

Centennial Pathways: Enhancing Community Connectivity on US-69 in Muskogee

BUILD Grant 2025

Oklahoma Department of Transportation Merit Criteria



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Criterion #1: Safety

Protect Non-Motorized Travelers from Safety Risks

Centennial Pathways: Enhancing Community Connectivity on US-69 in Muskogee Project (the Project) will enhance safety and traffic flow while providing improved infrastructure for roadway users. The Project includes three components, explained in the **Project Description** and shown in **Figure 1** (Project Area). **Component A** – road resurfacing – will enhance the existing ten-footwide outside shoulders and widen the inside shoulders to four feet. Paved shoulders have been found to reduce casualties by 25 to 40 percent and play a crucial role in minimizing the risk of accidents by offering a designated area for emergency stops and disabled vehicles away from the travel lane, allowing for drivers to make steering corrections before veering off the road, and providing room for evasive maneuvers. Additionally, shoulders can be used by pedestrians and bicyclists, improving safety for non-motorized travelers.

Component B includes reconstructing the Centennial Trail Pedestrian Bridge to meet modern vertical clearance design standards and widen the bridge to 12 feet. The multi-use path will allow pedestrians and bicyclists to safely cross US-69 and connect them to the Muskogee trail system. The existing roadway sag vertical curve and low bridge vertical clearance will be corrected, enhancing safety by allowing trucks to continue on US-69 rather than detouring through downtown Muskogee.

Component C includes reconstructing the roadway to add capacity, two-way left turn lanes (TWLTLs), sidewalks, and crosswalks. The lack of sidewalks and crosswalks throughout the Project Area restricts non-motorized travelers on US-69 and creates a physical barrier for these users. Adding improvements such as <u>sidewalks</u>, <u>crosswalks</u>, and <u>improved lighting</u> will enhance safety for pedestrians and bicyclists. Additionally, TWLTLs <u>can be expected to reduce collisions</u> by removing left turning vehicles from the through lane, improving the flow efficiency of US-69 and reducing safety risk for travelers.

The Project includes safety countermeasures outlined in the <u>National Roadway Safety</u> <u>Strategy Plan</u>, including crosswalk visibility enhancements, adding sidewalks, and adding dedicated left- and right-turn lanes at intersections. The Project also includes elements of the FHWA's <u>Improving Safety for Pedestrians and Bicyclists Accessing Transit</u> report including wide sidewalks and marked crossings.

Additionally, in 2023 Oklahoma Department of Transportation (ODOT) conducted a <u>Vulnerable Road User (VRU) Assessment</u> and identified Muskogee has a VRU Safety High-Risk Area based on the rate of fatalities and injuries per 100,000 residents (p. 56). ODOT stated that additional analysis, consultation, and resources to improve pedestrian and bicycle safety would be necessary due to the high risk for vulnerable users. In the <u>2023 Strategic Highway Safety Plan</u>, ODOT cited actions for high-risk areas including identifying and upgrading at-risk roads, establishing criteria for road diets, and educating drivers on safety.



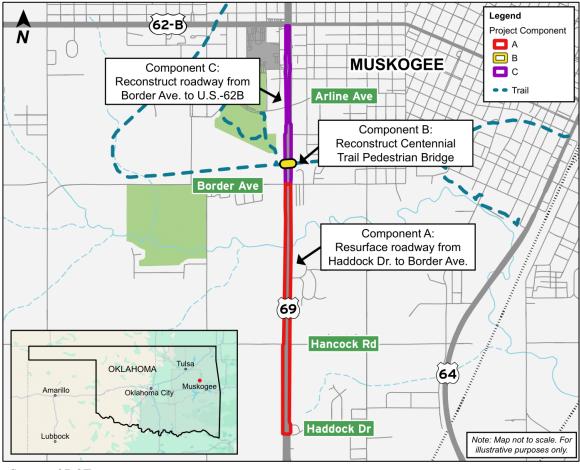


Figure 1: Project Location and Components

Source: ODOT

Reduce Injuries in Communities

From 2017 and 2021, 147 vehicle crashes occurred within the Project Area, resulting in 47 injuries and no fatalities. **Table 1** provides more details about the collisions in the Project Area. The

Benefit-Cost Analysis (BCA) used a crash modification factor (CMF) for the resurfacing treatment expected occur as part of construction, which is determined to reduce the likelihood of fatal, injury, and property damage only crashes in all weather conditions. It is expected that the Project would reduce crashes on this segment by 14 percent (see BCA Narrative).

