

4 Multi-modal Transportation Systems

Introduction

This section provides a comprehensive overview of the existing conditions and planned improvements of Plaquemines Parish's multi-modal transportation system. The findings from this assessment are essential in creating a comprehensive master plan that meets the Parish's needs for an integrated transportation system. Currently, the transportation system is maintained and operated through a joint effort between the Parish and the Louisiana Department of Transportation and Development (DOTD). Transportation planning for the Parish is primarily conducted by the New Orleans Regional Planning Commission (NORPC), which is the Metropolitan Planning Organization (MPO) responsible for Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany Parishes.

The existing transportation network in the Parish offers opportunities for improvements that would provide regional benefits. The Parish is served by four major highways, an active freight rail line operating up to three trains per day, over 20 aviation facilities, 35 bridges, 20 port terminals and facilities, and two ferry crossings over the Mississippi River. Although there is currently a general lack of bicycle and pedestrian facilities in the Parish, there are plans in place to develop a comprehensive network of bicycle facilities. As such, system maintenance and monitoring, as well as opportunities to increase capacity and access, are key considerations in the transportation plan. **Figure 4.1** illustrates the Parish's existing multi-modal transportation network.

Much of the data sources used herein originate from data collected and maintained by the DOTD and previous studies conducted by the Parish, RPC and DOTD. **Figure 4.2** presents the list of data items and relevant studies used as the basis for the following assessment of existing transportation conditions in the Parish.

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Figure 4.2: Sources for Information in the Assessment of Transportation System

Data Source	Year	Agency
St. Bernard and Plaquemines Land Use and Transportation Vision Plan	2009	RPC
Transportation Improvement Program, New Orleans Urbanized Area, FY 2011-2014	2010	RPC
Replace Belle Chasse Tunnel and Bridge Stage 0 Feasibility Study	2009	DOTD
Peters Road Supplemental Environmental Assessment	2009	RPC
Baptiste Collete Bayou Navigation Channel Deepening Section 203 Study - In Progress Review Document	2009	Plaquemines Parish
Coordinated Public Transit-Human Services Transportation Plan	2009	RPC
General Aviation Airport Feasibility Study Plaquemines Parish	2009	Plaquemines Parish
Louisiana Statewide Bicycle and Pedestrian Master Plan	2009	DOTD
NORPC’s 2010 Campaign for Active Transportation Case Statement	2008	RPC
Daily Traffic Volume	2008	DOTD
Crash Data	2006 - 2008	DOTD

4.1 Roadway Network

The roadway network in the Parish is comprised of four state highways, which, together with a feeder network of local roads, carry the bulk of Parish traffic. Due to its narrow shape, there are only two arterials that provide north-south connectivity in the Parish. Travel patterns vary throughout the Parish with the heaviest travel occurring in the northern Parish and significantly less traffic in the lower Parish due to limited access and activities. However, as the Venice Port Complex and other industries in the lower Plaquemines Parish grow and expand, there is a need to provide safe and convenient roadway access to and from these developments.

Belle Chasse Highway (LA 23) is the main north-south route on the western bank of the Mississippi River. LA 23 begins near the mouth of the Mississippi River in Venice at the southern end of the Parish and follows the river north for 75 miles until it reaches Belle Chasse, where it extends north to the Westbank Expressway in Jefferson Parish. The Belle Chasse Bridge and Tunnel provides the only crossing of the Gulf Intracoastal Waterway (Intracoastal Canal) in the Parish. According to the New Orleans Highway Functional Classification Map developed by the state DOTD, LA 23 is classified as a

principal arterial from Westbank Expressway through Belle Chasse, and as a minor arterial south of Belle Chasse, near the Hero Canal. The section of LA 23 in Belle Chasse is the most traveled roadway in the Parish. It is a four-lane divided roadway that provides controlled access to up to 32,000 vehicles per day. As it provides the main access in the Parish, frequent bottlenecks occur at major intersections particularly during peak-hours and bridge openings. Average daily traffic (ADT) decreases towards the southern, less populated portion of the Parish, with approximately 15,000 vehicles per day on LA 23 near Bertrandville and 5,000 vehicles per day near Venice, according to 2008 DOTD counts.

