

State Project No. 736-52-0043  
Federal Aid Project No. STP 5204 (508)  
RPC Project No. 0043-ST

# LA 21 Widening Environmental Assessment

## With Finding of No Significant Impact (FONSI)

Bootlegger Road to West 11th Avenue,  
St. Tammany Parish, LA



May 2009



**FEDERAL HIGHWAY ADMINISTRATION**

**FINDING OF NO SIGNIFICANT IMPACT**

**FOR**

**STATE PROJECT NO.: 736-52-0043**

**FEDERAL AID PROJECT NO.: STP-5204(508)**

**NAME: LA 21 WIDENING (BOOTLEGGER ROAD – WEST 11<sup>TH</sup> AVE.)**

**ROUTE: LA 21**

**PARISH: ST. TAMMANY**

The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impact (FONSI) is based on the environmental assessment which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required.

**APPROVED,**  
*Carl M. Hochsmitt*  
CARL M. HOCHSMITT  
PROJECT DELIVERY TEAM LEADER  
FEDERAL HIGHWAY ADMINISTRATION  
DATE: 3-1-09

## Summary of Permits, Commitments and Mitigation

- A Louisiana Natural and Scenic River System Permit will be required from the Louisiana Department of Wildlife and Fisheries.
- A U.S. Army Corps of Engineers 404 Permit will be required, which will establish the conditions of mitigation of impacts to jurisdictional wetlands within the identified corridor area. Mitigation will be required for approximately .10 acres of jurisdictional wetlands.
- A Department of the Army (DA) Section 10 Permit will be required prior to any work in the Tchefuncte River and if the project proposed to deposit dredged or fill material into waterways.
- A U.S. Coast Guard Bridge Permit may be required (but likely will not be), pending the determination of navigability of the Tchefuncte River. It appears that the bridge over the Tchefuncte River falls into the excluded category not subject to 33USC401 and 525(b) under Section 144(h) of Title 23.
- A Water Quality Certification from the Office of Environmental Services, Louisiana Department of Environmental Quality.
- Stormwater Permit from the Louisiana Department of Environmental Quality
- A floodplain development permit may be required from the local floodplain administrator.
- Coordination will be required with the local public works departments to ensure that all appropriate reviews for the project are acquired at the time of final design.
- Other federal, state and local permits (as identified during future phases of the project may be required.
- During final design, design issues related to the closure of the median cut through north of Azalea and the reconfiguration of access via Azalea Drive and Gardenia Drive will be finalized. Coordination with the Flowers Estates Civic Association, the Association of Associations, and St. Tammany Hospital is requested.
- During final design, the type of median planting used will be identified. Consideration of the use of native species was requested by the public. There is also strong interest in the sidewalks remaining in the design.



ENVIRONMENTAL DETERMINATION CHECKLIST

State Project No. 736-52-0043
F. A. P. No. STP 5204 (508)
Name: LA 21 Widening EA
Route: LA 21
Parish: St. Tammany Parish

1. General Information

- Status: ( ) Conceptual Layout ( ) Plan-in-Hand
(X) Line and Grade ( ) Preliminary Plans
( ) Survey ( ) Final Design

2. Class of Action

- ( ) Environmental Impact Statement (E.I.S.)
(X) Environmental Assessment (E.A.)
( ) Categorical Exclusion (C.E.)
( ) Programmatic C.E. (as defined in letter of agreement dated 03/15/95, does not require FHWA approval)

3. Project Description (use attachment if necessary)

The LA Highway 21 Environmental Assessment (LA 21 EA) is a planning effort sponsored by the Regional Planning Commission (RPC) of Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany Parishes and the Louisiana Department of Transportation and Development (LADOTD) to examine alternatives for the widening of LA 21 from Bootlegger Road to West 11th Avenue in Covington, LA. This 1.44 mile long project includes a bridge crossing of the Tchefonctue River. The final concept is a 4 lane divided highway which is slightly asymmetrical to the current facility.

4. Public Involvement

- ( ) Views were solicited on March 5, 2007. Responses are attached.
( ) No adverse comments were received.
(X) Comments are addressed in attachment.
( ) A public hearing (P/H) Opportunity is not required.
( ) An opportunity for requesting a P/H will be afforded upon your concurrence.
( ) Opportunity was afforded, with no requests for P/H.
( ) A Public Hearing was held on \_\_\_\_\_.
(X) A Public Meeting was held on November 15, 2007.

5. Real Estate (If yes, use attachment)

Table with 3 columns: Question, NO, YES. Row 1: Will additional right-of-way be required? ( ) YES (X). Row 2: Will any relocations be required? (X) YES ( ). Row 3: Are construction or drainage servitudes required? (X) YES ( ).

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**6. Cultural and 106 Impacts (If yes, use attachment)**

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	NO	YES
a. <b>Section 4(f) or 6(f) lands</b>		
Are any impacted by the project? (If so, list below).....	(X)	( )
Are any adjacent to the project? (If so, list below).....	(X)	( )
b. <b>Known Historic sites/structures</b>		
Are any impacted by the project? (If so, list below).....	(X)	( )
Are any adjacent to the project? (If so, list below).....	(X)	( )
c. <b>Known Archaeological sites</b>		
Are any impacted by the project? (If so, list site # below).....	(X)	( )
Are any adjacent to the project? (If so, list site # below).....	(X)	( )
d. <b>Cemeteries</b>		
Are any impacted by the project? (If so, list below).....	(X)	( )
Are any adjacent to the project? (If so, list below).....	(X)	( )
e. <b>Historic Bridges</b> .....	(X)	( )

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**7. Wetlands (Attach wetlands finding, if applicable)**

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	NO	YES
a. Are wetlands being affected?.....	( )	(X)
b. Are other waters of the U.S. being affected?.....	( )	(X)
c. Can C.O.E. Nationwide Permit be used?.....	( )	(X)

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**8. Natural Environment (use attachment if necessary)**

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	NO	YES
a. Endangered/Threatened Species/Habitat.....	( )	(X)
b. Within 100 Year Floodplain?.....	( )	(X)
Is project a significant encroachment in Floodplain?.....	(X)	( )
c. In Coastal Zone Management Area?.....	(X)	( )
Is the project consistent with the Coastal Management Program?.....	( )	( )
d. Coastal Barrier Island (Grand Isle only).....	(X)	( )
e. Farmlands (use form AD 1006 if necessary).....	(X)	( )
f. Is project on Sole Source Aquifer?.....	( )	(X)
Is coordination with EPA necessary?.....	( )	(X)
g. Natural & Scenic Stream Permit required.....	( )	(X)
h. Is project impacting a waterway?.....	( )	(X)
Has navigability determination been made?.....	(X)	( )
Will a US Coast Guard permit or amended permit be required?.....	(X)	( )

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**9. Physical Impacts (use attachment if necessary)**

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	NO	YES
a. Is a noise analysis warranted (Type I project).....	( )	(X)
Are there noise impacts based on violation of the (NAC)?.....	( )	(X)
Are there noise impacts based on the 10 dBA increase?.....	(X)	( )
Are noise abatement measures reasonable and feasible?.....	(X)	( )
b. Is an air quality study warranted?.....	(X)	( )
Do project level air quality levels exceed the NAAQS for CO?.....	(X)	( )
c. Is project in a non-attainment area for Carbon monoxide (CO), Ozone (O <sub>3</sub> ), Nitrogen dioxide (NO <sub>2</sub> ), or Particulates (PM-10)? .....	(X)	( )
d. Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP)?.....	( )	(X)
e. Are construction air, noise, & water impacts major?.....	(X)	( )
f. Are there any known waste sites or U.S.T.s?.....	( )	(X)
Will these sites require further investigation prior to purchase? .....	( )	(X)

**10. Social Impacts (use attachment if necessary)**

	NO	YES
a. <b>Land use changes</b> .....	(X)	( )
b. <b>Churches and Schools</b>		
Are any impacted by the project? (If so, list below).....	(X)	( )
Are any adjacent to the project? (If so, list below).....	( )	(X)
c. <b>Title VI Considerations</b> .....	(X)	( )
d. <b>Will any specific groups be adversely affected (i.e., minorities, low-income, elderly, disabled, etc.)?</b> .....	(X)	( )
e. <b>Hospitals, medical facilities, fire police</b>		
Are any impacted by the project? (If so, list below).....	(X)	( )
Are any adjacent to the project? (If so, list below).....	( )	(X)
f. <b>Transportation pattern changes</b> .....	(X)	( )
g. <b>Community cohesion</b> .....	(X)	( )
h. <b>Are short-term social/economic impacts due to construction considered major?</b> .....	(X)	( )
i. <b>Do conditions warrant special construction times (i.e., school in session, congestion, tourist season, harvest)?</b> .....	(X)	( )
j. <b>Were Context Sensitive Solutions considered? (If so explain below)</b> .....	( )	(X)
k. <b>Will the roadway/bridge be closed? (If yes, answer questions below)</b> .....	(X)	( )
Will a detour bridge be provided?.....	( )	( )
Will a detour route be signed?.....	( )	( )

**11. Other (Use this space to explain or expand answers to questions above.)**

If instream activities will occur between April 1 and September 30, no further consultation with the US Fish and Wildlife Services. However, if any instream work will occur between November 1 and March 31, further consultation with the US Fish and Wildlife Services is required due to the potential presence of a federally listed threatened species during their spawning season.

Churches

Holy Trinity Lutheran Church  
1 N. Marigold Dr.  
Covington, LA 70433

Hospitals

St. Tammany Parish Hospital  
1202 S. Tyler Street  
Covington, LA 70433

Schools

Holy Trinity School  
1 N. Marigold Dr.  
Covington, LA 70433

Special Construction Times

Special construction times should be coordinated with church and school regarding mass times and arrival/dismissal.

CSS - In order to accommodate the improvement and be sensitive to the surroundings, the project team worked with City and Parish officials to develop the Preferred Alternative.

Attachments

- (X) S.O.V. and Responses
- (X) Wetlands Finding
- ( ) Project Description Sheet
- ( ) Conceptual Stage Relocation Plan
- (X) Noise Analysis
- (X) Air Analysis
- (X) Exhibits and/or Maps
- ( ) 4(f) Evaluation
- ( ) Form AD 1006 (Farmlands)

- (X) 106 Documentation
- (X) Other: Threatened and Endangered Species Survey

Preparer: Ellen Wilmer Soll, AICP  
Burk-Kleinpeter, Inc.  
Date: January 6, 2009

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*All photos used in report taken by Burk-Kleinpeter, Inc. unless otherwise specified.*

**LA 2 I Widening Environmental Assessment**

State Project No. 736-52-0043

Federal Aid Project No. STP 5204 (508)

RPC Project No. 0043-ST

# **Chapter I: Introduction**

# CHAPTER I.

## *Introduction*

The LA Highway 21 Environmental Assessment (LA 21 EA) is a planning effort sponsored by the Regional Planning Commission (RPC) of Jefferson, Orleans, Plaquemines, St. Bernard, and St. Tammany Parishes and the Louisiana Department of Transportation and Development (LA DOTD) to examine alternatives for the widening of LA 21 from Bootlegger Road to West 11<sup>th</sup> Avenue in Covington, LA. This 1.44 mile long project includes a bridge crossing of the Tchefuncte River.

### **Project Background**

LA 21 is a main arterial providing access between I-12 and western St. Tammany Parish to the City of Covington. This commercial corridor and the area surrounding it are rapidly developing with a mix of retail, office, commercial and residential construction. The St. Tammany Parish Hospital, located between 8<sup>th</sup> and 11<sup>th</sup> Avenues, is also in the process of expansion. LA 21 from Bootlegger to 11<sup>th</sup> Avenue is the main route for emergency vehicles and medical patrons accessing these facilities.

### **Definition of Project Study Area**

The road widening project would extend from Bootlegger Road to West 11<sup>th</sup> Avenue in Covington, LA. For the purposes of analyzing impacts, a project area defined as extending from I-12 at the southern end to West 15<sup>th</sup> Avenue on the northern end, and from Filmore and Bricker on the west side and Jackson Street and Dogwood Drive on the east was established. This study area contains approximately 810 acres of land. Refer to Figure 1-1 for an overview of the Study Area.

Logical termini are the rational endpoints for the review of environmental impacts of a proposed action. The defined logical termini for this project are Highland Park and 13<sup>th</sup> Avenue. At the southern terminus, this project will connect up with an ongoing St. Tammany Parish project road widening project – the LA 21 Widening - Bootlegger Road to Oschner (State Project No. 059-01-0026, St. Tammany Parish Project No. 200-01-01). A terminal point at Highland Park includes queuing traffic headed to points west along LA 1077 and 1088, a rapidly growing area of the Parish. At the northern end, West 13<sup>th</sup> Avenue serves as the terminal point; this is just beyond the second major signalized intersection north of the Tchefuncte Bridge (11<sup>th</sup> Avenue) and allows the project area to encompass the entire street facing portion of the St. Tammany Hospital.





## Purpose and Need for the Project

### Purpose:

- ❖ The purpose of the project is to increase capacity on LA 21 from Bootlegger Road to West 11th Avenue by adding lane capacity and replacing an inadequate and aging rural roadway and bridge with a suburban style arterial and bridge crossing of the Tchefuncte River.

### Need:

- ❖ The need for the project is to remove several deficiencies from the corridor identified during the Stage 0 Process. These deficiencies contribute to increased travel times, delays and congestion. The project is necessary because there is currently inadequate roadway capacity.
- ❖ According to the traffic data collected during the Stage 0 Feasibility Study, there were 23,470 vehicles per day north of Bootlegger Rd. From 2005 to 2007, the average daily traffic increased by an additional 15% to 26,890. This trend is expected to continue as a result of continued and planned development in the area.

## Methodology

This project followed all established guidelines of the National Environmental Policy Act (NEPA) for the preparation of an Environmental Assessment (EA). This includes a statement of existing conditions without the proposed action, identification and analysis of alternatives, including a no-build option, identification of a preferred alternative and expected impacts resulting from the proposed action.

Information included in this report came from a variety of sources, including existing data resources and surveys, field reconnaissance, and input received from the community.

This environmental process included a public information meeting on November 17, 2007 to familiarize the community and interested parties with the project and give them an opportunity for comment and to ask questions. A public hearing was held on February 11, 2009 to provide a final opportunity to learn about the preferred alternative selected and have a final opportunity for comments.



The report is organized as follows:

Chapter I - Introduction:

The first chapter provides the project background items such as the project descriptions, definition of the study area, statement of purpose and need and methodology.

Chapter II – Existing Conditions: This section of the report analyzes the existing conditions, both human and environmental, without the proposed action occurring. These impacts are considered to a wide variety of factors, including traffic, permits, land use, community and social impacts, economic impacts, historic and cultural and archaeological resources, recreational assets, noise, air, wetlands, floodplains farmland, endangered and threatened species and habitat, to name a few.

Chapter III – Alternatives Analysis: The third chapter analyzes the two alternatives defined by the project sponsors in the Scope of Services, identifies additional alternatives including the ‘no-build’ and evaluates the impacts and feasibility of each to determine the preferred alternative.

Chapter IV – Preferred Alternative Identification: This chapter identifies the preferred alternative for the project and presents a more thorough analysis of the potential impacts to the natural and human environment.

Chapter V – Community Participation: This chapter outlines the coordination plan for all levels of input.

**Appendices**

Appendix A – Technical Reports

Item A1. Air Quality and Traffic Noise Analysis

Item A2. Traffic Analysis

Item A3. Wetlands Findings and Threatened and Endangered Species Survey

Appendix B – Public Participation Notebook

**Other Independent Volumes**

Public Hearing Transcript

Line and Grade

Cultural Resources Report

Environmental Site Assessment

**LA 2 I Widening Environmental Assessment**

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# **Chapter II: Existing Conditions**

# CHAPTER II.

## *Existing Conditions*

Information on the existing condition of the project area without the project improvements came from the Stage 0 Study, other existing resources and reports, field reconnaissance and field survey and St. Tammany Parish and City of Covington Geographic Information Systems (GIS) data.

### **The Human Environment**

The project area straddles the boundaries of unincorporated St. Tammany Parish and the City of Covington. Of the 810 acres of the project area, 605 acres (75%) are in St. Tammany Parish and 205 acres (25%) are in the City of Covington. This chapter, thus, refers to the environment in the vicinity of the corridor, not to actual project impacts, which are addressed in Chapter III, the Alternatives Evaluation.

### **Demographic and Socio-economic Conditions**

Demographic and socio-economic data for the project area came from the U.S. Bureau of the Census, 2000 Census of the Population. The project study area contains five census block groups; these are contained within three census tracts. See figure 2-1 for census geography.

<b>Project Area Census Geography</b>	
Census Tract 404.0	Block Group 1
	Block Group 2
Census Tract 406.01	Block Group 1
	Block Group 2
Census Tract 406.02	Block Group 2
	Block Group 3

Data from the census files obtained for the study included population, race, age, and income information.

### Population Change

The population of St. Tammany Parish has increased rapidly over the later half of the 20<sup>th</sup> Century, growing by at least 30% each decade since 1950.<sup>1</sup> According to the 2000 Census, St. Tammany Parish had a population of 191,268; this was a 32% increase from the 1990 Census, when the population of St. Tammany Parish was just 144,508.<sup>2</sup>

<sup>1</sup> Louisiana Population of Counties by Decennial Census: 1900 to 1990, [www.census.gov/population/cencounts/la190090.txt](http://www.census.gov/population/cencounts/la190090.txt).

<sup>2</sup> U.S. Bureau of the Census. SF 1 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov).



During that same ten year time period, block groups within the project area grew at varied rates. Census Tract 404.0 Block Group 1 grew quite slowly, at a rate of only 1.7%, as it is located in an already established area of the city of Covington (north of LA 21). Census Tract 406.01, Block Group 1 and Census Tract 406.02, Block Groups 2 and 3 grew at a rate of between 22 and 36%, which was on par with the growth rate of the Parish (32%). However, Census Tract 404.0, Block Group 2, which encompasses Bootlegger Road and extends to the Tangipahoa Parish boundary, grew at a rate of 75.8% from 1990 to 2000. This is indicative of the rapid rate of residential development occurring in this western part of the Parish, as indicated by development approvals and traffic impact analyses recorded by the Parish.<sup>3</sup>

#### Post-Katrina Population Data

The U.S. Bureau of the Census estimated the population of St. Tammany Parish at 217,999 in 2005<sup>4</sup>; a 15% increase in the five year period prior to Hurricane Katrina's impact on the region. Following Hurricane Katrina, the population of St. Tammany Parish increased dramatically. In January of 2006, the U.S. Bureau of the Census performed a special population estimate, finding that 220,651 persons were living in the Parish.<sup>5</sup> During that same time frame, several other population estimates were performed.

