



# MOVE

2046

Connecting Communities – Shaping Our Future


# Congestion Management Plan

January 2022 DRAFT



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# 1.0 Introduction and Purpose

## 1.1 Foreword/Background

A Congestion Management Process (CMP) is an analytical process that measures the operational effectiveness of major transportation facilities located within a Transportation Management Area (TMA), an urbanized area with a population greater than 200,000 people. A CMP proposes strategies required to address congested areas identified within a TMA.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required each TMA to develop a Congestion Management System (CMS). Subsequent legislation that have continued this requirement include:

- The Transportation Equity Act for the 21st Century (TEA-21) in 1998
- Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005
- Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012

The CMS became the CMP when SAFETEA-LU was passed. Prior to becoming the CMP, the CMS was often treated as a stand-alone data analysis exercise or report on congestion. Since then, the CMP has been intended to be an on-going process, fully integrated into the metropolitan transportation planning process<sup>1</sup>. The previous CMP effort for the Baton Rouge Metropolitan Area was conducted in 2013 to:

- Analyze the Baton Rouge Metropolitan Planning Area's (MPA's) transportation system.
- Determine which areas experience the greatest mobility and maneuverability issues associated with traffic congestion.
- Identify a wide range of congestion reduction scenarios that, if implemented, can aid in improving free flow traffic conditions.

## 1.2 Definition of Congestion and Purpose of Congestion Management Process

Congestion is defined as the delay compared to normal free-flow traffic conditions on major transportation systems that impedes traffic mobility and maneuverability. Traffic congestion has several negative side effects, such as an increase in goods transportation costs, increased fuel

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<sup>1</sup> [https://www.fhwa.dot.gov/planning/congestion\\_management\\_process/cmp\\_guidebook/cmpguidebk.pdf](https://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/cmpguidebk.pdf)

consumption, and lost work productivity. It also contributes to air pollution, negatively impacting the health of the MPA's residents, workers, and the environment.

**A CMP is an effective tool that assists in the management of new and existing transportation facilities. It does so using travel demand reduction scenarios and supply management strategies that promote traffic mobility and accessibility in the MPA.**

### 1.3 Federal Guidance/Federal Legislation

Section 450.322 (a) of Subpart C (Metropolitan Transportation Planning and Programming), 23 CFR (Final Rule), states that:

"The transportation planning process in a Transportation Management Area (TMA) shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction (including Intercity bus operators, employer-based commuting programs such as a carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), job access projects and operational management strategies."

Section 500.109 (a) of Subpart A (Management Systems), 23 CFR (Final Rule), states that:

"For purposes of this part, congestion means the level at which transportation system performance is unacceptable due to excessive travel times and delays. Congestion management means the application of strategies to improve system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods in a region. A congestion management system or process is a systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system operations and performance and assesses alternative strategies for congestion management that meet State and local needs."

Section 500.109 (b) states of Subpart A (Management Systems), 23 CFR (Final Rule), states that:

“The development of a congestion management system or process should result in performance measures and strategies that can be integrated into transportation plans and programs. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea and/or non-metropolitan area), and/or time of day. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that manage demand, reduce Single Occupant Vehicle (SOV) travel, and improve transportation system management and operations. Where the addition of general-purpose lanes is determined to be an appropriate congestion management strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management strategies and operational improvements that will maintain the functional integrity of those lanes.”

## 1.4 Causes and Types of Congestion

Within urbanized areas across the United States, people are migrating from the core areas to the “outer rings” and suburbs. This out-migration trend has placed a strain on the existing infrastructure. This has affected other public facilities including transit, rental cars, bicycle lanes, and taxis.

The Baton Rouge MPA is the second largest metropolitan area in Louisiana. Situated on the Mississippi River, the MPA encompasses the entirety or portions of five (5) parishes:

- East Baton Rouge
- Ascension
- Iberville
- Livingston
- West Baton Rouge

The MPA is situated along the I-10 corridor, the major east-west Interstate across the Southern United States, connecting the MPA to Lafayette, Louisiana and Houston, Texas to the west and New Orleans, Louisiana and Mobile, Alabama to the east. The MPA’s location along the I-10 corridor results in additional through traffic as travelers head from one major metropolitan area to another. These additional trips have led to increased traffic not only on I-10, but also on I-12, US 61, and US 190.

Congestion can generally be classified as either recurring or non-recurring.

## Recurring Congestion

•Recurring congestion is regularly occurring traffic congestion that happens at the same time every day during peak hours. This congestion occurs due to traffic demand exceeding roadway capacity.

## Non-Recurring Congestion

•Non-recurring congestion occurs due to accidents, adverse weather, special events, work zones, and other factors that do not follow a predictable pattern. As such, non-recurring congestion is caused by non-standard or random events.

### 1.5 Previous Congestion Management Strategies

Across the nation, there is a push to reduce Single Occupancy Vehicle (SOV) travel to reduce congestion. These efforts were guided by proposed alternative travel methods and travel demand strategies, such as carpooling/vanpooling and transit park-and-ride facilities. However, motorists preferred the convenience that SOVs provide and the strategies proved ineffective. According to the Census Bureau, the percentage of workers in Baton Rouge that drove to work alone has been steady at approximately 80 percent in the last decade (2010 to 2019)<sup>2,3</sup>.

Alternative strategies to projects that increase SOV capacity could alleviate congestion on the congested corridors that were identified in the previous CMP document, which was adopted in 2010 and modified in 2013. The previous CMP considered a corridor to be congested if:

- The V/C ratio was greater than 1.0, or
- Short links with LOS D or E adjoined a link with LOS F; these links were considered potential links that the congested would be carried over.

According to the previous CMP, there were 173 congested segments covering 586.4 miles of the network. The determination of the proposed strategies was identified by the functional classification of the CMP segment since strategies were specific to certain road types. The strategies from the previous CMP were grouped into the following five categories:

<sup>2</sup> <https://data.census.gov/cedsci/table?q=Baton%20Rouge,%20Louisiana&t=Commuting&tid=ACSDT5Y2010.B08101>

<sup>3</sup> <https://data.census.gov/cedsci/table?q=Baton%20Rouge,%20Louisiana&t=Commuting&tid=ACSDT1Y2019.B08101>

- Transportation Demand Management
- Traffic Operational Improvement
- Public Transportation and Non-Traditional Modes
- Intelligent Transportation Systems
- Additional System Capacity

The strategies for each category, and their objectives, from the previous CMP are shown in **Appendix A**.

## 1.6 Goals and Objectives

The objectives of this CMP are to:

- Improve the following elements of the transportation system:
  - Mobility
  - Connectivity
  - Accessibility
  - Reliability
  - Travel times
  - Safety
- Provide various modes of travel options in the Baton Rouge MPA.

## 2.0 Data and Network

### 2.1 Congestion Data Sources

This section describes the data sources used to conduct the congestion analysis within the MPA.

#### Probe Data Analytics (PDA) Suite

The PDA Suite<sup>4</sup>, which can be accessed from the Regional Integrated Transportation Information System (RITIS) website, allows agencies to support operations, planning, analysis, research, and performance measures generation using probe data mixed with other agency transportation data.

The suite consists of a collection of data visualization and retrieval tools. These web-based tools allow users to download reports, visualize data on maps or in other interactive graphics, and even download raw data for offline analysis. Each tool has its own unique purposes. Among many other uses, the PDA Suite can provide insight on:

- Real-time Speed Data
- Travel Time Index
- Travel Time Reliability metrics
- Queue Measurements
- Statewide bottleneck ranking
- Corridor Congestion Charts

For this CMP effort, the *Bottleneck Ranking Tool* was used. This tool gathers all bottlenecks found within a specified range of dates along a corridor and ranks the congested portions of the road based on either the number of occurrences found, the queue size, or the duration of the bottlenecks. This tool allows for quick and easy identification of regularly congested roads.

#### Travel Demand Model (TDM)

The Metropolitan Planning Organization's (MPO) TDM predicts trip-making behavior such as the number of trips, their origins and destinations, and most probable trip routes. The TDM used for this CMP has an existing (base) year of 2020 (pre-COVID conditions) and a horizon year of 2046. The TDM contains data on existing conditions, socioeconomic forecasts, and anticipated growth in external trips to replicate current travel demand and develop forecast travel demand on the MPA's roadway network. It can also be used to conduct a congestion analysis for future conditions.

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<sup>4</sup> <https://www.cattlab.umd.edu/?portfolio=vehicle-probe-project-suite>



## Google Traffic

A feature in Google Maps, Google Traffic displays traffic data using colored overlays on top of roads to represent the observed speed of traffic. It uses crowdsourcing to obtain the GPS locations of cellphone users and generates live traffic maps along roadway segments. This data, shown on a scale from fast (representing minimal or no congestion) to slow (representing heavy congestion), is displayed on a map. The data displays traffic conditions along a particular section of roads at specific times on specific days. Google Traffic was used to corroborate the congested segment results obtained from the PDA data.

## Crash Data

Crash data obtained from the Louisiana Department of Transportation and Development (LADOTD) was used to identify non-recurring congestion, since incidents along a roadway may result in excessive delays. The crash records included latitude and longitude data, as well as the:

- Time
- Location (Intersection or roadway segment)
- Severity
- Crash type
- Location conditions (e.g. Pavement condition, weather)

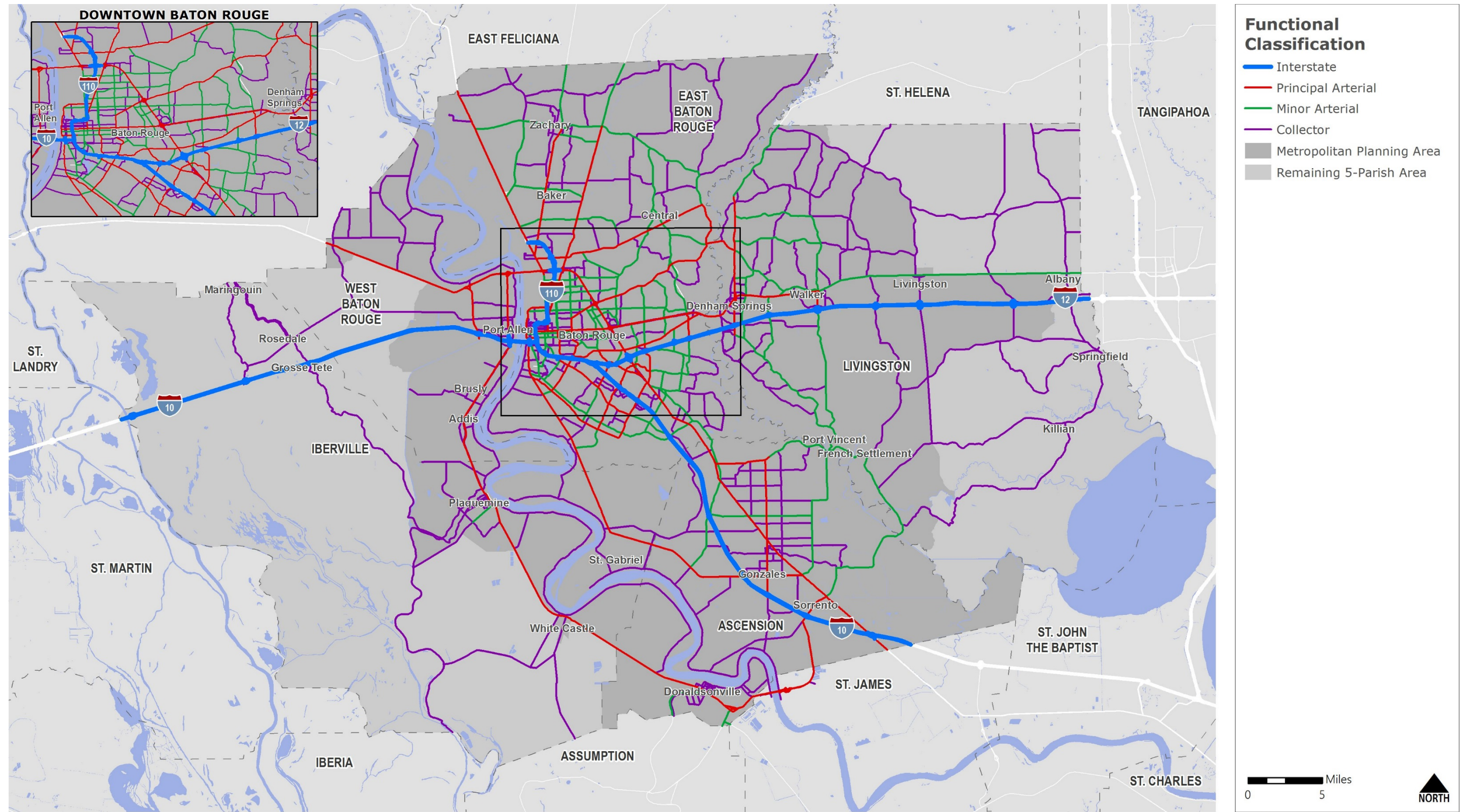
## 2.2 Network

The MPA's roadway network consists of five facility types. The facility types are:

- Interstates
- Principal Arterials
- Minor Arterials
- Collectors
- Local Roads

Each facility type provides separate and distinct traffic service functions, which are described in Section 2.1 of *Technical Report: Existing Conditions*. Their designs vary in accordance to the characteristics of traffic to be served by the facility. The CMP network includes all roadways within the TDM network that are functionally classified as a Collector or above. The boundaries of the MPA, and its CMP network, are shown in Figure 2.1.

Figure 2.1: MPA and CMP Network



Data Sources: LADOTD

Disclaimer: This map is for planning purposes only.



## 2.3 Multimodal Mobility

The traditional understanding of congestion has been focused largely, if not solely, on automobiles. Typically, the standard solution for congestion reduction has been increasing roadway capacity (i.e. “building our way out of congestion”). However, this solution usually induces more automobile travel, which may worsen the level of congestion that existed before the capacity expansion. By understanding congestion from a multimodal perspective, all modes can be considered potential sources and remedies for congestion. Several studies have indicated that transit<sup>5</sup>, walking, and cycling<sup>6, 7</sup> can be tools to relieve automobile congestion.

Congestion also affects economic productivity. Growing freight demand increases congestion on the highway system as truck and automobiles compete for space on the highway system while commuter trains and freight trains compete for space on the railroad network. This congestion affects both businesses and consumers as businesses require more operators and equipment to deliver goods while consumers wait longer for inventory deliveries<sup>8</sup>.

### Freight

The Baton Rouge MPA is a major generator of freight, as well as a distribution and processing center for many goods. It is home to many freight facilities, including four Class I railroads and six major highways. These two (2) factors indicate that freight traffic has a major impact within the MPA. The major freight network within the Baton Rouge MPA includes:

- Major freight roads, including I-10, I-12, I-110, US 190, US 61, and LA 1. Section 3.2 of *Technical Report: Exiting Conditions* summarizes the freight highway network and conditions.
- Railroads including the Kansas City Southern Railroad along I-10 and US 61; Canadian Northern Railroad along US 190, Canadian Northern Railroad along the East Bank of the Mississippi River; and Union Pacific Railroad along the West Bank of the Mississippi

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<sup>5</sup> Nakamura, K., Hayashi, Y. (2013). Strategies and instruments for low-carbon urban transport: An international review on trends and effects. *Transport Policy*. 29, pp. 264–274

<sup>6</sup> Litman, T. (2014). Congestion Evaluation Best Practices. In: International Transportation Economic Development Conference. Sheraton Dallas Hotel, Dallas, USA. Apr. 09-11, 2014. pp. 1–20.

<sup>7</sup> Litman, T. (2018). Smart Congestion Relief - Comprehensive Evaluation of Traffic Congestion Costs and Congestion Reduction Strategies. Victoria Transport Policy Institute, Victoria, Canada

<sup>8</sup> [https://ops.fhwa.dot.gov/freight/freight\\_analysis/freight\\_story/congestion.htm](https://ops.fhwa.dot.gov/freight/freight_analysis/freight_story/congestion.htm)

River. Section 3.3 of *Technical Report: Exiting Conditions* summarizes the freight railroad network and conditions.

- Airports, including Baton Rouge Metropolitan Airport and Louisiana Regional Airport. Section 3.4 of *Technical Report: Exiting Conditions* summarizes the freight airport conditions.
- Waterways and Ports, including the Port of Baton Rouge; the Mississippi River; the Gulf Intracoastal Waterway – Morgan City-Port Allen Route; Bayou Lafourche; Amite River; and Bayou Manchac. Section 3.5 of *Technical Report: Exiting Conditions* summarizes the water network, ports, and their conditions.

The economic consequences of congestion-delayed freight goods are significant to the Baton Rouge MPA. Data from the Baton Rouge MPO TDM indicates that, on the CMP Network, the auto Vehicle Hours Delay (VHD) and auto congestion costs will increase by 58 percent from 2020 to 2046 and that truck VHD and truck congestion costs will increase by 99 percent during the same period. Figure 3.8 of *Technical Report: Exiting Conditions* identifies locations that currently experience freight congestion. Segments currently experiencing freight congestion, or are expected to experience freight congestion in 2046, are identified in Figure 5.3 and Figure 5.4 of *Technical Report: Needs Assessment*, respectively.

## Transit

Transit can provide people with mobility and access to employment, shopping, medical care, and other destinations and opportunities. For some, transit is a lifeline service for those who have no other choice due to economic and/or physical limitations. For others, transit serves as an alternative to driving as well as a cheaper method of travel. Using transit removes SOVs from the roadway network and reduces overall network congestion, which can also improve the reliability for transit. Projects that promote the use of transit help reduce congestion and eliminate the need for costly capacity improvements while reducing induced demand.

The City of Baton Rouge, operating as CATS, is the primary public transit provider in the region. It offers both fixed route bus service and complementary paratransit service within the City limits. The CATS fixed route service in the City operates from Monday through Sunday, excluding major holidays. Intercity bus service is provided by private bus companies (e.g. Greyhound and Megabus).

The current transit conditions in the MPA can be found in Chapter 5 of *Technical Report: Existing Conditions*, and the transit needs can be found in Chapter 5 of *Technical Report: Needs Assessment*.

## Bicycle and Pedestrian

Although bicycling and walking currently accounts for a relatively small portion of commuting patterns in Louisiana, a seamless bicycle and pedestrian network would provide the MPA with a viable alternative to motor vehicle transportation and reduce the level of congestion by removing SOVs from the roadway network. Additionally, this network would produce benefits for the health of the MPA's residents and workers while improving regional air quality.

Bicycle facilities include:

- Bicycle Lanes
- Paved Shoulders
- Marked Shared Lanes
- Shared Use Paths
- Cycle Tracks
- End of Trip Facilities

Pedestrian facilities include:

- Sidewalks
- Crosswalks
- Enhanced Pedestrian Treatments
- Pedestrian Overpasses
- Pedestrian Amenities
- Shared Used Paths
- Curb Ramps
- Transit Stops
- Pedestrian Signals

More information on the current status of bicycle and pedestrian conditions in the MPA can be found in Chapter 4 of *Technical Report: Existing Conditions*, while bicycle and pedestrian needs can be found in Chapter 4 of *Technical Report: Needs Assessment*.

## 3.0 Congestion Measurement and Methodology

### 3.1 Federal Guidelines for Measuring Congestion

Section 450.322 (d)(3) of Subpart C (Congestion Management Process in Transportation Management Areas), 23 CFR (Final Rule) states that a Congestion Management Process shall include:

“Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area.”

### 3.2 Congestion Metrics

The following performance metrics are used in this CMP effort. They serve as indicators to characterize the usage of a transportation facility or the characteristics of travelers using the system. These metrics were used to determine which roadway segments are congested, with the methodology described in later sections.

#### Bottleneck Ranking Tool Metrics

The Bottleneck Ranking Tool allows users to identify, rank, and explore bottleneck locations on the roadway. The following metrics provided in the Bottleneck Ranking Tool are summarized in Table 3.1.

Table 3.1 Bottleneck Ranking Metrics

| Metric             |                            | Description   |
|--------------------|----------------------------|---|
| Bottleneck Profile | Average Max Length (miles) | The average maximum length (in miles) of queues formed by congestion originating at each location.  |
|                    | Average Daily Duration     | The average amount of time per day that congestion is identified originating at each location.  |
|                    | Total Duration             | The total amount of time each location congestion was identified originating at each location.  |
| Influences         | All Events/Incidents       | The number of traffic events and incidents that occurred within the space of the bottleneck at any time during the time period that was searched. |
| Base Impact        | Base Impact                | The aggregation of queue length over time for congestion originating at each location in mile-minutes.  |
| Weight Base Impact | Speed Differential         | Raw speed drop weighted by queue lengths.   |
|                    | Congestion                 | Speed drop adjusted by bottleneck activation threshold, weighted by queue length.   |
|                    | Total Delay                | Raw speed drop weighted by VMT Factor.  |

The table provided in the Bottleneck Ranking Tool is, by default, sorted by the **total delay**. This metric is used to rank and compare the bottlenecks.

### Travel Time Index (TTI)

The TTI measures the amount of time delay that occurs when travelling a roadway segment. It is calculated by dividing the highest peak travel time (morning, midday, or afternoon) by the free-flow travel time. The TTI represents the increased travel time drivers experienced when travelling compared to the free-flow travel time.

The TTI was measured by:

- Calculating the average travel time for three (3) different time periods
  - Morning "AM" Peak Period (6:00 AM - 9:00 AM)
  - Midday "MD" Peak Period (9:00 AM - 3:00 PM)
  - Afternoon "PM" Peak Period (3:00 PM - 6:00 PM)
  - The nighttime "NT" travel times (6:00 PM and 6:00 AM) were not calculated due to the lower traffic volumes.
- Calculating the free-flow travel time of a segment using its free-flow speed



- Dividing the highest of the three peak travel times (AM, MD, or PM) by the free-flow travel time.

The formula used to calculate the TTI is shown below:

$$TTI = \frac{\textit{Highest Travel Time}}{\textit{Freeflow Travel Time}}$$

Where:

- TTI is Travel Time Index
- Highest travel time is the highest of the three peak period travel times (AM, MD, or PM)
- Free-flow travel time is the travel time at free-flow speed

### TTI Example

- The highest peak period travel time on A Street between B Avenue and C Avenue is three (3) minutes.
- The free-flow travel time on this segment is one (1) minute.
- Divide three (3) minutes, the highest peak travel time, by one (1) minute, the free-flow travel time.
- This results in a TTI of 3.0, which implies that it takes three (3) times longer to travel during the peak period.

The results from the TTI study for each peak travel time (AM, MD, or PM) are shown in **Appendix B**.

### Vehicle Hours Delay (VHD)

The annual vehicle hours of delay (VHD) are calculated by subtracting the estimated vehicle-hours traveled (VHT) if all travel demand were at free-flow speed from the VHT at the actual travel speed. The existing (2020) and future (2046) daily VHD can be obtained from the TDM to forecast the projected change in VHD between 2019 and 2046. The results of the VHD study are shown in **Appendix C**.

## Volume-to-Capacity (V/C) Ratios

The V/C ratio is defined as the demand flow rate over the capacity available for a traffic facility. For this CMP effort, the TDM volumes and capacities for each network link were used to develop the V/C ratio, which compares the existing traffic volumes to the capacity the roadways were designed to handle. The time of day (Morning, Midday, Afternoon, and Night) capacity factors developed in the TDM are discussed in *Technical Report: Model Development*. The model volumes and capacities can be found in the TDM's network files.

Segments with a V/C ratio greater than 1.00 are considered over capacity. The results of the V/C ratio study for each peak travel time (AM, MD, PM, or NT) are shown in **Appendix D**.

Many corridors in the MPA have received capacity improvements between 2015, the base year of MOVE2042 (the previous Metropolitan Transportation Plan (MTP)), and 2020, the base year of MOVE2046 (the current MTP). Table 3.2 displays the corridors in the CMP network that have received capacity improvements between 2015 and 2020.

Table 3.2 Roadways with Improved Capacity between 2015 and 2020

| Roadway                       | Limits                                    | Previous Facility Type (2015) | New Facility Type (2020) |
|-------------------------------|---|-------------------------------|--------------------------|
| Dijon Dr<br>(Constantin Blvd) | Essen Ln to Mancuso Ln                    | N/A                           | 4-lane Divided           |
| Mancuso Ln                    | Summa Ave to Dijon Dr                     | N/A                           | 2-lane Undivided         |
| Edenborne Pkwy                | Emerson Pkwy to St Landry Ave             | N/A                           | 2-lane Undivided         |
| LA 3064<br>(Essen Ln)         | Perkins Rd to Essen Park Ave              | 5-lane Divided                | 6-lane Divided           |
| Antioch Rd                    | Old Jefferson Hwy to Airline Hwy          | N/A                           | 4-lane Divided           |
| I-12                          | 0.5 miles West of Satsuma to Satsuma Ramp | 4-lane Divided                | 6-lane Divided           |
| Jones Creek Rd                | Tiger Bend Rd to Coursey Blvd             | 2-lane Divided                | 4-lane Divided           |
| O'Neal Ln                     | S Harrell's Ferry Rd to George O'Neal Rd  | 2-lane Divided                | 4-lane Divided           |
| I-12                          | Millerville Rd WB On-Ramp                 | N/A                           | 1-lane On-Ramp           |

## Safety

Non-recurring congestion is a result of crashes, which impact travel time and cause unexpected delays. The LADOTD crash data was used to locate the high crash frequency corridors and

intersections. Traffic incidents account for about 25 percent of all congestion on U.S. roadway networks. Crashes are one (1) type of traffic incident<sup>9</sup>.

Crashes, especially those that result in a fatality or life-threatening injury or involve hazardous materials, can result in significant congestion and dramatically reduce the available capacity and reliability of the entire transportation system. Additionally, congestion can result in additional crashes.

The LADOTD crash data was used to identify trends in total crash frequency and those that resulted in a fatality or life-threatening injury. Section 2.7 of *Technical Report: Existing Conditions* identifies high crash frequency and high crash rate locations within the Baton Rouge MPA. These locations were identified in Table 2.6 and Table 2.9 as well as Figure 2.17 and Figure 2.18 of that report. The MPA's safety needs, as well as ways to reduce the number of crashes, are summarized in Section 4.3 of *Technical Report: Needs Assessment*.

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<sup>9</sup> [https://ops.fhwa.dot.gov/program\\_areas/reduce-non-cong.htm](https://ops.fhwa.dot.gov/program_areas/reduce-non-cong.htm)

## 4.0 Existing Recurring Congestion Analysis Results

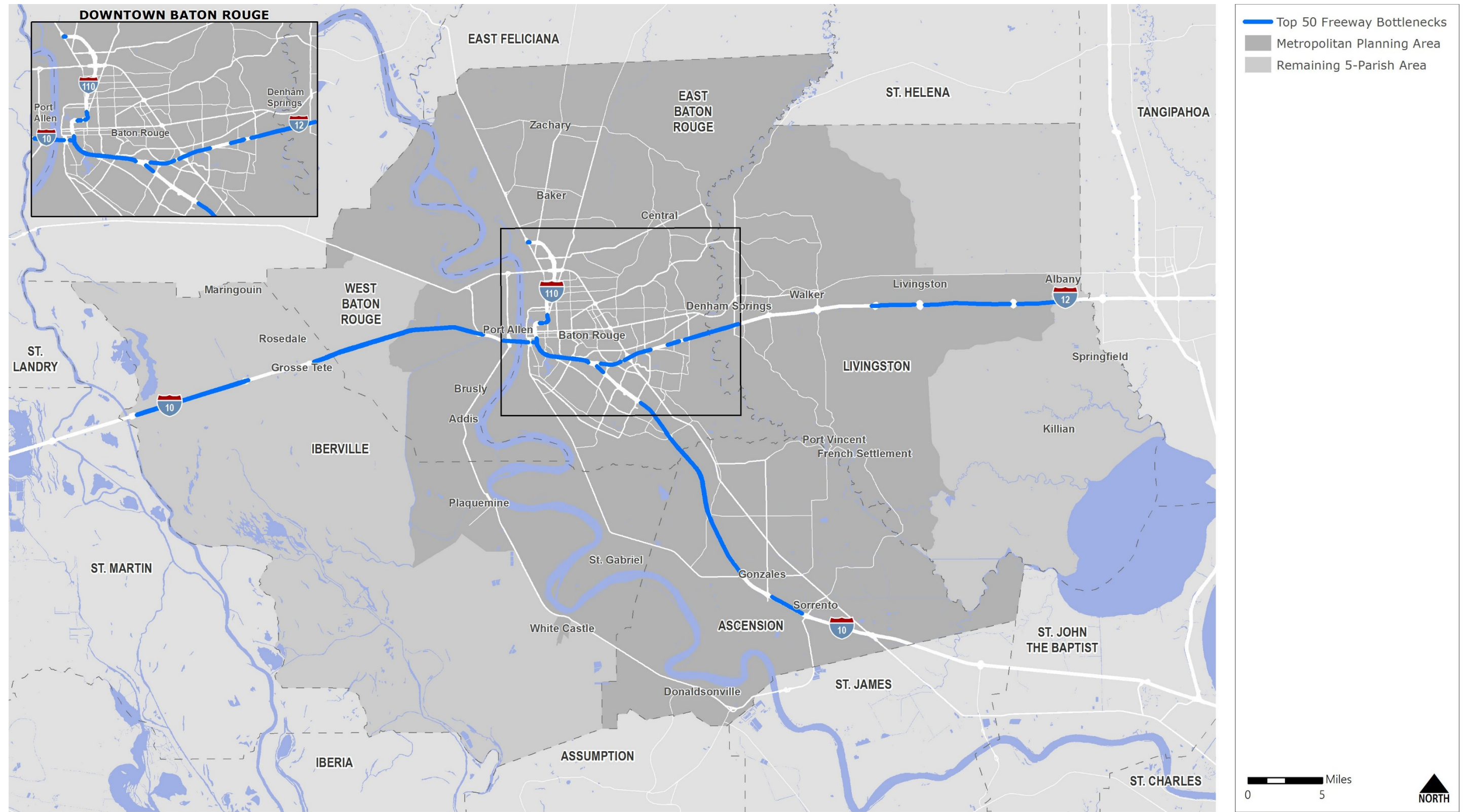
### 4.1 Congestion Segments and Prioritization

As mentioned in Chapter 3, the **Total Delay** from the Bottleneck Ranking Tool is used to rank and compare the bottlenecks.

The duration of congestion, type of congestion, traffic volumes, and potential solutions to reduce congestion are different between freeways and arterials. Additionally, the queue lengths and total delays tend to be greater on freeways than arterials. Based on the **Total Delay** ranking, six (6) out of the top ten (10) bottlenecks are on freeways. Because of these reasons, separate rankings for freeways and arterials are presented in this document. Tables 4.1 and 4.2 show the Top 50 congested freeway and arterial segments based on the PDA Bottleneck Ranking Tool, respectively. These segments are also presented in Figure 4.1 and Figure 4.2.

Tables 4.1 and 4.2 also display the TTI and V/C ratios for each corridor. Of the top 50 congested freeway segments, 23 have a maximum peak period TTI of at least 1.50, and 11 have a maximum peak period V/C ratio of greater than 1.00. Of the top fifty (50) congested arterial segments, forty-three (43) have a maximum peak period TTI of at least 1.50, and eight (8) have a maximum peak period V/C ratio of greater than 1.00.

