



# I-10 LAKE CHARLES CALCASIEU RIVER BRIDGE

## Final Environmental Impact Statement

### I-10 Calcasieu River Bridge Improvements

(I-10/I-210 West End to I-10/I-210 East End)

Calcasieu Parish, Louisiana

State Project Number: H.003931

September 11, 2023



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Calcasieu Parish, Louisiana

Project Number H.003931

Final Environmental Impact Statement

Submitted Pursuant to 42 U.S.C. 4332 (2) (c)

by the

U.S. Department of Transportation

Federal Highway Administration

and

Louisiana Department of Transportation and Development

and

US Army Corps of Engineers

US Coast Guard

Federal Railroad Administration

Cooperating Agencies

9-20-2023

Date of Approval



DOTD Chief Engineer

for LADOTD

9-20-2023

Date of Approval



Acting Division Administrator

for FHWA

The Federal Highway Administration (FHWA) signature gives approval to distribute the information for public and agency review and comment. Such approval does not commit to approve any future grant requests to fund the Preferred Alternative.

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This document is a Final Environmental Impact Statement (FEIS) for the I-10 Calcasieu River Bridge Improvements Project (Project). The FEIS identifies the preferred alternative and evaluates all reasonable alternatives considered for the Project. The purpose of the Project is to (a) Address the lack of system continuity on I-10; (b) Reduce congestion and improve mobility on I-10 and along Sampson Street; (c) Address structural and functional roadway and bridge deficiencies; and (d) Address safety concerns on I-10 and the Calcasieu River Bridge. The Project alternatives consist of three Build Alternatives, which would provide six lanes of interstate highway in each direction for the full extent of the project, and the No-Build Alternative. All three Build Alternatives would provide other improvements including reducing the vertical clearance of the bridge over the Calcasieu River. Also, I-10 from Ryan Street to Opelousas Street would be elevated on a continuous bridge. Based on the comparative analysis of the Build Alternatives and public/local agency input, this document identifies Alternative 5G as the Preferred Alternative, which provides an elevated interchange at Sampson Street, eliminates the at-grade railroad crossing in Westlake; supports three out of four of the Project's Purpose and Need statements; and is the least costly to build. Comments on this FEIS are due by **10/30/2023** and should be sent to **HNTB, 450 Laurel Street, Suite 1200, Baton Rouge, LA 70801** or by email at **CalcasieuBridge@hntb.com**.

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# FINAL ENVIRONMENTAL IMPACT STATEMENT

## 1 INTRODUCTION

The Final Environmental Impact Statement (FEIS) evaluates alternatives for the I-10 Calcasieu River Bridge Improvements Project (Project) along a nine (9) mile stretch of Interstate 10 (I-10) between the I-10/Interstate 210 (I-210) west and I-10/I-210 east interchanges in Calcasieu Parish, Louisiana. The Federal Highway Administration (FHWA) is the lead federal agency under the National Environmental Policy Act (NEPA). The Louisiana Department of Transportation and Development (LADOTD) is the state agency responsible for the Project, and the U.S. Army Corps of Engineers (USACE), the Federal Railroad Administration (FRA), and the U.S. Coast Guard (USCG) are Cooperating Agencies. A No-Build Alternative and three Build Alternatives were evaluated in the Project's Draft Environmental Impact Statement (DEIS).

### 1.1 Project Background

An engineering and environmental feasibility study was commissioned by LADOTD in 2000 for the I-10 Calcasieu River Bridge Improvements Project. Six (6) technical memoranda were produced in 2001 and summarized in the Comprehensive Preliminary Alternatives Report (HNTB 2002). The study focused on issues related to the existing bridge, its approaches, and the interstate mainline between the I-210 interchanges including several overpass bridges. Solutions to issues at PPG Drive and U.S. Highway 90 (US 90) frontage roads, as well as the at-grade railroad crossings at Sampson Street in Westlake, were proposed and modifications to the existing interchanges and local road connections were studied. The first public meeting was held on June 4, 2002.

Four alternative actions were recommended in the Comprehensive Preliminary Alternatives Report, and the preferred vertical clearance of the bridge was established as 73 feet (HNTB 2002). On December 19, 2007, the Policy Committee of the Imperial Calcasieu Regional Planning and Development Commission/Metropolitan Planning Organization (IMCAL/MPO) voted in favor of a 73-foot vertical clearance for the new I-10 Calcasieu River Bridge. A copy of the resolution is provided in the Public Involvement Summary – NOI, SOV, and Public Scoping Meeting (2014), which is included in Appendix C of the DEIS and is available online in the project website's document library at <https://i10lakecharles.com/documentlibrary>. Subsequent navigation studies have continued to use 73 feet of vertical clearance for evaluation of impacts to navigation.

The technical memoranda related to environmental factors summarized in the alternatives analysis identified releases of hazardous chemicals within the Project Corridor (HNTB 2002). The spill of ethylene dichloride (EDC) near Sampson Street is an issue for the Project. Actions to minimize disturbing groundwater and soils are being planned, and those actions will be incorporated into the contractor's work plan.

The bridge was built almost 70 years ago and the interstate almost 60 years ago. The bridge was rehabilitated in 2011-2012, which extended its life expectancy. Nevertheless, the Project is needed because the geometric and structural designs of I-10 and the I-10 Calcasieu River Bridge do not meet current design guidelines for freeways, ramps, and frontage roads for this section of the Interstate Highway System.

The studies presented in 2002 satisfied the first step in the LADOTD project delivery process. Known as Stage 0, this step concluded with a determination that the Project was feasible and should be advanced to Stage 1 of the NEPA Planning and Environmental Phase which concludes with this Final Environmental Impact Statement (FEIS) followed by the issuance of the Record of Decision (ROD).

## 1.2 Project Description

The Project proposes to improve I-10 between the I-10/I-210 west and I-10/I-210 east interchanges in Calcasieu Parish, LA (**Figure 1**). The interstate is a controlled access, divided highway with four to six lanes. The Project Corridor includes the I-10 Calcasieu River Bridge that connects the cities of Lake Charles and Westlake. The Project length is approximately nine (9) miles and includes interstate roadways and ramps, the bridge approaches, the I-10 service roads, and interchanges at PPG Drive, Sampson Street, North Lakeshore/Ryan Street, Enterprise Boulevard, and Opelousas Street that connect the interstate to state roads and local streets.

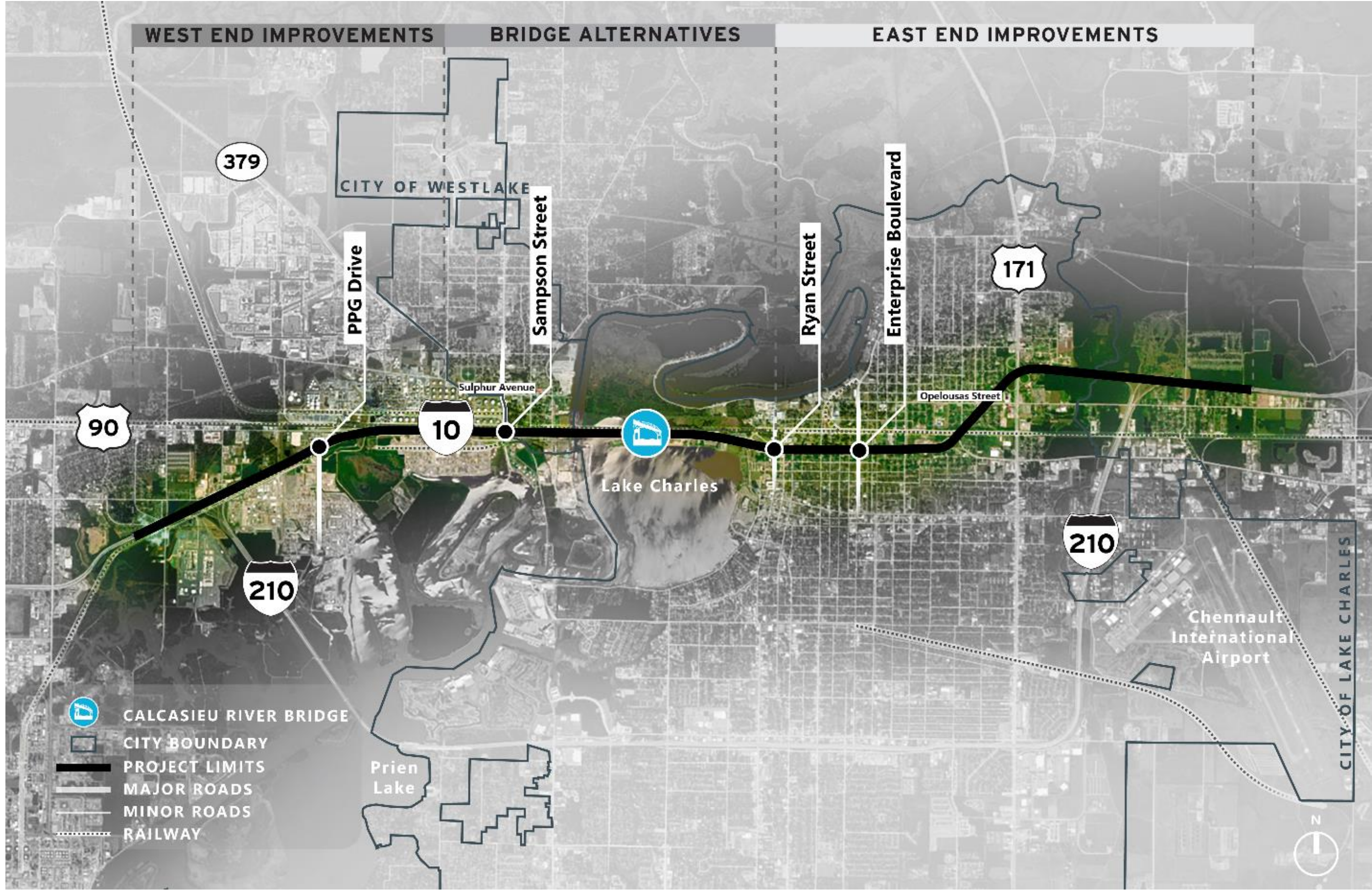


Figure FEIS-1 I-10 Calcasieu River Bridge Improvement Project Extents

The Project proposes to reconstruct the I-10 Calcasieu River Bridge and the interstate within the Project limits to provide a minimum of six lanes of interstate between the interchanges at I-210 West End and I-210 East End. Reconstruction of the system would include several overpasses, interchange ramps, and service roads to ensure that the vertical clearance, horizontal alignment, acceleration, deceleration, weaving distances, and other road and bridge elements meet current design guidelines to the extent practicable. To accommodate six lanes of I-10 under US Highway 171 (US 171), the overpass would be reconstructed but the existing loop ramps would not be modified.

### 1.3 Initiation of the EIS

Initially, the Project started as an Environmental Assessment (EA) with the expectation that a Finding of No Significant Impact (FONSI) would be issued. In 2010, the FHWA and LADOTD agreed that the environmental review should be an Environmental Impact Statement (EIS) because of uncertainties related to the EDC contamination, the potential socioeconomic impacts from a change in bridge height, and the high level of public interest in the Project. The EIS process was initiated with publication of the Notice of Intent (NOI) on August 1, 2013.

### 1.4 Purpose and Need

The Purpose and Need statement for the Project was developed through coordination with agencies and key stakeholders. Details on the iterative process that resulted in the Purpose and Need statement is located in Appendix A of the DEIS and on the Project website's document library at <https://i10lakecharles.com/documentlibrary>.

