

The background of the cover features a photograph of a bridge structure over water. The bridge has large concrete pillars and a series of arches. The image is overlaid with large, semi-transparent geometric shapes in shades of blue and orange, creating a modern, abstract design.

BRIDGING THE GULF

*Creating Opportunity on
the Victoria Barge Canal*

February 2024

**Rebuilding American Infrastructure with
Sustainability and Equity (RAISE) Grant Application**



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1. Project Description

Overview

The Texas Department of Transportation (TxDOT) is requesting \$25 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program to support *Bridging the Gulf: Improving Safety on the Victoria Barge Canal*. A \$60 million project, this critical investment will replace the bridge carrying State Highway 35 (SH 35) over the Victoria Barge Canal. Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a navigational clearance of 50 feet that is now insufficient. In 2023, an average of 3 to 8 strikes per month resulted in frequent bridge repairs, and repeated damage to the bridge’s fender system. **If the existing bridge were to deteriorate into Poor condition or close, it would force the deployment of a 40+ mile detour generating \$3.5 million in external costs every week.** The existing steel girder superstructure requires regular maintenance, painting, and inspection; the proposed prestressed concrete bridge replacement would minimize these costs while increasing the navigational clearance to 75 feet and widening the main span to eliminate in-water infrastructure.

Bridging the Gulf will shape the future of economic development for the Port of Victoria, San Antonio Bay, and the surrounding region. The project will directly support all eight of the RAISE Merit Criteria as shown in the table below.

Table 1-1 | Merit Criteria Implementation Strategies

Merit Criterion	Implementation Strategy
Safety*	<ul style="list-style-type: none"> Increase bridge clearance to reduce strikes and closures. Widen shoulders to improve emergency access.
Environmental Sustainability*	<ul style="list-style-type: none"> Maintain width and depth of Texas waterways, pursuant to TxDOT’s Port Mission Plan and Carbon Reduction Strategy. Reduce barge strikes and hazardous material spills.
Quality of Life*	<ul style="list-style-type: none"> Improve access to major job centers and growth opportunities in and around the Port of Victoria. Improve freight travel time reliability.
Mobility & Community Connectivity*	<ul style="list-style-type: none"> Reduce exposure to 40+ mile detour if bridge closes. Align with nearby multimodal investments in rail and ports.
Economic Competitiveness & Opportunity*	<ul style="list-style-type: none"> Accommodate projected growth in barge traffic. Incentivize industrial job creation in region by improving travel time reliability and freight safety.
State of Good Repair*	<ul style="list-style-type: none"> Replace corroded steel frame with prestressed concrete. Increase clearances to reduce bridge strikes.
Partnership & Collaboration	<ul style="list-style-type: none"> Support continued growth for Port of Victoria. Encourage high-quality workforce development.
Innovation	<ul style="list-style-type: none"> Deploy new monitoring and detection sensors. Leverage advanced digital construction techniques to minimize traffic disruption.

* = Primary Project Purpose

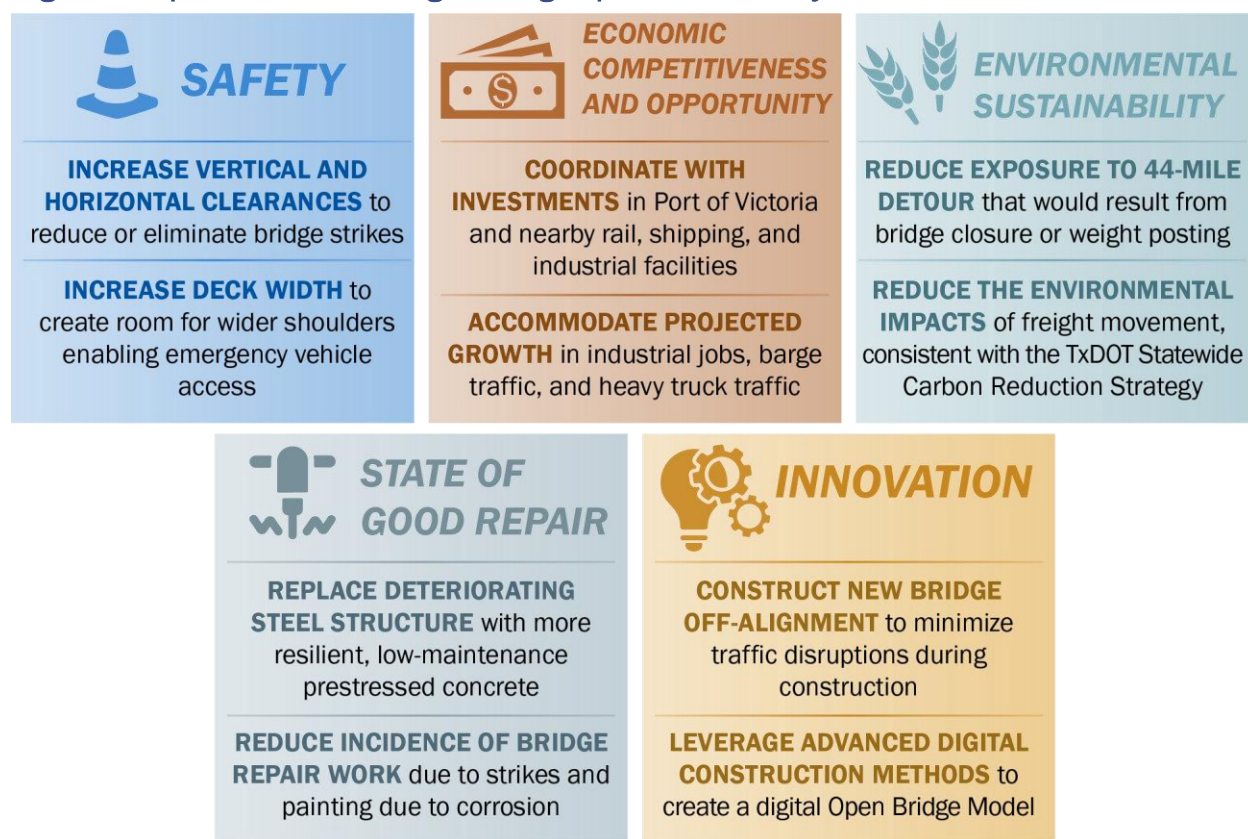


Statement of Work

Technical and Engineering Aspects of the Project

This project will replace the existing bridge (NBI Structure Number 130290018001034), which carries SH 35 over the Victoria Barge Canal in Calhoun County, Texas. The existing bridge carries one lane of traffic in each direction, totaling about 3,500 vehicles per day. As of 2019, trucks made up 15.3% of daily traffic, a number that is only expected to climb as the area continues to industrialize. **The proposed project will replace the existing bridge with a taller, wider structure designed to mitigate safety concerns, bring a key commercial corridor up to a state of good repair, and make room for continued growth in the Port of Victoria, Calhoun County, and the Greater Victoria Region.**

Figure 1-1 | Technical and Engineering Aspects of the Project



Current Design Status

TxDOT completed 30% design plans in September 2023. The 60% design plans are nearly complete, due April 5, 2024. TxDOT expects to complete design by December 2024. Following completion of design, TxDOT has already identified two parcels that will need to be acquired for the project. Right-of-way acquisition and utility relocation will be completed by January 2026, prior to an anticipated letting date of October 2026. A complete schedule is available in the [Project Readiness](#) section of this application.



Transportation Challenges to be Addressed

Capacity Challenges for Road and Canal Users

The existing SH 35 bridge over the Victoria Barge Canal is inadequate in several ways:

- The bridge piers and protective fender system create a bottleneck in the canal, requiring single-file barge passage under the bridge. The narrow navigational clearance results in bridge strikes by barges as frequently as **twice weekly**. TxDOT has spent an estimated **\$1.75 million** on the last three rounds of repairs to mitigate barge strikes. **The proposed project would replace the 554-foot bridge with a 2,970-foot structure that fully spans the Victoria Barge Canal, eliminating all in-water structural elements.**
- The current vertical clearance of 50 feet has historically hindered expansion at the Port of Victoria, with potential developers citing the overhead clearance as an obstacle to movement of waterborne construction modules. The proposed project would **increase the vertical clearance to 75 feet, unlocking the economic development potential of the Port of Victoria and surrounding region.**
- At just 29.8 feet wide, the existing bridge deck is too narrow to accommodate safe shoulders for emergency use or cyclist and pedestrian passage. The bridge is also 15 feet narrower than the approaching roadways on either side. With 3,500 vehicles crossing daily, truck traffic at 15.3%, and Annual Average Daily Traffic (AADT) expected to grow by 1.9% annually over the next 20 years, rising traffic volumes will exacerbate the capacity challenges caused by bridge constriction. **The proposed project will install 10-foot shoulders on the bridge in each direction to ensure safe passage and access for all modes including emergency personnel, cyclists, and pedestrians.**

Lack of Alternative Routes

This project will replace **one of only two vehicular crossings over the Victoria Barge Canal**. Given that the other crossing is nearly 20 miles north, failure or closure at the SH 35 bridge would result in a **44-mile detour**, which would adversely impact the residents of Calhoun County who rely on the bridge to access jobs, schools, and community centers on either side of the canal. The detour would similarly impact adjacent businesses that produce products and materials critical to supply chain manufacturing like [INEOS' Green Lake Works](#), a 4,000-acre site with 208 employees that produces acrylonitrile, acetonitrile, hydrogen cyanide, and acetylcholine used to manufacture carpets, clothing, plastics, pharmaceuticals, solvents, plexiglass, and more. **Bridging the Gulf will construct a stronger, more resilient bridge to reinforce a critical connection for adjacent communities and businesses that rely on the Victoria Barge Canal and its few crossings.**

Economic Growth Potential is Limited by the Existing Bridge

The SH 35 bridge is a key asset for Calhoun County and the Greater Victoria region, but it cannot keep up with the demands and plans for growth surrounding it. Nearby plants and distribution centers for Dow Chemical, Seadrift, Frontier Logistics, Calhoun Chemical, and INEOS Nitriles house thousands of jobs. The Port of Victoria is a multimodal hub for shipping, with waterway, rail, highway, and air transportation options.



This project lays critical groundwork for future economic development by:

- Improving reliability along SH 35, which connects major arteries in South Texas and 15 million+ customers, including US 59, US 77, US 87, and I-10 and I-37;
- Facilitating the construction of \$8 billion in site improvements under option at the Port of Victoria, including significant investments in renewable energy production; and
- Accommodating larger, heavier, and more frequent barge traffic in the Victoria Barge Canal to support expansion at the Port of Victoria.

Funding this project will allow for the construction of a bridge that can unlock the growth potential of Calhoun County and Greater Victoria. Without it, this region could miss out on development opportunities due to substandard infrastructure.

Placing the Project in Broader Context

The Project will enhance local, regional, and statewide economic competitiveness. The [Port of Victoria](#) combines multiple transportation advantages in one location. Businesses can send and receive goods and supplies by air, railroads, highways, and across the water, connecting the [Port of Victoria](#) to the Gulf Coast and onward to Florida and the Great Lakes through a network of connected canals and river basins. A new bridge will expedite current traffic and permit heavier multimodal loads needed for local industrialization to continue. Improvements complement existing enhancements occurring at the Port of Victoria made possible from the \$6 million CARES Act Grant awarded to the Victoria County Navigation District to improve BNSF and Union Pacific freight rail capacity; expanding rail at the Port will enable increased barge traffic along the canal and alleviate current backlogs.

Project Location Narrative

The Project connects SH 35 over the Victoria Bridge Canal. It is located on the southeastern coast of Texas, approximately 150 miles from Houston and 135 miles from San Antonio. The Project is in rural Calhoun County, adjacent to Refugio County on the west and Victoria County to the north. The Project is surrounded by multiple water features; Green Lake to the north and Mission Lake to the south, leading to the San Antonio Bay ([Figure 1-2](#)).

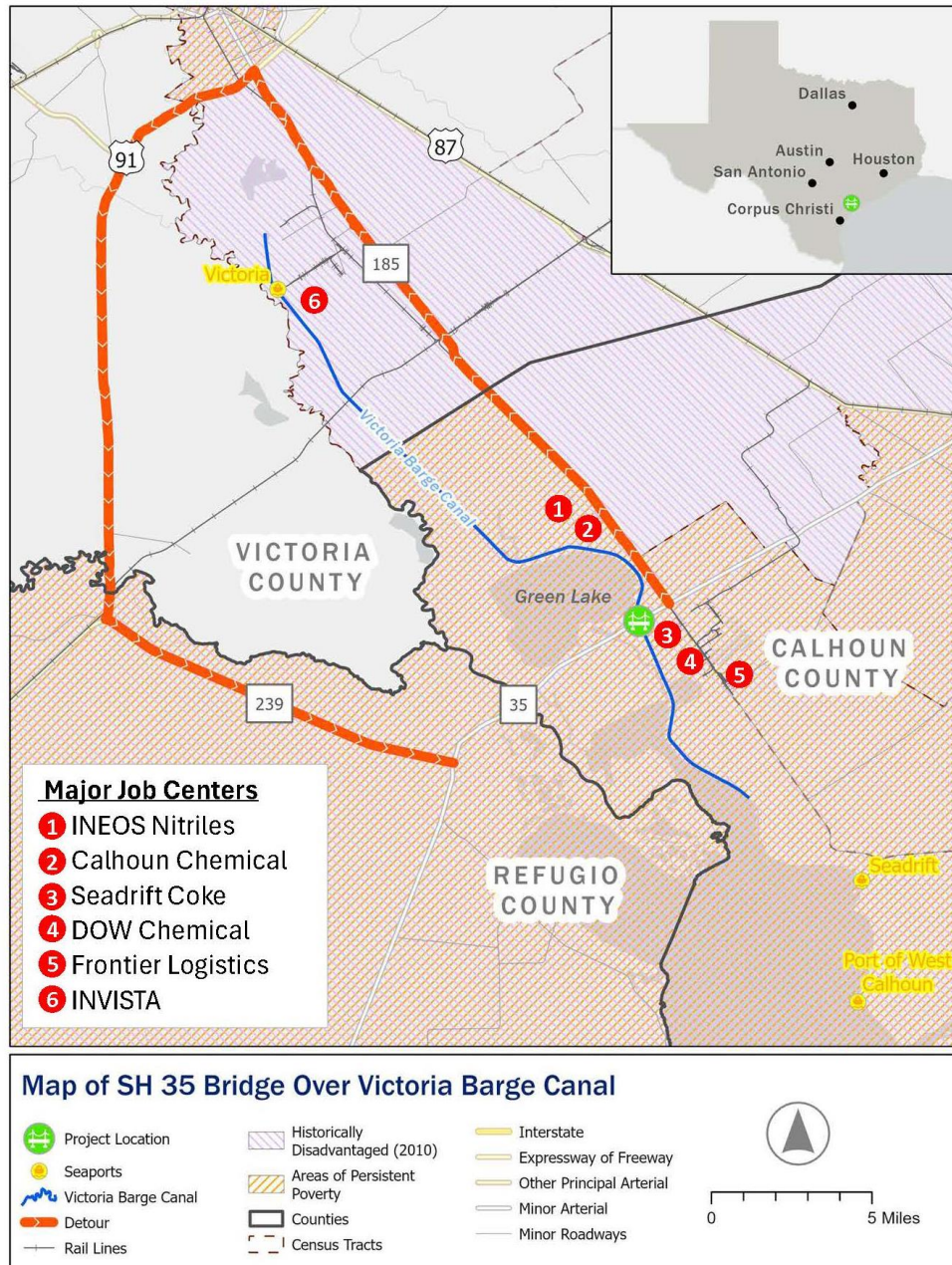
The Bridge is part of an interconnected network of multimodal transportation spanning rail, roadways, and waterways. The Port of Victoria is connected by water via the Gulf Intracoastal Waterway (GIWW), by rail via Union Pacific, by road via US 77, and Texas State Highways 35, 185, and 239, and by air via the Victoria Regional Airport. In 2016, the Texas portion of the GIWW (GIWW-T) was designated as [Marine Highway 69](#) by the U.S. Maritime Administration in recognition of its contributions to the transportation network. Prior to the M-69 designation, the GIWW-T was part of the larger M-10 corridor, which encompasses the entire length of the GIWW from Florida to Brownsville. SH 35 and US 77 are part of the Texas Highway Freight Network, as designated by TxDOT. SH 35 also includes connections to critical State Evacuation Routes on US 87 and SH 239, which provide points of access for coastal communities escaping extreme weather events.

