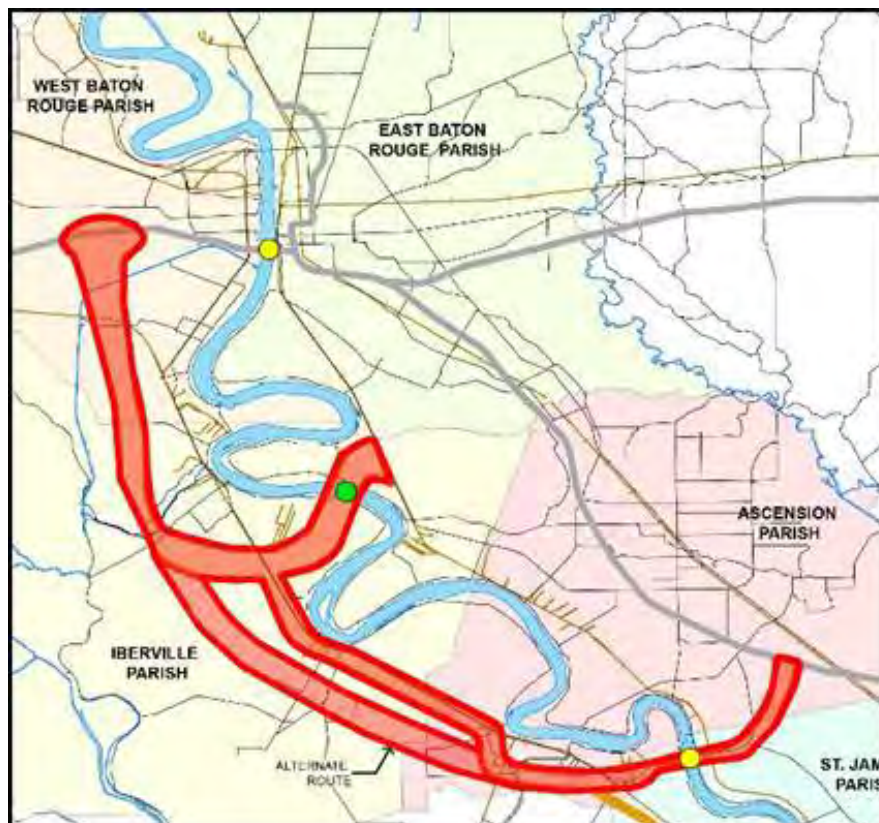


# Iberville Parish Mississippi River Bridge and West Side Expressway Implementation Plan

March 2016



## Table of Contents

| Section   | Title/Subtitle  | Page No. |
|---|---|----------|
| Table of Contents                                       |   | i        |
| List of Tables  |   | v        |
| List of Figures   |   | vi       |
| Executive Summary                                       |   | 1        |
| Chapter 1: Project Description and Purpose and Need     |   |          |
| 1.1   | Project Description                                   | 7        |
| 1.2   | Congestion and Mobility                               | 7        |
| 1.3   | Economic Growth and Development                       | 9        |
| 1.4   | Hurricane Evacuation                                  | 10       |
| 1.5   | Safety  | 10       |
| 1.6   | Legislation   | 11       |
| 1.7   | Other Projects and Proposals                          | 11       |
| 1.8   | Discussion of Logical Termini and Independent Utility | 12       |
| Chapter 2: Existing Conditions and Affected Environment |   |          |
| 2.1   | Social Environment                                    | 13       |
| 2.2   | Community Characteristics                             | 14       |
| 2.2.1   | Healthcare Facilities                                 | 14       |
| 2.2.2   | Education   | 15       |
| 2.2.3   | Police Protection                                     | 15       |
| 2.2.4   | Fire Protection                                       | 15       |
| 2.2.5   | Housing   | 15       |
| 2.2.6   | Recreational Resources                                | 16       |
| 2.3   | Economic Environment                                  | 16       |
| 2.4   | Environmental Justice                                 | 19       |
| 2.5   | Land Use  | 22       |
| 2.5.1   | Farmlands   | 23       |
| 2.5.2   | Forestry  | 24       |
| 2.6   | Geology   | 24       |
| 2.6.1   | Oil and Natural Gas                                   | 25       |
| 2.7   | Water Quality   | 26       |
| 2.7.1   | Surface Water Quality                                 | 26       |
| 2.7.2   | Groundwater   | 27       |
| 2.7.3   | Drinking Water  | 27       |
| 2.8   | Floodplains and Floodways                             | 29       |
| 2.9   | Wetlands  | 29       |
| 2.10  | Threatened and Endangered Species                     | 30       |
| 2.11  | Public Lands  | 32       |
| 2.12  | Cultural Resources                                    | 34       |
| 2.13  | Air Quality   | 36       |
| 2.14  | Noise   | 36       |

| Section | Title/Subtitle             | Page No. |
|---------|----------------------------|----------|
| 2.15    | Hazardous Waste            | 39       |
| 2.16    | Climate and Climate Change | 42       |
| 2.17    | Visual Characteristics     | 42       |
| 2.18    | Bibliography               | 42       |

### Chapter 3: Alternatives Development

|       |  |    |
|-------|--|----|
| 3.1   | Introduction   | 45 |
| 3.2   | Alignment Descriptions   | 46 |
| 3.2.1 | Alternative 1  | 46 |
| 3.2.2 | Alternative 2  | 48 |
| 3.2.3 | Alternative 3  | 49 |
| 3.3   | Design Standards   | 49 |
| 3.3.1 | Design Criteria  | 49 |
| 3.3.2 | Typical Sections   | 50 |
| 3.3.3 | Elevated Roadways  | 51 |
| 3.4   | Interchanges   | 51 |
| 3.5   | Project Costs Estimates  | 52 |
| 3.6   | Traffic  | 57 |
| 3.6.1 | Scenario 1: Existing Transportation Network  | 57 |
| 3.6.2 | Scenario 2: No-Build Alternative   | 59 |
| 3.6.3 | Scenario 3: Build Alternative 1 or Build Alternative 2 with the BUMP (or BR Loop North Bypass, the LA 415 Connector in West Baton Rouge Parish, and a widened LA 30 from the EBR Parish Line to I-10 in Gonzales | 59 |
| 3.6.4 | Scenario 4: Build Alternative 2 from I-10 in Port Allen to LA 1, the Iberville Mississippi River Bridge, a widened LA 30, and the BUMP   | 60 |
| 3.6.5 | Scenario 5: Build Alternative 3 with the Iberville Mississippi River Bridge and a widened LA 30  | 60 |
| 3.6.6 | Scenario 6: Build Alternative 1 and BUMP excluding the Iberville Mississippi River Bridge (Westside Expressway Only)   | 61 |
| 3.6.7 | Interchanges   | 61 |

### Chapter 4: Potential Environmental Impacts and Consequences

|         |   |    |
|---------|---|----|
| 4.1     | Social Impacts  | 68 |
| 4.1.1   | Land Use and Cover  | 68 |
| 4.1.2   | Prime Farmland  | 68 |
| 4.1.3   | Forestry  | 69 |
| 4.1.4   | Developmental Impacts   | 70 |
| 4.1.4.1 | Commercial Development  | 70 |
| 4.1.4.2 | Industrial Development  | 70 |
| 4.1.4.3 | Recreational Development  | 72 |
| 4.1.4.4 | Residential Development   | 72 |
| 4.1.4.5 | Consistency of the Expressway with Local Development and Land Use Plans | 72 |

| Section   | Title/Subtitle  | Page No. |
|---|---|----------|
| 4.1.5   | Community Changes   | 73       |
| 4.1.5.1   | Changes in Neighborhoods and Community Cohesion                           | 73       |
| 4.1.5.2   | Changes in Accessibility and Travel Patterns                              | 73       |
| 4.1.5.3   | Changes in Local Traffic Volumes and Movements                            | 74       |
| 4.1.5.4   | Community Services  | 74       |
| 4.1.6   | Displacements   | 75       |
| 4.2   | Economic Impacts  | 76       |
| 4.2.1   | Construction  | 76       |
| 4.2.2   | Accessibility and Mobility  | 77       |
| 4.2.3   | Economic Development  | 77       |
| 4.3   | Visual Impacts  | 78       |
| 4.3.1   | Views of the Proposed Highway   | 78       |
| 4.3.2   | Views from the Proposed Highway   | 78       |
| 4.3.3   | Mitigating for Visual Impacts   | 79       |
| 4.4   | Environmental Justice   | 79       |
| 4.5   | Safety  | 80       |
| 4.6   | Cultural Resources  | 80       |
| 4.7   | Public Lands  | 82       |
| 4.8   | Water Quality   | 82       |
| 4.8.1   | Surface Water   | 82       |
| 4.8.2   | Groundwater and Drinking Water Resources                                  | 83       |
| 4.9   | Wetlands  | 84       |
| 4.10  | Floodplains and Floodways   | 85       |
| 4.11  | Threatened and Endangered Species   | 86       |
| 4.12  | Coastal Zone Impacts  | 87       |
| 4.13  | Highway Traffic Noise   | 87       |
| 4.14  | Air Quality   | 88       |
| 4.15  | Climate Change  | 89       |
| 4.16  | Solid and Hazardous Waste   | 90       |
| 4.16.1  | CERCLIS List  | 90       |
| 4.16.2  | Leaking Underground Storage Tanks   | 90       |
| 4.16.3  | Underground Storage Tanks   | 91       |
| 4.16.4  | Environmental Compliance  | 92       |
| 4.17  | Indirect and Cumulative Impacts   | 92       |
| 4.17.1  | Indirect Impacts  | 92       |
| 4.17.2  | Cumulative Impacts  | 94       |
| 4.18  | Bibliography  | 96       |
| Chapter 5: Future Actions, Permits and Mitigation |   |          |
| 5.1   | The National Environmental Policy Act of 1969 (NEPA), 42 USC 4321 et seq. | 98       |
| 5.1.1   | Integrating Planning and NEPA   | 98       |
| 5.1.2   | Lead Agency Review and Agency/Government Involvement                      | 99       |
| 5.1.3   | Public Involvement Activities   | 99       |

| Section | Title/Subtitle                               | Page No. |
|---------|--|----------|
| 5.1.4   | Project Management Plans and Financial Plans | 100      |
| 5.2     | Conceptual Design                            | 100      |
| 5.2.1   | Bridges and Navigation                       | 100      |
| 5.2.2   | Access Management                            | 101      |
| 5.2.3   | Transportation Management Plans              | 102      |
| 5.3     | Permits and Coordination                     | 102      |
| 5.4     | Mitigation                                   | 103      |

## Chapter 6: Public Involvement and Agency Coordination

|       |                       |     |
|-------|-----------------------|-----|
| 6.1   | Agency Coordination   | 104 |
| 6.1.1 | Solicitation of Views | 104 |
| 6.1.2 | Agency Meeting        | 106 |
| 6.1.3 | Stakeholder Meeting   | 106 |

## APPENDICES

Appendix A: Exhibits

Appendix B: Stage 0 Checklists

Appendix C: Solicitation of Views and Responses

Appendix D: Alternatives

## List of Tables

| Table | Title  | Page No. |
|-------|--|----------|
| ES-1  | Environmental Matrix   |          |
| 1.1   | LA 1 Estimated Average Daily Traffic (ADT, Vehicles per Day) | 8        |
| 1.2   | Parish Populations   | 9        |
| 2.1   | General Census Data  | 13       |
| 2.2   | Population Demographics by Race                              | 14       |
| 2.3   | Housing Characteristics                                      | 15       |
| 2.4   | Agricultural Commodities Produced (in dollars)               | 17       |
| 2.5   | Workforce Estimates  | 17       |
| 2.6   | Employment By Industry Category                              | 18       |
| 2.7   | Top Employers Within Project Area Parishes                   | 18       |
| 2.8   | Median Household Income and Estimated Poverty                | 19       |
| 2.9   | Minority, Low Income and Elderly Populations                 | 20       |
| 2.10  | Production Acreage for Top Crops                             | 24       |
| 2.11  | Oil Production Trends, barrels                               | 25       |
| 2.12  | Surface Water Quality Assessment                             | 28       |
| 2.13  | Species of Concern by Parish                                 | 31       |
| 2.14  | Public Parks   | 33       |
| 2.15  | National Register of Historic Places Properties and Sites    | 34       |
| 2.16  | FHWA Noise Abatement Criteria (dBA)                          | 37       |
| 2.17  | Potential Hazardous Material Sites                           | 40       |
| 3.1   | Design Standards for Freeway and Ramps                       | 53       |
| 3.2   | Design Standards for Frontage Roads                          | 54       |
| 3.3   | Interchange Locations  | 55       |
| 3.4   | Project Cost Estimates                                       | 56       |
| 4.1   | Direct Land Use Conversion Impacts, in acres                 | 69       |
| 4.2   | Interchange Locations  | 71       |
| 4.3   | Summary of Estimated Displacements and Impacts               | 75       |
| 4.4   | Census Blocks in White Castle                                | 80       |
| 4.5   | Wetland Impacts, in acres                                    | 85       |
| 4.6   | Floodplain Impacts   | 85       |
| 4.7   | Underground Storage Tanks                                    | 91       |
| 4.8   | Summary of Environmental Compliance by Zip Code              | 92       |
| 4.9   | Facilities with Current Significant Violations               | 93       |

## List of Figures

| Figure | Title   | Page No. |
|--------|---|----------|
| 3-1    | Proposed Typical Section of 4-Lane Highway with provisions for Frontage Roads   | 50       |
| 3-2    | Proposed Typical Section of Expanded 6-Lane Highway with provisions for Frontage Roads  | 50       |
| 3-3    | Proposed Typical Section of Iberville Mississippi River Bridge Roadway Deck   | 51       |
| 3-4    | Proposed Typical Section of Bridge Structures along Westside Expressway   | 52       |
| 3-5    | Scenario 3 - Build Alternative 1 or Build Alternative 2 with BUMP, LA 415 Connector, Iberville Mississippi River Bridge and widened LA 30 | 62       |
| 3-6    | Scenario 4 - Build Alternative 2 from I-10 in Port Allen to LA 1 with BUMP, Iberville Mississippi River Bridge, and widened LA 30         | 62       |
| 3-7    | Scenario 5 - Build Alternative 3 with the Iberville Mississippi River Bridge and widened LA 30  | 63       |
| 3-8    | Scenario 6 - Build Alternative 1 with BUMP excluding the Iberville Mississippi River Bridge   | 63       |
| 3-9    | I-10 Interchange with BUMP and Westside Expressway  | 64       |
| 3-10   | Interchange of Westside Expressway, Iberville River Bridge Connector, and LA 1  | 65       |
| 3-11   | Interchange with LA 30 and the Iberville Mississippi River Bridge Connector   | 66       |
| 3-12   | Interchange with I-10 and LA 70 Connector near Sorrento   | 67       |



## **Executive Summary**

### **Project Description**

The West Side Expressway project is a proposed freeway-class highway in Ascension, Iberville, St. James and West Baton Rouge Parishes to enhance mobility, increase safety, relieve congestion and enhance hurricane evacuation. It is envisioned to provide needed connectivity between the parishes by construction of a new Mississippi River Bridge, construction of a controlled-access freeway, and providing additional access to Interstate 10 (I-10).

The proposed project would provide a four-lane freeway from a new I-10 interchange west of the current I-10/LA 415 Interchange running south on new alignment through West Baton Rouge and Iberville Parishes, then east to a crossing of Highway LA 1 between Plaquemine and White Castle, then crossing the Mississippi River near River Mile 203 Above Head of Passes (AHP) and ending at an interchange on Highway LA 30 near St. Gabriel in Iberville Parish.

Additionally, the proposal would construct a four-lane freeway along LA 1 along the existing alignment between the proposed bridge crossing and White Castle and from White Castle to Donaldsonville, with bypasses of both White Castle and Donaldsonville. Also, connectivity between LA 1/LA 70 and LA 3127 on the west bank would be improved to access the LA 70 Mississippi River (Sunshine) Bridge. From the Sunshine Bridge, connection to I-10 would be accommodated via a new interchange at I-10 in St. James Parish or a widened LA 70 to the existing LA 22 interchange.

### **Purpose and Need**

The project concept envisions addressing several needs important to the parishes on the west bank of the Mississippi River, including:

- Relieving congestion along the LA 1 Corridor caused by high traffic volumes accessing I-10 and the Mississippi River Bridge at Baton Rouge
- Lack of mobility and access across the Mississippi River which has stymied the growth of residential, commercial and industrial development, especially in Iberville Parish
- Lack of efficient connectivity between interests in Iberville Parish, which sits astride on both sides of the river
- Enhance hurricane evacuation routing for populations in the lower Atchafalaya, Lafourche and Barataria basins of coastal South Louisiana
- Enhance motorist safety

The impetus driving this project is House Concurrent Resolution (HCR) 100 of the Regular Session of the 2014 Louisiana Legislature. It urges DOTD to perform a feasibility study on this proposal based on the following:





- Improvements to LA 1 and LA 3127 have been on the drawing board for years;
- An alternate route to US 61 and I-10 is needed due to flooding during Hurricane Isaac;
- An additional Mississippi Bridge crossing in Iberville Parish opens up industrial development and movement of workers;
- Increased accessibility and traffic relief to I-10 for those commuting to the west bank, west towards Lafayette and relieve traffic movement towards Nicholson Drive and LSU; and
- Offers a compelling alternative to a bypass around Baton Rouge.

### **Project Setting**

The project study area is located in southeast Louisiana on the west bank of the Mississippi River opposite East Baton Rouge and Ascension Parishes and on the east bank at Plaquemine Point near Sunshine and in St. James Parish from the Sunshine Bridge to I-10. The project area along LA 1 has a generally rural character with suburban aspects within the communities of Port Allen, Brusly, Addis, Plaquemine, White Castle and Donaldsonville. Outside of these cities and towns, farms and general agriculture are the predominant developed land use. Petrochemical and industrial sites are located along the Mississippi River in order to take advantage of the domestic and international maritime corridor.

Bordering the project area to the west is the Atchafalaya River Basin, the largest wetland area in the United States. It contains sprawling swamps and marshes interlaced with many bayous and canals. It offers freshwater fishing, hunting, bird watching and other outdoor recreational activities.

From pre-historic times into the historic period, Native American tribes occupied the area, including the Houmas, Mugulasha, Chitimacha and Bayougoula, taking advantage of the verdant land and its abundant game and fisheries. Spanish explorers first entered the area in the 1500's, though attempts at colonization did not begin until the late 1600's when settlers from France, Germany, Spain and other countries came to the area. Swamps were drained for agriculture and the arpent system was initiated for land grants to bring settlers to the area for cultivation. Much of the current agricultural land in the area is still laid out in fan-shaped parcels reminiscent of that system.

Extant plantation homes which dot the area provide an historical context of the antebellum period where the large sugarcane industry dominated the social and economic system of the area, which was woven around its planting, growth, harvest and granulation. Sugarcane remains the dominant cash crop in the area, though soybeans are also a major commodity produced by farmers here.

The rise of the petrochemical industry in the area began in the early 1900's with the development of oil refineries and support services. The Mississippi River provides these industries the ability to provide goods and services throughout the world via the ocean-going and barge shipping modes.

### **Alternatives Development**

Three build alternatives were developed during this stage of the study to provide a new access controlled expressway facility through the parishes of West Baton Rouge, Iberville, Ascension and St. James parishes along the west bank of the Mississippi River and a river crossing in Iberville Parish. Also, a No Build (no action) alternative was considered to compare and contrast the results of not providing any improvements over the study period as a baseline.

Alternative 1 proposes an expressway which provides a continuous route from I-10 west of LA 415 in West Baton Rouge Parish to I-10 East south of Sorrento in Ascension Parish. The expressway includes the crossing of the Mississippi River at Mile 203 which connects Iberville Parish on both sides of the river and terminates at LA 30. The expressway envisions that LA 3127 would be the mainline of the expressway and provides a directional interchange at LA 3127 south of Donaldsonville. The expressway alignment is located west of the existing communities of Brusly and Addis, and follows existing LA 1 south of Plaquemine through White Castle and turns west and south of Donaldsonville. Two terminal alignments to I-10 East are proposed, one which utilizes existing LA 70/LA 22 and the other on new alignment to a new directional interchange with I-10 between the existing LA 22 and US 61 interchanges.

Alternative 2 is similar to Alternative 1, except it views the project as a two-phase proposal. Phase 1 of the project would connect I-10 West of the LA 415 interchange, following the same alignment as Alternative 1 to the Iberville Mississippi River crossing and terminate at LA 30. Phase 2 of the project would be to construct the remaining expressway; however, in this alternative, LA 70 would be the mainline of the expressway (rather than LA 3127) and a more modest interchange connection to LA 3127 would be built while carrying the controlled access facility along the existing LA 70 alignment through the Sunshine Bridge. There also would be two terminal alignments to I-10 East as described above.

Alternative 3 proposes that the expressway bypass the existing communities along LA 1 south of Plaquemine. While the connection to LA 1 and the Iberville Mississippi River crossing would be slightly offset south of the alignments for Alternatives 1 and 2, the alignment would depart through construction of a new interchange about 3 miles west of LA 1 and continue through relatively undeveloped farmland and wetlands to connect to the alignments for Alternatives 1 and 2 just west of the Bayou Lafourche crossing and LA 1/LA 308 interchange ramps.

### **Environmental Consequences**

In order to avoid as much as possible impacts to existing development and natural communities, the proposed alignments are planned to be constructed in the margins between existing residential, commercial and industrial development and the forested wetlands which lie beyond them. Also, scars left in the area created by pipeline and utility corridors were closely paralleled when possible to minimize habitat fragmentation. In these area, wetland functions are already somewhat degraded due to proximity impacts to existing development. Alternates 1 and 2 also parallel existing LA 1 in order to develop a collinear highway corridor through



the parishes. This would minimize impacts to natural communities, but existing towns would be more adversely affected.

Insofar as community impacts, all alternates have a large numbers of displacements which occur at the following locations:

- Along Old Choctaw Road and Elwood Road in Brusly
- At the proposed LA 1148 Interchange (Choctaw Mobile Home Park)
- Along Random Oaks, Live Oak and Maple Drives off LA 1 south of Plaquemine
- At the proposed LA 30 Interchange

Alternates 1 and 2 also have a large number of displacements within the Town of White Castle and potentially affect four cemeteries – St. Paul Cemetery at the corner of LA 1 and Corporal Herman Brown, Jr., Street in Bayou Goula, St. John Baptist Church Cemetery at the corner of LA 1 and Lacroix Road in White Castle, and White Castle and Our Lady of Prompt Succor Cemeteries along Moss Street in White Castle.

Burton Park along Moss Street in White Castle could also be impacted by Alternatives 1 and 2. This public park is protected under Section 4(f) of the Department of Transportation Act. More detailed planning will be required to specify whether the current proposal avoids use of the park.

Impacts are also possible to Dorseyville Elementary School by Alternatives 1 and 2.

While it is felt that the project in total does not have disproportional impacts to minority and low income populations, a pocket of census blocks with a high proportion of minority residents within White Castle will be affected by Alternates 1 and 2. It is proposed that the expressway corridor will take and occupy the entire area immediately adjacent to and north of the railroad tracks. While it is proposed that the expressway be elevated through the town to minimize impacts to cohesion within the community, several businesses and residents would need to be taken in order to site the expressway on these alignments.