The Project is needed because the geometric and structural design of I-10 between its logical termini at I-210 on the West End and I-210 on the East End and on the Calcasieu River Bridge do not meet current design guidelines for freeways, ramps, and frontage roads for this section of the Interstate Highway System. The age, condition, and structural issues of the existing bridge limit its useful life. The configuration of the interchange at Sampson Street and presence of at-grade railroad crossings do not adequately serve the existing and planned future traffic in Westlake. Bottlenecks at the bridge and at the Sampson Street interchange that already impact traffic and safety on the interstate are predicted to get worse in future. The number of crashes in the Project corridor surpassed statewide averages for crashes on multi-lane highways.

The purpose of the Project is to (a) address the lack of system continuity on I-10 and along Sampson Street; (b) reduce congestion and improve mobility on I-10 and along Sampson Street; (c) address structural and functional roadway and bridge deficiencies; and (d) address safety concerns on I-10 and the Calcasieu River Bridge.

The DEIS was published in October 2022, approved by LADOTD and FHWA on November 2, 2022, and noticed in the Federal Register on November 18, 2022. A public hearing was held on December 13, 2022, and the comment period on the DEIS remained open until January 3, 2023.

## 1.5 FAST Act Provisions

President Obama signed into law the Fixing America's Surface Transportation (FAST) Act (Public Law 114-94) on December 4, 2015, incorporating streamlining the requirements of environmental documents. Section 1304 of the FAST Act, Efficient Environmental Reviews for Project Decision Making, sets forth the changes to Title 23 U.S.C. Section 139 in Subsection (j), Accelerated Decision Making; Improving Transparency in Environmental Reviews, and amends 23 U.S.C. Section 139 by adding subsection (n), Accelerated Decision Making in Environmental Reviews. 23 U.S.C. 139(n) provides for the preparation of a FEIS by attaching errata sheets to the DEIS if certain conditions are met.

### 1.5.1 Final EIS Errata Sheet Approach

The Council on Environmental Quality (CEQ) regulations implementing NEPA allow the use of errata sheets attached to the DEIS in lieu of a traditional FEIS (40 CFR 1503.4(c)). The language in 23 U.S.C. 139(n)(1) and 49 U.S.C. 304a(a) parallels the CEQ regulations and addresses circulation and filing of a FEIS using errata sheets. Under these provisions, the use of errata sheets in lieu of rewriting the DEIS is appropriate when comments received on a DEIS are minor, and the Operating Administration's (OA) responses to those comments are limited to factual corrections or explanations of why the comments do not warrant further response. When applying this provision, the OA must make the errata sheets publicly available to the same extent as the DEIS and ensure continued availability of the DEIS.

### 1.5.2 Use of Errata

Comments received on the DEIS were minor. Responses to comments from the public (Appendix A of this FEIS) provide an explanation of why the comments do not warrant additional study under NEPA or any changes to the analysis of the DEIS. Changes to the DEIS made in the Response to Comments are reflected in the errata contained within this FEIS. Continued availability of the DEIS will be ensured. Some comments required clarifications, but no comments warranted further response in the form of additional alternatives.

The DEIS is currently available to the public at the following locations:

- Project website (<https://i10lakecharles.com>)
- LADOTD Environmental website ([http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Environmental](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Environmental))
- Three public libraries in Calcasieu Parish and the Louisiana State Library in Baton Rouge
- LADOTD District Office in Lake Charles

The DEIS Errata included in this FEIS will be available with the DEIS at the locations noted above. Information provided in the FEIS and errata sheets includes:

- Section 106 Final MOA (Appendix C)
- Section 4(f) Statements (Appendix C)
- Updated information on EDC Sampling
- Additional information on funding

- Summary of all public comments received and response to comments on the DEIS since the Notice of Availability (NOA) of the DEIS was published in the Federal Register (Appendix A)
- Letters from agencies with comments on the DEIS since the NOA of the DEIS was published in the Federal Register (Appendix B)
- Identification of coordination activities since the DEIS was made available (Section 3 of the FEIS)

## 2 IDENTIFICATION OF PREFERRED ALTERNATIVE

The section demonstrates why Alternative 5G was identified as the Preferred Alternative following the formal DEIS comment period.

Distribution of the DEIS to local, regional, state, federal agencies, interested and affected parties, as well as to the public along with email communications, newspaper and website notices, newspaper articles, and a public hearing, provided opportunities for review and comment on the DEIS and the identified Preferred Alternative.

Comment themes included Tolling/Opposition to tolls, concerns about funding, impacts on freight, traffic impacts, public-private partnership contracting, bridge design, impacts to navigation, basic design, a tunnel alternative, property impacts, EDC contamination, safety, pedestrian and bicycle facilities, re-use of the existing bridge, and impacts on low-income persons.

No comments received on the DEIS warranted modifying or reconsidering the selection of the preferred alternative or the alternatives analysis. Additionally, no comments identified new circumstances or provided new information relevant to environmental or safety concerns that would change the NEPA Preferred Alternative.

All public comments on the DEIS, including comments received during the Public Hearing Comment Period along with responses to those comments, are located in Appendix A of this FEIS. Letters from agencies with comments on the DEIS are located in Appendix B.

### 2.1 Alternatives Analysis

An alternatives analysis was conducted to ensure that the alternative selected to be built is the most practicable and least-damaging of all the solutions proposed and meets all current regulatory requirements. Public involvement and agency coordination was conducted throughout the alternatives analysis and continued through the public hearing. Documentation of public, agency, and stakeholder meetings held since 2013 is provided in Appendix C of the DEIS, and agency correspondence and other public/agency documents are included in Appendix G of the DEIS. The alternatives analysis can be found in Chapter 2 of the DEIS. It documents the decisions made that led to identification of Alternative 5G as the Preferred Alternative.

## 2.2 Alternatives Considered

After several stages of alternatives development and refinement were conducted, including a Feasibility Study, multiple bridge height and engineering studies, and public and agency coordination, a wide range of alternatives for the Project were proposed. In accordance with NEPA, these preliminary alternatives represented the full spectrum of solutions that would be explored and objectively evaluated for the Project. Conceptual in nature, the early alternatives considered non-structural solutions that could utilize existing infrastructure and address the Purpose and Need without building anything new. The first condition for any early alternative to be considered was that it met the Purpose and Need for the Project. Preliminary structural alternatives also had to be feasible; that is, they had to be constructible based on current design guidelines and best practices.

All reasonable Build Alternatives under consideration were further developed to the same level of detail in the DEIS so that their comparative merits could be evaluated (40 CFR 1502.14(b) and (d)) and to avoid any indication of bias towards a particular alternative. The reasonable Build Alternatives 3A, 3E, and 5G shown on **Figure 2** were also compared to the No-Build Alternative and analyzed to determine their associated impacts and benefits and how well they addressed concerns raised by the public and agencies. Technical analyses such as traffic noise were performed according to established policies and procedures. These analyses are contained within technical reports provided in the DEIS appendices and in the Project website's document library at <https://i10lakecharles.com/documentlibrary>.

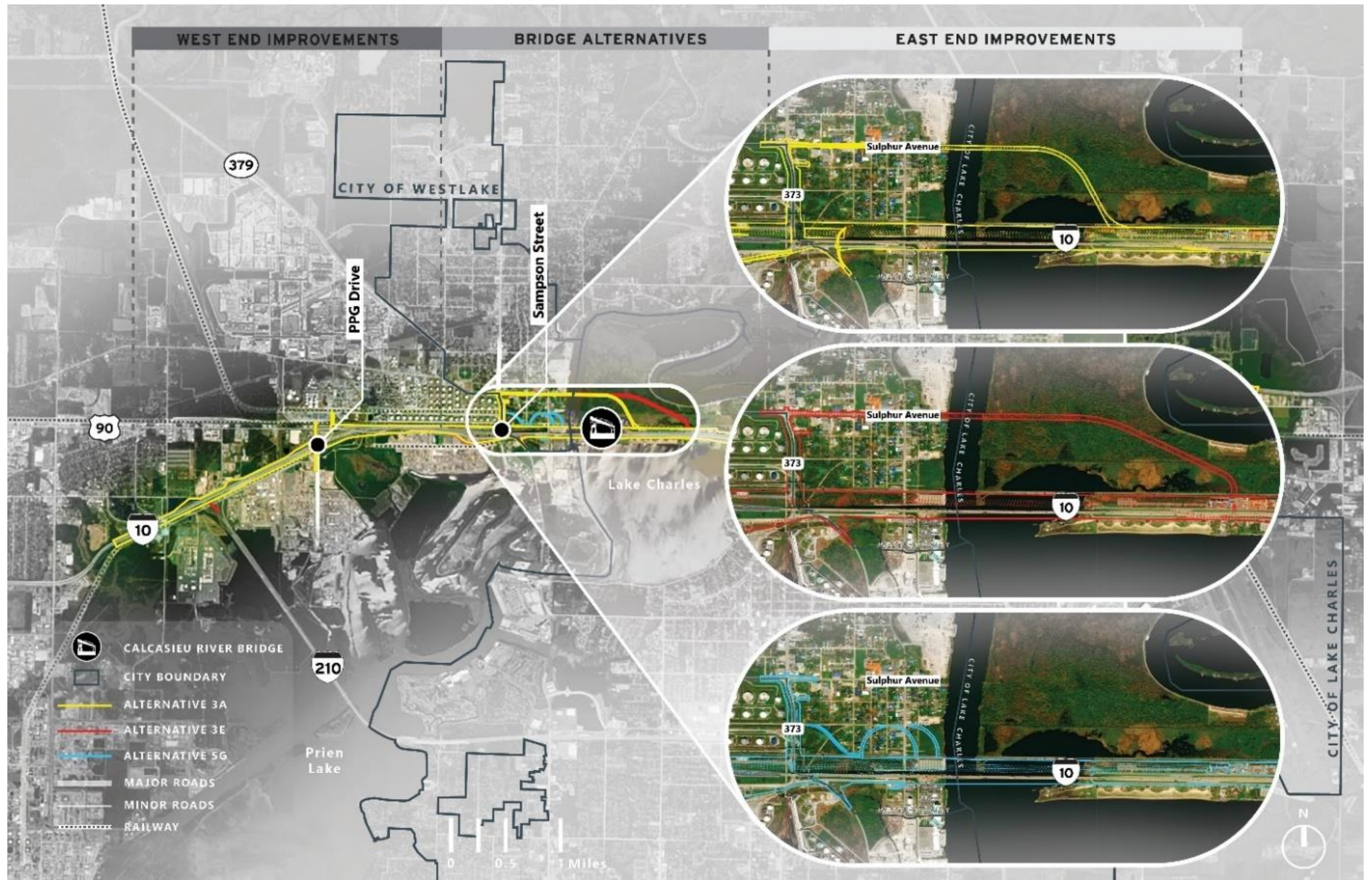


Figure FEIS-2 Comparison of Reasonable Alternatives

### 2.2.1 No-Build Alternative

The No-Build Alternative serves as the baseline to which the other alternatives are compared. The No-Build Alternative would maintain the highway in its existing configuration; however, “no build” in the case of the Project is not equivalent to “no action.” Short-term activities such as bridge inspections and repairs, resurfacing, and signal improvements will continue to be implemented. The effect of these ongoing activities is considered in the comparison of the No-Build Alternative with the other alternatives. The No-Build Alternative was also included in the analysis in recognition of the possibility that it might have been selected as the preferred alternative; however, the No-Build Alternative would not solve any of the problems identified in the Purpose and Need.

