

STAGE 0 FEASIBILITY STUDY
SCOPE OF SERVICES

Northshore Boulevard: US 190 to I-12 S. Service Rd.
Traffic Study
(RPC Task SL-1.20NSB; FY-20 UPWP)

PURPOSE AND NEED

The purpose of this project is to perform a Stage 0 Feasibility Study to address existing traffic congestion, transportation mobility, and safety issues along Northshore Blvd. The corridor extends between US 190 to the south to the I-12 S. Service Rd. to the north. Analysis will also cover areas immediately adjacent to the geographic area of the defined corridor to the degree they are directly impactful to the operations of the Northshore Blvd. corridor.

The need for this study is as follows:

- 1) Northshore Blvd. is a roadway owned and maintained by the City of Slidell. It is a locally owned roadway on the National Highway System network and provides an important connection between US 190 and I-12.
- 2) Northshore Blvd is functionally classified as an urban principal arterial on the functional class network for the Slidell Urbanized area.
- 3) By way of the Local Road Safety Program (LSRP), Northshore Boulevard has the highest number of crashes of any locally owned roadway in St. Tammany Parish as of the latest crash profile, 2014-2016.
- 4) Over the past several years, changes in land use and commercial activity along the corridor have provided an opportunity to reexamine operations of and access to Northshore Blvd.

Scope of Work:

Project will be undertaken in a manner consistent with LADOTD's Traffic Engineering Process and Report (TEPR), as promulgated below:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Publications/Pages/Process%20and%20Report.aspx

Task 1. Kick-Off Meeting

Conduct an initial project kick off meeting with a Project Advisory Committee include the City of Slidell, LADOTD District 62, NORPC, St. Tammany Parish and other local stakeholders to discuss project and project planning process. Invitees shall receive an invitation (with draft agenda) no later than 7 days prior to the meeting date.

Meeting will include a review of the project area (as described above) to help identify issues and areas of potential concern by the meeting invitees.

Meeting documentation will include an agenda, sign-in sheet, scope, project area map, project schedule (concept), pre-scope checklist of data elements.

***Deliverable:** A report of the meeting activities and outcome, with a copy of the sign-in list, will be made available to attendees within 10 days of the kick-off meeting.*

Task 2. Initial Data Collection – Average Daily Traffic Counts and Peak Period Determination

Collect 7 day/24 hour traffic counts with classifications¹ at up to two locations along Northshore Boulevard, defined as follows:

- I-12 Service Road (south) to Home Depot/Walmart Entrance Road;
- Home Depot/Walmart Entrance Road to US 190

All data collected will be analyzed for the identification of the peak period. A chart and explanation will accompany this peak period determination as well as the identified time periods.

***Deliverable:** Task Report of the average daily traffic data collection with documentation provided of the QA/QC of all data and analyses completed with the task.*

Task 3. Final Data Collection – Peak Period Traffic Counts and Observations

Collect peak-period turning movement traffic and observational data for the following locations along Northshore Boulevard, with all movement data to include vehicle classification (Auto, Truck, Bus) as well as data for pedestrians and cyclists:

- Northshore Boulevard at I-12 Service Road South and North Shore Square Mall North driveway (taken together);
- Northshore Boulevard at Home Depot/Walmart Entrance Road;
- Northshore Boulevard at North Shore Square Mall South Driveway;
- Northshore Boulevard at US 190 (Gause Boulevard W).

All peak-hour data will be collected on a Tuesday, Wednesday and Thursday during a non-holiday, week when schools are in session. During the process of peak-hour counts², a series of peak-period observations will be taken at these locations along Northshore Boulevard to document field conditions during the traffic counting period including roadway geometry, operational issues with existing geometry, signals, access patterns, travel demands, as well as other items as determined during the kick-off meeting.

All data collected will be summarized into a standardized profile for each intersection and accompanying text to summarize observations across the corridor.

***Demand and Driveway Data:** In addition, demand data will be counted as part of the peak hour turning movement data collection effort, as per the LADOTD methodology. Fifteen (15) minute*

¹ Classifications based upon the standard FHWA vehicle classification methodology. If approved by LADOTD, 48-hour counts with classifications may be used at these locations.

² This decision will be up to LADOTD but peak-hour study requires 48-hour tube counts with vehicle classifications be taken at the intersection approaches at the same time as the peak-hour turning movement counts to validate results.

driveway counts will be undertaken for all parcels with driveway access to Northshore Boulevard along the corridor, approximately 14 driveways, exclusive of intersections.

Basemaps: In addition, a base map of the existing corridor (at 1-200' scale with a standard LADOTD title block and corridor identification information) will be prepared to depicting geometry along the corridor, including lane configuration and storage, stop lines, signals, signal cabinets and crosswalks will be prepared using current aerial photography and a standard set of map symbols.

Warrant Analysis: Changes in signal locations and traffic control type, will require consideration of impacts following Section 4B.3 of the Traffic Engineering Manual of LADOTD and consideration of the EDSM VI.3.1.6.

Design Year/Trip Generation Forecast: In consultation Regional Planning Commission Travel Demand Model (SELATRAM), an estimate for future growth will be identified to correspond to the horizon year of the long-range transportation plan. Existing volumes will be grown to the horizon year using the data trends documented in the travel demand model. As part of the documentation for this design year calculation, documentation of the travel demand model data for the area (jobs, residential employment, school enrollment, etc.) along with roadway improvements within the immediate vicinity (within 5 miles) will be identified with a description and timeline for implementation (as found in the long-range plan).