The Project Area facilitates interlocal traffic in Southeast Texas as well as passenger and freight traffic between the Corpus Christi region and Houston. The Project Area is close to

Census-designated urban areas in the cities of Port Lavaca and Victoria, approximately 13 and 25 miles away, respectively.

Census tract 5.02, where the Project is located, is considered a [Historically Disadvantaged Community](#) (HDC) due to numerous factors that affect the residents' quality of life and wellbeing, including energy, public health, transportation, and income. The Project location is also considered an [Area of Persistent Poverty](#), overlapping with the HDC boundary throughout Calhoun County as shown in Figure 1-2.

Figure 1-2 | Project Area Map



2. Project Budget

Overview

The Texas Department of Transportation (TxDOT) is requesting \$25 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program to support *Bridging the Gulf*. A \$60 million project to replace the existing bridge carrying SH 35 over the Victoria Barge Canal, this critical safety investment will:

- Replace a low, narrow bridge built in 1960 with a wider, taller structure, reducing the incidence of bridge strikes.
- Increase resiliency and reduce maintenance costs for TxDOT, Calhoun County, and the Greater Victoria region by replacing an at-risk steel structure with a prestressed concrete bridge with longer spans that increase the barge opening.
- Unlock the economic potential of the region by accommodating multimodal freight traffic near two ports, encouraging investment in high-quality industrial and logistics jobs.

Figure 2-1 | Bridge and Fender System



TxDOT estimates that the future eligible costs associated with this project will be approximately \$60 million. This estimate was generated at the alignment, material, and component level, corresponding to the 30% design phase. As shown in [Table 2-1](#), this project will be supported by RAISE and Non-Federal Funds.

Table 2-1 | Project Budget by Source of Funds

Funding Source	Funding Amount	Cost Share
RAISE Funds	\$25,000,000.00	41.67%
Other Federal Funds	\$0	0%
Non-Federal Funds	\$35,000,000.00	58.33%
Total Project Cost	\$60,000,000.00	100.00%

The project is located entirely within Calhoun County, Texas. The limits fall within the boundaries of 2020 Census Tract 5.02, identified in the 2010 Census as Tract 5. This is

entirely a **rural** area. It is considered an **Area of Persistent Poverty** and a **Historically Disadvantaged Community**. Not all of Calhoun County is considered Historically Disadvantaged, but nearly one in six residents live below the Federal poverty line. The tables below present the estimated project costs by census tract and urban/rural designation pursuant to the guidance in the FY2024 RAISE NOFO.

Census Tract 5.02 has considerable [transportation barriers](#) already. The area is in the 95th percentile for average relative cost and time spent on transportation. That burden also falls on a population with low rates of educational attainment. This project will make a timely investment to prevent a 40+ mile detour if the bridge were to close, which would exacerbate already significant transportation barriers.

Table 2-2 | Project Costs by 2020 Census Tract

2020 Census Tract(s)	Project Costs per Census Tract
Census Tract 5.02	\$60,000,000.00

Table 2-3 | Project Costs by 2010 Census Tract

2010 Census Tract(s)	Project Costs per Census Tract
Census Tract 5	\$60,000,000.00

Table 2-4 | Project Costs by Urban/Rural Designation

Urban/Rural	Project Costs
Urban (2020 Census-designated urban area with a population greater than 200,000)	\$0.00
Rural (Located outside of a 2020 Census-designated urban area with a population greater than 200,000)	\$60,000,000.00
Total Project Cost:	\$60,000,000.00

Sources, Uses, and Availability of Funds

The project is included in the [FY2023-2026 TxDOT Statewide Transportation Improvement Program \(STIP\)](#). It is listed as a Grouped Control-Section-Job (CSJ) under CSJ-5000-00-953 which provides dedicated funding to “replace and/or rehabilitate functionally obsolete or structurally deficient bridges.” As shown in [Table 2-1](#), the funding for this project includes **\$35 million** in non-federal funds.

The State of Texas is a stable and reliable funding partner committed to maintaining the existing system and building new infrastructure to encourage economic growth. A broad range of state funding sources leverage federal funding support and are dedicated by the Texas Constitution to fund public roadway projects, including:



1. State motor vehicle fuels tax;
2. State vehicle registration fees;
3. Oil and gas severance taxes (Proposition 1); and
4. General sales and use tax, motor vehicle sales, and rental tax (Proposition 7).

If TxDOT is awarded the \$25 million in RAISE funds requested for this project, TxDOT commits the remaining \$35 million from a combination of these state funds to complete the funding package for *Bridging the Gulf*.

Table 2-5 | Detailed Project Budget

Category	Federal	Non-Federal	Total
Design	\$570,405.41	\$798,567.57	\$1,368,972.98
Right-of-Way	\$166,666.67	\$233,333.33	\$400,000.00
Utility Relocations	\$628,702.35	\$880,183.30	\$1,508,885.65
Roadway	\$2,422,906.25	\$3,392,068.75	\$5,814,975.00
Barricades	\$37,500.00	\$52,500.00	\$90,000.00
Drainage	\$32,541.67	\$45,558.33	\$78,100.00
Erosion	\$71,469.79	\$100,057.71	\$171,527.50
Mobilization	\$1,666,666.67	\$2,333,333.33	\$4,000,000.00
Pavement Markings	\$19,800.42	\$27,720.58	\$47,521.00
Removal	\$150,020.83	\$210,029.17	\$360,050.00
Signing	\$4,875.00	\$6,825.00	\$11,700.00
Work Zone	\$395,429.42	\$553,601.18	\$949,030.60
Structural	\$13,582,874.25	\$19,016,023.95	\$32,598,898.20
Contingency	\$3,750,000.00	\$5,250,000.00	\$9,000,000.00
Inflation (4% x 2 Years = 1.0816)	\$1,500,141.28	\$2,100,197.79	\$3,600,339.07
Total	\$25,000,000.00	\$35,000,000.00	\$60,000,000.00

Contingency Amount

The budget for this project includes approximately **\$9 million** in contingencies. TxDOT has determined this amount is sufficient to cover unanticipated cost increases based on the current level of design. Projects of similar size and scope have succeeded with proportionate contingency funds set aside, which are most often used to account for change orders, incentives, disincentives, force account work, and other miscellaneous expenses that arise.




In the unlikely event that the project budget evolves to exceed planned expenditures and contingency amounts, TxDOT has developed a **Plan to Address Potential Cost Overruns**.



Plan to Address Potential Cost Overruns

The funding requested is expected to complete a funding package to execute the entirety of this project. In the unlikely event that the budget for this project is determined to exceed \$60 million at any point in the final design, letting, or construction processes, TxDOT will deploy a three-phased approach to mitigate cost overruns as shown in [Figure 2-2](#).

Figure 2-2 | Plan to Address Potential Cost Overruns

<p>PHASE 1</p>  <p>VALUE ENGINEERING STUDY</p>	<p>TxDOT includes a Value Engineering (VE) study as a standard part of its project development process. TxDOT policy requires that each VE study include and document <u>seven</u> unique phases:</p> <ol style="list-style-type: none">1. Information: Gather project information, commitments, and restraints.2. Function Analysis: Analyze project to understand required functions.3. Creative: Generate ideas to improve performance, enhance quality, and lower project costs.4. Evaluation: Evaluate feasible ideas for development.5. Development: Develop the selected alternatives into fully supported recommendations.6. Presentation: Present VE recommendations to stakeholders.7. Resolution: Evaluate, resolve, document and implement all approved recommendations.
<p>PHASE 2</p>  <p>PRIORITIZE INVESTMENTS</p>	<p>The 2024 Texas Unified Transportation Program provides a framework for identifying and allocating funds to address cost overruns for projects ready for letting. Pursuant to a legislative mandate, each TxDOT district receives a minimum of \$2.5 million in discretionary funds, with additional funding distributed through an allocation formula. The Texas Transportation Commission may supplement the funds allocated to individual districts on a case-by-case basis to cover project cost overruns.</p>
<p>PHASE 3</p>  <p>PURSUE ADDITIONAL FUNDING</p>	<p>TxDOT has developed a tested strategy for securing additional funds for major projects including recent grants for the Texas Active Transportation Network (\$25 million) and the US 59 San Antonio River Bridge (\$14.04 million). In the event of a major cost overrun that could not be resolved through Phases 1 and 2, TxDOT would deploy a combination of these tools to secure the required funding. TxDOT would entertain all avenues to make the project whole and to secure sufficient financing to proceed.</p>



Level of Design and Cost Estimates

This project has reached a **30%** level of design. Project cost estimates were prepared by TxDOT to support the 30% designs, which were completed in September 2023. TxDOT is confident recent estimates account for both itemized and anticipated expenditures, including, but not limited to design completion, right-of-way acquisition, utility coordination, material cost escalation, and potential scope creep.

Cost Share or Non-Federal Funding Match

This project satisfies the statutory cost share by committing **58.33%** of the overall budget in non-federal funds (\$35 million non-federal out of a total budget of \$60 million).

Financial Completeness Assessment

This section includes all required information to demonstrate that TxDOT has presented a complete funding package based on reasonable cost estimates. **Table 2-6** summarizes the Financial Completeness of *Bridging the Gulf*.

Table 2-6 | Financial Completeness Assessment Summary

Criteria	Details
All Funding Sources for Project Budget Identified	<ul style="list-style-type: none"> • Table 2-1 summarizes the allocation of all funding sources intended to support the project. • Additional funding details are also provided in the Sources, Uses, and Availability of Funds section.
Funding Availability and Commitments Documented	<ul style="list-style-type: none"> • The project is included and funded in the FY2023-2026 TxDOT STIP. • TxDOT has also included a letter as Appendix A to this application to demonstrate proof of funding commitments.
Contingency Amounts Included in Project Budget	<ul style="list-style-type: none"> • The project budget of \$60 million includes \$9 million in contingency funds, derived from 30% design-level estimates.
Plan to Address Cost Overruns Described	<ul style="list-style-type: none"> • This application includes a three-phase plan to address potential cost overruns, shown in Figure 2-2. • The plan is directly informed by existing TxDOT policies, plans, and programs.
Cost Estimates No More Than a Year Old	<ul style="list-style-type: none"> • Cost estimates were produced to support 30% designs, finalized in September 2023. • TxDOT will finalize additional estimates at the 60% design level in Spring 2024, and again when designs are completed at the end of 2024.

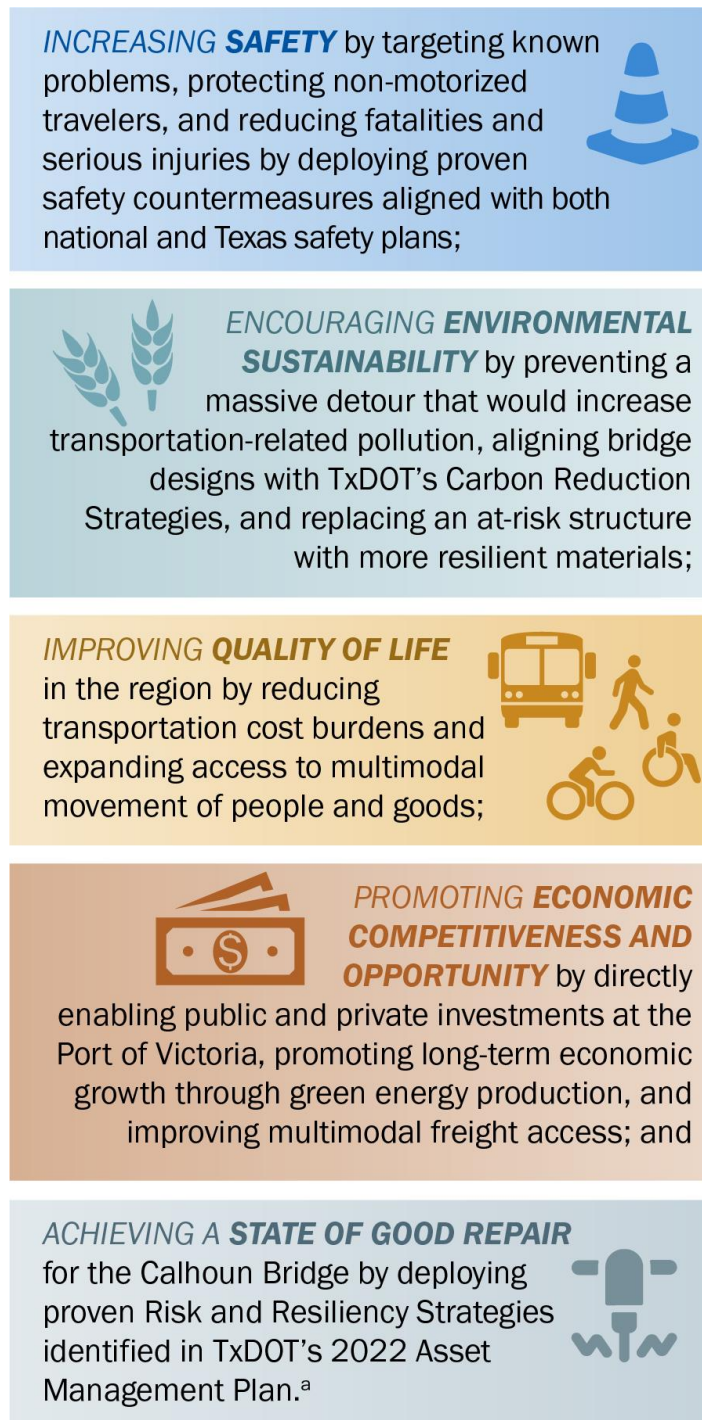
3. Merit Criteria Narrative

The Texas Department of Transportation (TxDOT) is requesting \$25 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program to support *Bridging the Gulf*. A \$60 million project to replace the bridge carrying State Highway 35 (SH 35) over the Victoria Barge Canal, this critical safety investment will:

- Improve public safety by redesigning a 1960 bridge with a wider, taller structure, designed to withstand modern freight loads and accommodate pedestrians, cyclists, and access for emergency vehicles;
- Eliminate the incidence of bridge strikes and crashes by increasing the main span length to traverse the entirety of the Victoria Barge Canal, eliminating the opportunity for pier strikes by barges; and
- Expand the economic development potential of Calhoun County and the Greater Victoria region by increasing the vertical clearance of the structure, opening the possibility of floating large, industrial construction modules through the Canal to expand the offerings at the Port of Victoria.

As this section shows, this project directly addresses all eight Merit Criteria identified in the 2024 RAISE Program NOFO. The five **Primary Purposes** of this project are listed in **Figure 3-1**.

Figure 3-1 | Primary Project Purposes



^a [TxDOT's 2022 Asset Management Plan](#).



Safety

One of the primary purposes of *Bridging the Gulf* is improving the safety of SH 35 by replacing the existing bridge with a new structure that increases the load carrying capacity, incorporates better safety countermeasures, and improves navigational clearance through the Victoria Barge Canal. Secondary safety benefits include (1) reducing ongoing repair costs, accompanied by disruptive work zones, and (2) reducing the risk of bridge closures, which would detour traffic 44-miles on high-risk roadways.

Targeting Known Safety Problems

TxDOT is committed to improving safety, and pursuing zero crash-related deaths by 2050. TxDOT has developed the [Texas Strategic Highway Safety Plan](#) (SHSP) (2022-2027) to identify the most effective and efficient strategies and actions to reduce fatalities and injuries on Texas roads. Proven counter measures identified in the Texas Traffic Safety Task Force Report [Solutions for Saving Lives on Texas Roads](#) (2016) in this project include:

Figure 3-2 | Proven Safety Countermeasures Incorporated Into Design



Other known safety problems being addressed in the design and construction of the new proposed bridge include:

- **Limiting Risk of Bridge Strikes by Barges Navigating the Victoria Barge Canal** – The proposed bridge redesign includes removing bridge footings from the canal, eliminating the risk of barge strikes. Currently, the fender system near the bridge footings is struck three to eight times per month due to the narrow horizontal passage.
- **Increasing Bridge Carrying Capacity** – The current bridge was constructed in 1960 and has a H-20 design load, a limit of 32,000 pounds. Since the bridge was constructed, reliance on truck freight has increased, with larger and heavier trucks frequently being used to transport materials. SH 35 is part of the state freight system and 15.3% of the total AADT are trucks, largely due to the proximity to two ports and surrounding industrial land uses. Failing to replace the structure will accelerate deterioration and pose a safety risk as heavy trucks continue to use the bridge.

Protecting Non-Motorized Travelers from Safety Risks

While there is limited pedestrian and non-motorized travel in the project area, if the bridge were to close, the detour includes a 44-mile route that travels into more densely populated areas. The increase in traffic along the detour puts more travelers at risk compared to when the bridge is open and functional. The SHSP identified 11 safety emphasis areas, including pedestrians as vulnerable road users. TxDOT has developed a Pedestrian Safety Action Plan (PSAP), including a targeted [fact sheet](#) for TxDOT's Yoakum District, where the project is located.