Figure 4.1: Top 50 Freeway Bottlenecks

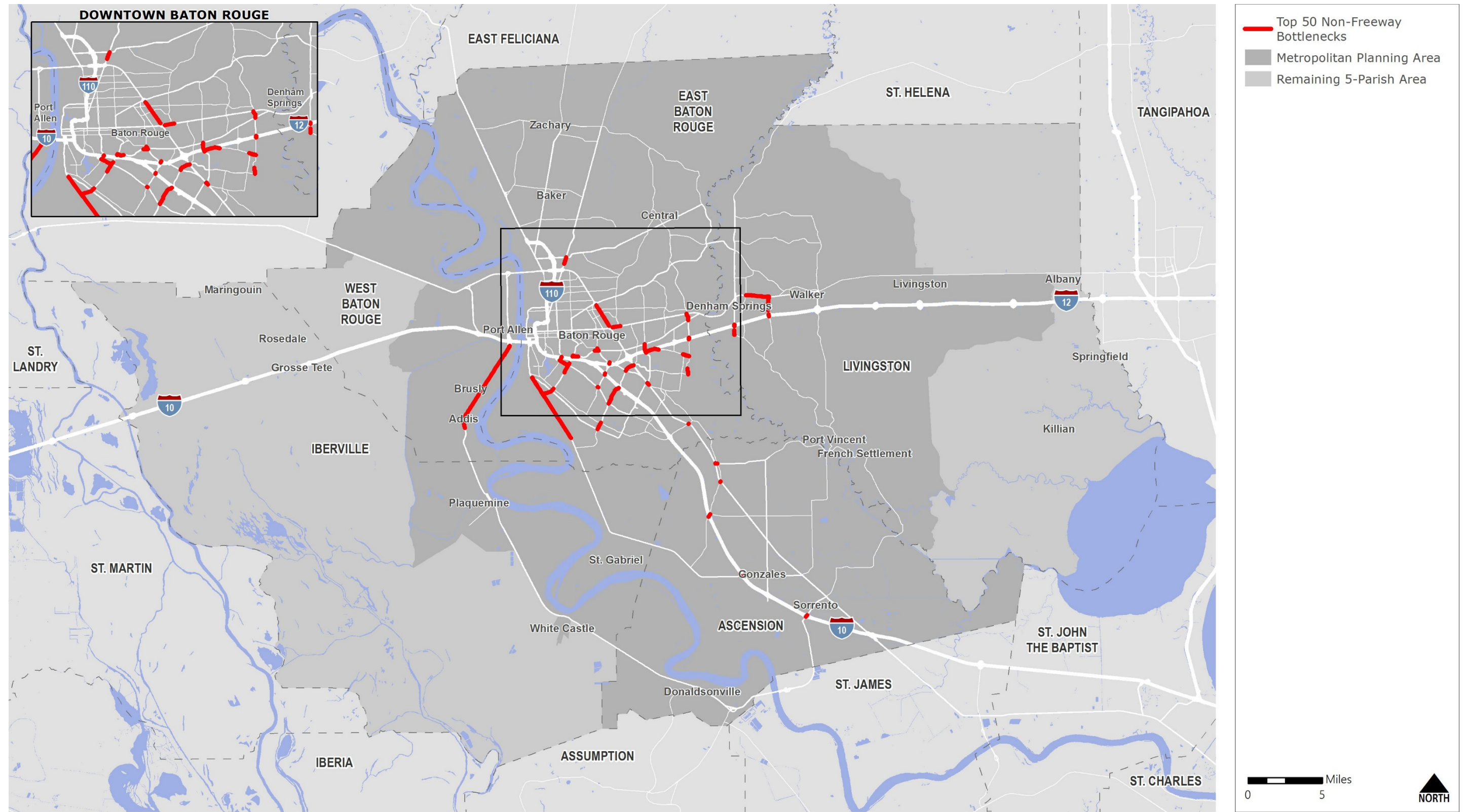


Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.



Figure 4.2: Top 50 Arterial Bottlenecks



Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.

Table 4.1 Top 50 Recurring Congested Freeway Segments

| Rank | Segment   | Average Maximum Bottleneck Length (miles) | Average Daily Duration of Congestion | Total Duration of Congestion | Total Delay (Vehicle Hours) | Maximum Peak Period TTI | Maximum Peak Period V/C |
|------|---|---|--------------------------------------|------------------------------|-----------------------------|-------------------------|-------------------------|
| 1    | I-10 Westbound from LA 73 On-Ramp to Highland Rd Off-Ramp             | 6.84                                      | 19 m                                 | 4 d 23 h 22 m                | 87,056,780                  | 1.30                    | 1.07                    |
| 2    | I-10 Westbound from Nicholson Rd On-Ramp to LA 1 Off-Ramp             | 4.80                                      | 17 m                                 | 4 d 9 h 49 m                 | 75,623,790                  | 1.43                    | 0.98                    |
| 3    | I-110 Southbound from I-10 Westbound to I-10 Eastbound                | 1.03                                      | 1 h 42 m                             | 25 d 22 h 54 m               | 69,756,682                  | 4.94                    | 0.54                    |
| 4    | I-10 Eastbound between Highland Rd Ramps                              | 3.25                                      | 44 m                                 | 11 d 6 h 21 m                | 66,100,996                  | 2.34                    | 0.78                    |
| 5    | I-10 Westbound from Acadian Thwy On-Ramp to Perkins Rd On-Ramp        | 2.24                                      | 47 m                                 | 11 d 23 h 7 m                | 64,331,530                  | 2.47                    | 1.10                    |
| 6    | I-10 Eastbound from Highland Rd On-Ramp to LA 73 Off-Ramp             | 7.67                                      | 14 m                                 | 3 d 18 h 33 m                | 63,251,072                  | 1.32                    | 1.00                    |
| 7    | I-12 Eastbound between US 61 (Airline Hwy) Ramps                      | 2.30                                      | 33 m                                 | 8 d 9 h 37 m                 | 57,883,922                  | 3.42                    | 0.79                    |
| 8    | I-10 Westbound at Nicholson Dr On-Ramp                                | 2.64                                      | 23 m                                 | 6 d 38 m                     | 40,995,528                  | 1.67                    | 0.79                    |
| 9    | I-10 Eastbound at Dalrymple Dr Off-Ramp                               | 3.99                                      | 17 m                                 | 4 d 8 h 7 m                  | 40,570,588                  | 2.05                    | 1.00                    |
| 10   | I-10 Eastbound from College Dr Off-Ramp to I-12 Eastbound             | 6.13                                      | 7 m                                  | 1 d 19 h 2 m                 | 39,069,260                  | 1.42                    | 0.93                    |
| 11   | I-12 Eastbound between Sherwood Forest Blvd Ramps                     | 3.30                                      | 16 m                                 | 4 d 6 h 6 m                  | 38,947,023                  | 2.18                    | 0.77                    |
| 12   | I-12 Westbound between Millerville Road Ramps                         | 3.85                                      | 28 m                                 | 7 d 5 h 12 m                 | 35,841,029                  | 2.83                    | 0.94                    |
| 13   | I-10 Eastbound between I-110 Ramps                                    | 2.68                                      | 41 m                                 | 10 d 14 h 52 m               | 35,524,070                  | 4.79                    | 0.91                    |
| 14   | I-10 Westbound from Perkins Rd On-Ramp to Dalrymple Drive Off-Ramp    | 3.45                                      | 11 m                                 | 2 d 19 h 8 m                 | 34,010,790                  | 1.73                    | 1.09                    |
| 15   | I-10 Eastbound between Acadian Thwy Ramps                             | 5.51                                      | 10 m                                 | 2 d 17 h                     | 33,700,351                  | 1.98                    | 0.94                    |
| 16   | I-10 Westbound from LA 415 On-Ramp to LA 77 Off-Ramp                  | 12.83                                     | 3 m                                  | 22 h 44 m                    | 32,512,150                  | 1.19                    | 0.72                    |
| 17   | I-10 Eastbound between LA 1 Ramps                                     | 1.41                                      | 43 m                                 | 11 d 1 h 15 m                | 28,530,485                  | 4.01                    | 0.85                    |
| 18   | I-10 Westbound from LA 3000 On-Ramp to LA 975 Off-Ramp                | 9.79                                      | 5 m                                  | 1 d 12 h 16 m                | 28,485,081                  | 1.10                    | 0.78                    |
| 19   | I-12 Eastbound from O'Neal Ln to LA 3002 (Range Rd) Off-Ramp          | 6.14                                      | 4 m                                  | 1 d 2 h 36 m                 | 26,741,831                  | 1.21                    | 1.01                    |
| 20   | I-12 Eastbound between O'Neal Ln Ramps                                | 3.39                                      | 11 m                                 | 2 d 21 h 5 m                 | 26,268,253                  | 1.73                    | 0.79                    |
| 21   | I-10 Eastbound between College Dr Ramps                               | 6.27                                      | 4 m                                  | 1 d 6 h 11 m                 | 23,218,143                  | 1.47                    | 0.98                    |
| 22   | I-10 Eastbound from LA 1 On-Ramp to Nicholson Dr Off-Ramp             | 3.81                                      | 13 m                                 | 3 d 10 h 35 m                | 22,014,718                  | 3.37                    | 1.00                    |
| 23   | I-10 Westbound between College Dr Ramps                               | 1.99                                      | 11 m                                 | 2 d 23 h 28 m                | 18,675,958                  | 2.63                    | 1.12                    |
| 24   | I-10 Eastbound from LA 975 On-Ramp to LA 3000 Off-Ramp                | 9.93                                      | 3 m                                  | 23 h 16 m                    | 17,048,384                  | 1.00                    | 0.76                    |
| 25   | I-10 Westbound between LA 73 Ramps                                    | 1.68                                      | 29 m                                 | 7 d 12 h 47 m                | 16,849,119                  | 2.93                    | 0.67                    |
| 26   | I-12 Westbound from LA 3002 (Range Rd) Off-Ramp to O'Neal Ln Off-Ramp | 4.04                                      | 6 m                                  | 1 d 13 h 22 m                | 15,549,940                  | 2.48                    | 1.20                    |
| 27   | I-12 Westbound between Sherwood Forest Blvd Ramps                     | 6.06                                      | 5 m                                  | 1 d 7 h 34 m                 | 12,363,110                  | 1.46                    | 0.92                    |
| 28   | I-10 Eastbound between Washington St Off-Ramps                        | 3.69                                      | 4 m                                  | 1 d 6 h 19 m                 | 9,666,335                   | 2.74                    | 1.03                    |



| Rank | Segment   | Average Maximum Bottleneck Length (miles) | Average Daily Duration of Congestion | Total Duration of Congestion | Total Delay (Vehicle Hours) | Maximum Peak Period TTI | Maximum Peak Period V/C |
|------|---|---|--------------------------------------|------------------------------|-----------------------------|-------------------------|-------------------------|
| 29   | I-10 Westbound from Dalrymple Dr On-Ramp to Louise St Off-Ramp                              | 3.43                                      | 3 m                                  | 21 h 49 m                    | 9,595,837                   | 1.46                    | 1.10                    |
| 30   | I-12 Westbound from Sherwood Forest Blvd On-Ramp to US 61 (Airline Hwy) Northbound Off-Ramp | 4.80                                      | 3 m                                  | 20 h 5 m                     | 8,885,795                   | 1.30                    | 1.14                    |
| 31   | I-12 Eastbound between Millerville Rd Ramps   | 3.09                                      | 2 m                                  | 12 h 26 m                    | 6,009,303                   | 1.87                    | 0.80                    |
| 32   | I-12 Westbound between LA 3002 (Range Rd) Ramps   | 1.70                                      | 7 m                                  | 1 d 21 h 2 m                 | 5,477,456                   | 4.14                    | 0.81                    |
| 33   | I-12 Eastbound between Satsuma Rd Ramps   | 2.57                                      | 4 m                                  | 1 d 57 m                     | 5,346,093                   | 1.03                    | 0.95                    |
| 34   | I-110 Southbound from N 19th St On-Ramp to Capitol Access Rd Off-Ramp                       | 0.96                                      | 4 m                                  | 1 d 5 h 16 m                 | 5,132,746                   | 1.38                    | 0.76                    |
| 35   | I-10 Westbound from Highland Rd On-Ramp to Siegen Ln Off-Ramp                               | 4.11                                      | 2 m                                  | 13 h 48 m                    | 5,051,490                   | 1.03                    | 0.85                    |
| 36   | I-10 Westbound from LA 3064 (Essen Ln) to I-12 Eastbound Off-Ramp                           | 1.00                                      | 12 m                                 | 3 d 5 h 32 m                 | 4,818,111                   | 2.29                    | 0.81                    |
| 37   | I-12 Eastbound from LA 63 On-Ramp to LA 441 Off-Ramp  | 7.67                                      | 1 m                                  | 11 h 35 m                    | 4,616,032                   | 1.05                    | 0.90                    |
| 38   | I-12 Eastbound from LA 441 On-Ramp to LA 43 Off-Ramp  | 5.07                                      | 2 m                                  | 13 h 46 m                    | 4,261,199                   | 1.02                    | 0.91                    |
| 39   | I-12 Westbound at LA 3064 (Essen Ln) Interchange  | 1.72                                      | 8 m                                  | 2 d 1 h 15 m                 | 3,818,648                   | 1.42                    | 0.92                    |
| 40   | I-10 Westbound between LA 3000 Ramps  | 4.06                                      | 2 m                                  | 12 h 52 m                    | 3,716,266                   | 1.11                    | 0.73                    |
| 41   | I-12 Westbound from LA 3064 (Essen Ln) On-Ramp to I-10 Eastbound Off-Ramp                   | 1.98                                      | 3 m                                  | 20 h 42 m                    | 3,607,494                   | 1.26                    | 1.02                    |
| 42   | I-10 Eastbound from LA 73 On-Ramp to LA 30 Off-Ramp   | 4.90                                      | 2 m                                  | 15 h 26 m                    | 3,570,725                   | 1.03                    | 0.86                    |
| 43   | I-10 Eastbound between LA 975 Ramps   | 3.39                                      | 2 m                                  | 18 h 11 m                    | 3,419,504                   | 1.00                    | 0.76                    |
| 44   | I-10 Westbound between LA 415 Ramps   | 2.53                                      | 1 m                                  | 8 h 2 m                      | 2,719,024                   | 1.20                    | 0.67                    |
| 45   | I-10 Westbound from LA 22 On-Ramp to LA 44 Off-Ramp   | 3.00                                      | 1 m                                  | 9 h 36 m                     | 2,531,410                   | 0.95                    | 0.70                    |
| 46   | I-12 Westbound from LA 63 On-Ramp to Satsuma Rd Off-Ramp                                    | 2.94                                      | 3 m                                  | 18 h 58 m                    | 2,154,806                   | 1.04                    | 0.00                    |
| 47   | I-10 Eastbound from LA 77 On-Ramp to LA 415 Off-Ramp  | 11.17                                     | 1 m                                  | 6 h 12 m                     | 2,043,737                   | 1.05                    | 0.71                    |
| 48   | I-110 Northbound at US 61 (Scenic Hwy) Interchange  | 0.14                                      | 1 h 29 m                             | 22 d 14 h 51 m               | 1,686,643                   | 2.05                    | 0.34                    |
| 49   | I-10 Westbound from I-12 Westbound to College Dr Off-Ramp                                   | 2.11                                      | 0 m                                  | 5 h 38 m                     | 1,644,031                   | 2.16                    | 0.85                    |
| 50   | I-110 Southbound from Scenic Hwy to N 22nd St On-Ramp                                       | 1.14                                      | 1 m                                  | 10 h 10 m                    | 1,564,751                   | 1.21                    | 0.56                    |

Table 4.2 Top 50 Recurring Congested Arterial Segments

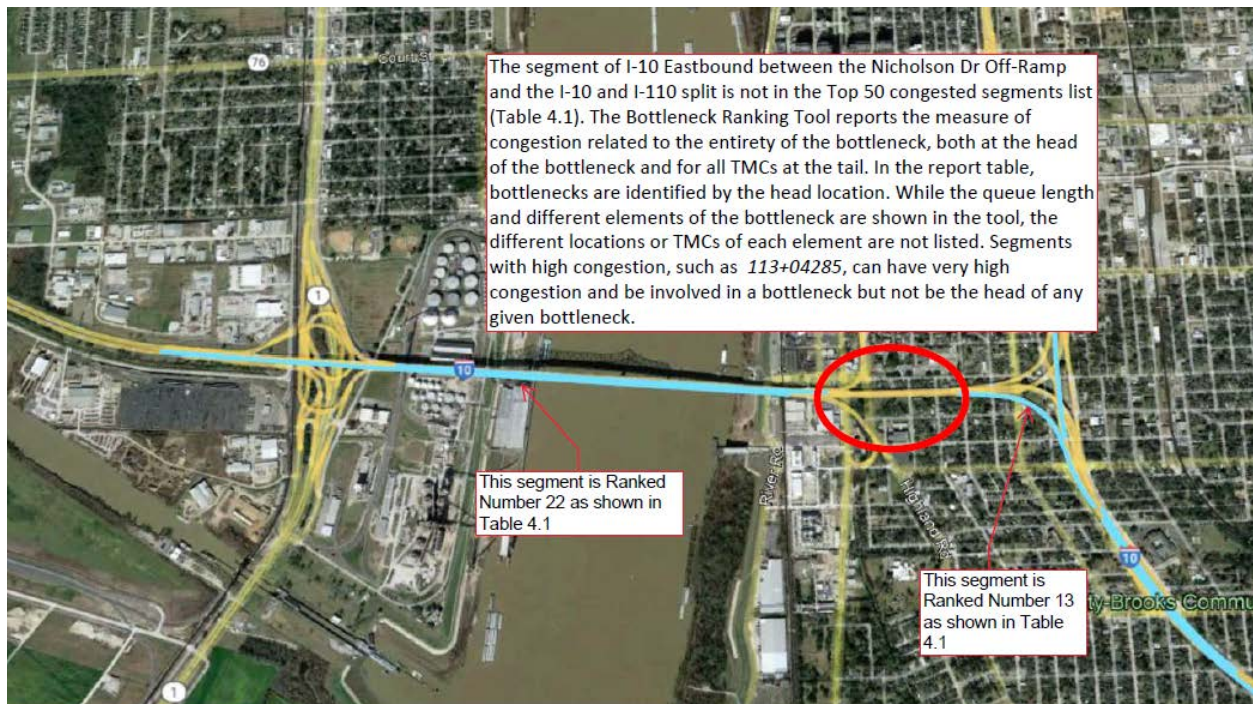
| Rank | Segment  | Average Maximum Bottleneck Length (miles) | Average Daily Duration of Congestion | Total Duration of Congestion | Total Delay (Vehicle Hours) | Maximum Peak Period TTI | Maximum Peak Period V/C |
|------|--|---|--------------------------------------|------------------------------|-----------------------------|-------------------------|-------------------------|
| 1    | S Harrell's Ferry Rd Eastbound from Jones Creek Rd to O'Neal Ln  | 0.39                                      | 6 h 39 m                             | 101 d 4 h 8 m                | 76,143,643                  | 2.06                    | 0.47                    |
| 2    | LA 3002 (Range Ave) Southbound between I-12 Ramps  | 0.18                                      | 6 h 21 m                             | 96 d 17 h 22 m               | 69,501,939                  | 2.88                    | 0.54                    |
| 3    | LA 3002 (Range Ave) Northbound between I-12 Ramps  | 0.18                                      | 4 h 42 m                             | 71 d 15 h 49 m               | 64,366,474                  | 2.21                    | 1.06                    |
| 4    | LA 3064 (Essen Ln) Northbound at Jefferson Hwy   | 0.20                                      | 10 h 49 m                            | 164 d 15 h 40 m              | 60,289,836                  | 3.92                    | 0.77                    |
| 5    | O'Neal Ln Northbound between I-12 Ramps  | 0.45                                      | 3 h 1 m                              | 46 d 1 m                     | 56,427,495                  | 2.06                    | 0.76                    |
| 6    | O'Neal Ln Southbound between I-12 Ramps  | 0.28                                      | 4 h 29 m                             | 68 d 6 h 27 m                | 51,001,371                  | 2.39                    | 1.14                    |
| 7    | LA 42 Westbound from LA 73 (Jefferson Hwy) to US 61 (Airline Hwy)  | 0.55                                      | 9 h 54 m                             | 150 d 18 h 42 m              | 42,557,875                  | 3.27                    | 0.73                    |
| 8    | LA 42 Eastbound from US 61 (Airline Hwy) to LA 73 (Jefferson Hwy)  | 0.22                                      | 9 h 18 m                             | 141 d 13 h 55 m              | 32,639,974                  | 4.15                    | 0.61                    |
| 9    | Acadian Thwy Northbound between I-10 Ramps   | 0.29                                      | 7 h 57 m                             | 121 d 8 m                    | 32,545,176                  | 2.25                    | 0.47                    |
| 10   | LA 1026 (Juban Rd) Northbound at US 190  | 0.25                                      | 5 h 17 m                             | 80 d 11 h 20 m               | 31,200,929                  | 2.51                    | 0.53                    |
| 11   | O'Neal Ln Northbound at US 190 (Florida Blvd)  | 0.21                                      | 6 h 36 m                             | 100 d 12 h 9 m               | 30,153,198                  | 2.00                    | 0.91                    |
| 12   | Bluebonnet Blvd Northbound at US 61 (Airline Hwy)  | 0.21                                      | 8 h 44 m                             | 132 d 23 h 29 m              | 26,369,748                  | 1.96                    | 0.70                    |
| 13   | Highland Rd Westbound at US 61 (Airline Hwy)   | 0.21                                      | 8 h 55 m                             | 135 d 16 h 27 m              | 25,625,926                  | 5.08                    | 1.19                    |
| 14   | College Dr Southbound at Perkins Rd  | 0.31                                      | 7 h 37 m                             | 116 d 1 h 47 m               | 24,465,384                  | 2.17                    | 0.80                    |
| 15   | LA 3064 (Essen Ln) Southbound between I-10 Ramps   | 0.24                                      | 6 h 1 m                              | 91 d 16 h 1 m                | 24,216,425                  | 2.10                    | 0.93                    |
| 16   | LA 3002 (Range Rd) Southbound at LA 1034 (Vincent Rd)  | 0.12                                      | 2 h 47 m                             | 42 d 8 h 7 m                 | 23,892,327                  | 1.33                    | 0.45                    |
| 17   | Lee Dr Southbound at Burbank Dr  | 0.33                                      | 6 h 57 m                             | 105 d 20 h 16 m              | 23,263,333                  | 2.02                    | 0.58                    |
| 18   | Jefferson Hwy Southbound at Corporate Blvd/Old Hammond Hwy   | 0.28                                      | 5 h 49 m                             | 88 d 12 h 44 m               | 21,753,635                  | 3.54                    | 0.72                    |
| 19   | LA 67 (Plank Rd) Northbound at LA 408 (Hooper Rd)  | 0.14                                      | 8 h 33 m                             | 130 d 1 h 23 m               | 21,645,116                  | 2.75                    | 0.72                    |
| 20   | LA 73 from I-10 Eastbound Ramps to LA 621  | 0.46                                      | 5 h 55 m                             | 90 d 4 h 16 m                | 21,597,511                  | 3.54                    | 0.76                    |
| 21   | Siegen Ln Northbound at US 61 (Airline Hwy)  | 0.12                                      | 8 h 32 m                             | 129 d 22 h 36 m              | 21,406,843                  | 3.02                    | 0.60                    |
| 22   | US 61/US 190 (Airline Hwy) Northbound from Florida Blvd On-Ramp to LA 37 (Greenwell Springs Rd) Off-Ramp | 1.76                                      | 40 m                                 | 10 d 6 h 27 m                | 20,083,723                  | 1.57                    | 0.83                    |
| 23   | LA 22 Northbound between I-10 Ramps  | 0.23                                      | 3 h 58 m                             | 60 d 8 h 44 m                | 19,792,655                  | 2.15                    | 0.54                    |
| 24   | LA 73 Northbound at US 61 (Airline Hwy) (Ascension Parish)   | 0.20                                      | 9 h 53 m                             | 150 d 12 h 56 m              | 19,719,147                  | 6.42                    | 0.85                    |
| 25   | US 61 (Airline Hwy) Southbound at LA 42 East JCT   | 5.83                                      | 22 m                                 | 5 d 17 h                     | 19,584,556                  | 1.72                    | 0.84                    |
| 26   | Sherwood Forest Blvd Northbound from I-12 to Old Hammond Hwy   | 0.61                                      | 54 m                                 | 13 d 19 h 27 m               | 19,364,459                  | 1.35                    | 0.70                    |
| 27   | US 190 Eastbound from LA 16 (Pete's Hwy) to LA 1026 (Juban Rd)   | 1.63                                      | 1 h 16 m                             | 19 d 9 h 32 m                | 19,228,052                  | 2.23                    | 0.97                    |
| 28   | Perkins Rd Westbound from College Dr to Acadian Thwy/Stanford Ave  | 1.01                                      | 1 h 10 m                             | 17 d 22 h 50 m               | 18,915,979                  | 2.27                    | 0.63                    |

| Rank | Segment  | Average Maximum Bottleneck Length (miles) | Average Daily Duration of Congestion | Total Duration of Congestion | Total Delay (Vehicle Hours) | Maximum Peak Period TTI | Maximum Peak Period V/C |
|------|--|---|--------------------------------------|------------------------------|-----------------------------|-------------------------|-------------------------|
| 29   | Corporate Blvd Westbound at College Dr                                 | 0.19                                      | 9 h 52 m                             | 150 d 5 h 14 m               | 18,863,948                  | 3.05                    | 0.62                    |
| 30   | Sherwood Forest Blvd Northbound between I-12 Ramps                     | 0.29                                      | 1 h 39 m                             | 25 d 6 h 36 m                | 18,540,642                  | 1.45                    | 1.20                    |
| 31   | US 61 (Airline Hwy) Northbound at Siegen Ln/South Sherwood Forest Blvd | 0.46                                      | 2 h 59 m                             | 45 d 14 h 49 m               | 18,250,329                  | 2.00                    | 0.87                    |
| 32   | Lee Dr Northbound at Perkins Rd  | 0.15                                      | 9 h 44 m                             | 148 d 6 h 23 m               | 18,115,124                  | 2.06                    | 1.14                    |
| 33   | LA 1026 (Juban Rd) Southbound between I-12 Ramps                       | 0.24                                      | 5 h 49 m                             | 88 d 13 h 39 m               | 17,759,453                  | 2.25                    | 0.39                    |
| 34   | LA 1 Northbound from LA 990 to I-10                                    | 6.47                                      | 14 m                                 | 3 d 15 h 54 m                | 17,638,905                  | 1.71                    | 0.76                    |
| 35   | Nicholson Dr Northbound from Gardere Ln to Brightside Dr/W Lee Dr      | 3.89                                      | 32 m                                 | 8 d 6 h 1 m                  | 17,156,142                  | 1.59                    | 0.75                    |
| 36   | Perkins Rd Eastbound at LA 3064 (Essen Ln/Staring Ln)                  | 0.34                                      | 5 h 49 m                             | 88 d 15 h 20 m               | 16,956,541                  | 2.51                    | 0.67                    |
| 37   | Bluebonnet Blvd Southbound at Burbank Dr                               | 0.26                                      | 8 h 31 m                             | 129 d 15 h 7 m               | 16,841,021                  | 1.57                    | 0.58                    |
| 38   | Sherwood Forest Blvd Southbound at US 61 (Airline Hwy)                 | 0.14                                      | 6 h 48 m                             | 103 d 13 h 15 m              | 16,821,510                  | 2.37                    | 0.87                    |
| 39   | S Harrell's Ferry Rd Westbound at Jones Creek Rd                       | 0.21                                      | 3 h 6 m                              | 47 d 7 h 5 m                 | 16,747,404                  | 1.50                    | 0.54                    |
| 40   | Nicholson Dr Northbound from Brightside Dr/W Lee Dr to Burbank Dr      | 1.74                                      | 38 m                                 | 9 d 17 h 51 m                | 16,707,678                  | 1.36                    | 1.05                    |
| 41   | Nicholson Dr Southbound from Burbank Dr to Brightside Dr/W Lee Dr      | 1.41                                      | 2 h 3 m                              | 31 d 6 h 42 m                | 16,642,696                  | 2.35                    | 0.94                    |
| 42   | College Dr Northbound at Corporate Blvd                                | 0.22                                      | 4 h 3 m                              | 61 d 19 h 34 m               | 16,398,007                  | 2.29                    | 1.24                    |
| 43   | LA 30 Westbound between I-10 Ramps (Ascension Parish)                  | 0.29                                      | 2 h 13 m                             | 33 d 17 h 12 m               | 16,295,857                  | 1.53                    | 0.83                    |
| 44   | US 190 (Florida Blvd) from Monterrey Blvd to US 61 (Airline Hwy)       | 1.22                                      | 1 h 42 m                             | 26 d 1 h 45 m                | 15,514,169                  | 1.87                    | 1.09                    |
| 45   | S Harrell's Ferry Rd Westbound at S Sherwood Forest Blvd               | 0.13                                      | 7 h 37 m                             | 115 d 21 h 49 m              | 15,334,030                  | 1.15                    | 0.51                    |
| 46   | O'Neal Ln Southbound at George O'Neal Rd                               | 0.05                                      | 7 h 55 m                             | 120 d 14 h 20 m              | 14,690,510                  | 1.36                    | 0.52                    |
| 47   | Sherwood Forest Blvd Southbound from Old Hammond Hwy to I-12           | 0.60                                      | 36 m                                 | 9 d 7 h 24 m                 | 14,642,733                  | 1.46                    | 0.68                    |
| 48   | Bluebonnet Blvd Southbound from I-10 to Perkins Rd                     | 1.32                                      | 35 m                                 | 8 d 22 h 2 m                 | 14,420,173                  | 2.08                    | 0.89                    |
| 49   | Corporate Blvd Eastbound at Jefferson Hwy                              | 0.15                                      | 9 h 31 m                             | 144 d 22 h 41 m              | 14,350,761                  | 3.74                    | 0.49                    |
| 50   | Lee Dr Westbound at Nicholson Dr                                       | 0.14                                      | 6 h 56 m                             | 105 d 15 h 45 m              | 14,112,394                  | 1.51                    | 0.37                    |

## Bottleneck Ranking Limitations

Tables and Figures 4.1 and 4.2 show the top 50 congested freeway and arterial segments based on the PDA Bottleneck Ranking Tool, respectively. However, some of the segments that are in between two congested segments are not shown in Table 4.1, Table 4.2, Figure 4.1, or Figure 4.2. This does not mean that the segment is not congested, but rather that it is not in top 50 list. An example screenshot of this bottleneck ranking limitation is shown in Figure 4.3.

