

STAGE 0 FEASIBILITY STUDY
SCOPE OF SERVICES

LA 1091 (Robert Boulevard) @ Country Club Boulevard/John Slidell Park
Roundabout Study
RPC Task SL-1.18; FY-18 UPWP

The purpose of this project is to perform a Stage 0 Feasibility Study for a proposed roundabout at the intersection of LA 1091 (Robert Boulevard) @ Country Club Boulevard/John Slidell Park. This intersection is presently an unsignalized four-way intersection with Stop signs controlling the Country Club Boulevard and John Slidell Park approaches.

The intersection is under the jurisdiction of the Louisiana Department of Transportation and Development (DOTD). Consequently, the study will adhere to DOTD's Engineering Directives and Standards governing the requirements for the justification, design, and approval for roundabouts on State highways (EDSM No. VI.1.1.5 "Roundabouts"). The study shall be managed by and the report signed and stamped by a Professional Engineer (P.E.).

This project will include the following tasks.

TASK 1: PROJECT TIMELINE AND KICK-OFF MEETING

The Consultant will prepare a draft project schedule including major milestones for the Tasks to follow. The timeline will be submitted at a project kick-off meeting that will include representatives from the Consultant, any sub-Consultant, the City of Slidell, DOTD District 62, and the Regional Planning Commission (RPC). Other attendees will be invited as necessary. The kick-off meeting will take place within two (2) weeks of the Notice to Proceed.

TASK 2: PROJECT MANAGEMENT COMMITTEE

The Consultant will assist the City of Slidell in establishing and supporting a Project Management Committee (PMC) to guide the technical work effort and to review the Consultant's work products. The PMC will include representatives from the City of Slidell, DOTD District 62, RPC, and others stakeholders as deemed appropriate.

The PMC will meet approximately four times during the course of the study effort. In addition, the Consultant will as necessary conduct meetings with elected officials and other local leaders and organizations in the area to discuss the project's purpose and need and project-related opportunities and concerns.

TASK 3: SITE INVESTIGATION AND DATA COLLECTION

A comprehensive site investigation and data collection effort will be made at the location to allow an accurate assessment of the traffic and physical characteristics of the site.

Data collection work will include but may not be limited to the following.

Crash History – A crash history of the intersection will be determined for the past 3 years and a chart developed listing the number of “correctible crashes”. Correctible crashes are defined as head-on, right-angle, and left-turn collisions.

Traffic Volume Counts – 7-day, 24-hour traffic volume counts will be conducted on each approach to the intersection. These counts will contain hourly subtotals and include vehicle classification amounts. Counts must be completed during a 7-day period that does not include a holiday or special event not typically seen at the site.

Peak Hour Turning Movement Counts – Vehicle and pedestrian peak hour turning movement counts will be collected at the intersection during the weekday A.M. and P.M. peak hours. A weekend, noon (midday) peak hour turning movement count will also be required to determine the traffic impact of routine recreational events occurring at John Slidell Park. Peak hour observations of existing queue lengths on all approaches to the intersection will be noted during the peak hour counts. These counts must be completed during a period that does not include a holiday or special event not typically seen at the park.

Speed Study – Vehicle travel speeds will be collected along the LA 1091 (Robert Boulevard) approaches to the intersection to perform a speed study following the methods defined by DOTD’s EDSM VI.1.1.1 and the DOTD Traffic Engineering Manual.

TASK 4: ROUNDABOUT OPERATIONAL ANALYSIS

Utilizing the traffic data collected in Tasks 3, the Consultant will conduct a roundabout operational analysis for the intersection.

The analysis will include the following evaluations.

HCM Level of Service Analysis (Existing Intersection) – For comparison purposes, a HCM Level of Service Analysis will be performed on the existing operational state of the intersection during the A.M. and P.M. peak hours using the existing geometry, traffic controls, and traffic volumes. Delay times (seconds per vehicles) and corresponding Level of Service (LOS) designations and v/c ratios will be calculated using Synchro Software (Version 7 or higher).

Sidra Intersection Analysis (Roundabout) – For the roundabout analysis, Sidra Intersection computer software will be used to determine the level of service and v/c ratio for the proposed roundabout. The collected peak hour traffic counts shall be projected out from the anticipated build year of the roundabout to allow a design life of 20 years. In this case the build year is considered to be 3 years from submittal of the traffic study. The Sidra Intersection software settings and final analysis reports must be set to follow the requirements set forth in the DOTD Roundabout Analysis Brochure. An electronic copy of the Sidra analysis file shall be submitted with the report. Level of Service and v/c ratios for the roundabout Sidra analysis will be compared to the HCM analysis for the existing unsignalized intersection.

VISSIM Modeling – A VISSIM computer software model will be prepared to show an animation of the anticipated function of the roundabout. An electronic copy of the model will be submitted with the report. The VISSIM model shall be calibrated using the industry standards for the calibration of traffic models.

AutoTURN Analysis – The report must provide an AutoTURN analysis to demonstrate that the proposed roundabout layout can accommodate a WB-67 truck.

TASK 5: CONCEPTUAL ROUNDABOUT LAYOUT DESIGN

The Consultant will prepare a detailed conceptual drawing on an aerial photograph showing the proposed roundabout layout design. The layout shall follow to the greatest extent possible the LADOTD Roadway Design Procedure and Details Manual for roundabouts. The concept drawing will include but not be limited to the following.

- Appropriate geometry for the entry and exit of the design vehicle
- Potential horizontal and/or vertical geometry issues
- Apparent right-of-way as determine from available information and site visits.
- Anticipated required right-of-way
- Nearby driveways, intersections, and traffic control types within the 95% queue length.
- Apparent utility locations determined from available information and site visit.
- Anticipated utility relocations
- Sidewalk locations
- Apparent drainage issues

TASK 6: DRAFT REVIEW

A draft report with all documentation described above will be submitted to the City of Slidell and others on the PMC. The report will include the conceptual layout of the roundabout and descriptions of the proposed improvements.

TASK 7: FINAL DELIVERABLES

Following review and approval of the draft submission, the Consultant will provide the City of Slidell with six (6) bound copies of the Final Study Report and supporting plan packages. A pdf version of the final report and plan packages will also be provided and include all accessory documentation created during the course of the study.

TIMELINE: 6 Months

BUDGET: \$55,000.00