### 2.2.2 Alternative 3A

Build Alternative 3A, shown on **Figure 2**, conceptually consists of a bridge for the I-10 crossing of the Calcasieu River that would provide a minimum of two hundred feet of horizontal clearance at the channel. A long-span section would extend the bridge over the EDC area, touching down west of Sampson Street. The westbound off-ramp would curve under the new long-span bridge section and come to grade on Isle of Capri Boulevard near Mike Hooks Road. The other three ramps would remain at-grade and be improved in generally the same locations. The at-grade railroad crossings at Sampson Street would remain. An extension of Sulphur Avenue crossing the river north of the mainline with a movable bridge would be provided as an alternate route to avoid the railroad crossings. This extension would connect with I-10 east of the river. Two ramps, one as the I-10 eastbound entrance and one as the I-10 westbound exit, would be provided to create a partial interchange at North Lakeshore Drive.

### 2.2.3 Alternative 3E

Like Alternative 3A, Alternative 3E, shown on **Figure 2**, conceptually consists of a bridge for the I-10 crossing of the Calcasieu River that would provide a minimum of two hundred feet of horizontal clearance at the channel, a long-span bridge crossing over the EDC area of contamination, a westbound off-ramp to Isle of Capri Boulevard, improvements to the existing three at-grade ramps, and no change to the railroad crossings of Sampson Street. Alternative 3E would also extend Sulphur Avenue with a movable bridge and connect with I-10 east of the river. Alternative 3E would complete the interchange at North Lakeshore Drive with four ramps: an eastbound entrance, an eastbound exit, a westbound entrance, and a westbound exit.

### 2.2.4 Alternative 5G

Alternative 5G conceptually consists of a bridge for the I-10 crossing of the Calcasieu River that would provide a minimum of two hundred feet of horizontal clearance at the channel. At its western end, the bridge would be carried on a low-profile structure allowing I-10 to pass under Sampson Street. Technical solutions allowing for shallower foundations such as a retaining wall or short pilings were considered to reduce the risk of disturbing the EDC area. This design would allow a fully directional interchange at Sampson Street to be

elevated over I-10. Sampson Street would connect four ramps to the interstate and provide a grade separation for the railroad crossings. The lower profile of the western end of the I-10 Calcasieu River Bridge would block two railroad spurs at their convergence. The spurs would have to be relocated to the east to pass underneath the new bridge structure.

FHWA has been involved throughout the Project and development of the alternatives. The final technical design solution has yet to be prepared. FHWA will remain involved in the design review process and will further evaluate the detailed design solution.

Alternative 5G is the only alternative that includes relocation of the two railroad spurs. Kansas City Southern (KCS) and Union Pacific Railroad (UPRR) use these spurs, which converge into a single track, to connect to an industrial yard southwest of Sampson Street and the I-10 Service Road. As shown on **Figure 3**, the UPRR spur would be relocated east of its current location. This option is the only one considered for UPRR and would be paired with the other three KCS options. Three options were considered for relocation of the KCS spur. The first option was not favorable because its impacts included residential relocations and would cross riverfront land planned for redevelopment by the City of Westlake. Railroad Option 3 would require UPRR to grant KCS trackage rights on its main railroad line. Railroad Option 2 is the preferred option for relocation of the existing KCS spur. This option would allow KCS trains to move forward in an arc and approach the industrial yard by way of a track south of and parallel to the existing bridge. The parallel track is currently defunct and would have to be reconstructed.



Figure FEIS-3 Alternative 5G Rail Spur Relocation Options

## 2.3 Comparison of Transportation and Environmental Consequences

**Table 1** presents a detailed comparative analysis for each of the reasonable Build Alternatives. Alternative 5G includes impacts from Railroad Relocation Option 2, which was selected as the best option by KCS and the City of Westlake for relocating the existing railroad spurs as required by this alternative.

Table FEIS-1 Comparative Effects of the Alternatives Evaluated in the EIS

Resource / Issue	Criterion	No-Build Alternative	Alternative 3A	Alternative 3E	Alternative 5G	
Section 4(f)/6(f)	Number of Sites Impacted	0	3	3	3	
Cultural Resources (Section 106)	Number of Historic Sites Impacted	0	2	2	2	
	Number of Archeological Sites Impacted	0	1	1	1	
Habitat Impacts	Federally Protected T&E Species	None	None	None	None	
	Bald Eagle Nest	No Impact	Within 650 Feet	Within 10 Feet	No Impact	
	Red-Cockaded Woodpecker Preferred Habitat	No Impact	No Impact	No Impact	No Impact	
	West Indian Manatee Habitat	Existing Alignment	2 New Alignments	2 New Alignments	1 New Alignment	
	Woodlands	18.5	20.7	20.8	20.7	
	Essential Fish Habitat	No Impact	Impact	Impact	No Substantial Impact	
	Rookeries	Potential Habitat	Potential Habitat	Potential Habitat	No Impact	
Wetlands	Number of Acres Impacted	0	32.2	37.7	26.9	
Residential Neighborhood Impacts	Westlake between KCS (Pilley Street) and UPRR (Railroad Avenue)	No Change	No Change	No Change	No Change	
	Westlake Sulphur Avenue Sampson to River	No Change	Change Land Use to Commercial	Change Land Use to Commercial	No Change	
	Viaduct from Ryan to Opelousas	No Change	Close Local Streets	Close Local Streets	Close Local Streets	
Visual Effects	View by Lakefront Users	No Change	Roadway More Intrusive	Roadway More Intrusive	No Change	
	View of Westlake Gateway by Drivers	No Change	No Change	No Change	Elevated above Industrial Clutter	
Safety	Predicted Crashes 2042 (Entire Project)	Fatal & Injury	130	124	127	122
		Property Damage Only	268	256	272	263
		Total Crashes	398	380	399	385
	Predicted Crashes 2042 (I-10 Mainline)	Fatal & Injury	64	51	50	51
		Property Damage Only	135	111	109	113
		Total Crashes	199	162	159	164
	Potential for Back-of-Queue Crashes When Traffic Stopped At Moveable Bridge		No	Yes	Yes	No
	Number of At-Grade RR Crossing Sampson Street		2	2	2	0
	Number of At-Grade RR Crossing Isle of Capri Boulevard		1	1	1	2
Number of At-Grade RR Crossing Westlake Streets		7	7	7	5	
Cost Estimates	Construction (\$ Million 2021) Note: Due to current inflation rates, it is anticipated that these values will increase substantially by the end of 2022, but the relative costs among alternatives should not change.	0	\$1,174	\$1,256	\$991	
Phase I ESA	RECs Within, Adjacent, or < 1/4 mile from Project	9	9	9	9	
	HRECs Within, Adjacent, or < 1/4 mile from Project	8	9	9	9	
	CRECs Within, Adjacent, or < 1/4 mile from Project	9	10	10	10	
EDC	Level of Risk	Least Risk	Less Risk	Less Risk	Most Risk	

Least Impact or Most Benefit  
 Worst Impact or Least Benefit

Table FEIS-1 Comparative Effects of the Alternatives Evaluated in the EIS (continued)

Resource / Issue	Criterion	No-Build Alternative	Alternative 3A	Alternative 3E	Alternative 5G	
Relocations	Residential Relocations	0	21	21	21	
	Business Relocations	0	14	14	17	
	Total Number Relocations	0	35	35	38	
Right of Way	Additional Acres to be Acquired	0	75.14	80.14	68.3	
Traffic Noise Impacted Receivers (Receptors)	Residential (Category B)	226(234)	242(269)	241(268)	242(269)	
	Park, Church, Institution, and Other (Category C)	19(19)	18(18)	16(16)	14(14)	
	Hotels, Restaurants, Other Development (Category E)	3(3)	0(0)	0(0)	0(0)	
	Total Number of Impacted Receivers (Receptors)	248(256)	260(287)	257(284)	256(283)	
Navigation	Impact on Number of Known Operations from Change in Vertical Clearance Calcasieu River Bridge	0	2	2	2	
	Impact on Navigation from Second Moveable Bridge	0	1	1	0	
Traffic Operations	Number of Time Periods Delay Exceeds 55 seconds at one or more signals along Sampson St*	7	10	10	0	
	Number of Time Periods Delay Exceeds 80 seconds at one or more signals along Sampson St*	2	2	2	0	
	Trips between Sulphur Avenue and I-10 that experience random disruptions from trains blocking Sampson Street?	Yes	Yes	Yes	No	
	Locations where queues potentially affect I-10 mainline	I-10 EB off-ramp to I-10 South Service Road	Yes	No	No	No
		I-10 EB off-ramp to PPG Drive	Yes	No	No	No
		I-10 WB off-ramp to Sampson Street**	Yes	No	No	No
	Number of hours that speed on I-10 Calcasieu River Bridge is < 50 mph	Eastbound AM Peak	0.5	0	0	0
		Eastbound PM Peak	4.0	1.25	1.25	0.75
		Westbound AM Peak	2.0	0	0	0
		Westbound PM Peak	3.0	0.5	0.5	0.51
Number of I-10 Segments where demand-capacity ratio > 1 for at least one time period	Eastbound AM Peak	1	0	0	0	
	Eastbound PM Peak	7	0	0	0	
	Westbound AM Peak	6	2	2	0	
	Eastbound PM Peak	3	1	1	1	
Tolling	Traffic Diverted to I-210 in 2042 (Toll vs No Toll)	NC	+18-44%	+18-44%	+17-42%	
	Toll Revenue	No Revenue	Highest Revenue	Higher Revenue	Lowest Revenue	
Bicycle Pedestrian Network	Connection Across Calcasieu River	No	Yes	Yes	No	
	Implementation of Lake Charles Bike/Ped Plan Viaduct Ryan to Opelousas	No	Yes	Yes	Yes	
Low-Income Populations	Impacts from Local Street Closures	No	Yes	Yes	Yes	
	Impacts from Air Quality	No	No	No	No	
	Impacts from Traffic Noise	Yes	Yes	Yes	Yes	
	Impacts from Proposed Tolls	No	Yes	Yes	Yes	
Minority Populations	Impacts from Local Street Closures	No	Yes	Yes	Yes	
	Impacts from Air Quality	No	No	No	No	
	Impacts from Traffic Noise	Yes	Yes	Yes	Yes	
	Impacts from Proposed Tolls	No	Yes	Yes	Yes	

Least Impact or Most Benefit

Worst Impact or Least Benefit

## 2.4 Preferred Alternative

Alternative 5G would cause the least harm to natural resources by impacting the fewest acres of wetlands and would have no effect on a known bald eagle nest. It would elevate Sampson Street, eliminating the at-grade railroad crossing. It would also provide an opportunity for a gateway to Westlake without visual clutter in the background. Unlike Alternative 3A and Alternative 3E, there would be no change to land use along Sulphur Avenue and no additional movable bridge that would cause disruptions to waterway and roadway traffic, thus increasing the possibility for crashes.

Alternative 5G would minimize right of way (ROW) acquisition, impact the fewest noise receptors, and be the least costly to build. Potential residential relocations would be the same for Alternative 3A, Alternative 3E, and Alternative 5G. Selection of Railroad Relocation Option 2 would increase the difference in business displacements by four for Alternative 5G compared to the other two alternatives.

Detailed plan and profile drawings of the three reasonable Build Alternatives evaluated in the EIS are provided in Appendix H of the DEIS and online at [www.i10lakecharles.com](http://www.i10lakecharles.com).

