



SH-100 over the Arkansas River Bridge Replacement Project Project Narrative

Submitted by Oklahoma Department of Transportation

FY 2026 Bridge Investment Program
Bridge Project Grants
Opportunity # 693JJ324NF00006
June 29, 2026





I. Basic Project Information

Project Description

The Oklahoma Department of Transportation (ODOT) is requesting \$31.14 million in Fiscal Year (FY) 2026 Bridge Investment Program (BIP) funding to replace the SH-100 bridge (NBI Bridge No. 17611) over the Arkansas River in eastern Oklahoma. The bridge spans the McClellan-Kerr Arkansas River Navigation System (MKARNS) at River Mile 363.1 and connects Muskogee County to Sequoyah County. It serves as a critical transportation link between the communities of Webbers Falls and Gore and functions as the primary alternate route for Interstate 40 traffic crossing the Arkansas River.

The existing steel girder bridge was designed and constructed in 1969 with a 50-year design life and was rehabilitated in 2014. The bridge is approximately 1,928 feet long and 35 feet wide with a 28-foot clear roadway. The bridge carries two 11-foot travel lanes and 3-foot shoulders, which are considered substandard by current design standards. The main span is 334 feet long and crosses the navigation channel of the MKARNS. The bridge includes two 40-foot diameter steel sheet pile dolphins located at Piers 5 and 6 for vessel collision protection.

The bridge is fracture-critical and approaching the end of its intended service life. Due to its age and condition, the bridge is currently on ODOT's annual inspection schedule. Since the 2024 inspection, the condition of the deck and substructure have fallen from 6 to 5¹. This rapid deterioration has prompted ODOT to accelerate the replacement of the bridge, moving it ahead of the nearby I-40 bridge over the Arkansas River. ODOT anticipates load posting restrictions for trucks by 2035, when the bridge is projected to reach an overall condition rating of 3, and closure to all traffic by 2049 if the bridge is not replaced. The bridge is shown in **Figure 1** and its key features are listed in **Table 1**. The proposed replacement bridge will improve safety and reliability by reducing the number of spans from fifteen to seven, increasing lane widths to 12 feet, providing 8-foot shoulders in each direction, incorporating modern 42-inch safety railings, utilizing high-performance steel girders, and incorporating modern scour protection and resilience features.

Figure 1: SH-100 over the Arkansas River



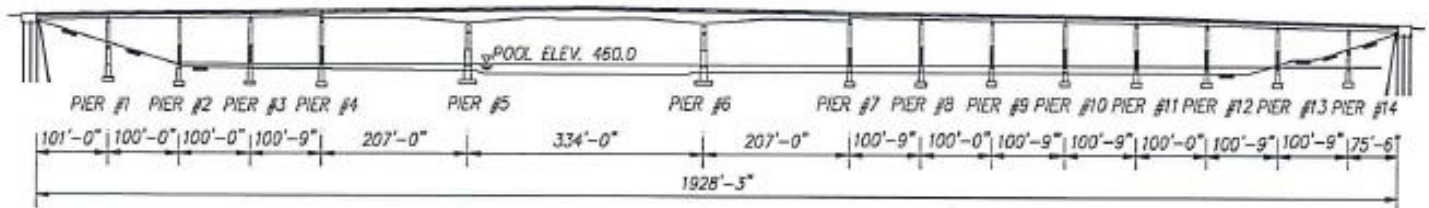
¹ NBI 17611 Inspection Report, 7/23/2025, available at Project Website: <https://oklahoma.gov/odot/progress-and-performance/federal-grant-awards/bridge-investment-program/bip-2026/sh-100-over-the-arkansas-river.html> (SH-100 FY26 BIP)


Table 1: Bridge Features

Characteristic	SH-100 over Arkansas River
Segment Features	<ul style="list-style-type: none"> • 1,928 feet long • 35 feet wide (28-foot clear roadway) • 15 spans • 2 dolphins
Bridge History	Designed and built in 1969
Fracture-Critical?	Yes
Bridge Location	Spans Muskogee and Sequoyah counties, near Webbers Falls
MKARNS Location	Main Span is 334 feet long at river mile 363.1
Condition Rating (deck, superstructure, substructure)	5, 5, 5
Design Life	50 years
Anticipated Closure to Trucks	2035
Anticipated Closure to All Traffic	2049

Designed for a 50-year service life, the SH-100 bridge was completed in 1969 and rehabilitated in 2014. The bridge is approximately 1,928 feet in length and 35 feet wide,² about 2.8 miles upstream from the I-40 bridge.³ The SH-100 bridge serves as a vital route between Oklahoma communities, connecting both Webbers Falls in Muskogee County located west of the bridge and Gore in Sequoyah County located east of the bridge.

The bridge segment is a two-lane highway with driving lanes that are 11 feet wide and outside shoulders that are 3 feet wide. The bridge includes two different surface elevation benchmarks used to measure the height of the bridge, including an elevation of 528 feet at benchmark one and an elevation of 517 feet at benchmark two (Figure). The bridge consists of fifteen spans. The main span is 334 feet long over the MKARNS navigation channel at river mile 363.1. In addition to the 15 spans, the bridge is protected by two 40-foot diameter steel sheet pile dolphins located at Piers 5 and 6.

Figure 2: Existing Bridge Elevation for SH-100


² ODOT, Underwater Inspection of SH 100 over the Arkansas River, 2022, available at [SH-100 FY26 BIP](#)

³ ODOT, SH-100 Vessel Collision Risk Assessment, 2005, available at [SH-100 FY26 BIP](#)



The bridge design was completed in the late 1960s prior to the development of criteria for vessel collision design. Two dolphins on the upstream side of the bridge were provided in the original design to protect the piers adjacent to the navigation channel.

SH-100 serves as a critical relief route for all users of I-40. ODOT understands the importance of a safe and reliable detour – and this was reinforced as a result of a barge collision that occurred in 2002 with the nearby I-40 bridge (**Figure 3**). The collision caused a collapse of a portion of the bridge, resulting in 14 fatalities and five injuries in addition to \$30.1 million in structural damages (2002\$).⁴ Around 20,000 vehicles per day were rerouted over the SH-100 bridge for about two months while crews rebuilt the I-40 bridge, resulting in additional travel costs for detoured traffic and additional operations and maintenance costs for ODOT to maintain the detoured route.

Figure 3: I-40 Bridge Collapse on May 26, 2002



For the current project, I-40 will serve as the detour route during construction.

However, because the I-40 bridge is also in need of replacement, ODOT has programmed the two projects so that upon substantial completion of the SH-100 bridge, ODOT will let the I-40 project and SH-100 will serve as the detour. This strategic approach will preserve connectivity for residents, freight movement, and emergency responders, while minimizing disruptions to the transportation network.

