ECONOMIC STUDY REPORT

I-12 to Bush Environmental Impact Statement
USACE Permit No. MVN-2006-0037

Prepared for

United States Army Corps of Engineers, New Orleans District

and

Louisiana Department of Transportation and Development

February 2011

US Army Corps of Engineers®
New Orleans District

DOTD
LOUISIANA'S ON THE MOVE
BUILDS THE WAY

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Acronyms

EIS	Environmental Impact Statement
GDP	Gross Domestic Product
I-12	Interstate 12
LA	Louisiana Highway
LADOTD	Louisiana Department of Transportation and Development
MSA	Metro Statistical Area
PCI	Per Capita Income
REMI	Regional Economics Models, Inc.
ROI	Region of Influence
USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau

SECTION 1.0
STUDY OVERVIEW

1.1 INTRODUCTION

This report presents the findings of the economic study conducted for the Louisiana Department of Transportation and Development (LADOTD) proposed construction of "Louisiana Highway (LA) 3241" from the LA 40/41 intersection in Bush, Louisiana to Interstate 12 (I-12). This study was conducted as part of the U.S. Army Corps of Engineers (USACE), New Orleans District environmental impact statement (EIS) to evaluate the potential environmental and socioeconomic consequences of the proposed project. Information provided in this report will be used by the USACE as part of the permit decision-making process.

LA 21 is a four-lane divided highway between the cities of Bogalusa, in Washington Parish, and Bush, in St. Tammany Parish, ending at its intersection with LA 41. The proposed I-12 to Bush highway would extend the four-lane section from that point to an existing interchange on I-12 by 4-laning an existing highway or construction of a new alignment with a maximum right-of-way width of 250 feet. Four alignment alternatives (Alternatives B/O, J, P, and Q) have been identified as meeting the purpose and need of the project.

The specific objective of this study is to determine the economic impact of the proposed highway on the region of influence (ROI). The ROI for this study is identified as St. Tammany Parish and Washington Parish, Louisiana (Figure 1-1).

St. Tammany Parish is bordered by the Pearl River to the east, Lake Pontchartrain to the south, Tangipahoa Parish to the west, and Washington Parish to the north. St. Tammany Parish is part of the New Orleans-Metairie-Kenner, Louisiana Metro Statistical Area (MSA). St. Tammany Parish had a land area of approximately 854 square miles in 2000. The parish is primarily urbanized.

Washington Parish is bordered by the Pearl River to the east, St. Tammany Parish to the south, Tangipahoa Parish to the west, and Pike and Walthall Counties, Mississippi to the north. Washington Parish is not a part of an MSA. The parish is primarily rural and has a land area of approximately 670 square miles.

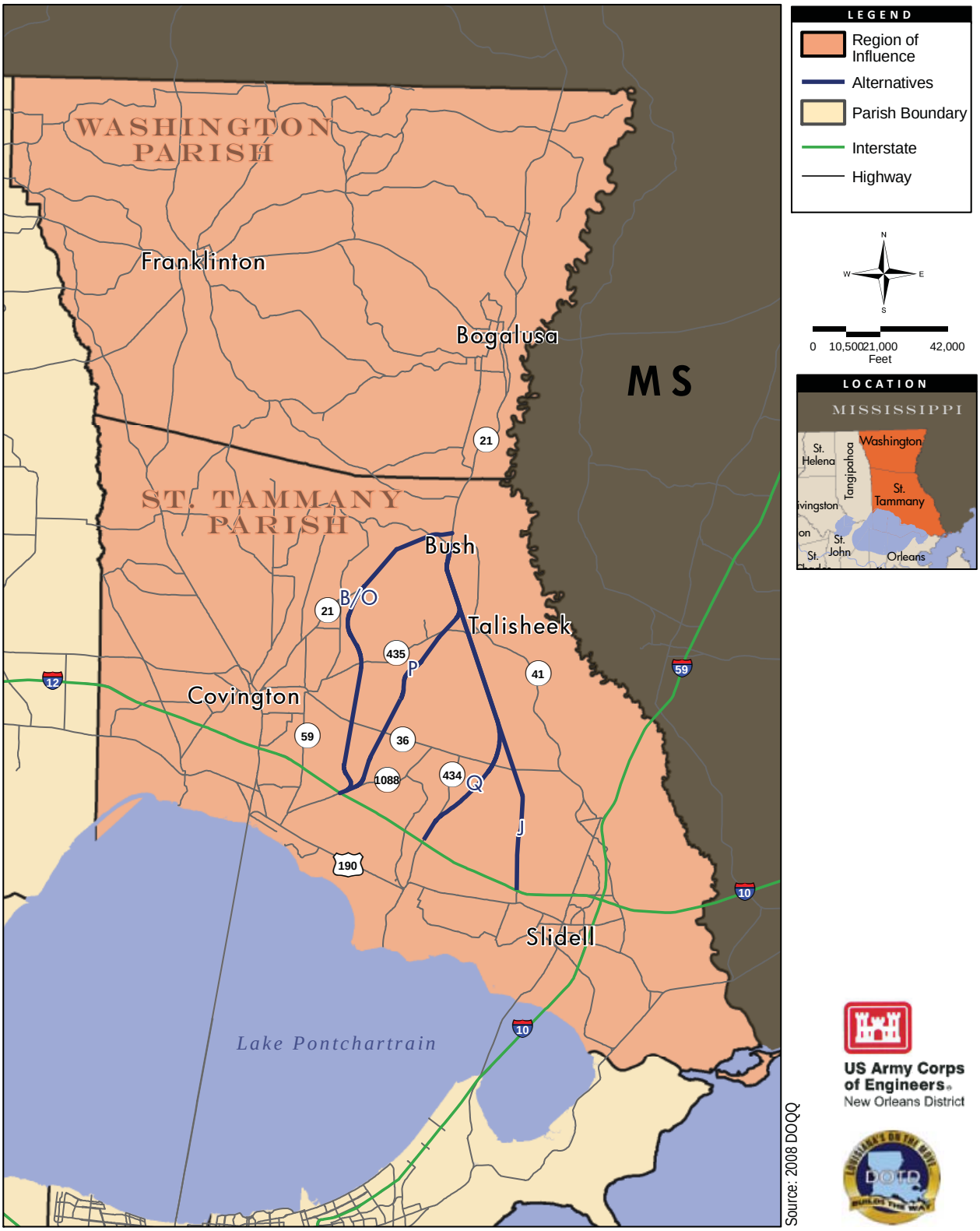
Table 1-1 summarizes some of the geographical data of the ROI and two comparison areas, Louisiana and the United States.

