NORTHWEST FORWARD

2045 Regional Long Range Transportation Plan

NORTHERN OKLAHOMA REGIONAL TRANSPORTATION PLANNING ORGANIZATION

(R-LRTP) - Regional Long Range Transportation Plan

Northwest Forward 2045

NORTPO, Adopted: November 30th, 2023.

Contents

Chapter 1 – RTPO Overview

Transportation planning in Oklahoma has typically been limited to urban areas. Rural or regional transportation planning is evolving into an opportunity to consider both the short and long term transportation needs for locations outside of urban areas. This plan will consider growth and development patterns in the region and will not address development regulations. However, critically important complements to these growth areas are the locations that may generate significant demands on the transportation system. Such “activity generators” include business and industrial sites, governmental, schools, universities, tourism, and recreation centers. Counties in the NORTPO region are working to seek new economic growth and diversification while striving to preserve their natural, historic and cultural resources.

Maintaining an integrated transportation network is crucial in today’s highly integrated and connected society and it is more important than ever to have a transportation system that represents that reality. Therefore, planning at the regional level encourages integration of ideas, plans, and trends across similar landscapes to ensure collaborative growth for the advancement of the region as a whole. A healthy transportation system cultivates economic development, industry growth, trade, market expansion, technological innovation, access to food and health care, opportunity, and access to information. The Northwest Oklahoma Regional Long Range Transportation Plan embodies these concepts and in this plan you will find steps and recommendations to further these sectors as they relate to regional transportation planning.

The objective of this plan is to outline the transportation projects and needs as identified by the RTPO in coordination with the Oklahoma Department of Transportation (ODOT). The plan will establish transportation goals and identify strategies to reach the goals such as funding opportunities and implementation resources. This plan will inventory and outline trends in population, employment, traffic and mobility preferences while inventorying things such as road and bridge conditions, air travel, popular goods movement, parks, natural resources, tourist destinations, construction projects, land development, opportunity zones and alternative modes of transportation such as bus, bike, or walking.

This Regional Long Range Transportation Plan (RLRTP) addresses a forecast period of at least (20) twenty years and includes long-range and short-range strategies for the development of an integrated, intermodal and multimodal transportation system that facilitates the efficient movement of people and goods. The RLRTP projects the conditions affecting surface transportation through a process of applying reasonable assumptions, technical analysis, and financial projections, recommends a future transportation system, and reflects consideration of the area land use and development patterns. 2045 was chosen as the end year for the projects and recommended improvements included in this plan because that time line allows adequate time for cities and towns to anticipate and prepare for the changes that will be observed in the following chapters.

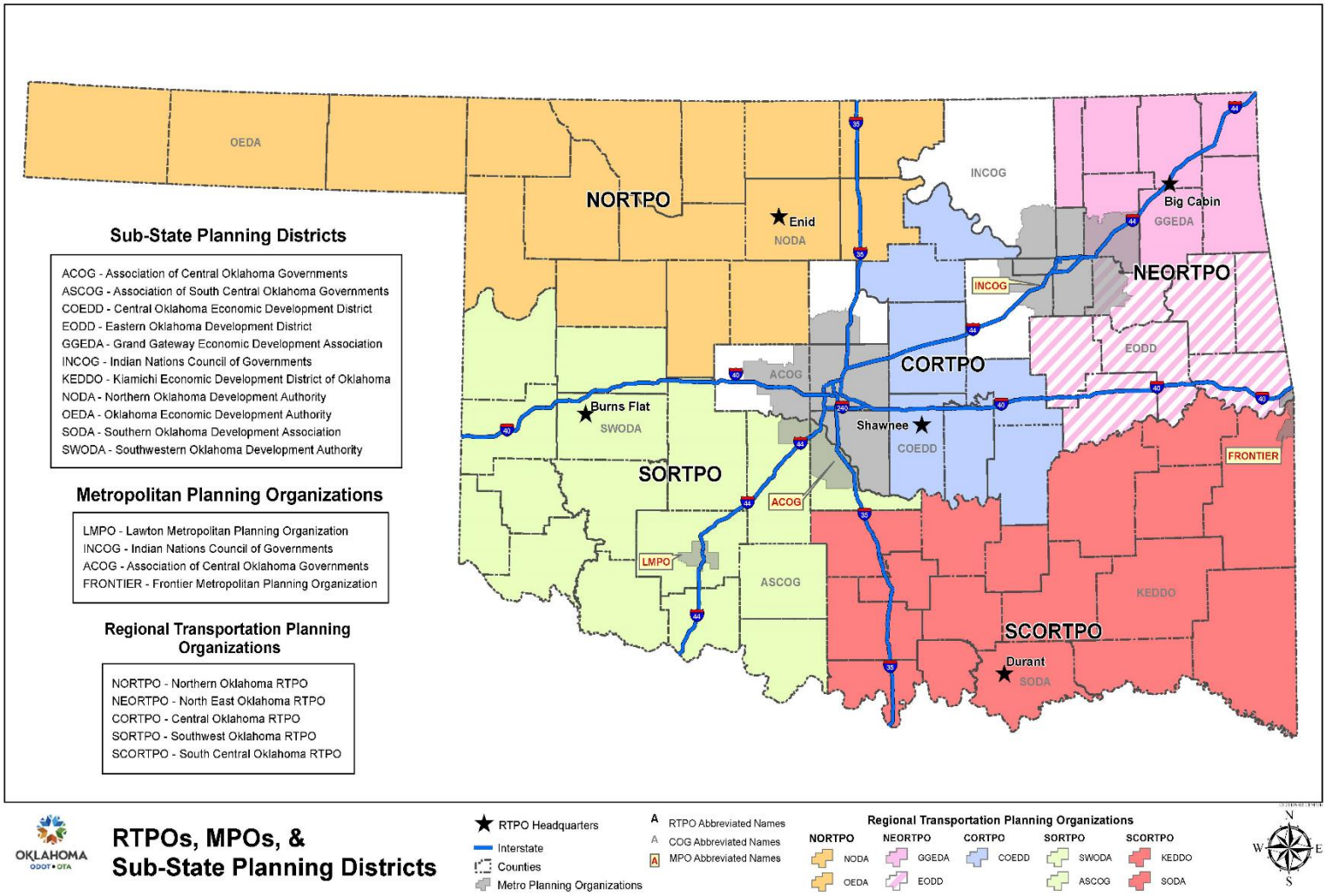
This plan will be reviewed and updated every five years, or as needed.

RTPO History (NORTPO)

In April 2012, ODOT entered into an agreement with Oklahoma Association of Regional Councils (OARC) to oversee development of the regional transportation planning process and the regional public participation process in the non-metropolitan areas of the state. Council of Governments (COG) are selected by ODOT into the Regional Transportation Planning Organization (RTPO) program, though a request for proposal (RFP) process and scored by an ODOT review team (RTPO manual). By resolution #2016 PWP the Northern Oklahoma Development Authority (NODA), after participating in the RFP process, created the Northern Oklahoma Regional Transportation Planning Organization (NORTPO). With the aim to be the leader in regional transportation planning in Northwest Oklahoma, providing opportunities to focus and address key regional transportation needs for safety, infrastructure, and future economic growth and development. *(vision statement).*

The ODOT, in cooperation with the RTPO, has allocated a portion of the State Planning and Research (SRP) Funding made available via federal transportation legislation to provide transportation planning assistance for the non-metropolitan areas of the state. This regional transportation program assists ODOT in meeting the requirements of the Statewide Planning Process to address the transportation needs in non-metropolitan areas. (ODOT RTPO manual pg 1).

In Oklahoma there are currently five RTPOs – NORTPO in the northwest, NEORTPO in the northeast, SORTPO in the southwest, and CORTPO in the central area of the state, and SCORTPO in southcentral. See the state RTPO (Map Below for reference – ODOT divisions map.)



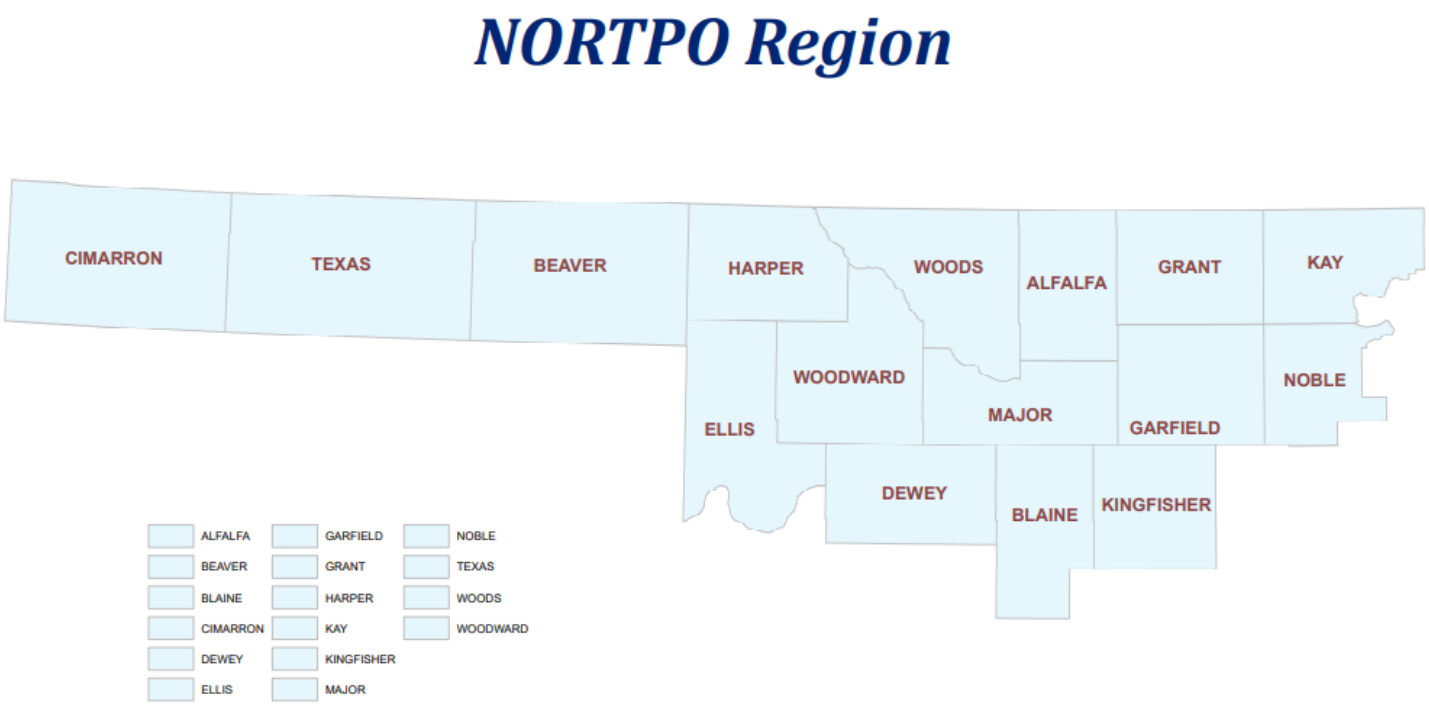
The Planning Area

NORTPO is a division of the Northern Oklahoma Development Authority (NODA) that addresses transportation planning in the eight counties of the NODA District including Alfalfa, Blaine, Garfield, Grant, Kay, Kingfisher, Noble and Major, and the eight counties of Oklahoma Economic Development Authority (OEDA) including Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods and Woodward.

Covering northwest and north central Oklahoma an area of 18,961 square miles, 12,135,040 acres, the NORTPO region is home to 16 counties, 100 cities and towns (38 OEDA, 62 NODA), and 17 conservation districts. The total population of the NORTPO Region is 228,367 (2020), a 2.3% decrease from 2010. This results in an average of 12 persons per square mile.

The region is predominately rural with the half of the population located within the incorporated cities of Enid (pop. 51,308), Ponca City (pop. 24,424), Guymon (pop. 12,965) Woodward (pop. 12,133) and Alva (pop. 5,028).

Population data obtained from the 2020 Census shows the median age of the region is 40 years old and 83% of the population is under the age of 65. The racial and ethnic population makeup is 15.63% Hispanic or Latinx, 69.73% White alone, 2.17% African American alone, 4.01% Native American or Alaskan Native alone, 0.78% Asian alone, 1.41% Native Hawaiian and Pacific Islander alone, Tables and maps are located in the appendix. NORTPO Region Map Below.



RTPO Transportation Planning Process

Transportation planning is a process that develops information to help make decisions on the future development and management of transportation systems. It involves the determination of the need for new or expanded roads, transit systems, freight facilities, and bicycle/pedestrian facilities, along with their location, capacity and future needs. The process of developing the plan provides an opportunity for participating in both planning and priority sets. The process allows the community to focus their attention on transportation in the context the NORTPO region.

Regional transportation planning is a collaborative process designed to foster participation by all interested parties such as business communities, community groups, elected officials, and the general public through a proactive public participation process. Emphasis by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) is placed on extending public participation to include people who have been traditionally underserved by the transportation system and services in the region. All aspects of the transportation planning process are overseen by the NORTPO Policy Board after input has been provided by the Technical Committee. The Board makes the final decision on the transportation plan as well as other transportation planning documents.

The day-to-day activities of NORTPO are currently supported by two full-time NODA staff members, and seeking the addition of a 3rd for Mobility Management. Additional NODA staff members contribute to the transportation planning process to ensure the overall planning program is executed in a timely and efficient manner and in accordance with Federal regulations. Staff is housed at the NODA office located in Enid, Oklahoma. Staff, equipment, supplies, rent, consulting studies, and other expenses used to support staffing operations are reimbursable to NORTPO by the FHWA State Planning & Research (SPR) program funds at 80% of the total amount of the work effort and the local match of 20% is provided by NODA.

The LRTP establishes the goals, objectives and transportation strategies for addressing the region's transportation needs. This planning process follows the four "C's" identified by federal transportation regulations:

- **Consideration** means that one or more parties takes into account the opinions, actions and relevant information from other parties in making decisions or determining a course of action.
- **Consultation** means that one or more parties confer with other identified parties in accordance with an established process and, prior to taking action(s), consider the views of the other parties and periodically inform them about action(s) taken
- **Cooperation** means that the parties involved in carrying out the transportation planning programming processes work together to achieve a common goal or objectives.
- **Coordination** means the cooperative development of plans, programs and schedules among agencies and entities with legal standing and adjustment of such plans, programs, and schedules to achieve general consistency, as appropriate. The LRTP was developed with the regulatory framework of Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act).

In accordance with the RTPO manual version 3, 2022, the planning process consists of, but is not limited to these important steps:

1. Plan The Planning Process. It is critical for LPAs and RTPOs first to decide what will be done, when it will be done, and who will do it. This step should be completed by the team of planners who will be responsible for preparing the plan. The planning process will depend on both external factors and internal factors. Examples of external factors include provisions of state or Federal law that must be complied with for the plan to be accepted. Examples of internal factors include a planning agency's mission statement or its technical capabilities. Planning agencies must be careful to meet externally imposed conditions but not to outstrip their own technical capabilities when developing plans.

2. Get The Right People to The Table. Plans that succeed get the right people to the table and get them involved effectively through a mechanism such as a planning steering committee. Who the right people are depends on the region and its issues, but should include policy board members, technical advisory committee members, other elected

and appointed officials, stakeholders, transportation providers, and transportation users. Some willingness to "get outside the box" when choosing a set of people to participate in the plan is important. For instance, if it is anticipated that transportation enhancements will be a major focus of the plan, then parks and recreation groups or walking/cycling representatives should be sought out. If improving economic development highway corridors is a major issue in the region, then professional economic developers should be involved.

3. Develop The Overall Direction for The Plan. It is important for any plan to have a set of goals and objectives. These are the goals for the planning process as well as the goals for how the organization developing the plan will use it when it is completed. The planning goals and objectives should be determined by the RTPO Policy Board with recommendations from the Technical Committee and facilitation help from professional planners.

4. Identify Key Trends. Use available data sources and develop information and knowledge needed to identify a handful of key trends in the region that will most impact transportation over the next several decades. These trends could involve demographics, social conditions, economic conditions, energy, environmental conditions, or physical conditions of infrastructure.

5. Conduct a Regional Analysis. Identify a limited number of key regional transportation strengths, weaknesses, opportunities, and threats.

a. *Strength.* A strength is something positive about the region at present. An example could be a trade center that provides growing employment opportunities.

b. *Weakness.* A weakness is something that hinders the region at present. A good example would be a bottleneck that slows shipments of freight.

c. *Opportunity.* An opportunity is something positive that could be realized in the future, during the planning horizon. An example could be the completion of a Regional general aviation airport.

d. *Threat.* A threat is something negative that is likely to occur given current trends. An example could be a large number of pavement lane miles that are in deteriorating condition with a lack of necessary future funding.

6. Identify Critical Issues. Identify and categorize critical issues and transportation needs to be addressed by the plan based on the regional analyses completed in steps 4 and 5. This is the point at which the planning process becomes focused.

7. Develop Alternatives to Address Critical Issues. Develop specific alternatives to address the key transportation issues and needs. For instance, if a critical issue or threat involves deteriorating pavements, an alternative would be to establish a region wide pavement management and rehabilitation program. Alternative levels of funding and different approaches might be considered for such an effort.

8. Alternatives Selection. Use available data sources, information, and knowledge to select the most appropriate alternative by issue for inclusion in the plan.

9. Action Planning. Develop action items applicable to the RTPO. For example, specific improvement projects and new programs with project detail for five years and a less detailed plan for the next 15 years.

10. Financial Plan. The long-range financial plan demonstrates that the necessary resources are available to implement the plan. If resources are lacking, the LRTP will clearly show what portions of the plan should be implemented and which portions should be postponed until resources become available. The financial plan includes an analysis of maintenance and operations expenses. The financial plan covers the entire 20-year horizon and includes three sections as described below: An analysis of funding capability including an inventory of revenue sources for regional transportation improvements and probable funding levels available for regional transportation improvements from each source.

a. A financing plan which compares probable funding with identified current and future needs, identifies funding shortfalls, and

b. If funding shortfalls are identified, an analysis of additional funding resources to make up the shortfall, or a reassessment of the regional development strategy to ensure that transportation needs fall within current funding and reasonable projections of future funding levels.

11. Public Involvement. Involve the public in a meaningful way to gain input on the proposed plan. The public should be involved when there is something fairly concrete for them to react to. The most appropriate place to involve them is at the stage that the Fiscal Plan has been completed as a draft. The public should be advised that at the point of public involvement, the plan is subject to revision based upon their input. The suggested format for public involvement is an informal "public open house" rather than a formal "public hearing".

12. Final Document Preparation. This should be accomplished once the public involvement stage is completed and input has been incorporated where appropriate. The published document should be very concise with more detailed technical appendices as needed.

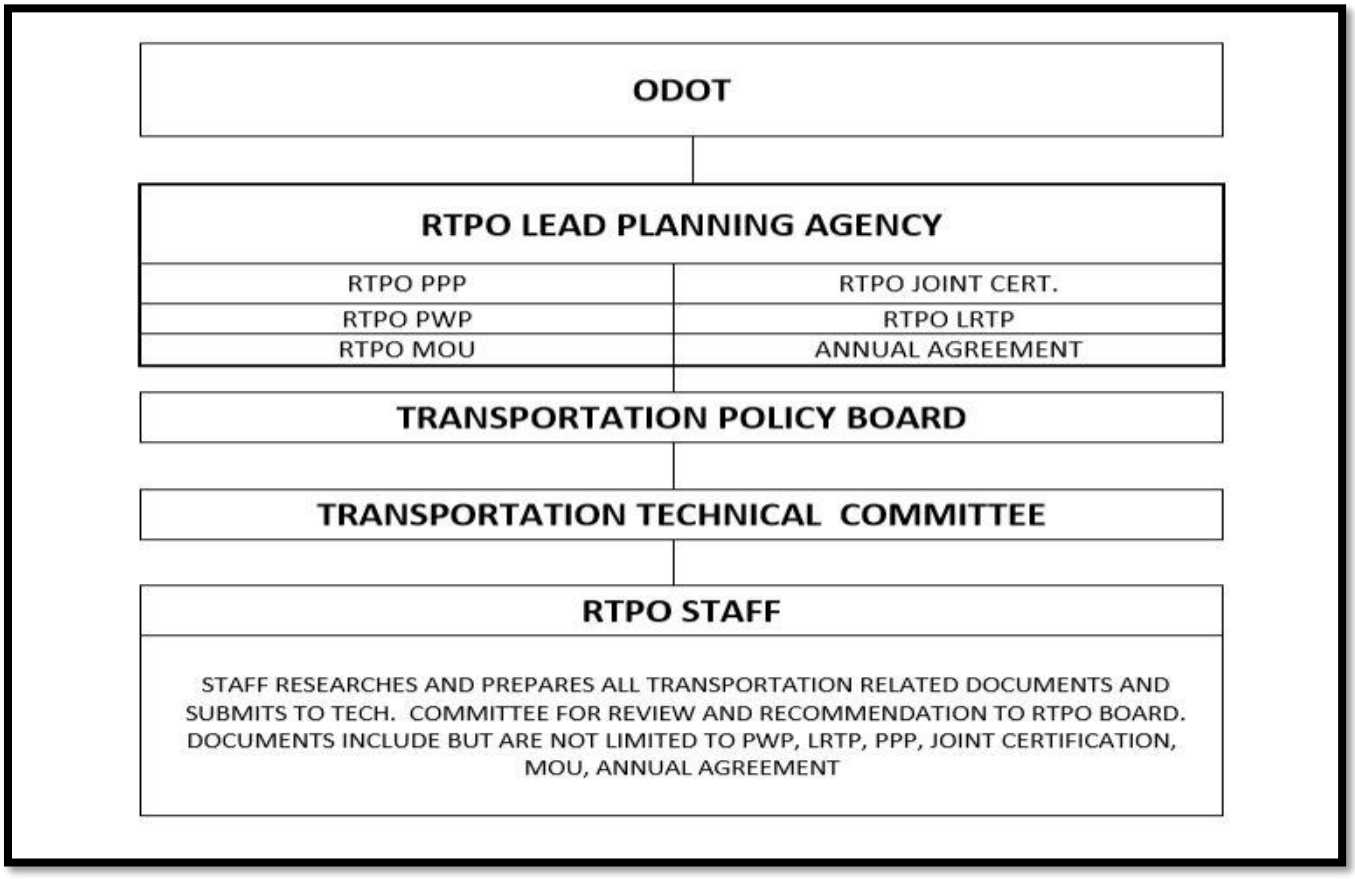
13. Plan Implementation. Implement the plan through the regional transportation improvement programming process.

14. Feedback. No plan is ever perfect. Forecasts can be wrong, and events may occur that simply were not foreseen during the planning process. All plans need to be improved as the process moves forward. Provide mechanisms for feedback to update the plan.

Funding Process

Funding must be established and secured through the State Planning and Research Program (SRP) at 80% and RTPO funding at 20%.

An annual funding agreement incorporating specific language from the Planning Work Program (PWP) must be established. A Memorandum of Understanding (MOU) must be signed setting up the organizational structure of the regional transportation planning process with ODOT and the COG involved. A joint certification must also be signed between the RTPO and ODOT to ensure the RTPO is upholding its required planning procedures from year to year.



Public Participation

Regional transportation planning is a collaborative process designed to foster participation by all interested parties, such as the business community, community groups, elected, officials, and the public through a proactive public participation process.

Public participation in the transportation planning and programming process has been a priority for federal, state, and local officials since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991; its successor, the Transportation Efficiency Act for the 21st Century (TEA-21); its successor, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Moving Ahead for Progress in the 21st Century Act (MAP-21) and the present Fixing America's Surface Transportation (FAST) Act. Therefore, regional Transportation Public Participation and Environmental Justice policies must reflect the mandates of ISTEA, TEA-21, SAFETEA-LU, MAP-21, and the FAST Act.

Source: RTPO Manual pg.27

The NORTPO Public Participation Plan (PPP) has been developed to assure that the transportation planning process conducted by NORTPO complies with Federal requirements for public involvement and participation. This document presents the goals of the NORTPO for public participation and involvement, as well as the public involvement procedures designed for various NORTPO activities. These procedures will provide opportunities for citizens to contribute ideas and opinions early and at every stage of the planning process. Efforts will be made to assure participation in the transportation planning and programming process by traditionally underserved individuals including elderly, low income, minority, persons with disabilities, and persons with limited English proficiency (LEP).

The NORTPO will, to the extent reasonable and practical, ensure that the NORTPO Public Participation Plan will address the requirements for NORTPO public involvement as identified in 23 CFR 450.210 Statewide Transportation Planning and Programming.

Federal and State Transportation Planning Regulations

The LRTP was developed in cooperation and collaboration with the federal, state, county, local member governments, transit providers, tribal governments, RTPOs, ODOT, FHWA, and FTA. The LRTP is the culmination of a continuing, cooperative, coordinated, and comprehensive planning effort among the federal, state, and local governments. Directed by NORTPO for consideration and implementation of projects, strategies, and services that address the eight planning factors identified in The Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act) which was signed into law in December 2015. The FAST Act added two additional factors to MAP-21 for totaling 10 ten, which NORTPO will strive to address through their LRTP planning process.

The FAST Act also required all states to prepare and annually evaluate their Strategic Highway Safety Plan (SHSP). A SHSP is a statewide, coordinated safety plan which includes goals, objectives and emphasis areas for reducing highway fatalities and serious injuries on all public roads. More information on the Oklahoma SHSP can be found on the State of Oklahoma Highway Safety Office's website (http://ohso.ok.gov/strategicplanning-results).

The scope of the statewide and nonmetropolitan transportation planning process. Each State is required to carry out a continuing, cooperative, and comprehensive performance-based statewide multimodal transportation planning process, including the development of a long-range statewide transportation plan and STIP, that facilitates the safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the State, including those areas subject to the metropolitan transportation planning requirements of 23 U.S.C. 134 and 49 U.S.C. 5303.

This is addressed through the **Ten Planning Factors** listed below:

1. Support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially enabling global competitiveness, productivity and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase accessibility and mobility of people and freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic patterns.
6. Enhance the integration and connectivity of the transportation system across and between modes, people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation.
10. Enhance travel and tourism.

Goals and Strategies for Implementation

Goal 1: Mobility Choice, Connectivity and Accessibility

Facilitate the easy movement of people and goods, improve interconnectivity of regions and activity centers, and provide access to different modes of transportation.

Objectives

1. Promote connectivity across and between modes for people and freight.

2. Maximize access to the transportation system and improve the mobility of the transportation under-represented population.

3. Ensure new facilities are built to American Association of State Highway and Transportation Officials (AASHTO) design standards.

4. Improve and expand infrastructure for pedestrians, bicyclists and people with disabilities in compliance with the Americans with Disabilities Act (ADA) standards.

5. Provide accessible and convenient non-motorized routes to destinations throughout the region such as schools, commercial areas, recreational facilities, education, major employment areas and activity centers.

6. Incorporate bicycle and pedestrian friendly designs into considerations for transportation improvement projects.

7. Minimize conflicts between pedestrians, bicyclists and vehicles while accommodating each type of travel.

8. Increase access to ensure all residents have the capability of moving affordably between where they live, work, play and get services, using transportation options that promote a healthy lifestyle.

Policies

1. Regional transportation partners will continue to work together to plan and implement transportation systems that are multi-modal and provide connections between modes.

2. Increase public knowledge of on-demand transportation services in the region

3. Develop a Transit Development Plan that will identify effective tools to measure transit service, assess and collect data, enhance coordination between providers and provide guidance on future needs and system expansion. This process would develop, distribute and collect transit user surveys to measure the need of transit service and ensure adequate frequency of transit services. Assess and collect demographic data (when available) to identify the most distressed areas of the region (economic distress, low auto availability, etc.) and target transit programs to these areas on a priority basis.

4. Assist with expansion of on-demand transit services in the region and enhance coordination between various providers.

5. Add curb ramps to crosswalks where needed.

6. Map the locations of major employment centers, including existing and proposed developments, and identify types of transportation available.

7. Increase access to bicycle and pedestrian facilities within ½ of a mile to recreational areas or downtowns.

8. Document locations and conditions of current freight routes.

9. Hold joint meetings between the rail, freight community, and public transportation agencies.

10. Track the increase in households or jobs by TAZ to identify potential employment and residential growth areas.

11. Encourage public acquisition of abandoned right-of-ways to permit multi-modal use of these properties. Identify designated routes for use by non-motorized users. Conduct a bicycle and pedestrian needs assessment.

12. Ensure that when feasible any transportation improvements consider multimodal issues during planning and design phases, including bicycle and pedestrian improvements, multi-modal connections, etc., and provides for travel across or around physical barriers, and/or improves continuity between jurisdictions.

13. Include bicycle racks at education facilities, health facilities, major employment areas and activity centers.

14. Develop a system to collect and monitor changes in population, residential areas, employment, and major employers by Traffic Analysis Zone (TAZ).

15. Assess and collect demographic data (when available) to identify the most distressed areas of the region (economic distress, low auto availability, etc.) and target transit programs to these areas on a priority basis.

16. RTPO partners will plan and implement a transportation system that considers the needs of all potential users, including children, senior citizens, and persons with disabilities, and that promotes active lifestyles and cohesive communities.

Goal 2: Awareness, Education, and Cooperative Process

Create effective transportation partnerships and cooperative processes that encourage citizen participation to enhance awareness of the needs and benefits of the transportation system.

Objective

Promote local, regional and state cooperation on collection of data, identification of transportation needs, and early public participation.

Policies

1. Participate in state, regional and local committees regarding regional transportation issues.

2. Undertake studies (when needed) to address emerging transportation needs through cooperation, participation and initiation with relevant regional agencies and affected parties.

3. Educate key stakeholders, businesses, local leaders and the public on the purpose and function of NORTPO.

4. Annually review the Public Participation Plan.

5. Develop a clearinghouse for regional data sets, such as pavement management systems and geographic information systems to help inform sound planning decisions.

6. Facilitate the dissemination of training materials such as webinars and programs.

7. Develop method to track the implementation of projects and regularly update the public on the status of projects, programs and finances.

8. Engage the public in workshops, public hearings, surveys and other methods to encourage awareness and participation.

9. Educate the public and elected officials, in order to increase public understanding of both the options and the constraints of transportation alternatives.

10. Educate the driving public about the rights of bicyclists, while also educating bicyclists about the responsibilities of cycling.

11. Identify and implement techniques to eliminate barriers to public engagement in the region.

12. Coordinate with local and state partners to identify type, frequency and responsibility of data collected and maintained. Develop procedures to identify data needs, collection and distribution process.

Goal 3: Community

Ensure continued quality of life during project development and implementation by considering natural, historic, and community environments, including special populations, and promote a regional transportation system that contributes to communities' livability and sustainability.

Objectives

1. Improve or expand the multi-modal transportation system to meet the needs of the community and under-represented population.

2. Increase access to ensure all residents have the capability of moving affordably between where they live, work, play and get services, using transportation options that promote a healthy lifestyle.

3. Plan and design new expanded transportation projects while preserving historical, cultural and natural environments, and under-represented communities.

Policies

1. Support transportation projects serving already-developed locations of residential or commercial/industrial activity.

2. Design the transportation network to protect cultural, historical and scenic resources, community cohesiveness, and quality of life.

3. Increase the number of quiet zones, especially around residential areas.

4. Coordinate with local and tribal governments on the placement of regionally significant developments.

5. Maintain local and state support for the general aviation airports that serve the region.

6. RTPO partners will plan and implement a transportation system that considers the needs of all potential users, including children, senior citizens, and persons with disabilities, and that promotes active lifestyles and cohesive communities.

7. Assist in the development of main street designations.

8. Promote proper environmental stewardship and mitigation practices to restore and maintain environmental resources that may be impacted by transportation projects.

9. Promote the use of alternative fuels and technologies in motor vehicles, fleet and transit vehicles.

10. Increase air quality awareness to educate residents on the importance of utilizing alternative transportation to decrease air pollution as well as inform at risk populations when air quality days are poor.

11. RTPO partners will avoid, minimize, and mitigate disproportionately high and adverse impacts of transportation projects to the regions under-represented communities.

Goal 4: Economic Vitality

The transportation system will support and improve the economic vitality of the region by providing access to economic opportunities, such as industrial access, recreational travel, tourism, as well as enhancing inter-modal connectivity.

Objectives

1. Improve multi-modal access to employment concentrations within the region.
2. Support transportation projects that promote economic development and job creation.
3. Invest in a multi-modal transportation system to attract and retain businesses and residents.
4. Support the region's economic competitiveness through the efficient movement of freight.

Policies

1. Prioritize transportation projects that serve major employment areas, activity centers, and freight corridors.
2. The RTPO will coordinate with other agencies planning and pursuing transportation investments that strengthen connections to support economic vitality.
3. Emphasize improvements to the major truck freight corridors.
4. Encourage the railroad industry to upgrade and/or expand the freight and passenger rail infrastructure.
5. Continue to coordinate transportation planning with adjoining counties, regions and councils of government for transportation needs and improvements beyond those in our region.
6. Work with area employers and stakeholders to develop a database and map identifying transportation needs.
7. Locate employment and industry hubs in the region and calculate expected growth, if applicable, to ensure an adequate transportation service is provided for the future.
8. Provide resources discussing how to capitalize on tourism destinations within jurisdictions.

Goal 5: Finance and Funding

Develop a cooperative process between RTPO partners, state officials, and private interests in the pursuit and funding of transportation improvements.

Objective

Seek and acquire a variety of transportation funding sources to meet the many needs of the diverse system.

Policies

1. Maximize local leverage of state and federal transportation funding opportunities.
2. Increase private sector participation in funding transportation infrastructure and services.
3. Encourage multi-year capital improvement planning by local, county and state officials that includes public participation, private sector involvement, coordination among jurisdictions and modes, and fiscal constraint.
4. Assist jurisdictions in identifying and applying for funds that enhance or support the region's transportation system.

Goal 6: Maintenance and Preservation

Preserve the existing transportation network and promote efficient system management in order to promote access and mobility for both people and freight.

Objective

Preserve, maintain and improve the existing streets, highway system, bikes, trails, sidewalks and infrastructure. Better understand how we are using our infrastructure and assist in developing plans to disperse the daily impact on overused roadways.

Policies

1. Identify sources of transportation data and develop a procedure to collect the data and present it to the public.

2. Emphasize system rehabilitation and preservation.

3. Establish a regular traffic count and reporting system for the region.

4. Route construction traffic to roadways that are designated to accommodate their weight.

Goal 7: Safety and Security

The transportation system will safely and securely sustain people, goods and emergency support services.

Objective

Improve the safety and security of the transportation system by implementing transportation improvements that reduce fatalities and serious injuries as well as enabling effective emergency management operations.

Policies

1. Collect and routinely analyze safety and security data by mode and severity to identify changes and trends.

2. Incorporate emergency service agencies in the transportation planning and implementation processes in order to ensure delivery of transportation security to the traveling public.

3. Coordinate with local governments and other agencies to identify safety concerns and conditions. Also recommend projects to address key deficiencies. Coordinate county and regional actions with the Statewide Highway Safety Plan.

4. Improve the transportation infrastructure to better support emergency response and evacuations.

5. Assist in the designation of various corridors and development of procedures to provide for safe movement of hazardous materials.

6. Minimize the impacts of truck traffic on roadways not designated as local truck routes or regional goods movement corridors.

7. Collect and review incident data at rail crossings.

8. Collect and review motor vehicle accidents data and identify local trends.

9. Upgrade passively protected at-grade rail-highway crossings.

10. NORTPO partners should work with local, state and federal public safety officials, including emergency responders, to protect and strengthen the transportation system.

11. Adopt best practices to provide and improve facilities for safe walking and bicycling.

12. Facilitate coordination among emergency management and transportation agencies to improve county and regional planning for emergency management.

13. Support the Oklahoma Department of Transportation in its plans to add and improve roadway shoulders to designated two lane highways.

14. Identify the best corridors for evacuation in the event of emergency situations. Those corridors will also be analyzed and their maximum traffic capacity will be observed.

15. Provide resources for evacuations and emergency management procedures as well as pertinent, county specific, staff and offices.

16. Mitigating storm water collection on roadway in event of heavy rain.

17. Will include designated snow route maps in plan.

Goal 8: Bicycle and Pedestrian

Create safe, accessible, and convenient routes to schools and places of work that promote walking and biking as an alternative form of transportation that integrates well into the existing system.

Objectives

1. Ensure new facilities are built to American Association of State Highway and Transportation Officials (AASHTO) design standards.

2. Improve and expand infrastructure for pedestrians, bicyclists and people with disabilities.

3. Provide accessible and convenient non-motorized routes to destinations throughout the region such as schools, commercial areas, recreational facilities, education, major employment areas and activity centers.

4. Incorporate bicycle and pedestrian friendly designs into considerations for transportation improvement projects.

5. Minimize conflicts between pedestrians, bicyclists and vehicles while accommodating each type of travel.

6. Explore bicycle tourism potential in rural areas, where facilities permit.

Policies

1. Encourage public acquisition of abandoned right-of-ways to permit multi-modal use of these properties. Identify designated routes for use by non-motorized users.

2. Ensure that when feasible any transportation improvements consider multi-modal issues during planning and design phases, including bicycle, pedestrian improvements, multi-modal connections, etc.

3. Develop and implement a regional bicycle and pedestrian network that provides for travel across or around physical barriers, and/or improves continuity between jurisdictions.

4. Include bicycle racks at education facilities, health facilities, major employment areas and activity centers.

Chapter 2 – Regional Characteristic's

This chapter provides a "snapshot" of current conditions, and how they relate to transportation in the NORTPO region. Understanding the status of the transportation system provides a basis for developing the transportation plan. Much of this data and information was obtained from county, state and federal agencies or institutions. Tables and maps referred to in this chapter are included in Appendix E-2. Transportation planning has typically been limited to urban areas. Regional transportation planning is evolving into an opportunity to consider both the short and long-term transportation needs for locations outside of urban areas. This plan will consider growth and development patterns in the region. However, critically important complements to these growth areas are the locations that may generate significant demands on the transportation system. Such "activity generators" include business and industrial sites, governmental, schools, universities, tourism, and recreation centers. Counties in the NORTPO region are working to seek new economic growth and diversification while striving to preserve their natural, historic and cultural resources. As populations fluctuate (either through economic changes in or out migration, or shifting within the region) or industries relocate the needs of communities - education, health care, social services, employment, and transportation - remain the same. Maintaining, and updating this chapter will be vital in ensuring continued transportation improvements based upon the needs of the population.

County by County Analysis

This intent of this section is to introduce the region and give context to the population and their economic activity which comprises the NORTPO region and is not meant to be exhaustive detailed tables outlining county specific information.

Alfalfa County, located in north-central Oklahoma, lies in the most northern tier of counties bordered on the north by the state of Kansas. Surrounded by Grant County on the east, Garfield County on the southeast, Major County on the south, and Woods County on the west and encompasses 866 square miles. Alfalfa County has a population of 5,699 (2020) resulting in a population density of 6.6 persons per square mile. The county's population is distributed - 60.2% male, 39.8% female with a median age of 43.4. Residents 65 years and older represent 19.3% of the total population. 46.7% of the population is employed while 6.6% of families are experiencing poverty (2020). The economy of Alfalfa County is primarily based upon agriculture, mining, quarrying, oil, and gas extraction. The county seat is Cherokee.

Beaver County is located in northwest Oklahoma and is bordered by Kansas to the north, Harper County to the east, Texas to the south, Texas County to the west and encompasses 1,814 square miles. Beaver County has a population of 5,049 (2020) resulting in a population density of 2.8 persons per square mile. The county's population is distributed - 50.2% male, 49.8% female with a median age of 39.8. Residents 65 years and older represent 19.2% of the total population. 60.8% of the population is employed while 5.6% of families are experiencing poverty (2020). The economy of Beaver county is primarily based upon agriculture via farming. (Encyclopedia of Oklahoma History and Culture) Beaver is the county seat.

Blaine County is located in north-central Oklahoma. It is surrounded by Kingfisher and Canadian Counties to the east, Dewey and Custer Counties to the west, Caddo County to the south, Major County to the north and encompasses 928 square miles. Blaine County has a population of 8,735 (2020) resulting in a population density of 9.4 per square mile. The county's population is distributed – 54.6% male, 45.4% female with a median age of 42.7. Residents 65 years and older represent 18.3% of the total population. 45.0% of the population is employed while 9.3% of families are experiencing poverty (2020). Blaine County's economy is based principally upon agriculture and is a significant source of income. Mineral production is also important to the county's economy with oil, natural gas, and gypsum mining. Tourism and recreation are also important in Blaine County with major facilities such as Roman Nose State Park. The County seat is Watonga.

Cimarron County is located in northwest Oklahoma and is bordered by Kansas, and Colorado to the north, Texas County to the east, Texas to the south, New Mexico to the west and encompasses 1,835 square miles. Cimarron county has a population of 2,296 (2020) resulting in a population density of 1.3 persons per square mile. The county's population is distributed – 49.7% male, 50.3% female with a median age of 44.1. Residents 65 years and older represent 24.7% of the total population. 58.1% of the population is employed while 15.5% of families are experiencing poverty (2020). The most common employment sectors for those who live in Cimarron County, OK, are Agriculture, Forestry, Fishing & Hunting, making up 31.8 percent of the employment sector, followed by Retail Trade and Public Administration. (Data from the Census Bureau ACS 5-year Estimate.) Boise City is the county seat.

Dewey County is located in west-northwest Oklahoma and is bordered by Woodward and Major Counties to the north, Blaine County to the east, Custer County to the south, Ellis and Roger Mills Counties to the west and encompasses 999 square miles. Dewey County has a population of 4,484 (2020) resulting in a population density of 4.5 persons per square mile. The county's population is distributed – 49.1% male, 50.9% female with a median age of 39.2. Residents 65 years and older represent 19.1% of the total population. 56.6% of the population is employed while 8.7% of families are experiencing poverty (2020). The most common job groups, by number of people living in Dewey County, OK, are Office & Administrative Support Occupations, followed by Management Occupations, and Sales & Related Occupations. The most common employment sectors are Retail Trade, followed by Mining, Quarrying, & Oil & Gas Extraction), and Educational Services. (Data from the Census Bureau ACS 5-year Estimate.) Taloga is the county seat.

Ellis County is located in northwest Oklahoma and is bordered by Harper County to the north, Woodward and Dewey County to the east, Roger Mills County to the south, Texas to the west and encompasses 1,231 square miles. Ellis County has a population of 3,749 (2020) resulting in a population density of 3.0 persons per square mile. The county's

population is distributed – 48.7% male, 51.3% female with a median age of 44.3. Residents 65 years and older represent 23.1% of the total population. 54.1% of the population is employed while 9.9% of families are experiencing poverty (2020). The largest industries in Ellis County, OK are Health Care & Social Assistance, followed by Transportation & Warehousing and Mining, Quarrying, & Oil & Gas Extraction. The most common job groups are Management Occupations, Office & Administrative Support Occupations, and Transportation Occupations. (Data from the Census Bureau ACS 5-year Estimate.) Arnett is the county seat.

Garfield County is located in north-central Oklahoma. It is surrounded by Kingfisher and Logan Counties to the south, Major and Alfalfa Counties to the west, Grant County to the north, Noble County to the east and encompasses 1,058 square miles. Garfield County has a population of 62,846 (2020) resulting in a population density of 59.4 persons per square mile. The county's population is distributed – 49.6% male, 50.4% female with a median age of 35.8. Residents 65 years and older represent 16.3% of the total population. 57.3% of the population is employed while 12.2% of families are experiencing poverty (2020). Enid is the county seat and home to Vance Air Force Base, a major economic driver in the community.

Grant County is located in north-central Oklahoma, and lies in the most northern tier of counties bordered on the north by the state of Kansas. Surrounded by Kay County on the east, Garfield County on the south, and Alfalfa County on the west and encompasses 1,001 square miles. Grant County has a total population of 4,169 (2020) resulting in a population density of 4.2 persons per square mile. The county's population is distributed – 49.6% male, 50.4% female with a median age of 42. Residents 65 years and older represent 21.3% of the total population. 59.4% of the population is employed while 5.8% of families are experiencing poverty (2020). The economy of Grant County is based upon agriculture, with the Farmers Grain Company, a producer-owned cooperative, providing service for most of the County. Medford is the county seat.

Harper County is located in northwest Oklahoma and is bordered by Kansas to the north, Woods and Woodward Counties to the east, Ellis and Woodward counties to the south, Beaver County to the west and encompasses 1,039 square miles. Harper County has a population of 3,272 (2020) resulting in a population density of 3.1 persons per square mile. The county's population is distributed – 49.0% male, 51.0% female with a median age of 36.4. Residents 65 years and older represent 19.0% of the total population. 52.2% of the population is employed while 11.6% of families are experiencing poverty (2020). The most common job groups, by number of people living in Harper County, OK, are Construction & Extraction Occupations, followed by Office & Administrative Support Occupations, and Management Occupations. The most common employment sectors are Construction, followed by Public Administration, and Retail Trade. (Data from the Census Bureau ACS 5-year Estimate.) Buffalo is the county seat.

Kay County is located in north-central Oklahoma, and lies in the most northern tier of counties on the Kansas border. It is surrounded by Osage County on the east, Noble County to the south, Grant County to the west and encompasses 920 square miles. Kay County has a total population of 43,700 (2020) resulting in a population density of 47.5 persons per square mile. The county's population is distributed – 49.7% male, 50.3% female with a median age of 38.5. Residents 65 years and older represent 19.2% of the total population. 54.4% of the population is employed while 12.8% of families are experiencing poverty (2020). Current growth is concentrated in Ponca City, Blackwell and Tonkawa areas as well as non-incorporated areas of the County. The most significant commercial growth areas continue to occur in Ponca City. The most common employment sectors for those who live in Kay County, OK, are Manufacturing, followed by Health Care, and Retail Trade. The most common job group is production occupations. (Data from the Census Bureau ACS 5-year Estimate.) Newkirk is the county seat.

Kingfisher County is located in north-central Oklahoma. It is surrounded by Logan County to the east, Blaine County to the west, Canadian County to the south and Garfield and Major Counties to the north and encompasses 898 square miles. Kingfisher County has a total population of 15,184 (2020) resulting in a population density of 17.0 persons per square mile. The county's population is distributed – 49.8% male, 50.2% female with a median age of 37.9. Residents 65 years and older represent 15.9% of the total population. 62.4% of the population is employed while 8.4% of families are experiencing poverty (2020). The largest industries are mining, quarrying, oil, and gas extraction next would be healthcare and social assistance. Kingfisher is the county seat.

Major County is located in north-central Oklahoma and is surrounded by Garfield County to the east, Blaine and Dewey Counties on the south, Kingfisher County to the southeast and Woodward County to the west, Alfalfa and Woods County to the north and encompasses 945 square miles. Major County has a population of 7,782 (2020) resulting in a population density of 8.2 persons per square mile. The county's population is distributed – 49.8% male, 50.2% female with a median age of 39.9. Residents 65 years and older represent 20.1% of the total population. 55.7% of the population is employed while 8.6% of families are experiencing poverty (2020). The economy of Major County is primarily based upon agriculture, mining, quarrying, oil, and gas extraction. Fairview is the county seat.

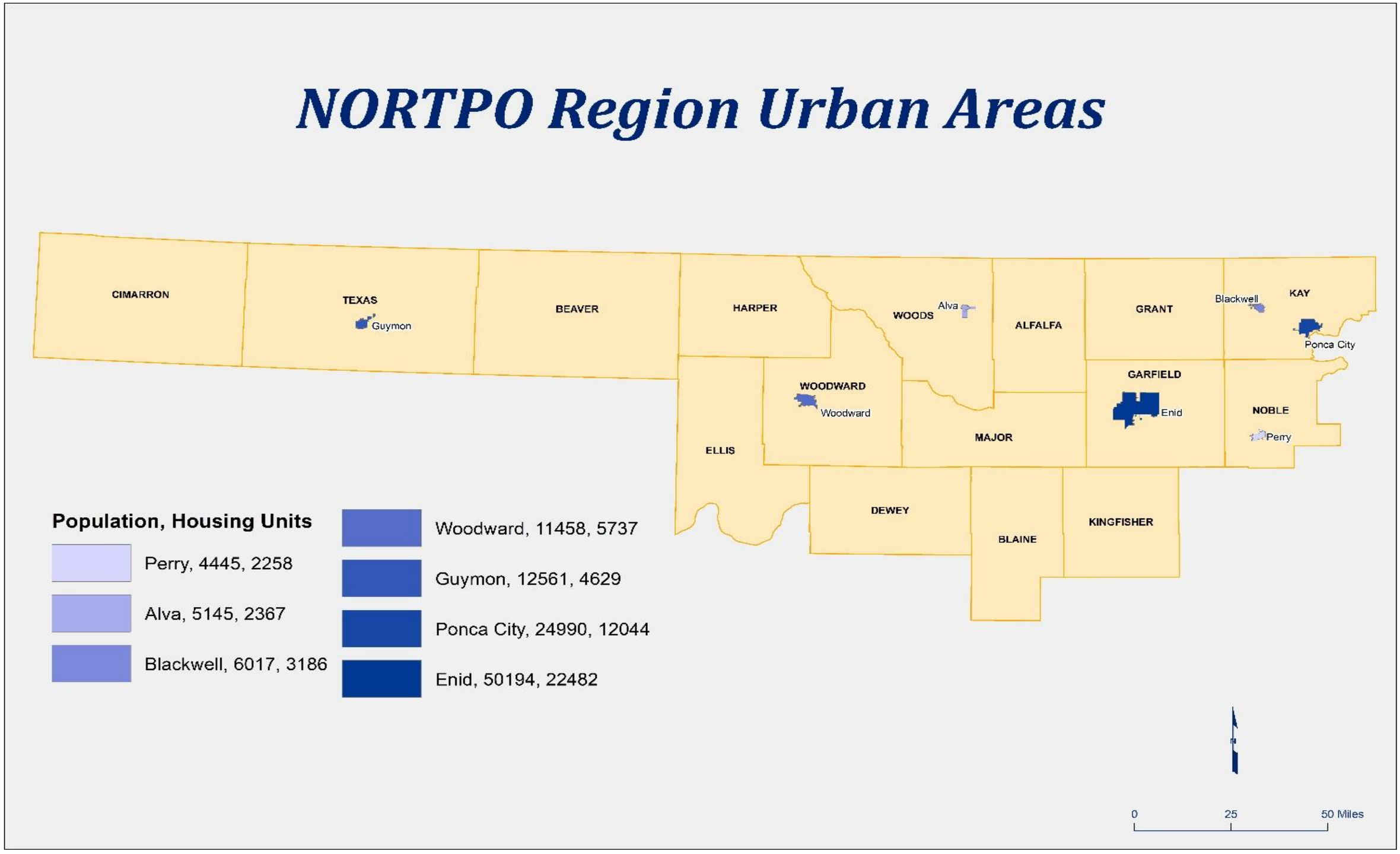
Noble County is located in north-central Oklahoma and is surrounded by Kay on the north, Garfield on the west, Logan and Payne on the south, Osage and Pawnee on the east and encompasses 737 square miles. Noble County has a total population of 10,924 (2020) resulting in a population density of 15.0 persons per square mile. The county's population is distributed – 49.4% male, 50.6% female with a median age of 41.3. Residents 65 years and older represent 19.5% of the total population. 56.4% of the population is employed while 5.6% of families are experiencing poverty (2020). The most common employment sectors for those who live in Noble County, OK, are Manufacturing, followed by Educational Services, and Health Care & Social Assistance. Manufacturing makes up for 22.2 percent of employment sector. (Data from the Census Bureau ACS 5-year Estimate.) Although the employment sector is heavily concentrated in the agriculture, mining and construction industry, other industries that continue to grow include education and health career. Perry is the county seat.

