May 6, 2024

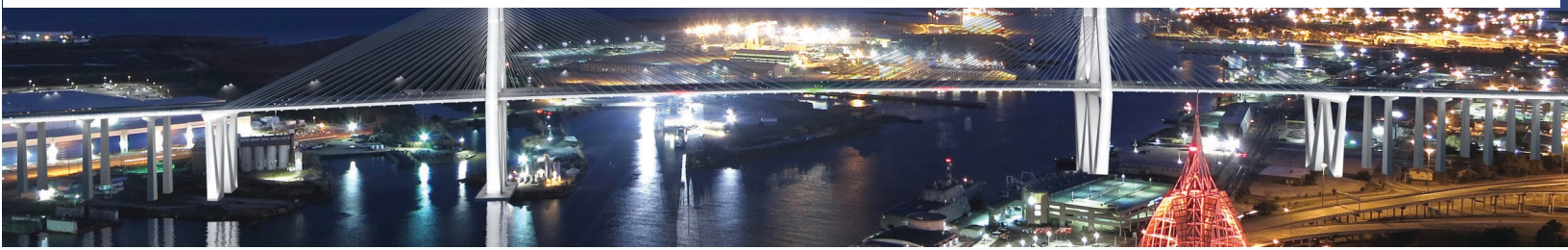
FY 2025-2026 Multimodal Project Discretionary Grant Opportunity (MPDG)

MOBILE RIVER BRIDGE & BAYWAY

I-10 MOBILE RIVER BRIDGE AND BAYWAY MULTIMODAL PROJECT

Outcome Criteria Narrative

For more information, please visit: https://mobileriverbridge.com/fy25-26-mega-grant/



OUTCOME CRITERIA NARRATIVE

The Mobile River Bridge and Bayway project will impact the surrounding cities and counties, their residents, and their transportation systems in multiple ways. It will improve safety along I-10 including the Wallace Tunnel (Tunnel); lead to an overall improved state of good repair; support national and regional economic vitality; address challenges associated with climate change resiliency, environmental justice, racial equity, and barriers to opportunity; and make efficient use of state and federal funding.

Criterion #1: Safety

The I-10 Mobile River Bridge and Bayway project will lead to significantly fewer traffic crashes and related fatalities and injuries by improving outdated roadway geometry, reducing congestion, and reducing driver frustration related to congestion. The existing I-10 route was not designed to handle current or future volumes of daily traffic. The addition of the new Mobile River crossing will allow for distribution of traffic that is currently bottlenecked at the Wallace Tunnel crossing and the added lane to the Bayway with wider shoulders will reduce crash probability. The I-10 route under the Mobile River and across Mobile Bay has a high injury crash rate (21.38%) as compared to the average injury crash rates on freeways in Alabama (17.58%). Click here to see the diagnostics report for the project compared to freeways statewide. A ten-year crash history analysis indicated that this portion of I-10 has experienced a comparatively **high crash rate of 364 crashes a year**. The design of the Tunnel approach, which includes a sharp curve that does not meet current design standards and the highway narrowing from six lanes to four, are significant factors behind the high crash rate.

Figure 1: Picture of Crash on I-10 WB at Approach to Wallace Tunnel

The Mobile River Bridge and new Bayway will solve this geometric issue by utilizing highway geometry that meets current design standards. Over a 30-year period of future projections, the Mobile River Bridge and Bayway are expected to reduce crashes by 50%[1], including 13 fewer fatal crashes, and about 1,284 fewer injury crashes, or about 43 per year. These crash reductions would

[1] Interstate 10 Mobile River Bridge and Bayway Widening, Survey Response Report November 12, 2014

generate approximately $298.2 million in savings over 30 years, discounted at 3.1% (as estimated in the Benefit Cost Analysis (BCA)). In addition to reducing the number of crashes, there are benefits associated with potential reduction in crash severity as well.

Congestion-related crashes are also an issue on the current Bayway, nearby tunnels, and adjacent roads. Bumper-to-bumper traffic and reduced speeds led to 1,429 rear-end crashes on I-10 from 2018 through 2022, within the project limits. The rear-end crashes account for 66% of all crashes along that segment.

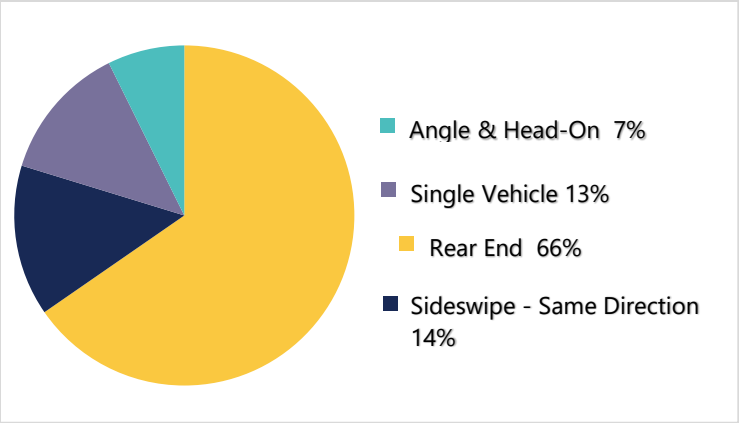


Figure 2: Crash History: I-10 Exit 25A – Exit 35

The congestion and limited shoulders on the current Bayway also slow EMS (Emergency Medical Services) and police response time to incidents on the Bayway, which in turn, has negative impacts on crash victims. Crash data for I-10 between Exit 25A and Exit 35 indicate that EMS was delayed an average of 11 to 23 hours annually[1]. In addition to reduced congestion, the new Bayway will be designed to have additional turnarounds for the use of EMS during an incident. Currently there is only one interchange in the seven-mile long Bayway that allows for EMS to turn around.