In addition to serving as an alternate route to I-40, SH-100 itself is a significant crossing, facilitating the movement of goods and people over the Arkansas River and across eastern Oklahoma. This contributes to regional economic activity, some of which is tied to industries that depend on the river, particularly agriculture. As a result, SH-100 is heavily relied upon to transport agricultural inputs across the Arkansas River. If SH-100 were shut down, the agricultural industry would suffer significant losses. The AADT for SH-100 was 3,700 in 2024 with 15 percent truck traffic.⁵

⁴ NTSB, U.S. Towboat Robert Y. Love Allision With Interstate 40 Highway Bridge Near Webbers Falls, Oklahoma, 2002. Retrieved <https://www.nts.gov/investigations/AccidentReports/Reports/HAR0405.pdf>

⁵ ODOT, Traffic Viewer, 2025. Retrieved https://okdot.public.ms2soft.com/TDMS.UI_Core/trafficviewer



Due to the urgency of addressing defects as a fracture-critical bridge, SH-100 is currently on ODOT's annual inspection schedule as it approaches the end of its intended useful life. The existing bridge is considered narrow, with 11-foot driving lanes and 3-foot-wide outside shoulders. The bridge is also at risk of becoming structurally deficient and its condition is rapidly deteriorating. By replacing the bridge, the Project will avoid any costs associated with the deteriorating structural conditions of the existing bridge and incorporate modern design standards, described below, that will enhance safety and operational performance. The Project will replace the bridge with a wider section, featuring 12-foot driving lanes as well as 8-foot-wide outside shoulders going in each direction. The Project will also reduce the existing bridge's 15 spans by half and implement the use of a 42-inch-tall railing to further increase safety. While pedestrians and bicyclists are allowed to use the SH-100 bridge, there are no designated facilities for these modes on the highway approaches. Currently, pedestrians and cyclists must use the 3-foot shoulder which does not provide a safe or comfortable space for walking and biking. The wider, 8-foot shoulder included in the project will provide a safer space for pedestrians and bicyclists to operate in the future. **Figure 4** shows a visual depiction of the bridge once construction is complete.

Figure 4: Renderings of the new SH-100 bridge

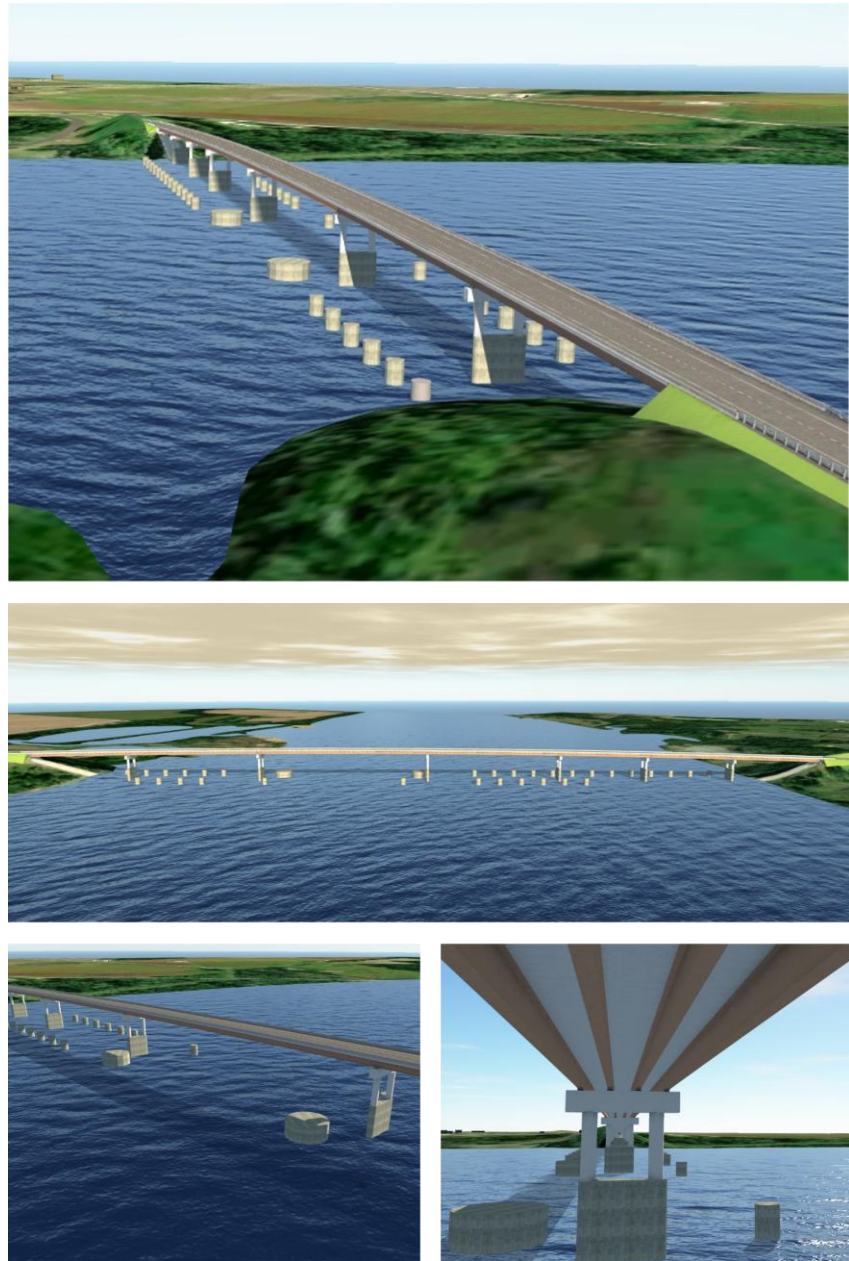


Exhibit credit: CEC©



Absent the Project, ODOT will post load limits on SH-100 that restrict truck access by 2035, closing to all vehicles by 2049. The detour route is approximately 10 miles (7.8 net miles), using the I-40 bridge over the Arkansas River. However, as I-40 will also be load posted by 2040, truck movements would be diverted north to US Highway 62 while personal vehicles will be diverted to I-40 between 2040 and 2054. Following the anticipated closure of I-40 in 2054, all traffic would be diverted to US Highway 62, adding approximately 48 miles to the detour⁶.

Project Location

SH-100 connects the community of Webbers Falls in Muskogee County with the community of Gore in Sequoyah County¹⁷⁶ in eastern Oklahoma, as shown in **Figure 5**. Geospatial data is presented in **Table 2**. The project is not within a 2020 Census-designated Urbanized Area and as such, the Project is considered rural.⁷

Table 2: Geospatial Data for the Project

Bridge	Latitude	Longitude	Census Tracts
SH-100 over Arkansas River	35.519054	95.1264113	40135030202 (302.02 in Sequoyah County) 40101001501 (15.01 in Muskogee County)

Per the US Census American Community Survey, Muskogee and Sequoyah Counties have a combined population of 106,100. Muskogee County has a fertility rate of 67 births per 1,000 women and Sequoyah County has a fertility rate of 60 births per 1,000 women, for a weighted fertility rate of 64 births per 1,000 women, compared to fertility rates of 57 and 52 per 1,000 women in Oklahoma and the United States, respectively. These demographic statistics suggest the Project will provide significant benefits to young families. Muskogee and Sequoyah County have a combined employment rate of the population 16 years and over in the agriculture, forestry, fishing and hunting,

Figure 5: Project Location



⁶ The benefit-cost analysis performed for this application did not account for load posting and closure of the I-40 bridge within the analysis period

⁷ FHWA HEPGIS, MPO and 2020 Census Urban Areas, 2026. Retrieved <https://hepgis-usdot.hub.arcgis.com/apps/72bcd861285c423c9d4aec6b8e48a496/explore>



and mining industry that is 69 percent greater than the population of United States at large, demonstrating the Project will further support the agriculture community.

The SH-100 bridge serves as a rural connector to I-40, which links two USDOT Opportunity Zones (**Figure 6**). Opportunity Zones are special geographic areas designated to encourage investment and revitalization in underserved communities. The goal is to spur economic development and job creation by incentivizing private investment. This creates a great importance for rural connectivity as in the case of bridge closure, the Opportunity Zones do not stay connected and suffer from lack of development.

