

Bridge Investment Program (BIP) Bridge Grant Awards 2022



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U.S. Department of Transportation

Federal Highway Administration

Table of Contents

Project Name	State	Award Amount	Rural or Urban	Page
Bridge Rehab, Safety, and Mobility Project at Palm Avenue/I-805	California	\$24,000,000	Urban	<u>1</u>
I-395 Northbound Bridge Over the Potomac River Rehabilitation Project	District of Columbia	\$72,000,000	Urban	<u>2</u>
One Bridge, Many Connections: Reinventing the Lafayette Bascule Bridge	Michigan	\$73,000,000	Urban	<u>3</u>
Restoring the Castleton-on-Hudson Bridge	New York	\$21,000,000	Rural	<u>4</u>
Improving Rural Bridges in Northwest Oklahoma	Oklahoma	\$11,505,044	Rural	<u>5</u>
Burgard Bridge Resiliency and Multimodal Enhancements Project	Oregon	\$13,895,277	Urban	<u>6</u>
Investing in South Carolina's Rural Bridges	South Carolina	\$51,185,909	Rural	<u>7</u>
Goliad County US 59 San Antonio River Bridge Replacement Project	Texas	\$14,037,887	Rural	<u>8</u>
Replacement of John Nolen Drive Bridges in Madison, Wisconsin	Wisconsin	\$15,124,596	Urban	<u>9</u>



Bridge Rehab, Safety, and Mobility Project at Palm Avenue/I-805 Interchange

San Diego, California, 38,160 vehicles per day, 2% truck traffic (763 trucks per day)

Grant Funding: \$24,000,000

Estimated Total Project Cost: \$30,000,000

Project Description

The 47-year-old Palm Avenue overcrossing bridge in San Diego is a key connector for the Otay Mesa-Nestor community and is a few miles from the U.S./Mexico border. This rehabilitation project aims to improve the structural safety of the bridge; improve safety and traffic operations on the interchange through the project design year of 2040; relieve traffic congestion, traffic delays, and traffic queues; provide safe mobility for all users of the interchange; and increase seismic resiliency of the existing bridge.

Extensive development within the project area has caused traffic volume to exceed capacity. This has resulted in saturated weaving maneuvers between traffic entering and exiting the I-805 mainline lanes to and from Palm Avenue, and excessive queueing during peak travel times.

Project Benefits

A comprehensive upgrade to the bridge structure would extend the service life, increase resiliency to earthquakes, and reduce long-term maintenance costs for the City of San Diego. Improvements also will reduce traffic delays and increase freight movement through these corridors originating from the San Ysidro Port of Entry. Pedestrian improvements include six-foot sidewalks, ADA-compliant curb ramps, high-visibility sidewalks and improved signalization, which will improve pedestrian safety.



Image Source: City of San Diego.



I-395 Northbound Bridge Over the Potomac River Rehabilitation Project

Washington, District of Columbia, 88,404 vehicles per day, 4% truck traffic (3,536 trucks per day)

Grant Funding: \$72,000,000

Estimated Total Project Cost: \$90,000,000

Project Description

The I-395 northbound bridge, also known as the Arland D. Williams Jr. Memorial Bridge, is a nearly half-mile, four-lane bridge that carries people and goods from Arlington, Virginia over the Potomac River to Washington, D.C. Rehabilitation of this bridge is a high priority for the District Department of Transportation because its traffic volume is among the highest of all bridges in Washington, D.C. Several bridge components are significantly deteriorated, and constant maintenance efforts have generated urgent concerns for a long-term solution. The shoulder on the bridge is currently closed because of the poor condition of the bridge barriers and steel overhang of the bascule span. This bridge has undergone three rehabilitations since 2006. The project will address safety issues, replace the bascule span with a fixed span, and repair deteriorating bridge elements, including steel barriers, and fender and dolphin systems.

Project Benefits

The project would minimize frequent maintenance-related bridge closures that cause severe traffic congestion in the D.C. region and replace safety-critical bridge elements. The roadway shoulder will be brought back into use, improving safety and reliability for commuters who rely on this bridge to access jobs in the D.C. region.



Image Source: Ben Schumin via Creative Commons Attribution-Share Alike 2.5 Generic License



One Bridge, Many Connections: Reinventing the Lafayette Bascule Bridge

Bay City, Michigan, 16,380 vehicles per day, 6% truck traffic (983 trucks per day)

Grant Funding: \$73,000,000

Estimated Total Project Cost: \$91,250,000

Project Description

This construction project replaces the 85-year-old bascule Lafayette Avenue Bridge with a new bascule bridge. The bridge, over the Saginaw River, has been an important link in the transportation network of Michigan's Bay Region. The bridge has undergone increasing repairs and closures in recent years as the end of its service life nears. In 2019, the bridge was closed for emergency repairs six times, while in 2022 unanticipated closures climbed to 20. The bridge is the only regularly used pedestrian and bicycle crossing in Bay City, and it provides the only vehicular, pedestrian, and bicycle access from the more populous east side of the city to community amenities at Middle Ground Island. The replacement bridge will include a shared-use path and 5-foot sidewalks, and shared-use paths on the east end of the bridge will be improved to eliminate an intersection crossing for bicyclists and pedestrians.