Five properties listed on the National Register of Historic Places are located adjacent or within close proximity to the proposed alternative alignments: Nottaway Plantation by Alternatives 1 and 2, and Palo Alto Plantation, Palo Alto Dependency, St. Emma Plantation, and the Cinclare Sugar Mill Historic District by all Build Alternatives. At this conceptual level of project planning, it is difficult at this time to delineate the impacts to these properties, as well as other sites which may be eligible for the Register. The Sunshine Bridge, which carries the expressway across the Mississippi River, is eligible for the Register under Criterion C.

The US Postal Service Office in White Castle will require functional replacement due to Alternatives 1 and 2.

Table ES-1 provides a summary of the comparative preliminary environmental impacts of the alternatives discussed in this Study. It should be emphasized that a detailed environmental analysis has not been performed and is not necessary for the purposes of this Feasibility Study. More detailed environmental analyses will be performed during subsequent phases of project development which require detailed impact



identification as required by the National Environmental Policy Act (NEPA). NEPA approvals are required prior to the authorization of any Federal actions, such as permitting and project development, on this project.

### **Future Actions, Mitigation and Permits**

Upon review and approval of this study satisfying the requirements of Stage 0 for advancement of the Department of Transportation and Development (DOTD) project development process, an Environmental Assessment shall be prepared in accordance with NEPA. It is assumed that an Environmental Assessment is the appropriate document to be prepared until impacts are identified which would be significant and thus require preparation of an Environmental Impact Statement.

Besides providing information relative to the feasibility and impacts of this proposal, this Study intends to provide multi-modal, systems-level corridor or subarea planning studies as a part of the statewide transportation process. Federal regulations allow these planning studies to be consistent with NEPA by producing:

- Purpose and Need or goals and objective statements
- General travel corridor and/or general modes definition
- Preliminary screening of alternatives and elimination of unreasonable alternatives
- Basic description of the environmental setting
- Preliminary identification of environmental impacts and mitigation

If these documents are made available to the public, they may be incorporated directly or by reference into the NEPA documents if:

- The NEPA lead agencies agree that they will aid in establishing or evaluating the purpose and need for action, reasonable alternatives, cumulative and other environmental impacts or mitigation of the impacts
- The study is conducted with involvement of State, local, Tribal and Federal agencies, public review, reasonable opportunity to comment within the planning process and study development
- Documentation of relevant decisions are identifiable and available for review during the NEPA scoping process and can be appended or referenced in the NEPA document
- The document is reviewed by FHWA

This document has been prepared by the project sponsors, Iberville and Ascension Parish Governments, to meet the regulatory requirements of integrating the corridor and subarea planning process to inform NEPA.

However, it must be pointed out that this document does not meet the public and agency involvement requirements of the regulations. Specifically, this document has not been generally made available to the public or conducted with the involvement of State, local, Tribal or Federal agencies, except that a Solicitation of Views was made during the process. Should the project sponsors wish to involve these entities in the process, it is suggested that this involvement occur prior to or during the Scoping process as required by NEPA.



Once the project is the subject of a more detailed NEPA analysis, then the preliminary corridors and alignments identified in this study can be tweaked or even eliminated based on public and agency involvement to avoid or minimize social, economic and environmental impacts. At that time, conceptual, or even final, mitigation can be proposed for unavoidable impacts and permits can be applied for and approved by other agencies, who are brought into the NEPA process for their legal standing or special expertise as regards resources and permit actions.

### **Public and Agency Involvement**

A Solicitation of Views was sent to Federal, State and local agencies on September 30, 2015 by mass mailing. Fourteen responses were received.

An introductory presentation on the project was made to representatives of FHWA, DOTD and the Capital Region Planning Commission, the Metropolitan Planning Organization for Baton Rouge on November 15, 2015.

A presentation on the project purpose and alternative alignments was also made to elected officials, including area representatives and senators of the Louisiana Legislature, on January 21, 2016.

**Table ES-1**  
**Preliminary Potential Environmental Impacts**

| Environmental Resource                    | Alternative 1 |              | Alternative 2 |              | Alternative 3 |         | No Build Alternative |
|---|---------------|--------------|---------------|--------------|---------------|---------|----------------------|
|   | LA 22 Int     | New Int      | LA 22 Int     | New Int      | LA 22 Int     | New Int |                      |
| Direct Land Use Conversion (Acres)        |               |              |               |              |               |         |                      |
| Forested                                  | 1108          | 1354         | 967           | 1213         | 1648          | 1895    | 0                    |
| Pature and Cropland                       | 1438          | 1438         | 1549          | 1549         | 2345          | 2345    | 0                    |
| Wetlands                                  | 1119          | 1210         | 1084          | 1175         | 1203          | 1294    | 0                    |
| Developed                                 | 1147          | 1147         | 1147          | 1147         | 1147          | 1147    | 0                    |
| Total                                     | 4812          | 5149         | 4747          | 5084         | 6343          | 6681    | 0                    |
|   |               |              |               |              |               |         |                      |
| Estimated Displacements                   |               |              |               |              |               |         |                      |
| Residences                                | 72            | 72           | 72            | 72           | 38            | 38      | 0                    |
| Mobile Homes                              | 282           | 282          | 282           | 282          | 274           | 274     | 0                    |
| Businesses                                | 38            | 38           | 38            | 38           | 23            | 23      | 0                    |
| Community Services                        | Post Office   | Post Office  | Post Office   | Post Office  | 0             | 0       | 0                    |
|   |               |              |               |              |               |         |                      |
| Cemeteries Adjacent to Alignment          | 4             | 4            | 4             | 4            | 0             | 0       | 0                    |
| Public Parks Adjaent to Alignment         | 1             | 1            | 1             | 1            | 0             | 0       | 0                    |
| Schools Adjacent to Alignment             | 1             | 1            | 1             | 1            | 0             | 0       | 0                    |
|   |               |              |               |              |               |         |                      |
| Community Cohesion Impacted               | White Castle  | White Castle | White Castle  | White Castle | None          | None    | None                 |
| Minorities & Low Income Populations       | White Castle  | White Castle | White Castle  | White Castle | None          | None    | None                 |
|   |               |              |               |              |               |         |                      |
| National Register Properties Adjacent     | 5             | 5            | 5             | 5            | 4             | 4       | 0                    |
| Bridge Eligible for the National Register | 1             | 1            | 1             | 1            | 1             | 1       | 0                    |
| Sites of Indeterminate Eligibility        | 1             | 1            | 1             | 1            | 3             | 3       | 0                    |
|   |               |              |               |              |               |         |                      |
| Navigable Waterways Crossed               | 4             | 4            | 4             | 4            | 4             | 4       | 0                    |
|   |               |              |               |              |               |         |                      |
| Wetlands (Acres)                          | 1135          | 1226         | 1100          | 1191         | 1219          | 1310    | 0                    |
| Floodplains (Acres)                       | 433           | 560          | 451           | 578          | 1070          | 1197    | 0                    |
| Interchanges located in Floodplains       | 2             | 2            | 2             | 2            | 3             | 3       | 0                    |

Build Alternatives have two terminal sub-alternatives, one utilizing existing LA 70 to the existing LA 22 Interchange, the other with a new interchange at I-10 East

Direct Land Use Conversions may have different totals due to overlapping of multiple land uses

Estimated displacements include the taking of Choctaw Mobile Home Park on LA 1148. The number of displacements is an estimate of the trailer pads in the park.

Post Office in White Castle will require functional replacement.

While overall project area is not reflective of disproportionate impacts to low income or minority populations, census blocks within White Castle to be affected have a high number of such population.

Table ES-1  
Preliminary Potential Environmental Impacts

| Environmental Resource                    | Alternative 1   |              | Alternative 2 |              | Alternative 3 |          | No Build Alternative |
|---|-----------------|--------------|---------------|--------------|---------------|----------|----------------------|
|   | LA 22 Int       | New Int      | LA 22 Int     | New Int      | LA 22 Int     | New Int  |                      |
|   |                 |              |               |              |               |          |                      |
| Superfund Sites Adjacent to Alignment     | 1               | 0            | 1             | 0            | 1             | 0        | 0                    |
| Leaking Underground Storage Tanks         | 2               | 1            | 2             | 1            | 1             | 0        | 0                    |
| Underground Storage Tanks                 | 16              | 10           | 16            | 10           | 13            | 7        | 0                    |
| Sites with current significant violations | 2               | 2            | 2             | 2            | 2             | 2        | 0                    |
|   |                 |              |               |              |               |          |                      |
| Possible Wellhead Protection Area         | White Castle    | White Castle | White Castle  | White Castle | 0             | 0        | 0                    |
|   |                 |              |               |              |               |          |                      |
| Possible Threatened/Endangered Species    | Pallid Sturgeon |              |               |              |               |          | None                 |
|   |                 |              |               |              |               |          |                      |
| Coastal Zone Impacts                      | Yes             | Yes          | Yes           | Yes          | Yes           | Yes      | No                   |
|   |                 |              |               |              |               |          |                      |
| Highway Traffic Noise Impacts             | Probable        | Probable     | Probable      | Probable     | Probable      | Probable | None                 |
|   |                 |              |               |              |               |          |                      |
| Located in Non-Attainment Area            | Yes             | Yes          | Yes           | Yes          | Yes           | Yes      | Not Applicable       |
| Microscale Air Quality Impacts            | Possible        | Possible     | Possible      | Possible     | Possible      | Possible | None                 |
|   |                 |              |               |              |               |          |                      |

Build Alternatives have two terminal sub-alternatives, one utilizing existing LA 70 to the existing LA 22 Interchange, the other with a new interchange at I-10 East

White Castle Municipal Code enforces a Drinking Water Protection Critical Area of 1000 radial feet from any active public water system well

All Build Alternatives will probably have Traffic Noise Impacts due to being on new alignment; mitigation for impacts must be reasonable and feasible

All Build Alternatives are in the Baton Rouge Non-attainment Area for air quality; however, designation of the area has not been finalized

All Build Alternatives may have microscale air quality impacts; however, not enough is known to estimate locations and magnitude of impacts





## **CHAPTER 1: Project Description and Purpose and Need**

### **1.1 Project Description**

The West Side Expressway project is a proposed freeway-class highway in Ascension, Iberville, St. James and West Baton Rouge Parishes to enhance mobility, increase safety, relieve congestion and enhance hurricane evacuation. It is envisioned to provide needed connectivity between the parishes by construction of a new Mississippi River Bridge, construction of a controlled-access freeway, and providing additional access to Interstate 10 (I-10). Exhibit A shows the project study area and preliminary corridors.

The proposed project would provide a four-lane freeway from a new I-10 interchange west of the current I-10/LA 415 Interchange running south on new alignment through West Baton Rouge and Iberville Parishes, then east to a crossing of Highway LA 1 between Plaquemine and White Castle, then crossing the Mississippi River near River Mile 203 Above Head of Passes (AHP) and ending at an interchange on Highway LA 30 near St. Gabriel in Iberville Parish. Additionally, the proposal would construct a four-lane freeway along LA 1 along the existing alignment between the proposed bridge crossing and White Castle and from White Castle to Donaldsonville, with bypasses of both White Castle and Donaldsonville. Also, connectivity between LA 1/LA 70 and LA 3127 on the west bank would be improved to access the LA 70 Mississippi River (Sunshine) Bridge. From the Sunshine Bridge, connection to I-10 would be accommodated via a new interchange at I-10 in St. James Parish or, alternatively, by a widened LA 70 to the existing LA 22 interchange.

Portions of this proposed roadway are the subject of ongoing studies.

- Baton Rouge Loop Tier 1 Environmental Impact Statement, Section 4(f)/6(f) Evaluation, prepared for the Federal Highway Administration (FHWA), the Louisiana Department of Transportation and Development (DOTD) and the Capitol Area Expressway Authority (CAEA), State Project Number H.005021, Federal Aid Project Number STP-9609(504), dated 2015; and
- West Bank Turnpike Feasibility Study, From I-10 at LA 1 in Port Allen To I-310 at LA 3127 in Boutte, prepared by the DOTD Scoping Unit, dated February 2011.

### **1.2 Congestion and Mobility**

LA 1 is the only arterial highway which runs north-south along the eastern edge of the west bank in Iberville and West Baton Rouge Parishes. Due to its proximity to the Mississippi River and the State's capitol city, Baton Rouge, these parishes are desirable for industrial, agricultural and residential site locations. LA 1 provides direct access to I-10, which is the only Interstate Highway in either parish. This access, provided by an interchange located on the west approach to the I-10 Horace Wilkinson Bridge, is critical to mobility of goods and people to and from the west side of the Mississippi River.

However, the traffic volumes on LA 1 at I-10 are extremely high, increasing, and indicative of heavy congestion, as shown in Table 1.1:



Table 1.1: LA 1 Estimated Average Daily Traffic (ADT, Vehicles per Day)

| Year                            | 1998   | 2001   | 2004   | 2007   | 2010   | 2013   |
|---------------------------------|--------|--------|--------|--------|--------|--------|
| South Approach I-10             | 39,128 | 37,741 | 38,502 | 44,700 | 45,071 | 46,853 |
| Brusly (Terrill St.)            | 43,361 | 28,453 | 33,190 | 37,517 | 40,655 | 34,878 |
| Brusly (St. Francis St.)        | 40,732 | 31,745 | 31,618 | 39,027 | 37,291 | 30,851 |
| Addis (N. Sugar Plantation Rd.) | 38,313 | 24,881 | 29,054 | 33,072 | 34,979 | 29,123 |
| South of Addis                  | 34,040 | 22,774 | 25,727 | 29,325 | 31,456 | 29,720 |
| Plaquemine (Joffrion St.)       | 18,078 | 21,819 | 22,694 | 23,967 | 23,030 | 27,559 |
| Plaquemine (Laville St.)        | 23,363 | 23,258 | 26,175 | 25,652 | 25,153 | 25,622 |
| Plaquemine (Bayou)              | 25,961 | 28,075 | 28,291 | 25,002 | 26,583 | 28,088 |
| Plaquemine                      | 19,584 | 18,635 | 20,890 | 19,021 | 15,808 | 23,009 |
| South of Plaquemine             | 11,128 | 12,507 | 13,015 | 13,117 | 26,212 | 12,347 |
| White Castle (Maggio St.)       | 11,485 | 11,528 | 10,972 | 12,549 | 11,484 | 10,790 |
| White Castle (Leona Ave.)       | 10,346 | 11,676 | 11,618 | 11,854 | 11,521 | 10,275 |
| White Castle (Francois St.)     | 5,329  | 5,740  | 5,149  | 5,405  | 6,143  | 5,535  |
| Donaldsonville                  | 8,137  | 6,865  | 6,872  | 8,923  | 8,686  | 7,673  |
| Donaldsonville (LA 18/3089)     | 11,299 | 13,352 | 10,970 | 12,431 | 12,250 | 10,402 |

(Source: DOTD Website ([www.dotd.la.gov](http://www.dotd.la.gov)), Traffic Counts, State-maintained Roadways, last accessed 8-6-2015)

At such a critical juncture of the two highways, it is clear that traffic volumes exceed capacity for the existing interchange and are much worse during peak hours.

Better mobility would alleviate this problem. However, the Mississippi River, while providing the impetus for growth in the region, is a formidable barrier to increased mobility. Downstream from the I-10 Bridge, the next crossing is a ferry located in Plaquemine about 12 miles south. Depending on the time of day, weather conditions and origin/destination, the ferry may provide a viable, though very limited, option to accessing the I-10 Bridge. However, connectivity via this mode of travel is hardly efficient for goods and services which are in need of traversing the river.

The next downstream bridge crossing the river is at LA 70 near Donaldsonville, which is about 37 miles south of the I-10 Bridge. This bridge connects to I-10 fairly efficiently along LA 70 and LA 22 on the east bank. However, the nature of the configuration of LA 1 between the bridges is that it traverses several communities in between – Brusly, Addis, Plaquemine, White Castle and Donaldsonville - and contains many traffic signals. The 37-mile distance, even with good traffic conditions, can easily take an hour to traverse.



Iberville Parish is located geographically straddling both sides of the Mississippi River. The only direct connection between the two portions of the Parish is the Plaquemine Ferry. At present, DOTD maintains two ferries at this crossing. The operations of the ferry are heavily reliant on weather and maintenance. The ferry does not operate where fog on the river would decrease visibility and increase the risk of collision with both ocean-going ships and barge traffic. Also, the ferry operation is expensive and fares do not pay for the full cost maintaining and running the ferry. When maintenance problems arise, the crossing would be reduced to a single ferry and dramatically increase crossing times, which with the best of conditions can be an hour or more. Iberville Parish government needs to be able to provide service to its constituents and citizenry in a more efficient manner, one in which only a direct bridge connection can be useful in providing.

### 1.3 Economic Growth and Development

Due to the lack of an efficient transportation system, residents who may desire to live on one bank but work on the opposite must consider the uncertain traffic conditions which may result on the I-10 Bridge. Not only might normal access be problematic, but conditions can worsen substantially if there are further problems, such as accidents or special events which may increase I-10 traffic beyond the normal congested condition. The traffic situation could be the deciding factor as to where residents and businesses choose to locate. Table 1.2 below provides population information for the corresponding years cited above in Table 1.1:

Table 1.2: Parish Populations

| Year             | 1998    | 2001    | 2004    | 2007    | 2010    | 2013    |
|------------------|---------|---------|---------|---------|---------|---------|
| East Baton Rouge | 410,256 | 411,408 | 412,772 | 430,700 | 440,856 | 445,227 |
| Ascension        | 72,272  | 79,168  | 86,085  | 99,702  | 107,866 | 114,393 |
| Livingston       | 86,938  | 95,203  | 104,631 | 117,028 | 128,654 | 134,053 |
| Iberville        | 33,004  | 33,228  | 32,332  | 32,915  | 33,383  | 33,367  |
| West Baton Rouge | 21,649  | 21,620  | 21,730  | 22,632  | 23,949  | 24,573  |

Source: United States Census Bureau

While there are many factors which determine population growth over time, these figures clearly show that communities on the west bank of the river are not experiencing the types of growth being experienced on the east bank. Certainly, one of these factors is the inefficient access provided by the current transportation system.

Inefficient transportation access is also a factor in determining site suitability for industrial development. The availability of qualified employees may be limited if commuting options are lengthy or few. Also, getting raw materials into sites or finished products out and site services access are other factors which can determine the quality of suitable sites for development.



Despite these apparent barriers, industrial site suitability is high in Iberville Parish, and several established companies (Dow Chemical, Shintech, Syngenta, SNF Flowpam and Axiall, among others) have flourished there.

#### **1.4 Hurricane Evacuation**

The geographical location of Louisiana along the coast of the Gulf of Mexico makes it especially vulnerable to the threat of hurricanes and tropical storms. Since 2000, no fewer than 25 tropical systems have threatened the Louisiana Gulf Coast. Many of the most dangerous and damaging hurricanes, including Audrey (1957), Betsy (1965), Andrew (1992), Ivan (2004), Katrina (2005), Rita (2005) and Gustav (2008), have affected Louisiana and caused billions of dollars in property damage and considerable loss of life.

Over 1 million Louisiana citizens live in coastal areas south of I-10 and I-12. When tropical storms threaten, phased evacuations of these coastal parishes takes place either voluntarily or at the Governor's declaration. Several parishes located along US 90 and northward (including Assumption, Lafourche, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary and Terrebonne) could use existing routes LA 70 and LA 3127 to drive north and seek shelter. Both of these routes and other minor collectors serving rural areas flow to LA 1 in order to reach I-10 or to access several of the bridges crossing the Mississippi River.

This evacuation scenario puts significant pressure on Louisiana freeways and arterials in order to make evacuation lengths and times as brief as possible. Additional outlets heading north (and south during return after the disaster has passed) would increase the efficiency of a general evacuation of coastal Louisiana.

#### **1.5 Safety**

A cursory review of crash data along the length of LA 1 from LA 18 in Ascension Parish to I-10 in West Baton Rouge found no abnormal non-intersection accident locations. A couple of intersections were noteworthy for their accident rates, but were not judged to have abnormal rates per DOTD standards.

Providing another north-south highway will serve to reduce traffic on the mainline of LA 1 and thus reduce traffic volumes and accidents rates along the existing route. A higher classification such as a freeway, which have lower accident rates by being access-controlled and limiting the conflicts inherent at intersections, should make travel in the parishes safer.

While not inherently unsafe, one of the crossings of the Mississippi River are two ferries maintained by DOTD crossing between Plaquemine on the west bank and Sunshine on the east bank. On October 20, 1976, the ferry M/V Prince George collided with the tanker SS Frosta at Mile 120.8 AHP (Luling – Destrehan). The ferry capsized with the loss of 76 passengers. Ferry crossings in this stretch of the river where conflicts with larger oceangoing vessels exist create the potential for such an accident to occur.



## 1.6 Legislation

The impetus driving this project is House Concurrent Resolution (HCR) 100 of the Regular Session of the 2014 Louisiana Legislature. It urges DOTD to perform a feasibility study on this proposal based on the following:

- Improvements to LA 1 and LA 3127 have been on the drawing board for years;
- An alternate route to US 61 and I-10 is needed due to flooding during Hurricane Isaac;
- An additional Mississippi Bridge crossing in Iberville Parish opens up industrial development and movement of workers;
- Increased accessibility and traffic relief to I-10 for those commuting to the west bank, west towards Lafayette and relieve traffic movement towards Nicholson Drive and LSU; and
- Offers compelling alternative to a bypass around Baton Rouge.

In order to accomplish this task, the Legislature has provided through Capital Outlay \$1.65 Million for planning, design, rights-of-way, utilities and construction to date with additional authorization up to \$20,000,000 total. This Implementation Plan is being accomplished through and by funding provided by Ascension and Iberville Parish Governments.

## 1.7 Other Projects and Proposals

The LA 1 – I-10 Connector is an arterial highway on new alignment in West Baton Rouge Parish to connect existing LA 1 in Brusly to I-10 via the existing LA 415 Interchange. The objective of this proposed project is to alleviate congestion on LA 1 by providing a highway connection to the next existing interchange west on I-10. An Environmental Assessment was prepared and a Finding of No Significant Impact approved by FHWA on April 11, 2007. Alternative 4 was selected for advancement in project development. The project is awaiting additional funding for further studies.

The Baton Rouge Loop Project is a project to create a circumferential access-controlled highway to bypass the City of Baton Rouge. A Tier 1 Environmental Impact Statement (EIS) is being developed by FHWA/DOTD/CAEA and is being reviewed for comments. A Record of Decision is required on the Tier 1 EIS before a detailed Tier 2 EIS on a lone selected alternative can be prepared to advance project development.

In early 2015, DOTD presented to the Louisiana Transportation Authority an unsolicited Public-Private Partnership proposal from AECOM, Inc., for the Baton Rouge Urban Renewal and Mobility Plan (BUMP), a toll road to connect I-10 on the west bank to the underutilized US 190 Mississippi River Bridge and upgrade the existing US190/US 61 corridor (Airline Highway) with a free flow freeway ending on new alignment near Pecue Lane on I-10 on the east bank.



## 1.8 Discussion of Logical Termini and Independent Utility

Federal regulations at 23 CFR 771 require:

*In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS or finding of no significant impact (FONSI) shall:*

- (1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;*
- (2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and*
- (3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.*

As previously mentioned in Section 1.1, the scope of improvements proposed are based on two studies. It is proposed that the I-10 connection to the new Mississippi River crossing in Iberville Parish be based on the corridor evaluated during the Baton Rouge Loop Tier 1 EIS, which consists of South Corridor segments S1, S2 and S12, which begins at I-10 in West Baton Rouge Parish and ends at LA 30 in Ascension Parish.