Figure 6: Proximity to Opportunity Zones



The SH-100 bridge in eastern Oklahoma serves as a vital regional transportation corridor, connecting I-40 to communities throughout eastern Oklahoma, ultimately extending to the Arkansas state line near Stilwell. While located near the I-40 Arkansas River crossing at Webbers Falls, the SH-100 bridge provides necessary redundancy within the regional transportation network, supporting the movement of residents, freight, agricultural products, and commercial traffic across the McClellan-Kerr Arkansas River Navigation System (MKARNS). In the event of load restrictions, accidents, maintenance activities, or closures affecting either the I-40 or SH-100 crossings, the nearest alternative Arkansas River crossings are approximately 36 miles north in Muskogee and approximately 58 miles south on US-59 below Robert S. Kerr Reservoir, underscoring the bridge's importance to regional mobility and network redundancy.

In addition to supporting freight movement and regional commerce, SH-100 provides access to key destinations including the Oklahoma National Guard Training Center at Camp Gruber, Greenleaf State Park, and Tenkiller State Park. The corridor serves as an important connection for residents of the surrounding rural communities and the Cherokee Nation, linking rural and tribal travelers to employment centers, educational opportunities, healthcare services, and recreational destinations, while also facilitating movement within the Cherokee Nation for cultural, economic, and community purposes.



Preserving this critical Arkansas River crossing will maintain reliable access for residents, businesses, emergency responders, and freight carriers, while supporting local economic activity and long-term regional connectivity.

Lead Applicant

As the Project sponsor, ODOT has the technical capacity to successfully deliver the Project, along with decades of experience with receipt and expenditure of federal transportation funds. ODOT has the technical expertise and resources dedicated to the Project to provide quality control throughout implementation, keep the public informed of the Project's progress, and confirm the Project meets all federal requirements. ODOT has a successful track record collaborating with various entities, including local governments and tribal nations, to deliver projects to construct, improve, and maintain Oklahoma's transportation infrastructure. ODOT has also received hundreds of millions of dollars in federal discretionary funding and has experience managing large and complex projects funded in part by USDOT, including the US-75/I-44 Interchange Project in Tulsa which received 2018 INFRA, 2022 RAISE and 2022 MEGA awards. Additionally, in 2025, ODOT was awarded funds through the Rural Surface Transportation Program (MPDG) for the MidAmerica Connectivity Project and the US-259 Widening Project.

ODOT is committed to improving its bridge conditions. Oklahoma improved its national ranking in highway bridge conditions from 49th place in 2004 to 4th place in 2025. The agency's eight-year Construction Work Plan⁸ and four-year Asset Preservation Plan⁹ mark the continuation of ODOT's commitment to improving bridges at risk of becoming structurally deficient. Together, the plans address 294 bridges currently in poor condition or at risk of falling into poor condition. This Project will align with ODOT's progress to date of addressing safety and capacity improvements.

Other Public and Private Parties

No additional public or private parties will be involved in delivering the Project. No private or non-private entity will receive a direct and predictable financial benefit if the Project is selected for award.

Additional Eligibility Requirements

Maintenance

ODOT will uphold the maintenance of the constructed bridges in alignment with the organization's Transportation Asset Management Plan (TAMP).¹⁰ As documented in ODOT's TAMP (2022-3031), maintenance and preservation funds come from state and federal sources. ODOT forecasts future funding based on historical data and allocates this revenue to its field districts. Maintenance funds are allocated based on a lifecycle

⁸ [ODOT CWP-2025.pdf](#)

⁹ [ODOT APP-2025.pdf](#)

¹⁰ [ODOT TAMP 2022-2031](#)



analysis of existing assets to determine the most cost-effective uses of those funds. ODOT currently has \$43.7 million in the TAMP for bridge maintenance and preservation. ODOT will allocate the funding for the Project’s maintenance costs through their dedicated maintenance fund.

In addition to the TAMP, ODOT’s comprehensive \$500 million Asset Preservation Plan strategically targets issues pertaining to bridges, roadways, and accessibility. Leveraging funding support from the state legislature through the ODOT Rebuilding Oklahoma Access and Driver Safety (ROADS) fund, ODOT has successfully reduced the number of structurally deficient bridges on Oklahoma highways. The commitment to ensuring that fewer than one percent of bridges in Oklahoma is structurally deficient has resulted in a remarkable reduction, from 1,068 in 2006 to 49 by 2023.

II. National Bridge Inventory Data

National Bridge Inventory (NBI) condition data for SH-100 is presented in the Bridge Project Application Template included with this application.

III. Project Budget – Grant Funds, Sources, and Uses of all Project Funding

The total cost for the Project is \$40.99 million, of which \$2.06 million has been previously incurred. Of the remaining \$38.93 million of future eligible Project costs, ODOT is requesting \$31.14 million (80 percent) in BIP grant funding, matched by \$7.79 million (20 percent) in state funding. No other federal funding sources will be used.

Table 3 presents Project costs and funding sources. The estimate is based on 90% plans and includes 6% for construction engineering and inspection and 10% contingency. ODOT is confident there will be no challenges providing the specified non-federal match for the Project and has attached documentation to this application demonstrating its commitment to providing the local match.

Table 3: Project Costs and Funding Sources

Sources of Funds (\$YoE)						
Project Component	Other Federal	BIP	Non-Federal Funds (ODOT)	Future Project Costs	Previously Incurred Costs	Total Project Costs
Design & Environmental	\$0	\$0	\$0	\$0	\$1,225,190	\$1,225,190
Right-of-Way and Utilities	\$0	\$0	\$0	\$0	\$838,050	\$838,050
Construction and Inspection	\$0	\$28,456,000	\$7,114,000	\$35,570,000	\$0	\$35,570,000
Subtotal	\$0	\$28,456,000	\$7,114,000	\$35,570,000	\$2,063,240	\$37,633,240
20% Contingency	\$0	\$2,688,000	\$672,000	\$3,360,000	\$0	\$3,360,000
TOTAL*	\$0	\$31,140,000	\$7,790,000	\$38,930,000	\$2,063,240	\$40,993,240
% OF FUTURE ELIGIBLE COSTS	0%	80%	20%	100%		



ODOT has committed substantial resources to the Project to advance it to 90 percent design, however the bridge is at risk of additional rapid deterioration requiring immediate action. Programming this project in 2027 to address this deterioration has forced ODOT to delay the replacement of the I-40 bridge over the Arkansas River due to lack of funding. Federal funding is needed to deliver this critical Project and keep other critical projects on track.

ODOT is committed to the long-term maintenance of its infrastructure assets and conducts regular maintenance on its assets to ensure they remain in a state of good repair. ODOT allocates funding to budget maintenance activities and plans to allot the appropriate amount to maintain the Project.

IV. Merit Criteria

As per the FY 2026 BIP Bridge Project Grants NOFO, all merit criteria are met with this Project. Each criterion is discussed in further detail below.

Criterion #1: State of Good Repair

In bringing the bridge to a state of good repair, the Project will result in improving the condition of a bridge at risk of falling into poor condition, and reduced maintenance costs.

Bridge Condition and Geometric Design Standards

The Project will contribute to a state of good repair by replacing a fracture-critical bridge that is more susceptible to collapse than other types of bridges because it lacks redundant structural elements to compensate load bearing for areas where multiple cracks exist. The SH-100 bridge was constructed in 1969 and is now 56 years old, exceeding its original 50-year design life. The 2025 SH-100 inspection report (see Attachment SH-100 Inspection Report 07-23-2025) rated the bridge in overall fair condition, with deck, superstructure, substructure, railings, and bearings all receiving ratings of 5 – fair condition. Since the 2024 inspection, ODOT has noted rapid deterioration in the deck and substructure, resulting in reduced ratings for both of those components. This rapid deterioration suggests that the bridge will fall into poor condition within the next three years, if not sooner. These failing conditions have prompted ODOT to accelerate the replacement of this bridge to avoid potential load postings or closures in the near future.