Texas County is located in northwest Oklahoma and is bordered by Kansas to the north, Beaver County to the east, Texas to the south, Cimarron County to the west and encompasses 2,041 square miles. Texas County has a population of 21,384 (2020) resulting in a population density of 10.5 persons per square mile. The county's population is distributed – 53.2% male, 46.8% female with a median age of 31.2. Residents 65 years and older represent 11.1% of the total population. 67.7% of the population is employed while 16.8% of families are experiencing poverty (2020). The most common job groups, by number of people living in Texas County, OK, are Production Occupations, followed by Sales & Related Occupations, and Construction & Extraction Occupations. The most common employment sectors are Manufacturing, followed by Educational Services, and Agriculture, Forestry, Fishing & Hunting. (Data from the Census Bureau ACS 5-year Estimate.) Guymon is the county seat.

Woods County is located in northwest Oklahoma and is bordered by Kansas to the north, Alfalfa County to the east, Major County to the south, Woodward, and Harper County to the west, and encompasses 1,286 square miles. Woods County has a population of 8,624 (2020) resulting in a population density of 7.0 persons per square mile The county's population is distributed – 53.3% male, 46.7% female with a median age of 32.9. Residents 65 years and older represent 17.0% of the total population. 58.5% of the population is employed while 6.1% of families are experiencing poverty (2020). The most common job groups, by number of people living in Woods County, OK, are Management Occupations, followed by Sales & Related Occupation, and Office & Administrative Support Occupations. The most common employment sectors are Educational Services followed by, Retail Trade, and Health Care & Social Assistance. (Data from the Census Bureau ACS 5-year Estimate.) Alva is the county seat.

Woodward County is located in northwest Oklahoma and is surrounded by Major and Woods Counties to the east, Dewey and Ellis Counties to the south, Harper and Woods Counties to the north, Ellis and Harper Counties to the west and encompasses 1,242 square miles. Woodward county has a population of 20,470 (2020) resulting in a population density of 16.5 persons per square mile. The county's population is distributed – 53.6% male, 46.4% female with a median age of 36.6. Residents 65 years and older represent 15.3% of the total population. 59.3% of the population is employed while 10.5% of families are experiencing poverty (2020). Their economy has historically depended on farming, primarily wheat and grain; quickly becoming an agricultural service center for wheat, poultry, and livestock. The most common job groups, by number of people living in Woodward County, OK, are Sales & Related Occupations, followed by Management Occupations and Construction & Extraction Occupations. The most common employment sectors are Retail Trade, followed by Mining, Quarrying, & Oil & Gas Extraction, and Educational Services. (Data from the Census Bureau ACS 5-year Estimate.) Woodward is the county seat.

Urban vs Rural



Urban vs Rural - NORTPO

The Census Bureau's urban and rural classification provides an important baseline for analyzing changes in the distribution and characteristics of urban and rural populations.

The Census Bureau most updated criteria for Urban-Rural classification was updated in December of 2022, changes were made to criteria classifying urban areas following the 2020 Census. Key changes to the Census Bureau's urban area concept and criteria include:

1. Adopting a housing unit density of 425 housing units per square mile as the primary criterion, and metric for determining whether a census block qualifies for inclusion in an urban area, replacing the use of population density. (The use of housing unit density allows the Census Bureau to more accurately account for areas with substantial concentrations of housing that are considered part of the urban landscape but have less than average people per housing unit or seasonal populations or both. The use of housing unit density also provides the ability to update urban areas between censuses. This is especially important in faster growing areas of the nation.)
2. The minimum population threshold to qualify as urban increased from 2,500 to 5,000
3. The Census Bureau no longer distinguishes different types of urban areas. (All areas, regardless of population size, are simply called "urban areas." Instead of those below 50,000 being "Urban Clusters". Further, the threshold was, to some extent, arbitrary; that is, as far as the Census Bureau has been able to determine from scholarship, there is no reason to assume that an urban area of just over 50,000 populations is fundamentally different in terms of economic and social functions and services than an area with just under 50,000 populations.) (Source – U.S. Census Bureau)

FTA will begin using these census determinations when making formula-based apportionments and allocations in FY 2024.

NORTPO's region accounts for 7 Urban areas out of Oklahoma's 52 total Urban Area's as defined by Federal Register / Vol. 87, No. 249 / Thursday, December 29, 2022. They are as follows:

- Alva, OK – Population = 5,145, Housing = 2,637.
- Blackwell, OK – Population = 6017, Housing = 3186.
- Enid, OK - Population = 50,194, Housing = 22,482.
- Guymon, OK – Population = 12,561, Housing = 4,629
- Perry, OK – Population = 4,445, Housing = 2,258.
- Ponca City, OK - Population = 24,990, Housing = 12,044.
- Woodward, OK - Population = 11,458, Housing = 5,737.

This makes up for 11.54 percent of the entire state's urban area. NORTPO's region is overwhelmingly rural, but consists of large amounts of transportation infrastructure for the entire state. An emphasis must be placed on funding for rural programs. An increased call for participation, and cooperation amongst these municipalities is vital to successful transportation infrastructure.

Urban vs Rural - Impact on Funding

Despite the Census nomenclature, FTA "urban transit" funds continue to be available only to those urban areas with populations above 50,000. Federal rural assistance programs use census derived data to distribute funds through grants. Grants are transfers of funds that recipients are legally committed to use for certain purposes in the public interest. Project grants distribute funds for uses related to a specific project. While formulas may be used to allocate project grants, funds must be used only for the intended project. The Formula Grants for Rural Areas program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach them. Within NORTPO every county/area is under the 50,000 threshold of funding for Rural Area grants except for Garfield County, specifically Enid.

Due to decades of disinvestment, around 13% of rural roads and 10% of off-system bridges, most of which are in rural areas, are in poor condition. The fatality rate on rural roads is also two times greater than on urban roads. Facing these sobering figures, the Biden Administration made supporting Americans living in rural areas a top priority. And with a total of $44 billion through the infrastructure law to help rural communities repair and improve their roads, bridges, airports, ports, and transit systems, USDOT is leading the charge to help rebuild rural transportation systems to benefit residents for decades to come. The Bipartisan Infrastructure Law, also referred to as the Infrastructure Investment and Jobs Act, which contains significant new funding for rural areas which include:

Active Funding Opportunities:

EV charging stations. National Electric Vehicle Infrastructure Formula Program ($5 billion): Provides funding to States to strategically deploy electric vehicle charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability. Discretionary Grant Program for Charging and Fueling Infrastructure ($2.5 billion): Competitive grant program to strategically deploy publicly accessible electric vehicle charging infrastructure and other alternative fueling infrastructure along designated alternative fuel corridors. At least 50 percent of this funding must be used for a community grant program where priority is given to projects that expand access to EV charging and alternative fueling infrastructure within rural areas, low- and moderate-income neighborhoods, and communities with a low ratio of private parking spaces. The law also makes the installation of EV charging infrastructure an eligible expense under the USDOT Surface Transportation Block Grant formula program. Additionally, the Bipartisan Infrastructure Law provides funding to USDOT, DOE, and EPA for the deployment of electric school buses and ferries, port electrification, a domestic supply chain for battery production, and battery recycling, among other EV-related initiatives.

Tribal Transportation Program Safety Fund

The Bipartisan Infrastructure Law (BIL), as enacted by the Infrastructure Investment and Jobs Act (Public Law 117-58), 4% of the available TTP funds are set aside to address transportation safety issues identified by federally recognized Indian tribes through a competitive, discretionary program. Projects are chosen whose outcomes will reduce fatal and serious injuries in transportation related incidents, such as motor vehicle crashes.

FHWA advocates the development of strategic transportation safety plans as a means for tribes to determine how transportation safety needs will be addressed in and around tribal communities.

Eligible projects for the TTP Safety Fund include:

- develop and update transportation safety plans
- safety data assessment, improvement, and analysis
- systemic roadway departure countermeasures
- infrastructure improvements and other eligible activities as listed in 23 U.S.C. 148(a)(4)

Culvert Removal, Replacement, and Restoration Program (Culvert AOP) Program

The National Culvert Removal, Replacement, and Restoration Grant Program (Culvert Aquatic Organism Passage (AOP) Program) is an annual competitive grant program that awards grants to eligible entities for projects for the replacement, removal, and repair of culverts or weirs that meaningfully improve or restore fish passage for anadromous fish.

Anadromous fish species are born in freshwater such as streams and rivers, spend most of their lives in the marine environment, and migrate back to freshwater to spawn.

The Culvert AOP Program focuses on two project categories as differentiated by structure type:

Projects to replace, remove, or repair culverts that would meaningfully improve or restore fish passage for anadromous fish.

Projects to replace, remove, or repair weirs that would meaningfully improve or restore fish passage for anadromous fish. With respect to weirs, the project may include: 1) infrastructure to facilitate fish passage around or over the weir; and 2) weir improvements.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) –

RAISE projects are rigorously reviewed and evaluated on statutory criteria of safety, environmental sustainability, quality of life, mobility and community connectivity, economic competitiveness and opportunity including tourism, state of good repair, partnership and collaboration, and innovation.

Half of the funding will go to projects in rural areas, and half of the funding will go to projects in urban areas. At least $15 million in funding is guaranteed to go towards projects located in Areas of Persistent Poverty or Historically Disadvantaged Communities, and projects located in these areas will be eligible for up to 100 percent federal cost share, as directed by Congress in the Bipartisan Infrastructure Law.

As was the case last year, the Department is encouraging applicants to consider how their projects can address climate change, ensure racial equity, and remove barriers to opportunity. The Department also intends to use the RAISE program to support wealth creation and the creation of good-paying jobs with the free and fair choice to join a union, the incorporation of strong labor standards, and training and placement programs, especially registered apprenticeships.

Rural Projects Initiative

There is a special program that is part of the Transportation Infrastructure Finance and Innovation Act (TIFIA) called the Rural Project Initiative (RPI).

TIFIA RPI provides flexible, low-interest (half the treasury rate), long-term loans to get transportation projects underway now – benefiting our communities and not collecting dust as plans on a shelf.

State Infrastructure Banks (SIBs)

Tribal and rural communities can also get loans for projects from State Infrastructure Banks (SIBs), which borrow funds from the Bureau on behalf of smaller entities that might not otherwise be qualified for a loan with one project. The SIB can then lend to a variety of projects and provide the same favorable terms as a traditional TIFIA loan for a larger project.

Regional Infrastructure Accelerators

Regional Infrastructure Accelerators could also be a viable option for rural communities. The grant program helps an agency or a group partnered with a public agency to set up regional “extensions” of the Bureau to incubate projects and get them prepared for financing sooner than they might otherwise be ready.

The Rural Surface Transportation Grant program,

Will invest a total of approximately $2 billion through 2026 for projects that improves highways, bridges, and tunnels, address highway safety, increase access to agricultural, commercial, energy, or freight facilities that support the economy, and bring flexible transit services to rural and Tribal areas.

Upcoming Funding Opportunities:

Rural & Tribal Infrastructure Advancement Pilot Program

The Bipartisan Infrastructure Law created a new grant program that will benefit rural and tribal communities. The Bureau is working on the implementation. Here are the highlights:

A $10 million, five-year pilot program to provide rural state, local, and tribal governments with:

- Technical, legal, and financial advisory assistance
- Evaluate potential projects to be delivered through alternative delivery through alternative delivery methods
- Pay for early development activities such as:
- Feasibility studies
- Revenue forecasting
- Preliminary engineering
- Environmental review

PROTECT Discretionary Grants

The purpose of these programs is to provide funds for resilience improvements through formula funding distributed to States; competitive planning grants to enable communities to assess vulnerabilities to current and future weather events and natural disasters and changing conditions, including sea level rise, and plan transportation improvements and emergency response strategies to address those vulnerabilities; and competitive resilience improvement grants to protect:

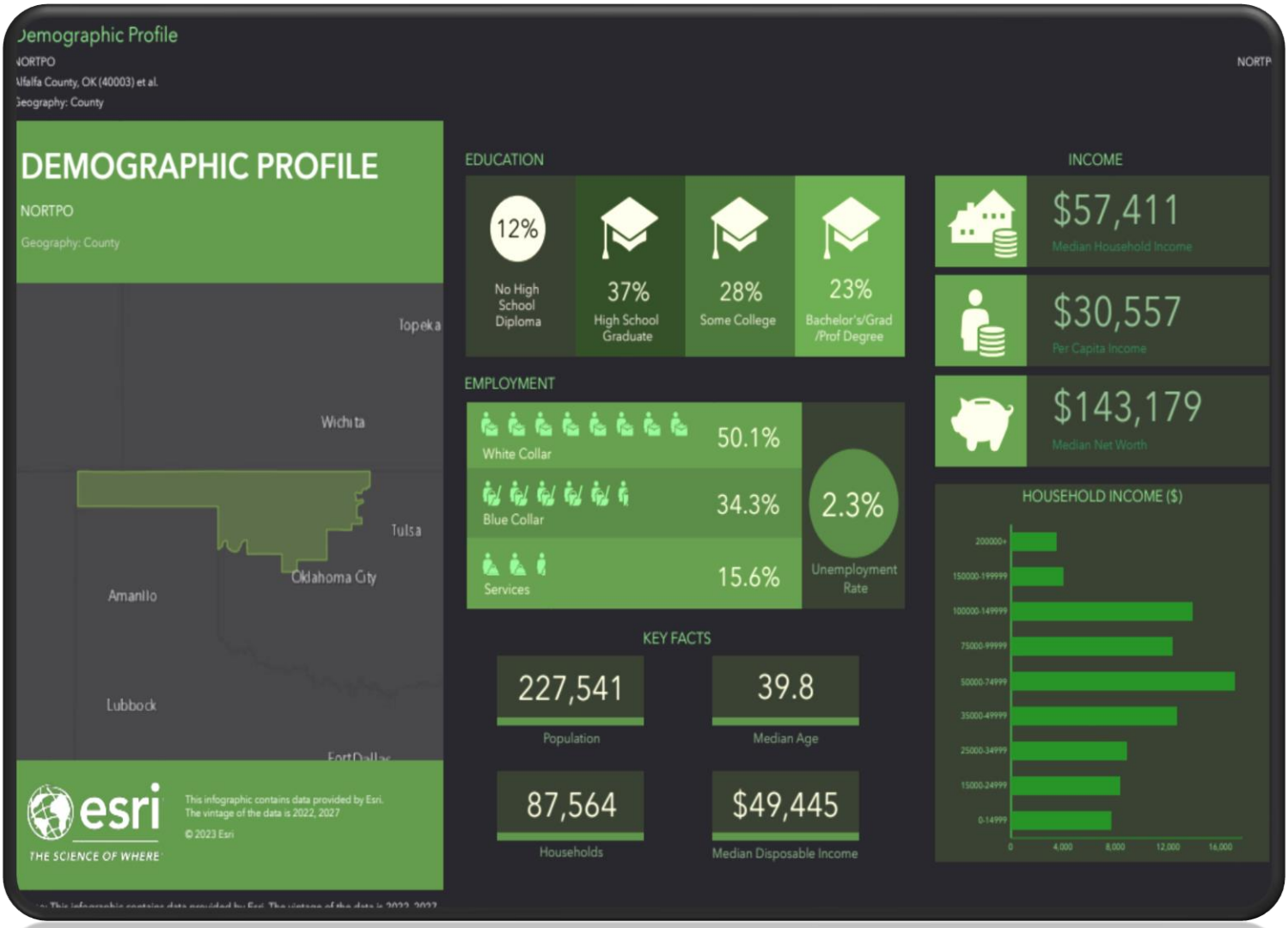
- Surface transportation assets by making them more resilient to current and future weather events and natural disasters, such as severe storms, flooding, drought, levee and dam failures, wildfire, rockslides, mudslides, sea level rise, extreme weather, including extreme temperature, and earthquakes;
- Communities through resilience improvements and strategies that allow for the continued operation or rapid recovery of surface transportation systems that serve critical local, regional, and national needs, including evacuation routes, and that provide access or service to hospitals and other medical or emergency service facilities, major employers, critical manufacturing centers, ports and intermodal facilities, utilities, and Federal facilities;
- Coastal infrastructure, such as a tide gate to protect highways, that is at long-term risk to sea level rise; • Natural infrastructure that protects and enhances surface transportation assets while improving ecosystem conditions, including culverts that ensure adequate flows in rivers and estuarine systems. (See 23 U.S.C. 176(b)(2); 176(c)(1)). Although near-term costs may be higher, investments in resilience projects and activities can reduce long-term, life cycle infrastructure costs by avoiding future damage, maintenance, and reconstruction.

New Rural Surface Transportation Grant Program, made possible by the President's infrastructure law, makes long overdue safety and state of good repair investments to transportation systems in rural areas across the nation. will invest a total of approximately $2 billion through 2026 for projects that improve highways, bridges, and tunnels, address highway safety, increase access to agricultural, commercial, energy, or freight facilities that support the economy, and bring flexible transit services to rural and Tribal areas. The Department received applications requesting approximately $10 billion in funding, far exceeding the nearly $300 million in 2022 funding available.

Mobility for Everyone - The project will increase economic opportunity and improve the quality of life for local residents by to promoting accessible, affordable, and equitable multimodal (transit, bike, etc.) transportation options for residents of all ages and abilities and to raise awareness that transportation is a basic social, economic, and health needs.

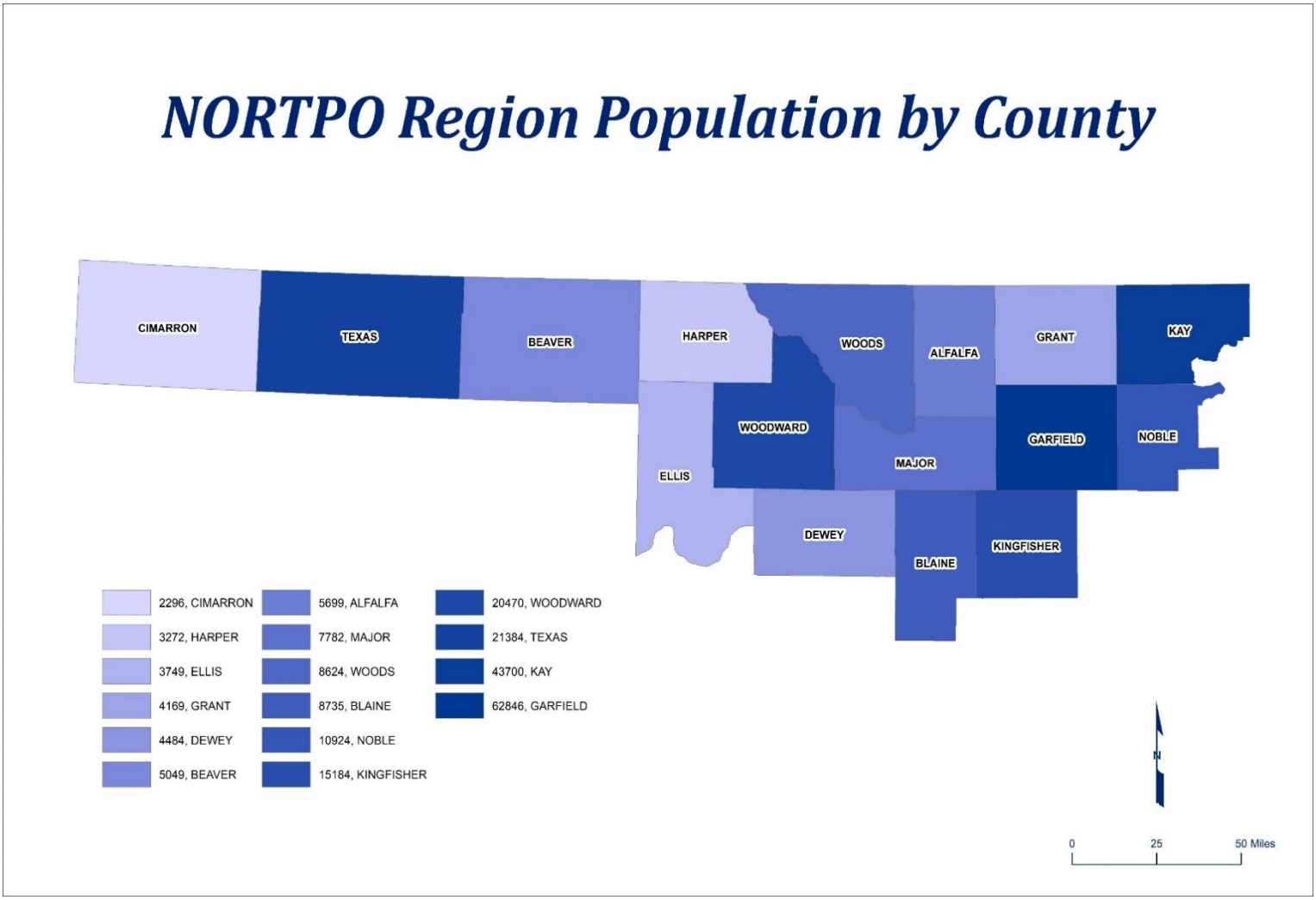
Demographic Trends

Understanding local demographic information is vital to help identify transportation disparities and inform the development of equitable transportation policies and projects. Further insight into the social, economic, and political dynamics of an area are vital to this plan. For example, if a community has a high percentage of low-income or minority residents, they may prioritize investments in affordable and accessible transportation options, such as public transit or bike-sharing programs, to serve those residents. Additionally, demographic information can help policy makers better understand the transportation needs and preferences of different groups and tailor transportation solutions to meet those needs in that specific region which helps inform public policy, community development, and business decisions.



Population

The total population of the NORTPO Region is 228,367 (2020), a population increase of 5,300, or 2.38%, from the year 2000, but a decrease of 5,365, or 2.30%, from 2010. Counties that have experienced a 5% or more increase in population are Garfield, Kay, Kingfisher, Texas, and Woodward. Of the counties that decreased in population of the 20-year period Noble County is the only county to not have decreased by more than 5%. (Table - 2.1)



(Source – 2020 Decennial Census)

Population by City within NORTPO --

NODA	
Alfalfa	**5,699**
Aline town, Alfalfa County	168
Amorita town, Alfalfa County	38
Burlington town, Alfalfa County	124
Byron town, Alfalfa County	37
Carmen town, Alfalfa County	360
Cherokee city, Alfalfa County	1,476
Goltry town, Alfalfa County	251
Helena town, Alfalfa County	1,537
Jet town, Alfalfa County	197
Blaine	**8,735**
Canton town, Blaine County	468
Geary city (part), Blaine County	994
Greenfield town, Blaine County	114
Hitchcock town, Blaine County	102

OEDA	
Beaver	
Beaver town, Beaver County	
Forgan town, Beaver County	
Gate town, Beaver County	
Knowles town, Beaver County	
Cimarron	
Boise City city, Cimarron County	
Keyes town, Cimarron County	
Dewey	
Camargo town, Dewey County	
Leedey town, Dewey County	
Oakwood town, Dewey County	
Putnam town, Dewey County	
Seiling city, Dewey County	
Taloga town, Dewey County	

Hydro town (part), Blaine County	927
Longdale town, Blaine County	186
Okeene town, Blaine County	1,090
Watonga city, Blaine County	2,690
Garfield	**62,846**
Breckenridge town, Garfield County	199
Carrier town, Garfield County	90
Covington town, Garfield County	472
Douglas town, Garfield County	51
Drummond town, Garfield County	455
Enid city, Garfield County	51,308
Fairmont town, Garfield County	132
Garber city, Garfield County	725
Hillsdale town, Garfield County	75
Hunter town, Garfield County	145
Kremlin town, Garfield County	247
Lahoma town, Garfield County	539
North Enid town, Garfield County	1,003
Waukomis town, Garfield County	1,349
Grant	**4,169**
Deer Creek town, Grant County	78
Jefferson town, Grant County	9
Lamont town, Grant County	301
Manchester town, Grant County	90
Medford city, Grant County	932
Nash town, Grant County	192
Pond Creek city, Grant County	885
Renfrow town, Grant County	15
Wakita town, Grant County	311
Kay	**43,700**
Blackwell city, Kay County	6,085
Braman town, Kay County	160
Kaw City city, Kay County	325
Kildare town, Kay County	86
Newkirk city, Kay County	2,172
Ponca City city, Kay County	24,424
Tonkawa city, Kay County	3,015
Kingfisher	**15,184**
Cashion town (part), Kingfisher County	850
Dover town, Kingfisher County	400
Hennessey town, Kingfisher County	2,151
Kingfisher city, Kingfisher County	4,903
Loyal town, Kingfisher County	71
Okarche town (part), Kingfisher County	1,141
Major	**7,782**
Ames town, Major County	193
Cleo Springs town, Major County	287
Fairview city, Major County	2,740
Meno town, Major County	198
Ringwood town, Major County	401
Noble	**10,924**
Billings town, Noble County	578
Marland town, Noble County	184
Morrison town, Noble County	723
Perry city, Noble County	4,484
Red Rock town, Noble County	245

Ellis
- Arnett town, Ellis County
- Fargo town, Ellis County
- Gage town, Ellis County
- Shattuck town, Ellis County

Harper
- Buffalo town, Harper County
- Laverne town, Harper County
- May town, Harper County
- Rosston town, Harper County

Texas
- Goodwell town, Texas County
- Guymon city, Texas County
- Hardesty town, Texas County
- Hooker city, Texas County
- Optima town, Texas County
- Texhoma town, Texas County
- Tyrone town, Texas County

Woods
- Alva city, Woods County
- Avard city, Woods County
- Capron town, Woods County
- Dacoma town, Woods County
- Freedom town, Woods County
- Waynoka city, Woods County

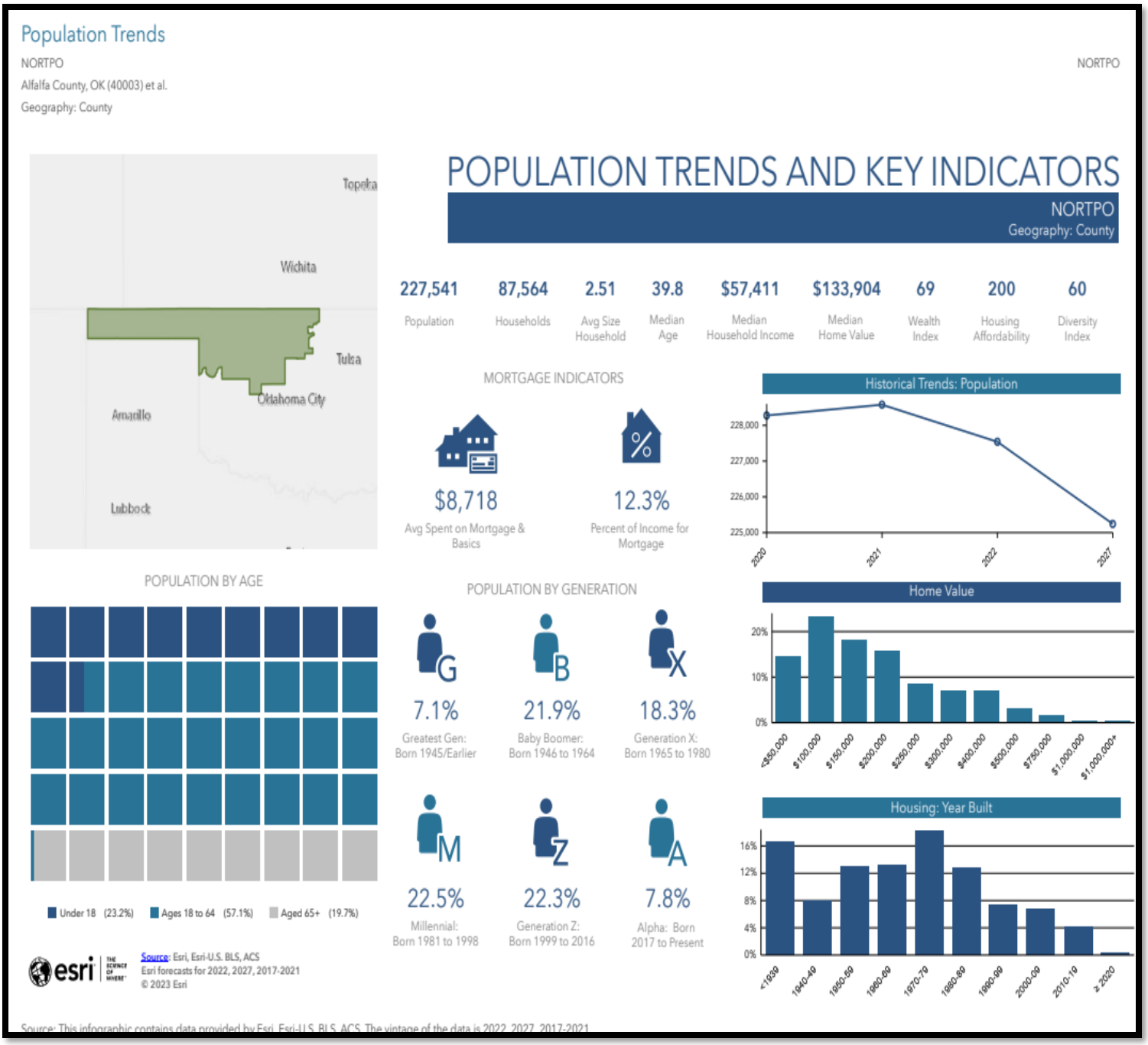
Woodward
- Fort Supply town, Woodward County
- Mooreland town, Woodward County
- Mutual town, Woodward County
- Sharon town, Woodward County
- Woodward city, Woodward County

(Source: Census 2020)

Age and Sex -

Transportation is crucial to keeping older adults independent, healthy and connected to friends, family and health care providers. However, older residents' transportation needs differ based on their health, income, marital status, age, ethnicity and whether they live in the city, town, or rural area. The needs of this subset of the population will influence the demand for public transportation services. Knowing the age makeup of residents helps elected officials make more informed decisions for the future since it gives them a better understanding of the needs likely present themselves. For example, if your population is shown to be aging then you may evaluate your current social programs aimed at care for the elderly to determine whether you are prepared to handle the expected numbers; with that too, you may determine that since the younger population, including children and young adults, is not growing so you consider economic development activities that would encourage migration to your county which can increase population and economic activity.

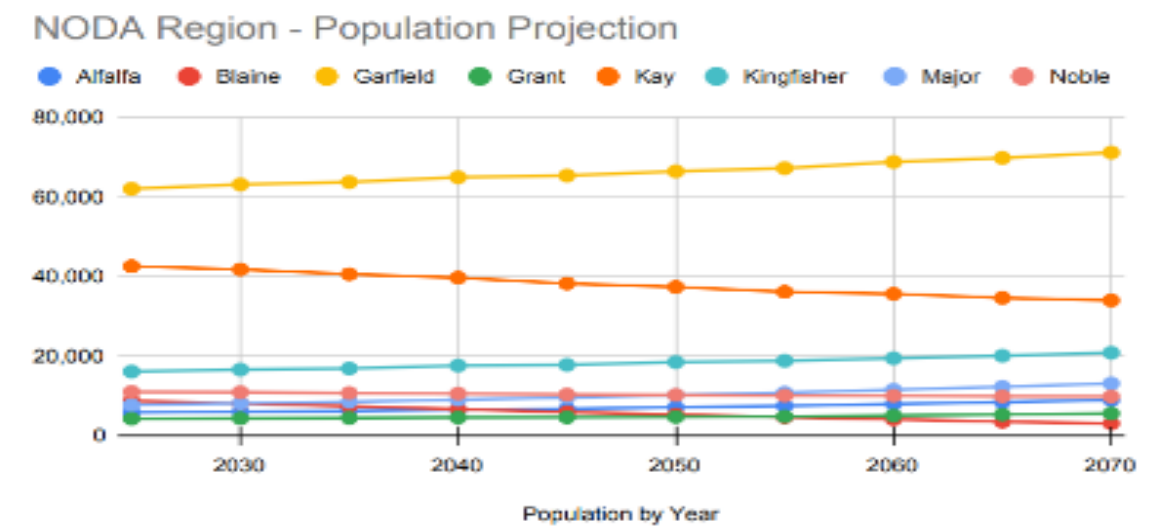
Population data obtained from the 2020 Census shows 83% of NORTPO population is below 65, and 17% of NORTPO population is above 65. The majority of the population is between 20 and 64 making up 55% percent of the NORTPO region. The Sex makeup of the area consists of 51 percent male, and 49 percent female. (Table - 2.2) NORTPO's region is uniquely situated for both of these examples with a median age of 39.8 which is nearly 3 years older than the State of Oklahoma's Median age of 37.2, and 1 year older than the nations median age of 38.8. Priority should be placed with development projects that encourage migration into the region with new economic opportunities, and also services that ensure an aging population is able to stay in the area for all of their needs.



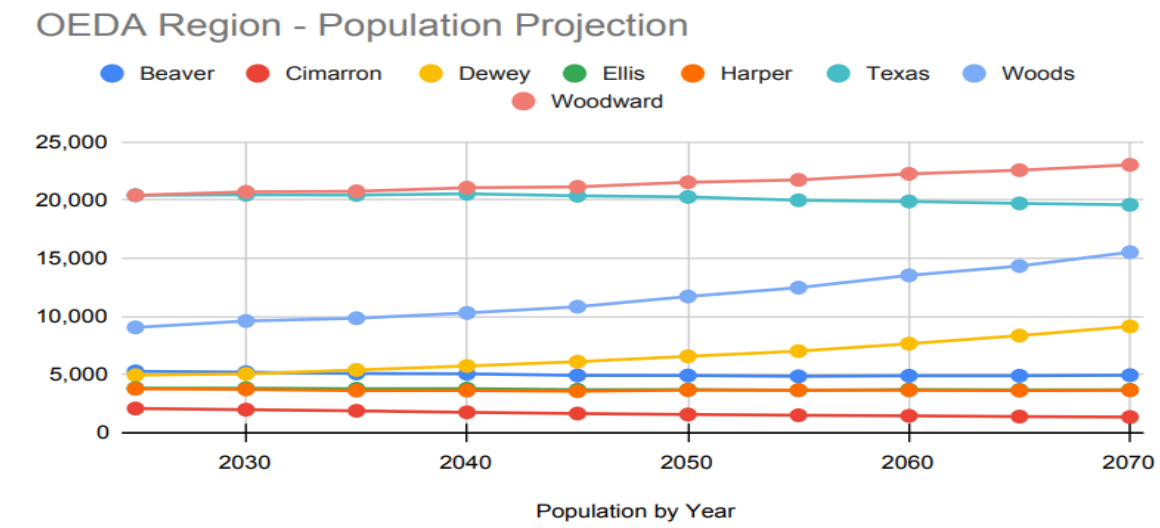
Trends and Growth -

6 Counties in NORTPO had growth trends from 2010-2020 which includes Alfalfa, Garfield, Kingfisher, Major, Texas, and Woodward. These trends are likely to continue. According to Oklahoma Works estimate, 9 counties are expected to grow in population which includes Beaver, Blaine, Cimarron, Dewey, Garfield, Grant, Harper, Kingfisher, and Major. 2 cities specifically are in the top 20 growing cities in all of Oklahoma, Guymon, and Enid. Guymon population change from 2010-2020 is +2,061, and population change from 2010-2020 is 18.9%. Guymon is currently the 36th largest city in Oklahoma. Enid population change from 2010-2020 is +3,182, and population change from 2010-2020 is 6.6%. Enid is currently the 9th largest city in Oklahoma. We can expect both of these cities to maintain their growth rate due to declining counties nearby, and their attractive qualities that are mentioned in the regional destinations section below. NORTPO's region makes up for 5.77 percent of total Oklahoma State population, but makes up more than 27% in total area which leaves more opportunity for population growth and development of the region. The county with the highest projected increase is Garfield with 755 which hosts Enid. Below are tables for both short and long term projections of population in the region. Oklahoma Department of Commerce's State Demographic Report in 2023 shows that through the year 2070 that 10 of the 16 counties in NORTPO's region are expected to increase population with a net increase of

19,245 people, equaling 8.43% increase in population over the next 50 years. For the timeline, of the plan by 2045 the projected population is 230,966 which is an increase of 2,599 people for a percent increase of 1.14%.



Major	7,664	8,139	476
Noble	11,042	10,729	-312
Texas	19,772	18,773	-999
Woods	8,673	8,606	-67
Woodward	19,764	19,539	-226
NORTPO	226,217	226,339	123



Northwest Oklahoma - Population Projections, Through 2070

State Demographic Report, 2023, https://www.okcommerce.gov/wp-content/uploads/Oklahoma-State-and-County-Population-Projections-Through-2070.pdf

METHODOLOGY: Population in the current year + Births in the current year - Deaths in the current year + Net migration = Population projection for the next year. Population projection for the next year + estimated births in the current year, based on fertility rates and # of women of childbearing age - Deaths in the current year + Net migration = Population projection for the following year

NODA's Region		ODOC - Projected Population's										50 Year Change 2020-2070	
County	2020 Population	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	Change	Rate of Change
Alfalfa	5,699	5,862	6,047	6,224	6,537	6,739	7,174	7,492	7,976	8,456	8,996	3,297	57.85%
Blaine	8,735	8,752	8,137	7,406	6,695	5,934	5,328	4,671	4,136	3,540	3,101	-5,634	-64.50%
Garfield	62,846	62,012	63,096	63,690	64,905	65,326	66,381	67,181	68,755	69,746	71,110	8,264	13.15%
Grant	4,169	4,294	4,387	4,474	4,598	4,643	4,730	4,840	5,083	5,335	5,600	1,431	34.32%
Kay	43,700	42,573	41,769	40,581	39,681	38,233	37,364	36,149	35,622	34,627	33,990	-9,710	-22.22%
Kingfisher	15,184	16,130	16,619	16,902	17,619	17,805	18,504	18,821	19,462	20,089	20,851	5,667	37.32%
Major	7,782	7,788	8,153	8,520	9,051	9,590	10,203	10,810	11,543	12,290	13,130	5,348	68.72%
Noble	10,924	11,006	10,929	10,720	10,578	10,361	10,234	10,070	10,030	9,917	9,871	-1,053	-9.64%
TOTAL -	159,039	158,417	159,137	158,517	159,664	158,631	159,918	160,034	162,607	164,000	166,649	7,610	4.78%

OEDA's Region		ODOC - Projected Population's										50 Year Change 2020-2070	
County	2020 Population	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	Change	Rate of Change
Beaver	5,049	5,283	5,211	5,104	5,070	4,935	4,927	4,855	4,905	4,906	4,952	-97	-1.92%
Cimarron	2,296	2,092	1,987	1,891	1,761	1,657	1,577	1,509	1,459	1,397	1,356	-940	-40.94%
Dewey	4,484	4,958	5,067	5,406	5,745	6,116	6,575	7,020	7,659	8,355	9,148	4,664	104.01%
Ellis	3,749	3,834	3,833	3,789	3,793	3,701	3,714	3,654	3,718	3,687	3,695	-54	-1.44%
Harper	3,272	3,783	3,737	3,625	3,635	3,572	3,674	3,679	3,660	3,627	3,659	387	11.83%
Texas	21,384	20,428	20,456	20,438	20,546	20,373	20,277	19,988	19,888	19,718	19,597	-1,787	-8.36%
Woods	8,624	9,060	9,613	9,846	10,304	10,838	11,718	12,477	13,535	14,336	15,524	6,900	80.01%
Woodward	20,470	20,412	20,711	20,758	21,069	21,143	21,538	21,737	22,260	22,571	23,032	2,562	12.52%
TOTAL -	69,328	69,850	70,615	70,857	71,923	72,335	74,000	74,919	77,084	78,597	80,963	11,635	16.78%

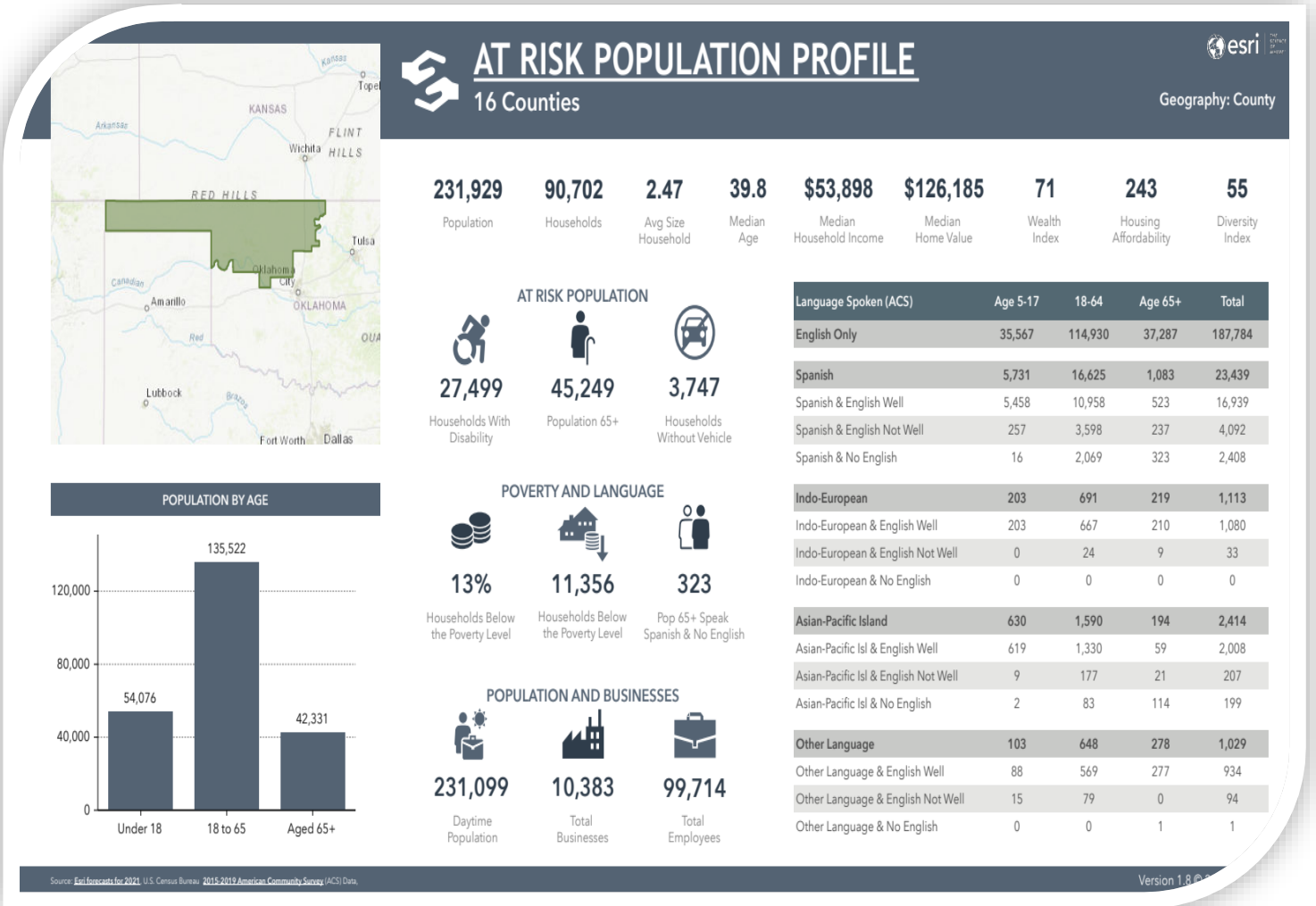
Combined Total - Both Regions			
		19,245	8.43%

Disability

Transportation infrastructure, including roads, public transportation systems, and airports, plays a crucial role in the ability of individuals with disabilities to access employment, education, healthcare, and other vital resources. Inadequate transportation infrastructure can create barriers for individuals with disabilities, limiting their mobility and independence. On the other hand, accessible transportation infrastructure, including sidewalks, curb ramps, elevators, public transit, and designated parking spots, that are compliant with the Americans with Disabilities Act (ADA), can greatly improve the quality of life for individuals with disabilities. Additionally, transportation services that are specifically designed for individuals with disabilities, such as paratransit, can provide critical support for those who are unable to use traditional forms of transportation. Therefore, it's important to ensure that transportation infrastructure is designed and maintained in a way that is inclusive and accessible to all users, including individuals with disabilities.

The Americans with Disabilities Act of 1990 (ADA) is a federal law which requires accessible public transportation services for persons with disabilities, including complementary or supplemental paratransit services in areas where fixed route transit service is operated. Expands definition of eligibility for accessible services to persons with mental disabilities, temporary disabilities, and the conditions related to substance abuse. The Act is an augmentation to, but does not supersede Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of disability against otherwise qualified individuals in programs receiving federal assistance.

The number of citizens in the NORTPO region with a disability is 37,768 people. 16.5% of people in the region have a disability which is slightly below the state of Oklahoma's total of 17.2% with a disability. (Table – 2.3)



Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	35,567	114,930	37,287	187,784
Spanish	5,731	16,625	1,083	23,439
Spanish & English Well	5,458	10,958	523	16,939
Spanish & English Not Well	257	3,598	237	4,092
Spanish & No English	16	2,069	323	2,408
Indo-European	203	691	219	1,113
Indo-European & English Well	203	667	210	1,080
Indo-European & English Not Well	0	24	9	33
Indo-European & No English	0	0	0	0
Asian-Pacific Island	630	1,590	194	2,414
Asian-Pacific Isl & English Well	619	1,330	59	2,008
Asian-Pacific Isl & English Not Well	9	177	21	207
Asian-Pacific Isl & No English	2	83	114	199
Other Language	103	648	278	1,029
Other Language & English Well	88	569	277	934
Other Language & English Not Well	15	79	0	94
Other Language & No English	0	0	1	1

Poverty -

7,415 of those people with a disability in the area are at or below the poverty level, which equals a 19.6% poverty rate for those with a disability, this is 5 percent higher than the average poverty level of the entire NORTPO region. (Table Below) Disabled people are typically more likely to live in poverty, due to pervasive discrimination and barriers to economic security and upward mobility. The Census's Supplemental Poverty Measure found that 21.6 percent of disabled people were considered poor compared to the rest of the nation with just over 10 percent of people in poverty without disabilities.

