



# **OKLAHOMA** **Transportation**

## **2020 – 2045** **Oklahoma Long Range Transportation Plan**

**Chapter 7: Existing Transportation System and Conditions**

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Prepared by



## Table of Contents

|           |                                     |           |
|-----------|-------------------------------------|-----------|
| <b>1.</b> | <b>INTRODUCTION .....</b>           | <b>1</b>  |
| <b>2.</b> | <b>BRIDGES .....</b>                | <b>1</b>  |
| <b>3.</b> | <b>HIGHWAYS .....</b>               | <b>2</b>  |
| 3.1.      | Rural Two-Lane Highways .....       | 5         |
| 3.2.      | Major State Highways .....          | 6         |
| 3.3.      | Interstate Highways .....           | 6         |
| <b>4.</b> | <b>FREIGHT TRANSPORTATION .....</b> | <b>7</b>  |
| 4.1.      | Freight on Highways.....            | 7         |
| 4.2.      | Ports of Entry .....                | 9         |
| 4.3.      | Freight Rail .....                  | 10        |
| 4.4.      | Ports and Waterways.....            | 11        |
| <b>5.</b> | <b>PUBLIC TRANSPORTATION .....</b>  | <b>11</b> |
| 5.1.      | Passenger Rail .....                | 11        |
| 5.2.      | Transit .....                       | 11        |
| 5.2.1.    | Rural Transit .....                 | 12        |
| 5.2.2.    | Urban Transit .....                 | 12        |
| 5.2.3.    | Tribal Transit .....                | 12        |
| <b>6.</b> | <b>ACTIVE TRANSPORTATION .....</b>  | <b>12</b> |

## List of Figures

|             |   |    |
|-------------|---|----|
| Figure 2-1. | Structurally Deficient Bridges on State Highway System.....           | 1  |
| Figure 3-1. | Major Highways in Oklahoma .....                                      | 2  |
| Figure 3-2. | Percent of Daily Vehicle Miles Traveled (DVMT) per Highway Type ..... | 3  |
| Figure 3-3. | Statewide State Highway System Pavement Condition.....                | 4  |
| Figure 3-4. | State Highway System Roads with Two- Lanes, Deficient Shoulders ..... | 5  |
| Figure 3-5. | Federal Interstate Pavement Condition.....                            | 6  |
| Figure 4-1. | Oklahoma Freight Mode Share by Tonnage and Value .....                | 7  |
| Figure 4-2. | High Volume Truck Corridors.....                                      | 8  |
| Figure 4-3. | Oklahoma Ports of Entry Locations.....                                | 9  |
| Figure 4-4. | Rail Network of Oklahoma Railroads .....                              | 10 |

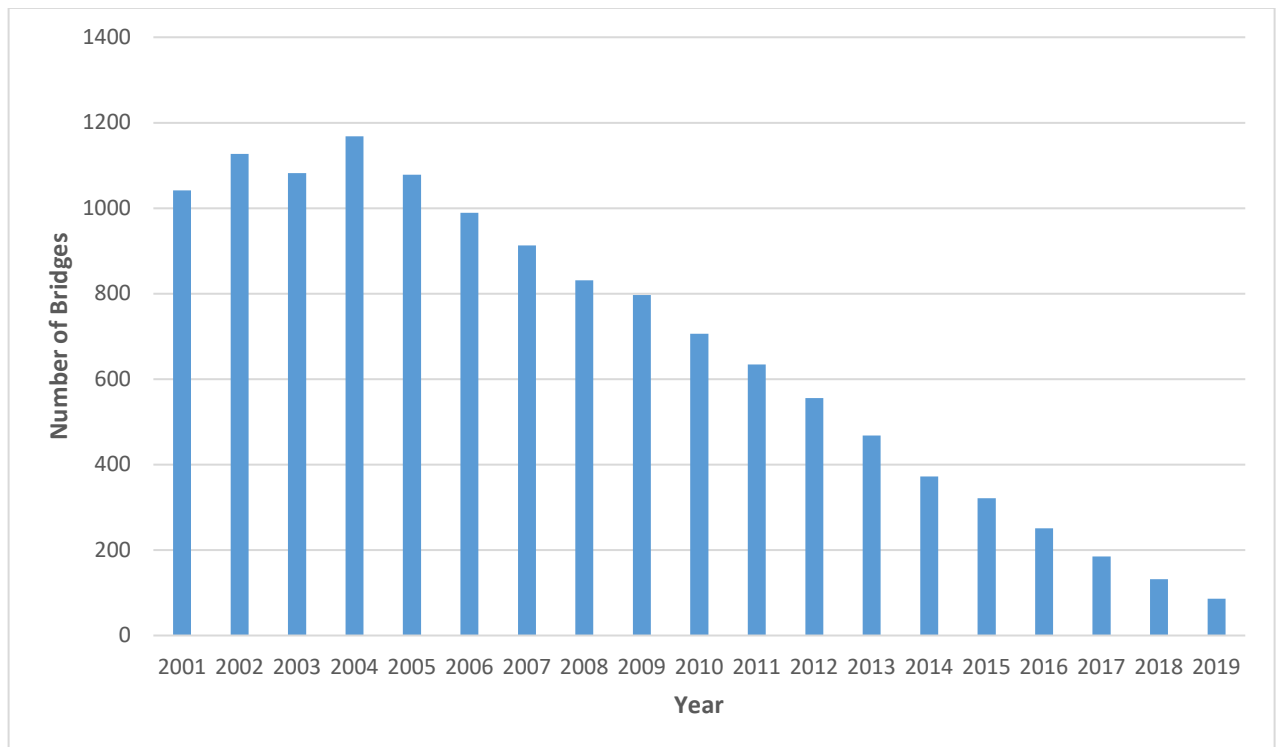
## 1. INTRODUCTION

This section provides an inventory of the multimodal transportation infrastructure of Oklahoma based on existing system data and attributes for the year 2018 for bridges, highways, freight rail, ports of entry, ports and waterways, and for public and active transportation facilities.