Consultation with the City of Slidell Planning Department will take place to document comprehensive plan recommendations for the area, bicycle master plan elements and to determine whether any future developments might appear in the corridor which could change traffic and access patterns. This review will be kept to items known in the public realm as presented for application and approval through the City of Slidell and the City Planning Commission process. An estimate of any future trips added to the corridor as a result of these developments will be estimated using the *ITE Trip Generation Manual, 10th Edition*.

Maps will be prepared to document turning movement counts/volumes including design year volumes (with distribution), trip generation volume estimates (with distribution) and final future volumes map (Design Year + Trip Generation) for peak periods.

Deliverable: Task Report of the base year and design year peak-hour data collection with documentation provided of the QA/QC of all data and analyses completed with the task.

Task 4. Existing Safety Analysis

An analysis of corridor safety will take place using the CATScan Tool to document all crash types reported within the last three (3) year period as approved by LADOTD. Data obtained from this review should be presented to LADOTD District 62 for review, with a decision made on which set of data to present along the corridor within a collision diagram. Documentation for this analysis should include a listing of crashes, to determine trends and compare to statewide averages. The analysis should explain results, patterns, trends, and problem areas using results from the CATScan Tool, collision diagram and crash report documentation. Data collection and reporting will be as outlined in the LADOTD methodology.

Deliverable: Task Report of the safety analysis with documentation provided of the QA/QC of all data and analyses completed with the task.

Task 5. Alternatives Analysis, Existing Conditions vs. No Build/Design Year

The initial phase of alternatives analysis starts with an analysis of existing conditions along the corridor during peak periods. This analysis will utilize method and software package as identified by LADOTD during the review of existing data and design-year traffic volumes. *Note, this analysis cannot start until approval for software package and analysis method is received from LADOTD.* The purpose of the no-build review will be to document change in operational conditions using existing geometry and future volumes (as determined in Task 3, Design Year/Trip Generation Forecast).

Deliverable: Task Report of the existing conditions and no-build design year analysis with approved analysis tool inputs (HCM or VISSIM) to LADOTD with documentation provided of the QA/QC of all data and analyses completed with the task.

Task 6. Alternatives Analysis – Identification of Potential Alternatives

In addition, potential alternatives to improve noted deficiencies will be identified using a high-level analysis which would focus on potential solutions by type to address existing needs as a determined through the analysis of existing conditions and no-build in Tasks 1 through 5.

The high-level analysis is completed with a minimal amount of engineering details; documentation of alternatives would include a name, limits, and brief description only. A non-engineering schematic may be prepared along with informational graphics in order to depict future construction location and potential for impacts to the built and natural environments.

A recommendation of the alternative(s) to be considered along the corridor will be identified in summarized in matrix form using criteria and analysis findings identified as a result of work completed in Tasks 1 through 5.

The results of this analysis of alternatives would be shared with the Project Advisory Committee (as outlined in Task 1), in order to garner input and to identify community concerns. The results of this step will be shared with LADOTD District 62 in order identify which alternative(s) would be considered for further analysis.

Deliverable: Task Report of the initial high-level alternatives evaluation with recommendations for further analysis – with documentation provided of the QA/QC of all data and analyses completed with the task.

Task 7. Alternatives Analysis, Existing Conditions vs. Future Design Year BUILD

With approval for alternatives analysis and software provided, the next phase of alternatives analysis starts. This phase of work will present the outcomes of the analysis of existing conditions along with the initial analysis identified in Task 6 as potentially feasible. The analysis of alternatives takes place in the design year model following the method required by LADOTD,

including rebalance of design year volumes (with map and explanation of changes provided), presentation of base traffic analysis models for review and validation, development of data sets for review and approval and completion of the analysis for review by LADOTD and the members of the Project Advisory Committee. The process of development will follow the LADOTD methodology. Outcomes will include a recommendation of improvements for the corridor.

The results, once approved by LADOTD, will be used to develop engineering schematics of the potential improvements (not line and grade) and initial cost estimates for implementation based upon the applicable LADOTD unit costs for construction.

***Deliverable:** Task Report of the final alternatives evaluation with approved analysis tool inputs (HCM or VISSIM) to LADOTD with documentation provided of the QA/QC of all data and analyses completed with the task.*

Task 8. Final Report

Preparation of a final report to summarize outcomes documented in deliverables for Tasks 1 through 7, along with applicable background data. Final report must be prepared following LADOTD methodology, including submittal of intermediate deliverables for review by LADOTD, complete with QA/QC review and documentation as outlined in the Traffic Engineering Process & Report:

Chapter 1 Items from Task 2 (Initial Data Collection) and Task 3 (Final Data Collection), plus Task 4 (Existing Safety Analysis) as an Appendix;

Chapter 2 Items from Task 5 (Existing and No Build Analysis);

Chapter 3 Items from Task 6 (Identification of Potential Alternatives) and Task 7 (Existing and Future Design Year)

Executive Summary

Deliverable:

1. Sealed Report (**Draft must be approved before final submission**)
2. Minimum 2 Hard Copies and 2 Electronic Copies

Duration: Seven Months from NTP

Cost: \$40,000