



OKLAHOMA
Transportation

I-35 CAPACITY IMPROVEMENTS

FY 2023-2024 MPDG

Project Description

PROJECT DESCRIPTION

PROJECT OVERVIEW

The Oklahoma Department of Transportation (ODOT) is seeking \$30,000,000 through the 2023/2024 Multimodal Project Discretionary Grant Program (MPDG) Rural grant for the I-35 Capacity Improvements in McClain County, Oklahoma. This initiative will focus on widening the most-congested 6.2-mile section of I-35 from four lanes to six lanes. The corridor is located in rural McClain County, just south of the Oklahoma City Metro area. Along with the widening, replacement of the SH-74 bridge over I-35 is necessary to accommodate the additional interstate lanes. The project's aim is to enhance a critical corridor connecting Texas through Oklahoma City to Kansas, supporting freight connections crucial for Oklahoma's and the United States' economic vitality while also providing essential safety improvements.

For development purposes, ODOT has split the project into three components: the SH-74 Interchange/Bridge, the I-35 North Section Widening (4.2 miles), and the I-35 South Section Widening (2 miles). The I-35 North Section has progressed to final design, while the SH-74 Interchange/Bridge and the I-35 South Section Widening are in preliminary design. All components of the project will complete development by the spring of 2026 at the latest. If construction funding is in place, all project components will be let in the summer of 2026.

With a total estimated project cost of \$78,100,000 (in 2023 dollars), the \$30,000,000 investment from MPDG would complete the construction funding package. According to the Benefit-Cost Analysis, the I-35 Widening and Bridge project is projected to achieve a benefit-cost ratio (BCR) of 3.0 with a net present value (NPV) of \$157.6 M. This project holds immense importance in improving transportation infrastructure and fostering economic growth for the region.

Benefit Cost Ratio: 3.0

Net Present Value: 157.6 million

The I-35 corridor plays a vital role in national and international freight movement, with approximately 20 percent of its usage being trucks, while also serving as a significant commuter route in major metropolitan areas. The corridor acts as an economic engine for Oklahoma, the Chickasaw Nation, Texas, and the United States, facilitating trade and connectivity between the Oklahoma City area and the Dallas/Fort Worth region. I-35 is on the National Highway Freight Network (NHFN) and is classified as part of the Primary Highway Freight System (PHFS), which consists of a network of highways identified as the most critical highway portions of the U.S. freight transportation system¹. This strategic route serves as one of the principal freight corridors linking the United States and Mexico, terminating at the Port of Laredo in Texas. It also is one of two major north-south routes located west of the Mississippi, as shown in Figure 1 from the Bureau of Transportation Statistics (I-35 has been highlighted purple)²⁷.