## 2. BRIDGES

Oklahoma’s state highway system reached a peak of 1,168 structurally deficient bridges on the state highway system in 2004. Since the year 2000, when Oklahoma had a high share of structurally deficient bridges, ODOT has prioritized eliminating structurally deficient bridges. After decades of minimal investment in the state’s 6,794 bridges, increased state funding has enabled ODOT to reach an improved low of 86 structurally deficient bridges at the end of 2019. This represents a 93 percent reduction in the number of structurally deficient bridges, placing Oklahoma just over 1 percent of structurally deficient bridges. **Figure 2-1** indicates the progress that ODOT has made in reducing the number of structurally deficient bridges.

**Figure 2-1. Structurally Deficient Bridges on State Highway System**

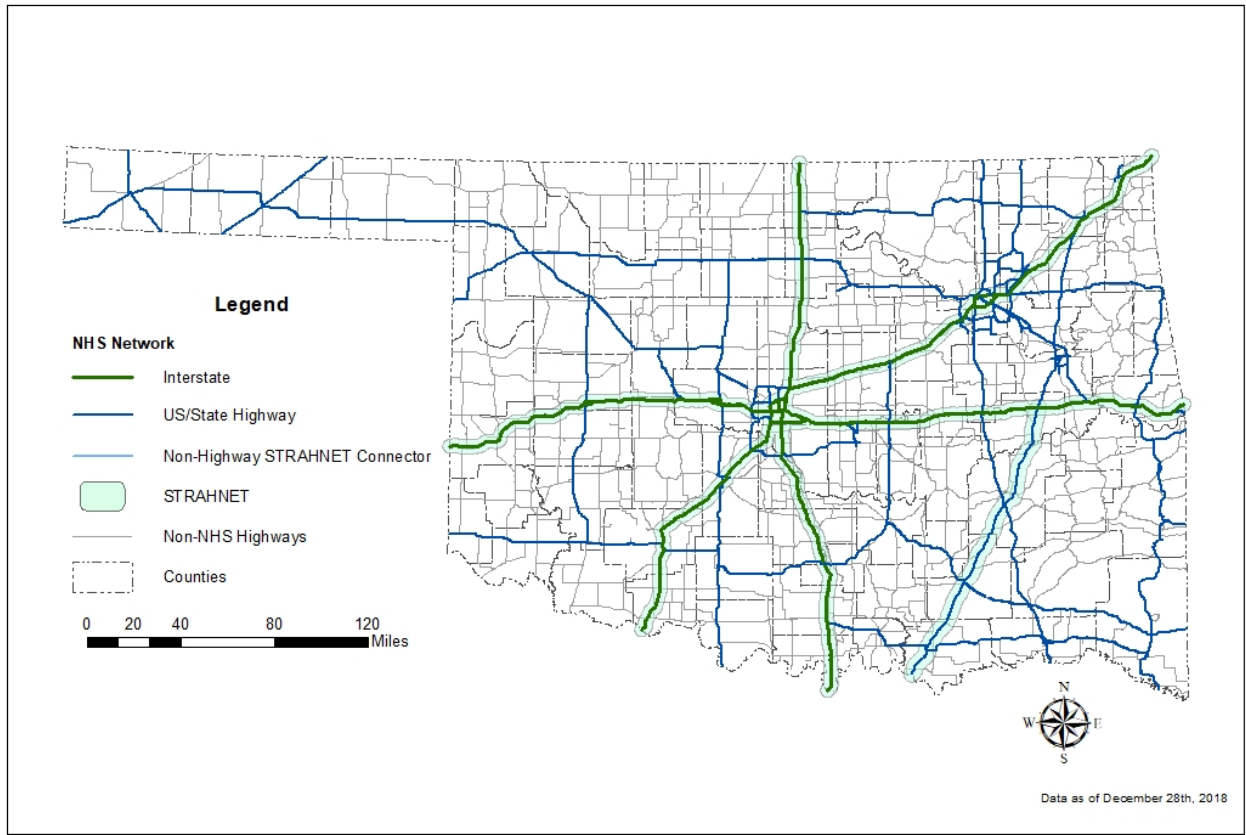


Source: ODOT <https://www.ok.gov/odot/Bridges.html>, (data based on year of the actual inspection)

### 3. HIGHWAYS

Oklahoma has an extensive highway network which positions the state’s system as a link in the national transportation system. Many U.S. Highways and State Highways span Oklahoma, connecting communities and commercial centers. **Figure 3-1** indicates the extent and characteristics of major Oklahoma highways.