According to Claritas, St. Tammany Parish's population had jumped to 257,767 in October 2005; then declined to 233,781 in Jan 2006; and then had decreased again slightly to 230,603 by July 2006. The Louisiana Department of Health and Hospitals performed a household survey during this same time frame.<sup>6</sup> Their results indicate that there were 220,656 persons living in households as of January 2007. The St. Tammany Parish Planning Department estimates are closer to 270,000 as of January 2007 using electrical customers and number living in group quarters. These numbers will continue to vary until the 2010 Census of the Population becomes official.

#### Population by Race and Ethnicity

As of the 2000 Census, the majority of the population of St. Tammany Parish was white (87.2%). This trend is reflected throughout the project area, where the percentage of the population which identified themselves as white was between 79.3% and 97.7%. The percentage of the population for St. Tammany Parish who identified themselves as Black or African American was 9.9% in 2000. In the project

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<sup>3</sup> U.S. Bureau of the Census. SF 1 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov).

<sup>4</sup> U.S. Bureau of the Census, July 1, 2005 Population Estimate.

<sup>5</sup> U.S. Bureau of the Census, January 1, 2006 Special Population Estimate.

<sup>6</sup> Louisiana Department of Health and Hospitals, 2006 Louisiana Health and Population Survey Report, January 10, 2007.

area, this number ranged between 1.2% and 5.5%; slightly lower than that of the Parish. The combination of Asian, Hawaiian or Pacific Islander, American Indian or Alaskan Native, Other, and two or more races made up less than 3% of the population when combined in all census geographies.<sup>7</sup>

The results of the 2006 Louisiana Health and Population Survey indicate that these demographic trends continue into the post-Katrina period.

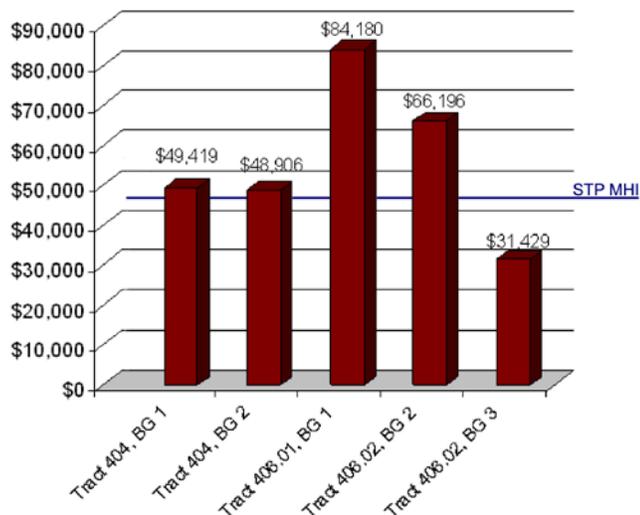
Population by Age

Within St. Tammany Parish, the majority of the population is young to middle age adults between the ages of 18 and 59 years (57.8%), while school age children (ages 5 through 17) make up 21.4% and young children (under 5 years of age) make up 7.1%. Only 13.7% make up traditional retirement age individuals (over 65 years).<sup>8</sup> The results of the 2006 Louisiana Health and Population Survey indicate that these demographic trends continue into the post-Katrina period.

These trends are similar throughout the project area with a few notable exceptions, as shown in Table 2.1, Demographics Overview (page 2-6) In Census Tract 406.01 Block Group 1, (located on the south side of LA 21 and west side of the Tchefuncte River) there is a higher percentage of school age children (30.4%). Conversely, Census Tract 406.02, Block Groups 2 and 3, located on the south side of LA 21 in Covington both have a notably higher number of retirement age individuals (30.5% and 28.3%, respectively).<sup>9</sup>

Population by Income

The Median Household Income (MHI) for St. Tammany Parish (STP) was \$47,883 in 1999, while 7.6% of families lived below the poverty line (\$17,029). Incomes in the project area are varied. MHIs in Census Tract 404 Block Groups 1 and 2 (north side of LA 21) are quite close to that of the parish at \$49,419 and \$48,906, respectively. In Census Tract 406.01, Block Group 1 and Census Tract 406.02,



<sup>7</sup> U.S. Bureau of the Census. SF 1 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov).

<sup>8</sup> U.S. Bureau of the Census. SF 1 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov).

<sup>9</sup> U.S. Bureau of the Census. SF 1 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov)



Block Group 2, Incomes were higher in 1999 than those of the Parish, at \$84,180 and \$66,196, respectively. On the other hand, Census Tract 406.02, Block Group 3 had the lowest incomes in the project area, at \$31,429.<sup>10</sup>

### Environmental Justice Issues

Concern for low-income and minority populations enduring an unequal or unfair amount of adverse health and environmental effects as a result of the development of transportation projects has lead to the study of Environmental Justice. The U.S. Environmental Protection Agency (EPA) defines Environmental Justice as the “fair treatment for people of all races, cultures, and incomes, regarding the development of environmental laws, regulations and policies”.<sup>11</sup> Executive Order 12898 directed every Federal Agency to add an environmental justice policy to all its programs, policies and activities concerning these low-income and minority populations.<sup>12</sup>

Only areas which have a combination of a majority of low-income and/or concentrated poverty fit the federal definition for “Environmental Justice”. This applies to persons who live in a household with an income at or below the Department of Health and Human Services poverty guidelines (\$17,029 in 2000), or persons who are Black/African American, Asian American, American Indian, Alaskan Native or Hispanic.

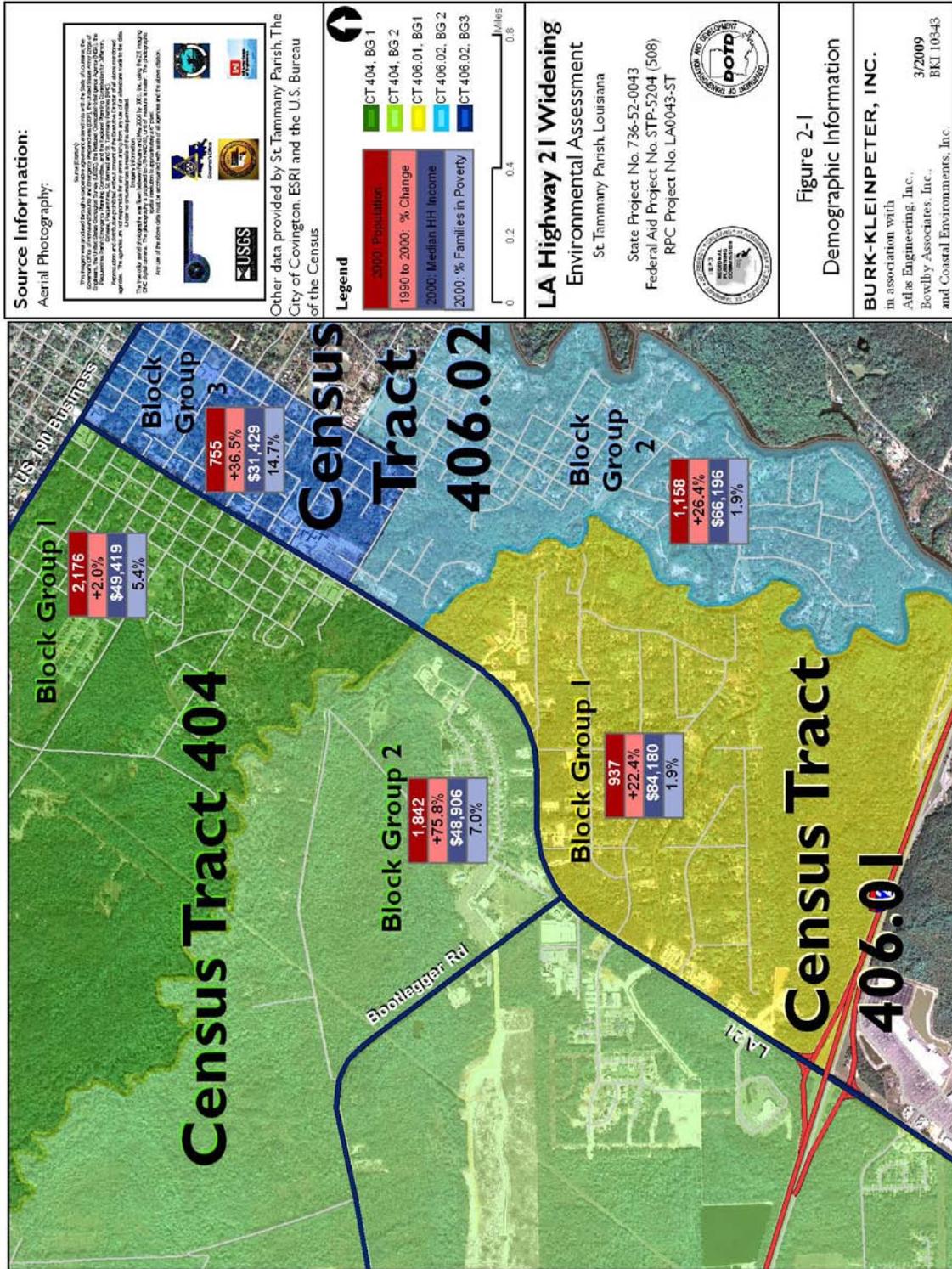
Given the Census data reviewed for the project area, it is clear that the project area population does not meet the federal definition of majority low-income or concentrated poverty.

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<sup>10</sup> U.S. Bureau of the Census. SF 3 data, 1990 and 2000. [www.factfinder.census.gov](http://www.factfinder.census.gov)

<sup>11</sup> [www.epa.gov/swerosps/ej/](http://www.epa.gov/swerosps/ej/)

<sup>12</sup> Memorandum for the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, Executive Order 12898, February 11, 1994.



<b>Table 2-1 Demographic Overview</b>												
	<b>ST. TAMMANY PARISH</b>		<b>CENSUS TRACT 404</b>				<b>CENSUS TRACT 406.01</b>		<b>CENSUS TRACT 406.02</b>			
			<b>BLOCK GROUP 1</b>		<b>BLOCK GROUP 2</b>		<b>BLOCK GROUP 1</b>		<b>BLOCK GROUP 2</b>		<b>BLOCK GROUP 3</b>	
<b>Total population</b>	191,268		2,160		1,842		937		1,158		755	
Under 5 Years	13,556	7.1%	133	6.2%	173	9.4%	47	5.0%	61	5.3%	66	8.7%
5 to 17 Years	40,843	21.4%	434	20.1%	366	19.9%	285	30.4%	171	14.8%	75	9.9%
18 to 21 Years	8,778	4.6%	115	5.3%	38	2.1%	30	3.2%	20	1.7%	26	3.4%
22 to 34 Years	28,258	14.8%	380	17.6%	335	18.2%	30	3.2%	122	10.5%	131	17.4%
35 to 44 Years	34,112	17.8%	269	12.5%	384	20.8%	200	21.3%	160	13.8%	96	12.7%
45 to 59 Years	39,436	20.6%	461	21.3%	326	17.7%	236	25.2%	271	23.4%	147	19.5%
60 to 65 Years	7,125	3.7%	69	3.2%	88	4.8%	58	6.2%	66	5.7%	19	2.5%
Over 65 Years	19,160	10.0%	299	13.8%	132	7.2%	51	5.4%	287	24.8%	195	25.8%
<b>Race and Ethnicity</b>			2,176		1,826		760		1,113		785	
White Alone	166,758	87.2%	2,083	95.7%	1,685	92.3%	743	97.8%	1,070	96.1%	738	94.0%
Black or African American	18,929	9.9%	47	2.2%	101	5.5%	9	1.2%	20	1.8%	38	4.8%
American Indian or Alaskan Native	47	0.0%	6	0.3%	6	0.3%	1	0.1%	0	0.0%	3	0.4%
Asian	1,420	0.7%	12	0.6%	3	0.2%	4	0.5%	2	0.2%	0	0.0%
Native Hawaiian and Other Pacific	57	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%
Other	1,164	0.6%	1	0.0%	12	0.7%	1	0.1%	3	0.3%	3	0.4%
Two or more races	2,415	1.3%	27	1.2%	19	1.0%	2	0.3%	17	1.5%	3	0.4%
Hispanic or Latino	4,737	2.5%	34	1.6%	54	3.0%	16	2.1%	20	1.8%	18	2.3%
<b>MHI 1999</b>	\$47,883		\$49,419		\$48,906		\$84,180		\$66,196		\$31,429	
<b>Families below poverty level</b>	4,041	7.6%	34	5.4%	35	7.0%	5	1.9%	6	1.9%	22	14.7%

Source: U.S. Bureau of the Census, SF1 and SF3 Data, 2000.

Compiled by Burk-Kleinpeter, Inc., 2007.

### Economic Characteristics

Review of the parish's employment data as reported in the 2002 and 1997 economic census show a net loss in manufacturing jobs as well as jobs which are administrative, support, waste management and remediation services. These few losses are more than offset by increases in virtually every other sector. The most significant gains were in

professional, scientific and technical services, educational services and health care and social assistance.<sup>13</sup>

<b>INDUSTRY</b>	<b>1997</b>	<b>2002</b>	<b>% Change (1997 to 2002)</b>
Manufacturing	2,699	2,130	-21.1%
Wholesale trade	2,070	2,522	21.8%
Retail trade	9,479	11,160	17.7%
Information		855	
Real estate & rental & leasing	739	761	3.0%
Professional, scientific, & technical services	1,789	3,204	79.1%
Administrative & support & waste management & remediation service	1,938	1,896	-2.2%
Educational services	153	281	83.7%
Health care & social assistance	5,248	10,564	101.3%
Arts, entertainment, & recreation	869	1,046	20.4%
Accommodation & food services	5,415	6,702	23.8%
Other services (except public administration)	1,263	1,667	32.0%

Source: US Bureau of the Census, Economic Census, 1997 and 2002.

Compiled by Burk-Kleinpeter, Inc., 2007.

Historically, St. Tammany Parish functioned as a ‘bedroom community’ in the growth period from the 1950s to recent years. However, in recent years, trends indicate that St. Tammany is establishing itself as a central place, attracting more professional, scientific and technical services and establishing a growing health care industry. While a large number of residents continued to commute outside the parish in 2000, this number has declined slightly from 1990 to 2000, and may continue to do so in the future

<b>PLACE OF WORK</b>	<b>1990</b>		<b>2000</b>	
Total Workers (age 16 and older)	61,370	100.0%	87,130	100.0%
Worked in state of residence:	58,797	95.8%	83,825	96.2%
Worked in county of residence:	35,112	57.2%	52,681	60.5%
Worked outside county of residence:	23,867	38.9%	31,144	35.7%
Worked outside state of residence:	2,573	4.2%	3,305	3.8%

Source: U.S. Bureau of the Census, SF-3 Data, 1990 and 2000.

Compiled by Burk-Kleinpeter, Inc., 2007

<sup>13</sup> U.S. Bureau of the Census. Economic Census, 1997 and 2002. [www.factfinder.census.gov](http://www.factfinder.census.gov)





**Land Use**

General land use for the project area consists of a mix of commercial, institutional and undeveloped land which fronts the corridor, behind which a combination of residential and undeveloped land exists. Despite falling in two jurisdictions which use different classification systems, the land use designations for each can be generalized according to the American Planning Association’s Land Based Classification Standards (LBCS)<sup>14</sup> as the following:

**Table 2-4 Existing Land Use by Activity Category and Acreage**

LAND USE	DESCRIPTION	ACRES	% OF TOTAL
<b>Residential Activities</b> LBCS Code 1000	This classification is defined as being characterized as all densities of housing from single to multiple family, and includes types from site-built to mobile homes or transient living facilities.	291	36%
<b>Shopping, Business and Trade Activities</b> LBCS Code 2000	This classification includes all types of commercial and office activities	65	8%
<b>Social, Institutional or Infrastructure related activities</b> LBCS Code 4000	This classification is defined as schools, fire and police facilities, healthcare, etc.	101	13%
<b>No Human Activity or Unclassifiable</b> LBCS Code 9000	This classification includes land that is not developed, such as natural areas, water ways, or land that cannot otherwise be classified	304	38%
<b>Neighborhood Mixed Use</b> Not Part of the LBCS coding system	This includes a variety of residential, commercial and institutional uses intermixed in the same building or on the same site	47	6%

Source: American Planning Association, Land-based Classification System

**Community Facilities**

During the Stage 0 Study, community facilities located within the project study area were recorded. These include the Holy Trinity Lutheran Church, at One Marigold Street in Covington, and an early childhood development center associated with that facility. The St. Tammany Parish Office of Family Support and Department of Social Services, located south of Bootlegger Road on LA 21, and the St. Tammany Hospital, located between 8<sup>th</sup> and 11<sup>th</sup> Avenue in Covington. The First Baptist Church is located on Bootlegger Road.<sup>15</sup>

**Parks and Recreation Facilities**

Information on recreational facilities was obtained from existing maps and area land use descriptions produced by the U.S. Geological Service and St. Tammany Parish. There are no parks, recreation, wildlife refuges, hiking biking or camping areas located within the project study area.

<sup>14</sup> American Planning Association, Land Based Classification System, [www.planning.org/lbcs/standards](http://www.planning.org/lbcs/standards).

<sup>15</sup> LA 21 Stage 0 Feasibility Study, Prepared for the Regional Planning Commission, June 2005.



### **Historical, Cultural and Archaeological Resources**

A Phase I cultural resources survey was conducted within the proposed rights of way for the project. Prior to the field investigations, a records-check was conducted to determine what types of cultural resources might be located in the vicinity. This investigation yielded that there were no historic structures recorded in the vicinity of the project area and the nearest archaeological site is located approximately .25 miles south of the project area.<sup>16</sup>

### **Traffic and Transportation System**

Information on St. Tammany Parish's existing transportation network came from a combination of sources, including the Louisiana Department of Transportation and Development (LA DOTD), the St. Tammany Parish Traffic Engineering Department, fieldwork and traffic data collection and analysis performed by the project team.

According to the Highway Functional Classification Urbanized Area Map for the Mandeville-Covington area, there are several major roads in the vicinity of the project area. To the south is Interstate 12, and to the north, US 190 business is classified as a principal arterial. Within the project area, LA 21 is classified as a minor arterial, while both 11<sup>th</sup> Avenue and 8<sup>th</sup> Avenue are classified as urban collector streets.