Figure 4.3: Bottleneck Limitation Example



## 4.2 Public and Stakeholder Meeting Identification

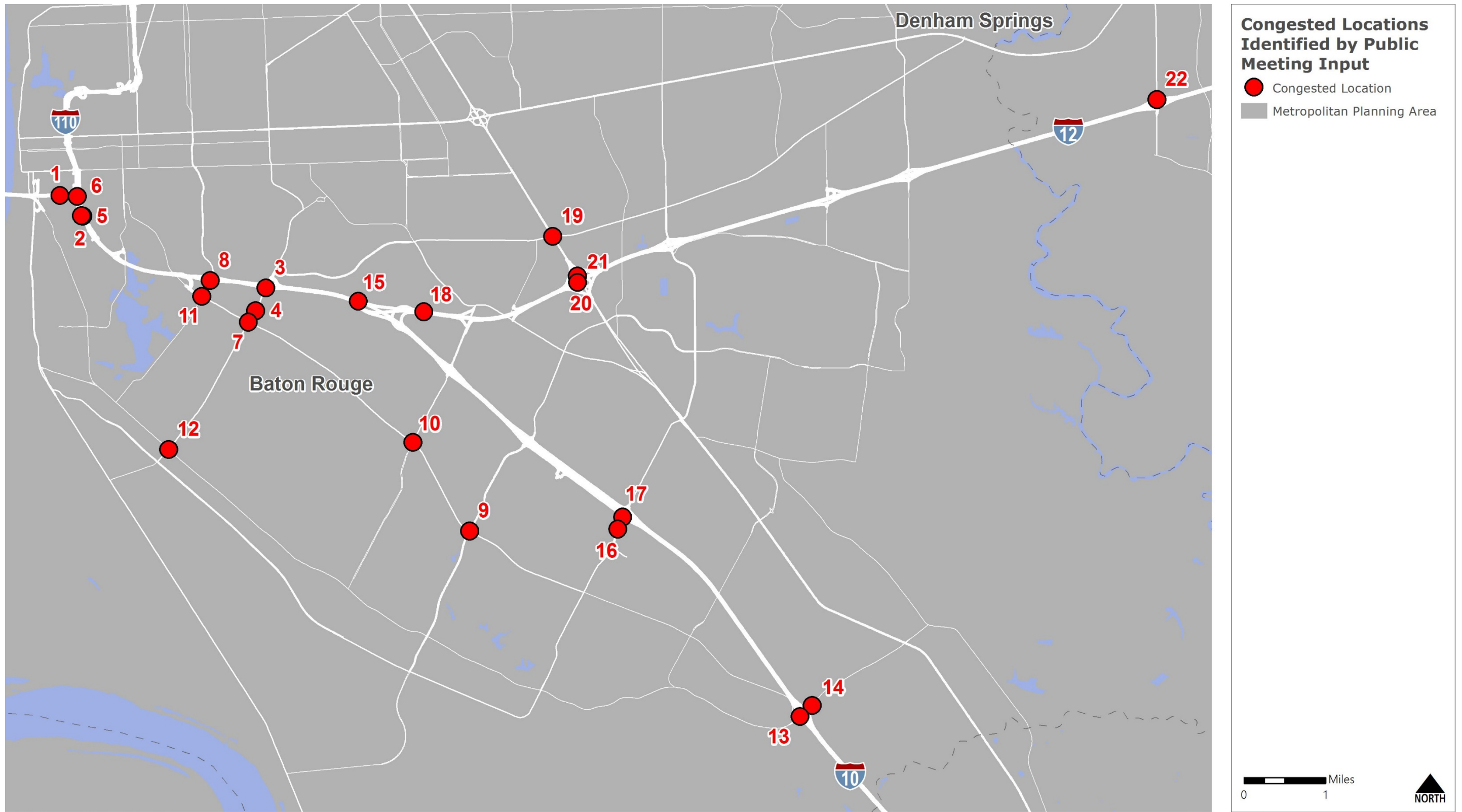
Input from the public and stakeholders' meetings are also considered in the CMP. This input from the public, stakeholders locates congested locations that were not identified in the analysis. The locations identified by the public are listed in Table 4.3 and shown in Figure 4.4.

Table 4.3 Congested Locations Identified by Public Meeting Input

| ID | Congested Location                                     | Parish           | City           |
|----|--|------------------|----------------|
| 1  | I-110 Southbound at S 10th St On-Ramp                  | East Baton Rouge | Baton Rouge    |
| 2  | I-10 Westbound at I-110 Diverge                        | East Baton Rouge | Baton Rouge    |
| 3  | College Dr at I-10 Eastbound Off-Ramp/Constitution Ave | East Baton Rouge | Baton Rouge    |
| 4  | Perkins Rd at College Dr/Lee Dr                        | East Baton Rouge | Baton Rouge    |
| 5  | I-10 Eastbound at I-110 Merge                          | East Baton Rouge | Baton Rouge    |
| 6  | I-10 Eastbound at I-110 Diverge                        | East Baton Rouge | Baton Rouge    |
| 7  | College Dr at Concord Ave                              | East Baton Rouge | Baton Rouge    |
| 8  | Acadian Thwy at I-10 Eastbound Off-Ramp                | East Baton Rouge | Baton Rouge    |
| 9  | Perkins Rd at Bluebonnet Blvd                          | East Baton Rouge | Baton Rouge    |
| 10 | Perkins Rd at Essen Ln/Staring Ln                      | East Baton Rouge | Baton Rouge    |
| 11 | Perkins Rd at Acadian Thwy/Stanford Ave                | East Baton Rouge | Baton Rouge    |
| 12 | Burbank Dr at Lee Dr                                   | East Baton Rouge | Baton Rouge    |
| 13 | Highland Rd at I-10 Eastbound Off-Ramp                 | East Baton Rouge | Baton Rouge    |
| 14 | Highland Rd at Perkins Rd E                            | East Baton Rouge | Baton Rouge    |
| 15 | I-10 Westbound at I-12 Merge                           | East Baton Rouge | Baton Rouge    |
| 16 | Siegen Ln at Mall Dr                                   | East Baton Rouge | Baton Rouge    |
| 17 | Siegen Ln at I-10 Eastbound Off-Ramp                   | East Baton Rouge | Baton Rouge    |
| 18 | I-12 Eastbound at I-10 Westbound On-Ramp               | East Baton Rouge | Baton Rouge    |
| 19 | Airline Hwy at Old Hammond Hwy                         | East Baton Rouge | Baton Rouge    |
| 20 | I-12 Eastbound at Airline Hwy Southbound On-Ramp       | East Baton Rouge | Baton Rouge    |
| 21 | Airline Hwy at I-12 Westbound Loop Ramps               | East Baton Rouge | Baton Rouge    |
| 22 | Range Ave at I-12 Westbound Off-Ramp                   | Livingston       | Denham Springs |



Figure 4.4 Congested Locations Identified by Public Meeting Input



Data Sources: Neel-Schaffer, Inc.

Disclaimer: This map is for planning purposes only.

### 4.3 COVID-19 Impacts

The World Health Organization (WHO) announced a worldwide pandemic associated with COVID-19 on March 11, 2020. In order to fight this highly contagious virus, restrictions were imposed by governments on businesses and various social activities to limit the spread of virus. These restrictions have led to a dramatic reduction in traffic demand, resulting in an overall decline in traffic delay. According to the INRIX 2020 Global Traffic Scorecard, congestion in the Baton Rouge Urban Area decreased by 30 percent between 2019 and 2020<sup>10</sup>. The total delay in 2020 of the top 50 congested freeway segments and top 50 congested arterial segments in 2019 was obtained from the PDA suite to determine the changes in total delay between 2019 and 2020. Those changes are shown in **Appendix E**.

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<sup>10</sup> <https://inrix.com/scorecard/>



## 5.0 Non-Recurring Congestion

The methodology<sup>11</sup> used to determine the roadway segments experiencing nonrecurring congestion was to:

- Group speed data into one-hour periods for a year and calculate the annual average speed and the annual standard deviation by hour for each segment.
- Group speed data into one-hour periods by hour and day and calculate the average speeds by hour.
- Tabulate the average speeds calculated in the previous steps, side by side, for all the speeds collected over the two years (2017 and 2018), for a specific time period (hour and day).
- Calculate the Standard Normal Deviate (SND) for each time period (hour and day) using the below formula.

$$(SND)_{ij} = \frac{((Speed)_{ij} - (Annual Average Speed)_i)}{(Annual Standard Deviation)_i}$$

Where: SND = Standard Normal Deviate

i = Hour

j = Day

Negative SND values that are greater than a selected threshold would indicate congestion beyond average levels. This indicates a high likelihood of non-recurring congestion. For this CMP effort, a threshold value of -1.5 was selected based on the research's sensitivity analysis. SND values which deviated by more than -1.5 (i.e., less than -1.5) are indicative of non-recurring congestion speeds. Additionally, the delays for time period (hour and day) where the SND deviated by more than -1.5 were calculated using the below formula.

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<sup>11</sup> Andrew J. Sullivan, Virginia P. Sisiopiku, Bharat R. Kallem, "Measuring Non-Recurring Congestion in Small to Medium Sized Urban Areas" Prepared by the University Transportation Center for Alabama.

$$Time\ Delay = \left( \frac{Segment\ Length}{Segment\ Speed_i} \right) - \left( \frac{Segment\ Length}{Segment\ Annual\ Average\ Speed_i} \right)$$

Where: Segment length is in miles

Segment speeds are in MPH

Time Delay is in hours

i = Hour

## 5.1 Non-Recurring Congestion Segments

With the methodology established, the following process was used to locate segments that experienced excessive non-recurring congestion in 2019:

- Calculate the SND and the time delay (in hours) for each segment.
  - The top 20 percent of the Segments based on the calculated maximum delay in 2019 were considered to experience excessive non-recurring congestion.
- Calculate the five-year crash trends using the 2015-2019 LADOTD crash data for both total and fatality/life-threatening crash frequencies.
  - The average yearly crash frequency was used to prioritize the segments experiencing excessive non-recurring congestion.

Figure 5.1 displays the segments that experienced excessive non-recurring congestion in the year 2019. The non-recurring congestion trends for each segment are shown in Table 5.1.

### Limitations

To develop a reliable methodology that identifies non-recurring congestion, a consistent and reliable travel time database is necessary. Speed data and travel times for each time interval (5-minute, 10-minute, 15-minute, or 1-hour) throughout an entire year is essential. However, the RITIS database contains several time intervals where speed and travel time data is unavailable or missing, making it difficult to perform an accurate and reliable non-recurring congestion analysis.

Additionally, the RITIS database travel time data is not available for each individual travel lane for multi-lane highways. However, with minor incidents, there is a chance that the impacts from the incident would negatively impact only the travel lane experiencing the incident and not the other travel lanes. This indicates that the incident would not be reflected in the RITIS database even though an incident had occurred.

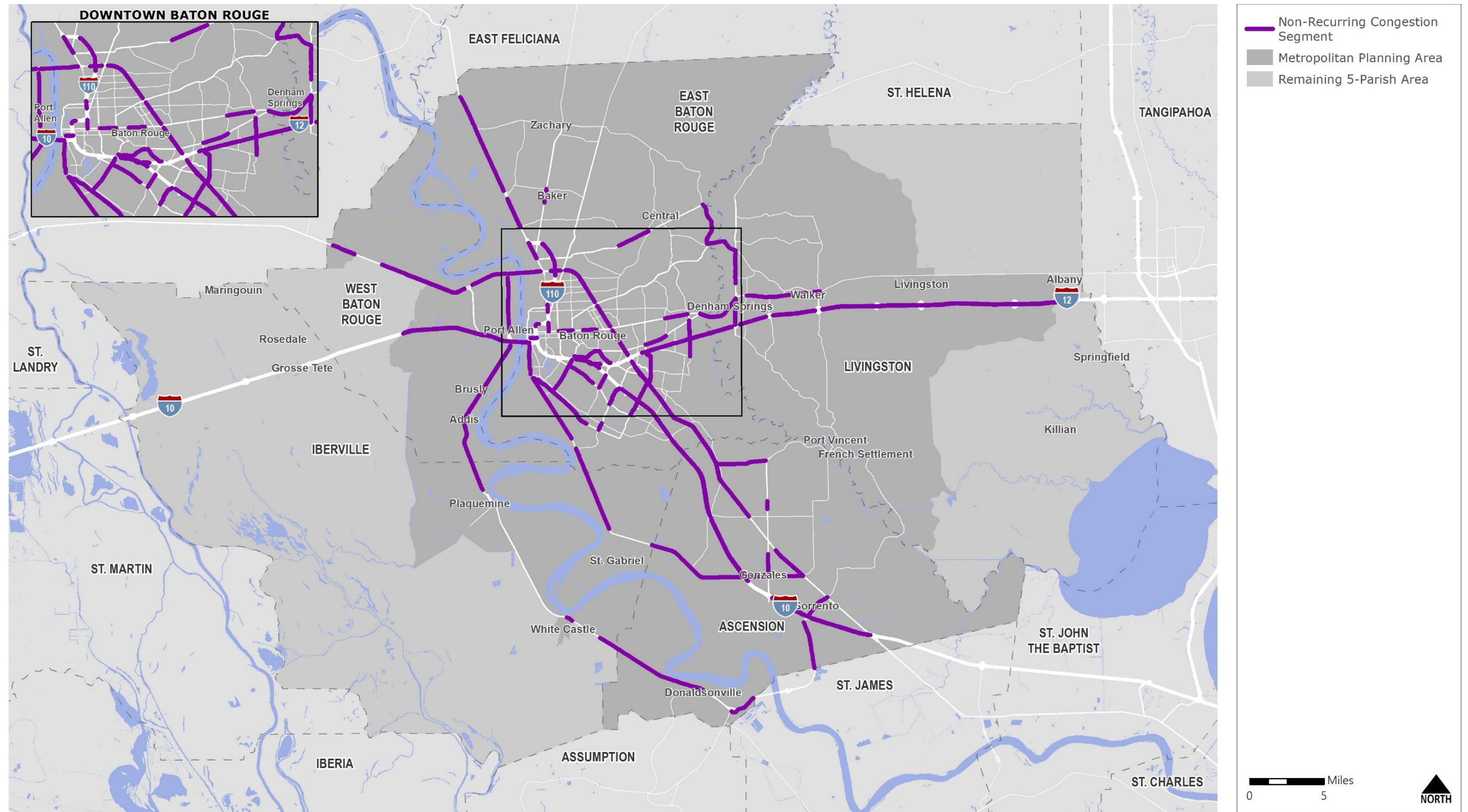
## 5.2 Segment Prioritization

The segments displayed in Figure 5.1 were ranked based on the five-year average crash frequency. Table 5.1 shows the following:

- Frequency of non-recurring congestion incidents
- The maximum delay for a non-recurring congestion incident

The 5-year trends for total crash frequency and fatal and life-threatening injury crash frequency for each segment.

Figure 5.1: Non-Recurring Congestion Segments



Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.

Table 5.1: Non-Recurring Congestion Trends: Top 10 Segments based on Crash Frequency

| Roadway                              | Segment                           | Length (miles) | 2019 Non-Recurring Incidents | 2019 Maximum Delay (Hours) | 5-Year Average Crash Frequency | 5-Year Average Fatal/Life Threatening Crash Frequency | 5-Year Total Crash Trend | 5-Year Fatal/Life Threatening Crash Trend |
|--------------------------------------|-----------------------------------|----------------|------------------------------|----------------------------|--------------------------------|---|--------------------------|---|
| LA 1 Northbound                      | LA 990 (Addis Ln) to I-10         | 6.44           | 459                          | 0.33                       | 179.8                          | 1.8   | Decrease                 | Stable                                    |
| LA 3002 (Range Ave) Southbound       | US 190 to I-12                    | 1.71           | 430                          | 0.12                       | 143.0                          | 0.6   | Stable                   | Stable                                    |
| LA 30 Westbound                      | LA 44 to I-10                     | 1.47           | 345                          | 0.10                       | 140.6                          | 0.6   | Stable                   | Stable                                    |
| LA 44 Southbound                     | LA 3038 to LA 30                  | 1.51           | 257                          | 0.13                       | 138.6                          | 0.2   | Stable                   | Stable                                    |
| US 61 (Airline Hwy) Southbound       | US 190 (Florida Blvd) to I-12     | 1.94           | 401                          | 0.20                       | 119.8                          | 0.6   | Stable                   | Stable                                    |
| LA 1 Southbound                      | I-10 to LA 990 (Addis Ln)         | 6.44           | 424                          | 0.19                       | 113.0                          | 2.0   | Decrease                 | Stable                                    |
| Sherwood Forest Blvd Southbound      | I-12 to Coursey Blvd              | 1.37           | 374                          | 0.10                       | 112.4                          | 0.4   | Decrease                 | Decrease                                  |
| US 61/US 190 (Airline Hwy) Eastbound | LA 67 (Plank Rd) to Evangeline St | 1.81           | 378                          | 0.12                       | 111.6                          | 1.6   | Stable                   | Stable                                    |
| US 61 (Airline Hwy) Northbound       | I-12 to US 190                    | 1.90           | 355                          | 0.12                       | 111.2                          | 0.8   | Stable                   | Decrease                                  |
| Lee Dr Southbound                    | Perkins Rd to Highland Rd         | 1.81           | 266                          | 0.15                       | 110.8                          | 0.4   | Decrease                 | Stable                                    |



## 6.0 Congestion Reduction Strategies

### 6.1 Federal Guidelines for Congestion Reduction Strategies

Section 500.109 (a) of Subpart A (Management Systems), 23 CFR (Final Rule) states:

"...A congestion management system or process is systematic and regionally accepted approach for managing congestion that provides accurate, up-to-date information on transportation system operations and performance and assesses alternative strategies for congestion management that meet State and local needs."

Section 450.322 (c)(4) of Subpart C (Metropolitan Transportation Planning and Programming), 23 CFR (Final Rule) further states that a Congestion Management Process shall include:

"identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies that will contribute to the more effective use and improved safety of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combination of strategies, are some examples of what should be appropriately considered for each area:

- Demand management measures, including growth management and congestion pricing;
- Traffic operational improvements;
- Public transportation improvements;
- ITS technologies as related to the regional ITS Architecture; and
- Where necessary, additional system capacity."

Section 450.322 (c)(5) of Subpart C (Metropolitan Transportation Planning and Programming) 23 CFR (Final Rule) also states that a CMP shall include "identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation."

### 6.2 Identifying Congestion Reduction Strategies Using CMP Toolbox

There are constant changes in the way our society and economy operate. With increased commercial, residential, and industrial development, there is also increased transportation demand on existing transportation facilities. To address this increase in demand and ensuing congestion, appropriate strategies must be formulated to prevent deterioration in free flow traffic



conditions. These strategies can include upgrading existing transportation facilities, creating additional facilities, and exploring the use of alternative travel methods. The CMP proposes the following four (4) management strategies that provide a variety of measures that can be implemented to reduce traffic congestion<sup>12</sup>:

- Demand Management Strategies
- Traffic Operations Strategies
- Public Transportation Strategies
- Road Capacity Strategies

## Demand Management Strategies

Demand Management, or Travel Demand Management (TDM), nonautomotive travel modes, and land use management can provide travelers with more options and reduce the number of vehicles of trips during congested periods. These include strategies, summarized in Table 6.1, that substitute communication for travel or encourage regional cooperation to change development patterns and/or reduce sprawl.

## Traffic Operations Strategies

These strategies, summarized in Table 6.2, focus on getting more out of the existing infrastructure. Rather than building new infrastructure, many transportation agencies have embraced strategies that deal with operation of the existing network of roads. Many of these operations-based strategies are supported by the use of enhanced technologies or Intelligent Transportation Systems (ITS).

## Public Transportation Strategies


Improving transit operations, improving access to transit, and expanding transit service can help reduce the number of vehicles on the road by making transit more attractive or accessible. These strategies, summarized in Table 6.3, may be closely linked to Demand Management and Traffic Operations Strategies. As with traffic operations, transit operations are often enhanced by ITS.

## Road Capacity Strategies

This category of strategies addresses adding more base capacity to the road network, including additional lanes and building new highways, as well as redesigning specific bottlenecks (such as interchanges and intersections) to increase their capacity. Given the expense and possible adverse environmental impacts of new single-occupant vehicle capacity, management and operations

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<sup>12</sup> [https://www.fhwa.dot.gov/planning/congestion\\_management\\_process/cmp\\_guidebook/cmpguidebk.pdf](https://www.fhwa.dot.gov/planning/congestion_management_process/cmp_guidebook/cmpguidebk.pdf)



strategies, summarized in Table 6.4, should be given due consideration before additional capacity is considered.

Tables 6.5 and 6.6 present potential strategies that can be employed to alleviate or reduce congestion on the freeways and arterials identified in Figures 4.1 and 4.2 that experience the highest levels of traffic congestion in the MPA. The table also lists agencies responsible for proposed improvements, possible funding sources for project implementation, and a proposed project implementation schedule.

Table 6.1 Demand Management Strategies

| Strategy Group              | Strategy   | Description  |
|-----------------------------|--|--|
| Promoting Alternatives      | Programs that encourage transit use  | <p>These programs give travelers that have the option of driving reasons to choose transit. Some programs can use:</p> <ul style="list-style-type: none"> <li>• Improving transit service (more service, faster service, and more comfortable service)</li> <li>• Improved stops and stations</li> <li>• Reduced fares and more convenient fare structures and payment systems</li> <li>• Marketing</li> </ul>   |
|                             | Pedestrian and bicycle improvements, and other strategies that promote nonmotorized travel | <p>Pedestrian and bicycle improvements ensure that a network of infrastructure is in place to make bicycling or walking viable modes of travel. Some examples of infrastructure improvement to pedestrian and bicycle facilities include:</p> <ul style="list-style-type: none"> <li>• Bicycle lanes</li> <li>• Bicycle parking and storage facilities</li> <li>• Curb extensions</li> <li>• Intersection treatments</li> <li>• Paved shoulders and/or sidewalks</li> <li>• Shared-lane markings ("sharrows")</li> <li>• Signage and signalization</li> <li>• Trails and shared-use paths</li> </ul> |
| Managing and Pricing Assets | Congestion pricing strategies  | <p>Congestion pricing works by shifting some rush hour highway travel to other transportation modes or to off-peak periods. Some strategies include:</p> <ul style="list-style-type: none"> <li>• HOT and Express Toll Lanes</li> <li>• Roadway facility-based pricing</li> <li>• Zone-based pricing</li> <li>• Parking pricing</li> </ul>   |
|                             | Parking management   | Parking management refers to strategies that result in a more efficient use of parking resources.  |
|                             | Pricing fees for parking spaces  | Efficient pricing fees for parking spaces can provide numerous benefits including increase turnover and therefore improved user convenience, parking facility cost savings, reduced traffic congestion, and increased revenues.  |
|                             | Pricing fees for use of travel lanes   | Pricing fees for use of travel lanes, or congestion pricing, works by shifting some rush hours traffic to over transportation modes or to off-peak periods.  |
|                             | Increasing intercity freight rail or port capacity   | Increasing freight rail or port capacity can reduce the number of trucks, thus reducing congestion.  |

| Strategy Group | Strategy   | Description  |
|----------------|--|--|
| Work Patterns  | Flexible work hours programs                               | The organization has varying starting and ending working hours for employees.<br>Staggered hours are where employees arrive and depart work at different times in shifts, which may be staggered anywhere from 15 minutes to two (2) hours.<br>Flextime is where employees work specified hours each week but are given flexibility on where they arrive to work, take lunch, and leave work.<br>Compressed work weeks are where employees work more hours daily but work fewer days per week or pay period. (e.g. four ten-hour days instead of five eight-hour days) |
|                | Telecommuting programs                                     | Work is performed wherever the employee chooses. This is a system where employees do not commute or travel to a central place of work.   |
| Land Uses      | Land use controls or zoning                                | Land use controls consist of government ordinances, codes, and permit requirements that restrict the private use of land and natural resources, to conform to public policies. These controls can provide a blueprint for sustainable growth and manage traffic.   |
|                | Growth management restrictions                             | Growth management restrictions often stem from concerns about the compatibility of new growth with surrounding uses and/or the need to minimize the costs associated with supplying public services, such as roads and streets, to support new development.  |
|                | Development policies that support transit-oriented designs | The utilization of effective and predictable transit encourages surrounding development which, in turn, supports transit. The basic principle is that convenient access to transit can be a key attraction that fosters mixed-use development, and the increased density in station areas not only support transit but also may accomplish other goals, including reducing congestion and urban sprawl, increasing pedestrian activity and economic development potential, and realizing environmental benefits.   |
|                | Incentives for high-density development                    | Incentives such as tax abatements and streamlined permitting processes can be used to stimulate the development of housing types which can reduce congestion.  |

Table 6.2 Traffic Operations Strategies

| Strategy Group                           | Strategy   | Description   |
|--|--|---|
| Highway/Freeway Operations               | Metering traffic onto freeways                             | Ramp meters are signals installed on freeway on-ramps to control the frequency at which vehicles enter the flow of traffic on the freeway. These signals reduce overall freeway congestion by managing the amount of traffic entering the freeway and by breaking up platoons that make it difficult to merge onto the freeway. |
|  | Reversible commuter lanes                                  | Reversible commuter lanes add peak-direction capacity to a two-way road and decrease congestion by borrowing available lane capacity from the other (off-peak) direction. This strategy can also be used for situations of non-recurring congestion, such as special events, construction, or evacuations.                      |
|  | Access management  | Access management strategies for highways include: <ul style="list-style-type: none"> <li>• Left-turn restrictions</li> <li>• Intersection/signal spacing</li> <li>• Frontage Roads</li> <li>• Turn lanes</li> <li>• Roadway modifications (geometry, medians, sight distance)</li> </ul>                                       |
|  | Movable median barriers                                    | These barriers can be transferred between lanes to increase capacity in the peak direction. These barriers can also be used in work zones to prevent opposing traffic flow collisions.  |
|  | Automated toll collection improvements                     | Improving automated toll collections can improve traffic flow, decrease emissions, and are less expensive to build and operate than traditional toll collection methods.  |
|  | Conversion of HOV lanes to High Occupancy Toll (HOT) lanes | In many cases, HOV lanes may be underutilized and do not meet expectations about congestion relief benefits. Converting HOV lanes to HOT lanes is an innovative concept that can better utilize HOV lanes.  |
|  | Bus-only shoulder lanes                                    | These shoulders can permit buses to bypass congestion.  |
|  | Arterial and Local Roads Operations                        | Optimizing traffic signal timings   |
| Restricting turns at key intersections   |  | Turning movement restrictions are a type of access management strategy used to improve the safety of intersections and driveways. Restricted and prohibited turn movements reduce the number of turning conflict points at intersections, which are generally known to reduce crash risk.                                       |
| Geometric improvements                   |  | Geometric improvements can include adding raised medians near intersections, adding bicycle lanes, and improved skew angles. Adding turn lanes are another intersection improvement. However, right-of-way restrictions need to be considered.  |
| Converting streets to one-way operations |  | One-way streets manage traffic patterns and reduce vehicle conflicts. These conversions work best in downtown or very congested areas, and they can offer improved signal timing.   |
| Transit signal priority (TSP)            |  | TSP adjusts the timing of a traffic signal's red and green cycles to reduce the amount of time a transit vehicle spends waiting at a red light.   |



| Strategy Group              | Strategy                                      | Description   |
|-----------------------------|---|---|
|                             | Access management                             | <p>Access management strategies for arterial and local roads include:</p> <ul style="list-style-type: none"> <li>• Driveway consolidation</li> <li>• Driveway spacing/design</li> <li>• Left-turn restrictions</li> <li>• Elimination of on-street parking</li> <li>• Intersection/signal spacing</li> <li>• Turn lanes</li> <li>• Roadway modifications (geometry, medians, sight distance)</li> </ul> |
|                             | Traffic calming                               | Traffic calming refers to a full range of methods to slow cars through commercial and residential neighborhoods. This can benefit pedestrians and bicyclists since cars are driving at speeds that are safer and more compatible to walking and bicycling.  |
|                             | Road Diets                                    | Road Diets remove travel lanes from a roadway and utilize space for other uses and travel modes. The most common Road Diet reconfiguration is converting a four-lane undivided roadway to a three-lane roadway with a Two-Way Left-Turn Lane (TWLTL).   |
| Other Operations Strategies | Incident management                           | Traffic incident management (TIM) consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents and restore traffic flow as safely and quickly as possible.   |
|                             | Traveler information systems                  | These systems update drivers on current roadway conditions, including delays, incidents, weather-related messages, travel times, emergency alerts, and alternate routes. These systems allow drivers to make more effective travel decisions.   |
|                             | Improved management of work zones             | Managing traffic during construction is necessary to minimize traffic delays, maintain motorist and worker safety, complete roadwork in a timely manner, and maintain access for businesses and residents.  |
|                             | Identifying weather and road surface problems | Weather can have impact traffic flow due to reduced visibility and or wet roadway surface conditions.   |
|                             | Special events management                     | Special events such as sporting events, concerts, fairs, and conventions cause high levels of congestion due to an overload of the street and highway networks adjacent to the venue. However, agencies and organizers can easily coordinate a mitigation plan and deploy the proper resources to minimize the effects on normal traffic operation.   |
|                             | Freight management                            | Congestion can be caused by restrictions on freight movement, such as the lack of space for trucks in urban areas.  |

Table 6.3 Public Transportation Strategies

| Strategy Group           | Strategy   | Description   |
|--------------------------|--|---|
| Operations Strategies    | Realigned transit service schedules and stop locations | Realigning transit service schedules and stop locations eliminate non-productive route segments, reduce route mileage and/or increase speed, or ensure that major activity centers are served.  |
|                          | Providing real-time information                        | Real-time transit information systems provide transit riders with up-to-the-minute information on bus arrivals via the internet, phone, and display boards at key bus stops. The information is based on real-time bus locations using GPS rather than a set schedule of arrival and departure times. Access to real-time travel information reduces actual and perceived wait times and increase the reliability of transit, which can encourage a mode shift. |
|                          | Providing travel conditions information                | Travel conditions information can allow users to make proper mode and route choices.  |
|                          | Monitoring security                                    | Enhancing the security, and safety, of transit customers, personnel, equipment, and facilities can alert officials of possible delays or closures as well as warn officials of possible intentional acts of crime or violence.  |
|                          | Enhanced transit amenities and safety                  | Enhanced transit amenities and safety can make transit more attractive while bringing immense benefits to accessibility and performance.  |
|                          | Universal farecards                                    | Users can access multiple modes of travel, such as trains, buses, and taxis, with one card.   |
|                          | Transit Signal Priority (TSP)                          | TSP tools modify signal timing or phasing when transit vehicles are present either conditionally for late runs or unconditionally for all arriving transit.   |
|                          | Bus Rapid Transit (BRT)                                | BRT is a term used for a set of transit service improvements that include: <ul style="list-style-type: none"> <li>• Grade-separated right-of-way</li> <li>• High-quality vehicles</li> <li>• Frequent service</li> <li>• Convenient user information</li> <li>• Efficient pre-paid fare collection</li> <li>• Efficient operations</li> </ul>   |
| Capacity Strategies      | Reserved travel lanes                                  | Reserved lanes help buses pass congested traffic. These lanes can include curbside lanes, median lanes, or contraflow lanes.  |
|                          | More frequent transit or expanded hours of service     | Expanded transit can reduce motor vehicles miles driven and traffic congestion.   |
|                          | Expanded transit network                               | Expanding the transit network can increase the mode's attractiveness.   |
| Accessibility Strategies | Bicycle and pedestrian facilities improvements         | Improved bicycle and pedestrian facilities can reduce traffic congestion and pollution by providing alternate means of vehicular travel, as well as recreational opportunities which encourage healthy lifestyles.  |
|                          | Provisions for bicycles                                | Transit vehicles with bikeracks mounted on buses allows a bicycle to be used at both ends of the journey, and helps cyclists who experience a mechanical failure, unexpected bad weather, or sudden illness. It also allows cyclists to pass major barriers where cycling is prohibited or particularly difficult.  |