Between 2017 and 2021, 45 percent of collisions within the Project Area

Table 1: Total Crashes 2017 to 2021

Collision Type	Property Damage Only	Injury	Total
Rear End	43	23	66
Angle	25	14	39
Sideswipe	17	1	18
Other	9	1	10
Fixed Object	5	1	6
Rollover	0	4	4
Pedestrian	0	3	3
Animal	1	0	1
Total	100	47	147

Source: ODOT Traffic and Safety Office



were classified as rear end collisions. According to the <u>FHWA</u>, rear end collisions are commonly observed on roadways where traffic stops in travel lanes and sudden deceleration from vehicles is required. This characterizes the current bottleneck at the Centennial Pedestrian Bridge where the roadway dips, causing sudden deceleration. This sag vertical clearance will be corrected when the roadway is reconstructed.

As mentioned in the **Project Description**, the Project is located within rural Census Tracts that are designated as Areas of Persistent Poverty (APP) (<u>Grant Project Location Verification</u>). The current roadway has no sidewalks or crosswalks, which has contributed to safety issues for pedestrians. While pedestrian collisions accounted for less than one percent of crashes from 2017 to 2021, the collisions involving pedestrians always resulted in injury which could have been prevented if safe pedestrian infrastructure was provided throughout the corridor. The Project intends to improve pedestrian infrastructure, including sidewalks and crosswalks, to enhance

pedestrian safety on US-69. Therefore, reconstructing the roadway will help to reduce injuries to this community.

In addition to the corridor safety countermeasures, the Project will enhance safety for the surrounding community by

Figure 2: News Clipping After Pedestrian Collision in Muskogee PEDESTRIAN KILLED AFTER BEING HIT BY MULTIPLE VEHICLES IN MUSKOGEE

A pedestrian died after being hit by several vehicles in Muskogee. It happened around 10 p.m. Wednesday Highway 69, near the West Shawnee Bypass.

Thursday, October 3rd 2013, 5:22 pm By: News On 6



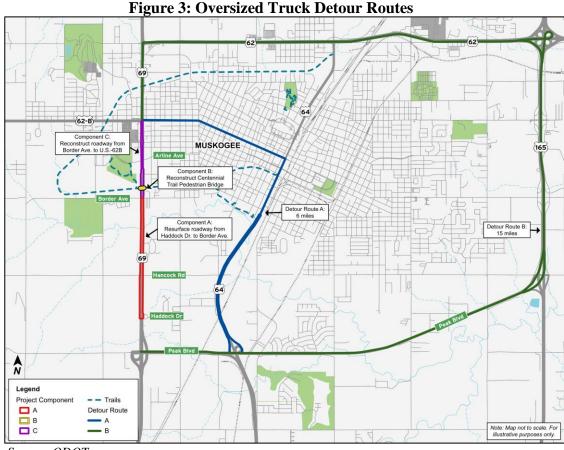
Source: The News on 6

bringing the Centennial Trail Pedestrian Bridge to modern vertical clearance standards. Due to the bridge's low vertical clearance, oversized trucks must detour off US-69 and travel through or around downtown Muskogee, as shown in **Figure 3**. Detour A is approximately six miles in length, utilizing US-64 and goes directly through downtown Muskogee. Detour B is approximately 15 miles in length, utilizing US-62 and US-165. This detour avoids downtown Muskogee but is significantly longer, increasing vehicle miles traveled (VMT) and roadway emissions.

These detours present a safety issue for the surrounding community, as oversized trucks are much taller and heavier than passenger vehicles and have <u>longer stopping distances</u>. While not all collisions on the detour routes can be attributed to oversized trucks, from 2017 to 2021 four collisions occurred on Detour A and nine occurred on Detour B with trucks weighing more than 10,000 pounds. These 13 total collisions could have been avoided if oversized trucks were able to continue on US-69 rather than detouring. By allowing oversized trucks to stay on US-69, collisions



could be decreased in the surrounding community while also reducing vehicle emissions and increasing travel time benefits that lead to more efficient movement of goods.