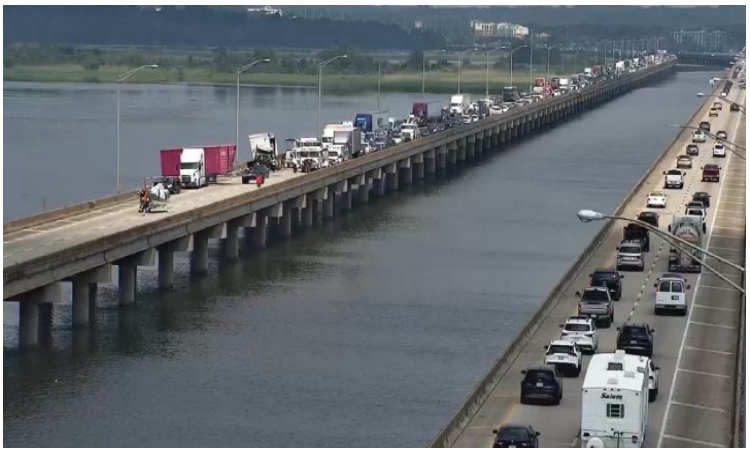


Figure 3: Picture of Crash on Bayway

The I-10 Mobile River Bridge and Bayway project will also provide a safer route for trucks carrying hazardous materials. Currently, vehicles transporting hazardous materials are detoured through Africatown and through Mobile's Central Business District, near neighborhoods and businesses. Should any of these hazardous materials be released, either due to an accident or other cause, the impacts could have catastrophic health and safety consequences. By

[1] Alabama Department of Transportation's Critical Analysis Reporting Environment (CARE) database, for the years 2018 through 2023.

providing an alternative and more direct route with appropriate signage, that avoids residential areas, the I-10 Mobile River Bridge and Bayway project will greatly reduce the chances of a release of hazardous materials that could harm residents and downtown workers. Click here to view a map of the existing and future hazardous materials routes.

The neighborhood which will benefit the most from this redirection of hazardous cargo is Africatown, a historic community formed more than 160 years ago by members of the last illegal shipment of slaves to the U.S. The community will benefit from a lower risk of accidental release of hazardous materials from the redirection of through traffic carrying hazardous materials. On a recent weekday (in March of 2023), over 350 trucks carried hazardous cargo through this area. ALDOT has committed to conducting a traffic study to document existing and future hazardous cargo flow along Africatown Boulevard in Africatown to compare actual numbers before and after project construction.

Connecting Communities

ALDOT will undertake additional efforts to improve transportation safety and work to create "safe streets" in the Africatown neighborhood, developed in consultation with the community. Improvements will include adding crosswalks at all the signalized intersections along Africatown Boulevard as part of the Cochrane-Africatown USA Bridge Shared Use Path and working with the Africatown/Plateau Steering Committee to evaluate and implement traffic calming measures. These improvements are further described in Criterion #5.

Criterion #2: State of Good Repair

The improvements that are a part of the I-10 Mobile River Bridge and Bayway project will modernize and improve the overall condition and level of service of the river and bay crossings which will bring the entire 12-mile project corridor into a state of good repair. All infrastructure within the project limits, including interchanges and local roads under the interstate, will be either replaced or upgraded to meet or exceed current standards.

- The existing Bayway is reaching the end of its service life and is requiring increased maintenance. The new Bayway will be required to meet an enhanced service life of 100 years.
- The approaches to the Wallace Tunnel include sharp horizontal and steep vertical curves that do not meet current safety and design standards.
- The Tunnel and Bayway have failing Levels of Service (LOS) of E and F, with delays during peak traffic periods due to inadequate capacity and cannot meet the load and traffic requirements typical of the regional transportation network.
- The new I-10 Mobile River Bridge and Bayway will solve geometric issues by utilizing highway geometry that meets current safety and design standards.
- The existing Bayway does not meet the standards specified in AASHTO's Guide Specifications for Bridges Vulnerable to Coastal Storms (released in the wake of hurricanes Ivan and Katrina, 2008). Because of this substandard condition and the increased effects of climate change,

> the risk of the Bayway bridges being damaged by a storm is high. The superstructure connections of the Bayway do not have sufficient capacity to resist the uplift force from storm surge and wave effects.[1]

Currently, continuous maintenance work is required on the existing Bayway. The typical defects are abrasion, cracking, and spalling. Additionally, there are numerous locations of fire damage, joint seal failure, and corroded bearings. The needed repairs for these structures far exceeds the annual maintenance budget for all ALDOT maintained bridges in the four county Mobile area of the ALDOT Region. This project will eliminate the need for these repairs and significantly reduce the long-term maintenance. The BCA estimates that the project will avoid $121 million in significant repair and rehabilitation costs. These avoided costs more than offset the build scenario maintenance cost estimated to be $350,000 annually.

ALDOT is responsible for the maintenance of I-10 within Alabama which includes all components of this project. The bridges will be part of ALDOT's inventory and will be inspected and maintained routinely per FHWA and ALDOT requirements. ALDOT allocates funds every fiscal year for the preventative maintenance of Alabama's infrastructure. ALDOT has a Transportation Asset Management Plan (TAMP) to outline ways to preserve Alabama's transportation assets and to identify sustainable funding patterns for roads and bridges to address needs. ALDOT's TAMP is available here.

