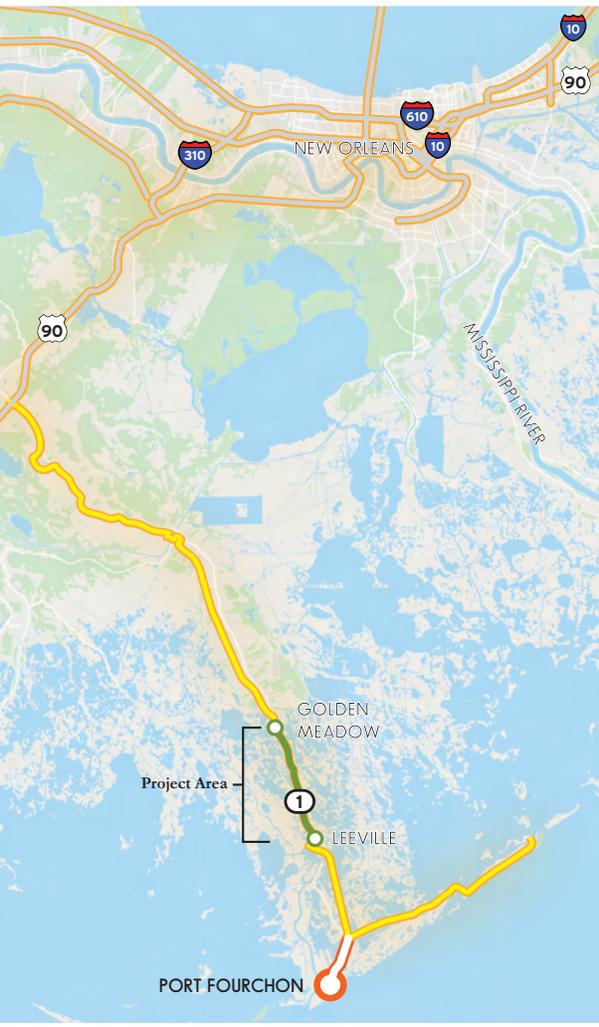


# 2020 INFRA GRANT APPLICATION



## LOUISIANA LA1 Improvements Phase 2



### LA1 IMPROVEMENTS- PHASE 2 PROJECT INFORMATION

What is the Project Name?	LA 1 Improvement Project – Phase 2	Approximately how much of the estimated future eligible project costs will be spent on components constituting railway-highway grade crossing or grade separation projects?	\$0
Who is the Project Sponsor?	<a href="#">Louisiana Department of Transportation and Development</a>	Approximately how much of the estimated future eligible project costs will be spent on components constituting intermodal or freight rail projects, or freight projects within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	\$0
Was an INFRA application for this project submitted previously? (If Yes, please include title)	Yes - Louisiana Highway 1 Improvement Project	<b>PROJECT LOCATION</b>	
<b>PROJECT COSTS</b>		State(s) in which project is located	Louisiana
INFRA Request Amount	\$185,000,000	Small or large project	Large
Estimated Federal funding (excl. INFRA)	\$0	Urbanized Area in which project is located, if applicable	N/A
Estimated non-Federal funding	\$260,000,000	Population of Urbanized Area	N/A
Future Eligible Project Cost (Sum of previous three rows)	\$445,000,000	Is the project located (entirely or partially) in an Opportunity Zone?	No
Previously incurred project costs (if applicable)	\$32,299,567	<b>Is the project currently programmed in the following (provide links to publicly accessible):</b>	
Total Project Cost (Sum of 'previous incurred' and 'future eligible')	\$477,299,567	<a href="#">Transportation Improvement Program (TIP)?</a>	No
Are matching funds restricted to a specific project component? Which one?	No	<a href="#">Statewide Transportation Improvement Program (STIP)?</a>	No
<b>PROJECT ELIGIBILITY</b>		<a href="#">MPO Long Range Transportation Plan?</a>	Yes (74)
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on the <a href="#">National Highway Freight Network (NHFN)</a> ?	\$0	<a href="#">State Long Range Transportation Plan?</a>	Yes (7-8)
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on the <a href="#">National Highway System (NHS)</a> ?	\$445,000,000	<a href="#">State Freight Plan?</a>	Yes (10-18)

## Table of Contents

Executive Summary .....	2
I. Project Summary.....	3
I.1 Project Description .....	4
I.2 National and Regional Significance .....	4
I.3 Transportation Challenges Addressed .....	5
I.4 Project History and Context .....	6
II. Project Location .....	6
III. Project Parties .....	8
IV. Grant Funds, Sources and Uses of Project Funds.....	9
IV.1 Previously Incurred Project Costs .....	10
IV.2 Future Eligible Costs .....	10
IV.3 Non-Federal Funds .....	10
V. Merit Criteria.....	10
V.1 Merit Criterion 1: Support for National or Regional Economic Vitality .....	11
V.2 Merit Criterion 2: Leveraging of Federal Funding.....	14
V.3 Merit Criterion 3: Potential for Innovation.....	14
V.4 Merit Criterion 4: Performance and Accountability.....	16
VI. Project Readiness .....	17
VI.1 Technical Feasibility .....	18
VI.2 Project Schedule .....	18
VI.3 Required Approvals .....	20
VI.4 Assessment of Project Risks and Mitigation Strategies .....	20

## Appendices Uploaded to Grants.Gov

(Document Title and Upload Name)

- BCA Workbook ..... BCACalcs.xlsx
- BCA Methodology Memo.....Methodology.pdf
- REMI Report .....REMI\_Report.pdf
- NOAA Estimation of Tidal Flooding Along LA 1 ..... NOAA\_Flooding.pdf
- FHWA ROD Verification .....RODVerify.pdf
- Coastal Use Permit..... Coastal\_Permit
- USACE 408 Permission Letter .....USACE408
- Funding Commitment Letters..... Commitments.pdf
- Letters of Support ..... SupportLetters.pdf
- Existing LA 1 Parish Ownership .....ParishOwnership.pdf

**Table 1 - LA1 Improvement - Phase 2 Project Information**

LA 1 IMPROVEMENTS- PHASE 2 PROJECT INFORMATION	
Who is the Project Sponsor?	<a href="#">Louisiana Department of Transportation</a>
Was an INFRA application for this project submitted previously? (If Yes, please include title).	Yes - Louisiana Highway 1 Improvement Project
PROJECT COSTS	
INFRA Request Amount:	\$185,000,000
Estimated federal funding (excl. INFRA):	\$0
Estimated non-federal funding:	\$260,000,000
Future Eligible Project Cost (Sum of previous three rows):	\$445,000,000
Previously incurred project costs (if applicable):	\$32,299,567
Total Project Cost (Sum of 'previous incurred' and 'future eligible'):	\$477,299,567
Are matching funds restricted to a specific project component? Which one?	No
PROJECT ELIGIBILITY	
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on the <a href="#">National Highway Freight Network</a> (NHFN)?	\$0
Approximately how much of the estimated future eligible project costs will be spent on components of the project currently located on the <a href="#">National Highway System</a> (NHS)?	\$445,000,000
Approximately how much of the estimated future eligible project costs will be spent on components constituting railway-highway grade crossing or grade separation projects?	\$0
Approximately how much of the estimated future eligible project costs will be spent on components constituting intermodal or freight rail projects, or freight projects within the boundaries of a public or private freight rail, water (including ports), or intermodal facility?	\$0
PROJECT LOCATION	
State(s) in which project is located	Louisiana
Small or large project	Large
Urbanized Area in which project is located, if applicable	N/A
Population of Urbanized Area	N/A
Is the project currently programmed in the following (provide links to publicly accessible):	
<a href="#">TIP?</a>	No
<a href="#">STIP?</a>	No
<a href="#">MPO Long Range Transportation Plan?</a>	Yes (74)
<a href="#">State Long Range Transportation Plan?</a>	Yes (7-8)
<a href="#">State Freight Plan?</a>	Yes (10-18)