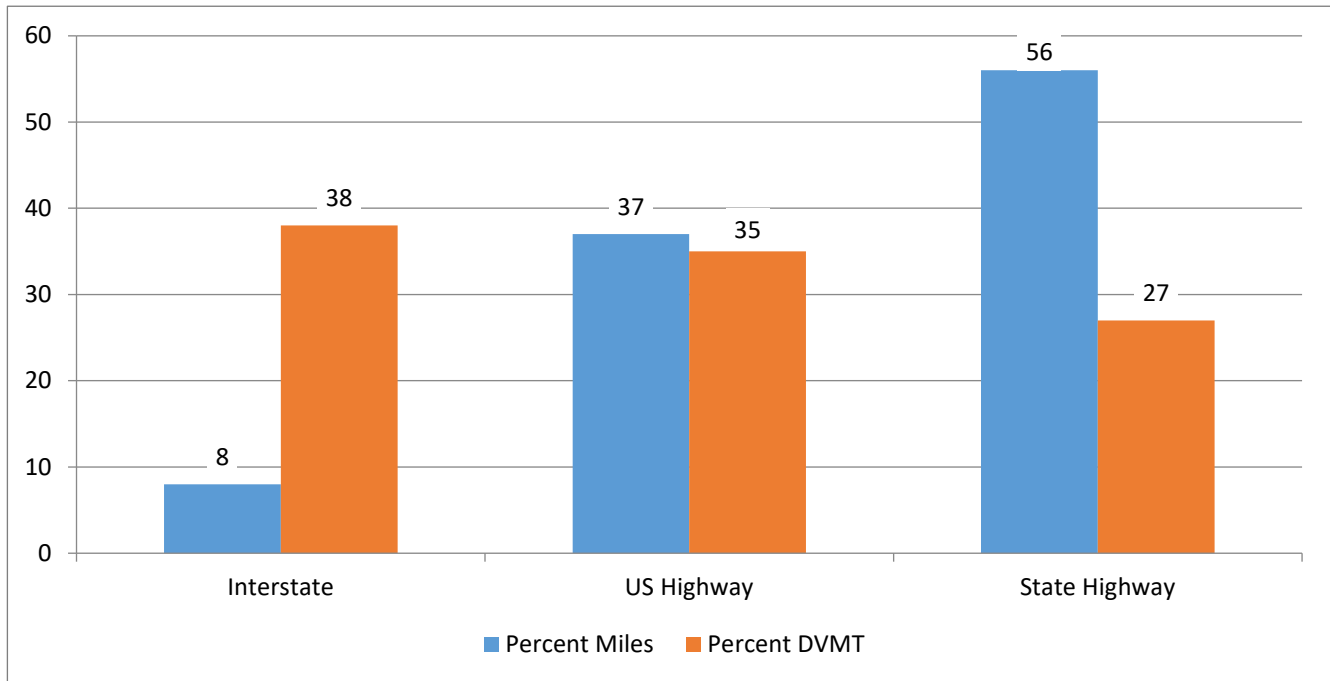
**Figure 3-1. Major Highways in Oklahoma**



Source: ODOT Strategic Asset and Performance Management Division, December 2018

Oklahoma has approximately 116,000 miles of public roads, of which ODOT is responsible for the 12,254 centerline miles of the state highway system. Over 81.7 million miles of travel occur on the state highway system daily. **Figure 3-2** illustrates the type of roadway and displays the daily vehicle miles traveled (DVMT) for highway facilities.

**Figure 3-2. Percent of Daily Vehicle Miles Traveled (DVMT) per Highway Type**

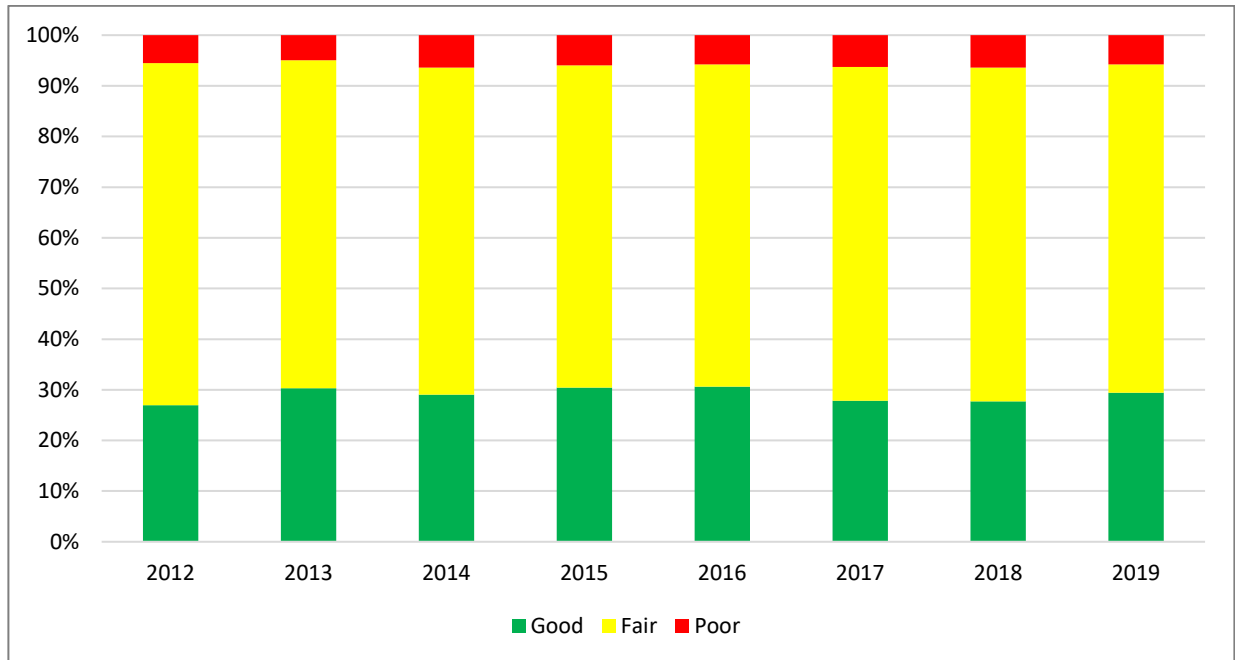


Source: ODOT Strategic Asset and Performance Management Division, June 2019

The interstate system is a significant component of the state highway system. ODOT is responsible for 673 of the state’s 933 interstate miles, with the remaining 260 miles under the responsibility of the OTA as toll facilities. OTA operates ten turnpikes on approximately 606 miles of roadway. As part of the Driving Forward program and an effort to modernize and improve safety, OTA is planning to construct three new turnpikes. This system of turnpikes complements and augments the ODOT-maintained state highway system by providing additional routes and connections to the state highway system through alternative funding solutions.

ODOT strives to combat pavement deterioration as a result of traffic and weather conditions. **Figure 3-3** illustrates the federal pavement condition rating for the entire state highway system. ODOT annually conducts an inspection of the state highway system to better track statewide conditions and trends, and to recommend appropriate pavement treatments. Analysis indicates that the percentage of pavement rated as poor is slightly increasing, and that the amount of pavement indicated as good is slightly decreasing over time. As prescribed in the 2020-2027 Construction Work Plan, ODOT will make improvements to over 1,800 miles of the state highway system.