Criterion #3: Economic Impacts, Freight Movement, and Job Creation

Efficient Transportation of Goods and People; Economic Outcomes

The I-10 Mobile River Bridge and Bayway project will ease congestion, improving travel time and reliability for the movement of freight and people. Intermodal connectivity will also be improved by easing bottlenecks and delays in freight transit within close proximity to one of the nation's major post-Panamax seaports. This congested corridor is identified as a critical bottleneck in Alabama's State Freight Plan and lists the I-10 Mobile River bridge as a critical freight need within the region. Additionally, the Mobile Airport Authority has recently opened the new Mobile International Airport located adjacent to the Airbus manufacturing site at Brookley Field near downtown, which is adjacent to the I-10 corridor.

The project will generate significant travel time savings for private and commercial drivers along the corridor. These travel time savings will be realized by all vehicles, which will be able to take advantage of higher average speeds compared to those experienced in a 'no build' scenario. These benefits are monetized in the Benefit-Cost Analysis (BCA), which estimates that trucks will save more than 5 million hours over 30 years, valued at $169 million (2022 dollars). By 2035, truck travel time savings will reach

[1] Technical Memorandum for Preliminary Structural Analysis of Existing Bayway Structure

more than 100 thousand hours annually, valued at $3.5 million (2022 dollars). Non-commercial vehicles will save more than 11 million hours over 30 years, valued at $372 million; the year after completion, personal cars will already be saving more than 100 thousand hours a year.

Community Development

The I-10 Mobile River Bridge and Bayway will have a positive impact on the tourist industry of Alabama and its neighboring states. The project enhances recreational and tourism opportunities by including a belvedere that will be attached to the west tower of the main span. The goal of this belvedere is to provide the public with an enjoyable experience to see the views of the city and river. This belvedere (view rendering here) will be accessible by sidewalk, pedestrian bridge, and an elevator. This attraction is anticipated to bring tourists and locals to the area. A conceptual plan can be seen in the below figure (higher resolution image viewed here.

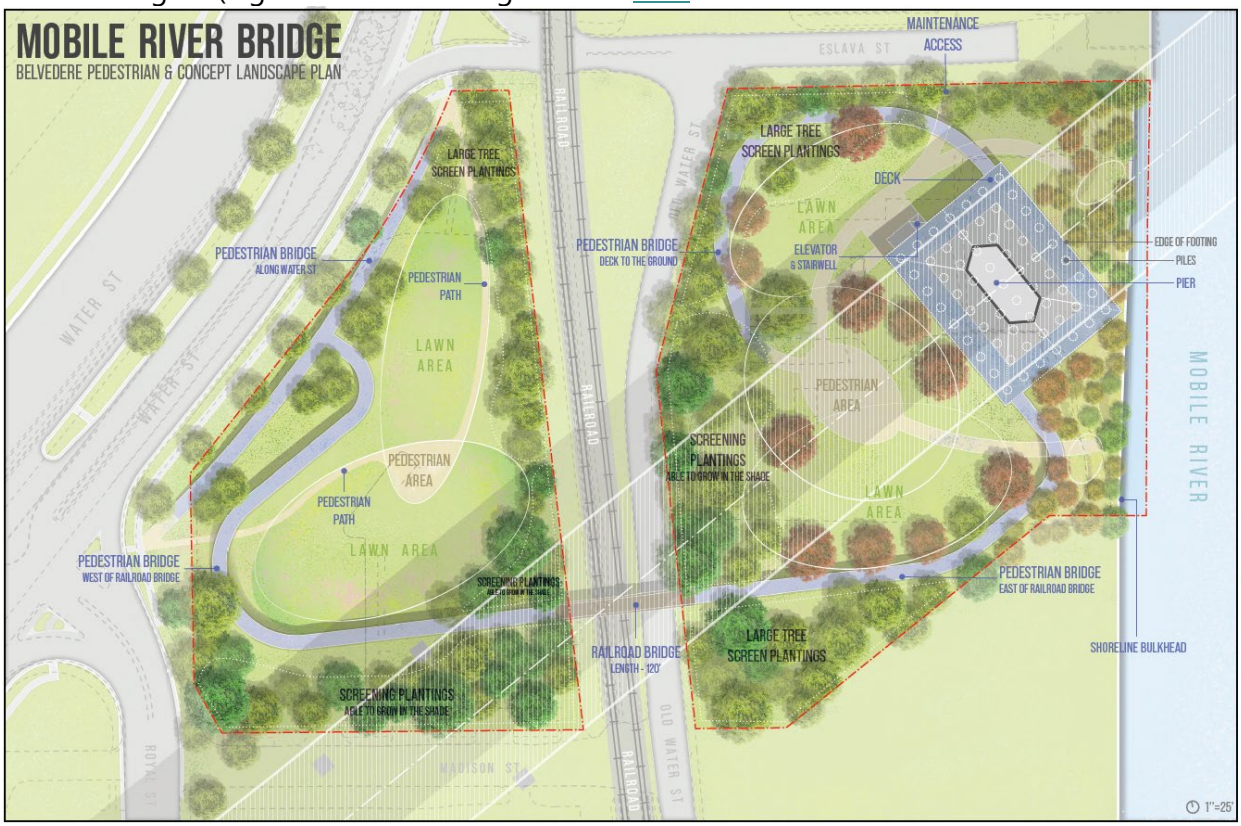


Figure 4: Belvedere and Pedestrian Bridge Conceptual Plan

In addition to the belvedere, space will be made available for future development in the City of Mobile. This space is being made available by the removal of ramps at the West Tunnel interchange (shown here). The new at grade connections will provide better connectivity to downtown Mobile and will include sidewalks, bike lanes and shared use paths. The City of Mobile recently announced their plans to construct a new, world-class civic center that ties directly into this project.