Disability and Poverty Relationship in NORTPO Region

County	Total:	Under 18: With a disability:	Income in the past 12-months below poverty level	18 to 64 years: With a disability:	Income in the past 12-months below poverty level2	65 years and over: With a disability:	Income in the past 12-months below poverty level3
Alfalfa	4,680	87	31	403	92	370	26
Beaver	4,990	64	5	260	52	428	11
Blaine	7,491	132	58	562	124	635	53
Cimarron	2,258	32	7	212	19	326	30
Dewey	4,466	142	75	442	52	242	35
Ellis	3,756	50	9	411	129	328	36
Garfield	59,929	835	304	5,878	1,302	3,829	487
Grant	4,058	137	38	366	53	361	102
Harper	3,268	17	12	310	150	210	47
Kay	43,110	700	179	4,464	1,160	3,124	361
Kingfisher	15,069	94	31	912	195	806	41
Major	7,593	86	52	618	163	703	110
Noble	10,810	151	2	1,019	217	762	98
Texas	21,011	210	123	1,120	267	798	93
Woods	7,880	47	2	690	138	615	19
Woodward	19,531	403	84	1,819	419	1,558	322
NORTPO	219,900	3187	1012	19486	4532	15095	1871

(Source – ACS – 2021 5 Year Estimate)

Veterans -

Veterans make up a significant amount of the total of disabled people. 5,140 of the people diagnosed with a disability in the NORTPO area are veterans which equals 13.6% of all of those disabled. The majority of those veterans with a disability are male at 92.41%. The percent of those disabled gradually increases with age from 7.13% for 18 to 34 year olds, 15.54% for 35 to 54 year olds, 18.62% for 55 to 64 year olds, 28.64% for 65 to 74 year olds, and 30.08% for 75 years old and over. (Table – 2.4)

Age/Sex -

The majority of those disabled in NORTPO are within the 35-64-year-old range with 7,607 total for men, and 7,408 for women within that age range. The total number of women disabled is 17,955, and total number of men is 19,985 which is due to the slightly higher male population, more than indicative of one sex having higher risk of disability. The state of Oklahoma has 332,355 disabled men, and 339,393 disabled women, and matches the same trend as NORTPO of the higher populated sex, 1,980,227 women to 1,925,045 men, thus having more total disabled people for that sex with the higher population. (Table – 2.5, 2.6)

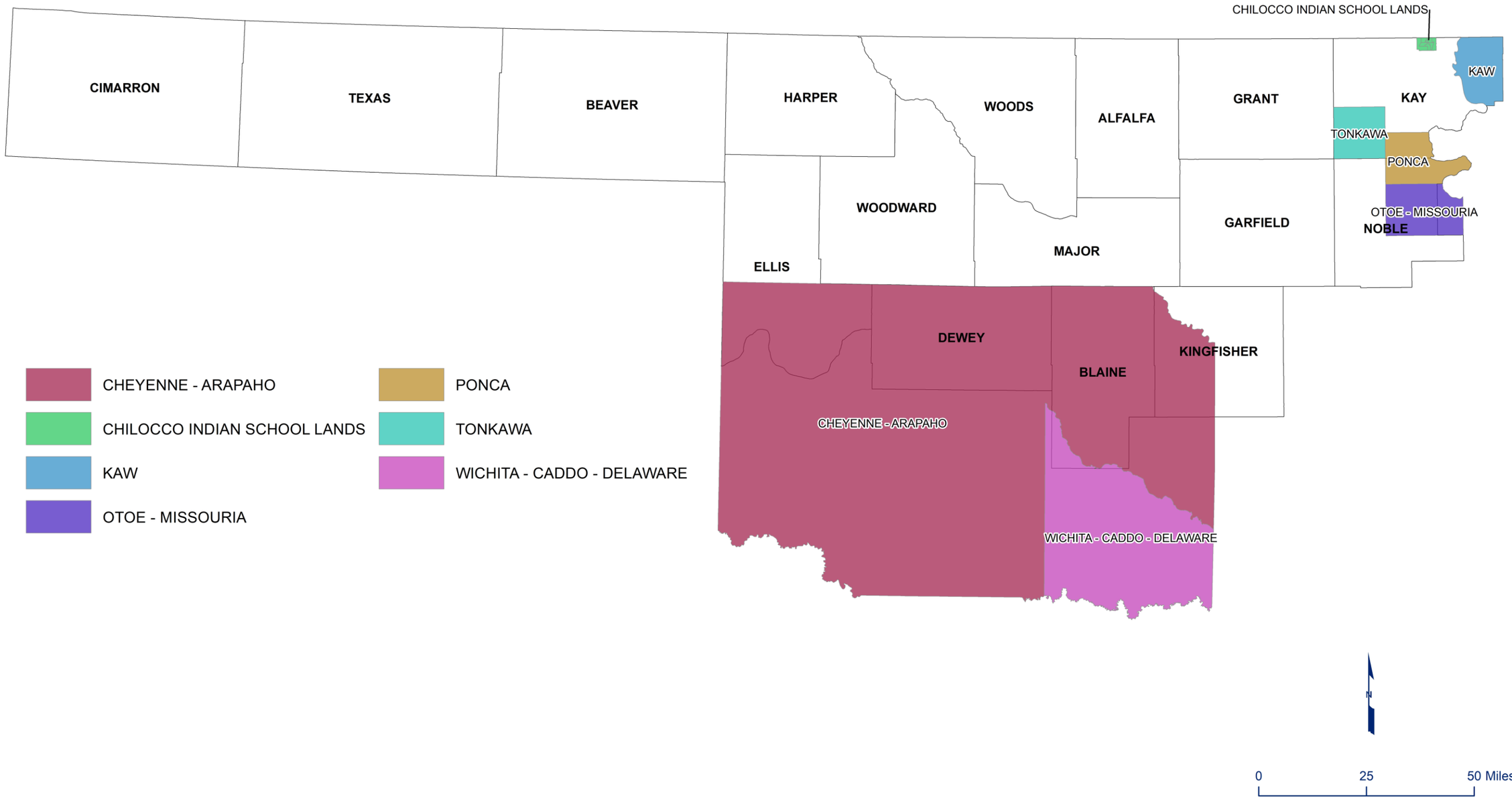
Race/Ethnicity

Understanding a regions racial, and ethnic makeup is important for transportation planning because it can help identify and address any disparities or discrimination that may exist within the community. Additionally, it can also help in understanding the cultural background of the region, and cultural nuances and sensitivities. There has previously been a history of racial discrimination in the development and maintenance of transportation infrastructure in the United States. Historically, transportation infrastructure such as highways and public transit systems have often been built in ways that have disproportionately affected communities of color, by cutting through their neighborhoods and disrupting the social and economic fabric of those communities. Communities of color have often been underrepresented in the decision-making processes related to transportation infrastructure, which has led to projects that do not meet the needs of those communities. This history of discrimination and lack of representation has led to disparities in access to transportation and mobility for communities of color, which can have negative impacts on their economic and social well-being. These impacts have had long-term effects on those communities making it difficult for people to access jobs, healthcare, and other essential services. Additionally, the lack of investment in transportation infrastructure in these communities can also contribute to a cycle of poverty and disinvestment from social life. Areas with improved infrastructure attract people, and allow for more long term economic opportunities, and competitiveness within a community. Increased projects into rural areas leads to a more diverse and sustainable economic environment to spillover in the region.

The racial and ethnic population makeup is 15.63% Hispanic or Latinx, 69.73% White alone, 2.17% African American alone, 4.01% Native American or Alaskan Native alone, 0.78% Asian alone, 1.41% Native Hawaiian and Pacific Islander alone. The racial and ethnic background has become increasingly diversified. Since, 2010 population of one race alone has decreased by 20,297, and white alone has decreased by 23,305. This trend has been continuing since 2000 in nearly every racial/ethnic category. (Table Below) Although the area has been diversifying as a whole, it is largely concentrated in the more urban areas. Specific counties with more than 1,000 Hispanic, or Latino citizens such as Beaver, Garfield, Kay, Texas, Kingfisher, and Woodward counties. Also Garfield, Kay, Texas, Kingfisher, and Woodward counties have roughly 5,000 people who are not just white alone. (Table – 2.7)

Race and Ethnicity						
	2000		2010		2020	
	NORTPO	Oklahoma	NORTPO	Oklahoma	NORTPO	Oklahoma
Total:	231,067	3,450,654	230,394	3,675,339	228,367	3,959,353
Hispanic or Latino	15,634	179,304	24,533	302,167	35,683	471,931
Not Hispanic or Latino	215,433	3,271,350	205,861	3,373,172	192,684	3,487,422
Population of one race	210,218	3,294,669	199,131	3,140,566	178,834	3,113,743
White alone	195,437	2,556,368	182,536	2,559,664	159,231	2,407,188
Black or African American alone	4,721	260,968	4,491	263,078	4,953	283,242
American Indian and Alaska Native alone	8,391	273,230	9,409	249,870	9,164	311,890
Asian alone	1,158	46,767	1,464	60,475	1,787	89,653
Native Hawaiian and Other Pacific Islander alone	407	2,372	971	3,787	3,216	8,168
Some other race alone	104	82,898	260	3,692	483	13,602
Population of two or more races	5,215	155,985	6,730	232,606	13,850	373,679

Regional Tribal Areas



Languages -

For planning purposes, an individual who experiences Limited English Proficiency (LEP) is any person, of any language, over the age of 5, who reports speaking a language other than English and speaks English less than "very well". (Table Below) This identifies the primary languages spoken at home in the NORTPO region and what percentage of those persons identify as experiencing LEP. According to the 2015-2019 ACS five-year averages, 187,784 persons, or 87.03%, of the NORTPO region reports speaking English only at home while 27,995 persons, or 12.97%, report speaking a language other than English. Of those who reported speaking a language other than English 12,777 persons, or 45.64%, reported they speak English less than "very well". Based on our analysis of the available ACS data, 5.92% of the NORTPO population age 5 years and older qualify as LEP. Spanish was the second most spoken language at 10.86% of the total. In these communities it is more important to ensure we have alternative readings, and signage on our transportation related projects for those with limited English proficiency. (Table - 2.8)

Languages Spoken by NORTPO Population

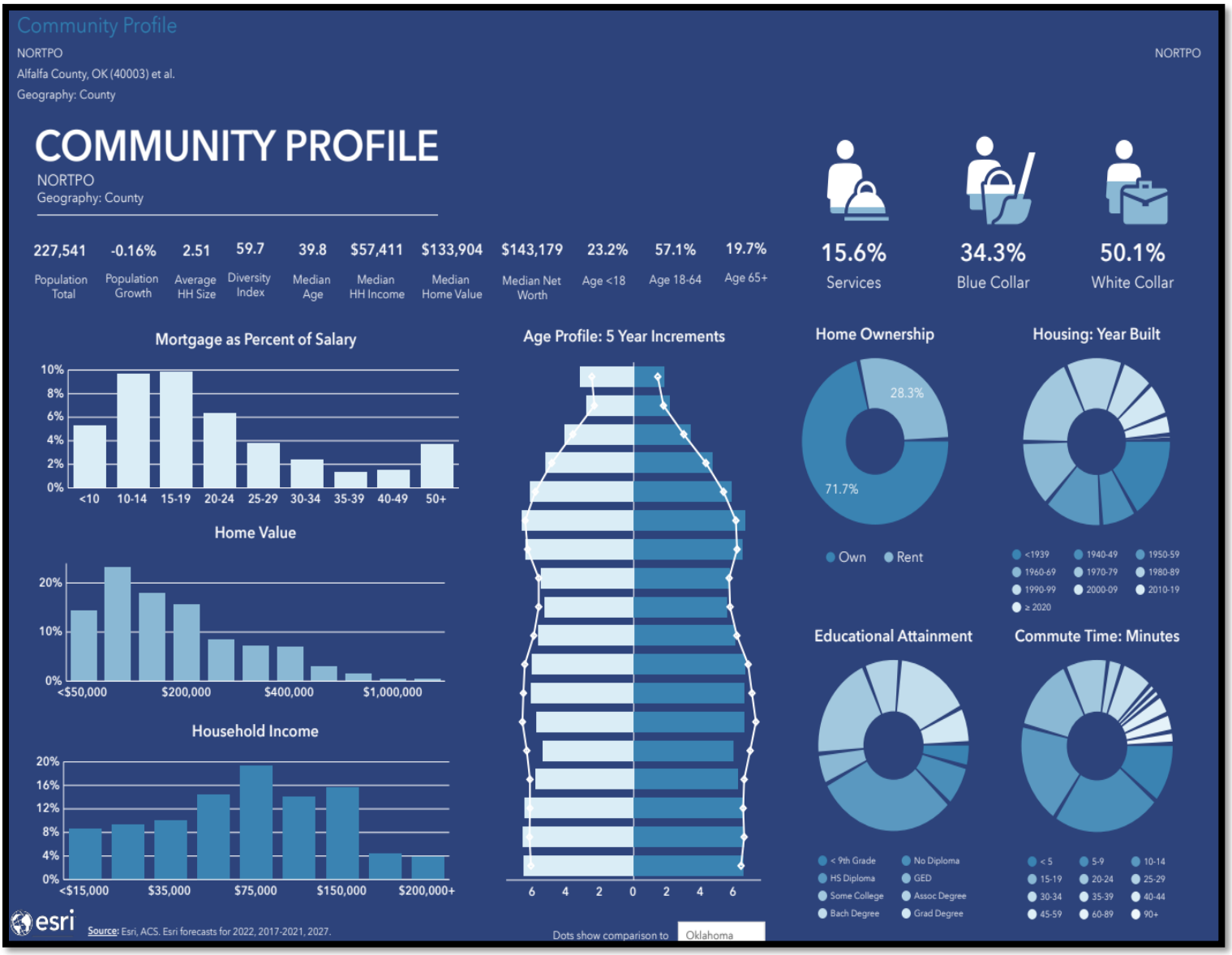
	NORTPO Population	Percent of Total	Total LEP*	Percent of Total**
Population 5 years and over	**215,779**			
English only	187,784	87.03%		
Speaks Language other than English	**27,995**	**12.97%**		
Speaks English less than "very well"			***12,777***	**5.92%**
Spanish	23,439	10.86%		
Speaks English less than "very well"			10,884	5.04%
Other Indo-European languages	1,113	0.52%		
Speaks English less than "very well"			162	0.08%
Asian and Pacific Islander languages	2,414	1.12%		
Speaks English less than "very well"			1,420	0.66%
Other languages	1,029	0.48%		
Speaks English less than "very well"			311	0.14%
		Total LEP	***12,777***	***5.92%***

*LEP = Speaks English less than "very well"

** A percentage of "population 5 years and over"

Economic Trends

Transportation Infrastructure is directly linked to the economic development and growth of an area by acting as a catalyst for the development of poverty alleviating solutions, providing access to basic needs such as education, food resources, health care, job opportunities, etc. while also increasing productivity and improving the quality of life for many communities. When Transportation systems are not operating properly, the chain of production is disrupted. This disruption hinders development, which causes economic deficit and, in turn, brings low standards of living. Infrastructure is the backbone of a healthy economy, that enables efficient trade, connects workers to jobs, and also protects us from unpredictable environmental impacts. Clean energy via public transit can also reduce greenhouse gas emissions. Transportation also has a social impact, for example, when a community lacks transportation infrastructure like roads, or transit services it means that the people from that community are unable to travel to other locations, or places where job and social networking opportunities are available, as well as quality health care facilities. Lack of transportation infrastructure inhibits any ability to contribute to the economic activity of the municipality in which people live, and the area at large. Rural transportation networks are critically important for domestic production and export of agriculture, mining, and energy commodities. Rural roads account for a significant proportion of total lane miles in Oklahoma. Ongoing demographic and cultural changes, such as the aging and diversification of our society, underscore the need for new, and constant updates to our transportation systems to better connect people to their communities in our region.



Educational Attainment

Public transportation infrastructure is vital to students who may have difficulty getting to and from school without it. Adequate transportation helps level the playing field by enabling greater access to lower-income students to not only schools, but resources such as libraries. All of these schools, and technology centers in NORTPO have an influx of students during the fall and spring semesters as well which puts more stress on transportation systems to and from all of these locations. Increased access to, and from these schools as well as other development projects would benefit the overall economic wellness of the region.

Higher Education -

The Bachelor's degree or higher average percentage throughout all of NORTPO is 22.35% which is nearly 6% less than the 27.9 percent of people in Oklahoma that have a Bachelor's Degree or higher which is already 7% less than the United States total of 35% with Bachelor's degree or higher. (Source - 2021 American Community Survey 1-Year Estimates) Although, NORTPO has a low average degree percentage the area has been increasing its average percentage of people with a degree every decennial census. 14 counties increased their percentage of the population with a Bachelor's degree or higher from the previous 2010 Census. 12 of those counties (Alfalfa, Beaver, Blaine, Dewey, Garfield, Grant, Kingfisher, Major, Noble, Texas, and Woodward) we're an increase from both 2010, and 2000 census data. 2 counties (Cimarron, and Harper) had an increase in population with a Bachelor's or higher since the 2010 Census. Only 2 counties had a decrease from the 2010 census (Ellis, and Kay), but both of those are still net increases from the 2000 census. The rural makeup of the region is largely the cause for the lower percentage of college graduates, but as population has shifted the percentage has continued to rise.

Degree by County in NORTPO region - Population 25 Years and Older:

County	Bachelor's 2020 ≤		Bachelor's 2010 ≤		Bachelor's 2000 ≤	
	Number	%	Number	%	Number	%
Alfalfa	965	22.50%	769	17.90%	677	14.90%
Beaver	824	23.30%	683	17.90%	686	17.60%
Blaine	1,355	19.40%	1,321	15.90%	1,137	14.00%
Cimarron	410	26.60%	286	16.90%	368	17.70%
Dewey	666	20.90%	640	19.20%	549	16.60%
Ellis	563	20.30%	671	23.30%	560	19.20%
Garfield	9,466	23.30%	8,473	21.80%	7,461	19.60%
Grant	661	22.20%	668	20.80%	567	16.20%
Harper	502	19.50%	422	17.10%	481	19.20%
Kay	5,683	19.30%	6,099	19.90%	5,692	18.30%
Kingfisher	2,365	23.20%	1,652	17.10%	1,446	16.10%
Major	1,035	20.10%	862	16.40%	748	14.40%
Noble	1,677	21.80%	1,372	17.50%	1,206	15.80%
Texas	3,270	26.40%	2,413	20.30%	2,084	17.70%
Woods	1,627	29.40%	1,604	28.50%	1,420	23.70%
Woodward	2,665	19.40%	2,302	17.40%	1,823	15.20%

(Source - ACS 5-Year Estimates from 2000, 2010, 2020.)

Early Childhood Education -

There are 189 PK-12 schools in the NORTPO region making up 41,830 total student enrollments as of 2022. (Table 2.9)

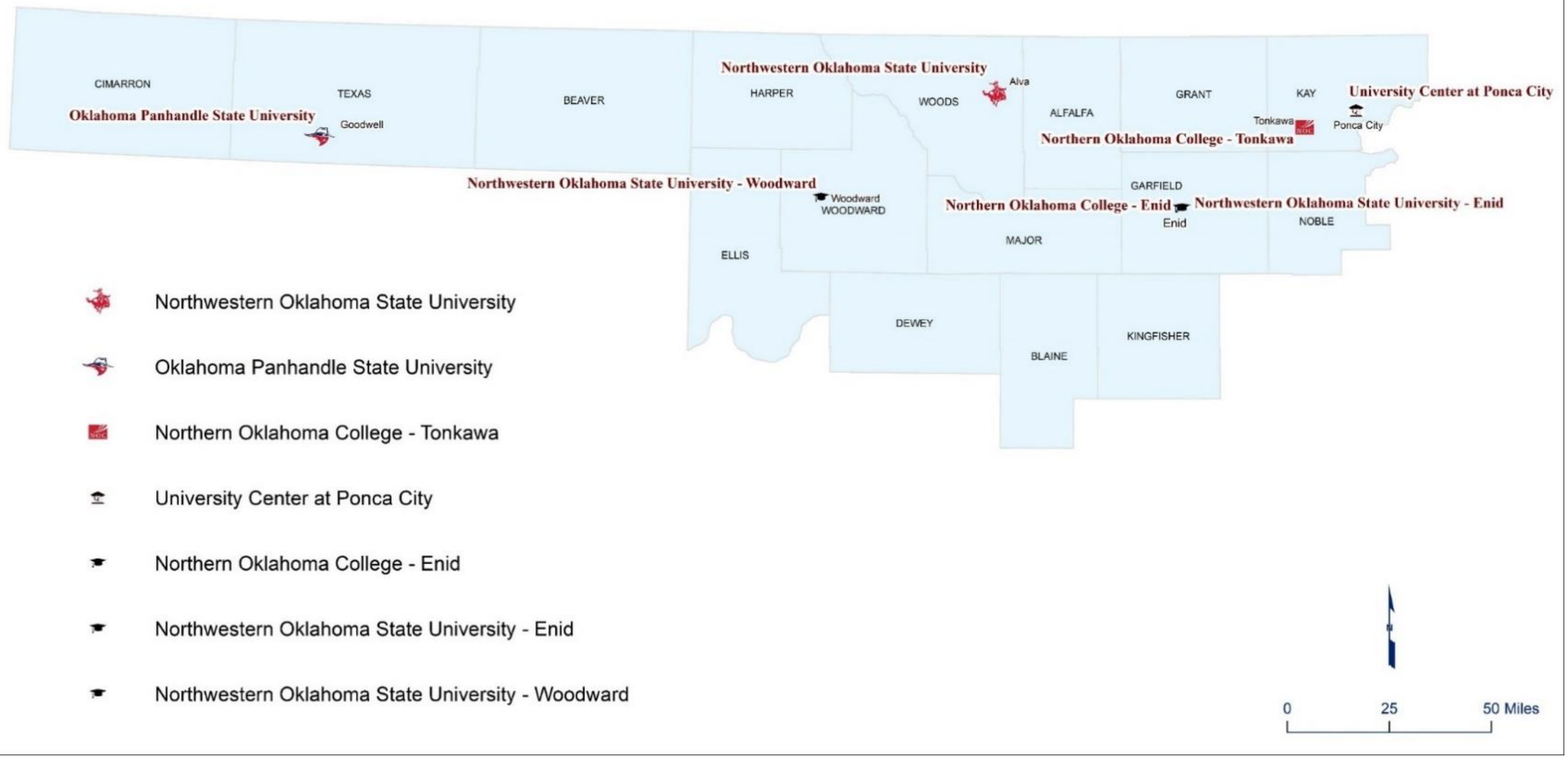
Universities/Colleges -

There are 2 Universities (Northwestern Oklahoma State University [NOSU] with campuses in Alva, and Enid, as well as, Oklahoma Panhandle State University [OPSU] in Goodwell), and 1 2-year college within the NORTPO (Northern Oklahoma College [NOC] with campuses in Tonkawa, and Enid). 4 counties host these schools, Garfield County, Kay County, Texas County, and Woods County. Both counties that are the primary campus hosts for the 4-year universities are well above the NORTPO average person's obtaining a Bachelor's degree with Woods County leading the region at 29.4 percent, and Texas County 3rd within the region with 26.4 percent. (Map of University and Colleges Below) The enrollment numbers for the 3 schools are NOC – 2,997, NOSU - 1,791, OPSU - 1,294. (Source – National Center for Education Statistics, 2022). This makes up only 3.2 percent of total students enrolled in all Oklahoma postsecondary institutions which is 189,214. Currently, among all Oklahoma residents enrolled in college, 14.2% leave the state to attend school. There is also a University Center in Ponca City that is used for providing multiple degree programs from Oklahoma Colleges, serving 100s of students per semester offering a full range of degrees from Associates, Bachelors, and Master degree choices.

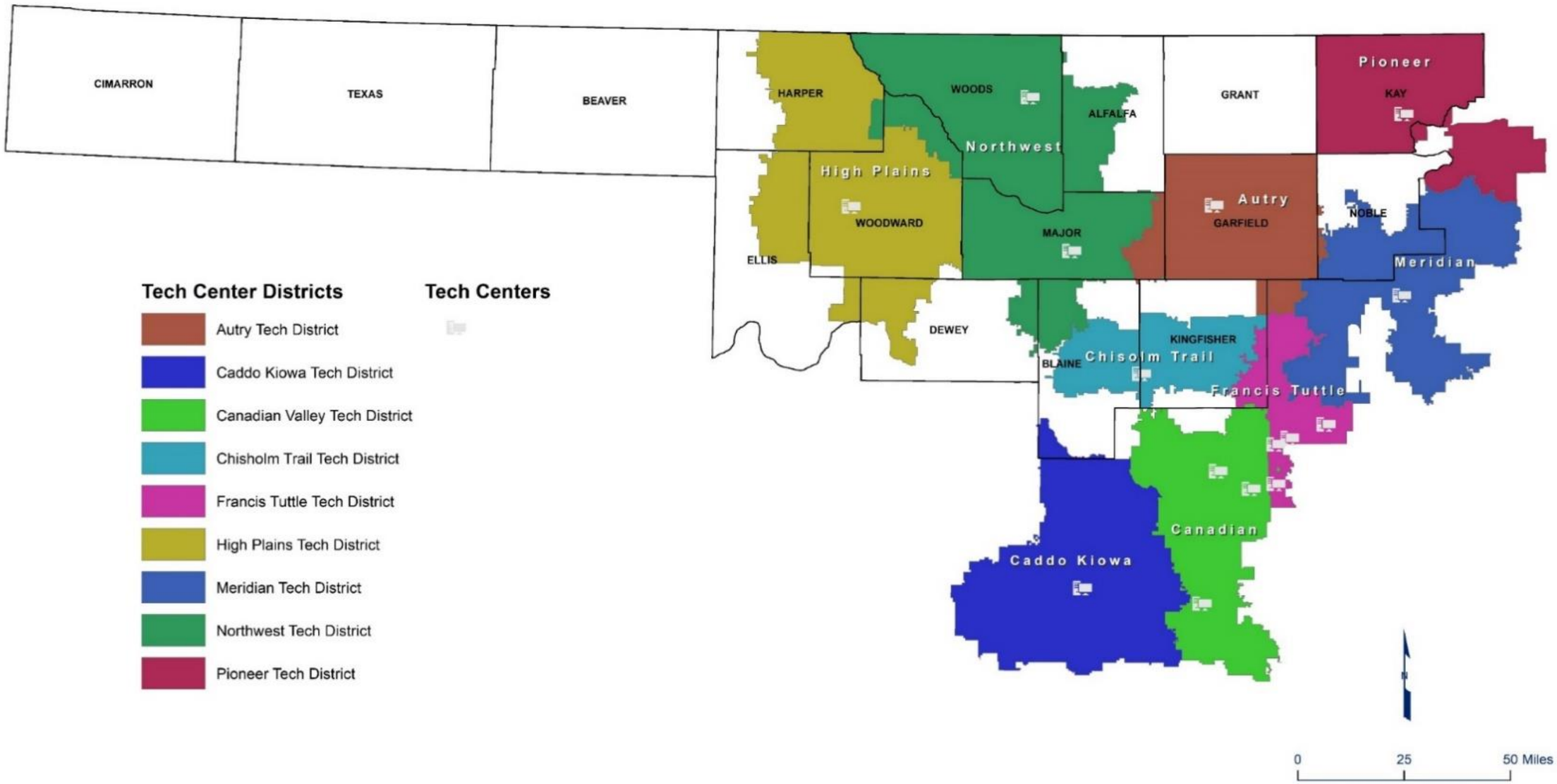
Technology Centers -

NORTPO is also home to 5 technology centers with 6 campus locations. Autry in Enid, High Plains in Woodward, Chisholm Trail in Omega, Northwest in Alva, and Fairview, and Pioneer in Ponca City. Based upon Oklahoma Technology Center Districts there are 4 more technology centers that reach into our region, Francis Tuttle into Kingfisher, Meridian into Noble, and High Plains, and Canadian Valley both reach into small parts of Blaine, and Kingfisher counties. (Map of Regional Tech Centers Below)

NORTPO Region Universities and Colleges



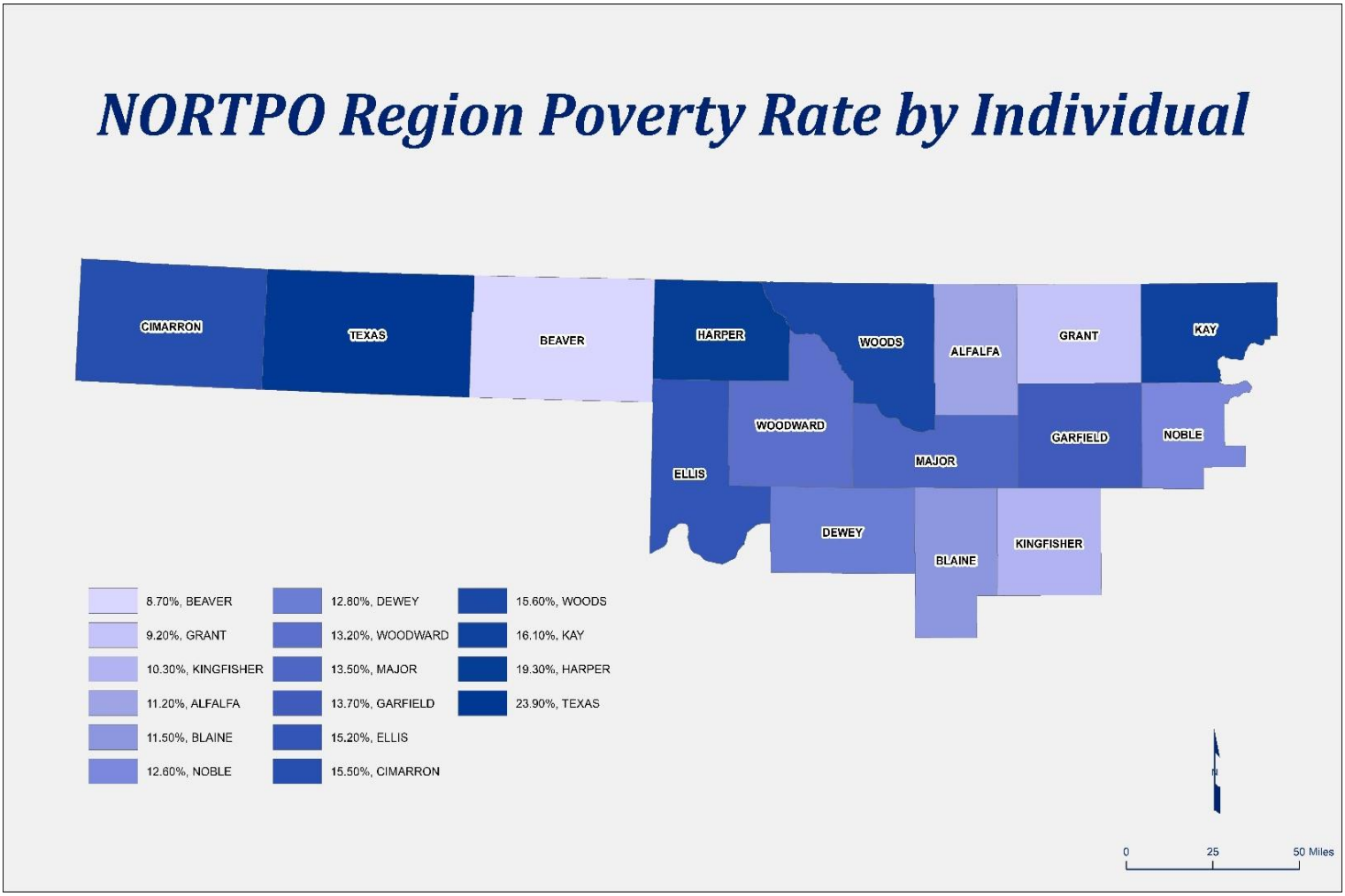
NORTPO Region Technology Center Districts



Poverty

Poverty data is indicative of a regions economic wellbeing, and is useful in transportation planning because individuals living in poverty typically have limited access to transportation options, such as owning a car or having reliable access to public transportation. This lack of access can make it difficult for individuals to access job opportunities, education, and healthcare, which can further perpetuate poverty. Additionally, transportation infrastructure projects, such as highways and rail lines, can displace low-income communities and disrupt the economic stability of those areas. Simultaneously, economic development through transportation infrastructure projects can also improve people's economic situation by providing more opportunities for transit, or efficient methods of travel. Low income populations are identified in the NORTPO region in the tables below. Low income populations are defined by the FHWA for transportation planning purposes as families of four with a household income that is below the poverty guidelines set by HHS. The 2022 HHS poverty guideline for a family of four is $27,750

NORTPO's region is listed at 10.87% below the poverty level for families which is slightly less than the State's total of 11.20% from the 2020 Census data. For individuals, NORTPO is listed at 14.53% below poverty level which is also slightly below the State's total of 15.30%. Texas County has the highest percentage below poverty level with 16.80% for families, and 23.90% for individuals. Beaver County has the lowest percentage below poverty level with 5.60% for families, and 8.70% individuals. The overall trend for the NORTPO region for poverty rate has been positive with individual poverty percentage dropping from 17.34% to 14.53% since the 2000 Census. (Map Below) For families, the poverty rate in NORTPO has roughly stayed the same since 2000 going from 10.53% to 10.87% which is a slight increase of 0.35%. (Map – 2.1)



(Source – Census 2020 - ACS 5-Year Estimates Data Profiles)

Median Family Income -

The Median Family Income in the NORTPO region has increased drastically since the 2000 census data going from $38,643 to $66,443 which is a 71.94% increase. This still outpaces inflation in 2020 by 21%. Inflation of the dollar from 2000-2020 was at 50.30%. (Source – "$1 in 2000 → 2020 | Inflation Calculator." Official Inflation Data, Alioth Finance, 16 Jan. 2023, https://www.officialdata.org/us/inflation/2000?endYear=2020&amount=1..) The county with the highest median family income is Woods with $75,046, and the county with the lowest median family income is Cimarron with $58,534. Cimarron's median family income although being the lowest in the NORTPO region for 2020 is still higher than the entirety of NORTPO's median family income from 2010 being $54,643. (Table 2.10, 2.11, 2.12)

Age/Education/Sex -

Poverty by Age in Oklahoma is 21.2% under 18 years old, 14.8% for 18 to 64, and 10.6% for 65 years and over. (Source – Census 2020) As expected, age and it's coexisting workforce experience are large contributors in being above or below the poverty rate with younger people being effected the most by poverty. In the NORTPO region this trend is maintained with 18.07% below poverty under 18 years, 13.01% below poverty from 18-64 years, and 8.43% below poverty for those over 65. All of these numbers in NORTPO are below the average for Oklahoma in 2020. Poverty by attainment of a Bachelor's degree or higher in the state of Oklahoma is 4.8%. (Source – ACS 5 Year Estimate 2021) In the NORTPO region poverty rate is at 3.95% for those with a Bachelor's degree or higher. Beaver County has the lowest below poverty with a bachelor degree with 0.70%, and Ellis county has the highest for those with a Bachelor's degree with 10.10%. This data helps show how access to higher education is important in preventing poverty because it equips individuals with the knowledge, skills, and abilities necessary to secure well-paying jobs, which in turn allows them to support themselves and their families financially. Additionally, education can also lead to better decision-making and improved critical thinking, which can help individuals to avoid financial pitfalls and make better use of their resources. Furthermore, education is also a way to increase social mobility and give people a chance to improve their lives and those of their children, as well as a way to reduce income inequality. (Table Below)

Percent Below Poverty Rate by Education, Age, and Sex in NORTPO Region

County	Bachelor's degree or higher	Under 18 years	18 to 64 years	65 years and over	Male	Female
Alfalfa	1.80%	18.80%	10.10%	7.30%	10.00%	13.40%
Beaver	0.70%	7.80%	8.50%	4.00%	5.60%	9.30%
Blaine	3.00%	16.90%	12.20%	6.70%	10.30%	14.20%
Cimarron	7.00%	17.80%	9.80%	10.90%	11.00%	13.20%
Dewey	0.50%	22.10%	13.40%	7.60%	15.60%	14.00%
Ellis	10.10%	21.90%	16.90%	5.20%	14.30%	16.50%
Garfield	4.60%	17.90%	13.10%	8.10%	11.80%	15.20%
Grant	4.80%	14.50%	10.00%	14.80%	8.00%	16.20%
Harper	7.70%	18.60%	14.20%	14.10%	14.60%	15.90%
Kay	5.50%	23.50%	15.30%	10.50%	16.20%	16.70%
Kingfisher	3.30%	11.70%	11.30%	6.70%	8.60%	12.80%
Major	2.20%	17.60%	9.40%	12.20%	11.90%	12.10%
Noble	1.40%	15.30%	11.70%	7.10%	9.70%	13.60%
Texas	5.60%	32.80%	22.00%	5.70%	24.30%	21.90%
Woods	1.00%	13.80%	17.30%	5.50%	14.60%	14.20%
NORTPO	**3.95%**	**18.07%**	**13.01%**	**8.43%**	**12.43%**	**14.61%**

(Source – Census ACS 5 Year Estimate 2021)

Housing

Transportation and housing are fundamental building blocks of successful communities that have strong relationships between each other as the availability and accessibility of transportation options can greatly impact the demand for housing in a particular area. Transportation and housing both conflict with and at the same time depend upon and serve one another. The actions of one affect the actions of the other, so there's an emphasis to be put upon coordinating them wherever possible which makes understanding of housing demographics ever most important. When both housing and transportation work together on issues such as economic development, environmental quality, education, and workforce development, transportation and housing can create places of prosperity, justice, and opportunity. If they are misused, or fail to take advantage of their reinforcing linkages, they can create dysfunctional, and unhealthful environments that diminish quality of life, and ultimately foreclose people from housing and work, thus denying them a sense of community, whilst raising household and community costs.

Finding ways to accomplish a mutually supportive relationship between these two community drivers can have positive results which includes less traffic congestion and air pollution, lower costs for both housing and transportation, lower labor costs for employers and reduced expenses for families, preservation of open space and heritage, mitigation of the jobs/housing mismatch, more efficient and environmentally-friendly land uses, and greater choices in development patterns, housing types, and transportation services.

There is a pattern of separation with transportation and housing that is consistent with the theme of urban sprawl. Absent a space for affordable housing creates social dislocations such as overcrowding and labor supply issues. A sprawled pattern of development has increased transportation costs, environmental impacts, and diminishes the resources to provide housing that is affordable particularly low-income people and those with special needs. Connected communities for transportation and housing are places with affordable housing options, pedestrian-friendly street designs, public spaces, and transit that has access to major employment centers, goods and services.

Communities that are walkable and provide transportation-friendly services allows residents to access employment and amenities easily and effectively with less dependence on an automobile. This could result in not only saved time and money, but also in increased physical activity that promotes a better cycle of health, and reduced greenhouse gas emissions. Transportation infrastructure can also have an effect on the type of housing that is built, with areas well-served by public transportation often having a higher density of housing.

NORTPO's region being rural based creates unique challenges to these idealistic connected communities by having fewer transit and housing options overall due to, fewer staffers, and limited financial resources with which to achieve an effective system of community connectivity. NORTPO, and the DOT must instead expand capacity by developing useful partnerships with other private and public entities by assembling decision makers and stakeholders drawn from county governments, transit agencies, state departments of transportation, public housing agencies, and nonprofit and private affordable housing developers with the goal of linking housing affordability and transportation by keeping housing and transportation integration on the agenda at planning meetings.

Affordable housing is typically defined as housing that requires no more than 30% of a household's income (U.S. Department of Housing and Urban Development, 2013), but this measure does not take into account the transportation costs associated with home locations that are further away from work locations. Housing that is affordable can increase the wealth of a community as a keystone of economic development, stabilize and bring together neighborhoods and whole communities, provide the basis for economic expansion, promote public health, social progress and increase the overall quality of community life.

Persons Per Household -

United States Persons per household is 2.60. Oklahoma's person per household is 2.56. NORTPO's average person per household is 2.6 which is slightly higher than both the state's and national averages. Texas county has the highest persons per household with 3.05, and Blaine county has the lowest with 2.12. Having a higher person per household percentage indicates larger families, or increased difficulty in being able to obtain new housing. The average percentage of people living in the same house as they we're a year+ ago is 86.03% in the NORTPO region. This is 2 percent higher than the state of Oklahoma, and the same as the nation's percentage of people living in the same house for 1+ year. The highest county being Cimarron at 94.90% living in the same house for over a year with Woods being the lowest at 79.80%. (Table Below)

Families & Living Arrangements in NORTPO

Counties --	Households, 2017-2021	Persons per household, 2017-2021	Living in same house 1 year ago, percent of persons age 1 year+, 2017-2021
Alfalfa	1,812	2.59	86.00%
Beaver	1,781	2.83	90.20%
Blaine	3,542	2.12	81.60%
Cimarron	829	2.72	94.90%
Dewey	1,503	2.97	89.60%
Ellis	1,468	2.56	83.30%
Garfield	23,875	2.56	84.70%
Grant	1,508	2.71	88.90%
Harper	1,196	2.78	86.80%
Kay	16,916	2.55	81.40%
Kingfisher	5,528	2.73	87.30%
Major	3,171	2.42	87.70%
Noble	4,202	2.57	87.50%
Texas	6,890	3.05	84.30%
Woods	3,332	2.39	79.80%
Woodward	7,952	2.46	82.50%
NORTPO	85,505	2.625625	86.03%

(Source - ACS – 2021 – 5 Year Estimate)

Housing Units -

NORTPO total housing units is 105,329 which is an increase from the year 2000, but a 1.3 % decrease from 2010. (Table Below) Of the 105,329 houses, 86,191 are occupied and 16,659 are vacant. 81.8% of the total housing units are occupied leaving 18.2% vacant as of the 2020 Census. (Table Below) According to ACS 2021 estimate NORTPO region has grown over 200 housing units in 1 year to 105,538. (Table – 2.13) 154,833 people own their houses and 66,659 rent their houses in the NORTPO region. 31.5% rent instead of own their house. Renting in an area is indicative of a more mobile population that tends to move around once leases are up. Economic development projects that are transportation centered can help maintain the local population, and increase populations as well. (Table – 2.14)

Housing Units Last 3 Census

	2000	2010	2020
Alfalfa	2,832	2,771	2,479
Beaver	2,719	2,676	2,460
Blaine	5,208	5,198	4,590
Cimarron	1,583	1,592	1,359
Dewey	2,425	2,440	2,176
Ellis	2,146	2,257	2,128
Garfield	26,047	26,814	27,846
Grant	2,622	2,528	2,160
Harper	1,863	1,905	1,714
Kay	21,804	21,759	20,968
Kingfisher	5,879	6,341	6,394
Major	3,540	3,659	3,713
Noble	5,082	5,315	5,057
Texas	8,014	8,230	8,443
Woods	4,492	4,478	4,456
Woodward	8,341	8,760	9,386
Total	**104,597**	**106,723**	**105,329**
Δ		**2.0%**	**-1.3%**

(Source - ACS 2000, 2010 - Decennial for 2020)

Occupied vs Vacant Housing Units in NORTPO

Label	Alfalfa	Beaver	Blaine	Cimarron	Dewey	Ellis	Garfield	Grant
Total:	2,479	2,460	4,590	1,359	2,176	2,128	27,846	2,160
Occupied	1,895	1,962	3,558	970	1,736	1,581	24,198	1,762
Vacant	584	498	1,032	389	440	547	3,648	398

Harper	Kay	Kingfisher	Major	Noble	Texas	Woods	Wood-ward
1,714	20,968	6,394	3,713	5,057	8,443	4,456	9,386
1,344	17,571	5,624	3,082	4,353	7,376	3,346	7,728
370	3,397	770	631	704	1,067	1,110	1,658

(Source – ACS 1-year Estimate – 2021)

Single Parent Households -

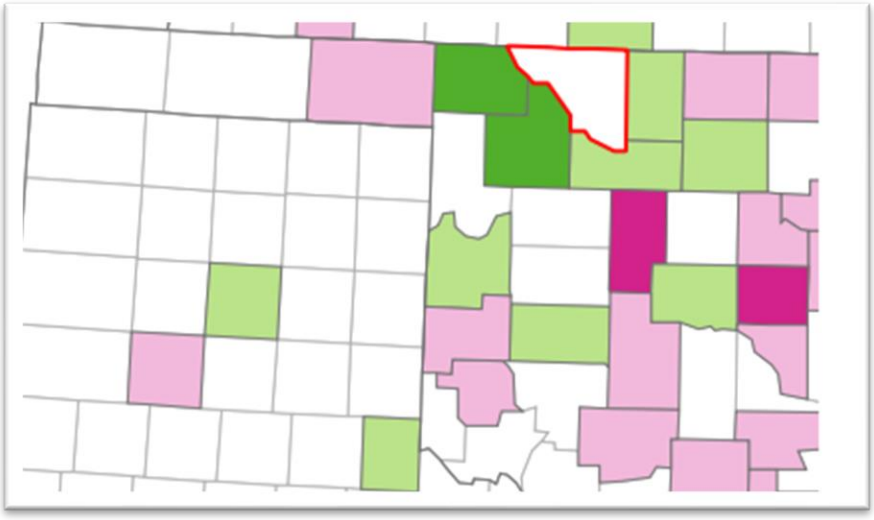
53,705 NORTPO citizens are children 17 and younger with 16,269 under the age of 6, and 37,36 from 6-17 years old. 5,582 children under the age of 6 live with only one parent, and 12,905 kids from 6-17 live with only one parent making up 18,487 total. This equals 34.4 percent of living arrangements for children being with only 1 parent. Consequently, with less parents in the home there is more likely chance of needing daycare services that effect transportation routes, and economic opportunities. Also, often there's only one parent due to divorced parents which causes increased commutes for visitations to and from the children's location. (Table 2.15)

Moving Trends -

Nearly 43.6 million Americans move each year, according to recently released Census Bureau data from 2015 to 2019. That comes out to about 16% of the country. Most of those movers don't go far. 59% stayed in the same county, 24% moved to a different county in the same state, and 17% moved to a different state. Out of those 7.5 million people who

move to a different state every year, 45% stay in the same region. That leaves around 4.1 million people who make true "cross-country" moves annually — about 9% of total movers. That said, this data was taken before the COVID-19 pandemic, which greatly impacted Americans' moving habits. The first half of 2020 saw a 4% increase in movers from the year before, with people leaving densely populated urban areas in greater numbers. Here are the top reasons given for why people move, wanted newer/better/larger house or apartment – 16.3%, To establish own household – 11.7%, New job or job transfer – 10.9%, Other family reason – 10.4%, Wanted cheaper housing – 7.6% Wanted to own home, not rent – 6.9%, Other housing reason – 6.8% To be closer to work/easier commute - 5.7%, Change in marital status – 5.1%, Wanted better neighborhood/less crime – 3.1%. The reasons people move look a lot like the reasons they make any major life decision: to find the best situation for their family, seek new career opportunities, and improve their finances. Older Americans are far less likely to move. The data released from the Census Bureau reveals some major trends in how Americans move at different life stages. One of the biggest takeaways from the recent release was that older Americans are far less likely to move than young people, and when they do, it's typically short distances within the same county. With people moving out of our region due to its rural nature it's vital we utilize transportation projects to maintain and create infrastructure improvements. In the NORTPO region 6.54% are projected to move within the same county, different county, but same state moving is at 4.64%, moved from different state into one of NORTPO counties average is 2.37%, and moving from abroad into one of the NORTPO counties is only at 0.43%. Men are slightly more likely to move in our area, and be more mobile overall. (Table – 2.16) Woodward county increased the most with 7.40% coming from out of the county. From the 2016-2020 ACS Census, Blaine had the highest net change of migration positively, followed by Beaver, Grant, and Kay. Harper, and Woods counties had the largest decrease in people migrating from their counties into others. (Map Below) Dark Pink = 41 to 111, Pink = 1 to 40, White = No net movers, Light Green = -52 to -1, Dark Green = -148 to -5.

Total Net Migration Flows



Source – US Census Bureau - 2016-2020 5-year, ACS)

Employment

Transportation plays a crucial role in connecting individuals to employment opportunities. Access to reliable and efficient transportation can increase job accessibility, as it is necessary for people to be able to travel to and from their workplaces, particularly for low-income individuals and those living in rural areas such as the NORTPO region. Reliable and efficient transportation systems also help to connect people with job opportunities, and can also make it easier for businesses to attract and retain employees. Conversely, a lack of transportation can act as a barrier to employment, limiting job opportunities and economic mobility. Investing in transportation infrastructure and public transit can also lead to job creation and economic growth. Overall, transportation is closely linked to employment, as it affects both the availability of jobs and the ability of individuals to access them.

In the NORTPO region, there are 102,265 employed persons over the age of 16, 5.75% of the state employment numbers (2020 Census). The highest occupation category numbers are in the management, business, science, and arts sectors with 31,344 employees, or 30.6% of the share. Regarding industry specific data, the highest employment concentration is in the educational services, health care and social assistance sectors with 21,200 employees, 20.79%, and agriculture, forestry, fishing, hunting, and mining with 11,955, 11.7%. (Table – 2.17)

Staff looked at location quotients and concentrations of each industry to determine its significance at the regional and state level. An industry's location quotient (LQ) is a measure of how significant that industry is to a particular region's economy. An LQ is computed as an industry's share of a regional total divided by the industry's share of the reference area's total for the same statistic. For example, an LQ of 1.0 in mining means that the region and the nation are equally specialized in mining; while an LQ of 1.8 means that the region has a higher concentration in mining than the nation. The results of these analyses can show industries and states where to concentrate services or resources because that county is either already equipped to grow in a certain industry or needs assistance is growing that sector.

Agriculture, forestry, fishing and hunting, and mining have the highest specialization when compared to the state at 2.96. Construction, Manufacturing, Wholesale trade, Retail trade, Transportation and warehousing and utilities all have a LQ over 1. These Industry categories make up 39% percent of the employment in the NORTPO region (2020 ACS).

The NORTPO region has seen major fluctuations in NORTPO's population are due to the area's reliance upon Oil and Natural gas industries that have remained unstable which has corresponded with an increase, and subsequent decrease in both Oil and Natural gas, and service industries

According to data obtained from the 2020 ACS 60.7% of the population age 16 years and older are in the labor force and 57.2% of the population is employed while only 2.8% of the 16 years and older population is unemployed. The vast majority of the labor force in the NORTPO region is civilian labor with 107,337 as of 2020 Census. The Armed Forces only make up 1,062 in the labor force which is just under 1 % at 0.98%. The state of Oklahoma's rate of armed forces to civilians is 1.02%. Almost all of those armed forces members in NORTPO are located in Garfield county with 1,026 due to the Vance Air Force Base. The only based in the region is located in Enid, and is a significant contributor to the local economy. (Table – 2.18)

In December of 2021, the 4 counties with the lowest unemployment rate in all of Oklahoma we're all located within NORTPO's region, Cimarron, Beaver, Texas, and Woods, all sharing 0.8% unemployment which is 3.1% lower than the highest in Oklahoma at 3.9%. (Map – 2.1) This trend was maintained in 2022 with the most recent available months data showing Cimarron, Texas, and Woods as having the lowest unemployment rates, but they all had increased from the year prior from 0.8% for each to 1.4% for Cimarron, 1.5% for Texas, and 1.7% for Woods county. (Map Below) As shown above in the poverty section of economic trends, Texas county had the worst poverty rates with 16.80% for families, and 23.90% for individuals, yet Texas county has some of the lowest unemployment rates in not just NORTPO, but all of Oklahoma, which is indicative of the county having lower wages, and less economic opportunities for competition in the workforce. Improved transit projects in this area should be empathized to allow better economic mobility.

