

Roosevelt Memorial Bridge Investment Project

Bryan and Marshall Counties, Oklahoma
May 2024

Project Description

The Roosevelt Memorial Bridge carries US-70 over Lake Texoma. The bridge is 4,943 feet long and carries two traffic lanes, one in each direction, on a 24-foot-wide deck with no shoulders (**Figure 1**). The bridge was constructed in 1945 and is composed of 87 spans, including a 250-foot-long Warren through-truss, and is eligible for inclusion in the National Register of Historic Places (NRHP). The bridge is functionally obsolete, fracture-critical, and at-risk of becoming structurally deficient. The bridge currently carries 8,500 vehicles per day (vpd). With major development underway, future traffic volumes are anticipated to exceed 27,000 vpd by 2050.



Figure 1: Roosevelt Memorial Bridge

The Roosevelt Bridge Project will construct a new multimodal bridge across Lake Texoma on a new alignment south of the existing bridge. The new bridge will have a total length of 10,625 feet and consist of 72 spans. The superstructure will be made of prestressed concrete girders that will support a concrete deck. The substructure will consist of multi-column piers with 10-foot diameter drilled shafts that will be founded on bedrock. The bridge will have four lanes of traffic with 10-foot shoulders on each side and a median barrier to separate the directions of travel. The bridge will also have lighting fixtures to enhance visibility and safety at night. In addition, the Project will include multimodal accommodations for cyclists and pedestrians, such as a barrier separated path. US-70 between State Park Road and Willow Springs Road will be widened to a five-lane section (two driving lanes in each direction and center turn lane) to provide continuity with the sections to the east and west. Turn lanes will be provided where needed at intersections, and a traffic signal and crosswalk are anticipated at the State Park Road intersection to accommodate traffic from adjacent development.

Challenges of the Roosevelt Bridge Project are related to the critical safety concerns of the existing structure, rapidly increasing traffic demand, a lack of affordable multimodal transportation options, increasingly frequent flood events, and the extraordinary cost of replacing the bridge. These issues are summarized below; more detail on how the Project will address these challenges is presented in the Outcome Criteria section of this application. Through addressing these challenges, the Roosevelt Bridge Project will address the MPDG Program goals of investing in projects of national or regional significance, improving infrastructure in rural areas, and supporting projects that improve safety, economic strength and global competitiveness, equity, and climate and sustainability.

Safety: The Roosevelt Bridge has a demonstrated history of high collision rates, particularly severe collisions involving injuries and fatalities. Some of these fatal collisions were head-on or side swipe, likely due to the narrow bridge width and lack of separation between the two directions of traffic (**Figure 2**). The Project will improve safety by providing adding lanes and shoulders as well as safety features such as lighting, median barrier, and rumble strips. These improvements are anticipated to significantly reduce fatalities and serious injuries.



Figure 2: Roosevelt Bridge Narrow Deck Width

Structure Condition (State of Good Repair):

The Roosevelt Bridge is rated in fair condition and is at risk of becoming structurally deficient. The truss span is fracture-critical, meaning it lacks redundancy and failure of certain elements in tension could cause the bridge to collapse. There are extensive and serious deficiencies including deck spalling, corrosion and section loss of the floor beams, sheared bolts, and failed railing connections (**Figure 3**). Without major rehabilitation, the bridge would likely fall to poor condition within three years, if not sooner. Left unaddressed, the potential for load posting and/or closure of the bridge would threaten the future transportation network efficiency, mobility of goods and people, and economic growth.



Figure 3: Existing Structural Deficiencies

Capacity: Traffic demand on US-70 over Lake Texoma is anticipated to increase substantially due to local and regional development. The existing two-lane facility is not sufficient to accommodate the anticipated future traffic growth. The Pointe Vista development ([Pointe Vista | Premiere Master-Planned Community | United States](#)) is currently under construction at the west approach and is anticipated to more than double the traffic demand along US-70. Without improvement, mainline level of service (LOS) on the bridge would decline to LOS E, resulting in significant congestion. As a major freight corridor and the primary access to Lake Texoma State Park and the federal recreational lands managed by the USACE, the Roosevelt Bridge Project will eliminate a critical freight bottleneck and enhance freight, recreational, and tourism opportunities.

Multimodal Mobility: The existing Roosevelt Bridge is narrow and does not provide any pedestrian or bicycle accommodations. As a Historically Disadvantaged Community and Area of Persistent Poverty, these opportunities would directly benefit the population in the area. As a major camping, fishing, and hiking destination, multi-modal accommodations would also enhance the recreational offerings of Lake Texoma. The Project would provide a dedicated bicycle and pedestrian crossing of Lake Texoma.

Flooding and Resiliency: The entire Roosevelt Bridge project is located within a mapped floodplain (FEMA Zone A/AE). Flooding of Lake Texoma has become more commonplace and more frequently overtops the existing bridge and causeway. Two major flood events occurred in 1990 and 2015 that forced ODOT to close US-70 and the Roosevelt Bridge for several days (**Figure 4**). The new bridge will raise the roadway and bridge profiles approximately ten feet to provide additional clearance above high water, providing long-term resiliency to extreme weather events.



Figure 4: Roosevelt Bridge Flooding, 2015

Project Cost: The Roosevelt Bridge Project is anticipated to be the largest project ever let by ODOT. Less than 10% of the expected construction costs have currently been funded in ODOT’s [8-Year Construction Work Plan](#) (CWP). However, the growing corridor traffic demand combined with the deteriorating Roosevelt Bridge conditions demand a near-term solution. Therefore, the project is in significant need of federal funding.