## EXECUTIVE SUMMARY

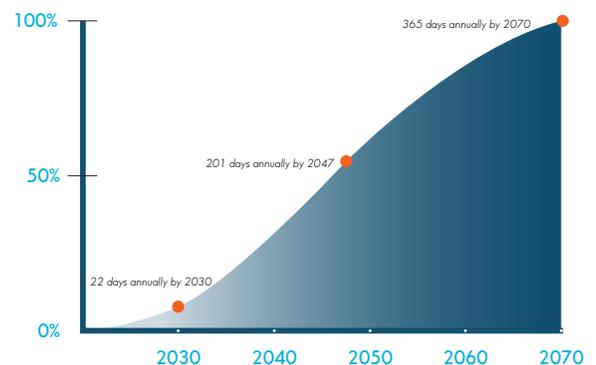
- [The LA 1 Improvement Project – Phase 2](#) (Project) will elevate an 8.3-mile stretch of two-lane, at-grade rural [Louisiana State Highway 1](#) (LA 1) to 22 feet above surrounding bodies of water to eliminate frequent inundation and energy production impacts.
- The Project has a **4.86 Benefit-Cost Ratio (BCR)**, reflecting its critical importance to the U.S. economy. It moves people and goods that service 17 percent of U.S. oil and gas production – and over [90 percent of active Gulf of Mexico extraction](#).
- [More than 1,300 trucks and very heavy trucks \(special-purpose trucks requiring escort\) travel daily south](#) to energy production and related facilities. But those trucks – and related economic activity – halt due to high water driven by hurricanes or severe weather coupled with high tides. Each event results in closures – something the Project will eliminate.
- Currently, closures occur ten days per year or more. Each day LA 1 is closed costs the U.S. [\\$46 million in oil and gas production and \\$528 million in total GDP](#).
- Without the Project, the problem will worsen if the facility is not elevated. The National Oceanic and Atmospheric Administration (NOAA) predicts LA 1 will be under water 22 days annually by 2030 and 201 days annually by 2047. By 2070, LA 1 [will be permanently under more than four feet of water](#) from the combined impacts of increased [subsidence](#) and weather events (**Grants.Gov upload: NOAA\_Flooding**).
- Implementing the LA 1 Improvement Project will yield significant safety benefits. Just a small rise in water levels or any mechanical breakdown creates seriously unsafe conditions. Elevating the roadway and providing wider shoulders will accommodate the oversized loads that daily travel the highway, separate pedestrians and bicyclists from through traffic, and prevent the roadway from flooding. Safety also will be enhanced by planned project delivery and technology innovations.
- [A Homeland Security study](#) estimated that a hurricane similar in force to [Hurricanes Ivan](#) or [Katrina](#) striking LA 1 could destroy the road, requiring up to 90 days to restore full access to Port Fourchon, costing the national GDP \$47,520,000,000. The study estimated that there is a 100 percent probability of this happening by 2053.
- The LA 1 Improvement Project - Phase 2 will cost \$445 million. Of this, private non-governmental organizations and state/regional/local governments will contribute \$260 million - including \$25 million for the Greater Lafourche Port Commission (GLPC) and \$1.2 million from Lafourche Parish. This represents an unparalleled [three-decade public- and private-sector partnership that has contributed 78 percent of LA 1 Phase 1 and 2 costs in non-federal funds](#). The balance will be paid for by the requested \$185 million in INFRA funding.



Figure 1 - LA 1 Post-Hurricane



Figure 2 - Inundation Projection



The National Oceanic and Atmospheric Administration (NOAA) projects LA 1 will be inundated 22 days annually by 2030; 201 days annually by 2047.

# I. PROJECT SUMMARY

The [LA 1 Improvement Project – Phase 2](#) (Project) will elevate an 8.3-mile stretch of at-grade [Louisiana State Highway 1](#) – a highway servicing 17 percent of the country’s total oil and gas production. The rural, two-lane roadway is the critical link to [Port Fourchon](#), which handles nearly [90 percent of the active deep-water gas and petroleum extraction](#) occurring in the Gulf of Mexico.

But LA 1 is a threatened link between America’s economy and the petroleum that drives it. [More than 1,300 heavy-supply trucks daily travel south to the Port](#) – except when high water from hurricanes or even severe weather coupled with high tides close it down.

[With each day LA 1 is submerged, America loses \\$46 million in oil and gas production and \\$528 million in total GDP](#). Its closure, along with local hurricane-related production shut-downs, can swing gas prices nationally up to \$.25 a gallon. And as the U.S. Energy Information Administration notes, [crude oil supply disruptions—realized or expected—can have large and immediate effects on crude oil prices](#).

The National Oceanic and Atmospheric Administration (NOAA) predicts that the frequency of tidal flooding will increase in the next 20 years ([Grants.Gov upload: NOAA Flooding](#)). Currently, closures from flooding can occur up to 10 days annually based on the NOAA analysis. From 2041 and onwards, the frequency of tidal flooding rises even more rapidly. Loss of adjacent marsh lands will increase the vulnerability of the road to storm waves, increasing erosion of the embankments and road surface.

Elevating the highway to 22 feet between Golden Meadow and Leeville will eliminate these recurring disruptions. A Homeland Security study estimated that a hurricane similar in force to [Hurricanes Ivan](#) or [Katrina](#) striking LA 1 could destroy the road, requiring up to 90 days to restore full access to Port Fourchon.

A closure of LA 1 in the project area would reduce domestic oil and gas supplies for ten years following the event, according to the 2014 economic impact study [The Economic Impact of Port Fourchon: An Update](#). To be conservative, this impact is not quantified in this Application’s Benefit-Cost Analysis (BCA), but the study’s findings are worth noting.

In addition to Port Fourchon (described above), LA 1 is a critical corridor for carrying goods and workers to the [Louisiana Offshore Oil Port](#). LOOP is the single-largest point of entry for waterborne crude oil in the U.S., and it is the only port in America capable of offloading [Ultra Large Crude Carriers \(ULCC\) and Very Large Crude Carriers \(VLCC\)](#).

**Figure 3 - America's Busiest Intermodal Energy Port**



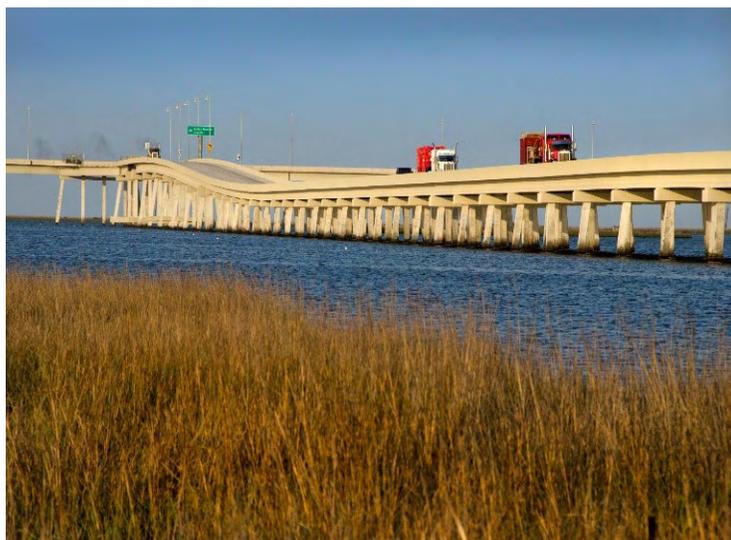
*LA 1 makes it possible for Port Fourchon to service more than 250 companies that use it as a base of operations. The facility is America’s busiest intermodal energy port, seeing more than 400 large supply vessels more through its channels. They move people and supplies to oil and gas locations that produce 15 percent of all U.S. production and 50 percent of U.S. refinery capacity.*

## I.1 PROJECT DESCRIPTION

The Project will safeguard America’s energy security and independence by addressing a critical weakness in the U.S. energy-related transportation network. It will provide rural workers with uninterrupted access to high-quality, high-paying jobs. An investment of \$260 million in state, local and private funding – along with the \$185 million in INFRA grant funding being requested – will complete this nationally important project.

The Project replaces an existing at-grade two-lane rural roadway running alongside Bayou Lafourche. LA 1 has narrow shoulders, a safety hazard for local traffic and hundreds of tractor-trailers accessing the petroleum, marine services and fisheries companies at the corridor’s south end. Phase 2 will elevate the rural state highway on new alignment away from Bayou Lafourche. The existing facility between Golden Meadow and Leeville will remain in use for local trips and by bicyclists and pedestrians. It will be maintained by Lafourche Parish.