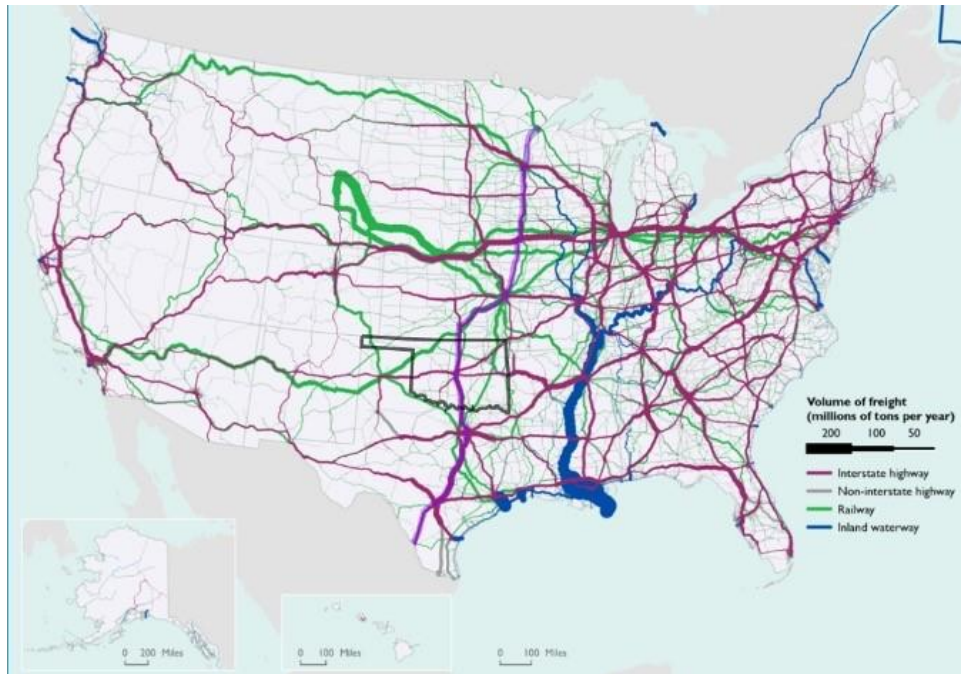


Figure 1: Freight Flows by Highway, Railroad and Waterway: 2017

By providing additional capacity on the congested corridor, the project will alleviate traffic, leading to reduced travel times and increased reliability. The decreased number of stopped and idling vehicles will help reduce vehicle emissions, supporting environmental sustainability and quality of life. The widened inside shoulder and additional lanes will enhance motorist safety and increase resiliency for I-35 in the case of a vehicle equipment or traffic collision.

The project's success will not only benefit the local communities and businesses but will also contribute to the efficient movement of goods and services across state and national borders. This grant application aims to secure funding to drive this crucial infrastructure upgrade, bolstering regional economies and promoting safer, more efficient transportation for everyone.

PROJECT BACKGROUND

ODOT has identified the entire length of I-35 from the Texas border to Oklahoma City as an initiative for current and future improvements. ODOT has formed a committee tasked with studying the I-35 corridor, and they (through data gathering and analysis) have recognized the need for expansion in this area to accommodate capacity as the traffic volumes have continued to increase through the years. The extents of this project were identified based upon the surface condition, average annual daily traffic (AADT), percentage of truck traffic, collision history, and capacity, as well as local, regional, and national traffic patterns. The I-35 Committee Study website⁴ shows initial conclusions and data from this ongoing study.

As stated above, I-35 is part of the NHFN, having been classified into the PHFS subsystem within the network. The corridor is also identified as a primary interstate freight corridor in the National

Freight Strategic Plan (NFSP)² and is part of the Interim National Multimodal Freight Network³. Within Oklahoma, ODOT's FFY-2023 through FFY-2030 Construction Work Plan (8-Year CWP)⁶ has \$500M programmed for I-35 between Texas and Oklahoma City, but the total need for the 125-mile corridor is currently estimated at \$2.5B⁴. Additionally, the Oklahoma Freight Transportation Plan (OFTP) for 2023-2030 indicates I-35 from Texas to Oklahoma City as one of the areas of worst delay and reliability problems for trucks⁵.

For all of the stated reasons, it is clear that I-35 from Oklahoma City to Texas is a high priority for ODOT and the state of Oklahoma; however, based upon current projected funds as outlined in the 8-Year CWP, this project will not be able to be fully funded until 2031. This reveals the effects of funding limitations as these critical sections of I-35 improvements are delayed until they can be balanced into ODOT's typical funding model. This grant would change those restrictions and allow the timelines to be expedited with the injection of MPDG funds.

TRANSPORTATION CHALLENGES

The I-35 Widening and Interchange project is necessary to address several items of concern throughout the project area. Through the I-35 Committee Study, ODOT is monitoring the traffic volumes and studying how to best approach widening I-35 in a cost-effective way that prioritizes the sections based upon safety and capacity needs. Along I-35 in 2022, over 64,000 cars and trucks used this section of I-35 each day. Those drivers will consistently be impacted by decreasing mobility as the years go by. In 2052, daily traffic is expected to exceed 100,000 vehicles per day with 20 percent of traffic consisting of heavy trucks. This information has led ODOT to identify this section in need of immediate improvements to mitigate capacity issues.