Source: ODOT

Criterion #2: Environmental Sustainability

Reducing Environmental Impacts in Communities

Muskogee County has a high concentration of Particulate Matter (PM) 2.5, which is the presence of particles like dust, dirt, or smoke in the air (Center for Disease Control and Prevention [CDC] Environmental Health Tracking). PM 2.5 may lead to breathing problems, asthma, and heat conditions. PM 2.5 may be caused by road dust or vehicle emissions. As discussed in **Safety**, the current US-69 roadway requires oversized trucks to detour either six or 15 miles off of US-69 to avoid the low bridge clearance. By allowing oversized trucks to stay on US-69, vehicle emissions may be reduced.

Avoid Adverse Environmental Impacts to Air or Water Quality, Wetlands, and Endangered Species

In **Component A**, the roadway will be resurfaced using its current configuration. The design of this component is essentially within the same footprint as the existing roadway. Temporary lanes will be used to maintain traffic while the road is being resurfaced. By limiting the footprint of the



Project, ODOT will avoid adverse environmental impacts to water quality, wetlands, and endangered species. The Project received an Individual Categorical Exclusion (ICE) in December of 2021, which did not identify significant impacts to environmental resources.

Incorporate Natural Infrastructure

The US-69 corridor has been identified by ODOT as a candidate for the state's Monarch Program. The <u>Monarch Program</u> implements conservation measures to address threats to the monarch butterfly, including native seeding, brush removal, conservation mowing, and targeted herbicide treatments. The grass median of **Component A** – road resurfacing – is a candidate for the Monarch Program, enhancing the natural infrastructure on the US-69 corridor.

Criterion #3: Quality of Life

As mentioned in the **Project Description**, the Project is located within rural Census Tracts that are designated as APPs (<u>Grant Project Location Verification</u>). Shown in **Table 2**, both Project Area Census Tracts rank in higher percentiles for quality-of-life characteristics when compared to the state of Oklahoma.

Table 2: Census Tract Quality of Life Characteristics

	Tract 1	Tract 10	State of Oklahoma
Median household income	\$40,854	\$40,655	\$53,840
Population below 200% of federal poverty line (percent of population)	59.0%	49.2%	34.9%
Households without vehicles	14.1%	11.5%	5.4%
Asthma prevalence (percent of adults aged 18 or older)	14.5%	14.4%	Not Available

Source: U.S. Census Bureau <u>Table S2503</u>; U.S. Census Bureau <u>Table S1701</u>; U.S. Census Bureau <u>Table S2504</u>; CDC <u>Places Interactive Map</u>

Increase Affordable Transportation Choices

The Project will expand affordable transportation choices. Currently, there are no pedestrian or

bicycle accommodations on this corridor of US-69 and the signalized intersections do not have crosswalks, requiring residents to use vehicles or cross illegally to traverse the corridor, as seen in **Figure 4**. Providing safe bike and pedestrian facilities on a corridor that currently lacks accommodations these will provide another option for residents. The sidewalks and trail

Figure 4: Pedestrian Attempting to Cross US-69

Source: <u>Google Maps</u>, accessed December 2024 Image shows a person walking across US-69 without crosswalk, which is a common occurrence in the corridor.



connection will improve safety and enhance access to <u>Muskogee County Transit</u> (MCT) routes, which runs within the Project Area and provides access to downtown Muskogee.

ODOT's <u>Active Transportation Plan</u> (October 2023) recommends adding paved shoulders to rural highways to increase the potential for longer bicycle travel distances (p. 29). In conjunction with widening US-69, the shoulders in **Component A** will be widened to 10-feet to provide cyclists more space along the roadway. Crosswalks that are added at intersections will further enhance safety for cyclists crossing US-69.