Highest county unemployment rates*

November 2022	Unemployment rate
Latimer County	6.2%
McIntosh County	5.1%
Choctaw County	4.7%

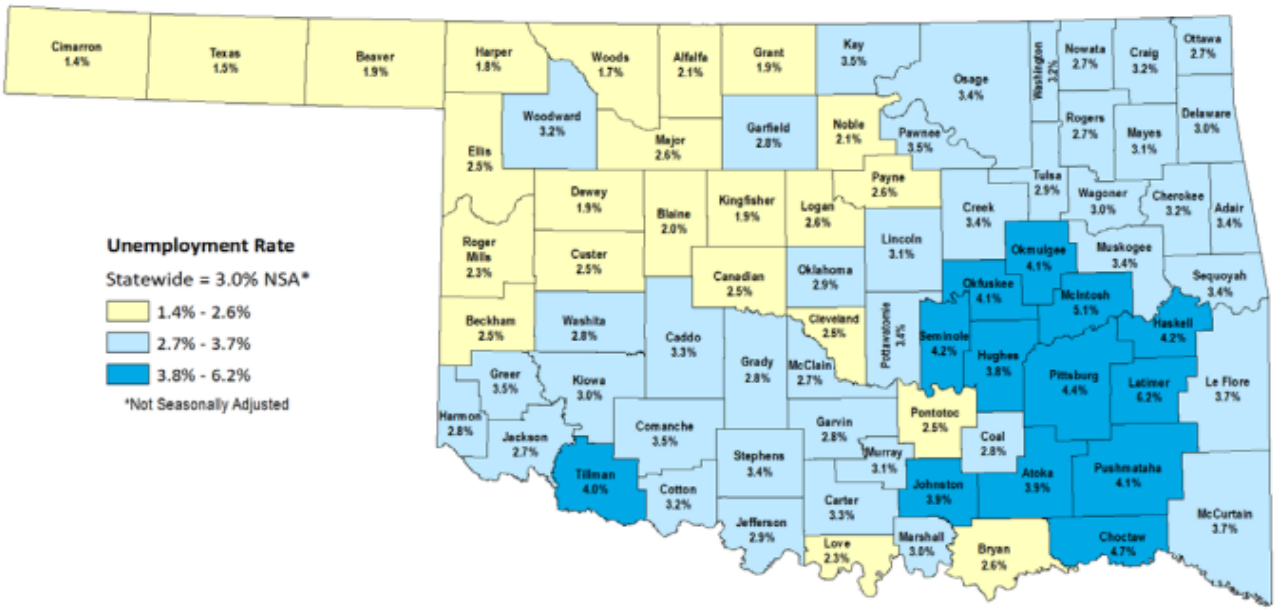
* Non-seasonally adjusted

Lowest county unemployment rates*

November 2022	Unemployment rate
Cimarron County	1.4%
Texas County	1.5%
Woods County	1.7%

* Non-seasonally adjusted

UNEMPLOYMENT RATES by COUNTY – November 2022 (Not Seasonally Adjusted)



NOTE: Each month, Current Employment Statistics (CES) and Local Area Unemployment Statistics (LAUS) data for the previous month is revised. The data for the current month in this news release is preliminary (not revised) and the data for the previous months is revised. All data is non-seasonally adjusted.

(Source – Oklahoma LAUS Data Report – November 2022)

Industries -

The NORTPO region has 4 major industries. The major industry label was selected by staff for industries that make up more than 10% of industries in the region. 1st is educational, health care and social assistance services making up 20.80% of all industries, 2nd is agriculture, forestry, fishing, hunting, and mining which makes up 11.70%, 3rd largest industry is retail trade with 11.30%, and the 4th major industry is manufacturing at 10.90%. (Table Below) These 4 industries make up for 54.7% of all industries within NORTPO. (Info Graphic – 2.1) Cimarron has the highest percentage in a single industry with 33.70% working in agriculture, forestry, fishing and hunting, and mining. Woods and Grant county both have the highest percentage of workers in the largest industry of educational, health care and social assistance services with 23.90%. (Table – 2.19) Also, each of those 4 major industries all have over 11,000 minimum workers in their industry. In the last 10 years, we have seen the largest increase in the arts, entertainment, recreation, accommodation, and food service industries with nearly a 1% increase.

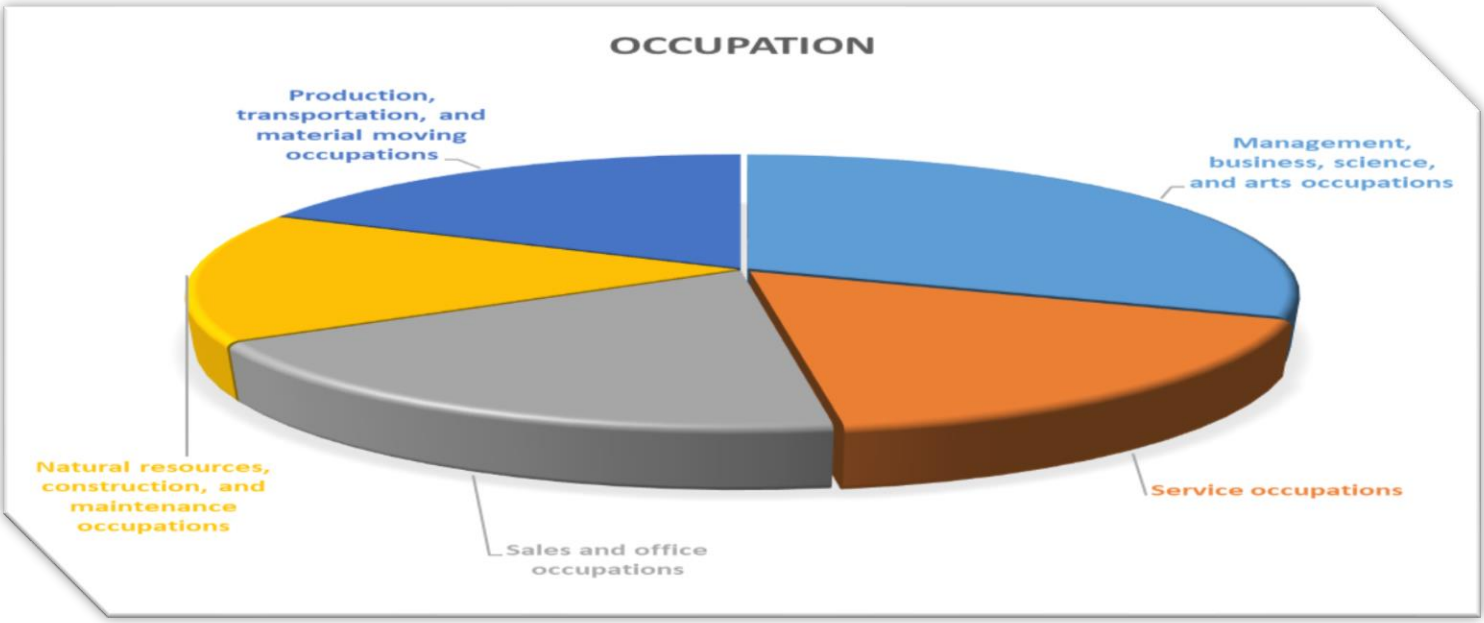
of People of Each Industry in NORTPO

Agriculture, forestry, fishing and hunting, and mining	11995
Construction	7361
Manufacturing	11160
Wholesale trade	2830
Retail trade	11526
Transportation and warehousing, and utilities	6221
Information	1571
Finance and insurance, and real estate and rental and leasing	3865
Professional, scientific, and management, and administrative and waste management services	5097
Educational services, and health care and social assistance	21260
Arts, entertainment, and recreation, accommodation and food services	8430
Other services, except public administration	5114
Public administration	5875

(Source – 2020 - ACS 5-Year Estimates Data Profiles)

Occupations -

The Census bureau broadly categorizes employment into 5 categories of occupations; 1. Management, business, science, and arts occupations, 2. Service occupations, 3. Sales and office occupations, 4. Natural resources, construction, and maintenance occupations, 5. Production, transportation, and material moving occupations. Management, business, science, and art occupations makes up a significant majority of NORTPO workers with 30.60%, totaling 31,344 workers which is over 12,00 more than the 2nd highest occupation, sales and office occupations, at 19,315. The other occupations vary from 15.40%-18.90% range of the occupations. (Info Graphic Below) Beaver county is the only county in the region that doesn't have at least 90 percent of residents working in the state of residence. Only 69.9 percent of Beaver county residents work in Oklahoma. (Table 2.20, 2.21,2.22)



Major Employers and Employment Centers -

There are 4 major employment centers in the NORTPO region. Oklahoma Works American Job Center in Enid, Oklahoma Works American Job Center in Ponca City, Oklahoma Works American Job Center in Woodward, and Oklahoma Works American Job Center in Guymon, OK. Only 1 of these is a Comprehensive Oklahoma Works American Job Centers where workers, job seekers and businesses can access the most services offered by multiple state and federal programs and non-profit partners. Services for job seekers and workers can help securing jobs, better jobs, and careers, along with other services needed to help secure and sustain employment. The other 3 are Affiliate Oklahoma Works American Job

Centers, these function as supplemental locations for workers, job-seekers and businesses to access to American Job Center services. These sites have one or more partners' programs available, but do not offer all the services available at a Comprehensive Center. Job centers generate high levels of employment and attract large numbers of workers, which can lead to increased demand for transportation services, such as, public transit, as well as private transportation options such as cars, bicycles, and walking. By providing a central location for employment, job centers can also reduce the need for workers to travel long distances to work, which can help to reduce traffic congestion and improve air quality. Additionally, job centers can also be designed to be easily accessible by public transportation, which can make it easier for workers who do not have access to a car to travel to work.

From June of 2021-June of 2022 the percent change in number of business establishments in the state of Oklahoma was 6.0%. A year prior their we're 114,987 business establishments, and a year later there was 121,907. Totaling a net positive increase of 6,920 throughout the entire state. (Source – Bureau of Labor Statistics) (Table 2.23) The number of designated major employers in all of NORTPO is 332. Designation of major employer is listed at employers with more than 50 employees. Garfield county has a total of 93 major employers which makes up for 28 percent of all major employers in all 16 counties. Kay county has the 2nd most major employers with 61 which makes up 18 percent of all major employers in NORTPO. The 2 largest counties alone make up 46% of all the major businesses. (Table Below) (Map Below)

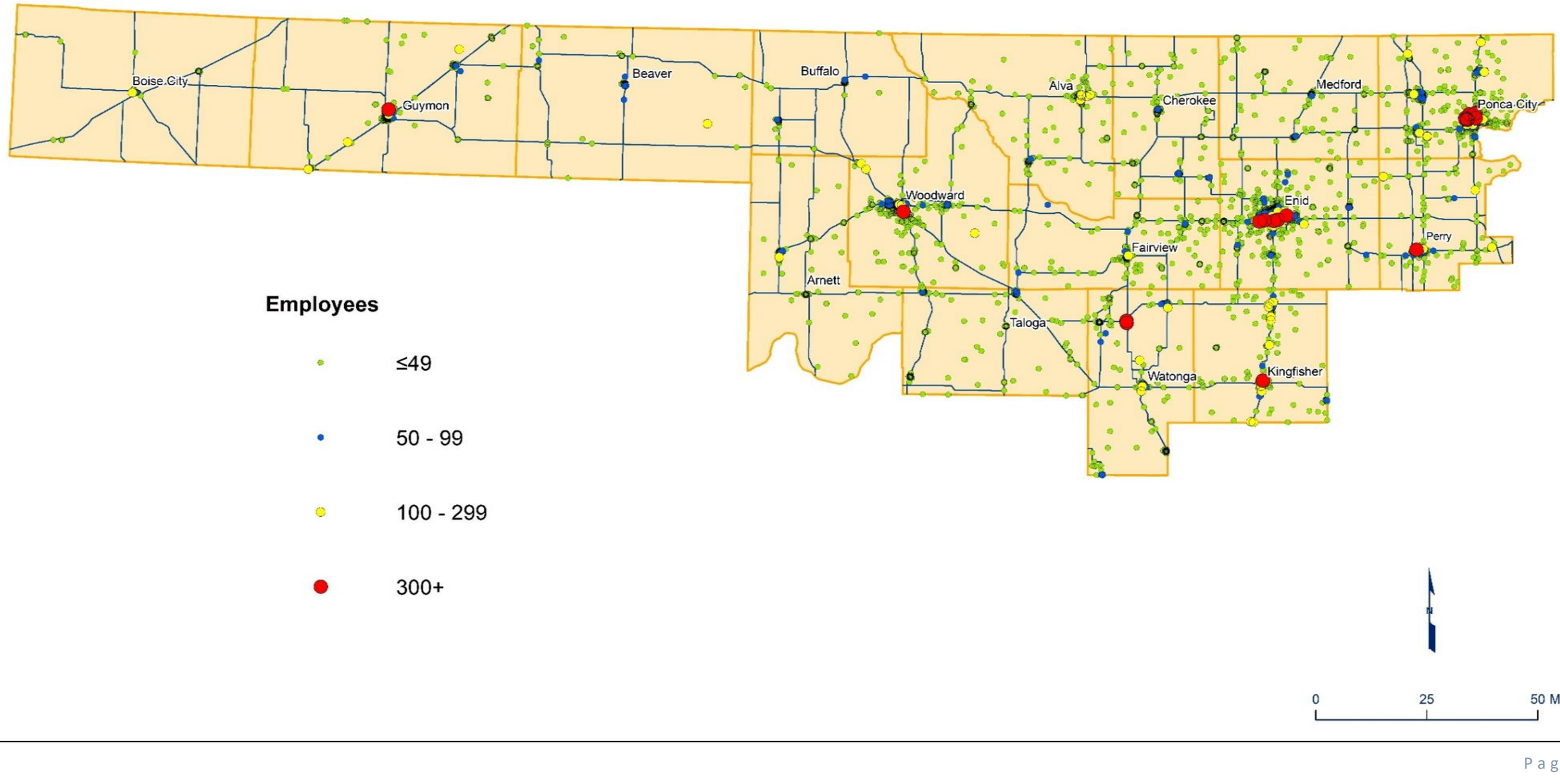
The labor force may be considered one of the foremost assets of a particular region, providing key goods and services, collaborating across industries, and participating in economic and skills development. The labor force participation by county shows the NORTPO labor force participation rate by county in June 2022. Currently, 13 out of the 16 counties meet or exceed the Oklahoma state average labor force participation rate of 61%. The highest percentage is in Grant County at 89.2%. The second highest is in Cimarron county at 88%. The third highest is in Dewey County at 82.7%. The lowest percentage is in Kay county at 55%. (Table 2.24) As of 2022, NORTPO has 106,304 total employees.

Employer Numbers

		Designated as Major Employer			DME Totals	Total	% of Total
	≤ 49	50-99	100-299	300+			
Alfalfa	301	5	0	0	5	306	2.6%
Beaver	266	8	1	0	9	275	2.3%
Blaine	679	11	8	4	23	702	5.9%
Cimarron	139	1	1	0	2	141	1.2%
Dewey	371	7	0	0	7	378	3.2%
Ellis	266	2	1	0	3	269	2.3%
Garfield	2,591	65	23	5	93	2,684	22.6%
Grant	286	2	0	0	2	288	2.4%
Harper	225	4	1	0	5	230	1.9%
Kay	1,927	46	8	7	61	1,988	16.8%
Kingfisher	939	16	10	2	28	967	8.2%
Major	456	6	1	0	7	463	3.9%
Noble	426	12	5	2	19	445	3.8%
Texas	848	15	6	1	22	870	7.3%
Woods	558	9	5	0	14	572	4.8%
Woodward	1,241	24	7	1	32	1,273	10.7%
NORTPO Total	**11,519**	**233**	**77**	**22**	**332**	**11,851**	

(Source: Business Analyst, 2021)

Regional Employers



Opportunity Zones

Qualified Opportunity Zones were created by the 2017 Tax Cuts and Jobs Act. These zones are designed to spur economic development and job creation in distressed communities throughout the country and U.S. possessions by providing tax benefits to investors who invest eligible capital into these communities. Taxpayers may defer tax on eligible capital gains by making an appropriate investment in a Qualified Opportunity Fund and meeting other requirements.

Opportunity zones are designed to spur economic development by providing tax benefits to investors.

First, investors can defer tax on any prior gains invested in a Qualified Opportunity Fund (QOF) until the earlier of the date on which the investment in a QOF is sold or exchanged, or December 31, 2026. If the QOF investment is held for longer than 5 years, there is a 10% exclusion of the deferred gain. If held for more than 7 years, the 10% becomes 15%.

Second, if the investor holds the investment in the Opportunity Fund for at least ten years, the investor is eligible for an increase in basis of the QOF investment equal to its fair market value on the date that the QOF investment is sold or exchanged.

Fifty-two million Americans live in economically distressed communities. These urban, rural, and suburban communities are located in every corner of the United States and its territories. Despite the growing national economy, these communities are plagued by high levels of poverty, failing schools, job scarcity, unsafe neighborhoods, and a lack of investment capital. In response, the historic Tax Cuts and Jobs Act included a powerful new tax incentive—Opportunity Zones—to spur economic development and job creation by encouraging long-term investment in low-income communities nationwide.

Opportunity Zones are a powerful vehicle for bringing economic growth and job creation to the American communities that need them the most. Opportunity Zones are nominated by states, which are then certified by the Secretary of Treasury. The United States Department of Transportation has identified transportation assets that fall within Opportunity Zones with the goal of driving investment of all types to these important areas. The map below shows the opportunity zones in NORTPO. NORTPO has 5 opportunity zones listed below with their county, census tract, tract type, and year of data. Garfield County, Census Tract – 40047000100, Tract Type - Low-Income Community, ACS - 2011-2015. Garfield County, Census Tract – 40047001500, Tract Type - Low-Income Community, ACS - 2011-2015. Kay County, Census Tract – 40071000100, Tract Type = Low-Income Community, ACS - 2011–2015. Kay County, Census Tract – 40071001301, Tract Type = Low-Income Community, ACS - 2011–201.5 Blaine County, Census Tract – 40011958800, Tract Type - Low-Income Community, ACS 2012–2016.

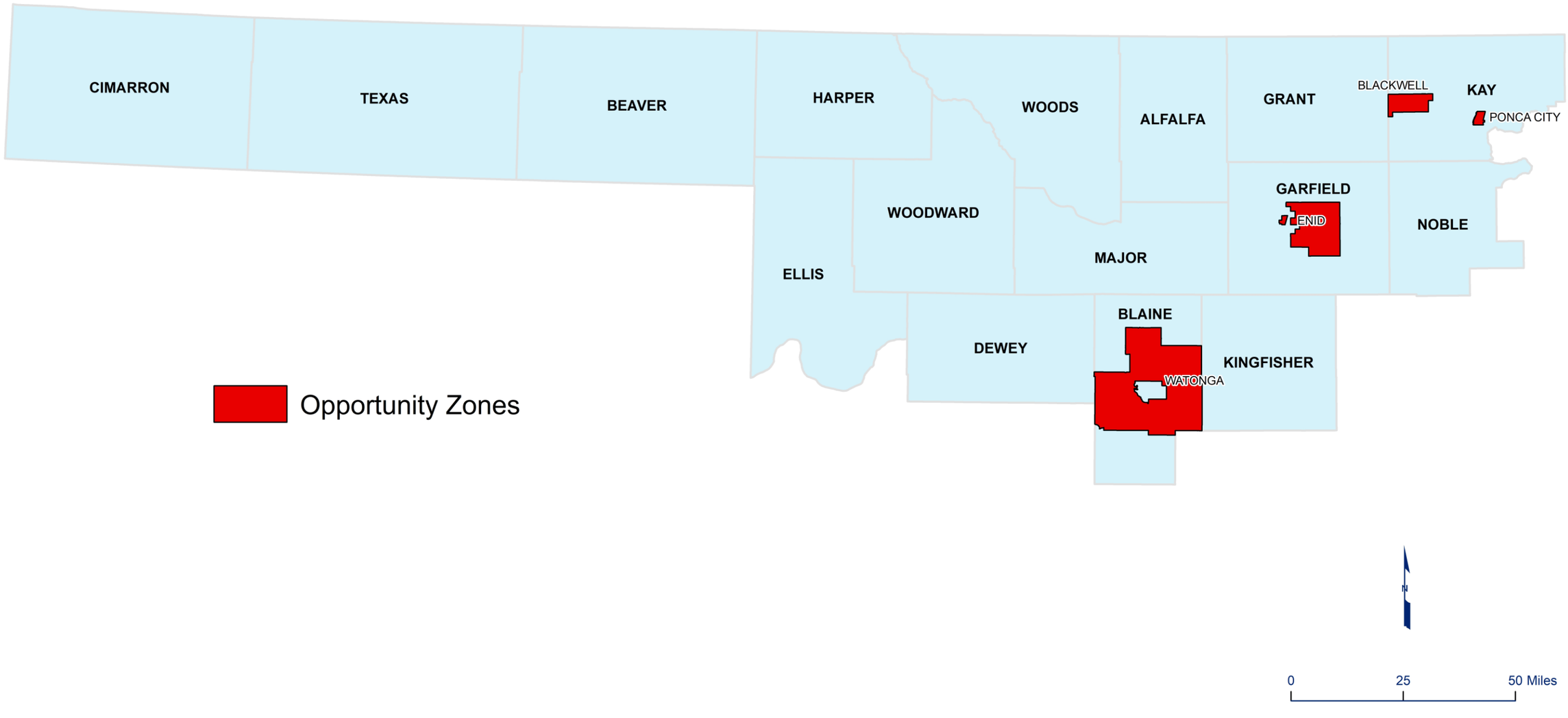
U.S. Department of Transportation's Role - The U.S. Department of Transportation (USDOT) regularly reports to the White House Opportunity and Revitalization Council's Chair and Vice-Chair on implementation actions and progress made within the Economic Development work stream. Through this subcommittee, USDOT will leverage federal grants and loans in a more integrated way to develop dilapidated properties and provide basic infrastructure and financial tools to attract private investment. As with any implementation plan, USDOT will remain responsive and adjust to changing dynamics, needs, and priorities discovered on the ground.

Strategies and goals for the Economic Development Work Stream include:

- Target and streamline infrastructure programs to Opportunity Zones and other economically distressed communities;
- Leverage Federal grants and loans in a more integrated way;
- Improve and increase coordination between Federal, State, local, and tribal capital investment;
- Provide increased flexibility in existing Federal programs that operate within Opportunity Zones; and
- Spur private investment through public-private partnerships

(Source: https://www.okcommerce.gov/doing-business/business-relocation-expansion/incentives/federal-opportunity-zones/)

Regional Opportunity Zones



Health and Wellness

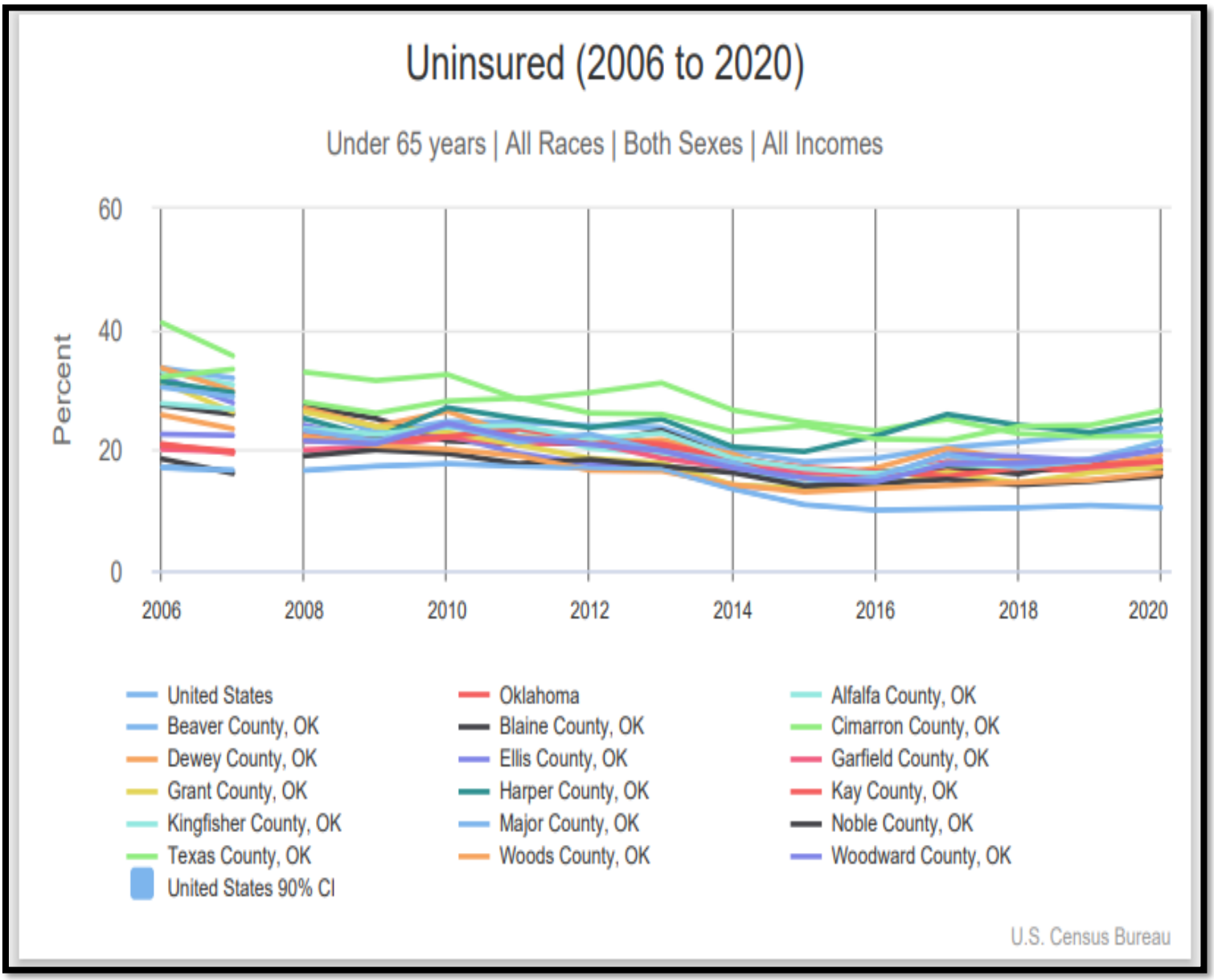
Health and Transportation are closely related in a myriad of ways. Access to reliable and affordable transportation increases access healthcare services, and to healthier food options, leading to improved health outcomes. The creation of trails that promote increased walking and cycling can improve physical health and reduce the risk of chronic diseases, while car-dependency and sedentary travel can contribute to obesity and other health problems. Access to reliable public transportation also promotes physical activity too, when people walk to and from transit stops it helps reduce the risk of developing diabetes, metabolic syndrome, heart disease, and stroke. Transportation can also affect the environment and air quality, which in turn can have a significant impact on public health, for example, air pollution from vehicles can lead to increased cancer risks, and contribute to neurological, cardiovascular, respiratory, reproductive, and immune system damage. Most of these impacts disproportionately harm people of color and those in lower-income communities, who are more likely to be exposed to traffic and traffic-related air pollution and to live near high-polluting corridors and highways. Additionally, well-designed transportation systems can reduce traffic-related injuries. Motor vehicle crashes are a leading cause of injury-related death for many age groups. On the other hand, a lack of access to transportation can create barriers to healthcare causing missed or delayed health care appointments, and increased health expenditures that negatively impact health whilst also causing limited mobility, social isolation, and stress, particularly for older populations and people with disabilities or others who do not drive. This can increase the risk for early mortality, depression, and dementia.

Many of the health issues mentioned in this section are intricately related to the disability section under demographics in this chapter as well. Planning transportation policies have historically emphasized roads over public and active transportation which has contributed to the united states overall trends of health hazards and segregating communities. Planning should also take into consideration how there are effects specifically on mental health as well. People with mental health issues, such as depression, make everyday activities appear to be daunting, if not downright impossible. Any barriers to transportation to and from key destinations such as psychiatrists, and it becomes that much more difficult for that person to seek help they need. This can result in isolation from family and friends, which has been shown to increase the likelihood of mental health issues forming. Access to public transportation can have important effects on both health and wellness, and health equity. Public transportation refers to a wide variety of options, including buses, streetcars, light rail, ferries, and subways that provide regular and continuing transportation to the public and that may incorporate private sector services such as paratransit or ride-sharing. In summary, transportation and health are interconnected and the availability and mode of transportation can have a significant impact on individual and population health.

Trends

Insurance –

The Uninsured rate in Oklahoma is one in seven. 537,825 Oklahomans are uninsured, making up for 13.8 percent of Oklahomans. Oklahoma ranks second highest in the nation for its percent of uninsured citizens. States that have not expanded Medicaid coverage had significantly higher uninsured rates according to the Department of Health and Human Services in 2021. One in 12 Oklahoma children is uninsured, 7.4 percent. Oklahoman ranks eighth in the nation for percent of uninsured children. Source: U.S. Census Bureau, 2021 ACS) NORTPO percentage of insured people is 86.17% which is 1 percent lower than the rest of Oklahoma. For children 91.75% are insured in NORTPO which is also roughly 1 percent less than the rest of Oklahoma children rates. The rate of people with insurance in NORTPO progressively increases over time as people age. (Table 2.25) More than half of the counties in NORTPO have higher uninsured rates than the state of Oklahoma, and every county has more than the rest of the United States average of uninsured peoples. (Graph Below) Due to the low rates of those insured it's even more critical that we provide better public transit access to hospitals, and clinics, as well as develop active transportation alternatives that promote healthier lifestyles in the region.



Life Expectancy/ Mortality Rates --

Fair access to jobs, quality education, safe, affordable housing, proximity to greenspace, and transportation shape day-to-day life and long-term opportunities for good health. In 2018, nearly seven million children in poverty lived in a household that spent half or more of their income on housing, leaving little else for other basic needs like food, transportation, or child care. To address these challenges, government, business, and nonprofit leaders must work together through support of new taxes to fund the construction of more affordable housing and transportation improvements. After a drop in life expectancy in recent years, signs indicate the overall national trend may be leveling off. Yet not all groups of people, everywhere, have experienced the same length of life trends. Among rural counties, more counties worsened than improved since the 2010 Rankings. Progress is uneven: from the 2010 to 2020 Rankings, there have been gains in some of the key factors that impact health, including education and employment, while others, such as rates of children living in poverty and income inequality showed little progress. (Source: County Health Rankings, 2022) In the NORTPO region life expectancy is higher than anywhere else in the state. (Source: Center for Health Statistics, Map 2.3) The average life expectancy is 75.75 years, and Cimarron boasts the highest life expectancy of any county in the state with an average life expectancy of 81.8 years. The panhandle counties Cimarron, Texas, and Beaver are all above 75 years. The lowest life expectancy in the region is Blaine county at 71.7. According to the Health Statistics Director at the Oklahoma Department of Health, life expectancy for Oklahomans as of 2022 is 72.8 years at birth. Blaine is the only NORTPO county under that life expectancy number. (Table Below) Life Expectancy measures the average number of years from birth a person can expect to live, according to the current mortality experience (age-specific death rates) of the population. Life Expectancy calculations are based on the number of deaths in a given time period and the average number of people at risk of dying during that period, allowing us to compare data across counties with different population sizes. Deaths are counted in the county where the individual lived. So, even if an individual die in a car crash on the other side of the state, the death is attributed to the individual's county of residence. Understanding how long and well we will live is vital information these ranking provide. One part of the social and economic factors that is effected by transportation is housing and transit. The main issues mentioned that transportation effects are driving alone to work, long commute – driving home, and traffic volume. Another major issue that influences life expectancy is access to care that is directly linked to mobility. (Info Graphic 2.2)

Life Expectancy in NORTPO

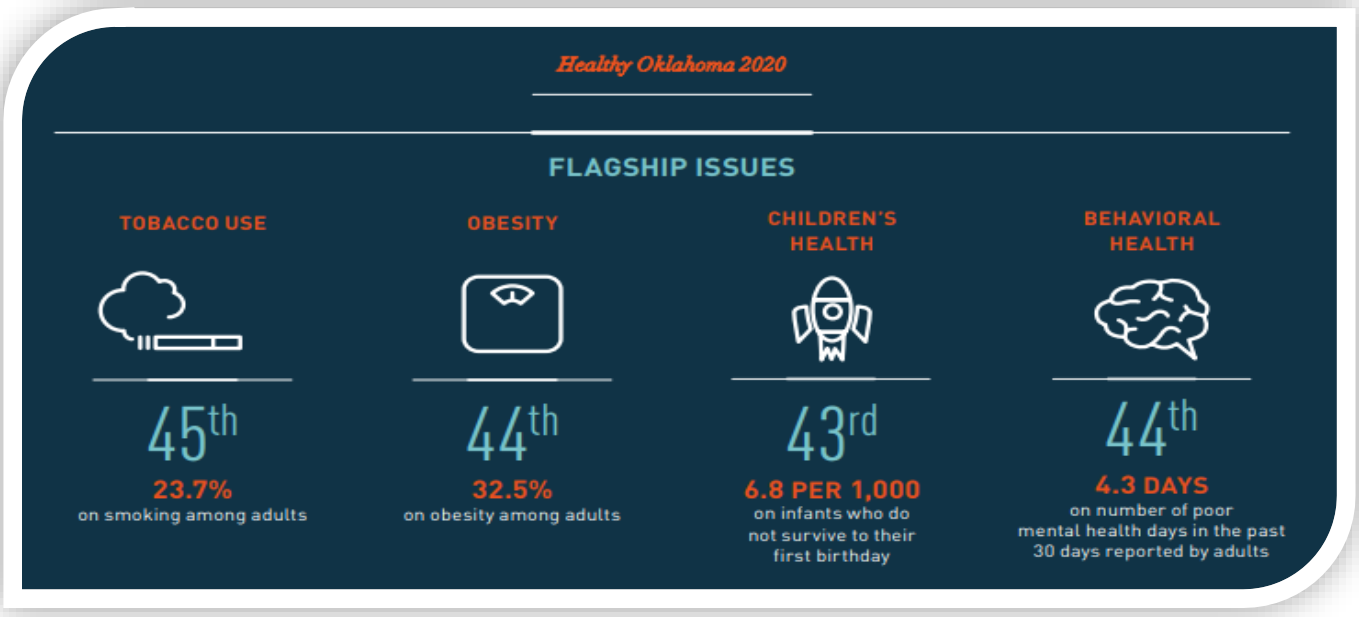
Counties	Life Expectancy Age
Alfalfa	77
Beaver	77.4
Blaine	71.7
Cimarron	81.8
Dewey	73.4
Ellis	76.2
Garfield	75
Grant	74.6
Harper	78
Kay	73.1
Kingfisher	77
Noble	74.8
Major	74.9
Texas	75
Woods	75.4
Woodward	76.1
NORTPO	75.7125

Community Health Improvement Plans (CHIP) -

Kingfisher county is the only county in the NORTPO area that has a CHIP. One of the benefits of developing this plan is that it helps identify and focus on factors in the community that have the greatest impact on its health. Then the community can work to facilitate the good things and mitigate the bad things. After reviewing the data for Kingfisher seven elements were identified for further consideration:

- Mental Health, including Suicide and Opioids
- Smoking and Tobacco Use
- Obesity and Diabetes
- Cardiovascular Disease Mortality
- Cancer Mortality
- Child Abuse and Neglect
- COVID-19

Many of these listed in the Kingfisher area also are issues throughout NORTPO. Transportation is relevant for each issue in that increased access to mobility via vehicles, or walking trails etc. all have positive impacts on people's health. Specifically, under the mental health section in Kingfisher's CHIP, mentions one of their barriers are difficulties with local transportation providers. Being able to help provide resources on which transit providers take people to or from specific locations, and increasing access to mental health facilities would be helpful in preventing these barriers. (Source: Kingfisher County Community Health Improvement Plan, 2022 – 2027) Adequate transportation, educational attainment, income, housing, social support and safe neighborhoods are necessary foundations for healthy communities. While the role of individual lifestyle choices cannot be minimized, the social and physical influences of one's surroundings cannot be underestimated. Thus, these social determinants of health are taken into account in the work surrounding the flagship issues of OHIP and find a specific designation within the model. (Source: Oklahoma Health Improvement Plan (OHIP, 2020) The 4 flagship issues listed by the OHIP is Tobacco Use, Obesity, Children's Health, and Behavioral Health. In each of these issues Oklahoma ranks in the bottom 7 states or below. (Infographic Below)



(Source: Oklahoma Health Improvement Plan (OHIP, 2020)

Locations

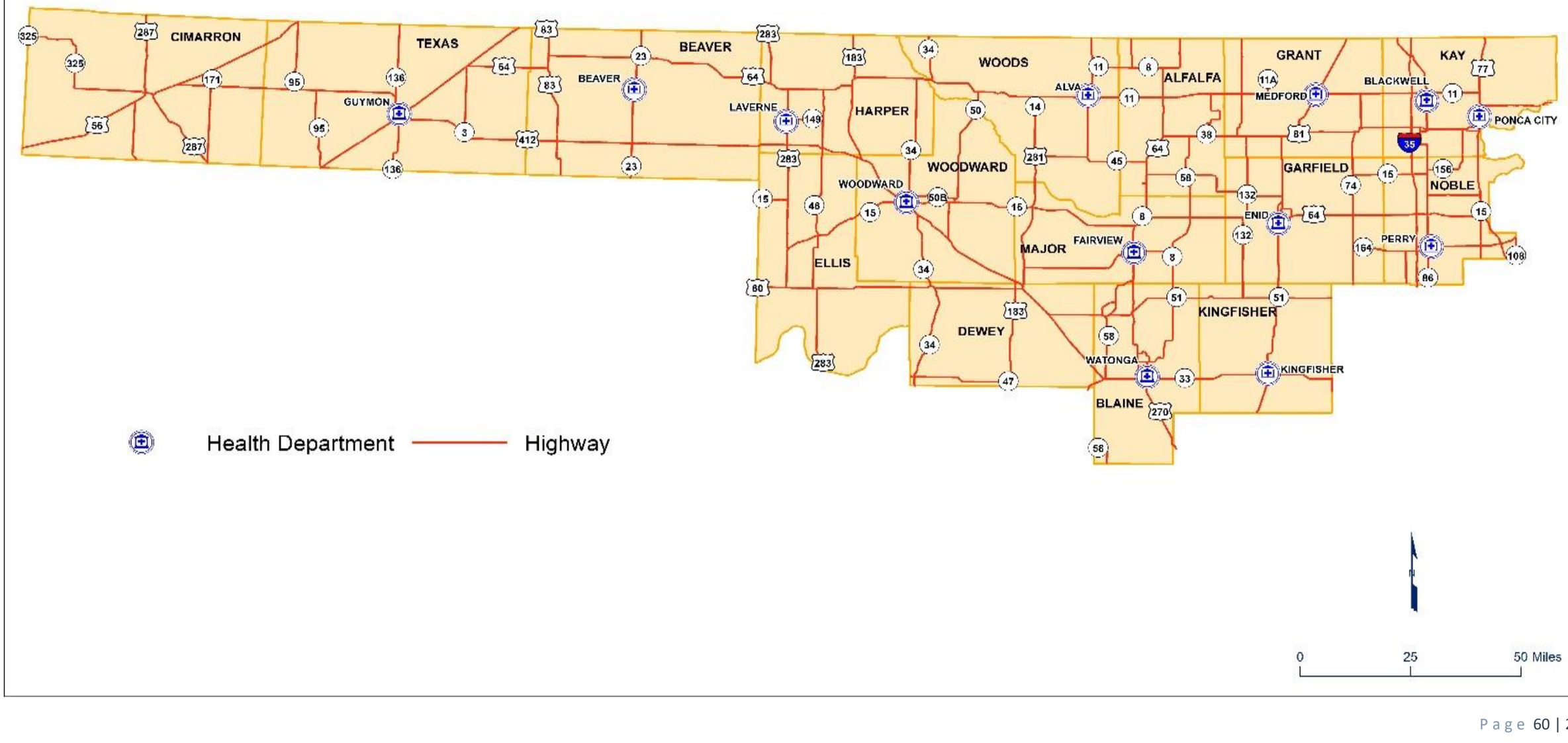
Health Departments -

Oklahoma currently has 68 county health departments and two independent city-county health departments serving 77 counties. Each department offers a variety of services, such as immunizations, family planning, maternity education, well-baby clinics, adolescent health clinics, hearing & speech services, child developmental services, environmental health, and the SoonerStart program. There's only 7 counties without a county health department in Oklahoma, but 4 of those reside in the NORTPO region which include Alfalfa, Cimarron, Dewey, and Ellis, but each has a neighboring county nearby that has a health department. Kay county is unique in our area of having 2 locations for their county health department, 1 in Ponca City, and the other in Blackwell. Health departments are key destinations for people in rural regions especially for vaccinations, and should be prioritized in the context of transportation infrastructure. (Table 2.26) (Map Below)

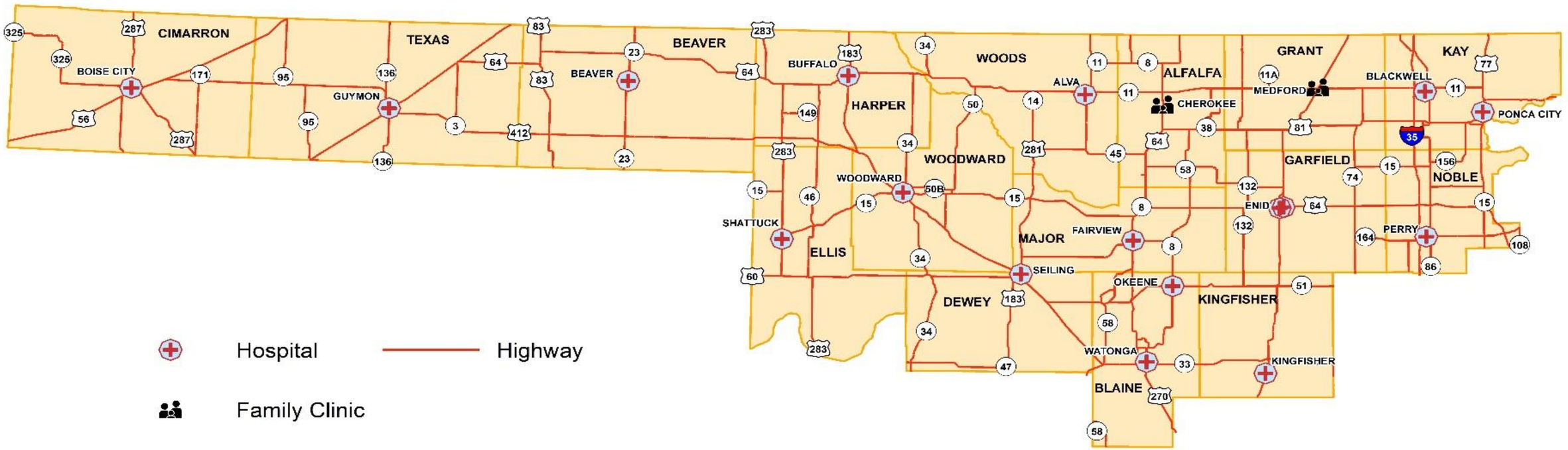
Hospitals –

There are 15 hospitals located in the NORTPO region. The counties of Grant and Alfalfa do not have a hospital but they do have family health care clinics, and are both near Kay and Garfield counties that have the largest hospitals in the entire region. Blaine county has two hospitals serving a population of 9,680 people in an area of 929 square miles. There is 1 Hospital per 4,840 people, and 1 Hospital per 464 square miles. (Map Below) In Oklahoma, Blaine County is ranked 7th of 77 counties in Hospitals per capita, and 31st of 77 counties in Hospitals per square mile. There are 188 Hospitals in Oklahoma, serving a population of 3,896,251 people in an area of 68,578 square miles. There is 1 Hospital per 20,724 people, and 1 Hospital per 364 square miles. (Map 2.4) The state of Oklahoma is ranked 15th in Hospitals per capita, and 40th in Hospitals per square mile. This emphasizes the importance of reliable transportation due to the lack of hospitals within close proximity to people. (Table 2.27) Both the Enid hospitals have the highest grossing patient revenue at $660,358, and $499,062, and a combined bed total of 347. (Table 2.28) Many of the other counties in the region send their patients to Enid due to their expertise, and available bed size thus making it important to ensure access from those hospitals to the hospitals in Enid.

Regional Health Departments



Regional Hospitals and Family Clinics



Geographical Trends

Understanding an area's geography helps with transportation planning by determining the physical features of an area, such as the availability of roads, rail lines, water bodies, and mountainous terrain, which in turn affects the feasibility and cost of different modes of transportation. Geography also determines the distribution of population and economic activities, which affects transportations demand and the need for transportation infrastructure. Understanding geography, therefore, enables transportation planners to make informed decisions about where to locate transportation infrastructure and how to design it to meet the needs of the area. This includes topography, waterways, land use patterns, population density, and infrastructure. For example, an area with high population density and few roads may require more investment in public transportation, while an area with low population density and abundant natural resources may require more investment in road infrastructure to support the movement of goods. Understanding an area's geography can also help transportation planners identify potential challenges and opportunities, such as mountainous terrain or waterways that may impact transportation routes and modes. Transportation allows us to mitigate the constraints of geographical features and plays a major role in supporting spatial relations between locations by creating links between regions and economic activities. The ultimate goal of any transportation is to overcome space, which is shaped by a variety of human and physical constraints such as distance, time, administrative divisions, and topography. Transportation, being one element of this spatial order, is, at the same time, influenced by geography as well as influencing it. For instance, the path followed by a road is influenced by regional economic and physical attributes, but once constructed, the same road will shape future regional developments and its physical layout from thereon. These principles underline that there's would be no transportation without geography and no geography without transportation.

Regional Destinations

Regional destinations refer to cities, towns, and other locations within a particular region that attract tourists or serve as business or residential centers and refer to the various tourist attractions, natural landmarks, cultural hotspots, and other places of interest that exist within a specific region or geographical area. Regional destinations can vary greatly in terms of size, scale, and popularity, and may include cities, rural areas, mountains, beaches, lakes, forests, and more. Oklahoma is home to 8 tourist information centers, and 1 is located in NORTPO, Blackwell Tourism Information in Blackwell, at Exit 222 along I-35. Transportation infrastructure in a region can play a critical role in shaping these key destinations making it easier for people to travel to and from regional destinations, as well as move goods and services within the region. This can stimulate economic growth and help to create new jobs by attracting new businesses and destinations. In order for regional destinations to be accessible and effectively utilized, it is important for there to be well-developed transportation infrastructure in place. This can help to make travel and regional tourism easier, faster, and more efficient, and can also provide a boost to local economies by increasing the number of visitors to the region. Below there are analysis on specific regional destinations that attract tourism, or large quantities of people, and require stable and efficient infrastructure in the area. In the future we may consider broadening this section with major grocery stores per county, restaurants, and possibly farm equipment hubs, and co-ops due to the agricultural nature of many counties.

Historical Places -

The National Register of Historic Places (NRHP) is a list of properties determined significant in American history, architecture, archaeology, engineering, or culture, by virtue of design or architectural criteria, association with historical persons and events, and/or value for historic or prehistoric information. Under state and federal law, NRHP listed and NRHP-eligible properties are afforded equal protection from impact. NRHP properties are designated to help state and local governments, federal agencies, and others identify important historic and archeological resources, to ensure their protection, either preservation, or minimization and mitigation of impact.

. The Department of Transportation Act (DOT Act) of 1966 established a regulatory requirement that made avoidance and preservation of historic properties a responsibility of the U.S. Department of Transportation (USDOT). A special provision of the DOT Act, known as Section 4(f) (Title 23 U.S.C. 138), set restrictions on the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or publicly and privately owned historical sites for transportation projects.

In the case of specific transportation projects, the federal agencies consult with the historic preservation officer to determine whether the project has the potential to affect historic properties. Highway agencies also consult the public and other stakeholders, such as Native American tribes, when determining whether a specific project has the potential to affect historic properties. After consultation, the Federal agency may decide that the project has no potential to affect historic properties and satisfies Section 106, and the agency then may direct the project to proceed. However, if project effects are possible, or if the parties cannot agree, the Federal agency will continue to consult and will seek ways to avoid, minimize, or mitigate the adverse effects before proceeding.