The I-10 Mobile River Bridge and Bayway will be used by heavy tourist traffic visiting not only Alabama beaches and attractions but also beaches, parks, and attractions of neighboring states. Additionally, more than 30 Carnival Caribbean cruises depart annually out of Mobile's cruise terminal (approximately 500 feet from the entrance to the Wallace Tunnel and adjacent to the main span bridge west tower) between the months of October and March. The reduced congestion experienced by seasonal travelers will translate into the expansion of the tourist industry in the Southeast, creating more jobs to service that industry.

ALDOT has also carefully considered non-recurrent delay, i.e., delays caused by highway crashes, natural disasters, and other unpredictable incidents. On congested corridors, non-recurrent delay can equal 50% or more of the delay caused by regularly recurring congestion. The project will substantially reduce crashes and provide a more redundant highway network for avoiding and mitigating incidents in general, as well as mitigating their effects. Currently the I-10 corridor has minimal redundancy because the detour route is 56 miles long as shown in the figure below.

By reducing delays and congestion, especially at the access points near downtown Mobile, the I-10 Mobile River Bridge and Bayway project will also improve the connections between nearby residents and centers of employment and civic activity. As noted in the Project Description, the Bridge and Bayway cross or are adjacent to more than a dozen census tracts that meet the U.S. Department of Transportation's definition of an Area of Persistent Poverty or a Historically Disadvantaged Community. The residents of these communities will have easier and faster travel to centers of employment and civic activity across the Bay at the conclusion of this project.

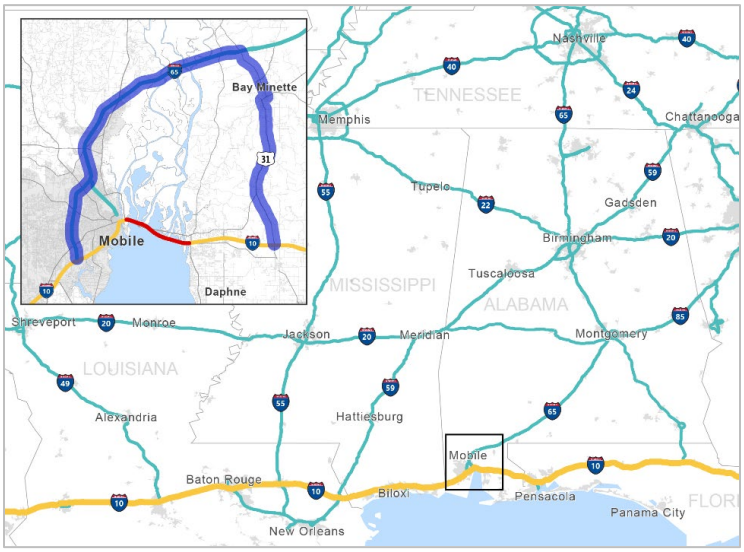


Figure 5: I-10 Corridor showing 56-mile long detour

Additionally, the project will expand quality training and education opportunities to help place underrepresented people in good-paying jobs. In its FY2023 Annual Report, ALDOT noted its continued DBE outreach efforts designed to educate DBEs and improve their bidding opportunities regarding major construction projects. In 2023, an estimated $42,761,731 was awarded to DBEs. The DBE goal for this project is estimated to be $82 Million. The on-the-job training hours have been set to be 22,600 hours. The DBE outreach for the project as written in the technical provisions has to include no less than three outreach events annually to educate and train DBE's on opportunities available on the project.

Support for National and Regional Economic Vitality

The I-10 corridor is an essential link in the U.S. Interstate Highway network, serving eight states and 17 major metropolitan regions. Nine out of the top 10 U.S. ports are located within the I-10 corridor. It is also the southernmost cross-country corridor from Santa Monica, CA, to Jacksonville, FL. According to the Mobile MPO Long Range Transportation Plan: Chapter 7 – Freight; truck freight in Mobile will make up one third of the modes of freight in 2045. This LRTP states about the project, "This bridge is not only critical for daily vehicular traffic, but imperative for the effective movement of freight". This project will have a direct positive impact on truck freight which directly supports the development of the Port of Mobile.

Regionally, the project area serves interstate and international commerce needs with the Port of Mobile (seaport) and Brookley Aeroplex. Mobile's maritime industry is a significant part of the regional economy due to its accessibility to two major interstates, I-10 and I-65. Interstate 65 is a major corridor going through Montgomery and Birmingham, Alabama, and Nashville, Tennessee, and provides connections to I-85 toward Atlanta, Georgia, to I-59 toward Chattanooga, Tennessee, and to I-22 toward Memphis, Tennessee. The Port of Mobile is vital to the region's economic growth, handling more than 55 million tons of international and domestic cargo. [1]

If no action is taken to improve capacity on this part of the highway network, the growing population and shipment of goods will reduce the efficiency and reliability of the region's surface transportation system considerably. Current strains on the river and bay crossings are expected to worsen as the regional economy continues to expand.