LA 39 traverses approximately 39 miles along the extent of the East Bank of Plaquemines Parish and provides access to St. Bernard Parish to the northeast. LA 39 is a two-lane arterial that carries a much lower volume of traffic than LA 23, with up to 2,050 vehicles per day near the Belle Chasse ferry crossing, and 250 vehicles near its terminus in Bohemia.

Woodland Highway (LA 406) connects LA 23 to the West Bank of Orleans Parish to the north via a multilane bridge over the Intracoastal Canal. LA 406 is generally a two-lane rural highway, with a recent expansion to three lanes between Planters Canal and Industry Canal. There are plans to eventually widen LA 406 to four lanes from LA 23 to LA 407 with intersection improvements at LA 23. 2008 DOTD daily counts reported approximately 10,500 vehicles per day on LA 406.

Engineers Road (LA 3107) is a two-lane road that generally parallels the Intracoastal Canal near the Parish border. It connects LA 23 to Peters Road at the Harvey Canal in Jefferson Parish and carries up to 10,000 vehicles per day, according to 2008 DOTD counts.

Planned Roadway Improvements

The RPC adopted the current Metropolitan Transportation Plan (MTP) in 2007. The MTP provides a long-range program of improvements for the New Orleans Urbanized Area. This program incorporates a list of varying transportation improvements, from studies and environmental assessments/impact statements to construction and re-habilitation projects. The MTP cannot designate a spending program larger than the funds reasonably expected to accrue over the next 20 years. The MTP provides the basis for the latest Transportation Improvement Program (TIP), which consists of a priority list of projects that will be advanced toward construction over the four year period FY-2011 to FY-2014 (**Figure 4.3**).

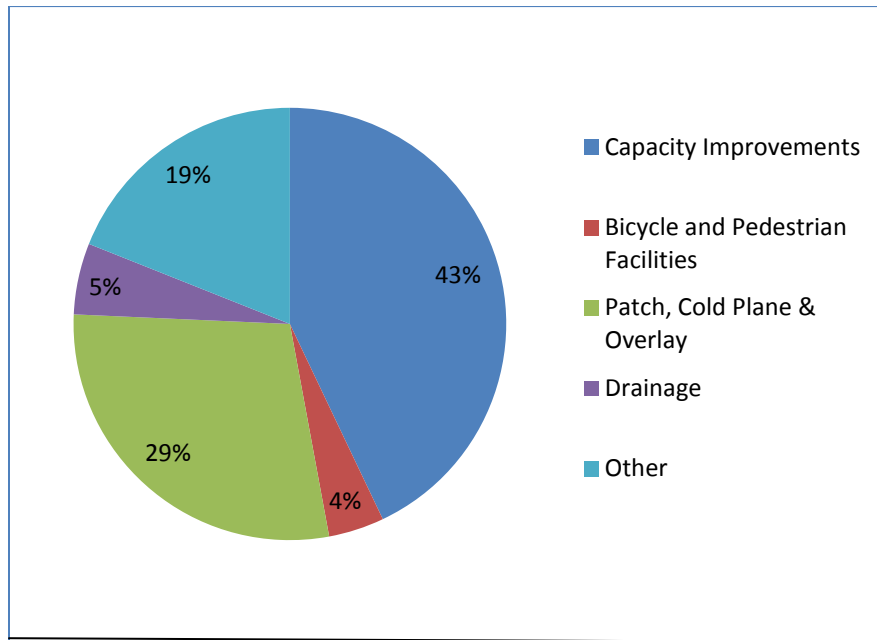
Figure 4.3: Transportation Improvement Program (TIP) for FY 2011 – 2014