#### Daily Traffic Volumes (2007)

The analysis of existing traffic operations utilized average daily traffic count data collected by Burk-Kleinpeter, Inc. (BKI). All of the daily traffic data collected along the corridor came from March 2007. For comparison purposes, data from the original 2005 Stage 0 Feasibility Study has also been included.

On average, the LA 21 corridor, between Bootlegger Road and 11<sup>th</sup> Avenue, carries an average of 25,650 vehicles per day. At the Tchefuncte River Bridge, the volume of traffic is 26,890 vehicles per day. This equates to 3,420 (or 13%) more vehicles per day than found at the same location in 2005. However, traffic growth overall between 2005 and 2007 is about 1%. Since the 2005 traffic counting period, the Parish has opened a widened US Highway 190 from I-12 into Covington. This mostly has helped equalize traffic growth in the corridor, particularly for through movements between I-12 and Downtown. However, since that time, the pace and intensity of adjacent roadside development (residential and commercial) has quickened. This has brought more traffic into the area and helped contribute to the observed problems with congestion and extended queues of stopped traffic.

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<sup>16</sup> *Cultural Resources Survey of the Proposed LA 21 Widening*, St. Tammany Parish, LA, May 2007

<b>Table 2-5 Average Daily Traffic Volumes (2007 vs. 2005)</b>				
LA 21, BOOTLEGGER ROAD TO 11 <sup>TH</sup> AVE				
<b>CORRIDOR SEGMENT</b>	<b>2005 ADT</b>	<b>2007 ADT</b>	<b>2005-07 CHANGE</b>	
LA 21 from Bootlegger Road to Tchefuncte River	23470	26890	3420	13%
LA 21 from Tchefuncte River to 11th Avenue	27470	24410	-3060	-11%
Corridor Average	25470	25650	180	1%

Notes:

- (1) – Values rounded to the closest 10 vehicles.
- (2) – Value for Tchefuncte River to 11th Avenue is an average of two station's worth of data.

Compiled by Burk-Kleinpeter, Inc., 2007.

Corridor Level-of-Service Evaluation (2007)

An evaluation of the corridor’s operational level-of-service utilized the 2007 traffic data between Bootlegger Road and 11<sup>th</sup> Avenue. Peak period traffic volumes and directional splits along the corridor have been developed using the patterns shown within the source data and input into a *Highway Capacity Manual* analysis for two-lane highways.<sup>17</sup> This analysis determines overall level-of-service based upon a comparison of the characteristics of roadway operations expressed in terms of average travel speed, percentage of travel time with a delay to the roadway capacity. One of six corresponding values for level-of-service (A through F) identifies the current traffic conditions in the segment. A value of ‘A’ represents the best or optimum operating conditions, while ‘F’ represents the worst operating conditions. This typically signals that the corridor is over capacity in need of some improvements. LA 21, as it appears to be crossing from rural to urban, was evaluated following the ‘D’ threshold.

Table 2-6 provides an overview of a planning-level analysis of the level-of-service for the corridor. In comparison to the same analysis completed in 2005, the level-of-service has actually worsened in the corridor segment between Bootlegger Road and 8<sup>th</sup> Avenue. It has gotten no better in the segment between 8<sup>th</sup> Avenue and 11<sup>th</sup> Avenue. As observed during two previous traffic observations in 2004 and 2005, platoons of traffic build along the corridor as motorists approach the existing traffic signals or encounter slower vehicles entering from adjacent driveways and side streets. Since the last completed traffic observation in 2005, several new businesses have opened along LA 21 between I-12 and Bootlegger Road. This creates more friction in traffic as vehicles turn into or exit out of these driveways.

<sup>17</sup> *Highway Capacity Manual, Special Report 209*, Transportation Research Board, National Research Council, 1998.



Extended queues of stopped traffic on LA 21 between Highland Park and 11<sup>th</sup> Avenue in Covington in front of the St. Tammany Parish Hospital first observed in 2004 and then again in 2005, remained a common occurrence during the March 2007 traffic observations.<sup>18</sup> Traffic demand appeared heaviest in the southbound movement (Covington to I-12) in the PM peak period, while the distribution appeared balanced with queues forming in both directions during the AM peak period. It was also noted that traffic could build into a continuous queue of slow-moving or stopped traffic between Gardenia Drive and the Ochsner Clinic driveway during both the AM and PM Peak Periods.<sup>19</sup>

<b>Table 2-6 Level-of-Service at Peak by Corridor Segment (2007)</b>			
LA 21 – Bootlegger Road to 11 <sup>th</sup> Avenue			
<b>CORRIDOR SEGMENT</b>	<b>PEAK VOLUME</b>	<b>LEVEL OF SERVICE (LOS)</b>	<b>TRAVEL SPEED (est.)</b>
LA 21 <sup>(1)</sup> from Bootlegger Road to 8th Avenue	2,689 vehicles	E	16.2 mph
LA 21 <sup>(2)</sup> from 8th Avenue to 11th Avenue	2,192 vehicles	F	6.3 mph

**Notes:**

- (1) Bootlegger to 8<sup>th</sup> Avenue, assumes a 10% of average daily traffic at peak, with a 50% / 50% directional split, as determined through review of the average daily traffic data collected in March 2007.
  - (2) 8<sup>th</sup> Avenue to 11<sup>th</sup> Avenue assumes a 10% of average daily traffic at peak, with a 53% NB / 47% SB directional split, as determined through review of the average daily traffic data collected in March 2007.
  - (3) Level-of-service computed for Section 5 using *Highway Capacity Software 2000*, Urban Streets Module, Release 4.1f.
  - (4) See Appendix A for analysis details and data items.
- Compiled by Burk-Kleinpeter, Inc., 2007.

Intersection Operations and Level-of-Service (2007)

An evaluation of current intersection operations and level-of-service focused on existing signalized and major non-signalized intersections along the LA 21 corridor. Peak period traffic volumes, turning movements and vehicle composition data (cars and heavy vehicles) at three locations along the corridor have been collected and examined. Within the data set, all of the locations contain traffic signals. There are no four-way or all-way stop control intersections on the LA 21 corridor between 11<sup>th</sup> Avenue and Bootlegger Road. There are several local roadways which have two-way stop control at LA 21.

Generally, all of the signalized intersections provide the majority of their green time to the north-south movements on LA 21. This is based upon the current LA DOTD

<sup>18</sup> Observed during BKI peak-period traffic counting period, conducted on March 28, April 4 and April 5, 2007, as well as at times during the traffic counter installation and inspection period: March 19-23, 2007.  
<sup>19</sup> Observed during BKI peak-period traffic counting period, conducted on March 28, April 4 and April 5, 2007.

timing plan for these locations. However, even with this type of signal pattern, it was common to see queues of stopped traffic on LA 21 approaching the intersection at Bootlegger and between 8<sup>th</sup> and 11<sup>th</sup> Avenues. The longest of these queues, which were observed as extending over a ¼ mile in some instances, were on LA 21 north and south of Bootlegger Road.

Bootlegger Road provides the only connecting roadway to LA 1077, a parallel state highway approximately 2.67 miles to the west. Since the last review of traffic in the area, land areas in the vicinity of the Bootlegger Road and LA 21 intersection have started developing. This includes several commercial businesses and at-least three residential developments, each in varying stages of occupancy and construction. It is expected that the future will see a replacement of traffic generated by construction crews with that generated by completed and occupied structures.

<b>Table 2-7 Existing Intersection Level-of-Service (2007)</b>				
LA 21 – Bootlegger Road to 11 <sup>th</sup> Avenue				
<b>LOCATION</b>	<b>GENERAL OBSERVATIONS</b>	<b>INTERSECTION TYPE</b>	<b>LOS</b>	
			<b>AM PEAK</b>	<b>PM PEAK</b>
LA 21 at 11 <sup>th</sup> Avenue	Generally, observations revealed that traffic queues on LA 21 extended north and south from 8th through 11th Avenue during peak period. As observed, the longest of these queues was found on LA 21 NB between the current bridge and 8th Avenue.	Signalized	E	D
LA 21 at 8 <sup>th</sup> Avenue	Generally, observations revealed that traffic queues on LA 21 extend north and south from intersection. The length of queue appears greatest on LA 21 southbound during the PM Peak, and almost equal in both directions during the AM Peak period. The longest of these queues, which were observed as extending over a ¼ mile in some instances.	Signalized	F	F
LA 21 at Bootlegger Road	Generally, observations revealed that traffic queues on LA 21 extend north and south from intersection. The length of queue appears greatest on LA 21 southbound during the PM Peak, and almost equal in both directions during the AM Peak period. The longest of these queues, which were observed as extending over a ¼ mile in some instances.	Signalized	F	F

Notes:

- (1) Traffic data for these locations collected during March and April 2007. Turning movements by total volume and classification (vehicle, heavy vehicle) collected. Traffic signal timing as outlined from DOTD District 62 TSI information received on May 17, 2007. LOS during PM Peak at 11th Avenue does not reflect individual approach LOS of F on the East, and E on the South.
- (2) Level-of-service computed using *Signal 2000* software for the defined AM and PM peak period.
- (3) See Appendix A for analysis details and data items.
- (4) Values in bold represent a period during which the intersection is at or over capacity, given the current volume, lane configuration and signal timing plan.

Compiled by Burk-Kleinpeter, Inc., 2007.



Data collected for the analysis of existing conditions came from the data collection effort undertaken in March-April, 2007. Data was collected in accordance with the policies of St. Tammany Parish, in that traffic is counted during a defined non-holiday, weekday period while school is in session. Table 2-7 provides an overview of the existing level-of-service at each location based upon a *Highway Capacity Manual* analysis for each intersection.

**Planned Improvements**

Improvements to the existing transportation system in the immediate vicinity of the project area were identified through the regional transportation capital improvement process. The Transportation Improvement Program (TIP) for St. Tammany is prepared biannually in accordance with the Safe, Accountable, Flexible, Efficient, Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21). Included in the TIP are projects and project segments being advanced towards implementation over the next one to four years, as well as longer range improvements which are in the planning and development stage which are expected to advance towards implementation. Projects included in the TIP which are located in the vicinity of the project study area are listed in Table 2-8.

<b>Table 2-8 Planned and Programed Transportation Improvements</b>		
<b>ROADWAY</b>	<b>DESCRIPTION</b>	<b>FISCAL YEAR</b>
<b>LA 21</b> Bootlegger Road to 11th Ave	Widen to four lanes (ENG)	FY 09
<b>LA 21 Signal Pre-emption</b>	Signal improvement	FY 09
<b>LA 21</b> Bootlegger Road to 11th Ave	Widen to four lanes	FY 12
<b>LA 21 to Bootlegger Road</b> Covington Bypass	New Roadway - Tier 3B - Unfunded future project	-

Source: Regional Planning Commission, Transportation Improvement Program, Fiscal Years 2008-11, St. Tammany Parish Urbanized Areas

**Hazardous Materials**

An environmental investigation of the corridor was performed in accordance with ASTM Standard E 1527-00. This study consisted of review and verification of available data from review of agency databases, review of historic maps and aerial photography and site reconnaissance. The study revealed that there are no

recognized environmental conditions at or in connection with the project study area.<sup>20</sup>

### **Groundwater Resources**

Information on groundwater resources was provided by the U.S. Environmental Protection Agency. The project study area is located above a sole-source aquifer: the Southern Hills Aquifer System.<sup>21</sup>

### **Oil and Gas Wells**

Information on Oil and Gas wells was obtained from the Louisiana Department of Transportation and Development and the Louisiana Department of Natural Resources. There are no oil or gas wells located in the project study area.<sup>22</sup>

### **Air Quality**

The state of Louisiana is in attainment statewide for CO. Past project-level CO "hot spot" analyses on similar projects have revealed no violations of the NAAQS.<sup>23</sup> Carbon monoxide (CO) concentrations are not anticipated to cause or contribute to an exceedance of the CO NAAQS as a result of this project.

Transportation conformity is a process required of Metropolitan Planning Organizations (MPOs) pursuant to the Clean Air Act Amendments of 1990 (CAAA of 1990) to ensure that Federal funding and approval are given to those transportation activities that are consistent with air quality goals. CAAA require that transportation plans, programs, and projects in nonattainment or maintenance areas that are funded or approved by the Federal Highway Administration (FHWA) be in conformity with the State Implementation Plan (SIP) which represents the State's plan to either achieve or maintain the NAAQS for a particular pollutant.

The proposed project is not currently located in a nonattainment or maintenance area, so conformity does not apply to this project. The New Orleans Regional Planning Commission area is an attainment area for the EPA particulate matter (PM-2.5) standard and therefore a detailed hot-spot analysis is not required.

### **Noise**

A study of existing traffic noise levels in the project study area and future impacts of build and no build alternatives has been prepared in accordance with Federal

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<sup>20</sup> Environmental Investigation for the LA Hwy 21 Widening Project, May 2007. See separate volume.

<sup>21</sup> US EPA response to Solicitation of Views letter, dated April 4, 2007.

<sup>22</sup> LA DNR response to Solicitation of Views letter, dated March 30, 2007.

<sup>23</sup> The National Ambient Air Quality Standard (NAAQS) for CO include a one-hour standard of 35 parts per million (ppm) and an eight-hour standard of 9 ppm.



Highway Administration noise standards, *Procedures for Abatement of Highway Traffic and Construction Noise, 23 CFR 772* [1], and the Louisiana Department of Transportation and Development's (DOTD) *Highway Traffic Noise Policy*.<sup>24</sup>

A review of available electronic mapping as well as field reconnaissance revealed noise sensitive land uses, including residences on both the sides of LA21 between Bootlegger Road and W. 8<sup>th</sup> Avenue. Residences were identified at the Reedfurn Apartments and along Laurel Leaf Lane on the north side of LA21. On the south side of LA21, residences were identified along Marigold Drive, Dogwood Drive, W. 5<sup>th</sup> Avenue, S. Van Buren Street and W. 6<sup>th</sup> Avenue. North of W. 8<sup>th</sup> Avenue the land use was typically identified as commercial, but includes the St. Tammany Parish Hospital. Other noise-sensitive land uses that might be affected by the project include the Holy Trinity Lutheran Church, the Covington Faithway Baptist Church and the Forest Manor Nursing Home.

Prediction of Traffic Noise Equivalent Sound Levels –Existing Year 2007

Existing noise levels are determined by modeling the existing LA21 geometry and traffic within TNM<sup>25</sup> and then calculating the  $L_{eq}(h)$ <sup>26</sup> for each representative noise receiver. Predicted  $L_{eq}(h)$  for the Existing Year 2007 case ranged from 51 dBA at the back row of the Reedfurn Apartments at 493 Laurelleaf Lane, and up to 69 dBA at the Forest Manor Nursing Home.

Sites	$L_{eq}(h)$
Holy Trinity Lutheran Church	62
493 Laurelleaf	51
Reedfurn Apartments (1st row)	62
Reedfurn Apartments (back row)	51
413 Laurelleaf	53
Forest Manor Nursing Home	69
Covington Faithway Baptist Church	59
519 7th Ave	56
St. Tammany Parish Hospital	63

<sup>24</sup> Air Quality and Traffic Noise Analysis Technical Report, LA 21 Widening, St. Tammany Parish, LA. February 2008.

<sup>25</sup> Traffic Noise Model

<sup>26</sup> equivalent sound level;  $L_{eq}$  is typically evaluated over the worst one-hour period and is defined as  $L_{eq}(h)$

## The Natural Environment

The project study area is in a portion of St. Tammany Parish which is rapidly transitioning from a rural to urban area.

### Wetlands

Prior to the field investigations to delineate wetlands within the proposed ROW, information on the project area was initially gathered from aerial color infrared, 2004 Geological Survey (USGS) digital ortho quarter quads (DOQQ); true color aerial photography flown by 3001, Inc., between February and May of 2005; the USGS Covington and Madisonville, LA 7.5 minute quadrangle maps; and the USDA Soil Conservation Service Soil Survey Geographic (SSURGO) data. This information provided basic background information about the geography of the area. Additionally, the National Wetlands Inventory was consulted and showed that there were 55 acres of wetlands located within the 810-acre project study area. These are primarily located adjacent to the Tchefuncte River.<sup>27</sup>

### Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, the project study area consists of 35% (284 acres) Zone A, which is within the 100 year flood inundation zone; 58% (467 acres) Zone X, which is outside the 500 and 100 year flood zones and 7% (59 acres) Zone X500, which are areas inside of the 100 and 500 year flood inundation zones which either get less than 1 foot of inundation or are protected by levees. These areas are indicated on Figure 2-3.<sup>28</sup>

### Threatened and Endangered Species and Habitat

Data on threatened and endangered species and habitat was obtained from the Louisiana Department of Wildlife and Fisheries as well as the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service reported that Gulf Sturgeon is reported in the Tchefuncte River. Field reconnaissance was conducted to confirm that no other threatened or endangered species were present in the project study area.<sup>29</sup>

### Water Quality

Information on water quality issues within the study area were obtained through the LA Department of Environmental Quality (LA DEQ) and the U.S. Environmental Protection Agency (US EPA). US EPA noted that the project area is located above the Southern Hills aquifer system, which is a sole source aquifer.<sup>30</sup>

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<sup>27</sup> Wetlands Findings and Threatened and Endangered Species Survey, May 2007. See Appendix A.

<sup>28</sup> LA DOTD Floodplain Management Office response to Solicitation of Views letter, dated April 5, 2007.

<sup>29</sup> US FWS response to Solicitation of Views letter, dated March 13, 2007.

<sup>30</sup> US EPA response to Solicitation of Views letter, dated April 4, 2007.



### **Natural and Scenic Streams**

Information on Natural and Scenic Streams came from the Louisiana Department of Wildlife and Fisheries and the Louisiana Scenic Rivers Act of 1988 and revealed that the Tchefuncte River, which is crossed by the project area, has been designated a Louisiana Natural and Scenic River.

### **Navigable Waterways**

Information on navigable waterways was obtained through the U.S. Coast Guard. The Tchefuncte River, which is crossed by the project area, does bear some of the characteristics of a navigable waterway, however a determination of navigability will need to be made by FHWA and the US Coast Guard.



The bridge over the Tchefuncte River appears to fall into the excluded category of bridges that are not subject to 33USC401 and 525(b) under Section 144(h) of Title 23 USC. The bridges in this category are those that cross waterways:

1. which are not used and are not susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate commerce; and
2. which are non-tidal, or if tidal, used by vessels less than 21 feet in length.