Table 1-1 Geographic Characteristics of ROI and Comparison Areas

	United States	Louisiana	St. Tammany Parish	Washington Parish	ROI
Land area (sq. miles), 2000	3,537,438	43,562	854	670	1,524
Population living in urban area, percent 2000	79.0%	72.6%	74.7%	37.6%	67.7%
Population living in rural area, percent 2000	21.0%	27.4%	25.3%	62.4%	32.3%

Sources: USCB 2009 ; USCB 2010; Tetra Tech 2010

Figure 1-1 Economic Region of Influence



1.2 REMI

Regional Economic Models, Inc's (REMI) TranSight software was used to determine potential economic impacts to four socioeconomic variables in the ROI as a whole and to the two individual parishes that comprise the ROI, St. Tammany Parish and Washington Parish. REMI is an economic-forecasting and policy-analysis model, and TranSight is a tool for evaluating economic effects of transportation improvements. Socioeconomic variables analyzed included the regional population, employment, Gross Domestic Product (GDP) and real personal income[1]. Real personal income data was studied on a per capita, or person, basis. To establish the economic impact of the proposed project, the REMI model was used to forecast baseline information about each of these socioeconomic variables for a forty-year period, 2010 to 2050.

Project-related impacts are reported as changes, on an annual basis, to the applicable baselines. The REMI output, or results, is based on documented regional economic activity and population counts in 2008. In addition, the effects of current national and regional economic recession[2] have been built in to the forecasted values of all the variables.

The model is based on certain assumptions (model inputs) about the start and end dates of the pre-construction and construction phases of the proposed project and the costs associated with each phase. These assumptions are: 1) pre-construction activities (planning, engineering, and right-of-way acquisition) starts at the beginning of the third quarter (Q3) 2015, (July 1); is completed at the end of the fourth quarter (Q4) 2018, (December 31); and that total pre-construction costs (excluding any wetland mitigation costs) are about $35 million (in 2010 dollars), of which $20.2 million is in acquisition of right-of-way costs and 2) construction starts at the beginning of first quarter (Q1) 2019 (January 1); is completed by the end of fourth quarter (Q4) 2030, (December 31); and that total construction costs is $210 million (in 2010 dollars)[3].

Baseline data reflects the forecasted values of the various variables in the ROI and in both parishes individually, under the assumption that the proposed project is not built. The baseline is called the "No Build Alternative" in this analysis. Baseline values are the foundation from which economic changes are measured. While assumed baseline values may be disputed, they provided a standard, or springboard, which can accurately determine the magnitude of changes to the economic variables as a result of the proposed project.

[1] These four variables are the most commonly used industry parameters to profile and analyze potential socioeconomic changes or impacts in a region. Changes in population drive changes to use of community services and infrastructure. The profiling of the four variables in the socioeconomic sections of the Affected Environment and Environmental Consequences chapters of the EIS satisfies the regulatory requirements outlined in 40 CFR Parts 1500 – 1508, NEPA, and USACE guidance. This Economic Study and the socioeconomic sections of the EIS evaluated only changes based on the timing (start and end dates) and cost of pre-construction and construction activities (model inputs); other variables that could be used to profile economic changes in the region and other model inputs are beyond the scope of these documents.

[2] A recession is a business cycle contradiction, a general slowdown in economic activity over a period of time. A recession is characterized as a period of high unemployment rate, a low rate of inflation, and low rate of economic growth.