The 2025 bridge inspection identified multiple structural deficiencies requiring corrective action, including:

- Cracking of both steel and concrete elements which directly affects load-carrying members,
- Corrosion and section loss which are progressive and weaken structural capacity,



- Loose, missing, or damaged connections which reduce redundancy and increase the risk of localized failures,
- Bearing failures and movement issues which are critical for load transfer,
- Deck and surface deterioration which leads to water intrusion, accelerating the corrosion issues,
- Steel member distortion and alignment issues,
- Concrete deterioration in the piers and caps,
- Undermining of the abutments, and
- Damaged or deficient railings.

In addition to structural concerns, the bridge does not meet current FHWA, AASHTO, or ODOT design standards. The existing structure carries two 11-foot travel lanes and narrow 3-foot shoulders (**Figure 7**) that provide limited recovery area for motorists, constrained space for maintenance work or if a vehicle breaks down, and insufficient space for safe bicycle or pedestrian use. Additionally, the bridge railings do not meet current safety standards and the approach rail deficiencies require repair.

Figure 7: Existing bridge, facing west



Photo credit: CEC©

Damage to the SH-100 bridge over MKARNS could block navigation, disrupt freight flows, and impact regional commerce. A block in barge traffic could halt the flow of key goods. This would force costly rerouting to truck or rail, delay supply chains, and impact regional industries and ports. Combined with increased highway congestion from diverted traffic, the disruption could cause a significant domino effect on the local and regional economy. If the bridge is forced to close, the region will face serious ramifications, impacting an average of 3,700 vehicles (today) on SH-100¹¹ and severing the connection between Webbers Falls and Gore, who rely on the bridge for access to critical services.

The project will replace the existing bridge with a new seven span steel girder bridge on existing alignment. The new bridge will carry two 12-foot-wide lanes with 8-foot outside shoulders, providing a wider roadway consistent with ODOT, FHWA, and AASHTO design standards. The new bridge will be designed to provide a service life of over 75

¹¹ ODOT, Traffic Viewer, 2025. Retrieved https://okdot.public.ms2soft.com/TDMS.UI_Core/trafficviewer



years, eliminating concerns about posting or closure within the next 30 years, which creates a more viable and safe transportation network. The Project will reduce long-term maintenance liabilities, improve reliability for both roadway and waterway navigation users, and ensure this critical Arkansas River crossing remains in a state of good repair for future generations.

Operations and Maintenance Costs

Replacing the SH-100 bridge will enable ODOT to avoid major near-term operations and maintenance (O&M) costs needed to maintain current elements and keep operations moving effectively. The deteriorating condition of the bridge requires ODOT to continually reevaluate its condition to ensure it is still safe to use. Following any of these more frequent inspections, results could reach the likely conclusion that the bridge has degraded to “critical” condition, and the heightened risk to safety will require it to be closed. If the Project were delayed or unable to be implemented, and the bridge was deemed unsafe, traffic would not be able to use the bridge. Without replacement of the bridge, there is a significant threat to the mobility of goods and economic growth in the region. As a result, the closure would cause severe travel time and reliability impacts for the traveling public. The detoured routes increase travel time and will lead to more congestion, safety and reliability challenges.

The implementation of the Project will result in significant O&M cost savings for ODOT while also bringing the bridge to a state of good repair. Under the baseline, the poor condition of the bridge will require ODOT to allocate funds towards the following over the 30-year analysis period: annual O&M costs, biannual special inspection costs, biannual NBI and NSTM inspection costs, underwater inspection costs (every five years), and rehabilitation. As described in the BCA Technical Memorandum¹², the Project will result in \$6.18 million in maintenance costs avoided over the 30-year analysis period (2024\$, discounted at 7 percent).

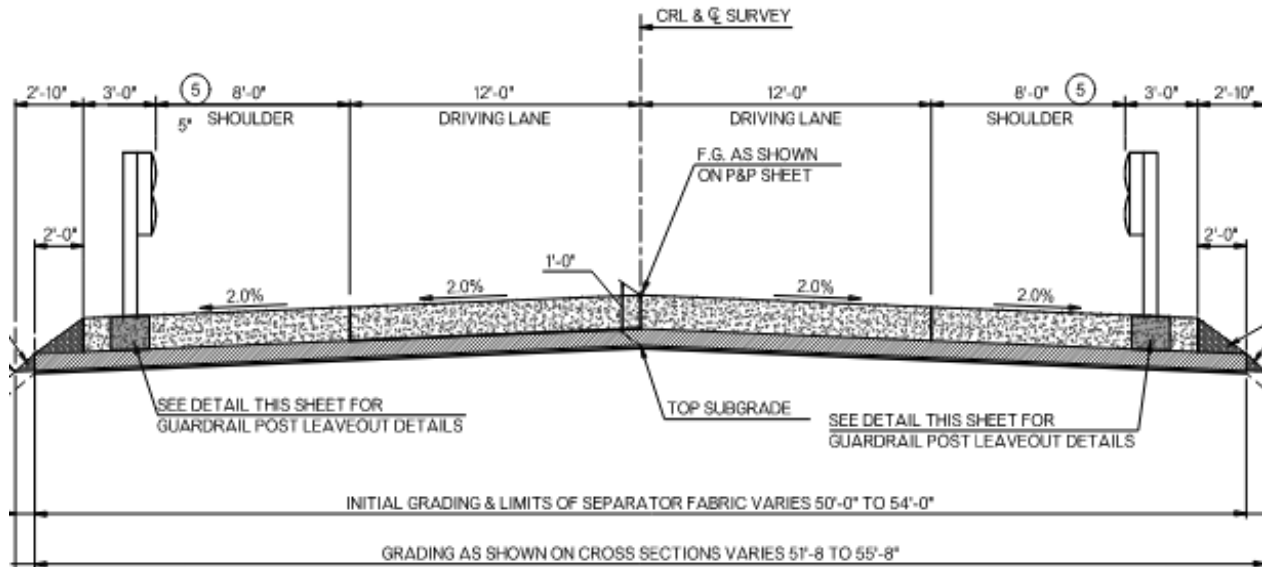
Criterion #2: Safety and Mobility

The Project will deliver significant safety benefits. As described in the BCA Technical Memorandum, the Project will provide \$6.52 million in safety benefits over the 30-year analysis period (2024\$, discounted at 7 percent). By 2059, the project is anticipated to impact 78,819 person-miles traveled (PMT) assuming the average daily traffic volumes shown in the BCA Tool, 1.52 persons/vehicle (per BCA guidance), and a bridge length of 0.365 miles.

Bridge Design

The new SH-100 bridge will include two 12-foot driving lanes and two eight-foot-wide outside shoulders (**Figure 8**). The new bridge will be wider by adding eight feet wide shoulders to each side, increasing the roadway width from 28 feet to 40 feet through the

¹² Available at [SH-100 FY26 BIP](#)


Figure 8: Proposed Typical Section


bridge. Also, modern 42-inch-tall railings will be incorporated into the design to increase safety for all bridge users. The widened shoulders will increase safety for bicyclists and pedestrians.

The existing bridge's 15 spans will be reduced to seven spans with the new structure. The reduction in the number of spans will provide increased safety for both boaters and highway users. The new bridge will incorporate scour protection innovation to provide long-term resiliency to extreme weather events, flooding, and other natural disasters.