Table 6.4 Road Capacity Strategies

| Strategy Group | Strategy   | Description   |
|----------------|--|---|
| All            | Construct new HOV or HOT lanes                   | High Occupancy Vehicle (HOV) lanes are lanes that have occupancy restrictions on usage to encourage ridesharing. High Occupancy Toll (HOT) lanes are available to HOV users without a toll. SOV users can use these lanes for a toll, which adjusts based on demand.  |
|                | Removing bottlenecks                             | Some strategies that can remove or fix bottlenecks include: <ul style="list-style-type: none"> <li>• Use a short section of traffic bearing shoulder as a peak-hour lane</li> <li>• Restriping</li> <li>• Modifying weaving areas</li> <li>• Ramp metering or closing entrance ramps</li> <li>• Improving traffic signal timing</li> <li>• Access management</li> <li>• Providing traffic diversion information (ITS).</li> </ul> |
|                | Intersection improvements                        | Intersection improvements can include adding raised medians near intersections, adding bicycle lanes, improved skew angles, reconfiguring signal timings, and adding advanced warning devices. Adding turn lanes are another intersection improvement. However, right-of-way restrictions need to be considered.  |
|                | Center turn lanes                                | These lanes, also known as Two-Way Left Turn Lanes (TWLTL), remove left-turning vehicles from the through lanes and store those vehicles in the median area until an acceptable gap in opposing traffic is available.   |
|                | Overpasses or underpasses at congested locations | Intersections handling a high volume of traffic and pedestrians (and possibly railroads) limit the capacity of the approaching roads. Grade separating these conflict points using overpasses and underpasses allows traffic to flow freely. This in turn makes conditions safer for vehicles, pedestrians, and trains.   |
|                | Closing gaps in the street network               | Closing gaps in the street network by constructing new roads can mitigate congestion on existing roads. These new roads can also incorporate complete streets.  |
|                | Adding travel lanes                              | Increasing the number of lanes is not always possible due to physical and fiscal constraints. However, it remains an important approach to addressing congestion.   |

Table 6.5 Proposed Strategies for Alleviating Congestion on Freeway Segments

| Roadway Segment   | Congestion Recurring or Non-Recurring | Proposed Congestion Alleviation Strategy   |
|---|---------------------------------------|--|
| I-10 Westbound from LA 73 On-Ramp to Highland Rd Off-Ramp             | Recurring                             | Additional capacity – widening four lanes to six lanes, Improving ITS, Incident management, and Freight management                             |
| I-10 Westbound from Nicholson Rd On-Ramp to LA 1 Off-Ramp             | Recurring                             | Additional capacity – extend LA 1 deceleration lane, Improving ITS, Incident management, and Freight management                                |
| I-110 Southbound from I-10 Westbound to I-10 Eastbound                | Recurring                             | New Terrace Ave ramp, Improving ITS, Incident management, and Freight management   |
| I-10 Eastbound between Highland Rd Ramps                              | Recurring                             | Additional capacity – widening four lanes to six lanes, Improving ITS, Incident management, and Freight management                             |
| I-10 Westbound from Acadian Thwy On-Ramp to Perkins Rd On-Ramp        | Recurring                             | Additional capacity – widening six lanes to eight lanes, Remove Perkins Rd On-Ramp, Improving ITS, Incident management, and Freight management |
| I-10 Eastbound from Highland Rd On-Ramp to LA 73 Off-Ramp             | Recurring                             | Additional capacity – widening four lanes to six lanes, Improving ITS, Incident management, and Freight management                             |
| I-12 Eastbound between US 61 (Airline Hwy) Ramps                      | Recurring                             | I-12 HOV lanes, Improving ITS, Incident management, and Freight management   |
| I-10 Westbound at Nicholson Dr On-Ramp                                | Recurring                             | Additional capacity – Extend acceleration lane length  |
| I-10 Eastbound at Dalrymple Dr Off-Ramp                               | Recurring                             | Relocate Dalrymple On-Ramp upstream on I-10  |
| I-10 Eastbound from College Dr Off-Ramp to I-12 Eastbound             | Recurring                             | Additional capacity – additional lane, Improving ITS, Incident management, and Freight management  |
| I-12 Eastbound between Sherwood Forest Blvd Ramps                     | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Westbound between Millerville Road Ramps                         | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-10 Eastbound between I-110 Ramps                                    | Recurring                             | Additional capacity on I-10; New Terrace Ave Off-Ramp on I-110, Improving ITS, Incident management, and Freight management                     |
| I-10 Westbound from Perkins Rd On-Ramp to Dalrymple Drive Off-Ramp    | Recurring                             | Additional capacity – widening six lanes to eight lanes, Remove Perkins Rd On-Ramp, Improving ITS, Incident management, and Freight management |
| I-10 Eastbound between Acadian Thwy Ramps                             | Recurring                             | Additional capacity – widening six lanes to eight lanes, Improving ITS, Incident management, and Freight management                            |
| I-10 Westbound from LA 415 On-Ramp to LA 77 Off-Ramp                  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Eastbound between LA 1 Ramps                                     | Recurring                             | Additional capacity – extend LA 1 On-Ramp acceleration lane, Improving ITS, Incident management, and Freight management                        |
| I-10 Westbound from LA 3000 On-Ramp to LA 975 Off-Ramp                | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-12 Eastbound from O'Neal Ln to LA 3002 (Range Rd) Off-Ramp          | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Eastbound between O'Neal Ln Ramps                                | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-10 Eastbound between College Dr Ramps                               | Recurring                             | Additional capacity – widening six lanes to eight lanes, Improving ITS, Incident management, and Freight management                            |
| I-10 Eastbound from LA 1 On-Ramp to Nicholson Dr Off-Ramp             | Recurring                             | Additional capacity – extend Nicholson Dr Off-Ramp deceleration lane, Improving ITS, Incident management, and Freight management               |
| I-10 Westbound between College Dr Ramps                               | Recurring                             | Additional capacity – widening six lanes to eight lanes, Improving ITS, Incident management, and Freight management                            |
| I-10 Eastbound from LA 975 On-Ramp to LA 3000 Off-Ramp                | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Westbound between LA 73 Ramps                                    | Recurring                             | Additional capacity – widening four lanes to six lanes, Improving ITS, Incident management, and Freight management                             |
| I-12 Westbound from LA 3002 (Range Rd) Off-Ramp to O'Neal Ln Off-Ramp | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Westbound between Sherwood Forest Blvd Ramps                     | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |

| Roadway Segment   | Congestion Recurring or Non-Recurring | Proposed Congestion Alleviation Strategy   |
|---|---------------------------------------|--|
| I-10 Eastbound between Washington St Off-Ramps  | Recurring                             | Additional capacity – widening six lanes to eight lanes, New Terrace Rd Off-Ramp, Improving ITS, Incident management, and Freight management |
| I-10 Westbound from Dalrymple Dr On-Ramp to Louise St Off-Ramp                              | Recurring                             | Additional capacity – widening six lanes to eight lanes, Improving ITS, Incident management, and Freight management                          |
| I-12 Westbound from Sherwood Forest Blvd On-Ramp to US 61 (Airline Hwy) Northbound Off-Ramp | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Eastbound between Millerville Rd Ramps   | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Westbound between LA 3002 (Range Rd) Ramps   | Recurring                             | I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management  |
| I-12 Eastbound between Satsuma Rd Ramps   | Recurring                             | Additional capacity – widening four lanes to six lanes, Improving ITS, Incident management, and Freight management                           |
| I-110 Southbound from N 19th St On-Ramp to Capitol Access Rd Off-Ramp                       | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Westbound from Highland Rd On-Ramp to Siegen Ln Off-Ramp                               | Recurring                             | I-10 at Pecue Interchange, Improving ITS, Incident management, and Freight management  |
| I-10 Westbound from LA 3064 (Essen Ln) to I-12 Eastbound Off-Ramp                           | Recurring                             | Additional capacity – additional lane, College Dr Flyover, Improving ITS, Incident management, and Freight management                        |
| I-12 Eastbound from LA 63 On-Ramp to LA 441 Off-Ramp  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-12 Eastbound from LA 441 On-Ramp to LA 43 Off-Ramp  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-12 Westbound at LA 3064 (Essen Ln) Interchange  | Recurring                             | New Essen Ln Westbound off-ramp, I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management                   |
| I-10 Westbound between LA 3000 Ramps  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-12 Westbound from LA 3064 (Essen Ln) On-Ramp to I-10 Eastbound Off-Ramp                   | Recurring                             | New Essen Ln Westbound off-ramp, I-12 HOV lanes, Improving Ramp Metering, ITS, Incident management, and Freight management                   |
| I-10 Eastbound from LA 73 On-Ramp to LA 30 Off-Ramp   | Recurring                             | Additional capacity – widen four lanes to six lanes, Improving ITS, Incident management, and Freight management                              |
| I-10 Eastbound between LA 975 Ramps   | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Westbound between LA 415 Ramps   | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Westbound from LA 22 On-Ramp to LA 44 Off-Ramp   | Recurring                             | Additional capacity – widen four lanes to six lanes, Improving ITS, Incident management, and Freight management                              |
| I-12 Westbound from LA 63 On-Ramp to Satsuma Rd Off-Ramp                                    | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Eastbound from LA 77 On-Ramp to LA 415 Off-Ramp  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-110 Northbound at US 61 (Scenic Hwy) Interchange  | Recurring                             | Improving ITS, Incident management, and Freight management   |
| I-10 Westbound from I-12 Westbound to College Dr Off-Ramp                                   | Recurring                             | College Dr Flyover, Improving ITS, Incident management, and Freight management   |
| I-110 Southbound from Scenic Hwy to N 22nd St On-Ramp                                       | Recurring                             | Improving ITS, Incident management, and Freight management   |



Table 6.6 Proposed Strategies for Alleviating Congestion on Arterial Segments

| Roadway  | Congestion Recurring or Non-Recurring | Proposed Congestion Alleviation Strategy  |
|--|---------------------------------------|---|
| S Harrell's Ferry Rd Eastbound from Jones Creek Rd to O'Neal Ln  | Recurring                             | Optimize traffic signal timings   |
| LA 3002 (Range Ave) Southbound between I-12 Ramps  | Recurring                             | New I-12 at LA 16 interchange, Optimize traffic signal timings  |
| LA 3002 (Range Ave) Northbound between I-12 Ramps  | Recurring                             | New I-12 at LA 16 interchange, Optimize traffic signal timings  |
| LA 3064 (Essen Ln) Northbound at Jefferson Hwy   | Recurring                             | Optimize traffic signal timings, extend right turn lane   |
| O'Neal Ln Northbound between I-12 Ramps  | Recurring                             | Extend and/or construct new turn lanes, optimize traffic signal timings   |
| O'Neal Ln Southbound between I-12 Ramps  | Recurring                             | Extend and/or construct new turn lanes, optimize traffic signal timings   |
| LA 42 Westbound from LA 73 (Jefferson Hwy) to US 61 (Airline Hwy)  | Recurring                             | Additional capacity – widen two lanes to four lanes, Optimize traffic signal timings                            |
| LA 42 Eastbound from US 61 (Airline Hwy) to LA 73 (Jefferson Hwy)  | Recurring                             | Additional capacity – widen two lanes to four lanes, Optimize traffic signal timings                            |
| Acadian Thwy Northbound between I-10 Ramps   | Recurring                             | Interchange modification, Optimize traffic signal timings   |
| LA 1026 (Juban Rd) Northbound at US 190  | Recurring                             | Additional capacity – widen two lanes to four lanes, extend turn lanes, optimize traffic signal timings         |
| O'Neal Ln Northbound at US 190 (Florida Blvd)  | Recurring                             | Construct new turn lanes, optimize traffic signal timings, restrict westbound right movement from Frontage Road |
| Bluebonnet Blvd Northbound at US 61 (Airline Hwy)  | Recurring                             | Construct new northbound right turn lane  |
| Highland Rd Westbound at US 61 (Airline Hwy)   | Recurring                             | Optimize traffic signal timings   |
| College Dr Southbound at Perkins Rd  | Recurring                             | College Dr corridor improvements, Optimize traffic signal timings   |
| LA 3064 (Essen Ln) Southbound between I-10 Ramps   | Recurring                             | Signal retiming, Ramp Terminal Coordination   |
| LA 3002 (Range Rd) Southbound at LA 1034 (Vincent Rd)  | Recurring                             | Change Southbound lane configuration to dual lefts and one shared thru and right lane                           |
| Lee Dr Southbound at Burbank Dr  | Recurring                             | Add right turn lanes along Lee Drive  |
| Jefferson Hwy Southbound at Corporate Blvd/Old Hammond Hwy   | Recurring                             | Add right turn lane along Southbound Jefferson Hwy  |
| LA 67 (Plank Rd) Northbound at LA 408 (Hooper Rd)  | Recurring                             | Increase the northbound right turn storage  |
| LA 73 from I-10 Eastbound Ramps to LA 621  | Recurring                             | Signal retiming and Ramp Terminal Coordination  |
| Siegen Ln Northbound at US 61 (Airline Hwy)  | Recurring                             | Signal retiming   |
| US 61/US 190 (Airline Hwy) Northbound from Florida Blvd On-Ramp to LA 37 (Greenwell Springs Rd) Off-Ramp | Recurring                             | Signal retiming   |
| LA 22 Northbound between I-10 Ramps  | Recurring                             | Signal retiming and Ramp Terminal Coordination  |
| LA 73 Northbound at US 61 (Airline Hwy) (Ascension Parish)   | Recurring                             | Signal retiming   |
| US 61 (Airline Hwy) Southbound at LA 42 East JCT   | Recurring                             | Signal retiming   |
| Sherwood Forest Blvd Northbound from I-12 to Old Hammond Hwy   | Recurring                             | Signal retiming and Ramp Terminal Coordination  |
| US 190 Eastbound from LA 16 (Pete's Hwy) to LA 1026 (Juban Rd)   | Recurring                             | Access management, Driveway consolidation   |
| Perkins Rd Westbound from College Dr to Acadian Thwy/Stanford Ave  | Recurring                             | Access management, Signal retiming  |

| Roadway   | Congestion Recurring or Non-Recurring | Proposed Congestion Alleviation Strategy                  |
|---|---------------------------------------|---|
| Corporate Blvd Westbound at College Dr                                      | Recurring                             | College Drive Project                                     |
| Sherwood Forest Blvd Northbound between I-12 Ramps                          | Recurring                             | Signal retiming and Ramp Terminal Coordination            |
| US 61 (Airline Hwy) Northbound at Siegen Ln/South Sherwood Forest Blvd      | Recurring                             | Signal retiming and coordination                          |
| Lee Dr Northbound at Perkins Rd   | Recurring                             | College Drive Project                                     |
| LA 1026 (Juban Rd) Southbound between I-12 Ramps                            | Recurring                             | Signal retiming and Ramp Terminal Coordination            |
| LA 1 Northbound from LA 990 to I-10   | Recurring and Non-Recurring           | Corridor Study, access management                         |
| Nicholson Dr Northbound from Gardere Ln to Brightside Dr/W Lee Dr           | Recurring                             | Add left turn lanes for side streets                      |
| Perkins Rd Eastbound at LA 3064 (Essen Ln/Staring Ln)                       | Recurring                             | Signal retiming, Add right turn lane                      |
| Bluebonnet Blvd Southbound at Burbank Dr                                    | Recurring                             | Signal retiming, Add additional southbound left turn lane |
| Sherwood Forest Blvd Southbound at US 61 (Airline Hwy)                      | Recurring                             | Signal retiming and coordination                          |
| S Harrell's Ferry Rd Westbound at Jones Creek Rd                            | Recurring                             | Optimize traffic signal timings                           |
| Nicholson Dr Northbound from Brightside Dr/W Lee Dr to Burbank Dr           | Recurring                             | Add turn lanes along Nicholson Dr at minor streets        |
| Nicholson Dr Southbound from Burbank Dr to Brightside Dr/W Lee Dr           | Recurring                             | Add turn lanes along Nicholson Dr at minor streets        |
| College Dr Northbound at Corporate Blvd                                     | Recurring                             | College Drive Project                                     |
| LA 30 Westbound between I-10 Ramps (Ascension Parish)                       | Recurring                             | Signal retiming and Ramp Terminal Coordination            |
| US 190 (Florida Blvd) from Monterrey Blvd to US 61 (Airline Hwy)            | Recurring                             | Signal retiming   |
| S Harrell's Ferry Rd Westbound at S Sherwood Forest Blvd                    | Recurring                             | Modify lane configuration, signal retiming                |
| O'Neal Ln Southbound at George O'Neal Rd                                    | Recurring                             | Modify lane configuration, signal retiming                |
| Sherwood Forest Blvd Southbound from Old Hammond Hwy to I-12                | Recurring                             | Add turn lanes  |
| Bluebonnet Blvd Southbound from I-10 to Perkins Rd                          | Recurring                             | Add turn lanes  |
| Corporate Blvd Eastbound at Jefferson Hwy                                   | Recurring                             | Signal retiming   |
| Lee Dr Westbound at Nicholson Dr  | Recurring                             | Add right turn lane                                       |
| LA 3002 (Range Ave) from US 190 (Florida Ave) to I-12                       | Non-Recurring                         | Safety improvements, Access management                    |
| LA 30 from LA 44 to I-10  | Non-Recurring                         | Safety improvements, Access management                    |
| LA 44 from LA 3038 to I-10  | Non-Recurring                         | Safety improvements, Access management                    |
| US 61 (Airline Hwy) Southbound from US 190 to I-12                          | Non-Recurring                         | Safety improvements, Access management                    |
| LA 1 Southbound from I-10 to LA 990 (Addis Ln)                              | Non-Recurring                         | Safety improvements, Access management                    |
| Sherwood Forest Blvd Southbound from I-12 to Coursey Blvd                   | Non-Recurring                         | Safety improvements, Access management                    |
| US 61/US 190 (Airline Hwy) Eastbound from LA 67 (Plank Rd) to Evangeline St | Non-Recurring                         | Safety improvements, Access management                    |

| Roadway  | Congestion Recurring or Non-Recurring | Proposed Congestion Alleviation Strategy                        |
|--|---------------------------------------|---|
| US 61 (Airline Hwy) Northbound from I-12 to US 190 | Non-Recurring                         | Safety improvements, Access management                          |
| Lee Dr Southbound from Perkins Rd to Highland Rd   | Non-Recurring                         | Additional capacity – add center turn lane, Safety improvements |

## 7.0 Congestion Management Process Maintenance

### 7.1 Federal Guidelines for Maintaining the Congestion Management Process

Section 450.322 (d)(3) of Subpart C (Metropolitan Transportation Planning and Programming), 23 CFR (Final Rule) states that a Congestion Management Process shall include:

“Establishment of a coordinated program for data collection and system performance monitoring to define the extent and duration of congestion, to contribute in determining the causes of congestion, and evaluate the efficiency and effectiveness of implemented actions. To the extent possible, this data collection program should be coordinated with existing data sources (including archived operational/ITS data) and coordinated with operations managers in the metropolitan area.”

Section 450.322 (d)(6) of Subpart C (Metropolitan Transportation Planning and Programming), 23 CFR further states that the CMP shall include:

“Implementation of a process for periodic assessment of the effectiveness of implemented strategies, in terms of the area’s established performance measures. The results of this evaluation shall be provided to decision makers and the public to provide guidance on selection of effective strategies for future implementation.”

### 7.2 System Performance and Maintenance

The overall goal of the CMP is to reduce traffic congestion within the MPA and improve free-flow traffic condition through the implementation of proposed congestion reduction strategies. To measure the effectiveness the proposed strategies the 2013 CMP had on reducing traffic congestion in the MPA, a comparative analysis was performed. This comparative analysis shows the proposed improvement for the 2013 CMP congested roadways, if that roadway is congested in the 2021 CMP, if there is an ongoing project, and the MTP’s project implementation schedule. The results of the comparative analysis between the 2013 CMP and the 2021 CMP are shown in Table 7.1.

Table 7.1 2013 CMP and 2021 CMP Comparative Analysis

| Road                 | Segment                                   | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?            | Status | Previous Implementation Schedule (MOVE 2042) | Current Implementation Schedule (MOVE 2046)  |
|----------------------|---|--|----------------------|--------------------------------------|--------|--|--|
| 4-H Club Rd          | Vincent Rd to US 190                      | N/A  | No                   | Yes                                  | N/A    | Stage II                                     | Stage 3  |
| Acadian Thwy         | Perkins Rd to Clay Cut Rd                 | 5.1  | No                   | No                                   | N/A    | N/A  | N/A  |
| Airline Hwy          | Florida Blvd to I-12                      | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |
| Airline Hwy          | I-12 to Siegen Ln                         | N/A  | No                   | Yes (Bluebonnet to ASC/EBR Ph Line)  | N/A    | Stage II (Bluebonnet to ASC/EBR Ph Line)     | Stage 1 (Cedarcrest Ave to Siegen Ln)  |
| Airline Hwy          | I-110 to Greenwell Springs Rd             | N/A  | No                   | Yes                                  | N/A    | Stage II                                     | Stage 1 (Excluding I-110 and Plank Rd Interchanges)<br>Stage 3 (Through I-110 and Plank Rd Interchanges) |
| Airline Hwy          | Greenwell Springs Rd to Florida Blvd      | N/A  | Yes                  | Yes                                  | N/A    | Stage II                                     | Stage 1  |
| Airline Hwy          | Siegen Ln to EBR/ASC Parish Line          | 2.1, 2.4, 5.1                              | No                   | Yes (Bluebonnet to ASC/EBR Ph Line)  | N/A    | Stage II (Bluebonnet to ASC/EBR Ph Line)     | Stage 1  |
| Airline Hwy          | ASC/EBR Parish Line to Germany Rd         | N/A  | No                   | No                                   | N/A    | N/A  | Stage 2 (ASC/EBR Ph Line to Perkins Rd)  |
| Airline Hwy          | Germany Rd to Church Point Rd             | 5.1  | No                   | No                                   | N/A    | N/A  | N/A  |
| Arnold Rd            | Linder Rd to Duff Rd                      | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |
| Barringer-Foreman Rd | Highland Rd to Jefferson Hwy              | 2.4  | No                   | No                                   | N/A    | N/A  | N/A  |
| Bluebonnet Blvd      | I-10 to Airline Hwy                       | 2.7  | Yes                  | No                                   | N/A    | N/A  | N/A  |
| Bluebonnet Blvd      | I-10 to Highland Rd                       | 5.1 (Perkins-MD #3)                        | Yes                  | Yes (Perkins to Picardy)             | N/A    | Stage I (Perkins to Picardy)                 | Stage 1 (Perkins Rd to Picardy Ave)  |
| Brentwood Dr         | Jefferson Hwy to Old Hammond Hwy          | 2.7  | No                   | No                                   | N/A    | N/A  | N/A  |
| Brightside Dr        | Nicholson Dr to 1.27 mi W of Nicholson Dr | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |
| Burbank Dr           | W Parker Blvd to Highland Rd              | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |
| Burgess Ave          | US 190 to LA 447                          | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |
| Cedarcrest Ave       | Coursey Blvd to Old Hammond Hwy           | N/A  | No                   | Yes (Airline Hwy to Old Hammond Hwy) | N/A    | Stage II (Airline Hwy to Old Hammond Hwy)    | N/A  |
| Central Thwy         | Florida Blvd to Sullivan Rd               | 5.2  | No                   | No                                   | N/A    | N/A  | N/A  |
| Clay Cut Rd          | Acadian Thwy to Jefferson Hwy             | 2.4  | No                   | Yes (S Foster Dr to Jefferson Hwy)   | N/A    | Stage II (S Foster Dr to Jefferson Hwy)      | N/A  |
| Cockerham Rd         | Hatchell Ln to LA 1026                    | N/A  | No                   | No                                   | N/A    | N/A  | N/A  |

| Road                 | Segment                                     | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?               | Status  | Previous Implementation Schedule (MOVE 2042) | Current Implementation Schedule (MOVE 2046) |
|----------------------|---|--|----------------------|---|---|--|---|
| College Dr           | Perkins Rd to Jefferson Hwy                 | 2.4, 2.5, 5.1                              | Yes                  | Yes (Perkins to I-10)                   | N/A   | Stage II (Perkins to I-10)                   | Stage 2 (Corporate Blvd to Jefferson Hwy)   |
| Coursey Blvd         | Airline Hwy to Sherwood Forest Blvd         | 2.2  | No                   | No                                      | N/A   | N/A  | N/A   |
| Coursey Blvd         | Sherwood Forest Blvd to Jones Creek Rd      | 2.2  | No                   | No                                      | N/A   | N/A  | N/A   |
| Dalrymple Dr         | Highland Rd to I-10                         | 2.1, 2.4, 2.7                              | No                   | No                                      | N/A   | N/A  | N/A   |
| Drusilla Ln          | Jefferson Hwy to Old Hammond Hwy            | N/A  | No                   | Yes                                     | N/A   | Stage II                                     | N/A   |
| E Roosevelt St       | Highland Rd to Thomas H Delpit Dr           | 2.4, 3.3                                   | No                   | No                                      | N/A   | N/A  | N/A   |
| E Washington St      | Thomas Delpit Dr to Park Blvd               | 2.1, 2.7, 4.18                             | No                   | No                                      | N/A   | N/A  | N/A   |
| Essen Ln             | Perkins Rd to Jefferson Hwy                 | N/A  | Yes                  | Yes (Perkins Rd to Essen Park Ave)      | Widening to 6 Lanes from Perkins Rd to Essen Park Ave completed.                      | E+C (Perkins Rd to Essen Park Ave)           | Project completed                           |
| Florida Ave          | LIV/EBR Parish Line to S Range Ave          | N/A  | No                   | No                                      | N/A   | N/A  | N/A   |
| Florida Ave          | S Range Ave to LA 447                       | N/A  | No                   | Yes (Pete's Hwy to Burgess Ave)         | N/A   | Stage II (Pete's Hwy to Burgess Ave)         | Stage 2 (Pete's Hwy to Walker South Rd)     |
| Florida Blvd         | Airline Hwy to Sherwood Forest Blvd         | N/A  | Yes                  | Yes (Airline Hwy to Monterey Blvd)      | N/A   | Stage II (Airline Hwy to Monterey Blvd)      | Stage 2 (Airline Hwy to Monterey Blvd)      |
| Florida Blvd         | Sherwood Forest Blvd to EBR/LIV Parish Line | 2.2, 2.4                                   | No                   | No                                      | N/A   | N/A  | N/A   |
| Florida Blvd         | S Forest Dr to Airline Hwy                  | N/A  | No                   | Yes (I-110 to Airline)                  | N/A   | Stage II                                     | N/A   |
| Florida Blvd         | N 22nd St to S Foster Dr                    | 2.1, 2.7, 4.18                             | No                   | Yes (I-110 to Airline)                  | N/A   | Stage II                                     | N/A   |
| Gardere Ln           | Highland Rd to GSRI Rd                      | 2.4, 5.1                                   | No                   | Yes (Burbank Dr to Nicholson Dr)        | N/A   | Stage I (Burbank Dr to Nicholson Dr)         | Stage 2 (GSRI Rd to Burbank Rd)             |
| George O'Neal Rd     | Jones Creek Rd to Woodlake Dr               | N/A  | No                   | No                                      | N/A   | N/A  | N/A   |
| Goodwood Blvd        | E Airport Dr to S Flannery Rd               | N/A  | No                   | No                                      | N/A   | N/A  | N/A   |
| Government St        | St Ferdinand St to Jefferson Hwy            | N/A  | No                   | Yes (East Blvd to Lobdell Ave)          | Reducing 4 Lane undivided to 3 Lane from East Blvd to Lobdell Ave under construction. | E+C (East Blvd to Lobdell Ave)               | Project under construction                  |
| Greenwell Springs Rd | Sherwood Forest Blvd to Magnolia Bridge Rd  | N/A  | No                   | Yes (Sullivan Rd to Magnolia Bridge Rd) | N/A   | Stage II (Sullivan Rd to Magnolia Bridge Rd) | N/A   |
| Greenwell Springs Rd | N Foster Rd to Sherwood Forest Blvd         | 2.2  | No                   | No                                      | N/A   | N/A  | N/A   |
| Greenwell Springs Rd | Hooper Rd to LA 37                          | 2.4, 5.1                                   | No                   | No                                      | N/A   | N/A  | N/A   |
| Greenwell St         | Airline Hwy to Joor Rd                      | 2.4  | No                   | No                                      | N/A   | N/A  | N/A   |



| Road         | Segment                                | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?  | Status   | Previous Implementation Schedule (MOVE 2042)                                 | Current Implementation Schedule (MOVE 2046)   |
|--------------|--|--|----------------------|--|--|--|---|
| Harding Blvd | I-110 to Plank Rd                      | 2.2, 5.1                                   | No                   | Yes (Harding at I-110)   | N/A  | Stage I (Harding at I-110)   | Stage 1 (Harding Blvd at I-110)   |
| Hatchell Ln  | US 190 to LA 1030                      | N/A  | No                   | No   | N/A  | N/A  | N/A   |
| Highland Rd  | Stanford Ave to Staring Ln             | 3.3  | No                   | No   | N/A  | N/A  | N/A   |
| Highland Rd  | Perkins Rd to Jefferson Hwy            | N/A  | Yes                  | Yes (Perkins to Old Perkins)                                       | N/A  | Stage II (Perkins to Old Perkins)  | Stage 2 (Perkins Rd to Old Perkins Rd)  |
| Highland Rd  | Terrace Ave to Stanford Ave            | 3.3, 5.1                                   | No                   | No   | N/A  | N/A  | N/A   |
| Highland Rd  | Staring Ln to Perkins Rd               | N/A  | No                   | Yes (Highland at Siegen)   | N/A  | Stage I (Highland at Siegen)   | N/A   |
| Hooper Rd    | Greenwell Springs Rd to Springfield Rd | N/A  | No                   | No   | N/A  | N/A  | N/A   |
| Hooper Rd    | Plank Rd to Greenwell Springs Rd       | N/A  | No                   | Yes (Blackwater Rd to Sullivan Rd)<br>Yes (Plank Rd to Mickens Rd) | N/A<br>N/A   | Stage I (Blackwater Rd to Sullivan Rd)<br>Stage III (Plank Rd to Mickens Rd) | Stage 1 (Blackwater Rd to Greenwell Springs Rd)   |
| I-10 (EB)    | ASC/EBR Parish Line to LA 22           | 5.1, 4.5                                   | Yes                  | Yes  | Widening to 6 Lanes from ASC/EBR Parish Line to LA 73 completed. | E+C from ASC/EBR Parish Line to LA 73<br>Stage II from LA 73 to LA 22        | Project completed<br>Stage 2 (LA 73 to LA 22)   |
| I-10 (EB)    | I-110 to I-10/I-12 Split               | N/A  | Yes                  | Yes  | N/A  | Stage I  | Stage 1 (I-110 to Dalrymple Dr and Acadian Thwy to I-10/I-12 Split)<br>Stage 2 (Dalrymple Dr to Acadian Thwy) |
| I-10 (EB)    | EBR/WBR Parish Line to I-110           | 2.9  | Yes                  | Yes  | N/A  | Stage I  | Stage 3 (Excluding MRB)   |
| I-10 (EB)    | I-10/I-12 Split to EBR/ASC Parish Line | N/A  | Yes                  | Yes  | N/A  | Stage I  | Project Completed (Highland Rd to EBR/ASC Parish Line)<br>Stage 1 (I-10/I-12 Split to Essen Ln)               |
| I-10 (EB)    | Lobdell Hwy to EBR/WBR Parish Line     | 5.1, 2.3, 4.12                             | Yes                  | Yes  | N/A  | Stage I and Stage III  | Stage 3 (Excluding MRB)   |
| I-10 (WB)    | I-110 to I-10/I-12 Split               | N/A  | Yes                  | Yes  | N/A  | Stage I  | Stage 1 (I-110 to Dalrymple Dr and Acadian Thwy to I-10/I-12 Split)<br>Stage 2 (Dalrymple Dr to Acadian Thwy) |