[3] The estimated start and end dates of both pre-construction and construction and the estimated cost of each phase represent the best information available at the time this report was published. Should a Build Alternative be executed on a different time frame or experience different costs than presented in this document, the magnitude and timing of socioeconomic impacts could differ. However, it is unlikely that the impacts under an altered schedule or budget would be meaningfully different than those presented in this report.

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SECTION 2.0
POPULATION

2.1 BASELINE POPULATION

Population reflects mid-year estimates of people, including survivors from the previous year, births, special populations (prisoners, the college population and military personnel and their dependents), and three types of migrants (economic, international, and retired).

Table 2-1 displays information about the baseline population in the ROI including annualized changes in the rate of population growth. For comparison purposes, the annual change in population, as a percentage, in the USA is included.

From 2010 until 2050, the rate of population growth in the ROI is expected to outpace the rate of population growth in the USA. The ROI is expected to increase in population at approximately twice the rate of the USA as a whole from 2010 to 2020. During the 2020s, the ROI annual rate of population growth will slow from the prior decade, but still noticeably outpace the annual growth rate in the nation. In the period 2030 to 2050, the annual rate of population growth in both the ROI and in the USA will likely stabilize at about 1 percent per year.

Within the ROI, there is a marked variation in the baseline expected annual rate of growth in population. St. Tammany Parish is expected to grow faster than Washington Parish during the entire 40 year period. The accelerated annual rate of growth in St. Tammany Parish, relative to the rate of growth in Washington Parish, is particularly noticeable in the period 2010 to 2035. Washington Parish's annual growth of population is expected to grow slightly faster than the national rate until 2015, but then lag behind both St. Tammany Parish and the USA in the annual rate of growth. Within the ROI, on average in the period 2010 to 2050, the baseline population in St. Tammany Parish accounts for 87 percent and the population in Washington Parish accounts for about 13 percent.

Table 2-1. Baseline Population in the ROI, 2010 to 2050

	Baseline Population in ROI								
Population	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
ROI	293,841	328,967	360,959	389,899	415,449	438,017	460,036	484,509	512,978
St. Tammany Parish	247,296	279,893	309,769	336,905	360,886	381,821	401,767	423,474	448,478
Washington Parish	46,545	49,074	51,189	52,994	54,562	56,196	58,270	61,035	64,500
	Annual Change in Baseline Population of ROI								
		2010 to 2015	**2015 to 2020**	**2020 to 2025**	**2025 to 2030**	**2030 to 2035**	**2035 to 2040**	**2040 to 2045**	**2045 to 2050**
ROI		2.3%	1.9%	1.6%	1.3%	1.1%	1.0%	1.0%	1.1%
St. Tammany Parish		2.5%	2.0%	1.7%	1.4%	1.1%	1.0%	1.1%	1.2%
Washington Parish		1.1%	0.8%	0.7%	0.6%	0.6%	0.7%	0.9%	1.1%
USA		1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%	0.9%

Sources: REMI 2010a; Tetra Tech 2010

2.2 IMPACTS TO POPULATION

Construction of the proposed highway from I-12 to Bush, regardless of the alternative alignment selected, will minimally impact the projected population in the ROI. The ROI would experience an increase in population over the naturally occurring baseline population of less than 0.01 percent during pre-construction. A project-related increase during pre-construction of 0.01 percent of the population, in the peak year of change to population, 2018, represents 15 people over the projected population of 348,517 people. Pre-construction activity includes planning, engineering and design, and the acquisition of right-of-way.

St. Tammany Parish is expected to absorb virtually all of the project-related increase in population during pre-construction. In the peak year of project-related increases in population, 13 of the projected 15 new ROI residents would reside in St. Tammany Parish, with the remaining 2 people in Washington Parish.

It is noted that of the 15 project-related new ROI residents, 3 of those people would be school aged children. All of the school age children would be expected to live in St. Tammany Parish. In the 2007-2008 school year, there were 51,816 children in public and private educational institutes in the ROI.

Table 2-2 details expected projected-related changes in the ROI during pre-construction, in both absolute numbers and in percentages over the baseline, for the period 2015 to 2018, and for reference 2010.

The economic impact of project-related changes in population is reflected in changes in the regional GDP and in changes to real personal income. Changes to both these variables are discussed in Sections 4 and 5 of this report.

The ROI would experience an increase over the naturally occurring baseline population of 0.01 percent or less during construction. A project-related increase of 0.01 percent, in the peak year of construction, 2030, represents a project-related increase in the ROI of 45 people over the projected baseline population of 415,449. The project-related increase in population in the ROI during construction drops to less than 20 people by the year 2036 and to ten or less people by the year 2040. Unlike much larger construction projects, the ROI is not expected to experience a much slower rate of growth in population at the conclusion of construction.

St. Tammany Parish is expected to absorb virtually all of the project-related increase in population during construction. In the peak year of project-related increases in population, 2030, 39 of the projected 45 new ROI residents would reside in St. Tammany Parish and the remaining 6 people in Washington Parish.

It is noted that of the 45 project-related new ROI residents, 11 of those people would be school aged children. Of the 11 school age children 10 would be expected to live in St. Tammany Parish and 1 in Washington Parish.