There are multiple areas of the bridge closure detour that are identified as PSAP Focus Facilities and high-risk segments, including portions of US 59 and US 77 in Victoria County. Reducing the risk of bridge closure by building a safer bridge reduces the use of the detour, limiting further strain on these high-risk safety areas.

Reducing Fatalities and Serious Injuries

There were 26 crashes between 2019-2023 within a half mile buffer of the project area. Of the 26 crashes, two crashes included possible injury, one crash included a suspected injury, and two crashes included fatal injury. See [Figure 3-3](#) for a breakdown of crash severity.

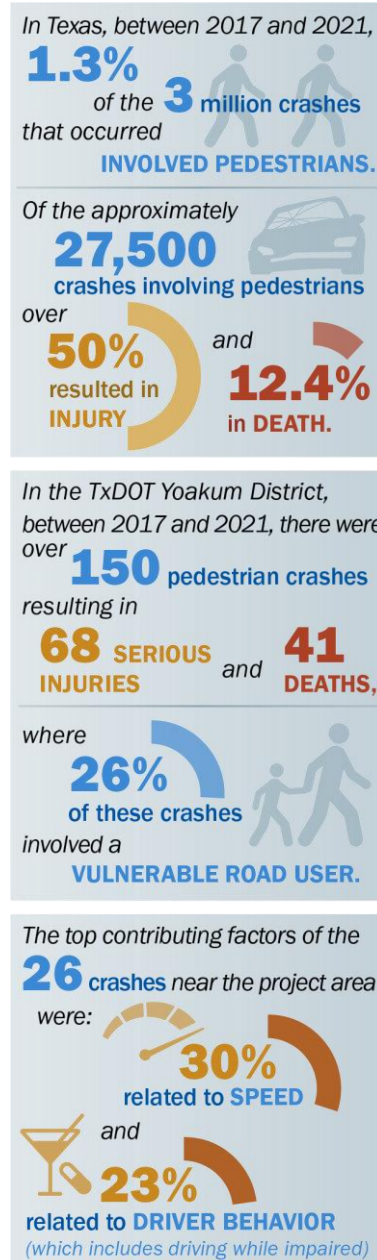
While TxDOT does not track roadway departures as a contributing factor to crashes, many of the crashes that involved possible injuries or fatalities involved vehicles leaving the lane or roadway and striking embankments, fixed objects, or other vehicles in the opposite directional lane (resulting in two fatalities). TxDOT incorporates proven safety countermeasures and strategies to address known safety risks that directly or indirectly contributed to injury or fatality within the project area.

In its 2040 Long Range Transportation Plan, TxDOT plans to program \$3.14 billion towards safety projects between to meet the goal of zero deaths by 2050.

Incorporating the National Roadway Safety Strategy

Texas aligns with the [National Roadway Safety Strategy](#). This project directly supports the objectives identified in the National Roadway Safety Strategy and Safe Systems Approach, particularly "Safer People" and "Safer Speeds" through TxDOT's educational campaigns and "Safer Roads" through the improved engineering countermeasures implemented in the design and construction of the proposed project. Texas was identified as [one of the states](#)

Figure 3-3 | Crash Severity



with the highest roadway fatalities (total 3,615 in 2019) and had a Roadway Fatality Rate of 1.25 (per 100 million Vehicle Miles Traveled). In 2019, Texas adopted the [Road to Zero](#) to eliminate fatalities on Texas roadways by 2050. TxDOT's multiple safety plans and reports, including the [SHSP](#), [PSAP](#), and [Solutions for Saving Lives on Texas Roads](#), identify and integrate strategies and countermeasures to accomplish the Road to Zero.

Figure 3-4 | Safety CounterMeasures and Educational or Enforcement Strategies

Safety Countermeasures

- **Roadway/ Lane Departures** – This project will incorporate rumble strips and reflective pavement markings to reduce the risk of death and serious injury; upgrade the bridge railings to meet today's safety standards; and deploy [wider edge lines](#) which can reduce crashes up to 37% and has a 25:1 Benefit-Cost ratio for fatal and serious injury crashes on two-lane rural roads.
- **Improve Roadway Visibility** – This project will incorporate reflective pavement markings and wider edge lines to improve visibility during poor site conditions. Based on the current design, TxDOT will incorporate signage for areas with poor site lines due to bridge slope increases or roadway curvatures.

Educational or Enforcement Strategies

- **Work Zone Safety** – There was one crash related to work zones as a contributing factor. TxDOT identifies work zone-related crashes as a key safety issue and dedicates funding to safety education and awareness campaigns for work zones. **This project will significantly reduce the risk of a potential bridge closure, reducing the frequency of work zone setups and potential detour routes.**
- **Speed Management** – In 2021, there was a 7.4% increase in speed-related crashes in Texas. TxDOT has identified speed-related crashes as an emphasis area and has developed the “Be Safe. Drive Smart” educational campaign to raise awareness, save lives, and reduce crashes. This project supports that effort by lowering the grade of the bridge from 5% to 3%, improving sight lines and reducing rear-end collisions. *Bridging the Gulf* will also install new signage highlighting speed limits, cautioning against reckless driving, and notifying users about lane configurations.

Environmental Sustainability

Bridging the Gulf will directly promote a more sustainable future by:

- Elevating the SH 35 Bridge, which will enable expansion of green energy investments at the Port of Victoria, already totaling **\$8 billion** in planned future investments.
- Promoting more efficient freight modes by expanding the navigational clearance of the bridge, allowing for the bi-directional passage of larger, faster, more frequent barges.
- Deploying sustainable infrastructure improvements to the bridge like material upgrades from steel girders to prestressed concrete and eliminating obstacles for freight operators, recreational users, and wildlife inhabiting the canal.

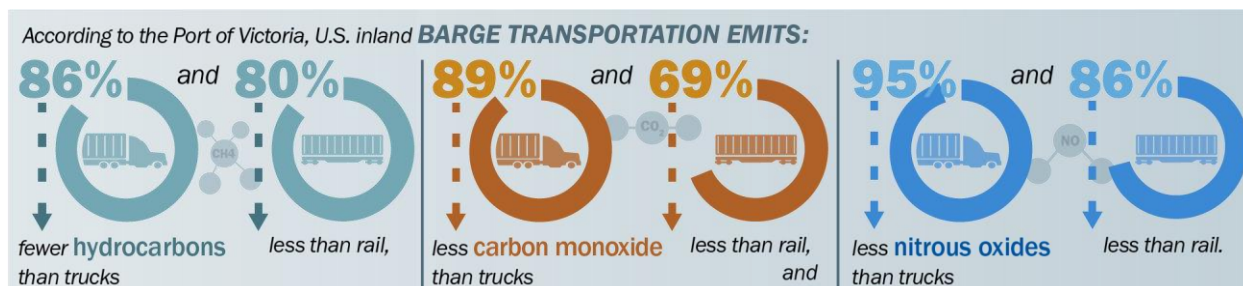
These improvements allow for greater use of the canal and directly impact freight movements in Texas providing for more cost-efficient and cleaner freight transportation compared to light- and heavy-trucks. This project:

- Aligns with [U.S. National Blueprint for Transportation Decarbonization](#), shifting freight to lower-carbon modes and improving the resilience of at-risk infrastructure.
- Reduces VMT and carbon emissions on the Texas Highway Freight Network by eliminating the risk of barge strikes and bridge closures requiring a 44-mile detour.
- Improves the resilience of the bridge and surrounding roadways located in a vulnerable area for coastal inundation due to major weather events.
- Incorporates the use of resilient and innovative materials designed to withstand extreme heat and reduce rutting and cracking.

Reducing Transportation-Related Air Pollution

Shifting freight to lower-carbon modes is a key strategy to reducing transportation-related air pollution. Medium- and heavy-duty trucks comprise 23% of transportation-related greenhouse gas emissions. Rail, ships, and boats make up a combined 5% of transportation-related greenhouse gas emissions. As shown in [Figure 3-5](#), barges emit far fewer emissions than trucks or rail.

Figure 3-5 | Efficiency of Freight Movement by Barge



Bridging the Gulf will directly increase the potential for domestic-barge movements at the Port of Victoria, a key multimodal port in Texas. As the freight sector continues to grow, investing in more efficient freight transportation will help keep trucks off the roadways. The [Benefit-Cost Analysis Narrative](#) quantifies these impacts, as well as foregone costs from avoiding a costly detour.

Addressing Disproportionately Negative Environmental Impacts

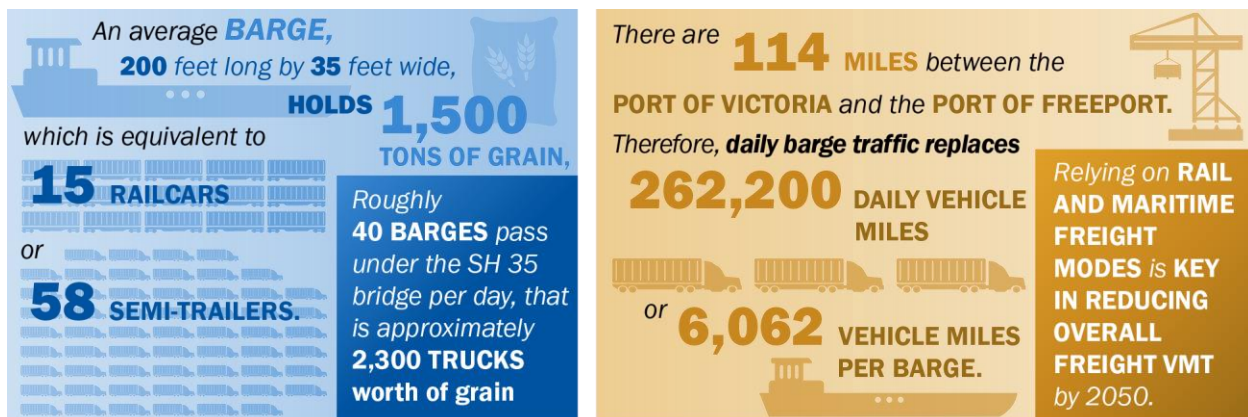
As outlined in the [Economic Competitiveness and Opportunity](#) section, **Bridging the Gulf** has a significant potential impact on growth of the green energy sector in South Texas. The Port of Victoria has already secured commitments on projects that will bring hydrogen and solar energy production to the area in the next 10 years. However, **these investments will require massive industrial equipment modules to initiate, which are most efficiently transported to the Port via barge.** Therefore, increasing the navigational clearance of the bridge is a critical step towards future development. Green energy, such as solar and hydrogen production, improves air quality for the surrounding Historically Disadvantaged

Communities and Areas of Persistent Poverty, as seen in [Figure 1-2](#). The Port of Victoria has identified this outdated bridge as a critical barrier to the Port's future development. If the Port cannot attract green energy projects, the surrounding land may develop with less environmentally sustainable industries that can lead to greater air pollution in the area.

Aligning With Carbon Reduction Strategies

The Port of Victoria is an intermodal facility that moved between 3-5 million tons annually between 2016 and 2020. Currently, the Project Area is a pinch-point along the canal due to the limited width between bridge footings and the height of the bridge. Increasing the navigational clearance for barges will help improve access to the Port of Victoria, supporting the growth of multimodal freight. The Port of Victoria ranks among the top 10 busiest ports in Texas and the only shallow-draft port that supplies domestic-only barge traffic. As outlined in [Texas Delivers 2050](#), for Texas to handle the volume of freight expected in 2050, multimodal freight investments are needed, and waterways have an important role to play in alleviating some of the demand and congestion on the state's major freight corridors.

Figure 3-6 | Measuring Freight Volumes by Mode



Bridging the Gulf supports the [Texas Statewide Carbon Reduction Strategy](#) and aligns with the [U.S. National Blueprint for Transportation](#) strategy to improve efficiency by supporting the growth of freight transportation through maritime and rail modes. This project promotes:

- **Energy-Efficiency** | According to the [Army Corps of Engineers](#), U.S. inland barges are the **most efficient freight mode**, moving one ton of bulk liquid products 514 miles per gallon of fuel compared to 202 miles by rail and 59 miles by truck.
- **Lower-Emissions** | According to EPA's [SmartWay Vision 2020: A New Era of Freight Sustainability](#), waterborne transport uses less fuel on a per-ton basis, emits fewer emissions, and has fewer direct impacts on communities. Growing the maritime transportation sector can offer more efficient freight than heavy-duty vehicles, which have been the largest, fastest growing contributor to greenhouse gas emissions, accounting for 23%.
- **Reduced VMT** | A preliminary study by the University of Texas found that it takes ten times the amount of energy to transport goods over land as opposed to by barge. If 50

to 100 containers can be moved by one barge, that removes 50 to 100 trucks from the road. Therefore, growing barge capacity can remove the need to ship goods via truck, reducing the overall VMT on the roadways.

- **Increase Capacity of Multimodal Freight** | The [2024-2025 Texas Port Mission Plan](#) identifies the improvement of the SH 35 clearance over the Victoria Barge Channel as a key project. Improving the clearance of the bridge ensures that vessels can continue to move in and out of ports safely and efficiently. TxDOT is also investing \$36 million in port and rail infrastructure at the Port of Victoria, including \$5 million for General Cargo Dock Development and \$26.4 million for the Texas Logistics Center Rail Expansion. The investments in intermodal freight connectivity between barges and rail supports TxDOT's [Texas Delivers 2050 Freight Mobility Plan](#) recommendation to enhance intermodal connectivity efficiency between railroads, seaports, airports, and highways.

Improving the Resilience of At-Risk Infrastructure

Bridging the Gulf will incorporate resilient infrastructure and design into the SH 35 bridge and approaching roadways. The periphery project area is identified as an at-risk area for coastal inundation, especially when caused by extreme weather. Texas is also one of the few states that experience extreme heat and droughts, which can impact the pavement conditions. TxDOT will incorporate retroreflective pavement markings to improve visibility during weather events and will replace the current steel bridge with a concrete superstructure that utilizes longer spans to eliminate footings from the canal, reducing the risk of damage caused by canal flooding and debris in the water.

Quality of Life

The project has a significant impact on freight transportation, providing opportunities for investments at the Port of Victoria and its surrounding communities. As outlined in the [Economic Competitiveness and Opportunity](#) section, this project eliminates a key barrier to economic growth. The existing bridge limits capacity for transporting large construction modules to build future project sites along the Victoria Barge Canal and Transportation Logistics Center. By building a new bridge, the Port of Victoria could expand its potential \$8 billion in private investments over the next 10+ years. These opportunities will help generate new tax revenues and bring new, good-paying jobs to the surrounding communities, identified as Areas of Persistent Poverty and Historically Disadvantaged.

Increasing Affordable Transportation Choices

Bridging the Gulf will help ensure transportation choices remain affordable. The no-build scenario estimates the bridge will be closed due to poor condition ratings by 2029 or due to the increasing risk of barge strike damage that will make the bridge unsafe to travel. According to the 2022 American Community Survey (ACS) 5-Year Estimates, Calhoun County has a mean commute time of 18 minutes, with 64% of workers aged 16 years or older reporting a commuting time of less than 20 minutes. Over 80% of workers report driving alone as their main mode of transportation when commuting. In the no-build scenario's bridge closure and 44-mile detour, individuals using SH 35 would add 45 minutes to their commute, greatly increasing the cost of commuting for workers who would otherwise use the bridge. Using the U.S. DOT's recommended operating cost of \$0.52 per

mile for light duty vehicles from the [Benefit-Cost Analysis Guidance for Discretionary Grant Programs](#), the detour would cost drivers an estimated additional \$23 per trip.

Reducing Transportation and Housing Cost Burdens

As identified in the [Economic Competitiveness and Opportunity](#) section, upgrading this bridge will help remove a key barrier to growth on the Victoria Barge Canal. The improvement of the bridge will help attract new businesses to the Port of Victoria, generating local tax revenue from developing currently vacant parcels. This, in turn, can be invested in transportation improvements in communities and mitigate local tax rates. For example, a 2,700-acre solar farm is projected to produce billions of dollars in economic benefits. Another advantage is an increase in good-paying jobs; **185,000** potential employees exist within a 55-mile radius from Victoria. The median income for individuals in 2022 (ACS 5-Year Estimates) is \$35,700 in Calhoun County and \$32,075 in Victoria County. Existing energy developments under option in 2023 will add an estimated 607 jobs in the energy sector, many of which will raise local incomes as the average annual wage for jobs in solar generation is **\$109,943**.