| Road          | Segment                                | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?     | Status   | Previous Implementation Schedule (MOVE 2042)                          | Current Implementation Schedule (MOVE 2046)   |
|---------------|--|--|----------------------|-------------------------------|--|---|---|
| I-10 (WB)     | I-10/I-12 Split to EBR/ASC Parish Line | N/A  | Yes                  | Yes                           | N/A  | Stage I   | Project Completed (Highland Rd to EBR/ASC Parish Line)<br>Stage 1 (I-10/I-12 Split to Essen Ln) |
| I-10 (WB)     | ASC/EBR Parish Line to LA 22           | 5.1, 4.5                                   | Yes                  | Yes                           | Widening to 6 Lanes from ASC/EBR Parish Line to LA 73 completed. | E+C from ASC/EBR Parish Line to LA 73<br>Stage II from LA 73 to LA 22 | Project completed<br>Stage 2 (LA 73 to LA 22)   |
| I-10 (WB)     | Lobdell Hwy to EBR/WBR Parish Line     | 5.1, 2.3, 4.12                             | Yes                  | Yes                           | N/A  | Stage I and Stage III   | Stage 3 (Excluding MRB)   |
| I-10 (WB)     | EBR/WBR Parish Line to I-110           | 5.1, 2.3, 4.12                             | Yes                  | Yes                           | N/A  | Stage I   | Stage 3 (Excluding MRB)   |
| I-110 (NB)    | Airline Hwy to Harding Blvd            | N/A  | No                   | No                            | N/A  | N/A   | N/A   |
| I-110 (NB)    | I-10 to Plank Rd                       | N/A  | No                   | No                            | N/A  | N/A   | N/A   |
| I-110 (NB)    | Plank Rd to Airline Hwy                | N/A  | No                   | No                            | N/A  | N/A   | N/A   |
| I-110 (SB)    | I-10 to Plank Rd                       | N/A  | Yes                  | Yes (I-110 at Terrace Ave)    | New I-110 SB off-ramp to Terrace Ave completed.                  | Stage I (I-110 at Terrace Ave)  | Project completed   |
| I-110 (SB)    | Plank Rd to Airline Hwy                | N/A  | No                   | No                            | N/A  | N/A   | N/A   |
| I-110 (SB)    | Airline Hwy to Harding Blvd            | 4.5  | No                   | No                            | N/A  | N/A   | N/A   |
| I-12 (EB)     | Airline Hwy to EBR/LIV Parish Line     | N/A  | Yes                  | No                            | N/A  | N/A   | N/A   |
| I-12 (EB)     | I-10/I-12 Split to Airline Hwy         | N/A  | Yes                  | No                            | N/A  | N/A   | N/A   |
| I-12 (EB)     | LIV/EBR Parish Line to LA 447          | New Interchange @ LA 16 and I-12           | Yes                  | Yes (At Pete's Hwy/Range Ave) | N/A  | Stage II  | N/A   |
| I-12 (WB)     | Airline Hwy to EBR/LIV Parish Line     | N/A  | Yes                  | No                            | N/A  | N/A   | N/A   |
| I-12 (WB)     | I-10/I-12 Split to Airline Hwy         | 2.9  | Yes                  | No                            | N/A  | N/A   | N/A   |
| I-12 (WB)     | LIV/EBR Parish Line to LA 447          | New Interchange @ LA 16 and I-12           | Yes                  | Yes (At Pete's Hwy/Range Ave) | N/A  | Stage II  | N/A   |
| Jefferson Hwy | Government St to Essen Ln              | 2.1, 2.7                                   | Yes                  | Yes (Jefferson at Corporate)  | N/A  | Stage I (Jefferson at Corporate)                                      | N/A   |
| Jefferson Hwy | Essen Ln to Airline Hwy                | 2.7  | No                   | Yes (Jefferson at Bluebonnet) | N/A  | Stage I (Jefferson at Bluebonnet)                                     | N/A   |
| Jefferson Hwy | Airline Hwy to Highland Rd             | N/A  | No                   | No                            | N/A  | N/A   | N/A   |
| Jefferson Hwy | Highland Rd to EBR/ASC Parish Line     | 2.4, 2.7, 5.1                              | No                   | No                            | N/A  | N/A   | N/A   |
| Jefferson Hwy | ASC/EBR Parish Line to Airline Hwy     | N/A  | No                   | Yes (Airline Hwy to LA 42)    | N/A  | Stage II (Airline Hwy to LA 42)                                       | N/A   |

| Road            | Segment  | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?   | Status   | Previous Implementation Schedule (MOVE 2042)                                     | Current Implementation Schedule (MOVE 2046) |
|-----------------|--|--|----------------------|---|--|--|---|
| Jones Creek Rd  | Tigerbend Rd to S Harrell's Ferry Rd             | N/A  | No                   | Yes (Tigerbend Rd to Coursey Blvd)                                    | Widening to 5 Lanes from Tigerbend Rd to Coursey Blvd completed.         | E+C (Tigerbend Rd to Coursey Blvd)   | Project completed                           |
| Joor Rd         | Greenwell Springs Rd to Hooper Rd                | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| Joor Rd         | Hooper Rd to LA 64                               | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| Juban Rd        | I-12 to US 190                                   | N/A  | Yes                  | Yes   | Widening to 5 Lanes from I-12 to Florida Ave (US 190) under construction | Stage I  | Project under construction                  |
| Juban Rd        | I-12 to Wax Rd                                   | N/A  | No                   | Yes   | N/A  | Stage II   | N/A   |
| Kenilworth Pkwy | Perkins Rd to 0.97 mi S of Perkins Rd            | 5.2  | No                   | No  | N/A  | N/A  | N/A   |
| LA 1            | I-10 to LA 1148                                  | 5.1, 2.3, 4.12                             | Yes                  | No  | N/A  | N/A  | N/A   |
| LA 1 Connector  | LA 1 to I-10                                     | N/A  | No                   | Yes   | N/A  | Stage II   | Stage 1                                     |
| LA 1019         | LA 64 to 0.37 mi E of LA 16                      | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 16           | 4H Club Rd to LA 22                              | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 30           | I-10 to Airline Hwy                              | 2.2  | Yes                  | Yes (Ashland Rd to Burnside Ave)<br>Yes (Burnside Ave to Airline Hwy) | N/A<br>N/A   | Stage II (Ashland Rd to Burnside Ave)<br>Stage III (Burnside Ave to Airline Hwy) | N/A<br>N/A                                  |
| LA 415          | I-10 to US 190                                   | 5.1, 2.3, 4.12                             | No                   | No  | N/A  | N/A  | N/A   |
| LA 447          | I-12 to LA 1024                                  | N/A  | No                   | Yes (Duff Rd to Burgess Ave)  | N/A  | Stage II (Duff Rd to Burgess Ave)  | N/A   |
| LA 447          | I-12 to Joe May Rd                               | N/A  | No                   | Yes (I-12 to Hood Rd)   | N/A  | Stage II (I-12 to Hood Rd)   | N/A   |
| LA 447          | Joe May Rd to LA 16                              | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 64           | Plank Rd to Joor Rd                              | 2.4, 5.1                                   | No                   | Yes   | N/A  | Stage III  | N/A   |
| LA 64           | LIV/EBR Parish Line to LA 16                     | N/A  | No                   | Yes   | N/A  | Stage II   | N/A   |
| LA 16           | LA 1019 to 0.73 mi N of LA 1022                  | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 19           | Scenic Hwy to 0.5 mi N of Port Hudson - Pride Rd | N/A  | No                   | Yes (LA 64 to Sunset Blvd)  | N/A  | Stage II (LA 64 to Sunset Blvd)  | N/A   |
| LA 22           | Airline Hwy to ASC/LIV Parish Line               | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 22           | LIV/ASC Parish Line to LA 16                     | N/A  | No                   | No  | N/A  | N/A  | N/A   |
| LA 42           | LIV/ASC Parish Line to LA 16                     | 5.1, 2.2                                   | No                   | No  | N/A  | N/A  | N/A   |

| Road           | Segment                                 | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?                                    | Status  | Previous Implementation Schedule (MOVE 2042)                           | Current Implementation Schedule (MOVE 2046)                        |
|----------------|---|--|----------------------|--|---|--|--|
| LA 42          | Airline Hwy to Roddy Rd                 | N/A  | Yes                  | Yes (Airline Hwy to LA 44)                                   | Widening to 4 Lanes from US 61 (Airline Hwy) to LA 44 under construction. | E+C from US 61 (Airline Hwy) to LA 44                                  | Project under construction   |
| LA 431         | Airline Hwy to LA 931                   | 2.4  | No                   | No   | N/A   | N/A  | N/A  |
| LA 431         | LA 931 to LA 42                         | 2.4  | No                   | No   | N/A   | N/A  | N/A  |
| LA 44          | I-10 to LA 22                           | 5.1  | No                   | Yes (I-10 to Loosemore Rd)<br>Yes (Loosemore Rd to River Rd) | N/A<br>N/A  | Stage I (I-10 to Loosemore Rd)<br>Stage III (Loosemore Rd to River Rd) | Stage 1 (I-10 to Loosemore Rd)<br>Stage 2 (Loosemore Rd to LA 942) |
| LA 44          | LA 30 to LA 42                          | 5.1, 2.4, 2.7                              | No                   | Yes (Cante Rd to LA 42)                                      | N/A   | Stage II (Cante Rd to LA 42)   | N/A  |
| LA 621         | LA 73 to Airline Hwy                    | 5.1, 2.2                                   | No                   | Yes  | N/A   | Stage III  | N/A  |
| LA 70          | LA 22 to ASC/STJ Parish Line            | 5.1  | No                   | Yes  | N/A   | Stage I  | Stage 1  |
| LA 73          | Airline Hwy to I-10                     | N/A  | Yes                  | Yes  | N/A   | Stage II   | N/A  |
| LA 73          | I-10 to LA 429                          | N/A  | Yes                  | Yes (LA 74 to I-10)  | N/A   | Stage II (LA 74 to I-10)   | Stage 2 (LA 74 to LA 429)<br>Stage 3 (I-10 to LA 74)               |
| LA 74          | LA 73 to Airline Hwy                    | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| LA 931         | LA 44 to LA 431                         | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| Lee Dr         | Nicholson Dr to Perkins Rd              | N/A  | Yes                  | Yes (Highland to Perkins)                                    | N/A   | Stage II (Highland to Perkins)   | N/A  |
| Lobdell Ave    | Jefferson Hwy to Florida Blvd           | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| Lockhart Rd    | N Range Ave to Burgess Ave              | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| Mickens Rd     | Joor Rd to Hooper Rd                    | 2.4  | No                   | Yes  | N/A   | Stage II   | Stage 1 (Hooper Rd to Lanier Rd)                                   |
| Millerville Rd | S Harrell's Ferry Rd to Old Hammond Hwy | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| Monterey Dr    | S Choctaw Dr to Greenwell Springs Rd    | 4.18                                       | No                   | No   | N/A   | N/A  | N/A  |
| N 22nd St      | Government St to I-110                  | 2.1, 2.4                                   | No                   | No   | N/A   | N/A  | N/A  |
| N Flannery Rd  | Old Hammond Hwy to Greenwell Springs Rd | N/A  | No                   | Yes (Old Hammond Hwy to Florida)                             | N/A   | Stage II (Old Hammond Hwy to Florida)                                  | Stage 1 (Old Hammond Hwy to Florida Blvd)                          |
| N Foster Dr    | College Dr to Greenwell Springs Rd      | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| N Range Ave    | US 190 to LA 1024                       | N/A  | No                   | No   | N/A   | N/A  | N/A  |
| Nicholson Dr   | South Blvd to Burbank Dr                | 4.18                                       | No                   | No   | N/A   | N/A  | N/A  |

| Road            | Segment                                 | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?   | Status  | Previous Implementation Schedule (MOVE 2042)   | Current Implementation Schedule (MOVE 2046)   |
|-----------------|---|--|----------------------|---|---|--|---|
| Nicholson Dr    | Burbank Dr to (IBR/EBR)/ASC Parish Line | N/A  | Yes                  | Yes   | N/A   | Stage I (Brightside Dr to Gourrier Ave)<br>Stage II (Brightside to EBR/IBR Parish Line)  | Stage 1 (Brightside Dr to Gourrier Ave and EBR/ASC Parish Line to Ben Hur Rd)<br>Stage 2 (W Lee Dr to Ben Hur Rd) |
| Nicholson Dr    | IBR/EBR Parish Line to LA 74            | N/A  | No                   | Yes (IBR/EBR Parish Line to Ashland Rd)   | N/A   | Stage III (IBR/EBR Parish Line to Ashland Rd)  | N/A   |
| Nicholson Ext   | Highland Rd to 0.41 mi W of Highland Rd | 2.4  | No                   | No  | N/A   | N/A  | N/A   |
| Oak Villa Blvd  | S Choctaw Dr to Greenwell Springs Rd    | N/A  | No                   | No  | N/A   | N/A  | N/A   |
| Old Hammond Hwy | Airline Hwy to Sherwood Forest Blvd     | N/A  | No                   | No  | N/A   | N/A  | N/A   |
| Old Hammond Hwy | Sherwood Forest Blvd to O'Neal Ln       | N/A  | No                   | Yes (Millerville Rd to O'Neal Rd)<br>Yes (Boulevard de Province to Millerville) | N/A<br>N/A  | Stage I (Millerville Rd to O'Neal Rd)<br>Stage II (Boulevard de Province to Millerville) | Stage 1 (Blvd de Province to O'Neal Rd)   |
| Old Hammond Hwy | Jefferson Hwy to Airline Hwy            | 2.7  | No                   | No  | N/A   | N/A  | N/A   |
| Old Scenic Hwy  | US 61 to LA 64                          | N/A  | No                   | No  | N/A   | N/A  | N/A   |
| O'Neal Ln       | George O'Neal Rd to I-12                | N/A  | Yes                  | Yes (S Harrell's Ferry Rd to George O'Neal Rd)                                  | Widening to 4 Lanes from S Harrell's Ferry Rd to George O'Neal Rd completed.                      | E+C (S Harrell's Ferry Rd to George O'Neal Rd)   | Project completed   |
| O'Neal Ln       | I-12 to Florida Blvd                    | N/A  | Yes                  | No  | N/A   | N/A  | N/A   |
| Park Blvd       | I-10 to Florida Blvd                    | N/A  | No                   | No  | N/A   | N/A  | N/A   |
| Pecue Ln        | Perkins Rd to Jefferson Hwy             | N/A  | No                   | Yes (Perkins Rd to Airline Hwy)   | Widening to 4 Lanes from Perkins Rd to Airline Hwy TBD<br>New I-10 Interchange under construction | Stage I (Perkins Rd to Airline Hwy)  | I-10 Interchange under construction   |
| Perkins Rd      | Park Blvd to Essen Ln                   | 3.3  | Yes                  | No  | N/A   | N/A  | N/A   |
| Perkins Rd      | Siegen Ln to Highland Rd                | 5.1  | No                   | Yes (Siegen Ln to Pecue Ln)   | N/A   | Stage I (Siegen Ln to Pecue Ln)  | Stage 1   |
| Perkins Rd      | Essen Ln to Siegen Ln                   | N/A  | No                   | No  | N/A   | N/A  | Stage 1   |
| Perkins Rd      | Highland Rd to EBR/ASC Parish Line      | 5.1  | No                   | No  | N/A   | N/A  | Stage 3   |
| Perkins Rd      | ASC/EBR Parish Line to Jefferson Hwy    | 5.1, 2.4                                   | No                   | No  | N/A   | N/A  | Stage 3 (ASC/EBR Parish Line to Airline Hwy)  |
| Pete's Hwy      | I-12 to Hood Rd                         | N/A  | No                   | Yes   | N/A   | Stage II   | N/A   |

| Road                 | Segment                           | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP?                               | Status  | Previous Implementation Schedule (MOVE 2042)                      | Current Implementation Schedule (MOVE 2046)                     |
|----------------------|-----------------------------------|--|----------------------|---|---|---|---|
| Pete's Hwy           | I-12 to US 190                    | N/A  | No                   | Yes   | N/A   | Stage II  | N/A   |
| Plank Rd             | Airline Hwy to LA 64              | N/A  | Yes                  | Yes (N 22nd to Harding St)<br>Yes (Groom Rd to Main St) | N/A<br>N/A  | Stage I (N 22nd to Harding St)<br>Stage III (Groom Rd to Main St) | N/A   |
| Plank Rd             | I-110 to Airline Hwy              | 2.7  | No                   | Yes (N 22nd to Harding St)                              | N/A   | Stage I (N 22nd to Harding St)                                    | N/A   |
| River Rd             | South Blvd to Skip Bertman Dr     | 2.4, 5.1                                   | No                   | No  | N/A   | N/A   | N/A   |
| River Rd             | South Blvd to Choctaw Dr          | 2.7  | No                   | No  | N/A   | N/A   | N/A   |
| S Choctaw Dr         | Lobdell Ave to Airline Hwy        | 2.1, 2.7                                   | No                   | No  | N/A   | N/A   | N/A   |
| S Choctaw Dr         | Airline Hwy to N Flannery Rd      | 2.7  | No                   | No  | N/A   | N/A   | N/A   |
| S Harrell's Ferry Rd | Sherwood Forest Blvd to O'Neal Ln | N/A  | Yes                  | No  | N/A   | N/A   | N/A   |
| S Range Ave          | I-12 to US 190                    | N/A  | Yes                  | No  | N/A   | N/A   | N/A   |
| S Sharp Rd           | Old Hammond Hwy to Florida Blvd   | N/A  | No                   | No  | N/A   | N/A   | N/A   |
| S Alexander Ave      | I-10 to Maryland Ave              | 5.1, 2.3, 4.12                             | No                   | No  | N/A   | N/A   | N/A   |
| Sherwood Forest Blvd | Airline Hwy to I-12               | N/A  | Yes                  | No  | N/A   | N/A   | Stage 2   |
| Sherwood Forest Blvd | I-12 to Greenwell Springs Rd      | N/A  | Yes                  | Yes (Choctaw Dr to Greenwell Springs Rd)                | Widening to 5 Lanes from Choctaw Dr to Greenwell Springs Rd under construction. | Stage I (Choctaw Dr to Greenwell Springs Rd)                      | Project under construction<br>Stage 2 (I-12 to Old Hammond Hwy) |
| Siegen Ln            | Perkins Rd to Airline Hwy         | 2.7, 4.10                                  | Yes                  | No  | N/A   | N/A   | N/A   |
| Siegen Ln            | Perkins Rd to Highland Rd         | N/A  | No                   | No  | N/A   | N/A   | N/A   |
| St Ferdinand St      | South Blvd to Government St       | 2.5  | No                   | No  | N/A   | N/A   | N/A   |
| St Louis St          | South Blvd to Government St       | 2.5  | No                   | No  | N/A   | N/A   | N/A   |
| St Philip St         | South Blvd to Government St       | 2.5  | No                   | No  | N/A   | N/A   | N/A   |
| Stanford Ave         | Highland Rd to Perkins Rd         | 2.4  | No                   | No  | N/A   | N/A   | N/A   |
| Staring Ln           | Highland Rd to Perkins Rd         | N/A  | No                   | No  | N/A   | Stage II (Highland to Perkins Rd)                                 | Stage 1 (LA 327 Spur (Staring Extension))                       |
| Sullivan Rd          | Greenwell Springs Rd to Joor Rd   | N/A  | No                   | Yes (Wax Rd to Hooper Rd)                               | Widening to 4 Lanes from Wax Rd to Hooper Rd under construction.                | E+C from Wax Rd to Hooper Rd                                      | Project under construction                                      |
| Terrace Ave          | Nicholson Dr to I-10              | 2.4  | No                   | Yes (Highland to Perkins Rd)                            | N/A   | N/A   | N/A   |
| Thomas H. Delpit Dr  | E Washington St to Highland Rd    | 2.4  | No                   | No  | N/A   | Stage II  | N/A   |
| Tiger Bend Rd        | Jefferson Hwy to Antioch Rd       | 5.1  | No                   | Yes   | N/A   | N/A   | Stage 1 (Jones Creek Rd to Antioch Rd)                          |



| Road            | Segment                            | 2013 CMP Proposed Improvement <sup>1</sup> | Segment in 2021 CMP? | Segment in MOVE 2042 SIP? | Status | Previous Implementation Schedule (MOVE 2042) | Current Implementation Schedule (MOVE 2046) |
|-----------------|------------------------------------|--|----------------------|---------------------------|--------|--|---|
| US 190          | EBR/WBR Parish Line to Airline Hwy | N/A  | No                   | No                        | N/A    | N/A  | N/A   |
| US 190          | LA 447 to MPO Study Area Boundary  | N/A  | No                   | No                        | N/A    | N/A  | N/A   |
| US 190          | LA 415 to MPO Study Area Boundary  | 5.1, 2.3, 4.12                             | No                   | No                        | N/A    | N/A  | N/A   |
| US 190          | WBR/EBR Parish Line to LA 415      | 5.1, 2.3, 4.12                             | No                   | No                        | N/A    | N/A  | N/A   |
| US 61           | US 190 to I-110                    | 2.4, 2.5                                   | No                   | No                        | N/A    | N/A  | N/A   |
| US 61           | I-110 to Port Hudson-Plains Rd     | N/A  | No                   | No                        | N/A    | N/A  | N/A   |
| Vincent Rd      | S Range Ave to Pete's Hwy          | N/A  | No                   | No                        | N/A    | N/A  | N/A   |
| W Lake Shore Dr | Stanford Ave to W Parker Blvd      | N/A  | No                   | No                        | N/A    | N/A  | N/A   |
| W Parker Blvd   | Burbank Dr to Highland Rd          | 2.6, 3.3                                   | No                   | No                        | N/A    | N/A  | N/A   |

NOTE:

1: For a list of proposed improvements in the 2013 CMP, see **Appendix A**.

## 8.0 Future Conditions

Using the results from the MOVE 2046 TDM, with only the “Existing plus Committed” (E+C) Projects implemented, in the Baton Rouge MPA, the Vehicle Miles Traveled (VMT) will increase by 25 percent from 2020 to 2046, and the Vehicle Hours Traveled (VHT) will increase by 31 percent from 2020 to 2046. However, during this same time period, the Vehicle Hours Delay (VHD) will increase by 63 percent. This large increase in VHD is expected to result in increased congestion on the roadway network. Chapter 4 of *Technical Report: Needs Assessment* further summarizes the congestion relief needs.

To calculate the projected change in Average Daily Duration of Congestion, Total Duration of Congestion, and Total Delay for the top 50 freeway and Top 50 arterial segments shown in Tables 4.1 and 4.2 between 2019 and 2046, the VHD for each segment was obtained from the TDM, and the percent change in VHD between 2020 and 2046 was applied to the 2019 Average Daily Duration of Congestion, Total Duration of Congestion, and Total Delay to calculate the 2046 values.

Non-recurring congestion analysis for the future was not conducted since the occurrence of random events such as crashes, road construction, or special events in the future cannot be determined. However, segments that currently experience non-recurring congestion due to crashes may experience longer delays in the future if no improvements are made. Chapter 5 identifies the segments that experienced significant non-recurring congestion.

### 8.1 Existing + Committed (E+C) Scenario

This scenario includes only the projects that are committed for construction. A list of E+C projects can be found in *Technical Report: Model Development*. According to *Technical Report: Model Development*, a project is considered committed if:

- Construction was either completed or begun since 2020,
- A contract for construction has been awarded,
- Have completed the National Environmental Policy Act (NEPA) phase, or
- Have funding for right-of-way and/or construction programmed in the MPO’s Transportation Improvement Program.

If only the E+C projects are implemented, the sum of the Total Delay of the top 50 freeway Segments is projected to increase by 45 percent between 2019 and 2046, and the sum of the Total Delay of the top 50 arterial Segments is projected to increase by 17 percent between 2019 and 2046. Tables 8.1 and 8.2 shows the projected Average Daily Duration of Congestion, Total Duration

of Congestion, and Total Delay for the top 50 freeway and top 50 arterial segments shown in Tables 4.1 and 4.2, respectively, in 2046, with only the E+C projects implemented.

Table 8.1 Changes in Total Delay for Top 50 Congested Freeway Segments, 2019 to 2046 E+C

| 2019 Rank | Segment  | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|--|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 1         | I-10 Westbound from LA 73 On-Ramp to Highland Rd Off-Ramp          | 19 m                                 | 4 d 23 h 22 m                     | 87,056,780                       | 1,973.3            | 1,698.9            | -274.4                                 | -14%   | 16 m                                      | 4 d 6 h 45 m                      | 74,949,123                       |
| 2         | I-10 Westbound from Nicholson Rd On-Ramp to LA 1 Off-Ramp          | 17 m                                 | 4 d 9 h 49 m                      | 75,623,790                       | 671.3              | 1,312.8            | 641.5                                  | 96%  | 34 m                                      | 8 d 14 h 55 m                     | 147,881,040                      |
| 3         | I-110 Southbound from I-10 Westbound to I-10 Eastbound             | 1 h 42 m                             | 25 d 22 h 54 m                    | 69,756,682                       | 36.4               | 41.0               | 4.6                                    | 13%  | 1 h 55 m                                  | 29 d 5 h 24 m                     | 78,547,901                       |
| 4         | I-10 Eastbound between Highland Rd Ramps                           | 44 m                                 | 11 d 6 h 21 m                     | 66,100,996                       | 70.6               | 69.1               | -1.5                                   | -2%  | 43 m                                      | 11 d 33 m                         | 64,682,996                       |
| 5         | I-10 Westbound from Acadian Thwy On-Ramp to Perkins Rd On-Ramp     | 47 m                                 | 11 d 23 h 7 m                     | 64,331,530                       | 194.4              | 218.0              | 23.6                                   | 12%  | 52 m                                      | 13 d 10 h 1 m                     | 72,152,895                       |
| 6         | I-10 Eastbound from Highland Rd On-Ramp to LA 73 Off-Ramp          | 14 m                                 | 3 d 18 h 33 m                     | 63,251,072                       | 1,908.1            | 1,646.3            | -261.8                                 | -14%   | 12 m                                      | 3 d 6 h 7 m                       | 54,572,100                       |
| 7         | I-12 Eastbound between US 61 (Airline Hwy) Ramps                   | 33 m                                 | 8 d 9 h 37 m                      | 57,883,922                       | 118.4              | 147.4              | 29.0                                   | 25%  | 41 m                                      | 10 d 11 h 2 m                     | 72,075,305                       |
| 8         | I-10 Westbound at Nicholson Dr On-Ramp                             | 23 m                                 | 6 d 38 m                          | 40,995,528                       | 44.4               | 64.1               | 19.7                                   | 44%  | 34 m                                      | 8 d 16 h 41 m                     | 59,150,679                       |
| 9         | I-10 Eastbound at Dalrymple Dr Off-Ramp                            | 17 m                                 | 4 d 8 h 7 m                       | 40,570,588                       | 27.1               | 28.8               | 1.7                                    | 6%   | 18 m                                      | 4 d 14 h 31 m                     | 43,067,612                       |
| 10        | I-10 Eastbound from College Dr Off-Ramp to I-12 Eastbound          | 7 m                                  | 1 d 19 h 2 m                      | 39,069,260                       | 715.9              | 1,103.9            | 388.0                                  | 54%  | 10 m                                      | 2 d 18 h 21 m                     | 60,246,616                       |
| 11        | I-12 Eastbound between Sherwood Forest Blvd Ramps                  | 16 m                                 | 4 d 6 h 6 m                       | 38,947,023                       | 119.0              | 158.2              | 39.2                                   | 33%  | 22 m                                      | 5 d 15 h 45 m                     | 51,783,468                       |
| 12        | I-12 Westbound between Millerville Road Ramps                      | 28 m                                 | 7 d 5 h 12 m                      | 35,841,029                       | 95.4               | 120.0              | 24.5                                   | 26%  | 35 m                                      | 9 d 1 h 41 m                      | 45,048,163                       |
| 13        | I-10 Eastbound between I-110 Ramps                                 | 41 m                                 | 10 d 14 h 52 m                    | 35,524,070                       | 105.1              | 123.1              | 18.0                                   | 17%  | 46 m                                      | 11 d 19 h 12 m                    | 41,595,881                       |
| 14        | I-10 Westbound from Perkins Rd On-Ramp to Dalrymple Drive Off-Ramp | 11 m                                 | 2 d 19 h 8 m                      | 34,010,790                       | 406.2              | 431.0              | 24.7                                   | 6%   | 11 m                                      | 2 d 23 h 13 m                     | 36,079,505                       |
| 15        | I-10 Eastbound between Acadian Thwy Ramps                          | 10 m                                 | 2 d 17 h                          | 33,700,351                       | 183.5              | 199.5              | 15.9                                   | 9%   | 11 m                                      | 2 d 22 h 38 m                     | 36,626,550                       |
| 16        | I-10 Westbound from LA 415 On-Ramp to LA 77 Off-Ramp               | 3 m                                  | 22 h 44 m                         | 32,512,150                       | 1,539.0            | 4,926.1            | 3,387.1                                | 220%   | 11 m                                      | 3 d 45 m                          | 104,065,194                      |
| 17        | I-10 Eastbound between LA 1 Ramps                                  | 43 m                                 | 11 d 1 h 15 m                     | 28,530,485                       | 119.1              | 157.5              | 38.4                                   | 32%  | 57 m                                      | 14 d 14 h 49 m                    | 37,735,412                       |
| 18        | I-10 Westbound from LA 3000 On-Ramp to LA 975 Off-Ramp             | 5 m                                  | 1 d 12 h 16 m                     | 28,485,081                       | 1,210.7            | 5,433.9            | 4,223.3                                | 349%   | 26 m                                      | 6 d 18 h 46 m                     | 127,851,909                      |