In addition to the benefits of highway expansion, designing the new bridge with a higher vertical clearance than originally recommended in the feasibility study will accommodate larger cruise and shipping vessels, both of which will allow the region's economy to continue to grow. Mobile Harbor is a Federal Navigation Channel, and the Port of Mobile annually handles about 58 million tons of cargo. Based on input from stakeholders and findings from the I-10 MRB Air Draft Clearance Report, the new bridge is designed with a 215-foot air draft clearance, allowing Mobile to remain competitive with other ports, including Gulfport, Houston, New Orleans, Savannah, Charleston, Jacksonville, and Tampa.

Criterion #4: Climate Change, Resiliency, and the Environment

The Mobile River Bridge and Bayway project is located in an area that is highly susceptible to sea-level rise (Figure 7). As noted by FHWA, many parts of Mobile, Alabama, including critical roads, rail lines, and pipelines, may be exposed to storm surge under a scenario of a 30-inch sea level rise combined with a storm similar to Hurricane Katrina.[2] In fact, if Hurricane Katrina had made

[1] See Port of Mobile, Economic Impact here.
[2] Climate Variability and Change in Mobile, Alabama: Task 2 Final Report. Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: The Gulf Coast Study, Phase 2. Report # FHWA-HEP-12-053

landfall 50 miles more to the east, around Biloxi, MS the storm surge in the north end of Mobile Bay would have been approximately seven foot higher than it had been. With this increase in storm surge, the existing I-10 Bayway bridge would have been exposed to wave-induced loads that would have exceeded the structural capacity.[1]

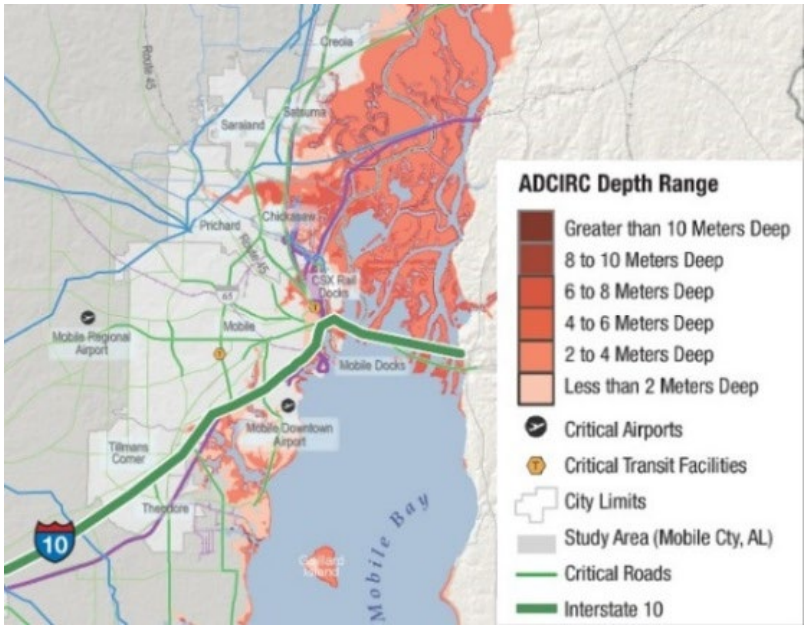


Figure 7: Possible Future Flood Depths in Mobile, AL with Rising Sea Level

Source: U.S. Department of Transportation, 2012

The current Bayway, in particular, is highly susceptible to sea-level rise and damage from storm surges. Moderate storms lead to flooding on the Bayway approaches multiple times a year. Climate change is elevating the risk of increased frequency and severity of storms that routinely cause localized flooding. This project is also located in a FEMA designated Community Disaster Resilience Zone. The tract number within the limits of this project with this designation is Tract 01097001200 and the map can be seen here.

This project will produce a resilient I-10 Corridor by constructing the Mobile River Bridge and Bayway to address sea level rise and storm surge.

ALDOT performed multiple storm surge impact analyses to assess the vulnerability of the existing Bayway bridges to tropical storm and hurricane forces. These analyses used data for environmental conditions such as water bottom terrain, water depths, flood-prone areas identified by the Federal Emergency Management Agency (FEMA), and the heights and widths of the existing Bayway bridges and ramps. These analyses found it likely that the I-10 corridor will experience multiple natural disasters over the next few decades, which could cause major damage to the existing

[1] Cleary, John & Webb, Bret & Douglass, Scott & Buhring, Thomas & Steward, Eric (2018). Assessment of Engineering Adaptations to Extreme Events and Climate Change for a Simply Supported Interstate Bridge over a Shallow Estuary: Case Study. Journal of Bridge Engineering. 23. 10.1061/(ASCE)BE.1943-5592.0001306

Bayway. Based upon this information, ALDOT determined that the Bayway should be replaced with new wider and higher-clearance bridges.[1]

Currently, a 100-year storm would likely leave most, if not all, of the Bayway damaged beyond repair. The new Bayway, to be built above the 100-year storm event maximum wave height, would save an estimated $853 million (2023 dollars) in avoided reconstruction costs should a 100-year storm occur in the next 40 to 50 years. This resiliency benefit has been included in the BCA.