Improving Public Health

Bridging the Gulf aligns with the Green Lake Master Plan, a public park located in the low-lying watershed to the north of SH 35 along Green Lake. This park includes a boat launch, trails, fishing, and picnic areas. A study of the [Health Benefits of Parks and their Economic Impacts](#) notes that (1) green space can protect against flood risk by reducing runoff, and that interactions with green space generate (2) mental health benefits, and (3) positive environmental health outcomes. The park is in a critical area for coastal flood inundation and will help create an open space buffer. The preliminary design of the bridge incorporates easier and safer ingress and egress, improving access to the park for the surrounding Historically Disadvantaged census tracts and Areas of Persistent Poverty.

Mobility and Community Connectivity

Improving mobility and community connectivity is a primary purpose of this project. Potential risk of a catastrophic bridge strike, failure, or closure increases each day the bridge is not replaced. *Bridging the Gulf* is a timely investment, eliminating the risk of a bridge closure that would force the implementation of a 44-mile detour that would place a significant transportation cost burden on the Project Area.

Improving System-Wide Connectivity

This project will directly improve system-wide connectivity in three key ways:

1. The bridge carrying SH 35 will be replaced by a wider, taller bridge, enabling faster, more frequent, unimpeded travel beneath it by barges and over it by heavy trucks.
2. The addition of wide shoulders, lane departure warning technology, and the Manual for Assessing Safety Hardware (MASH)-compliant bridge railings will improve safety for all modes and make it easier for emergency personnel to access and cross the bridge.

3. The replacement of the existing bridge before it deteriorates into poor condition or closes will prevent the need for a 44-mile detour that would increase transportation costs, pollution, and damage to other routes, including in busier residential and commercial areas where routing more traffic puts cyclists and pedestrians at risk.

TxDOT projects that the bridge will fall to Poor condition between 2027 and 2032, at which time TxDOT policy would dictate that a weight limit be placed on the bridge, forcing trucks to detour. Every day the detour remains in place would add \$60,000 in costs for truck operators. If the bridge were closed, forcing light duty vehicles to use the detour, costs would total **\$535,000 per day**. The replacement of this bridge all but eliminates the possibility of incurring **\$3.5 million in operating and travel time delay costs every week**.

Implementing Plans Based on Community Participation

Designed to engage with the community, advocacy groups, and developers, this Project supports inclusive economic development. By hiring residents, community members, and vendors, this Project will benefit small businesses through improved trade connections in addition to smoother everyday trips and deliveries.

TxDOT is committed to creating a business environment that includes strong labor standards and good-paying jobs. The Project benefits from contracting incentives to employ local labor, to the extent permissible under Federal law. TxDOT's procurement and contracting policies allow for local preference when evaluating bids, subject to local limits governing procurement rules when using federal funds. Every effort will be made to provide quality, good-paying jobs for the local workforce, and targets for Minority and Women-Owned Business Enterprises (M/WBE) particularly as it pertains to subcontracting under general service contracts. In 2013, [Calhoun County](#) implemented a living wage policy for all general service contracts, detailing rules to adhere to living wage standards, including fringe benefits, for the life of the contract.

Increasing Intermodal and Multimodal Freight Movement

This project will directly enable an increase in intermodal and multimodal freight movement by **eliminating the current height and navigational clearance constraints on the Victoria Barge Canal**. The proposed 50% increase in vertical clearance will allow for larger, faster barges to traverse the canal, allowing for transport of double stacked containers, new commodities, and construction modules to expand the offerings of the Port of Victoria. Similarly, the proposed bridge will be constructed without in-water infrastructure to eliminate possible barge-pier strikes. This will allow for the bidirectional flow of barges, reducing the time that vessels are forced to wait in the channel for others before them to cross under the bridge. For additional details about this project's impacts on Intermodal and Multimodal Freight Movement, please refer to the sections on [Reducing Transportation-Related Air Pollution](#), [Increasing Affordable Transportation Choices](#), [Improving Intermodal or Multimodal Freight Mobility](#), and [Coordinating With Other Types of Projects](#).



Economic Competitiveness and Opportunity

The Project will enhance local, regional, and statewide economic competitiveness, bringing more economic opportunities throughout the [Port of Victoria](#), Calhoun County, and across regional intrastate multimodal networks. The Port of Victoria combines multiple transportation advantages as businesses can send and receive goods as well as supplies along waterways, railroads, highways, and by air.

The existing bridge hinders vehicular and maritime traffic, with barges hitting fenders along the bridge three to eight times per month. With roughly 40 barges passing under the bridge each day, keeping traffic moving is key to maintaining supply chains and encouraging economic growth. A new bridge will permit larger volumes and heavier loads, especially for trucks, and reduce barge delays by removing in-water infrastructure, reducing the incidence of strikes. **If the bridge was shut down for any reason, like a barge strike carrying commodities or construction equipment, up to 4 million tons of cargo would be impacted, affecting refineries and other raw material processors.** Long-term local and regional economic activity would be repressed if businesses had to deal with higher costs from land-only shipments and diverted pipelines. Barges would be delayed in unloading or rerouted elsewhere, and construction expansion projects would be stalled, harming overall economic activity and regional competitiveness.

A bridge closure also halts any truck traffic from crossing the canal, effectively limiting access to the Port of Victoria. That closure would therefore burden the Port of West Calhoun located south of the bridge, which could be used as temporary relief, as well as businesses dependent on receiving critical commodities (in-bound or out-bound). The INEOS facility and other businesses north of the bridge would be prevented from receiving necessary raw materials from barges. As the largest acrylonitrile facility in the world with a pipeline to Calhoun Port Authority, lasting negative impacts would ripple widely through multiple economies. ***Bridging the Gulf* will construct a bridge that enables economic growth and competitiveness.**

Improving Intermodal or Multimodal Freight Mobility

The Project complements existing enhancements occurring at the [Port of Victoria](#) through the \$6 million CARES Act Grant awarded to the Victoria County Navigation District which is targeted at improving freight movement dominated by BNSF and Union Pacific (UP) railroads. The Port's rail expansion can accommodate increased barge traffic along the canal and will help alleviate current backlogs. Freight rail is growing, supported by multimillion dollar investments from Victoria County, TxDOT, and other agencies. The Victoria Sales Tax Corporation, for example, opened up 2,700 acres for dual rail access to be served by both BNSF and UP, connecting the Port fully to both Class I Railroad systems.

As expansion continues, rail car storage will be built out with more storage capacity being added over time, transforming the Texas Logistics Center into a full industrial park with a strong maritime component in need of modern maritime infrastructure. Taking full advantage of economies of scale associated with the bulk transport of cargo, expediting regional multimodal travel provides the Port of Victoria more opportunities for international business commerce by distributing reliable products to multiple economies.



Promoting Long-Term Economic Growth

As a key link at the Port of Victoria along SH 35, the existing bridge currently generates hundreds of millions of dollars in economic impact as well as supports tens of thousands of direct and indirect jobs. The bridge provides critical infrastructure complementing maritime national and international freight logistics in addition to vehicular traffic, albeit saving a roughly 44-mile detour. The location has become the primary link to transport various goods and other regional raw materials like gravel and sand to Dow Chemical and to ports along the Texas coastline. As commodities like crude, construction sand, and gravel continue to move out, agriculture products continue to grow as more and more are being transported into and out of the Port.

While the limited bridge height does not affect daily operations in transporting commodities, shorter bridge clearances hinder current expansion projects and long-term economic growth, impacting future areawide development. The Dow Chemical expansion south of the bridge for their nuclear reactor required importing large international equipment moved only using select barges and trucks due to the bridge's current narrow width and permitted loadbearing. INEOS Nitriles is also expanding and requiring a wider and stronger bridge to enable oversize shipments between Corpus Christi and the Port of West Calhoun to reach companies throughout the region.

Six new projects are being developed in sites across the Port of Victoria with corporations like Green Ammonia, VITIS Energy, and ACME. In 2023 alone, the Port secured **\$8 billion** in development options by private partners. While there is interest from and commitment by green energy partners, low bridge clearance means the bridge cannot support large construction projects from companies that have invested or expanded elsewhere along the Texas Gulf Coast. Shorter bridge clearances cannot support the needs of large construction projects as heavy machinery is most economically transported across by water. Economic growth will be hindered without bridge improvements.

Promoting Public and Private Investments in Land Use Productivity

The Project directly supports an increase in surrounding property values. Upgrading the bridge will increase property values for regional homes and businesses affected by and dependent on SH 35. This Project augments the productivity of the land surrounding the bridge, generating higher property taxes to be invested directly back into the surrounding communities. A recent proposal from the U.S. Department of Defense to construct a production facility for electric car batteries exemplifies the region's potential for growth. This site, adjacent to Dow Chemical along SH 35, requires the ability for larger imports. Ample private land is available for sale north of the bridge which is part of the Port of West Calhoun District and brings even more promising potential for future development.

The Project will encourage more residential and commercial development, helping local businesses grow for residents and workers to enjoy. As industrial activity continues to grow, the possibility of building large solar fields is being explored, bringing further tax revenues to the surrounding communities from the project. Furthermore, the Project will also improve land use around the canal's floodplain, which increases land use productivity and minimizes waste, complementing the Green Lake Park being developed by Calhoun County and contributing to economic development and competitiveness.

State of Good Repair

Achieving and maintaining a State of Good Repair is a primary purpose of this project. ***Bridging the Gulf*** will replace the bridge carrying SH 35 across the Victoria Barge Canal with a more resilient, purpose-built structure designed to withstand modern freight loads and optimize operations and maintenance responsibilities. Adjoining roadways, neighboring waterways, and associated land uses will all be enhanced as the bridge is upgraded, reducing the amount of interference from temporary repair work and improving the reliability of SH 35. Bringing the bridge in line with current safety standards is key to keeping traffic moving across the region and ensures Calhoun County remains regionally competitive across local and national economies.

Figure 3-7 | Existing Bridge, Showing Corroded Superstructure and Fender System



Restoring and Modernizing Core Infrastructure Assets

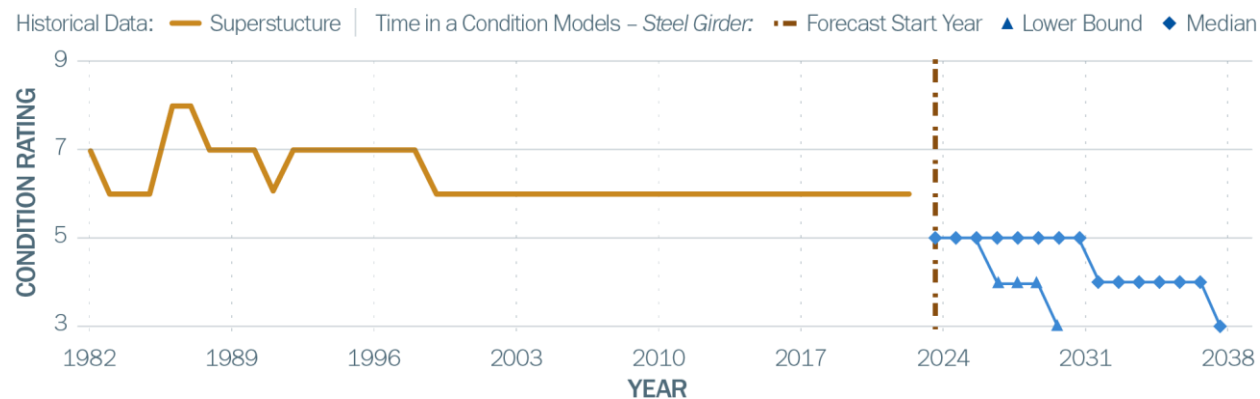
The Project replaces the existing bridge with a new structure in line with current rating standards. The SH 35 Bridge was constructed in 1960 with a design load of H-20, which equates to a 32,000-pound weight limit. The bridge regularly carries loads that exceed its design standard, originally intended to cater towards empty two-axel trucks. However, hundreds of times per day, trucks weighing as much as 80,000 pounds use the bridge, exceeding the original design capacity and accelerating existing deterioration, wearing down the bridge's current infrastructure and shortening its useful life.

This project will also bring the navigational clearance of the structure in line with local and regional demands. Bridge clearance is a major concern for maritime traffic, with a navigational clearance of 50 feet limiting potential opportunities for the transport of heavy construction equipment, port development modules, and certain commodity loads from traversing the canal. Frequent bridge strikes are also a current concern, which will be mitigated by eliminating all in-water structural elements.



TxDOT data indicates the current bridge is in Fair condition, but regular wear and tear over the past 60 years plus increasingly frequent barge strikes have deteriorated the condition of the steel girder superstructure to the point that it will likely hit Poor condition between 2027 and 2032 (Figure 3-8). At that point, TxDOT policy dictates that heavy trucks will be prohibited from the bridge and forced to take a 44-mile detour. A timely bridge replacement ensures that this structure can be upgraded to meet modern safety as well as State of Good Repair standards before the existing structure becomes entirely Structurally Deficient.

Figure 3-8 | TxDOT Superstructure Condition Projections, Existing Bridge



Reducing Construction or Maintenance Burdens

Repair and maintenance costs continue to increase as structures age, and upgrading infrastructure on aging assets will lower long-term maintenance burdens for TxDOT. Furthermore, upgrading the bridge will help TxDOT continue its upward trend of improving pavement and bridge conditions across Texas. Repairing the bridge saves vehicles from having to use the circuitous 44-mile detour, saving unnecessary vehicular miles traveled (VMT) on neighboring roadways and further lowering future wear-and-tear maintenance costs. Currently the existing bridge [exceeds the 48-year average age of bridges in Texas](#). Replacing the bridge will greatly extend the life cycle of all components of the SH 35 crossing including bridge approach and on- and off-ramp facilities, as each will be updated with the new bridge design. Furthermore, the condition forecast for the bridge superstructure shows aggressive deterioration will bring the bridge to Poor condition in just four years in addition to expected decay from coastal weather and regular erosion.

Addressing Current or Projected Transportation System Vulnerabilities

The Project is a critical component to supporting the growth and resilience of a strategic transportation asset in the Victoria region and across Calhoun County. The Project provides readiness investments to support the Port of Victoria's current expansion which will improve both the resilience and condition of the entire Port as well as neighboring communities. Without replacing the degraded bridge, local, regional, and national transportation infrastructure remains threatened and vulnerable because the Port of Victoria as well as SH 35 are key components to multiple inter- and intra-state transportation systems. Maintenance responsibilities for the infrastructure built by this project will be the purview of TxDOT in partnership with the Port of Victoria and Calhoun County. The roadway infrastructure will be managed by TxDOT, while any maritime needs

will be managed by the Port of Victoria. Both departments have ample capacity to plan and carry out infrastructure maintenance activities after project completion. TxDOT will manage the inspection and maintenance of the new bridge.

Partnership and Collaboration

Engaging Residents and Community-Based Organizations

TxDOT utilizes a combination of virtual and in-person surveys, media, and events to solicit feedback during project development and implementation. This approach leverages the TxDOT [Strategic Public Engagement Guidance](#) which incorporates inclusive strategies that are mindful of readability for residents of diverse educational backgrounds; accessibility for residents with physical, auditory, or visual impairments; and other languages as needed. For public meetings, TxDOT offers interpreters for other languages including Spanish and American Sign Language. TxDOT's public engagement approach is also influenced by U.S. DOT's "[Promising Practices for Meaningful Public Involvement in Transportation Decision-Making](#)" such as hosting public meetings with accessible event times and locations, and conducting briefings for stakeholders affiliated with the Port. TxDOT's public outreach approach is particularly effective in engaging property owners affected by right of way (ROW) acquisitions. This includes personalized letters, translated as needed, to property owners, as well as one-on-one meetings with those affected by ROW acquisitions.

Coordinating With Other Types of Projects

TxDOT has an advisory committee comprised of stakeholders in the community that provide a dual purpose: offering feedback on the agency's transportation projects and programs, and sharing updates on members' own projects that could impact TxDOT's plans. This forum ensures ongoing coordination with partners in the area to facilitate information and resource sharing regarding other transportation, infrastructure, commercial/residential, or technology deployment projects in the area. For example, the Port of Victoria has been working with local and state electricity providers interested in serving prospective tenants.

Prior to the Project, as part of the hydrology assessment, TxDOT coordinated with federal agencies including the U.S. Coast Guard and the Federal Emergency Management Agency to meet minimum bridge clearance and Flood Hazard Area requirements. TxDOT continues to coordinate with the Calhoun County Flood Administrator to ensure planned construction does not negatively impact the floodplain. In preparation for the Project, TxDOT has met with multiple stakeholders including Calhoun County, the Port of Victoria, the Port of West Calhoun, the Calhoun Port Authority, County Judges, the Victoria Metropolitan Planning Organization (MPO), the Coast Guard, and the Army Corps of Engineers. TxDOT is scheduling individual meetings with potentially affected property owners in early 2024.