From the point where this alignment would cross existing LA 1 southward to I-10, the scope of improvements would be as included in the DOTD West Bank Turnpike Feasibility Study. These potential improvements include:

- Construction of a new freeway along existing LA 1 south of Plaquemine
- Construction of a new freeway along LA 1 between White Castle and Donaldsonville
- Bypass of White Castle on new alignment
- Donaldsonville Bypass to LA 70/LA 3127 intersection
- Upgrade LA 70 to freeway through the Sunshine Bridge
- Proposed direct freeway connection to new interchange at I-10

Based on the results of this study, the logical termini to be carried into the documentation required by NEPA can be determined upon initiation of Stage 1 studies.

The proposed action has independent utility in the sense that it does not depend on whether any other traffic improvements are made. The proposed action does not restrict any alternatives for other foreseeable transportation improvements.

## Chapter 2: Existing Conditions and Affected Environment

### 2.1 Social Environment

The project study area is located in southeast Louisiana on the west bank of the Mississippi River opposite East Baton Rouge and Ascension Parishes and on the east bank at Plaquemine Point near Sunshine and in St. James Parish from the Sunshine Bridge to I-10. In contrast to most of its east bank neighbors, the parishes of Iberville and West Baton Rouge are more rural in nature, with few communities with high population density.

Tables 2.1 and 2.2 provides a general overview of the population trends and demographics of the affected parishes and project area:

Table 2.1 General Census Data

| Community        | 2000      | 2010      | 2013-14<br>(Estimated) | % Change |         |
|------------------|-----------|-----------|------------------------|----------|---------|
|                  |           |           |                        | 2000-10  | 2010-14 |
| Louisiana        | 4,468,976 | 4,533,479 | 4,649,676              | 1.4      | 2.4     |
| Ascension Parish | 76,627    | 107,194   | 117,029                | 28.5     | 8.4     |
| Donaldsonville   | 7,605     | 7,436     | 7,473                  | -2.2     | 0.5     |
| Iberville Parish | 33,320    | 33,407    | 33,327                 | 0.3      | -0.2    |
| Plaquemine       | 7,064     | 7,119     | 7,046                  | 0.8      | -1.0    |
| White Castle     | 1,946     | 1,883     | 1,856                  | -3.9     | -1.5    |
| West Baton Rouge | 21,601    | 23,788    | 25,085                 | 9.2      | 5.2     |
| Port Allen       | 5,278     | 5,180     | 5,143                  | -1.9     | -0.8    |
| Brusly           | 2,020     | 2,589     | 2,706                  | 22.0     | 4.3     |
| Addis            | 2,238     | 3,593     | 4,431                  | 37.7     | 18.9    |

Source: U.S. Department of Commerce, U.S. Census Bureau.

While Ascension Parish as well as most of West Baton Rouge continue growth exceeding the growth of the State of Louisiana, several communities on the west bank show lackluster or negative growth in population. These include Plaquemine, White Castle and Donaldsonville on the southern end of the project area, as well as Iberville Parish as a whole. While minority populations in the study area are better balanced than that of the State, Donaldsonville, Plaquemine, White Castle and Port Allen have a high percentage minority population, with Black or African American comprising the largest minority percentage.



Table 2.2: Population Demographics by Race

| Community             | 2010*/2013<br>Population | White        |             | Black/African American |             | Other      |            |
|-----------------------|--------------------------|--------------|-------------|------------------------|-------------|------------|------------|
|                       |                          | Population   | %           | Population             | %           | Population | %          |
| Louisiana             | 4,629,284                | 2,759,053    | 59.6        | 1,499,888              | 32.4        | 370,343    | 8.0        |
| Ascension Parish      | 117,029                  | 81,920       | 70.0        | 26,683                 | 22.8        | 8,426      | 7.2        |
| <i>Donaldsonville</i> | <i>7,436</i>             | <i>1,673</i> | <i>22.5</i> | <i>5,651</i>           | <i>76.0</i> | <i>112</i> | <i>1.5</i> |
| Iberville Parish      | 33,438                   | 16,050       | 48.0        | 16,284                 | 48.7        | 1,103      | 3.3        |
| <i>Plaquemine</i>     | <i>7,119</i>             | <i>3,246</i> | <i>45.6</i> | <i>3,631</i>           | <i>51.0</i> | <i>242</i> | <i>3.4</i> |
| <i>White Castle</i>   | <i>1,883</i>             | <i>426</i>   | <i>22.6</i> | <i>1,446</i>           | <i>76.8</i> | <i>11</i>  | <i>0.6</i> |
| West Baton Rouge      | 24,555                   | 13,773       | 57.9        | 9,016                  | 37.9        | 999        | 4.2        |
| <i>Port Allen</i>     | <i>5,180</i>             | <i>2,040</i> | <i>39.4</i> | <i>3,004</i>           | <i>58.0</i> | <i>136</i> | <i>2.6</i> |
| <i>Brusly</i>         | <i>2,589</i>             | <i>1,885</i> | <i>72.8</i> | <i>665</i>             | <i>25.7</i> | <i>39</i>  | <i>1.5</i> |
| <i>Addis</i>          | <i>3,593</i>             | <i>2,734</i> | <i>76.1</i> | <i>826</i>             | <i>23.0</i> | <i>33</i>  | <i>0.9</i> |

Source: U.S. Department of Commerce, U.S. Census Bureau \*2010 Data in italics where 2009-13 American Community Survey data was unavailable.

## 2.2 Community Characteristics

The project area along LA 1 has a generally rural character with suburban aspects within the communities of Port Allen, Brusly, Addis, Plaquemine, White Castle and Donaldsonville. Outside of these cities and towns, farms and general agriculture are the predominant developed land use. Petrochemical and industrial sites are located along the Mississippi River in order to take advantage of the domestic and international maritime corridor. Dow Chemical is the largest employer in Iberville parish, and several other companies together employ over 3,600 employees in the industrial sector. See Exhibit B for a location of community resources.

Beyond the river, the LA 1 corridor, and the spider web of roadways off of this corridor, farmland gives way to beautiful marshes along the many bayous in the western portion of the project area. This provides many recreational opportunities, such as fishing, boating and hunting.

### 2.2.1 Healthcare Facilities

There are two hospitals in the project area – Ochsner Medical Complex in Plaquemine and Prevost Memorial Hospital in Donaldsonville. The limited availability of hospitals on the west bank are supplemented by the numerous facilities on the east bank, such as Our Lady of the Lake Regional Medical Center, Baton Rouge General Medical Hospital, Woman’s Hospital and St. Elizabeth’s Hospital.

### 2.2.2 Education

The communities in the project area have ample elementary, middle and high schools available for primary and secondary educational opportunities. However, post-secondary educational opportunities are mainly available in Baton Rouge. These include Louisiana State University, Southern University, and Baton Rouge Community College.

### 2.2.3 Police Protection

Each community within the project area has its own police department. Additionally, every parish in the area has a sheriff's office.

### 2.2.4 Fire Protection

Each community within the project area is served by a municipal or volunteer fire department.

### 2.2.5 Housing

Table 2.3 provides data on housing in the project area.

Table 2.3: Housing Characteristics

| Community        | Total Housing Units | Owner-Occupied |      | Renter-Occupied |      | Vacant  |      | Median Value of OOU |
|------------------|---------------------|----------------|------|-----------------|------|---------|------|---------------------|
|                  |                     | Units          | %    | Units           | %    | Units   | %    |                     |
| Louisiana        | 1,964,981           | 1,162,299      | 59.2 | 566,061         | 28.8 | 236,621 | 12.0 | \$138,900           |
| Ascension Parish | 40,784              | 30,542         | 74.9 | 7,248           | 17.8 | 2,994   | 7.3  | \$167,400           |
| Donaldsonville   | 3,011               | 1,612          | 53.5 | 1,069           | 35.5 | 330     | 11.0 | \$108,300           |
| Iberville Parish | 12,707              | 8,333          | 65.6 | 2,739           | 21.5 | 1,635   | 12.9 | \$ 93,300           |
| Plaquemine       | 2,995               | 1,839          | 61.4 | 867             | 28.9 | 289     | 9.7  | \$ 98,600           |
| White Castle     | 757                 | 368            | 48.6 | 313             | 41.4 | 76      | 10.0 | \$ 88,200           |
| West Baton Rouge | 9,324               | 6,424          | 68.9 | 2,264           | 24.3 | 636     | 6.8  | \$141,900           |
| Port Allen       | 2,206               | 1,369          | 62.1 | 699             | 31.7 | 138     | 6.2  | \$108,600           |
| Brusly           | 989                 | 790            | 79.9 | 149             | 15.1 | 50      | 5.0  | \$205,700           |
| Addis            | 1,441               | 981            | 68.1 | 352             | 24.4 | 108     | 7.5  | \$136,400           |

Source: U.S. Department of Commerce, U.S. Census Bureau, 2010 Decennial Census, 2009-13 American Community Survey





Owner-occupied housing in the project area is generally above (with the exceptions of Donaldsonville and White Castle) and vacant housing units is below the State average. However, median owner-occupied home values in Iberville Parish were substantially below the State average.

### **2.2.6 Recreational Resources**

Bordering the project area to the west is the Atchafalaya River Basin, the largest wetland area in the United States. It contains sprawling swamps and marshes interlaced with many bayous and canals. It offers freshwater fishing, hunting, bird watching and other outdoor recreational activities.

While there are no official bicycle or pedestrian facilities in the project area, there are some suitable bicycle routes outlined by LaDOTD in their Bicycle Suitability Map (2012):

- River Road (LA 988, LA 1 and LA 405)
- Plaquemine to Grosse Tete (via LA 75 and LA 77)
- White Castle west to Morgan City (via LA 993/404 and LA 75)

While there are no bicycle paths, these interconnected routes are favorite routes for local clubs.

In accordance with LaDOTD Complete Streets Policy (2010) a comprehensive, integrated and connected transportation network is envisioned which includes bicyclists and pedestrians. Provisions for all users should be integrated into the planning process which utilizes context sensitive solutions to provide safety, mobility and accommodation for users.

## **2.3 Economic Environment**

Since the 19<sup>th</sup> century, agriculture has been the backbone of the economy of the west bank parishes. The dominant crop was sugarcane, and the social and economic system of the area was woven around its planting, growth, harvest and granulation. While the total economies of the parishes have diversified with the passing of time, agriculture is still important to their economies and sugarcane is their largest cash crop.

Table 2.4 provides a highlight and summary of agricultural production.

Table 2.5 provides labor force statistics for parishes in the project area.

Table 2.6 provides employment data by industry category for the project area.

Consistently, educational services and health care outpaced State growth throughout the project area. Donaldsonville was able to increase its workforce while lowering their unemployment rate. Iberville Parish and its communities were consistently above the State rate of unemployment, with increases in educational services and health care employment able to balance losses in manufacturing and retail trade. West Baton Rouge was able to keep unemployment below the State average, with Addis showing a reduction in unemployment, and able to balance losses in retail trade with gains in educational services and health care.

Table 2.4: Agricultural Commodities Produced (in dollars)

| Product              | Louisiana        | Ascension     | Iberville     | West Baton Rouge |
|----------------------|------------------|---------------|---------------|------------------|
| Forestry             | \$ 878,643,611   | \$ 721,756    | \$ 335,677    | \$ 27,943        |
| Feed Grains          | \$ 337,326,338   |               | \$ 1,599,458  | \$ 207,987       |
| Fruits               | \$ 36,460,502    | \$ 18,750     |               |                  |
| Hay                  | \$ 145,729,499   | \$ 190,000    | \$ 1,224,000  | \$ 680,000       |
| Nursery Crops        | \$ 107,686,500   | \$ 175,000    | \$ 5,100,000  |                  |
| Pecans               | \$ 17,373,914    | \$ 89,050     | \$ 476,000    | \$ 584,450       |
| Rice                 | \$ 492,384,445   |               |               | \$ 543,059       |
| Soybeans             | \$ 988,139,472   | \$ 2,459,160  | \$ 9,162,259  | \$ 6,742,570     |
| Sugarcane            | \$ 440,764,545   | \$ 16,609,497 | \$ 41,698,105 | \$ 16,191,813    |
| Vegetables           | \$ 76,094,155    | \$ 349,712    |               | \$ 700,799       |
| Wheat                | \$ 63,447,670    |               | \$ 146,139    | \$ 539,382       |
| Crawfish (Farm)      | \$ 172,070,595   |               | \$ 2,187,000  | \$ 459,000       |
| Freshwater Fisheries | \$ 18,943,623    |               | \$ 198,367    |                  |
| Marine Fisheries     | \$ 328,665,448   |               |               | \$ 53,444        |
| Alligators           | \$ 10,843,500    | \$ 31,875     | \$ 214,500    | \$ 13,125        |
| Hunting Leases       | \$ 96,255,043    | \$ 114,000    | \$ 3,665,000  | \$ 712,500       |
| Animal Enterprises   | \$ 2,185,826,793 | \$ 15,413,602 | \$ 16,602,817 | \$ 13,617,465    |

Source: LSU Agricultural Center, for the year 2014

Table 2.5: Workforce Estimates

| Community        | Civilian Labor Force |           |          | Unemployment Rate (%) |      |         |
|------------------|----------------------|-----------|----------|-----------------------|------|---------|
|                  | 2010                 | 2013      | % Change | 2010                  | 2013 | Differ- |
| Louisiana        | 2,116,794            | 2,187,544 | 3.2      | 4.7                   | 5.4  | +0.7    |
| Ascension Parish | 51,623               | 55,908    | 5.9      | 3.6                   | 4.1  | +0.5    |
| Donaldsonville   | 3,052                | 3,352     | 8.9      | 7.5                   | 4.3  | -3.2    |
| Iberville Parish | 13,733               | 14,270    | 3.8      | 2.7                   | 4.3  | +1.6    |
| Plaquemine       | 3,123                | 3,179     | 1.8      | 1.8                   | 2.9  | +1.1    |
| White Castle     | 763                  | 835       | 8.6      | 9.0                   | 12.1 | +3.1    |
| West Baton Rouge | 11,970               | 12,245    | 3.7      | 5.1                   | 4.0  | -1.1    |
| Port Allen       | 2,552                | 2,619     | 2.6      | 3.5                   | 3.7  | +0.2    |
| Brusly           | 1,300                | 1,297     | 0.0      | 2.1                   | 2.2  | +0.1    |
| Addis            | 1,901                | 2,003     | 5.1      | 8.0                   | 6.4  | -1.6    |



Table 2.6 Employment By Industry Category

(Louisiana figure in 1,000's)

| Community | Agriculture* |      |       | Manufacturing |       |       | Retail Trade |       |       | Education/Health Care† |        |      |
|-----------|--------------|------|-------|---------------|-------|-------|--------------|-------|-------|------------------------|--------|------|
|           | 2010         | 2013 | %Δ    | 2010          | 2013  | %Δ    | 2010         | 2013  | %Δ    | 2010                   | 2013   | %Δ   |
| Louisiana | 86.9         | 92.6 | 6.3   | 164.9         | 161.1 | -2.4  | 233.9        | 231.2 | -1.2  | 444.0                  | 469.2  | 5.4  |
| Ascension | 492          | 629  | 21.8  | 7,578         | 7,429 | -2.0  | 5,328        | 5,363 | 0.7   | 9,476                  | 11,002 | 13.9 |
| Iberville | 328          | 454  | 27.8  | 2,197         | 1,811 | -21.3 | 1,443        | 1,282 | -12.6 | 2,169                  | 2,498  | 13.2 |
| West BR   | 194          | 155  | -25.2 | 1,417         | 1,682 | 15.8  | 1,081        | 748   | -44.5 | 2,490                  | 2,850  | 12.6 |

Source: U.S. Department of Commerce, U.S Census Bureau, American Fact Finder

\* includes forestry, fishing and hunting, and mining

† includes educational services, health care and social assistance

Table 2.7 lists the top employers in each Parish:

Table 2.7: Top Employers Within Project Area Parishes

|    | Ascension                    |       | Iberville                             |       | West Baton Rouge             |     |
|----|------------------------------|-------|---------------------------------------|-------|------------------------------|-----|
| 1  | BASF                         | 1,000 | Dow Chemical Co.                      | 2,200 | Scaffold Rental/Erection     | 460 |
| 2  | St. Elizabeth Hospital/Phys. | 750   | LA Dept. of Public Safety/Corrections | 1,200 | Turner Indus. Piping         | 375 |
| 3  | Ascension Parish             | 744   | Syngenta, Inc.                        | 885   | Petrin Corporation           | 375 |
| 4  | Kellogg Company              | 703   | Axiall, LLC                           | 393   | Trinity Marine               | 370 |
| 5  | Wal-Mart Stores              | 700   | Maintenance Enterprise II, Inc.       | 380   | Wal-Mart Stores              | 300 |
| 6  | Shell Chemical               | 600   | Iberville Parish                      | 315   | Placid Refining Co.          | 200 |
| 7  | Volks Construct.             | 600   | Crown Enterprises                     | 250   | BASF Catalysts LLC           | 157 |
| 8  | Field Hospitality Group LLC  | 550   | LA Department of Military Affairs     | 250   | The Martin-Brower Co. LLC    | 138 |
| 9  | LeBlanc's Stores             | 520   | LSU System                            | 205   | West BR Parish               | 125 |
| 10 | Community Health Care, Inc.  | 500   | National Institute Of Health          | 167   | Beard Construction Group LLC | 100 |

Source: Baton Rouge Chamber of Commerce

Table 2.8 provides the Median Household Income and estimated percentage of all ages in poverty for the project area:

Table 2.8: Median Household Income and Estimated Poverty

| Community        | 2000            |                 | 2010            |                 | 2013            |                 | 2000-13<br>% Change |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------|-----------------|
|                  | Income<br>(MHI) | % in<br>Poverty | Income<br>(MHI) | % in<br>Poverty | Income<br>(MHI) | % in<br>Poverty | Income<br>(MHI)     | % in<br>Poverty |
| Louisiana        | \$32,566        | 17.3            | \$43,445        | 18.8            | \$44,874        | 20              | 27.4                | +2.7            |
| Ascension Parish | \$44,288        | 10.5            | \$63,716        | 12.8            | \$69,070        | 11.1            | 35.9                | +0.6            |
| Donaldsonville   | \$24,084        |                 | \$31,813        |                 | \$34,093        |                 | 29.4                |                 |
| Iberville Parish | \$29,089        | 20.4            | \$42,215        | 22.7            | \$45,368        | 25.7            | 35.9                | +5.3            |
| Plaquemine       | \$28,364        |                 | \$33,832        |                 | \$41,798        |                 | 32.1                |                 |
| White Castle     | \$19,435        |                 | \$23,059        |                 | \$23,826        |                 | 18.4                |                 |
| West Baton Rouge | \$37,117        | 14.0            | \$47,298        | 15.0            | \$50,926        | 16.4            | 27.1                | +2.4            |
| Port Allen       | \$30,254        |                 | \$38,250        |                 | \$43,843        |                 | 31.0                |                 |
| Brusly           | \$47,619        |                 | \$57,798        |                 | \$78,512        |                 | 39.3                |                 |
| Addis            | \$36,188        |                 | \$53,854        |                 | \$46,777        |                 | 22.6                |                 |

Source: US Department of Commerce, U.S. Census Bureau, American Fact Finder

Since 2000, all of the parishes have experienced growth near or above that for the State. Median Household Income growth has been particularly slow in White Castle. Iberville Parish, despite income growth, has a persistent poverty problem which has exceeded the State poverty rate of 20% for the years under study.

## 2.4 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, issued February 11, 1994, requires Federal agencies to achieve environmental justice by identifying and addressing disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

The U. S. Department of Transportation (USDOT) Order 5610.2(a) sets forth policy to consider environmental justice principles in all programs, policies, and activities. The order reaffirms USDOT commitment to promote the principles of environmental justice by fully considering environmental justice principles throughout planning and decision-making processes in the development of programs, policies, and activities, using the

principles of the National Environmental Policy Act of 1969 (NEPA), Title VI of the Civil Rights Act of 1964, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and other USDOT statutes, regulations and guidance that address or affect infrastructure planning and decision-making.

On June 14, 2012, FHWA issued their Order 6640.23A to affirm their policy to ensure nondiscrimination in Federally-funded activities and to identify and prevent discriminatory effects by actively administering its programs, policies, and activities to ensure that social impacts to communities and people are recognized early and continually throughout the transportation decisionmaking process.

In order to comply with these policies and orders at this early stage of project planning, Table 2.9 provides information relative to identifying low-income and minority populations in the project area so that further development of alternatives during the process are so informed. While not part of the Executive Order, included is information relative identifying the elderly population.