Project Benefits

This project will replace a structure that is scour critical, in poor condition, and experiencing increasing operational problems. The new bridge will provide a toll-free and reliable crossing to enable businesses to transport goods throughout the Bay Region. Safe access for pedestrians and bicyclists to parks at Middle Ground Island will be improved by including a shared-use path that will connect to paths on both sides of the river.



Image Source: Michigan Department of Transportation.



Restoring the Castleton-on-Hudson Bridge

Albany and Rensselaer Counties, New York, 17,000 vehicles per day, 28-30% truck traffic (4,760-5,100 trucks per day)

Grant Funding: \$21,000,000

Estimated Total Project Cost: \$42,000,000

Project Description

This project will rehabilitate and strengthen deteriorated sections of conditionally at-risk elements on the eastbound superstructure of the Castleton-on-Hudson Bridge. The bridge is on the Berkshire Spur of the New York Thruway, connecting I-87 in Albany County to the New York State/Massachusetts line.

The eastbound bridge deck will be replaced with a new slab with integral wearing surface because repairs have been necessary almost monthly to keep the bridge in service. Other work includes repairs to steel girders for the approach spans and truss members of the truss spans, installation of a concrete approach slab at each bridge approach, modification to the existing concrete abutments, and replacement of non-conforming bridge rail with a conforming steel four-rail TL-4 system. A separate \$47.6 million construction project to replace the westbound bridge deck is underway. With completion of these two projects, anticipated service life of the superstructure will be extended by 50 years.

Project Benefits

This project will improve the reliability of the corridor by reducing the frequency of emergency repairs, lane closures, and traffic delays. Safety improvements include an improved riding surface, a crash-tested bridge railing, and improved roadway drainage to decrease the risk of hydroplaning.



Image Source: Jag9989 via Creative Commons-Share Alike 4.0 International License.



Improving Rural Bridges in Northwest Oklahoma

Garfield, Grant, Kingfisher, Major, Noble, and Woods Counties, Oklahoma, for combined seven bridges 2,894 vehicles per day, estimated 15% truck traffic (combined 434 trucks per day)

Grant Funding: \$11,505,044

Estimated Total Project Cost: \$14,381,305

Project Description

This project is to replace seven bridges in northwest Oklahoma that were constructed between 1915 and 1981. All bridges are on rural roadways connecting agricultural areas with local towns and larger roadway facilities. All bridges are in fair or poor condition, have deficient horizontal clearances, and are load-posted. These postings affect oversize agricultural and oilfield vehicles, which are important to the region's economy. Energy sector and agricultural equipment, such as oil rig materials, combines, and large wind turbine towers must move on these narrow roadways and bridges.

Project Benefits

The project would eliminate these deficient bridges and restore safe crossings that meet regional traffic requirements for safety and weight. Load restrictions force commercial trucks, emergency vehicles, and school buses to detour to other routes. If no major rehabilitation or replacement occurs, the existing bridges will likely have to be closed in the next 15 years, which would have significant negative impacts to transportation network efficiency, accessibility and mobility of people and goods, and economic growth. The project will improve reliability and capacity of the bridges for the region's farmers, ranchers, and energy workers.



Image Source: Circuit Engineering District 8, Oklahoma. Existing bridge decks on two of the seven bridges.



Burgard Bridge Resiliency and Multimodal Enhancements Project

Portland, Oregon, 8,608 vehicles per day, 37% truck traffic (3,185 trucks per day)

Grant Funding: \$13,895,277

Estimated Total Project Cost: \$17,369,097

Project Description

The project will replace the existing 92-year-old viaduct over the Union Pacific Railroad in the St. Johns neighborhood in Portland, Oregon. The existing substructure was impacted by a train derailment in 2020, causing significant damage to one of the support columns. This bridge provides a critical connection to area residents and industries, serving all transportation modes and providing an integral link through the North Portland peninsula to other areas of the City, including the Rivergate Industrial District. While the existing bridge has sidewalk on one side and a buffered two-way bike lane, the new bridge will include a protected sidewalk-level two-way bike lane on one side and 8-foot sidewalks on both sides.