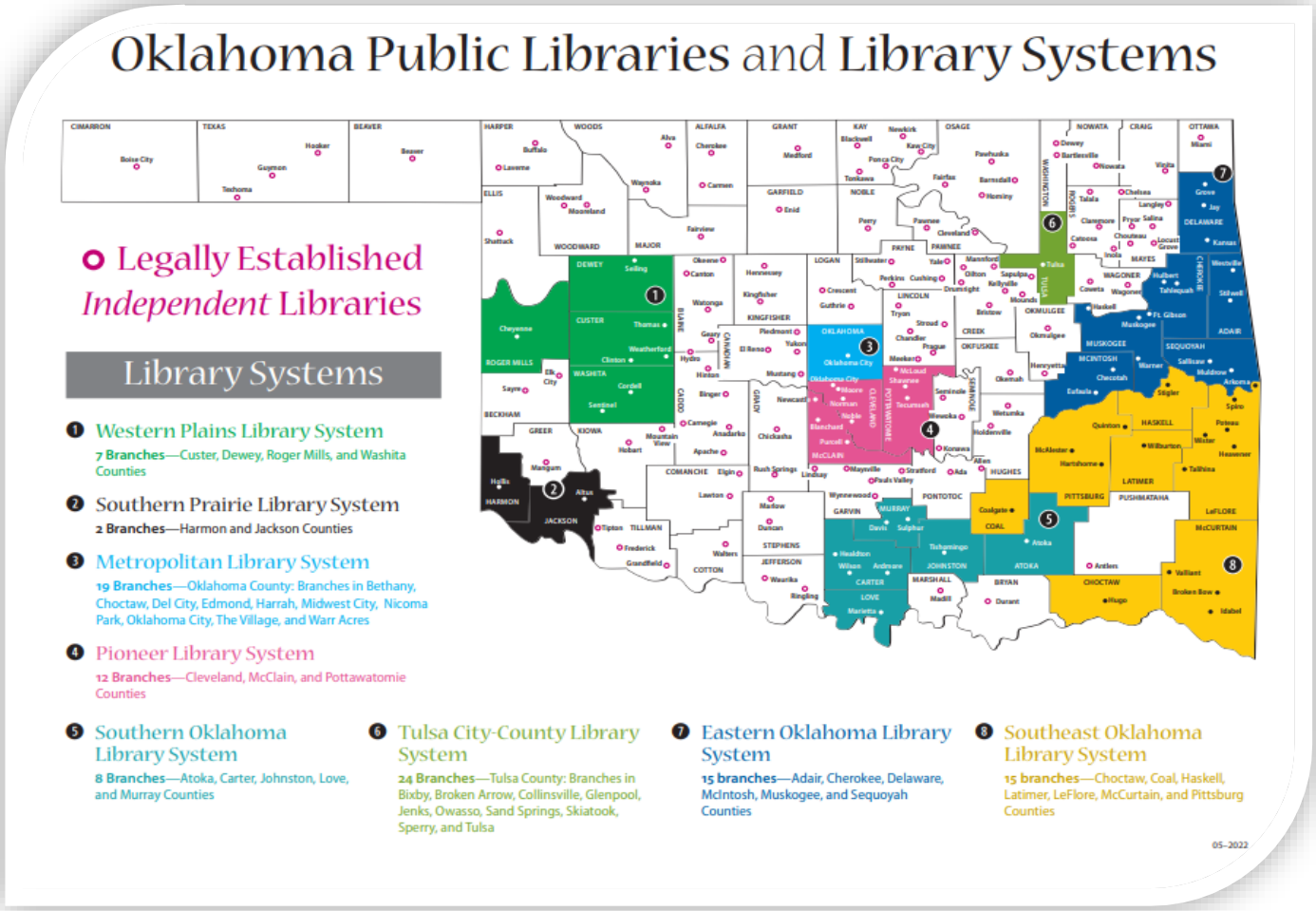
Section 106 regulations should not be viewed as an inhibitor to transportation infrastructure projects, but rather represents an opportunity for transportation planners to incorporate historic preservation into the planning of future transportation infrastructure. Maintaining this catalog of historic resources along its roadways will help planners, road builders, and historians make more informed decisions that affect significant roadside features. In the end this will help preserve historic structures, where infrastructure can be much more than gravel, concrete, or asphalt, particularly when they symbolize a pathway through the regions rich and varied history. (Source: FHWA)

There are 264 historical places in the NORPTO region according to the NRHP. Kay county has the most with 62 historical places due to its rich history with Native American's, and architectural achievements. Ponca City is one of the largest urban areas in our region and has the most historical sites within Kay county and has benefited greatly over the years from Conoco/Phillips activity in the area. After the Civil War the federal government relocated other Native American tribes into the area known as the Cherokee Outlet - the Kansa (Kaw) arrived in June 1873 and settled in what would

become the northeastern part of Kay County. The Ponca tribe arrived in 1877 followed by Tonkawa tribe around 1885 which has contributed to the areas culture. One unique historical place is White Eagle Park that was adopted as a historical place in 2007. White Eagle Park camp by the river became the nucleus of the White Eagle community, and according to Ponca oral tradition some families lived in tents on the campground Ponca elders still recall life in that community in the 1920s and 1930s when everyone still spoke the Ponca language. Speaking the Ponca language as well as the social and ceremonial dances on the tree shaded campground now known as the South Arena reinforced and sustained their Ponca identity. The campground in White Eagle Park was the location for one of the most important, unifying, and enduring Ponca traditions, the Ponca Powwow. The Ponca believe and historians of powwow culture acknowledge that today's intertribal contest powwow originated in the Ponca gatherings and activities at the White Eagle Powwow ground and quickly spread to other tribes. (Source: American Legion, 2023) There is only one historical bridge in the NORTPO area that is located in Morrison of Noble County, and is known as the Morrison suspension bridge which was the last suspension bridge to be in use in Oklahoma. Ever since 2009 every year at least one historical place has been added in the NORTPO area. Maintenance of this data will be important to know which areas have this status, and possibly where we could have better infrastructure to promote these culturally important sites. (Table 2.29)

Libraries –

Libraries often serve as community centers, and they can provide access to information and resources that are related to transportation, such as maps, schedules, and travel guides. By providing access to information and resources related to transportation, libraries help people to make informed decisions about how to get around their community, and they can host events and workshops to raise awareness and encourage uses of public transport. A robust transportation system allows people to reach libraries easily, regardless of where they live. There are 30 libraries in NORTPO's region. Kay county has the most libraries with 5. Half of the counties in the region have more than 1 library. All the libraries in NORTPO are Independent libraries except for the one in Seiling of Dewey county which is a part of the Western Plains Library System. (Map Below)



(Source – Public Library Locator, https://oklahoma.gov/libraries/oklahomans/public-library-locator.html, 2023)

Downtowns –

The NORTPO area is home to many popular downtown locations, and they create the most traffic in our urban areas of Alva, Blackwell, Enid, Guymon, Perry, Ponca City, and Woodward. Kingfisher city, and Perry city both don't meet the qualifications for urban areas under the census, but also have lively downtown locations. Downtown areas in NORTPO host a variety of activities including dining, shopping, arts, culture, and recreational activities. The downtown area is often defined as the historical and political, geographic heart of a city. Downtowns are vital to the success of a community. Significant considerations should be given to developments that can build downtown areas into a livelier place to work and play. There is a direct relationship between a downtown's growth and the transportation provided to it. Businesses want to locate their offices in places that are accessible and that provide the benefits of agglomeration. A downtown's growth must be approached by considering transportation and land use in complement with one another. Agglomeration economies exist when production is cheaper because of this clustering of economic activity. As a result of this clustering it becomes possible to establish other businesses that may take advantage of these economies without joining any big organization. This process may help to urbanize areas as well. Benefits arise from the spatial agglomeration of physical capital, companies, consumers and workers including lower transport costs, and proximity to centers of production which minimizes costs. Another benefit is knowledge spillovers, where the accumulation of knowledge in a concentrated area like a major urban area can contribute to sharing of new production techniques, and technology which facilitates even greater skills in a smaller economic region.

Key Cities –

In planning and managing the growth of cities, it is important for governments to consider how to meet the transportation needs of existing and new residents, and how transportation shapes the use and affects the growth of an area. Planning for larger urban transport overtime needs to be an integral part of managing the growth of urban, and growing rural areas. Cities can grow both vertically and horizontally by either building upward and filling the open spaces between existing buildings, or by building outwards. For cities to grow sustainably, they need a balance of both kinds of expansion. When a city expands horizontally it can lead to reduced densities in their core areas. This affects the agglomeration of cities, i.e., strategic situation of households and firms that benefit from being close together. Agglomeration yields major economic advantages not only in the form of reduced transportation and energy costs for households and firms, but also increased productivity and better opportunities for innovation. The close and strategic location of firms allows for sharing of certain resources, for example, specialized services such as repair, printing, advertising, and communications, which, in turn, creates local economies of scale and complementarities in production.

Robust transport infrastructure, including high-quality and well-connected roads, increases the mobility of people by cutting down travel costs and times, contributes to greater road safety, lessens the amount of greenhouse gases released by cutting down the time spent on roads, and over time may help contribute to agglomeration through a balance of vertical, horizontal, and articulated density. Innovations in transportation are expected to impact how we live, work, play and learn. With new technologies, it is possible that people will move from rural to urban areas more than ever before following national trends. This also means there are more cars on the road, increasing congestion, traffic jams, and pollution. As cities expand, transportation systems need to provide efficient modes of transportation for people in the city. Transportation is a crucial factor in urban planning. It is not only a means of transportation but also an important part of urbanization. It provides jobs and opportunities for economic growth, as well as social mobility. To ensure that urban planners make the best transportation planning decisions, we must ensure that we have a complete understanding of transport and urbanization – how various modes of transport impact our cities and how innovating our transport systems may deliver improved urban sustainability. Transportation systems are one of the most important factors in the growth of a city.

Listed below are the key cities in the NORTPO area that either have shown growth, or have the most potential for growth based upon preexisting transportation infrastructure, attractions or current populous. Emphasizing transportation that is either in these cities, and leading to these cities from other rural areas is key to the growth and sustainability of the NORTPO region as a whole. Each of these overviews provides information on key locations for each city, and their background in how they have come to be a tourist attraction and regional destination form TravelOK brochures.

Alva - A northwest Oklahoma City located in the middle of the Great Salt Plains State Park, Alabaster Caverns State Park and Little Sahara State Park tourism triangle. Bradt's Menagerie allows people to come face-to-face with farm and exotic animals, including miniature donkeys, zebras and even a camel. Established in 1902, the NWOSU Museum of Natural History is the second oldest in Oklahoma. The Alva Regional Airport Museum has a dose of local aviation history. Alva is also home to the Cherokee Strip Museum, which has one of the best collections of pioneer exhibits and Indian art and artifacts in the state. When it comes time to rest and refuel, Alva offers several hotel options, and restaurants like Holder Drug Soda Fountain and You Pick Restaurant. As an added treat, around town, you'll also find an impressive series of more than a dozen historical murals that will add a wonderful touch of authenticity to Alva.

Blackwell - Blackwell was settled in the late 1800s as part of the Cherokee Strip Land Run of Northern Oklahoma, and the town remains a testament to its history. At the Top of Oklahoma Historical Society Museum, you can browse farm tools, artwork and even artifacts from the Land Run of 1893. The museum is located in the Electric Park Pavilion that was built in 1912 and is listed on the National Register of Historic Places. There's plenty of relaxation at the open greens of the Blackwell Municipal Golf Course. A key restaurant is Bob's Grill, a Blackwell establishment that has been serving homemade meals for half a century. There's also the Oklahoma Barn Quilt Trail, and many antique shops for beautiful keepsakes.

Buffalo – The original "stone city" of Buffalo was established before statehood and still stands thanks to its founders' requirement that downtown buildings be constructed of stone to withstand fires. The Selman Guest Ranch is a must-see in the northwest Oklahoma town of Buffalo. Located in the heart of wild quail country, this 14,000-acre working cattle ranch welcomes visitors to a hunter's paradise. In addition to hunting and fishing, guests can also view wildlife like the Lesser Prairie Chicken, deer, dove and pheasant. Hiking and mountain biking trails will take guests through miles of creek bottom and gently rolling sagebrush-covered hills. Closer to town, visitors will find the Doby Springs Municipal Golf Course & Recreation Park, as well as the Buffalo Museum, where you can spot a display of the original Selman Post Office and even a fully furnished sod house

Enid – Enid is a city with a fascinating history, vibrant shopping, unique dining and a bustling music scene. The historic town of Enid was a well-known watering hole and overnight stop along the Chisholm Trail before it opened for settlement as part of the Cherokee Strip land run. This heritage has left a lingering Old West flavor that mingles with modern amenities, from culinary delights to cultural richness. Family fun flourishes in Enid, Oklahoma. Kids love spending a day at Leonardo's Children's Museum & Adventure Quest, a three-story play castle and hands-on museum. The whole family will enjoy the Cherokee Strip Regional Heritage Center, which highlights the Land Run and history of the area, from cowboys to oil barons. All ages are also invited to marvel at the incredible model train exhibits at the Railroad Museum of Oklahoma. Many activities in the arts at The Enid Symphony Center, home of the oldest symphony orchestra in the state, and the Gaslight Theatre, where acclaimed productions are staged year-round. Guests visit Enid's Chautauqua in the Park, one of the oldest Chautauqua events in Oklahoma, and an abundance of live music venues provide a vibrant nightlife and music scene. A host of festivals and events create even more compelling reasons for Enid being a regional destination as the largest city in NORTPO.

Fairview – Fairview is home to Gloss Mountain State Park, this hidden gem in western Oklahoma entices visitors to climb to the peak to enjoy a bird's-eye view of the surrounding countryside. Sometimes called "Glass Mountains," the area has a high Selenite content that sparkles in the sun. The park is open from sunrise to sunset and offers plenty of trails and picnic areas. Fairview is also home to the Major County Historical Society & Museum, where visitors can learn about the history and heritage of the area. The museum, which is located on 160 acres of farmland, will transport you back in time with two churches, a two-story hotel from the early 1900s, a one-room schoolhouse, railroad depot and locomotive, blacksmith shop and building with memorabilia from Fairview businesses in the 1890s. For overnight trips many stay at Plymouth Valley Cellars, this 4.5-acre vineyard and winery offers Oklahoma wines, products and works by local artists, as well as a cottage in the vineyard, RV campsites and a four-bedroom home for larger groups.

Freedom - Located in northwest Oklahoma, Freedom is home to the largest natural gypsum cave in the world that is open to the public and the only gypsum show cave in the United States. The Alabaster Caverns State Park offers daily guided cavern tours and overnight stays at one of the park's campsites. Within the park, there's the Selman Bat Cave

Wildlife Management Area, which hosts an annual summer event for visitors to witness over one million Mexican free-tailed bats return to the area during migration.

Guymon – Guymon is home to the Guymon Pioneer Days Rodeo, the fifth-largest outdoor rodeo in the nation. People can view art at a downtown gallery, visit the No Man's Land Museum in nearby Goodwell, and watch buffalo, elk and longhorn cattle at the Guymon Game Preserve, or explore mixed-grass prairies at the Optima National Wildlife Refuge

Hennessey - The charming small town of Hennessey sits alongside the historic Chisholm Trail and welcomes visitors with a variety of historic sites, lodging options, restaurants, specialty shops and recreation opportunities. Bull Foot Park is a supply point noted for the water well used by drovers on the trail, and marvel at the unique cattle drive statue. Hennessey is also home to the Sam & Burla Snyder Memorial History Center, which chronicles the exciting story of the settlement and development of north-central Oklahoma Vernost Wine Co. is located in Hennessey, which is a small batch winery and bar that hosts live local music, and nearby the historic downtown there's Prairie Quilt, Oklahoma's largest quilt shop.

Kenton – Nestled among mesas formed by ancient lava flows, Kenton is the only town in Oklahoma on Mountain Standard Time. The Kenton Museum is the oldest building in the hamlet, which was built of native rock in 1902 and houses No Man's Land artifacts. Many travel out west to visit the Black Mesa, Oklahoma's highest point at 4,973 feet; the trail head is east of Kenton at the Black Mesa Nature Preserve. There's also dinosaur tracks just a hop and a skip down the road in a dry creek bed. After a day spent exploring, many stop at one of two guest ranches, a guesthouse or a B&B in town.

Kingfisher - Kingfisher functions as the gateway to northwest Oklahoma from Oklahoma City. This growing city has a friendly, small-town feel where visitors will enjoy a quaint soda fountain, historic mansion and tributes to the "Ambassador of the Plains," Jesse Chisholm. Many travel to the Chisholm Trail Museum & Governor Seay Mansion to discover more about the Oklahoma Land Runs and the Chisholm Trail, as well as Native American artifacts and the history of the Kingfisher College. A frontier village with an 1890 church, 1889 bank, one-room schoolhouse and two log cabins are also located on-site. The historic Seay Mansion, territorial Governor Abraham Jefferson Seay built this three-story mansion in March 1892 with the hopes that Kingfisher would become the capital of Oklahoma Territory.

Newkirk - Founded in 1893, the entirety of downtown Newkirk is on the National Register of Historic Places with the largest collection of limestone buildings in Oklahoma. Historical sites include the Newkirk Community Museum or the Newkirk Heritage Center. This small north-central Oklahoma town offers casinos big and small from the sprawling SouthWind Casino Newkirk to smaller operations like the 7 Clans Casino Chilocco. Newkirk is also home to the Native Lights Casino and 7 Clans First Council Casino, which also has a luxurious onsite hotel and indoor waterpark for guests.

Perry – Perry, Oklahoma was born of the 1893 land run, which opened the Cherokee Strip for settlement. At noon on September 16, 1893, the sound of a pistol signaled the beginning of the great race to stake a claim and take title to 160 acres of virgin land. The town of Perry sprang up in a single day with 40,000 residents of the tent city by nightfall. These determined settlers created a community on the plains that still thrives today. There's the exciting history of the land run at the Cherokee Strip Museum & Rose Hill School in Perry, and the Perry Wrestling Monument Park. Many people spend time at family-owned restaurants, or a relaxing day at Perry Lake.

Ponca City - Ponca City settlers claimed town site certificates during the Cherokee Outlet Opening, and oil made it into the thriving cultural center it is today. Ponca City is home to the Pioneer Woman Museum & Statue, and the "Palace on the Prairie," the Marland Mansion & Estate, built by oil baron and Governor E.W. Marland. Ponca City has a deep oil history you can learn about at the Conoco Museum. You can honor Native roots at the Standing Bear Park, and Museum & Education Center or take a tour of the Lester & Mary Cann Memorial Botanical Gardens.

Tonkawa - Tonkawa, nicknamed "The Wheatheart of Oklahoma," is located in north-central Oklahoma. Tonkawa is home to gaming, shopping, museums and more. The Tonkawa Hotel & Casino is always busy, and offers over 500 slot machines and "Vegas Style" entertainment, as well as an onsite restaurant, bar and upscale hotel. History buffs learn about the area with trips to the Tonkawa Tribal Museum or the McCarter Museum of Tonkawa History & Centennial

Park. There's also the Heart in the Park Labyrinth — the only heart-shaped labyrinth in the world. In addition to its wonderful attractions, Tonkawa also offers unique eateries such as TS Fork which on either Friday or Saturday night has a five-course, prix fixe menu focusing on fresh, local ingredients. Arbuckle Mountain Fried Pies are a key attraction for food lovers of a flaky hand pie stuffed with your choice of sweet or savory fillings.

Watonga - Watonga is home to gorgeous Roman Nose State Park. One of Oklahoma's original seven state parks, Roman Nose State Park takes its name from a Cheyenne Chief and is set amidst a beautiful canyon with exceptional recreation activities. Amenities include an 18-hole golf course, swimming pools, hiking trails, two lakes, horse stables and even seasonal trout fishing. Many people stay in one of the park's cabins or head to the renovated lodge for exquisite guest rooms and an on-site restaurant. There's also Lucky Star Casino Watonga, and local history at the T.B. Ferguson Home. Watonga is also home to Whirlwind Winery, which produces all of its wines from locally-grown grapes and fruit. One of the city's most popular festivals is the Watonga Cheese Festival, held annually in mid-October, this two-day event offers a parade, art show, 5K run, carriage rides, vendors and, of course, plenty of wine and cheese tastings.

Waynoka – Named for a Cherokee word meaning "sweet water," Waynoka is a western Oklahoma gem. Home of Little Sahara State Park, this area is a great example of Oklahoma's diverse landscape where visitors are treated to over 1,600 acres of sand dunes ranging from 25 to 75 feet high. Many people bring their own off-road vehicle or rent one nearby and drive it right to the park. Little Sahara State Park also offers over 200 campsites, picnic facilities and seasonal concessions. History buffs visit the 1910 Harvey House and Santa Fe Depot, this complex houses the Waynoka Air Rail Museum, which is located on the BNSF main line and sees 50 to 100 trains pass by daily. An unexpected eatery in Waynoka, Cafe Bahnhof serves an authentic German feast, featuring schnitzel, bratwurst and all the ice-cold beer you can drink.

Woodward - In Woodward visitors enjoy Boiling Springs State Park, which includes Boiling Springs Golf Club, and has quail, dove, pheasant, turkey and deer at the Hal & Fern Cooper Wildlife Management Area and local hunting ranches. There's many cultural locations including the restored 1920s Woodward Arts Theatre, and the Plains Indians & Pioneers Museum, named the best local history museum in the state.

(Source: https://www.travelok.com/cities-and-regions)

Museums –

Oklahoma has over 500 museums, historical societies, historic sites, zoos, aquariums, science centers, botanical gardens, historic houses, natural history museums, children's museums, heritage centers, living history museums and tribal cultural centers. The accepted definition of a museum by the Oklahoma Museums Association is defined as an organization which uses a professional staff or the equivalent, whether paid or unpaid, that is primarily engaged in the acquisition, care and exhibition to the public of objects or interactive displays/exhibits owned or used by the institution. Further, a museum is understood to possess a variety of the following characteristics: 1) is organized on a permanent or regular basis for essentially educational and/or aesthetic purposes; 2) owns or uses tangible objects, either animate or inanimate; 3) cares for these objects; and 4) exhibits these objects to the general public on a regular basis at or in a facility which it owns or operates; 5) provides educational and cultural programming.

Number of each museum type in Oklahoma:

- Art - 49
- Children's - 7
- History - 358
- National History & Natural Science - 27
- Science & Technology - 10
- Tribal Museums and Cultural Centers - 37
- Zoos, Aquariums, Zoological Societies and Arboreta Botanical Gardens - 12

NORTPO area is home to 48 different museums total that fit within each of these categories. (Table 2.30) Travel Oklahoma lists their 13 top tier museums throughout the state, and NORTPO has 1 of them being the Cherokee Strip Museum.

The Oklahoma Historical Society is an agency of the State of Oklahoma that has developed numerous collections, programs, research centers, museums, historic homes, and military sites across the state. 5 of their 14 museums are located in the NORTPO region, and are more significant than other museums due to their history, size, and financial backing. The only historical home in NORTPO from the Oklahoma Historical Society is the Sod House Museum in Aline of Alfalfa county. The historical society seeks to preserve Oklahoma's only remaining sod house and interprets the early-day lifestyles of a pioneer, from the establishment of the Cherokee Outlet in 1893 to 1920. The only military site home in NORTPO from the Oklahoma Historical Society is Fort Supply Historic Site in Woodward county, which includes five original buildings and a replica of the 1868 stockade.

Museums in NORTPO from the Oklahoma Historical Society include:

Cherokee Strip Museum and Rose Hill School - The museum complex sits on about five acres and includes four buildings: the museum, a blacksmith shop, a large implement building, and an original one-room schoolhouse. The exhibits are designed to portray life from the opening of the Cherokee Strip in 1893 to the 1930s. The museum features exhibits, a gallery featuring works by local and regional artists, a large gift shop, and a hands-on farmyard exhibit for children. The museum complex is located approximately a quarter-mile east of I-35 from exit 186 toward Perry. The Cherokee Strip Museum and Rose Hill School are an affiliate of the Oklahoma Historical Society, operated in partnership with the Cherokee Strip Historical Society.

Cherokee Strip Regional Heritage Center - The Heritage Center's exhibits take visitors on a journey through history from life before the and after the Land Run of 1893, to early settlers, oil and gas, the story of Enid, and Phillips University. A special exhibit gallery features traveling and temporary exhibits. The Heritage Center also offers resources for research. The Research Center includes Enid city directories, newspapers on microfilm, Phillips University yearbooks, and oral histories. The Sons and Daughters of the Cherokee Strip Pioneers created the original museum in the 1960s. In the 1970s the museum moved to its current location and became a property of the Oklahoma Historical Society. The Cherokee Strip Regional Heritage Center opened in 2011.

Chisholm Trail Museum and Horizon Hill - Now on exhibit at the Chisholm Trail Museum is Bridging the Chisholm Trail through Indian Territory. The largest exhibit ever constructed at the museum, it emphasizes the history of the Chisholm Trail as it relates to Indian Territory and present-day north-central Oklahoma. During museum hours' visitors may also tour the Pioneer Village, which includes two log cabins, a one-room schoolhouse, a church, and one of Kingfisher's first banks. Admission to the Chisholm Trail Museum also includes admission to Horizon Hill, located just across the street. This property is managed by Chisholm Trail Museum. Once the greatest cattle trail in the world, the Chisholm Trail served to get Texas cattle north to the Kansas railheads from which they were shipped to other parts of the country. The main stem of the Chisholm Trail ran along what is now US 81. Cattle were first moved over the trail in 1867. In the ten years from 1867 to 1877, more than three million head of cattle passed through Oklahoma to Kansas. The trail blazed was named after Jesse Chisholm, a Cherokee guide and trader. Chisholm had moved trade goods over a part of the route and travelers began referring to it as Chisholm's Trail. In Kingfisher County all three parts of the trail can be seen; the Chisholm Trail Museum is located directly on this famous trail.

Pioneer Woman Museum and Statue

Pioneer Woman Museum was dedicated September 15, 1958, just east of the statue. The museum preserves the legacy of women of all races, creeds, and nationalities, who contributed to the development of Oklahoma. The museum's education center features craft demonstrations, special exhibits, an interactive timeline, and the Pioneer Woman Walk of Fame. The museum is dedicated to the enduring spirit of women—past, present, and future—who see no boundaries.

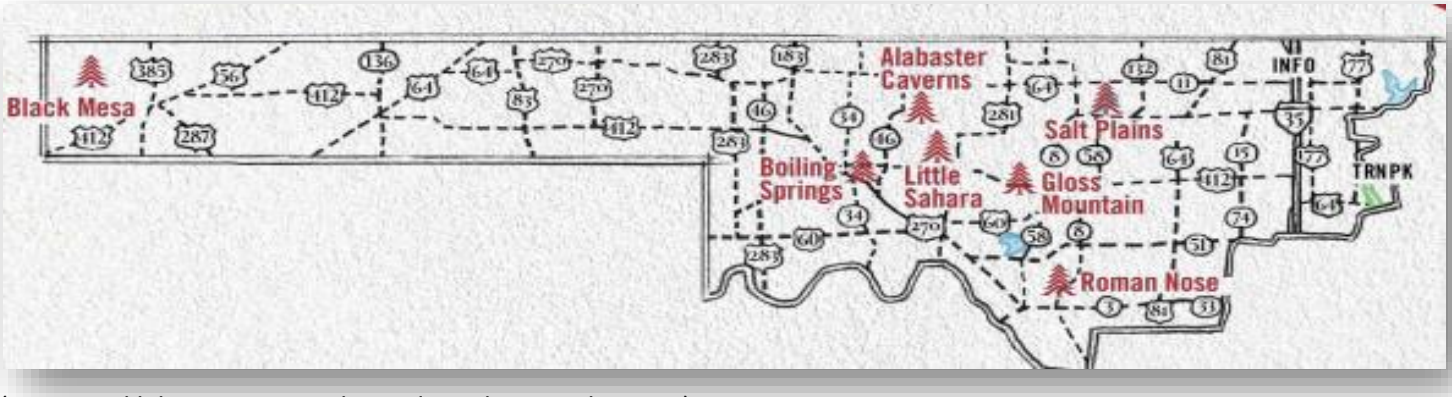
Tom Mix Museum - The Tom Mix Museum houses items from Tom Mix's personal collection, providing a glimpse into the life of one of Oklahoma's most colorful figures. Located in Dewey, OK, those too young to remember the man and his talent are sure to find his story as fascinating as those who watched him ride across the movie screen years ago.

(Source: https://www.okhistory.org/sites/museums)

Parks/Camping –

Northwest Oklahoma offers an amazing variety of ecoregions and landscapes that invite people to enjoy the regions natural treasures. In the region, you can enjoy one of the hottest shorebird watching spots, dig for rare crystals, take a cave tour or try your hand at a wild caving adventure, hike and ride over 70-foot sand dunes and enjoy a spring-fed oasis filled with wildlife. All of these activities attract tourism throughout the state and the surrounding areas. Oklahoma is one of just twenty states without a National Park but does contain numerous state parks including Alabaster Caverns, Boiling Springs State Park, Black Mesa State Park, Gloss Mountains, Little Sahara State Park, Roman Nose State Park, and Salt Plains State Park. (Map Below)

NORTPO Region State Parks



(Source: Oklahoma State Parks, and Outdoor Guide, 2023)

One of the other most unique, and important sites in NORTPO is Standing Bear Park, Museum & Education Center in Ponca City that functions as a historical place, museum, and park. The location honors Native Americans with a 22-foot bronze statue of Ponca Chief Standing Bear who in 1879 persuaded a federal judge to recognize Native Americans as persons with the right to sue for their freedom, established him as one of the nation's earliest civil rights heroes. This outstanding sculpture sits on a 63-acre park that boasts a walking trail among native grasses and wildflowers, a peaceful memorial grove, a pond and outdoor interpretive center. These elements come together to tell the history of American Indians in Oklahoma. Visitors to this park are greeted by the larger-than-life sculpture of Standing Bear, located where the actual chief is believed to have walked more than a century ago. This Ponca City monument built in his honor celebrates all Native Americans with artifacts, artwork and educational material, all in a breathtaking setting. The location is also host to The Standing Bear Powwow, hosted by the six north-central tribes of Oklahoma, is held the last Friday and Saturday of September. It features inter-tribal dancing, exhibition dancing, contest dancing, tiny tot contests and the crowning of the Standing Bear Princess that attracts traffic from all over the region. (Source: 2022 Standing Bear Native American Foundation, https://www.standingbearpark.com/) Another popular park location in Ponca City is Historic White Eagle Park. This parks location is the historical foundation for today's "intertribal powwow." The first legitimate intertribal powwow in Oklahoma was the Ponca Powwow. It began in northern Indian Territory around 1879.

According to the Oklahoma State Parks, and Outdoor Guide in 2023, NORTPO's region is host to at least 89 activity location sites that includes 17 lakes, 26 parks, and 17 golf courses. Each of these attract visitors, and tourism to the region, often in larger vehicles that have a more significant impact on infrastructure due to their weight and size. NORTPO is also host to 51 different camping site locations which is located at many of the lakes and parks, but also includes 18 RV parks which is significant because RV's rely on safe and adequate transportation for outdoor recreational facilities. NORTPO is also host to 28 cabin, and lodging locations. (Tables 2.31,2.32,2.33)

Development

NORTPO's planning considers growth and development patterns in the region as a critically important component to transportation planning. Growth areas generate significant demands on the transportation system. The predominant land use in the region is agricultural with commercial and residential use within the cities and towns. With historical trends in population declining in most counties, community governments must consider the long-term impact of declining revenues dedicated to transportation systems and infrastructure. Efforts to maintain and attract business and industry will remain the focus of the communities for the future. The transportation planning process involves both long-term transportation system objectives and short-term implementation of projects that will provide a blueprint for the development of a healthier, safer and more efficient transportation system. Extensive and efficient transport infrastructure is essential for well-functioning economies and the development of regions and cities. When designed effectively, our transport networks can be an engine for productivity and improved quality of life for citizens. Transportation infrastructure allows regions and cities to leverage benefits from agglomeration and concentration of people by expanding commuting opportunities for their workers. This creates benefits for places and for workers who can access better-matching and better-paid jobs without bearing the burden of moving to a different place. Intra-urban and suburban transportation infrastructure serves to integrate rural regions into the local labor market of the cities located in their proximity, thereby creating a greater variety in job opportunities and raising the living standards of their inhabitants.

New commercial development –

In 2021, there were 83 announcements made for new and expanding companies statewide. Twenty-three companies are new to Oklahoma. 3 are located in the NORTPO region. Koch Fertilizer will invest approximately $150 million at its Enid facility. The investment will go toward increasing area production and enhancing the reliability of existing production units. Furthermore, Koch plans to improve its rail infrastructure and ammonia truck loading facilities. Koch manufactures, markets and distributes agricultural fertilizers as well as industrial ammonias, urea, CO2, and Diesel Exhaust Fluid. Chisholm Trail Meats will build a facility on an industrial park in eastern Enid pending city construction of a new access road and other infrastructure upgrades. The company will invest more than $2.6 million into the facility. 20 full-time jobs will be added over the next five years at the distribution and processing facility. It will be located at the Garfield County Industrial Park on the southwest corner of 54th and Willow. Maverick Wind Energy Center, a wind farm built by American Electric Power, has begun commercial operation. The 287-megawatt wind farm near Enid is one of three farms that compose AEP's North Central Energy Facilities. (Source: New Growth + Expansions Reports, Oklahoma Department of Commerce, 2021) (Map 2.5)

In 2022, there were 77 announcements made for new and expanding companies statewide, including updates to earlier announcements. Twenty-nine companies are new to Oklahoma. At least 5,072 new jobs are expected from these announcements. Noble, Garfield, Blaine, and Woodward counties all have publically new and expanding companies in the year 2022. In Garfield, Logan, and Noble, Southwestern Electric Power Company (SWEPCO), in partnership with sister company Public Service Company of Tulsa, seeks approval to acquire the 598.4-MW Wagon Wheel wind power project. The wind farms will be located in Garfield, Logan and Noble counties. The acquisition is one of three projects totaling $2.2 billion in investment by parent American Electric Power. SWEPCO expects to finish Wagon Wheel by 2025. In Garfield, Renew Energy Maintenance, LLC, announced the opening of a new factory in Enid. The plant will remanufacture wind turbine drive trains, performing service on turbines on-site. It will have the largest capacity in terms of size of such turbines, at up to seven megawatts. The facility will hire more than 90 full-time positions at its peak. In Noble, The Toro Company announced plans to expand the facility of its Ditch Witch subsidiary in Perry. The expansion will add 200,000 square feet and 100 new jobs to the site. Ditch Witch has been making construction equipment in Perry since 1949. With more than 1,600 employees, it is the largest employer in Perry. In Woodward, Advanced 4 Solutions, Inc. plans to open a recycling and manufacturing plant in Woodward. The company plans to hire up to 100 new jobs, with the majority from the Woodward area. Advanced 4 Solutions recycles wind turbines and other composite materials and remanufactures them for products in the automotive, furniture, and consumer goods markets. In Blaine, American

Electric Power has begun operations of its latest wind farm, the Traverse Wind Energy Center. It is the largest single wind power project built in one time in North America. The wind farm will generate 998 megawatts from 356 GE turbines. It will deliver 3.8 million megawatt-hours of energy annually. Benefitting will be customers of AEP subsidiaries Public Service Company of Oklahoma (PSO) and Southwestern Electric Power Company (SWEPCO) in three states -- Oklahoma, Arkansas and Louisiana. (Source: New Growth + Expansions Reports, Oklahoma Department of Commerce, 2022)

Traffic Analysis Zones (TAZ) -

The Traffic Analysis Zone (TAZ) Program is a specialized software program used for delineating TAZs in support of the Census Transportation Planning Products (CTPP). This software program is designed to allow agencies the ability to define areas to and associate demographic data that supports transportation system analysis as well as creation of geographic summary layers suitable to their planning. NORTPO utilizes TAZ delineation in review of socio economic data. TAZ delineation for the non-urban parts of Oklahoma is the responsibility of ODOT. Additional information is obtained from the CTPP. Historically, in non-MPO areas the TAZ boundary defaulted to the census tract boundary, and census block groups that fit within the tracts. This makes the process of maintaining and updating socioeconomic data much easier. TAZ information is important for a variety of metrics including population, employment, vehicles available, occupied housing units, and registration data. As rural transportation planning continues to mature the delineation of TAZ will allow acquisition of data that supports the transportation planning process. NORTPO has developed TAZ maps and data for NODA counties based upon the RTPO manual for TAZ delineation, but now utilizes the ODOT TAZ files for making maps, and data on TAZ. The NORTPO region consists of 327 traffic analysis zones as of 2017 ODOT data. Garfield has the most with 58, and Dewey has the least with 11.

Alfalfa County – 14 TAZ

Beaver County – 15 TAZ

Blaine – 14 TAZ

Cimarron – 12 TAZ

Dewey – 11 TAZ

Ellis – 14 TAZ

Garfield – 58 TAZ

Grant – 13 TAZ

Harper – 18 TAZ

Kay – 26 TAZ

Kingfisher – 19 TAZ

Major – 15 TAZ

Noble – 27 TAZ

Texas – 28 TAZ

Woods – 18 TAZ

Woodward – 25 TAZ

Environmental Features

Oklahoma has a land area of 68,577.8 square miles and a water area of 1,302.7 square miles. It is the 19th largest state by area. Oklahoma is bordered by Missouri, Colorado, Arkansas, New Mexico, Kansas, and Texas. The states that Oklahoma border are reflected in its geography for each area. Oklahoma is geographically diverse, and is a transition zone in the western United States between wetter, forested parts and drier regions yet is unmistakably a Great Plains state especially in the NORTPO region. Oklahoma's topography includes forests, mountains, prairies, rivers, lakes, canyons, and mesas. Oklahoma comprises a number of environments—from mountainous to plains, semiarid to humid, and grassland to forest. The Geography of Oklahoma encompasses terrain and ecosystems ranging from arid plains to subtropical forests and mountains. Much of Oklahoma consists of level plains, but the state also has rugged hills and mountains covered by green forests. It also has extremely fertile farmland. Oklahoma has more than 300 lakes and almost 23,000 miles (37,015 km) of rivers and streams. Its land is drained by two great rivers systems-the Red and the Arkansas. The landscape of Oklahoma comprises ten land divisions/geographic regions:

The Ozark Plateau is in the northeast. It includes a bit of the Ozark mountain range, which has ridges, steep valleys, caves, and sinkholes. This region is a part of the Missouri and Arkansas landscape.

In the northeast is the Prairie Plains, fertile farmlands where animals graze. Most of the state's coal and oil are produced here. Farms in the Arkansas River Valley are located here and spinach, beans and carrots are produced east of Muskogee.

In the southeast is the Ouachita Mountains region, which includes Ouachita National Forest (part of this forest is also in Arkansas.)

East-central Oklahoma contains the Sandstone Hills region that has low, rocky hills.

In south-central Oklahoma, the Arbuckle Mountains are one of North America's oldest ranges, at 1.3 billion years old. They've been heavily eroded, or worn down.

Southwest is the Wichita Mountains National Wildlife Refuge, the state's biggest wildlife refuge.

The Red River Valley runs along Oklahoma's border with Texas. In addition to the Red River, which forms the wiggly boundary between the two states, this area has sandy, fertile soil and some forests.

In the center of the state is Oklahoma's largest land region, the Red Beds Plains, with gentle hills made of red sandstone and shale.

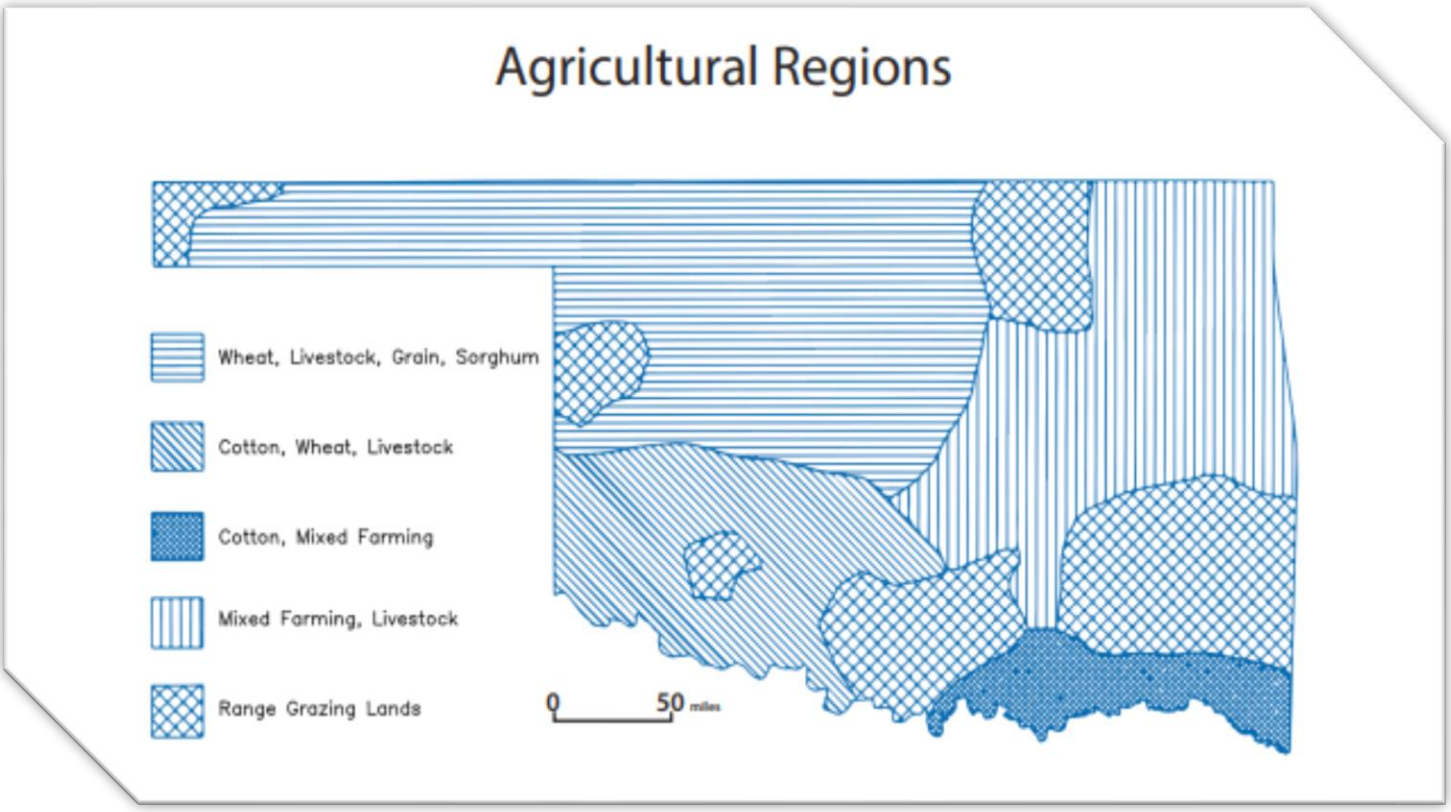
Farther west is the Gypsum Hills, low hills capped with up to 20 feet of sparkling gypsum, a soft mineral. They are west of the Red Beds Plains and run north to the High Plains.

The High Plains are flat grasslands in the northwest. They include the Oklahoma panhandle, this strip of land is 166 miles long and is 34 miles wide between Colorado and Kansas in the north and Texas in the south. This is the highest and driest part of the state. This region is level grasslands. They rise from 2,000 feet above sea level in the east to 4,973 feet above sea level in the west at the Black Mesa.

NORTPO has an area covering northwest and north central Oklahoma totaling 18,961 square miles, 12,135,040 acres. NORTPO makes up 27.6% of total land area in Oklahoma and is larger than 9 other states' total land area. NORTPO's region is bordered by Colorado to the west, Kansas to the north, New Mexico to the west, and Texas southwest. All of these bordering states geographies effect NORTPO's area as well. NORTPO also functions similar to the rest of Oklahoma in being a diverse area. The geographic regions in NORTPO include, the High Plains, Gypsum Hills, and parts of the Red Beds Plains. The land is fertile for crops with rivers, and lakes throughout the area, and aquifers that provide water from underground primarily used for irrigation and public supply. NORTPO area is a significant contributor to Oklahoma's agricultural impact.

Oklahoma ranks 4th in the nation for the number of farms covering 34.2 million acres of land with the average farm size being 438 acres. Oklahoma's most valuable crop is wheat and the state ranks among the leading (#4) producers in the

country. In most circumstances, individual farming areas include more than one type of crop since it is more economical to grow a variety of crops within one area; however, wheat is planted on more acres than any other crop in Oklahoma. Wheat production is centered primarily in the northwestern and north central areas of the state that encompass NORTPO. Oklahoma normally ranks second in winter wheat production, surpassed only by Kansas. The Panhandle area of Oklahoma is a mixed area of rangeland and valuable irrigated cropland. Wheat, corn, and grain sorghum are grown to help support a large cattle feeding industry and a recent expansion in hog production. The range-grazing lands of Oklahoma are spread across the state. The regions in NORTPO have generally had rich soils and plentiful supplies of water to support grasses. Oklahoma is also ranked #5 in sources of beef in the country and, not surprisingly, the production of beef cattle is the leading source of agricultural income in the state. Oklahoma is also ranked #2 in Rye Production with 1.5 million bushels per year, and has seen a 421% increase in cotton cash receipts since 2015. Environmental conditions such as climate and soil type have a great influence on agriculture practices in the state. Another one of the leading reasons for success is Oklahoma ranks #5 in the nation for days of sunshine. Though Oklahoma provides food, fuel and fiber for the U.S., the state is extremely valuable in an international sense as well. In 2013, the total value of agricultural exports for the state was an estimated $1.9 billion. (Source: Oklahoma Almanac, 2022) (Map Below)



(Source: Oklahoma Almanac, 2022)

NORTPO's region is home to many environmental features and natural and cultural resources that can influence the transportation system. Environmental information collected and mapped provides for an understanding and awareness of important features and resources early in the planning process. This way the protection of these resources, either through avoidance or minimization of impact, can be more fully considered as an integral part of plan and project development. There are many different types of environmentally sensitive areas and potential impacts to the natural and human environment that may be affected by various actions associated with the regional plan. These include (but are not necessarily limited to):

- Threatened and Endangered Species
- Wetlands
- Floodplains
- Surface and Ground Waters
- Storm water Management and Erosion and Sediment Control
- Hazardous Materials
- Air Quality
- Historically/Cultural Resources
- Right-of-Way/Property Impacts, Including Impacts to Parks, Farmland and Neighborhoods
- Traffic and Train Noise

Identification of important environmental features provide agencies and officials, involved with addressing the transportation issues, baseline information necessary to afford protection or to minimize impact to environmental resources, as required by the National Environmental Policy Act (NEPA) and other state and federal laws, rules, and regulations. As individual projects or transportation improvements are advanced from this plan, detailed environmental impact assessments will be required for any projects using federal funds, and in many cases any using state funds. The environmental features and constraints in this section were identified and mapped using secondary source information that included mapping, and publications from the following: United States Environmental Protection Agency (USEPA), Oklahoma Geological Survey, Oklahoma Department of Fish and Wildlife Resources, Oklahoma Department for Environmental Quality (ODEQ), United States Department of Agriculture (USDA), United States Department of the Interior Fish and Wildlife Service (USFWS), United States Geological Survey (USGS), University of Oklahoma Geographic Information System (GIS), and other state and local agencies. (A complete list of references is included in Appendix F.)

Air Quality –

The Clean Air Act requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act identifies air quality standards to protect public health, including protecting the health of "sensitive" populations such as asthmatics, children and the elderly. The EPA has set NAAQS for six principal pollutants, which are called "criteria" pollutants: carbon monoxide, lead, nitrogen dioxide, ozone (O3), particulate matter (PM)2.5, PM10, and sulfur dioxide (SO2). The NORTPO region has three air quality monitoring sites located in Seiling, Kremlin, and Ponca City. The Seiling site (no. 40-043-0860) located at the airport measures Ozone (O3) and Particulate Matter to 2.5 micrometers or smaller (PM2.5). The Kremlin site (no. 40-047-0555) measures Sulfur Dioxide (SO2) and the Ponca City site (no. 40-071-0604) measures Sulfur Dioxide (SO2) and Particulate Matter to 2.5 micrometers or smaller (PM2.5). (Table Below)

Toxin Monitoring Sites

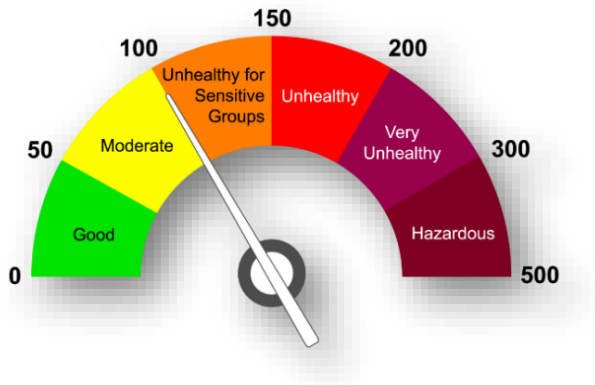
Toxins	City	County
SO2	Kremlin	Garfield
PM2.5, SO2	Ponca City	Kay
O3, PM2.5	Seiling	Dewey

(Source: Oklahoma Environmental Air Quality, 2023)

Studies indicate PM2.5 and O3 have health effects on the respiratory system and can lead to heart diseases. The largest source of SO_2 in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities. Smaller sources of SO_2 emissions include: industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content. Short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2. According to the Environmental Protection Agency (EPA) particulate matter (PM) (also called particle pollution) is the term for a mixture of solid and liquid droplets found in the

air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye, but others are so small they can only be detected using an electron microscope. PM2.5 is defined as fine inhalable particles roughly 30 times smaller than the diameter of a strand of human hair. These particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks or fires although most particles form in the atmosphere as a result of complex reactions of chemicals such as sulfur dioxide and nitrogen oxides, which are pollutants emitted from power plants, industries and automobiles. Particulate matter contains microscopic solids or liquid droplets that are so small that they can be inhaled and cause serious health problems. Particles less than 2.5 micrometers in diameter (PM2.5) pose the greatest risk to health. Fine particles are also the main cause of reduced visibility (haze) in parts of the United States, including many of our treasured national parks and wilderness areas (source EPA). Major sources of PM are motor vehicles, power plants and wood-burning stoves. Near ground level ozone is a harmful pollutant and is formed when pollutants emitted by cars, power plants, refineries, chemical plants and other sources react chemically in the presence of sunlight.

Ozone in the air we breathe can harm our health. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers. In addition, people with certain genetic characteristics, and people with reduced intake of certain nutrients, such as vitamins C and E, are at greater risk from ozone exposure. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and airway inflammation. It also can reduce lung function and harm lung tissue. Ozone can worsen bronchitis, emphysema, and asthma, leading to increased medical care. (source EPA) Ozone at ground level is a harmful air pollutant, because of its effects on people and the environment, and it is the main ingredient in “smog." Ground level ozone, is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC). This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight. Since ozone is a particularly troublesome pollutant in Oklahoma, there is a special forecast for it. Each day the Oklahoma Environmental Air Quality Division checks the weather forecast, current ozone levels and available ozone models to try to forecast ozone concentrations across the state. Ozone watches/alerts are called on days when tomorrow’s ozone concentrations could reach levels unhealthy for sensitive groups (orange) or worse on the AQI. When an Ozone Watch/Alert is issued, a banner will appear on the DEQ Home Page. Information will be provided there to indicate what parts of the state are forecasted to be affected. The Air Quality Index, or AQI, is a system of colors and numbers used to communicate the air quality in a region. The AQI color scheme starts with green for healthy air through maroon for the unhealthiest level. Likewise, AQI numbers go from healthiest (0-50) to unhealthiest (300+). The AQI can be used in a number of ways. DEQ uses it to forecast expected conditions for the day. Each day forecasters attempt to predict the most likely air quality conditions for the day and display that data in the form of the AQI. Each AQI color has a descriptor statement that informs the public of any necessary precautions to take. (AQI Graphic Below) In the future monitoring when areas of NORTPO are on watch, or alert can be useful in knowing if there’s any relationship between local factories, or transportation and air quality.