Table 2-3 details expected projected-related changes in the ROI during construction, in both absolute numbers and in percentages over the baseline, for the period 2019 to 2037.

Table 2-2. Project-related Changes in Population during Pre-construction in the ROI, 2010 to 2018

ROI	2010	2015	2016	2017	2018
Baseline Population (Population with No Build Alternative)	293,841	328,967	335,630	342,133	348,517
Population with Build Alternatives	293,841	328,970	335,637	342,145	348,532
Difference in Population, absolute number	0	3	7	11	15
Difference in Population, percent	0%	0%	0%	0%	0%
St. Tammany Parish					
Baseline Population (Population with No Build Alternative)	247,296	279,893	286,106	292,175	298,137
Population with Build Alternatives	247,296	279,896	286,112	292,185	298,151
Difference in Population, absolute number	0	2	7	10	13
Difference in Population, percent	0%	0%	0%	0%	0%
Washington Parish					
Baseline Population (Population with No Build Alternative)	46,545	49,074	49,524	49,959	50,380
Population with Build Alternatives	46,545	49,074	49,525	49,960	50,381
Difference in Population, absolute number	0	0	1	1	2
Difference in Population, percent	0%	0%	0%	0%	0%

Note: Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b; Tetra Tech 2010

Table 2-3. Project-related Changes in Population During Construction in the ROI, 2019 to 2037

ROI	2019	2022	2025	2028	2031	2034	2037
Baseline Population (Population with No Build Alternative)	354,779	372,965	389,899	405,648	420,160	433,652	446,704
Population with Build Alternatives	354,799	372,998	389,940	405,691	420,199	433,678	446,720
Difference in Population, absolute number	21	33	40	44	39	25	16
Difference in Population, percent	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	<0.01%
St. Tammany Parish							
Baseline Population (Population with No Build Alternative)	303,989	321,009	336,905	351,699	365,288	377,810	389,749
Population with Build Alternatives	304,007	321,039	336,941	351,737	365,322	377,831	389,762
Difference in Population, absolute number	18	29	36	39	34	22	13
Difference in Population, percent	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	<0.01%
Washington Parish							
Baseline Population (Population with No Build Alternative)	50,790	51,955	52,994	53,949	54,872	55,843	56,955
Population with Build Alternatives	50,792	51,959	52,999	53,954	54,877	55,846	56,958
Difference in Population, absolute number	2	4	5	5	5	4	3
Difference in Population, percent	<0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	<0.01%

Note: Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b; Tetra Tech 2010

SECTION 3.0
EMPLOYMENT

3.1 BASELINE EMPLOYMENT

Employment comprises estimates of the number of jobs, full-time plus part-time, by place of work. Full-time and part-time jobs are counted at equal weight. Employees, sole proprietors, and active partners are included, but unpaid family workers and volunteers are not included.

Baseline employment opportunities in the ROI are expected to expand more rapidly than in the USA during the period 2010 to 2050, particularly in the period 2010 to 2025 when the annual rate of expansion is about 50 percent higher than the annual rate of expansion at the national level. In the baseline No Build Alternative, St. Tammany Parish easily outpaces the national job growth rate the entire 40 year study period. Washington Parish, with a much small number of jobs at present is expected to grow too, but at a slower annual rate than either the ROI in aggregate, or the nation. However, as the rate of job creation slows nationally starting in about in 2035, Washington Parish's rate of job growth from 2035 to 2050 will reflect the growth rate at the ROI level and exceed the national rate.

Note however, that the baseline rate of job growth in the ROI is smaller than the rate of growth in population. This phenomenon suggests that both St. Tammany Parish and Washington Parish will increasingly serve as bedroom communities for residents communing to work in another parish or state (i.e. Mississippi). Within the ROI, on average in the period 2010 to 2050, the baseline employment in St. Tammany Parish accounts for 88 percent of the jobs and the employment in Washington Parish accounts for about 12 percent of the jobs.

Table 3-1 displays information about the baseline changes in employment opportunities in the ROI, and for comparison purpose, annual rates of change projected for the USA.

Table 3-1. Baseline Employment in the ROI, 2010 to 2050

	Baseline Employment in ROI								
Employment	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
ROI	123,527	131,402	137,340	142,419	148,177	154,611	162,469	172,093	184,006
St. Tammany Parish	106,941	114,685	120,603	125,621	131,095	136,954	143,904	152,385	163,000
Washington Parish	16,587	16,718	16,738	16,798	17,082	17,657	18,565	19,708	21,006
	Annual Change in Baseline Employment of ROI								
		2010 to 2015	**2015 to 2020**	**2020 to 2025**	**2025 to 2030**	**2030 to 2035**	**2035 to 2040**	**2040 to 2045**	**2045 to 2050**
ROI		1.2%	0.9%	0.7%	0.8%	0.9%	1.0%	1.2%	1.3%
St. Tammany Parish		1.4%	1.0%	0.8%	0.9%	0.9%	1.0%	1.2%	1.4%
Washington Parish		0.2%	0.0%	0.1%	0.3%	0.7%	1.0%	1.2%	1.3%
USA		0.8%	0.6%	0.4%	0.6%	0.8%	0.9%	0.9%	1.0%

Sources: REMI 2010a;Tetra Tech 2010

3.2 IMPACTS TO EMPLOYMENT

Pre-construction activities and construction of the proposed highway between I-12 and Bush, regardless of the alternative alignment selected, will have a very small impact on employment in the ROI, even during the construction period itself.