Alternative 5G (**Figure 4**) has been identified as the Preferred Alternative based on evaluation of the estimated capital costs, potentially affected environmental resources, and public input.

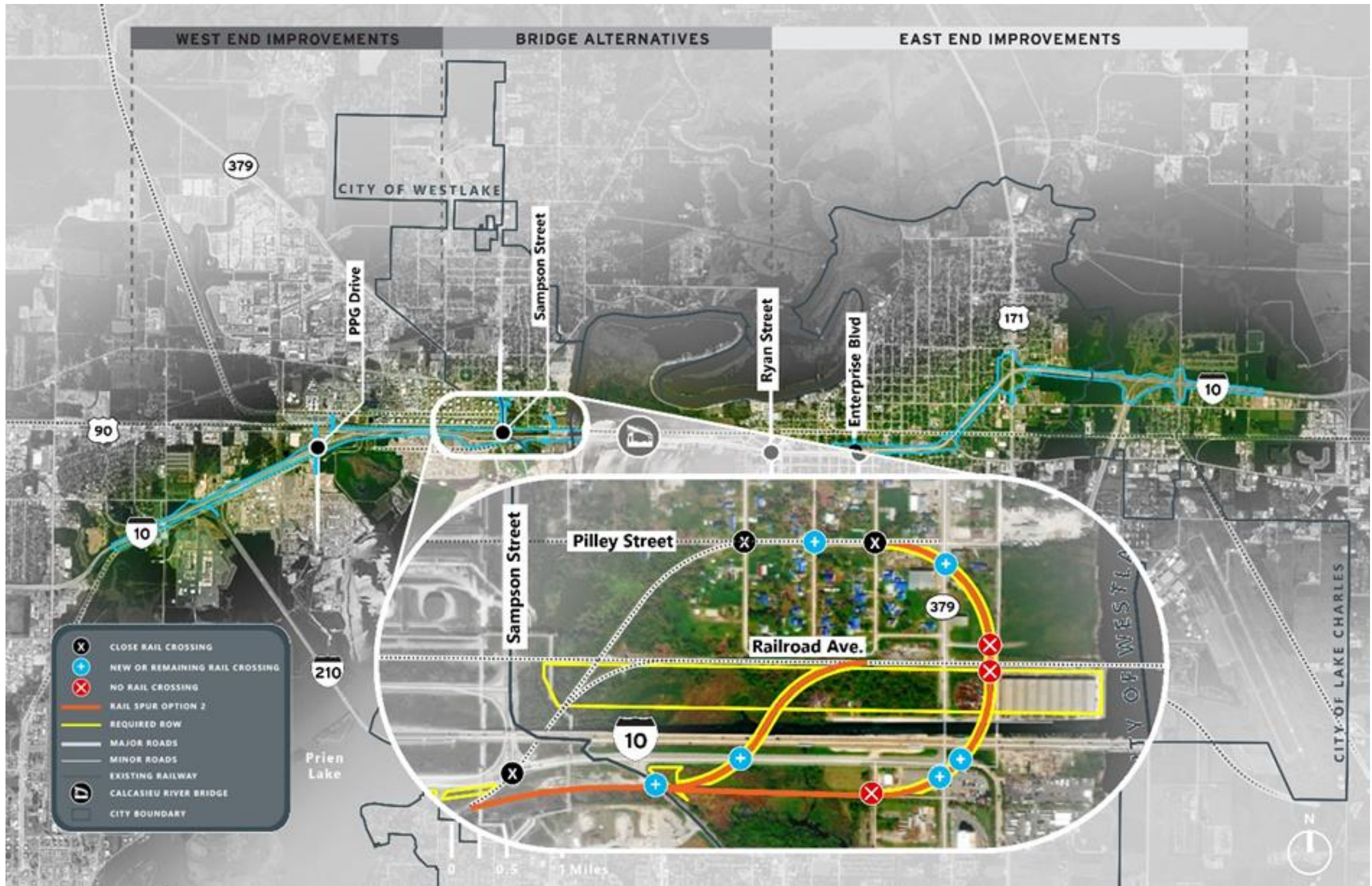


Figure FEIS-4 Preferred Alternative, Alternative 5G

## 2.5 Public-Private Partnership (P3)

Construction of the Project will be phased. Phase 1 from I-10/I-210 West End to Ryan Street will cost approximately \$1.5 billion to construct. Pursuit of a Public-Private Partnership (P3) agreement was initiated in January 2021 to attract private funds to build this phase. A financial feasibility study that looked at a 50-year concession period and toll rates of \$1 to \$3 determined that private financing could provide from 30 to 70 percent of the capital costs needed to design, construct, and operate the Project for the concession period. Currently, the State of Louisiana has committed \$800 million to the Project, which includes a recent federal discretionary grant award of \$150 million. Based on these numbers, the P3 will have to fund approximately \$700 million to complete the design and construct the Project. Tolls collected will cover these P3 costs plus a 50-year period of operations and maintenance and pay the partners a return on their investment. An additional \$140 million has been committed from the Louisiana State General Fund and the Highway Priority Program for ROW and other pre-construction costs. Tolling is a major concern of local stakeholders. Commenters expressed concern about the cost of the toll and about the effect on I-210 traffic from drivers who would divert from I-10 to avoid paying the toll. Without tolls, this project would not be financially feasible. LADOTD has been authorized by the legislature to move forward with a P3 for the first phase. The state will be responsible for the balance of the project from Ryan Street to I-10/I-210 East End.

## 3 PUBLIC OUTREACH SINCE DISTRIBUTION OF THE DEIS

### 3.1 Notice of Availability (NOA)

The NOA for the DEIS was published November 18, 2022, in the Federal Register. The NOA informed interested parties that the DEIS for the Project was available for public review, announced a public hearing to encourage public participation, and invited comments for a 45-day period public comment period lasting through January 3, 2023. Following publication of the NOA, the DEIS was made available in public libraries, at local agencies, and at administrative offices as well as on the Project website and LADOTD website. A summary of these locations and the list of agencies receiving the DEIS for review can be found in Chapter 5 of the DEIS.

### 3.2 Public Hearing and DEIS Distribution

A public hearing was held December 13, 2022, at the Pryce/Miller Recreation Center on Albert Street in Lake Charles, Louisiana. The public involvement process for a DEIS requires that the agency make the document available to the public at least fifteen (15) days in advance of the public hearing. The NOA was published in the Federal Register twenty-five (25) days in advance of the public hearing.

The public was invited to view exhibits, review the DEIS, and speak with the Project Team from 5:00-6:30 pm at the public hearing. The public hearing was attended by 94 individuals, not including LADOTD, FHWA, and Consultant staff. Public hearing participants represented a wide range of interests and included members of the public, members of community organizations, elected officials, and agencies. Due to the large number of participants, a video presentation explaining the Project was offered twice for viewing. The public was then invited to provide

comments in a moderated and recorded forum from 6:30-7:00. The purpose of the public hearing was to obtain public comments regarding the Project. The public hearing comment period was open for 10 days concluding on December 23, 2022. Comments received at the hearing and the 10-day period are listed in the public hearing transcript. Copies of the public hearing transcript has been distributed to the parties listed in the DEIS Distribution List (Appendix D of this FEIS) and has been made available to the public on the Project website at [www.i10lakecharles.com](http://www.i10lakecharles.com). Responses to comments in the public hearing transcript are included in Appendix A of this FEIS.

Distribution of the DEIS included hard copies for public libraries, agencies, and local officials and/or electronic copies via email. Copies were provided by email upon request, and LADOTD distributed copies to tribal representatives.

### 3.3 DEIS and Public Hearing Comments

Written comments relative to the public hearing were accepted during the public hearing and for ten (10) days following the public hearing, concluding on December 23, 2022. The public comment period on the DEIS lasted for 45 days after publication of the NOA and ended January 3, 2023.

Comment themes included Tolling/Opposition to tolls, concerns about funding, impacts on freight, traffic impacts, public-private partnership contracting, bridge design, impacts to navigation, basic design, a tunnel alternative, property impacts, EDC contamination, safety, pedestrian and bicycle facilities, re-use of existing bridge, and impacts on low-income persons. All comments received are summarized and responses are provided in Appendix A of this FEIS.

Five agencies: the FRA, NOAA's National Marine Fisheries Service (NMFS), the USACE New Orleans District Regulatory Division (CEMVN), Louisiana Department of Wildlife and Fisheries (LDWF), and the Department of the Interior (DOI), provided letters commenting on the DEIS during the 45-day comment period. A letter with comments from the USCG dated January 12, 2023, was also received. These comments are listed and duly noted in **Table 2** below. Letters from these agencies are provided in Appendix B of this FEIS.

Table FEIS-2 Comments from Agencies

<b>Agency/Role in NEPA</b>	<b>Comment(s)</b>
<p>Federal Railroad Administration (FRA) / Cooperating Agency</p>	<ul style="list-style-type: none"> <li>• FRA supports the preferred alternative 5G which would eliminate two at-grade crossings on Sampson Street. FRA encourages DOTD and FHWA to continue coordination with members of the public and railroad operators to ensure the selected alternative will provide optimal benefit to all impacted.</li> </ul>
<p>NOAA's National Marine Fisheries Service (NMFS) / Participating Agency</p>	<ul style="list-style-type: none"> <li>• The NMFS agrees with the federally managed fishery species and habitats identified in the EFH Assessment. The NMFS does not support Alternatives 3A and 3E. These alternatives would impact tidal marsh and further fragment EFH in the area. The NMFS recommended Alternative 5G, which was ultimately selected as the preferred alternative. Alternative 5G would impact 7.9 acres of wetlands by excavation and 11.9 acres of estuarine water bottoms and estuarine water column by shading. Of the 7.9 acres of wetland impacts, only the fringing marsh adjacent to the Calcasieu River is EFH and totals approximately 0.3-acre. The preferred alternative demonstrates substantial avoidance and minimization of impacts to EFH and wetlands. Wetland impacts will be mitigated at a federally approved mitigation bank. The preferred alternative will not have substantial adverse impacts to EFH or federally managed fishery species. As such, we have no additional comments to provide. The NMFS appreciates your efforts to avoid and minimize wetland and EFH impacts. This concludes the EFH consultation requirements pursuant to the Magnuson-Stevens Act for this activity.</li> </ul>
<p>United States Coast Guard, Eighth Coast Guard District/Cooperating Agency</p>	<ul style="list-style-type: none"> <li>• You have proposed to build a bridge with a 73' vertical clearance and you have identified two companies that could be impacted by reducing the bridges [sic] vertical clearance from 135' (current bridge) to 73' (proposed bridge): Friend Ships and Louisiana Scrap Metal. We cannot approve this clearance reduction because it will not allow these two companies with a reasonable ability to use the Calcasieu River.</li> <li>• You have also proposed that if the bridge were built with a 73' vertical clearance, then you would compensate Friend Ships and Louisiana Scrap Metal for lost revenue and/or vessel berths. We could accept reducing the vertical clearance if both companies were to accept LADOTD compensation. We would not need to know the terms of the compensation but would require signed documents from LADOTD, Friend Ships and Louisiana Scrap Metal attesting to and agreeing to the terms of the compensation.</li> <li>• Our comments are not an approval or a preliminary navigation determination . . . If activities, assumptions or conditions identified in Appendix P change, then our comments on navigation could also change.</li> </ul>