| 2019 Rank | Segment   | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|---|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 19        | I-12 Eastbound from O'Neal Ln to LA 3002 (Range Rd) Off-Ramp                                | 4 m                                  | 1 d 2 h 36 m                      | 26,741,831                       | 1,387.6            | 1,899.4            | 511.8                                  | 37%  | 5 m                                       | 1 d 12 h 24 m                     | 36,605,272                       |
| 20        | I-12 Eastbound between O'Neal Ln Ramps  | 11 m                                 | 2 d 21 h 5 m                      | 26,268,253                       | 101.7              | 141.4              | 39.7                                   | 39%  | 15 m                                      | 4 d                               | 36,509,323                       |
| 21        | I-10 Eastbound between College Dr Ramps   | 4 m                                  | 1 d 6 h 11 m                      | 23,218,143                       | 238.1              | 224.9              | -13.2                                  | -6%  | 4 m                                       | 1 d 4 h 30 m                      | 21,929,247                       |
| 22        | I-10 Eastbound from LA 1 On-Ramp to Nicholson Dr Off-Ramp                                   | 13 m                                 | 3 d 10 h 35 m                     | 22,014,718                       | 595.7              | 1,172.6            | 576.9                                  | 97%  | 26 m                                      | 6 d 18 h 33 m                     | 43,332,717                       |
| 23        | I-10 Westbound between College Dr Ramps   | 11 m                                 | 2 d 23 h 28 m                     | 18,675,958                       | 247.2              | 237.4              | -9.8                                   | -4%  | 11 m                                      | 2 d 20 h 38 m                     | 17,937,281                       |
| 24        | I-10 Eastbound from LA 975 On-Ramp to LA 3000 Off-Ramp                                      | 3 m                                  | 23 h 16 m                         | 17,048,384                       | 1,196.9            | 5,369.2            | 4,172.3                                | 349%   | 17 m                                      | 4 d 8 h 22 m                      | 76,479,564                       |
| 25        | I-10 Westbound between LA 73 Ramps  | 29 m                                 | 7 d 12 h 47 m                     | 16,849,119                       | 47.9               | 47.7               | -0.2                                   | 0%   | 29 m                                      | 7 d 12 h 7 m                      | 16,788,508                       |
| 26        | I-12 Westbound from LA 3002 (Range Rd) Off-Ramp to O'Neal Ln Off-Ramp                       | 6 m                                  | 1 d 13 h 22 m                     | 15,549,940                       | 1,628.4            | 2,133.9            | 505.4                                  | 31%  | 8 m                                       | 2 d 57 m                          | 20,376,172                       |
| 27        | I-12 Westbound between Sherwood Forest Blvd Ramps   | 5 m                                  | 1 d 7 h 34 m                      | 12,363,110                       | 129.0              | 172.0              | 43.0                                   | 33%  | 6 m                                       | 1 d 18 h 5 m                      | 16,483,599                       |
| 28        | I-10 Eastbound between Washington St Off-Ramps  | 4 m                                  | 1 d 6 h 19 m                      | 9,666,335                        | 210.2              | 230.5              | 20.3                                   | 10%  | 5 m                                       | 1 d 9 h 14 m                      | 10,600,045                       |
| 29        | I-10 Westbound from Dalrymple Dr On-Ramp to Louise St Off-Ramp                              | 3 m                                  | 21 h 49 m                         | 9,595,837                        | 254.4              | 284.5              | 30.2                                   | 12%  | 4 m                                       | 1 d 24 m                          | 10,733,781                       |
| 30        | I-12 Westbound from Sherwood Forest Blvd On-Ramp to US 61 (Airline Hwy) Northbound Off-Ramp | 3 m                                  | 20 h 5 m                          | 8,885,795                        | 391.3              | 494.5              | 103.3                                  | 26%  | 4 m                                       | 1 d 1 h 23 m                      | 11,231,091                       |
| 31        | I-12 Eastbound between Millerville Rd Ramps   | 2 m                                  | 12 h 26 m                         | 6,009,303                        | 148.5              | 194.6              | 46.1                                   | 31%  | 2 m                                       | 16 h 17 m                         | 7,877,150                        |
| 32        | I-12 Westbound between LA 3002 (Range Rd) Ramps   | 7 m                                  | 1 d 21 h 2 m                      | 5,477,456                        | 97.7               | 154.7              | 57.0                                   | 58%  | 11 m                                      | 2 d 23 h 19 m                     | 8,675,990                        |
| 33        | I-12 Eastbound between Satsuma Rd Ramps   | 4 m                                  | 1 d 57 m                          | 5,346,093                        | 145.6              | 284.2              | 138.6                                  | 95%  | 8 m                                       | 2 d 42 m                          | 10,436,371                       |
| 34        | I-110 Southbound from N 19th St On-Ramp to Capitol Access Rd Off-Ramp                       | 4 m                                  | 1 d 5 h 16 m                      | 5,132,746                        | 20.4               | 23.3               | 2.8                                    | 14%  | 5 m                                       | 1 d 9 h 20 m                      | 5,847,684                        |
| 35        | I-10 Westbound from Highland Rd On-Ramp to Siegen Ln Off-Ramp                               | 2 m                                  | 13 h 48 m                         | 5,051,490                        | 633.8              | 879.3              | 245.5                                  | 39%  | 3 m                                       | 19 h 8 m                          | 7,008,374                        |
| 36        | I-10 Westbound from LA 3064 (Essen Ln) to I-12 Eastbound Off-Ramp                           | 12 m                                 | 3 d 5 h 32 m                      | 4,818,111                        | 137.8              | 123.4              | -14.3                                  | -10%   | 11 m                                      | 2 d 21 h 28 m                     | 4,316,915                        |

| 2019 Rank | Segment   | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|---|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 37        | I-12 Eastbound from LA 63 On-Ramp to LA 441 Off-Ramp                      | 1 m                                  | 11 h 35 m                         | 4,616,032                        | 1,510.4            | 3,244.4            | 1,734.0                                | 115%   | 4 m                                       | 1 d 2 m                           | 9,915,301                        |
| 38        | I-12 Eastbound from LA 441 On-Ramp to LA 43 Off-Ramp                      | 2 m                                  | 13 h 46 m                         | 4,261,199                        | 995.7              | 2,239.0            | 1,243.3                                | 125%   | 5 m                                       | 1 d 6 h 57 m                      | 9,582,055                        |
| 39        | I-12 Westbound at LA 3064 (Essen Ln) Interchange                          | 8 m                                  | 2 d 1 h 15 m                      | 3,818,648                        | 111.2              | 140.4              | 29.2                                   | 26%  | 10 m                                      | 2 d 14 h 10 m                     | 4,820,575                        |
| 40        | I-10 Westbound between LA 3000 Ramps                                      | 2 m                                  | 12 h 52 m                         | 3,716,266                        | 33.3               | 120.6              | 87.4                                   | 263%   | 7 m                                       | 1 d 22 h 39 m                     | 13,474,081                       |
| 41        | I-12 Westbound from LA 3064 (Essen Ln) On-Ramp to I-10 Eastbound Off-Ramp | 3 m                                  | 20 h 42 m                         | 3,607,494                        | 120.4              | 157.6              | 37.2                                   | 31%  | 4 m                                       | 1 d 3 h 5 m                       | 4,720,844                        |
| 42        | I-10 Eastbound from LA 73 On-Ramp to LA 30 Off-Ramp                       | 2 m                                  | 15 h 26 m                         | 3,570,725                        | 842.5              | 1,769.4            | 926.9                                  | 110%   | 5 m                                       | 1 d 8 h 24 m                      | 7,498,938                        |
| 43        | I-10 Eastbound between LA 975 Ramps                                       | 2 m                                  | 18 h 11 m                         | 3,419,504                        | 49.4               | 221.4              | 172.1                                  | 349%   | 13 m                                      | 3 d 9 h 34 m                      | 15,340,907                       |
| 44        | I-10 Westbound between LA 415 Ramps                                       | 1 m                                  | 8 h 2 m                           | 2,719,024                        | 52.4               | 73.6               | 21.2                                   | 40%  | 1 m                                       | 11 h 17 m                         | 3,819,744                        |
| 45        | I-10 Westbound from LA 22 On-Ramp to LA 44 Off-Ramp                       | 1 m                                  | 9 h 36 m                          | 2,531,410                        | 294.3              | 955.8              | 661.4                                  | 225%   | 5 m                                       | 1 d 7 h 10 m                      | 8,220,438                        |
| 46        | I-12 Westbound from LA 63 On-Ramp to Satsuma Rd Off-Ramp                  | 3 m                                  | 18 h 58 m                         | 2,154,806                        | 781.6              | 1,647.1            | 865.4                                  | 111%   | 6 m                                       | 1 d 15 h 58 m                     | 4,540,675                        |
| 47        | I-10 Eastbound from LA 77 On-Ramp to LA 415 Off-Ramp                      | 1 m                                  | 6 h 12 m                          | 2,043,737                        | 1,543.5            | 4,933.4            | 3,389.9                                | 220%   | 3 m                                       | 19 h 49 m                         | 6,532,323                        |
| 48        | I-110 Northbound at US 61 (Scenic Hwy) Interchange                        | 1 h 29 m                             | 22 d 14 h 51 m                    | 1,686,643                        | 5.6                | 11.8               | 6.2                                    | 111%   | 3 h 8 m                                   | 47 d 16 h 39 m                    | 3,556,447                        |
| 49        | I-10 Westbound from I-12 Westbound to College Dr Off-Ramp                 | 0 m                                  | 5 h 38 m                          | 1,644,031                        | 487.8              | 413.2              | -74.5                                  | -15%   | 0 m                                       | 4 h 46 m                          | 1,392,891                        |
| 50        | I-110 Southbound from Scenic Hwy to N 22nd St On-Ramp                     | 1 m                                  | 10 h 10 m                         | 1,564,751                        | 37.3               | 41.5               | 4.1                                    | 11%  | 1 m                                       | 11 h 17 m                         | 1,736,880                        |



Table 8.2 Changes in Total Delay for Top 50 Congested Arterial Segments, 2019 to 2046 E+C

| 2019 Rank | Segment   | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|---|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 1         | S Harrell's Ferry Rd Eastbound from Jones Creek Rd to O'Neal Ln   | 6 h 39 m                             | 101 d 4 h 8 m                     | 76,143,643                       | 10.4               | 13.4               | 3.0                                    | 29%  | 8 h 33 m                                  | 130 d 4 h 46 m                    | 97,989,706                       |
| 2         | LA 3002 (Range Ave) Southbound between I-12 Ramps                 | 6 h 21 m                             | 96 d 17 h 22 m                    | 69,501,939                       | 4.7                | 5.4                | 0.7                                    | 15%  | 7 h 18 m                                  | 111 d 2 h 53 m                    | 79,847,201                       |
| 3         | LA 3002 (Range Ave) Northbound between I-12 Ramps                 | 4 h 42 m                             | 71 d 15 h 49 m                    | 64,366,474                       | 35.8               | 36.3               | 0.5                                    | 2%   | 4 h 46 m                                  | 72 d 17 h 43 m                    | 65,336,248                       |
| 4         | LA 3064 (Essen Ln) Northbound at Jefferson Hwy                    | 10 h 49 m                            | 164 d 15 h 40 m                   | 60,289,836                       | 7.8                | 6.4                | -1.4                                   | -18%   | 8 h 52 m                                  | 134 d 22 h 30 m                   | 49,409,213                       |
| 5         | O'Neal Ln Northbound between I-12 Ramps                           | 3 h 1 m                              | 46 d 1 m                          | 56,427,495                       | 11.0               | 10.2               | -0.8                                   | -7%  | 2 h 48 m                                  | 42 d 16 h 49 m                    | 52,379,625                       |
| 6         | O'Neal Ln Southbound between I-12 Ramps                           | 4 h 29 m                             | 68 d 6 h 27 m                     | 51,001,371                       | 38.4               | 45.0               | 6.6                                    | 17%  | 5 h 15 m                                  | 80 d 1 h 17 m                     | 59,805,531                       |
| 7         | LA 42 Westbound from LA 73 (Jefferson Hwy) to US 61 (Airline Hwy) | 9 h 54 m                             | 150 d 18 h 42 m                   | 42,557,875                       | 4.3                | 8.7                | 4.4                                    | 103%   | 20 h 9 m                                  | 306 d 11 h 24 m                   | 86,503,594                       |
| 8         | LA 42 Eastbound from US 61 (Airline Hwy) to LA 73 (Jefferson Hwy) | 9 h 18 m                             | 141 d 13 h 55 m                   | 32,639,974                       | 3.4                | 6.0                | 2.6                                    | 77%  | 16 h 26 m                                 | 249 d 23 h 54 m                   | 57,634,314                       |
| 9         | Acadian Thwy Northbound between I-10 Ramps                        | 7 h 57 m                             | 121 d 8 m                         | 32,545,176                       | 1.8                | 2.5                | 0.6                                    | 34%  | 10 h 39 m                                 | 162 d 4 h 46 m                    | 43,624,348                       |
| 10        | LA 1026 (Juban Rd) Northbound at US 190                           | 5 h 17 m                             | 80 d 11 h 20 m                    | 31,200,929                       | 1.8                | 1.2                | -0.7                                   | -36%   | 3 h 23 m                                  | 51 d 13 h 50 m                    | 19,997,455                       |
| 11        | O'Neal Ln Northbound at US 190 (Florida Blvd)                     | 6 h 36 m                             | 100 d 12 h 9 m                    | 30,153,198                       | 1.0                | 1.1                | 0.1                                    | 12%  | 7 h 24 m                                  | 112 d 14 h 57 m                   | 33,788,379                       |
| 12        | Bluebonnet Blvd Northbound at US 61 (Airline Hwy)                 | 8 h 44 m                             | 132 d 23 h 29 m                   | 26,369,748                       | 35.7               | 37.5               | 1.9                                    | 5%   | 9 h 11 m                                  | 139 d 21 h 55 m                   | 27,744,983                       |
| 13        | Highland Rd Westbound at US 61 (Airline Hwy)                      | 8 h 55 m                             | 135 d 16 h 27 m                   | 25,625,926                       | 19.8               | 15.6               | -4.2                                   | -21%   | 7 h 1 m                                   | 106 d 21 h 12 m                   | 20,186,411                       |
| 14        | College Dr Southbound at Perkins Rd                               | 7 h 37 m                             | 116 d 1 h 47 m                    | 24,465,384                       | 22.9               | 26.5               | 3.5                                    | 15%  | 8 h 48 m                                  | 133 d 20 h 9 m                    | 28,209,898                       |
| 15        | LA 3064 (Essen Ln) Southbound between I-10 Ramps                  | 6 h 1 m                              | 91 d 16 h 1 m                     | 24,216,425                       | 29.0               | 35.6               | 6.6                                    | 23%  | 7 h 23 m                                  | 112 d 12 h 52 m                   | 29,729,525                       |
| 16        | LA 3002 (Range Rd) Southbound at LA 1034 (Vincent Rd)             | 2 h 47 m                             | 42 d 8 h 7 m                      | 23,892,327                       | 4.1                | 4.2                | 0.1                                    | 3%   | 2 h 51 m                                  | 43 d 10 h 51 m                    | 24,521,044                       |
| 17        | Lee Dr Southbound at Burbank Dr                                   | 6 h 57 m                             | 105 d 20 h 16 m                   | 23,263,333                       | 1.8                | 2.0                | 0.2                                    | 10%  | 7 h 37 m                                  | 115 d 22 h 38 m                   | 25,482,928                       |
| 18        | Jefferson Hwy Southbound at Corporate Blvd/Old Hammond Hwy        | 5 h 49 m                             | 88 d 12 h 44 m                    | 21,753,635                       | 12.5               | 12.2               | -0.2                                   | -2%  | 5 h 42 m                                  | 86 d 19 h 12 m                    | 21,328,506                       |
| 19        | LA 67 (Plank Rd) Northbound at LA 408 (Hooper Rd)                 | 8 h 33 m                             | 130 d 1 h 23 m                    | 21,645,116                       | 15.7               | 20.4               | 4.7                                    | 30%  | 11 h 7 m                                  | 169 d 4 h 28 m                    | 28,157,176                       |
| 20        | LA 73 from I-10 Eastbound Ramps to LA 621                         | 5 h 55 m                             | 90 d 4 h 16 m                     | 21,597,511                       | 20.0               | 26.6               | 6.7                                    | 33%  | 7 h 54 m                                  | 120 d 6 h 52 m                    | 28,808,444                       |

| 2019 Rank | Segment  | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|--|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 21        | Siegen Ln Northbound at US 61 (Airline Hwy)  | 8 h 32 m                             | 129 d 22 h 36 m                   | 21,406,843                       | 35.1               | 32.5               | -2.7                                   | -8%  | 7 h 53 m                                  | 120 d 2 h 47 m                    | 19,788,147                       |
| 22        | US 61/US 190 (Airline Hwy) Northbound from Florida Blvd On-Ramp to LA 37 (Greenwell Springs Rd) Off-Ramp | 40 m                                 | 10 d 6 h 27 m                     | 20,083,723                       | 274.6              | 306.3              | 31.7                                   | 12%  | 45 m                                      | 11 d 10 h 52 m                    | 22,400,596                       |
| 23        | LA 22 Northbound between I-10 Ramps  | 3 h 58 m                             | 60 d 8 h 44 m                     | 19,792,655                       | 6.0                | 12.3               | 6.3                                    | 105%   | 8 h 8 m                                   | 123 d 18 h 19 m                   | 40,580,808                       |
| 24        | LA 73 Northbound at US 61 (Airline Hwy) (Ascension Parish)   | 9 h 53 m                             | 150 d 12 h 56 m                   | 19,719,147                       | 38.2               | 38.6               | 0.4                                    | 1%   | 10 h                                      | 152 d 2 h 37 m                    | 19,924,860                       |
| 25        | US 61 (Airline Hwy) Southbound at LA 42 East JCT   | 22 m                                 | 5 d 17 h                          | 19,584,556                       | 74.5               | 111.4              | 36.9                                   | 50%  | 33 m                                      | 8 d 12 h 48 m                     | 29,278,973                       |
| 26        | Sherwood Forest Blvd Northbound from I-12 to Old Hammond Hwy   | 54 m                                 | 13 d 19 h 27 m                    | 19,364,459                       | 53.8               | 58.4               | 4.6                                    | 9%   | 59 m                                      | 15 d 5 m                          | 21,037,752                       |
| 27        | US 190 Eastbound from LA 16 (Pete's Hwy) to LA 1026 (Juban Rd)   | 1 h 16 m                             | 19 d 9 h 32 m                     | 19,228,052                       | 145.3              | 185.0              | 39.8                                   | 27%  | 1 h 37 m                                  | 24 d 16 h 55 m                    | 24,489,437                       |
| 28        | Perkins Rd Westbound from College Dr to Acadian Thwy/Stanford Ave  | 1 h 10 m                             | 17 d 22 h 50 m                    | 18,915,979                       | 44.2               | 48.2               | 4.0                                    | 9%   | 1 h 17 m                                  | 19 d 13 h 40 m                    | 20,620,979                       |
| 29        | Corporate Blvd Westbound at College Dr   | 9 h 52 m                             | 150 d 5 h 14 m                    | 18,863,948                       | 9.0                | 12.2               | 3.3                                    | 37%  | 13 h 29 m                                 | 205 d 3 h 20 m                    | 25,760,784                       |
| 30        | Sherwood Forest Blvd Northbound between I-12 Ramps   | 1 h 39 m                             | 25 d 6 h 36 m                     | 18,540,642                       | 62.2               | 68.2               | 6.0                                    | 10%  | 1 h 49 m                                  | 27 d 17 h 12 m                    | 20,331,950                       |
| 31        | US 61 (Airline Hwy) Northbound at Siegen Ln/Sherwood Forest Blvd   | 2 h 59 m                             | 45 d 14 h 49 m                    | 18,250,329                       | 43.4               | 55.0               | 11.6                                   | 27%  | 3 h 48 m                                  | 57 d 20 h 17 m                    | 23,142,389                       |
| 32        | Lee Dr Northbound at Perkins Rd  | 9 h 44 m                             | 148 d 6 h 23 m                    | 18,115,124                       | 46.2               | 45.6               | -0.6                                   | -1%  | 9 h 36 m                                  | 146 d 5 h 32 m                    | 17,866,503                       |
| 33        | LA 1026 (Juban Rd) Southbound between I-12 Ramps   | 5 h 49 m                             | 88 d 13 h 39 m                    | 17,759,453                       | 1.3                | 2.1                | 0.7                                    | 56%  | 9 h 6 m                                   | 138 d 14 h 31 m                   | 27,792,607                       |
| 34        | LA 1 Northbound from LA 990 to I-10  | 14 m                                 | 3 d 15 h 54 m                     | 17,638,905                       | 616.0              | 836.3              | 220.4                                  | 36%  | 19 m                                      | 4 d 23 h 20 m                     | 23,949,333                       |
| 35        | Nicholson Dr Northbound from Gardere Ln to Brightside Dr/W Lee Dr  | 32 m                                 | 8 d 6 h 1 m                       | 17,156,142                       | 126.7              | 142.7              | 16.0                                   | 13%  | 36 m                                      | 9 d 7 h 4 m                       | 19,326,570                       |
| 36        | Perkins Rd Eastbound at LA 3064 (Essen Ln/Staring Ln)  | 5 h 49 m                             | 88 d 15 h 20 m                    | 16,956,541                       | 16.3               | 18.2               | 1.9                                    | 12%  | 6 h 30 m                                  | 99 d 13 m                         | 18,940,358                       |
| 37        | Bluebonnet Blvd Southbound at Burbank Dr   | 8 h 31 m                             | 129 d 15 h 7 m                    | 16,841,021                       | 4.8                | 5.2                | 0.4                                    | 9%   | 9 h 15 m                                  | 140 d 21 h 42 m                   | 18,305,767                       |
| 38        | Sherwood Forest Blvd Southbound at US 61 (Airline Hwy)   | 6 h 48 m                             | 103 d 13 h 15 m                   | 16,821,510                       | 3.2                | 3.2                | 0.0                                    | 0%   | 6 h 46 m                                  | 103 d 3 h                         | 16,752,151                       |

| 2019 Rank | Segment   | 2019 Average Daily Duration of Delay | 2019 Total Duration of Congestion | 2019 Total Delay (Vehicle Hours) | 2019 TDM Daily VHD | 2046 TDM Daily VHD | Change in TDM Daily VHD (2019 to 2046) | Percent Change in TDM Daily VHD (2019 to 2046) | 2046 Average Daily Duration of Congestion | 2046 Total Duration of Congestion | 2046 Total Delay (Vehicle Hours) |
|-----------|---|--------------------------------------|-----------------------------------|----------------------------------|--------------------|--------------------|--|--|---|-----------------------------------|----------------------------------|
| 39        | S Harrell's Ferry Rd Westbound at Jones Creek Rd                  | 3 h 6 m                              | 47 d 7 h 5 m                      | 16,747,404                       | 7.0                | 6.7                | -0.3                                   | -4%  | 2 h 58 m                                  | 45 d 5 h 16 m                     | 16,012,437                       |
| 40        | Nicholson Dr Northbound from Brightside Dr/W Lee Dr to Burbank Dr | 38 m                                 | 9 d 17 h 51 m                     | 16,707,678                       | 109.1              | 50.7               | -58.5                                  | -54%   | 17 m                                      | 4 d 12 h 34 m                     | 7,757,117                        |
| 41        | Nicholson Dr Southbound from Burbank Dr to Brightside Dr/W Lee Dr | 2 h 3 m                              | 31 d 6 h 42 m                     | 16,642,696                       | 102.8              | 47.2               | -55.6                                  | -54%   | 56 m                                      | 14 d 8 h 54 m                     | 7,646,382                        |
| 42        | College Dr Northbound at Corporate Blvd                           | 4 h 3 m                              | 61 d 19 h 34 m                    | 16,398,007                       | 71.5               | 90.2               | 18.7                                   | 26%  | 5 h 7 m                                   | 77 d 22 h 59 m                    | 20,680,197                       |
| 43        | LA 30 Westbound between I-10 Ramps (Ascension Parish)             | 2 h 13 m                             | 33 d 17 h 12 m                    | 16,295,857                       | 18.9               | 38.1               | 19.2                                   | 101%   | 4 h 27 m                                  | 67 d 21 h 12 m                    | 32,809,283                       |
| 44        | US 190 (Florida Blvd) from Monterrey Blvd to US 61 (Airline Hwy)  | 1 h 42 m                             | 26 d 1 h 45 m                     | 15,514,169                       | 113.9              | 138.5              | 24.6                                   | 22%  | 2 h 5 m                                   | 31 d 16 h 44 m                    | 18,860,948                       |
| 45        | S Harrell's Ferry Rd Westbound at S Sherwood Forest Blvd          | 7 h 37 m                             | 115 d 21 h 49 m                   | 15,334,030                       | 7.9                | 8.2                | 0.3                                    | 3%   | 7 h 52 m                                  | 119 d 20 h 55 m                   | 15,858,275                       |
| 46        | O'Neal Ln Southbound at George O'Neal Rd                          | 7 h 55 m                             | 120 d 14 h 20 m                   | 14,690,510                       | 10.4               | 15.6               | 5.1                                    | 49%  | 11 h 49 m                                 | 179 d 17 h 54 m                   | 21,895,748                       |
| 47        | Sherwood Forest Blvd Southbound from Old Hammond Hwy to I-12      | 36 m                                 | 9 d 7 h 24 m                      | 14,642,733                       | 51.6               | 62.4               | 10.8                                   | 21%  | 44 m                                      | 11 d 6 h 10 m                     | 17,708,152                       |
| 48        | Bluebonnet Blvd Southbound from I-10 to Perkins Rd                | 35 m                                 | 8 d 22 h 2 m                      | 14,420,173                       | 230.9              | 180.9              | -50.1                                  | -22%   | 27 m                                      | 6 d 23 h 37 m                     | 11,293,384                       |
| 49        | Corporate Blvd Eastbound at Jefferson Hwy                         | 9 h 31 m                             | 144 d 22 h 41 m                   | 14,350,761                       | 2.6                | 3.8                | 1.2                                    | 45%  | 13 h 51 m                                 | 210 d 21 h 7 m                    | 20,878,844                       |
| 50        | Lee Dr Westbound at Nicholson Dr                                  | 6 h 56 m                             | 105 d 15 h 45 m                   | 14,112,394                       | 1.2                | 1.2                | 0.0                                    | 1%   | 7 h 1 m                                   | 106 d 18 h 56 m                   | 14,263,747                       |



## **Appendices**

Appendix A: Previous CMP Strategies and Objectives

Appendix B: Travel Time Index Study

Appendix C: Vehicles Hours Delay Study

Appendix D: Volume to Capacity Study

Appendix E: COVID-19 Impacts

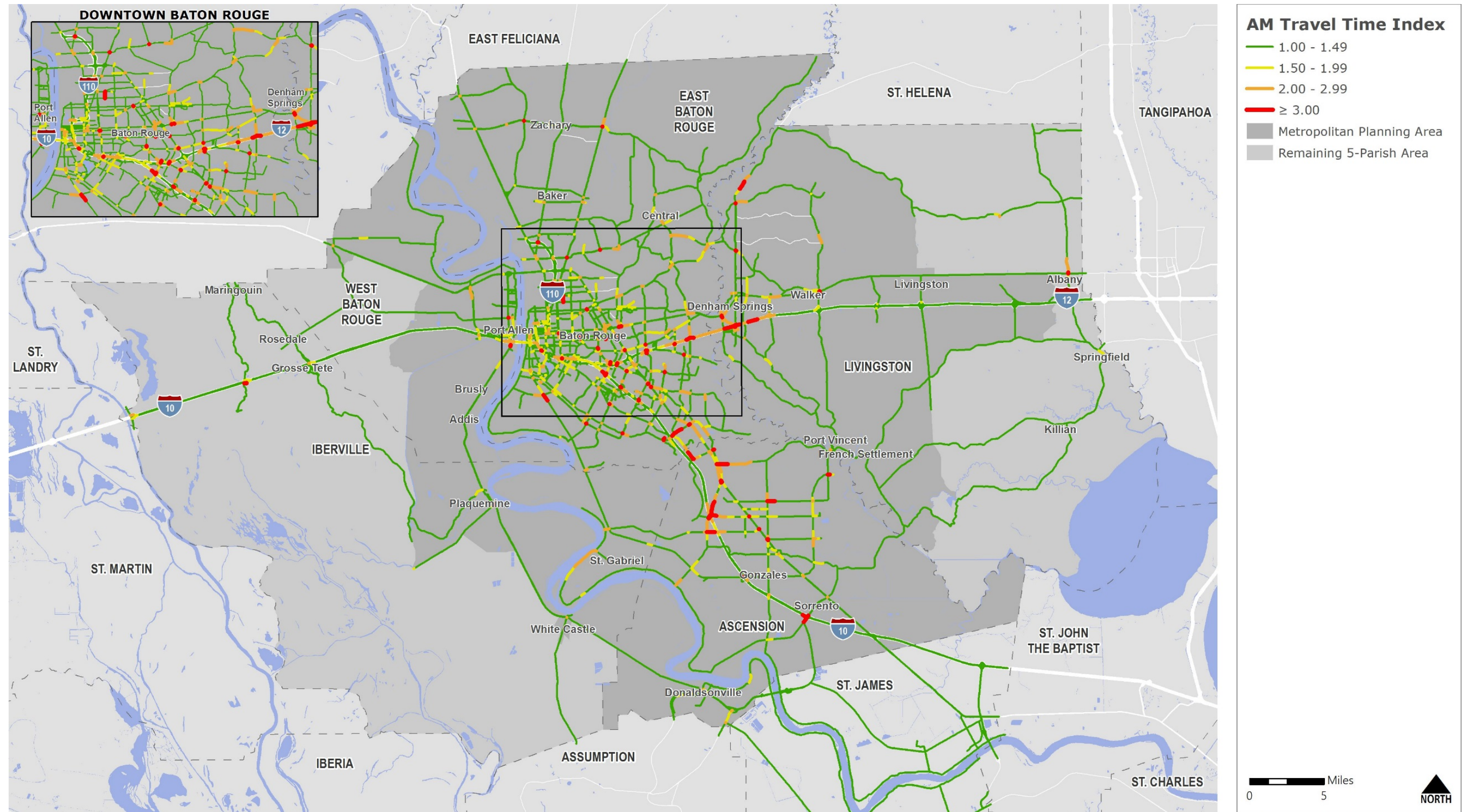
## Appendix A.1: Previous CMP Strategies and Objectives