Table 2.9 Minority, Low-Income and Elderly Populations

| Community         | Population | % Minority | % 65 and Older | Median Household Income | % Poverty |
|-------------------|------------|------------|----------------|-------------------------|-----------|
| Louisiana         | 4,629,284  | 40.4       | 13.3           | \$ 44,874               | 19.1      |
| Ascension Parish  | 114,432    | 30.0       | 9.9            | \$ 69,070               | 12.3      |
| Census Tract 309  |            |            |                | \$ 27,967               | 36.8      |
| Block Group 1     | 1,927      | 92.7       | 8.3            |                         |           |
| Block Group 2     | 1,075      | 62.0       | 13.0           |                         |           |
| Block Group 3     | 1,163      | 41.3       | 17.5           |                         |           |
| Census Tract 310  |            |            |                | \$ 44,558               | 22.9      |
| Block Group 1     | 1,281      | 52.1       | 9.8            |                         |           |
| Block Group 2     | 2,784      | 74.4       | 11.8           |                         |           |
| Block Group 3     | 1,453      | 58.6       | 14.6           |                         |           |
| Iberville Parish  | 33,438     | 52.0       | 13.4           | \$ 45,368               | 19.2      |
| Census Tract 9527 |            |            |                | \$ 55,283               | 7.2       |
| Block Group 2     | 1,028      | 29.7       | 19.4           |                         |           |
| Block Group 3     | 2,018      | 66.2       | 8.5            |                         |           |
| Block Group 4     | 1,589      | 13.8       | 6.7            |                         |           |

Table 2.9 Minority, Low-Income and Elderly Populations (continued)

| Community            | Popula-<br>tion | % Minority | % 65 and<br>Older | Median<br>Household<br>Income | % Poverty |
|----------------------|-----------------|------------|-------------------|-------------------------------|-----------|
| Census Tract 9531.01 |                 |            |                   | \$ 33,827                     | 26.4      |
| Block Group 1        | 1,673           | 39.0       | 19.1              |                               |           |
| Block Group 2        | 2,769           | 66.2       | 14.1              |                               |           |
| Block Group 3        | 1,660           | 72.2       | 12.5              |                               |           |
| Census Tract 9531.02 |                 |            |                   | \$ 45,263                     | 21.9      |
| Block Group 1        | 559             | 62.1       | 12.2              |                               |           |
| Block Group 2        | 1,890           | 70.2       | 13.9              |                               |           |
| Census Tract 9529    |                 |            |                   | \$ 36,509                     | 22.7      |
| Block Group 1        | 1,171           | 82.8       | 12.6              |                               |           |
| Block Group 2        | 2,409           | 34.0       | 11.5              |                               |           |
| Block Group 3        | 1,321           | 63.2       | 13.3              |                               |           |
| Census Tract 9530    |                 |            |                   | \$ 46,351                     | 26.0      |
| Block Group 2        | 539             | 73.7       | 13.0              |                               |           |
| Block Group 3        | 860             | 54.0       | 16.6              |                               |           |
| Census Tract 9532    |                 |            |                   | \$ 57,012                     | 18.4      |
| Block Group 1        | 1,236           | 46.8       | 12.4              |                               |           |
| St. James Parish     | 21,700          | 52.0       | 14.4              | \$ 55,443                     | 16.4      |
| Census Tract 405     |                 |            |                   | \$ 33,516                     | 23.9      |
| Block Group 2        | 1,429           | 93.9       | 12.0              |                               |           |
| Census Tract 404     |                 |            |                   | \$ 31,313                     | 39.9      |
| Block Group 1        | 892             | 80.4       | 11.5              |                               |           |
| Block Group 2        | 867             | 69.0       | 12.7              |                               |           |

Table 2.9 Minority, Low-Income and Elderly Populations (continued)

| Community               | Popula-<br>tion | % Minority | % 65 and<br>Older | Median<br>Household<br>Income | % Poverty |
|-------------------------|-----------------|------------|-------------------|-------------------------------|-----------|
| West Baton Rouge Parish | 24,555          | 42.1       | 11.8              | \$ 50,926                     | 14.6      |
| Census Tract 203        |                 |            |                   | \$ 54,784                     | 12.2      |
| Block Group 1           | 1,161           | 35.1       | 9.6               |                               |           |
| Census Tract 202        |                 |            |                   | \$ 44,507                     | 19.9      |
| Block Group 2           | 1,685           | 66.4       | 9.0               |                               |           |
| Census Tract 204.02     |                 |            |                   | \$ 78,567                     | 6.4       |
| Block Group 1           | 3,157           | 22.1       | 9.5               |                               |           |
| Block Group 2           | 2,296           | 18.8       | 8.7               |                               |           |
| Census Tract 204.01     |                 |            |                   | \$ 44,102                     | 22.2      |
| Block Group 1           | 2,335           | 35.9       | 12.2              |                               |           |
| Block Group 2           | 2,529           | 49.1       | 9.0               |                               |           |

Source: United States Department of Commerce, U. S. Census Bureau, American Fact Finder, 2009-13 American Community Survey

One large pocket consisting of four census tracts (Ascension 309 and 310, St. James 404 and 405) with high percentile minority populations are located on both sides of the Mississippi in the vicinity of Donaldsonville/McCall and the Sunshine Bridge. Eight of the nine block groups within these tracts have a high percentage of minority populations and three of the four tracts in this area have median household incomes well below the State and Parish levels.

Between McCall and Plaquemine, higher percentages of minorities and lower median income levels are found in block groups adjacent to the River (Iberville 9530-2, 9529-1, 9531.02-2, and 9531.02-1) and in and adjacent to the City of Plaquemine (Iberville 9527-3, 9531.01-2 and 9531.01-3). Census Tracts with incomes well below the medians for the State and Parish are located adjacent and south of Plaquemine (9529 and 9531.01). See Exhibit C for map of Census Tract boundaries.

## 2.5 Land Use

Viewing the project area from satellite photography, the layout of land tracts along the Mississippi River and its former tributaries as developed by the French arpent land division method is striking. Along the river, as





well as Bayou Plaquemine and Bayou Lafourche, thin land lots are laid out in multiples of the French arpent (about 192 feet in length) and then fade radially into the marshlands of the Atchafalaya Basin.

The project area in West Baton Rouge is a checkerboard of linear farm tracts interspersed with residential development and retail business establishments along LA 1. Light industrial development is extant in the strip of land south of I-10 and north of the Intracoastal Waterway. To the west, the landscape is mainly palustrine forested and scrub/shrub wetland into the Basin. The communities of Port Allen, Brusly and Addis make up the residential development along LA 1.

At the West Baton Rouge – Iberville Parish line, heavy industrial development associated with Dow Chemical and the Bayou Choctaw Strategic Petroleum Reserve/Petrologistics sites dominates the mixed cultivated agricultural land and palustrine wetlands noted above, with wetlands extending to the east of Dow Chemical into Manchac/Australia Point. The City of Plaquemine is located just to the south of the industrial area, surrounded by cultivated farms along Bayou Plaquemine.

South of Plaquemine continues the rural landscape of agricultural lands, with a strip of palustrine forested wetlands noted along Bayou LaButte extending westward into the Basin. Heavy industrial development associated Shintech and Axiall is also part of the landscape along the river extending towards Point Pleasant.

On the east bank, Plaquemine Point is scattered by palustrine forested wetland mixed with hayfields and cultivated farmland to LA 30, where the strip of rural residential development known as Sunshine extends to the Mississippi River.

From White Castle to Donaldsonville, cultivated agricultural development dominates the landscape but for an island of palustrine wetlands past the 40 Arpent line at the Iberville – Ascension Parish line. From the parish line south, agricultural development again is prominent, with the City of Donaldsonville and a few heavy industrial developments also extant. In St. James Parish, the landscape is palustrine wetlands from the Sunshine Bridge to I-10.

### **2.5.1 Farmlands**

In response to the millions of acres of farmland which were being converted annually in the early 1980's, Congress passed the Farmland Protection Policy Act (Public Law 98-98, Title XV, Subtitle I, Section 1539-1549) as a part of the Agriculture and Food Act of 1981. It is intended to minimize the impact that Federal programs have on the unnecessary and irreversible conversion of farmlands to non-agricultural uses. It is administered by the U.S. Department of Agriculture, Natural Resources Conservation Service.

Table 2.10 provides information on production acreage for the parishes in the study area:



Table 2.10 Production Acreage for Top Crops

| Rank | Ascension  |         | Iberville   |         | West Baton Rouge |         |
|------|------------|---------|-------------|---------|------------------|---------|
|      | Crop       | Acreage | Crop        | Acreage | Crop             | Acreage |
| 1    | Sugarcane  | 16,667  | Sugarcane   | 36,118  | Sugarcane        | 14,025  |
| 2    | Soybeans   | 3,600   | Soybeans    | 12,719  | Soybeans         | 9,360   |
| 3    | Hay        | 1,400   | Hay         | 4,500   | Hay              | 2,500   |
| 4    | Sod        | 410     | Feed Grains | 2,240   | Wheat            | 1,089   |
| 5    | Pecans     | 175     | Pecans      | 1,450   | Pecans           | 1,065   |
| 6    | Vegetables | 33      | Wheat       | 311     | Rice             | 575     |
| 7    | Fruit      | 5       |             |         | Feed Grains      | 287     |
| 8    |            |         |             |         | Vegetables       | 93      |

Source: LSU Agricultural Center, for the year 2014

### 2.5.2 Forestry

While forestry is the largest agricultural industry in Louisiana, with production in excess of \$878 Million in 2014, the three parishes in the project area together produced just over \$1 Million over the same period.

However, the dominant land use on the western side of the project area is the bottomland hardwood forests associated with the Atchafalaya Basin, the nation's largest wetland swamp. At nearly 1 million acres in size, the Basin is one of the country's most important environmental areas and is targeted for conservation by several initiatives. In July 2015, the Nature Conservancy acquired over 5,000 acres in the Pigeon Bay and Flat Lake/ East Grand Lake Water Management Units in their efforts to create a preserve as a part of their Atchafalaya River Basin Initiative. The Louisiana Department of Natural Resources' Atchafalaya Basin Program was established by the Louisiana Legislature in 1998 to coordinate, oversee and provide a funding vehicle for conservation activities in the Basin.

### 2.6 Geology

The entire project area is located in the deltaic plain of the Mississippi River, which stretches from near Angola in West Feliciana Parish to the river delta south of New Orleans in Plaquemines Parish. Because of the broad area and shallow slope in elevation characteristic of the deltaic plain, the river has meandered, or changed course, throughout its history.

Immediately adjacent to the river, meandering and overflowing has created a complex of silty to sandy deposits occurring as the river deposited its alluvial sediment as it continually changed course during the modern

Holocene Period. Historical distributaries, such as Bayou Plaquemine and Bayou Lafourche, created their own silty to clayey deposits.

Beyond the river bank lies back swamp of fine-grained organic clays associated with the Mississippi and Atchafalaya deposits underlying flood basins between the meander belts.

Outside of the Atchafalaya Basin, three soil associations are prevalent. Commerce Association soils are found along the natural levee of the Mississippi River. They are nearly level, somewhat poorly drained loamy soils which are seldom to never flooded. They are excellent soils for cropland, such as sugarcane and soybeans. Found along the natural levee, but at lower elevation, are the Sharkey Association of level, poorly drained clayey soils. They are also good soils for cropland, but require surface drainage systems to control soil wetness. Sharkey-Fausse Association soils are found at the lowest elevations along the natural levee and are subject to flooding. They are level, poorly to very poorly drained clayey soils. This association makes for woodland, wildlife habitat and recreation.

### 2.6.1 Oil and Natural Gas

Since its discovery at the beginning of the 20<sup>th</sup> century, oil and gas exploration and production has been the driver of the economy in Louisiana. The State is ranked seventh in the country in crude oil production at nearly 72 million barrels in 2013 and second in natural gas at nearly 8 billion cubic feet per day, which would rank at tenth among the countries of the world. It's proved oil reserves of 463 million barrels ranks tenth and 22.1 trillion cubic feet fourth in the nation. The 19 operating refineries (second most among the states) are capable of processing 3.3 million barrels of oil per day.

Oil production trends in the State, as in the project area, have declined steadily as shown in Table 2.11. See Exhibit D for oil and gas well locations.

Table 2.11 Oil Production Trends, barrels

| Community        | 1985        | 1995        | 2005       | 2014       | % Decline |
|------------------|-------------|-------------|------------|------------|-----------|
| Louisiana        | 185,637,033 | 125,406,026 | 75,727,355 | 55,423,249 | 70.1      |
| Ascension        | 454,482     | 451,859     | 92,685     | 39,554     | 91.3      |
| Iberville        | 4,453,066   | 1,375,003   | 856,883    | 488,544    | 89.0      |
| West Baton Rouge | 515,972     | 109,907     | 46,077     | 166,833    | 67.7      |

Source: DrillingEdge.com

Despite the recent rebound in production in West Baton Rouge Parish, their production had fallen to a low of 45,550 barrels as recently as 2007.



There are three main fields with multiple well facilities in the project area:

- Port Allen Oil Field between I-10 and the Intracoastal Waterway to the east of Blind Choctaw Bayou in West Baton Rouge Parish
- Bayou Choctaw Field west of Plaquemine and Dow Chemical and east of the Intracoastal Waterway in Iberville Parish
- White Castle Oil Field immediately south of LA 404 west of White Castle and Donaldsonville in Iberville Parish

The Bayou Choctaw Strategic Petroleum Reserve in Iberville Parish stores emergency crude oil in their salt dome caverns. One of four situated along the Gulf Coast region, it has a capacity of 76 million barrels with a maximum drawdown of 550,000 barrels per day. The site is operated and maintained by the U.S. Department of Energy.

Placid Refining Company operates a crude oil refinery in Port Allen north of the project area adjacent to the Mississippi River.

## **2.7 Water Quality**

### **2.7.1 Surface Water Quality**

The project area mainly lies between two large basins associated with the Mississippi River and Atchafalaya Rivers. The Mississippi River is the largest river in the country, with headwaters at Lake Itasca in northern Minnesota and delta at the Gulf of Mexico. Along its 2,320 mile length, it combines with other tributaries to create a watershed which drains all or parts of 31 states and 2 Canadian provinces. The Atchafalaya River forms near the confluence of the Mississippi River and Red River, is 137 miles long but is the fifth largest river on the continent in terms of discharge.

In between the rivers, the landscape is crisscrossed by dozens of natural streams (bayous) and manmade canals. However, a check of the Louisiana Department of Wildlife and Fisheries indicated that no Natural and Scenic Rivers occur within the study area. Likewise, the U.S. National Park Service indicated no National Wild and Scenic Rivers occur within the study area.

Surface waters in Louisiana are assigned or designated uses consistent with national goals identified in the Clean Water Act. The seven designated uses are:

1. Primary Contact Recreation (PCR, ex. swimming)
2. Secondary Contact Recreation (SCR, ex. boating)

3. Fish and Wildlife Propagation (FWP)
  - a. Limited Aquatic Life and Wildlife (LAL)
4. Drinking Water Supply (DWS)
5. Outstanding Natural Resource Waters (ONR)
6. Oyster Propagation (OYS)
7. Agriculture (AGR)

Analytical testing results are used to determine the support for each designated use; i.e., “Fully Supporting” indicates good water quality and “Not Supporting” indicates bad water quality.

Table 2.12 provides information relative to the surface water quality for water features in the project area.

### **2.7.2 Groundwater**

The Louisiana Department of Environmental Quality (LaDEQ), Business Community Outreach and Incentives Division, tests approximately 200 water wells on a 3-year rotating basis as a part of the Aquifer Sampling and Assessment Program, or ASSET. Each well is sampled for water quality, metals, nutrients, volatile organic compounds, semi-volatile organic compounds, pesticides, and Polychlorinated Biphenyls (PCBs).

The project area is located in the Mississippi River Alluvial Aquifer. Three wells in Iberville Parish were last tested in 2008 and results were analyzed against Federal Primary and Secondary the secondary standards for Total Dissolved Solids. Results for Inorganic Data indicated exceedances of the primary standards for Arsenic at two of the well sites and secondary standard exceedances for Iron at all three sites.

### **2.7.3 Drinking Water**

The Safe Water Drinking Act of 1974, as amended, created two programs to help protect vital drinking water resources. These are the Sole Source Aquifer Designation Program and the Wellhead Protection Program.

There are no Sole Source Aquifers as designated by the U. S. Environmental Protection Agency (EPA) which are located in the project area.

There are ten public water systems which participate in the Wellhead Protection Program which is operated by the LaDEQ Business Community Outreach and Incentives Division. These systems have completed a source water assessment and have prepared a contingency plan approved by LaDEQ. These participating systems are as follows:

1. City of Plaquemine, Iberville Parish

Table 2.12 Surface Water Quality Assessment

| Water Body                   | Designated Uses |             |             |             |             |             |             |             | Suspected Cause of Impairment        | Suspected Source of Impairment                             |
|------------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------------------------|--|
|                              | P<br>C<br>R     | S<br>C<br>R | F<br>W<br>P | D<br>W<br>S | O<br>N<br>R | O<br>Y<br>S | A<br>G<br>R | L<br>A<br>L |                                      |  |
| Bayou Lafourche              | N               | F           | N           | F           |             |             |             |             | PCR - Fecal Coliform                 | Treatment Systems, Package Plants or Small Permitted Flows |
| Bayou Lafourche              | N               | F           | N           | F           |             |             |             |             | FWP - Non-native Aquatic Plants      | Introduction of non-native organisms                       |
| Chamberlin Canal             | N               | F           | N           |             |             |             |             |             | PCR – Fecal Coliform                 | Treatment Systems  |
| Chamberlin Canal             | N               | F           | N           |             |             |             |             |             | FWP – Dissolved Oxygen and Turbidity | Agriculture and Unknown Sources                            |
| Bayou Plaquemine             | F               | F           | F           |             |             |             |             |             |                                      |  |
| Intracoastal Waterway        | F               | F           | N           | F           |             |             |             |             | FWP – Sulfates                       | Freshets or Major Flooding                                 |
| Lower Grand and Belle Rivers | F               | F           | N           |             |             |             |             |             | FWP – Sulfates                       | Natural Sources or Drought                                 |

Source: Louisiana Department of Environmental Quality, Final 2014 Louisiana Water Quality Integrated Report

(F = Fully Supports, N = Not Supporting)

2. Town of White Castle, Iberville Parish
3. City of Port Allen, West Baton Rouge Parish
4. West Baton Rouge Public Utilities
5. West Baton Rouge Waterworks District #1 (Addis)
6. West Baton Rouge Waterworks District #2
7. West Baton Rouge District #4 – Arboth
8. West Baton Rouge District #4 – Crocodile Inn
9. West Baton Rouge District #4 – Holiday Inn
10. West Baton Rouge District #4 – Section Road/Winterville

## **2.8 Floodplains and Floodways**

Executive Order 11988, Floodplain Management, requires that each agency shall determine whether a proposed action will occur in a floodplain and, for major Federal actions significantly affecting the quality of the human environment, the evaluation required will be included in any statement prepared under the NEPA. This determination is made utilizing maps of the location of the floodplain. Alternatives must be considered to avoid adverse effects and incompatible development in the floodplain. U.S. DOT Order 5650.2 reaffirms their policy to prevent uneconomic, hazardous or incompatible use and development of floodplains and to avoid or minimize impacts of their actions on base floodplains. In order to provide such determination, Flood Insurance Rate Maps (FIRMs) are used to delineate the floodplains and Base Flood Elevations for each floodplain. Exhibits E1, E2 and E3 show the limits of floodplain boundaries.

As would be expected the eastern part of the project area contains minimal flooding risk due to the presence of the Mississippi River levees and is drained to maintain agricultural lands, industrial and residential development. The western part of the project area is more prone to flooding due to the Atchafalaya River Basin. The many bayous and channels running through this area are also prone to overbank flooding, but these floodways are linear in nature and should be bridged or culverted as appropriate to minimize flood flow impacts to adjacent property.

## **2.9 Wetlands**

According to the U.S EPA and the U.S. Army, Corps of Engineers (COE), wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Wetlands generally include swamps, marshes, bogs, and similar areas." The value of wetlands is measured in terms of water filtration and storage, biological diversity, flood control, groundwater recharge and habitat value.

Wetlands are regulated by the Federal government under the Clean Water Act. Section 401 of the Clean Water Act requires that an applicant for a federal license or permit provide a certification that any discharges from the facility will comply with the act, including water quality standard requirements. Section 404 establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Proposed activities are regulated through a permit review process. An individual permit is required for potentially significant impacts. Exhibit F shows the National Wetland Inventory (NWI) boundaries.

The basic premise of the program is that no discharge of dredged or fill material may be permitted if a practicable alternative exists that is less damaging to the aquatic environment or the nation's waters would be significantly degraded. Alternates must be shown to avoid impacts to wetlands, streams and other aquatic resources, or that potential impacts have been minimized and that compensatory mitigation will be provided for all remaining impacts. In accordance with the EPA and COE definition of what is a wetland, the three main factors in determining if a wetland exists are (1) evidence of inundation or periodic inundation in water, (2) saturated or poorly drained soils, and (3) the prevalence of plants which are adapted to saturated conditions and poorly drained soil.

Based on previous discussions here of soil types and natural and manmade bayous and canals, it is obvious that extensive wetland areas are found in the western portion of the project area bordering the Atchafalaya River Basin. Wetland types present include Palustrine Forested wetlands with scattered areas of Palustrine Emergent and Scrub/Shrub areas at the margins of the forested areas. Other broad areas of wetlands present in the project area include Manchac/Australia Point east of Dow Chemical, those associated with Bayou LaButte into Point Pleasant, a large area at the Iberville-Ascension Parish Line to the north and east of LA 1 beyond the edge of agricultural development and in St. James Parish on the east bank of the Mississippi River.

## **2.10 Threatened and Endangered Species**

The Endangered Species Act of 1973 was designed to protect critically threatened and endangered species from extinction as a "consequence of economic growth and development untampered by adequate concern and conservation." At the Federal level, this program is administered by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration.

In 1984, the Louisiana Natural Heritage Program within the Louisiana Department of Wildlife and Fisheries (LAWLF) was founded with the goal of developing and maintaining a database on rare, threatened and endangered species of plants and animals and natural communities for the State of Louisiana.

Table 2.13 provides a list of species of concern within the parishes in the project area. It is provided here for informational purposes, as consultation with LAWLF has not been initiated.



Table 2.13 Species of Concern by Parish

| Species                        |                              | Status/Rank          |            | Parishes  |
|--------------------------------|------------------------------|----------------------|------------|---|
| Scientific Name                | Common Name                  | State                | Federal    |   |
| Animals                        |                              |                      |            |   |
| Acipenser oxyrinchus desotoi   | Gulf Sturgeon                | Threatened           | Threatened | Ascension   |
| Elanoides forficatus           | American Swallow-tailed Kite | Imperiled - Breeding | Secure     | Iberville   |
| Haliaeetus leucocephalus       | Bald Eagle                   | Endangered           | Delisted   | Ascension, Iberville, St. James, West Baton Rouge |
| Hemidactylium scutatum         | Four-toed Salamander         | Critically Imperiled | Secure     | Ascension   |
| Mustela frenata                | Long-tailed Weasel           | Imperiled/ Secure    | Secure     | St. James   |
| Pandion haliaetus              | Osprey                       | Rare                 | Secure     | Iberville   |
| Potamilus inflatus             | Inflated Heel-splitter       | Threatened           | Threatened | Ascension   |
| Scaphirhynchus albus           | Pallid Sturgeon              | Endangered           | Endangered | Ascension, Iberville, St. James, West Baton Rouge |
| Spilogale putorius             | Eastern Spotted Skunk        | Critically Imperiled | Secure     | Ascension   |
| Sternula antillarum athalassos | Interior Least Tern          | Endangered           | Endangered | Iberville, West Baton Rouge                       |
| Strophitus subvexus            | Southern Creekmussel         | Critically Imperiled | Very Rare  | Ascension   |
| Trichechus manatus             | Manatee                      | Endangered           | Endangered | Ascension, St. James                              |
| Ursus americanus luteolus      | Louisiana Black Bear         | Threatened           | Threatened | Iberville, West Baton Rouge                       |



Table 2.13 Species of Concern by Parish (Continued)

| Species                |                             | Status/Rank           |                   | Parishes  |
|------------------------|-----------------------------|-----------------------|-------------------|-----------|
| Scientific Name        | Common Name                 | State                 | Federal           |           |
| Plants                 |                             |                       |                   |           |
| Asclepias incarnata    | Swamp Milkweed              | Imperiled             | Secure            | St. James |
| Blechnum occidentale   | Sink-hole Fern              | Historical Occurrence | Secure            | Iberville |
| Melanthera nivea       | Snow Melanthera             | Imperiled             | Secure            | Iberville |
| Physostegia correllii  | Correll’s False Dragon-head | Imperiled             | Imperiled         | St. James |
| Thalia dealbata        | Powdery Thalia              | Rare                  | Apparently Secure | Iberville |
| Triphora trianthophora | Nodding Pogonia             | Imperiled             | Apparently Secure | Iberville |

Source: Louisiana Department of Wildlife and Fisheries, Natural Heritage Program

## 2.11 Public Lands

The Section 4(f) of the Department of Transportation Act of 1966 includes a stipulation that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land; and
- The action includes all possible planning to minimize harm to the property resulting from such use; or
- The Administration determines that the use of the property will have a *de minimus* impact

Table 2.14 lists and describes the location of public parks and recreation areas in the project area.