**Figure 3-3. Statewide State Highway System Pavement Condition**

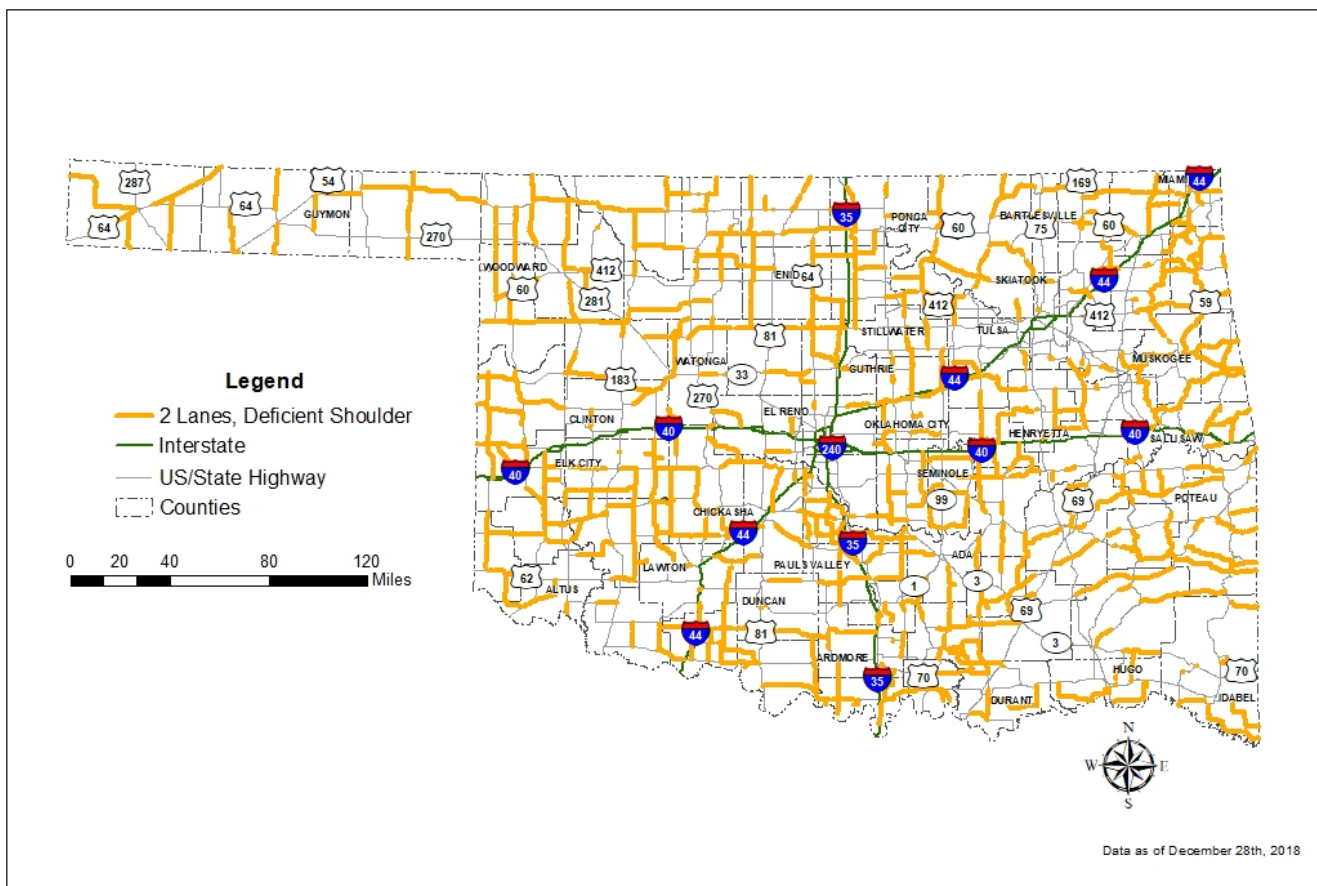


Source: ODOT Strategic Asset and Performance Management Division, June 2019

### 3.1. RURAL TWO-LANE HIGHWAYS

Oklahoma rural highways have historically served the state’s energy and agricultural-based economy. However, roads originally developed for farm-to-market purposes no longer meet the needs or expectations associated with a modern transportation network. Developing innovative transportation solutions such as connected and autonomous vehicles (CAV), combined with the volumes and weights of modern traffic, place increasing demands for uniformity and consistent conditions on roads and highways. Of the over 9,500 miles of rural two-lane highways on the state highway system, approximately 5,399 miles of these are two-lane facilities without paved shoulders. **Figure 3-4** illustrates the extent of the state highway system that remains as two-lane roads with no shoulders.