Figure 4 - LA 1 Phase 2 Improvements



*The elevated LA 1 roadway will be built above the FEMA Base Flood Elevation height – on average 22 feet – to ensure it remains invulnerable to storm inundation. The new facility will tie into LA 3235, a four-lane highway to the north, and LA 1 Phase 1 to the south, the elevated portion between Leeville and Port Fourchon, fulfilling the twin goals of improving safety and reliability in the corridor.*

## I.2 NATIONAL AND REGIONAL SIGNIFICANCE

An improved LA 1 will ensure that thousands of offshore workers and residents of Grand Isle, Louisiana’s only inhabited barrier island, are able to safely evacuate during hurricanes. [LA 1 also is critical for supporting economic vitality nationally and regionally, serving as the primary – and often only – link between the U.S. economy and:](#)

- Nearly one-fifth of the Nation’s energy production;
- More than \$41 million of seafood products annually, according to the Louisiana Department of Wildlife and Fisheries;
- New and growing Gulf industries such as ecotourism; maritime wind farms; internet access for rural areas; and coastal restoration and wetland projects; and
- Gulf of Mexico safety and environmental recovery events (such as the Deepwater Horizon long-term environmental clean-up and the recent \$215 million Caminada Headland Restoration, the largest state coastal restoration project completed to date).

The area serviced by LA 1 has been deemed a [“Super Basin” in terms of its proven and anticipated oil and gas reserves](#). Oil and gas production generated by this central Gulf of Mexico [\(yields nearly \\$5 billion in royalty revenue for the federal government\)](#). In fact, the Gulf of Mexico is [expected to generate record production numbers for the next decade](#) or more, with [ongoing technological improvements continue to grow U.S. reserves and their projected productive lifespans](#). As a result, the projected lifespan of this basin easily justifies making an investment of the size envisioned for LA 1.

### I.3 TRANSPORTATION CHALLENGES ADDRESSED

The Gulf Coast transportation network is increasingly at risk from two simultaneously occurring threats that are increasing the frequency and severity of weather events that close LA 1 - subsidence and increasing severe weather events.

Subsidence - The Project will directly address network impacts caused by subsidence. The coastline of Louisiana is sinking about one third of an inch annually, according to a [2017 study by the Geological Society of America](#).

Subsidence has resulted in the loss of coastal land over the past century equivalent in area to the state of Delaware. One hundred and fifty years of levee building, loss and other factors reduce and prevent the capture of Mississippi River sediment that would otherwise refresh coastal areas and rebuild land. An influential study published in [Nature Geoscience](#) estimated that subsidence, coupled with sea level rise, will cause Louisiana to see up to 8,000 square miles of land submerged by 2100 absent infrastructure improvements and sediment diversion and storage measures now being undertaken.

Increasing frequency and severity of serious weather events - Raising LA 1 will eliminate the possibility of people and commerce being disrupted. According to the federal [National Climate Assessment](#) it is clear that [the intensity, frequency, and duration of hurricanes, as well as the frequency of the strongest hurricanes, have all increased since the early 1980s](#).

The LA 1 Improvement Project – Phase 2 will address a pressing issue assessed in 2011 by the [National Infrastructure Simulation and Analysis Center \(NISAC\)](#) for the [US Department of Homeland Security report](#). It concluded that:

- LA 1 will experience regular submersion of the roadway by 2040.
- “...closure of Port Fourchon would cause loss of business to many firms in Louisiana and other states that supply goods and services to the petroleum industry. The lost business would cascade through the chains of suppliers for each firm directly impacted, thereby spreading the economic impact to regions of the country other than Louisiana.”
- A prolonged closure of LA 1 – 90 days from a direct hit from a severe hurricane – along with the effective closure of Port Fourchon would mean no deep-water drilling or well maintenance could occur due to the disruption of the LA 1 supply chain. As a result, NISAC estimated that there would be a \$7.8 to \$10.4 billion in national GDP reduction (in 2011 dollars).

With the LA 1 Improvement Project – Phase 2 in place, this critical oil corridor would be out of action during a hurricane only while mandatory evacuation orders were in place. It would remain open through all other severe weather events and also allow emergency services to reach individuals sooner who inevitably disregard the order.

### Assessing LA 1 Weather Event Risks

*Hurricane Barry was used as the benchmark storm for conservatively estimating the potential frequency and impacts stemming from LA 1 closures.*

*Barry was a relatively common Category 1 hurricane. It caused one death and \$900 million in property damages during an effective landfall impact of three days.*

*In reality, however, the typical Louisiana hurricane may be worse. One insurance industry analysis estimates that 31 percent of Louisiana hurricanes are Category 3 or higher, with projected damage being characterized as devastating to catastrophic.*

*The frequency of more powerful storms appears to be increasing. The state has been experiencing more and more devastating hurricanes on average over time, according to the National Weather Service’s Louisiana Hurricane History.*

## I.4 PROJECT HISTORY AND CONTEXT

The LA 1 Improvement Project – Phase 2 represents an unparalleled three-decade cooperative effort between Louisiana public- and private-sector organizations to safeguard and improve this vital artery for oil, gas and other related Gulf economies:

- Phase 1 is complete between Leesville and Port Fourchon. It consists of nine miles of elevated highway and a high-rise bridge over Bayou Lafourche.
- Phase 1 financing involved the state self-imposing a toll to help pay for construction cost; the toll is set at the highest level possible given use patterns, local income levels, and regional extractive industry economics.
- Phase 2 will further leverage \$390 million in federal, state, local and private funds already expended in the Project's first phase between Leesville and Port Fourchon.
- The two projects, collectively known as the Gateway to Gulf Expressway, will cost approximately \$835 million. The requested \$185 million INFRA grant will constitute only 22 percent of total project investment.

## II. PROJECT LOCATION

The LA 1 Improvement Project - Phase 2 is located in southeast Louisiana in Lafourche Parish on Louisiana State Highway 1. The proposed elevated highway will cross the marshlands, swamps, and waterways of southern Lafourche from levee-protected Golden Meadow south to Phase 1's newly-completed Leesville Bridge and elevated highway.

It will connect the region's energy commodities, fishing, tourism, and recreation industries to the [Louisiana portions of the National Highway Freight Network](#) (NHFN).

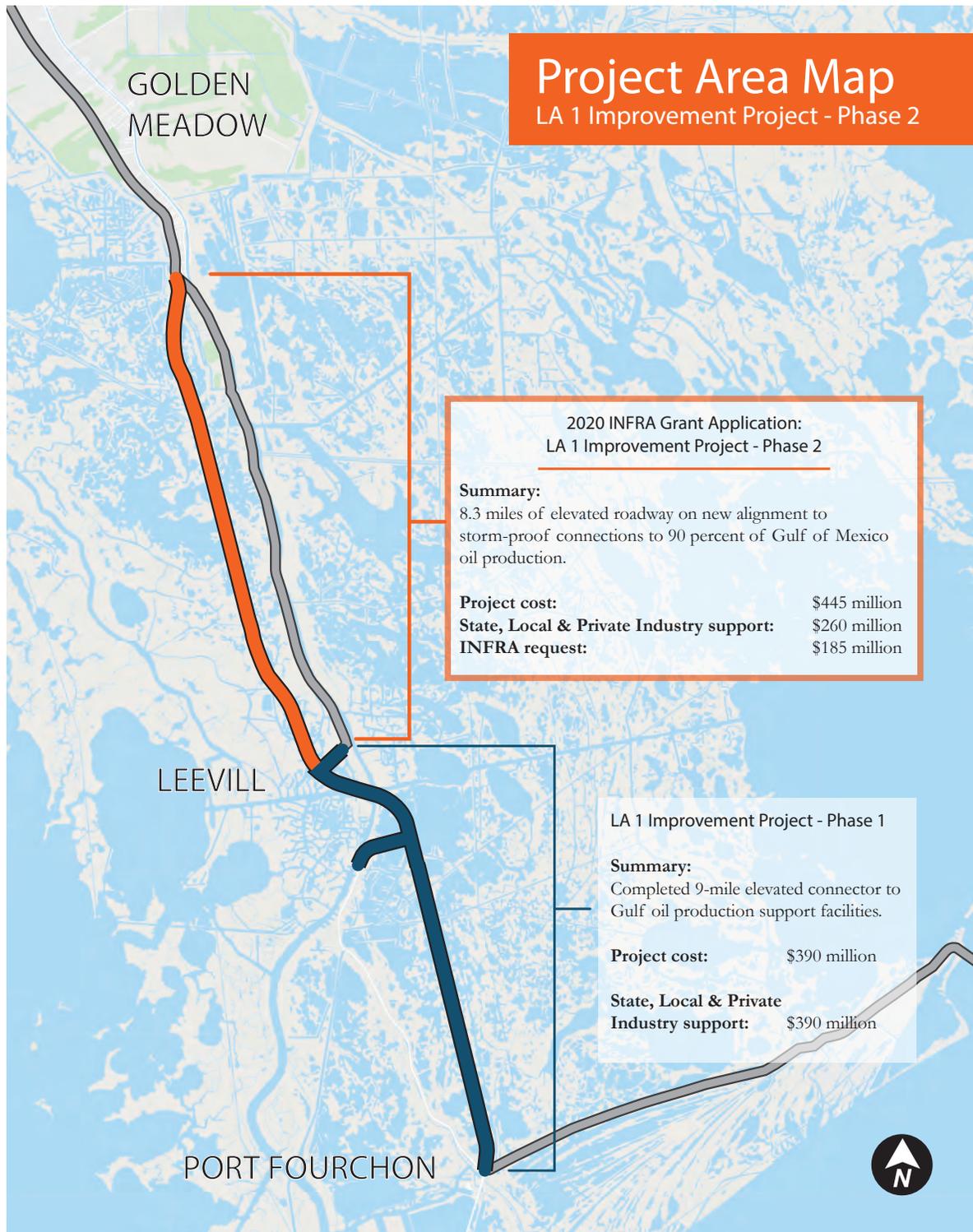
By connecting to I-10 and I-20, industry operations at Port Fourchon are linked to vital oil and gas service and supply industry operations in cities such as Baton Rouge, Shreveport, Dallas, and Houston.