## 2.14 Public Parks

| Parish           | Park Name                               | Location   |
|------------------|---|--|
| Ascension        | Abend Community Park                    | Mt. Bethel Road, Donaldsonville  |
|                  | Lemanville Park                         | LA 18, Donaldsonville  |
|                  | Modeste Park                            | Butler's Road, Modeste   |
| Iberville        | Bayou Goula Park                        | Cpl Herman Brown Jr. Street, Bayou Goula                                 |
|                  | Belleville District Park                | Bellevue Drive, Plaquemine   |
|                  | Burton Park                             | Alice Street, White Castle   |
|                  | Crescent Bend Park                      | Bayou Road @ Crescent Lane, Crescent                                     |
|                  | East Iberville District Park            | Monticello Drive, St. Gabriel  |
|                  | Herman Graham Park                      | Bayou Road (LA 3066), Plaquemine   |
|                  | Joe Davis Barrow Street Park            | Barrow Street, Plaquemine  |
|                  | Murrell Park                            | Shady Lane, White Castle   |
|                  | North Plaquemine Park                   | LA 988, Plaquemine   |
|                  | Plaquemine City Park                    | Ferdinand Street between Bellevue Drive and Sherburne Street, Plaquemine |
|                  | Point Pleasant Park & Recreation Center | LA 405 (River Road)  |
|                  | Sciortino Park                          | White Castle   |
|                  | Williams Park                           | William Road, St. Gabriel  |
| West Baton Rouge | Alexander Park                          | West St. Francis @ Elaine Street, Brusly                                 |
|                  | Joe Myhand Park                         | Laws Road, Addis   |
|                  | William & Lee Park                      | Louisiana Avenue, Port Allen   |
|                  | Rivault Park                            | Base of the I-10 Bridge, Port Allen                                      |

Source: Parish of Ascension Recreation & Culture, Iberville Parks & Recreation Department, and West Baton Rouge Parks & Recreation Department

No Wildlife or Waterfowl Refuges are located in the project area.

## 2.12 Cultural Resources

The National Historic Preservation Act of 1966, as amended, requires federal agencies to take into account the effects of its actions on historic properties by identifying historic properties, assessing adverse effects and resolving those adverse effects. The process is initiated by the federal agency, and includes comment and input from stakeholders at the local and State levels, as well as the Advisory Council on Historic Preservation. Affects or impacts to properties eligible for the National Register of Historic Places are also protected by Section 4(f) of the Department of Transportation Act of 1966.

At the State and tribal level, the leadership of preservation efforts is bestowed to the State (or Tribal) Historic Preservation Officer, whose office is located in the Louisiana Office of Culture, Recreation and Tourism.

Table 2.15 provides list of properties and sites listed on the Register in the project area. Exhibit G shows the location of properties listed on the National Register of Historic Places.

The Sunshine Bridge on LA 70 in St. James Parish (Recall Number 203760), built in 1964, is a Warren through truss which is eligible for the Register under Criterion C: Design/Engineering for its significance as an important example of its distinctive type and retains good integrity. Since the bridge will carry the proposed expressway across the Mississippi River, care must be taken not to substantially modify the structure in a way that such integrity would be lost. Also, the two parallel structures on LA 1 crossing the Intracoastal Waterway (Recall Numbers 055240 and 055250) are eligible for the Register under Criterion C.

Table 2.15 National Register of Historic Places Properties and Sites

| Parish    | Resource   | Location   |
|-----------|--|--|
| Ascension | Ascension Parish Courthouse, Jail and Louisiana Square | Donaldsonville, bounded by Chetmaches St., Railroad Ave, Nicholls and Opelousas Streets.                   |
|           | Donaldsonville Historic District                       | Bounded by Bayou Lafourche, the Mississippi River, Jackson Ave. Marchand Dr. and Monroe and Church Streets |
|           | Evan Hall Slave Cabins                                 | LA 1 west of Donaldsonville (McCall)   |

Table 2.15 National Register of Historic Places Properties and Sites (Continued)

| Parish                | Resource  | Location  |
|-----------------------|---|---|
| Ascension (Continued) | Fort Butler   | Donaldsonville  |
|                       | Landry Tomb   | Ascension Catholic Church Cemetery,                           |
|                       | Lemann Store  | 314 Mississippi St., Donaldsonville                           |
|                       | Palo Alto Dependency                                      | LA 944 near Donaldsonville                                    |
|                       | Palo Alto Plantation                                      | LA 1 west of Donaldsonville                                   |
|                       | Rome House  | LA 1 @ Delaney Lane   |
|                       | St. Emma  | LA 1 South of Donaldsonville                                  |
| Iberville             | Bagatelle Plantation House                                | 695 LA 991, Sunshine  |
|                       | Bayou Plaquemine Lock                                     | Plaquemine  |
|                       | Plaquemine Historic District and Boundary Increase (2005) | Church St., Court St., Railroad Ave. and Main St., Plaquemine |
|                       | Pierre Ernest Rivet House                                 | 58159 Plaquemine Street, Plaquemine                           |
|                       | St. Basil's Academy                                       | 311 Church Street, Plaquemine                                 |
|                       | St. Gabriel Roman Catholic Church                         | LA 75 south of St. Gabriel                                    |
|                       | St. John Baptist Church                                   | 31925 Lacroix Road, Dorseyville                               |
|                       | St. Louis Plantation                                      | 1 mile south of Plaquemine on LA 405                          |
|                       | Supple's J. Sons Mercantile Company,                      | 29830 LA 405, Bayou Goula                                     |
|                       | Tally-Ho Plantation House                                 | River Road, Bayou Goula                                       |

Table 2.15 National Register of Historic Places Properties and Sites (Continued)

| Parish           | Resource                              | Location                                |
|------------------|---------------------------------------|---|
| West Baton Rouge | Aillet House                          | 845 N. Jefferson Ave., Port Allen       |
|                  | Bank of Addis                         | 7843 Ray Rivet St., Addis               |
|                  | Cinclare Sugar Mill Historic District | Jct. LA 1 and Terrell Drive, Brusly     |
|                  | Cohn High School                      | 805 N. 14 <sup>th</sup> St., Port Allen |
|                  | Hebert House                          | 919 E. Main Street, Brusly              |
|                  | Port Allen High School                | 610 Rosedale St., Port Allen            |
|                  | Sandbar Plantation House              | 4234 River Road, Port Allen             |

Source: National Register of Historic Places

### 2.13 Air Quality

The Baton Rouge, Louisiana Area is currently designated as a Marginal Non-Attainment Area for the 2008 8-Hour Ozone National Ambient Air Quality Standard (NAAQS). The 2008 8-Hour NAAQS for a Marginal classification of ozone is 76-86 parts per billion. The Baton Rouge Area includes Ascension, East Baton Rouge, Iberville, Livingston and West Baton Rouge Parishes. On April 15, 2014, the EPA published a Federal Register notice that as of June 16, 2014, the Baton Rouge Area was in attainment of the NAAQS and had approved the State's Implementation Plan (SIP). However, the designation remains until EPA formally removes it based on performance of the maintenance plan contained in the SIP. The deadline for the area to attain the NAAQS is December 31, 2015.

### 2.14 Noise

NEPA provides broad authority and responsibility for evaluating and mitigating adverse environmental effects including highway traffic noise. The NEPA directs the Federal government to use all practical means and measures to promote the general welfare and foster a healthy environment. Federal-Aid Highway Act of 1970 specifically involves abatement of highway traffic noise. This law mandates FHWA to develop noise standards for mitigating highway traffic noise.

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations require the following during the planning and design of a highway project:

1. Identification of traffic noise impacts and examination of potential mitigation measures;
2. The incorporation of reasonable and feasible noise mitigation measures into the highway project; and
3. Coordination with local officials to provide helpful information on compatible land use planning and control.

The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a prerequisite for the granting of Federal-aid highway funds for construction or reconstruction of a highway.

DOTD has a Highway Traffic Noise Policy, last updated and approved in July 2011. The policy defines certain terms introduced in the legislation and FHWA policy. It states that existing noise levels are the worst noise hour, resulting from the natural and mechanical sources and human activity usually present in the area. It also identifies a traffic noise impact to be a design year (year of highway construction plus 20 years) build condition noise level that approach or exceed the FHWA Noise Abatement Criteria (NAC), or a design year build condition noise level that exceed the existing noise levels by 10 decibels, A-weighted (dBA). “Approach the NAC” is further defined as 1 dBA less than the NAC.

The proposed project meets the DOTD definition of a Type 1 Project, indicating that FHWA and DOTD noise policies and regulations apply to the project. Further, existing land uses in the project area are categorized and each category has its own NAC to which the design year noise levels are compared in order to determine potential impacts. These categories and their applicable NAC are shown in Table 2.16.

Table 2.16 FHWA Noise Abatement Criteria (dBA)

| Activity Category | Activity Leq(h) | Evaluation Location | Activity Description  | Impact Criteria (dBA) |
|-------------------|-----------------|---------------------|---|-----------------------|
| A                 | 57              | Exterior            | Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. | 56                    |

Table 2.16 FHWA Noise Abatement Criteria (dBA) (Continued)

| Activity Category | Activity Leq(h) | Evaluation Location | Activity Description   | Impact Criteria (dBA) |
|-------------------|-----------------|---------------------|--|-----------------------|
| B                 | 67              | Exterior            | Residential (includes undeveloped lands permitted for residential).  | 66                    |
| C                 | 67              | Exterior            | Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. (Includes undeveloped lands permitted for these activities). | 66                    |
| D                 | 52              | Interior            | Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.   | 51                    |
| E                 | 72              | Exterior            | Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. (Includes undeveloped lands permitted for these activities).  | 71                    |
| F                 | --              | --                  | Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.   | N/A                   |
| G                 | --              | --                  | Undeveloped lands that are not permitted.  | N/A                   |

Leq(h) = Steady-state equivalent sound energy level which contains the same amount of acoustic energy as the time-varying sound level over the time period of one hour.. Impact Criteria are consistent with FHWA NAC and approach definition of 1dBA less than the NAC (Source: LA DOTD Noise Policy, July 2011)



Therefore, traffic noise impacts occur at a receptor (discrete or representative location of a noise sensitive area) when predicted design year noise levels reach the Impact Criteria for the appropriate activity that receptor represents or when it exceeds the existing noise levels by 10 dBA.

When impacts do occur, noise abatement measures are considered and evaluated. Noise abatement measures can take the form of noise barriers/walls, traffic management measures to control noise sources, alteration of horizontal or vertical alternative alignments, the creation of buffer zones by property acquisition, or providing noise insulation for interior receptors (Activity Category D). Noise abatement measures considered must be found to be both feasible (achieve at least a 5 dBA reduction in highway traffic noise levels considering safety, barrier height, topography, drainage, utilities, maintenance of the abatement measure, and access to adjacent properties) and reasonable (be cost effective and acceptable to the public) before implementation into the project plans.

A highway noise study is beyond the scope of this document, but would be required for any study or document provided under NEPA. However, since some alignments for the proposed project would be constructed on new alignments (where no highway presently exists), it is possible that impacts would occur at some receptors based on substantial increases (10 dBA) over existing noise levels, even if the NAC are not approached or exceeded.

## **2.15 Hazardous Waste**

Several databases maintained by the EPA and DEQ were accessed to obtain information relative to sites in the project area which may contain hazardous materials:

- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) – contains information on the current status of activities at hazardous waste sites considered for cleanup under Federal Superfund regulations.
- National Biennial RCRA Hazardous Waste Report (based on 2011 data) – the Resource Conservation and Recovery Act (RCRA) of 1976 sets standards for the treatment, storage and disposal of hazardous waste. The report provides information for reported sites in the project area.
- Leaking Underground Storage Tanks (LUST) provides a list of all underground storage tanks reported to DEQ to be leaking.
- List of Permitted Underground Storage Tanks maintained by DEQ.



Table 2.17: Potential Hazardous Material Sites

| Site Name                         | Location       | Site Type |
|-----------------------------------|----------------|-----------|
| Hunt Correctional Center          | St. Gabriel    | LUST      |
| J&B Car Care                      | Sorrento       | LUST      |
| Sorrento Super Stop               | Sorrento       | LUST      |
| Circle K #2830                    | Donaldsonville | LUST      |
| Lil Pigeon                        | Plaquemine     | LUST      |
| Circle K #9733                    | Port Allen     | LUST      |
| Bro's Food Mart                   | Port Allen     | LUST      |
| RaceTrac #365                     | Port Allen     | LUST      |
| J&T Supermarket                   | Donaldsonville | LUST      |
| Chaz's                            | White Castle   | LUST      |
| West Baton Rouge Car Care Center  | Port Allen     | LUST      |
| Tire/Truck Repair                 | Port Allen     | LUST      |
| SFS Inc.                          | Plaquemine     | LUST      |
| Iberville Water Works District #2 | St. Gabriel    | LUST      |
| Louisiana Metals                  | Port Allen     | CERCLIS   |
| Sun-Con Ltd/Magic Klean           | Port Allen     | CERCLIS   |
| Airgas Specialty Gases            | Port Allen     | RCRA      |
| Americas Styenics LLC             | St. James      | RCRA      |
| CF Industries, Inc.               | Donaldsonville | RCRA      |
| Delta Petrochemical Co., Inc.     | St. Gabriel    | RCRA      |
| Dexco Polymers, LP                | Plaquemine     | RCRA      |
| DSM Copolymer, Inc.               | Addis          | RCRA      |
| E. I. Dupont De Nemours           | Darrow         | RCRA      |
| Exxon Mobil Anchor Tank Farm      | Port Allen     | RCRA      |
| Axiall Corporation                | Plaquemine     | RCRA      |
| Groendyke Transport Inc.          | Port Allen     | RCRA      |
| Gulf Interstate Field Services    | Port Allen     | RCRA      |

Table 2.17: Potential Hazardous Material Sites (Continued)

| Site Name                           | Location     | Site |
|-------------------------------------|--------------|------|
| LBC Baton Rouge LLC                 | Sunshine     | RCRA |
| Mexichem Fluor, Inc.                | St. Gabriel  | RCRA |
| Motiva Enterprises                  | Convent      | RCRA |
| Olin Chlor Alkali Products          | St. Gabriel  | RCRA |
| Pioneer Americas LLC                | St. Gabriel  | RCRA |
| Placid Refining Co. LLC             | Port Allen   | RCRA |
| Plaquemine Point Shipyard           | Sunshine     | RCRA |
| Plaquemine Remediation Services LLC | Plaquemine   | RCRA |
| Dow Chemical Company                | Plaquemine   | RCRA |
| Qualawash Holdings, LLC             | St. Gabriel  | RCRA |
| Quality Carriers, Inc.              | St. Gabriel  | RCRA |
| Shintech Louisiana LLC              | Plaquemine   | RCRA |
| Supplemental Fuels, Inc.            | St. Gabriel  | RCRA |
| Sygenta Crop Protection             | St. Gabriel  | RCRA |
| Taminco, Inc.                       | St. Gabriel  | RCRA |
| Texas Eastern Pipeline Trans.       | White Castle | RCRA |
| Trinity Marine Products, Inc.       | Brusly       | RCRA |
| Turner Industries Piping            | Port Allen   | RCRA |
| US Army Corps of Engineers          | Port Allen   | RCRA |
| Zeneca Agricultural Products, Inc.  | St. Gabriel  | RCRA |



Sources: LUST Database, LA DEQ, accessed 8/25/2015; CERCLIS Database, US EPA, accessed 8/25/2015; National Biennial RCRA Hazardous Waste Report: Based on 2011 Data, US EPA; RECRIS Database, US EPA, accessed 8/26/2015

## **2.16 Climate and Climate Change**

Louisiana has a humid subtropical climate, evidenced by long, hot, humid summers and short, mild winters. These subtropical characteristics are due to the proximity influence of the Gulf or Mexico. In the project area, high temperatures average 78 degrees and lows average 56 degrees, with annual precipitation of about 62 inches of rainfall.

Increases in greenhouse gases (GHG) globally and resulting warming have caused concern on the short- and long-term impacts which may accrue. Due to its low, flat coast, sea level rise combined with natural subsidence of marshes would increase coastal erosion and saltwater intrusion into freshwater marshes. Crop yields and forestry production could be affected from heat stress of rising temperatures, increases in the number of days annually with high temperatures, and changes in precipitation patterns and intensity. Fisheries could be affected by reduced oxygen content, saltwater intrusion and availability of feed species due to disruption or degradation of estuaries and coastal environments. Extreme weather events, such as increases in the number and intensity of tropical cyclones, could put stresses on the existing transportation system in times when the coastal zone must be evacuated.

## **2.17 Visual Characteristics**

The project area consists of cultivated lands and pastures interspersed with scattered residential and industrial development. The only densely developed population centers are Port Allen, Plaquemine and Donaldsonville, while smaller scattered towns dot the landscape among the farmland. Beyond this mostly pastoral setting in the west, the cultivated lands give way to large tracts of hardwood forests and swamps associated with the Atchafalaya Basin. Along the many bayous, the marshes provide scenic viewsheds filled with estuarine habitat of animal and plant species. So unique to the State is this Basin and its marshes, potential development should consider preservation of the more unspoiled viewsheds.

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*The Nature Conservancy today announced the acquisition of 5,359 acres in the Bayou Sorrel region of the Atchafalaya River Basin...* (<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/louisiana/explore/atchfalaya-acq-press-release-06-2015.pdf>)

U.S. Department of Transportation, Federal Highway Administration (<https://www.fhwa.dot.gov/>)

U.S. Department of Agriculture, Natural Resources Conservation Service (<http://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>)

Soil Survey of Iberville Parish, Louisiana ([http://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/louisiana/ibervilleLA1977/iberville.pdf](http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/louisiana/ibervilleLA1977/iberville.pdf))

Drilling Edge (<http://www.drillingedge.com/>)

United States Department of Energy (<http://www.energy.gov/>)

Louisiana Department of Environmental Quality (<http://www.deq.louisiana.gov/portal/>)

U.S. Department of Homeland Security, Federal Emergency Management Agency (<http://www.fema.gov/>)

Baton Rouge Loop, Tier 1 Draft Environmental Impact Statement (<http://www.brloop.com/>)

Louisiana Department of Wildlife and Fisheries (<http://wlf.louisiana.gov/>)

Parish of Ascension Recreation & Culture (<http://www.ascensionparish.net/index.php/departments/m-z/recreation>)

Iberville Parks & Recreation Department (<http://www.iprd.net/>)

West Baton Rouge Parks & Recreation Department (<http://www.wbrcouncil.org/departments/parks-and-recreation>)



## Chapter 3: Alignment Alternatives

### 3.1 Introduction

The alignment alternatives for the Iberville Mississippi River Bridge and West Side Expressway project are an outgrowth of two current studies that would redistribute traffic in the Baton Rouge area:

- Baton Rouge Loop Tier I Environmental Impact Statement (EIS)
- West Side Turnpike Stage 0 Study

The intent of the alternatives developed for this project is to provide a new access controlled highway through the parishes of West Baton Rouge, Iberville, Ascension and St. James along the west bank of the Mississippi River and to provide a new Mississippi River crossing located in Iberville Parish. These transportation improvements would serve the growing communities and industrial corridor along the west bank of the Mississippi River.

Three build alternatives were developed during this stage of the study to provide a new access controlled expressway facility through the parishes of West Baton Rouge, Iberville, Ascension and St. James parishes along the west bank of the Mississippi River and a river crossing in Iberville Parish. Also, a No Build (no action) alternative was considered to compare and contrast the results of not providing any improvements over the study period as a baseline.

Alternative 1 proposes an expressway which provides a continuous route from I-10 west of LA 415 in West Baton Rouge Parish to I-10 East south of Sorrento in Ascension Parish. The expressway includes the crossing of the Mississippi River at Mile 203 Above Head of Passes (AHP) which connects Iberville Parish on both sides of the river and terminates at LA 30. The expressway envisions that LA 3127 would be the mainline of the expressway and provides a directional interchange at LA 3127 south of Donaldsonville. The expressway alignment is located west of the existing communities of Brusly and Addis, and follows existing LA 1 south of Plaquemine through White Castle and turns west and south of Donaldsonville. Two terminal alignments to I-10 East are proposed, one which utilizes existing LA 70/LA 22 and the other on new alignment to a new directional interchange with I-10 between the existing LA 22 and US 61 interchanges.

Alternative 2 is similar to Alternative 1, except it views the project as a two-phase proposal. Phase 1 of the project would connect I-10 West of the LA 415 interchange, following the same alignment as Alternative 1 to the Iberville Mississippi River crossing and terminate at LA 30. Phase 2 of the project would be to construct the remaining expressway; however, in this alternative, LA 70 would be the mainline of the expressway (rather than LA 3127) and a more modest interchange connection to LA 3127 would be built while carrying the controlled access facility along the existing LA 70 alignment through the Sunshine Bridge. There also would be to terminal alignments to I-10 East as described above.



Alternative 3 proposes that the expressway bypass the existing communities along LA 1 south of Plaquemine. While the connection to LA 1 and the Iberville Mississippi River crossing would be slightly off-set south of the alignments for Alternatives 1 and 2, the alignment would depart through construction of a new interchange about 3 miles west of LA 1 and continue through relatively undeveloped farmland and wetlands to connect to the alignments for Alternatives 1 and 2 just west of the Bayou Lafourche crossing and LA 1/LA 308 interchange ramps.

All three alternatives utilize the Plaquemine Crossing for the Mississippi River as it is the crossing solely contained in Iberville Parish that has sustained itself through the alternatives analysis in the Baton Rouge Loop Tier I EIS.

Maps of the alignment alternatives developed for this project are provided in Appendix D.

## 3.2 Alignment Descriptions

### 3.2.1 Alternative 1

The alignment for Alternative 1 begins at I-10 approximately three miles west of the LA 415 Interchange in Port Allen. The interchange location is in general alignment with the location of both the North Bypass, a corridor identified in the Baton Rouge Loop Tier I EIS, and the BUMP, an unsolicited public-private partnership project proposed as an alternate to the North Bypass.

The alignment heads southeast across the Intracoastal Waterway on structure near Mile Point 59 along the Morgan City to Port Allen Route. Then, the alignment continues south following along the western edge of the developed area of Brusly.

One mile south of the crossing is the Brusly Connector Interchange. The Brusly Connector is proposed as an arterial roadway connecting the West Side Expressway with LA 1 on the north side of the Town of Brusly. The interchange is proposed as a trumpet interchange since it is unlikely that the roadway would ever be extended to the west beyond the West Side Expressway.

The alignment continues south following along the western edge of the developed areas of Brusly and Addis. The LA 1148 interchange is located 6.1 miles south of the proposed Brusly Connector Interchange. It is proposed as a diamond interchange and would provide access to the industry along LA 1148 and to the Dow Chemical Plant.

The alignment continues south along the west side of Enterprise Boulevard and then across Bayou Jacob and Bayou Plaquemine. Three tenths of a mile south of the Bayou Plaquemine crossing there would be a diamond interchange with LA 75. This interchange provides access to the western side of Plaquemine.

The alignment then turns towards the east for 4.5 miles along the northern edge of a forested area toward LA 1. It would then turn south of into the LA 1 corridor at the interchange with LA 1 and the proposed Iberville





Mississippi River Bridge Connector roadway and bridge crossing. This interchange would be a modified directional interchange that would provide through movements for the West Side Expressway and LA 1 as well as all connecting movements between the Expressway, LA 1, and the Bridge Crossing without relocation of the adjacent Union Pacific Railroad tracks.