Construction Fiscal Year	Project Number	Project Description	Proposed Improvement	Estimated Cost	Federal Share	Funding Source
2010	838-03-0024	Woodland Hwy. (LA 406), Phase 2	Widening	\$1,300,000	\$1,300,000	ARRA
2010	700-38-0108	Belle Chasse Bridge and Tunnel Replacement	Stage 1 - Environmental Assessment	\$718,650	\$574,920	Demo
2010	062-05-0035	Jct. Buras Rd. - 5.4 Mile S. of Jct.	Patch, Cold Plane & Overlay	\$8,395,000	\$8,395,000	E-R100
2010	062-05-0044	LA 23 (3.48 Mile S. Doullut Canal - Buras)	Patch, Cold Plane & Overlay	\$1,175,000	\$1,175,000	E-R100
2010	062-05-0043	LA 23 (0.3 mi. N. of RR Spur - 2.6 mi. N)	Patch, Cold Plane & Overlay	\$2,053,000	\$2,053,000	E-R100
2010	046-04-0041	Ferryboat Engine Upgrades	New Engines for Ferryboats	\$1,850,000	\$1,850,000	FBD/ARRA
2010	062-05-0042	LA 23 (near Empire)	Drainage Improvements	\$227,000	\$0	St. Cash
2010	062-02-0119	Intracoastal Canal Bridge Gearbox Repair	Moveable Bridge Repair	\$200,000	\$0	St. Gen
2010	062-02-0120	Belle Chasse Tunnel	Electrical & Mech. Repair	\$2,135,000	\$0	St. Gen
2010	742-00-000C	LA 406/Woodland Hwy. (LA 23 -LA 407)	Environmental Assessment, Proposed Widening	\$135,000	\$108,000	STP>200K
2010	826-63-0001	Peters Road Extension, Phase I	New Two-Lane Roadway	\$18,000,000	\$6,000,000	STP>200K
2011	062-02-0126	Judge Perez Bridge	Replace Wire Rope, Install New Counterweight Wire Rope	\$600,000	\$480,000	NHS
2011	700-38-0109	F. Edward Hebert Road Improvements	Overlay/Bike/Pedestrian Improvements	\$2,500,000	\$1,300,000	STP>200K
2012	062-03-0025	Drainage Improvements near Myrtle Grove	Drainage Improvements	\$3,000,000	\$2,400,000	NHS
2013	062-02-0128	LA 23 (S. of Jesuit Bend - Alliance - SB)	Concrete Pavement Rehab, Cole Plane & Overlay	\$5,625,000	\$4,500,000	STP FLEX

Source: New Orleans RPC

Note: ARRA - American Recovery and Reinvestment Act (Stimulus)/ Demo - Congressional High Priority or Demonstration Project/ ER - FHWA Emergency Relief/ NHS - National Highway System/ STP - Federal funds the formula for large urban areas with population more than 200,000/ STP FLEX - Federal funds programmed statewide through DOTD needs assessment process

Figure 4.4: \$60 Million of Transportation Improvements (FY 2011 - 2014) Funding Breakdown



As illustrated in **Figure 4.4**, there are more than \$60 million in transportation infrastructure investments currently programmed for Plaquemines Parish, with greater than 40 percent of the funding secured for capacity improvements. The projects discussed in this section have been identified by the Parish in partnership with the RPC as among the most critical to provide mobility and access to the area. **Figure 4.5** presents the various capacity improvements planned in the Belle Chasse area. It is crucial that funding continue for these projects so that they may provide mobility and economic benefits to Plaquemines Parish and the state of Louisiana.