Wildlife –

The rapid development of transportation infrastructure is a major threat to wildlife in a region, and specifically endangered species. Roads and railways can increase animal mortality, fragment habitats, and exacerbate other threats to biodiversity. By keeping track of endangered species in the NORPTO region we can mitigate future impacts to endangered species, and use planning in ways that proactively reduce the negative effects of transportation infrastructure on animals overall. These methods can include creating barriers for animals, or natural land bridges that allow animals to avoid high traffic corridors. State and federal agencies classify plants and animals as threatened or endangered when their numbers are low or declining due to direct destruction (from development or pollution, for example) or loss or degradation of suitable habitat. Alteration of river flows caused by reservoirs and impoundments has had the most influence. Other threats include river channelization, water pollution, sedimentation, and agricultural runoff. Federally listed endangered and threatened species in the region may include: Piping Plover (Charadrius melodus) classified as federally endangered is located at many reservoirs throughout the state for brief periods, and Whooping Crane (Grus Americana) classified as federally endangered most commonly migrates through the western half of the state, typically east of Guymon, OK and west of Interstate 35. Since 2020 Major, and Cimarron counties are the only counties in NORTPO that have had Mountain Lion sightings. Cimarron, and Texas counties are the only counties in the region that are areas of concentration for bear sightings. (Source: Oklahoma Wildlife Department)

Brownfields-

The Oklahoma Department of Environmental Quality (DEQ) Brownfields Program provides a means for private parties, public and governmental entities, and nonprofits to voluntarily investigate and, if warranted, clean up properties that may be contaminated by pollution with petroleum, produced water/brine, gasoline, diesel or other deleterious wastes from oil and gas exploration and production related sites, or from leaking underground petroleum storage tank (PST) sites. The brownfields process includes a Consent Order (CO) for site characterization and remediation. (Source: http://www.deq.state.ok.us/lpdnew/brownfindex.html) Brownfields are areas that are or are presumed to be contaminated with hazardous substances such as petroleum or other harmful substances that pose barriers to redevelopment. A proposed Brownfield site is a defined area; it does NOT need to be the entire property or lease. There can be many advantages to cleaning up and redeveloping a Brownfield site such as creating a tourist destination, commercial site, and broadening the tax base. Public, nonprofit and private entities may obtain low interest loans for cleanup from DEQ's Brownfields Revolving Loan Fund (RLF). Through Brownfields, communities have been able to reinvest in themselves, returning properties in the core of their infrastructure to beneficial reuse. Cleaning up and redeveloping these properties increases local tax bases, facilitates job growth, preserves historic structures, and improves public health, while turning environmental liabilities into economic drivers for the community.

There have previously been at least 3 completed Brownfield sites in the NORTPO region, 1 in Garfield county that was a former compressor booster station that had been abandoned and has now been restored to oil, gas and trucking operations. Another was completed in Harper county that was previously a gas plant site with an old case, and has now been restored into an oil off-loading facility. The other was located in Kay County in Blackwell where multiple tracts used to be former zinc smelters. There are currently two active Brownfield sites in the NORTPO Region – 1 in Major county, the former Montgomery Oil Station, and 1 in Alfalfa county that was a historic gas station. (Source: The Oklahoma Corporation Commission Brownfield Program)

Bodies of Water –

Oklahoma contains approximately 1,401 square miles of water area in its lakes and ponds (larger than the state of Rhode Island). Oklahoma also has approximately 167,600 miles of rivers/streams with more than 200 lakes and over one million surface acres of water for boating and swimming, Oklahoma has been a haven for water recreation. Streams of water are natural corridors provide habitat for fish, insects, and wildlife, and recreational benefits to people such as hunting, fishing, boating, and bird watching, as well as aesthetic benefits. Streams also provide drinking water for wild animals, livestock, and people. All major streams in Oklahoma have broad, sand or clay filled channels with active water courses occupying a small portion of the river bed or flood plain. These broad, sand-filled channels reflect large changes in discharge (floods) that dissolution of bedded salt (halite) occurs at shallow depths in parts of western Oklahoma. This high-salinity brine seeps to the surface, creating a series of natural salt plains or salt flats in some of the state's rivers.

The largest, Great Salt Plains, on the Salt Fork of the Arkansas River, covers about twenty-five square miles in Alfalfa County. Others in northwest Oklahoma are the Big Salt Plain and Little Salt Plain, on the Cimarron River, and Ferguson Salt Plain, in Salt Creek Canyon in northern Blaine County. In recent years, Oklahoma and other states have been impacted by various naturally occurring environmental conditions. With the development of many man-made dams on the major rivers and their tributaries, the frequency and magnitude of flooding is decreasing; this causes gradual stabilization of the active watercourses within the flood plains. Oklahoma salt plains discharge natural brines to the Arkansas and Red River basin systems. (Map - 2.6) Each major drainage system in Oklahoma consists of a principal river, with many smaller tributary rivers, streams, and creeks funneling water to the main course.

Streams flowed across Oklahoma for millions of years before finally carving out today's major drainage basins. The positions of earlier streams are marked now by alluvial deposits remaining as stream terraces, high above the flood plains of today's streams that are occur from time to time. The two rivers and their many tributaries flow into Oklahoma from neighboring states, while all surface water from Oklahoma flows into Arkansas, via the Red, Arkansas, and Little Rivers, and Lee Creek. Major rivers and tributaries flow mainly east and southeast across Oklahoma. Downstream in both drainage basins, fresh-water inflow dilutes saline river waters, making the water usable for municipalities, livestock, and industrial purposes before reaching Keystone Lake or Lake Texoma. There are many lakes and reservoirs in Oklahoma; most are manmade, created by damming streams for flood control, water supply, recreation, fish, wildlife, and hydroelectric power. Major lakes are formed behind dams built by the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and the Grand River Dam Authority. Various state and federal agencies, cities, and other entities own and operate large lakes. Farmers and landowners have built many smaller lakes and ponds. A series of oxbow and playa lakes are the only natural lakes in Oklahoma (Oklahoma Water Resources Board). Typically, crescent shaped, oxbow lakes occupy abandoned channels of meandering streams and occur mainly in flood plains of the Red, Arkansas, Washita, North Canadian, and Verdigris Rivers in central and eastern Oklahoma. Oklahoma has 62 oxbow lakes covering at least 10 acres each; the largest, near Red River in McCurtain County, covers 272 acres (Oklahoma Water Resources Board). Playa lakes form in shallow, saucer-like depressions scattered across the semiarid High Plains in northwestern Oklahoma and the Panhandle. Playa lakes have no outflow, holding water during and after rainy seasons before evaporating, or losing water by infiltrating into the ground. Oklahoma has about 600 of these intermittent or ephemeral playa lakes, but only a few persist year-round (Oklahoma Water Resources Board)

There are 13 lakes in NORTPO region. The oldest of which lakes is Perry CCC lake built in 1935, and the newest was built in 1971, Lake McMurty. Due to their aging conditions the infrastructure is deteriorated in the area and requires more assessment, and needs. The largest lakes in the area are Kaw lake in Kay county and Canton lake in Blaine county both over 100,000-acre foot. Other prominent sources of water in the NORTPO region include Beaver River, Bitter Creek, Black Bear Creek, Cimarron River, Canadian River Tributary, Coon Creek, Cow Creek, North Canadian River, North Stillwater Creek, Kingfisher Creek Tributary, Salt Fork Arkansas River, South Carrizo Creek, Turkey Creek, Upper Black Bear Creek Washita River and Wolf Creek. (Source: OWRB) Lakes are primary attractions in the region, and have an increased demand on infrastructure especially during warmer months. Ensuring quality access to these locations is important for the fabric of many communities, and to attract outside tourism into the region as an economic driver. (Table 2.34) (Map 2.7)

The United States Geological Survey (USGS) measures streamflow of water. Streamflow is the volume of water that moves over a designated point over a fixed period of time. The flow of a stream is directly related to the amount of water moving off the watershed into the stream channel. It is affected by weather, increasing during rainstorms and decreasing during dry periods. Stream velocity, which increases as the volume of the water in the stream increases, determines the kinds of organisms that can live in the stream (some need fast-flowing areas; others need quiet pools). Streamflow also affects the amount of silt and sediment carried by the stream. Streamflow levels are a useful indicator for drought, but may reflect management decisions at upstream reservoirs which will not reflect true drought conditions. A streamflow which is greater than the 75th percentile is considered above normal. A streamflow which is between 25th and 75th percentiles is considered normal. A streamflow which is less than the 25 percentile is considered below normal.

NORTPO's streamflow as of recent data of January of 2023 has been significantly below normal in 5 locations, and below normal at the other 3 locations measuring streamflow. (Map - 2.8) Due to this low streamflow, the area has been considered in either moderate or severe level droughts by the USGS. (Map - 2.9) Drought reduces available water-based transportation routes and limits cargo-carrying capacity. The primary effected source in NORTPO during drought is agriculture, that may result in increased transportation costs related to cracks, and damaged pavements as well as causing rail lines to possibly buckle. When water supplies are in low supply and high demand, subsidence (the sinking of the ground) can occur as more groundwater is drawn upon. This can destabilize the ground, affecting infrastructure (including buildings, roads, and water pipes) and can also lead to the formation of sinkholes. Having transportation advocates become an active role in water infrastructure planning is important to minimize the effects of climate based impacts. (Source: NOAA – National Oceanic and Atmospheric Administration, and NIDI - National Integrated Drought Information System)

Water Quality -

Transportation is inherently sensitive to climate related concerns, with numerous examples of transportation disruptions and delays related to weather events and seasonal conditions. Similar to water infrastructure, climate change impacts transportation systems in most sectors, including natural resources, agriculture, fisheries, tourism, insurance and health, all of which depend upon a safe and reliable transportation network working with water infrastructure as many of these are funded in conjunction with each other for infrastructure projects. The climate sensitivity of transportation systems is reflected in design and construction standards, asset management expenditures, and mobility and safety outcomes. Impacts are associated with both declining, and increased water levels in freshwater systems, and storm surge flooding.

According to data compiled for the 2012 Update of the Oklahoma Comprehensive Water Plan, total water use in Oklahoma in 2007 was 1,814,762 acre-feet: Approximately 56% of this use came from surface water sources and 44% from groundwater sources; Approximately 73% of this water was used for Crop Irrigation and Municipal/Industrial combined, Oklahoma's two largest water use sectors. Crop irrigation (41% of total use) is the number one use of water in Oklahoma; public water supply (32%) is second, followed distantly by livestock and aquaculture (12%). Groundwater accounts for 73 percent of total irrigation water use in Oklahoma. The majority of the state's surface water (approximately 54 percent) is used for public water supply. The approximate number of stream water permits on file at the OWRB is 2,600; the approximate total allocated stream water use in Oklahoma is 2.6 million ac-ft/year. The approximate number of groundwater permits on file at the OWRB is 10,000; the approximate total allocated groundwater use in Oklahoma is 3.2 million ac-ft/year. Evaporation and percolation preclude immediate use of approximately 80 percent of Oklahoma stream water. Each year, approximately 10.5 million acre-feet of water flows into Oklahoma through its two major river basins, the Red and Arkansas. An average of almost 36 million acre-feet flows out of the state each year. (Source: Oklahoma Water Resource Board)

OWRB monitoring staff are engaged in a variety of activities to ensure the best data are available to assist decision makers in managing, protecting, and improving Oklahoma's water resources. This includes administration of Oklahoma's Beneficial Use Monitoring Program (BUMP), the state's first truly comprehensive water quality monitoring effort. Data provided by the program help identify waters experiencing impairments as well as the cause of declining water quality. Annual reports are produced by the OWRB detailing physical, chemical, and biological information from the state's lakes, streams, and groundwater. The program is instrumental for the development and refinement of Oklahoma's Water Quality Standards. OWRB monitoring staff also conduct statistical survey monitoring and other more targeted monitoring activities throughout the state, as well as lake restoration activities and bathymetric mapping. The Water Quality Portal is a cooperative service sponsored by the US Geological Survey, the US Environmental Protection Agency, and the National Water Quality Monitoring Council. It serves data collected by over 400 state, federal, tribal, and local agencies. The OWRB has monitored water quality, including chemical and biological data, through Oklahoma's BUMP for over 20 years and through the Groundwater Monitoring and Assessment Program (GMAP) for 7 years. This wealth of data can be found in the Water Quality Portal and associated analyses can be found in the annual BUMP reports on our lakes, streams, and groundwater pages. Approximately 130 lakes are monitored on a quarterly basis utilizing a five-year rotation schedule, allowing for long-term assessment of beneficial uses and water quality trends. Generally, lakes are

sampled at 3-5 stations in order to be representative of the riverine, transitional and lacustrine zones of the waterbody. On many reservoirs, additional sites are monitored, including major arms of the reservoir as appropriate.

In Oklahoma, the Department of Environmental Quality (DEQ) is responsible for assuring the safety of Considering Water Quality in Oklahoma water. If a violation with potential serious harmful health implication occurs, the information is made public within 24 hours. From August 18, 2018 through November 11, 2020 most Oklahoma counties had a very low number of violations. Higher violation counts appear in the south central and north-eastern counties where the population density is higher as well as the number of public water systems. There's a significant negative relationship between the Oklahoma rurality areas and the number of EPA water quality violations present. This indicates that rural counties tend to have lower violation counts during the time period studied. One of the reasons rural counties have lower violation numbers may be that there are fewer public water systems in rural areas due to population needs, and less chances of contamination. In the NORTPO region, Cimarron county had zero violation counts, and 11 other counties had only 1-15 water quality violations per county. Beaver and Noble counties had between 16-30 violation counts. Alfalfa and Kingfisher should be the most emphasized areas based on the data set with water quality. Alfalfa was in the 31-100 violation counts, and Kingfisher was in the 101-250 in number of violations of water quality. (Map - 2.10)

Aquifers –

Oklahoma is underlain by 22 major groundwater basins containing approximately 390 million acre-feet of water in storage, though only one-half of that amount may be recoverable. Groundwater is the prevalent source of water in the western half of the state in the NORTPO region. The state's largest groundwater basin, the Ogallala Aquifer in western Oklahoma, contains 90 million acre-feet of supply--enough to cover the entire state two feet deep. (Source: Oklahoma Water Resources Board) Traditionally, bedrock and alluvial rivers have been regarded as fundamentally different in character, with bedrock rivers being shaped primarily by lithological and structural controls, and alluvial rivers being shaped primarily by flow and sediment transport processes. Bedrock is made of bedrock whereas alluvial is made of unconsolidated materials. NORTPO region has multiple major aquifers in both bedrock and alluvial. In bedrock, the major aquifers are the Ogallala, and Rush Springs. In alluvial, Washita River, North Canadian River, Cimarron River, Salt Fork Arkansas River, and Enid Isolated Terrace are all major aquifers in the region. A major ground water basin (aquifer) is defined as being distinct from any underground body of water overlain by contiguous land, yet having the same geological and hydrological characteristics. (Map – 2.11)

Floodplains –

In the wake of historic flooding, the 2020 Oklahoma legislature passed Senate Bill 1269 to create Oklahoma's first statewide flood planning initiative. The Oklahoma Flood Plan, integrated with the Oklahoma Comprehensive Water Plan (OCWP), will raise awareness and motivate actions to reduce flood risk. At the community level, the plan will identify mitigation projects and provide a foundational structure for initiating and coordinating successful floodplain management programs. The Oklahoma Floodplain Management Act, passed in 1980, authorizes communities (cities, towns, and counties) to develop and enforce floodplain regulations in designated flood hazard areas. An amendment in 2004 calls for community floodplain administrators to become accredited through the OWRB, ensuring that these officials are properly trained to effectively administer local floodplain regulations. NORTPO coordinating with other planning agencies will be important to help prevent infrastructure issues from flooding. A key component of floodplain management implementation is convincing community leaders that reducing flood loss at the local level can help develop a sound, stable economy. By following regulations and ensuring that development in the floodplain meets required standards, taxpayers and local governments will save money and overall federal disaster recovery costs can be reduced. Special flood hazard areas are a designated width along a stream or river which has a 1% chance of flooding annually. Flood hazard areas are protected to prevent any increase in the risks or severity of possible future floods and to maintain their natural and ecological benefits. Almost half of flood-related deaths occur in vehicles, primarily when people drive into flooded highway dips or low-drainage areas at night. There are approximately 40,000 structures in Oklahoma that reside within the boundaries of the regulatory floodplain, yet less than 10,000 of these are covered by flood insurance. NORTPO's region has the least amount of floodplain areas per state based on FEMA's flood maps due to the higher rates of drought in the area. (Map – 2.12) Flash flooding of creeks and minor streams remains a serious

threat, especially in urban and suburban areas, where development and removal of vegetation have increased runoff. (Source: Oklahoma Climatological Survey)

Earthquakes –

Oklahoma is no stranger to small earthquakes as small fault lines riddle throughout the state and are often focal points for tremors. (Map – 2.13) In the past decade Oklahoma experienced a dramatic surge in earthquakes, many of which were felt, and a few even causing some damage in parts of the state. 2022 brought us only 78 earthquakes with a magnitude 2.5 or greater. This was the lowest count of these earthquakes since 2009 when only 33 earthquakes at the magnitude or greater were detected. There has been a gradual decline in the number of these earthquakes since 2019, but there was a rapid increase from 2008-2015. (Info Graphic - 2.3) The biggest earthquake measured occurred in 2016 near Pawnee, Okla. at a 5.8 magnitude. ODOT immediately responded after the 7:02 a.m. earthquake and sent inspection teams to look at bridges within a 30-mile radius of the earthquake's epicenter. No structural damage was found on the 180 state bridges inspected, however, cosmetic damage was found on SH-15 over Red Rock Creek in Noble County and on SH-108 over the Cimarron Turnpike in Payne County. On Sept. 7, the USGS revised the earthquake's magnitude to 5.8, making this the largest recorded earthquake in Oklahoma to date. ODOT widened its inspection radius to 60 miles from the epicenter, inspecting an additional 179 bridges. No damage was found. Since 2016, our state has not seen a magnitude 5.0 earthquake or greater. The Oklahoma Department of Transportation has not identified any structural damage caused by earthquakes since 2011. However, many of the state's highway bridges are very old and have pre-existing damage. ODOT would close a bridge if it was deemed unsafe for any reason. Earthquakes have been primarily concentrated in north-central and central Oklahoma, with ODOT inspectors going more often to check bridges in these areas that encompass large parts of Grant, Garfield, Noble, and Alfalfa, Major, and Kingfisher, all of which are located within NORTPO. (Map – 2.14) Prior to April 2016, the department inspected bridges within a 5-mile radius after every 4.0-magnitude earthquake. Because no structural damage was ever found during the two years that the department inspected at this level and after scientific analysis and recommendations from its consultant, ODOT changed its inspection procedure to the following:

4.7 to 4.8 magnitude — 5-mile inspection radius;

4.9 to 5.3 magnitude — 15-mile inspection radius;

5.4 to 5.8 magnitude — 30-mile inspection radius;

5.9 to 6.2 magnitude — 60-mile inspection radius; and

6.3-plus magnitude — 120-mile inspection radius

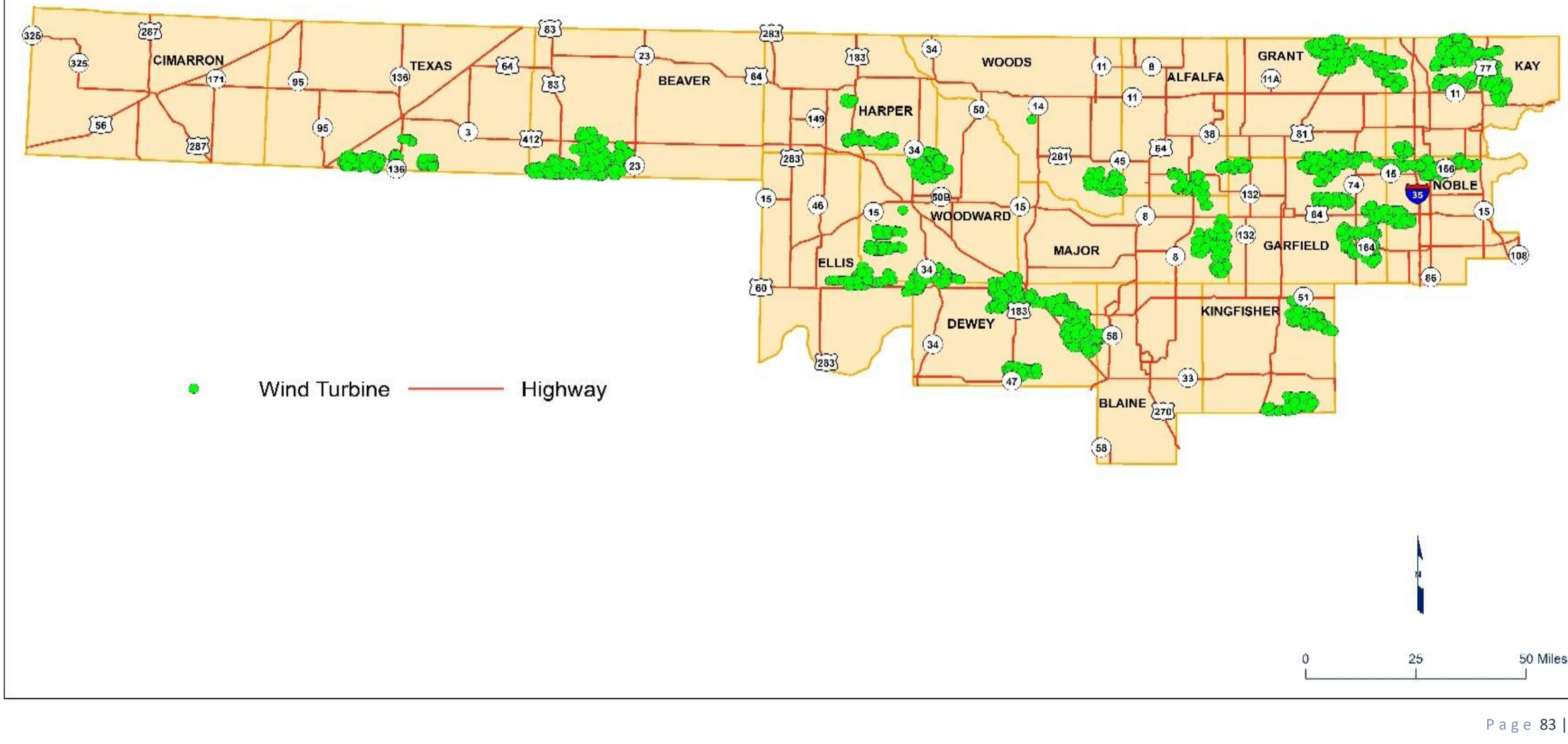
ODOT has maintenance crews in all 77 counties who are on-call 24/7 to perform bridge inspections as part of their regular duties. Oklahoma’s bridges meet federal design standards, meaning they are meant to safely withstand some degree of vibrations and movement. Maintenance, and inspections of bridges in the eastern counties of NORTPO should continue to be prioritized due to the higher amount of earthquakes. (Source: ODOT-Earthquake Response Plan)

Wind Farms –

Oklahoma ranks No. 2 in the nation for installed wind power capacity, according to a report from the American Wind Energy Association. Most of Oklahoma's turbines are located in the western half of the state in NORTPO's area and are part of 58 distinct, multiple-turbine wind farm projects that vary in size, the data show, ranging from small installations like the nine-turbine Buffalo Bear wind farm near Buffalo, Okla., to the 162-turbine Balko Wind Project in the Panhandle's Beaver County. (Map Below) The 356 GE turbine-powered wind farm, which spans Blaine in north central Oklahoma, is the largest single wind farm built at one time in North America and is one of the largest wind farms in the world. An increasing source of electricity around the nation has been through the harnessing of wind power. Due to the geographic location of Oklahoma in the Great Plains and the Rocky Mountains to the west, and the pattern of meteorological systems' general movement of west to east, winds tend to come over the mountains onto the plains at an increasing rate, thus making Oklahoma a prime location for power-generating wind turbines to be located to harness this energy. Wind farms, locations with multiple wind turbines in fairly close proximity to each other, are created by energy companies to collect the energy created and move it via power lines to other locations. Many counties that don't have windmills have monitoring towers to study for future building of wind farms.

Currently, the demand for larger wind turbine assemblies is rapidly reaching the point where the demand exceeds the capacity of the nation's highways and or the number of available trucks to deliver the parts to the wind farms, specifically the demand for transportation of oversized parts—nacelles, towers, and blades—may exceed both the available trucking resources (power units, trailers, and drivers), and in many cases the highway infrastructure to support loads of the size and weight of newer wind generators. To fully support the demands of wind farms, transportation agencies must have the necessary variety of specialized trailering equipment needed to haul exceptionally large and heavy loads over a variety of road conditions—and experienced drivers and crews to manage these exceptional super loads. Each of the wind turbine components must be delivered from the port of entry or manufacturer to the wind farm site. Some components can be broken down for shipping, but the blades must the transported as a single piece. Hauling wind turbine blades that are 116 feet long represents a significantly oversized load. At this length, they are still manageable for transportation by trucks. However, with the trend to larger, taller wind generators, and blades approaching 200 feet long, the truck transportation system is being challenged. There has been some use of trains to carry wind generator assemblies, but it does not solve all the transportation problems as the new, longer generator blades may not fit on typical 89-ft-railroad flat cars. As the wind farm industry grows, both in numbers and in the size of the wind generators, the transportation infrastructure must also grow and adapt.

Regional Wind Farms



Mountains/Slopes –

The topographic features of Oklahoma vary greatly throughout the state with different ecosystem's. The highest elevation (4,973 ft.) in Oklahoma is on Black Mesa, in the northwest corner of the Panhandle; the lowest elevation (287 ft) is where Little River flows into Arkansas, near the southeast corner of the State. Therefore, the land surface slopes down from about 15 ft. per mile in the Panhandle to about 4 ft. per mile in central and eastern Oklahoma. Spot elevations are shown at each map corner, at the highest points of several mountain ranges, and at other key places. Mountains and streams help define the topography or landscape of Oklahoma. Mountains consist mainly of resistant rocks that were folded, faulted, and thrust upward over geologic time, whereas streams continuously erode less-resistant rocks, lowering the landscape to form hills, broad valleys, and plains. Three principal mountain ranges (Wichita, Arbuckle, and Ouachita) occur in southern Oklahoma, although mountainous and hilly areas exist in other parts of the State. The Glass Mountains is an area of "badlands" topography in north-central Major County. Calling them "mountains" is an exaggeration, because they are really prominent mesas, buttes, and escarpments in the Cimarron Gypsum Hills. (Map - 2.15)

Weather –

The mean annual temperature over the state ranges from 62 deg F along the Red River to about 58 deg F along the northern border It then decreases westward to 56 deg F in Cimarron County. Temperatures of 90 deg F or greater occur, on average, about 60-65 days per year in the western panhandle and the northeast corner of the state Heat index values of 105 degrees or greater occur more than 40 times per year in the far southeast and less than 10 times per year in the far northwest. Temperatures of 32°F or less occur an average of 60 days per year in the southeast. This value increases to about 110 days per year where the panhandle joins the rest of the state, and to 140 days in the western panhandle. Although precipitation is quite variable on a year-to-year basis (Figure 5), average annual precipitation ranges from about 17 inches in the far western panhandle to about 56 inches in the far southeast. The frequency of days with measurable precipitation follows the same gradient as the annual accumulation, increasing from 45 days per year in western Oklahoma to 115 near the Arkansas border. On average, more precipitation falls during the nighttime hours, while greatest rainfall intensities occur during late afternoon. Excessive rainfall occurs at times. Amounts of 10 inches or more during 24 hours, while rare, have been recorded. The greatest official rainfall in a 24-hour period is 15.68 inches at Enid on October 11, 1973. Average annual snowfall increases from less than two inches in the extreme southeast to nearly 30 inches in the western panhandle. The frequency of snow events also increases sharply along the same gradient. Locations in southeast Oklahoma have gone several years between events, while northwestern Oklahoma typically records several snow events in one winter. On average, thunderstorms occur about 55 days per year in eastern Oklahoma, decreasing to about 45 days per year in the southwest. The annual rate increases to near 60 days annually in the extreme western panhandle.

Tornadoes are a particular hazard in Oklahoma Since 1950, an average of 53 tornadoes have been observed annually within the state's borders. Tornadoes can occur at any time of year, but are most frequent during springtime. Three-fourths of Oklahoma's tornadoes have occurred during April, May, and June. May's average of 20 tornado observations per month is the greatest. The winter months each average less than one tornado per month. Severe weather can occur at any time of day, but the maximum frequency for severe weather is from mid-afternoon to sunset. About 80 percent of tornadoes are observed between noon and midnight Central Standard Time, with the peak hours being between 4:00 and 8:00 PM. Annual average relative humidity ranges from about 60 percent in the panhandle to just over 70 percent in the east and southeast Prevailing winds are from the south to southeast throughout most of the state from the spring through autumn months. These prevailing winds typically are from the south to southwest in far western Oklahoma, including the panhandle. The winter wind regime is roughly equal split between northerly and southerly winds. (Source: Oklahoma Climatological Survey) Localized dust may occur on breezy afternoons, especially in parts of western Oklahoma, where drier weather will support agricultural and prescribed fire burning; which may cause locally unhealthy smoke plumes, and airborne fine particulates.

Chapter 3 – Transportation Assessment and Needs

This section provides an update of current transportation status which includes inventory of transportation facilities, structures, usage, and availability in the NORTPO region. Understanding the status of these transportation systems provides a basis for developing the transportation plan. Much of this data and information was obtained from county, state and federal agencies or institutions. Tables and maps referred to in this chapter are included in Appendix E-3. Maintaining an inventory of transportation systems is key for planning for several reasons:

Understanding existing infrastructure: An inventory of transportation systems provides a comprehensive understanding of existing transportation infrastructure, including roads, bridges, rail lines, pipelines, ports, and airports. This information helps planners identify strengths and weaknesses in the current transportation network, which can guide future investments and improvements.

Identifying gaps and needs: A transportation inventory can help identify gaps in the transportation network and areas where additional infrastructure is needed. This information is essential for decision-makers to prioritize investments and allocate resources effectively.

Monitoring system performance: A transportation inventory helps monitor the performance of the transportation network, including traffic flow, travel times, and safety. This information can guide improvements to the system to enhance its efficiency and effectiveness.

Planning for future growth: A transportation inventory provides the data needed to plan for future growth in the transportation network. This includes identifying areas where new infrastructure will be needed to support population growth, economic development, and changes in travel patterns.

Overall, maintaining an inventory of transportation systems is crucial for effective transportation planning. It provides decision-makers with the data they need to make informed decisions about investments, improvements, and future development of the transportation network. Maintaining, and updating this chapter will be vital in ensuring continued transportation improvements based upon the transportation status of the region. This starting point is established through a thorough overview and analysis of the current transportation system. Analyzing and measuring the current system provides the basis for identifying future transportation needs, allocating limited funding, and monitoring plan implementation.

Transportation Inventory

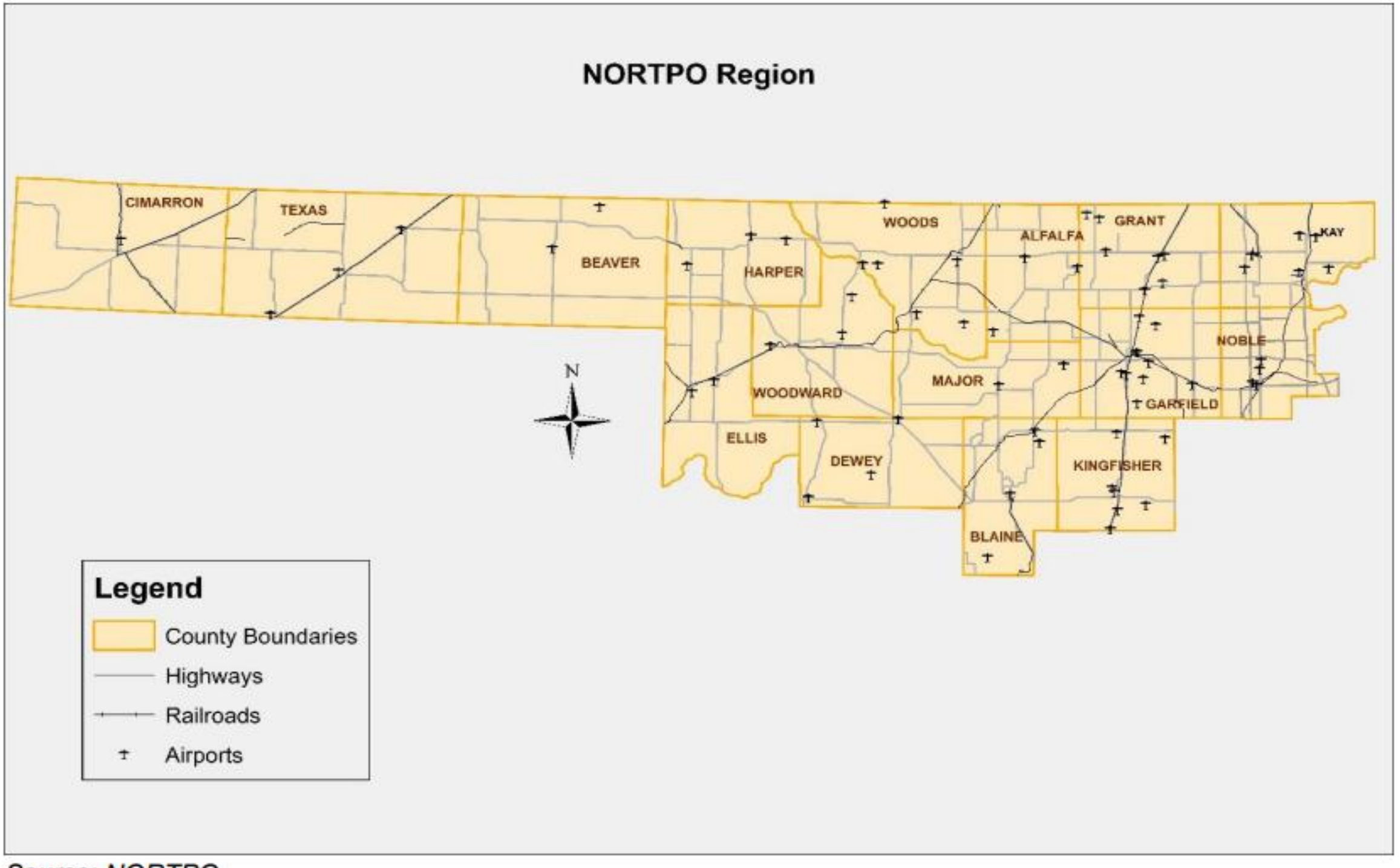
Aviation –

NORTPO's region has a variety of regional airports. Every county has at least 1 regional airport, and 2 counties, Woods, and Texas have 3 regional airports each. Regional airports constitute a vital part of the airport industry and are considered essential transport nodes, since they connect people, products, and services via point-to-point routes, and provide accessibility to the most remote areas in rural Oklahoma. They also contribute to the development of the local communities, the enhancement of social cohesion, as well as enabling tourism development, and leading to economic growth. Yet, small regional airports have several specificities and face a number of challenges. In these airports, intense fluctuations can be observed both in daily and monthly volumes, and weaker infrastructure is more susceptible to damages especially from larger aircrafts. (NORTPO Airports - Table, and Map Below)

NORTPO Airports

County	Towns	Airports
Alfalfa County	Cherokee	Cherokee Municipal Airport
Beaver County	Beaver	Beaver Municipal Airport
Blaine County	Okeene	Christman Airfield
	Watonga	Watonga Regional Airport
Cimarron County	Boise City	Boise City Airport
Dewey County	Seiling	Seiling Airport
	Vici	Vici Municipal Airport
Ellis County	Gage	Gage Airport
Garfield County	Enid	Enid Woodring Regional Airport
Grant County	Medford	Medford Municipal Airport
	Pond Creek	Pond Creek Municipal Airport
Harper County	Buffalo	Buffalo Municipal Airport
	Laverne	Laverne Municipal Airport
Kay County	Blackwell	Blackwell-Tonkawa Municipal Airport
	Ponca City	Ponca City Regional Airport
Kingfisher County	Kingfisher	Kingfisher Airport
Major County	Fairview	Fairview Municipal Airport
Noble County	Perry	Perry Municipal Airport
Texas County	Guymon	Guymon Municipal Airport
	Hooker	Hooker Municipal Airport
	Texhoma	Municipal Airport
Woods County	Alva	Alva Regional Airport
	Freedom	Freedom Municipal Airport
	Waynoka	Waynoka Municipal Airport
Woodward County	**Mooreland**	**Mooreland Municipal Airport**
	Woodward	**West Woodward Airport**

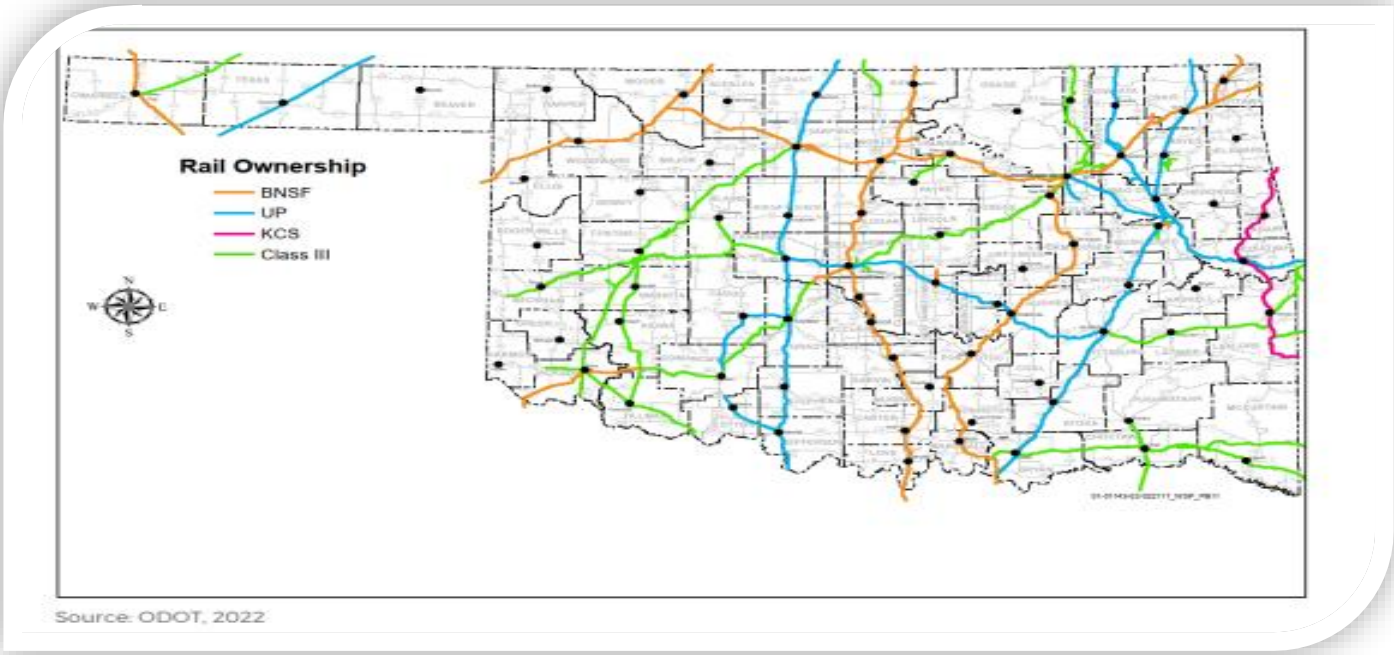
Source: http://www.airnav.com/airport



Source: NORTPO

Freight -

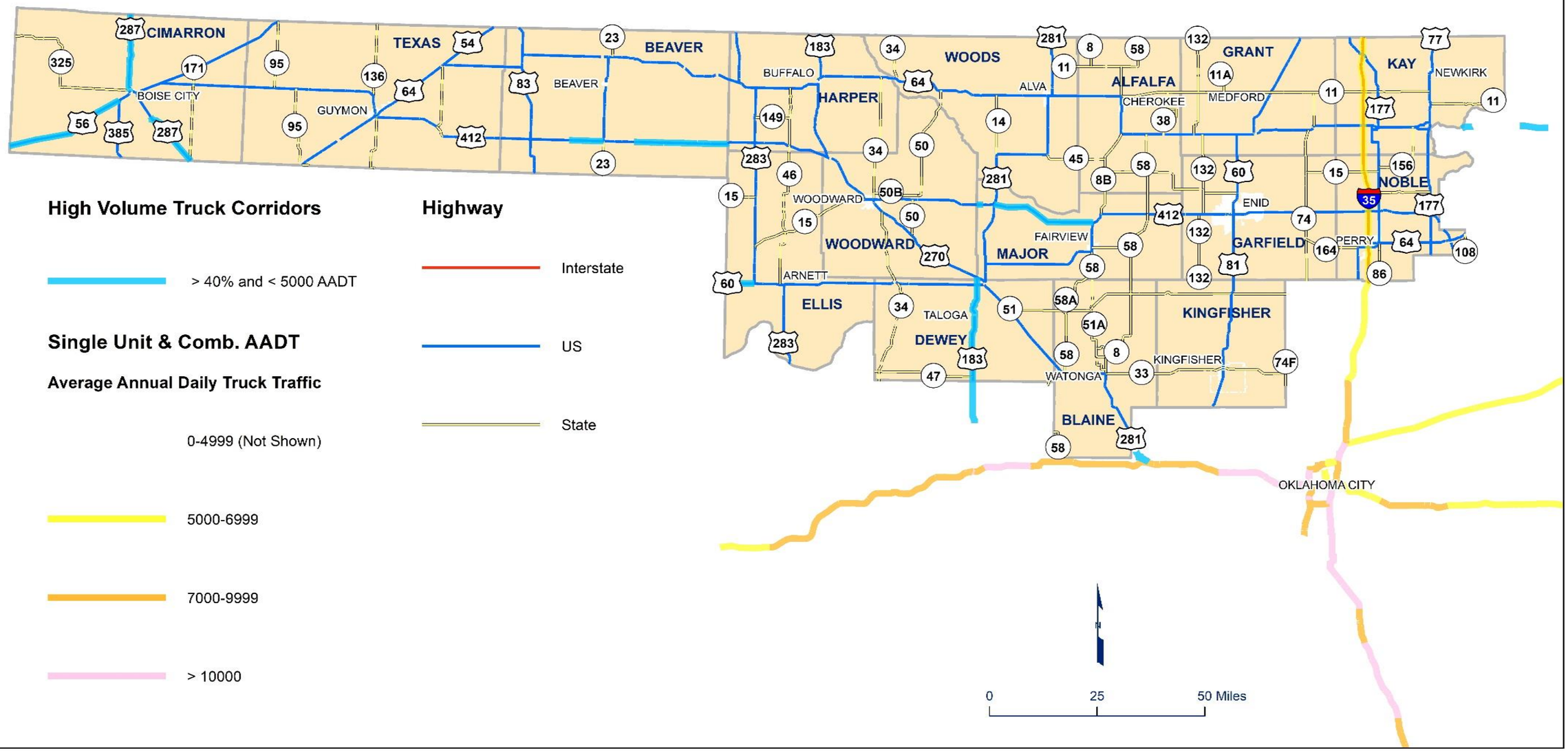
Oklahoma railroads date back to 1871 (36 years before Oklahoma officially became a state) when the Missouri-Kansas-Texas Railroad through what is now present day Enid in the NORTPO area. In 1978 the Oklahoma Department of Transportation published an eight-page list of railroads (or portions thereof) which had been abandoned. The nationwide consolidation of major interstate rail companies resulted in many lines being considered superfluous. A rail corridor preservation program to retain abandoned rail lines for future rail use (even in those instances where the tracks have been removed) should be considered. Some Oklahoma rail lines are underutilized, which is a cause for concern. Although the Region has experienced rail line abandonment there's still an excellent series of carriers and tracks still provide. There are portions of abandoned rail that have been dismantled. There are three railroads in the NORTPO region Burlington Northern Santa Fe Corporation (BNSF), Union Pacific (UP), and Grainbelt Corporation (GNBC) (Rail Ownership - Map Below) 2 of these are class 1 railroads which is a carrier earning revenue greater than $250 million. Analysis of freight movements in Oklahoma shows that the primary use of freight is through Oklahoma followed by within Oklahoma, outbound of Oklahoma, and lastly inbound. (Flow of Freight Traffic - Graphic Below) Freight movement by rail in the NORTPO region is primarily used by the agricultural industries. There are more than 1,375 miles of open rail track in the region. The rail infrastructure is the responsibility of the railroads. Oklahoma is a part of the Strategic Rail Corridor Network (STRACNET), a function of the Railroads for National Defense. STRACNET consists of 38,800 miles of rail lines important to national defense serving military installations that require rail service. Both Fort Sill and the McAlester Army Ammunition Depot are actively connected to STRACNET, while Vance Air Force Base, Altus Air Force Base, and Tinker Air Force Base all have the capability to reconnect to STRACNET "connector line". (Map – 3.1 STRACNET and 3.2 - Defense Connector Lines) The modes of freight transportation include air, truck, rail, ship, and pipeline. The impacts of freight include economic vitality, competitiveness, the environment, safety and quality of life, and national Infrastructure challenges include freight intermodal connectors, border crossings and the infrastructure of railways, ports, waterways, highways, airports, and pipelines. Operational challenges such as, roadway congestion, rail operations, port and intermodal access contribute to the overall system reliability. (Source: ODOT) Issues involving rail in the area include conflict with motor vehicle traffic, increased volumes, and train lengths, lack of infrastructure such as bridges, or track structure that can support current generation railcars. For example, connections between Class I (large) railroads and the regional Class III railroad at Enid, Oklahoma, limits train size to 50 cars, which is far smaller than most unit trains.



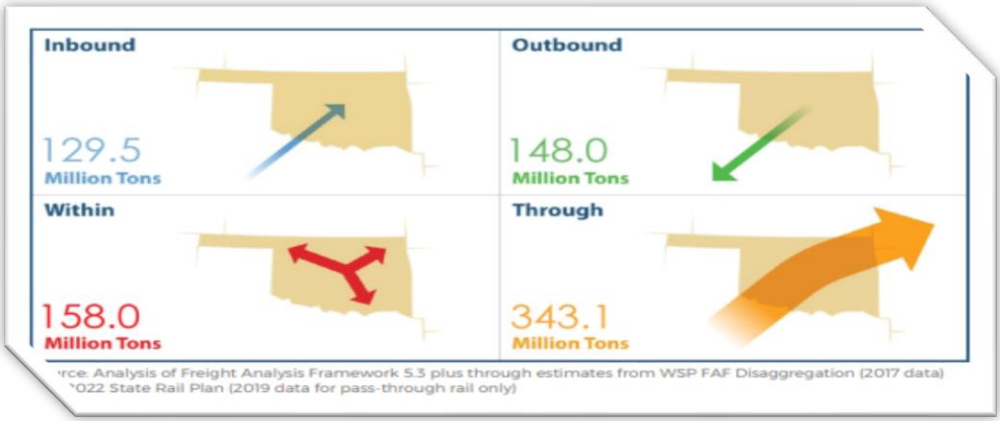
Railways and Highways are a part of the National Highway Freight Network (NHFN) and Freight-Related Bottlenecks include both railways and highway traffic. A bottleneck is defined as part of the transportation system that imposes disproportionately high costs in the movement of freight. Bottlenecks in urban areas typically have different magnitude and characteristics than bottlenecks in rural areas. Railroad-related concerns and mobility issues can be attributed to several factors. Inadequate track and a rail yard's physical capacity can produce railroad bottlenecks, as can the crossing of two tracks. Rail bottlenecks in turn impact rail velocity. Deficient structures such as bridges can introduce speed restrictions that affect freight mobility. Highways Heavy-freight traffic can also create bottlenecks that affect other highway users. To identify potential locations where delay is exacerbated by freight transportation, the study team examined locations on or near the network that are within 0.25 mile of an area with significant truck delay. Major highway freight corridors in the NORTPO region are located on segments of I-35, US-270 (to US-60 intersection in Seiling), US-60 (west of Seiling), US-283 (south of Arnett to I-40), US-81 (north of Enid). Primary highway freight system for our region is I-35 which runs through the east side of the region in Noble, and Kay counties. (HVTT - Map Below) The areas that have both freight generation and significant freight delay are locations where freight could be affecting other users. The following locations are areas where high freight delay intersects with close proximity to identified freight generators in the NORTPO region.

- US-412/SH-23 Intersection – Beaver County
- US-56/US 385 Intersection – Cimarron County
- US 287/US-56 Intersection in Boise City – Cimarron County
- US 287/ CR-E023 Intersection (Industrial Area) – Cimarron County
- US-183/SH-47 Intersection – Dewey County
- US-60/US-283 Intersection – Ellis County
- US-81 between SH-33 and SH-3 – Kingfisher County
- US-412/US 281 Intersection – Major County
- US-412/SH-58 Intersection – Major County
- US-64/ US-412/US-64/S-136 intersection in Guymon – Texas County

High Volume Truck Traffic

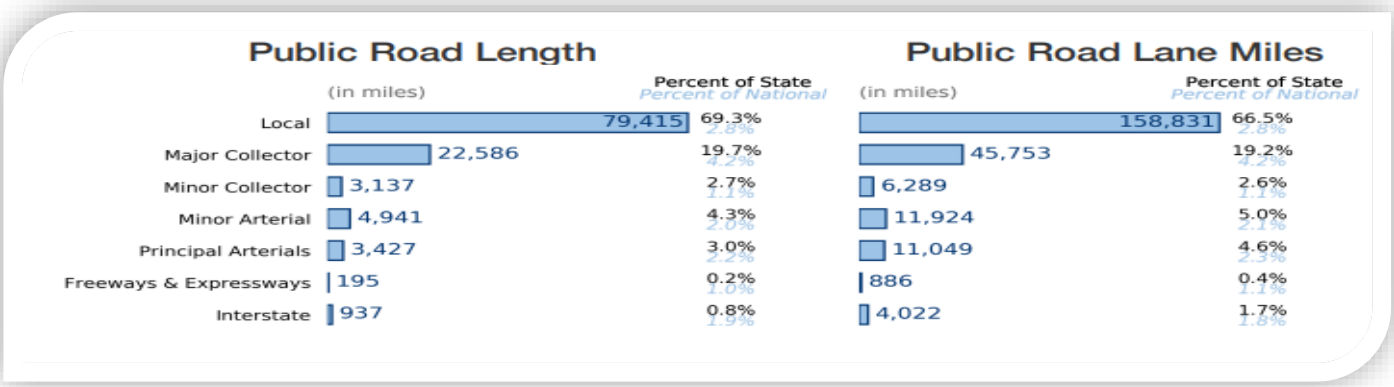


Flow of Freight Traffic



Roadways and Highways – Functional Classification

ODOT has embarked on a mission to update the highways throughout Oklahoma. Oklahoma currently has 114,638 public roads length, 238,754 of public lane miles and 68,596 total land area (sq. miles) (Road Length - Graphic Below) The NORTPO Region consists of State-owned highways, interstates, bridges, signage, and turnpikes along with municipality owned roads, signage, and bridges. The highway and bridge network forms the backbone of transportation infrastructure within and through the region serving freight, agriculture, public transit, national defense, and commerce. The NORTPO region is served by US and State highways, Interstates and local roads which are part of the essential inventory of highways serving the region. NORTPO is host to 2,570 centerline miles. The term "centerline mileage" typically refers to the total length of a roadway, measured along the centerline of the pavement. In Oklahoma, the total centerline mileage of the state highway system is approximately 12,000 miles. This includes all state-maintained highways, such as interstates, US highways, and state highways. NORTPO makes up 21 percent of all center line mileage in Oklahoma. NORTPO's region consists of 5,941 total lane miles.