### **Public Lands**

Information on Public Lands within the study area was derived from maps and descriptions created by the U.S. Geological Survey, the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, the National Park Service and the Louisiana Department of Fish and Wildlife. These sources revealed that no public lands exist within the project study area. There are no national parks or forests, wildlife management areas<sup>31</sup> or national wildlife refuges in the vicinity.<sup>32</sup>

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<sup>31</sup> Wildlife Management Areas in Louisiana from Nature Conservancy Source Data, Geographic NAD83, LOSCO (1998) [wf\_manage] <http://www.katrina.lsu.edu>. Accessed: March 5, 2007.

<sup>32</sup> National Wildlife Refuges in Louisiana from Nature Conservancy Source Data, Geographic NAD83, LOSCO (1998) [refuges] <http://www.katrina.lsu.edu>. Accessed: March 5, 2007.

**Prime Farmland**

Information on the prime farmlands within the project study area was obtained through analysis and mapping of data provide by the U.S. Department of Agriculture, U.S. Geological Survey Soil Maps, and data from the Farmland Protection Policy Act (FPPA) of 1980 and 1995.

**Coastal Zone**

The project study area is outside of the coastal zone boundary according to the Louisiana Department of Natural Resources (LDNR) coastal zone boundary.<sup>33</sup>

**Soil**

Within the project study area, there are five major soil types: Abita Silt Loam, 0 to 2% slopes; Arat silty clay loam; Myatt fine sandy loam; Myatt fine sandy loam, frequently flooded; and Ouachita and Bibb Soils, frequently flooded.<sup>34</sup>

Myatt fine sandy loam covers a majority of the project area with Arat silty clay loam and Myatt fine sandy loam frequently flooded covering the areas surrounding the Tchefuncte River. Smaller sections of the project area are covered by Ouachita and Bibb soils, frequently flooded, Abita silt loam. Of these soil types, Abita silt loam is the only one not found on the national list of hydric soils.<sup>35</sup>

**Existing vegetation**

Although the majority of the proposed project area outside the existing road and maintained right of way is covered by commercial and residential development, there are intermittent areas of vegetation including: maintained vacant land, scrub-shrub, mixed pine hardwood wetlands, mixed pine hardwood uplands, and bottomland hardwoods.<sup>36</sup>

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<sup>33</sup>Louisiana Coastal Zone Boundary, Geographic NAD83, LDNR (1998) [coastalzone], <http://www.katrina.lsu.edu>. Accessed: March 5, 2007.

<sup>34</sup> Wetlands Findings and Threatened and Endangered Species Survey, May 2007. See Appendix A.

<sup>35</sup> Hydric Soils of the United States, Soil Conservation Service, U.S. Department of Agriculture.

<sup>36</sup> Wetlands Findings and Threatened and Endangered Species Survey, May 2007. See Appendix A.



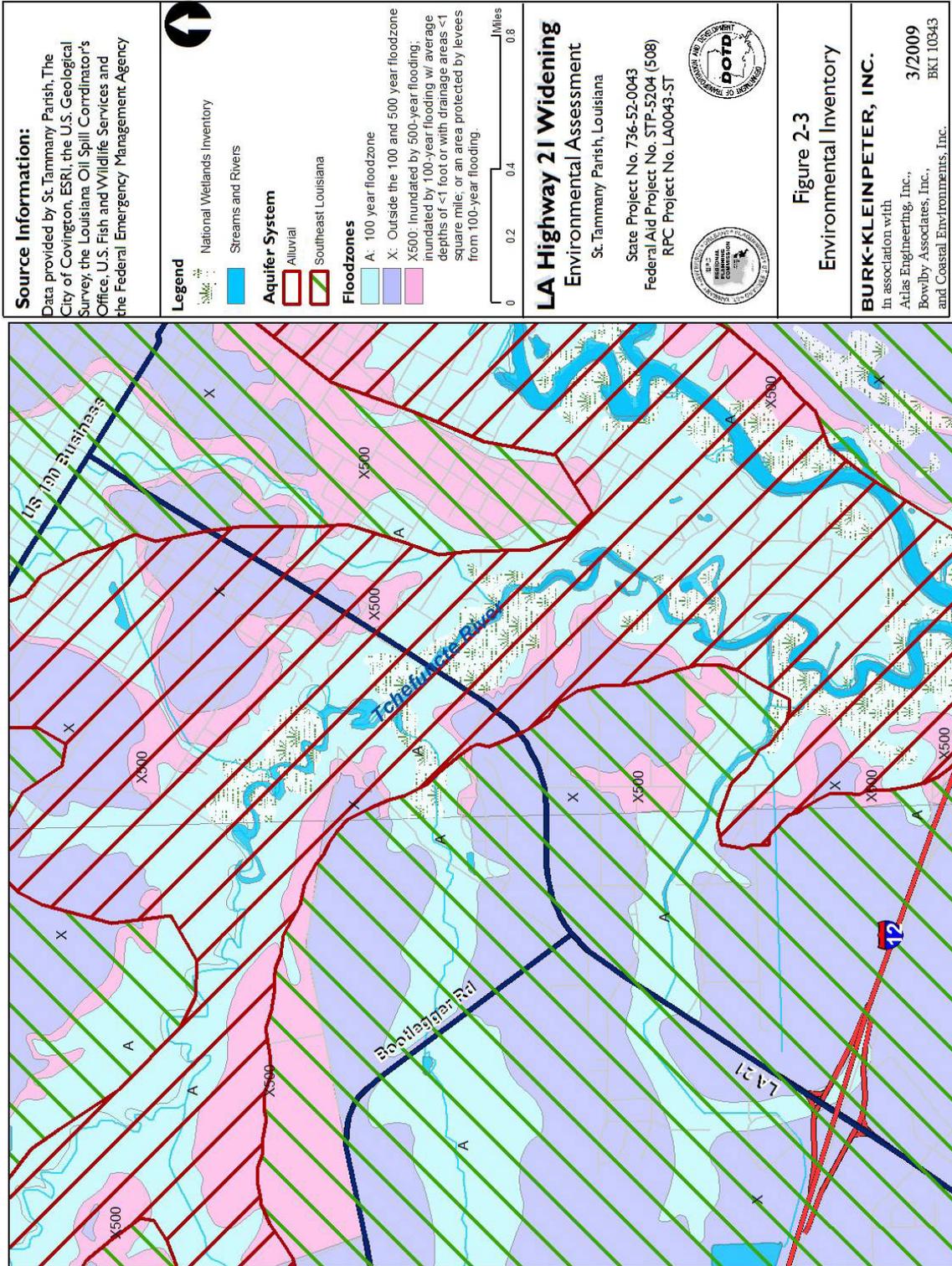


Table 2-10 Evaluation of Specific Features		
ITEM	QUESTION	FINDING SOURCE
<b>NATURAL ENVIRONMENT</b>		
<b>Wetlands</b>	Are Wetlands found in the study area?	<b>55 acres</b> national wetland inventory
<b>Floodplains</b>	What portion of the project area is in each floodzone?	<b>Zone A35%, Zone X: 58%, Zone X500: 7%</b> FEMA FIRMS
<b>Threatened or Endangered Species</b>	Are there any documented instances of threatened and endangered species or habitat within the study area?	<b>Gulf Sturgeon</b> U.S. EPA
<b>Water Quality</b>	Will there be ground water quality impacts to a Sole Source Aquifer?	<b>It is a Sole Source Aquifer</b> US EPA
<b>Natural and Scenic Streams</b>	Is there a designated Natural and Scenic Stream located within the project area?	<b>Yes</b> LA DWF
<b>Navigable Waterways</b>	Is there a navigable waterway located in the project area?	<b>No, but Determination yet to be made</b> U.S.C.G.
<b>Public Lands</b>	Are there any lands owned by the following agencies in the project area?	<b>No</b> U.S.G.S Maps
<b>Prime Farmlands</b>	Are prime farmlands located within the project area?	<b>Not likely</b> U.S.D.A.
<b>Coastal Zones</b>	Is the project area located in the Coastal Zone	<b>No</b> LA DEQ

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**LA 2 I Widening Environmental Assessment**

State Project No. 736-52-0043

Federal Aid Project No. STP 5204 (508)

RPC Project No. 0043-ST

# **Chapter III: Alternatives Analysis**

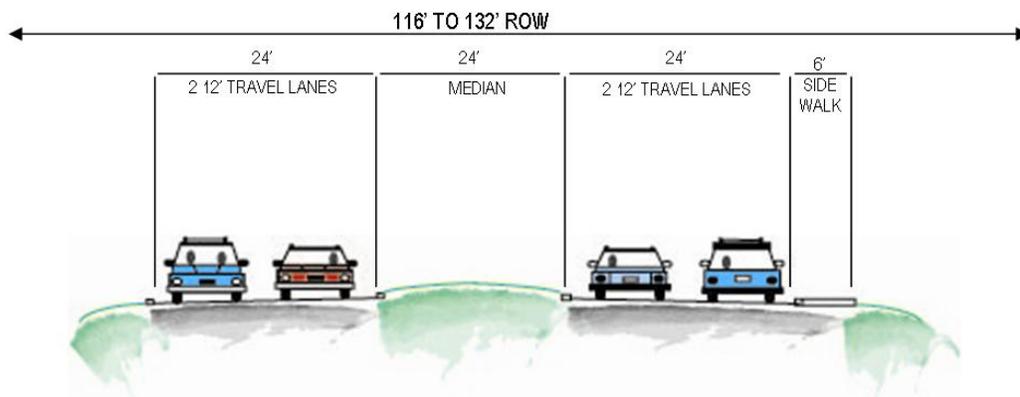
## CHAPTER III. *Alternatives Evaluation*

Initially, the project team identified two preliminary build alternatives for consideration, as well as the no-build alternative. Early on in the planning process, the two project-team-identified build alternatives developed into four. This included two concepts with a median section from 8<sup>th</sup> to 11<sup>th</sup>, added after it was determined that this may be a feasible concept.

These alternatives are as follows:

- Alternative 1a: Asymmetrical widening from Bootlegger Road to the Tchefuncte River with median from 8<sup>th</sup> to 11<sup>th</sup> Avenue
- Alternative 1b: Symmetrical widening from Bootlegger Road to the Tchefuncte River with median from 8<sup>th</sup> to 11<sup>th</sup> Avenue
- Alternative 2a: Asymmetrical widening from Bootlegger Road to the Tchefuncte River with 5-lane from 8<sup>th</sup> to 11<sup>th</sup> Avenue
- Alternative 2b: Symmetrical widening from Bootlegger Road to the Tchefuncte River with 5-lane from 8<sup>th</sup> to 11<sup>th</sup> Avenue

**Figure 3-1**  
*Asymmetrical or Symmetrical Typical Section*  
Bootlegger Road to Tchefuncte River



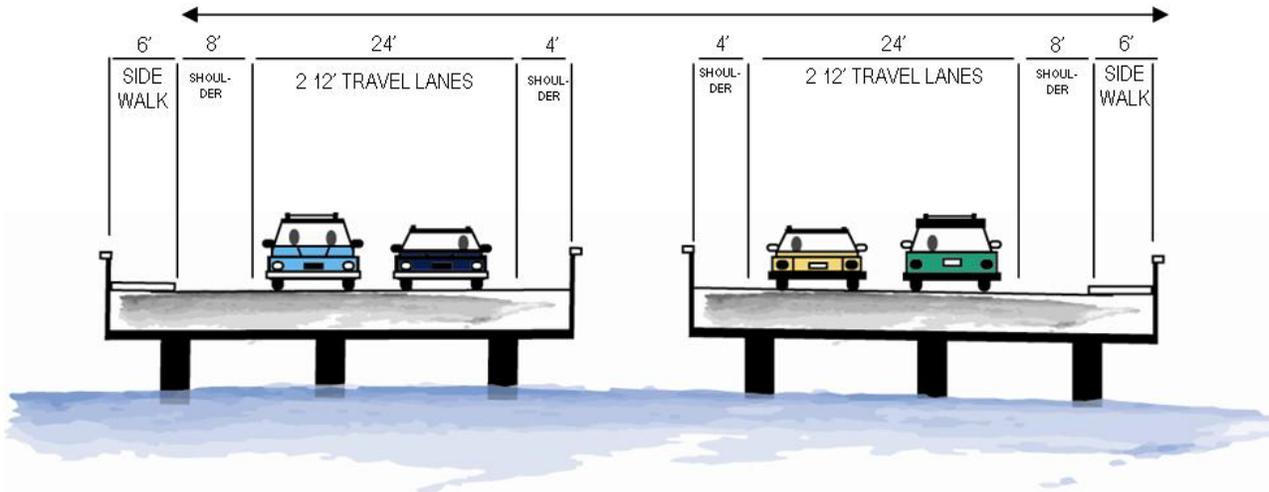
\*Sidewalks within DOTD right-of-way should comply with EDSM No.II.2.1.10



**Figure 3-3**

*Asymmetrical or Symmetrical Typical Section*

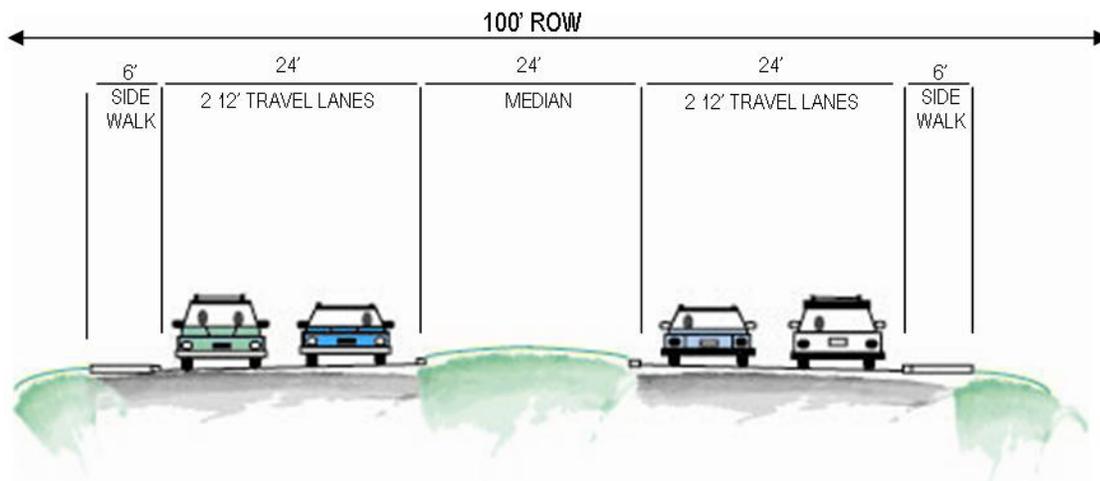
Tchefuncte River Bridge



**Figure 3-4**

*Asymmetrical or Symmetrical Typical Section, with Median*

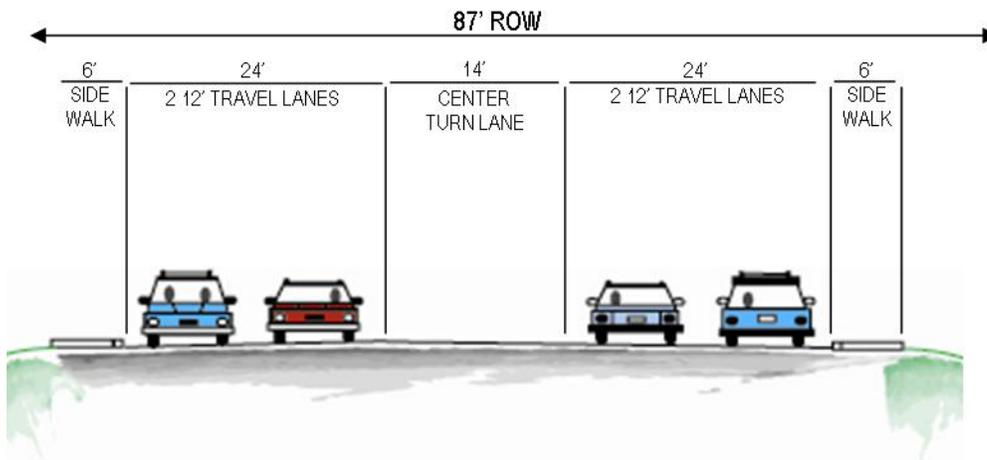
8<sup>th</sup> Avenue to 11<sup>th</sup> Avenue



**Figure 3-5**

*Asymmetrical or Symmetrical Typical Section, with 5-lane section*

8<sup>th</sup> Avenue to 11<sup>th</sup> Avenue



#### No-build Alternative

- In addition to the various build alternatives, the Environmental Assessment process requires the consideration of the no-build alternative. Generally, the no-build serves as a baseline condition which is used to assess the level of impacts of the other alternatives, but occasionally, if the impacts of a project are high and benefits minimal, it becomes a viable alternative.

#### User-defined alternatives

Stakeholder and Public input identified additional alternatives for the project team's consideration. These included:

- Alternative 3: Widen from Bootlegger Road through bridge, but no improvement from 8<sup>th</sup> to 11<sup>th</sup> Avenue.<sup>37</sup>
- Alternative 4: Widen from Bootlegger through bridge, with taper occurring between 8<sup>th</sup> and 11<sup>th</sup> Avenue

#### User-defined no-build alternative

- Alternative 5: Do not widen LA 21. Instead, construct a bridge connecting Bricker and S. Taylor, and redesign LA 21 and Taylor/Bricker as a one-way couplet.

Each alternative passed through a three step process – First the fatal flaws analysis was conducted to ensure that all alternatives are build-able and achieve the project's

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<sup>37</sup> A variation on this alternative was submitted after the close of the first comment period, which included keeping the three lane section from 8<sup>th</sup> to 11<sup>th</sup>, and adding on-street parking and 8 foot sidewalks.

purpose and need. Secondly, an impacts analysis to evaluate the potential impacts to the natural and man-made environment and then finally, the public interest review.

### **Fatal Flaws Analysis**

Alternatives 1a, 1b, 2a, and 2b would all achieve the project's purpose and need to:

- Increase capacity
- Replace a rural and aging bridge and roadway
- Improve access to the emergency room

Alternatives 3 and 4 would greatly reduce the project's ability to increase capacity and improve access to the emergency room, because all of these terminate the project before its logical endpoint at 11<sup>th</sup> Avenue. 11<sup>th</sup> Avenue provides access to the emergency room access, as well as signalized intersection which provides access to several neighborhoods and institutional uses.