Structurally, state-of-the-art hybrid steel plate girders incorporating High-Performance Steel will be utilized to achieve the longer spans. The new bridge piers will include concrete walls between columns to better resist damage by debris and incidental impacts. The existing dolphin pier protection measures will remain in place for the new bridge.

Crash Reduction Benefits

According to ODOT crash data, there were two (2) collisions reported on or near the SH-100 bridge between 2012 and 2025¹³. One involved property damage only and one was an injury crash. Using FHWA's database and methodology for Crash Modification Factors (CMFs)¹⁴, it is expected that widening the outside shoulders (3 feet to 8 feet) of the bridge will result in an average annual crash reduction of 0.03 (all severities) per year. Increasing the lane widths and adding the 42-inch safety railing will result in additional safety improvements that were not quantified through CMFs.

¹³ ODOT Traffic Engineering Division, report dated 6/16/2026. Note data from 2021-2025 may be incomplete.

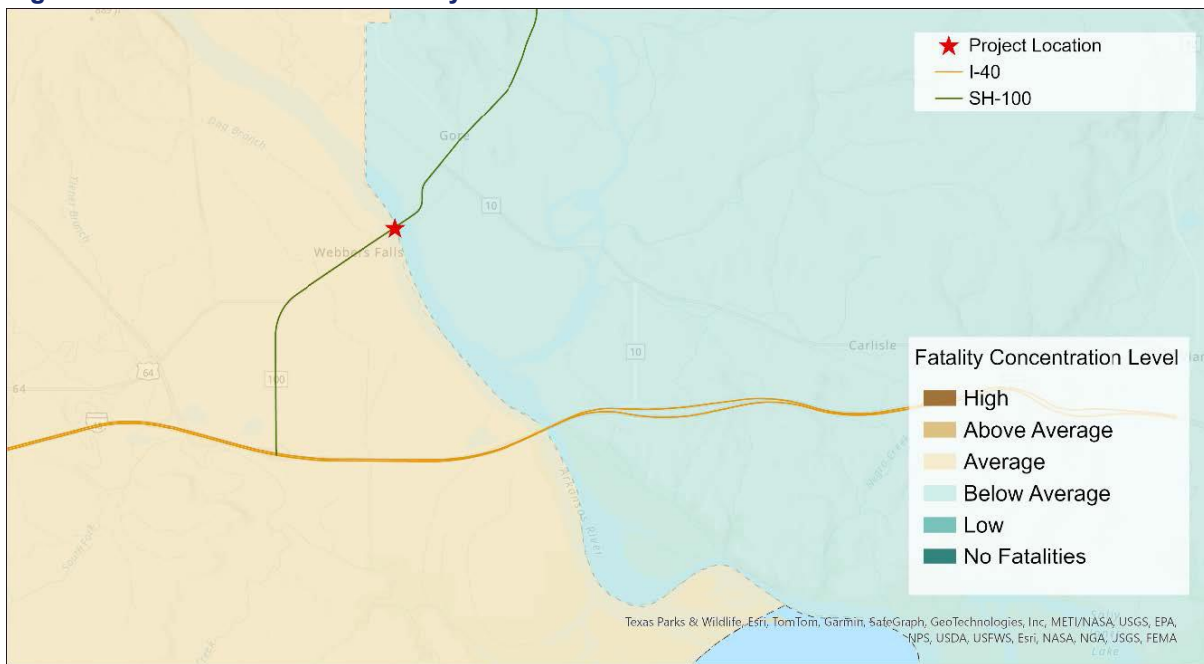
¹⁴ [Crash Modification Factors \(CMFs\) | FHWA](#)



National Roadway Safety Strategy

USDOT’s National Roadway Safety Strategy (NRSS) outlines the Department’s comprehensive approach to significantly reducing serious injuries and deaths on our Nation’s highways, roads, and streets and is the first step in working toward an ambitious long-term goal of reaching zero roadway fatalities. According to the Our Nation’s Roadway Safety Crisis StoryMap Tool,¹⁵ Muskogee County had an average fatality concentration level with a total of 65 fatalities between 2017 and 2021, and Sequoyah County had a below average fatality concentration level with a total of 37 fatalities between 2017 and 2021 (**Figure 9**). Both Muskogee and Sequoyah Counties have been identified as target areas for reducing fatalities.

Figure 9: Concentration of Roadway Fatalities



Criterion #3: Economic Competitiveness and Opportunity

The Project provides significant economic benefits. As described in the BCA Technical Memorandum, the Project will provide \$8.54 million in travel time savings and \$14.08 million in vehicle operating cost savings over the 30-year analysis period (2024\$, discounted at 7 percent).

Freight Movement

SH-100 serves as a critical freight corridor for eastern Oklahoma, carrying approximately 3,700 vehicles per day, including 563 trucks, which represent 15 percent of total traffic. The corridor supports the movement of livestock, feed, farm equipment, construction materials, and other goods between farms, processing facilities, and regional markets. As one of the few crossings of the Arkansas River in the region, the

¹⁵ [Our Nation's Roadway Safety Crisis](#)



SH-100 bridge provides farmers and freight haulers with critical east–west shipping access across the southern U.S., linking Oklahoma to markets in Texas, Arkansas, and beyond.

Damage to SH-100 bridge over MKARNS could disrupt freight flows, and impact regional commerce. A block in barge traffic could halt the flow of key goods. This would force costly rerouting to truck or rail, delay supply chains, and impact regional industries and ports. This could have a significant impact on freight movement leading to delays.

ODOT has explicitly considered the impact of the Project on freight movement and supply chains. Replacement of the bridge will improve long-term freight reliability by eliminating a fracture-critical structure that is expected to require truck load restrictions by 2035 and closure by 2049 absent replacement. The Project will preserve a critical freight connection for eastern Oklahoma, maintain reliable access for agricultural producers and commercial carriers, and ensure the continued movement of goods across both the highway and navigation networks.

Economic Strength and Land-use Productivity

The Project contributes to the economic competitiveness of the region and the U.S. by providing a safe transportation network and improving mobility for people and goods. The Project is expected to directly and indirectly support the creation of hundreds of jobs throughout the design, construction, and ancillary phases. All jobs created through this Project will comply with prevailing wage requirements under the Davis-Bacon Act, ensuring that workers are compensated fairly and competitively.

The SH-100 bridge also plays a key role in supporting freight movement. It is especially important for agricultural and industrial goods from eastern Oklahoma. This infrastructure helps connect those goods to national markets through ports, warehouses, and distribution centers in the region. By improving the safety and reliability of this freight corridor, the Project will enhance supply chain resilience and reduce costly disruptions. By replacing aging and functionally obsolete bridge infrastructure, the Project will improve safety and increase regional competitiveness.

The SH-100 bridge provides a critical economic corridor for the rural northeastern Oklahoma community. The bridge is a catalyst of improved access to jobs and services, supply chain and logistics efficiency, disaster resilience and emergency access and support. Absent the Project, there would be increased travel time for connecting residents of rural residents with limited alternative routes, lack in efficient movement of freight, increasing costs to manufacturers, and eventually leaving the communities in the nearby Opportunity Zones isolated.

The Project will act as a catalyst for land-use productivity by supporting industrial growth zones and logistics centers in rural Oklahoma, especially near Muskogee and eastern Oklahoma counties, encouraging private sector investment in transportation-dependent businesses by improving access and reliability and regional mobility, reducing pressure on urban centers and enabling balanced growth. SH-100 would increase land-use



productivity by making surrounding land more accessible, usable, and economically valuable, especially for agriculture and rural development.