- *Belle Chasse Highway (LA 23) Widening from Engineers Road to Lapalco Boulevard* – This project is designed to relieve the congested section of LA 23 by widening it to six lanes on the western side of the waterway. Currently, this section of the widening is in final design phase with estimated construction cost of \$3.6 million. There are plans to extend the widening north to Wall Boulevard/Terry Parkway in a later phase of the project.
- *Woodland Highway (LA 406) Widening from LA 23 to LA 407* – This project calls for the widening of Woodland Highway to four lanes with a major intersection upgrade at LA 23 to improve safety and facilitate heavy turning movements onto LA 23. The capacity improvements on LA 406, with additional turn lanes at the intersection, would provide a viable alternative to the congested LA 23 and the Belle Chasse Bridge and Tunnel. Phase 1, completed in 2009, includes additional turn lanes in front of subdivision and two turn lanes added at LA 23 intersection. Phase 2, calls for the addition of fourth lane from Industry Canal to LA 23 and is currently under construction. Note that the at-grade rail crossing on the LA 406 approach poses safety issues that will need to be addressed as part of the improvements.
- *Belle Chasse Bridge and Tunnel Replacement* – The existing tunnel and bridge are subject to frequent, costly, and unpredictable operational breakdowns for repair and maintenance. Excessive roadway delays occur when the existing bridge opens, which it does an average of 10-12 times a day. A feasibility study was completed in July 2009 that developed conceptual alternatives for further consideration and identified environmental concerns that may be of consequence later in the process. The three alternatives recommended from the initial fatal flaw analysis are: a 100' fixed bridge with an extension of Warren Street; a 70' movable bridge that would require approximately seven openings per month; and a 60' movable bridge that would require approximately 27 openings per month.
- *Barriere Road Extension* – This project would widen and extend Barriere Road from its current terminus west of the naval base rear gate to the proposed Peters Road Extension including signalization at the extension's junction with the Peters Road extension. Although this project is not programmed in the MTP, it has been recognized as a priority for the Parish due to the new Navy Exchange (NEX) and Commissary planned by the Naval Air Station/Joint Reserve Base (NAS/JRB), which would have significant traffic impacts on Barriere Road. A traffic study completed in March 2010 found that once the NEX/Commissary is complete, Barriere Road is anticipated to see a 227 percent increase in traffic if the back gate is designated to be the primary gate. A supplemental traffic study is being conducted now to better assess the impacts associated with shifting the primary access to the back gate on LA 23 and Barriere Road. In addition to its

role in providing access to navy traffic, Barriere Road Extension has the potential to increase the much needed connectivity in Belle Chasse and attract development on the vacant land across the canal

- *LA 23 Improvements* – The four-mile section of LA 23 from Happy Jack through Port Sulphur is the only section of LA 23 that has two lanes of travel. The widening of this section of LA 23 has been identified as a crucial infrastructure improvement in south Plaquemines Parish to improve safety and operations for all travelers, especially truck traffic associated with the oil industry. The Environmental Clearance Report by the RPC is currently underway for this project. Estimated project cost is \$17 million with anticipated construction in 2012.

There are plans in placed to elevate Belle Chasse Highway near Myrtle Grove to prevent flooding during high tide and large rainfalls. Furthermore, the Parish and DOTD are currently working jointly to construct curbs and sidewalks through the Parish in addition to improving road conditions especially in the Buras area.

- *Widen and Raise Tidewater Road* – This project is designed to help offset seasonal street flooding during high tide and other high water events. The recent deterioration of the marshlands necessitated the raising of Tidewater Road to additional 5 feet. This project is particularly important since Venice services the seafood, oil and gas, marine vessel repair and sport fishing industries. Phase 1, from LA 23 to Coast Guard Road, was completed in fall of 2009. Phase 2, from Coast Guard Road to Marina Road, is in final design.
- *Baptiste Collette Bayou Navigation Channel Deepening* – Plaquemines Parish conducted a study to investigate alternatives for improving access to the offshore oil located in Gulf of Mexico. Currently, the lower Mississippi River is too narrow to accommodate two-way traffic of newer, larger vessels. As a result, the Baptiste Collette Navigation Channel is being developed as an alternative route from eastern Gulf of Mexico to the port facilities in Venice. The preliminary plan is to have the channel be dredged to 22 ft deep by 185 ft wide to accommodate the anticipated increase in marine traffic. Additional studies and coordination of a dredged material disposal plan with least cost and environmentally acceptable approach are still being considered.