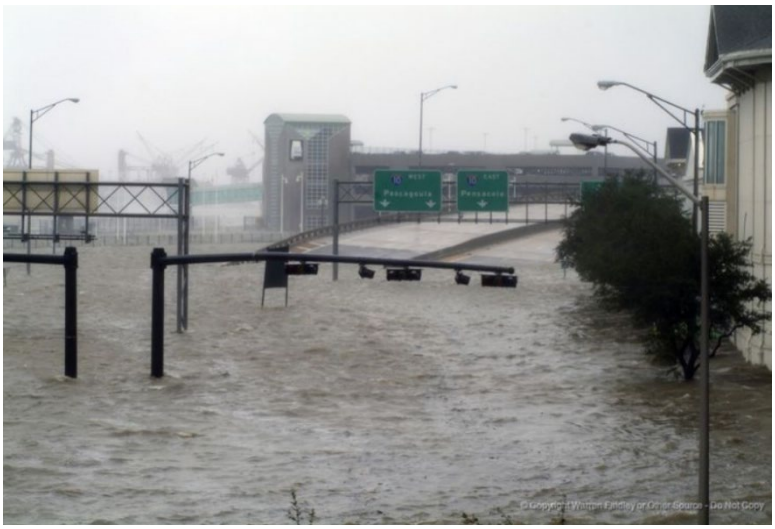


Figure 8: Flooding on I-10 Ramps

Other infrastructure in the area is also highly susceptible to sea-level rise associated with climate change, making the need for a resilient Mobile River and Bay crossing even more important. As noted by FHWA, many parts of Mobile and Baldwin Counties, including critical roads, rail lines, and pipelines, may be exposed to storm surge under a scenario of a 30-inch sea level rise combined with a storm similar to Hurricane Katrina. The risk of storm surge or sea level rise resulting in inundation of this critical infrastructure further emphasizes the need to reinforce the regional transportation network with alternatives that are less susceptible to storm surge inundation, such as raised bridges and modern roadway designs, both of which will be key features of the project.

Environmental Benefits

The proposed improvements will reduce emissions by allowing for more consistent free-flow speeds. As a result of the proposed improvements, emissions will decrease for pollutants such as carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NOx), fine particulate matter (PM2.5), Sulfur Dioxide (SO2), and Carbon Dioxide (CO2). The emission cost reductions for these pollutants are monetized in the BCA.

Stormwater management practices are an important commitment area for ALDOT. The department conducts vacuum sweeping on the Bayway bridges monthly to remove particulates that accumulate on the pavement shoulders. This practice will continue after completion of the project. In addition, ALDOT has included several other stormwater management practices as environmental commitments

[1] The I-10 Mobile River Bridge and Bayway Project – Storm Surge Impact Analysis Level 3, dated April 17, 2018.

in the FEIS/ROD, including the use of open-grade friction course pavements and vegetated filter strips on roadways, participating in environmental stewardship projects within the watershed, and developing a spill-containment plan to protect aquatic resources.

The Bayway will be constructed with an innovative gantry system that will allow construction to take place in a top-down fashion. This will eliminate the use of heavy floating construction equipment in the Bay and remove the need for extensive dredging, which would have significantly impacted subaquatic vegetation in this environmentally sensitive site. To further reduce impacts to the water bottoms, the new Bayway bridges will be constructed in the same footprint as the existing Bayway but since the effects of shading to submerged aquatic vegetation (SAV) and wetlands are not fully known, ALDOT has assumed 100% impacts and will be constructing a mitigation site currently estimated to be over 40 acres per the Draft Mitigation Plan. In addition, ALDOT has committed to placing removed portions of the Bayway into the Mobile Bay to support the Roads to Reef program to create artificial reefs to provide habitat improvements benefiting aquatic species.

Criterion #5: Equity, Multimodal Options, and Quality of Life

Proactively Addressing Equity Concerns

Currently, the designated route for trucks on I-10 carrying hazardous material is a detour through downtown Mobile and Africatown to the Africatown Bridge since they cannot go through the Wallace Tunnel or Bankhead Tunnel. These diverted trucks bring additional emissions, congestion, and noise to this Historically Disadvantaged Community, as well as the potential health and safety risks associated with living near the transport of hazardous materials. Click here to view the routes.

Figure 9: Street in Africatown

When the Wallace and/or Bankhead Tunnels are either closed for maintenance or become congested, traffic diverts to Africatown, subjecting the community to larger portions of emissions, congestion, and noise than other neighborhoods that are not Areas of Persistent Poverty or Historically Disadvantaged. Frequent crashes at the Wallace Tunnel lead to severe traffic congestion in Africatown. The project will provide an alternative route for users of the I-10 corridor and will also significantly reduce crashes; both lessening the impacts on the Africatown community.

In addition, a shared-use path on each side of the Africatown bridge and along Africatown Boulevard with historical interpretive signage will be constructed as part of the I-10 Mobile River Bridge and Bayway project and has become a project commitment.

The Africatown community has experienced disproportionately negative impacts from

transportation investments in the past. The Cochrane-Africatown USA Bridge, built in 1991, required additional right-of-way. The Africatown Heritage Preservation Foundation describes the bridge as "cut[ting] right through the heart of Africatown"[1]. On this project, ALDOT, in cooperation with the Africatown community, has actively developed solutions to significantly benefit Africatown, not harm it. These solutions are described in the multimodal and quality of life section below.

Areas of Persistent Poverty and Historically Disadvantaged Communities

Most of the census tracts adjacent to the project's western end meet the definition of an Area of Persistent Poverty or Historically Disadvantaged Community. Currently, these communities are the ones most negatively impacted by trucks transporting hazardous materials. These are the same communities that will benefit significantly when the new bridge offers a more direct route across the river for these trucks. See census tract map here.

I-10 currently runs along the eastern border of the Texas Street and Oakdale communities, also Historically Disadvantaged Communities. The proposed I-10 Mobile River Bridge and Bayway are expected to improve community cohesion for Texas Street and Oakdale by improving at-grade connections for vehicles, bicyclists, and pedestrians crossing I-10.