Partnering With Workforce Development Programs

In pursuit of a larger green energy strategy, the Port of Victoria has recruited clients that have the means and interest to employ residents at competitive wages in a forward-thinking industry. Current and prospective tenants have met with Victoria College, a community college in the region, and Bloomington Independent School District, located in

unincorporated Victoria County and comprised largely of economically disadvantaged students, to discuss workforce training programs. The Port also regularly collaborates with Workforce Solutions Golden Crescent to discuss policies for training residents, vocational programs, and potential agreements for local workforce requirements for new tenants. For example, the Port has met with both Victoria College and Workforce Solutions to discuss solar panel technician and solar photovoltaic installer training programs for a prospective tenant at the Port interested in building a largescale solar field.

TxDOT is committed to maintaining open communication with the Port of Victoria and the Port of West Calhoun throughout this project to share construction updates and identify partnering opportunities for future regional workforce development efforts.

Innovation

Innovative Technologies

This project will include the installation of new, energy-efficient lighting throughout the project area. It is important to note that existing cameras and sensors mounted on the bridge to monitor barge strikes have been instrumental in documenting the case for replacing this bridge, but the proposed design of the bridge will eliminate the need for the cameras to be replaced with similar sensors because the new bridge will not have any in-water infrastructure at risk of being damaged.

Innovative Project Delivery

This project will utilize [Open Bridge Modeler \(OBM\)](#) to create a 3D bridge model to support final design and analysis of this project. OBM connects natively to OpenRoads Designer (ORD) and is capable of reading and updating geometric data. A 3D bridge model referenced into a corridor model can help better visualize the project as a whole and lead to identifying possible conflicts with utilities, vertical and horizontal clearances, excavation, and schedule that might otherwise be overlooked. This is the foundational step TxDOT has taken to move towards Digital Delivery.

Innovative Financing

TxDOT has a well-documented history of embracing innovative financing methods. Previous grant awarded projects have included financing agreements between public agencies, public-private partnerships, and local support. The financing for this project does not currently include any innovative methods, but TxDOT would welcome the opportunity to incorporate innovative methods prior to authorizing construction.

This project will enable deployment of innovative financing methods for future local, County, and Port projects by easing Port access to encourage future development, which will in turn increase potential revenue for local municipalities and counties. That revenue can support further expansion of logistics infrastructure, community resources, or road and bridge repairs. In addition, continuous investments in energy resources will continue to diversify Texas' energy production portfolio and create new sources of energy for local businesses to draw on.

4. Project Readiness

Overview

The Texas Department of Transportation (TxDOT) requests \$25 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program to support *Bridging the Gulf: Creating Opportunity on the Victoria Barge Canal*. This \$60 million project will unleash the economic development potential of Calhoun County and the Port of Victoria by replacing an undersized bridge prone to barge strikes with a new structure that will:

- Improve environmental conditions by removing all in-water structural elements;
- Increase the navigational clearance of the structure from 50 to 75 feet;
- Reduce the risk of transportation cost burdens by preventing the need to implement a 44-mile detour; and

Implement modern safety, accessibility, and load rating standards, capable of accommodating and supporting surrounding growth and development.

TxDOT completed 30% designs on this project in September 2023. Final designs, right-of-way, utility force account coordination, public outreach, and environmental approvals at the local, state, and federal levels are all expected to be complete by the end of 2024. **If this project receives RAISE grant support, TxDOT will move quickly through each project development milestone required to reach construction well in advance of the obligation deadline of September 30, 2028.**

Project Schedule

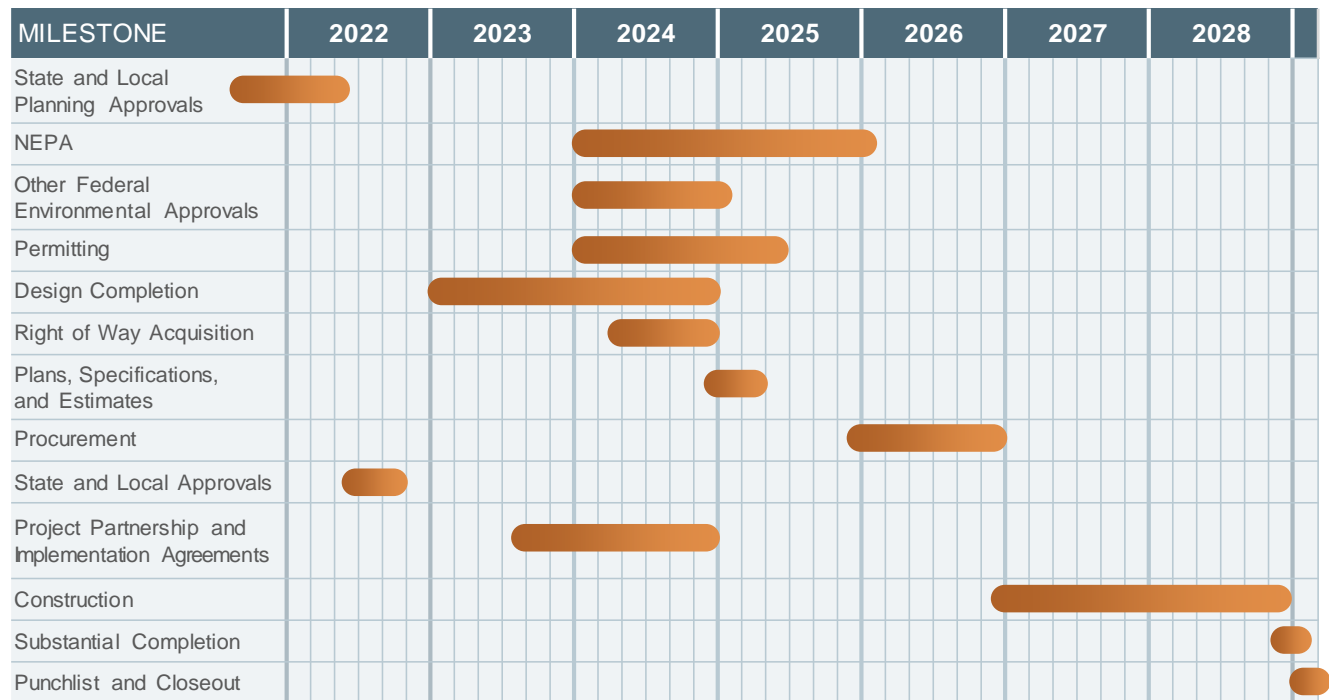
The schedule presented in [Figure 4-1](#) demonstrates that this project will meet all required milestones in the 2024 RAISE NOFO. Specifically:

- All necessary activities will be complete by **December 2026**, 21 months in advance of the obligation deadline of **September 30, 2028**. This will allow sufficient time for unexpected delays, ensuring no funding is at risk of expiring before it is obligated.
- This **capital project** can begin construction upon obligation of grant funds. Construction is expected to begin in **December 2026** and to be completed by **December 2028**, well ahead of the **September 30, 2033** expenditure deadline.
- All real property and right-of-way acquisition will be completed by **December 2024**, in accordance with all requirements of 49 CFR part 24, 23 CFR Part 710, and all other applicable legal requirements.
- TxDOT has meaningfully sought community input through early coordination with state and local stakeholders, including Calhoun County, the Port of Victoria, the Port of West Calhoun, the U.S. Coast Guard, and the Army Corps of Engineers. This project will also be among the first to utilize TxDOT's new [Strategic Public Engagement Guidance](#).

A tabular version of the schedule shown in [Figure 4-1](#) is also included as Appendix C to this application.



Figure 4-1 | Detailed Project Schedule



Environmental Risk Assessment

Required Approvals and Permits

NEPA

TxDOT has determined that this project is most likely to qualify for a Categorical Exclusion (CE) because the project will not have significant individual or cumulative impacts to the interests protected by the National Environmental Policy Act (NEPA). It is anticipated that the project will occur mainly within the operational right-of-way. TxDOT does not expect this project to negatively impact social, economic, or sensitive environmental resources such as floodplains, wetlands, endangered species, wildlife habitat, historic and archaeological sites, parklands, air quality, noise, right-of-way, historically and/or economically disadvantaged populations, travel patterns, or environmental grounds.

TxDOT is one of the few states with the delegated authority from FHWA known as “NEPA Assignment.” This power streamlines the federal environmental review process by eliminating Federal Highway Administration project-specific review and approval and provides a participating state specific review and approval authority. NEPA assignment is subject to a memorandum of understanding that is renewable every five years. TxDOT officially entered the program on December 16, 2014 and extended its participation in the NEPA assignment program for an additional five years in December 2019.

TxDOT has determined that this project will not meet one or more of the constraints listed under 23 CFR 771.117 (e) because the project will require permits from both the Army



Corps of Engineers and the U.S. Coast Guard. TxDOT has already initiated coordination with both bodies, and the project is currently under review by the Army Corps. Therefore, this project will qualify for a CE under 23 CFR 771.117(d)(13).

Reviews, Approvals, and Permits by Other Federal and State Agencies

This project requires permits from the Army Corps of Engineers, U.S. Coast Guard, and approval by the Texas Coastal Management Program. Archeological coordination will be conducted with the Apache Tribe of Oklahoma, Comanche Nation of Oklahoma, Kiowa Tribe, Mescalero Apache Tribe, Seminole Nation of Oklahoma, Tonkawa Tribe of Oklahoma, and Tunica-Biloxi Tribe of Louisiana. The Texas Historical Commission (THC) and Texas State Historic Preservation Officer (SHPO) will also be consulted, and historical coordination would occur in conjunction with the THC, SHPO, and Calhoun County Historical Commission. This bridge is identified as being “potentially eligible” for inclusion on the National Register of Historic Places. If the bridge is determined to be eligible for inclusion, the Advisory Council on Historic Preservation may need to be consulted as well.

Environmental Studies or Other Documents

This project may require the following permits and approvals:

- Section 7 Consultation under the Endangered Species Act (ESA) as administered by the U.S. Fish and Wildlife Service (USFWS);
- Clean Water Act Section 404 as administered by the Army Corp of Engineers which may include Programmatic General Permit (PGP);
- Clean Water Act Section 401 administered by the Texas Commission on Environmental Quality (TCEQ) under the Water Quality Certification Program;
- TCEQ Pollutant Discharge Elimination System (TPDES) Program Construction General Permit due to an anticipated soil disturbance >1 acre.

Discussions with DOT Field or Headquarters Offices

TxDOT has NEPA Assignment authority, which limits the need for ongoing coordination meetings with FHWA-TX. However, TxDOT will provide all necessary project updates, notifications, and approval requests to FHWA as required throughout construction.

Right-of-Way Acquisition Plans

TxDOT has identified all real property required to implement this project. Two parcels, including a small piece of county-owned property, will be acquired. Parcel plats are under development. Formal acquisition will begin in Spring 2024, with an anticipated completion of December 2024.

Description of Public Engagement

TxDOT has already begun coordination with local stakeholders including County Commissioners, local leadership, the Ports of Victoria and West Calhoun, the U.S. Coast Guard, and Army Corps of Engineers. In the Spring of 2024, TxDOT will begin notifications



to right-of-way owners and abutters and host a series of public meetings pursuant to the Department’s new [Strategic Public Engagement Guidance](#).

State and Local Approvals

Receipt of Tribal Government, State, and Local Approvals

Archaeological and historical coordination with the agencies listed in the [Reviews, Approvals, and Permits by Other Federal and State Agencies](#) section will be conducted as part of the NEPA Process. TxDOT has initiated outreach to all coordinating agencies and expects to secure all state and local approvals by **June 2025** and NEPA by **January 2026**.

Federal Transportation Requirements Affecting State and Local Planning

This project is included in the [FY2023-2026 TxDOT Statewide Transportation Improvement Program \(STIP\)](#). It is listed as a Grouped Control-Section-Job (CSJ) under CSJ-5000-00-953 which provides dedicated funding to “replace and/or rehabilitate functionally obsolete or structurally deficient bridges.” In addition, *Bridging the Gulf* directly supports the objectives of several federally required TxDOT plans and programs as described throughout the [Merit Criteria Narrative](#), including the Texas Freight Mobility Plan, [Texas Delivers 2050](#); Texas’ [Statewide Long-Range Transportation Plan](#); the 2022 TxDOT [Transportation Asset Management Plan \(TAMP\)](#); and more.

Assessment of Project Risks and Mitigation Strategies

Pursuant to the Risk Management Strategies describes in [TxDOT’s 2022 TAMP](#), [Table 4-1](#) summarizes the principal risks to this project and strategies to mitigate them.

Table 4-1 | Project Risks and Mitigation Strategies

Risk	Criticality	Mitigation
Approvals by Army Corps and U.S. Coast Guard are delayed	High	<ul style="list-style-type: none"> Coordinate between both agencies to encourage parallel reviews. Develop detailed schedule with adequate contingencies and redundancies.
Material Cost Escalation	Medium	<ul style="list-style-type: none"> Monitor incoming bids over the next two years to refine cost estimates. Deploy Plan to Address Potential Cost Overruns (see Figure 2-2) as required.
The existing bridge is forced to deploy weight restrictions or close entirely	Medium	<ul style="list-style-type: none"> Leverage TxDOT Notification System to mobilize employees and contractors. Utilize TxDOT Emergency Response App (TERA) and Highway Emergency Response Operator (HERO) Program to notify public and distribute detour routes.

TxDOT does not expect to pursue any waivers for any domestic preference laws on this project. TxDOT has remained up-to-date with all Build America, Buy America requirements and maintains [a public webpage providing guidance to all TxDOT contractors](#).

Technical Capacity Assessment

Federal Funding

TxDOT is an experienced and effective manager of federal funding. Per the most recent (2022) [Stewardship and Oversight Annual Report](#) on this partnership, TxDOT:

- Let 701 federally funded projects totaling \$7.904 billion.
- Processed 810 construction project preliminary engineering plan sets.
- Managed approximately 1,722 active construction projects.

TxDOT's Civil Rights Division oversees the goal setting, implementation, and enforcement of the Department's Civil Rights protections and considerations, including its [Disadvantaged Business Enterprise](#) programs. TxDOT also maintains Historically Underutilized Business (HUB) Programs, setting goals to be implemented statewide. There is an individual goal for each spending category that TxDOT must meet on a yearly basis: heavy construction, building construction, special trade construction contracts, professional services contracts, other services contracts, and commodities contracts. Any contracts or purchases with businesses actively certified as a HUB will count towards the goal for the appropriate spending category. **Approximately 17.7% of the work underway on this project is being supported by HUB firms.**

Federal Regulations

TxDOT is a capable, expert navigator of federal regulations. TxDOT has delegated NEPA Assignment Authority, which has improved the internal knowledge of federal program requirements and reduced approval delays for TxDOT projects. In addition, TxDOT has issued several policy guidance documents for statewide use which account for all federal program requirements, including Standard Operating Procedures (SOPs) on Cost Estimation, Plan Review, and Early Plans Posting for Contractor Review. A Design Exception SOP with accompanying Template and Checklist are also under development.

Project Planning

TxDOT maintains a robust [Strategic Plan](#), prepared biannually at the direction of the Texas Transportation Commission, to set vision, mission, and strategic goals for the agency. TxDOT also provides a suite of [Project Planning Tools](#) for use in project development.

Project Delivery

TxDOT prioritizes efficient and effective delivery of projects and programs, and maintains a high standard of transparency for its implementation methods. In 2022 alone, TxDOT completed 84% of its projects on-budget, and in 2023, TxDOT released an Educational Series Report on [Project Development, Selection and Delivery](#).

5. Benefit-Cost Analysis Narrative

TxDOT is requesting \$25 million from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program to support *Bridging the Gulf: Creating Opportunity on the Victoria Barge Canal*. A \$60 million project to replace the existing bridge carrying SH 35 over the Victoria Barge Canal, this critical safety investment will:

- Leverage off-alignment construction to construct a new bridge without impacting the existing structure.
- Replace a low, narrow bridge built in 1960 with a new structure that increases navigational clearances by 50%, reducing the incidence of bridge strikes.
- Increase resiliency and reduce maintenance costs for TxDOT, Calhoun County, and the Greater Victoria region by replacing an at-risk steel structure with a prestressed concrete bridge with longer spans that increase the barge opening.
- Unlock the economic potential of the region by accommodating multimodal freight traffic near the Port of Victoria, encouraging investment in high-quality jobs in manufacturing and logistics.

