Part III: Develop a listing of the ten (10) locations with the highest crash rates in the New Orleans study area for further evaluation and analysis; Illustrate locations on a map
Part IV: Develop collision diagrams for identified locations
Part V: Compare these identified locations with the LA DOTD statewide crash averages
Part VI: Determine if any locations have over-represented crash types

DELIVERABLE FOR TASK 2:
Technical memo submitted to the NORPC summarizing results of Comprehensive Crash Data Analysis for approval of ten (10) identified locations for further review.

TASK 3: Stage 0 Checklists
The consultant will conduct Stage 0 Feasibility Studies and prepare studies/checklists as required by LA DOTD. The Stage 0 studies and checklists must be prepared as outlined in LA DOTD’s Stage 0 manual, Stage0: Manual of Standard Practices. Task 2 shall be performed for each of the ten (10) locations identified in Task 1 of this project.
For each identified location on the listing of higher crash locations, develop a Stage 0 Preliminary Scope and Budget Checklist. This includes, but is not limited to, the following:

a) Discuss and explain the purpose and need for the project in detail in the feasibility study and the Stage 0 Preliminary Scope and Budget Checklist. This shall include an overview of crash rates and crash types for the last 3 to 5 years, if available.

b) Obtain, organize, and review the engineering data required to prepare the studies/checklists. It may include, but is not limited to, the following:
   1. Existing traffic data
   2. Crash data
   3. Existing roadway plans (as-builts) and/or available aerial images or Google Maps
   4. Utility information
   5. Previous studies and reports
   6. Unit cost data
   7. Map to identify project site
   8. Aerial photography
   9. TSI data, as available (field collected by consultant if not available)

c) Provide geometric layouts of reasonable alternatives using aerial photography and DOTD’s design standards.

d) Perform a safety analysis using the Highway Safety Manual predictive method, where applicable, and provide a quantitative comparison of safety for each alternative. Crash Modification Factors may be used if the predictive method is not applicable. If CMFs are used, LA-specific CMFs should be used if available.

e) Develop preliminary cost estimates for each alternative, including low cost improvement alternatives, based on unit cost data. The estimates will include the costs associated with engineering, environmental, construction, right-of-way acquisition, utility relocation, and contingencies.

f) Complete DOTD’s Environmental Checklist and include it in the feasibility report. Analysis of each alternative, including the no build, will be made to the extent practicable. Items to be considered include, but are not limited to, social economic, historic, cultural, recreational, archeological, noise, air, wetlands, flood plains, endangered or threatened species and/or their habitats, and farmland. Identify and define the apparent environmentally sensitive areas, hazardous material sites, and natural or manmade constraints to project development within the project’s limits, using field reconnaissance and aerial photography. This includes the use of publicly available data sets and field review to locate community resources, utilities, etc. Analysis results and any information collected will be documented in a manner consistent with the requirements of the National Environmental Policy Act (NEPA).

DELIVERABLES FOR TASK 3:
The consultant shall submit to the NORPC ten (10) DRAFT stand-alone Stage 0 Checklists and all supporting documentation for each. A Stage 0 Checklist shall be prepared for each of the ten (10) locations identified and approved in Task 1. Drafts should be submitted and approved, prior to submitting final deliverables.
Task 4: Development of Plans for Low Cost Safety Improvements
The consultant will prepare plan sheets for low-cost safety improvements as identified by the Stage 0 Feasibility Studies. Additional countermeasures may be recommended for inclusion into the plans using the FHWA’s Crash Modification Factor Clearinghouse. These plan sheets shall be simple letter-size plans and shall be created using available aerial images from NORPC. The plan sheets shall be developed in accordance with the MUTCD and the AASHTO Roadside Design Guide with consideration of the Highway Safety Manual and NCHRP 600: Human Factors Guidelines for Road Systems.

DELIVERABLES FOR TASK 4:
Letter-size plan sheets and an associated specification for each identified low-cost safety improvement

Task 5: Safety Effectiveness Evaluation
The consultant will perform a safety effectiveness evaluation in accordance with the recommended practices outlined in the Highway Safety Manual for each of the individual ten (10) locations identified as part of this project. Safety effectiveness evaluation is the process of developing quantitative estimates of how a treatment, project, or a group of projects is anticipated to affect crash frequencies or severities. The safety effectiveness evaluation may include:

a) Evaluating a single project at a specific site to document the safety effectiveness of that specific project,

b) Evaluating a group of similar projects to document the safety effectiveness of those projects,

c) Evaluating a group of similar projects for the specific purpose of quantifying a CMF for a countermeasure, and

d) Assessing the overall safety effectiveness of specific types of projects or countermeasures in comparison to their costs.

Safety effectiveness evaluations may use several different performance measures, such as a percentage reduction in crashes, a shift in the proportions of crashes by collision type or severity level, and CMF for a treatment, or a comparison of the safety benefits achieved to the cost of a project or treatment.

DELIVERABLE FOR TASK 5:
Technical memo shall be prepared to present the findings of the safety effectiveness evaluation.
Task 6: Final Document Preparation
The consultant will prepare a final document containing all findings of Tasks 1-4. A separate section of the document should be dedicated to each of the ten (10) identified locations. The final document for each of the locations shall include a completed Stage 0 Checklist, a Safety Effectiveness Evaluation, and all supporting documentation, as well as letter-size plan sheets for any identified low-cost safety improvements.

DELIVERABLE FOR TASK 6:
*Final documentation for study.*

**Budget:** $45,000

**Timeline:** 8 months