Table 1: Areas of Persistent Poverty and Historically Disadvantaged Communities

Census Tract Name	Area of Persistent Poverty	Historically Disadvantaged Community
Census Tract 11	Yes	Yes
Census Tract 12	Yes	Yes
Census Tract 13.02	No	Yes
Census Tract 15.02	Yes	Yes
Census Tract 2	Yes	Yes

Including EJ Communities in the Planning Process and Project Delivery

ALDOT has made significant changes to its funding and tolling approach in response to feedback from EJ communities and the community at large. Originally, both the Wallace Tunnel and the new River Bridge and Bayway were going to be tolled. In response to significant community concern, ALDOT decided to leave the Wallace Tunnel toll free. If the Wallace Tunnel were to be tolled, there would be a notable diversion of traffic away from the Tunnel and towards the un-tolled Africatown Bridge, generating significant congestion in the nearby communities, which are nearly all Areas of Persistent Poverty or Historically Disadvantaged Communities. Africatown, just at the northern edge of downtown Mobile, is a historic community formed by a group of former slaves who were part of the last known illegal shipment of slaves to the United States, smuggled into Mobile from the schooner Clotilda. The Africatown Historic District was listed on the National Register of Historic Places in 2012. In 2022 the World Monuments Fund included the Africatown community on its 2022 World Monuments Watch, a selection of "25 of the world's most significant heritage sites in need of immediate attention." If the project is not constructed, the Africatown

[1] See https://africatownhpf.org/contributions

neighborhood will be subject to increased noise, emissions and peak time congestion that would impede redevelopment plans that involve heritage tourism.

ALDOT spent more than a year conducting an EJ assessment for the Mobile River Bridge and Bayway project, working with the Africatown community to identify potential impacts and mitigation measures.

Outreach efforts to EJ communities have been extensive (meeting sign in sheets) , including (but not limited to):

- Africatown Community Development Corporation (CDC) Meetings. ALDOT has participated in three CDC meetings since 2016 to provide project updates, including bicycle/pedestrian facilities, potential impacts, and proposed mitigation measures.
- Bicycle/Pedestrian Public Workshop (October 27, 2016)
- Texas Street Community Workshop (June 18, 2018)
- Africatown Community Workshop (June 19, 2018)
- Surveys provided to residents via the Africatown CDC and community leaders.
- Tabling Events within EJ Community, February 2019
- Community Meeting at Union Missionary Baptist Church, March 19, 2019
- Africatown Steering Committee (June 23, 2022, November 17, 2022, December 8, 2022, January 26, 2023, March 2, 2023, April 13, 2023).

Multimodal and Quality of Life

Multiple refinements have been made to the overall project due to this community engagement, including commitments to implement traffic calming measures, install traffic signals and improve signal timing to facilitate local and church traffic to/from side streets, construct the Africatown Shared Use Path, install landscaping and historical/interpretive signage along the shared use path, install activated crosswalks at signalized intersections, provide streetscaping along Paper Mill Road, and develop an access management plan on the Causeway. These commitments are a part of the requirements in the approved FEIS/ROD and will better connect populations with destinations throughout the corridor and enhance local mobility. They will reduce automobile independence, improve pedestrian safety, and improves access for all people including those with disabilities within this community. A typical section of the Africatown shared use path can be viewed here and 60% plans for the sidewalk and crosswalks can be viewed here. These improvements are consistent with local and regional planning efforts shown in the MPO Bicycle and Pedestrian Comprehensive Plan. The network connects urban, suburban and rural areas using roads, trails and other facilities appropriate for bicycle travel.

Africatown Steering Committee

To foster collaboration and compatibility with plans for heritage tourism and redevelopment in Africatown and to address equity and environmental justice in the project, ALDOT created the Africatown Steering Committee. The purpose of this Committee is to continue the dialogue that began as part of the EIS process to give the community a voice in how mitigation measures are

implemented as part of the Mobile River Bridge project. Through this Committee, ALDOT has made significant progress in consistently reaching the community to hear their ideas, address their concerns, and get input on the community's priorities from an infrastructure perspective.

The Committee, which consists of 17 organizations, represents a diverse group of community leaders who are committed to improving and enhancing Africatown. With the recent discovery of the Clotilda and the national attention Africatown has received as a result of the Netflix documentary *Descendant*, the Committee is fully supportive of ALDOT's commitments as listed above in the multimodal and quality of life section. These commitments promote equity and support Africatown's heritage tourism and community development plans.

ALDOT's team meets with the Committee on a regular basis to provide updates, facilitate conversation, and build relationships with the community. These meetings will continue throughout the construction of the project and beyond.

Criterion #6: Innovation Areas: Technology, Project Delivery, and Financing

ALDOT is driving innovation on the project by incentivizing the use of modern technologies, procuring under a progressive design-build approach, and laying the groundwork for a highly innovative plan of finance.