**Figure 3-4. State Highway System Roads with Two- Lanes, Deficient Shoulders**



Source: ODOT Strategic Asset and Performance Management Division, December 2018

### 3.2. MAJOR STATE HIGHWAYS

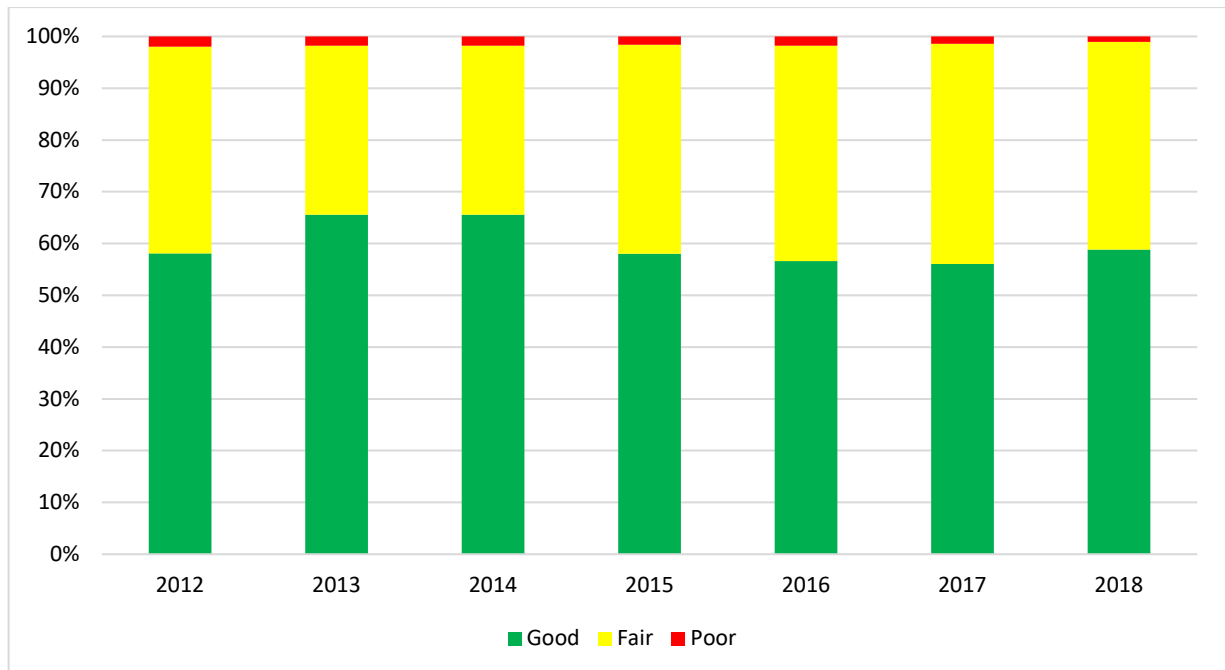
Oklahoma relies upon multilane highways to provide access to the state’s most significant population centers. These facilities serve daily commerce and job access. Multilane highways and interstates carry over 76 percent of daily vehicle miles traveled on the entire state highway system.

### 3.3. INTERSTATE HIGHWAYS

Interstate highways are the highest class of highway and are designed to move significant numbers of people and goods safely and efficiently across the country. Three interstates, I-35, I-40, and I-44 pass through the state, connecting Oklahoma directly to Kansas, Texas, Arkansas, and Missouri, and indirectly to other parts of the country. This network is also designed to provide movement for national defense purposes. The interstate system accounts for approximately 38 percent of the daily vehicle miles traveled on the state highway system.

The condition of interstate highway pavement is evaluated annually to formulate and execute a comprehensive effort at managing pavement conditions. Since 2012, the percentage of pavements in “poor” condition remains small, with an increasing trend of pavements in “fair” condition. This increase is likely attributed to a decrease of pavements in “good” condition (Figure 3-5).

**Figure 3-5. Federal Interstate Pavement Condition**



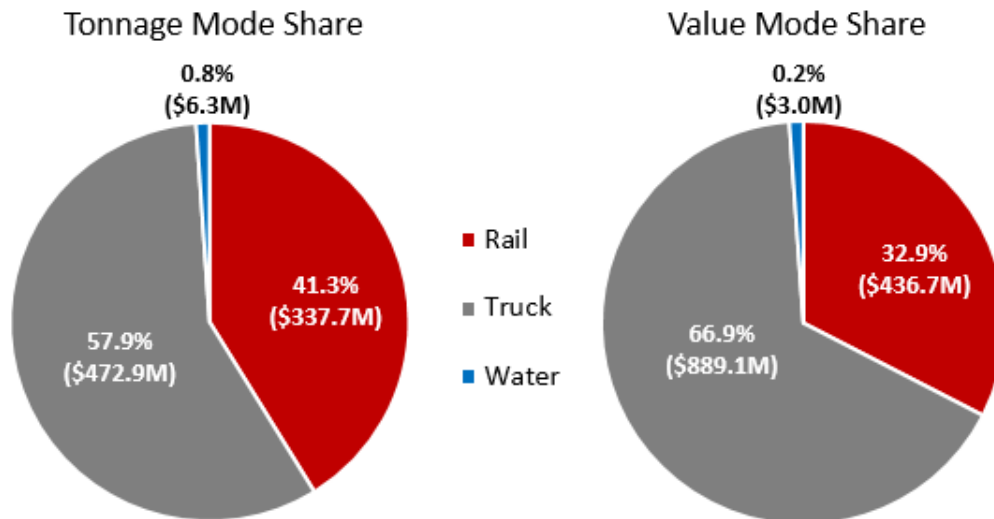
Source: ODOT Strategic Asset and Performance Management Division, June 2019



## 4. FREIGHT TRANSPORTATION

According to the 2018-2022 OFTP, the dominant modes of freight transportation in Oklahoma are truck, rail, and water. **Figure 4-1** from the Freight Plan depicts both the tonnage and value share of Oklahoma freight by mode.