The Project meets the definition of Rural Project as defined by the [2020 INFRA Notice of Funding Opportunity](#).

The Project's northern terminus is just inside the southern boundary of the [Galliano-Larose-Cut Off, LA Urban Cluster, which contains 21,277 residents](#). The remaining 8 miles of the proposed Project are located in rural Lafourche Parish at:

- North terminus - [Lat: 29.371310, Long: -90.262126](#);
- South for the south side it is [Lat: 29.2537961, Long: -90.224435](#).

Figure 5 - Project Location Map



### III. PROJECT PARTIES

The lead applicant for this grant is the [Louisiana Department of Transportation and Development](#) (LA DOTD). LA DOTD maintains the State’s public highways, roadways and other modal assets and programs. [The agency has approximately 4,200 employees and a capital and operating budget of approximately \\$1.7 billion.](#) The agency is INFRA Grant-eligible, has previously received INFRA and BUILD grants, and has a history of successfully delivering large-scale projects. Providing financial and public outreach support for LA DOTD and the Project is the [LA 1 Coalition](#). The public-private partnership responsible for coordinating, providing, and disseminating public information regarding improving the highway system between Grand Isle and U.S. Highway 90. [Its membership consists of nearly 70 agencies and companies,](#) including local Parishes as well as America’s largest, leading petroleum, shipbuilding and related service and technology companies:

- |                                      |   |   |   |
|--------------------------------------|---|---|---|
| <a href="#">Occidental Petroleum</a> | <a href="#">ConocoPhillips</a>          | <a href="#">Halliburton</a>             | <a href="#">Seacor Marine</a>           |
| <a href="#">Bollinger Shipyards</a>  | <a href="#">Edison Chouest Offshore</a> | <a href="#">Hess Corp.</a>              | <a href="#">Shell Oil Company</a>       |
| <a href="#">BP America</a>           | <a href="#">ExxonMobil</a>              | <a href="#">LOOP, LLC</a>               | <a href="#">United Vision Logistics</a> |
| <a href="#">Chevron Products</a>     | <a href="#">Grand Isle Shipyard</a>     | <a href="#">Schlumberger Technology</a> | <a href="#">Williams</a>                |

Table 2 - Project Partners

PROJECT PARTNERS	
PROJECT PARTNERS	 
CONGRESSIONAL DELEGATION	 U.S. Senator ▪ Bill Cassidy  U.S. Senator ▪ John Kennedy  U.S. Congressman ▪ Steve Scalise  U.S. Congressman ▪ Clay Higgins  U.S. Congressman ▪ Mike Johnson  U.S. Congressman ▪ Ralph Abraham  U.S. Congressman ▪ Garret Graves  U.S. Congressman ▪ Cedric Richmond
SUPPORTING AGENCIES AND ORGANIZATIONS (Grants.Gov upload: SupportLetters.pdf)	<p> <a href="#">Greater Lafourche Port Commission</a> · <a href="#">Lafourche Parish Government</a> · <a href="#">BHP</a> · <a href="#">Shell Offshore</a> · <a href="#">Talos Energy</a> · <a href="#">Hess Corporation</a> · <a href="#">W&amp;T Offshore</a> · <a href="#">LLOG Exploration</a> · <a href="#">Murphy Oil Corp.</a> · <a href="#">Cantium</a> · <a href="#">Enven Corp.</a> · <a href="#">Arena Offshore</a> · <a href="#">ConocoPhillips</a> · <a href="#">Harvey Gulf International Marines</a> · <a href="#">Hornbeck Offshore</a> · <a href="#">Edward Wisner Donation Advisory Committee</a> · <a href="#">Halliburton</a> · <a href="#">City of New Orleans</a> · <a href="#">Lafourche Chamber of Commerce</a> · <a href="#">Allied Shipyard</a> · <a href="#">Apache Louisiana Minerals LLC</a> · <a href="#">Bayou Industrial Group</a> · <a href="#">Dean Blanchard Seafood, Inc.</a> · <a href="#">Bollinger</a> · <a href="#">Consumer Energy Alliance</a> · <a href="#">Edison Chouest Offshore</a> · <a href="#">Greater New Orleans, Inc.</a> · <a href="#">Town of Grand Isle</a> · <a href="#">Houma-Thibodaux MPO</a> · <a href="#">Houma-Terrebonne Chamber of Commerce</a> · <a href="#">Jefferson Parish</a> · <a href="#">K Mar Supply</a> · <a href="#">LA Mid-Continent Oil and Gas</a> · <a href="#">LA Motor Transport Association</a> · <a href="#">LOGA</a> · <a href="#">LOOP</a> · <a href="#">Magnum Mud Equipment Company</a> · <a href="#">Moran's Marina</a> · <a href="#">Nicholls State University</a> · <a href="#">National Ocean Industries Assoc.</a> · <a href="#">National Ocean Policy Coalition</a> · <a href="#">OMSA</a> · <a href="#">Picciola &amp; Assoc.</a> · <a href="#">South Central Industrial Assoc.</a> · <a href="#">South Central Planning &amp; Development Commission</a> · <a href="#">South LA Economic Council</a> · <a href="#">Southern Guard Service, Inc.</a> · <a href="#">Tanks-A-Lot</a> · <a href="#">Terrebonne Parish Government</a> · <a href="#">State Rep. Reggie Bagala</a> · <a href="#">Thibodaux Chamber of Commerce</a> · <a href="#">United Vision Logistics</a> · <a href="#">State Senator Michael Fesi</a> </p>

## IV. GRANT FUNDS, SOURCES AND USES OF PROJECT FUNDS

INFRA prioritizes freight-beneficial construction projects that: (1) leverage Federal dollars with non-Federal contributions; (2) include private investment; and (3) offer innovative project delivery that maximizes the impact of the planned investment. The LA 1 Improvement Project – Phase 2 fully aligns with these priorities. A significant portion of the \$445 million project comes from non-federal sources, including significant amounts of private investment, assuming the following funding sources::

- LA DOTD \$210 - 225 million
- Private-Sector Commitments \$35 - 50 million (including GLPC - \$25 million; Lafourche Parish - \$1.2 million)
- INFRA Request \$185 million

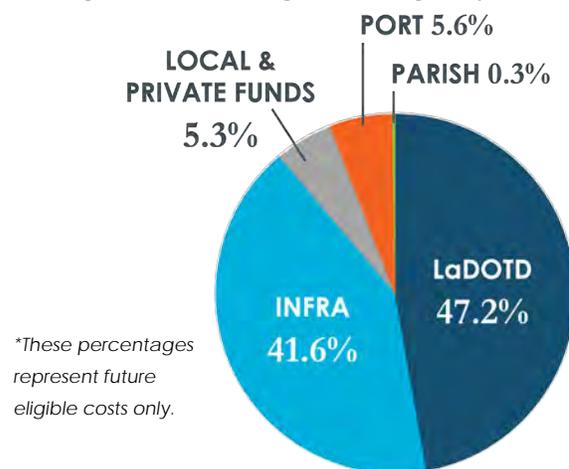
**Table 3 - Grant Funds, Sources and Uses of Project Funds**