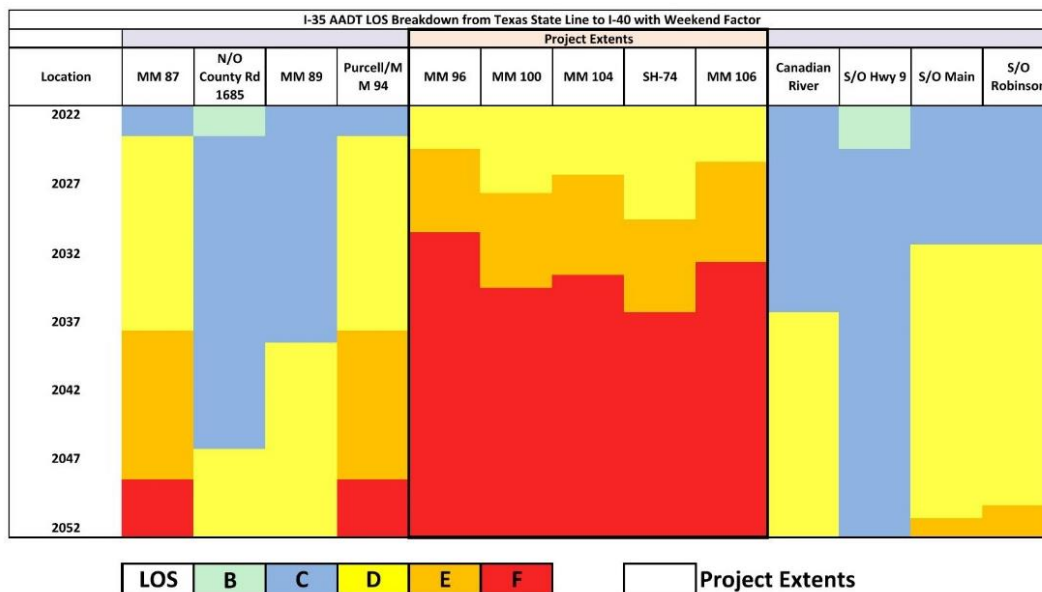


Figure 2: LOS Breakdown by Year and Location

Capacity directly affects level of service (LOS) as defined by Federal Highway Administration (FHWA) criteria. Figure 2 (see detailed chart on the project website⁷) shows the LOS breakdown by year for I-35 from the Texas border to the Canadian River (the south boundary of the Oklahoma City metro area). The highlighted columns correspond to this project. Current volume projections place this project at a LOS D (i.e., traveling speeds below posted speed limit), and without improvement, sections of this project will reach LOS F (i.e., traffic flow is irregular, and speeds vary substantially due to congestion) by 2031. Congestion results in delay causing increased travel time and reducing reliability for freight traffic. Varying speeds and idling traffic also increase emissions and can cause secondary collisions.

From 2016 to 2020, there were a total of 380 collisions along the project with three fatalities, 12 serious injuries, and 35 non-incapacitating injuries⁸. As congestion continues to increase and LOS decreases, collisions are expected to increase as well. Even minor collisions will increase congestion beyond what results from traffic volumes since lanes and ramps are closed while the collision is cleared.

The additional lane proposed along I-35 will provide the additional capacity needed to accommodate the current and future traffic demand, with the LOS ratings improving by one letter grade for existing and future conditions. Additionally, the inside shoulder will be widened from 4 feet to 10 feet (see Figure 2) with this project, providing an additional refuge for stopped traffic. These improvements will decrease collisions, add resilience, and increase reliability along this essential corridor.

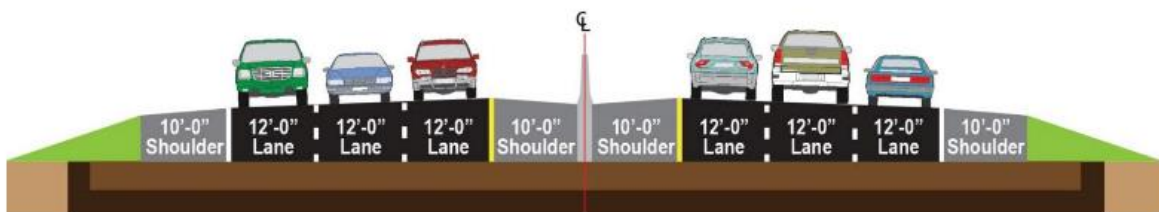


Figure 2: I-35 Typical Section with Widening

At SH-74, the bridge must be replaced to safely span the widened I-35 corridor. With the new bridge construction on an offset alignment, interchange construction was required. This construction allows the horizontal and vertical curves to be improved throughout the interchange to meet current standards for the design speeds and traffic volumes. Various interchange configurations were studied, and the preferred option improves safety, accommodates large volumes of traffic, requires the least amount of right-of-way, and was the most economical option in the study.