**Figure 4-1. Oklahoma Freight Mode Share by Tonnage and Value**

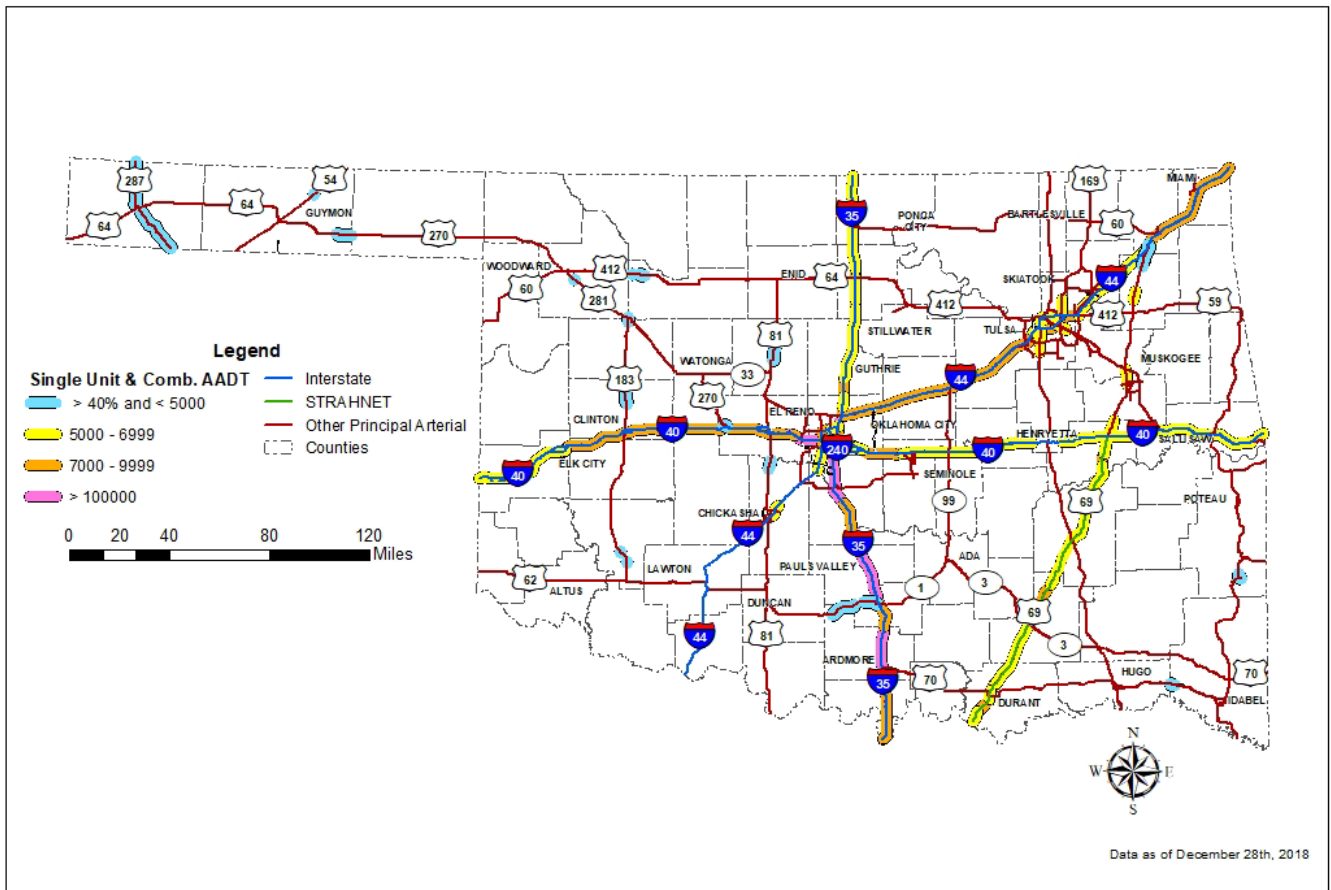


Source: Oklahoma Freight Transportation Plan, 2017

### 4.1. FREIGHT ON HIGHWAYS

ODOT analyzes truck volumes to identify important statewide freight corridors. **Figure 4-2** indicates the High-Volume Truck Corridors, which ODOT recognizes as crucial for the goods movement. Identifying these High-Volume Truck Corridors allows Oklahoma to focus investment, maintenance activities, and enforcement efforts. Overweight vehicles, poorly maintained equipment, and unsafe operations adversely influence the infrastructure and traffic on these roadways, as well as the safety of the traveling public. Overweight trucks cause accelerated deterioration of the roadways and bridges, reducing the estimated useful life of these facilities and increasing maintenance costs. As such, a comprehensive enforcement effort has been launched to protect the traveling public by ODOT, the OTA, and the Oklahoma Corporation Commission, in conjunction with the Oklahoma Department of Public Safety (DPS).

**Figure 4-2. High Volume Truck Corridors**



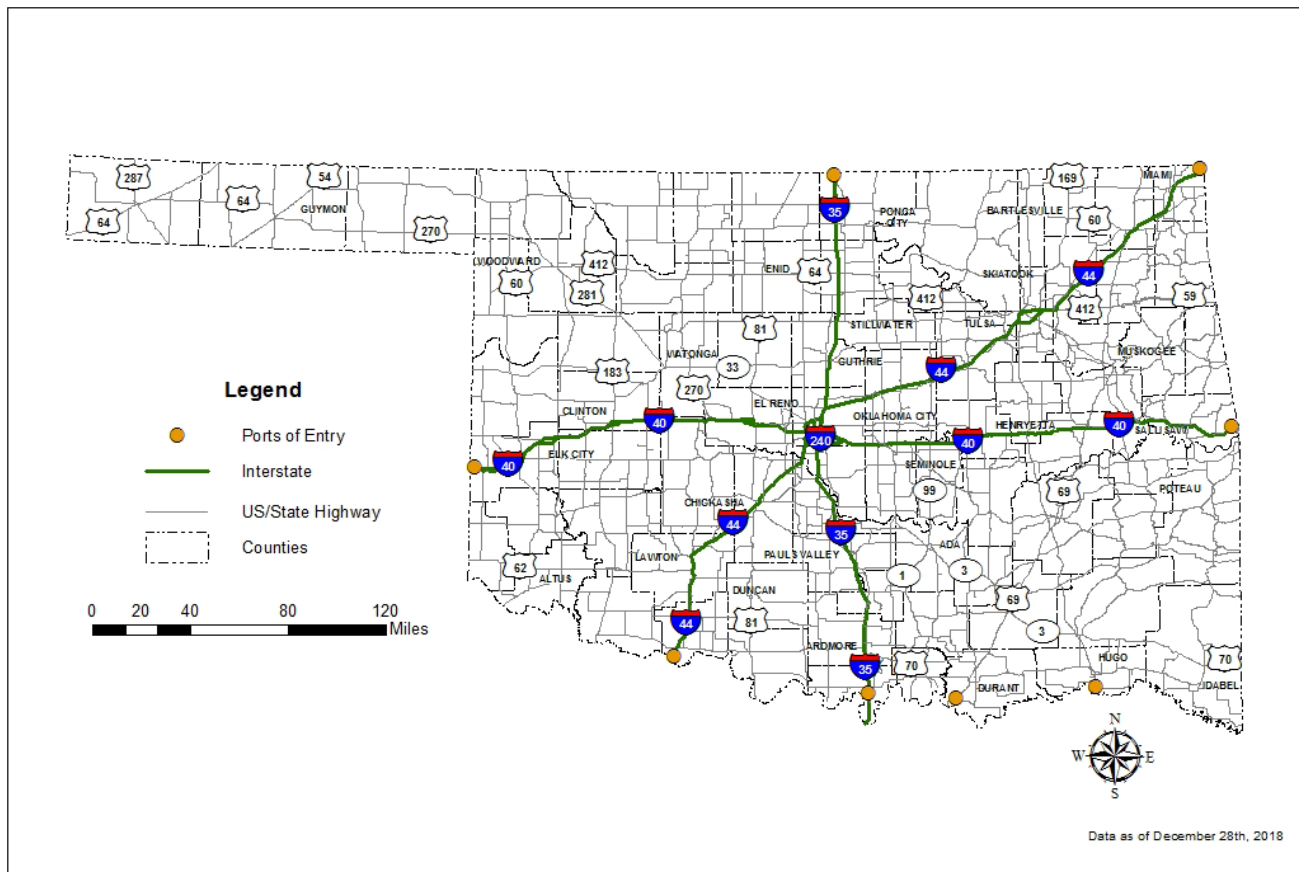
Source: ODOT Strategic Asset and Performance Management Division, December 2018