As Table 3-2 shows, in the peak years of employment during pre-construction, 2016 and 2017, the number of jobs in the ROI would increase by 103 positions because of construction related activities. These additional positions represent about 0.1 percent of the baseline ROI employment in that year. Virtually all of the jobs, 102 or 99 percent, would be created in St. Tammany Parish. Project-related jobs include positions created as a direct and indirect result of pre-construction activities.

The economic impact of project-related changes in employment during pre-construction is reflected in changes in the regional Gross Domestic Product and in changes to real personal income. Changes to both these variables are discussed in Sections 4 and 5.

Table 3-2. Project-Related Changes in Employment during Pre-construction in the ROI, 2010 to 2018

ROI	2010	2015	2016	2017	2018
Baseline Employment (Employment with No Build Alternative)	123,527	131,402	132,728	133,891	135,190
Employment with Build Alternatives	123,527	131,454	132,832	133,994	135,291
Difference in Employment, absolute numbers	0	52	103	103	101
Difference in Employment, percent	0%	0.04%	0.08%	0.08%	0.07%
St. Tammany Parish					
Baseline Employment (Employment with No Build Alternative)	106,941	114,685	116,007	117,173	118,454
Employment with Build Alternatives	106,941	114,736	116,110	117,275	118,554
Difference in Employment, absolute numbers	0	52	102	102	100
Difference in Employment, percent	0%	0.04%	0.09%	0.09%	0.08%
Washington Parish					
Baseline Employment (Employment with No Build Alternative)	16,587	16,718	16,721	16,718	16,735
Employment with Build Alternatives	16,587	16,718	16,722	16,719	16,736
Difference in Employment, absolute numbers	0	0	1	1	1
Difference in Employment, percent	0%	0%	0.01%	0.01%	0.01%

Note: Displayed values may not sum because of rounding.
Source: REMI 2010a

Table 3-3 displays information about the creation of project-related positions during the construction and in the immediate post-construction period. In all years during construction and in the 20 years post construction, changes in employment levels in the ROI and in the parishes individually represent less than 0.14 percent of the baseline employment. It should be noted that the loss of positions in the post 2031 period represents a slower rate of growth in new positions in the ROI rather than an absolute loss of positions (see Table 3-1).

Table 3-3. Project-Related Changes in Employment during Construction and Immediately Following in the ROI, 2019 to 2037

ROI	2019	2022	2025	2028	2031	2034	2037
Baseline Employment (Employment with No Build Alternative)	136,458	139,282	142,419	145,806	149,365	153,302	157,537
Employment with Build Alternatives	136,613	139,427	142,552	145,930	149,348	153,283	157,523
Difference in Employment, absolute numbers	155	145	133	123	-17	-19	-14
Difference in Employment, percent	0.11%	0.10%	0.09%	0.08%	-0.01%	-0.01%	-0.01%
St. Tammany Parish							
Baseline Employment (Employment with No Build Alternative)	119,698	122,528	125,621	128,861	132,192	135,788	139,559
Employment with Build Alternatives	119,851	122,671	125,753	128,983	132,175	135,769	139,545
Difference in Employment, absolute numbers	154	143	132	122	-17	-19	-14
Difference in Employment, percent	0.13%	0.12%	0.10%	0.09%	-0.01%	-0.01%	-0.01%
Washington Parish							
Baseline Employment (Employment with No Build Alternative)	16,760	16,754	16,798	16,945	17,173	17,515	17,978
Employment with Build Alternatives	16,761	16,756	16,800	16,947	17,173	17,515	17,978
Difference in Employment, absolute numbers	2	2	1	1	0	-0	0
Difference in Employment, percent	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%

Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b

The economic impact of project-related changes in employment during construction is reflected in changes in the regional Gross Domestic Product and in changes to real personal income. Changes to both these variables are discussed in Sections 4 and 5.

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SECTION 4.0
GROSS DOMESTIC PRODUCT

4.1 BASELINE GDP

Gross Domestic Product (GDP) can be measured by summing: Consumption (expenditures by households) + Investment (expenditures by businesses) + Government (expenditures by all levels of government) + Net exports (the value of exports – the value of imports). GDP is the value of all final goods and services produced in an area within a given year.

As discussed in Section 2 (Population) and Section 3 (Employment), the ROI is expected to experience growth in the applicable baselines in all years from 2010 to 2050. The annual increase in population and annual increase in the number of jobs will result in an annual increase in the regional GDP.