ACTIVITY	STATUS	COST	NON-FEDERAL								FEDERAL					
			"STATE FUNDS (TF, CAPITAL OUTLAY, SURPLUS, HB 578)"	% PHASE	"LAFOURCHE PARISH"	% PHASE	"PRIVATE INDUSTRY"	% PHASE	"PORT OF FOURCHON"	% PHASE	"REGULAR PROGRAM"	% PHASE	DEMO	% PHASE	"INFRA (60% MAX.)"	% PHASE
PLANNING AND ENVIRONMENTAL	COMPLETE	\$1,872,903											\$1,872,903	100.0%		
ENGINEERING (PRELIMINARY DESIGN)	COMPLETE	\$15,044,579	\$558,818	3.7%	\$3,400,000	22.6%			\$100,000	0.7%	\$10,985,761	73.0%				
ROW ACQUISITION	COMPLETE	\$1,500,000	\$1,500,000	100.0%												
UTILITY RELOCATION	DECEMBER 2020	\$600,000	\$600,000	100.0%												
CONSTRUCTION (PHASE 2E)	COMPLETE	\$13,282,085	\$5,050,000	38.0%			\$6,600,000	49.7%			\$1,632,085	12.3%				
ENGINEERING (FINAL DESIGN)	UNDERWAY	\$11,800,000	\$11,800,000	100.0%												
CONSTRUCTION ENGINEERING	2020-2021	\$32,000,000	\$32,000,000	100.0%												
CONSTRUCTION	2021-2028	\$401,200,000	\$166,200,000	41.4%	\$1,200,000	0.3%	\$23,800,000	5.9%	\$25,000,000	6.2%					\$185,000,000	41.6%
	TOTAL PROJECT FUNDING:	\$477,299,567	\$217,708,818	45.6%	\$4,600,000	1.0%	\$30,400,000	6.4%	\$25,100,000	5.3%	\$12,617,846	2.6%	\$1,872,903	0.4%	\$185,000,000	38.8%
	FUTURE ELIGIBLE COSTS:	\$445,000,000	\$210,000,000	47.2%	\$1,200,000	0.3%	\$23,800,000	5.3%	\$25,000,000	5.6%	\$-		\$-		\$185,000,000	41.6%

**Table 3** summarizes the proposed Project Budget by funding source and share of each major construction activity (in total dollars and percentages). These data show the Project satisfies statutory cost-sharing requirements described in [Section C.2 of the NOFO](#). No requested INFRA funds are subject to limits on freight rail, port, and intermodal infrastructure described in Section B.2. No funds are subject to any condition that must be satisfied before the funding is provided. Without INFRA grant funding, this project cannot be completed in the foreseeable future.

The Project Parties are committed to raising \$50 million financial obligations from NGOs, local government, and private sector organizations.

**Figure 6 - Funding Percentages by Source**



Currently, a total of \$36 million has been pledged, including \$25 million from the GLPC and \$1.2 million each from the LA 1 Coalition and Lafourche Parish. Project Parties will continue to seek pledges and other funding sources to close the gap. Any shortfall will be covered by LA DOTD using non-federal funds to preserve its commitment to leverage federal funds.

#### IV.1 PREVIOUSLY INCURRED PROJECT COSTS

LA DOTD has previously invested \$32.3 million in advancing the Project through environmental review and preliminary design. No previously incurred costs are included in this grant request for the purpose of meeting the minimum project size requirement. INFRA grant funding will be dedicated solely to future construction costs.

#### IV.2 FUTURE ELIGIBLE COSTS

The LA DOTD is experienced in all aspects of successfully delivering a project like the LA 1 Improvement Project – Phase 2, including design, procurement, construction, inspection and project management. Design has advanced far enough to produce a reliable and reasonable cost estimate and ensure that identified future costs meet eligibility requirements as defined in [Section C.3.c of the NOFO](#). Contingency amounts are based upon normal LA DOTD standards and are adequate to ensure that project budget will cover unanticipated cost increases.

#### IV.3 NON-FEDERAL FUNDS

Documentation of local and private funding commitments are found at **Grants.Gov upload: Commitments**.

### V. MERIT CRITERIA

The LA 1 Improvement Project – Phase 2 provides benefits well aligned with the INFRA merit criteria. The Project prevents national economic harm and creates important economic benefits by:

1. Offering a Benefit Cost Ratio of 4.86 even with conservative estimates of safety and travel time improvements along with avoided national oil and gas production losses.
2. Strengthening the freight network spanning the U.S. that supports the oil and gas industry.
3. Providing rural workers with uninterrupted access to high-paying jobs—with hourly wages at or above median U.S. rural wages—in drilling, shipping, shipbuilding and other area industries.
4. Being consistent with the [Rural Opportunities to Use Transportation for Economic Success](#) (ROUTES) Initiative and addressing multiple economic challenges faced by rural areas.

## V.1 MERIT CRITERION 1: SUPPORT FOR NATIONAL OR REGIONAL ECONOMIC VITALITY

The LA 1 Improvement Project – Phase 2 substantially supports the national and regional economies by making a critically important improvement to the Louisiana freight and goods movements network that supports Gulf of Mexico oil and gas production along with other natural resource extraction industries.

The Project will deliver a Benefit-Cost Ratio of 4.86, based on the conservative, data-driven assessments and processes aligned with U.S. DOT standards and as described in detail in the **Benefit-Cost Analysis Technical Memo** appendix submitted as part of this INFRA grant application. The LA DOTD also ran a project-focused [Regional Economic Models, Inc. \(REMI\)](#) evaluation related to lost oil and gas production impacts to ensure that benefits were not overstated (see **Grants.Gov upload: REMI\_Report**).



Based on the latest USDOT guidance, the Project was analyzed over a 30-year period with benefits beginning in 2029. Our model runs through 2100 to reflect NOAA forecasts and to allow for the capture of delayed oil and gas production in the benefits discounted at seven (7) percent. The process used quantified the following six benefit classes:

1. **Travel Time Savings** resulting from reduced travel distance (about 0.6 miles shorter via the Phase 2 LA 1 combined with a speed limit increase from 50 mph to 55 mph). Using LA DOTD toll transactions as a basis for traffic volumes and assuming no growth over time, this amounts to:
  - a. 57 hours per day for autos;
  - b. 75 hours per day for trucks; and
  - c. About 48,000 vehicle-hours traveled (VHT) per year of time savings for all LA 1 users.
2. **Vehicle Operating Cost Savings** from reduced travel distance and higher operating speeds. Using the same traffic volumes:
  - a. Autos save 1,259 miles per day;
  - b. Trucks save 1,669 miles per day; and
  - c. A total of about 1,069,000 vehicle-miles traveled (VMT) per year of time savings are experienced by LA 1 users.
3. **Reduced Crash Costs** associated with a safer alternate route. Based on LA DOTD crash statistics before and after construction of improvements for the Phase 1 segment (comparable to Phase 2), there likely will be a:
  - a. 40% reduction in fatalities;
  - b. 9.3% reduction in injuries; and a
  - c. 12.5% reduction in property damage only (PDO) crashes.

Applying this reduction to the Phase 2 segment, an annual reduction of 0.24 in-vehicle fatalities, 0.80 injuries, and 4.11 PDO crashes is expected. We also assume that by diverting traffic off of old LA 1 onto a new highway without pedestrian users, 75% of pedestrian crashes can be avoided, or 0.15 fatalities and 0.45 injuries per year.

4. **Reduced Emissions Damage** resulting from reduced travel distance and higher operating speed. This benefit has minimal value.
5. **Avoided Oil and Gas Production Loss** attributable to LA 1 road closures. This is a function of three phenomena:
  - a. High Tides - every ten hours of LA 1 closure due to flooding is assumed to have a one-hour effect on Gulf oil and

gas production;

- b. **Named Storms** – there are 0.44 storms per year based on 1995-2014 Gulf experience assumed to have impacts similar to Hurricane Barry, which caused a 24-hour loss of 73% of oil production and 62% of gas production due to the road being closed longer than when producers are ready to reopen shut-in offshore wells; and
- c. **Catastrophic Storms** – there are about 0.03 storms per year or 1 every 33 years resulting in a one-week washout of LA 1 with corresponding duration of lost production.