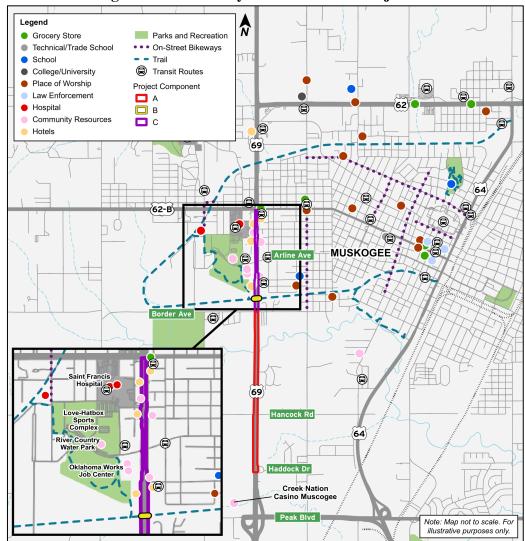


Figure 5: Community Resources Near Project Area

Source: ODOT

Improve Access to Daily Destinations

There are several community resources within one mile of the Project Area including four places of worship, two hospitals, two grocery stores, one elementary school, and six recreational areas, as shown in **Figure 5**. Additionally, Northeastern State University is approximately one mile north of the Project Area. The increased capacity of US-69 will improve access to these daily



destinations for motorized travelers. Additionally, the new sidewalks and crosswalks in **Component C** and the reconstruction of the Centennial Trail Pedestrian Bridge in **Component B** will improve safe access to these daily destinations for non-motorized travelers. The Project will improve the safety of pedestrians and bicyclists to move through and across the US-69 corridor.

Criterion #4: Mobility and Community Connectivity

Increase Accessibility for Non-Motorized Travelers

The reconstruction of the Centennial Trail Pedestrian Bridge will improve the connectivity of the trail system in Muskogee. The seven-mile Centennial Trail begins in downtown Muskogee and continues west to the Love-Hatbox Sports Complex, just west of the Project Area, where it loops northwest through the north side of Muskogee. The trail connects to multiple other trails and onstreet bikeways within Muskogee, creating a comprehensive transportation network. Additionally, the outside shoulders in **Component A** will be 10-feet to provide cyclists with mobility options. As stated in **Quality of Life**, ODOT's <u>Active Transportation Plan</u> (October 2023) recommends adding paved shoulders to rural highways to increase the potential for longer bicycle travel distances.

As discussed in **Quality of Life**, the addition of sidewalks in **Component C** – road configuration – and the reconstruction of the Centennial Trail Pedestrian Bridge in **Component B** will increase access for non-motorized travelers to daily destinations and employment opportunities. Currently, pedestrians using US-69 must walk on the roadway shoulder and cross without crosswalks, leading

to safety issues, as shown in Figure 6. The Project will improve the safety and comfort for pedestrians and bicyclists to move through and across the US-69 corridor. Additionally, sidewalks and crosswalks will improve access to the system, existing bus facilitating access to job centers and opportunities in downtown Muskogee.



Source: <u>Google Maps</u>, accessed December 2024 Image shows a person walking on shoulder of US-69 with a mobility aid.

Improve System-Wide Connectivity

The MCT runs fixed route and on-demand services providing access to employment, recreation, and shopping throughout Muskogee County. In 2023, MCT provided approximately 27,000 on-demand trips and 15,000 bus rides for residents. By adding infrastructure such as sidewalks and crosswalks, first and last mile connections to transit will be improved on the corridor. Improved access to the existing bus transit in Muskogee improves access to job centers in downtown



Muskogee, as well as services along bus routes including the Muskogee Public Library, grocery stores, schools, and tourism. Additionally, the Project intends to add capacity to the corridor, which will lead to more efficient traffic flow.

Remove Physical Barriers to Reconnect Communities

Currently, pedestrians struggle crossing US-69 as there are no pedestrian or bicycle facilities at any of the intersections of the Project Area, illustrated in **Figure 7**. With residential use on the east side of US-69 and commercial and retail on the west, US-69 creates a physical barrier separating the community. The Project will remove barriers for individuals to jobs and businesses by providing infrastructure such as LED lighting, sidewalks, and crosswalks. Additionally, the sidewalks in **Component C** will intersect with the Centennial Trail Pedestrian Bridge, creating a connection to the Muskogee trail system.