### CMP Strategies - Objectives Matrix

| Strategy  | Objective |              |               |             |             |        |         |
|---|-----------|--------------|---------------|-------------|-------------|--------|---------|
|   | Mobility  | Connectivity | Accessibility | Reliability | Travel time | Safety | Options |
| <b>Transportation Demand Management (TDM)</b>           |           |              |               |             |             |        |         |
| - Alternative Work Schedules                            | X         |              |               | X           | X           | X      | X       |
| - Telecommute   | X         |              |               | X           | X           | X      | X       |
| - Regional Telework Center                              | X         |              |               | X           | X           | X      | X       |
| - Regional Ride Share                                   | X         |              |               | X           | X           | X      | X       |
| - Park & Ride Lots                                      | X         |              |               | X           | X           | X      | X       |
| - Varpool   | X         |              |               | X           | X           | X      | X       |
| - Parking Discounts to Rideshare Users                  | X         |              |               | X           | X           | X      | X       |
| <b>Traffic Operational Improvements:</b>                |           |              |               |             |             |        |         |
| - Signal Improvements                                   | X         |              |               | X           | X           | X      |         |
| - Access Management                                     |           |              |               | X           | X           | X      |         |
| - One-way/Reversible Streets                            | X         |              |               |             |             | X      |         |
| - Intersection Improvements                             | X         |              |               | X           | X           | X      |         |
| - Improving Traffic Control                             |           |              |               | X           | X           | X      |         |
| - New Signals   |           |              |               |             |             |        |         |
| - Signalization   |           |              |               |             |             |        |         |
| - Turn Prohibitions                                     |           |              |               |             |             |        |         |
| - Ramp Metering   |           |              |               |             |             |        |         |
| <b>Public Transportation and Non-Traditional Modes:</b> |           |              |               |             |             |        |         |
| - Transit   |           |              |               |             |             |        |         |
| - Improved Routing                                      |           |              |               |             |             |        |         |
| - Fare Structures                                       |           |              |               |             |             |        |         |
| - System Service Expansion                              |           |              |               |             |             |        |         |
| - COA & MR  |           |              |               |             |             |        |         |
| - AVLS  | X         |              | X             | X           | X           | X      | X       |
| - New Fleet   |           |              |               |             | X           | X      | X       |
| - Bike Access to Transit                                | X         |              | X             |             |             |        | X       |
| - Bicycle/Pedestrian Facilities                         | X         |              | X             |             |             |        | X       |
| <b>Intelligent Transportation System (ITS)</b>          |           |              |               |             |             |        |         |
| - Traffic Cable TV Channels                             | X         |              |               | X           | X           | X      |         |
| - Traffic Internet Home Pages                           | X         |              |               | X           | X           | X      |         |
| - Travel Advisory Telephone System                      | X         |              |               | X           | X           | X      |         |
| - Highway Advisory Radio                                | X         |              |               | X           | X           | X      |         |
| - Variable Message Signs                                | X         |              |               | X           | X           | X      |         |
| - Pages/Personal Digital Assistants                     | X         |              |               | X           | X           | X      |         |
| - In-Vehicle Devices                                    | X         |              |               | X           | X           | X      |         |
| - In-Vehicle Maps                                       | X         |              |               | X           | X           | X      |         |
| - In-Vehicle Yellow Pages                               | X         |              |               | X           | X           | X      |         |
| - Expand ATMC Coverage                                  | X         |              |               | X           | X           | X      |         |
| - Expand Video Surveillance                             | X         |              |               | X           | X           | X      |         |
| - Regional Integration of ATMC                          | X         | X            |               | X           | X           | X      |         |
| - Expand ATMC on Arterials                              | X         | X            |               | X           | X           | X      |         |
| - Expand Freeway Service Patrols                        | X         |              |               | X           | X           | X      |         |
| - Incident Response/Public Information System           | X         |              |               | X           | X           | X      |         |
| - Incident Detection and Management                     | X         |              |               | X           | X           | X      |         |
| - Freeway Management Software Upgrades                  | X         |              |               | X           | X           | X      |         |
| - Upgrade Detector System                               | X         |              |               | X           | X           | X      |         |
| <b>Additional System Capacity</b>                       |           |              |               |             |             |        |         |
| - Increase number of lanes                              | X         | X            | X             | X           | X           | X      |         |
| - New roads (Promote Complete Streets)                  | X         | X            | X             | X           | X           | X      |         |



Appendix B.1: Travel Time Index Study - AM Peak

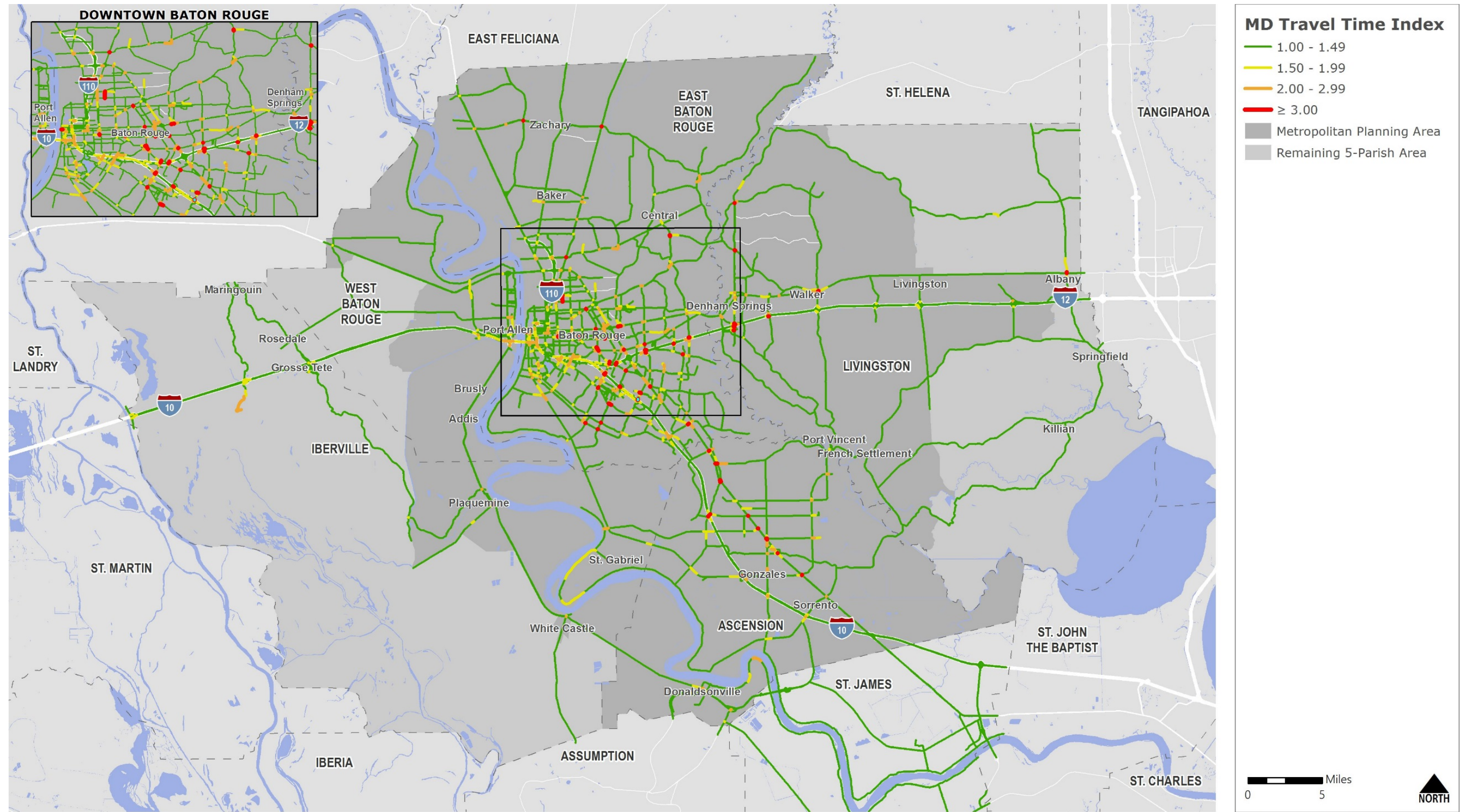


Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.



Appendix B.2: Travel Time Index Study - MD Peak

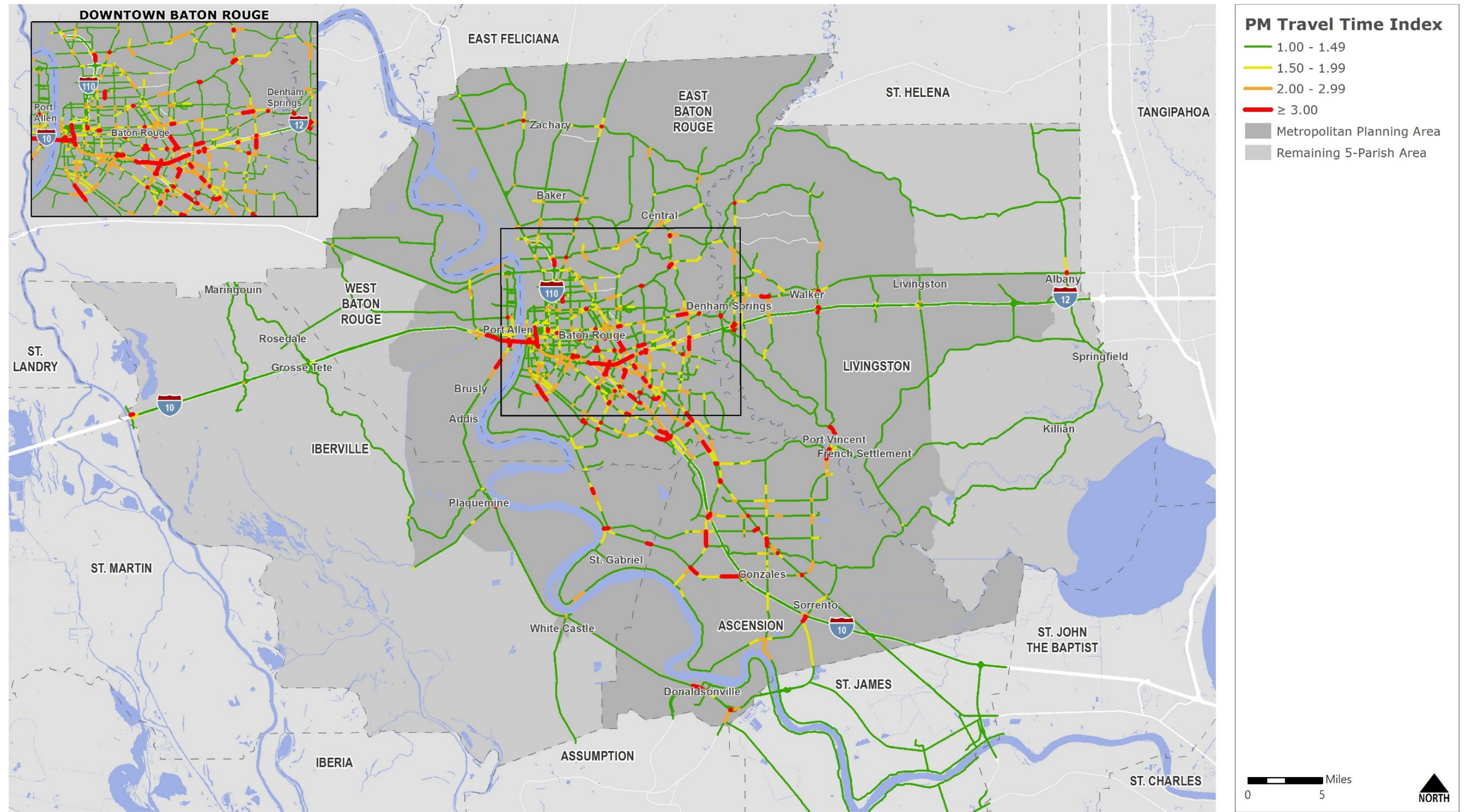


Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.



Appendix A.3: Travel Time Index Study - PM Peak

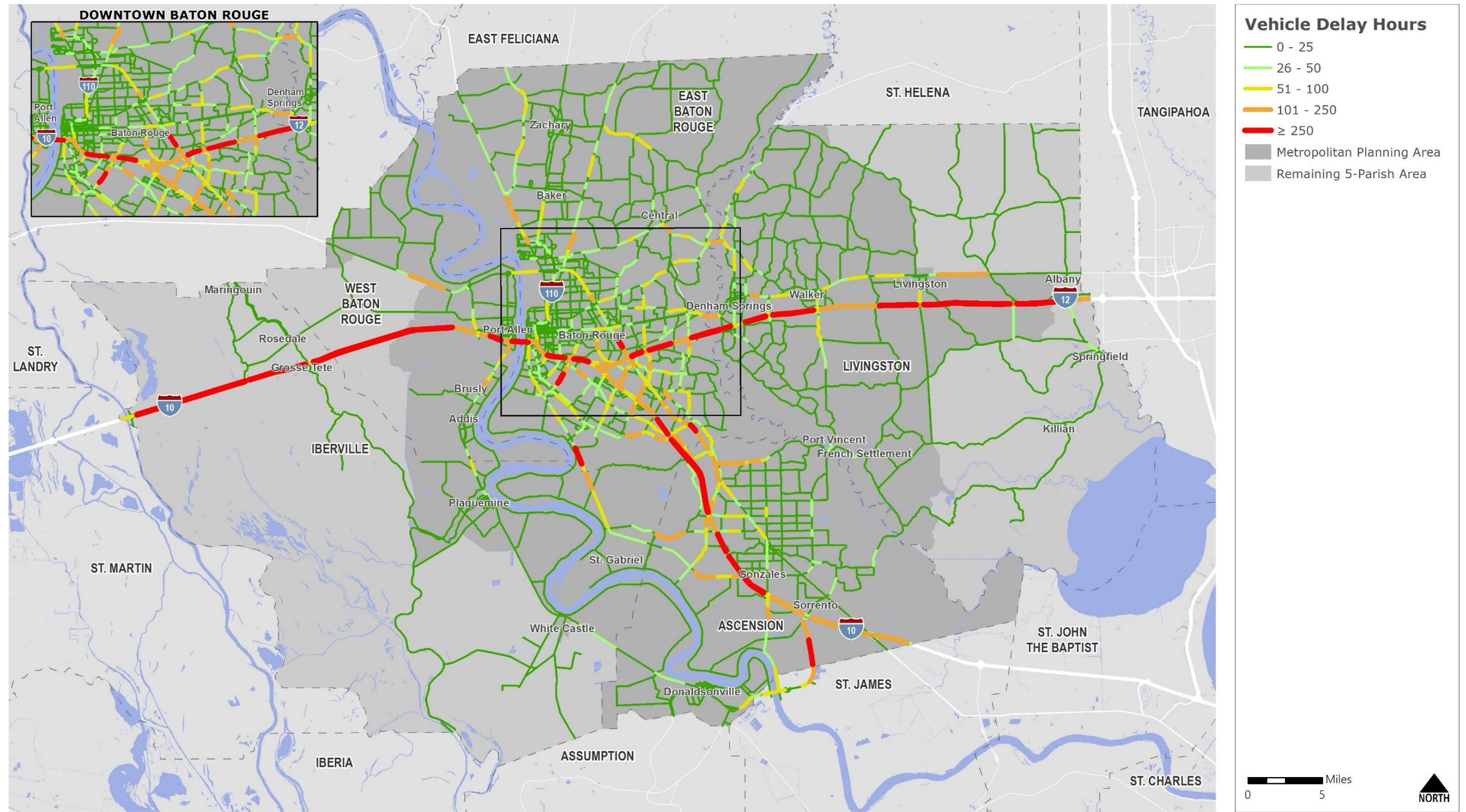


Data Sources: Probe Data Analytics

Disclaimer: This map is for planning purposes only.



Appendix C.1: Vehicle Hours Delay Study - Base (2019) Daily

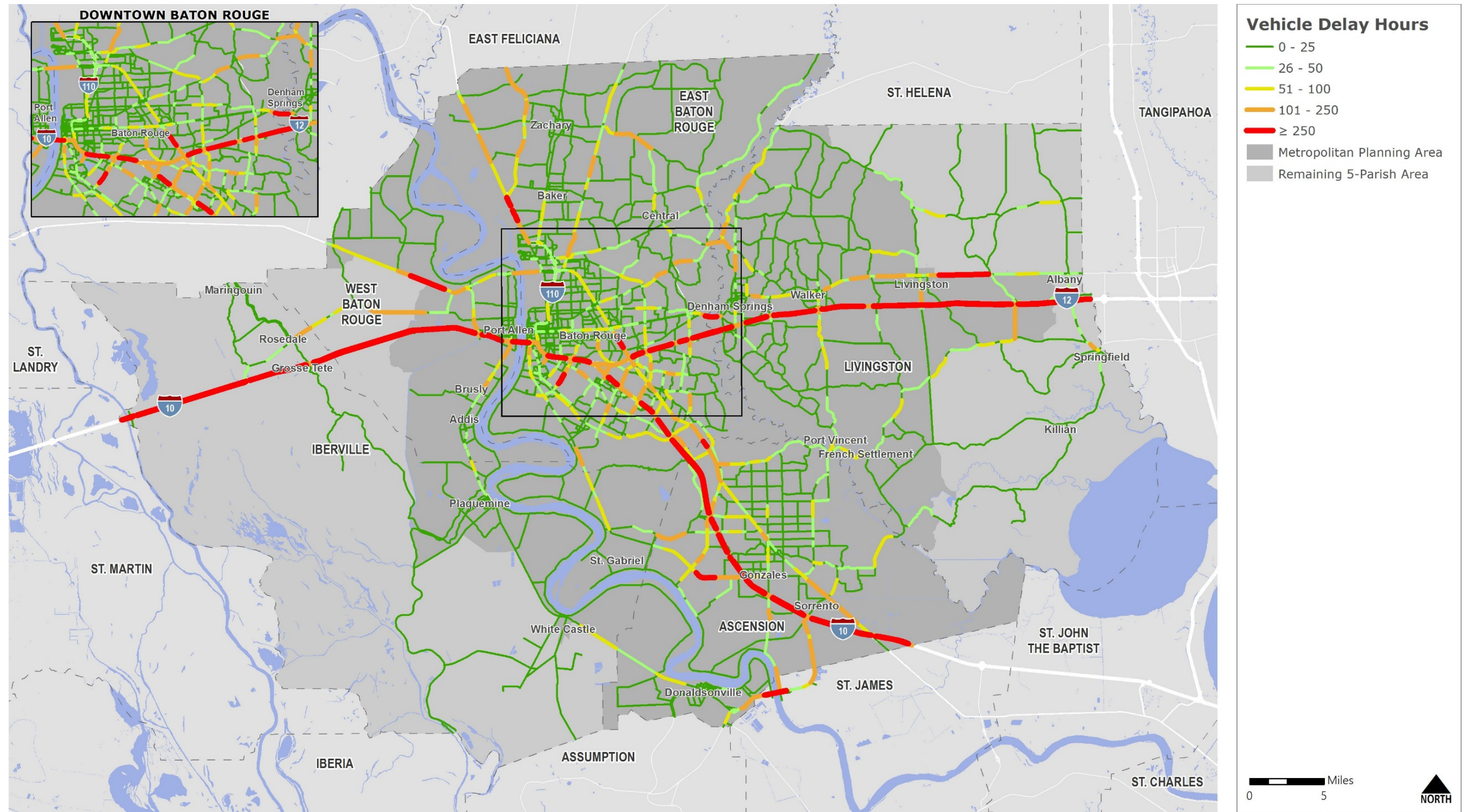


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix C.2: Vehicle Hours Delay Study - E+C (2046) Daily

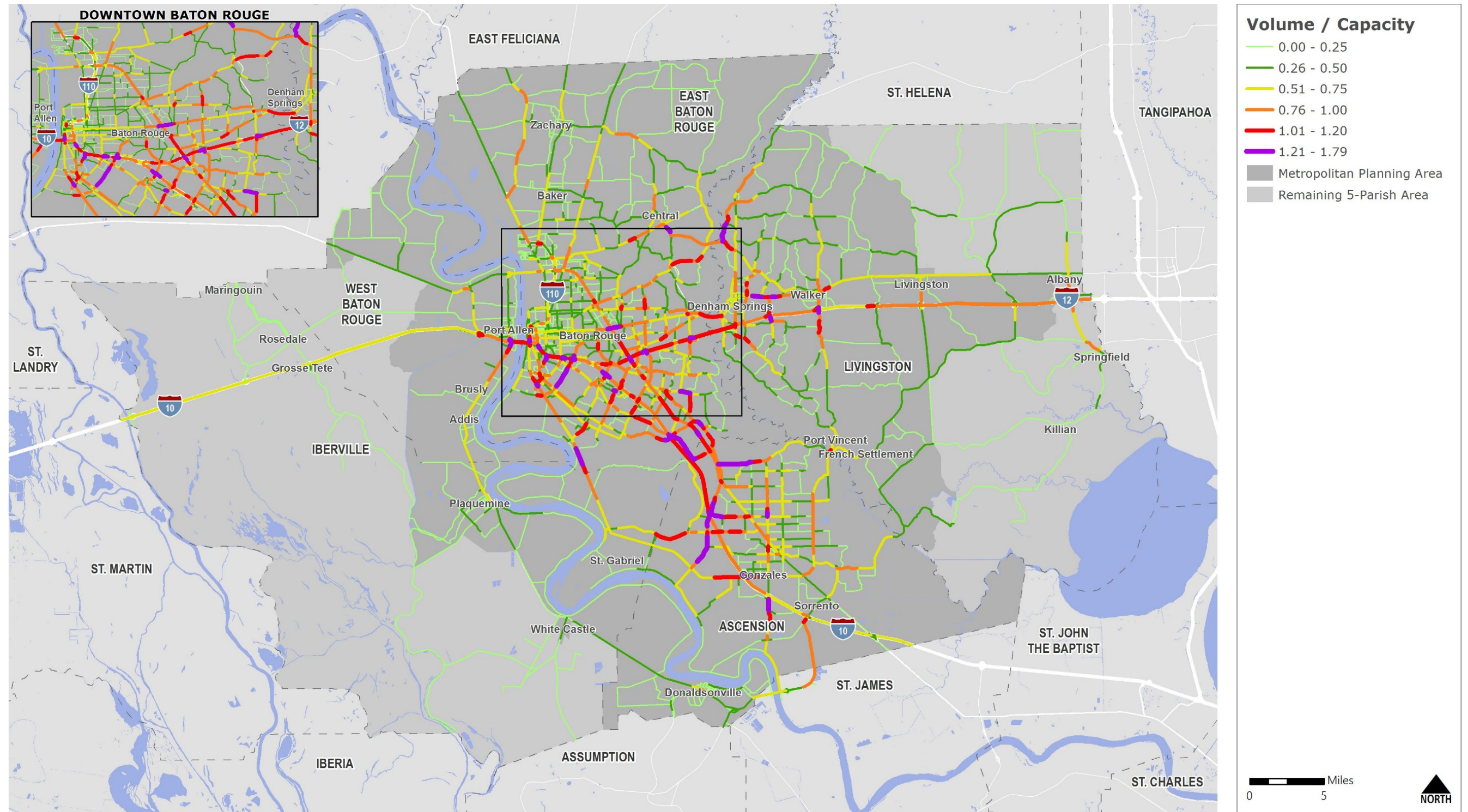


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.1: Volume to Capacity Study - Base (2019) AM

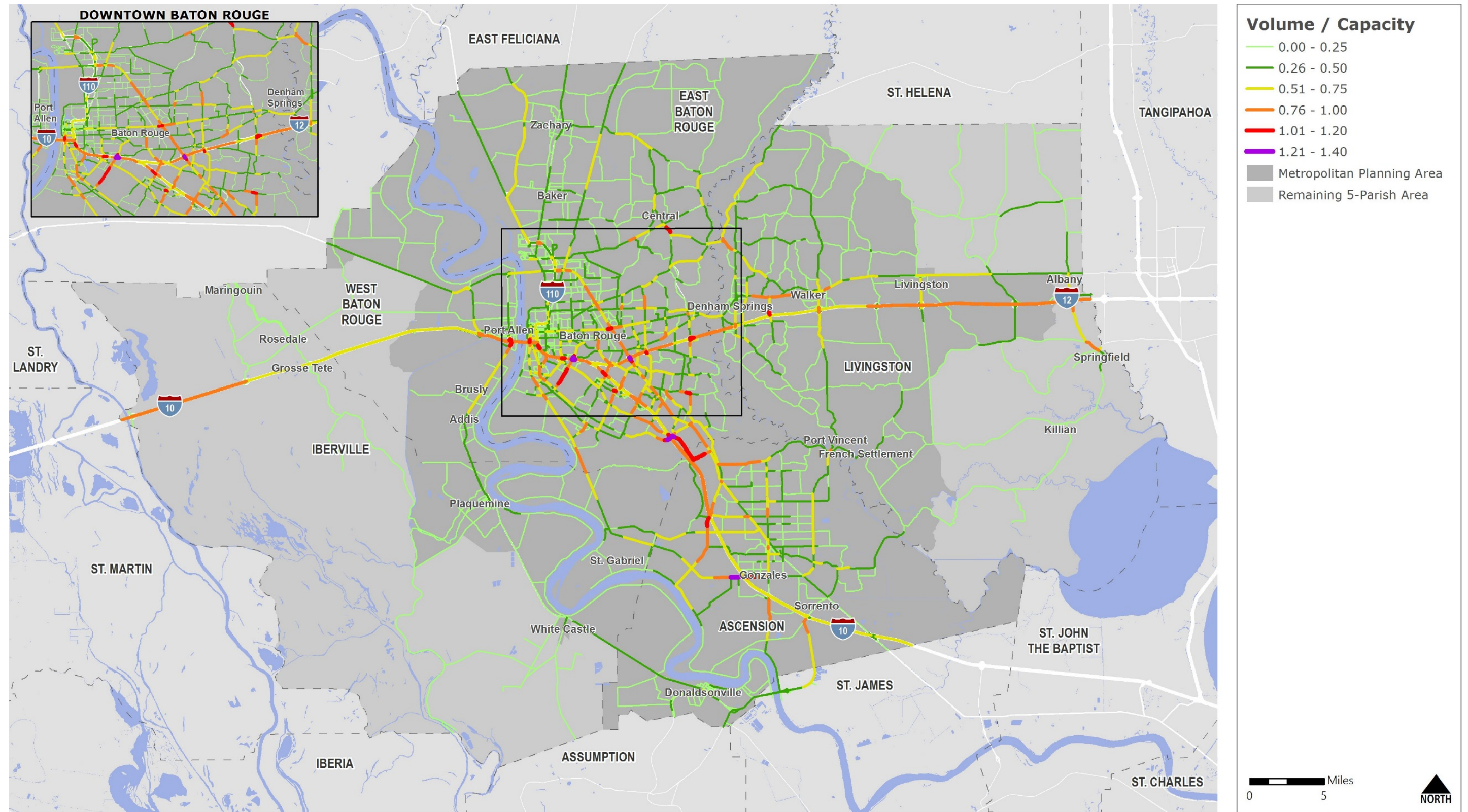


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.2: Volume to Capacity Study - Base (2019) MD

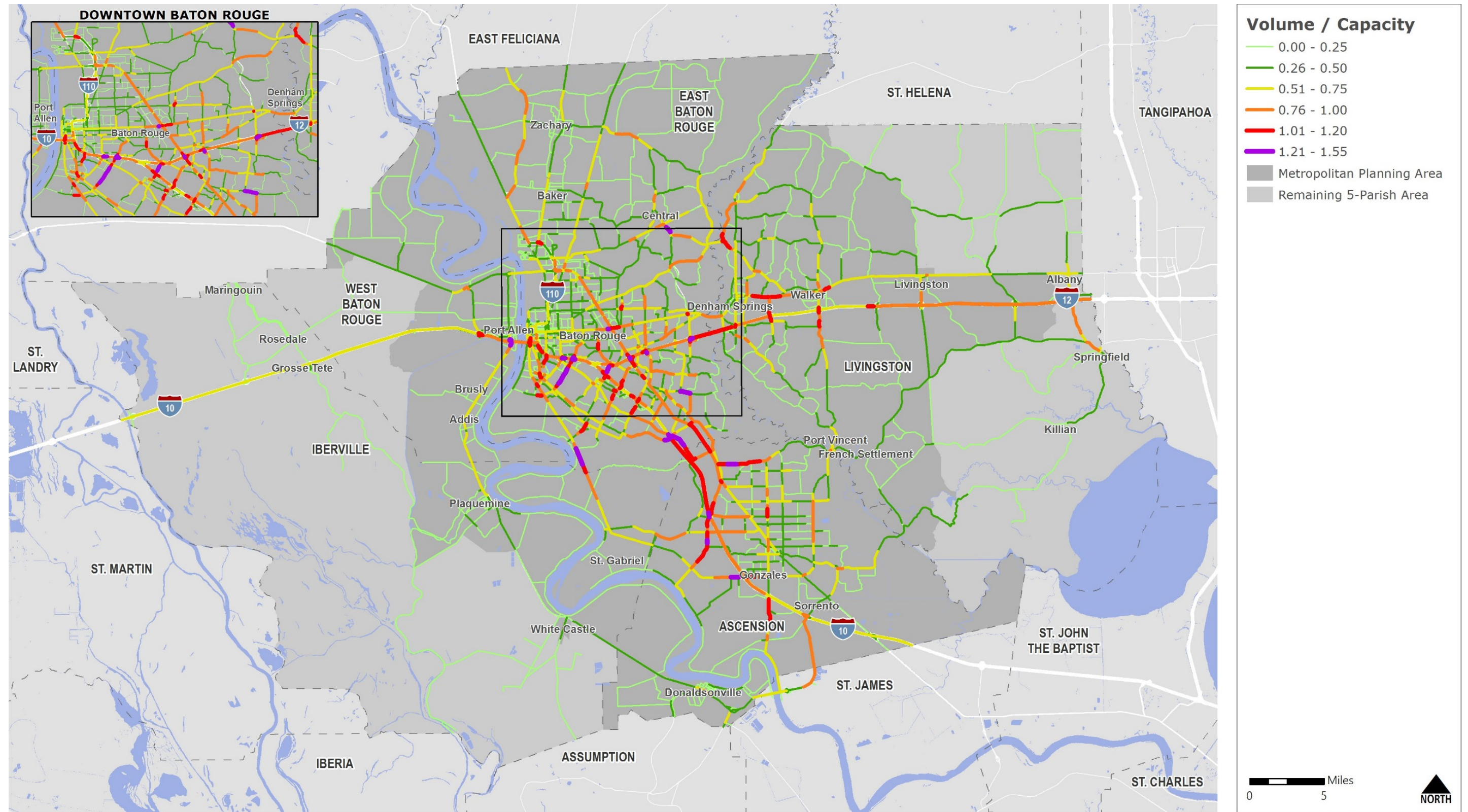


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.3: Volume to Capacity Study - Base (2019) PM

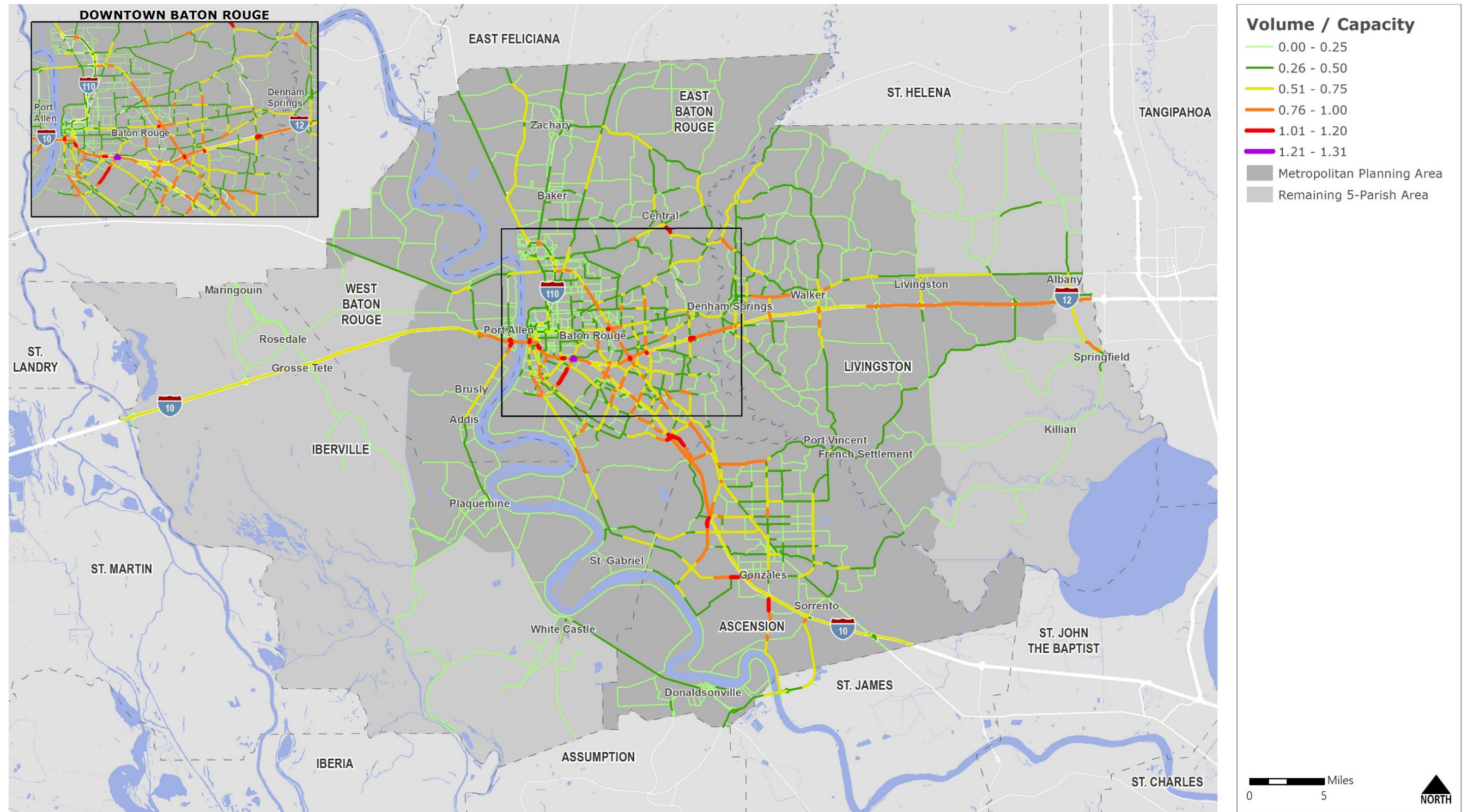


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.4: Volume to Capacity Study - Base (2019) NT