4.2 Accident and Safety Analysis

Assessing safety through the use of statistics is useful in identifying intersections and corridors that merit further study for safety improvements. Roadway safety was studied through a review of the Parish’s historic crash data collected by the DOTD between the years of 2006 and 2008. The following crash analyses were performed to measure the relative safety of roadways and intersections in Plaquemines Parish:

- Parish-wide comparison to statewide averages
- Roadways with the highest crash frequencies in the Parish
- Intersections with the highest crash frequencies in the Parish

Figure 4.6 shows the Parish-wide and statewide crash statistics from 2006 through 2008. Mostly due to the rural nature of the Parish, it has experienced a significantly lower crash rate per 1,000 persons than the state as a whole. According to **Figure 4.7**, there were an average of 600 vehicular crashes, 230 injuries and five fatalities reported annually in the Parish between 2006 and 2008. During this period, an average of 400 crashes, 190 injuries, and 4 fatalities occurred yearly on Belle Chasse Highway (LA 23), which accounts for more than two thirds of the Parish-wide total. The last crash analysis involves identifying intersections with the highest number of crashes. **Figure 4.8** reports four intersections along LA 23 which experience at least ten crashes per year. As expected, all four intersections are located within Belle Chasse. The intersection crash analysis is particularly relevant when identifying potential transportation projects to improve safety and traffic operations. As such, these intersections should be studied in more detail in the next phase of this study.

Figure 4.6: Vehicular Crashes on Major Roads (2006-2008)

Year	Plaquemines					Louisiana		
	Number of Crashes	Number of Injuries	Number of Fatalities	Population	Crash Rate per 1,000 Population	Number of Crashes	Population	Crash Rate per 1,000 Population
2006	651	296	7	21,293	30.6	161,875	4,240,327	38.2
2007	593	293	5	21,353	27.8	159,719	4,376,122	36.5
2008	563	232	5	21,138	26.6	157,871	4,451,513	35.5

Source: LA DOTD Crash Data & U.S. Census Estimates

Figure 4.7: Vehicular Crashes on Major Roads (2006-2008)

State Route	Crash Statistics 2006 - 2008								
	2006			2007			2008		
	Crashes	Injuries	Fatalities	Crashes	Injuries	Fatalities	Crashes	Injuries	Fatalities
LA 23	463	221	6	387	194	4	359	167	3
LA 39	28	24	0	36	23	0	35	8	0
LA 406	31	14	0	23	11	0	21	16	0
LA 3017	17	4	0	30	21	0	19	12	0
Local Road	112	33	1	117	47	1	129	29	2
Total	651	296	7	593	296	5	563	232	5

Source: LA DOTD

Figure 4.8: Intersections with Number of Crashes (2006-2008)

Intersection	2006			2007			2008		
	Crashes	Injuries	Fatalities	Crashes	Injuries	Fatalities	Crashes	Injuries	Fatalities
LA 23 at LA 406	137	67	1	124	49	0	152	71	0
LA 23 at LA 3017	44	14	0	39	15	0	36	10	0
LA 23 at Main Street	13	5	0	3	2	0	7	4	0
LA 23 at Barriere Road	10	3	0	14	9	0	14	3	0

Source: LA DOTD

4.3 Public Transit

Ferry crossings provide much-needed east-west mobility for not only Plaquemines Parish residents but also commuters from St. Bernard Parish. The Plaquemines Parish Ferry is the only Parish-owned and operated system (all others are owned by the state) and consists of two crossings: East Point a la Hache to West Pointe a la Hache, and Scarsdale to Belle Chasse. These two ferry routes are the only means of traversing the Mississippi River in the Parish and operate seven days a week all year long. A one-way ferry trip is approximately 0.5 nautical miles (0.6 statute miles) and takes approximately seven minutes. Though the ferries have the capacity to carry foot traffic, both routes are predominantly car carriers with only 0.1 percent pedestrian traffic. The current vessel fleet is underpowered given the strong river currents.

Of the two crossings, the Belle Chasse crossing is much more heavily used with 52 roundtrips per day. Approximately 645,000 vehicles crossed the river at Belle Chasse in 2009. The crossing offers service from 5:00 am to midnight, with 30 minute off-peak and 15 minute peak headways. The Pointe a la Hache crossing operates less frequently than Belle Chasse, and serves 18 round trips per day. Service starts at 6:00 am and ends at 10:00 pm with hourly off-peak and 30-minute peak headways.