The ROI, and St. Tammany Parish in particular, is forecasted to experience a very healthy rate of growth in its baseline GDP in the next 40 years. The annual baseline GDP in the ROI will grow at a rate exceeding the national rate of growth during the 2010 to 2050 period. The annual rate of increase fluctuates near 3.2 percent in the ROI and in St. Tammany Parish over the forty year period, at 2.7 percent in Washington Parish during this period, and at 2.6 percent nationally in this period. Within the ROI, on average in the period 2010 to 2050, the baseline GDP in St. Tammany Parish accounts for approximately 91 percent of the value of all final goods and services produced each year in the ROI. Washington Parish accounts for about 9 percent of the region's GDP. Table 4-1 displays information about the baseline Gross Domestic Product in the ROI.

Table 4-1. Baseline GDP in the ROI[1], 2010 to 2050

Gross Domestic Product	2010	2015	2020	2025	2030	2035	2040	2045	2050
ROI	6.613	7.766	8.958	10.304	11.916	13.840	16.212	19.168	22.884
St. Tammany Parish	5.915	6.989	8.098	9.345	10.831	12.592	14.751	17.441	20.836
Washington Parish	0.700	0.776	0.860	0.959	1.084	1.247	1.460	1.726	2.047
	Annual Change in Baseline Gross Domestic Product of ROI								
		2010 to 2015	**2015 to 2020**	**2020 to 2025**	**2025 to 2030**	**2030 to 2035**	**2035 to 2040**	**2040 to 2045**	**2045 to 2050**
ROI		3.3%	2.9%	2.8%	2.9%	3.0%	3.2%	3.4%	3.6%
St. Tammany Parish		3.4%	3.0%	2.9%	3.0%	3.1%	3.2%	3.4%	3.6%
Washington Parish		2.1%	2.1%	2.2%	2.5%	2.8%	3.2%	3.4%	3.5%
USA		3.0%	2.6%	2.4%	2.5%	2.7%	2.7%	2.8%	2.9%

[1] Billions of fixed (not adjusted for inflation) 2010 dollars
Sources: REMI 2010a; Tetra Tech 2010

4.2 IMPACTS TO GDP

Noting project-related changes in the region's GDP are a helpful way to assess the economic impact of a project. Project-related impacts to GDP will occur primarily during construction activities. Changes in GDP occur with changes in productivity and spending. New jobs create wages that are spent (increasing Consumption expenditures) and taxes paid (increasing Government expenditures). The increased spending of wages also results in additional business spending (increasing Investment as commercial entities expand offerings to meet the demands of consumers). Intermediate goods purchased for construction activities also increase Investment.

Pre-construction activities associated with the proposed highway, regardless of the alternative alignment selected, will cause a small increase over the baseline GDP. As shown in Table 4-2, the changes will occur in years 2015 to 2018 when there will be a small increase in GDP over the expected baseline. The increase over in the baseline is 0.06 percent or less within the ROI. Table 4-2 below displays information about project-related changes during pre-construction activities. Changes to GDP in the ROI would peak at 0.06 percent (six hundredth of one percent) 2016, 2017, and 2018.

Table 4-2. Project-related Changes in Gross Domestic Product[1] During Pre-construction in the ROI, 2015 to 2018

ROI	2015	2016	2017	2018
Baseline GDP (GDP with No Build Alternative)	7.766	8.007	8.233	8.474
GDP with Build Alternatives	7.768	8.012	8.238	8.479
Difference in GDP, absolute numbers	0.002	0.005	0.005	0.005
Difference in GDP, percent	0.03%	0.06%	0.06%	0.06%
St. Tammany Parish				
Baseline GDP (GDP with No Build Alternative)	6.989	7.214	7.425	7.649
GDP with Build Alternatives	6.992	7.219	7.430	7.654
Difference in GDP, absolute numbers	0.002	0.005	0.005	0.005
Difference in GDP, percent	0.04%	0.07%	0.07%	0.06%
Washington Parish				
Baseline GDP (GDP with No Build Alternative)	0.776	0.792	0.808	0.825
GDP with Build Alternatives	0.776	0.792	0.808	0.825
Difference in GDP, absolute numbers	0	0	0	0
Difference in GDP, percent	0%	0%	0%	0%

[1]Billions of Unadjusted (for inflation) 2010 dollars
Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b

The economic impact of project-related changes during both pre-construction and construction to the applicable baseline of GDP is generally positive, but very small. In the peak year of project-related changes to GDP during construction, 2019, regional GDP would be expected to increase by $9 million or less than 0.1 percent. The increase in the region's GDP during construction would be an annual average of about $5.5 million. Table 4-3 below summarizes project-related changes during construction and in the immediate post-construction period.

There will be a very small slowing in the rate of growth in GDP in the ROI because of project-related activities in the period 2031 to 2039. The slower growth rate amounts to about 0.01 percent (one hundredth of one percent). The slower rate of growth in GDP from project-related activities during this period amounts to about an annual average of $1.2 million. These increases over the baseline GDP values from 2015 to 2030 and the slowing from 2031 to 2039 are not meaningful because they are so small as a percentage of the region's GDP. The economic impact from project-related activities to GDP in St. Tammany and Washington Parish is negligible.