Figure 7: Intersection of US-69 and Arline Avenue with No Pedestrian Infrastructure



Source: Google Maps, accessed January 2025

Image shows intersection of US-69 and Airline Avenue where there are no sidewalks or crosswalks.

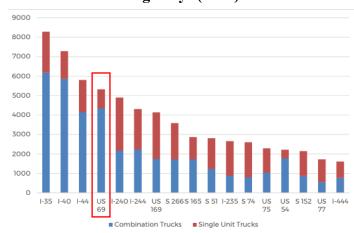
Criterion #5: Economic Competitiveness and Opportunity Improving Freight Mobility and Supply Chains

The Project is located along US-69 which has the **fourth highest volume of truck traffic in the state** (see **Figure 8**). US-69 is a major north-south corridor through the United States and is on the National Highway System (NHS) and the Strategic Highway Network (STRAHNET). Its northern terminus is in Albert Lea, Minnesota and its southern terminus is in Port Arthur, Texas, connecting to many Interstates in the United States. Due to these major roadway connections, US-69 is a very important route with heavy truck traffic. Along the Project corridor, there are over **6,500** trucks per day with an **average daily truck traffic of 26 percent**. As previously discussed, currently oversized trucks are required to detour through or around Muskogee, as seen in **Figure 3**. By addressing the sag vertical clearance and replacing the Centennial Trail Pedestrian Bridge, oversized tucks will be able to continue on US-69, reducing the burden on other routes and possibly increasing the usage of the corridor.



US-69 is designated as a Critical Rural Freight Corridor (CRFC) (ODOT Freight Transportation Plan, p. 6-45). CRFC designation in Oklahoma is limited to 160 rural miles and is reserved for those corridors that receive high volumes of freight traffic, connect interstates and ports, or have access to energy and agricultural production areas. US-69 meets these criteria as it carries high volumes of truck freight, connects rail hubs, diverts freight outside of traffic the major metropolitan areas, and connects to

Figure 8: Major Oklahoma Truck Traffic Highways (2021)



Source: ODOT Freight Transportation Plan, p. 2-7

several important industrial and agricultural hubs. The Project will enhance mobility throughout the corridor for freight and motorists by updating deteriorating infrastructure, making travel in the corridor safer, and improving efficiency in the region.

Oversized trucks must detour through downtown Muskogee due to the low vertical clearance of the Centennial Trail Pedestrian Bridge. The Project will mitigate barriers to mobility by allowing heavy truck traffic to continue on US-69 rather than detouring, enhancing safety issues caused by large trucks and reducing emissions from the lengthy detour routes, as discussed in the **Safety** and **Environmental Sustainability** criteria. By shifting truck traffic away from local streets, the quality of life for residents and visitors near the existing route will be improved.

Enhanced mobility from streamlining the detoured truck route to utilize US-69 monetizes benefits in the form of travel time savings, operational cost savings, and emission savings **will result in a total discounted savings of \$95.8 million for the Project**. This equates to an overall annual program savings of \$4.8 million per year (see **BCA Narrative**). A reduction of collisions is expected, but not included in the BCA calculations, with reconstruction, which may eliminate negative impacts to the surrounding communities caused by slow-moving and idling vehicles.

US-69 experiences heavy commodity truck flows that typically carry 35-54.99 million tons of grain, coal, aggregate, lumber, and petroleum (ODOT Freight Transportation Plan, p. 2-10). US-69 provides a roadway connection to US-62B which provides direct access to Port Muskogee and Three Forks Harbor, as shown in Figure 9. Port Muskogee is an economic driver of the region, including full-time staff devoted to ensuring businesses located at the Port Muskogee facilities and industry within the City and County of Muskogee have the resources to grow and thrive. The Port is home to nearly 85 industries which employ more than 6,000 people with more than \$300 million in annual payroll.