It is important to note that \$1.8 million is programmed in the TIP to replace the engines on all existing ferries with energy-efficient/alternative fuel engines to improve speed and reduce emissions. Refer to the *Plaquemines Parish Ferry Improvement Options Review* prepared as part of the Master Plan for a detailed assessment of existing conditions and recommended improvements.

Currently, the Plaquemines Parish Community Action Agency operates the public transportation system in the Parish. The agency's on-demand response service or door-to-door operation is provided to low income, economically disadvantaged elderly and disabled residents of Plaquemines Parish. More than half of the vehicles are wheel chair accessible. Patrons must schedule a trip in advance to assure them door-to-door service. Hours of operation are 6:30 am to 5:00 pm., Monday through Friday. The average monthly ridership of the program is 614 (Elderly 270, Disabled 181 and Other 163). The transportation program operates with Federal (Section 5311) and local government (Plaquemines Parish Government) funding.

Plaquemines Parish's only fixed route bus service, provided by Jefferson Transit (JeT), ended after Hurricanes Katrina and Rita. Currently, there are no plans to reinstate this service.

4.4 Freight

Plaquemines Parish is served by rail lines on both banks of the river. Norfolk Southern (NS) Railroad parallels the East Bank starting at the former Amax Nickel Plant and follows LA 39 north connecting with the main NS railroad line. The New Orleans and Gulf Coast Railroad (NOGC) has an active single track line parallel to Belle Chasse Highway. NOGC is part of the LA short line and terminal/switching railroad system and carries up to a million gross ton-miles per mile (MGTM/M). It provides freight service along 24 route miles of the former Union Pacific branch between Gouldsboro Yard and Myrtle Grove. Major shippers include Chevron Chemical, Harvest States, and British Petroleum (BP). According to the Federal Railroad Administration (FRA), up to three trains use the rail line per day, traveling between 10 - 15 MPH. Currently, railroads on both the East and West Banks operate at low volume, less than 10% capacity.

There are over 80 at-grade rail crossings of roadways and driveways between Engineers Road and at the end of the line near Myrtle Grove. Although the traffic signals at Woodland Highway and Engineers Road intersections are equipped with preemption capabilities for train crossings, most of the crossings are not properly equipped with gates and warning devices. Additionally, the majority of these rail crossings use wooden crossings, which deteriorate under heavy truck traffic. Recently, the more traveled crossings have undergone repairs and upgrades, including a more durable substitute (concrete) between the tracks to increase safety.

The *Comprehensive Port Development Master Plan* was recently completed and recommends three potential sites at Amax, Citrus II and Venice for port development. The Amax Property located near Braithwaite on the East Bank was identified as the best site for short term development due to its immediate access to road and rail infrastructure. Citrus Land II Site near Pointe Celeste on the West Bank was determined to be the best long term development site. Port Venice was included as a prime future development site because of its existing major contribution to the economy of the region in the oil and gas, commercial fishery and tourism sectors.

Among the transportation recommendations associated with the proposed port facilities are the extension of rail service to Citrus II and the relocation of the NOGC rail line away from Belle Chasse by circumventing the Naval Air Station via the Harvey Channel. The rail relocation would allow for the widening and expansion of LA 23 in Belle Chasse which has been constrained by its proximity to the railroad right-of-way.

4.5 Bridges

There are 35 bridges in the Parish; 23 are maintained by Plaquemines Parish and 12 are maintained by DOTD. On average, the bridges in the Parish are roughly about 39 years old and are inspected by the Parish and DOTD on a yearly basis.

Currently, access to Plaquemines Parish is provided at only two entry points – the Belle Chasse Bridge and Tunnel on LA 23 and the General DeGaulle Bridge that connects to LA 406. The Belle Chasse Bridge and Tunnel is the only crossing of the Intracoastal Canal in Plaquemines Parish, and it serves as the area’s primary emergency evacuation route. Currently, the northbound crossing of the Intracoastal Canal occurs via a two-lane vertical lift bridge, whereas the southbound crossing occurs via a two-lane tunnel. When open, the bridge provides 100’ of vertical clearance to marine traffic, and when closed, it provides 40’ of vertical clearance.