This project has a benefit-cost ratio of 10.5 to 1, indicating that this project is an extremely worthwhile and cost-effective investment. *Bridging the Gulf* is expected to generate a Net Present Value (NPV) of \$467.191 million.

Executive Summary

This benefit-cost analysis (BCA) was conducted for submission to the U.S. Department of Transportation (USDOT) as a requirement of a discretionary grant application for the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program. The analysis was conducted in accordance with the benefit-cost methodology as outlined by USDOT in the Benefit-Cost Analysis Guidance for Discretionary Grant Programs, released in December 2023.

The **period of analysis** corresponds to 32 years and includes 2 years of construction and 30 years of benefits after operations (replacement bridge) begin in 2029.

Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a vertical clearance of 50 feet that is now insufficient to accommodate heavy barge traffic, which is projected to grow significantly in the coming years. In 2023, an average of 3 to 8 strikes per month has resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires regular maintenance, painting, and inspection; the proposed prestressed concrete bridge replacement would minimize these costs while increasing the navigational clearance to 75 feet and widening the main span to eliminate in-water infrastructure.

If the bridge is not reconstructed, TxDOT expects that by 2029 the bridge would fall into Poor condition and need significant remediation work just to keep the existing structure operable, or the bridge would need to be indefinitely closed to commercial vehicular (truck)

traffic. This closure would require trucks to detour about 44 miles around the bridge and incur significant time and costs.

The capital cost for this Project (2023-dollar estimate) is expected to be **\$60.0 million or \$57.9 million in 2022 dollars**. At a 3.1% discount rate, the capital costs are **\$49.0 million** in discounted 2022 dollars. With a service life of 60 years, at the end of 30 years, the assets will retain 50% of their original value with a residual value of **\$29.0 million** in undiscounted dollars and **\$9.6 million** in 2022 discounted dollars. The residual value is added to the total benefits of the project as per USDOT guidance.

Savings in Operations and Maintenance costs (including repairs to the bridge fender system from barge strikes) if the Project is built versus maintaining the current bridge is expected to be \$283,905 per year on average, totaling **\$8.5 million** over 30 years, or **\$4.6 million** discounted to 2022. Considering all costs and benefits of the Project and using a 3.1% discount rate (2% for carbon emissions), this leads to an overall discounted Net Present Value (including residual value of assets) of **\$467.2 million** and a Benefit Cost Ratio (BCR) of **10.5:1**. The overall project benefit and costs are presented in [Table 5-1](#).

Table 5-1 | Summary of Project Benefits and Costs

Benefits and Costs	2022 Value	Discounted Value (2022\$)
Travel Time Savings (Avoided Detours)	\$259,027,186	\$133,318,061
Vehicle Operating Cost Savings (Avoided Detours)	\$510,322,218	\$262,656,479
Safety Crash Cost Savings (Avoided Crashes)	\$10,438,409	\$5,372,519
CO ₂ Emissions Cost Reduction	\$115,595,715	\$74,539,603
Non- CO ₂ Emissions Cost Reduction	\$13,531,271	\$6,964,376
Avoided Highway Externality (Congestion & Noise)	\$30,426,029	\$15,659,898
Pavement Damage Cost Reduction	\$6,644,627	\$3,419,907
Residual Asset Value	\$28,951,940	\$9,646,410
O&M Cost Savings	\$8,517,156	\$4,573,944
Total Benefits	\$983,454,551	\$516,151,197
Capital Costs	\$57,903,880	\$48,959,345
Benefit/Cost Ratio	17.0:1	10.5:1
Net Present Value	\$925,550,671	\$467,191,852

Current Baseline

This project will replace NBI Structure Number 130290018001034, which carries SH 35 over the Victoria Barge Canal in Calhoun County, Texas. The existing bridge carries one lane of traffic in either direction, totaling about 3,500 vehicles per day. As of 2019, trucks made up 15.3% of daily traffic, a number that is expected to climb as the area continues to industrialize. The proposed project will replace the existing bridge with a taller, wider structure designed to mitigate safety issues, bring a key commercial corridor up to a state



of good repair, and make room for continued growth in the Port of Victoria, Calhoun County, and the Greater Victoria Region.

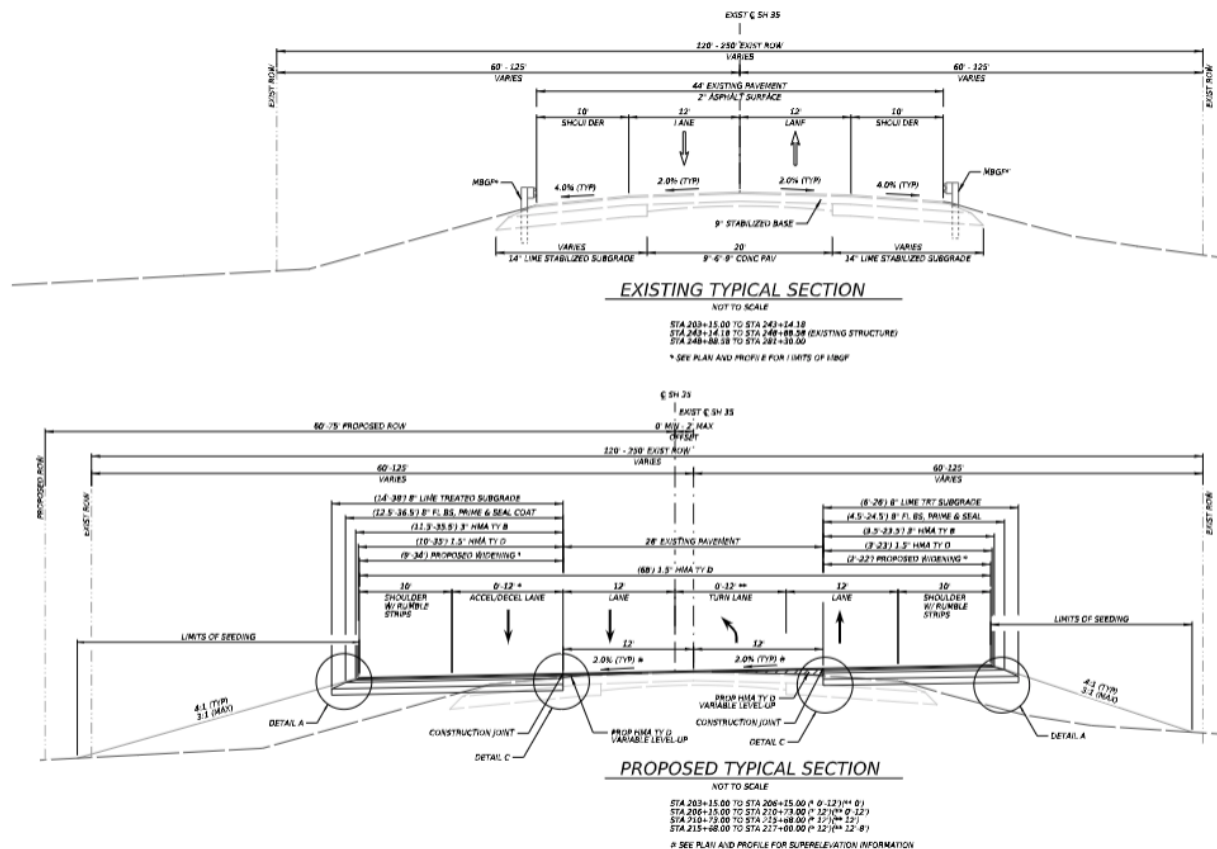
The replacement bridge will be constructed off-alignment with the old bridge; therefore, no construction-related detours are expected.

“Build” and “No-Build” Scenarios

The analysis of *Bridging the Gulf* considered how the balance of costs and benefits resulting from the construction of the Project would result in long-term benefits to its users and general society. This is accomplished by comparing the “Build” scenario relative to the “No-Build” scenario.

The “Build” scenario will replace the existing bridge carrying SH 35 over the Victoria Barge Canal. Construction will be completed off-alignment and replace the existing structure with a wider, taller structure that increases the navigational clearance of the waterway below.

Figure 5-1 | 30% Designs Showing Existing and Proposed Cross Sections



The No-build scenario assumes that the current bridge is not replaced. If the bridge is not replaced, TxDOT expects that by 2029 the bridge would fall into poor condition, requiring restriction of commercial vehicles (trucks) from using the bridge. In addition, to maintain the bridge for passenger vehicles, significant maintenance work on the bridge and fender

system will be required. Given the bridge's age, build specifications, and condition, TxDOT considers replacement of the bridge less expensive and more practical than attempting the significant restoration work required to bring the existing bridge up to modern specifications.

Sources of Data

All data utilized in this benefit-cost analysis was compiled from the following sources:

- TxDOT project cost estimates and design documents;
- TxDOT traffic counts and crash data; and
- Crash Modification Factor (CMF) Clearinghouse.

Methodology

The BCA framework involves defining a Base or “No Build” scenario, which is compared to the “Build” scenario. The BCA assesses the incremental difference between the “Build” scenario and the “No Build” scenario, (if the bridge is not reconstructed, it will be closed to commercial vehicles and create a 44-mile detour for the trucks) which represents the net change in welfare. BCAs are forward-looking exercises which seek to assess the incremental change in welfare over a project's life cycle. The importance of future changes is determined through discounting, which is meant to reflect the real value of money.

The Project BCA is conducted in accordance with the [benefit-cost methodology recommended by USDOT](#). The methodology includes the following key components:

- Defining existing and future conditions under the “No Build” (Base) scenario and the “Build” scenario;
- Assessing the project benefits over the 30 years of operations beyond Project completion when benefits accrue, and using USDOT recommended values to monetize changes in travel time, vehicle operating costs, and traffic crashes by severity while relying on best practices for monetization of other benefits or disbenefits;
- Estimating the Project's capital costs during Project construction and Project operation and maintenance costs over the 30 years of operations beyond the Project completion when benefits accrue; and
- Discounting Project benefits and costs using a real discount rate of 3.1% (2% for CO₂ emissions costs) consistent with USDOT guidance (December 2023).

Assumptions

The assessment of the Project benefits and costs associated with the **Project** involve the following key assumptions:

- The evaluation period includes the design and engineering and construction during which capital expenditures are undertaken, plus 30 years of operations beyond the Project completion within which to evaluate the ongoing Project benefits and costs.
- The preconstruction and construction phase of the Project is assumed to begin in 2027, ending in 2028 at which point the Project will be deemed complete.
- The Project will be opened to the public in 2029 and the 30-year operational period will conclude in 2058. Project benefits begin in the calendar year immediately following final construction.
- The reconstructed bridge will have a service life of 60 years. Therefore, the bridge will have a 50% residual value of the bridge costs in 2058.
- All Project benefits and costs are conservatively assumed to occur at the end of each calendar year for purposes of present value discounting.
- Monetary values of Project costs and benefits are expressed in constant, year-end 2022 dollars.

Key Input Parameters

In addition to the Data Sources listed, all key input parameters in this analysis are taken from USDOT's "Benefit-Cost Analysis Guidance for Discretionary Grant Programs," December 2023, unless otherwise noted. Safety benefit calculations utilize Crash Modification Factor Clearinghouse (CMF) inputs.

The BCA converts potential gains (benefits) and losses (costs) from the project into monetary units and compares them. The following common benefit-cost evaluation measures are included in this BCA:

- Net Present Value (NPV): NPV compares the net benefits (benefits minus costs) after being discounted to present values using the real discount rate assumption. The NPV provides a perspective on the overall dollar magnitude of cash flows over time in today's dollar terms.
- Benefit Cost Ratio (BCR): The present value of incremental benefits is divided by the present value of incremental costs to yield the BCR. The BCR expresses the relation of discounted benefits to discounted costs as a measure of the extent to which a project's benefits either exceed or fall short of the costs.

Baseline Challenges, Proposed Changes, and Impacts

This project will replace the existing bridge utilizing off-alignment construction methods to ensure that SH 35 remains open and functional throughout the construction period. The proposed bridge is being designed to update the mid-century design with MASH-compliant safety standards, load ratings to accommodate heavy freight trucks, and a larger navigational clearance to eliminate existing barge strike issues. Overall, this project represents a critical safety investment for the region which will:



- Replace a low, narrow bridge built in 1960 to traverse the Victoria Barge Canal with a wider, taller structure, reducing the incidence of bridge strikes and crashes on and below the bridge;
- Increase resiliency and reduce maintenance costs for TxDOT by replacing an at-risk steel structure with wider-span, prestressed concrete construction; and
- Unlock the economic potential of the region by accommodating multimodal freight traffic near the Port of Victoria, encouraging investment in high-quality jobs in manufacturing and logistics.

The table below summarizes several of the current baseline issues and describes how they will be addressed by the proposed project.

Table 5-2 | Baseline Issues to be Addressed

Baseline / Current Status and Problem to be Addressed	Change to Baseline / Proposed Project to Address Problem	Example Impacts
The existing bridge has an insufficient navigational clearance of 50 feet	The proposed bridge will increase the navigational clearance by 50%	More frequent, larger, heavier barges will be able to traverse the Victoria Barge Canal
The existing bridge has very few alternatives, so a failure would create a 44-mile detour	A new bridge will be constructed of more resilient materials	The likelihood of forced detours will decrease, reducing harmful emissions and lower vehicle operating costs
The existing design of the bridge leads to frequent barge strikes	The proposed design will eliminate all in-water infrastructure	Barge strikes will be eliminated

Project Benefits

This Project would contribute to increasing the economic competitiveness of the region through improvements in the mobility of people and goods. Cost-avoidance benefits are measured in the assessment of economic competitiveness, including detour-related travel time savings and vehicle operating cost savings for commercial vehicles.

The reduction in travel time and vehicle distance traveled enables the freight truck industry to deliver goods in an improved cost- and time-efficient manner, impacting nearly all economic industries active regionally and nationally. This project will improve system



operations to increase travel time reliability and improve mobility for both freight and passenger vehicles if a barge strike shuts the bridge down entirely).

Build Detour Avoidance: Travel Time and Vehicle Operating Cost Savings

The replacement of the current deficient bridge (Build) would eliminate the possibility of load posting and of truck traffic to detour approximately 44 miles around the bridge. In addition, a significant barge strike could render the bridge unsafe and, therefore, closed to all traffic.

Travel time savings include in-vehicle travel time savings for drivers and passengers. Travel time is considered a cost to users, and its value depends on the disutility that travelers attribute to time spent traveling. A reduction in travel time translates into more time available for work, leisure, or other activities.

Travel time savings in this BCA is calculated by multiplying the number of truck drivers (Truck occupancy of 1 is assumed) by the corresponding driver value of travel time (VoTT) and the changes in Vehicle Hours of Travel (VHT) between the “Build” (zero hours) and the “No Build” (53 minutes per detour). The VoTT is the driver time cost for trucks.

Table 5-3 | Unit Values/Rates Used in the Monetization of Travel Time Savings

Variable	Unit	Value	Source
Value of Travel Time (VoTT) – Truck Drivers	2022\$ per person hour	\$33.50	U.S. Department of Transportation, <i>Benefit-Cost Analysis Guidance for Discretionary Grant Programs</i> , (December 2023)

Vehicle operating costs (VOC) comprise fuel costs and all the necessary replacement items on the vehicle and regular maintenance (e.g., oil and fluid changes, tire rotations, tire replacements, and wiper replacement) as well as truck/trailer lease or purchase payments, permits and licenses, and other related costs to owners of commercial vehicles. The estimation of these benefits is based on the detour VMT for trucks and passenger cars under the “Build” scenario (zero miles detour) relative to the “No Build” (44.1 miles detour). The detour VMT for trucks and passenger cars in the “No Build” scenario is multiplied by the corresponding VOC per mile shown below.

Table 5-4 | Unit Values/Rates Used in the Monetization of Vehicle Operating Costs

Vehicle Type	Recommended Vehicle Operating Cost per Mile	Source
Trucks	\$1.32	U.S. Department of Transportation, <i>Benefit-Cost Analysis Guidance for Discretionary Grant Programs</i> , (December 2023)

The forementioned factors were applied to the estimated detour VMT and hours of travel based on available TxDOT data. TxDOT provides the following information about the SH 35 bridge over the Victoria Barge Canal:

- 2024 AADT of 3,587 vehicles, 15.3% or 549 of which are trucks.
- 2042 AADT of 5,022 vehicles, 15.3% or 768 of which are trucks.