Project History

In 2020, ODOT initiated a Preliminary Engineering study to investigate alternatives to improve the Roosevelt Bridge. The study began with a detailed analysis of the existing bridge to assess the condition of its various components. Using the current Load and Resistance Factor Design (LRFD) Specifications as a baseline for comparison, the analysis showed that many of the existing bridge components do not meet the current expected levels of capacity or reliability (see Analysis of Existing Bridge Report at [ODOT Roosevelt Bridge](#)). Because of the bridge’s historic significance, ODOT performed an analysis of alternatives to correct the structural and geometric deficiencies of the existing bridge while preserving its historic integrity, as prescribed by Section 4(f) of the

Department of Transportation Act. The Section 4(f) avoidance alternatives included rehabilitation of the existing structure to maintain vehicular traffic as well as preserving the existing bridge as one half of a one-way pair, a pedestrian facility, or as a monument.

As part of the Preliminary Engineering study, ODOT has completed a topographic survey, hydrologic analysis, environmental studies, traffic studies, geotechnical investigations, and an extensive alternatives analysis for both the Section 4(f) avoidance alternatives and replacement alternatives, in the event none of the Section 4(f) alternatives are found to be prudent and feasible. The alternatives analysis considered construction cost, user costs, right-of-way and utility impacts, constructability, and environmental impacts including loss of flood storage in Lake Texoma. Currently the design is approximately 15% complete. The complete Section 4(f) Design Analysis Report and Preliminary Engineering Report can be found at [ODOT Roosevelt Bridge](#). To date ODOT has expended roughly \$2.93 million towards planning, preliminary engineering, and environmental studies.

Project Location

The Roosevelt Bridge carries US-70 over Lake Texoma, which spans the Bryan and Marshall County lines in southeastern Oklahoma (**Figure 5**). US-70 is a major east-west connection across the southern portion of the state, providing a link between the major north-south freight routes of I-35, US-69, and US-75. The entire project area is within a Historically Disadvantaged Community (HDC) and the portion within Marshall County is an Area of Persistent Poverty (APP) (see **Table 1**). All of southeastern Oklahoma is considered rural, including the Project area. The Choctaw Nation Promise Zone is located approximately 6.75 miles east of the Roosevelt Bridge.

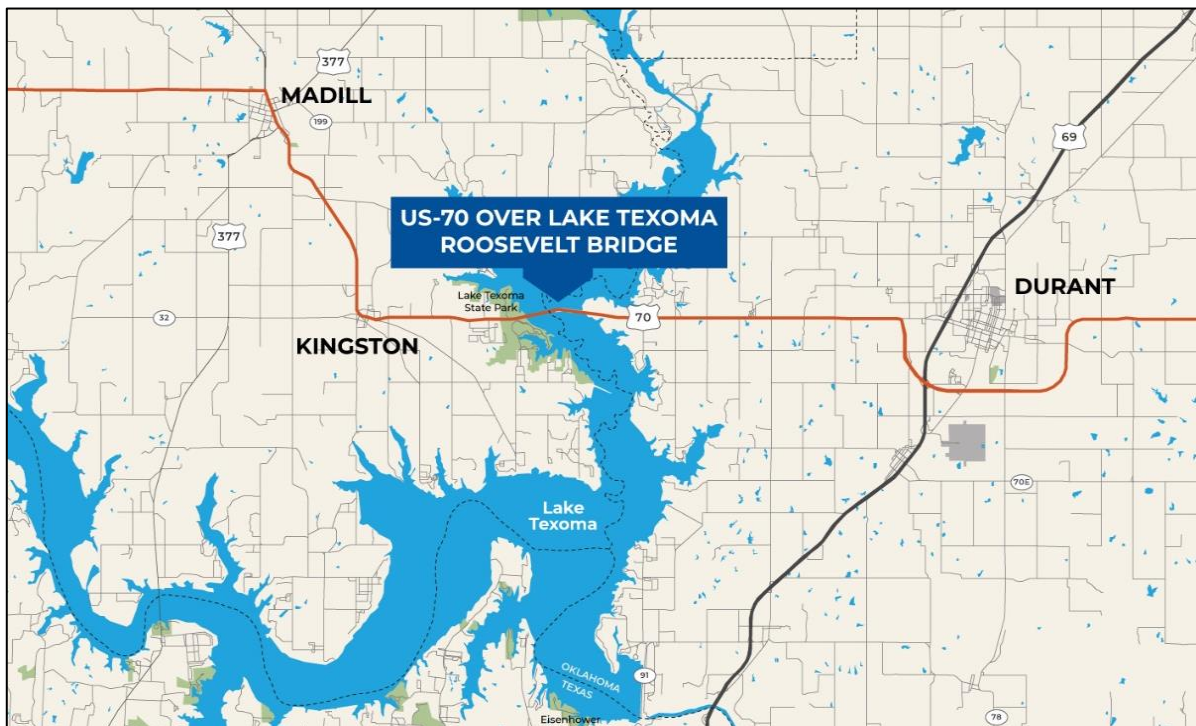


Figure 5: Roosevelt Bridge Location Map

Table 1: Roosevelt Bridge 2020 Census Tract Designations

Census Tracts	Historically Disadvantaged Community	Area of Persistent Poverty
40095094805	Yes	Yes
40013796003	Yes	No
40013796004	Yes	No