Criterion #4: Resiliency and the Environment

Transportation improvement projects that increase efficiency and reduce vehicle miles traveled deliver environmental benefits. As described in the BCA Technical Memorandum, the Project will provide \$418,989 in benefits associated with emissions reductions over the 30-year analysis period (2024\$, discounted at 7 percent).

Resiliency

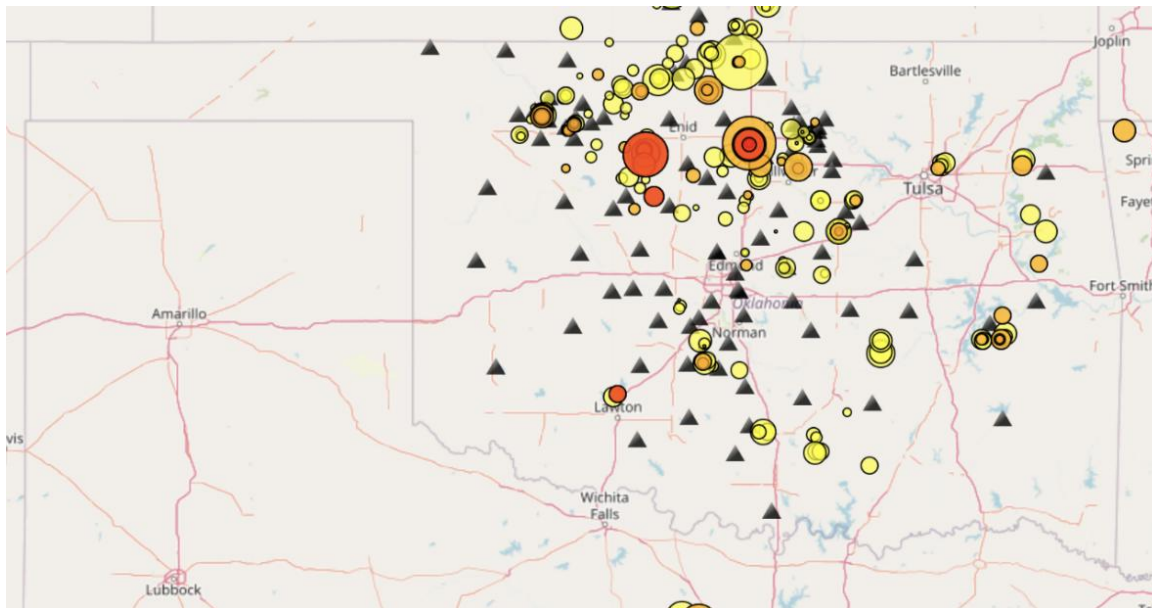
Due to its geology, rivers, and flood plains, ODOT has long recognized the vulnerability of its transportation assets to extreme weather and the risks it can present to the condition and performance of pavements and bridges; therefore, ODOT has integrated resiliency considerations into its life cycle planning and Project programming. ODOT has developed well-regarded resiliency focused design guidelines for bridges and roadways in flood-prone areas to reduce potential damage from extreme weather events and minimize overall life cycle costs and is increasingly incorporating resiliency and redundancy considerations into its decision-making.

Recognizing the increase in Oklahoma's seismic activity (**Figure 10**), ODOT incorporates the use of ShakeCast, an advanced monitoring and emergency response tool, in new bridge construction projects. This software program captures state bridge and seismic data to help crews perform bridge inspections quickly and efficiently after earthquakes. Supporting rapid post-event assessment of transportation infrastructure, ShakeCast enhances ODOT's ability to identify potential bridge impacts and restore service following natural hazards, thereby increasing the long-term resilience of this vital Arkansas River crossing.

The Project will further improve resiliency by replacing a fracture-critical structure with a modern, redundant bridge designed to withstand flooding, seismic activity, scour, vessel collision, corrosion, and other natural and man-made hazards while preserving one of the few Arkansas River crossings in eastern Oklahoma. The Project will strengthen both the transportation and navigation networks, reduce lifecycle vulnerability, and ensure reliable access for residents, emergency responders, freight carriers, and agricultural producers during future extreme weather and disruptive events.

Environmental Benefits

The SH-100 bridge replacement will provide environmental benefits by replacing an aging fracture-critical structure with a modern bridge designed to provide a service life exceeding 75 years while reducing long-term maintenance needs and associated environmental impacts. By eliminating the need for frequent repairs and extending the useful life of the crossing, the Project will reduce potential future impacts to natural


Figure 10: Recent Earthquakes in Oklahoma¹⁶


resources and water quality that are often byproducts of construction activity over streams.

The Project spans the Arkansas River within the MKARNS, a vital ecological and economic waterway, making protection of water quality a critical consideration. Aging bridge components, outdated stormwater drainage, and road runoff contribute to potential nonpoint source pollution in the region. Environmental design elements will aid in ensuring continuous monitoring and mitigation of water quality impacts. The replacement bridge will incorporate modern drainage and stormwater management features designed to reduce the potential for roadway runoff, sedimentation, and pollutant discharge into the Arkansas River. Construction activities will be performed in accordance with applicable environmental regulations and best management practices to minimize impacts on aquatic resources and maintain water quality.

Single Point of Failure

The Project will also preserve an essential transportation connection for eastern Oklahoma by avoiding future load restrictions and potential closure of the existing bridge. The impacts of the failure or disruption of the SH-100 bridge would be severe and widespread, involving increased travel times for passengers and freight, additional fuel consumption, and increased collision. While today's detour route (using the I-40 bridge over the Arkansas River) would result in an approximately 8-mile detour, the I-40 bridge is also in need of replacement and, due to funding constraints, has been deferred to 2031 in ODOT's 8 Year Construction Work Plan. Diverting all SH-100 traffic to a

¹⁶ [Oklahoma Geological Survey](#)



bridge already slated for replacement would place undesired additional wear and tear on the structure.

Criterion #5: Quality of Life

Community Engagement

The Project included community engagement throughout the planning and design process. ODOT coordinated with all relevant resource agencies, elected officials, and tribal governments through a direct solicitation of input. A virtual public open house was held online in February of 2021, providing information on the bridge design, detour routes and anticipated project timelines¹⁷. No in person public involvement was held due to COVID-19 concerns. Notification of the online open house was sent via email and Every Door Direct Mail to over 1,600 addresses in the project area including the communities of Webbers Falls and Gore. Written materials were also provided by mail for those unable to access the website. Over 300 people visited the website during the comment period. Public comments were in general support of the project, citing the need for safety improvements. A few comments expressed concerns about construction-related impacts. ODOT is committed to completing construction within two years.

Transportation Affordability

Although this Project focuses on a rural bridge with minimal pedestrian traffic, ODOT has worked to ensure that multi-modal transportation needs are considered in eastern Oklahoma. Design enhancements such as widened shoulders and improved clear zones will increase safety for bicyclists and pedestrians in areas where crossings are feasible for SH-100. Additionally, ODOT is exploring park-and-ride coordination with regional transit and vanpool services to support rural and low-income commuters who rely on shared transportation options. The Project also involves active coordination with regional transit providers such as Muskogee County Transit, which demand response to ensure continued and safe access for transit users during and after construction. Collectively, these efforts enhance transportation affordability, particularly for individuals without access to personal vehicles, while promoting more inclusive mobility options for the broader community.