<b>Agency/Role in NEPA</b>	<b>Comment(s)</b>
<p>Department of Interior (DOI)</p>	<ul style="list-style-type: none"> <li>• The Department of the Interior (Department) has reviewed the 1-10 Lake Charles Calcasieu River Bridge Project DEIS and Section 4(f) evaluation. We understand the purpose of the project is to address the lack of system continuity on 1-10; reduce congestion and improve mobility on 1-10 and along Sampson Street; address structural and functional roadway and bridge deficiencies; and address safety concerns on 1-10 and the Calcasieu River Bridge. The Project alternatives analyzed in the DEIS consist of the No Build Alternative and three Build Alternatives. Alternative 5G, which proposes an elevated interchange at Sampson Street in Westlake, is recommended as the Preferred Alternative.</li> <li>• The DEIS and Section 4(f) evaluation contains a great deal of valuable information concerning both human and natural resources as well as issues related to the proposed improvements to the 1-10 Lake Charles Calcasieu River Bridge between the 1-10/1-210 west and 1-10/1-210 east interchanges in Calcasieu Parish, Louisiana.</li> <li>• We welcome this opportunity to cooperate with the Federal Highway Administration (FHWA) and the Louisiana Department of Transportation and Development (LADOTD) and offer the following comments for your consideration.</li> <li>• National Park Service (NPS) Section 4(f) comments</li> <li>• The DEIS and the Section 4(f) evaluation describes a range of avoidance alternatives, the affected Section 4(f) resources, and discloses potential project impacts to those resources.</li> <li>• The Lake Charles National Register Historic District (NRHD) and ten individual properties listed on the National Register of Historic Places (NRHP) were identified as being in the area of potential effect (APE) during Section 106 consultation. The NRHP properties are the Sacred Heart Church and School complex, Watchmen House, Southern Pacific Railroad Bridge, I-10 Calcasieu Bridge, US 90 Bridge over I-10, Pioneer Building, Sacred Heart of Jesus/Saint Katharine Drexel School, Collette House, Sunset Hotel, and the Reeves Temple C.M.E. Church and Cemetery.</li> <li>• LADOTD has determined the proposed action results in a finding of adverse effect for the I-10 Calcasieu Bridge, US 90 Overpass over I-10, and the Norris Point Archaeological Site (16CU128). The DEIS and Section 4(f) evaluation discusses an ongoing coordination effort with the Louisiana Office of Cultural Development, Division of Historic Preservation (SHPO) in compliance with Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108), as amended, and codified in its implementing regulations, 36 CFR §800, as amended (August 5, 2004). The SHPO concurred with LADOTD's findings on October 5, 2021. A draft Memorandum of Agreement (MOA) has been prepared pending final approval by the SHPO and the Advisory Council on Historic Preservation.</li> </ul>



### 3.4 Additional Outreach to Environmental Justice Communities

Targeted outreach to members of environmental justice (EJ) communities who are affected by the Project is currently being conducted to solicit input and consider their needs regarding Project impacts and mitigation, specifically those deemed as having Disproportionately High and Adverse Effects (DHAE) on EJ communities. A summary of the materials presented, and the feedback obtained through this additional outreach, will be included as part of the ROD.

## 4 DEIS ERRATA SHEETS

The Project DEIS errata sheets document the revisions that have been made to the DEIS issued November 2, 2022, that are now reflected in the FEIS.

1. The List of Acronyms section has been updated to include TMP, Transportation Management Plan.
2. Item 4—Public Involvement section of the Environmental Checklist updated to include the date of the Public Hearing as December 13, 2022
3. The Permits, Mitigation, and Commitments Table has been updated.

A Commitment to “USGS Streamgage and Well” has been added and is listed below.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Commitment / USGS Streamgage and well	LADOTD / Commitment	The USGS Lower Mississippi-Gulf Water Science Center will be contacted and given sufficient advance notice before construction begins near USGS Site number 807044, Calcasieu River at I-10 at Lake Charles, LA, USGS streamgage to note the gap in accurate data during construction and prior to relocation of the streamgage. Efforts will be made to preserve USGS Site number 301435093154601, USGS Site Cu-1021 Well.”

The “Due Diligence / Hazardous Waste Sites and Risks to Human Health and the Environment” has been revised as listed below.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Due Diligence / Hazardous Waste Sites and Risks to Human Health and the Environment	LDEQ and USEPA / Resource Conservation and Recovery Act, Comprehensive Environmental Response Compensation and Liability Act, and LAC Title 33, V. Subpart 1.	Groundwater monitoring in vicinity of EDC and related contaminant releases (by responsible parties); minimization of ground and groundwater disturbances from construction activities including minimizing foundation footprint within the EDC plume; soil and groundwater sampling during all ground disturbing activities. Preparation of Safety and Protection Plan and worker training for disturbing activities; provide Personnel Protective Equipment (PPE); further evaluation for ROW / property acquisitions as needed.

A commitment for “continued coordination with members of the public and railroad operators to ensure the selected Rail Spur Relocation Option 2 will provide optimal benefit to all impacted” has been added as shown in the table to follow.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Commitment / Rail Spur Relocation	FRA	LADOTD and FHWA will continue coordination with members of the public and railroad operators to ensure that rail spur relocation option 2 will provide optimal benefit to all impacted.

The item for Compliance / Floodplain Encroachment has been revised as listed below.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Compliance / Floodplain Encroachment	LADOTD / FHWA, FEMA, and State and Local Floodplain Managers / 23 CFR 650, Subpart A	Studies conducted prior to final design to determine any water surface elevation impacts of placing fill within the floodplain and final design plans will incorporate measures to avoid or minimize impacts on the floodplain

An item for Environmental Justice mitigation of traffic noise has been added.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Mitigation /Environmental Justice (EJ) - Traffic Noise	FHWA and LADOTD / 23 CFR part 772	LADOTD proposes to modify the cost effectiveness criterion of the LADOTD Highway Traffic Noise Policy for project-specific EJ mitigation; the cost per benefited receptor of \$47,000 will be doubled to \$94,000; thus, increasing the number of reasonable and feasible noise walls by three (3) per the traffic noise analysis conducted for the Project, provided in Appendix K of the DEIS and located online at <a href="http://i10lakecharles.com/documentlibrary">i10lakecharles.com/documentlibrary</a> ; LADOTD will present this mitigation to members of EJ communities directly impacted by the Project

A commitment item for Environmental Justice outreach has been added.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Commitment / Environmental Justice (EJ) Outreach	LADOTD	LADOTD will conduct targeted community outreach to EJ Communities along the Project corridor, contacting businesses, residents, and property owners directly affected by the Project to solicit input and consider their needs regarding impacts and mitigation of disproportionately high and adverse effects from right of way acquisition, displacements, traffic noise, aesthetics, landscaping, and Context Sensitive Solutions and Design elements. In addition to prescribed measures, mitigation such as advanced acquisition and relocation services as well as consideration of maintaining proximity to services and family will be offered.

A commitment item for Environmental Justice displacements and right of way acquisition has been added.

ITEM / RESOURCE	AGENCY / AUTHORITY	MITIGATION / COMMITMENT
Commitment / Environmental Justice (EJ) - Displacements and Right of Way Acquisition	LADOTD	As mitigation for the DHAEs from right of way acquisition, LADOTD will offer advanced or early acquisition to property owners. When advanced acquisition is offered to property owners, LADOTD will also offer relocation benefits prior to actual acquisition. Section 2.8 of the <a href="#">LADOTD Real Estate Operations Manual (2018)</a> and the <a href="#">LPA Right of Way Manual (2017)</a> describe the process and authorizations for early or advance acquisition of property for right of way.

4. The Draft EIS Summary “What is Being Proposed and Why?” section has been updated for clarification. The last sentence of paragraph 3 has been revised to read “The segment of LA 378 (Sampson Street) from I-10 to Sulphur Avenue would be improved along with several access ramps, PPG Drive, and the interchange at Sampson Street.”
5. The Draft EIS Summary “What is Being Proposed and Why?” section has been updated. The last sentence of that section has been revised to address a comment regarding safety: “The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals. This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety and independently justify the proposed Project. However, a comparative safety analysis indicates that the preferred alternative will meet current design standards for safety.”
6. The Draft EIS Summary “What are the Possible Solutions (Alternatives) to Meet the Project Purpose?” section has been updated. The sentence in paragraph 6 on page S-4 that states “These build alternatives include all improvements needed to meet the Purpose and Need of the Project” has been removed.
7. The Draft EIS Summary “What are the Significant Environmental Impacts and What are People’s Concerns with the Project” section has been updated. The statement “The project alternatives would not meet the last purpose goal d) safety concerns” has been removed and replaced with “The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals.

This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety and independently justify the proposed Project. However, a comparative safety analysis indicates that the preferred alternative will meet current design standards for safety."

8. The Draft EIS Summary "What are the Significant Environmental Impacts and What are People's Concerns with the Project" section has been updated. The last sentence of the first paragraph on page S-6 has been revised to read "A Final Memorandum of Agreement (MOA) for the Norris Point Archaeological site has been signed." The Draft MOA included in Appendix E of the DEIS has been updated to the Final MOA. The Final MOA is included in this FEIS as Appendix C.
9. The Draft EIS Summary "What are the Significant Environmental Impacts and What are People's Concerns with the Project" has been updated. The fourth paragraph on page S-6 has been updated to "Construction of the Project will be phased. Phase 1 from I-10/I-210 West End to Ryan Street will cost approximately \$1.5 billion to construct. Pursuit of a Public-Private Partnership (P3) agreement was initiated in January 2021 to attract private funds to build this phase. A financial feasibility study that looked at a 50-year concession period and toll rates of \$1 to \$3 determined that private financing could provide from 30 to 70 percent of the capital costs needed to design, construct, and operate the Project for the concession period. Currently, the State of Louisiana has committed \$800 million to the Project, which includes a recent federal discretionary grant award of \$150 million. Based on these numbers, the P3 will have to fund approximately \$700 million to complete the design and construct the Project. The tolls collected will cover these P3 costs plus a 50-year period of operations and maintenance, and pay the partners a return on their investment. An additional \$140 million has been committed from the State General Fund and the Highway Priority Program for right of way and other pre-construction costs."
10. Chapter 1, Section 1.1.5 has been updated. The last sentence of the paragraph has been revised to "The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals. This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety and independently justify the proposed Project. However, a comparative safety analysis indicates that the preferred alternative will meet current design standards for safety."