The Belle Chasse Bridge and Tunnel carries just over 31,000 vehicles per day according to the ADT volumes collected by DOTD in 2008. As previously noted, the Belle Chasse Bridge opens an average of 10-12 times daily for seven minutes at a time for marine traffic. Often times, the bridge openings result in extensive congestion and delay for travelers on Belle Chasse Highway.

General DeGaulle Bridge is a 100’ fixed span bridge over the Intracoastal Canal that is technically part of Orleans Parish. Whereas the Belle Chasse Tunnel and Bridge mainly provides access to the Plaquemines Parish’s residents and businesses, the primary function of the General DeGaulle Bridge is to provide access to Lower Coast Algiers. According to the latest counts available, this bridge carried approximately 14,500 vehicles per day in 2003.

4.6 Airports

The Louis Armstrong International Airport in Kenner, Louisiana, located approximately 25 miles from Belle Chasse, is the primary server of commercial and personal air travel in the region. Plaquemines Parish has a number of aviation landing facilities which are privately owned and operated. The most significant facility is the Naval Air Station/Joint Reserve Base (NAS/JRB), located in Belle Chasse. This facility is home to the U.S. Navy, Louisiana Air National Guard, U.S. Air Force Reserve, U.S. Coast Guard and the U.S. Customs Service. This facility has extensive flight operations of fighter class military aircraft and requires airspace coordination for any area civilian aviation activities. Current access to the NAS/JRB is provided via the main gate on LA 23 and the back gate on Barriere Road.

Two other airport facilities are located in the Parish: Southern Seaplane, which is a combination asphalt runway and seaplane base in Belle Chasse; and Birdwin Airport, which is a turf strip, located approximately 2.3 miles southeast of Port Sulfur. In addition, there are eight seaplane bases and 14 heliports located throughout the Parish.

In March 2009, an airport feasibility study was developed by the RPC in partnership with Plaquemines Parish to determine the potential demand and possible sites for a general aviation facility in the Parish. A number of potential sites were considered, including a facility in Cedar Grove, Jesuit Bend, Alliance, St. Rosalie/Ironton, Lake Hermitage, Woodland, Fort Jackson and New Orleans NAS JRB Joint Use Site. The study recommended the Woodland site located near West Pointe a la Hache, as the preferred site for further study. Preliminary findings from the study indicate this site is able to accommodate a 4,200-foot runway in addition to future airside and landside expansion. Furthermore, this site was determined to have minimal airspace restrictions, adequate access and visibility from LA 23 and minimal environmental impacts. Anticipated funding sources include the Federal Aviation Administration (FAA), state and the Parish, with a majority (71 percent) of funding for initial development provided by the FAA. Next steps require an environmental assessment including detailed site plan and development strategy for the selected site, including a cost-benefit analysis.

4.7 Disaster Responsiveness

Emergency vehicles depend on well-maintained and accessible transportation infrastructure to reach those in need in an acceptable amount of time. It is thus important to provide additional connections over the Intracoastal Waterway and upgrade intersections to benefit public safety and increase emergency response time. Signal preemption for ambulances transporting severely sick or injured patients to New Orleans hospitals would also be beneficial; this technology is already implemented in Orleans Parish.

Natural disasters also put stress on the transportation system. This is particularly relevant in this region as the role of the transportation system must include providing safe evacuation routes during natural disasters. With absence of interstates in Plaquemines Parish, arterials provide the greatest capacity for vehicles, with LA 23 and LA 39 being designated official Louisiana evacuation routes. It is imperative to continue to uphold the highest performance standards for these roadways to ensure the safety of the residents during natural disasters.