Alternative 5, the user-defined no-build alternative is a potentially viable alternative if the cost or impacts of the widening of LA 21 prohibit its construction. This alternative is believed to have as many as if not more impacts to the community with similar benefits as the four viable build alternatives. Some of these impacts include:

- Greater noise impacts on the adjacent residential communities which would be difficult, if not impossible to mitigate.
- The construction of a new bridge span over the scenic Tchefuncte River could present additional permitting requirements.
- The pavement and subsurface was not designed as an arterial with a higher percentage of truck traffic, and would likely require a full re-build.

### **Impacts Analysis**

Given what is known about the project area through the review of the natural and human environment, it is possible to begin identifying elements which may have the potential to influence the selection of a Preferred Alternative. There are two primary impact variables which differ based on the alternative selected:

- In terms of the human environment, impacts to accessory structures and signs are the only impacts that differ based on the alternative selected. Those variables are shown in Table 3-1.
- In terms of the natural environment, the acres of wetlands and other waters of the US vary very slightly depending on the alternative selected. This variation is shown in Table 3-1.



Table 3-1 Alternatives Screening					
	Alternative 1a. Asymm. w/ Median	Alternative 1b. Symm. w/ Median	Alternative 2a. Asymm. w/ 5-lane	Alternative 2b. Symm. w/ 5-lane	No Build Alternative
<b>HUMAN ENVIRONMENT</b>					
Residential Structures	0	0	0	0	<b>NO CHANGE</b>
Commercial Structures	0	0	0	0	
Accessory Commerical Structures	2	2	1	1	
Signs	8 to 10	9 to 11	8 to 10	9 to 11	
<b>NATURAL ENVIRONMENT</b>					
Potential Wetland Impacts	.10 acres	.47 acres	.10 acres	.47 acres	<b>NO CHANGE</b>
Potential Other Waters Impacts	.07 acres	.09 acres	.07 acres	.09 acres	

Compiled by Burk-Kleinpeter, Inc., 2007

Of these four alternatives, both asymmetrical alternatives have fewer impacts to wetlands at the bridge crossing. Although the 5-lane alternatives could potentially have one fewer impact to a commercial accessory structure; the public, local elected officials, stakeholders and traffic engineers, engineers and planners involved in an advisory capacity all prefer the median section because of the improved aesthetics, the improved circulation, safety concerns with the 5-lane and with pedestrian crossings. ***Based on this evaluation process; Alternative 1a. The Asymmetrical Alternative with Median is recommended as the Preferred Alternative.***

**LA 2 I Widening Environmental Assessment**

State Project No. 736-52-0043

Federal Aid Project No. STP 5204 (508)

RPC Project No. 0043-ST

# **Chapter IV: Preferred Alternative**

## CHAPTER IV.

### *Preferred Alternative*

An initial evaluation of the build and no-build alternatives revealed that Alternative 1a: The Asymmetrical Alternative with a Median from 8<sup>th</sup> to 11<sup>th</sup> Avenue best addresses the objectives of this effort. It meets the project purpose and need, minimizes impacts to the natural environment and has community support. For these reasons, it has been identified as the Preferred Alternative (PA).

#### **Definition of Alignment**

The Preferred Alternative is defined as an envelope covering the 1.44 mile distance from Bootlegger Road to 11<sup>th</sup> Avenue. This alternative would require approximately 4.34 acres of ROW. The ROW width varies from 116 to 133 the section from Bootlegger Road to the Tchefuncte River Bridge and from the Bridge to 7<sup>th</sup> Avenue. In the section from 8<sup>th</sup> Avenue to 11<sup>th</sup> Avenue, the ROW is generally 100 feet. It contains 4 travel lanes, the median which is generally 24 feet in width and a 6 foot sidewalk on the south side of the road and both sides of the bridge.<sup>38</sup>

The 6-foot sidewalk on one side (the south side) of the road and both sides of the bridge complies with EDSM No.II.2.1.10 as being an allowable use of state funds (and the responsibility of the Road Design Engineer on Federal Aid Projects). A sidewalk is deemed necessary for safety reasons, as the highway is adjacent to hospitals, schools and other facilities where pedestrian movements are prevalent.

The base edge of the road elevation, at approximately 17.7 feet sets the edge of the road 2.7 feet above the 100 year flood elevation of 15.0 feet. The proposed bridge at the Tchefuncte River will have a 0.0% grade, a 6.13 feet vertical clearance above mean high water and an 8 foot horizontal clearance.

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<sup>38</sup> Intersection details are included in the LA 21 Environmental Assessment: Line and Grade Study, January 2009, prepared for the New Orleans Regional Planning Commission.



**Table 4-1 Order of Magnitude Cost Estimate**

Cost Category	Estimated Cost
Mobilization, Demolition, Site Preparation	\$2.60 million
Roadway Components	\$4.03 million
Bridge	\$3.58 million
Drainage/Utilities	\$3.12 million
Right-of-Way Acquisition	\$3.42 million
Engineering and Construction Admin.	\$1.43 million
Contingencies	\$2.52 million
	\$20.70 million

Prepared by Burk-Kleinpeter, Inc., 2008

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- LEGEND:**
- PROP. CENTERLINE LA 21
  - EXIST. CENTERLINE LA 21
  - PROP. LA 21 LANE EDGES
  - PROP. RIGHT OF WAY
  - EXIST. RIGHT OF WAY
  - PROP. IMPROVEMENTS (BY OTHERS)
  - PROP. CENTERLINE GARDENIA DR.



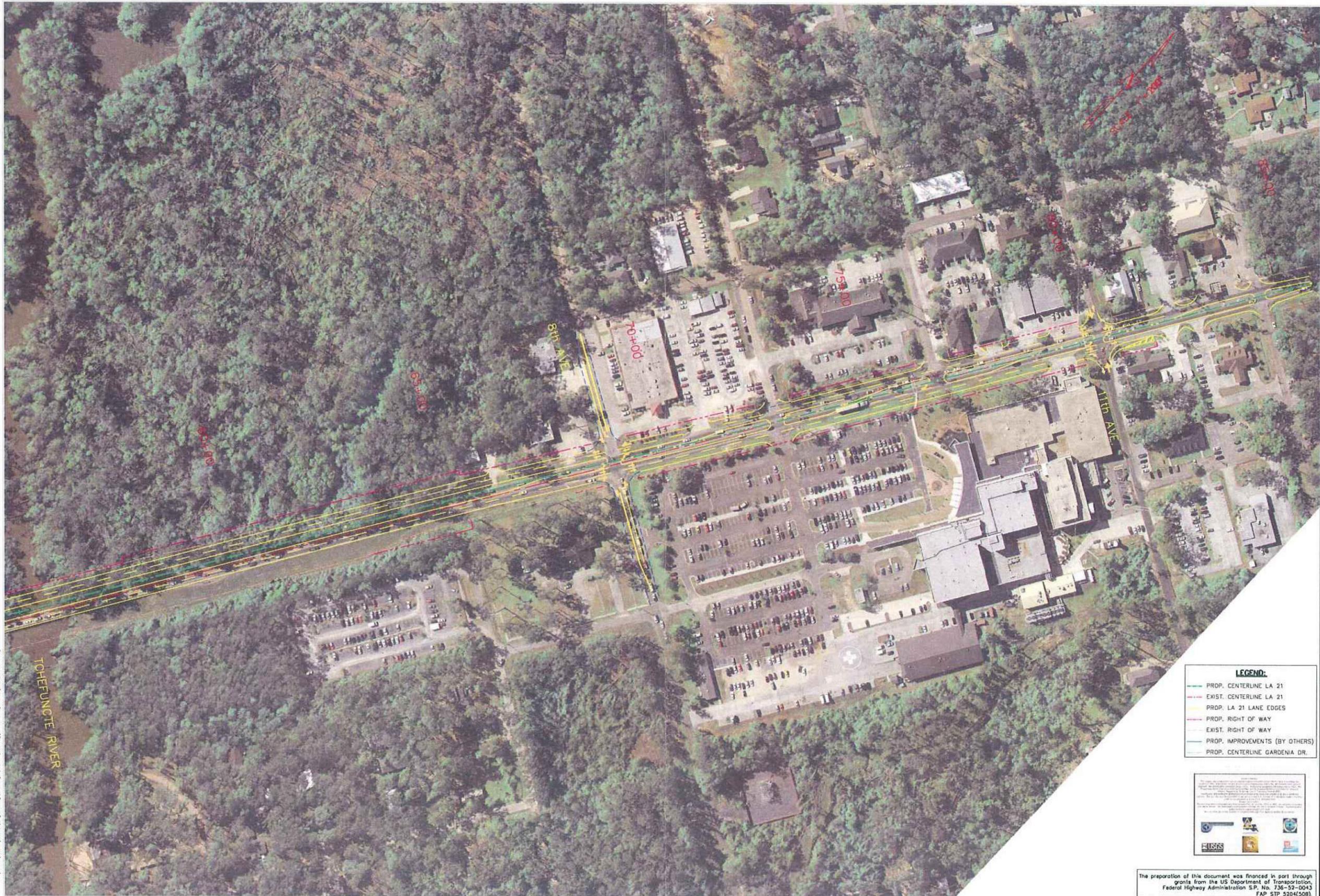
The preparation of this document was financed in part through grants from the US Department of Transportation, Federal Highway Administration S.P. No. 736-52-0043 FAP STP 5204(508)

LA Highway 21 Widening  
 Environmental Assessment with Line and Grade  
 State Project No. 736-52-0043/RFC Contract No. LA 0043-S1/FAP No. STP-5204(508)  
**BURKLEINPETER, INC.**  
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Figure# 4-1  
 BOOTLEGGER RD. TO  
 AZALEA DR.  
 PREFERRED ALTERNATIVE

BKI Job 10343  
 2009





**LEGEND:**

- PROP. CENTERLINE LA 21
- EXIST. CENTERLINE LA 21
- PROP. LA 21 LANE EDGES
- PROP. RIGHT OF WAY
- EXIST. RIGHT OF WAY
- PROP. IMPROVEMENTS (BY OTHERS)
- PROP. CENTERLINE GARDENIA DR.



The preparation of this document was financed in part through grants from the US Department of Transportation, Federal Highway Administration S.P. No. 736-52-0043 FAP STP 5204(508)

LA Highway 21 Widening  
 Environmental Assessment with Line and Grade  
 State Project No. 736-52-0043/RPC Contract No. La 0043-ST/FAP No. STP-5204(508)  
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Figure# 4-3  
 BRIDGE TO 11TH AVE.  
 PREFERRED ALTERNATIVE

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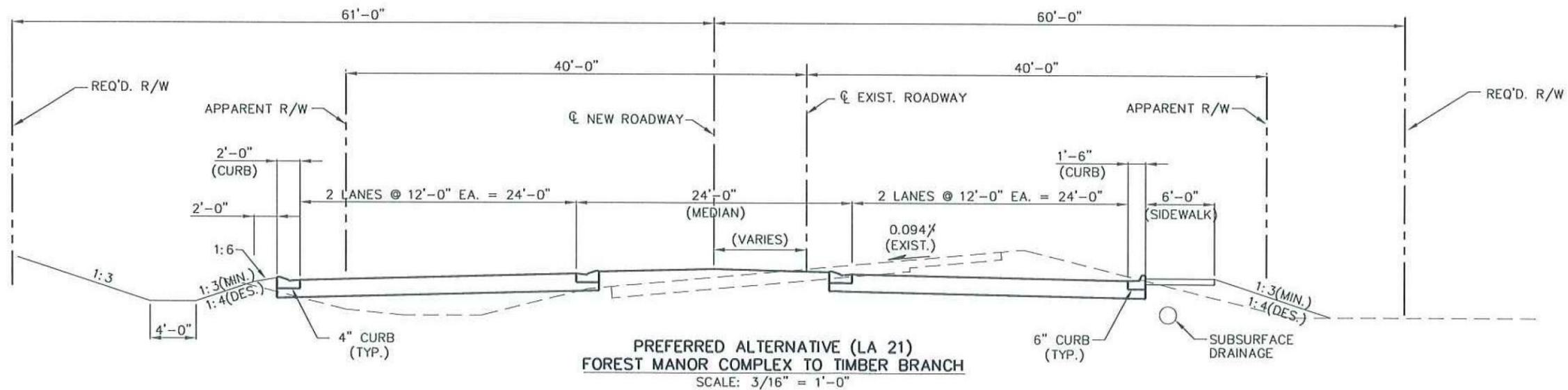
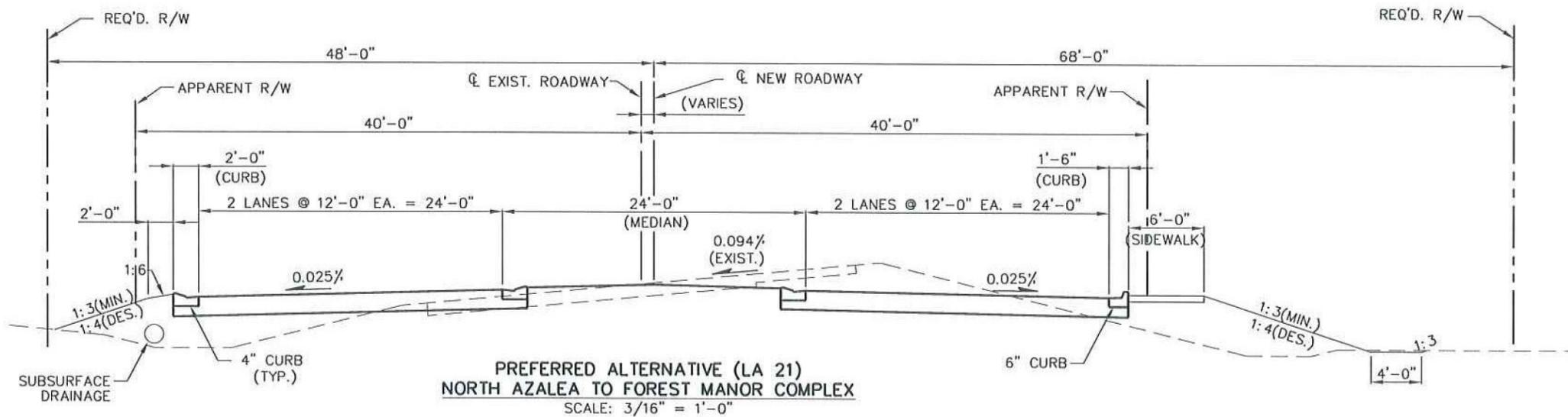
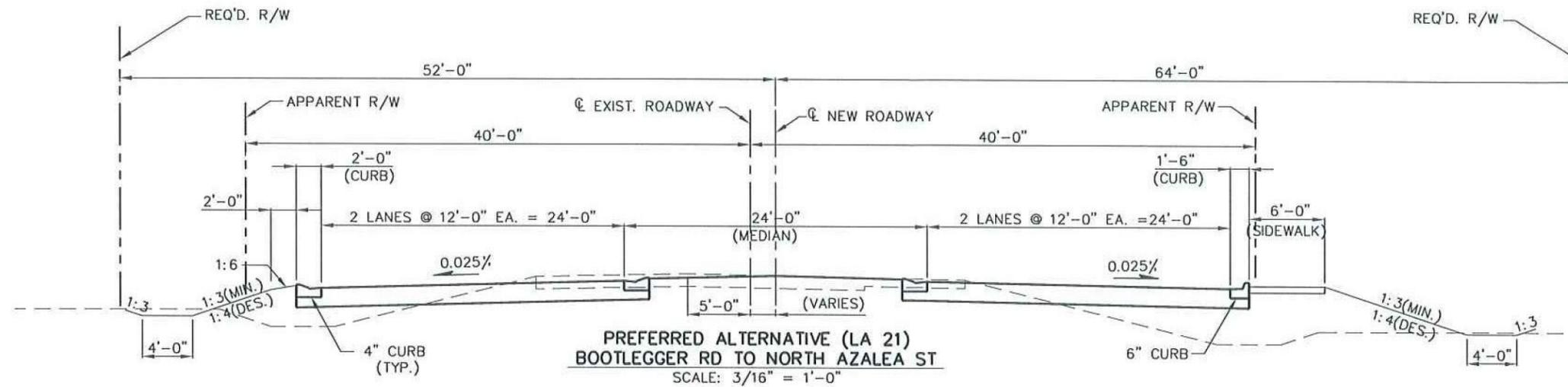
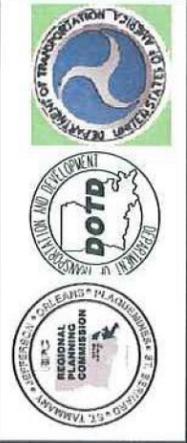


Figure # 4-4  
TYPICAL SECTIONS  
PREFERRED ALTERNATIVE

LA Highway 21 Widening  
Environmental Assessment with Line and Grade  
State Project No. 736-52-0043/RPC Contract No. La 0043-ST/FAP No. STP-5204(508)