Access to Critical Services

The SH-100 bridge serves as a critical lifeline for residents in Muskogee and Sequoyah Counties, in particular the communities of Webbers Falls and Gore, located on either side of the bridge. During the public involvement effort for the project, comments indicated that many residents of Webbers Falls use the bridge to access services in the larger community of Gore. SH-100 provides reliable access to healthcare facilities, schools, employment centers, grocery stores, government services, and other daily necessities. Additionally, the corridor provides access to employment in key sectors

¹⁷ [SH-100 over Arkansas River Virtual Open House](#)



such as transportation, agriculture, energy, and logistics throughout eastern Oklahoma and beyond. The corridor also links residents to important healthcare facilities in Muskogee, Fort Smith, and other regional centers, as well as to educational institutions like Connors State College and local K-12 schools. Reliable access to grocery stores, public services, places of worship, and recreational and cultural sites, such as Webbers Falls' riverfront, local parks, and tribal heritage areas, is also supported by this route. The corridor also has fire stations, health centers and police stations supported by this route.

For many families in eastern Oklahoma, particularly those living in rural communities with limited transportation alternatives, the bridge is an essential connection across the Arkansas River. Maintaining safe and reliable access to these destinations is especially important for older adults, individuals with disabilities, lower-income households, and families with school-aged children who depend on the transportation network to reach critical services and opportunities.

Absent the Project, the SH-100 bridge will close to all traffic in 2049 and would significantly impede emergency responders and considerably disrupt access to essential services by forcing travelers to use longer alternate routes. These longer routes would result in increased travel times which could be the difference in saving a life or arriving too late. The replacement and improvement of the bridge will avoid a lengthy detour, enhance route reliability, and significantly lower the risk of emergency detours or closures that often disproportionately affect rural and tribal communities.

Criterion #6: Innovation

Work Zone Interstate 2.0

Oklahoma is serving as the anchor state for the Interstate 2.0 Initiative for Work Zone Data Exchange (WZDx) along I-40 across the United States. This initiative will standardize the data feed for construction work zones to allow for connected vehicles and third-party mapping applications to have real time data for logistical decisions. SH-100 connects to I-40 just southwest of the bridge and lessons learned from the I-40 pilot program will be directly relevant to construction of the SH-100 bridge.

3D Digital Project Plans

ODOT commits to providing 3D digital project plans as part of the contracting process. This technology will allow contractors to use state-of-the-art GPS-controlled automated equipment in the construction process, which reduces the risk of human error in establishing grades and elevations while improving efficiency in earthmoving during the construction process and reducing the overall cost of construction.

Accelerated Bridge Construction

ODOT is committed to exploring Accelerated Bridge Construction (ABC) techniques, which combine innovative planning, materials, designs, and construction methods to reduce construction-related impacts, thereby minimizing overall construction completion



times. By utilizing ABC methods, such as design using prefabricated materials (such as pre-cast deck panels) or allowing the use of stay-in-place forms, the construction process for the Project may be streamlined, reducing on-site construction requirements. ABC is critically important for minimizing congestion and traffic delays along the SH-100 corridor throughout construction.

ShakeCast

Utilizing the innovative asset management technology provided through ShakeCast software, ODOT is committed to improving infrastructure monitoring and supporting data-driven maintenance and emergency response decisions. This technology enables rapid post-event assessment of bridge conditions following seismic activity, allowing ODOT to prioritize inspections, accelerate response efforts, and improve the resilience and reliability of the SH-100 bridge, a critical transportation asset to rural, eastern Oklahoma.

V. Benefit-Cost Analysis

In compliance with USDOT’s guidelines, ODOT has prepared a Benefit-Cost Analysis (BCA) for the Project using FHWA’s Benefit-Cost Analysis Tool (BCA Tool) Version 1.1.2. The assumptions and methodology for the BCA are detailed in the BCA Technical Memorandum available at [SH-100 FY26 BIP](#). The Project is expected to generate \$37.96 million in discounted benefits and \$29.04 million in discounted capital costs. Therefore, the Project has a Net Present Value of \$8.92 million and a Benefit/Cost Ratio (BCR) of 1.31 as shown below in **Table 4**.

Table 4: Summary of Benefits and Costs in Millions (2024\$, discounted at 7%)

Category	Benefit	Percent of Total Benefits
Safety	\$ 6,518,193	17%
Travel Time	\$ 8,538,074	22%
VOC	\$ 14,084,069	37%
Resilience	\$ -	0%
Health and Amenity	\$ -	0%
Non-CO2 Emissions	\$ 418,989	1%
Other Environmental	\$ 37,776	<1%
Maintenance	\$ 6,181,237	16%
Residual Value	\$ 2,183,389	6%
Total Benefits	\$ 37,962,178	100%
Total Discounted Costs	\$ 29,041,938	N/A
BCR	1.31	N/A
Net Present Value (NPV)	\$ 8,920,240	N/A



VI. Project Readiness and Permitting Risk

Technical Feasibility and Technical Competency

The SH-100 Bridge Replacement Project has been fully designed according to ODOT's Roadway Design Manual, Drainage Manual, and other standards. The project will replace the existing bridge on SH-100 over the Arkansas River (MKARNS) on existing alignment. The new bridge will consist of a seven-span steel girder structure with six concrete piers. The main span over the navigation channel will be 410 feet long, providing additional horizontal clearance for barge traffic. The bridge will be constructed at the same elevation as the existing, requiring minimal roadway work (less than 500 feet) on SH-100 on either end. The new typical section will consist of two 12-foot driving lanes and two 8-foot outside shoulders on a concrete deck with 42-inch F-shaped parapet on both sides. SH-100 will be closed during construction, and traffic will be detoured to the I-40 bridge. Construction is expected to take approximately two years to complete.

As the Project sponsor, ODOT has the technical capacity and competency to successfully complete this Project. ODOT has a close partnership with the FHWA Oklahoma Division through which it receives its federal aid allocation and discretionary grant funding. ODOT has been awarded several discretionary grants from various programs and is familiar with developing grant agreements, administering the funding, and providing the necessary reporting. ODOT has the technical expertise and resources dedicated to the Project to provide quality control over all aspects of design and construction, ensure the Project meets all federal requirements, and keep the public informed of the Project's progress.

ODOT maintains a Title VI Implementation Plan in accordance with the Civil Rights Act of 1964 and FHWA guidelines. This plan includes active steps that ODOT takes to ensure equitable treatment and participation, as well as procedures for filing a complaint and reviewing complaints. ODOT's Civil Rights Division administers and oversees the department's Title VI, ADA, DBE, and Contractor Compliance programs.

The ODOT Project management team are familiar with the risk management guidance published by FHWA and have followed those guidelines and best practices for the Project. Cost estimate reviews have been coordinated with FHWA, ODOT, and the consultant team for the Project with the most up-to-date information to identify and manage potential risks for the Project. Cost estimate contingencies, appropriate for the relative level of design completion, have been included since the beginning of the Project's design.

Project Schedule

The SH-100 project has completed preliminary and final design and all environmental reviews and permitting. No right-of-way acquisition is required for this project. ODOT anticipates the SH-100 project to begin construction in the first quarter of 2027 and be



complete by the end of 2028. **Table 5** displays the anticipated schedule for the SH-100 Project.

Table 5: Project Schedule for SH-100

Milestone	2025				2026				2027				2028			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Prelim. Engineering (COMPLETE)																
Survey (COMPLETE)																
NEPA (COMPLETE)																
Utilities																
Plans/Specs/Est.																
Funding Obligation																
Letting																
Construction																

BIP funding obligation would occur in late 2026 or early 2027 concurrent with project letting. This is well in advance of the September 30, 2029 deadline, with construction activities to begin within 2-3 months of obligation. ODOT is committed to completing construction within two years to minimize impacts on the surrounding communities and to be ready to advance the I-40 bridge project to construction should funding become available.