The City of Muskogee and Port Muskogee have significantly invested in new developments. Stardust Power announced it will invest over \$1 billion to build a new battery-grade lithium



refinery at Port Muskogee. <u>Polaris Technologies</u>, <u>Inc.</u> is investing \$100 million to create the community's first data center at the Port. Core Scientific, Inc. <u>broke ground in November 2024</u> on a 100-megawatt data center. <u>Core Scientific Inc</u>. is bringing more than \$4 billion in capital investment to the site and approximately \$182 million to the local economy, supporting 150 jobs and average salaries exceeding \$65,000. While Port Muskogee is not within the Project Area, US-69 provides a route to Port Muskogee for many residents and freight. It is imperative to ensure that intermodal connectivity along US-69 to US-62B has minimal congestion to enable the efficient transport of goods to the Port.

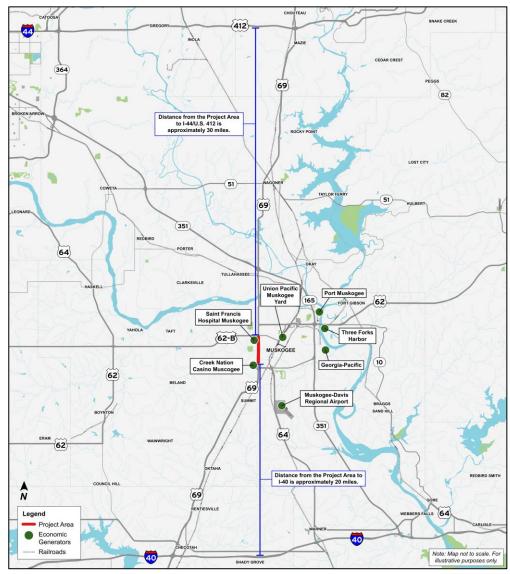


Figure 9: Economic Generators

Source: ODOT



Facilitating Tourism Opportunities and Economic Growth

The City of Muskogee has experienced positive economic development that necessitates the widening of US-69, the incorporation of sidewalks and crosswalks at signalized intersections, and the replacement and improvement of the Centennial Trail Pedestrian Bridge.

A signal of economic growth is the recently launched <u>Film Muskogee</u>, a film incentive program through the Muskogee Tourism Authority. With close proximity to the Cherokee Nation and as an officially <u>certified film friendly community</u> through the Oklahoma Film + Music Office's (OF+MO) Film Friendly Community Program, Muskogee offers a range of unique filming locations that span historic sites, natural landscapes, and even a submarine. The OF+MO reports the state's film incentive program, <u>Filmed in Oklahoma Act</u>, is estimated to have created 11,150 hires and \$159 million in spending during Fiscal Year (FY) 23 and FY24. Each production brings a positive economic impact to the city, from job creation to supporting local businesses and increasing tourism.

As discussed above, the City and Port of Muskogee are anticipating over \$1 billion in investment and development in the next several years. This project will support and promote long-term economic growth and other broader economic fiscal benefits by allowing for efficient movement of people and goods in and out of Muskogee.

Workforce

The State of Oklahoma currently has 193 registered apprenticeship programs, overseen by the US Department of Labor, which are pivotal to enhancing workforce skills, particularly in key sectors such as transportation. ODOT is exploring leveraging the state's workforce development initiatives, particularly utilizing existing apprenticeship programs and contributing to local economic growth thorough job creation and infrastructure improvement. These workforce development programs do not have any DEI or union labor preferences associated with them.

Criterion #6: State of Good Repair

Restore and Modernize the Existing Core Infrastructure

The Centennial Trail Pedestrian Bridge was constructed in 1952, prior to the adoption of the ODOT roadway design manual which includes the requisite vertical clearance for pedestrian bridges to be 17 feet nine inches. Currently, the Centennial Trail Pedestrian Bridge in Component **B** has a clearance of 14 feet 10 inches and piers located within the clear zone in the median and off the shoulders, which pose fixed object impact hazards. By raising the US-69 grade by approximately five feet, removing of old bridge piers, and widening the pedestrian bridge, Component **B** is restoring and modernizing existing core infrastructure.