## 4.2. PORTS OF ENTRY

ODOT builds and maintains enhanced weigh stations, or ‘Ports of Entry,’ across the state, while the Oklahoma Corporation Commission and Oklahoma DPS staff the facilities and perform inspections. Safety inspections conducted by the Corporation Commission and DPS focus on truck and driver safety, including checking the truck’s braking system, enforcing weight standards, and verifying that the driver logbook entry forms are entered correctly.

**Figure 4-3** illustrates the state’s eight primary ports of entry. A new port is planned for construction in Northeast Oklahoma.

**Figure 4-3. Oklahoma Ports of Entry Locations**

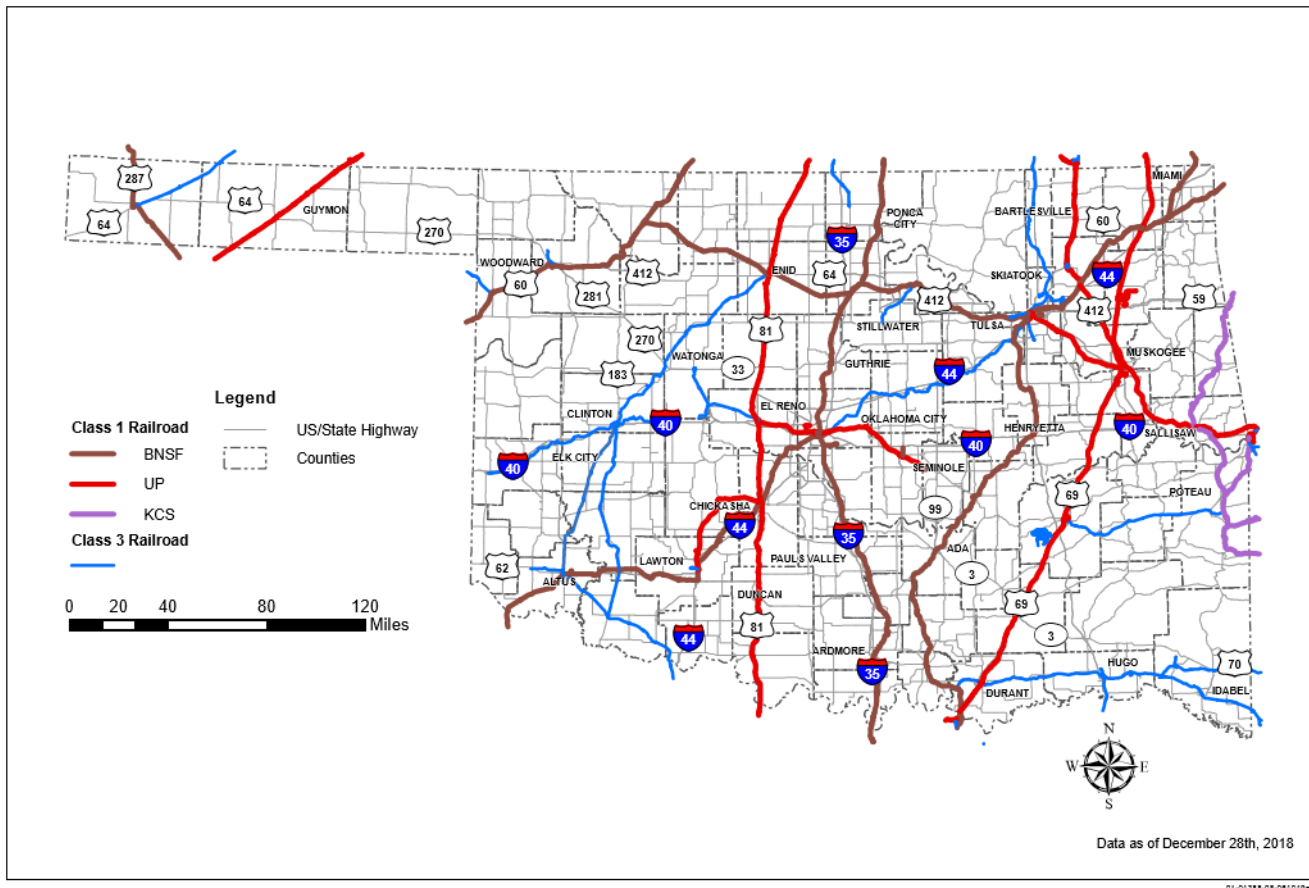


Source: ODOT Strategic Asset and Performance Management Division, December 2018

### 4.3. FREIGHT RAIL

Freight rail is categorized into six railroad classes as defined by annual operating revenue. There are currently three Class I freight operators in the state—the Burlington Northern Santa Fe (BNSF), the Union Pacific (UP), and Kansas City Southern Railway (KCS)—along with 20 Class III operators. Together, the rail operations in Oklahoma carry just over 41 percent of the freight tonnage. As of January 2019, ODOT has returned nearly 882 miles of rail lines to private ownership that had been acquired as a result of the Railroad Revitalization Act, House Bill 1623, which passed by the Oklahoma Legislature in 1978. The Sooner Sub Rail Line between Oklahoma and Tulsa was one of these lines returned to private ownership when it was sold to the Stillwater Central Railroad in August 2014 for \$75 million. The funds that were raised were used to improve more than 230 of Oklahoma’s nearly 3,800 at-grade rail crossings. **Figure 4-4** depicts the Oklahoma rail network.

**Figure 4-4. Rail Network of Oklahoma Railroads**



Source: ODOT Strategic Asset and Performance Management Division, December 2018

## 4.4. PORTS AND WATERWAYS

Marine Highway M40, also known as the McClellan-Kerr Arkansas River Navigational System (MKARNS) provides for waterborne freight transportation. Oklahoma’s portion of the MKARNS consists of eight ports interspersed with five locks and dams at the upper reaches of the 445-mile long waterway that is linked to the Mississippi River. The 51 miles of waterway in Oklahoma provide a linkage for goods movement to and from the Midwestern U.S. and the global economy. Additionally, the five dams in Oklahoma not only assist in transporting freight, but also provide other benefits such as flood control, hydro-electric power generation, recreation, and conservation of fish and wildlife. Transporting freight by barge is a cost-effective way of transporting bulk and oversized cargo with minimal adverse impacts to the state roadway infrastructure and the environment. The MKARNS carries 0.8 percent of freight tonnage moving within or through Oklahoma annually.

## 5. PUBLIC TRANSPORTATION

Public transportation is a term that can be used interchangeably with ‘public transit.’ A variety of public transportation options are available in Oklahoma, including buses, vans, passenger rail, and streetcars. Public transportation may be the only available means motorized of transportation to some Oklahomans.

Oklahoma’s public transportation services are funded through federal and state grants, as well as through local government funds. These transportation providers acquire additional funding through fares and through contracting for services with local businesses, educational institutions, civic groups, and other government organizations.