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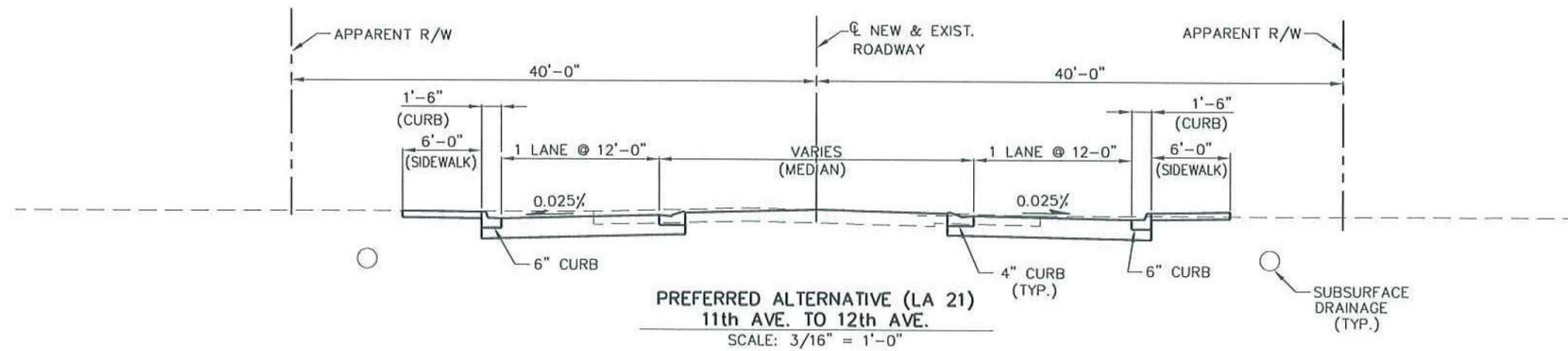
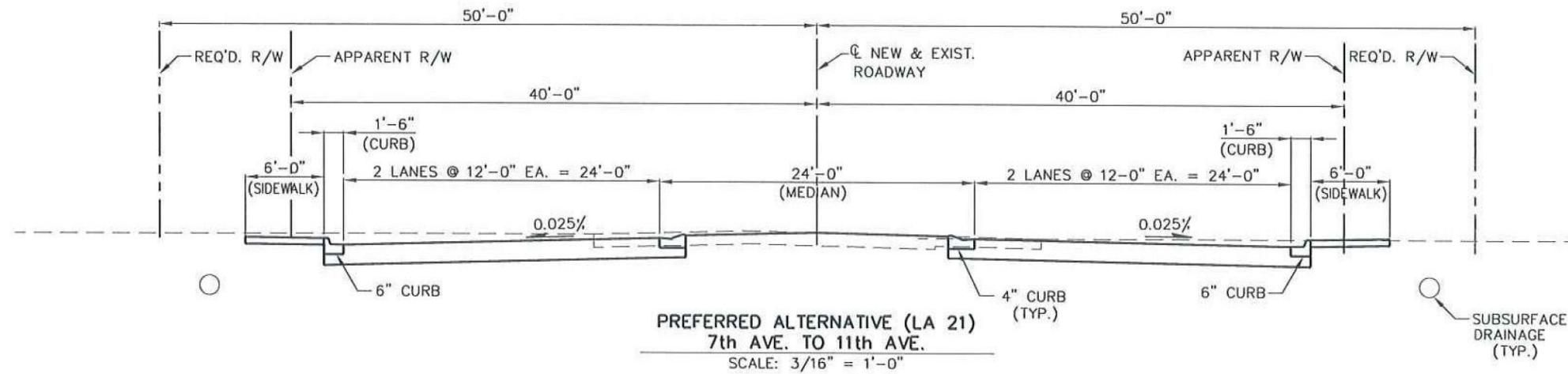
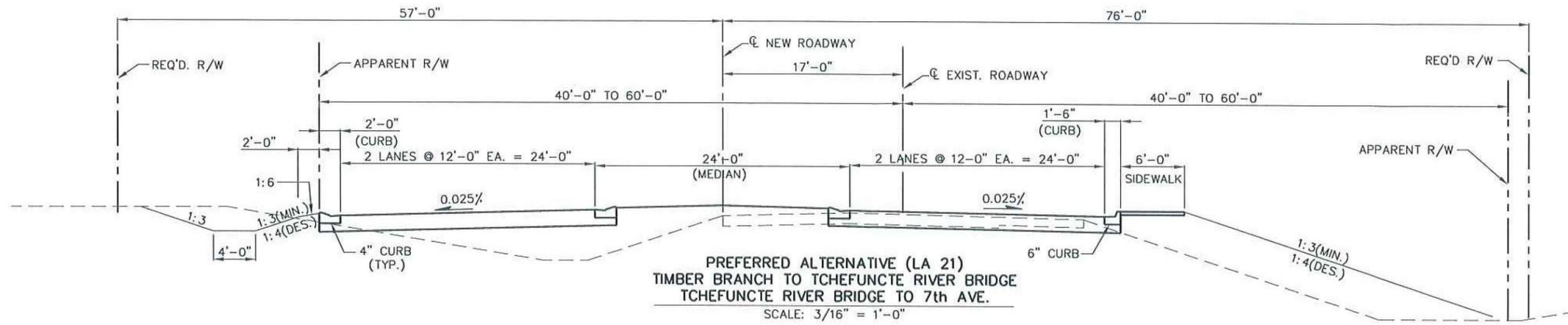
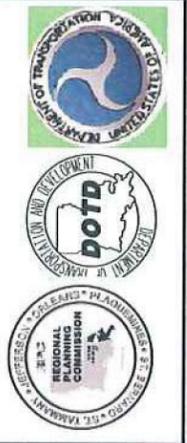


Figure # 4-5  
TYPICAL SECTIONS  
PREFERRED ALTERNATIVE

LA Highway 21 Widening  
Environmental Assessment with Line and Grade  
State Project No. 736-52-0043/RPC Contract No. La 0043-ST/FAP No. STP-5204(508)

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# AASHTO TYPE III - GIRDERS

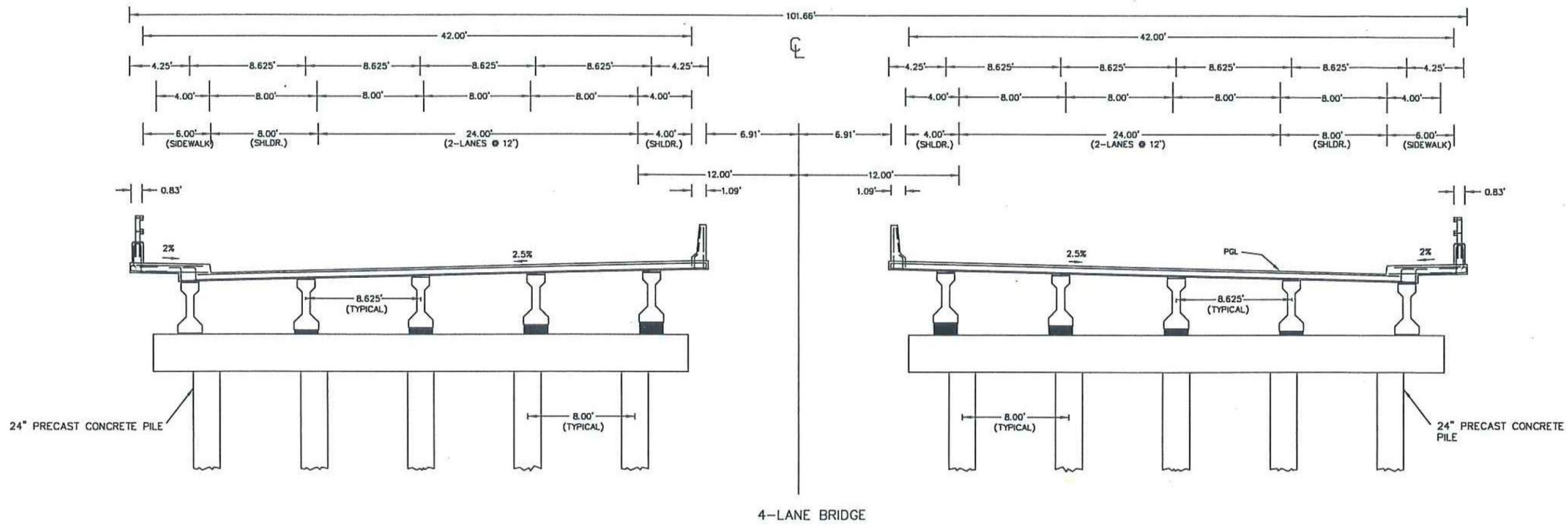


FIGURE 4-6  
BRIDGE SECTION VIEW  
LOOKING NORTH

LA Highway 21 Widening  
Environmental Assessment with Line and Grade  
State Project No. 736-52-0043/RPC Contract No. La 0043-ST/FAP No. STP-5204(508)

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3/09



## General Evaluation of Impacts

A comprehensive evaluation of the Preferred Alternative identified the potential impacts of the alignment on various human, man-made and natural resources as required under NEPA review.

## The Human Environment

### Demographics and community impacts

Social and Community impacts of the preferred alternative would be minimal. There are no residential displacements anticipated. Community cohesion, defined as the potential for disruption of an existing neighborhood or community as a result of the construction and development of the preferred alternative, is not impacted because the preferred alternative widens an existing roadway.

### Environmental Justice Review

The focus of an environmental justice (EJ) review is on ensuring that low-income and/or minority communities are not exposed to adverse environmental impacts from federally assisted projects.<sup>39</sup> A detailed review of census data in the project area revealed that the general population and income characteristics of the project study area does not appear to meet the EJ review definition of minority and low income population:

- **The population contained in the study area does not include a high concentration of minorities.** In fact, according to the 2000 census, over 90% of the population in surrounding census tracts reported themselves as white, and under 3% were Hispanic or Latino.
- **The population of the study area does not have a majority of its families in poverty.** In fact, most of the study area has a poverty rate which is lower than that of the Parish (7.6%), at 5.4%, 7.0%, 1.9%, and 1.9%. Only Census Tract 406.02, Block Group 3 had a higher rate of families in poverty than the parish as a whole, at 14.7%. Well over 90% of the population in and around the study area have incomes above the poverty threshold.<sup>40</sup>

### Land Use Impacts

St. Tammany Parish and the City of Covington have land use plans in place which anticipate the continued future development of the corridor. According to both, the area surrounding the preferred alternative is anticipated to build out in the timeframe considered in each plan, and this is anticipated with or without the road widening

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<sup>39</sup> Executive Order 12898, February 11, 1994.

<sup>40</sup> Please see Chapter II Existing Conditions for more information on Census population and income information.



project. Therefore, no notable land use change or economic impacts of the PA are anticipated.

Similarly because the area is located within an already developed suburban area of the Parish, impacts to wilderness or to rural quality are not anticipated.

This project is consistent with St. Tammany Parish's Infrastructure Plan, a subset of New Directions 2025.

**Scenic and Aesthetic Resources:**

Scenic and aesthetic resources relate to the view of the corridor and the view from the corridor.

**Future Year Traffic Analysis**

Long queues of traffic typify the current conditions along the LA 21 corridor. A fast-growing parish before Hurricane Katrina, St. Tammany Parish is now managing the influx of south shore residents displaced by Hurricane Katrina into the Parish. Business development along the corridor continues to add to the strain of the existing road infrastructure. LA 21, which is generally three lanes with a center turn lane, is operating with a poor overall level of service. As shown in the review of existing conditions, this existing corridor profile cannot accommodate existing traffic.

Data Assumptions

In order to determine if the improvement will address both existing and future traffic demands, a future year analysis was completed. Input to this analysis came from a combination of existing traffic patterns, along with information on proposed developments identified as part of previous study or during the project stakeholder review process. The focus of the analysis will be the typical peak hours of traffic demand, which correspond to the traditional AM and PM peak commuting periods.

For the purposes of planning, the corridor section follows the Urban Class 2 Arterial defined by the LADOTD<sup>41</sup> as a roadway having a design speed of up to 45 mph, little pedestrian activity, separate left-turn lanes, and low density of intersecting driveways.<sup>42</sup> Speed limits and access points in the section between 8<sup>th</sup> and 11<sup>th</sup> are reduced accordingly based upon the existing land uses and proposed future land use development pattern.

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<sup>41</sup> Roadway Design Procedures and Details, LADOTD, July 2002, and Design Standards for Urban and Suburban Arterial Roads and Streets, March 2003.

<sup>42</sup> The UA-2 Standard has a design speed of 45mph, and common practice is for the posted speed limit to be equal to or 5mph under design speed.

Average daily traffic (ADT) volume data for this analysis have been identified using the St. Tammany Parish Transportation Model as maintained by the Regional Planning Commission. This model incorporates the existing projected changes in population and employment, along with implementation of the 10-Year Capital Improvement Program funded through St. Tammany Parish and Transportation Improvement Program through the Regional Planning Commission.

However, review of model data for the LA 21 corridor area indicated that several recently announced developments were not accounted for in the data set. In order to account for these new developments, a trip matrix was developed utilizing descriptions of new development (# of units, square footage, etc.) and rates from the *Trip Generation Manual, 7<sup>th</sup> Edition*.<sup>43</sup> A copy of this matrix is included in the Traffic Impact Appendix.

### Geometric Assumptions

The analysis incorporates the following geometric assumptions which are a part of the identified improvement alternative for the corridor. Existing geometric information, as developed by others, has been incorporated at the intersection of LA 21 and Bootlegger Road and on the 8<sup>th</sup> Avenue approaches to LA 21, as noted previously:

- Dedicated through lanes are 12-foot wide
- Dedicated turn lanes adjacent to medians are 14-foot. wide with a curb
- Length of storage is 150' with 150' of taper, totaling 300'
- Current Posted Speed limit south of 8<sup>th</sup> Ave. is 45mph, while the speed limit between 8<sup>th</sup> and 11<sup>th</sup> is 35 mph.
- There are pedestrian crosswalks at both 8<sup>th</sup> Avenue and 11<sup>th</sup> Avenue, and pedestrian signalization would be proposed at both intersections
- There are sidewalks on both sides of LA 21 in Covington
- Traffic signals along the corridor are interconnected and coordinated with OPTICOM.
- There are no shoulders to the roads.<sup>44</sup>
- Projected percent of trucks and heavy vehicles same as existing traffic volumes on the corridor.
- Some minor right-turn-on-red traffic volume may be possible as all intersections improved under this project will provide corner radii following the WB50 template. Turns will occur as gaps in traffic flow allow.

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<sup>43</sup> Trip Generation Manual, 7<sup>th</sup> Edition, Institute of Transportation Engineers, 2003.

<sup>44</sup> According to the UA-2 Standard, curbs can be used in place of shoulders. This option was selected due to the tight ROW on the roadway.



The analysis of intersection level-of-service assumes the implementation of the design concept's 4-lane boulevard with a median from **just east of Bootlegger Road** (where SPN 059-01-0026 ends) to 11<sup>th</sup> Avenue and a two span bridge over the Tchefuncte River.<sup>45</sup> In addition, **improvements on 8<sup>th</sup> Avenue funded through a separate City of Covington undertaking have been incorporated into this analysis.**<sup>46</sup>

### **Findings**

Of the intersections analyzed, most are currently approaching capacity or are over-capacity and have significant delays on the minor street approaches due to the heavy volume of passing traffic on LA 21. Conditions are expected to deteriorate further due to continued commercial and residential development in the general vicinity of the LA 21 corridor.

For continuity purposes, the analysis also included Bootlegger Road at LA 21. **The analysis incorporated previously agreed and designed** changes to this intersection's geometry determined by others through the course of State Project No. 059-01-0026. **Updates to signal timing at this same location, while not a part of the roadway widening project, have also been included. This timing plan has incorporated the projected need for access generated by a new business in the eastern quadrant of the LA 21 and Bootlegger Road intersection.**<sup>47</sup>

### **Level-of-Service**

Given the projected volume and proposed geometry, total delay appears to decrease while levels of service improve within the corridor. This assumes the implementation of the improved corridor section, combined with a minor modification to the existing LADOTD signal timing and phasing plan (See Table 4.2).

However, the analysis above assumes signal optimization for north-south progression on LA 21/S. Tyler Street. The result is a general growth in queue length on side streets at the expense of moving more traffic through the LA 21 corridor. Also, the intersection at 11<sup>th</sup> Avenue, north of the St. Tammany Parish Hospital sees only a minimal improvement in total delay and level-of-service during the peak-periods. Capacity on the southbound approach at this intersection, even with the creation of the dedicated right-turn lane, remains in the future to be little more than what is currently provided. One solution to this may be the conversion of this signal to a program which allows green on the north-south approaches at all times, with

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<sup>45</sup> The bridge design does include shoulders (see figure 4-6).

<sup>46</sup> Plan provided by Pinnacle Engineering on 5/29/2007.

<sup>47</sup> Traffic signal inventory form information provided by LADOTD District 62, May 17, 2007, LA 21 @ Old Highway 1085 (a.k.a. Bootlegger Road); LA 21 @ 11<sup>th</sup> Avenue; LA 21 @ 8<sup>th</sup> Avenue, plus traffic signal plans for LA 21 at Bootlegger Road improvements, as part of State Project 059-01-0026, as provided by Richard C. Lambert Consultants, 2007.

interruptions only when the signal is actuated from the east-west approaches due to an emergency or vehicle’s presence in the lane waiting to turn or cross.

However, before such a measure is implemented, a **review of corridor-wide signal timing and phasing on LA 21 (from the Stirling Mandeville Shopping Center, south of I-12 to 15<sup>th</sup> Avenue in Covington)** would be in order. This would determine the signal programs which best optimize progression on the entire corridor. This was identified as a critical need during the development of the Stage 0 Feasibility Study as a means to address emergency access issues. Such an analysis is beyond the scope of this environmental assessment.

**Table 4.2 Intersection Level-of-Service (LOS) and Total Delay (secs), 2007 vs. 2025**  
11th Avenue to Bootlegger Road

Location	Current (2007) LOS		Future (2025) LOS	
	AM Peak	PM Peak	AM Peak	PM Peak
11th Avenue at S. Tyler Street (LA 21)	<b>LOS E</b>	<b>LOS D</b>	<b>LOS E</b>	<b>LOS F</b>
	73.1 secs delay	47.2 secs delay	77.2 secs delay	84.4 secs delay
8th Avenue at S. Tyler Street (LA 21)	<b>LOS F</b>	<b>LOS F</b>	<b>LOS D</b>	<b>LOS D</b>
	91.9 secs delay	126.9 secs delay	54.1 secs delay	53.3 secs delay
Bootlegger Road at LA Highway 21	<b>LOS F</b>	<b>LOS F</b>	<b>LOS C+</b>	<b>LOS C+</b>
	170.2 secs delay	171.8 secs delay	21.3 secs delay	21.3 secs delay

**Notes:**

- (1) - Signaling timing based upon LADOTD TSI from LADOTD District 62.
  - (2) - Values assume implementation of the identified 4-lane cross section.
  - (3) - Baseline 2025 data from the St. Tammany Parish Transportation Model. Trips added to the network for known proposed developments not included in the model dataset.
  - (4) - Trip distributions and directions assumed to be same as found during 2007 data collection.
  - (5) - Analysis completed using Signal 2000, Version 1.11, 02FEB02, Build 16; TEAPAC 2000 interface, Version 5.02, 25APR02, Build 16, Strong Concepts.
- Compiled by Burk-Kleinpeter, Inc., 2007.

**Queue length**

Queue lengths at each of the three major intersections in the corridor were evaluated using the projected traffic data, the design concept proposed, as well as those improvements developed and provided as input by others on 8<sup>th</sup> Avenue and at the Bootlegger Road intersection. Given the available data provided by LADOTD District 62 and St. Tammany Parish, adjustments to signal timing and phasing, along with the geometric improvements at these locations can yield some improvements through some minor decreases in queue lengths but cannot improve all intersections. (See Table 4.3) **However, a review of corridor-wide progression on LA 21 (from the Stirling Mandeville Shopping Center, south of I-12 to 15<sup>th</sup> Avenue in Covington) would be in order to determine the signal program which best optimizes progression**



and minimizes queue length on the entire corridor. Such an analysis is beyond the scope of this environmental assessment.