Project Benefits

A new bridge would remove geometric deficiencies, facilitate freight movement, provide enhanced bicycle and pedestrian facilities, and meet seismic standards to maintain connectivity along an identified emergency route in the event of an earthquake. The longer span of the proposed bridge will allot new space that provides the opportunity to add a third railroad track underneath the bridge, along the existing corridor that services the Port of Portland. The addition of non-vehicular paths on the bridge and its approaches will close the existing gap in multimodal infrastructure, providing safe, reliable access to employment opportunities and recreational destinations for residents of this community.



Image Source: City of Portland, Oregon.



Investing in South Carolina's Rural Bridges

Union County, South Carolina, for combined six bridges 13,300 vehicles per day, average 15% truck traffic (combined 1,935 trucks per day)

Grant Funding: \$51,185,909

Estimated Total Project Cost: \$63,982,387

Project Description

This package will replace six critical rural bridges on Union County in northwest South Carolina near the Appalachian Mountains. The area is bounded by Interstates 26, 85, and 77, and the bridges serve as cross-connectors between these national freight routes. The bridges are 68 to 100 years old and at or nearing the end of their service life. All six bridges are currently load-restricted, requiring freight haulers, farmers, and emergency vehicles to travel longer detour routes. The bridges are located on State and US routes which are vital farm-to-market and commercial freight routes in rural South Carolina.

Project Benefits

This project will maintain connectivity for these communities, which rely heavily on these six bridges to travel to work and school, and to transport goods across the State and region. Without the project, these bridges will all eventually close to traffic, causing vehicles to take long detours. The project will generate safety benefits through improvements to the existing bridges, including shoulder widening, rumble strips, and guardrails. Bicyclists and pedestrians will be accommodated through construction of wide shoulders on the bridges.



Image Source: South Carolina Department of Transportation.



Goliad County US 59 San Antonio River Bridge Replacement Project

Goliad County, Texas, 4,250 vehicles per day, 31% truck traffic (1,318 trucks per day)

Grant Funding: \$14,037,887

Estimated Total Project Cost: \$20,054,124

Project Description

This project will replace the U.S. Highway (US) 59 bridge at the San Antonio River, in a non-urbanized area of Goliad County, just southeast of the City of Goliad. The project is less than 70 miles from three key water ports (Port of Corpus Christi, Calhoun Port Authority, and Port of Victoria) and within 150 miles of one of the country's largest inland ports, Port Laredo, and is part of the future I-69 corridor. The existing bridge is rated as scour-critical and at risk of falling into poor condition. At its current width, the bridge struggles to accommodate the many wide-load vehicles that cross the bridge daily.

The project would widen the bridge deck from 33 feet to 82 feet to allow for two lanes, provide an increased buffer/shoulder, raise the bridge deck outside of the 100-year floodplain zone, update the existing piers to modern-day scour standards, and increase pier spacing.

Project Benefits

This project will improve the safety of the traveling public, prevent reroutes during bridge repair closures, and enhance the bridge's resiliency to extreme weather events. Currently, an inadequate shoulder and frequent truck traffic make any bridge crossing for bicyclists or pedestrians dangerous due to lack of sufficient passing distance. This project will provide an 11-foot-wide outside shoulder for separating bicycle and pedestrian traffic from vehicular traffic and will install rumble strips, which alert inattentive drivers to lane departures.



Image Source: Texas Department of Transportation.



Replacement of John Nolen Drive Bridges in Madison, Wisconsin

Madison, Wisconsin, 45,000 vehicles per day along John Nolen Drive, 0% truck traffic

Grant Funding: \$15,124,596

Estimated Total Project Cost: \$30,249,191

Project Description

This project will replace six bridges along the John Nolen Drive causeway, a major artery into downtown Madison, across Lake Monona. Harsh Wisconsin winters and spring thaws have been tough on the causeway, originally opened in 1967. The six two-lane bridges (three northbound, three southbound) on the corridor have reached the end of their service lives. The bridges have undergone constant repair in seven separate projects since 2000 due to differential settlement on Lake Monona's bottom. Other transportation challenges are poor structural integrity, dangerous roadway and intersections, unsafe bike environments, poor walkability, and increasing traffic volumes.

This project will also include a separated bike/pedestrian path, traffic signals and street lighting, smart technologies to manage traffic, and improved stormwater management.

Project Benefits

The reconstruction and replacement project will improve the existing roadway, bridges, bicycle and pedestrian accommodations, and shoreline. Traffic flow will be improved by coordinating traffic signals and by reducing the need for maintenance-related emergency closures. A separated 22-foot multi-use path will provide safe mobility options for pedestrians and cyclists along the Capital City State Trail, which sees up to 4,500 cyclists per day.

The shoreline along the causeway will be enhanced to minimize the impacts of extreme weather events and flooding. Pervious multi-use trail surfaces, vegetated buffers, and rain gardens will be employed to capture rainwater where it falls, which will help to minimize flooding and improve water quality.



Image Source: City of Madison, Wisconsin.