The Iberville Mississippi River Bridge Connector approach would begin at the LA 1 Interchange and head east and then northeast towards the Mississippi River. There would be an interchange at LA 405, which follows along the west side of the river. The LA 405 Interchange is approximately 3.5 miles northeast of the LA 1 interchange. The alignment continues to the northeast where it crosses the Mississippi River at River Mile 203 Ahead of Passes. The crossing would allow for a 3 span continuous cable stayed structure with a 1,600 foot long main span and 720 foot long side spans. The minimum clearance through the main span would be 133 feet at a high water elevation of 47.28 feet above means sea level. The route continues northeast, then turns to the east and terminates with a trumpet interchange with LA 30. The bridge connection also would include a rail crossing. This likely would be on a separate deck from the roadway in order to minimize the width of the bridge structure.

Along LA 1, the Westside Expressway would utilize the existing LA 1 roadway between the LA 1 Interchange and the north side of the Town of White Castle. Improvements would be made along the corridor to upgrade the roadway to a controlled access facility. These improvements include frontage roads, removal of at grade rail crossings, and removal of median openings. Along the east side of the corridor, a two way frontage road would be built north of the LA 1 interchange to connect an access road for Shintech, Evergreen Road, and Old Evergreen Road to allow for access to LA 1 away from the interchange ramps where LA 1 would return to arterial highway. South of the LA 1 Interchange, a two way frontage road along the east side of the road between the LA 1 Interchange and Augusta Road (LA 69). Augusta Road would require upgrade from a gravel road to a paved surface. Along the west side of the Union Pacific Railroad tracks, a two way road would be constructed allow for the removal of the twelve at-grade railroad crossings between the LA 1 Interchange and White Castle. This new road would tie into Moss Street and end at LA 69.

Through White Castle, the Westside Expressway remains parallel to the Union Pacific Railroad. LA 993 is elevated across the railroad track and the West Side Expressway where it ties into an intersection with LA 405. There is an opportunity for a tight diamond interchange at LA 993. The interchange would be on structure. Just south of LA 993, the new Westside Expressway would elevate on structure prior to Maggio Street and return to grade south of Francise St. allowing for the existing at-grade railroad crossings to remain so that continuity of the community is maintained.

On the south side of White Castle, the southbound lanes utilize the existing roadway. The northbound lanes would be built to the east to provide a 72 foot median. The existing LA 1 roadway through White Castle would extend to a frontage road along the east side of the corridor. Cambre Street would be extended south along the west side of the railroad track to allow for the closure of the at-grade crossings between White Castle and McCall. The road would follow the Westside Expressway as it turns south and terminate at an intersection





with LA 943 west of McCall. Approximately 5 miles south of White Castle, the West Side Expressway diverts from the LA 1 corridor to the south across the Union Pacific Railroad. It then turns east between LA 944 and LA 943 to an interchange LA1 and LA 308.

The LA 1 and LA 308 Interchange would be a tight diamond interchange to allow for Control of Access and separation between the existing intersections of LA 944 and LA 943.

The alignment continues to the east, bypassing Donaldsonville, for approximately 3.8 miles to a directional interchange with LA 70. The Westside Expressway then would continue south into St. James Parish utilizing the LA 3127 corridor to I-310 in St. Charles Parish.

To provide a connection back to I-10 east of Gonzales, the alternative provides improvements along LA 70 between LA 3127 and I-10 near Sorrento. From LA 3127, LA 70 would be widened to four lanes and realigned just west of the existing roadway. The two at-grade crossings with the Union Pacific railroad track and the railroad spur to the CF Industries plant would be replaced with an overpass over both tracks. Ramp modifications would be made to provide access to LA 3089.

LA 70 would remain along the existing roadway from the railroad spur across the Sunshine Bridge to the east bank.

The LA 3125 intersection would be replaced with an interchange. The roadway would then leave towards the north on new alignment connecting to I-10 approximately two miles east of the I-10/LA 22 interchange.

An optional alignment would be along the existing LA 70 corridor as an arterial roadway. The LA 70 and LA 22 intersection would be modified so that the major movement would be northbound LA 70 to turn east onto LA 22 to connect at the existing I-10 interchange.

### 3.2.2 Alternative 2

The alignment for Alternative 2 begins at I-10 approximately three miles west of the LA 415 Interchange in Port Allen and follows the same alignment as Alternative 1 from I-10 to the LA 75 Interchange. It includes the Brusly Connector, LA 1148 and LA 75 Interchanges. South of LA 75, the alignment turns to the east to a perpendicular crossing of LA 1 with a directional interchange. The alignment then follows along the alignment of the Iberville Mississippi River Bridge Connector as described in Alternative 1 across the river to its termination at LA 30.

Improvements in the LA 1 corridor are the same as described in Alternative 1 between the LA 1 interchange and McCall. The alignment diverts from the LA 1 corridor as described in Alternative 1 to bypass Donaldsonville to the south. There would be a split diamond interchange at LA 1 and LA 308. East of Donaldsonville, the mainline West Side Expressway would continue towards the LA 70 corridor. There would be a trumpet interchange with and extension of LA 3127 and LA 70. The Westside Expressway would then continue into



the LA 70 corridor where it would follow the same alignment and interchanges as described in Alternative from LA 3089 to its terminus at I-10.

### 3.2.3 Alternative 3

The alignment for Alternative 3 begins at I-10 approximately three miles west of the LA 415 Interchange in Port Allen and follows the same alignment as Alternative 1 from I-10 to the LA 75 Interchange. It includes the Brusly Connector, LA 1148, LA 75 Interchanges. South of LA 75, the alignment turns south to create a new corridor generally parallel to LA 1.

Four miles south of LA 75 would be an interchange with the Iberville Mississippi River Bridge approach.

The Iberville Bridge roadway would continue east to a directional interchange with LA 1. The alignment would turn to the northeast where it crosses the Mississippi River at River Mile 203 Ahead of Passes and terminate with an interchange at LA 30 as described in Alternative 1. The rail alignment would be as described as in Alternative 1 as well.

South of the River Crossing, the Alternative 3 alignment would continue south, then southeast crossing LA 993 and LA 404 to a diamond interchange with LA 69. Continuing southwest, the alignment enters Ascension Parish crossing LA 943 to an interchange with LA 1 and LA 308 in the same location as identified in Alternatives 1 and 2. To the east, Alternative 3 follows the same configuration as described in Alternative 2 with a trumpet interchange at LA 3127 and routing along LA 70 across the Mississippi River to a new interchange with LA 3125. Then, the mainline continues northward along new alignment to its termination at I-10 two miles west of the existing LA 22 interchange near Sorrento.

## 3.3 Design Standards

### 3.3.1 Design Criteria

Design criteria for the Westside Expressway and the Iberville Mississippi River Bridge were developed largely based on design standards developed for the Baton Rouge Loop Tier I Final EIS and modified as necessary to match the scope of this project. This study also considers:

- whether the new roadway would utilize a new or existing corridor, and
- impacts to the existing roadway network that would require new or modified roadways or frontage roads in order to maintain access to the adjacent land development.

The Westside Expressway and the Iberville Mississippi River Bridge would be designed as a controlled access, free flow facility in order to provide the highest level of service. It would meet freeway guidelines set forth by the American Association of State Highway and Transportation Officials (AASHTO) with consideration of

design standards established by DOTD. These criteria provide a summary of methodology and standards used in the preliminary construction cost estimates. As design progresses, these standards can be adjusted or updated to meet DOTD and AASHTO design standard guidelines or preferences.

The design criteria for the mainline freeway and interchange ramps are shown in Table 3.1. Similarly, the design criteria for frontage roads to control access are shown in Table 3.2. These criteria are based on the AASHTO publications: A Policy on Geometric Design of Highways and Streets (2011 Edition), Roadside Design Guide (2006 Edition), and the Guide for the Development of Bicycle Facilities (1999 Edition).

### 3.3.2 Typical Sections

The mainline Westside Expressway initially would be constructed as a 4-lane facility. As traffic volumes increase and additional capacity is needed, the roadway section would be capable of expansion to a 6-lane facility by adding a lane in each direction in the median. Provisions for widening are incorporated into the proposed typical sections. See Figures 3-1 and 3-2.

The Iberville Mississippi River Bridge would be constructed as a 4-lane facility. See Figure 3-3 for the roadway deck typical section.

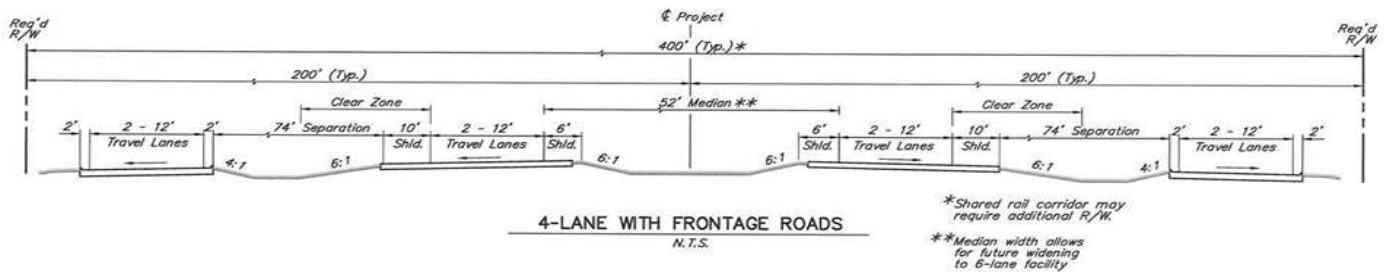


Figure 3-1: Proposed Typical Section of 4-Lane Highway with provisions for Frontage Roads (Source: Baton Rouge Loop Tier I EIS)

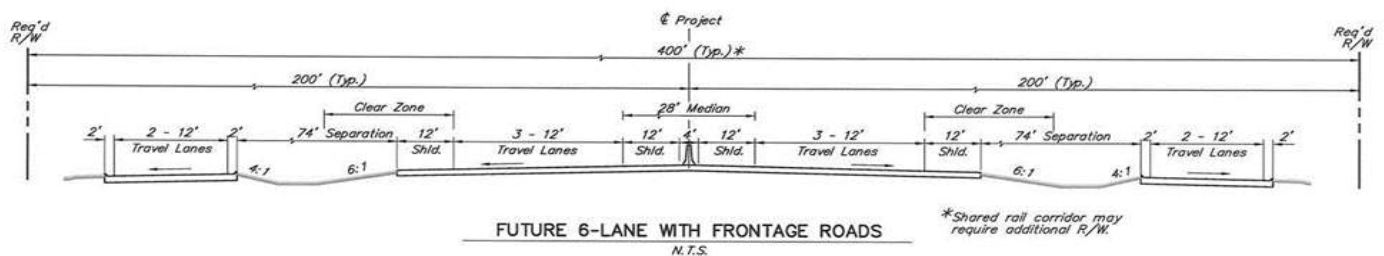


Figure 3-2: Proposed Typical Section of Expanded 6-Lane Highway with provisions for Frontage Roads (Source: Baton Rouge Loop Tier I EIS)

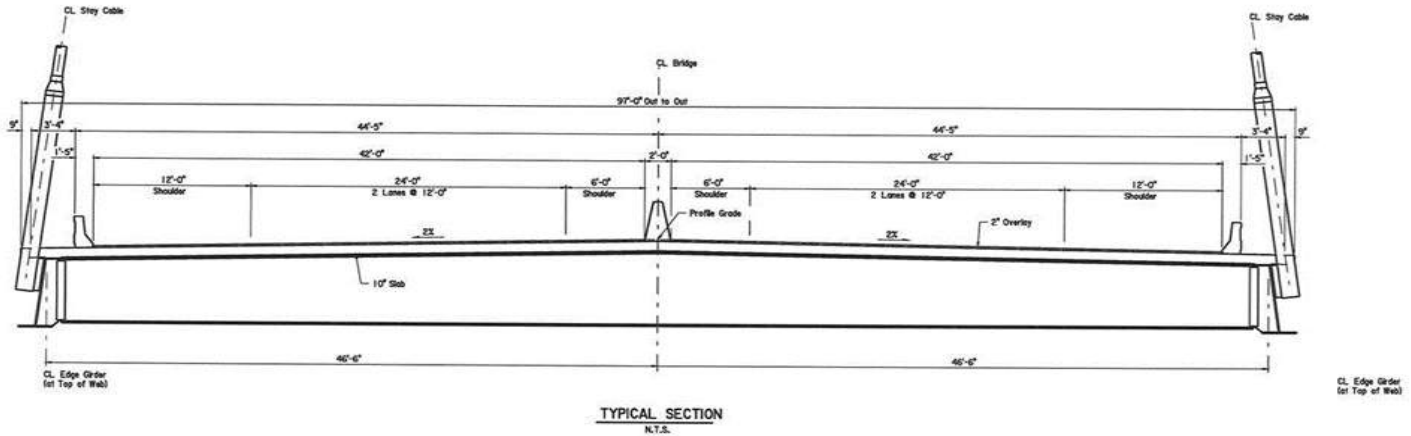


Figure 3-3: Proposed Typical Section of Iberville Mississippi River Bridge Roadway Deck (Source: Baton Rouge Loop Tier I EIS)

### 3.3.3 Elevated Roadways

Sections of the route would be elevated above existing terrain in environmentally sensitive areas to reduce the footprint of the roadway and minimize impacts to the natural environment. These structures allow the drainage in these low lying areas to move freely and also allow for free roaming of wildlife across the roadway. Actual structure height above natural ground would be determined on hydraulic and environmental requirements. See Figure 3-4.

### 3.4 Interchanges

Convenient access and connection to the existing roadway network is a critical feature for the traveling public to maximize the use of the proposed facility. Various interchange types and locations were considered in the alternative development process. Interchange types include:

- Diamond interchange (and variations thereof)
- Diamond interchange with slip ramps and frontage roads
- Trumpet interchange
- Fully directional interchange

Diamond interchanges would be the most common type used and would occur where the project crosses major state or federal highways that provide access to local communities. Diamond interchanges would be used in combination with one way frontage roads where access to adjacent development is required and cannot be accomplished with a two way frontage road or a another roadway outside of the corridor right-of-way. Modified versions may include the following:

- a split diamond interchange where two roads are closely spaced but are needed to provide access
- a folded diamond where either development or a geographic feature would prevent the construction of a diamond interchange.

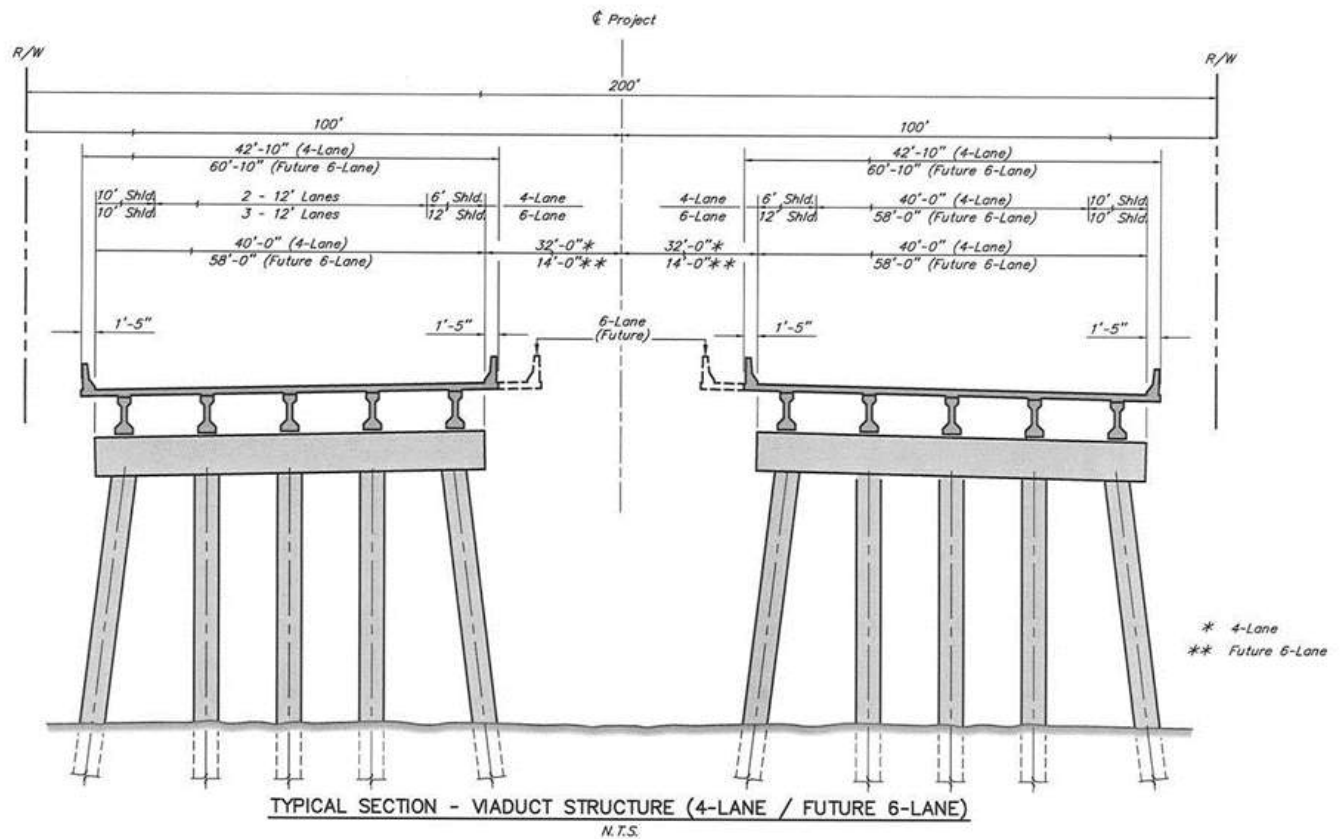


Figure 3-4: Proposed Typical Section of Bridge Structures along Westside Expressway (Source: Baton Rouge Loop Tier I EIS)

Where the project crosses or connects to interstate highways or major system linkage arterials, fully directional system-to-system interchanges would be used. A smaller, less costly variation of a fully directional interchange is the trumpet interchange which would be considered at the major state highways or arterial connections that end at the Westside Expressway. Potential interchanges are located in the alternative maps in Appendix D and are listed in Table 3.3.

### 3.5 Project Cost Estimates

Preliminary capital cost estimates for each alternative were estimated based on 2015 LADOTD unit price data and price data for major cable stayed bridges built throughout the United States. Costs include construction of a concrete mainline roadway and ramps, asphalt overlay for reuse of existing roads, asphalt frontage roads, reconstruction of cross roads for interchanges, major and minor bridges, drainage, rail construction to serve the rail track crossing, ITS, right of way, environmental, design, construction engineering, and contingency. A summary of costs are shown in Table 3.4.

Alternative 2 has the lowest cost because it has a reduced cost in the major interchanges located at LA 3127 and at the LA 1 interchange south of Plaquemine. Alternative 3 has the highest cost due to the additional roadway to extend the Iberville Mississippi River Bridge Connector out to the alignment on Alternative 3.



| Table 3.1 Design Standards for Freeway and Ramps  |                                 |                                 |
|---|---------------------------------|---------------------------------|
| Item  | Urban                           | Rural                           |
| Design Speed  | 60                              | 70                              |
| Level of Service <sup>1</sup>   | C                               | C                               |
| Number of Lanes (minimum) <sup>2</sup>  | 4                               | 4                               |
| Width of Travel Lanes (ft)  |                                 |                                 |
| (a) Mainline and Multi Lane Ramps   | 12                              | 12                              |
| (b) Single Lane Ramps   | 15                              | 15                              |
| Width of Shoulders (ft)   |                                 |                                 |
| (a) Inside <sup>3</sup>   | 6                               | 6                               |
| (b) Outside <sup>4</sup>  | 10                              | 10                              |
| Shoulder Type   | Paved                           | Paved                           |
| Width of Median (ft) <sup>5,6</sup>   |                                 |                                 |
| (a) Depressed   | 52                              | 52                              |
| (b) Continuous Barrier  | 28                              | 28                              |
| Fore Slope (V:H)  | 1:6                             | 1:6                             |
| Back Slope (V:H)  | 1:4                             | 1:4                             |
| Pavement Cross Slope (%)  | 2.5                             | 2.5                             |
| Stopping Sight Distance (ft)  | 570                             | 730                             |
| Maximum Superelevation (%)  | 10                              | 10                              |
| Minimum Radius on Mainline (ft)   | 5280                            | 7640                            |
| Minimum Radius on Ramp (ft) <sup>7</sup>  |                                 |                                 |
| (a) Directional   | 1100                            | 1700                            |
| (b) Loop  | 250                             | 250                             |
| Maximum Grade (%)   |                                 |                                 |
| (a) Mainline <sup>8</sup>   | 3                               | 3                               |
| (b) Ramps   | 4                               | 4                               |
| Width of Right-of-Way (ft)  |                                 |                                 |
| (a) New Alignment   | 400                             | 400                             |
| (b) Existing Alignment  | 200                             | 300                             |
| (c) Minimum from Edge of Bridge Structure <sup>9</sup>  | 25                              | 25                              |
| Bridge Design Live Load <sup>10</sup>   | LFRD                            | LFRD                            |
| Minimum Width of Bridges (face to face of bridge rail at gutter line) (ft)  | Roadway Width (Incl. Shoulders) | Roadway Width (Incl. Shoulders) |
| Minimum Vertical Clearance <sup>11</sup>  | 16                              | 16                              |
| Horizontal Clearance (from edge of travel lane) (1:6 Fore Slope) (ft)   | 32                              | 34                              |
| <b>Footnotes:</b><br><br>1. LOS D can be used in heavily developed urban areas.<br>2. Design concept allows for ultimate configuration of 2 lanes (total 6-lane facility)<br>3. 6 feet paved on 4-lane facilities. 10 feet paved on 6-lane facilities. 12 feet paved on 6-lane facilities when truck DDHV is greater than 250.<br>4. 12 feet paved on 6-lane facilities when truck DDHV is greater than 250.<br>5. For New Alignments. For existing alignments, maintain existing median width. Provide cable barrier or guardrail for median widths less than 72 feet. Provide continuous concrete barrier for median widths less than 36 feet.<br>6. For larger medians, two barriers may be required. Maximum offset from barrier face at gutter line to travel lane is 15 feet.<br>7. It may be necessary to increase the radius of the curve and/or increase the shoulder width (maximum of 12 feet) to provide adequate stopping sight distance on structure.<br>8. Grades 1 percent higher may be used in urban areas.<br>9. In accordance with LADOTD EDSM II.1.1.1<br>10. LRFD for bridge design.<br>11. An additional 6 inches is required for future surfacing. 17 feet is required for trusses and pedestrian overpasses. |                                 |                                 |