An important note about the calculations for this benefit. The Grant Application Team conducted five days of interviews with resource agency and oil and gas executives in New Orleans and Houston as part of the research for this application. Executives with the likes of Shell, Halliburton and other corporations emphasized their belief that oil and gas production delayed is lost forever because:

- **Dead wells** - Some wells cannot be restarted after being shut down due to technical and geological reasons;
- **Maxed-out production** – Wells operate at their maximum flow rate. When they are brought back on line after a shut-down, they cannot be run at higher volumes to make up for missed production.
- **Market forces** – As a result, lost production might be assumed to simply be production that is delayed to the effective life of a particular well or reservoir. However, changing market conditions over time – demand, location-specific extraction and transport costs or other factors mean that a lost barrel may be too costly or difficult to market when it finally comes to market in 30-50 years.

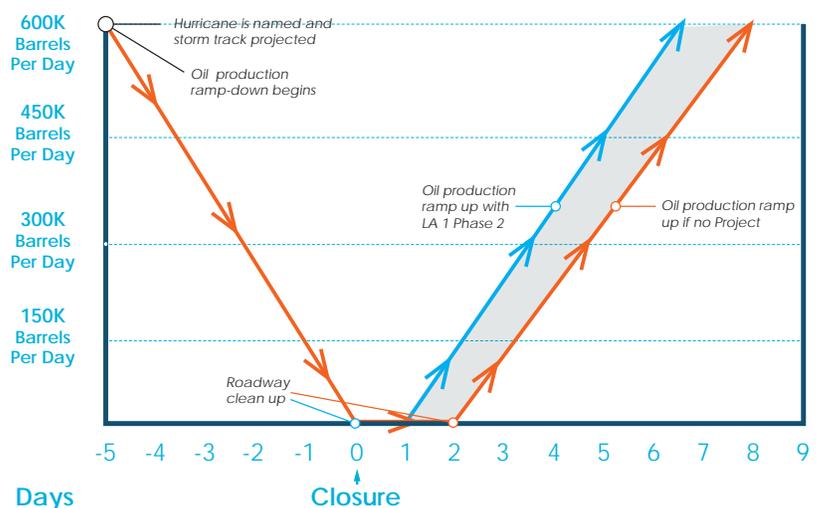
That being said, in order to ensure that the BCR was predicated on conservative estimates, the BCA:

- Reduces the value of the benefit of lost production by assuming that 96.5% of lost production will be extracted and sold in 30 years rather than lost.
- Assumes fewer, smaller storms than the science suggests will occur. The Gulf’s 1995-2014 experience and previously cited projections suggest that Category 4-5 storms are as frequent as Category 1-3 storms in the Gulf and that their number and intensity are likely to increase over time.

**6. Avoided Productivity Losses** attributable to LA 1 closures and a function of a number of factors:

- a. Lost wages for hourly workers who are not paid when they cannot get to work;
- b. Longer helicopter evacuation distances because the unreliability of LA 1 causes offshore workers to park their vehicles farther inland (e.g. [Houma](#)) instead of at [Port Fourchon](#) to avoid personal property damage.

**Figure 7 - Shut-in Diagram**



For lost wages, industry interviews cited earlier suggest that:

- 100 oil and gas producer employees (full-time-equivalents) with an average wage of \$25/hour are affected due to extended LA 1 closures after storms;
- 135-140 employees of oil and gas services firms based at Port Fourchon with average wages of \$25-\$26/hour are affected by high tides and storm-related closures; and
- 50-55 tourism employees with average wages of \$13.50/hour are affected by high tides and storm-related closures.

To ensure that conservative projections were used to arrive at the Project's BCR of 4.86, the BCA:

- Used only the employee numbers identified by industry stakeholders in the interviews cited earlier;
- Did not quantify impacts to the fishing industry, the trucking industry, or the lost productivity of salaried employees who cannot work as efficiently (e.g. those who stay in hotel rooms near Port Fourchon until the road reopens) when LA 1 is closed; and
- Assumed that for helicopter evacuations associated with storms about 25 flights carrying about 700 offshore employees could be 60 miles shorter if personnel could be evacuated to Port Fourchon instead of somewhere else along the Gulf Coast, saving \$4,000 per flight-hour.

However, it should be noted that, although not claimed in the BCA or reflected in the BCR, there are a number of factors that suggest the Project's BCR and potential economic and other benefits are much higher:

1. According to the [2020 Gulf Coast Energy Outlook](#), more than 70,000 high-quality Louisiana jobs are created through oil and gas exploration and in refineries and chemical manufacturing industries that rely on petroleum supplies. With over \$45 billion of capital expenditures in recent years in these sectors, numerous jobs in construction and elsewhere can be tracked back to the petrochemical industry. Economic impact multipliers provide a method of estimating this impact. The size of the multipliers varies by geographic area and industry, but one can conservatively estimate that one job in these sectors supports at least four total jobs through the entire economy. When indirect jobs are included, oil and gas, refineries and chemical manufacturing created eight percent of all jobs in the Gulf South region or 2.2 million workers in 2015.
2. The Project is consistent with the emphasis the USDOT and US Secretary of Transportation Elaine Chao place on improving our nation's rural transportation networks to support national and regional economic vitality. It aligns with the goals and objectives encouraged by such programs as the [Transportation Infrastructure Finance and Innovation Act Rural Project Initiative](#) (TIFIA RPI) and [Rural Opportunities to Use Transportation for Economic Success \(ROUTES\) initiative](#) by prioritizing rural production and the export of energy commodities. The Project does so by:
  - a. Securing an essential freight connection to our country's most vital energy commodity resources in the Gulf of Mexico. America exports two million barrels of oil, with [LA 1-related facilities such as the Louisiana Offshore Oil Port \(LOOP\) accounting for nearly 90 percent of that activity](#), according to the [U.S. Energy Information Administration](#).
  - b. Maintaining uninterrupted rural worker access to high-paying, high-quality hourly wage jobs in and around Port Fourchon. Located in the rural areas of southern Louisiana, these jobs offer the flexibility of extended schedules. For example, an oil platform worker may work 14 days on and have 21 days off. These schedules are particularly attractive to rural workers who operate small family farms, engage in seasonal fishing, and provide marine services as a reasonable supplement to household income. The Project addresses the unique challenges of this rural network by maintaining these workers safe, predictable, and convenient access to quality jobs and income.

**Table 4 - Benefit Cost Analysis Summary**

Key BCA Elements	Value
TOTAL CAPITAL COSTS (2018 Dollars)	\$427,504,274
PROJECT COSTS (7% DISCOUNTED) (NPV)	\$319,094,454
TOTAL NET BENEFIT	\$11,110,241,716
TOTAL NET BENEFIT (7% Discounted) (NPV)	\$1,550,862,244
BENEFIT COST RATIO	4.86

## V.2 MERIT CRITERION 2: LEVERAGING OF FEDERAL FUNDING

The Applicant has worked diligently to maximize its leveraging of Federal funding:

1. More than \$250 million in state and local funding from new and existing sources will be used to leverage the \$185 million INFRA grant award LA DOTD is seeking.
2. The Applicant’s non-Federal investment also includes up to \$50 million in local government and private-sector contributions and pledges (to be secured prior to grant award agreement) as noted in the Grant Funds section, reflecting the corridor’s importance to national and regional petroleum producers, shipping companies, seafood distributors and other major industries.

Through this combination of funding sources detailed elsewhere in this Grant Application, LA DOTD is investing 58 percent of the funds required to complete the Project, with INFRA grant funds providing the balance. It’s also worthy of note that LA DOTD and its partners have previously invested \$390 million in LA 1 Phase 1 improvements that will maximize the benefits provided by the LA 1 Improvement Project – Phase 2. Further, tolling is employed on Phase 1 to pay debt service on a TIFIA loan.

It also should be noted that local landowner [Apache Louisiana Minerals](#), among others, has granted a 4.6-mile right of way for the project at no cost to the state. In-kind contributions of this type have not been included in the leverage calculations.

## V.3 MERIT CRITERION 3: POTENTIAL FOR INNOVATION

Innovative technology, project delivery practices and financing are being deployed to:

- Facilitate a future transition to autonomous and connected vehicles;
- Expand rural 5G broadband access;
- Ensure a speedy, efficient completion of the project; and
- Increase the use of new revenues and private-sector transportation investment.