(Source: Highway Statistics Series State Statistical Abstracts, 2019)

The NORTPO region is largely rural county system roads with 23,887.94 rural miles making up 28.79 percent of the states total rural county system roads. (Miles of Rural County System Roads - Table Below) NORTPO makes up 8.42 percent of State and U.S. highway mileage with 2564.96 miles. (Table 3.1 – Functional Classification Mileage – NORTPO)

Miles of Rural County System Roads by Counties			
County	Rural Mileage	% of Regional Total	% of State Total
Alfalfa	1,348.34	5.64%	1.63%
Beaver	2,101.57	8.80%	2.53%
Blaine	1,304.38	5.46%	1.57%
Cimarron	1,513.27	6.33%	1.82%
Dewey	1,120.16	4.69%	1.35%
Ellis	1,278.94	5.35%	1.54%
Garfield	1,862.82	7.80%	2.25%
Grant	1,760.15	7.37%	2.12%
Harper	1,015.75	4.25%	1.22%
Kay	1,442.72	6.04%	1.74%
Kingfisher	1,544.31	6.46%	1.86%
Major	1,211.95	5.07%	1.46%
Noble	1,118.78	4.68%	1.35%
Texas	2,493.46	10.44%	3.01%
Woods	1,400.64	5.86%	1.69%
Woodward	1,370.70	5.74%	1.65%
NORTPO Total 2020:	**23,887.94**		
State Total 2020:	82,960.85		
NORTPO of State	28.79%		

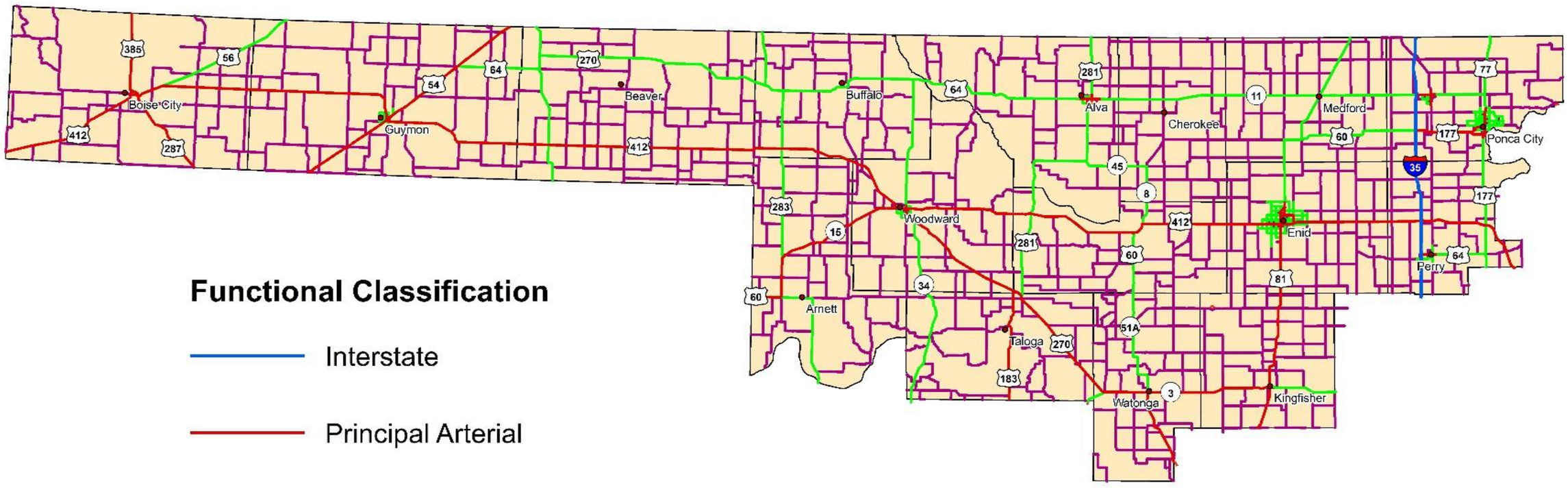
Functional classification is an important concept in transportation engineering and planning that categorizes roads based on their intended function or purpose. Functional classification also determines eligibility for funding under the Federal-aid program determining eligibility for funding under the Federal-aid program. Transportation agencies describe roadway system performance, benchmarks and targets by functional classification will be an increasingly important consideration in setting expectations and measuring outcomes for preservation, mobility, and safety. Guidance document provides recommended practices for assigning functional classifications and adjusting urban area boundaries concerning roadways that Federal, State, and local transportation entities own and operate. The functional classification of a road is determined by its design, traffic volume, speed limit, access, and other factors, and is used to guide decisions related to road design, construction, maintenance, and safety. Functional classification is important for understanding roads because it provides a standardized framework for classifying and comparing different types of roads based on their intended use. This helps transportation planners and engineers to better allocate resources and prioritize investments in infrastructure improvements based on the needs of different users and the community. For example, functional classification can help to determine whether a road should be designed for high-speed travel or lower-speed, more local access. This can have important implications for safety, traffic flow, and overall mobility in a given area. Functional classification also helps to support regional planning efforts, by identifying the different roles that roads play in the transportation network and how they connect with other modes of transportation such as transit, bicycle and pedestrian facilities. In short, functional classification is important for understanding roads because it provides a common language and framework for transportation planning and decision-making, and helps to ensure that roads are designed and managed in a way that meets the needs of users and the community as a whole. (Source: FHWA) (Table

3.2 – Functional Classification – FHWA, Map 3.3 – Oklahoma Functional Classification, Regional Functional Classification - Map Below)

State and US Hwy Miles – NORTPO Region

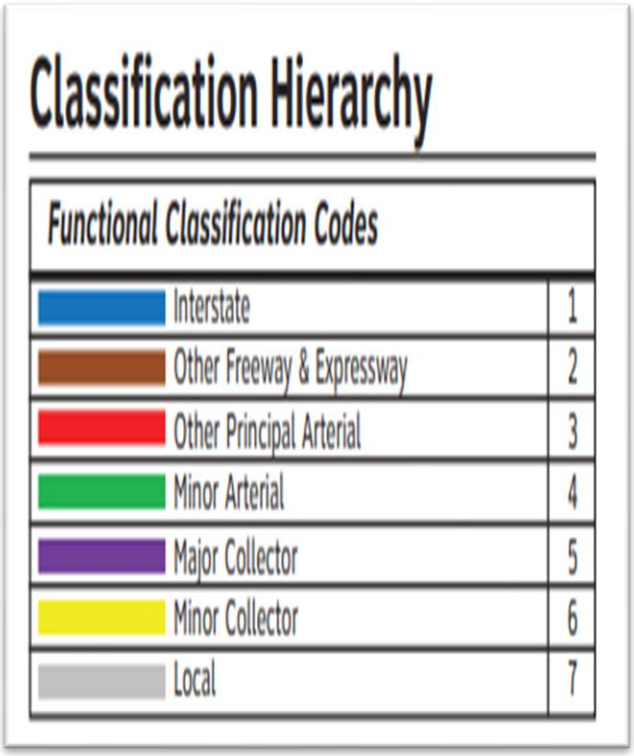
County	State and US Hwy miles	% of Regional Total	% of State Total
Alfalfa	154.83	6.04%	0.51%
Beaver	177.95	6.94%	0.58%
Blaine	163.03	6.36%	0.54%
Cimarron	197.06	7.68%	0.65%
Dewey	137.78	5.37%	0.45%
Ellis	145.82	5.69%	0.48%
Garfield	157.9	6.16%	0.52%
Grant	152.06	5.93%	0.50%
Harper	157.92	6.16%	0.52%
Kay	161.37	6.29%	0.53%
Kingfisher	95.49	3.72%	0.31%
Major	155.62	6.07%	0.51%
Noble	196.76	7.67%	0.65%
Texas	229.74	8.96%	0.75%
Woods	133.67	5.21%	0.44%
Woodward	147.96	5.77%	0.49%
NORTPO	**2564.96**		**8.42%**

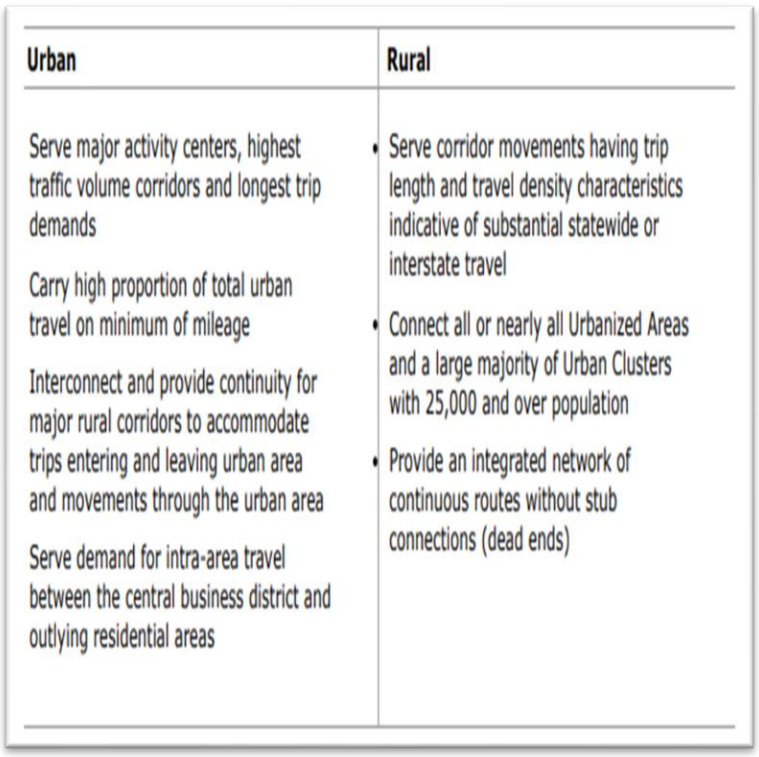
Regional Functional Classification



Functional Classification

- Interstate
- Principal Arterial
- Minor Arterial
- Major Collector





Interstates - are the highest classification of Arterials and were designed and constructed with mobility and long-distance travel in mind. Since their inception in the 1950's, the Interstate System has provided a superior network of limited access, divided highways offering high levels of mobility while linking the major urban areas of the United States. Determining the functional classification designation of many roadways can be somewhat subjective, but with the Interstate category of Arterials, there is no ambiguity. Roadways in this functional classification category is officially designated as Interstates by the Secretary of Transportation, and all routes that comprise the Dwight D. Eisenhower National System of Interstate and Defense Highways belong to the Interstate functional classification category and are considered Principal Arterials. NORTPO consists of 58.19 interstate centerline mileage, and 232.75 lane miles.

Other Freeways & Expressways - Roadways in this functional classification category look very similar to Interstates. While there can be regional differences in the use of the terms 'freeway' and 'expressway', for the purpose of functional classification the roads in this classification has directional travel lanes are usually separated by some type of physical barrier, and their access and egress points are limited to on- and off-ramp locations or a very limited number of at-grade intersections. Like Interstates, these roadways are designed and constructed to maximize their mobility function, and abutting land uses are not directly served by them. NORTPO has no other freeways or expressways.

Other Principal Arterials - These roadways serve major centers of metropolitan areas, provide a high degree of mobility and can also provide mobility through rural areas. Unlike their access-controlled counterparts, abutting land uses can be served directly. Forms of access for Other Principal Arterial roadways include driveways to specific parcels and at-grade intersections with other roadways. For the most part, roadways that fall into the top three functional classification categories (Interstate, Other Freeways & Expressways and Other Principal Arterials) provide similar service in both urban and rural areas. The primary difference is that there are usually multiple Arterial routes serving a particular urban area, radiating out from the urban center to serve the surrounding region. In contrast, an expanse of a rural area of equal size would be served by a single Arterial. NORTPO consists of 751.34 principal arterial centerline mileage, and 2,129.83 lane miles.

Minor Arterials - Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system. In an urban context, they interconnect and augment the higher Arterial system, provide intra-community continuity and may carry local bus routes. (Figure 3-3) In rural settings, Minor Arterials should be identified and spaced at intervals consistent with population density, so that all developed areas are within a reasonable distance of a higher level Arterial. Additionally, Minor Arterials in rural areas are typically designed to provide relatively high overall travel speeds, with minimum interference to through movement. The spacing of Minor Arterial streets may typically vary from 1/8- to 1/2-mile in the central business district (CBD) and 2 to 3 miles in the suburban fringes. Normally, the spacing should not exceed 1 mile in fully developed areas. NORTPO consists of 736.78 minor arterial centerline mileage, and 1523.98 lane miles.

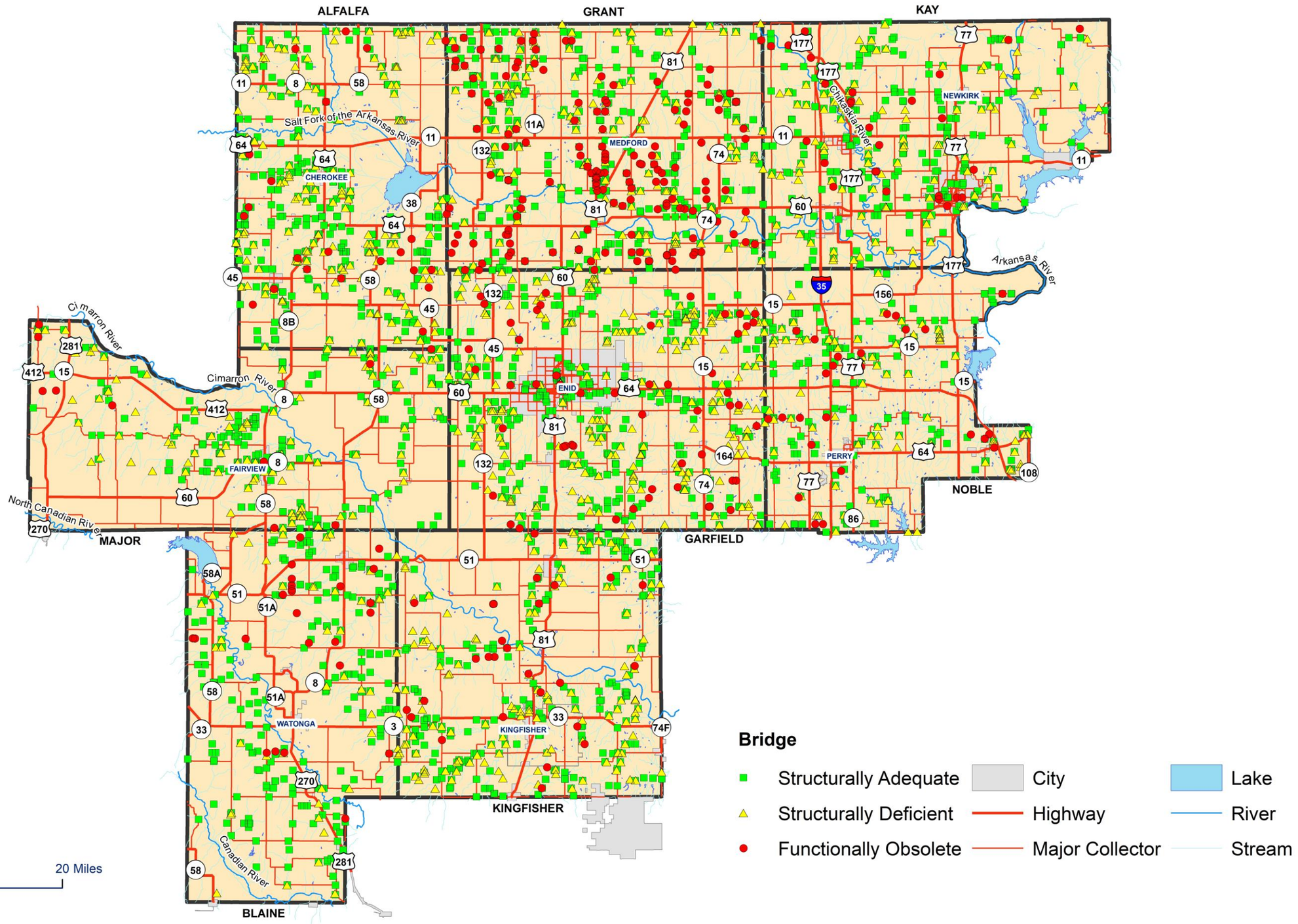
Major and Minor Collectors - Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. Within the context of functional classification, Collectors are broken down into two categories: Major Collectors and Minor Collectors. Until recently, this division was considered only in the rural environment. Currently, all Collectors, regardless of whether they are within a rural area or an urban area, may be sub-stratified into major and minor categories. The determination of whether a given Collector is a Major or a Minor Collector is frequently one of the biggest challenges in functionally classifying a roadway network. In the rural environment, Collectors generally serve primarily intra-county travel (rather than statewide) and constitute those routes on which (independent of traffic volume) predominant travel distances are shorter than on Arterial routes. Consequently, more moderate speeds may be posted. The distinctions between Major Collectors and Minor Collectors are often subtle. Generally, Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than their Minor Collector counterparts. Careful consideration should be given to these factors when assigning a Major or Minor Collector designation. In rural areas, (AADT) annual average daily traffic, and spacing may be the most significant designation factors. Since Major Collectors offer more mobility and Minor Collectors offer more access, it is beneficial to reexamine these two fundamental concepts of functional classification. Overall, the total mileage of Major Collectors is typically lower than the total mileage of Minor Collectors, while the total Collector mileage is typically one-third of the Local roadway network. NORTPO consists of 1,024.25 centerline mileage of major and minor collectors, and 2,054.85 lane miles.

Local Roads - Locally classified roads account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land. Bus routes generally do not run on Local Roads. They are often designed to discourage through traffic. As public roads, they should be accessible for public use throughout the year. Local Roads are often classified by default. In other words, once all Arterial and Collector roadways have been identified, all remaining roadways are classified as Local Roads.

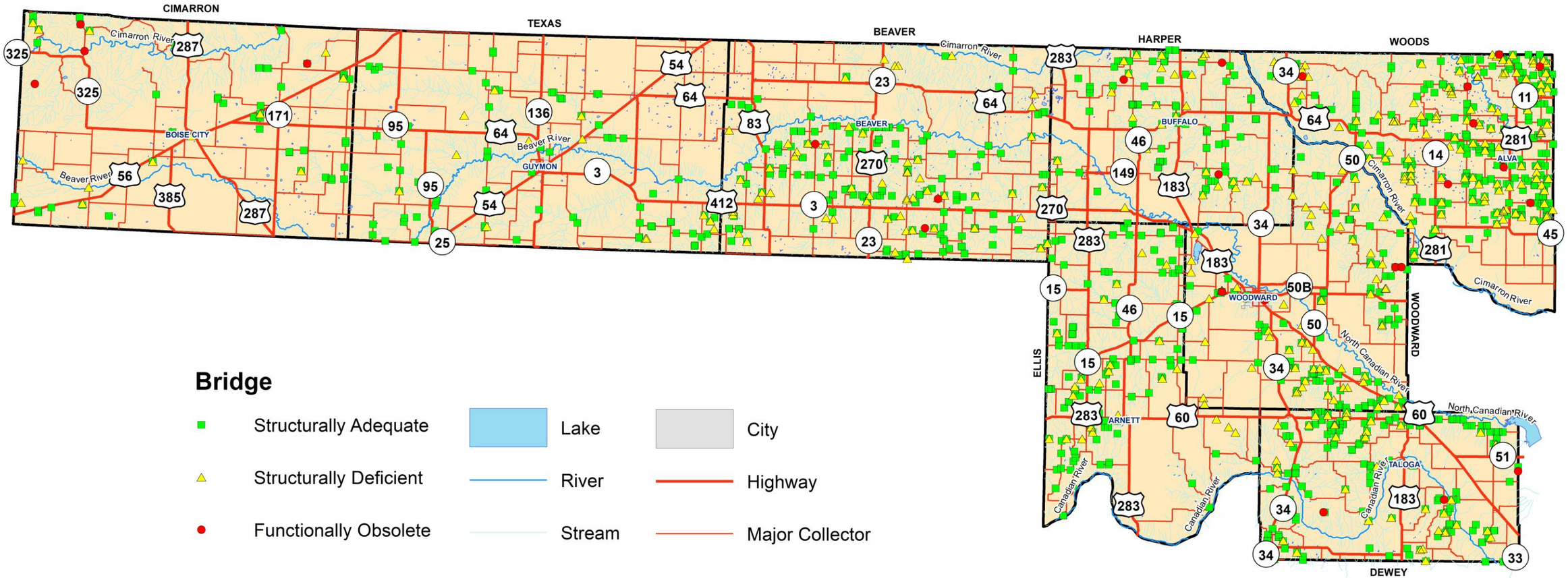
Bridges -

As of 2020, in the NORTPO region there are 6,404 bridges. 1,330 on the ODOT system and 5,074 off the system. There are 1,662 bridges classified as structurally deficient and 172 classified as functionally obsolete. The average overall sufficiency rating for bridges in the region is 68.37%. There are five (5) bridges that were constructed in 1900 – four (4) in Garfield County and one (1) in Beaver County. These are the oldest in the NORTPO region. An off-system bridge is any highway bridge located on a public road that is not on a Federal-aid highway - these are exclusively locally owned bridges. An on-system bridge is any bridge that is on a Federal-aid highway that is maintained by ODOT. (Maps Below Indicate Structurally Deficient, and Structurally Obsolete, On and Off System Bridges in NORTPO's Region)

Off System Bridges - NODA Region



Off System Bridges - OEDA Region



On System Bridges

Oklahoma in the Top Ten nationally for highway bridge conditions which are on system bridges. In August 2020, Gov. Kevin Stitt and Secretary of Transportation Tim Gatz announced that Oklahoma had become a Top Ten state nationally for highway bridge conditions. In September 2021, they announced the state had improved its Top Ten ranking from No. 9 to No. 7 in the nation. This ranking includes bridges on non-tolled interstates, U.S. highways and state highways maintained by the Oklahoma Department of Transportation. In 2004, Oklahoma ranked near the very bottom at 49th nationally for highway bridge conditions. In this year's bridge conditions report submitted in April 2021, for the inspection year ending 2020, Oklahoma reported 67 structurally deficient or poor bridges on the highway system. This moved Oklahoma up to 7th place, keeping us a Top Ten State for bridges. (Source: ODOT) (Bridge Conditions - Tables/Maps Below)

Bridges Rated Poor in Oklahoma – 2019-2021 Improvements

2021				
State	Total No. of Bridges	No. of Bridges Rated Poor	% of Bridges Rated Poor	State Ranking
Georgia	6808	23	0.34%	1
Arizona	4844	32	0.66%	2
Iowa	4152	30	0.72%	3
Kansas	5095	37	0.73%	4
Texas	34863	256	0.73%	5
Utah	1846	14	0.76%	6
Oklahoma	6737	67	0.99%	7
Nevada	1155	12	1.04%	8
Florida	5703	64	1.12%	9
Maryland	2554	29	1.14%	10

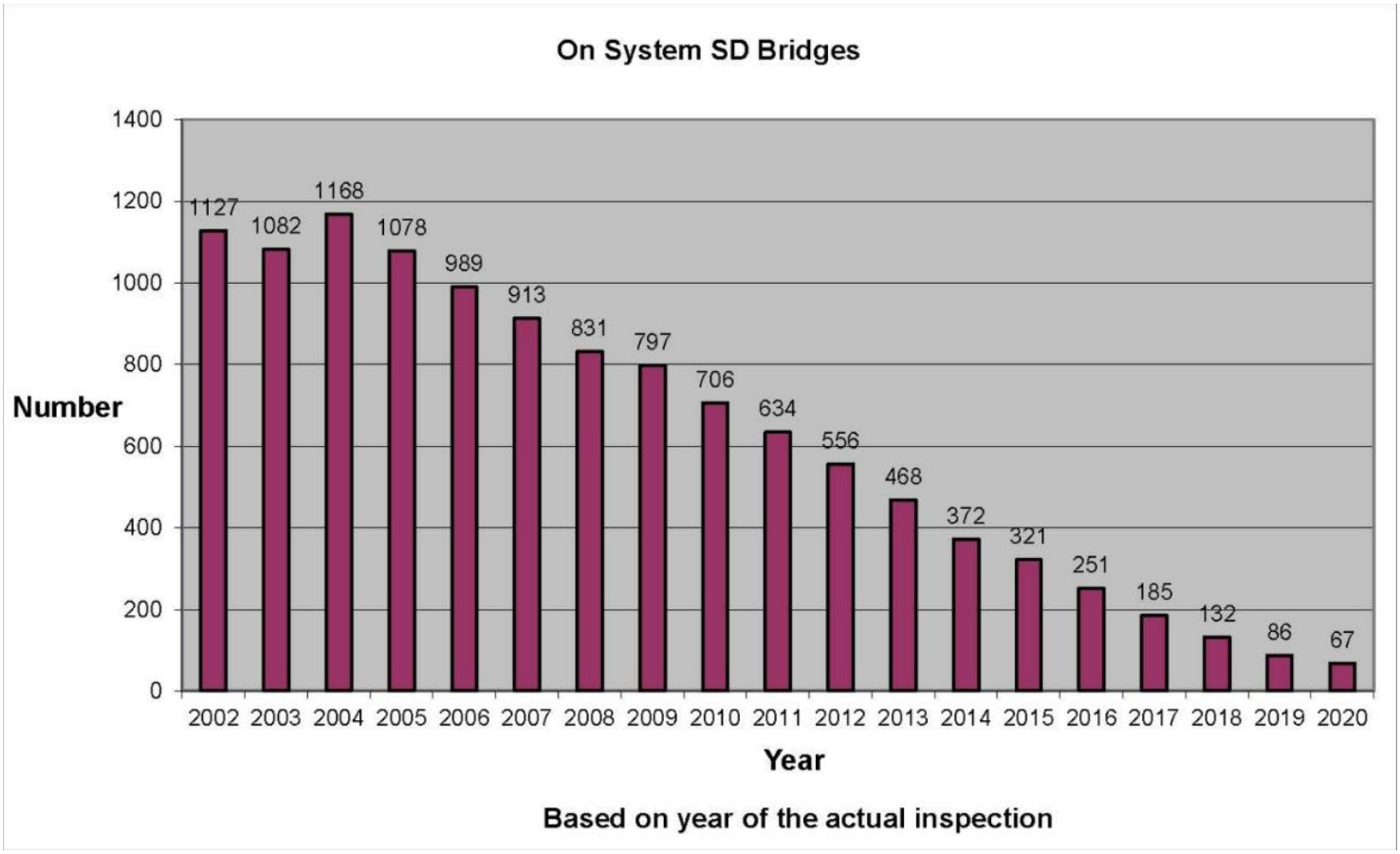
2020

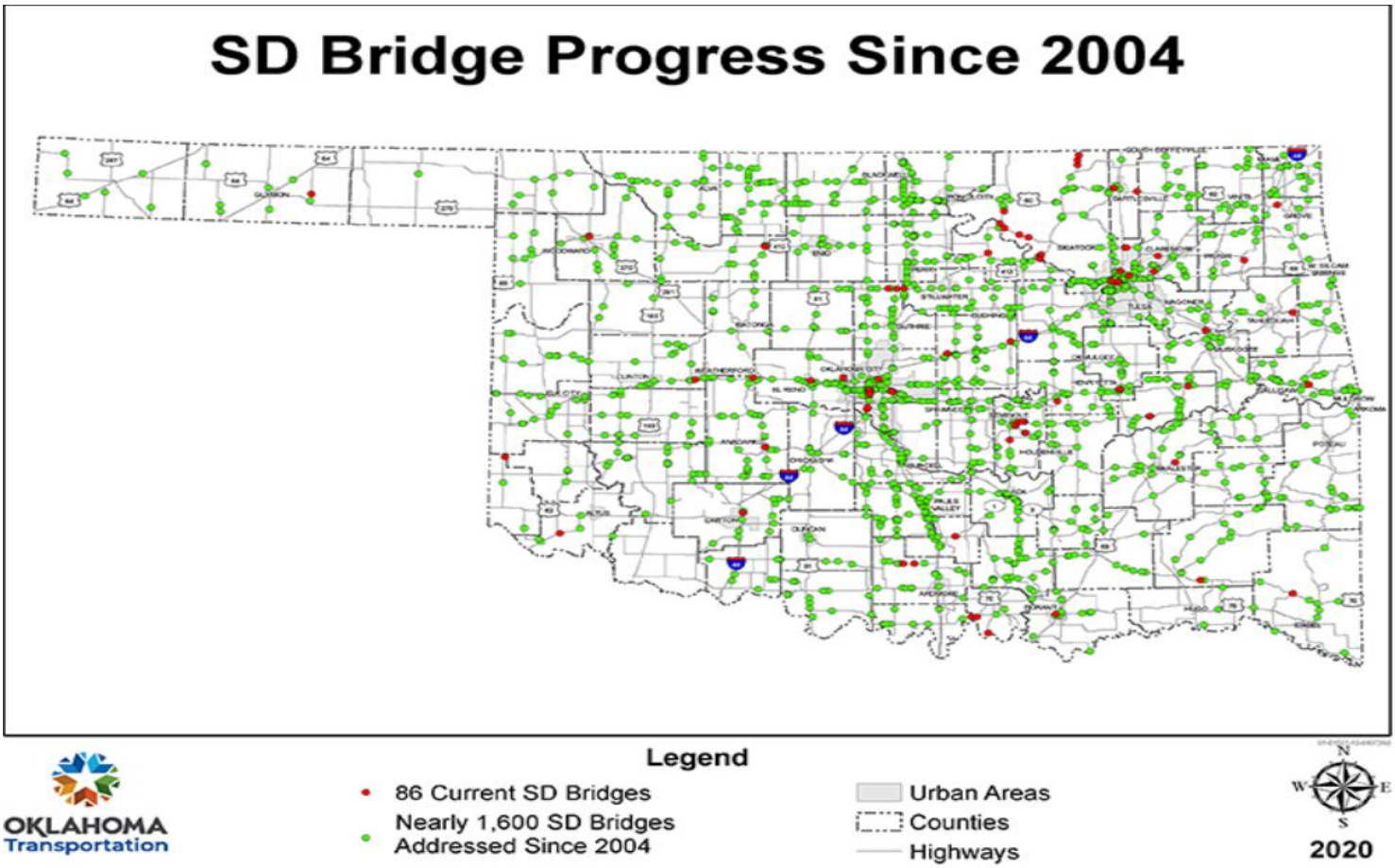
State	Total Highway Bridges	Bridges Rated Poor	% Bridges Rated Poor	State Ranking
Georgia	6,794	33	0.49%	1
Kansas	5,111	34	0.67%	2
Utah	1,852	13	0.70%	3
Iowa	4,144	32	0.77%	4
Texas	34,821	269	0.77%	5
Florida	5,656	51	0.90%	6
Arizona	4,873	44	0.90%	7
Nevada	1,152	12	1.04%	8
Oklahoma	6,749	86	1.27%	9
Alabama	5,769	78	1.35%	10
Maryland	2,553	36	1.41%	11
Oregon	2,760	42	1.52%	12
Delaware	849	14	1.65%	13
Ohio	10,479	196	1.87%	14
Minnesota	3,798	81	2.13%	15

2019

State	Total Highway Bridges	Bridges Rated Poor	% Bridges Rated Poor	State Ranking
Kansas	5,099	26	0.51%	1
Utah	1,844	11	0.60%	2
Texas	34,705	225	0.65%	3
Georgia	6,773	46	0.68%	4
Iowa	4,129	36	0.87%	5
Florida	5,613	52	0.93%	6
Arizona	4,785	47	0.98%	7
Nevada	1,130	12	1.06%	8
Alabama	5,762	80	1.39%	9
Oregon	2,754	43	1.56%	10
North Dakota	1,134	21	1.85%	11
Minnesota	3,674	70	1.91%	12
Oklahoma	6,749	132	1.94%	13
Maryland	2,553	52	2.04%	14
Ohio	10,475	218	2.08%	15

Disclaimer: State rankings are based on a comparison of bridge condition data for bridges that are owned and maintained by State DOTs only as compiled by the Federal Highway Administration National Bridge Inventory.





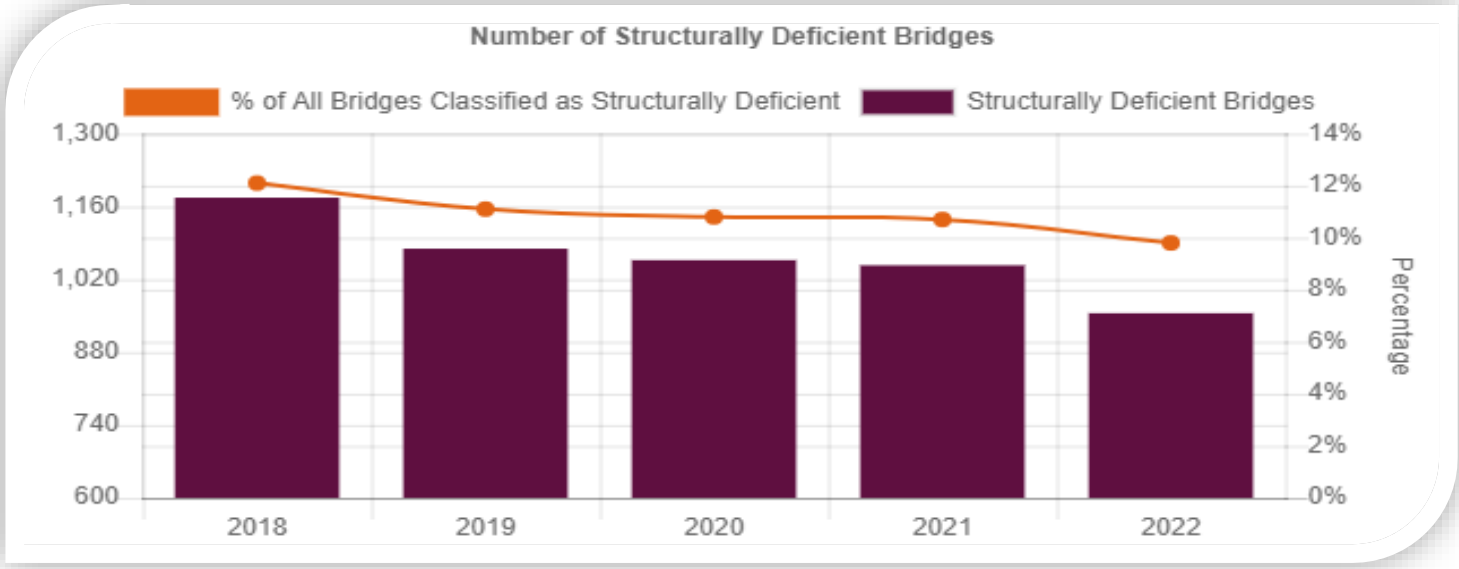
Despite a concerted effort to improve Oklahoma's state maintained bridges, Oklahoma still has the tenth worst overall bridge conditions in the nation. None of Oklahoma's immediately neighboring states is ranked lower. Missouri is close, with the 13th worst bridge conditions, but the next closest ranked neighboring state, Colorado, has the 20th best overall bridge conditions. Oklahoma's overall bridge ranking results from locally-maintained bridges, of which there are nearly 16,000.

Bridges are considered structurally deficient if they have been restricted to light vehicles, closed to traffic or require rehabilitation. Structurally deficient means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. It means the bridge must be monitored, inspected and maintained. The condition of different parts of a bridge is rated on a scale of 0 to 9 (with 9 being "excellent" and zero being "failed"). A structurally deficient bridge is one for which the deck (riding surface), the superstructure (supports immediately beneath the driving surface) or the substructure (foundation and supporting posts and piers) are rated in condition 4 or less. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. A "deficient" bridge is one with some maintenance concerns that do not pose a safety risk. A "deficient" bridge typically requires maintenance and repair and eventual rehabilitation or replacement to address deficiencies. To remain open to traffic, structurally deficient bridges are often posted with reduced weight limits that restrict the gross weight of vehicles using the bridges. If unsafe conditions are identified during a physical inspection, the structure must be closed. A functionally obsolete bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand, or those that may be occasionally flooded. A functionally obsolete bridge is similar to an older house. A house built in 1950 might be perfectly acceptable to live in, but it does not meet all of today's building codes. Yet, when it comes time to consider upgrading that house or making improvements, the owner must look at ways to bring the structure up to current standards. The sufficiency rating is developed from

evaluation of highway bridge data by calculating four separate factors to obtain a numeric value which is indicative of bridge sufficiency to remain in service. The result of this method is a percentage in which 100 percent would represent an entirely sufficient bridge and zero (0) percent would represent an entirely insufficient or deficient bridge.

The following information is per congressional district 3 (Map 3.4 – Oklahoma Congressional District 3) which encompasses all of NORTPO counties, and also includes Beckham County, Caddo County, Canadian County, Creek County, Custer County, Greer County, Harmon County, Jackson County, Kiowa County, Lincoln County, Logan County, Osage County, Pawnee County, Payne County, Roger Mills County, Washita County. (Source: ARTBA, American Road and Transportation Builders Association, Bridge Report, 2023)

- Of the 9,734 bridges in the counties of this district, 955, or 9.8 percent, are classified as structurally deficient. This means one of the key elements is in poor or worse condition. (SD Bridges - Graph and Table Below)
- This is down from 1,177 bridges classified as structurally deficient in 2018.
- 1,818 bridges are posted for load, which may restrict the size and weight of vehicles crossing the structure.
- Repairs are needed on 8,676 bridges in the district, which will cost an estimated $3.3 billion. (Infographic 3.1 - # of Bridges in need of Repair in Oklahoma) (Infographic 3.2 – Bridge Condition by Year in Oklahoma)
- This compares to 8,940 bridges that needed work in 2018.



Bridge Inventory

Type of Bridge	All Bridges			Structurally Deficient Bridges		
	Total Number	Area (sq. meters)	Daily Crossings	Total Number	Area (sq. meters)	Daily Crossings
Rural Bridges						
Interstate	233	209,712	3393650	0	0	0
Other principal arterial	491	392,545	1,744,943	1	2,801	2,600
Minor arterial	580	400,461	1,331,421	4	14,191	8,700
Major collector	2,995	886,149	1,698,635	229	45,754	59,453
Minor collector	2	3,892	1,400	0	0	0
Local	4,926	661,433	458,009	693	56,827	56,103
Urban Bridges						
Interstate	57	66,749	942,400	0	0	0
Freeway/expressway	45	41,307	544,270	0	0	0
Other principal arterial	87	102,383	818,380	0	0	0
Minor arterial	126	58,664	369,908	6	489	7,100
Collector	74	35,901	198,832	7	1,867	8,673
Local	118	21,889	78,144	15	3,075	3,525
Total	**9,734**	**2,881,087**	**11,579,992**	**955**	**125,003**	**146,154**

Proposed Bridge Work

Type of Work	Number	Cost (millions)	Daily Crossings	Area (sq. meters)
Bridge replacement	6,689	$3,016.4	5,482,821	2,063,484
Widening & rehabilitation	1,707	$275.7	4,630,480	272,575
Rehabilitation	27	$6.5	8,091	6,833
Deck rehabilitation/replacement	0	$0	0	0
Other work	253	$40.2	124,185	41,572
Total	**8,676**	$3,338.8	**10,245,577**	**2,384,464**

(Source: ARTBA Bridge Report, 2023)

Top Most Traveled Structurally Deficient Bridges in this District

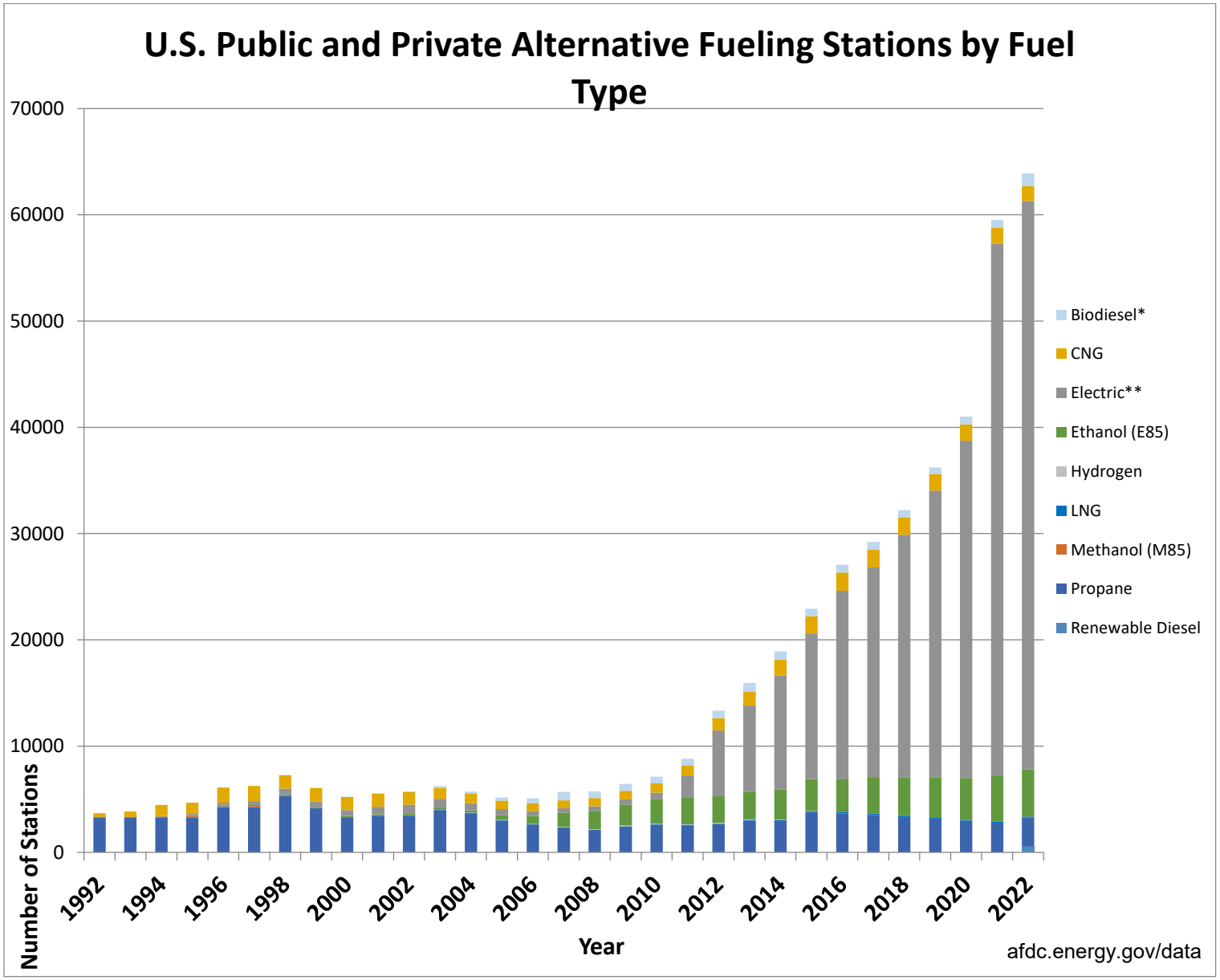
County	Year Built	Daily Crossings	Type of Bridge	Location
Lincoln	1926	7,800	Rural major collector	S.H. 66 over Slwc R.R. Under
Garfield	1984	4,800	Urban minor arterial	E0420 (Chestnut St over Creek
Pawnee	1963	4,000	Rural minor arterial	S.H. 99 over Arkansas River
Payne	1980	4,000	Rural local road	E0615 (Virginia St over West Boomer Creek
Payne	1966	4,000	Urban collector	3rd St. over Creek
Kay	2017	2,886	Rural major collector	E0180 over Chikaskia River O Flow
Canadian	1973	2,600	Rural arterial	U.S. 81 NB over N. Canadian River
Garfield	1930	2,500	Urban collector	E0426 (Broadway) over Creek
Pawnee	1954	2,200	Rural minor arterial	S.H. 18 over Black Bear Creek
Kay	1951	1,900	Rural major collector	E0230 over Creek

*Highlighted sections are NORTPO's counties. *

(Source: ARTBA Bridge Report, 2023)

Alternative Fuel Corridors (AFC) –

Alternative fuel corridors are designated routes for vehicles that rely on alternative fuels, such as electricity, hydrogen, propane, natural gas, or biofuels. These corridors are important to know the location of for transportation planners because they help ensure that alternative fuel vehicles have access to the infrastructure they need to travel long distances. Transportation planners need to know the location of alternative fuel corridors because they are responsible for designing and maintaining transportation infrastructure, such as roads, bridges, and refueling stations. By knowing the location of alternative fuel corridors, transportation planners can ensure that refueling stations are strategically placed along these routes, making it easier for drivers of alternative fuel vehicles to travel long distances without running out of fuel. Alternative fuel corridors also help reduce dependence on petroleum-based fuels, improve air quality, and promote the use of alternative fuels. They can also help reduce greenhouse gas emissions from the transportation sector, which is a significant contributor to climate change. U.S. public and private alternative fueling stations have been increasing drastically since 2010. In 2010 ethanol still outpaced electric fuel stations as did CNG and LPG. By 2013, electric fueling stations was ahead of all other alternative fueling stations combined, and in 2022, electric stations make up 83 percent of all alternative fueling stations. (Table - 3.3 - U.S. Public and Private Alternative Fueling Stations by Fuel Type, Graphic Below)

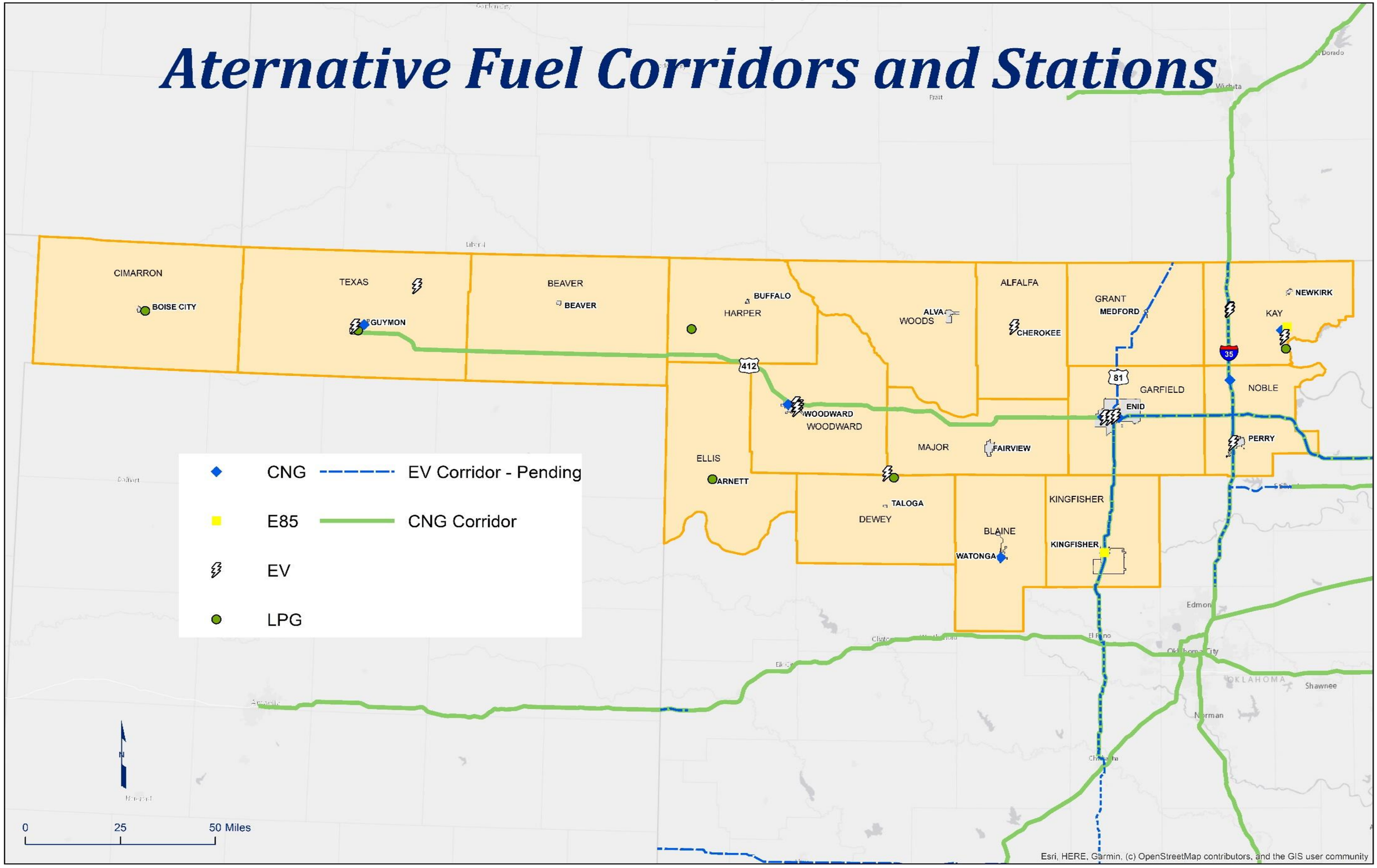


Oklahoma currently has 1,411 alternative fuel corridor locations as of 2021. This more than doubled the 617 from 2019 and we can expect the trend to rise with the increased usage of electric vehicles and manufactures moving towards meeting emissions standards goals set by the federal government, and the environmental protection agency. The majority of the alternative fuel corridors are electric making up 1,088 in Oklahoma. (Table - 3.4 - Alternative Fueling Stations in Oklahoma) Light duty EV sales from 2011 through June 2021 fluctuated; with the greatest number of sales (16,179) in calendar year 2017 followed by 15,026 sales in 2018. (Oklahoma Light Duty EV Sales 2011-2020 - Graph Below) ODOT is committed to build confidence in travel by building out alternative fuel corridors with EV charging stations at least every 50 miles will help EV drivers travel through all parts of Oklahoma. (Source: ODOT)