**Table 4.3 Proposed Intersection Maximum Queue, 2007 vs. 2025**  
I 1th Avenue to Bootlegger Road

Location	AM Peak Max Queue (est)			PM Peak Max Queue (est)		
	2007	2025	Change (ft)	2007	2025	Change
I 1th Avenue at S. Tyler Street (LA 21)	1,206 feet, NB traffic	3,260 feet, NB traffic	2,054 feet, NB traffic	1,528 feet, NB traffic	3,361 feet, NB traffic	1,833 feet, NB traffic
8th Avenue at S. Tyler Street (LA 21)	1,876 feet, NB traffic	754 feet, NB traffic	-1,122 feet, NB traffic	3,577 feet, NB traffic	761 feet, NB traffic	-2,816 feet, NB traffic
Bootlegger Road at LA Highway 21	4,190 feet, SB traffic	1,095 feet, SB traffic	-3,095 feet, SB traffic	4,236 feet, SB traffic	920 feet, SB traffic	-3,316 feet, SB traffic

**Notes:**

- (1) - Signaling timing based upon LADOTD TSI from LADOTD District 62.
- (2) - Values assume implementation of the identified 4-lane cross section.
- (3) - Baseline 2025 data from the St. Tammany Parish Transportation Model. Trips added to the network for known proposed developments not included in the model dataset.
- (4) - Trip distributions and directions assumed to be same as found during 2007 data collection.
- (5) - Analysis completed using Signal 2000, Version 1.11, 02FEB02, Build 16; TEAPAC 2000 interface, Version 5.02, 25APR02, Build 16, Strong Concepts.

Compiled by Burk-Kleinpeter, Inc., 2007.

### Historical, Cultural and Archaeological Resources<sup>48</sup>

Background research for the historic and cultural resources review of the PA included an examination of records at the Division of Archaeology, field survey including a pedestrian survey with shovel testing at a predetermined interval throughout the PA corridor. Cultural resources reports, site forms, standing structure forms, and National Register of Historic Places (NRHP) records were reviewed for the project area. The historic and cultural resources survey has revealed no historic structures within the area of potential effect (APE), and field work revealed that there were no sites eligible for the National Register located in the project corridor. Therefore, the preferred alternative will have no direct or indirect impacts on historic properties and/or cultural resources.

### Other State and Federal Projects

The PA begins at the intersection of Bootlegger Road and LA 21, where State Project No. 059-01-0026 terminates. The two projects are proposed for a seamless transition, although the improvements south of Bootlegger Road are anticipated to be completed well in advance of this project.

### The Man Made Environment

#### Phase I Environmental Site Assessment<sup>49</sup>

The Phase I Environmental Inventory completed for the project established potential hazardous and non-hazardous waste sites located in the vicinity of the PA. This process utilized review and verification of available study area level data from agency

<sup>48</sup> Cultural Resources Survey for the LA 21 Widening Project, St. Tammany Parish, LA. January 2008.

<sup>49</sup> Environmental Investigation LA Highway 21 Widening Project, St. Tammany Parish, LA.

database research review of historic maps and aerial photography, and site reconnaissance. The analysis indicates no apparent environmental concerns along the proposed alignment.

### **Air Quality<sup>50</sup>**

Mobile Source Air Toxins (MSAT) Emissions will likely be lower than present levels in the design year 2025 as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, vehicle miles traveled (VMT), growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in virtually all locations.

The additional travel lanes contemplated as part of the project will have the effect of moving some traffic closer to nearby homes, churches businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSATs could be higher under certain Build Alternatives than the No Build Alternative. However, as discussed above, the magnitude and the duration of these potential increases compared to the No-build alternative cannot be accurately quantified due to the inherent deficiencies of current models.

In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

### **Noise Analysis<sup>51</sup>**

Sound levels without the project are predicted by modeling the existing roadway system along the project within TNM and then calculating sound levels with future Year 2025 No Build traffic. Traffic volumes on LA 21 will continue to grow even without the project. This increase in traffic would ultimately decrease the

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<sup>50</sup> Air Quality and Traffic Noise Analysis Technical Report, LA 21 Widening, St. Tammany Parish, LA. February 2008

<sup>51</sup> Air Quality and Traffic Noise Analysis Technical Report, LA 21 Widening, St. Tammany Parish, LA. February 2008.



operational speed of vehicles during the peak hour. For the Year 2025 No Build case, this lowered operational speed results in predicted traffic sound levels that are typically lower than the Existing Year 2007 levels.

No-build Scenario

Predicted  $L_{eq}(h)$  for the Year 2025 No Build case ranged from 49 dBA at the back row of the Reedfurn Apartments up to 67 dBA at the Forest Manor Nursing Home. The Year 2025 No Build levels typically dropped 1-2 dBA from the Year 2007 Existing levels, however, there is a slight increase predicted at the St. Tammany Parish Hospital.

Build Scenario

Predictions of the worst hour  $L_{eq}(h)$  for Year 2025 Build show levels ranging from 53 dBA at the back row of the Reedfurn Apartments receiver up to 71 dB at the exterior of the Forest Manor Nursing Home. These levels typically represent increases of 2 to 3 dBA over the predicted Existing Year 2007 levels. The Year 2025 Build levels are increases of 1-4 dBA over the predicted 2025 No Build case.

**Table 4-4 Predicted Worst Hour Equivalent Sound Levels  
(Future Year: 2025)**

Sites	No-build $L_{eq}(h)$	Build $L_{eq}(h)$
Holy Trinity Lutheran Church	60	64
493 Laurelleaf	51	54
Reedfurn Apartments (1st row)	60	63
Reedfurn Apartments (back row)	49	53
413 Laurelleaf	51	55
Forest Manor Nursing Home	67	71
Covington Faithway Baptist Church	57	59
519 7th Ave	55	58
St. Tammany Parish Hospital	64	65

Impact Determination

As noted previously, a location is impacted if 1) the predicted worst hour  $L_{eq}(h)$  approaches or exceeds the NAC (defined by DOTD as 66 dBA), or 2) a substantial increase (defined by DOTD as an increase of more than 10 dBA) in  $L_{eq}(h)$  occurs.

Sound level increases along LA21 because of the proposed widening are predicted to range from 0 to 3 dBA over the Existing Year 2007 levels. No noise impacts are created by the project by creating a substantial increase in sound level.

Predicted future peak hour equivalent sound levels with the project at the modeled first-row receivers are in the 59 to 71 dBA range. Only the Forest Manor Nursing Home is predicted to be impacted.

#### Noise Abatement Evaluation

DOTD policy requires the consideration of abatement when traffic noise impacts occur as a result of a project. DOTD requires that a determination of feasibility and reasonableness be made for an abatement measure. For an abatement measure to be feasible, at least one of the impacted receivers must receive a minimum of an 8 dBA insertion loss. DOTD also requires that the cost of any proposed abatement measure be at or below \$25,000 per benefited residence. A benefited residence is one that receives at least 5 dBA of insertion loss from the abatement measure.

Though there is one impacted receiver, the Forest Manor Nursing Home, the cost of constructing an abatement measure for this single noise sensitive land use would not be below the \$25,000 per benefited residence requirement for reasonableness.

#### Construction Noise

The construction of the project would result in temporary noise increases for the residences and noise sensitive land uses along LA 21. Other noise-sensitive land uses are located at a distance far enough from the project area that noise levels would not increase. The noise would be generated primarily from heavy equipment used in hauling materials and building the roadway.

The construction contractor has the responsibility for protection of the general public in all aspects of construction throughout the life of the project. All construction equipment will be required to comply with OSHA Regulations as they apply to the employees' safety, and in accordance with the LADOTD Standard Specifications. All construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. In order to minimize the potential for impacts of construction noise on the local residents, the contractor should operate, whenever possible, between the hours of 7:00 a.m. and 5:00 p.m.



## **The Natural Environment**

### **Wetlands Delineation<sup>52</sup>**

The project area is both commercially and residentially developed and includes vacant land, drainage ditches and forestland adjacent to maintained Rights-of-Way. The largest undeveloped portion of the project area is located on either side of the Tchefuncte River. Although the majority of the project area is covered by commercial development, there are intermittent areas of vegetation including maintained vacant land, scrub-shrub, mixed pine hardwood wetlands, mixed pine hardwood uplands and bottomland hardwoods.

Approximately .10 acres of wetlands and .07 acres of other waters will potentially be impacted as a result of the project.

### **Threatened and Endangered Species<sup>53</sup>**

An analysis was performed to determine if there were any impacts to federally listed threatened and endangered species in the project area. This evaluation included correspondence with the Louisiana Department of Wildlife and Fisheries, National Heritage Program. This evaluation concluded that there are no rare, threatened, or endangered species or critical habitats located in the project area.

In response to the Solicitation of Views letter dated March 5, 2007, the US Fish and Wildlife Service (USFWS) stated that Gulf Sturgeon, a federally listed species may occur in the Tchefuncte River.

In order to mitigate potential impact to any Gulf Sturgeon that may be present in the Tchefuncte River, the US FWS suggested that no in-stream construction work occur during the spawning season between November 1 and March 31. If construction work is to be conducted during that period, USFWS must be consulted prior to initiation of such activities. Additional mitigation efforts require that construction activities strictly adhere to the Louisiana Department of Environmental Quality's Nonpoint Source (NPS) Management Phase II Storm Water Regulations.

### **Flood Plains<sup>54</sup>**

According to maps provided by the LADOTD Floodplain Office, most of the Preferred Alternative is in Zone C, with the exception of approximately 400 feet of Zone B and

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<sup>52</sup> Wetlands Findings and Threatened and Endangered Species Survey for the LA 21 Widening Project, May 2007.

<sup>53</sup> Wetlands Findings and Threatened and Endangered Species Survey for the LA 21 Widening Project, May 2007.

<sup>54</sup> From Solicitation of Views letter dated April 5, 2007 from the office of federal programs of the Louisiana Department of Transportation and Development.

800 feet of Zone A1 and 1,000 feet of Zone A11 at the crossing of the Tchefuncte River.

Because of the projected elevation of the existing ground and the need to have the proposed roadway above base flood elevation to meet DOTD hydraulic criteria, the road will require embankment.<sup>55</sup> Coordination with the St. Tammany Parish and the city of Covington floodplain administrators will be necessary to obtain the appropriate permits.

### **Water Quality**

The US Environmental Protection Agency (US EPA) Region 6, Ground Water/UIC Section provided a review of the project area as part of its response to the project's solicitation of views. Based on the information provided at the time of the review, the project area which includes the PA is located above a Sole Source Aquifer: the Southern Hills aquifer system.<sup>56</sup> There are no known hazards present that could contaminate the sole source aquifer as to cause harm to public health.

### **Scenic Rivers**

The Louisiana Department of Wildlife and Fisheries indicated in its response to the Solicitation of Views letter that the Tchefuncte River and its tributaries, which are Scenic Rivers, are located in the proposed project area.<sup>57</sup> A scenic river permit has been applied for.

### **Navigability**

The US Army Corps of Engineers indicated in their response to the solicitation of views letter that the Tchefuncte River is a navigable waterway and is subject to the Corp's jurisdiction under Section 10 of the Rivers and Harbors Act and as such, will require a DA Section 10 Permit to perform work in this waterway.<sup>58</sup>

The US Coast Guard indicated in their response to the solicitation of views letter that it is the responsibility of the Federal Highway Administration (FHWA) to determine whether or not a permit is required, although the Coast Guard is already undergoing an internal review process to determine navigability.<sup>59</sup> According to Section 144(h) of Title 23 U.S. Code 401 and 525(b), bridges which are excluded include those that cross waterways:

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<sup>55</sup> DOTD Hydraulic Manual, adopted November 19, 1984, revised March 1987.

<sup>56</sup> From Solicitation of Views letter dated April 4, 2007 from the US EPA Ground Water/UIC Section, Region 6.

<sup>57</sup> From Solicitation of Views response dated March 14, 2007 from the LDWF

<sup>58</sup> From Solicitation of Views response dated March 20, 2007 from the US ACOE

<sup>59</sup> From Solicitation of Views response dated March 16, 2007 from the US CG.



1. which are used and are not susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce and
2. which are nontidal, or if tidal, used by vessels less than 21 feet in length.

The PA crosses the Tchefuncte River, which is not used to transport interstate or foreign commerce. It is used recreationally, primarily by very small crafts, canoes, and rafts and therefore, it is likely that it is exempt from the CG requirement.

### **Coastal Zone**

Based on a review of the project by the Louisiana Department of Natural Resources (DNR), Coastal Management Division, the Preferred Alternative is outside of the Louisiana Coastal Zone.<sup>60</sup>

### **Prime Farmland**

Prime farmlands, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, feed, forage, fiber or oilseed crops. These do not include urban or build up land, public land and water areas. The only soil type which is classified as a prime farmland type (according to the St. Tammany Parish Soil Survey) in the project area is Abita Silt loam, 0 to 2%, which is located north of the Tchefuncte River between 7<sup>th</sup> and 11<sup>th</sup> Avenues, and is mostly developed. The Natural Resource Conservation Service (NRCS) will make the prime farm land conversion impact determination,<sup>61</sup> but impacts to prime farmlands are expected to be minimal.

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<sup>60</sup> Email from [owfmg@la.gov](mailto:owfmg@la.gov) to [rpc@norpc.org](mailto:rpc@norpc.org) on March 14, 2007.

<sup>61</sup> From Solicitation of Views response dated April 18, 2007 from NRCS.

**LA 2 I Widening Environmental Assessment**

State Project No. 736-52-0043

Federal Aid Project No. STP 5204 (508)

RPC Project No. 0043-ST

# **Chapter V: Public Participation**

## CHAPTER V.

### *Community Participation Plan*

Involvement of the community in a meaningful and constructive dialogue to identify their concerns and issues relative to the project led to the identification of a Preferred Alternative (PA) which meets both the requirements of NEPA and those of the community.

According to FHWA, Context Sensitive Solutions (CSS) is a “collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.”<sup>62</sup> This process engaged the public, stakeholders, local elected officials, and a vast group of technical advisors to develop a solution which is appropriate to the context of the area.

#### **Agency Involvement**

##### **Solicitation of Views (SOV)**

As required by the LA DOTD Environmental Assessment process, a Solicitation of Views was mailed out to all names which appear on the LA DOTD St. Tammany Parish (last updated in March 2005) and State SOV (last updated in November 2006) lists. The project team added to this list all applicable elected officials and others identified during the Stage 0 Study. In the end, the list included representation from the following groups.

- Federal and state resource agencies
- Native American Tribes
- Local Officials and other stakeholders

The solicitation period was from March 5<sup>th</sup> through April 6<sup>th</sup>, 2007. The full list of the individuals and agencies solicited is included in Appendix A – the Public Participation Notebook.

#### **Local Officials Involvement**

As part of the coordination plan for the LA 21 EA, the project team identified a number of local officials and other stakeholders, including local government and state representatives. These officials and other stakeholders were invited to the local

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<sup>62</sup> Federal Highway Administration, [http://www.contextsensitivesolutions.org/content/topics/what\\_is\\_css/](http://www.contextsensitivesolutions.org/content/topics/what_is_css/)



officials scoping meeting held on April 24, 2007 at the St. Tammany Parish Council Chambers at Koop Drive in St. Tammany Parish. Sign in sheets, a meeting summary and handouts are included in Appendix A – Public Participation Notebook.

Two additional stakeholder meetings were held at the St. Tammany Parish Hospital on May 22, 2007 and on November 5, 2007. Sign-in sheets, a meeting summary and handouts are included in Appendix A – Public Participation Notebook.

### **Public Information Meeting**

The public information meeting was held on November 15, 2007 at the Koop Drive Council Chambers in Mandeville, LA. The purpose of the meeting was to provide information about the proposed project to the public and to solicit comments about the project from the public and other interested parties. Handouts, sign-in sheets, meeting transcript, presentation, meeting summary, comments and summary of comments and responses are included in Appendix A – Public Participation Notebook.

### **Issues and Concerns**

The primary concerns voiced during the public involvement meeting, comment cards received at the meeting and mail in and email comments indicated general support for the project. There were several instances where alternatives were suggested, these are primarily addressed in Chapter III, Alternatives Analysis. Support for the inclusion of the sidewalk was expressed, in some instances it was suggested to be widened for use by cyclists as well. The community at large expressed an interest in continued communication throughout the project's life. The project team has collected addresses of public meeting attendees which can be used to facilitate communication with the adjacent neighborhoods and other active citizens in the future. All comments and responses are summarized in Table 5-1.