Table 4-3. Project-related changes in GDP[1] During Construction in the ROI, 2019 to 2037

ROI	2019	2022	2025	2028	2031	2034	2037
Baseline GDP (GDP with No Build Alternative)	8.719	9.467	10.304	11.237	12.270	13.430	14.726
GDP with Build Alternatives	8.727	9.474	10.312	11.244	12.269	13.428	14.724
Difference in GDP, absolute numbers	0.009	0.007	0.007	0.007	-0.001	-0.001	-0.001
Difference in GDP, percent	0.09%	0.08%	0.07%	0.06%	-0.01%	-0.01%	-0.01%
St. Tammany Parish							
Baseline GDP (GDP with No Build Alternative)	7.876	8.570	9.345	10.206	11.156	12.219	13.399
GDP with Build Alternatives	7.884	8.577	9.353	10.213	11.155	12.217	13.399
Difference in GDP, absolute numbers	0.007	0.007	0.007	0.007	-0.001	-0.001	0.000
Difference in GDP, percent	0.10%	0.09%	0.08%	0.07%	-0.01%	-0.01%	-0.01%
Washington Parish							
Baseline GDP (GDP with No Build Alternative)	0.843	0.897	0.959	1.031	1.114	1.211	1.325
GDP with Build Alternatives	0.843	0.897	0.959	1.031	1.114	1.211	1.325
Difference in GDP, absolute numbers	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Difference in GDP, percent	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%

[1] Billions of Unadjusted (for inflation) 2010 dollars
Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b

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SECTION 5.0
REAL PERSONAL INCOME PER CAPITA

5.1 BASELINE REAL PERSONAL INCOME

Personal income is the income that is received by all persons from all sources. It is the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income, rental income, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. Per capita means "per person." Real personal income per capita is real personal income divided by population.

Real personal income is expected to increase in the ROI in the period 2010 to 2050 (Table 5-1). This analysis focused on changes in real personal income per capita (PCI). By analyzing changes on a per capita basis as opposed to the aggregate changes in the region's real personal income, changes are more apparent.

Real personal income per capita is affected by changes in real personal income and changes in population. For example, an increase in real personal income per capita can be caused by an increase in real personal income or a decrease in population. Until about 2025, the ROI's annual rate of increase in real personal income per capita is less than the forecasted rate of growth at the national level. This is because the rate of job growth in the ROI is less than the ROI's population rate of growth.

There is a marked difference in the real personal income per capita in St. Tammany Parish and in Washington Parish. As displayed in Table 5-1, the per capita income in Washington Parish is about two-thirds the per capita income in St. Tammany Parish; the baseline ratio is expected to improve over the forty-year study period.

Table 5-1. Baseline Real Personal Income per Capita[1] in the ROI, 2010 to 2050

Real Personal Income per Capita	Baseline Real Personal Income per Capita in ROI								
	2010	2015	2020	2025	2030	2035	2040	2045	2050
ROI	41,042	43,141	45,434	47,995	51,366	55,595	60,859	67,243	75,347
St. Tammany Parish	43,730	45,697	47,950	50,526	53,978	58,344	63,781	70,410	75,919
Washington Parish	26,764	28,558	30,213	31,906	34,091	36,920	40,714	45,274	50,510
	Annual Change in Baseline Real Personal Income per Capita of ROI								
		2010 to 2015	2015 to 2020	2020 to 2025	2025 to 2030	2030 to 2035	2035 to 2040	2040 to 2045	2045 to 2050
ROI		1.0%	1.0%	1.1%	1.4%	1.6%	1.8%	2.0%	2.3%
St. Tammany Parish		0.9%	1.0%	1.1%	1.3%	1.6%	1.8%	2.0%	2.3%
Washington Parish		1.3%	1.1%	1.1%	1.3%	1.6%	2.0%	2.1%	2.2%
USA		1.6%	1.4%	1.2%	1.4%	1.6%	1.7%	1.8%	1.9%

[1]Fixed (not adjusted for inflation) 2010 dollars
Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b; Tetra Tech 2010

Table 5-2. Real Personal PCI in Washington Parish as Percent of St. Tammany Parish Real Personal PCI, 2010 to 2050

2010	2015	2020	2025	2030	2035	2040	2045	2050
61.2%	62.5%	63.0%	63.1%	63.2%	63.3%	63.8%	64.3%	64.0%

Sources: REMI 2010a; REMI 2010b;Tetra Tech 2010

5.2 IMPACTS TO REAL PERSONAL INCOME

Project-related activities during pre-construction and construction will have very little economic impact on the real personal income per capita of ROI residents. In the peak year, 2019, of project-related impacts to real personal income during either pre-construction or construction, residents in the ROI will see PCI improve by about $17, or about four-hundredths of one percent (0.04 percent). Changes, increases above the baseline, are most evident in the construction period. In the immediate post-construction period, there is a very small slowing of growth in the real personal income per capita, less than $5 per year, until about 2043. Tables 5-3 and 5-4 displays information about project-related changes to real personal income per capita in the region.