Bridge posting would force trucks to detour 44.1 miles. The Annual VMT for the analysis period (2029-2058) was based on interpolation/extrapolation of these AADT figures assuming this detour length. The compound annual VMT growth rate of truck traffic is 1.9% based on the AADT values. Assuming a travel speed of 50 miles per hours, the estimated VMT and travel time for the first and last years of the analysis based on the aforementioned truck detour are:

- 2029: 9,699,519 Truck VMT and 193,990 hours of travel
- 2058: 16,680,404 Truck VMT and 333,608 hours of travel

The annual VOC and travel time cost savings of the “Build” (no detour) scenario relative to the “No-Build” (detour) scenario are presented in the table below. These costs - **\$769.3 million** (\$396.0 million discounted to 2022 dollars), are avoided by the “Build” scenario, and considered Project benefits.

Table 5-5 | Project Vehicle Operating Costs and Travel Time Benefits

Year	Travel Time Cost Savings	Vehicle Operating Cost Savings	Total Detour TT & VOC Cost Savings	Total Detour TT & VOC Cost Savings (Discounted 2022\$)
2029	\$6,498,678	\$12,803,365	\$19,302,042	\$15,588,079
2030	\$6,621,314	\$13,044,977	\$19,666,290	\$15,404,696
2031	\$6,746,264	\$13,291,148	\$20,037,412	\$15,223,470
2032	\$6,873,573	\$13,541,965	\$20,415,538	\$15,044,376
2033	\$7,003,284	\$13,797,514	\$20,800,798	\$14,867,388
2034	\$7,135,443	\$14,057,887	\$21,193,329	\$14,692,483
2035	\$7,270,095	\$14,323,173	\$21,593,268	\$14,519,636
2036	\$7,407,289	\$14,593,465	\$22,000,754	\$14,348,822
2037	\$7,547,072	\$14,868,857	\$22,415,929	\$14,180,017
2038	\$7,689,492	\$15,149,447	\$22,838,939	\$14,013,199
2039	\$7,834,600	\$15,435,332	\$23,269,932	\$13,848,343
2040	\$7,982,447	\$15,726,611	\$23,709,058	\$13,685,426
2041	\$8,133,083	\$16,023,388	\$24,156,471	\$13,524,426
2042	\$8,286,562	\$16,325,764	\$24,612,327	\$13,365,320
2043	\$8,442,938	\$16,633,847	\$25,076,785	\$13,208,086
2044	\$8,602,264	\$16,947,744	\$25,550,008	\$13,052,701
2045	\$8,764,597	\$17,267,564	\$26,032,161	\$12,899,145

Year	Travel Time Cost Savings	Vehicle Operating Cost Savings	Total Detour TT & VOC Cost Savings	Total Detour TT & VOC Cost Savings (Discounted 2022\$)
2046	\$8,929,993	\$17,593,420	\$26,523,413	\$12,747,395
2047	\$9,098,511	\$17,925,425	\$27,023,935	\$12,597,430
2048	\$9,270,209	\$18,263,695	\$27,533,903	\$12,449,230
2049	\$9,445,146	\$18,608,348	\$28,053,494	\$12,302,773
2050	\$9,623,385	\$18,959,505	\$28,582,891	\$12,158,039
2051	\$9,804,988	\$19,317,290	\$29,122,277	\$12,015,007
2052	\$9,990,017	\$19,681,825	\$29,671,843	\$11,873,659
2053	\$10,178,539	\$20,053,240	\$30,231,779	\$11,733,973
2054	\$10,370,618	\$20,431,664	\$30,802,282	\$11,595,930
2055	\$10,566,321	\$20,817,230	\$31,383,551	\$11,459,512
2056	\$10,765,718	\$21,210,071	\$31,975,788	\$11,324,698
2057	\$10,968,877	\$21,610,325	\$32,579,202	\$11,191,471
2058	\$11,175,870	\$22,018,133	\$33,194,003	\$11,059,810
Total	\$259,027,186	\$510,322,218	\$769,349,404	\$395,974,541

Impacts to Barge Operations and Ports on the Victoria Barge Canal

The potential impacts of not replacing the existing SH 35 bridge on barge operations and the ports they service along the Victoria Barge Canal can be significant. These are described in the following, but not quantified in this BCA.

Limiting Risk of Bridge Strikes by Barges Navigating the Port Victoria Canal – The proposed bridge redesign includes removing the bridge footings from the canal, significantly widening the horizontal clearance under the bridge and reducing the risk of the bridge being struck and damaged. Currently, the fender system near the bridge footings is struck 3-8 times per month because of the narrow horizontal passageway under the bridge. The barge strikes on the fender system require periodic repairs which can hinder barge traffic and create expensive delays. Additionally, due to the narrowness of the passage, barge operators often must break down double-wide barge “packs” to single file for passage under the bridge. It takes time to break down the packs and reassemble them on the far side of the bridge. In addition, the narrow and relatively low passage under the current bridge also limits the size of cargo that can potentially traverse the canal, affecting the economic potential of the Port of Victoria.

This project will directly enable an increase in intermodal and multimodal freight movement by eliminating a major constraint on the Victoria Barge Canal: its current navigational clearance of 50 feet. The proposed bridge will be constructed without the use of in-water infrastructure, eliminating the possibility of barge-pier strikes. The proposed 50% increase in vertical clearance will allow a larger variety of different barges to traverse the canal, allowing for transport of double stacked containers, new commodities, industrial equipment, and construction modules to expand the offerings of the Port of Victoria.



Safety Benefits (Crash Cost Reduction)

This project will incorporate many design elements, which will make the proposed bridge a safer facility than what is currently in place. Given the relatively low number of crashes on the bridge historically, the crash modification benefits are not quantified in this BCA. That notwithstanding, significant safety benefits can be associated with eliminating detour-related roadway miles and the crashes that could occur if trucks were forced to detour around the bridge.

The calculation of these crash-reduction safety benefits is straight forward. USDOT benefit-cost guidance provides a safety value per vehicle mile traveled of \$0.027 per VMT. The safety benefit is calculated as the detour related VMT multiplied by \$0.027 per VMT. The crash reduction benefit over the 30-year analysis horizon is estimated at **\$10.4 million** (\$5.4 million discounted to 2022). **Table 5-6** presents the annual safety benefits.

Table 5-6 | Crash Reduction Benefits

Year	Crash Reduction Cost Savings	Crash Reduction Cost Savings (Discounted 2022 \$)
2029	\$261,887.00	\$211,496.55
2030	\$266,829.00	\$209,008.44
2031	\$271,864.00	\$206,549.59
2032	\$276,995.00	\$204,119.67
2033	\$282,222.00	\$201,718.33
2034	\$287,548.00	\$199,345.25
2035	\$292,974.00	\$197,000.08
2036	\$298,503.00	\$194,682.51
2037	\$304,136.00	\$192,392.20
2038	\$309,875.00	\$190,128.83
2039	\$315,723.00	\$187,892.09
2040	\$321,681.00	\$185,681.66
2041	\$327,751.00	\$183,497.24
2042	\$333,936.00	\$181,338.51
2043	\$340,238.00	\$179,205.19
2044	\$346,658.00	\$177,096.95
2045	\$353,200.00	\$175,013.52
2046	\$359,865.00	\$172,954.61
2047	\$366,656.00	\$170,919.91
2048	\$373,576.00	\$168,909.15
2049	\$380,625.00	\$166,922.04
2050	\$387,808.00	\$164,958.31
2051	\$395,126.00	\$163,017.69
2052	\$402,583.00	\$161,099.89
2053	\$410,180.00	\$159,204.66

Year	Crash Reduction Cost Savings	Crash Reduction Cost Savings (Discounted 2022 \$)
2054	\$417,920.00	\$157,331.72
2055	\$425,807.00	\$155,480.82
2056	\$433,842.00	\$153,651.69
2057	\$442,029.00	\$151,844.07
2058	\$450,371.00	\$150,057.73
Total	\$10,438,408.00	\$5,372,518.90

Environmental Sustainability Benefits

This analysis examined the potential automotive emissions associated with the “No-Build” detour that would be avoided if *Bridging the Gulf* is completed. Similar to the safety benefits, USDOT provides monetized values per VMT for CO₂ and Non- CO₂ emissions. These are \$0.299 and \$0.035 per VMT for CO₂ and Non- CO₂ emissions, respectively. Multiplying these values by the avoided detour-related VMT, provides the emissions reduction benefits of the Project. Over 30 years, the Project reduces CO₂ costs by **\$115.6 million** (\$74.5 million discounted to 2022) and Non- CO₂ emissions by **\$13.5 million** (\$6.9 million discounted to 2022). [Table 5-7](#) presents the annual emissions reduction benefits.

Table 5-7 | Project Vehicle Emissions Benefits

Year	CO ₂ Emissions Cost Reductions	CO ₂ Emissions Cost Reductions (Discounted 2022\$)	Non-CO ₂ Emissions Cost Reductions	Non-CO ₂ Emissions Cost Reductions
2029	\$2,900,156	\$2,524,760	\$339,483	\$274,162.20
2030	\$2,954,885	\$2,521,966	\$345,890	\$270,936.86
2031	\$3,010,646	\$2,519,174	\$352,417	\$267,749.47
2032	\$3,067,460	\$2,516,386	\$359,067	\$264,599.57
2033	\$3,125,346	\$2,513,600	\$365,843	\$261,486.73
2034	\$3,184,324	\$2,510,818	\$372,747	\$258,410.51
2035	\$3,244,416	\$2,508,039	\$379,781	\$255,370.48
2036	\$3,305,641	\$2,505,263	\$386,948	\$252,366.21
2037	\$3,368,022	\$2,502,490	\$394,250	\$249,397.29
2038	\$3,431,579	\$2,499,720	\$401,690	\$246,463.30
2039	\$3,496,337	\$2,496,953	\$409,270	\$243,563.82
2040	\$3,562,316	\$2,494,189	\$416,993	\$240,698.45
2041	\$3,629,540	\$2,491,428	\$424,863	\$237,866.79
2042	\$3,698,033	\$2,488,670	\$432,880	\$235,068.44
2043	\$3,767,818	\$2,485,915	\$441,049	\$232,303.02
2044	\$3,838,921	\$2,483,164	\$449,372	\$229,570.13
2045	\$3,911,365	\$2,480,415	\$457,852	\$226,869.38
2046	\$3,985,176	\$2,477,670	\$466,492	\$224,200.41
2047	\$4,060,380	\$2,474,927	\$475,295	\$221,562.84
2048	\$4,137,004	\$2,472,188	\$484,265	\$218,956.30

Year	CO ₂ Emissions Cost Reductions	CO ₂ Emissions Cost Reductions (Discounted 2022\$)	Non-CO ₂ Emissions Cost Reductions	Non-CO ₂ Emissions Cost Reductions
2049	\$4,215,073	\$2,469,451	\$493,403	\$216,380.43
2050	\$4,294,615	\$2,466,718	\$502,714	\$213,834.85
2051	\$4,375,659	\$2,463,987	\$512,201	\$211,319.23
2052	\$4,458,232	\$2,461,260	\$521,867	\$208,833.19
2053	\$4,542,363	\$2,458,536	\$531,715	\$206,376.41
2054	\$4,628,082	\$2,455,814	\$541,749	\$203,948.53
2055	\$4,715,418	\$2,453,096	\$551,972	\$201,549.20
2056	\$4,804,402	\$2,450,381	\$562,388	\$199,178.11
2057	\$4,895,066	\$2,447,668	\$573,001	\$196,834.91
2058	\$4,987,441	\$2,444,959	\$583,814	\$194,519.28
Total	\$115,595,715	\$74,539,603	\$13,531,271	\$6,964,376.34

State of Good Repair Benefits

Repair and maintenance costs continue to increase as structures age, and upgrading infrastructure on aging assets will lower long-term maintenance burdens for TxDOT. Furthermore, upgrading the bridge will help TxDOT continue its upward trend of improving pavement and bridge conditions across Texas. Repairing the bridge saves vehicles from having to use the circuitous 44-mile detour, saving unnecessary vehicular miles traveled (VMT) on neighboring roadways and further lowering future wear-and-tear maintenance costs. Currently the existing bridge [exceeds the 48-year average age of bridges in Texas](#). Replacing the bridge will greatly extend the life cycle of all components of the SH 35 crossing including bridge approach and on- and off-ramp facilities, as each will be updated with the new bridge design. Furthermore, the condition forecast for the bridge superstructure shows aggressive deterioration will bring the bridge to poor condition by 2027 in addition to expected decay from coastal weather and regular erosion.

The State of Good Repair benefit category focuses on two benefit types:

- Reducing bridge maintenance costs, as the replacement bridge will require much less maintenance and need for frequent bridge fender repairs due to barge strikes.
- Obviating the need to detour in the Build scenario, thus eliminating the potential deterioration of the road by the detoured trucks.

These benefits are described in the following sections.

Reduced Bridge Maintenance Costs

According to TxDOT, the average annual costs of maintaining the current bridge versus the replacement bridge are:

- Current bridge: \$435,000 average cost per year (2022 dollars).
- Replacement bridge \$111,549 average cost per year (2022 dollars).

Over the analysis period, the replacement bridge would save TxDOT on average \$283,905 per year. Over the 30-year analysis period, maintenance and repair savings for the new bridge versus the current bridge total **\$8.5 million** (\$4.6 million discounted to 2022).

Reduced Truck Detour-Related Pavement Costs

If the current bridge is not replaced by at least 2029, commercial vehicles (trucks) will no longer be able to use the bridge due to deterioration of the bridge resulting in load posting. This would create a circuitous 44-mile detour for trucks, resulting in increased pavement damage on the detour route.

Pavement damage per truck VMT was based on inflating the values provided for 2000 in the [Federal Highway Summary Report](#). The minimum pavement cost for trucks of \$0.01 was inflated to \$0.017 using the US Bureau of Economic Analysis GDP Price deflator values. This \$0.017 is based on pavement damage per mile for a 40,000 pound 4-axle single unit truck on a rural interstate. Given that many commercial vehicles far exceed that weight, the per mile cost is considered conservative.

The \$0.017 per mile pavement cost was applied to the estimated annual truck VMT for the No-Build scenario to calculate the annual cost of pavement damage if the replacement bridge was not built. In total, the replacement bridge would eliminate an estimated **\$6.6 million** in pavement damage (\$3.4 million discounted to 2022).

Replacement Bridge Residual Value

The Residual Value of the replacement bridge assumes that its original value depreciates in a linear manner over its service life. The replacement bridge is an asset with an expected useful life of 60 years and would thus retain half of its value after 30 years in service (the analysis period). The estimated construction cost is \$57.9 million in undiscounted 2022 dollars. After 30 years, 50% or **\$29.0 million** (\$9.6 million discounted to 2022) in value of the replacement bridge remains.

Other Benefits of the Build Scenario

Three additional benefits were quantified for this BCA. These are mobility (congestion reduction) costs, noise reduction (Quality of Life) costs, and Residual Value of the Replacement Bridge. The mobility (congestion reduction) and noise reduction benefits, similar to the emissions and the pavement cost reduction benefits, are based on eliminating the potential truck VMT associated with future load posting on the current bridge. As previously mentioned, this detour would require trucks to add 44 miles to their trip, adding to potential congestion on the detour routes. This analysis multiplied the estimated truck detour VMT by [\\$0.075 per mile as recommended by USDOT](#) for buses and trucks in a rural setting.

The recommended value of noise reductions by USDOT is \$0.0037 per VMT for buses and trucks in a rural setting. This analysis multiplied the estimated truck detour VMT by \$0.0037 per mile to obtain the noise reduction benefit of replacing the current bridge and eliminating the truck detour. Over the 30-year analysis period, the construction of the new

bridge would eliminate the potential congestion and noise costs of a detour valued at **\$30.4 million** (\$15.7 million discounted to 2022).

Project Benefits Summary

The benefits of the *Bridging the Gulf Project* include the reduction of existing costs, or the prevention of future costs related to the current bridge. Total benefits for the replacement bridge project are estimated at **\$983.5 million** (\$516.2 million discounted to 2022) over 30-years. The table below summarizes the project's long-term benefits.

Table 5-8 | Project Benefits Summary

Benefits and Costs	\$2022 Value	Discounted Value (2022\$)
Travel Time Savings (Avoided Detours)	\$259,027,186	\$133,318,061
Vehicle Operating Cost Savings (Avoided Detours)	\$510,322,218	\$262,656,479
Safety Crash Cost Savings (Avoided Crashes)	\$10,438,409	\$5,372,519
CO ₂ Emissions Cost Reduction	\$115,595,715	\$74,539,603
Non- CO ₂ Emissions Cost Reduction	\$13,531,271	\$6,964,376
Avoided Highway Externality (Congestion & Noise)	\$30,426,029	\$15,659,898
Pavement Damage Cost Reduction	\$6,644,627	\$3,419,907
Residual Asset Value	\$28,951,940	\$9,646,410
O&M Cost Savings	\$8,517,156	\$4,573,944
Total Benefits	\$983,454,557	\$516,151,197

Project Costs

Capital Costs

The capital costs associated with this project are primarily associated with construction. Project costs will total **\$57.9 million** in 2022 dollars (\$50.5 million discounted to 2022).