**Table 5-I Community Comment Summary**

Comment	Response
<b>SOLICIATION OF VIEWS (SOV)</b>	
City of Covington (Mayors Office) expresses its support	no response required
St. Tammany Hospital Board expresses its support	no response required
City of Covington (Economic Development) expresses its support	no response required
St. Tammany Parish Economic Development Foundation expresses its support	no response required
St. Tammany Hospital CEO expresses her support	no response required
<b>PUBLIC INFORMATION MEETING (PIM)</b>	
Provide a 10ft sidewalk to link up to the Tammany Trace (x2)	According to the bicycle analysis, the land uses adjacent to the project corridor are inconsistent with a recreational bicycle path, and connectivity opportunities have been lost to the south, which do not satisfy the need for connectivity for either a bicycle path or dedicated lane. Cyclists are legally permitted to use this facility, but there are no special accomodations.
Locations/types of traffic signals	Traffic signals will be located where ever they currently exist or are planned. Planned future signals and upgrades are to be interconnected and include the latest technologies.
Timetable/Manner of Construction (work at night, etc.)	It is too early in the process to know these things, although the state has given incentives for early completion or working at night. The length of time for the construction is likely around 18 months, and it is unknown whether that will be phased or all together.
Erosion Control during construction	DOTD has tighter control than developers, if they are in violation, they can get shut down.
Public Participation	Active neighborhood associations would like to continue to participate beyond the Phase I Environmental Assessment (EA)
Median Alternative is preferred (x4)	The median alternative is identified as the preferred alternative
Close cut through of Median N. of Azalea	Those details will be finalized in final design
Close cut through of Median N. of Azalea	Those details will be finalized in final design



**Table 5-1 Community Comment Summary**

<b>Comment</b>	<b>Response</b>
<b>MAIL IN COMMENTS (FOLLOWING PIM)</b>	
Median Alternative is not preferred (x1)	The median alternative is identified as the preferred alternative
Use Native Species in median plantings	Those details will be finalized in final design
Taper before 11th Avenue to avoid impacts	Tapering before 11th would eliminate many of the traffic benefits of the road widening and the benefits for emergency access to the hospital. Tapering in the middle of a superblock would also be confusing to drivers.
The hospital strongly supports the 5 lane alternative, as well as the median section provided that reasonable access is provided to their facilities. They do not support an alternative which does not extend the 4 lanes beyond 8th.	Tapering before 11th would eliminate many of the traffic benefits of the road widening and the benefits for emergency access to the hospital - and as such, it would not achieve the project's purpose and need. The impacts of doing so (continuing to 11th) are minor, and so the project will continue to 11th as originally conceived. Median cuts and access will be determined during final design and real estate acquisition. The city of Covington controls greenbelt requirements and variances.
Provide access to river and boat launch	While this idea cannot be incorporated into the road widening project under study, the comment will be forwarded to the City of Covington Economic Development Department
Instead of widening 21, make LA 21 one way and use Taylor/Bricker as couplet	This alternative was included in the alternatives analysis as a 'user-defined alternative'. It was ultimately not selected as the preferred alternative due to the potential environmental and residential impacts, as well as the distance between the couplet one way streets.
Connect LA 1085 with Business 190 and connect rest area exit to Old Landing	This recommendation will be forwarded to the Regional Planning Commission for future consideration, however it does not meet the purpose and need of this project
Build a new highway between LA 21 and LA 1077 to US 190 bypass	This recommendation will be forwarded to the Regional Planning Commission for future consideration, however it does not meet the purpose and need of this project
Keep the sidewalks	The sidewalk will be included in the conceptual design. Final decisions will be made in the final design phase, which will occur after Stage I is complete

### **Public Hearing, Official Public Comment Period, EA Distribution**

On January 14 and 28, 2009 and January 18 and 22, 2009, the St. Tammany News and Times Picayune Northshore Edition ran Public Hearing Notices and Notices of Availability for the Draft EA document. In addition to providing the details of the Hearing, the notice indicated the locations where documents were available for public review through the end of the official public comment period – February 27, 2009.

The public hearing was held on February 11, 2009 at the Koop Drive Council Chambers in Mandeville, LA. The purpose of the hearing was to provide information about the preferred alternative (PA) and provide an opportunity for final comments about the project from the public and other interested parties.

Notification materials, EA distribution information, and Hearing Materials are included in the Public Hearing Transcript (a separate volume).

The format of the hearing began with a 1-hour open house period prior to the hearing's official start during which time participants were invited to visit the Open House Stations. Project team members were available for questions and discussion.

Station 1 contained a sign in sheet, LDOTD survey, name tags and one page project hand out. Station 2 contained conceptual engineering exhibits in 'Plan View' and 'Typical Sections'. Station 3 contained copies of the Draft Environmental Assessment (EA) document for reviewing, Comment Forms, and Speaker Cards.

Once the Public Hearing officially began, the project team gave a brief PowerPoint presentation, followed by a 10-minute recess, followed by the Official Statement Period. Two members of the public provided comment during the Official Statement Period. During the hearing, general public sentiment was overwhelmingly positive. Other comments were provided in writing by agency representatives to whom Draft EA Documents had been distributed.

### **Issues and Concerns**

Speaker 1: William J. Jones, Jr. (Speaking on behalf of St. Tammany Hospital).

Mr Jones expressed the hospital's enthusiastic support for the project and their inclusion in the planning process. He expressed a desire to see the project move quickly towards construction. *Note: Mr. Jones also provided written comments, see page 5-6.*

Speaker 2: Rick Wilke.

Mr. Wilke echoed the general support and need for the project to progress quickly to construction. He expressed that he was very pleased to see the sidewalks on both sides of the bridge and shoulders on the bridge. He expressed concern that dedicated bicycle lanes are not included south of the bridge. He noted that there is a strong desire for people to use bicycles more for both transportation and to access recreational facilities such as the Tammany Trace. He made note of the design issue at Azalea and Gardenia (see below) and offered several alternatives for dealing with that intersection.



Letter 1: William J. Jones, Jr. (on behalf of the St. Tammany Hospital)

Mr. Jones noted in his letter dated February 9, 2009 several issues:

- Gardenia Drive Realignment – The aerial photography used by the project team to realign Gardenia Drive was not current. There is actually a 12,000 sq. ft. building located immediately adjacent to the realignment, taking most of the structure’s parking. The hospital has a lease option and is planning to construct a second medical building and parking lot on an adjacent lot which will be fully impacted by the realignment. The hospital has reason to believe that the alignment, as shown in the Draft Line and Grade (A17) would have substantial adverse impacts on the use of the existing building and on their planned future use, and would ultimately be excessively costly to LDOTD. Mr. Jones suggests severing access to Gardenia and upgrading the nearby unnamed street.
- Symmetrical Alignment – Mr. Jones notes that the asymmetrical alignment between 8<sup>th</sup> and 11<sup>th</sup> appears to ‘take’ more land from the westerly side. If that exceeds fifteen feet, it will adversely impact a large number of parking spaces. He suggests that taking equal amounts from both sides (about 10 feet).
- Traffic north of 11<sup>th</sup> Avenue – Mr. Jones notes that the project ends just beyond 11<sup>th</sup> Avenue, but asks the project team to suggest traffic solutions north of 11<sup>th</sup> Avenue.

Letter #2: US Department of the Interior – Fish and Wildlife Service

Mr. Brad S. Rieck made the following comments:

- All Federal-Trust fish and wildlife resource issues have been addressed
- Include details about compensatory mitigation for wetland impacts (if required)
- Ensure that project dimensions are consistent between text and drawings

Letter #3: Department of the Army – New Orleans District, Corps of Engineers

Ms. Karen Oberlies made the following comments:

- There are no impacts to Corps of Engineers projects
- A Department of the Army permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material in these Waters of the U.S.
- Additional details will be required to complete an approved delineation
- Off-site locations of activities such as borrow, disposals, haul and detour roads and work mobilization sites may be subject to Department of the Army

regulatory requirements and may have an impact on Corps of Engineers projects

The above mentioned substantive comments will be addressed in the following ways:

<b>Table 5-2 DRAFT EA Comments</b>	
<b>Issue</b>	<b>Response</b>
There is a strong desire for more bike-able and walkable facilities. What bicycle facilities were considered and why were they ultimately not included in the conceptual design?	The project team considered pedestrian and bicycle facilities in accordance with FHWA guidance. The preferred alternative includes a 6' sidewalk on both sides of LA 21 from 1th Avenue through the bridge and a 6' sidewalk on one side of the highway from the bridge to Bootlegger Rd. Shoulders are included on the bridge to provide access to bicyclists. Final design should consider bicycle compatible expansion joints, a bicycle safe height guard rail, and bicycle friendly drainage grates along the roadway. Dedicated bicycle facilities were determined to be either incompatible with the roadway or excessively costly. See Attachment A.
There are planned and existing buildings where the Gardenia Realignment is proposed. It will be excessively costly for LDOTD to acquire these where this is not an essential component of the design.	The Azalea Drive connection to LA 21 will be severed. A new roadway will be constructed where the existing unnamed connection is. A median opening will be provided for southbound LA 21 traffic to turn left to access Gardenia and Azalea. EDMS IV.2.1.4 would not apply to this median opening, as the project is beyond Stage 0.
The asymmetrical alignment takes more land from the West side between 8th and 11th. If it exceeds 15 ft it will impact a large number of parking spaces. A preference to take the 20 ft from the middle to minimize impacts was expressed.	The asymmetrical alignment allows for the use of the existing bridge during the construction period. The first span of the new bridge would be constructed on the north side, then the old bridge destroyed, then the second span of the new bridge constructed in its place. The conceptual design takes into account the geometrical requirements to develop the reverse curve necessary for the offset of the new bridge. Once a survey is completed, additional modification may be possible in final design stage of the project.
This project will improve traffic through to the hospital and across the bridge. What can you recommend North of the hospital	The ROW on LA 21/Tyler Street north of 11th Avenue narrows substantially to as little as 40 ft between 15th to 19th Avenues according to records at DOTD District 62. This creates substantial limitations for future widening opportunities. The project team recommends undertaking a Major Street Plan to establish a plan of connectivity to alleviate congestion and plan for future improvements in the area.
Include details about compensatory mitigation for wetland impacts (if required)	The project is anticipated to impact .10 acres of wetlands and .07 acres of other waters of the U.S.. When the project reaches the final design stage, LDOTD will apply to the US ACOE for a jurisdictional determination and then apply for their permits. The terms of compensatory mitigation will be determined at that time. <sup>63</sup>

<sup>63</sup> Verified through phone conversation with Bill Netherthy, USACE Biologist, March 2009.



# Attachment A

## Bicycle and Pedestrian Facilities Analysis

The three most recent federal transportation bills, starting with the Intermodal Surface Transportation Efficiency Act of 1991, as well as the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) and most recently Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) have reinforced the mainstreaming of bicyclists and pedestrians in the planning, design and operation of the Nation's Transportation System. This has meant, amongst other things, that non-motorized transportation should be given 'due consideration' in the planning and design of transportation projects.

As of the writing of this report, the Louisiana Department of Transportation and Development (LDOTD) was in the process of updating their bicycle and pedestrian guidance. Although the outcome of that process is still unknown at this time, it is expected that it will modernize existing guidance to be more in line with FHWA guidance. The most common interpretation of 'Due Consideration', as mentioned above, is that there is a presumption that bicyclists and pedestrians will be present on all roadways and accommodated in the design of new and improved transportation facilities. Bicyclists and pedestrians should be included as a matter of routine, and the decision to not accommodate them unless exceptional circumstances exist. Determining what accommodations are appropriate in a given context is generally done on a case by case basis.

The project team for the LA 21 widening from Bootlegger Rd to 11<sup>th</sup> Avenue was asked to review the viability of the inclusion of bicycle and pedestrian facilities within the ROW by various stakeholders early on in the process.

## Pedestrian Facilities

Pedestrians were observed in the corridor walking along the roadway, crossing the bridge and crossing at all of the intersections, as well as mid-block between 8<sup>th</sup> and 11<sup>th</sup> Avenues.

For the purposes of this project, the following criteria were developed to consider pedestrians:

### **Do the adjacent land uses suggest that pedestrians are likely to be present?**

Although pedestrians are anticipated to be present on virtually all roads on which they are allowed, some land uses suggest their use in higher numbers. These uses include shopping, restaurants, community services, schools,



libraries, health facilities, some offices, and multi-family residential. This corridor contains all of the above.

**Is transit present or likely in the future?**

While there are currently a low number of pedestrians using the LA 21 corridor, there are pedestrians present, often seen walking in the travel lanes to cross the Tchefuncte River Bridge. Additionally, this route would be an appropriate transit route in the future, given the mix of commercial, residential, and community facilities developing at in a fairly dense pattern.

**Would the inclusion of sidewalks create/improve on a network?**

Although there are no plans for the inclusion of sidewalks in the project to the south currently being designed by others, sidewalks are present to the north of the project area. Additionally, 1.44 miles of sidewalk is beyond the average pedestrian trip radius. Many pedestrian trips will be able to be accommodated by this length of sidewalk. Additionally, bridges require exceptional consideration, due to their importance in providing access across barriers such as waterways.

**Are there exceptional constraints (fiscal or corridor) that make inclusion of pedestrian facilities infeasible?** The addition of a sidewalk will not require additional ROW from the adjacent landowners, if it is kept to one side of the roadway, where the utilities are located.

Considering the above mentioned factors, the project team determined that a sidewalk should be included in the preferred alternative conceptual design. The sidewalk is located on the south side of the roadway from Bootlegger to the Bridge and on both sides of the Bridge through to 11<sup>th</sup> Avenue. *Inclusion of pedestrian accommodations for crossing (cross walks, pedestrian signal heads, etc.) should be considered in final design.*

**Consideration for bicycles**

Although bicycle activity was not observed by the project team, residents of the nearby residential communities noted that cyclists are present, and that there is a desire for more bike-able areas.

**Background Information**

The following user groups indicate the skill level of users:

- Group A – Advanced Cyclists
- Group B – Recreational Cyclists

- Group C - Children

Bicycle accommodations can take many forms, including, but not limited to:<sup>64</sup>

- Shared Path
- Bike lane
- Shared lane
- Signed shared lane
- Shoulders

**Shared Path – (aka Multi-use Path/Side Path)** – This facility type is generally reserved for non-motorized users and has a limited number of intersections. It is designed primarily with recreational use in mind, but may be part of a larger network. Generally at least 10 feet in width and two directional, it accommodates cyclists, joggers, in-line skaters and pedestrians and wheelchair users of various ages and abilities. Shared Paths are favored by Groups B and C.

**Bicycle Lanes** – A bicycle lane is generally a dedicated striped portion of the street (usually 4 foot in width) which carries traffic one way in the same direction as adjacent motor vehicle traffic. Bicycle lanes are favored by Groups A and B.

**Signed Shared Roadways (Bike Routes)** – Signed shared are shared roadways that indicate to the cyclist that the route conveys some benefits to the user. Connected, direct routes to desired locations, provision of traffic control devices adjusted for cyclists, provision of acceptably wide smooth surfaces as noted above, as well as regular maintenance of the route by the local jurisdiction would be characteristics of a bike route. Signed shared roadways are favored by Group A users.

**Shared Roadways** – The shared roadway system consists of all roadways on which cyclists are legally permitted. Group A users are the most comfortable on these roadways.

**Shoulders** – In most rural contexts, and some urban contexts, paved shoulders of at least 4 feet in width provide adequate space for bicycles, provided that they are not used for parking and are kept clear of debris. Group A cyclists are the most comfortable using shoulders.

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<sup>64</sup>With the exception of shoulders, definitions are based on ‘The Regional Planning Commission, 2005 New Orleans Metropolitan Bicycle and Pedestrian Plan.’



The following criteria were developed for the purpose of determining the appropriate accommodation for bicyclists on this particular project:

**What types of users are likely present based on adjacent land uses?** This corridor consists of shopping, community services, health facilities, some offices, and multi-family residential. These land uses are consistent with use for transportation purposes – and consistent with the facility types for bike lanes, signed shared roadway or shoulder use. The corridor, with its high frequency of driveways would be inconsistent with how shared path facilities are currently being designed in Louisiana. They are generally adjacent to recreational, residential or vacant areas and have a low frequency of intersections, including driveways, which is more appropriate for use by children and recreational users. According to this criterion, the Shared Path Facility is not recommended for this corridor.

**What is the current bicycle network in the area? What is the potential for a bicycle network?** This 1.44 mile corridor connects with a section of roadway to the south which is in the process of being widening. No dedicated bicycle facilities are included in the design of the roadway, although bicycle users are allowed to use it. There are no current or planned bicycle facilities on Bootlegger Road, also at the southern terminus of the project. To the north, there are no current or planned bicycle facilities immediately at the terminus of the project area. At 15<sup>th</sup> Avenue, the 15<sup>th</sup> Avenue Bicycle and Pedestrian Trail connects up with Tyler Street (LA 21). The Tammany Trace is over 2-miles from the project's northern terminus. With any of the bicycle facility designations, connectivity is an essential element, and it is severely lacking in this area.

This portion of roadway is designated as a 'bicycle route' on the New Directions 2025 Transportation Map; however the facility classification was not designated in that plan. At a minimum, bicycle access across this bridge over the Tchefuncte River is extremely important. <sup>65</sup>

**What is the level of driver/bicycle interaction in the area?** As of the writing of this report, motorists and bicyclists in this suburban area were unaccustomed to sharing lanes and have been observed having difficulty navigating around

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<sup>65</sup> The inclusion of a bike route on LA 21 is shown on a New Directions 2025 Plan Map. There is no mention of specific routes within the text portion of the New Directions 2025 document; it would meet the general goals and objectives of that document, adopted by resolution by the Parish Council.

each other and sharing facilities comfortably. A good deal of education for both motorists and bicyclists is necessary in this area to ensure that drivers and bicyclists understand each other's rights and responsibilities.

Designating or signing the route without infrastructure improvements for cyclists would not provide benefits to them in this corridor, considering the vehicle speeds and the amount of congestion. According to this criterion, the Signed Shared Roadway concept is not recommended for this corridor.

**Would the cost of accommodating bicyclists be excessive when compared with the anticipated use or benefit?** The existing ROW for the corridor is approximately 80 feet in width. The proposed project corridor varies from 88 foot in width to 124 feet in width. The inclusion of a Bike Lane would require an additional eight feet of pavement and eight feet of ROW, as well as the acquisition of at least one structure. Providing shoulders would more than double that additional cost. The cost of ROW in this corridor is exceptionally high, and the project team was originally tasked with using as little ROW as possible. The cost to include dedicated bicycle facilities or a shoulder would be excessive when compared with the amount of use and as such, neither bike lanes or shoulder concepts are recommended for this corridor as a means to accommodate bicyclists.

**What exceptional circumstances exist?** It is essential that both bicycles and pedestrians not only be permitted to cross the Tchefuncte River Bridge, but also to be accommodated in a way that provides for their safe access across this waterway. Final design should account for cyclists using the shoulders, and guard rail heights and joints that are 'bicycle friendly' should be considered. According to state law, bicyclists are permitted to use this roadway, by traveling in the outside travel lane. To make sure they can do this safely, bicycle-compatible drainage grates should be considered in the final design.

**What other considerations exist?** Both St. Tammany Parish and the City of Covington would need to increase maintenance along the corridor in order to decrease the risk of bicycle crashes along the corridor.

### **Provisions for Bicyclists and Pedestrians.**

A sidewalk is included in the preferred alternative conceptual design. The sidewalk is located on the south side of the roadway from Bootlegger to the Bridge and on both sides of the Bridge through to 11<sup>th</sup> Avenue. *Inclusion of pedestrian accommodations*



*for crossing (cross walks, pedestrian signal heads, etc.) should be considered in final design.*

Although no dedicated bicycle facilities are included in the preferred conceptual design, the project team recommends that the bridge, which includes 8-foot shoulders be made 'bicycle friendly' by using a bicycle-friendly guard rail and bicycle-friendly expansion joints. These decisions can be made during the final design period.