Innovation in Technology

Alabama is responsible for toll-setting, collection, and account management in accordance with state law and policies. As such, it is strongly incentivized to develop efficient and reliable toll technology that intelligently monitors and controls traffic flow and offers predictable toll collections and reliable cash management functions. As part of the project's technical requirements and design, ALDOT will also require that the following key areas be addressed to advocate innovation in technology:

- **Cyber Security**: Cyber security systems will be used to protect the network and toll users from hacking and cyber-attacks.
- **Vibration Monitoring System**: Due to the location of the project near several historical sites, the project will require a Vibration Monitoring System for the construction phase to monitor and minimize vibrations. If established levels are exceeded, alternative construction methods will be used to bring the vibrations within an acceptable threshold.
- **Dynamic Signals and Messaging**: The use of dynamic signaling with variable messaging panels will help control traffic and alert users of crashes and congestion.
- **High-Speed IT Network**: As part of the project, the existing IT system/network on the Bayway will be fully replaced by a new high-speed network.
- **Anti-Terrorism and Vulnerability Risk Assessment (ATVRA)**: A project specific ATVRA is being performed to assess the vulnerability to a specific attack, identify mitigation methods, and propose structural hardening of the bridges in the event of a successful attack.

- **Life Cycle Cost Analysis (LCCA) of Project Elements**: An LCCA will be required as part of the project during the design phase to provide 100-year service life for key components, improve durability and reduce long-term costs.
- **Tolling Interoperability with Bordering States**: ALDOT is in the process of joining the Southern States Interoperability Protocol (SSIOP) through the Southeast HUB. By the time of toll commencement, it is anticipated that most vehicle transponders will be interoperable with ALDOT's planned tolling system, easing toll collection for travelers and ALDOT.
- **Autonomous Vehicles**: Alabama has passed laws allowing driverless vehicles. The project will benefit the private sector's use of this route for autonomous vehicles since the current I-10 route through the Wallace Tunnel may interfere with an autonomous vehicle's connection to its network for operation.
- **Top-Down Construction:** The Bayway will be constructed with an innovative gantry system that will allow all construction to take place in a top-down fashion. This will eliminate the use of heavy floating construction equipment in the Bay and remove the need for dredging, which would have significantly impacted subaquatic vegetation in this environmentally sensitive site.
- **Metallizing:** All primary steel superstructure elements for the main-span cable-stayed structure and high-level approaches will utilize a Metalizing Protection System versus the traditional three-coat paint system. The system will be comprised of a zinc-based thermal spray coating, a sealer, and a topcoat. This approach will significantly reduce future maintenance costs associated with repainting in this high-chloride environment.

Innovative Project Delivery

This project is using a Progressive Design Build (PDB) procurement process and is split into two major components. ALDOT has selected two design-builders based on qualifications and innovations proposed for the project. As part of the delivery process, ALDOT will negotiate a Guaranteed Maximum Price (GMP) with each Design Builder to ensure the project is both technically feasible and competitively priced. The PDB method that ALDOT has chosen for this project is one of the primary underutilized innovations currently being championed by USDOT's Everyday Counts (EDC) and FHWA's Resource Center for Alternative Contracting.

The PDB alternative delivery model is incentivizing the design-build teams to lower project costs by advancing the design (reducing the risk) toward establishing a GMP in partnership with ALDOT. The PDB procurement is also accelerating project construction (and thereby accelerating commencement of tolling), incorporating lower-cost technologies to lower up-front and lifecycle projects costs, and efficiently managing project risks through frequent collaboration between ALDOT and the design-builders.

ALDOT developed Early Design Works Agreements (EDWA) with the selected Design-Builders to allow them to get started on critical design elements that could impact cost and schedule and other preconstruction activities while the Design-Build Agreements are being negotiated. This agreement allows the Design-Builders to eliminate significant risk and contingency in the GMP, which is

estimated to be $325M in GMP reduction based on preliminary pre-GMP estimates and risk workshops. The EDWA agreements have also allowed each Design-Build team to develop and prepare for potential work package authorizations which will allow key schedule critical activities like material procurement and site development to begin prior to Construction Notice to Proceed.

To streamline the environmental review and permitting process, ALDOT has:

- Worked with FHWA to secure a single, combined FEIS/ROD in accordance with FHWA's Interim Guidance on MAP-21, Section 1319 Accelerated Decision-Making in Environmental Reviews.[1] The Combined FEIS/ROD was signed by FHWA on August 15, 2019.
- Completed all ROW acquisition using state funds prior to design starting.
- Completed Phase I/Phase II level archaeological investigations concurrently rather than deferring Phase II until after the FEIS/ROD. Phase III investigation was completed March 2023.
- Submitted preliminary permit packages to USCG and FAA to allow for early input.
- Developed an SDEIS and FEIS/ROD that accounts for environmental impacts but accommodates flexibility in design for innovation that reduce project costs and schedule.
- Formed the Africatown Steering Committee to provide guidance on how to implement environmental commitments from the FEIS/ROD in a manner that is compatible with the community's development and growth plans.

Innovative Financing

The negotiated GMPs will be used to secure the financing for the project. The project will be financed with a combination of revenue bonds, a TIFIA loan, state funds, and federal grants. The TIFIA loan and revenue bonds will be paid back with toll revenue. Once the loans are paid back; ALDOT has committed to removing the tolls. With the use of tolls, this project will be able to use all the financial resources available through the Department of Transportation.

In March of 2023, ALDOT was notified that the U.S. DOT has designated this project as a candidate for Technical Assistance with Build America Bureau (BAB). On April 24, 2023, ALDOT sent a draft TIFIA Letter of Interest (LOI) to BAB for review, and ALDOT received comments back. ALDOT is using this guidance from the Technical Assistance program and other feedback from BAB to finalize the TIFIA LOI and continue the TIFIA loan application process. The TIFIA loan and toll revenue bonds cannot be secured until the Guaranteed Maximum Price (GMP) is reached for both projects which is currently scheduled for November 2024.

[1] www.fhwa.dot.gov/map21/guidance/guideaccdecer.cfm