Table 5-3. Project-related Changes During Pre-construction in Real Personal Income per Capita[1], 2015 to 2018

ROI	2015	2016	2017	2018
Baseline PCI (PCI with No Build Alternative)	43,141	43,622	44,055	44,553
PCI with Build Alternatives	43,148	43,634	44,066	44,564
Difference in PCI, absolute numbers	6	12	11	11
Difference in PCI, percent	0.01%	0.03%	0.03%	0.02%
St. Tammany Parish				
Baseline PCI (PCI with No Build Alternative)	45,697	46,163	46,583	47,080
PCI with Build Alternatives	45,704	46,177	46,596	47,092
Difference in PCI, absolute numbers	7	13	13	12
Difference in PCI, percent	0.02%	0.03%	0.03%	0.03%
Washington Parish				
Baseline PCI (PCI with No Build Alternative)	28,558	28,940	29,268	29,606
PCI with Build Alternatives	28,559	28,941	29,269	29,607
Difference in PCI, absolute numbers	1	1	1	1
Difference in PCI, percent	0.00%	0.00%	0.00%	0.00%

[1] Fixed (not adjusted for inflation) 2010 dollars
Displayed values may not sum because rounding.
Sources: REMI 2010a; REMI 2010b

Table 5-4. Project-related Changes During Construction in Real Personal Income per Capita[1], 2019 to 2037

ROI	2019	2022	2025	2028	2031	2035	2037
Baseline PCI (PCI with No Build Alternative)	45,045	46,364	47,995	49,892	52,150	55,595	57,556
PCI with Build Alternatives	45,062	46,379	48,008	49,904	52,145	55,591	57,553
Difference in PCI, absolute numbers	17	15	13	12	-5	-4	-2
Difference in PCI, percent	0.04%	0.03%	0.03%	0.02%	-0.01%	-0.01%	0.00%
St. Tammany Parish							
Baseline PCI (PCI with No Build Alternative)	47,566	48,864	50,526	52,458	54,782	58,344	60,373
PCI with Build Alternatives	47,586	48,880	50,541	52,471	54,776	58,339	60,371
Difference in PCI, absolute numbers	19	16	15	13	-6	-5	-2
Difference in PCI, percent	0.04%	0.03%	0.03%	0.03%	-0.01%	-0.01%	0.00%
Washington Parish							
Baseline PCI (PCI with No Build Alternative)	29,956	30,922	31,906	33,167	34,626	36,920	38,277
PCI with Build Alternatives	29,959	30,923	31,907	33,168	34,624	36,919	38,276
Difference in PCI, absolute numbers	2	1	1	1	-2	-1	-1
Difference in PCI, percent	0.01%	0.00%	0.00%	0.00%	-0.01%	0.00%	0.00%

[1]Fixed (not adjusted for inflation) 2010 dollars
Displayed values may not sum because of rounding.
Sources: REMI 2010a; REMI 2010b

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SECTION 6.0
SUMMARY AND CONCLUSIONS

St. Tammany Parish dominates the two-parish ROI in terms of the four analyzed socioeconomic variables: population, number of jobs (employment), the regional GDP, and real personal income per capita. In 2010, prior to the commencement of pre-construction activities or construction start of the proposed project, St. Tammany Parish housed 84 percent of the population, provided 86 percent of the jobs, and generated 89 percent of the region's GDP. In 2010, the real personal income per capita in St. Tammany Parish is estimated to be about 163 percent of the real personal income per capita in Washington Parish. Most of the project-related changes to these socioeconomic variables are expected to occur in St. Tammany Parish.

In the peak year of project-related changes, 2030 for changes in population and 2019 for changes in employment, GDP, and PCI, St. Tammany Parish will host 39 of the 45 (about 87 percent) of the new project-related residents in the ROI and provide 154 of the 155 new project-related jobs (about 99 percent). Project-related changes to the GDP will be nearly undetectable in Washington Parish, but represent an increase of $9 million over the baseline in St. Tammany Parish in 2019. Residents of St. Tammany Parish will likely experience an increase of $19 in their real personal income while residents of Washington Parish will see a project-related increase of $2 in their real personal income per capita. Hence, absolute changes and changes as a percentage over the baseline values for these socioeconomic variables in St. Tammany Parish broadly reflect the changes to the study area, the ROI.

Regardless of the alternative alignment selected, the economic impact of project-related activities is very small. In all years from 2010 to 2050 and in the ROI as a whole and in St. Tammany Parish and Washington Parish individually, the project-related impacts, annual changes to the applicable baselines, will be less than 0.14 percent. In Washington Parish, the project-related changes to each of the four analyzed variables during the applicable peak year (the year when changes reflect the greatest magnitude) will be less than two one-hundredth of one percent (less than 0.02 percent). In St. Tammany Parish, changes to population, GDP, and PCI will be less than two-hundredths of one percent (less than 0.2 percent) and changes to employment will be about 0.13 percent. At construction completion, the value of the ROI baseline variables will continue to grow, but at a very slightly (0.01 percent) slower rate for about ten years (until about 2040).

The economic impact in the ROI of the proposed project to the regional population, employment, GDP, and real personal income is positive, but not statistically significant.

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SECTION 7.0
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