11. Chapter 1, Section 1.7 Project Funding, has been updated. Paragraph 4 has been revised as follows: "Phase 1 from I-10/I-210 West End to Ryan Street will cost approximately \$1.5 billion to construct. Pursuit of a Public-Private Partnership (P3) agreement was initiated in January 2021 to attract private funds to build this phase. A financial feasibility study that looked at a 50-year concession period and toll rates of \$1 to \$3 determined that private financing could provide from 30 to 70 percent of the capital costs needed to design, construct, and operate the Project for the concession period. Currently, the State of Louisiana has committed \$800 million to the Project, which includes a recent federal discretionary grant award of \$150 million. Based on these numbers, the P3 will have to fund approximately \$700 million to complete the design and construct the Project. The tolls collected will cover these P3 costs plus a 50-year period of operations and maintenance, and pay the partners a return on their investment. An additional \$140 million has been committed from the State General Fund and the Highway Priority Program for right of way and other pre-construction costs."
12. Table 2 "Comparative Effects of the Alternatives Evaluated in the DEIS" located in Section 2.3.5 of the DEIS has been revised. Habitat Impacts/West Indian Manatee Habitat- "No-Build Alternative - Existing Alignment (shaded green); Alternative 3A and Alternative 3E "2 New Alignments (shaded red); Alternative 5G "1 New Alignment" (shaded white.) And for "Safety/Number of at-grade RR crossing Westlake Streets," "Alternative 5G" has been changed to green.
13. Chapter 2, Section 2.4.1 has been updated under the subsection titled "HOW THE BUILD ALTERNATIVES ADDRESS THE PURPOSE AND NEED." The paragraph after the lettered list has been revised as "The effect on (a) system continuity and (c) structural and functional deficiencies would be the same for all three alternatives. The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals. This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety and independently justify the proposed Project. However, a comparative safety analysis indicates that the preferred alternative will meet current design standards for safety." And the last paragraph under "HOW THE BUILD ALTERNATIVES ADDRESS THE PURPOSE AND NEED" has been deleted.
14. Chapter 2, Section 2.4.1 has been updated. The last sentence which is the 7th paragraph of the subsection "TRAFFIC OPERATIONS AND SAFETY PERFORMANCE COMPARED" has been deleted.
15. Chapter 3, Section 3.3 has been updated. A paragraph has been added as the first paragraph of the section: "Executive Order 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," mandates

that federal agencies identify and address, as appropriate, the disproportionately high and adverse human health or environmental effects (including social and economic effects) of their programs on minority and low-income populations. The US Department of Transportation (USDOT) Environmental Justice Order 5610.2(c) is an update to Order 5610.2(a) which sets forth the policy to consider environmental justice (EJ) principles in all USDOT programs, policies, and activities. Federal Highway Administration (FHWA) Order 6640.23A — FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, as well as FHWA Guidance on Environmental Justice and National Environmental Policy Act (NEPA) Memorandum dated December 15, 2011, supplements the existing guidance on compliance with the principles of EJ.” The paragraph that follows is revised to read, “Social characteristics of the project area were considered to determine how alternatives might benefit or adversely affect minority and low-income populations we in accordance with Executive Order 12898.”

The following has been added to the end of Section 3.3: “Details of the EJ analysis have been compiled into an Environmental Justice Technical Memorandum, Appendix D. Based on the EJ analysis using the methodology outlined in federal guidance in accordance with the provisions of Executive Order 12898, U.S. Department of Transportation Environmental Justice Order 5610.2(c), and FHWA Order 6640.23A, along with the data and public input collected to date, it has been determined that the I-10 Calcasieu Bridge Improvements Project will cause DHAEs on EJ communities. Disproportionately high and adverse effects (DHAe) on minority and low-income populations is defined as adverse effects that:

- are predominantly borne by a minority population and/or a low-income population; or
- will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

A summary of each social impact is included in the subsections to follow.”

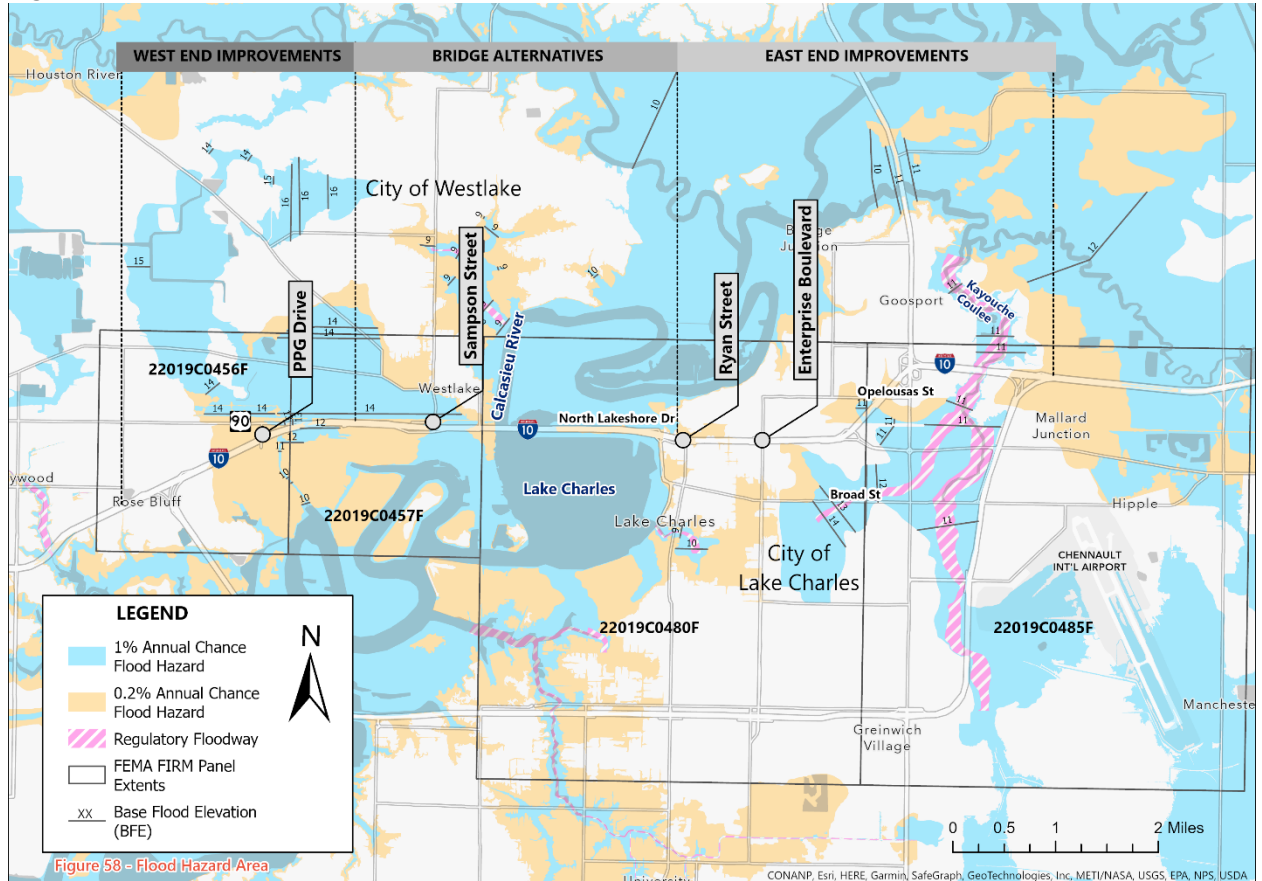
16. Chapter 3, Section 3.3.2 Impacts and Benefits to Social Groups, Environmental Justice – Displacements has been updated. The first sentence in the second to last paragraph of that subsection has been revised to read, “Potential impacts to an EJ community between Pilley Street, Railroad Avenue, Hilma Street, and the riverfront were evaluated because the relocation of two railroad spurs needed for Alternative 5G could cause disproportionately high takings of residential and commercial properties.” The last paragraph of that subsection has been revised to “The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601 et seq. (Uniform Relocation Act) is the federal law for relocation of displacements. Louisiana has more generous compensation requirements than Federal regulations and laws for mitigation of displacement impacts. Replacement housing of last resort will be provided if comparable replacement dwellings are not available within the monetary limits for

owners or tenants, as specified in 49 CFR Sec. 24.401 or Sec. 24.402, as appropriate. Louisiana Constitution Article 1, §4 states Louisiana's requirement for just compensation: "Property shall not be taken or damaged by the state ... except for public purposes and with just compensation paid to the owner or into court for his benefit." "In every expropriation or action to take property pursuant to the provisions of this Section, ... the owner shall be compensated to the full extent of his loss. Except as otherwise provided in this Constitution, the full extent of law shall include, but not be limited to, the appraised value of the property and all costs of relocation, inconvenience, and any other damages actually incurred by the owner." LADOTD Acquisition of Property and Relocation Assistance policy can be viewed in the document library at [www.i10lakecharles.com](http://www.i10lakecharles.com). More information is provided in Section 3.4 of this EIS."

17. Mitigation for displacement impacts is provided in federal law through the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. 4601 et seq. (Uniform Relocation Act). The LADOTD Acquisition of Property and Relocation Assistance policy can be viewed in the document library at [www.i10lakecharles.com](http://www.i10lakecharles.com). More information is provided in Section 3.4 of this EIS.
18. Chapter 3, Section 3.5.1 Transportation and Trade, has been updated. The fourth paragraph, beginning with the third sentence, has been updated to "Temporary closure of the I-10 WB/Sampson Street ramps will be necessary to accommodate the pipe rack relocation. These closures are anticipated to last approximately six months and will most likely be in addition to the extended Sampson Street closure of approximately 18 months. Closures of other roadways in the vicinity of the pipe racks will be limited in duration (e.g., nights, weekends). Traffic will be detoured in accordance with the Transportation Management Plan (TMP) developed for the work. Where appropriate, temporary improvements to facilitate maintenance and safety of traffic along the detour routes will be identified in the TMP and implemented prior to the associated closures. This will create long detours to reach the Westlake Terminal."
19. Chapter 3, Section 3.6.1 has been updated. The following sentences were added to the third paragraph of the section has been updated to read "Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents" from October 18, 2016. Updated guidance was issued January 18, 2023. The quantitative MSAT analysis included in the Air Quality Technical Report was conducted based on the latest MSAT guidance available at the time (October 18, 2016). The latest version of MOVES available at that time (MOVES3.0) was used for the analysis. However, MOVES background information and FHWA projected national emission trends were not available for MOVES3.0 from FHWA. Therefore, then current prototype language, which referenced MOVES2014b, was used."
20. Chapter 3, Section 3.8.4 Sole Source Aquifer has been revised. A sentence was added to the end of the second to last paragraph, "Hazardous waste sites including the EDC spill south of Sampson Street have been documented in the proposed Project area (see Section 3.12 Hazardous Waste Sites). Subsurface activities such as pile driving and

excavation for construction of the I-10 Calcasieu River Bridge and Improvements Project have the potential to puncture the confining clay layer creating a point of recharge that might introduce contaminants into the aquifer. Technical solutions allowing for shallower foundations such as a retaining wall or short pilings were considered to reduce the possibility of downward migration of the EDC.”

21. Figure 58, Flood Hazard Area, has been revised.



22. Chapter 3, Section 3.8.6 Floodplain Impacts has been revised as follows:

Data from Flood Insurance Rate Maps (FIRMs) of the community on which the Federal Emergency Management Agency (FEMA) has delineated the Special Flood Hazard Areas (SFHAs) (areas that will be inundated by the flood event having a 1-percent hazard of being equaled or exceeded in any given year), the Base Flood Elevations (BFEs) (elevations at which a flood has a 1% chance of being either equaled or exceeded in a given area in a given year), and the risk premium zones within the project area has been compiled and shown on **Figure 58**. The project corridor is comprised of two types of Special Flood Hazard Areas (SFHA): the SFHA with a 0.2 percent chance of flooding, also known as the 500-year floodplain (Zone X) and the SFHA with a one (1) percent annual chance of flooding, also known as the 100-year floodplain (Zone A). The “E” added to Zone A signifies that the Base Flood Elevation (BFE)—the elevation of surface water resulting from a flood that has a one-percent chance of equaling or exceeding that level

in any given year—has been determined. According to 23 CFR §650.105, the base flood means the flood or tide having a one-percent chance of being exceeded in any given year, or the SFHA Zone A identified on **Figure 58**.