ODOT acknowledges the necessity to modernize the core infrastructure as a means to minimize maintenance costs such as new stripe and signal maintenance. ODOT expects to spend approximately \$88,000 per year on maintenance without the recommended project improvements. However, if the Project is constructed, maintenance is expected to cost on average, \$7,500 per year



(ranging between \$5,000 to \$10,000) in the Build Scenario. This equates to an operations overall and maintenance savings of \$80,500 per year, equaling \$1,610,000 in avoided costs (undiscounted). See BCA Workbook and Memo.

As discussed in **Environmental Sustainability**, the Project

Figure 10: Existing Centennial Trail Pedestrian Bridge



Source: <u>Google Maps</u>, accessed December 2024 Image shows existing Centennial Trail Pedestrian Bridge and roadway sag.

will reduce maintenance efforts along **Component A** – road resurfacing – as it is a candidate for the state's Monarch Program. The Program will include native seeding, brush removal, conservation mowing, and targeted herbicide treatments which reduces the need for mowing on the median.

The corridor will be maintained in accordance with ODOT's maintenance schedule. ODOT maintains a detailed <u>Asset Preservation Plan</u> for existing infrastructure and future transportation improvements within each county. These plans begin with ODOT's Field District Engineer building a condition assessment of the highway network based upon their knowledge of the transportation needs and priorities in each district.

The new Centennial Pathways Bridge will be maintained by the City of Muskogee. ODOT will work with the City of Muskogee to verify the vertical clearance and signage on the bridge.

Prioritize Improvement of the Condition and Safety of Existing Transportation Infrastructure Within the Existing Footprint

In **Component A**, the roadway will be resurfaced using its current configuration. With this resurfacing component, ODOT is prioritizing the improvement of the condition and safety of existing transportation infrastructure within the existing footprint.

Address Current or Projected Transportation System Vulnerabilities

As discussed in **Safety**, **Component B** – pedestrian bridge replacement – will widen the Centennial Trail Pedestrian Bridge to a 12-foot wide, universally accessible multi-use path which will allow pedestrians and bicyclists to safety cross US-69 and connect non-vehicular traffic to the Muskogee trail system. This will allow improved access for both pedestrians using the bridge and vehicles moving under the bridge.

Additionally, ODOT recognizes that the existing infrastructure has been strained by the increased load capacities occurring on the roadway. According to the latest ODOT traffic counts, 12 percent of vehicles that travel in the corridor are considered medium or heavy trucks. US-69 through



Muskogee is a heavily utilized freight corridor, connecting US-69 to Port Muskogee and other industrial sites. The strain these heavy vehicles put on the deteriorating infrastructure causes it to fail quicker than similar facilities and can damage passenger vehicles on the roadway, causing increased stress for

Figure 11: Pedestrian Attempting to Cross US-69



Source: <u>Google Maps</u>, accessed December 2024 Image shows a person crossing US-69 in the grass median, which is a common occurrence in this corridor due to lack of sidewalks and crosswalks.

the movement of people and freight in this corridor.

Criterion #7: Partnership and Collaboration

Collaboration with Public and Private Entities

In addition to ODOT, there are businesses, elected officials, and community organizations that have expressed their support for the Project, including:

- City of Muskogee
- Eastern Oklahoma Development District
- Muscogee (Creek) Nation
- Muskogee Chamber of Commerce
- Muskogee Parks and Recreation

- Northeastern State University
- Oklahoma Bicycle Society
- Oklahoma Trucking Association
- U.S. Representative Josh Brecheen

Public Engagement

The earliest support for the Project from stakeholders and the public came from the drafting of the Statewide Transportation Improvement Plan (STIP) that was adopted in April of 2024. During the drafting of the STIP, which includes the Project, ODOT, FHWA, Tribal Governments, and Metropolitan Planning Organizations (MPOs) were partners in the planning process and were proactive in ensuring an open access public involvement process. During the public engagement process the partners used methods such as public meetings, advisory groups, and informational pamphlets to consult, solicit input, and receive comments from the public. The information given to the public was available in multiple languages to ensure non-English speaking guests could participate, ask questions, and have their comments addressed by the project partners.