Required Approvals

Environmental Permits and Reviews

ODOT has substantially advanced project development for the SH-100 bridge replacement, including completion of 90% plans and NEPA completion, receiving environmental clearance through a Documented Categorical Exclusion (DCE) approved by FHWA in March of 2022. Environmental studies supporting the DCE included evaluations of biological resources, cultural resources, hazardous materials, and socioeconomic considerations. Notes are included in the plans to minimize impacts to protected bat and bird species as well as cultural resources. ODOT will reevaluate the project prior to letting to confirm the DCE is still applicable and will update any commitments as needed. No additional right-of-way is required for the project. Final Plans, Specifications, and Estimate (PS&E) plans are anticipated by the end of June 2026. As a result of this advanced level of readiness, the Project is well positioned to proceed to construction upon receipt of funding. A copy of the NEPA document can be found at [SH-100 FY26 BIP](#).

The Arkansas River at the SH-100 crossing is a navigable waterway regulated by the Army Corps of Engineers (USACE) and the US Coast Guard. The project will be constructed under USACE Nationwide Permit 14 for compliance with the Clean Water Act. The USACE verified the use of this permit in 2022. ODOT has secured the Coast Guard permit determining that the proposed bridge design meets navigation and



environmental requirements and authorizing construction, under Title 33 of the U.S. Code and the General Bridge Act of 1946. The Coast Guard issued a revised Bridge Permit P(6-22-8) for the project on April 12, 2023. Copies of all permits can be found at [SH-100 FY26 BIP](#).

The Project included community engagement throughout the planning and design process. ODOT coordinated with all relevant resource agencies, elected officials, and tribal governments through a direct solicitation of input. A virtual public open house was held online in February of 2021. No in person public involvement was held due to COVID-19 concerns. Notification of the online open house was sent via email and Every Door Direct Mail to over 1,600 addresses in the project area including the communities of Webbers Falls and Gore. Written materials were also provided by mail for those unable to access the website. Over 300 people visited the website during the comment period. Public comments were in general support of the project, citing the need for safety improvements. A few comments expressed concerns about construction-related impacts. ODOT is committed to completing construction within two years.

[State and Local Approvals](#)

The SH-100 Project is included in the 2026-2029 Statewide Transportation Improvement Program (STIP).¹⁸ Further, ODOT's 8-Year Construction Work Plan (2026-2033) includes the SH-100 [JP 32100(04)].¹⁹ Per the Work Plan, construction is currently programmed in 2027. Due to the increased need for replacement, this Project has been accelerated and moved into the ODOT Statewide Transportation Improvement Program (STIP). A letter demonstrating ODOT's commitment to provide matching funding and to appropriately program the Project is attached at [SH-100 FY26 BIP](#). The Project has broad support and Letters of Support are also attached at [SH-100 FY26 BIP](#).

[Federal Transportation Requirements Affecting State and Local Planning](#)

[Statewide Transportation Improvement Program](#)

The SH-100 Project priority has been elevated, and the project is included in the 2026-2029 Statewide Transportation Improvement Program (STIP) for construction in FY 2027. The Project is also included in ODOT's 8-Year Construction Work Plan (2026-2033) in FY 2027.

[Oklahoma Freight Transportation Plan](#)

The SH-100 project is mentioned in ODOT's Freight Transportation Plan, 2023-2030.²⁰ Specifically, the Freight Transportation Plan calls for ODOT to pursue Federal grants and alternative revenue sources for this critical freight asset.

¹⁸ ODOT, Statewide Transportation Improvement Plan FFY 2026-2029. [FFY 2026-2029 STIP2.pdf](#)

¹⁹ ODOT, FFY-2026 through FFY-2033 Construction Work Plan. [ODOT CWP-2025.pdf](#)

²⁰ Oklahoma Freight Transportation Plan [2023-2030](#)



Transportation Asset Management Plan (TAMP)

The Project improves system resilience and reliability and is consistent with the goals set out in ODOT’s 2022-2031 TAMP²¹ with the intent of maintaining and preserving Oklahoma’s transportation network.

Assessment of Project Risks and Mitigation Strategies

Table 6 assesses the risks that may pose a threat to the ability of the Project to meet its objectives and schedule and identifies mitigation actions for each risk. Given that all environmental reviews and permits have been obtained, remaining risk is primarily related to letting and construction risk.

Table 6: Project Risks and Mitigation Strategies Matrix

Risk	Risk Level	Mitigation
Construction Materials Costs	Medium	Cost estimates have been developed based on the completion of 90% design. A 10% construction contingency and 6% E&C contingency have been included in the cost estimate to account for inflation and potential cost overruns.
Construction Delays	Medium	Environmental notes indicate the need for certain seasonal restrictions to avoid impacts to protected species. These restrictions could cause delays in the construction schedule. However, these restrictions are known and the contractor can plan construction accordingly.
Procurement, Award, and Contracting	Low	ODOT will procure a construction team well in advance of the identified construction date through a competitive process meeting federal requirements.
Community Frustration	Low	The communities of Webbers Fall & Gore rely on boaters and other users of the Robert S. Kerr Reservoir for economic support. Closure of the bridge during two lake seasons may result in frustration by these community members and negative publicity or complaints. ODOT has committed to building the project in two years which is an accelerated schedule for this type of structure.

DOT Priority Selection Considerations

SH-100 is a fracture critical bridge that does not meet current geometric design standards. Due to the existing condition, the bridge is at risk of falling into poor condition and closure would have severe and widespread impacts on vehicle and truck traffic. Replacing the bridge will address the BIP goal to reduce the number of bridges that do not meet current geometric design standards and reduce the number of bridges at risk of falling into “poor” condition.

Due to the rapidly deteriorating condition of the bridge, ODOT has allocated sufficient funding to construct the project in FY 2027. However, this funding required the deferment and delay of other critical planned projects, including the I-40 bridge over the

²¹ ODOT Transportation Asset Management Plan [2022-2031](#)



Arkansas River which serves as the SH-100 detour and is also in need of replacement. The BIP grant will allow ODOT to advance both projects in a manner that will maintain the safety and reliability of the regional transportation network.

The Benefit Cost Analysis and Merit Criteria demonstrate how the project will support the Administration's focus on American family and ensuring a more seamless travel experience. The project will avoid increased travel times and operating costs associated with detouring SH-100 traffic as the bridge continues to deteriorate. The project will provide a new bridge with wider lanes and shoulders designed to increase safety and improve state of good repair.

The Project schedule and budget demonstrate a high level of readiness and the ability to meet all BIP program delivery requirements. ODOT has completed the NEPA process, obtained all required permits, and advanced the Project to PS&E plans. As a result, the Project is well positioned to proceed to final design and construction upon receipt of funding and can readily satisfy the requirement to begin construction within 18 months of BIP fund obligation. ODOT's extensive experience delivering complex bridge replacement projects further supports its ability to successfully administer and deliver the Project on schedule and within budget.

ODOT has committed significant state resources to advance project development and reduce delivery risk. The advanced design status and completed environmental clearance substantially shorten the timeframe between award and construction, enabling the Project to be delivered well in advance of applicable federal expenditure deadlines. While ODOT remains committed to replacing the aging fracture-critical structure, a FY 2026 BIP Bridge Project award would accelerate implementation of this critical investment and help prevent future deterioration, load restrictions, and potential closure of one of the few Arkansas River crossings serving eastern Oklahoma.