In compliance with 23 CFR §650.115(a), current effective FEMA NFIP maps, dated February 18, 2011, were reviewed and determined that portions of the project are within the base floodplain. Each proposed project alternative was evaluated for encroachment. Longitudinal encroachment, that is, actions in the base floodplain, includes encroachment from some portions of the existing I-10 alignment and would include similar longitudinal encroachment from all project alternatives. As mentioned at the beginning of Chapter 3, the affected environment, and environmental consequences relative to the improved project corridor are analyzed in three different sections: West End Improvements (West End), Bridge Alternatives (where the proposed I-10 Calcasieu River Bridge is located), and East End Improvements (East End). Proposed actions in the West End and East End sections are common to all three build alternatives as described in Section 2.3.5. The Bridge Alternatives section is where the alternatives differ in terms of alignments, bridge crossings, and interchange configurations (**Figure 58a** and **Figure 58b**).

It should be noted per 23 CFR §650.115(b), the current I-10 alignment has portions that are longitudinal encroachments on the floodplain. Every alternative would continue to operate on this longitudinal encroachment. Attempting avoidance is not practicable for these locations.

Encroachments exist upon the floodplain at the US 90 Bridge over I-10 on the West End of the project corridor (**Figure 58a**) and upon the floodplain on the East End where the Kayouche Coulee crosses under I-10 (**Figure 58c**). This waterway is identified by FEMA as a regulatory floodway, which is defined in 23 CFR §650.105 as a floodplain area that is reserved in an open manner, i.e., unconfined or unobstructed either horizontally or vertically, in order to provide for the discharge of the base flood so that the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as established FEMA) for administering the NFIP.

Unlike Alternative 5G, Alternative 3A and Alternative 3E propose a second bridge crossing of the Calcasieu River that would encroach upon the base floodplain from Sulphur Avenue on the west bank (**Figure 58a**) to a new connection to I-10 south of the UPRR. The proposed second crossing would encroach on an additional four acres of base floodplain. Therefore, Alternative 5G proposes the least encroachment of the three alternatives evaluated.

FEMA FIRM maps were used to illustrate where the project limits encroach on the base floodplain in detail. The Calcasieu Parish Flood Insurance Study (FIS), which is a compilation of flood risk data for specific watercourses within the community and is completed for the FEMA National Flood Insurance Program (NFIP), was updated in May

of 2019; however, the study did not change the effective FIRM maps for the community, which are dated February 18, 2011.

As shown on **Figure 58a**, the base floodplain on the west end is located generally between Sampson Street and the Calcasieu River.



Figure 58a – FIRM Maps 22019C0456F, 22019C0457F, and 22019C0480F effective on 2/18/2011.

The proposed alignment of I-10 for all alternatives would be shifted north between the existing alignment and the UPRR and would encroach on the base floodplain.

**Figure 58b** illustrates the base floodplain on the east side of the Calcasieu River which includes the Bridge Alternatives area of the Project and East End Improvements.

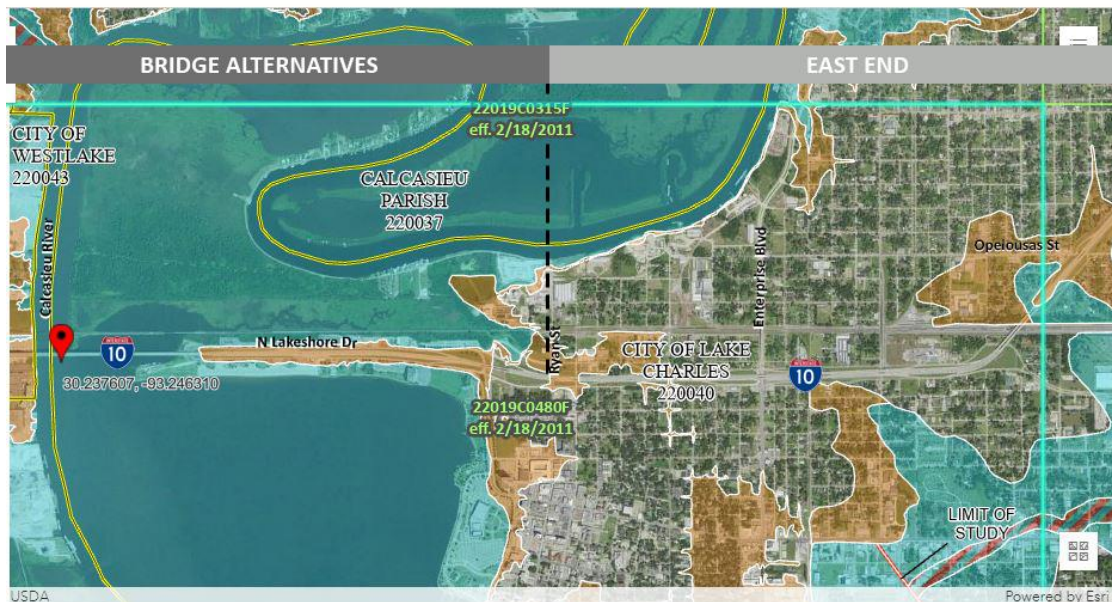


Figure 58b- FIRM Map 22019C0480F, effective on 2/18/2011

**Figure 58c** shows the base floodplain relative to the East End limits of the project and the Kayouche Coulee, a designated regulatory floodway in the floodplain (hatched area) which crosses existing I-10.

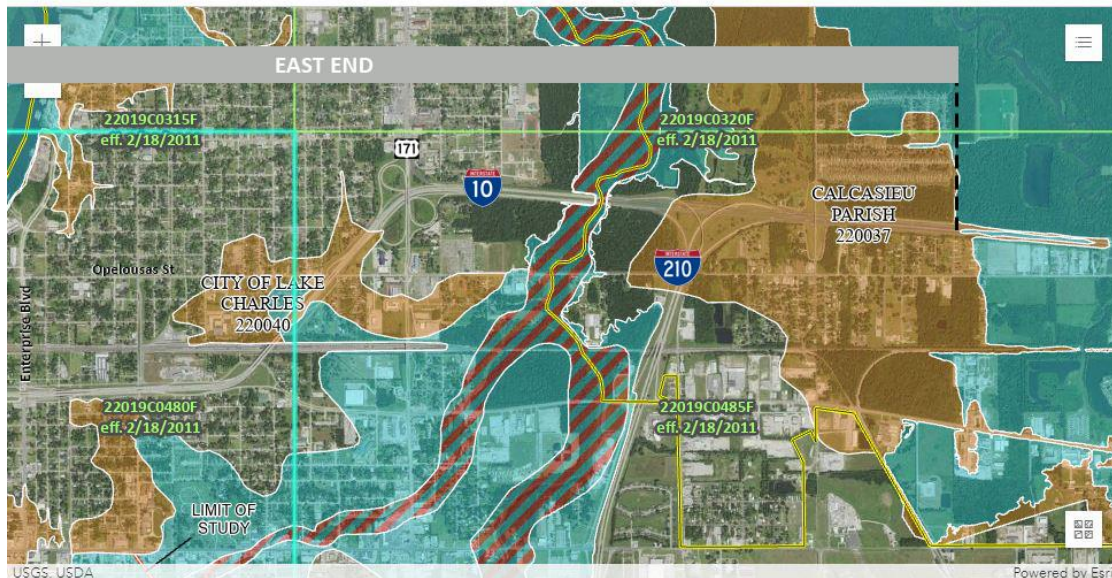


Figure 58c- FIRM Maps 22019C0480F and 22019C0485F, effective on 2/18/2011

Location hydraulic studies were conducted for the Project in accordance with 23 CFR §650.111 commensurate with the significance of the risk of the encroachment and for actions that would support base floodplain development.

Risk is defined as “the consequences associated with the probability of flooding attributable to an encroachment. It shall include the potential for property loss and hazard to life during the service life of the highway” (23 CFR §650.105[o]).

### **Location Hydraulic Study for the West Side of the Calcasieu River**

Longitudinal encroachment from the Alternative 5G on the west side of the Calcasieu River includes a new alignment of I-10 north of the existing encroachment, which includes the I-10 Calcasieu River Bridge, Sampson Street and its interchange including on- and off-ramps, and Isle of Capri Boulevard between Sampson Street and the Calcasieu River. For this alternative, the I-10 bridge would come to grade near Sampson Street. The Sampson Street interchange at I-10 would be reconstructed on structure and Sampson Street would rise from its intersection at Sulphur Street to meet the interchange. Isle of Capri Boulevard would remain on its current alignment at-grade. As shown on **Figure 58a**, the BFE north of the UPRR and south of Sulphur Avenue, is 14 feet. This area is where Sampson Street would rise from grade to approximately 44 feet (see Appendix H, Alternative 5G, Sheet 1 of 2, Vertical Profile 6).

South of the UPRR, the BFE is nine (9) feet. This area is where the rest of the proposed improvements would encroach on the base floodplain. The elevation of the at-grade portions of alignment of I-10 in this area is proposed to be approximately 16 feet or

seven (7) feet above the BFE. The facilities proposed on structure are conceived to exceed 40 feet. Isle of Capri Boulevard would remain in its current alignment at-grade. In this area, water conveyances would be constructed to maintain flow through the encroachment of I-10, the Sampson Street interchange, and Isle of Capri Boulevard into the receiving waters approximately 2000 feet to the south. These receiving waters are connected to remnants of the Calcasieu River, natural waterways like Contraband Bayou and Prien Lake, and channelized waterways such as Clooney Loop and the Calcasieu Ship Channel. Covering approximately 100 square miles, these surface waters flow into the Gulf of Mexico.

The area in the base floodplain on the west side of the Calcasieu River has been developed for industry. The natural and beneficial floodplain values of the lake and the swamp to the north, such as habitat for fish and other animals, protection of water quality, and recharge of groundwater have been impacted by industrial development but would continue to fully function in terms of flood storage and conveyance. Because the existing at-grade Sampson Street will be demolished and replaced with an elevated roadway, the proposed project offers an opportunity for habitat and waterways in those areas to transition to a more natural state.

Isle of Capri Boulevard currently supports development in the floodplain and would continue to do so. Any new development would be required to be elevated above the BFE to be eligible for flood insurance.

#### **Location Hydraulic Study for the East Side of the Calcasieu River**

Longitudinal encroachment from Alternative 5G on the east side of the Calcasieu River includes a new alignment of the I-10 Calcasieu River Bridge north of the existing encroachment. The portion of I-10 that is at-grade and does not currently encroach on the base floodplain would also be aligned towards the north and would encroach on the base floodplain. The encroachment would include the I-10 service roads (North Lakeshore Drive) and an access road for the beachfront areas. The realignment of the at-grade section of I-10 would require displacement of all of the businesses that currently operate in the base floodplain, thus eliminating development in this part of the base floodplain.

**Figure 58b** illustrates that the BFE for the base floodplain in this area is nine (9) feet. The elevation of the at-grade portions of alignment of I-10 in this area is proposed to be approximately 16 feet or seven (7) feet above the BFE. The elevation of North Lakeshore Drive would be approximately 15 feet (see Appendix H, Alternative 5G, Sheet 1 of 2, Vertical Profile).

LADOTD Hydraulics Manual states that the procedure for setting the minimum roadway grade is dependent upon the determination of the design flood stage for the roadway in question. Setting a roadway grade is based upon the road remaining open and usable for a flood of selected magnitude. By definition, "selected magnitude" equates to

roadways not being overtopped at that design flood stage (see Section 1.3 of the LADOTD Hydraulics Manual). Furthermore, it is generally desirable to maintain one (1) foot of freeboard between the lowest elevation of the paved surface and the design flood stage.