These innovations include:

## ***Innovative Technology***

The LA DOTD has committed to expanding regional rural broadband access by deploying 5G broadband fiber along the Project corridor during the roadway's construction. This will help fulfill the NOFO goal of helping advance rural Internet access in the region by reducing private-sector deployment costs. Doing so will help support sensors and actuators that LA DOTD will use to monitor weather and conditions on the elevated roadway and strengthen its incident management capabilities in the corridor, providing a direct user benefit in terms of improving safety along the corridor.

This expandable technological framework will be flexible enough to adapt to the eventual deployment of automated commercial vehicles in alignment with U.S. DOT priorities outlined in 2020's [Ensuring American Leadership in Automated Vehicle Technologies - Automated Vehicles 4.0](#). Louisiana already has positioned itself for the transition to these vehicles through passage of legislation allowing for truck platooning of electronically connected vehicles.

## ***Innovative Project Delivery***

The LA 1 Improvement Project – Phase 2 uses a range of innovative delivery practices to ensure the safe, efficient and environmentally sensitive completion of the project, many of the practices drawn directly from the Federal Highway Administration's [Every Day Counts initiative](#).

## ***Unique Construction Techniques through Environmentally Sensitive Wetland Areas***

Top-down Construction - The Project crosses environmentally sensitive marshlands, swamps, bayous, and canals. To avoid damaging these special habitats, end-on construction methods will be utilized.

This is a top-down technique where the bridge structure is advanced by working from the previously completed portion of the same structure avoiding impacts from construction to the environment below. Temporary steel piles are utilized to support an advancing truss system that serves as a working platform. Once the permanent structure is completed, work continues from the end of the new bridge.

Saltwater-Resistant Concrete - The Project will be constructed using a unique concrete designed to prevent salt water intrusion. This material possesses increased surface resistivity that limits water penetrating the concrete. Air voids in concrete are smaller, reducing permeability. This kind of concrete will extend the Project's design life and reduce maintenance costs.

Pile Dynamic Analysis - Geotechnical Innovations such as the use of Pile Dynamic Analysis (PDA) will help the Project cope with the impacts of poor soils underlying the Project Area. PDA modeling provides real-time feedback about the strength of the pile and how much load the pile will support given soil conditions where it is being driven. From information gathered as the contractor works along the corridor, time and cost savings in fabrication can be achieved by designing piles more closely to needed length and strength to meet real-world conditions.

**Figure 8 - Top Down Construction**



Top-down construction provides safety benefits by keeping workers and construction equipment on a solid, immovable structure rather than working from floating barges.

## Accelerated Bridge Construction

Precast Elements – The Project design maximizes the number of precast elements – concrete piles, caps and girders - being used to help make construction easier and to shorten the construction schedule.

Customized Concrete Fabrication – The Project will use pre-cast, pre-stressed concrete girders that allow the fabricator to remove them from the fabrication beds sooner so that the beds can be reused more quickly and allowing the girders to still cure to the LA DOTD standard of 8,500 pounds per square inch – the standard LA DOTD specification. The more rapid turnover of the fabrication beds will save the project more than \$1 million.

## Innovative Financing

INFRA emphasizes leveraging federal funds to the fullest degree possible as well as using either innovative funding sources and/or new revenue for transportation investment. The LA 1 Improvement Project – Phase 2 well aligns with this focus in several ways:

- The State of Louisiana committed \$150 million in new, non-customary LA DOTD funding for this Project through the bi-partisan passage of [Act 443](#). The legislation directs proceeds from the [Deepwater Horizon litigation settlement](#) to fund certain transportation projects through bonds backed by settlement payouts.
- The LA DOTD partnered with the [LA 1 Coalition](#), a public-private advocacy organization that has raised \$50 million in local government and private-sector contributions and commitments for the LA 1 corridor contingent upon the requested INFRA grant award. Should there be a shortfall in Coalition contributions, LA DOTD commits to filling the gap through non-federal funding sources.

**Figure 9 - Innovative Funding**



*Louisiana Governor John Bel Edwards signs into law legislation creating a new \$700 million transportation bonding program to help fund efforts like the LA 1 Improvement Project - Phase 2. It is one of several innovative funding approaches the state has taken to address its transportation challenges.*

## V.4 MERIT CRITERION 4: PERFORMANCE AND ACCOUNTABILITY

LA DOTD supports the INFRA goal of increasing project sponsor accountability and performance. Accordingly, the Department will:

1. Condition receipt of its award funding on meeting specific, measurable performance outcomes identified below;
2. Agree to have grant funding disbursed to LA DOTD as project phases are completed; and
3. Forfeit or return up to 10 percent of awarded funds or \$10 million, whichever is lower, if it does not meet its accountability measures.

For purposes of this Project, the LA DOTD accountability measures include:

1. Obligating funds by March 31, 2023;
2. Beginning construction on or before September 30, 2024;
3. Meeting the specific construction completion dates as detailed in the Project Schedule section;
4. Ensuring that, when completed, LA 1 will not close as a result of flooding caused by typical severe weather coupled with high tides or as a result of hurricanes of a severity comparable to Hurricane Barry; and
5. LA DOTD will complete the project regardless of unanticipated costs or other factors.

After funding for the Project has been awarded, the LA DOTD will regularly:

- Update the USDOT with all necessary documentation to monitor project progress and to help USDOT obligate funds as major milestones are reached;
- Ensure that reporting meets USDOT requirements and will include, but not be limited to: quarterly reports; annual budget reviews; program plan; and closeout reports; and
- Support project performance reporting measures with appropriate measurement, data collection and performance analysis.

LA DOTD understands and accepts that a modification request submission is required for any changes in the statement of work, schedule, or budget, and that the award agreement may be terminated, or financial penalties imposed should the LA DOTD fail to meet the Project's agreed upon design, expenditure, or construction deadlines.

LA DOTD has demonstrated a credible plan for addressing the full lifecycle costs associated with the Project. Several events underscore their capabilities in this regard:

1. An estimate of the lifecycle costs of the Project was developed and is presented at \$445,000,000.
2. FHWA selected the Department as one of three DOTs known for leadership in effective asset management to create a Pilot TAMP to serve as a guide for other states to develop their own plans. [The Pilot TAMP](#) was completed in 2015 and led to numerous operational and functional updates and improvements with regards to advancing asset management practices at LA DOTD.
3. As shown in its most [current asset management plan](#), LA DOTD has a number of financial strategies for assessing program- and project-specific long-term lifecycle investment needs and weighting available funding in ways to maintain system- and project-specific performance goals.
4. The plan requires the LA DOTD, in the face of significant funding shortfalls, to focus on preventing asset decline by deferring capacity projects and focusing available funding on critical assets, particularly high-priority corridors and bridges such as LA 1.

## VI. PROJECT READINESS

The LA 1 Improvement Project – Phase 2 is the culmination of more than two decades of LA DOTD work that has proven the technical feasibility and effectiveness of its design. When joined with the already-constructed Phase 1, America's Gulf oil and gas production will benefit from an 17-mile, full access-controlled, elevated highway on a new location between Golden Meadow (LA 3235) and Port Fourchon (LA 3090). It will become one of the longest bridges in Louisiana and the Americas—almost as long as the Pontchartrain Bridge in New Orleans, generally regarded as the world's longest bridge. Such lengthy bridges and elevated roadways in a maritime environment are not uncommon in Louisiana, which arguably has more DOT and state contractor experience with such structures than any other U.S. state.

## VI.1 TECHNICAL FEASIBILITY

The LA 1 Improvement Project – Phase 2 will elevate an 8.3-mile stretch of rural, at-grade Louisiana State Highway 1 on a concrete structure 22 feet above water level using proven bridge materials and construction methods typically used in the aquatic environments of the coastal plains of Louisiana. The Project will be built above the maximum hurricane storm surge event, eliminating the primary hurricane-damage cause, and will incorporate Intelligent Transportation System technologies that will enable the LA DOTD to monitor bridge conditions before, during and after severe weather events.

The Project's feasibility is well established. Phase 1 has already been constructed and has been operational since 2011. Phase 2 has completed environmental clearances, engineering, right-of way, utilities, and permitting work. Final design is underway using, among other inputs:

- [AASHTO LRFD Bridge Design Specifications, Seventh Edition, 2014](#) with 2015 Interim Revisions
- [AASHTO Standard Specifications for Structural Supports for Highways, Luminaries, and Traffic Signals 2013](#)
- [LADOTD Bridge Design and Evaluation Manual](#)

The applicant has a history of ambitious capital delivery projects being constructed on or significantly ahead of schedule, demonstrating how the LA DOTD project delivery process minimizes the risk of cost and schedule overruns. For example, Phase I of the project was completed on time and on budget.