PROJECT LOCATION

Within Oklahoma, I-35 is the only continuous north-south interstate providing connectivity north up to Minnesota and south through Texas into Mexico. This project spans from just north of Purcell, Oklahoma to Goldsby, Oklahoma in McClain County, Oklahoma, consisting of approximately 6.2 miles of I-35 widening from four lanes to six lanes. Additionally, interchange improvements and bridge replacement at SH-74 in Goldsby, OK are also included. Figure 3 shows the three project components: SH-74 Interchange / Bridge, I-35 North Section Widening, and I-35 South Section Widening.

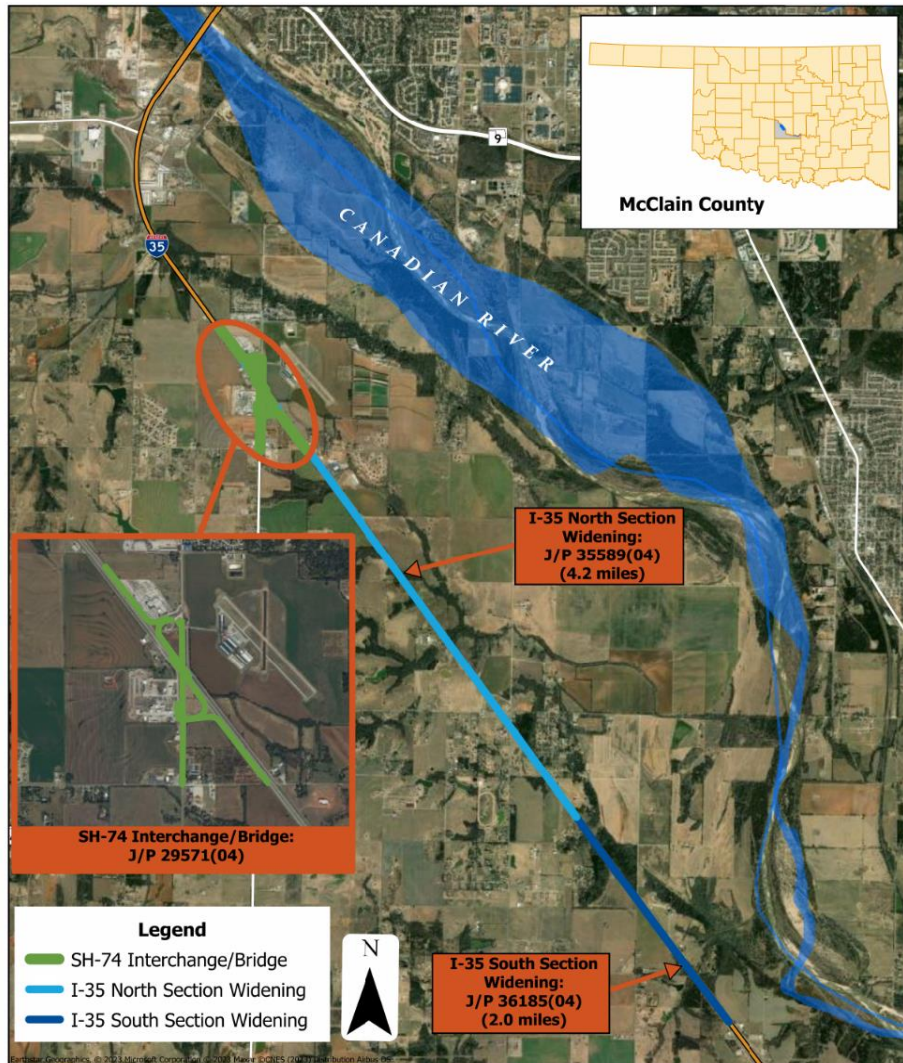


Figure 3: Project Location Map

The project's footprint is within a rural area, as defined in the USDOT Notice of Funding Opportunities (NOFO) for Rural program statutes and ODOT 2010-2035 Long Range Transportation Plan criteria, classifying counties with populations less than 200,000 and no urban clusters as rural. The project is not located in an area of persistent poverty or within a historically disadvantaged community.