| Table 3.2 Design Standards for Frontage Roads   |                                    |                                    |
|---|------------------------------------|------------------------------------|
| Item  | Urban                              | Rural                              |
| <b>DOTD Design Standard<sup>1</sup></b>   | <b>UC-1</b>                        | <b>RC-2<sup>2</sup></b>            |
| Design Speed  | 40                                 | 60                                 |
| Level of Service <sup>3</sup>   | C                                  | C                                  |
| Number of Lanes (minimum) <sup>4</sup>  | 2-4                                | 2                                  |
| Width of Travel Lanes (ft)  | 11-12                              | 11-12                              |
| Width of Shoulders (ft)   |                                    |                                    |
| (a) Inside  | N/A                                | N/A                                |
| (b) Outside <sup>4</sup>  | 8                                  | 4-5                                |
| Width of Parking Lane (ft) (Where Used) <sup>5</sup>  | 8-10                               | N/A                                |
| Shoulder Type   | Paved                              | Aggregate<br>(2' min paved)        |
| Width of Median (ft)  |                                    |                                    |
| (a) Depressed   | N/A                                | N/A                                |
| (b) Raised  | 4 (min) - 30 (des)                 | N/A                                |
| Fore Slope (V:H)  | 1:4                                | 1:4                                |
| Back Slope (V:H)  | 1:3                                | 1:4 <sup>6</sup>                   |
| Pavement Cross Slope (%)  | 2.5                                | 2.5                                |
| Stopping Sight Distance (ft)  | 305                                | 570                                |
| Maximum Superelevation (%)  | 4                                  | 10                                 |
| Minimum Radius (ft) <sup>7</sup>  |                                    |                                    |
| (a) With Normal Crown   | 700                                |                                    |
| (b) With 2.5% Superelevation  | 550                                |                                    |
| (b) With Full Superelevation  | 500                                | 1100                               |
| Maximum Grade (%)   | 9                                  | 5                                  |
| Width of Right-of-Way (ft)  |                                    |                                    |
| (a) New Alignment   | 100                                | 100                                |
| (b) Existing Alignment  | 100                                | 100                                |
| (c) Minimum from Edge of Bridge Structure <sup>8</sup>  | 25                                 | 25                                 |
| Bridge Design Live Load <sup>9</sup>  | LFRD                               | LFRD                               |
| Minimum Width of Bridges (face to face of bridge rail at gutter line) (ft)  |                                    |                                    |
| (a) Shoulder Facilities   | Roadway Width<br>(Incl. Shoulders) | Roadway Width<br>(Incl. Shoulders) |
| (b) Curb Facilities   | Traveled Way plus<br>8 feet        | N/A                                |
| Minimum Vertical Clearance <sup>10</sup>  | 16                                 | 16                                 |
| Horizontal Clearance (ft)   |                                    |                                    |
| (a) Shoulder Facilities (from edge of travel lane)  | 10                                 | 32                                 |
| (b) Curb Facilities (from back of curb where curbs are used) (ft)   | 2 (min) - 6 (des)                  | N/A                                |
| <b>Footnotes:</b><br><br>1. DOTD offers a range on values for certain criteria based on design speed. Maximum values for each road classification are shown. Refer to latest edition of DOTD English Design Standards for lesser values.<br>2. Further traffic study in Stage 1 should determine if a higher standard is required.<br>3. LOS D can be used in heavily developed urban areas.<br>4. In rural areas, a 4 foot paved shoulder should be provided where bicycle activity is observed. In urban areas, curb may be used instead of shoulder. Where bicycle activity is observed provide a minimum 5 foot bicycle lane.<br>5. Where a bicycle lane is included, the minimum combination of parking lane and bicycle lane should be no less than 14 feet.<br>6. 1:3 Back Slopes are allowed when right-of-way restrictions dictate.<br>7. For larger medians, two barriers may be required. Maximum offset from barrier face at gutter line to travel lane is 15 feet.<br>8. It may be necessary to increase the radius of the curve and/or increase the shoulder width (maximum of 12 feet) to provide adequate stopping sight distance on structure.<br>9. In accordance with LADOTD EDSM II.1.1.1<br>10. LRFD for bridge design.<br>11. An additional 6 inches is required for future surfacing. 17 feet is required for trusses and pedestrian overpasses. |                                    |                                    |

| Table 3.3 – Interchange Locations          |                |  |
|--|----------------|--|
| Roadway                                    | Classification | Type   |
| <b>Alternative 1 – Westside Expressway</b> |                |  |
| I-10 (West of Port Allen)                  | System         | Fully Directional (compatible with BR Loop North Bypass or BUMP) |
| Brusly Connector                           | Service        | Trumpet  |
| LA 1148                                    | Service        | Diamond  |
| LA 75                                      | Service        | Diamond  |
| LA 1/Iberville Miss. River Bridge          | System         | Fully Directional  |
| LA 934 (White Castle)                      | Service        | Diamond  |
| LA 1                                       | Service        | Folded Diamond   |
| LA 1/ LA 308                               | Service        | Split Diamond  |
| LA 3127/LA70                               | System         | Fully Directional  |
| <b>Alternative 1 – LA 70</b>               |                |  |
| LA 3089                                    | Service        | Directional  |
| LA 3120/LA18 Connector                     | Service        | Split Diamond  |
| LA 44 (Existing)                           | Service        | Folded Diamond   |
| LA 3125/LA 70                              | Service        | Diamond  |
| I-10 (Sorrento)                            | System         | Fully Directional  |
| <b>Alternative 2 – Westside Expressway</b> |                |  |
| I-10 (West of Port Allen)                  | System         | Fully Directional (to accommodate BR North Bypass or BUMP)       |
| Brusly Connector                           | Service        | Trumpet  |
| LA 1148                                    | Service        | Diamond  |
| LA 75                                      | Service        | Diamond  |
| LA 1/Iberville Miss. River Bridge          | System         | Fully Directional  |
| LA 934 (White Castle)                      | Service        | Diamond  |
| LA 1                                       | Service        | Folded Diamond   |
| LA 1/ LA 308                               | Service        | Split Diamond  |
| LA 3127/LA 70                              | System         | Trumpet  |
| LA 3089                                    | Service        | Directional  |
| LA 3120/LA18 Connector                     | Service        | Split Diamond  |
| LA 44 (Existing)                           | Service        | Folded Diamond   |
| LA 3125/LA 70                              | Service        | Diamond  |
| I-10 (Sorrento)                            | System         | Fully Directional  |



| <b>Table 3.3 – Interchange Locations (Continued)</b>               |         |  |
|--|---------|--|
| <b>Alternative 3 – Westside Expressway</b>                         |         |  |
| I-10 (West of Port Allen)  | System  | Fully Directional (to accommodate BR North Bypass or BUMP) |
| Brusly Connector   | Service | Trumpet  |
| LA 1148  | Service | Diamond  |
| LA 75  | Service | Diamond  |
| Iberville Miss. River Bridge                                       | System  | Fully Directional  |
| LA 69  | Service | Diamond  |
| LA 1/ LA 308   | Service | Split Diamond  |
| LA 3127/LA 70  | System  | Trumpet  |
| LA 3089  | Service | Directional  |
| LA 3120/LA18 Connector   | Service | Split Diamond  |
| LA 44 (Existing)   | Service | Folded Diamond   |
| LA 3125/LA 70  | Service | Diamond  |
| I-10 (Sorrento)  | System  | Fully Directional  |
| <b>Alternatives 1 &amp; 2 – Iberville Mississippi River Bridge</b> |         |  |
| LA 405   | Service | Fully Directional (due to structure height)                |
| LA 30  | System  | Trumpet  |
| <b>Alternative 3 – Iberville Mississippi River Bridge</b>          |         |  |
| LA 1   | System  | Fully Directional  |
| LA 405   | Service | Fully Directional (due to structure height)                |
| LA 30  | System  | Trumpet  |

| <b>Table 3.4 Project Cost Estimates</b>  |  |                           |
|--|--|---------------------------|
| <b>Alternative</b>   | <b>Overall Length (miles) <sup>1</sup></b> | <b>Project Cost (\$M)</b> |
| 1  | 65   | \$3,246                   |
| 2  | 65   | \$2,959                   |
| 3  | 69   | \$3,253                   |
| <b>Footnotes:</b><br>Includes mileage of all roadways including Westside Expressway, Brusly Connector, Iberville Bridge Connector, LA 70, LA 3127, and connection from LA 3125 to I-10 |  |                           |



### 3.6 Traffic

The No-Build Alternative and Build Alternatives developed for this project were analyzed utilizing information from the MPO's current regional models. There are currently two active models in use by the MPO. The difference between the models is that the newer model includes an expanded geographical area that includes all of Ascension and Livingston Parishes. Both models have also been used in other concurrent studies to manage traffic congestion in the Greater Baton Rouge metropolitan area including the CRISIS study, the Baton Rouge Urban Renewal and Mobility Plan and the Baton Rouge Loop.

The MPO regional model attempts to predict and simulate detailed travel patterns for every individual residing inside the study area over a 24-hour period. The model uses digitized networks and demographic data, along with trip generation, trip distribution, mode choice, time of day, and trip assignment to simulate travel patterns throughout the study area. The model is maintained and applied using TransCAD, a software commonly used in the transportation planning field to simulate travel demand at a macro level.

The study area for the traffic impacts analysis includes the following parishes: West Baton Rouge, East Baton Rouge, Iberville, and Ascension.

Various modeling scenarios including certain capacity projects were developed to evaluate the value of certain transportation improvements with respect to the alternatives developed in this study. The current models reflect 2012 socioeconomic data. Travel demand forecasts for the study area cover a period through the project Design Year of 2037. The modeling scenarios include the following:

1. 2012 Existing Transportation Network
2. 2037 No-Build Alternative
3. 2037 – Full Buildout of either Alternative 1 or Alternative 2 with the BUMP (or BR Loop North Bypass), the LA 415 Connector in West Baton Rouge Parish, and a widened LA 30 from the EBR Parish Line to I-10 in Gonzales
4. 2037 – Buildout of Alternative 2 from I-10 in Port Allen to LA 1, the Iberville Mississippi River Bridge, a widened LA 30, and the BUMP
5. 2037 – Full Buildout of Alternative 3 with Iberville Bridge and Widened LA 30
6. 2037 – Buildout of Alternative 1 and BUMP excluding the Iberville Mississippi River Bridge

#### 3.6.1 Scenario 1: Existing Transportation Network

The Westside Expressway and Iberville Mississippi River Bridge project would be considered as a major new system link that would impact traffic well beyond the limits of the project itself. As such, the study area considered includes the major corridors in the Baton Rouge Metropolitan Area. The existing transportation network in the study area includes three interstate highways: I-10, I-12, and I-110. This project acts as a parallel corridor to I-10; therefore it would be the most impacted of the interstate highways by the addition of the Westside Expressway. Arterial Highways of note in the Study Area include: US 61 (Airline Highway), US 190, LA 1, LA 30, LA 70, LA 3127.



I-10 is the primary route for west to southeast trips. It is the major transcontinental highway that routes through Baton Rouge and New Orleans. On I-10, traffic volumes range between 134,000 vehicles per day (vpd) and 164,000 vpd just east of the College Drive interchange.

I-12 is an interstate highway that runs east-west that begins just on the east side of the Baton Rouge Central Business District. It is essentially a bypass around New Orleans for east-west transcontinental traffic. Traffic volumes range between 91,000 vpd and 116,500 vpd between I-10 and Millerville Road.

I-110 is an approximately 9 mile spur that begins in downtown Baton Rouge from I-10 and travels northward to US 61 and the Baton Rouge Metropolitan Airport. Traffic volumes range between 87,000 and 84,000 vpd south of Hollywood Road and 49,000 vpd near the northern end of the highway.

US 61 (Airline Highway) is the main north-south arterial route along the east bank of Baton Rouge. A portion of the roadway from its connection US 190 and I-110 to its connection with I-12 acts as an arterial loop around the core of Baton Rouge. The city of Baton Rouge has grown well beyond that historical core boundary spreading eastward away from the Mississippi River. South of I-12, Airline Highway acts as a parallel arterial roadway to I-10 as a connection between Baton Rouge and New Orleans. Traffic volumes range between 51,000 vpd near Siegen Lane and decrease to 30,000 between Tiger Bend Road in Baton Rouge and LA 44 in Gonzales. South of Gonzales, volumes decrease to 10,000 vph near Sorrento.

US 190 is a main east-west arterial roadway that crosses Louisiana. It crosses the Mississippi River approximately 4.5 miles north of the I-10 crossing in downtown Baton Rouge. Traffic volumes crossing the bridge are around 26,000 vpd.

LA 1 is a major four lane arterial state highway that traverses the state from southeast to northwest. It is the major arterial highway along the west bank of the Mississippi River that is a system link to I-10 and parallel I-10 between Port Allen and Donaldsonville. It provides access to various industrial facilities located on the west side of the river and has sporadic development throughout its corridor. I-10 is currently accessed south of Baton Rouge via LA 3089, LA 70, and LA 22. Traffic volumes range from 47,000 vpd immediately south of the I-10 interchange to 30,000 vpd just south of Addis. In Iberville Parish traffic volumes range from 28,000 vpd north of Plaquemine to 12,000 south of Plaquemine to 5,500 vpd south of White Castle.

LA 30 is a major two lane arterial highway that follows the Mississippi River along the east side of the Mississippi River between downtown Baton Rouge and Gonzales where it connects to I-10 in both locations. Like LA 1, provides access to various industrial facilities located on the west side of the river and has sporadic development throughout its corridor. Traffic volumes fluctuate through the corridor from 14,000 at the East Baton Rouge Parish line to 8,600 south of St. Gabriel to 13,500 vpd just east of LA 73 to 21,000 vpd near I-10 in Gonzales.

LA 70 is a significant arterial in the study area as it is the first crossing of the Mississippi River south of Baton Rouge. It provides a connection between I-10 and LA 1. Traffic volumes range from 11,000 vpd just south of LA 3127 to 23,000 vpd just south of its terminus at LA 22.



LA 3127 is a two-lane arterial roadway provides access to various industrial facilities and communities located on the west side of the river between Donaldsonville and Luling where it connects to I-310. It was built with a plan to expand to four lanes. Its current traffic volume within the study area is 1,900 vpd just east of LA 70.

### 3.6.2 Scenario 2: No-Build Alternative

Traffic forecasts for the TransCAD model considered a design year of 2037.

Along I-10, no improvements were considered in the future model. At the I-10 crossing of the Mississippi River, the traffic volume increases by 37.5% causing an increase in traffic beyond capacity to just west of the LA 415 interchange. The increase in traffic is consistent on I-10 in Baton Rouge from I-110 to I-12 as well. South of I-12, I-10 traffic is only slightly worse than traffic conditions in the current year. US 61 (Airline Highway) traffic volumes generally remain the same south of I-12 as well.

Along LA 1, the traffic volumes through Brusly and approaching I-10 remain roughly the same, but LA 1 in Addis and north of Plaquemine becomes over capacity.

LA 30 see an approximately 20% increase in traffic between Bluebonnet Blvd. in East Baton Rouge Parish to Bayou Paul Lane in Iberville Parish (St. Gabriel). South of St. Gabriel, the traffic along LA 30 shows only a minimal increase.

### 3.6.3 Scenario 3: Build Alternative 1 or Build Alternative 2 with the BUMP (or BR Loop North Bypass), the LA 415 Connector in West Baton Rouge Parish, and a widened LA 30 from the EBR Parish Line to I-10 in Gonzales

This alternative considers building either Alternative 1 or Alternative 2 of the Westside Expressway and the Iberville Mississippi River Bridge. It also includes other capacity improvements projects including the BUMP or Baton Rouge Loop North Bypass and the LA 415 Connector. A map of this scenario is provided in Figure 3-5.

Regarding the bridge crossings, the traffic volume on the I-10 crossing is 70,700 vpd. The traffic volume on the US 190 crossing nearly doubles from 26,000 vpd to 51,700 vpd due to the addition of the BUMP or North Bypass. The traffic volume on the Iberville Bridge crossing would be 30,500 vpd. At the interchange with LA 30, the traffic splits evenly from northbound and southbound LA 30.

The traffic volume for the Sunshine Bridge along LA 70 near Donaldsonville would be around 30,000 vpd. On the east side of the river 18,000 vpd continue along LA 70 to LA 22 and 16,000 vpd continue along the new alignment to I-10.

The traffic volume on the Westside Expressway just south of I-10 would be approximately 19,000 vpd. The volume reduces to 16,300 vpd just west of the LA 1 interchange south of Plaquemine.



South of the interchange for the Westside Expressway and LA 1, the Westside Expressway along the LA 1 corridor would have a traffic volume of 23,700 vpd.

LA 1 between I-10 and Plaquemine ranges from 43,600 vpd near I-10 to 8,200 vpd just north of Plaquemine.

The traffic volume for the LA 415 Connector is around 3,500 vpd.

#### 3.6.4 Scenario 4: Build Alternative 2 from I-10 in Port Allen to LA 1, the Iberville Mississippi River Bridge, a widened LA 30, and the BUMP

This alternative considers the construction of Alternative 2 from I-10 in Port Allen to LA 1 south of Plaquemine and the construction of the Iberville Mississippi River Bridge connection to a widened LA 30. It does not include the LA 415 Connector. A map of this scenario is provided in Figure 3-6.

The traffic volume on the I-10 river crossing is 74,000 vpd. The traffic volume on the US 190 crossing nearly doubles from 26,000 vpd to 51,700 vpd. The traffic volume on the Iberville Bridge crossing would be 30,500 vpd.

The traffic volume on the Westside Expressway just south of I-10 would be approximately 20,000 vpd. The volume reduces to 16,100 vpd just west of the LA 1 interchange south of Plaquemine.

South of the interchange for the Westside Expressway and LA 1, the Westside Expressway along the LA 1 corridor would have a traffic volume of 53,700 vpd.

LA 1 between I-10 and Plaquemine ranges from 43,600 vpd near I-10 to 8,200 vpd just north of Plaquemine.

The traffic volumes along LA 30 between Bluebonnet Blvd. and Bayou Paul Road range from 45,000 to 50,000 vpd. South of St. Gabriel, the traffic volume reduces to around 15,000 vpd but increases to around 20,000 vpd near I-10 in Gonzales.

#### 3.6.5 Scenario 5: Build Alternative 3 with the Iberville Mississippi River Bridge and a widened LA 30

This scenario considers the buildout of Alternative 3 with the Iberville Mississippi River Bridge. A map of this scenario is provided in Figure 3-7.

The traffic volume for the Westside Expressway between I-10 west of Port Allen to the Iberville Bridge Connector is approximately 9,500 vpd. Between the Iberville Bridge Connector and the interchange with LA 3127 and LA 70, the traffic volume ranges around 7,000 to 5,000 vpd.

The Iberville Bridge Connector traffic volume is 27,600 vpd. I-10 crossing of the Mississippi River is around 79,800 vpd and the US 190 traffic volume is around 33,800 vpd.

LA 1 near I-10 has a traffic volume of 54,100 vpd. The volume drops to 25,400 vpd through Addis and further drops to 22,800 vpd south of Plaquemine. North of White Castle, LA 1 has a volume of 19,600 vpd. South of White Castle, the traffic volume drops to 12,100 vpd.



The traffic volumes along LA 30 between Bluebonnet Blvd. and Bayou Paul Road are around 33,400 vpd. South of St. Gabriel, the traffic volume reduces to around 10,000 vpd but increases to around 20,000 vpd near I-10 in Gonzales

### 3.6.6 Scenario 6: Build Alternative 1 and BUMP excluding the Iberville Mississippi River Bridge (Westside Expressway Only)

This alternative considers Build Alternative 1 and the BUMP or the Baton Rouge Loop North Bypass, but no Iberville Bridge. A map of this scenario is provided in Figure 3-8.

Regarding the bridge crossings, the traffic volume on the I-10 crossing is 105,000 vpd. The traffic volumes on the US 190 crossing nearly double from 26,000 vpd to 51,800 vpd.

The traffic volume on the Westside Expressway just south of I-10 would be approximately 20,000 vpd. The volume reduces to 16,100 vpd just west of the LA 1 interchange south of Plaquemine.

South of the interchange for the Westside Expressway and LA 1, the Westside Expressway along the LA 1 corridor would have a traffic volume of 53,700 vpd.

LA 1 between I-10 and Plaquemine ranges from 43,600 vpd near I-10 to 8,200 vpd just north of Plaquemine.

The traffic volumes along LA 30 between Bluebonnet Blvd. and Bayou Paul Road range from 17,000 to 20,000 vpd. South of St. Gabriel, the traffic volume reduces to around 9,000 vpd but increases to around 20,000 vpd near I-10 in Gonzales.

### 3.6.7 Interchanges

For Scenario 5, interchange ramp volumes were developed for the four major interchanges along the proposed corridor. Those locations are:

- I-10/Westside Expressway (WSE)
- LA 1/WSE/ Iberville Mississippi Bridge Connector (IMRB)
- Iberville Mississippi Bridge Connector/LA30, and
- LA 70 Connector/I-10 in Sorrento

Figure 3-9 depicts the interchange with Interstate 10 west of Port Allen. The north leg of the interchange considers traffic proposed to use the BUMP or Baton Rouge Loop North Bypass. The south leg is the Westside Expressway. The TransCAD model projects that 57% (17,900 vpd) of traffic west of the Interchange along I-10 would opt to utilize the BUMP to cross the Mississippi River. Five percent (1,500 vpd) of the traffic would utilize the West side Expressway. The Westside Expressway would also accept 2,000 vpd from west-bound I-10.