4.8 Bicycle and Pedestrian Facilities

Currently, bicycle and pedestrian facilities are not commonly found in the Parish, especially in the more rural southern areas. Some sidewalks can be found along major roadways such as LA 23 in Belle Chasse, and recreational bicycle paths exist along Woodlands Trail. The Parish, in partnership with the RPC, has developed a set of pedestrian and bicycle policy recommendations as part of the *Plaquemines Parish Land Use and Transportation Vision Plan*. The plan builds on the concepts of complete streets, which are streets designed and operated to enable safe access for all users: drivers, transit riders, pedestrians, and bicyclists of all ages and abilities. The policy recommendations include the incorporation of pedestrian and bicycle features into all future projects. The plan provides guidelines for prioritization of pedestrian and bicycle projects in addition to design specifications. Finally, a set of proposed bicycle routes were developed and included in the recently completed Rails-to-Trails Conservancy’s 2010 Campaign aimed at expanding the federal Non-motorized Transportation Program. As presented in **Figure 4.9**, nearly 21 miles of bike routes in Plaquemines Parish at an estimated cost of \$1.2 million are proposed as part of the comprehensive bike network. These routes consist of a combination of bike lanes and shared lanes on major roads primarily in the Belle Chasse area.

Figure 4.9: Proposed Bicycle Route

Facility	Proposed Mileage	Estimated Cost
Exclusive Bike Lane	7.85	\$274,750
Shared Lane	8	\$160,000
Wide Shoulder	5	\$754,000
Total	20.85	\$1,188,750

Source: NORPC’s 2010 Campaign for Active Transportation Case Statement

4.9 Summary of Transportation Planning Needs

Based on the information collected for this assessment and the transportation issues and needs identified through the public involvement process, the Parish would most benefit from further study of:

- *Congestion reduction in the Belle Chasse area, particularly along LA 23 and LA 406.* Frequent bottlenecks occur at major intersections on LA 23 during the peak-hours and bridge openings. In this regard, the planned Peters Road Extension will provide much needed congestion relief to LA 23 in addition to providing an alternate hurricane evacuation route. Additionally, operational improvements at the intersection of LA 23 at LA 3017, LA 406, Barriere Road, and Main Street should be considered to enhance safety and reduce delays at these major intersections.
- *Other major transportation investments designed to improve mobility and facilitate economic growth in the Parish.* They include the replacement of the Belle Chasse Bridge and Tunnel, the widening projects of LA 23 and LA 406 and the Barriere Road Extension. These projects would also improve access to the naval base and address the traffic impacts associated with its anticipated expansion. Additionally, it is recommended that the Parish maintain and expand its repair and rehabilitation program to provide a reliable roadway network throughout the Parish.
- *Limited access and connectivity in the lower Plaquemines Parish.* As the Venice Port Complex and surrounding industries grow and expand, there is a need to provide safe and convenient access to and from these developments. Improved access across the river and extension of the rail lines are also needed to facilitate growth in the southern portion of the Parish. Therefore it will be critical to coordinate and support intermodal connections among water, rail, and highway transportation to realize this area's potential.
- *Railroad relocation out of Belle Chasse.* The recently completed study examined the benefits of relocating the NOGC rail line out of Belle Chasse, which would facilitate the widening of LA 23.
- *Upgraded ferry system and investigation of a new ferry crossing.* Among the recommendations for improvements to the ferry system are the high speed ferry service, which would benefit the commuters, and a new consolidated ferry crossing in Jesuit Bend. Additional study, including a detailed cost-benefit analysis, is recommended to fully investigate the need for the new crossing.
- *Public fixed route transit service.* Coordination with Jefferson Parish Transit is needed to examine the need for reinstatement of transit service between the two parishes.
- *General aviation facility that is centrally located with minimal environmental impacts and airspace restrictions.* A feasibility study was completed in 2009 that recommended the Woodland site as the preferred site for a new general aviation airport. An Environmental Assessment will reconsider all the potential sites in much greater detail before the aviation facility is recommended for implementation.
- *Policy measures to incorporate pedestrian and bicycle components into future roadway projects.* This would ensure safe travel for all users of the transportation system. There is a need for a comprehensive inventory of

sidewalks and bicycle paths in the Parish to identify gaps and opportunities for multimodal transportation.

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