The area shown on **Figure 58b** is surrounded by water bodies including the lake (Lake Charles) to the south, the Calcasieu River to the west, and a large, forested wetland to the north. The UPRR could impede flow into the north wetland. But conveyances to the west and to the south would be constructed to maintain flow through and around the encroachment of I-10 and North Lakeshore Drive to the lake and to the Calcasieu River. Covering approximately two square miles, the lake is connected to the Calcasieu Ship Channel and other waterways that flow to the Gulf of Mexico.

The area in the base floodplain (N Lakeshore Dr in **Figure 58b**) is currently developed as a highway commercial strip. This development will be displaced. The natural and beneficial floodplain values such as habitat for fish and other animals, protection of water quality, and recharge of groundwater have been impacted by industrial and commercial development but still provide benefits. The beneficial floodplain values of flood storage and conveyance would continue to function.

On the south side, the City of Lake Charles is planning to build a museum-research complex called Port Wonder, a development compatible with its location at the lakefront. On the east end, the existing bridge which crosses the Kayouche Coulee will be modified according to the requirements for regulatory floodways as defined by 23 CFR §650.105. 23 CFR §650.111(c) stipulates that location studies include discussion of items 1 – 5 listed below.

- 1) The risk associated with implementation of the proposed Project is negligible because water conveyances to receiving waters would be implemented and the extent of commercial and residential development in the base floodplain would be reduced through relocation of these activities outside of the base floodplain.
- 2) The proposed Project would not impact natural and floodplain values but would offer some opportunity for improvement of natural and beneficial floodplain values by removing some existing development out of the base floodplain and allowing for a transition of that part of the floodplain to a more natural state.
- 3) The proposed Project would not support incompatible floodplain development; it would reduce the extent of commercial and residential development in the base floodplain through relocation of these activities outside of the base floodplain.
- 4) Measures to minimize floodplain impacts associated with the action include implementation of water conveyances and reduction of the extent of development in the floodplain.

- 5) The proposed Project would not impact natural and floodplain values but would offer some opportunity to restore and preserve the natural and beneficial floodplain values.

### **Findings**

A significant encroachment is defined in 23 CFR §650.105(q) as a highway encroachment and any direct support of likely base floodplain development that would involve one or more of the following construction-or flood-related impacts:

- 1) A significant potential for interruption of I-10, which is needed for emergency vehicles and provides a community's only evacuation route.
- 2) A significant risk.
- 3) A significant adverse impact on natural and beneficial flood-plain values.

The location hydraulic studies determined that the proposed Project would not involve any one of the above impacts and would not constitute a significant encroachment on the base floodplain.

- 1) The proposed Project does not represent a significant potential for interruption of I-10 for use by emergency vehicles or as an evacuation route. Historical data since the construction of I-10 within the Project Corridor indicates there is no significant potential for interruption of I-10, which has been in existence since the 1960s and has never been inundated by floodwaters. I-10 does serve as an east/west evacuation route; however, it is not the community's only evacuation route. During hurricane events, residents are encouraged to evacuate north. US 171 is the northern evacuation route in the City of Lake Charles and Hwy 378 (to US 171) is the northern evacuation route in the City of Westlake.
- 2) Risk is defined in 23 CFR §650.105(o) to mean the consequences associated with the probability of flooding attributable to an encroachment. It shall include the potential for property loss and hazard to life during the service life of the highway. FHWA recognizes the FEMA NFIP design standards that permit up to a one (1.0)-foot rise in water surface elevation for the 100-year flood (1% annual chance of flooding). Therefore, development in this floodplain (including highways) is permitted and does not pose a significant risk provided it does not cause backwater in excess of one (1.0) foot. This standard is established as the Federal standard under Executive Order 11988, Floodplain Management, and is to be used in designing highways in NFIP mapped floodplains. Furthermore, it is LADOTD's policy to not allow any backwater increase for sites covered by the NFIP and for delineated floodplains established under the NFIP.

- 3) The proposed Project would not cause a significant impact on natural and floodplain values but would remove some existing development out of the base floodplain and allow for a transition of that part of the floodplain to a more natural state.

Federal regulations also stipulate that location hydraulic studies shall include evaluation and discussion of the practicability of alternatives to any longitudinal encroachments, and the studies shall include evaluation and discussion of the practicability of alternatives to any significant encroachments or any support of incompatible floodplain development (23 CFR §650.111[d]). The proposed Project is a realignment and widening of I-10 and the I-10 Calcasieu River Bridge to address deficiencies and traffic operations in this section of the interstate. Chapter 2 details the many alternatives that were considered and dismissed. Alternative 5G was identified as preferred because it is the most practicable and least damaging alternative. Since it has been determined that the proposed project would not constitute a significant encroachment on the base floodplain, no further discussion of incompatible floodplain development is warranted per 23 CFR §650.111(e). In compliance with 23 CFR §650.111(f), local, state, and federal water resources and floodplain management agencies were consulted to determine if the proposed highway action is consistent with existing watershed and floodplain management programs and to obtain current information on the proposed project in the affected watersheds. Copies of floodplain manager correspondence provided in **Appendix G.5**.

Section 4.2.5 lists the measures identified by state and local floodplain managers to minimize potential impacts to floodplains during improvements and construction consistent with their floodplain management programs.

23. Chapter 3, Section 3.11 has been revised. Additional information has been added after the second paragraph on page 3-74. "A determination by FHWA of an adverse effect under the Section 106 process (see 36 CFR 800.5) does not automatically mean that Section 4(f) will apply. Nor does a determination of no adverse effect mean that Section 4(f) will not apply in some cases. When a project permanently incorporates land of a historic site, regardless of the Section 106 determination, Section 4(f) will apply."
24. Chapter 3, Section 3.12.2 EDC Site History, has been updated. The statement in the first paragraph which reads "The 1987 release occurred near the intersection of the I-10 Service Road and Mike Hooks Road" has been removed and replaced with "The 1987 release occurred at Tank 415, located inside the Phillips 66 facility."
25. Chapter 3, Section 3.12.2 EDC Site History, has been updated. The statement in the first paragraph which reads "The location and 2016 extent of the EDC contamination are illustrated on Figure 4" has been removed and replaced with the sentence, "The location

and extent of the 1994 release as delineated in the first quarter of 2016 are illustrated on Figure 10.”

26. Chapter 3, Section 3.12.2 EDC Site History, has been updated. Paragraph 5 has been updated to read “After a groundwater recovery system was installed, a site-specific RECAP standard was established. The recovery system was installed to intercept and remove free product and contaminated groundwater in the area. Based on extrapolation of the available information at this time, groundwater contamination is believed to still be present within the existing and required LADOTD ROW as deep as 80 feet bgs, within the base of the LIU.”
27. Chapter 3, Section 3.12.2 EDC Site History, has been updated. The last sentence of the section has been updated to read “Wells will be used to monitor for contaminants during construction.”
28. Chapter 3, Section 3.14.8, the last sentence has been revised to “The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals. This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety.” And the last sentence of the paragraph under “COMPARISON OF THE ALTERNATIVES” has been deleted.
29. Chapter 3, Section 3.14.8, has been updated. The first paragraph, last sentence, under Comparison of Alternatives has been revised to read: “The Interactive Highway Safety Design Model (IHSDM) was used to measure the ability of alternatives to meet safety related improvement goals. This model is a suite of software tools that support project level geometric design decisions by providing quantitative information on expected safety and operational performance. Safety analyses were performed for all alternatives in the EIS using the IHSDM. Those analyses did not indicate a statistically significant safety benefit which would meet the purpose and need for safety and independently justify the proposed Project. However, a comparative safety analysis indicates that the preferred alternative will meet current design standards for safety.”
30. The following paragraph has been added to Section 3.15 Construction and Other Temporary Impacts after the first paragraph:  
“If Alternative 5G were built, pipeline racks and railroad spurs that cross I-10 near Sampson Street would have to be relocated to accommodate the new bridge as it comes to grade. In order to accelerate the overall construction timeline, LADOTD is considering development of an early works package for relocation work in advance of the P3 project.

Identified components include:

- Modification of the existing bridge substructure to allow for relocation of the railroad spur before the bridge is replaced.
- Modification of the existing westbound on- and off-ramps at Sampson Street, including construction of a temporary bridge, to allow for the relocation of the pipeline racks before the bridge is replaced. Because this modification would require temporary closure of the ramp, a TMP will be developed to identify improvements to mitigate traffic congestion during the modification. Preliminary solutions include:
  - Construction of a temporary access road to allow the majority of traffic to travel from Sampson Street to I-10 westbound. (Remaining traffic would be required to utilize a signed detour to access I-10 westbound).
  - Improvement of the PPG to I-10 eastbound on-ramp. (I-10 westbound to Sampson Street off-ramp traffic would have to detour and use the next exit [I-10 westbound to PPG off-ramp] to U-turn to travel eastbound to access Sampson Street. The PPG to I-10 eastbound on-ramp will be improved to accommodate this additional traffic)
- Once the pipeline rack is relocated and the temporary bridge is in place, the ramp will be reopened to accommodate all westbound traffic and the temporary access road would be removed.

If pursued, these early works would be implemented in coordination with the relocation of the railroad spurs and pipeline racks, along with the construction of the P3 project.

31. Chapter 3, Section 3.15.2 Travel Times and Detours has been updated. The first paragraph has been updated and the first sentence of the section has been revised to read: "If Alternative 5G were built, Sampson Street would be completely closed for a period of approximately 18 months while the main span of the new interchange was constructed. Temporary closure of the I-10 WB/Sampson Street ramps will be necessary to accommodate the pipe rack relocation. These closures are anticipated to last approximately six months and will most likely be in addition to the extended Sampson Street closure of approximately 18 months." The following has been added after the first paragraph, "If Alternative 5G were built, closure of the I-10 WB/Sampson Street ramps will be necessary to accommodate the pipeline rack relocation. These closures are anticipated to last approximately six months and will most likely be in addition to the extended Sampson Street closure of approximately 18 months. Closures of other roadways in the vicinity of the pipe racks will be limited in duration (e.g., nights, weekends). Traffic will be detoured in accordance with the TMP developed for the work. Where appropriate, temporary improvements to facilitate maintenance and safety of

traffic along the detour routes will be identified in the TMP and implemented prior to the associated closures. One of these improvements, namely, modifications to the eastbound on-ramp from PPG Drive to accommodate westbound traffic making a U-turn to access Sampson Street, would be constructed as part of an early works package developed and implemented by LADOTD before construction of the first phase of the proposed project commences.”

32. Chapter 4, Section 4.2.9 has been updated. The last paragraph of the section has been updated. The sentence “Air monitoring to detect harmful volatile organic compounds (VOCs) will be conducted during all ground disturbing activities” has been revised to read: “ Air monitoring to detect harmful volatile organic compounds (VOCs) will be conducted where needed during ground disturbing activities.” The last sentence of the section has been revised to read “Appropriate Personnel Protective Equipment (PPE) will be provided.”
33. Chapter 4, Section 4.2.10 Temporary Construction Impacts, has been updated. The last paragraph of the section, the second-to-last sentence has been revised to read, “Sampson Street will be closed to traffic for a period of approximately 18 months if Alternative 5G is constructed. Pipe rack relocation will require temporary closure of the I-10 WB/Sampson Street ramps. These closures will last approximately six months and will be in addition to the approximately 18-month Sampson Street closure. Closures of other roadways in the vicinity of the pipe racks will be limited to nights and weekends to the extent practicable. Traffic will be detoured in accordance with the Transportation Management Plan (TMP) developed for the work. Where appropriate, temporary improvements to facilitate maintenance and safety of traffic along the detour routes will be identified in the TMP and implemented prior to the associated closures.”