# IBERVILLE MISSISSIPPI RIVER BRIDGE AND WEST SIDE EXPRESSWAY

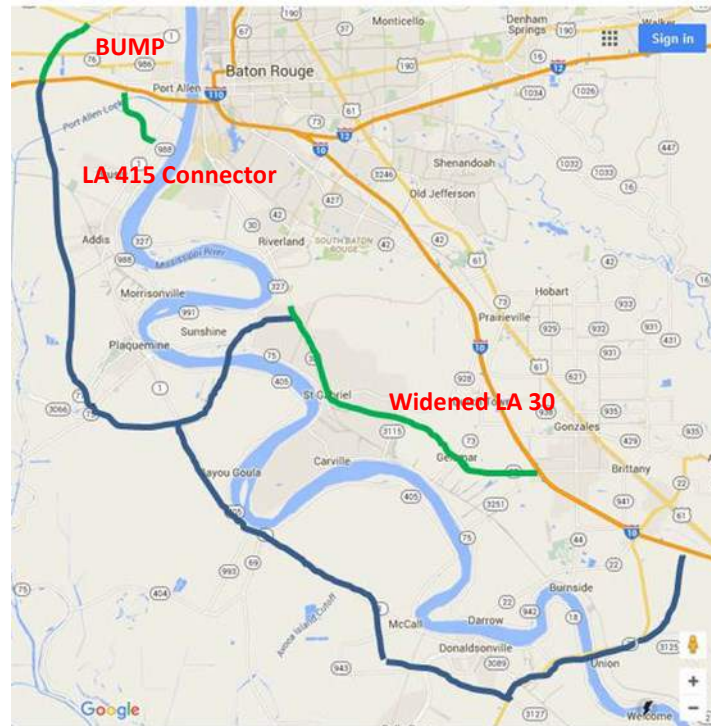


Figure 3-5: Scenario 3 – Build Alternative 1 or Build Alternative 2 with BUMP, LA 415 Connector, Iberville Mississippi River Bridge and widened LA 30

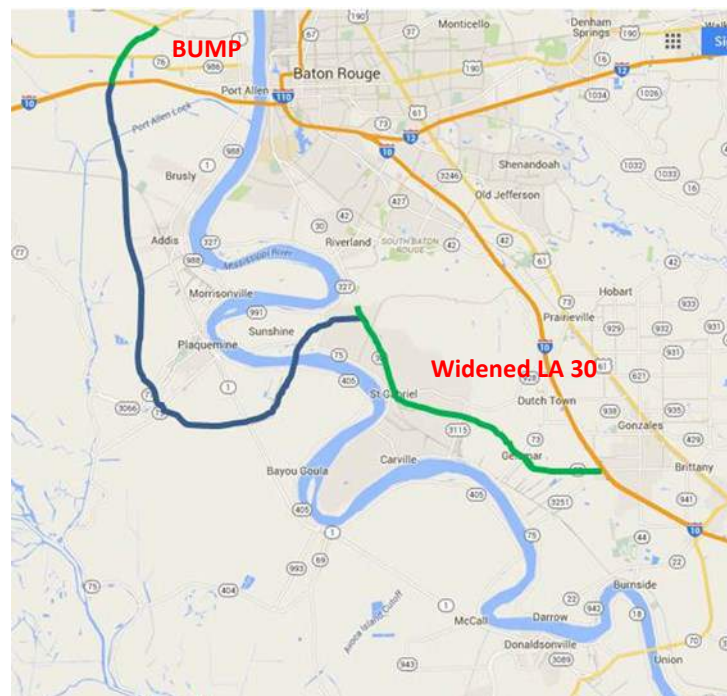


Figure 3-6: Scenario 4 –Build Alternative 2 from I-10 in Port Allen to LA 1 with BUMP, Iberville Mississippi River Bridge, and widened LA 30



# IBERVILLE MISSISSIPPI RIVER BRIDGE AND WEST SIDE EXPRESSWAY



Figure 3-7: Scenario 5 –Build Alternative 3 with the Iberville Mississippi River Bridge and widened LA 30



Figure 3-8: Scenario 6 –Build Alternative 1 with BUMP excluding the Iberville Mississippi River Bridge



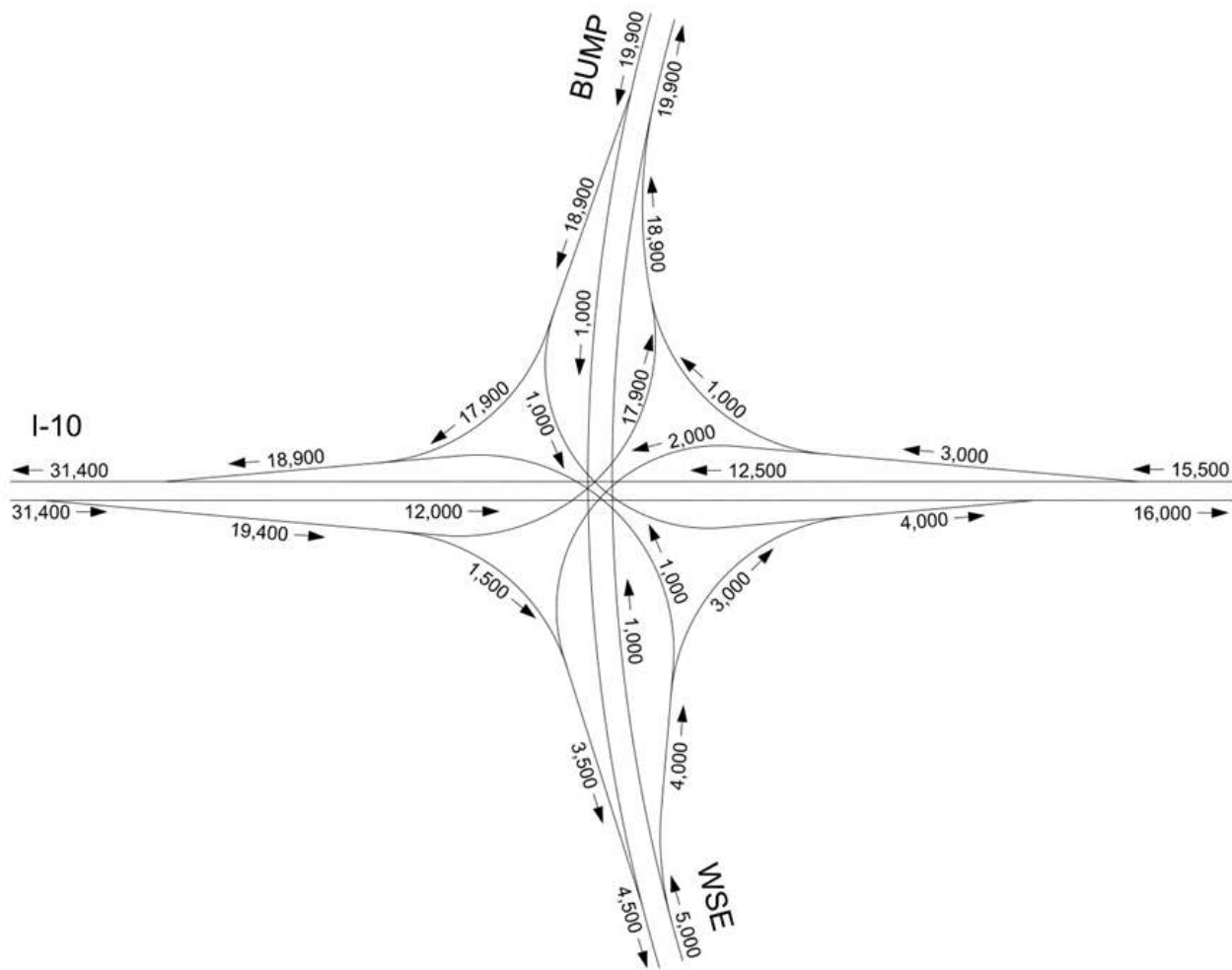
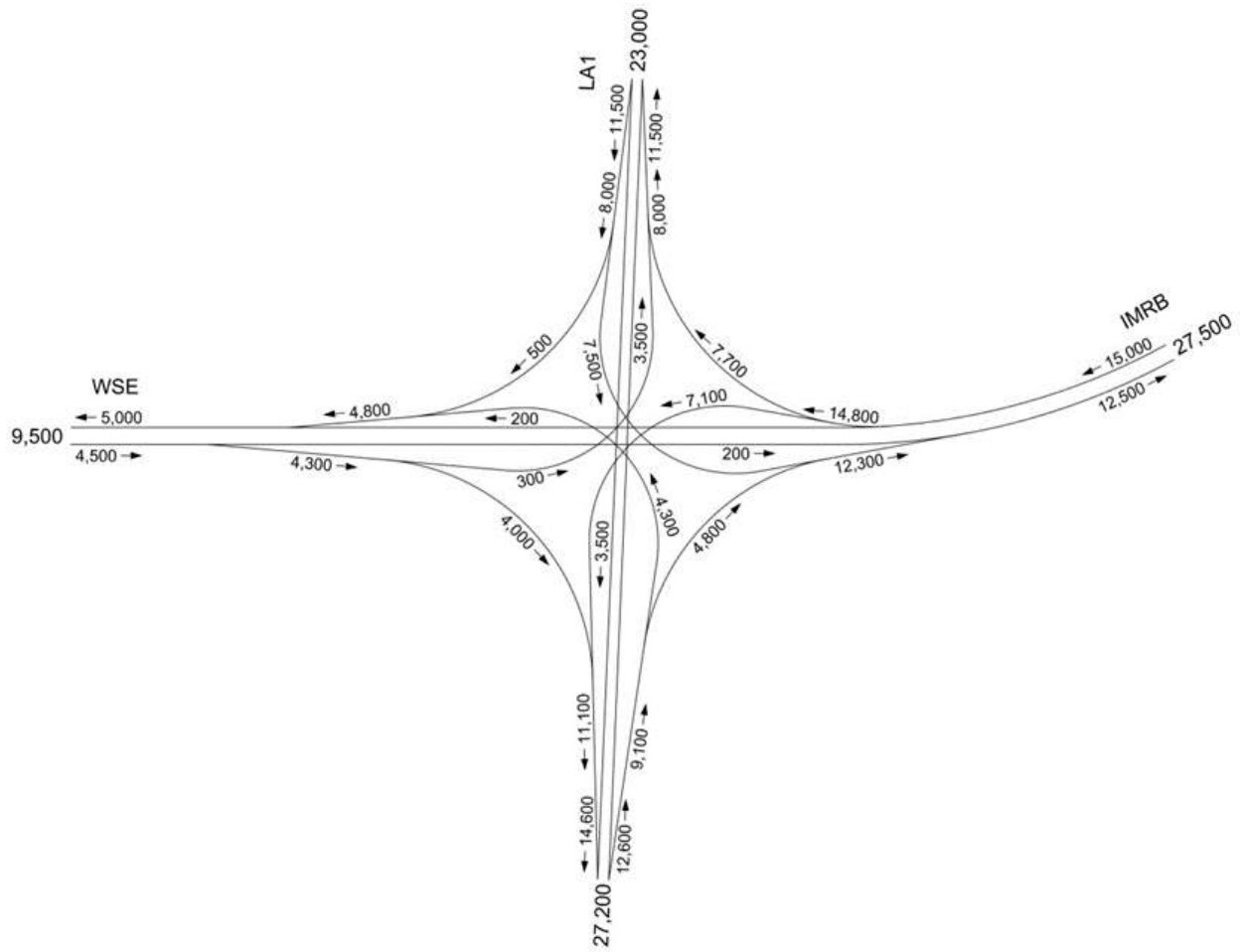


Figure 3-9: I-10 Interchange with BUMP and Westside Expressway

Figure 3-10 depicts the interchange south of Plaquemine with the Westside Expressway, the Iberville Mississippi River Bridge Connector, and LA 1. A combined ADT volume of 8,300 vpd utilizes the Westside Expressway from west to south. The traffic volume from the IMBC splits evenly between traffic heading north and heading south along LA 1. Only 400 vpd utilize the connection between the IMBC and the Westside Expressway heading north.

Figure 3-11 depicts the interchange of the Iberville Mississippi River Bridge Connector with LA 30 in St. Gabriel. The traffic volume from the IMBC splits evenly towards LA 30 northbound and LA 30 southbound. Meanwhile, the traffic volume going towards the IMBC is heavier from the north than it is from the south.

Figure 3-12 depicts the interchange of the Interstate 10 and the LA 70 Connector near Sorrento. The TransCAD model estimated that 16,200 vpd would utilize the LA 70 Connector between I-10 and the Sunshine Bridge. 4,000 vpd would utilize the ramps headed towards I-10 east of the interchange. 12,200 vpd would utilize the ramps to I-10 west of the interchange



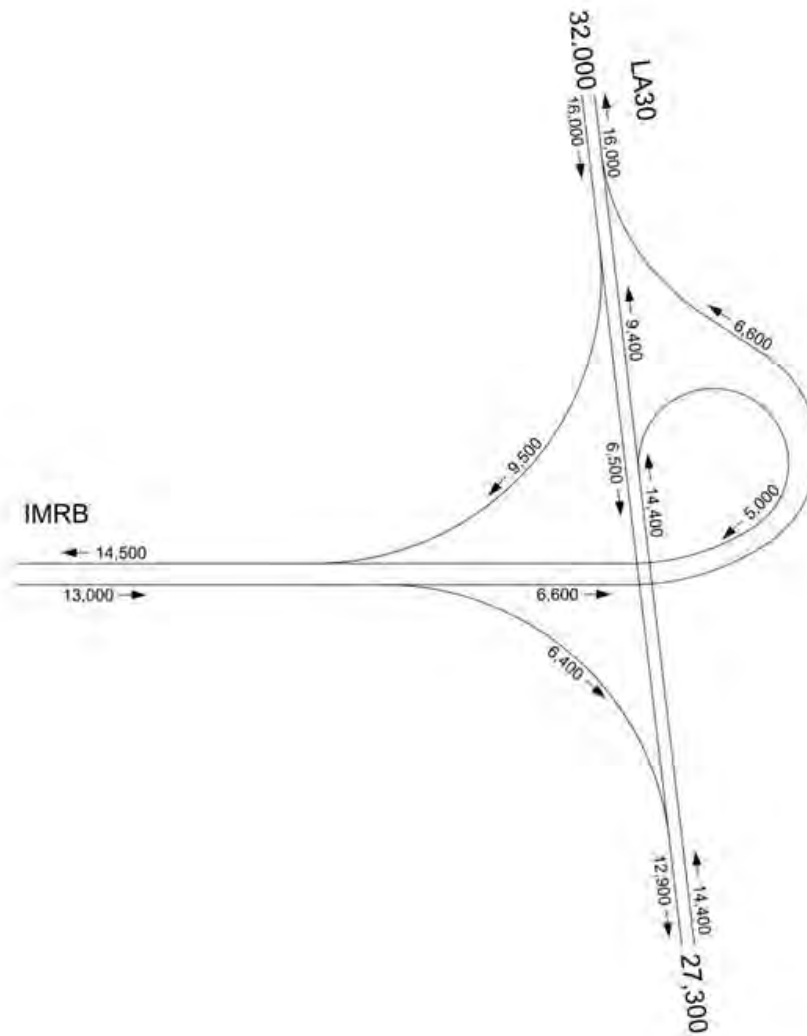


Figure 3-11: Interchange with LA 30 and the Iberville Mississippi River Bridge Connector

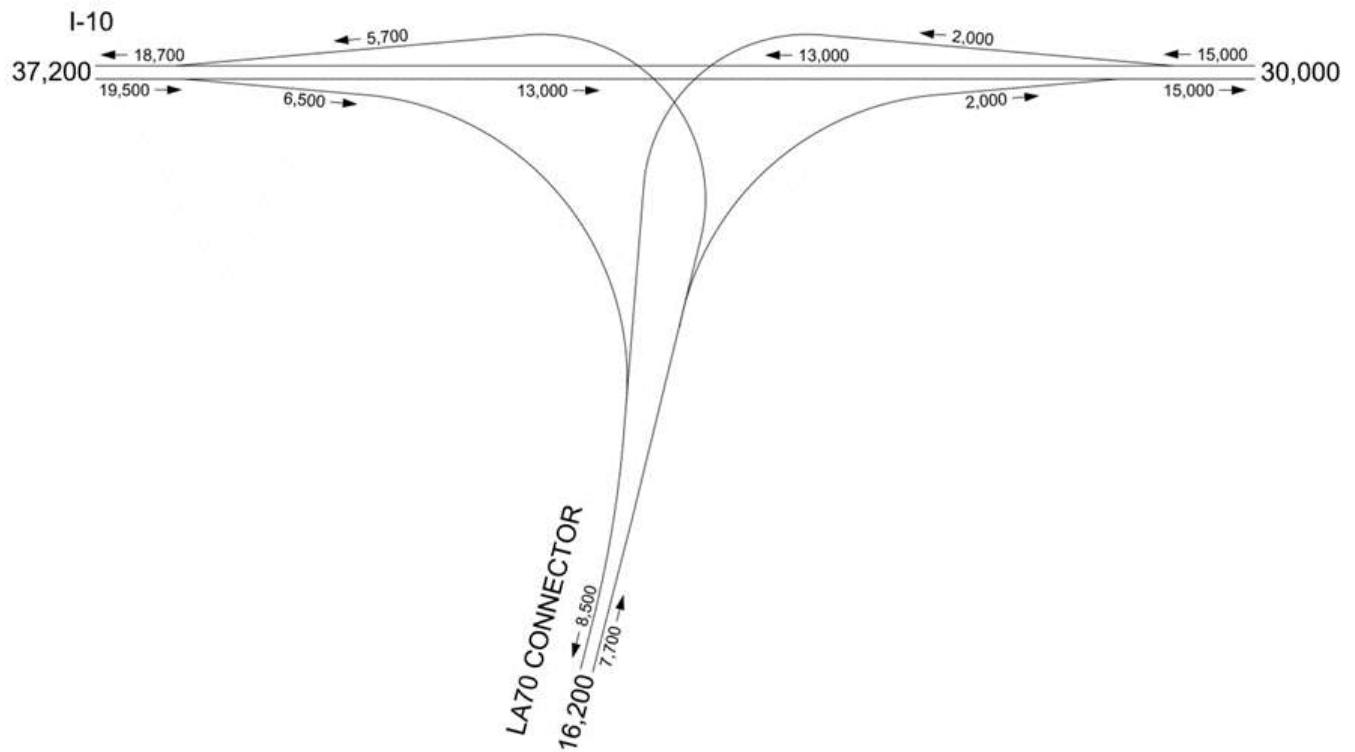


Figure 3-12: Interchange with I-10 and the LA 70 Connector near Sorrento

## **Chapter 4: Potential Environmental Impacts and Consequences**

Based on the existing conditions and affected environment documented in Chapter 2 and on the Alternatives developed and documented in Chapter 3, this chapter would compare and contrast the potential environmental impacts and consequences for these alternatives. The impacts discussed herein are based on existing data sources and limited ground-truthing.

While such methodology is generally not suitable for a study provided under the National Environmental Policy Act (NEPA), it is not the intent of this study to satisfy the requirements of NEPA. The intent of this study includes:

- Initiating corridor and subarea planning for the proposed project on behalf of stakeholders;
- Complying with Federal Highway Administration (FHWA) regulations and guidance for scoping activities to be undertaken for NEPA studies;
- Providing a basis for planning and environmental linkages per FHWA guidance; and
- Complying with Louisiana Department of Transportation and Development (DOTD) project development procedures for Stage 0; the Stage 0 Preliminary Scope and Budget and Environmental Checklists are found in Appendix B.

Therefore, this analysis should identify the likely impacts of interest to stakeholders for resources based on the existing data sources. Should this project progress beyond this implementation plan and feasibility study (Stage 0), a more detailed analysis would be required during the NEPA process (Stage 1) to comply with the requirements of NEPA.

### **4.1 Social Impacts**

#### **4.1.1 Land Use and Cover**

All new highway construction would directly convert the existing land use into a transportation land use. Table 4.1 provides an estimate of the amount of select land use types which would be converted by each of the build alternatives.

#### **4.1.2 Prime Farmland**

All Build alternatives would to various degrees impact areas identified as farmland. The Farmland Protection Policy Act (FPPA) requires Federal agencies to identify and take into account the adverse effects on preservation of farmland, to consider alternatives that could lessen adverse impacts, and to ensure that their action are compatible with State, local and private programs and policies to protect farmland. The FPPA is

Table 4.1 Direct Land Use Conversion Impacts, in acres\*

| Alignment      | Forested | Pasture/<br>Crops | Wetlands | Developed | Totals |
|----------------|----------|-------------------|----------|-----------|--------|
| Alternative 1  | 1,108    | 1,438             | 1,119    | 1,147     | 4,806  |
| Alternative 1a | 1,354    | 1,438             | 1,210    | 1,147     | 5,143  |
| Alternative 2  | 967      | 1,549             | 1,084    | 1,147     | 4,747  |
| Alternative 2a | 1,213    | 1,549             | 1,175    | 1,147     | 5,084  |
| Alternative 3  | 1,648    | 2,345             | 1,203    | 1,147     | 6,343  |
| Alternative 3a | 1,895    | 2,345             | 1,294    | 1,147     | 6,681  |
| No-Build       | 0        | 0                 | 0        | 0         | 0      |

Source: SJB Group, LLC, AECOM

\*Acreage counts do not represent an accurate total for similar alternatives due to multiple land use overlapping

administered by the Natural Resources Conservation Service (NRCS) as an adjunct to the US Department of Agriculture under 7 USC 4201-4209.

During the NEPA Process, a Farmland Conversion Impact Rating Form (AD-1006) would be completed and submitted to the NRCS State Office in Alexandria for their review under the FPPA.

#### 4.1.3 Forestry

Forested areas provide many benefits, such as wildlife habitat, material resources, storm water management, flooding minimization and recreation. Much of the forested wetlands in the project area are bottomland hardwood and cypress swamps. Past exploitation of these forested areas have resulted in a high degree of habitat loss and fragmentation.

In order to balance the impacts to forested wetlands and existing development in the project area, a deliberate attempt was made to place alignments at the margins of development to minimize fragmentation and to take advantage of areas where such development has lessened the quality of the wetlands for wildlife habitation.

Proper planning of route locations should consider construction techniques which minimize the impacts to these forested wetlands by reducing them, as much as possible, to the footprint of the project. Such planning would have the dual benefit of protection of forest benefits and providing maximum aesthetic value in the viewshed from the roadway (see Section 4.9 for further information).

#### 4.1.4 Developmental Impacts

It is highly likely that the construction of a new expressway would spur secondary development in the project area. The types of development which are common include:

1. Commercial development at interchanges;
2. Industrial development due to facilitated access to the Interstate Highway System;
3. Recreational development due to facilitated access; and
4. Residential development due to community growth and job opportunities.

##### 4.1.4.1 Commercial Development

Since the new facility is an access-controlled highway (i.e., has no direct access except at specific control points), it is likely that some proximity commercial development would occur near the locations of proposed interchanges. Table 4.2 labels the interchanges proposed for each alternative. The rural nature of the project area would indicate that such development would be limited. Also, it is probable that some commercial establishments, such as convenience stores, service stations and restaurants would be relocations of existing businesses already located within the project area.

It is possible that vacant land at a distance from the facility could also be converted to commercial development due to the increased access and mobility resulting from the Build alternatives. However, this type of development would be limited to locations where more efficient access is combined with proximity to consumers which does not presently exist or where more economical tracts of land for such development become available.

The amount and type of commercial development possible or probable at each interchange location is also largely dependent on the type of access control provided at the connecting highway and local codes and land use plans and regulations.

The No Build alternative would provide no changes in the historical development of commercial businesses in the area.

##### 4.1.4.2 Industrial Development

The parishes within the project area are adjacent to the Mississippi River, the most extensive inland waterway in the country. Additionally, up to the Baton Rouge turning basin, all of the parishes lie within the deep draft portion of the river, inviting opportunities for both ocean-going and barge transport of goods and services both nationally and globally.

While these opportunities themselves provide the possibility of a steady industrial economy, the lack of intermodal connectivity has not provided much of the project area all of the benefits which could be



Table 4.2 Interchange Location and Type

| Interchange             | Alternate 1 | Alternate 2 | Alternate 3 | No-Build |
|-------------------------|-------------|-------------|-------------|----------|
| I-10 West of Port Allen | System      | System      | System      | None     |
| Brusly Connector        | Service     | Service     | Service     | None     |
| LA 1148                 | Service     | Service     | Service     | None     |
| LA 75                   | Service     | Service     | Service     | None     |
| WSE/Iberville MRB       |             |             | System      | None     |
| LA 1/Iberville MRB      | System      | System      | System      | None     |
| LA 405                  | Service     | Service     | Service     | None     |
| LA 30                   | System      | System      | System      | None     |
| LA 934 (White Castle)   | Service     | Service     |             | None     |
| LA 1                    | Service     | Service     |             | None     |
| LA 69                   |             |             | Service     | None     |
| LA 1/LA 308             | Service     | Service     | Service     | None     |
| LA 3127/LA 70           | System      | System      | System      | None     |
| LA 3089                 | Service     | Service     | Service     | None     |
| LA 3120/LA 18           | Service     | Service     | Service     | None     |
| LA 44 (Existing)        | Service     | Service     | Service     | None     |
| LA 3125/LA 70           | Service     | Service     | Service     | None     |
| I-10 (Sorrento)         | System      | System      | System      | None     |

Source: SJB Group, LLC, AECOM. System interchanges have little opportunity for secondary development, as ramps are to divert traffic along the system and service roads are not normally constructed.

reaped by their proximity to the river. While LA 1 provides the opportunity for such connectivity, it is an arterial highway which is fraught with congestion and traffic control measures, which are detrimental to the efficiency needed in an industrial economy.

While it is possible that such industrial development could occur along the expressway, it is highly probable that industries would be developed along the river in order to take advantage of the maritime access in receiving and shipping of raw materials and completed products.

The No Build alternative would not produce increased intermodal mobility and connectivity. Over time, this may exacerbate the stagnation of population growth in the rural parishes, especially Iberville Parish.