For this Project, ODOT engaged residents through a virtual stakeholder meeting and a virtual open house in January of 2021, a stakeholder meeting summary can be found here. Due to COVID-19 restrictions, a virtual stakeholder meeting was held on November 2nd, 2020, and a virtual open house was held from December 18th, 2020 to January 18th, 2021. Notice of the stakeholder meeting was sent via mail and email to the ODOT Transportation Commissioner, state senators, state



representatives, Muskogee County Commissioners, Muscogee (Creek) Nation Principal Chief Floyd, Mayor of Muskogee, Muskogee City Council, and Muskogee city staff including the City Manager, Assistant City Manager, and Public Works Director.

While no written comments were received, there were several questions during the presentation. Most of the discussion was around the difference between the six and seven lane options related to collisions and there was interest in conducting an economic study comparing the options. Overall, the stakeholders were supportive of the Project.

As there were no changes from the selected 2021 alternative, no other public engagement will be completed prior to construction. During construction of the Project, ODOT will provide the public updates on construction efforts via social media and the <u>Project Status Dashboard</u>.

Criterion #8: Innovation

Innovative Technologies

During construction, ODOT will use <u>Intelligent Transportation Systems</u> to ensure work zones on US-69 are safe and to minimize delays for travelers. Smart Work Zones are an <u>Every Day Counts</u> 3 (EDC-3) innovation and use temporary cameras, sensors, and message signs to monitor travel speeds and congestion, support incident management, enhance the safety of users and construction workers, and maintain business and resident access.

As discussed in **Partnership and Collaboration**, ODOT engaged residents through a virtual stakeholder meeting and a virtual open house in January of 2021. <u>Virtual public involvement</u>, an EDC-5 innovation, offers a convenient, efficient, and low-cost method for informing the public, encouraging participation, and receiving input.

Innovative Project Delivery

Innovative construction techniques to be implemented on the Project will result in faster delivery and reduce impacts to the surrounding communities. The first innovation is the use of woven geotextiles rather than chemical stabilization for earthwork during construction. Chemical stabilization is generally used to improve soils below pavement although there are health risks associated with those materials due to blowing dust when the material is applied. Since the Project is in a residential area, ODOT will be used woven geotextile, which reduces construction dust and health impacts on residents.

The second innovation is the use of an Accelerated Bridge Construction (ABC) methods, Prefabricated Bridge Elements and Systems (PBES), an EDC-1 innovation, on the Centennial Trail Pedestrian Bridge in Component B. The prefabricated elements are constructed in a nearby location away from traffic, transported to the site, and installed in segments to the final position. PBES improve site constructability and bridge quality and durability, while reducing traffic impacts and onsite construction times. PBES have been shown to minimize environmental impacts, impacts to existing roadway alignments, and the need for utility relocation and ROW property acquisitions. While PBES have been used in the United States since the early 2000s, ODOT has



constructed or is constructing only three other projects utilizing PBES. Therefore, the technique is innovative for ODOT, but the contracting community has some level of comfort building these structures.

Innovative Financing

The Project will use funding from the Rural Economic Reliability and Optimization (RETRO) funds, as established by House Bill 2079 in 2021. RETRO is the single highest appropriation that goes towards rural transportation in Oklahoma state history. RETRO funds are administered by ODOT and are used to assist in the prioritization of construction, repair, and maintenance of state highways in rural areas where robust economic development has resulted in traffic safety and circulation difficulties. "Robust economic development" is defined as conditions of the highways in counties with a population of less than 75,000 where traffic volumes have increase to become so impaired or hazardous to constitute a threat to the safety of people traveling over or upon the highway. RETRO funding cannot be used for more than 50 percent of the total project cost.

The ODOT's 2025 to 2032 Eight-Year Construction Work Plan contained over \$8.6 billion worth of crucial transportation improvement projects. In addition to the Work Plan, the Oklahoma state legislature committed \$200 million to the RETRO fund to accelerate construction, repair, and maintenance of the Eight-Year Construction Work Plan projects in qualifying rural areas. The US-69 Project has been approved for \$4,000,000 of RETRO funds in 2025 and is a candidate for funds in later years (State Fiscal Year 2024 RETRO Projects, p. 10).