Table 5-9 | Capital Costs Summary

Variable	\$2022 Value	Discounted Value (2022\$ Millions)
Construction Start	2027	-
Construction End	2028	-
Construction Duration	2	-
Project Opening	2029	-
Capital Cost	\$57.9	\$50.5

Table 5-10 presents the evaluation results for *Bridging the Gulf*. Results are presented in undiscounted and discounted to 2022. All benefits and costs were estimated over an evaluation period extending 30 years beyond project completion in 2027 (starting in 2028). The total benefits from the Project improvements within the analysis period represent **\$516.2 million** discounted to 2022. The total project capital costs are calculated to be **\$49.0 million** when discounted to 2022. The difference of the discounted benefits and costs equal a NPV of **\$467.2 million**, resulting in a BCR of **10.5:1**.

Table 5-10 | Brief Summary of Project Costs and Benefits

Benefits and Costs	\$2022 Value	Discounted Value (2022\$)
Total Benefits	\$983,454,551	\$516,151,197
Capital Costs	\$57,903,880	\$48,959,345
Benefit/Cost Ratio	17.0	10.5
Net Present Value	\$925,550,671	\$467,191,852

Table 5-11 summarizes the results of the BCA by year. The full spreadsheet model has been attached with the application.

Table 5-11 | Lifecycle Benefit-Cost Analysis

Year	Costs Undiscounted 2022\$	Benefits Undiscounted 2022\$	Costs Discounted 2022\$	Benefits Discounted 2022\$
2027	\$28,951,940	\$0	\$24,853,316	\$0
2028	\$28,951,940	\$0	\$24,106,029	\$0
2029	\$0	\$24,017,532	\$0	\$19,578,879
2030	\$0	\$24,465,408	\$0	\$19,371,257
2031	\$0	\$24,921,736	\$0	\$19,166,175
2032	\$0	\$25,386,676	\$0	\$18,963,597
2033	\$0	\$25,860,389	\$0	\$18,763,492
2034	\$0	\$26,343,042	\$0	\$18,565,826
2035	\$0	\$26,834,803	\$0	\$18,370,568
2036	\$0	\$27,335,844	\$0	\$18,177,685
2037	\$0	\$27,846,340	\$0	\$17,987,147
2038	\$0	\$28,366,470	\$0	\$17,798,923
2039	\$0	\$28,896,415	\$0	\$17,612,983
2040	\$0	\$29,436,360	\$0	\$17,429,296
2041	\$0	\$29,986,495	\$0	\$17,247,834
2042	\$0	\$30,547,012	\$0	\$17,068,568
2043	\$0	\$31,118,106	\$0	\$16,891,468
2044	\$0	\$31,699,977	\$0	\$16,716,508
2045	\$0	\$32,292,828	\$0	\$16,543,658
2046	\$0	\$32,896,867	\$0	\$16,372,893
2047	\$0	\$33,512,305	\$0	\$16,204,185

Year	Costs Undiscounted 2022\$	Benefits Undiscounted 2022\$	Costs Discounted 2022\$	Benefits Discounted 2022\$
2048	\$0	\$34,139,357	\$0	\$16,037,507
2049	\$0	\$34,778,242	\$0	\$15,872,834
2050	\$0	\$35,429,184	\$0	\$15,710,140
2051	\$0	\$36,092,409	\$0	\$15,549,399
2052	\$0	\$36,768,150	\$0	\$15,390,586
2053	\$0	\$37,456,643	\$0	\$15,233,677
2054	\$0	\$38,158,128	\$0	\$15,078,648
2055	\$0	\$38,872,851	\$0	\$14,925,474
2056	\$0	\$39,601,061	\$0	\$14,774,132
2057	\$0	\$40,343,014	\$0	\$14,624,598
2058	\$0	\$70,050,908	\$0	\$24,123,260
Total	\$57,903,880	\$983,454,551	\$48,959,345	\$516,151,197

Sensitivity Testing

A sensitivity analysis is used to help identify which variables have the greatest impact on the BCA results. This analysis can be used to estimate how changes to key variables from their preferred value affect the results and how sensitive the results are to these changes. This allows for the assessment of the strength of the BCA, including whether the results reached using the preferred set of input variables are significantly different by reasonable departures from those values. **Table 5-12** summarizes the key variables which have been tested for sensitivity and the results of this analysis.

First, sensitivity was tested by decreasing the expected detour associated with the “No-Build” scenario by 50%. The resulting discounted BCR was **5.1:1**, with a NPV of **\$202.1** million.

Second, sensitivity was tested by increasing the cost of the replacement bridge by 25%. The resulting discounted BCR was **8.4:1**, with a NPV of **\$455.0** million.

The analysis shows that the BCA estimates are robust and demonstrate Project feasibility under extreme assumptions.

Table 5-12 | Sensitivity Analysis

Sensitivity Variable	Sensitivity Value	New BCR (Discounted)	New NPV (Millions of Discounted \$2022)
Decrease Detour Miles	-50%	5.1:1	\$202.1
Increase Cost of Replacement Bridge	+25%	8.4:1	\$455.0



Appendix A: Funding Commitment Letter





125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

February 26, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Buttigieg:

The Texas Department of Transportation is pleased to submit a FY 2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant application to support ***Bridging the Gulf: Improving Safety on the Victoria Barge Canal***. The application seeks \$25 million in RAISE program support against a total project cost of \$60 million.

TxDOT hereby commits that with the receipt of the requested RAISE funding, we will deploy \$35 million in state funds to complete the financing package for this critical project. We have these funds already committed; however, bridge projects are bundled in our STIP so we could not show documentation from our STIP to document this.

The State of Texas is a stable and reliable funding partner committed to leveraging state funding sources dedicated by the Texas Constitution to fund public roadway projects, including state motor vehicle fuels tax, vehicle registration fees, oil and gas severance taxes, and general sales and use tax, motor vehicle sales, and rental tax.

If ***Bridging the Gulf*** requires additional funding to complete this project, TxDOT will identify the source of those funds and be held accountable for any overages the project may incur.

Thank you for considering this application. If you have any questions, please call me at (512) 305-9515 or you or your staff may contact Melanie Alvord, Director, Federal Affairs at Melanie.Alvord@txdot.gov or (512) 944-5135.

Sincerely,

Marc D. Williams, P.E.
Executive Director

cc: Graham Bettis, P.E., Bridge Division Director
Martin Horst, P.E., District Engineer, Yoakum
Melanie Alvord, Federal Affairs Section Director

Appendix B: Letters of Support

TxDOT received support from a variety of elected officials, project stakeholders, and other public and private partners in support of *Bridging the Gulf: Creating Opportunity on the Victoria Barge Canal*. The list below provides a summary of the supporting parties committed as of the application deadline of February 28, 2024.

- Congressman Michael Cloud (TX-27)
- State Representative Geanie W. Morrison (HD-30)
- State Senator Lois W. Kolkhorst (SD-18)
- Port of Victoria
- Port of West Calhoun

MICHAEL CLOUD
27TH DISTRICT, TEXAS

COMMITTEE ON APPROPRIATIONS

COMMITTEE ON OVERSIGHT
AND ACCOUNTABILITY

SELECT SUBCOMMITTEE ON
THE CORONAVIRUS PANDEMIC

CLOUD.HOUSE.GOV

555 N. CARANCAHUA ST.
TOWER II, SUITE 980
CORPUS CHRISTI, TX 78401
(361) 884-2222

120 S. MAIN ST., SUITE 310
VICTORIA, TX 77901
(361) 894-6446

171 CANNON HOB
WASHINGTON, DC 20515
(202) 225-7742

Congress of the United States
House of Representatives
Washington, DC 20515

February 21, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Dear Secretary Buttigieg,

I would like to express my strong support for the Texas Department of Transportation, and their FY2024 Rebuilding American Infrastructure with Sustainability and Equity program application for the project "Bridging the Gulf: Improving Safety on the Victoria Barge Canal." This project is a critical investment that will replace the outdated bridge carrying State Highway 35 over the Victoria Barge Canal in Calhoun County, Texas.

Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway, the existing bridge was built in 1960 with a vertical clearance of 50 feet that is now greatly insufficient to accommodate heavy barge traffic. Barge traffic is projected to grow significantly over the next several years. In 2023, an average of 3 to 8 barge strikes per month resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires frequent maintenance, painting, and inspection, contributing to costs which the proposed replacement would minimize using prestressed concrete, increasing the vertical clearance to 75 feet, and widening the main span to eliminate all in-water infrastructure.

This project will ensure that the canal will be able to safely accommodate the increased barge traffic, lessening adverse impacts to motorists, while positively impacting the region's future economic development. Thank you for your full and fair consideration of the Texas Department of Transportation's application. Please do not hesitate to contact my office if you have any questions, or if I can be of further assistance.

Sincerely,



Michael Cloud
Member of Congress

TEXAS HOUSE OF REPRESENTATIVES

CAPITOL OFFICE:
P.O. BOX 2910
AUSTIN, TEXAS 78768-2910
(512) 463-0456
(512) 463-0158 *fax*

DISTRICT OFFICE:
P.O. BOX 4642
VICTORIA, TEXAS 77903
(361) 572-0196
(361) 576-0747 *fax*



GEANIE W. MORRISON

COMMITTEES:
APPROPRIATIONS
CULTURE, RECREATION & TOURISM
REDISTRICTING

DISTRICT 30
COUNTIES:
DEWITT
GOLIAD
JACKSON
LAVACA
MATAGORDA
VICTORIA

February 20, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

RE: RAISE Grant Support for Texas Calhoun Bridge

Dear Secretary Buttigieg,

I am writing in support of TxDOT's application for the FY 2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program for its project "Bridging the Gulf: Improving Safety on the Victoria Barge Canal." This project is a critical investment that will replace the bridge carrying State Highway 35 (SH35) over the Victoria Barge Canal.

Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a vertical clearance of 50 feet that is now insufficient to accommodate heavy barge traffic, which is projected to grow significantly over the next several years. In 2023, an average of 3 to 8 strikes per month has resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires frequent maintenance, painting, and inspection, costs which the proposed replacement would minimize using prestressed concrete, increasing the vertical clearance to 75 feet, and widening the main span to eliminate all in-water infrastructure.



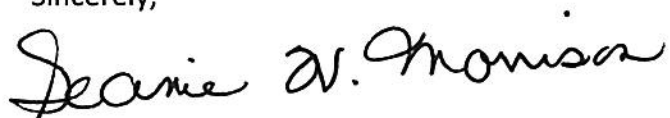
EMAIL: Geanie.Morrison@house.texas.gov

The Honorable Pete Buttigieg
February 20, 2024
Page -2-

This project will ensure the region can accommodate and take advantage of increased traffic helping shape the future of economic development for the Port of Victoria, San Antonio Bay, and the surrounding region.

I appreciate your consideration of TxDOT's application. If you have any questions or if I may be of further assistance, please do not hesitate to contact my office at (361) 572-0196.

Sincerely,

A handwritten signature in black ink that reads "Geanie W. Morrison". The signature is written in a cursive style with a prominent dot above the letter 'i' in "Morrison".

Representative Geanie W. Morrison
Texas House of Representatives District 30

COMMITTEES:

HEALTH & HUMAN SERVICES, CHAIR

BUSINESS AND COMMERCE

FINANCE

NATURAL RESOURCES & ECONOMIC DEVELOPMENT

WATER, AGRICULTURE & RURAL AFFAIRS

THE SENATE OF TEXAS



LOIS W. KOLKHORST

STATE SENATOR

DISTRICT 18

February 2, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Re: RAISE Grant Support for Texas Calhoun Bridge

Dear Secretary Buttigieg:

As State Senator for Texas Senate District 18, I am writing in support of TxDOT's application for the FY2024 RAISE program for its project "Bridging the Gulf: Improving Safety on the Victoria Barge Canal." This project is a critical investment that will replace the bridge carrying State Highway 35 (SH 35) over the Victoria Barge Canal in Calhoun County.

Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a vertical clearance of 50 feet. That height is now insufficient to accommodate heavy barge traffic, which is projected to grow by significantly over the next several years. Last year, 2023, saw an average of 3 to 8 strikes per month, which has resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires frequent maintenance, painting, and inspection. These are costs the proposed replacement would minimize using prestressed concrete, increasing the vertical clearance to 75 feet, and widening the main span to eliminate all in-water infrastructure.

This project will ensure the region can accommodate and take advantage of increased traffic, shaping the future of economic development for Calhoun County, Victoria County, and the surrounding region. Furthermore, this bridge is critical to supporting a locality and company that is at the forefront of nuclear energy development. This development of clean, thermal generation will pay dividends for the entire nation. Thank you for your consideration of TxDOT's application.

Sincerely,

A handwritten signature in black ink that reads "Lois W. Kolkhorst". The signature is written in a cursive style with a horizontal line under the first name.

Senator Lois W. Kolkhorst



Robby Burdge
Chairman

Byron Burris, II
Vice-Chairman

Donald Pozzi
Secretary

Annie L. Cullen
Commissioner

John H. Gilley, IV
Commissioner

Sean Stibich
Executive Director

Duane G. Crocker
Legal Counsel

VICTORIA COUNTY
NAVIGATION DISTRICT

1934 FM 1432
Victoria, TX 77905
Ph: 361-570-8855
Fax: 361-570-8854

www.portofvictoria.com

02/01/2024

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of
Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Re: RAISE Grant Support for Texas Calhoun Bridge

Dear Secretary Buttigieg:

As Executive Director of the Port of Victoria I am writing in support of TxDOT's application for the FY2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program for its project "Bridging the Gulf: Improving Safety on the Victoria Barge Canal." This project is a critical investment that will replace the bridge carrying State Highway 35 (SH 35) over the Victoria Barge Canal.

Prone to strikes by barges traversing the 36 miles between the Port of Victoria and the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a vertical clearance of 50 feet that is now insufficient to accommodate heavy barge traffic, which is projected to grow by significantly over the next several years. In 2023, an average of 3 to 8 strikes per month has resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires frequent maintenance, painting, and inspection, costs which the proposed replacement would minimize using prestressed concrete, increasing the vertical clearance to 75 feet, and widening the main span to eliminate all in-water infrastructure.

This project will ensure the region can accommodate and take advantage of increased traffic, shaping the future of economic development for the Port of Victoria, San Antonio Bay, and the surrounding region. Thank you for your consideration of TxDOT's application.

Sincerely,

Sean Stibich

Sean Stibich

Executive Director

JACK CAMPBELL, JR
Chairman

TEDDY HAWES
Commissioner

LOUIS DILLON, JR
Commissioner



WEST SIDE CALHOUN COUNTY NAVIGATION DISTRICT
PO BOX 189
SEADRIFT, TX 77983
361-482-0330

February 20, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Ave. SE
Washington, DC 20590

Re: RAISE Grant Support for Texas Calhoun Bridge

Dear Secretary Buttigieg:

As Port Director of the West Side Calhoun County Navigation District/Port of West Calhoun, I am writing in support of TxDOT's application for the FY2024 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program for its project "Bridging the Gulf: Improving Safety on the Victoria Barge Canal." This project is a critical investment that will replace the bridge carrying State Highway 35 (SH 35) over the Victoria Barge Canal.

Prone to strikes by barges traversing the 36 miles along the Victoria Barge Canal and to the Gulf Intracoastal Waterway (GIWW), the existing bridge was built in 1960 with a vertical clearance of 50 feet that is now insufficient to accommodate heavy barge traffic, which is projected to grow by significantly over the next several years. In 2023, an average of 3 to 8 strikes per month has resulted in frequent bridge repairs, partial closures, and repeated damage to the bridge's fender system. The existing steel girder superstructure requires frequent maintenance, painting, and inspection, costs which the proposed replacement would minimize using prestressed concrete, increasing the vertical clearance to 75 feet, and widening the main span to eliminate all in-water infrastructure.

This project will ensure the region can accommodate and take advantage of increased traffic, shaping the future of economic development for the Port of West Calhoun, San Antonio Bay, and the surrounding region. Thank you for your consideration of TxDOT's application. If you have any questions, you may contact me at 361-482-0330 or jennifer@portofwestcalhoun.com.

Sincerely,

Jennifer Stastny

West Side Calhoun County Navigation District/Port of West Calhoun