Data Sources: Travel Demand Model

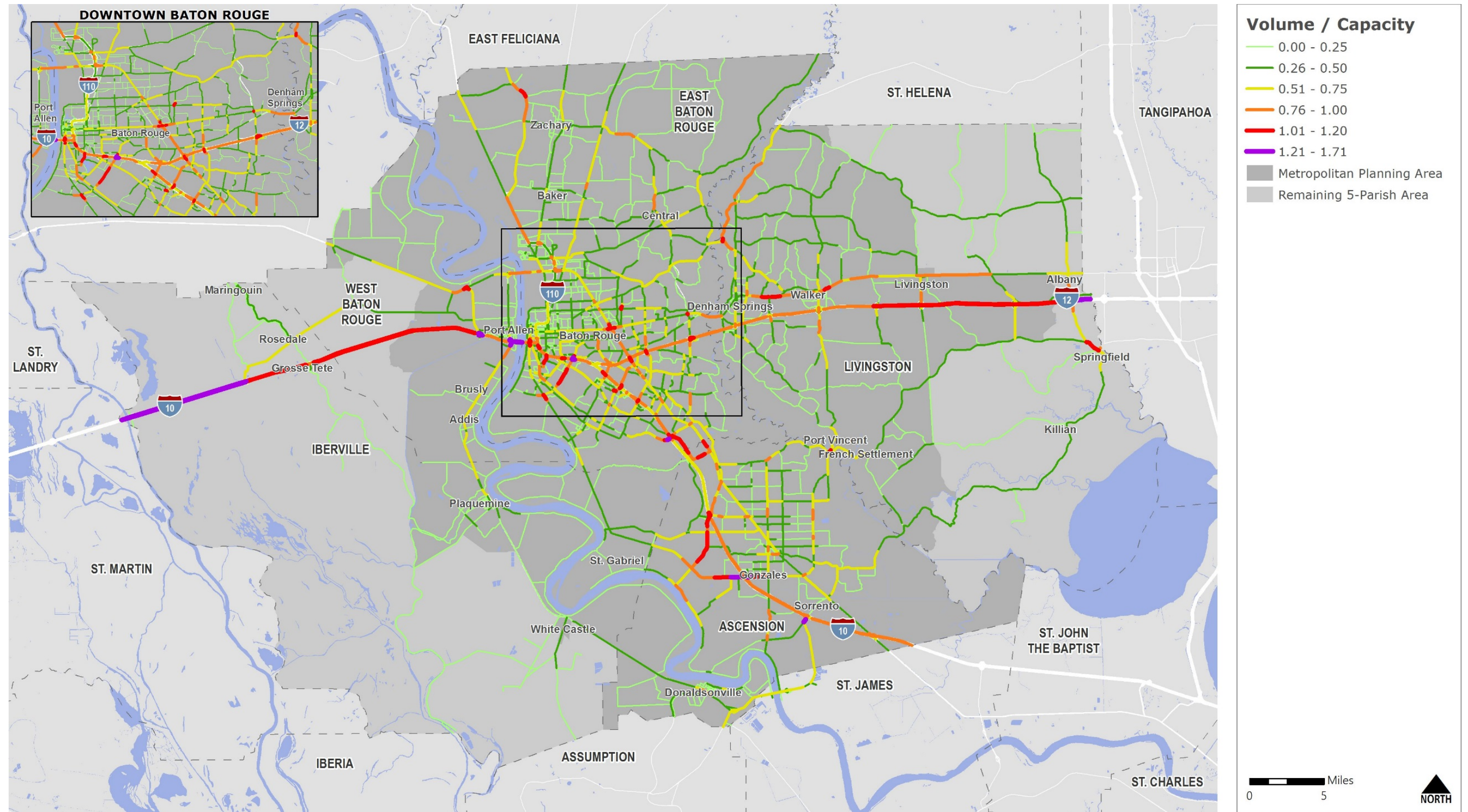
Disclaimer: This map is for planning purposes only.







Appendix D.6: Volume to Capacity Study - E+C (2046) MD

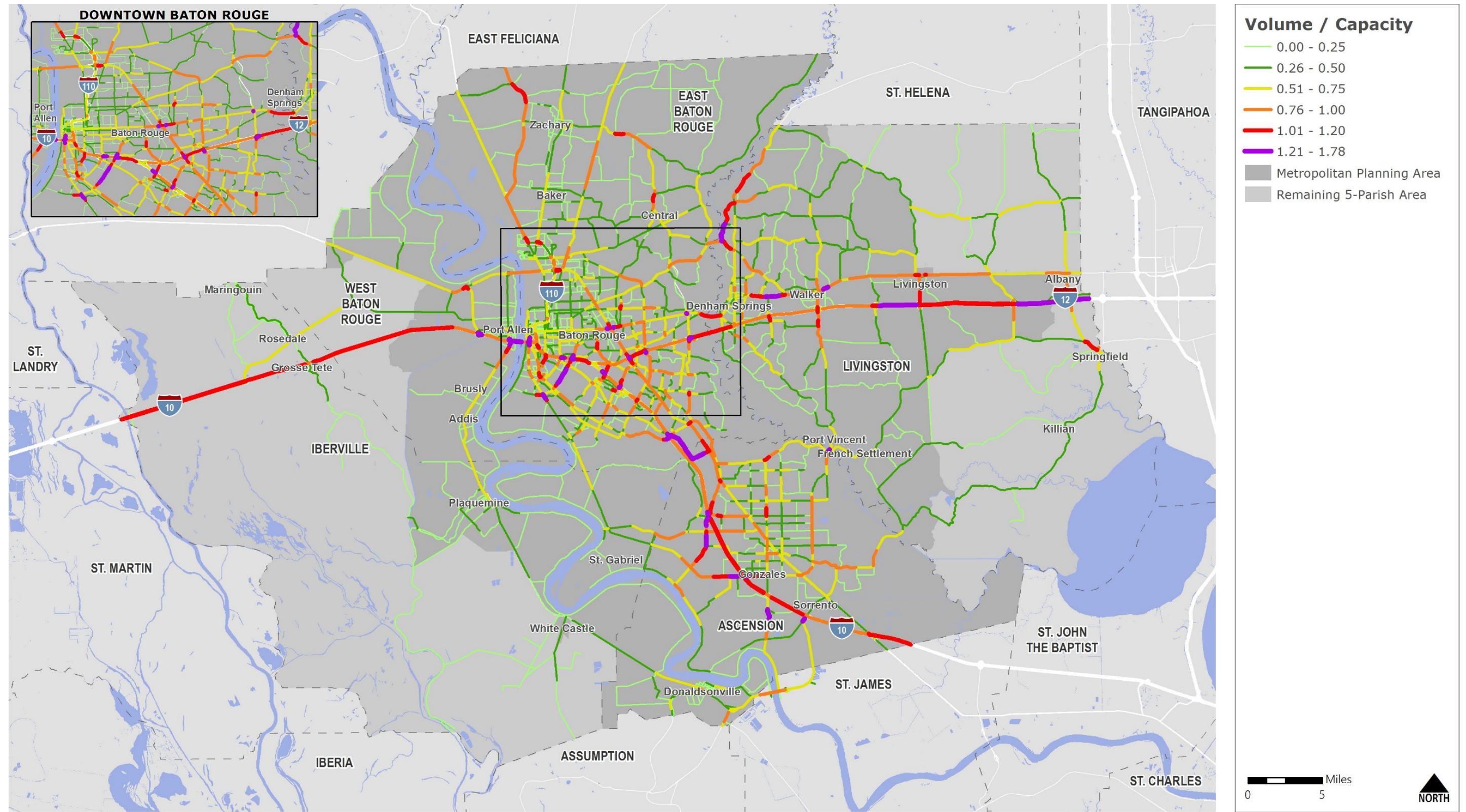


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.7: Volume to Capacity Study - E+C (2046) PM

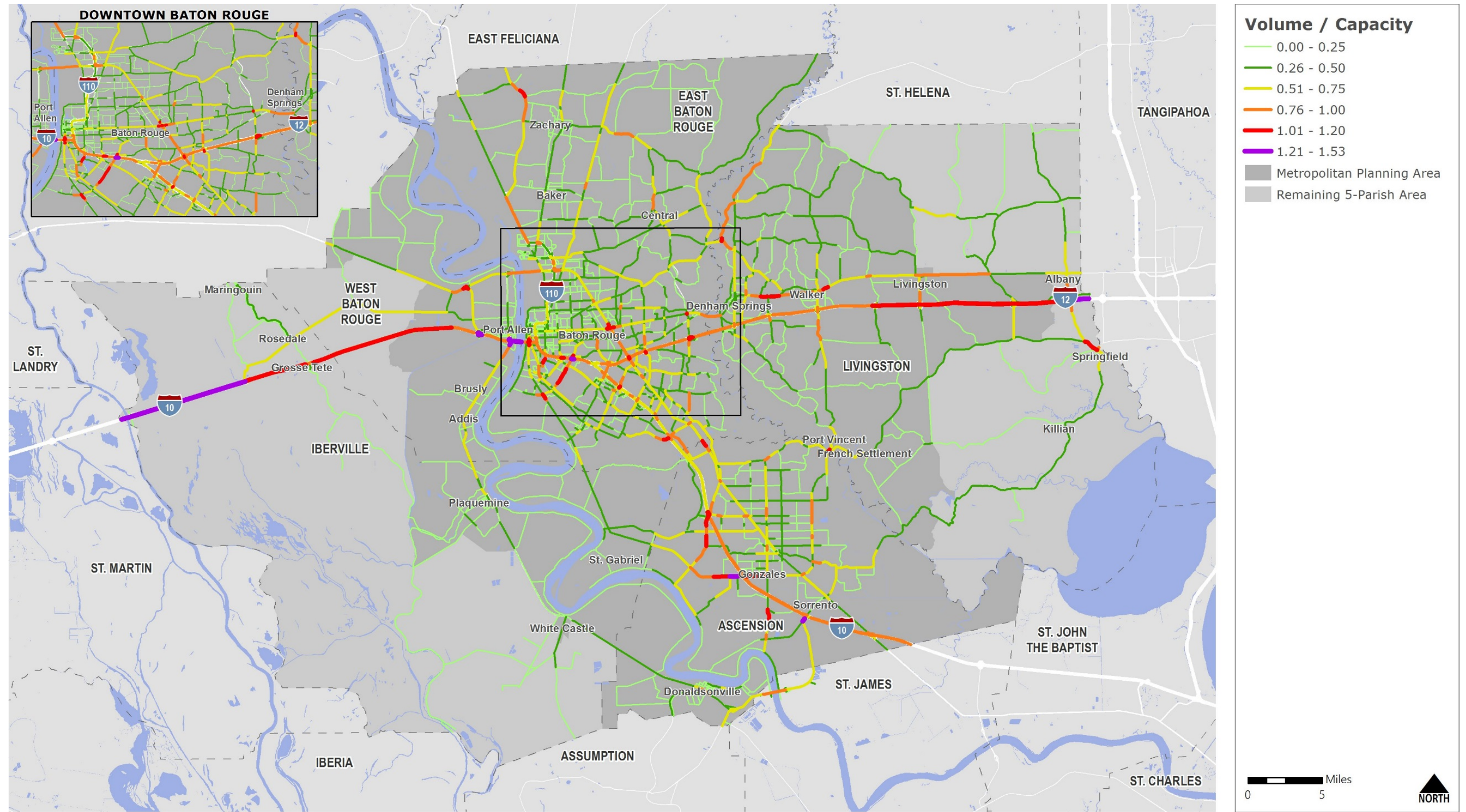


Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix D.8: Volume to Capacity Study - E+C (2046) NT



Data Sources: Travel Demand Model

Disclaimer: This map is for planning purposes only.



Appendix E.1: COVID-19 Impacts - Freeways

| Rank | Segment   | 2019 Total Delay<br>(Vehicle Hours) | 2020 Total Delay<br>(Vehicle Hours) | Change in Total Delay<br>(Vehicle Hours) | Percent Change in Total Delay |
|------|---|-------------------------------------|-------------------------------------|--|-------------------------------|
| 1    | I-10 Westbound from LA 73 On-Ramp to Highland Rd Off-Ramp             | 87,056,780                          | 63,609,641                          | -23,447,139                              | -27%                          |
| 2    | I-10 Westbound from Nicholson Rd On-Ramp to LA 1 Off-Ramp             | 75,623,790                          | 84,005,834                          | 8,382,044                                | 11%                           |
| 3    | I-110 Southbound from I-10 Westbound to I-10 Eastbound                | 69,756,682                          | 47,088,898                          | -22,667,784                              | -32%                          |
| 4    | I-10 Eastbound between Highland Rd Ramps                              | 66,100,996                          | N/A                                 | N/A                                      | N/A                           |
| 5    | I-10 Westbound from Acadian Thwy On-Ramp to Perkins Rd On-Ramp        | 64,331,530                          | 34,602,836                          | -29,728,694                              | -46%                          |
| 6    | I-10 Eastbound from Highland Rd On-Ramp to LA 73 Off-Ramp             | 63,251,072                          | 47,303,661                          | -15,947,411                              | -25%                          |
| 7    | I-12 Eastbound between US 61 (Airline Hwy) Ramps                      | 57,883,922                          | 52,548,163                          | -5,335,759                               | -9%                           |
| 8    | I-10 Westbound at Nicholson Dr On-Ramp                                | 40,995,528                          | 14,758,428                          | -26,237,100                              | -64%                          |
| 9    | I-10 Eastbound at Dalrymple Dr Off-Ramp                               | 40,570,588                          | 19,540,268                          | -21,030,320                              | -52%                          |
| 10   | I-10 Eastbound from College Dr Off-Ramp to I-12 Eastbound             | 39,069,260                          | N/A                                 | N/A                                      | N/A                           |
| 11   | I-12 Eastbound between Sherwood Forest Blvd Ramps                     | 38,947,023                          | 23,428,977                          | -15,518,046                              | -40%                          |
| 12   | I-12 Westbound between Millerville Road Ramps                         | 35,841,029                          | 12,292,157                          | -23,548,872                              | -66%                          |
| 13   | I-10 Eastbound between I-110 Ramps                                    | 35,524,070                          | 36,916,832                          | 1,392,762                                | 4%                            |
| 14   | I-10 Westbound from Perkins Rd On-Ramp to Dalrymple Drive Off-Ramp    | 34,010,790                          | N/A                                 | N/A                                      | N/A                           |
| 15   | I-10 Eastbound between Acadian Thwy Ramps                             | 33,700,351                          | 28,079,989                          | -5,620,362                               | -17%                          |
| 16   | I-10 Westbound from LA 415 On-Ramp to LA 77 Off-Ramp                  | 32,512,150                          | 6,313,112                           | -26,199,038                              | -81%                          |
| 17   | I-10 Eastbound between LA 1 Ramps                                     | 28,530,485                          | 32,943,544                          | 4,413,059                                | 15%                           |
| 18   | I-10 Westbound from LA 3000 On-Ramp to LA 975 Off-Ramp                | 28,485,081                          | 10,016,342                          | -18,468,739                              | -65%                          |
| 19   | I-12 Eastbound from O'Neal Ln to LA 3002 (Range Rd) Off-Ramp          | 26,741,831                          | 39,010,088                          | 12,268,257                               | 46%                           |
| 20   | I-12 Eastbound between O'Neal Ln Ramps                                | 26,268,253                          | 11,592,914                          | -14,675,339                              | -56%                          |
| 21   | I-10 Eastbound between College Dr Ramps                               | 23,218,143                          | N/A                                 | N/A                                      | N/A                           |
| 22   | I-10 Eastbound from LA 1 On-Ramp to Nicholson Dr Off-Ramp             | 22,014,718                          | 20,882,893                          | -1,131,825                               | -5%                           |
| 23   | I-10 Westbound between College Dr Ramps                               | 18,675,958                          | 9,701,008                           | -8,974,950                               | -48%                          |
| 24   | I-10 Eastbound from LA 975 On-Ramp to LA 3000 Off-Ramp                | 17,048,384                          | N/A                                 | N/A                                      | N/A                           |
| 25   | I-10 Westbound between LA 73 Ramps                                    | 16,849,119                          | 7,207,084                           | -9,642,035                               | -57%                          |
| 26   | I-12 Westbound from LA 3002 (Range Rd) Off-Ramp to O'Neal Ln Off-Ramp | 15,549,940                          | 7,270,187                           | -8,279,753                               | -53%                          |
| 27   | I-12 Westbound between Sherwood Forest Blvd Ramps                     | 12,363,110                          | 5,166,706                           | -7,196,404                               | -58%                          |
| 28   | I-10 Eastbound between Washington St Off-Ramps                        | 9,666,335                           | 11,149,600                          | 1,483,265                                | 15%                           |
| 29   | I-10 Westbound from Dalrymple Dr On-Ramp to Louise St Off-Ramp        | 9,595,837                           | N/A                                 | N/A                                      | N/A                           |

| Rank | Segment   | 2019 Total Delay<br>(Vehicle Hours) | 2020 Total Delay<br>(Vehicle Hours) | Change in Total Delay<br>(Vehicle Hours) | Percent Change in Total Delay |
|------|---|-------------------------------------|-------------------------------------|--|-------------------------------|
| 30   | I-12 Westbound from Sherwood Forest Blvd On-Ramp to US 61 (Airline Hwy) Northbound Off-Ramp | 8,885,795                           | 2,976,644                           | -5,909,151                               | -67%                          |
| 31   | I-12 Eastbound between Millerville Rd Ramps   | 6,009,303                           | 799,732                             | -5,209,571                               | -87%                          |
| 32   | I-12 Westbound between LA 3002 (Range Rd) Ramps   | 5,477,456                           | 1,844,299                           | -3,633,157                               | -66%                          |
| 33   | I-12 Eastbound between Satsuma Rd Ramps   | 5,346,093                           | N/A                                 | N/A                                      | N/A                           |
| 34   | I-110 Southbound from N 19th St On-Ramp to Capitol Access Rd Off-Ramp                       | 5,132,746                           | 941,337                             | -4,191,409                               | -82%                          |
| 35   | I-10 Westbound from Highland Rd On-Ramp to Siegen Ln Off-Ramp                               | 5,051,490                           | 7,858,473                           | 2,806,983                                | 56%                           |
| 36   | I-10 Westbound from LA 3064 (Essen Ln) to I-12 Eastbound Off-Ramp                           | 4,818,111                           | N/A                                 | N/A                                      | N/A                           |
| 37   | I-12 Eastbound from LA 63 On-Ramp to LA 441 Off-Ramp  | 4,616,032                           | 7,787,596                           | 3,171,564                                | 69%                           |
| 38   | I-12 Eastbound from LA 441 On-Ramp to LA 43 Off-Ramp  | 4,261,199                           | N/A                                 | N/A                                      | N/A                           |
| 39   | I-12 Westbound at LA 3064 (Essen Ln) Interchange  | 3,818,648                           | 1,825,398                           | -1,993,250                               | -52%                          |
| 40   | I-10 Westbound between LA 3000 Ramps  | 3,716,266                           | 2,263,602                           | -1,452,664                               | -39%                          |
| 41   | I-12 Westbound from LA 3064 (Essen Ln) On-Ramp to I-10 Eastbound Off-Ramp                   | 3,607,494                           | 1,726,024                           | -1,881,470                               | -52%                          |
| 42   | I-10 Eastbound from LA 73 On-Ramp to LA 30 Off-Ramp   | 3,570,725                           | N/A                                 | N/A                                      | N/A                           |
| 43   | I-10 Eastbound between LA 975 Ramps   | 3,419,504                           | 1,749,708                           | -1,669,796                               | -49%                          |
| 44   | I-10 Westbound between LA 415 Ramps   | 2,719,024                           | N/A                                 | N/A                                      | N/A                           |
| 45   | I-10 Westbound from LA 22 On-Ramp to LA 44 Off-Ramp   | 2,531,410                           | 1,632,234                           | -899,176                                 | -36%                          |
| 46   | I-12 Westbound from LA 63 On-Ramp to Satsuma Rd Off-Ramp                                    | 2,154,806                           | 969,122                             | -1,185,684                               | -55%                          |
| 47   | I-10 Eastbound from LA 77 On-Ramp to LA 415 Off-Ramp  | 2,043,737                           | 8,220,003                           | 6,176,266                                | 302%                          |
| 48   | I-110 Northbound at US 61 (Scenic Hwy) Interchange  | 1,686,643                           | N/A                                 | N/A                                      | N/A                           |
| 49   | I-10 Westbound from I-12 Westbound to College Dr Off-Ramp                                   | 1,644,031                           | 4,572,257                           | 2,928,226                                | 178%                          |
| 50   | I-110 Southbound from Scenic Hwy to N 22nd St On-Ramp                                       | 1,564,751                           | 845,024                             | -719,727                                 | -46%                          |

Appendix E.2: COVID-19 Impacts - Arterials

| Rank | Segment  | 2019 Total Delay<br>(Vehicle Hours) | 2020 Total Delay<br>(Vehicle Hours) | Change in Total Delay<br>(Vehicle Hours) | Percent Change in Total Delay |
|------|--|-------------------------------------|-------------------------------------|--|-------------------------------|
| 1    | S Harrell's Ferry Rd Eastbound from Jones Creek Rd to O'Neal Ln  | 76,143,643                          | 74,462,482                          | -1,681,161                               | -2%                           |
| 2    | LA 3002 (Range Ave) Southbound between I-12 Ramps  | 69,501,939                          | 62,422,488                          | -7,079,451                               | -10%                          |
| 3    | LA 3002 (Range Ave) Northbound between I-12 Ramps  | 64,366,474                          | 73,514,785                          | 9,148,311                                | 14%                           |
| 4    | LA 3064 (Essen Ln) Northbound at Jefferson Hwy   | 60,289,836                          | 48,649,312                          | -11,640,524                              | -19%                          |
| 5    | O'Neal Ln Northbound between I-12 Ramps  | 56,427,495                          | 37,511,299                          | -18,916,196                              | -34%                          |
| 6    | O'Neal Ln Southbound between I-12 Ramps  | 51,001,371                          | 33,916,058                          | -17,085,313                              | -33%                          |
| 7    | LA 42 Westbound from LA 73 (Jefferson Hwy) to US 61 (Airline Hwy)  | 42,557,875                          | 25,798,453                          | -16,759,422                              | -39%                          |
| 8    | LA 42 Eastbound from US 61 (Airline Hwy) to LA 73 (Jefferson Hwy)  | 32,639,974                          | 27,251,480                          | -5,388,494                               | -17%                          |
| 9    | Acadian Thwy Northbound between I-10 Ramps   | 32,545,176                          | 30,684,882                          | -1,860,294                               | -6%                           |
| 10   | LA 1026 (Juban Rd) Northbound at US 190  | 31,200,929                          | 36,044,600                          | 4,843,671                                | 16%                           |
| 11   | O'Neal Ln Northbound at US 190 (Florida Blvd)  | 30,153,198                          | 20,821,901                          | -9,331,297                               | -31%                          |
| 12   | Bluebonnet Blvd Northbound at US 61 (Airline Hwy)  | 26,369,748                          | 17,708,966                          | -8,660,782                               | -33%                          |
| 13   | Highland Rd Westbound at US 61 (Airline Hwy)   | 25,625,926                          | 27,006,278                          | 1,380,352                                | 5%                            |
| 14   | College Dr Southbound at Perkins Rd  | 24,465,384                          | 25,832,238                          | 1,366,854                                | 6%                            |
| 15   | LA 3064 (Essen Ln) Southbound between I-10 Ramps   | 24,216,425                          | 21,679,888                          | -2,536,537                               | -10%                          |
| 16   | LA 3002 (Range Rd) Southbound at LA 1034 (Vincent Rd)  | 23,892,327                          | 27,854,842                          | 3,962,515                                | 17%                           |
| 17   | Lee Dr Southbound at Burbank Dr  | 23,263,333                          | 25,003,872                          | 1,740,539                                | 7%                            |
| 18   | Jefferson Hwy Southbound at Corporate Blvd/Old Hammond Hwy   | 21,753,635                          | 16,118,318                          | -5,635,317                               | -26%                          |
| 19   | LA 67 (Plank Rd) Northbound at LA 408 (Hooper Rd)  | 21,645,116                          | N/A                                 | N/A                                      | N/A                           |
| 20   | LA 73 from I-10 Eastbound Ramps to LA 621  | 21,597,511                          | 19,357,939                          | -2,239,572                               | -10%                          |
| 21   | Siegen Ln Northbound at US 61 (Airline Hwy)  | 21,406,843                          | 15,669,207                          | -5,737,636                               | -27%                          |
| 22   | US 61/US 190 (Airline Hwy) Northbound from Florida Blvd On-Ramp to LA 37 (Greenwell Springs Rd) Off-Ramp | 20,083,723                          | 27,255,316                          | 7,171,593                                | 36%                           |
| 23   | LA 22 Northbound between I-10 Ramps  | 19,792,655                          | 44,182,209                          | 24,389,554                               | 123%                          |
| 24   | LA 73 Northbound at US 61 (Airline Hwy) (Ascension Parish)   | 19,719,147                          | 21,910,272                          | 2,191,125                                | 11%                           |
| 25   | US 61 (Airline Hwy) Southbound at LA 42 East JCT   | 19,584,556                          | 12,247,728                          | -7,336,828                               | -37%                          |
| 26   | Sherwood Forest Blvd Northbound from I-12 to Old Hammond Hwy   | 19,364,459                          | 10,164,119                          | -9,200,340                               | -48%                          |
| 27   | US 190 Eastbound from LA 16 (Pete's Hwy) to LA 1026 (Juban Rd)   | 19,228,052                          | 23,497,319                          | 4,269,267                                | 22%                           |
| 28   | Perkins Rd Westbound from College Dr to Acadian Thwy/Stanford Ave  | 18,915,979                          | 20,079,865                          | 1,163,886                                | 6%                            |
| 29   | Corporate Blvd Westbound at College Dr   | 18,863,948                          | 15,737,469                          | -3,126,479                               | -17%                          |

| Rank | Segment  | 2019 Total Delay<br>(Vehicle Hours) | 2020 Total Delay<br>(Vehicle Hours) | Change in Total Delay<br>(Vehicle Hours) | Percent Change in Total Delay |
|------|--|-------------------------------------|-------------------------------------|--|-------------------------------|
| 30   | Sherwood Forest Blvd Northbound between I-12 Ramps                     | 18,540,642                          | 12,610,266                          | -5,930,376                               | -32%                          |
| 31   | US 61 (Airline Hwy) Northbound at Siegen Ln/South Sherwood Forest Blvd | 18,250,329                          | 14,870,108                          | -3,380,221                               | -19%                          |
| 32   | Lee Dr Northbound at Perkins Rd  | 18,115,124                          | 20,790,251                          | 2,675,127                                | 15%                           |
| 33   | LA 1026 (Juban Rd) Southbound between I-12 Ramps                       | 17,759,453                          | 20,482,020                          | 2,722,567                                | 15%                           |
| 34   | LA 1 Northbound from LA 990 to I-10                                    | 17,638,905                          | N/A                                 | N/A                                      | N/A                           |
| 35   | Nicholson Dr Northbound from Gardere Ln to Brightside Dr/W Lee Dr      | 17,156,142                          | 6,760,323                           | -10,395,819                              | -61%                          |
| 36   | Perkins Rd Eastbound at LA 3064 (Essen Ln/Staring Ln)                  | 16,956,541                          | 17,193,451                          | 236,910                                  | 1%                            |
| 37   | Bluebonnet Blvd Southbound at Burbank Dr                               | 16,841,021                          | 20,173,615                          | 3,332,594                                | 20%                           |
| 38   | Sherwood Forest Blvd Southbound at US 61 (Airline Hwy)                 | 16,821,510                          | 11,132,779                          | -5,688,731                               | -34%                          |
| 39   | S Harrell's Ferry Rd Westbound at Jones Creek Rd                       | 16,747,404                          | 19,821,065                          | 3,073,661                                | 18%                           |
| 40   | Nicholson Dr Northbound from Brightside Dr/W Lee Dr to Burbank Dr      | 16,707,678                          | 3,035,371                           | -13,672,307                              | -82%                          |
| 41   | Nicholson Dr Southbound from Burbank Dr to Brightside Dr/W Lee Dr      | 16,642,696                          | 6,668,318                           | -9,974,378                               | -60%                          |
| 42   | College Dr Northbound at Corporate Blvd                                | 16,398,007                          | 7,591,139                           | -8,806,868                               | -54%                          |
| 43   | LA 30 Westbound between I-10 Ramps (Ascension Parish)                  | 16,295,857                          | 15,346,698                          | -949,159                                 | -6%                           |
| 44   | US 190 (Florida Blvd) from Monterrey Blvd to US 61 (Airline Hwy)       | 15,514,169                          | 13,388,295                          | -2,125,874                               | -14%                          |
| 45   | S Harrell's Ferry Rd Westbound at S Sherwood Forest Blvd               | 15,334,030                          | 16,544,627                          | 1,210,597                                | 8%                            |
| 46   | O'Neal Ln Southbound at George O'Neal Rd                               | 14,690,510                          | 13,837,070                          | -853,440                                 | -6%                           |
| 47   | Sherwood Forest Blvd Southbound from Old Hammond Hwy to I-12           | 14,642,733                          | 24,318,109                          | 9,675,376                                | 66%                           |
| 48   | Bluebonnet Blvd Southbound from I-10 to Perkins Rd                     | 14,420,173                          | 11,083,094                          | -3,337,079                               | -23%                          |
| 49   | Corporate Blvd Eastbound at Jefferson Hwy                              | 14,350,761                          | 15,685,608                          | 1,334,847                                | 9%                            |
| 50   | Lee Dr Westbound at Nicholson Dr                                       | 14,112,394                          | 9,140,557                           | -4,971,837                               | -35%                          |