This means that the proposed project cost estimate (**Table 3**), based on recent knowledge, is fundamentally sound. With design work nearly complete, contingency levels were set at 3.25% percent in accordance with normal LA DOTD practice and project experience.

## VI.2 PROJECT SCHEDULE

The Project will fulfill all INFRA requirements, including:

- Meeting the funding obligation deadline early;
- Completing final design in a timely manner; and
- Beginning construction quickly upon obligation of funds.

The Project Schedule, shown in **Figure 10**, provides detailed information regarding all major project milestones including previously completed tasks as well as next steps.

Figure 10 - Project Schedule Summary

TASK	2020			2021				2022				2023				2024				2025			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Partnership Agreement (Completed) ✓																							
Traffic Study (Completed) ✓																							
Interchange Concepts (Completed) ✓																							
Environmental Clearance Process Screening (Completed) ✓																							
Environmental Clearance Process CE (Completed) ✓																							
Survey (Completed) ✓																							
Soils Investigation (Completed) ✓																							
Utility Impact Investigation/Coordination (Completed) ✓																							
Preliminary Design, Develop Base Plans (Completed) ✓																							
USDOT INFRA Grant Review																							
Environmental Permit Assessment and Approval (Completed) ✓																							
Financial Obligation																							
Public Communication/Engagement																							
Design, Develop Pre-Final Plans and Specs , Phase 2A (Completed) ✓																							
Design, Develop Pre-Final Plans and Specs , Phase 2B (Completed) ✓																							
Design, Develop Pre-Final Plans and Specs , Phase 2C																							
Final Design, Develop Final Plans and Specs																							
Specifications/Estimates Review																							
Funds Obligation Upon Grant Award																							
Project Advertisement																							
Project Letting																							
Construction																							

★ Ends 2028 →

### VI.3 REQUIRED APPROVALS

The LA 1 Improvement Project – Phase 2 has completed all environmental reviews and requests for permits and authorizations needed for the project to proceed to construction. The following is a timeline of the requisite approvals and permits:

- Conducted an [FEIS in 2002](#);
- Received an [FHWA Record of Decision](#) in 2003;
- Received a revised [FHWA Record of Decision in 2004](#) (minor refinements);
- Received a revised [FHWA Record of Decision in 2009](#) (minor refinements);
- Received a revised [FHWA Record of Decision in 2011](#) (minor refinements);
- Received an [FHWA ROD verification in 2014](#);
- Completed all [required Louisiana Department of Natural Resources permits in 2015 and 2016](#);
- Secured [State and Federal permits](#);
- Received a [Coastal Use Permit](#); and
- Initiated a request for a U.S. Coast Guard permit for the bridge crossing of the Bollinger Canal in 2020.

The Project will be included in the TIP and STIP upon INFRA grant funding approval.

The project enjoys broad public support as a result of recognized local needs, years of outreach, and design changes that respond to stakeholder concerns. For example, LA DOTD agreed with stakeholders to leave the old LA 1 in place to provide access to businesses and other facilities that will not relocate with the opening of the new facility and to refrain from tolling of the new facility and to refrain from increasing toll rates given local use patterns and economic conditions. Public support is also evidenced by the \$50 million in public- and private-sector contributions and commitments toward the Phase 2 construction costs.

The outreach connected with the project’s NEPA and planning processes included the following number of meetings conducted over the span of nearly two decades (not a complete list):

- Interagency/Resource agency meetings - 25
- Local officials meetings – 3
- Local property owner meetings – 4
- Public- and private-sector media coverage – LA DOTD and LA 1 Coalition electronic outreach; various TV/radio/newspaper coverage
- Public meetings and hearings – 8
- Public notices/calls for comments – 5
- State and federal elected officials briefings (formal) - 6

### VI.4 ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

Phase 2 likely will encounter only minimal risks and has effective mitigation strategies in place to address them:

- The applicant has a history of ambitious capital delivery projects being constructed on or significantly ahead of schedule, including on Phase I of LA 1.
- Preliminary engineering is complete and final design is in process, cutting the risk of engineering and design task delays.
- Right-of-way acquisition is substantially complete, minimizing the risk of delays and budget issues. Agreement on pipeline relocation is underway, and bonds are available to pay for any relocation.
- Construction will avoid or minimize delays from environmental mitigation and protocols because major Project segments will be build using “top-down” construction methods to protect sensitive wetlands and marshes and accelerate construction completion. While new to many parts of the country, LA DOTD is experienced in these techniques as a

result of the successfully completed Phase I Project and many other similar projects.

**Table 5 - Risk Mitigation Strategies**

<b>RISK</b>	<b>LIKELIHOOD OF OCCURRENCE</b>	<b>MITIGATION STRATEGY</b>
<b>Environmental</b>	<i>Low</i>	Environmental risks are well defined and addressed through top-down construction techniques and market experience with environmental requirements.
<b>Funding</b>	<i>Medium</i>	State, local and private-sector funding secured; INFRA grant funding decision pending.
<b>Procurement</b>	<i>Low</i>	Project is well defined, with little risk uncertainty, in a market with multiple contractors experienced in bayou/ maritime construction techniques.
<b>Safety</b>	<i>Low</i>	Construction workers and equipment will operate from the bridge rather than from the bayou or construction barges.
<b>Schedule</b>	<i>Low</i>	Concurrent construction at each end of the Project, ABC techniques and use of customized concrete girder production minimizes risk of construction delays.
<b>Right of Way</b>	<i>Low</i>	Substantially complete.
<b>Technical Feasibility</b>	<i>Low</i>	Applicant is well experienced with these type of structures and successfully delivering them. Project is well defined and risks well understood and mitigated.

Table 6 - Large Project Requirements

REQUIREMENT	GUIDANCE / REFERENCE
<p>Does the project generate national or regional economic, mobility, or safety benefits?</p>	<p>Yes – The Project elevates and widens an existing at-grade two-lane roadway with narrow shoulders that is prone to flooding and has considerable heavy-capacity truck traffic. The Project bolsters the national economy by strengthening the increasingly threatened freight connection to 90% of America’s Gulf of Mexico oil extraction.</p> <p>For details, see <b>Project Description</b> and <b>Merit Criterion 1: Support for National or Regional Economic Vitality</b></p>
<p>Is the project cost effective?</p>	<p>Yes – Project BCR is 4.86.</p> <p>For details, see <b>Merit Criterion 1: Support for National or Regional Economic Vitality</b>.</p>
<p>Does the project contribute to one or more of the Goals listed under 23 U.S.C. 150 (and shown below)?</p> <p>(Safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, reduced project delivery delays)</p>	<p>Yes – The Project greatly improves safety, infrastructure condition, system reliability, and freight movement and economic vitality while reducing project delivery delays.</p> <p>For details, see <b>Transportation Challenges Addressed, Merit Criterion 1: Support for National or Regional Economic Vitality</b> and <b>Merit Criterion 3 -Innovative Project Delivery</b>.</p>
<p>Is the project based on the results of preliminary engineering?</p>	<p>Yes – Preliminary engineering is complete</p> <p>For details, see <b>Assessment of Project Risks and Mitigation Strategies</b>.</p>
<p>With respect to non-federal financial commitments, does the project have one or more stable and dependable funding or financing sources to construct, maintain, and operate the project?</p>	<p>Yes – DOTD has committed considerable non-Federal funds to the Project and has a significant asset management plan in place.</p> <p>For details, see <b>Grant Funds, Sources and Uses of Project Funds</b> and <b>Merit Criterion 4: Performance &amp; Accountability</b>.</p>
<p>Are contingency amounts available to cover unanticipated cost increases?</p>	<p>Yes – Contingency levels are set at 3.25%.</p> <p>For details, see <b>Future Eligible Costs, Grant Funds, Sources and Uses of Project Funds</b> and <b>Technical Feasibility</b>.</p>
<p>Is it possible that project cannot be easily and efficiently completed without other federal funding or financial assistance available to the project?</p>	<p>Yes – the Project cannot be completed without INFRA funds.</p> <p>For details, see <b>Grant Funds, Sources and Uses of Project Funds</b>.</p>
<p>Is the project reasonably expected to begin construction not later than 18 months after the date of the obligation of funds for the project?</p>	<p>Yes – construction is expected to begin in Q3, 2021.</p> <p>For details, see <b>Project Schedule</b>.</p>