### 5.1. PASSENGER RAIL

Passenger rail returned to Oklahoma in 1999 and recently celebrated 20 years of operation. The Amtrak Heartland Flyer operates between Oklahoma City and Fort Worth, Texas and has stops in Norman, Purcell, Pauls Valley, and Ardmore in Oklahoma, as well as in Gainesville, Texas. The service has transported more than 1.4 million passengers over the last two decades and connects Oklahoma to the national passenger rail system. In 2018, the Heartland Flyer had an annual ridership of 68,075.

### 5.2. TRANSIT

Governor Stitt signed House Bill 1365, which created the new Office of Mobility and Public Transit at ODOT to replace the old Transit Programs Division and transferred a federal program for transit services for the elderly and disabled from the Oklahoma Department of Human Services to ODOT. ODOT is currently developing the Oklahoma Public Transit Policy Plan (OPTPP), which is an all-inclusive plan that will address Oklahoma’s public transit

systems. The Transit Plan reflects the needs established in the 2018 Oklahoma Transit Needs Assessment.

### **5.2.1. RURAL TRANSIT**

Oklahoma has twenty rural public transit providers located in small communities. Four of Oklahoma’s rural transit agencies provide fixed-route service, while all provide demand-response services, as well as services for seniors and persons with disabilities.

ODOT assists these transit providers by administering the Federal Transit Administration’s Rural Area Funding Program which provides financial assistance to eligible local public transportation providers. In 2018, ODOT’s Transit Program Division developed a Transit Asset Management Group Plan to inventory existing transit assets, and to discuss level of service, performance measures, life cycle strategies, funding levels, and investment needs. This inventory revealed a total of 995 revenue vehicles, nine non-revenue vehicles, and 91 facilities.

### **5.2.2. URBAN TRANSIT**

Oklahoma’s five urban transit providers operate in Oklahoma City, Tulsa, Norman, Lawton, and Edmond. While all operators provide fixed-route and paratransit services, EMBARK (formerly METRO Transit) in Oklahoma City, offers additional ferryboat and streetcar services. Based on the national average, Oklahoma’s urbanized areas continue to operate a higher percentage of CNG buses on their fixed-routes. In 2018, 46 percent of buses in Oklahoma’s urban centers used alternative fuel sources, well above the national average of 28 percent.

### **5.2.3. TRIBAL TRANSIT**

Twelve tribal agencies in Oklahoma provide transportation services that allow riders access to jobs and medical care among other services. Some tribes choose to contract for service provision by other transit operators. Tribal entities support transit programs with a variety of funding mechanisms, including their local tribal transportation program funds, fare box collections, and funds from the FHWA and the Bureau of Indian Affairs funds.

## **6. ACTIVE TRANSPORTATION**

ODOT is dedicated to supporting a safe and effective transportation system that provides multimodal opportunities for active transportation. Oklahoma’s active transportation system includes approximately 520 miles of multi-use trails, bicycle routes, and sidewalks. An active transportation system provides for and promotes health and safety for users, and it can benefit the environment and the economy. Multi-use trails, bicycle routes, and sidewalks in Oklahoma are owned and maintained by partners of ODOT, including county and city governments. ODOT coordinates with local governments and applicable metropolitan

planning organizations in considering infrastructure options and facilitates inclusion of these features on projects when appropriate.

Bicycle and pedestrian accommodations are supported by federal and state legislation, policies, and practices. ODOT ensures that all state and federally funded transportation projects are constructed in compliance with the Americans with Disabilities Act.