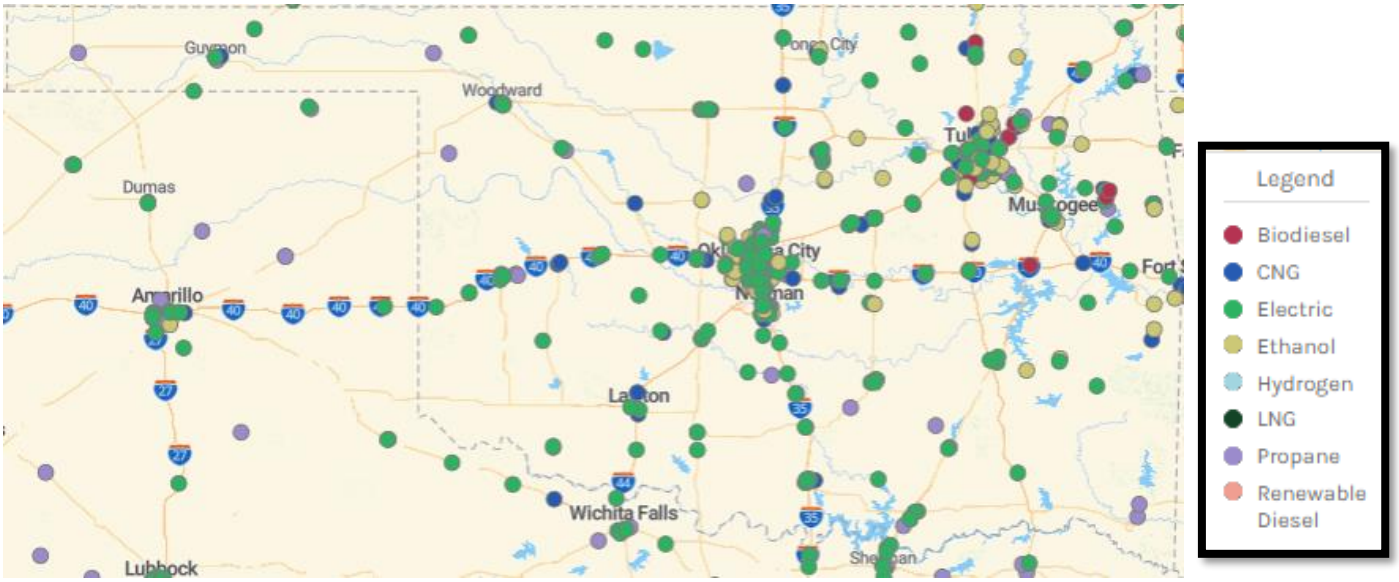
The NORTPO region has designated corridors for Electric Vehicles and (CNG) compressed natural gas vehicles. There are 4 public CNG fueling stations: 2 are in Enid in Garfield County, 1 is in Billings in Noble county, and the other is in Woodward in Woodward county. There are currently 16 Electric Vehicle Charging Stations in the region: 2 in Blackwell, 1 in Cherokee, 2 in Blackwell, 1 in Cherokee, 3 in Enid, 1 in Guymon, 1 in Hooker, 1 in Perry, 2 in Ponca City, 2 in Seiling, and 3 in Woodward. There are 3 (LPG) propane fueling stations in the region: 1 is in Boise City in Cimarron county, another is in Arnett in Ellis county, and lastly is in Seiling in Dewey county. The 3 liquefied petroleum gas (LPG) stations in western Oklahoma are primarily used for powering farm and industrial equipment in the area. (AFC NORTPO Region - Map Below) The corridor segment between Chickasha and Enid links Vance Air Force Base (Enid) with I-40. The CNG corridor between Chickasha and Enid is nominated as corridor ready. US 62 (I-44 to the Texas State line) is nominated as corridor pending for CNG and EV. The designated corridors in NORTPO's region is I-35, U-412, and U-81. NORTO currently doesn't have any Hydrogen fuel stations, but there are proposals for both locations, and corridors. Locations include, Boise City, Buffalo, Woodward, Guymon, Seiling, Waynoka, Alva, Renfrow, Pond Creek, Enid, Tonkawa, Perry, and Kingfisher. Proposed corridors include U-4-12, U-281, U-287, U-54, U-183, U-60, and I-35. (Alternative Fueling Stations and Corridors in Oklahoma - Maps Below)

(Source: ODOT)

Aternative Fuel Corridors and Stations

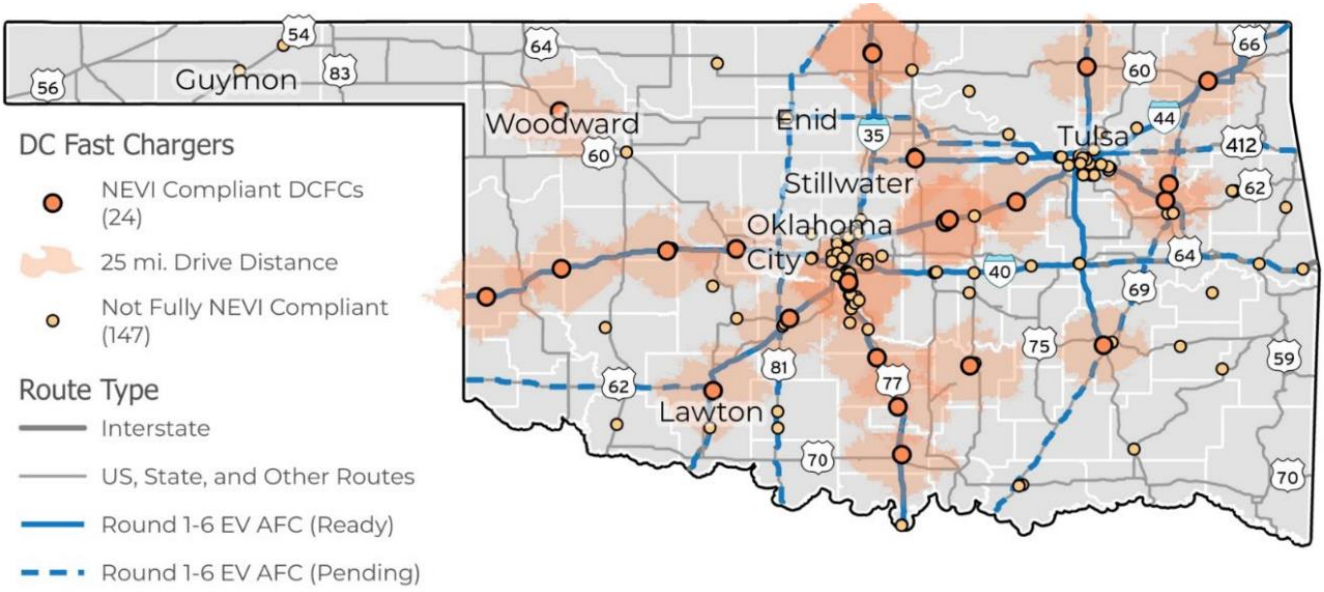


Alternative Fuel Locations in Oklahoma



(Source: https://afdc.energy.gov/)

Alternative Fuel Corridors in Oklahoma and DCFC's

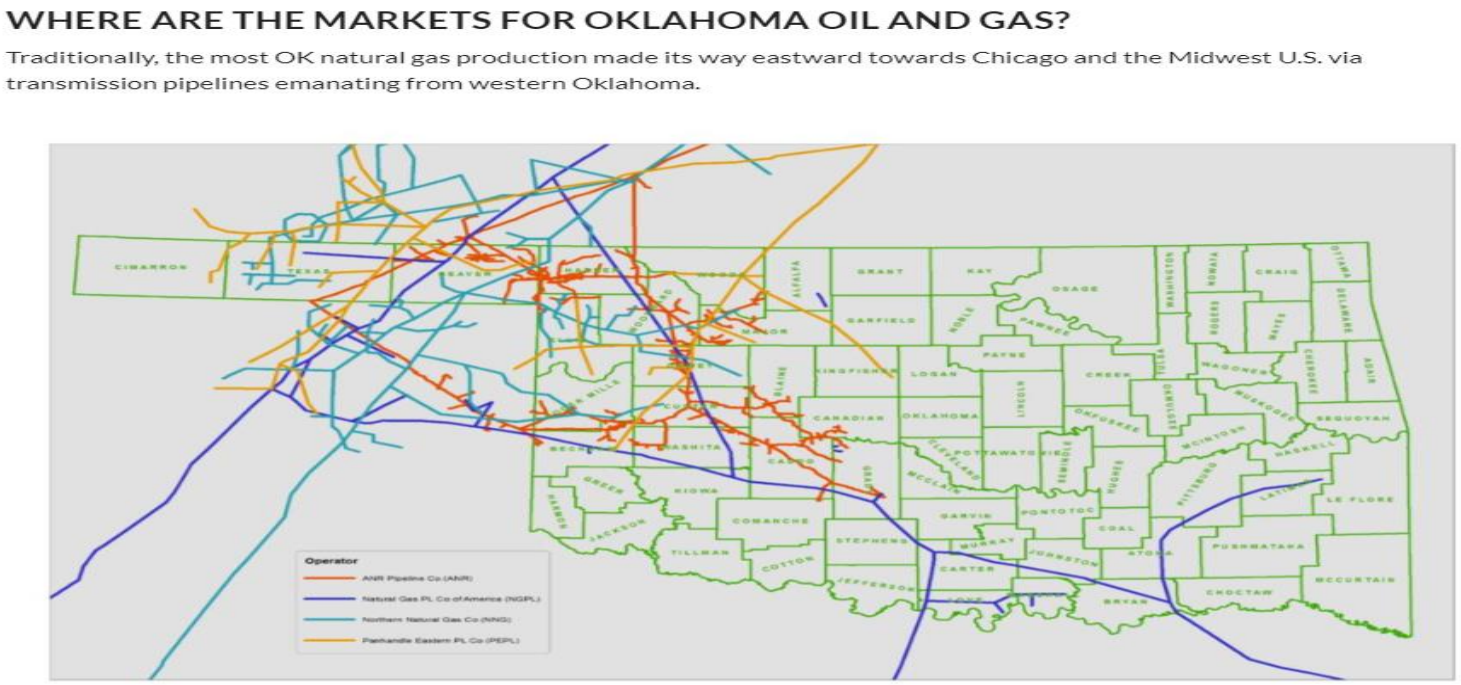


Source: U.S. Department of Energy, Alternative Fuels Data Center and ODOT research as of 5/24/2023. There are two NEVI compliant DCFCs included in the count (24) that are not on AFCs (Woodward and Ada).

Pipelines -

Pipelines are a critical component of transportation infrastructure. Pipelines are used to transport crude oil, natural gas, refined petroleum products, and other substances over long distances, from production sites to refineries, storage facilities, and distribution centers. Pipelines are often seen as a more efficient and cost-effective means of transporting these resources compared to other modes of transportation, such as rail or truck. This is because pipelines can transport large quantities of resources over long distances with minimal fuel consumption and emissions. Pipeline companies must build, operate, and maintain extensive networks of pipelines and associated facilities, including pumping stations, storage tanks, and control centers that will have an impact on other transportation related issues. Pipelines include separate systems for natural gas, crude petroleum, and petroleum products. Typically, natural gas pipelines connect sources of supply with end consumers (both households and businesses), while crude petroleum pipelines connect oil fields and marine terminals with refineries and product pipelines connect refineries with distribution centers. The U.S.

natural gas terminal and pipeline system extends across the lower 48 states, with higher concentrations in Louisiana, Oklahoma, Texas, and the Appalachia region. (Map – 3.5 - U.S. Petroleum and Natural Gas Pipelines) Pipelines provide the most efficient method of transporting liquid and gas petroleum products and as such move approximately two-thirds of the nation's petroleum production. At the beginning of the twenty-first century Oklahoma ranked seventh among oil-producing states and, with 68,008 miles operating within its boundaries, served as the nation's major crossroads for pipelines. Almost four times as much natural gas is produced in Oklahoma as is consumed in the state; surplus natural gas is added to the volumes transported by the interstate pipelines that cross through the state. The NORTPO region is a large player in the pipeline industry with a significant amount of pipeline in the area compared to the rest of the state. (Markets for Oklahoma Oil and Gas - Map Below)



(Source: Oklahoma Minerals, 2017)

The movement of Oklahoma's energy production to market is very much a geographic story with location at the very center of current Energy themes like markets, competition, capacity, proximity, and movement. The Pipeline Safety Department administers the Oklahoma Corporation Commission's intrastate regulatory program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline. The Commission develops regulations and other approaches to assure safety in design, construction, testing, operation, maintenance, and emergency response to pipeline facilities. The Commission derives its authority over intrastate pipeline operations through state statutes and certification agreements with the U.S. Department of Transportation. (Source: Oklahoma Corporate Commission) Oklahoma, as a leading U.S. energy producer, defies the notion that production and consumption don't usually occur in the same place. According to 2015 figures from the EIA, we consume almost half of the energy we produce in this state. Where does the other half go? Much of it is transported through a vast pipeline network to areas of the U.S. where oil and gas are either not produced, or in short supply. Increasingly, our energy products are also being exported for consumption in other parts of the world. The U.S. Department of Transportation's Office of Pipeline Safety has developed the National Pipeline Mapping System (NPMS) to provide information about gas transmission and liquid transmission operators and their pipelines. The NPMS web site is searchable by zip code or by county and state, and can display a printable county map. The site also provides the public a resource with which to obtain a list of operators and their contact information by county or state. Oklahoma according to the NPMS has 233 pipeline operators that span every county, and total of 8,341.77 miles of pipeline. Commodities carried through those pipelines include Natural Gas, Crude Oil, Natural Gas Liquids, Liquefied Petroleum Gas, Non-HVL Product, and Carbon Dioxide.

Vehicles

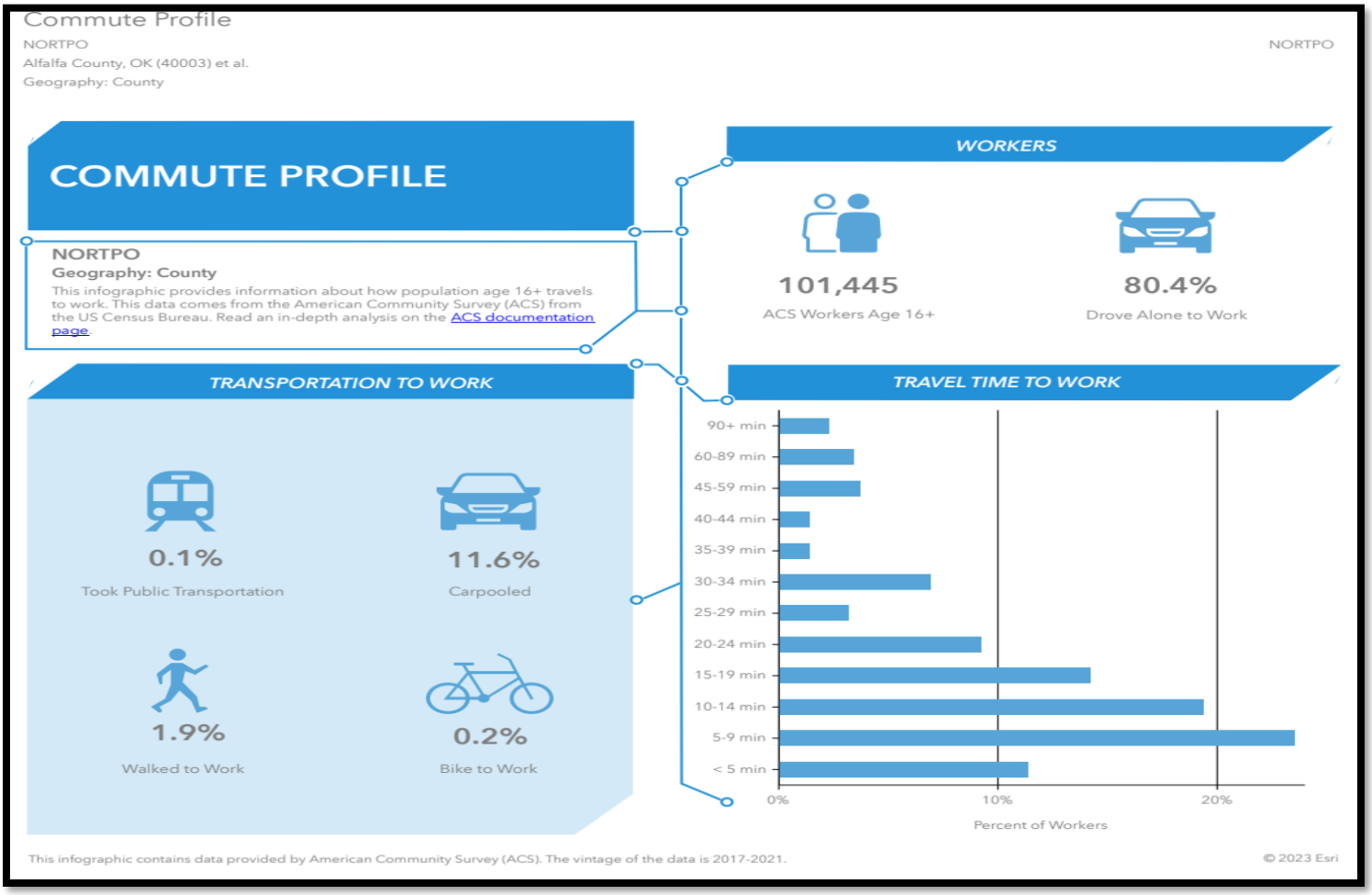
Vehicles are the foundation of the transportation infrastructure projects and planning agencies, as they are the means by which people and goods are transported from one place to another. However, vehicles cannot function effectively without a supporting network of roads, highways, bridges, tunnels, and other transportation infrastructure. Transportation infrastructure plays a vital role in facilitating the movement of vehicles, and in turn, people and goods. Roads and highways provide the necessary surface for vehicles to travel on, while bridges and tunnels enable vehicles to cross over waterways or through mountains. Public transportation infrastructure such as bus and train stations, airports, and subway systems provide alternative modes of transportation to private vehicles. The quality and availability of transportation infrastructure can have a significant impact on the efficiency, safety, and accessibility of transportation systems. Well-designed and maintained transportation infrastructure can reduce travel times, increase safety, and support economic growth by facilitating the movement of goods and people. Vehicle size, weight, trends, and usage determine the vehicular impact on infrastructure and lay the foundation for creating a future for transportation. It will be important for planners to track developments in these technologies as they will advance quickly, causing the impacts, opportunities, stakeholders, relationships, and roles of planners to change as well. Planning for the future of transportation with the rise of electrical vehicles, and vehicle to vehicle, and vehicle to infrastructure communication technologies it's important we stay ahead of the curve from both a planning, construction, and legislative standpoint.

Commuting Patterns –

Commuting patterns to work for workers 16 years and older according the 2021 ACS 5-year estimate shows that 80.29% of workers drove alone, 10.45% carpooled, 0.09% used public transportation, 2.54% walked to work, 1.48% traveled by other means, and 5.14% worked from home. Mean travel time to work for the region was estimated at 18.74 minutes. Blaine County was shown experiencing the longest commute time of 24.7 minutes and Cimarron being the shortest at 9.7 minutes. People using public transportation at less than 1 percent is indicative of gaps that need to be met in mobility programs in the region to either have better access to transportation, or better knowledge of current access not being utilized. The addition of a mobility manager in our region will be useful in improving these statistics of public transit use, and decreasing those who walk to work. We should expect to see a bit of a rise in those who work from home due to the changing landscape of the workforce especially after the Covid-19 pandemic. According to The American Trends Panel (ATP), created by Pew Research Center, in 2022, 60% of workers with jobs that can be done from home would like to work from home all or most of the time. This is up from 54% who said the same in 2020. Among those who are currently working from home, 78% say they'd like to continue to do so, up from 64% in 2020. In NORTPO we do not expect this to be as significant as other areas due to our rural nature, and lack of internet infrastructure which acts as a pre-requisite to work from home jobs. The majority of people leave for work from 7:30-8:00 a.m., and then also from 9:00-11:59 a.m. Increased traffic congestion can be expected during this time frame, especially in the 6 areas that are considered urban, Alva, Blackwell, Enid, Perry, Ponca City, Woodward, OK due to their higher population density. (Table – 3.5 – Commuting Statistics in NORTPO) (Table 3.6 – Means of Transportation to Work in NORTPO) (Table - 3.7 and 3.8 – Means of Transportation Rate of Change in NORTPO and Oklahoma)

To calculate trips from individual counties, staff used and analyzed CTPP data, an AASHTO program, to look at inter-county trips to work by county of residence for each county within the region. Census Transportation Planning Products (CTPP), CTPP program is a State DOT-funded, cooperative program that produces special tabulations of ACS data that have enhanced value for transportation planning, analysis, and strategic direction. Additionally, the program provides universal access to that data, funds and conducts research, and provides training and technical assistance to the transportation planning community, all to increase understanding of the needs of the traveling public in support of policy and programming decision-making. CTPP also refers to the collection of Census data products used by the transportation planning community. The CTPP program produces a set of special tabulations from the US Census Bureau's ACS that include: residence-based data, workplace-based data, and commuter flows from home to work, commonly known as Journey-to-Work (JTW). The average commute time to work in the region is 5-9 minutes with more than 80 percent driving alone, 11.6 percent carpooling, 1.9 percent walking, and only 0.1 percent using any public transportation. (Source: ACS 2021) (Commute Profile - Infographic Below) A further breakdown of drive time to work

and vehicles taken to work can be found in the appendix in (Infographic 3.3, and 3.4 - Commute Time to Work) The majority of intercountry trips in NORTPO region are in the eastern side of the region of Garfield, and Kay counties. (Map 3.6 – Inter County Commute Trips in Oklahoma)



Registered Vehicles –

Vehicle ownership varies across the Nation. Overall, 8.6 percent of U.S. households do not have access to a vehicle (either by choice or by circumstance) according to the 2019 American Community Survey. Oklahoma's automobile registration has increased from 2,877,797 in 2010 to 3,356,245 in 2020. (Table – 3.9 - Oklahoma Vehicle Registration 04-20) As of 2021 NORTPO makes up for 100,665 total registered vehicles. 40 percent of individuals have 2 vehicles available, and 24 percent have at least 3 vehicles available for use within the region. Only 14 percent have 4 or more vehicles available for use, and 21 percent have either 1 of no vehicle available. Texas, Kay, and Garfield counties are the only ones with 10,000 or more registered vehicles. (Table Below) Motorcycle registration is gradually increasing with 7.95 percent with a registered motorcycle in 2020, and 7.78 percent in 2010. (Table – 3.10 - Motorcycle Registrations – NORTPO) Analyzing that trend of motorcycles and crash rates will be helpful in the planning process moving forward. Farm truck registration is high in NORTPO's region due to our agricultural nature. A "Farm truck" means pickup, truck, or truck tractor used primarily for agricultural purposes. (Okla. Admin. Code § 710:60-3-111) NORTPO makes up for 23.23% of all farm trucks in Oklahoma. Even as Oklahoma's total farm trucks has decreased, NORTPO's has continued to rise from 2010-2020. (Table – 3.11 – Farm Truck Registration – NORTPO) Commercial truck registration in NORTPO has decreased although with 11,147 trucks in 2020 compared to 12,486 in 2010. This decreased in commercial truck could also be more of an impact from the Covid-19 pandemic and the move to working more remote. NORTPO share for the entire state of commercial trucks is 7.89 percent. (Table – 3.12 – Commercial Truck Registrations - NORTPO) Region-wide, commercial truck registrations fell by 10.7%, or 1,339, while automobile registrations increased by 10.7%, or

20,010. To calculate vehicles by average vehicles by household, staff looked at automobile registrations and housing unit data obtained from the census to find that across the region the average household had access 1.98 vehicles.

NORTPO Vehicles Available

Column1	Total:	No vehicle available	1 vehicle available	2 vehicles available	3 vehicles available	4 vehicles available	5 or more vehicles available
Alfalfa County, Oklahoma	2,121	21	189	876	645	293	97
Beaver County, Oklahoma	2,336	28	357	855	663	187	246
Blaine County, Oklahoma	3,027	12	709	1,206	572	343	185
Cimarron County, Oklahoma	1,081	8	77	417	338	157	84
Dewey County, Oklahoma	1,854	21	321	621	601	196	94
Ellis County, Oklahoma	1,570	58	303	422	341	300	146
Garfield County, Oklahoma	28,549	516	6,198	11,876	6,637	2,505	817
Grant County, Oklahoma	1,878	7	372	741	418	184	156
Harper County, Oklahoma	1,337	3	147	528	397	166	96
Kay County, Oklahoma	18,281	674	4,321	7,170	3,883	1,716	517
Kingfisher County, Oklahoma	6,690	91	861	2,806	1,716	803	413
Major County, Oklahoma	3,380	47	304	1,398	896	456	279
Noble County, Oklahoma	4,556	46	634	1,622	1,344	654	256
Texas County, Oklahoma	10,790	367	2,329	4,276	2,399	591	828
Woods County, Oklahoma	4,090	100	661	1,774	1,023	344	188
Woodward County, Oklahoma	9,125	100	1,617	3,614	2,180	583	1,031
NORTPO --	**100,665**	**2,099**	**19,400**	**40,202**	**24,053**	**9,478**	**5,433**

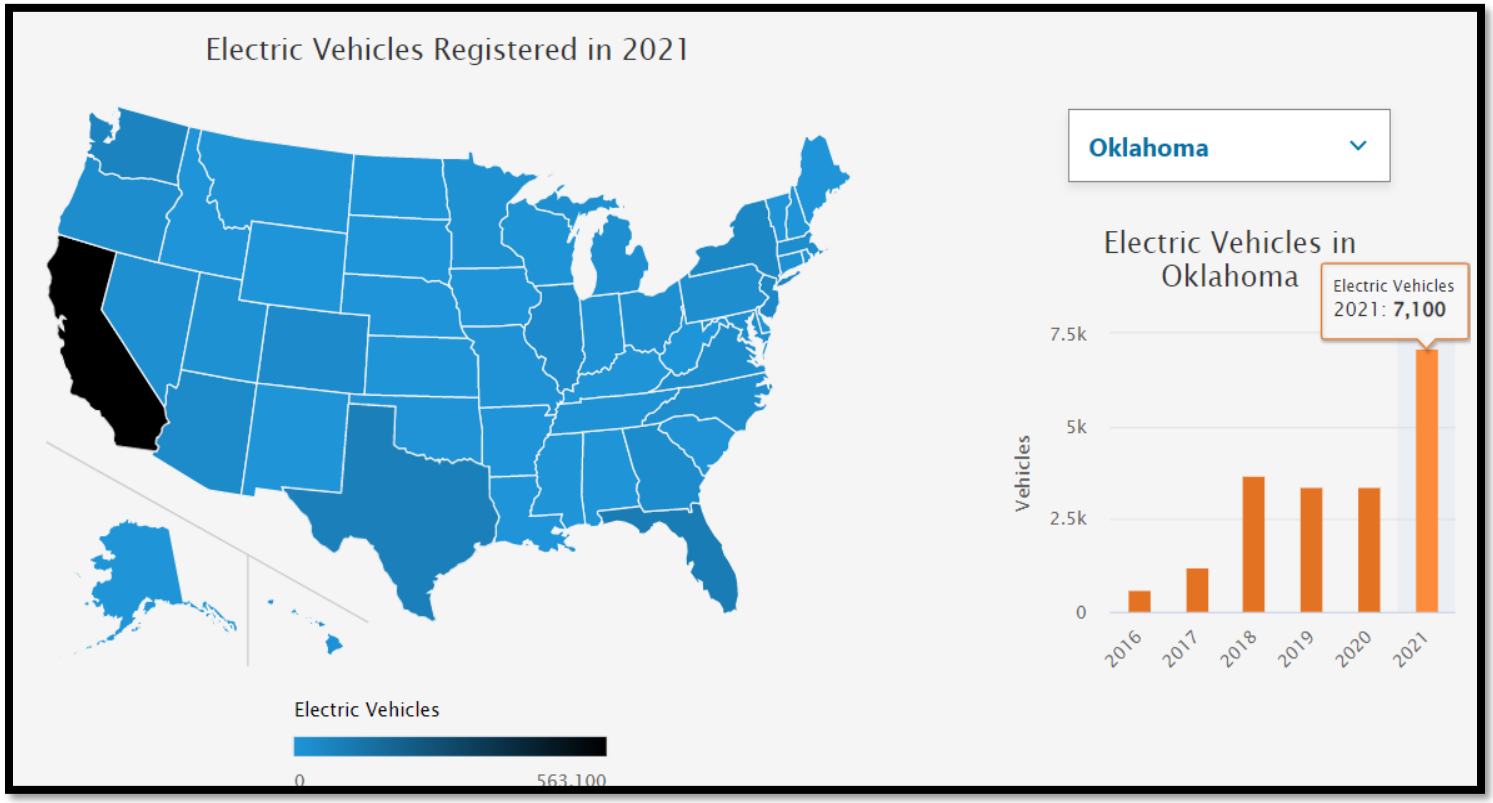
(Source: ACS 2021)

Licensed Drivers –

The percentage of licensed drivers among the young is the lowest in three decades, as more of them use public transit and many others use new services for sharing cars and bikes. The prototypical family of the suburban era, a married couple with school-age children, now represents only 20 percent of households, down from over 40 percent in 1970. Some 55 percent of millennials say living close to public transportation is important to them, according to a recent survey by the Urban Land Institute. About 15.9% of Americans don't have a valid driver's license. The age groups with the highest percentage without a driver's license are 16-19 years old (65.2%), 85 and older (39.9%) and 20 to 24 (19.2%). In 2023 there are a projected 243.4 million licensed drivers in the US, which includes 89% of US adults. That's up from 238.6 million in 2022.Oklahoma has 2,597,441 licensed drivers. (Source: Federal Highway Administration (Office of Highway Policy Information) 54 percent of licensed drivers in Oklahoma are women, and 46 percent are men. The ratio of those licensed and vehicles registered is 0.68. (Table 3.13 – Licensed Drivers – Oklahoma)

Electric Vehicles –

The number of electric cars on the road in Oklahoma has been steadily increasing in recent years, and there are now over 7,100 registered electric vehicles in the state and with more charging stations per capita than any other state. (Electric Vehicles in Oklahoma - Map Below) Oklahoma is 28th in the nation for number of registered EV's. (Infographic 3.5 – Electric Vehicle Sales, Nation Wide) The majority of these are passenger cars, but there are also a growing number of electric trucks and SUVs on the market from automakers. With the continued rise in electric vehicle sales, it is likely that the number of electric cars in Oklahoma will continue to increase in the years to come and possibly continue to double every few years. While hybrid electric vehicles (HEVs) were first on the market, electric vehicles (EVs) have quickly exploded in popularity. The year 2021 in particular is interesting for showing a near doubling in sales for HEVs, EVs, and PHEVs (Infographic 3.6 – Electric Vehicle Registrations by State) (Source: Alternative Fuels Data Center, AFDC, 2021) The National Electric Vehicle Formula Program (NEVI) provided Oklahoma more than $66 million in federal funding for EV charging infrastructure over the next five years. Oklahoma will have to match the federal funds with state, local and/or private funding.



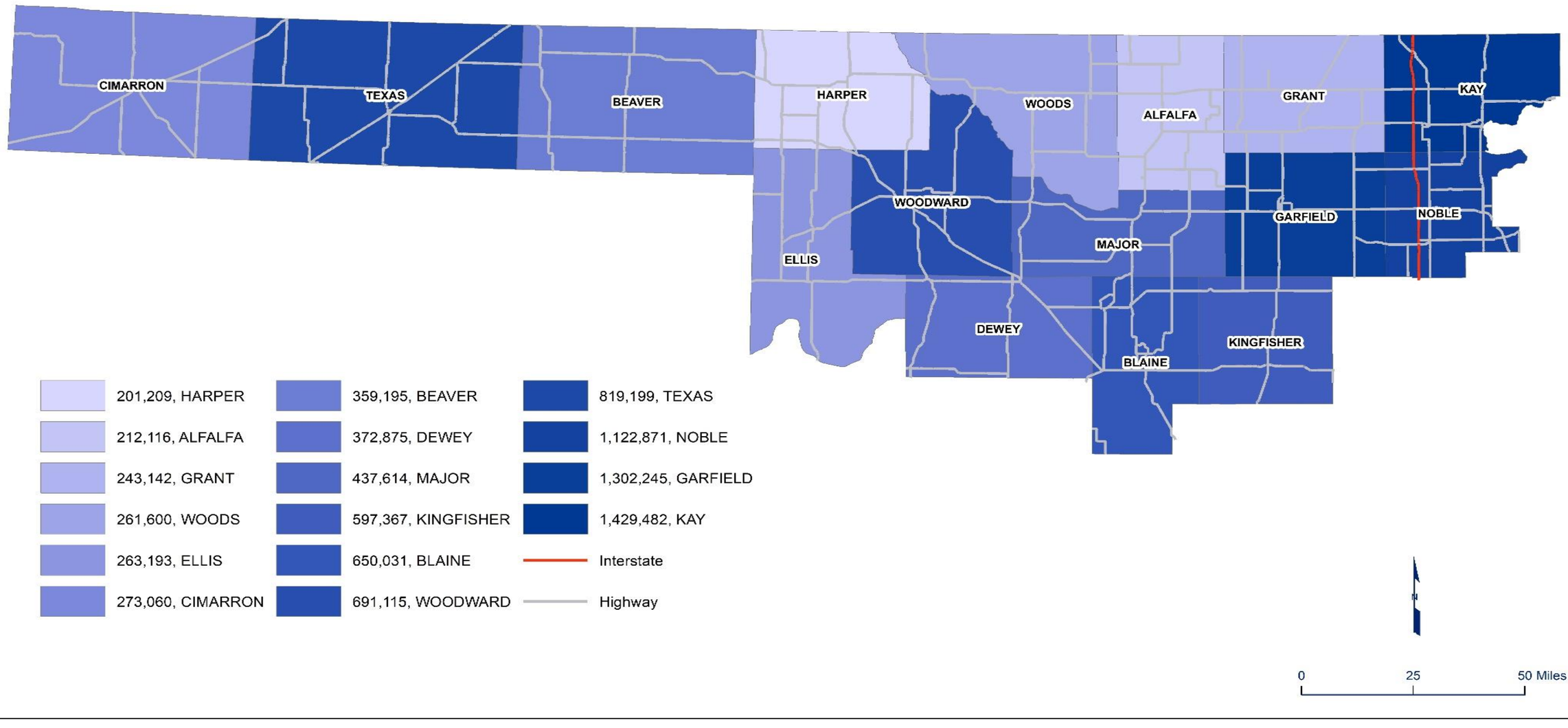
Traffic Data – (DVMT/AADT)

Annual average daily traffic (AADT) is the total volume of vehicle traffic on a highway or road for a year divided by 365 days. AADT is a useful and simple measurement of how busy a road is. The AADT traffic data can be used for: selecting a new site or facility location, evaluating a site, or designing a territory. Annual Average Daily Traffic (AADT) volume is used throughout the project planning process to provide projected future traffic volumes. It is based on a 24-hour, two directional count at a given location. The raw traffic data is mathematically adjusted for vehicle type, determined by an axle correction factor. Traffic volume trends is a monthly report based on hourly traffic count data reported by Oklahoma. This data is collected at approximately 5,000 continuous traffic counting locations nationwide and are used to estimate the percent change in traffic for the current month compared with the same month in the previous year. Estimates are re-adjusted annually to match the vehicle miles of travel from the Highway Performance Monitoring System and are continuing updated with additional data. (Source: FHWA) While AADT data provides a snapshot of traffic volumes at specific locations along roadways, the daily vehicle miles traveled (DVMT) metric multiplies the AADT by the roadway segment length, allowing volumes to be summed and analyzed based on roadway authority, geographic location, and other attributes. NORTPO's region is a part of 3 field divisions for ODOT engineers, division 4,5, and 6. In the appendix is a map of each of these field division areas that has the AADT data in the region, and for the state. (AADT Maps - 3.7, 3.8, 3.9, and 3.10) While AADT data provides a snapshot of traffic volumes at specific locations along roadways, the daily vehicle miles traveled (DVMT) metric multiplies the AADT by the roadway segment length, allowing volumes to be summed and analyzed based on roadway authority, geographic location, and other attributes. DVMT for the NORTPO region total is 9,236,314 miles. Kay county has the most with 1,429,482 miles traveled per day largely due I-35 going through the region. Noble is the only county in the region that has toll roads. Garfield county has the highest number of traveled miles for urban classification roads in the NORTPO region. (DVMT - Table Below) (DVMT - Map Below)

DVMT – NORTPO

County Name	COUNTY	SHS	Toll	UFC	RFC	Local-Count	Local-Cit	Total By Count
ALFALFA	2	166,420	0	0	29,659	4,245	11,792	212,116
BEAVER	4	305,012	0	0	40,004	9,479	4,700	359,195
BLAINE	6	532,769	0	666	80,590	15,978	20,029	650,031
CIMARRON	13	234,478	0	0	22,229	8,337	8,016	273,060
DEWEY	22	313,447	0	0	44,452	7,569	7,407	372,875
ELLIS	23	204,067	0	0	44,705	5,911	8,511	263,193
GARFIELD	24	714,949	0	352,747	82,696	29,748	122,106	1,302,245
GRANT	27	191,492	0	0	36,479	6,452	8,719	243,142
HARPER	30	169,332	0	0	17,348	5,108	9,421	201,209
KAY	36	1,003,881	0	217,270	79,213	42,983	86,136	1,429,482
KINGFISHER	37	399,735	0	0	134,648	25,976	37,007	597,367
MAJOR	47	356,972	0	0	48,368	15,743	16,530	437,614
NOBLE	52	934,920	115,875	8,075	18,520	25,231	20,249	1,122,871
TEXAS	70	608,565	0	30,153	116,174	33,984	30,323	819,199
WOODS	76	184,689	0	11,007	33,638	13,249	19,017	261,600
WOODWARD	77	517,515	0	58,816	39,290	38,664	36,830	691,115
NORTPO DVMT Totals		**6,838,244**	**115,875**	**678,733**	**868,012**	**288,658**	**446,792**	**9,236,314**
State DVMT Totals		**69,513,791**	**8,487,947**	**20,163,245**	**5,524,296**	**3,472,268**	**7,877,658**	**115,039,205**

NORTPO Daily Vehicle Miles Traveled



Level of Service –

Level of Service (LOS) – Refers to a standard measurement used by planners which reflects the relative ease of traffic flow on a scale of A to F with free-flow being rated LOS A and congested conditions rated as LOS F. This is used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety. Highway expansion in the NORTPO region need to account for maintaining an acceptable level of service (LOS) as traffic volumes grow. Acceptable LOS's conform with ODOT's standard of a LOS of C or above as the standard for rural freeways, and a LOS of D or above for all other roads.

The following is a list of the various LOS with abbreviated definitions from the Highway Capacity Manual:

- **LOS A** describes a condition with low traffic volumes with little or no delays. There is little or no restriction in maneuverability due to the presence of other vehicles. Drivers can maintain their desired speeds and can proceed through signals without having to wait unnecessarily. Operating capacity can be measured as less than 30% of capacity.

- **LOS B** describes a condition with stable traffic flow with a high degree of choice to select speed and operating conditions, but with some influence from other drivers. Operating capacity can be measured as less than 50% of capacity.

- **LOS C** describes the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. LOS C is normally utilized as a measure of "average conditions" for design of facilities in suburban and urban locations. Operating capacity can be measured as less than 69% of capacity.

- **LOS D** describes high density flow in which speed and freedom to maneuver is severely restricted even though flow remains stable. LOS D is considered acceptable during short periods of time and is often used in large urban areas. Operating capacity can be measured as less than 70% to 90% of capacity.

- **LOS E** describes operating conditions at or near capacity. Operations at this level are usually unstable, because small increases in flow or minor disturbances within the traffic stream will cause breakdowns. Operating capacity can be measured as between 90% to 99% of capacity.

- **LOS F** is used to define forced or breakdown flow. This condition exists whenever the amount of traffic approaching a point exceeds the amount that can be served. LOS F is characterized by demand volumes greater than the roadway capacity. Under these conditions, motorists seek other routes in order to bypass congestion, thus impacting adjacent streets. Operating capacity can be measured above 100% of capacity.

Future increases in traffic volume can be traced to population growth and land use development patterns. Capacity and LOS can also be diminished by increasing the number of access points and median cuts on the road network.

Alternative Transportation

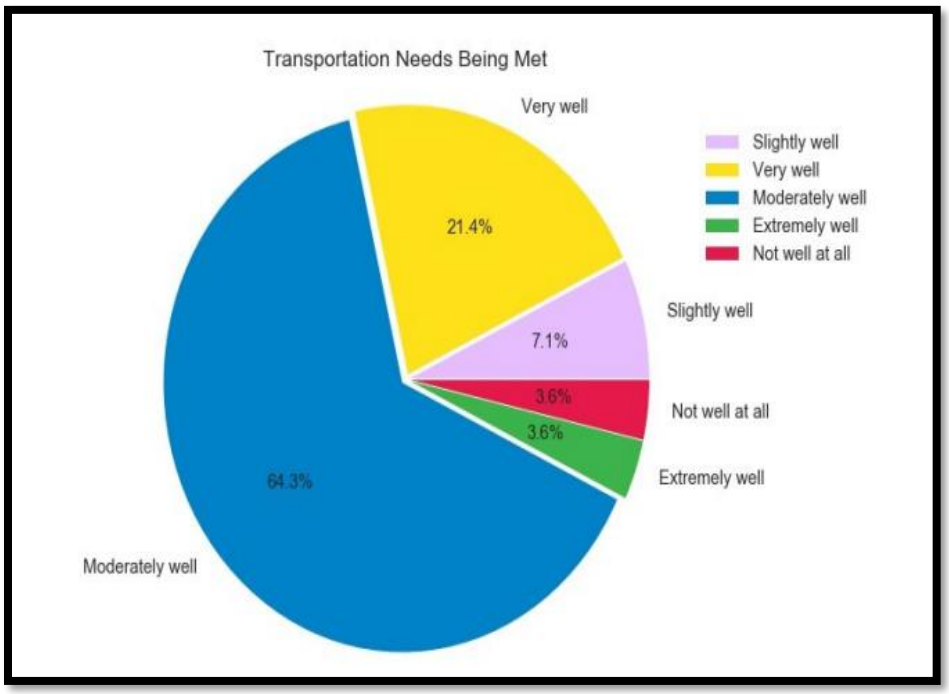
Alternative transportation refers to any mode of transportation other than driving alone in a car. This can include walking, cycling, public transportation, carpooling, among others. There are several benefits to using alternative transportation. Environmental benefits: Alternative transportation options emit less greenhouse gases and other pollutants than driving alone, which can help reduce air pollution, smog, and greenhouse gas emissions. Health benefits: Walking or cycling as a means of transportation can improve physical health and reduce the risk of obesity, heart disease, and other health problems associated with a sedentary lifestyle. Economic benefits: Using alternative transportation can be cheaper than owning and maintaining a car, especially in areas with good public transportation infrastructure. Reduced traffic congestion: When more people use alternative transportation, there are fewer cars on the road, which can help reduce traffic congestion and make commuting faster and more efficient. Improved community: Alternative transportation options can help foster a sense of community by encouraging people to interact more with one another and their surroundings, rather than being isolated in a car.

Public transit specifically provides a litany of benefits to a community including economic, health, freedom, and positive social impacts. Transit agencies provide a critical role in connecting every Oklahoman to necessary medical appointments, shopping, and entertainment venues which boosts economic development, grocery stores which helps reduce food insecurity all while creating room for new and existing employment opportunities. All 77 counties in Oklahoma are served in Oklahoma with 99 percent of residents living near transit routes and 37 public transit providers in Oklahoma. Transit needs in Oklahoma include needing to address the match gap on federal funding, increasing the state's revolving fund, and improving mobility partnerships with the community. Individuals living in poverty, with disabilities, or without access to a vehicle tend to rely heavily on transit services. This is especially true for Oklahoma given our demographic trends compared to national averages of poverty. (Source: Oklahoma Transit Association) Statewide, transit agencies in Oklahoma spent roughly $148 million in 2017 to provide service. About 48% of the funding is raised locally ($71 million), and about 33% of the funding comes from the federal government ($49 million). The remaining 19% is raised through passenger fares, funds provided by the State of Oklahoma, and other miscellaneous income. The urban transit agencies spent the largest amount, roughly $97 million. Rural agencies spent $39 million and tribal transit agencies spent $12 million. Urban transit systems rely more on local funds, while rural agencies depend on a combination of federal and other funds. In contrast, tribal agencies heavily depend on federal funds. (Source: Oklahoma Transit Authority's – (OTA) Statewide Personal Mobility Needs for Oklahoma 2018-2028.)

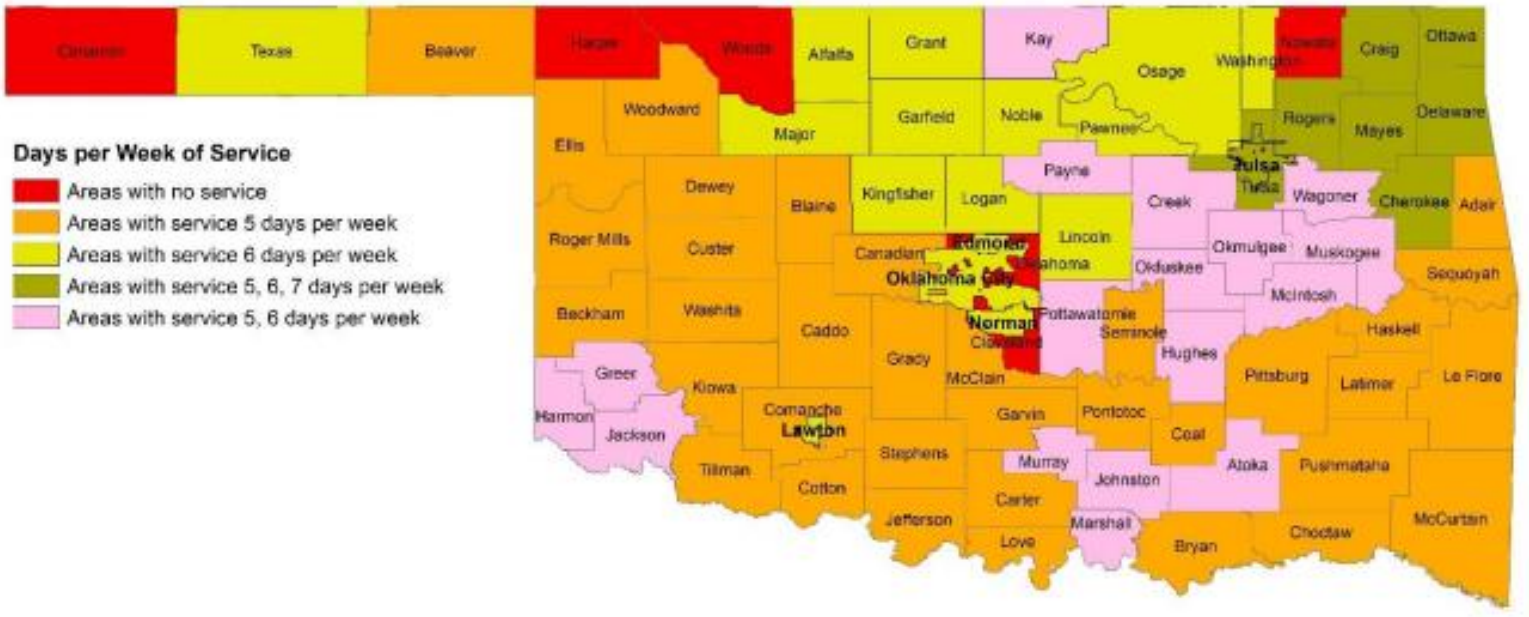
Public transportation systems and services in rural areas are limited. Low population densities in the NORTPO region and the distances between activity centers complicate the delivery of public transportation in rural areas. There are limited activity generators (mostly job destinations) that produce concentrations of transit need. That is, at least one end-of-trip is concentrated enough that public transit may be attractive. The difficulty then becomes establishing feasible routes and scheduling service such that the trip is acceptable to the workers. Federal, state and especially local funding is limited. This limits the type and level of service (LOS) that can be provided. ODOT's Transit Programs Division is responsible for the administration of the Federal Transit Administration (FTA) for rural transit operations. Service provided within the NORTPO region is mostly limited to on demand response service with exception to Cimarron transit which operates PICK, an evening and Saturday service. This service is provided based on a pre-arrangement or an agreement between a passenger (or group of passengers or an agency representing passengers) and a transportation provider for those needing "curb to curb" transportation. The pre-arrangement may be scheduled well in advance or, if available, on short notice and may be for a single trip or for repetitive trips over an extended period (called "subscription service"). (Maps of State-Wide Transit Routes, Coverage Areas, Operators, and Systems in Appendix under Maps 3.11, 3.12, 3.13) NORTPO doesn't have any passenger rail in the area as Amtrak ends in Oklahoma City, but there is a growing movement to have service reach into Kay county, specifically Ponca City from Newton Kansas. (Map 3.14 – National Passenger Rai – AMTRAK)

While the much of the National Transit Data was being analyzed, surveys were sent to each of the transit agencies via OTA to gather additional information about existing transit services. Participants were asked if they thought overall transit needs were being met, about trip purposes, the need for the agency to provide additional trips, adequacy of

facilities, administrative and vehicle storage, the need for vehicles, and if they believed the overall needs were being met. Transit agencies were asked how well the overall transportation needs of their service area residents were being met. Most transit agencies said the needs of residents in their service areas needs are being met moderately well. About 64% of the responding transit agencies had a major need for more trips for medical purposes, 54% for dialysis, and 46% for both employment and veteran transportation services trips. The survey results also indicated that about 54% of the responding agencies had minor needs for more service for education/job training trips and 46% needed more service for social/recreation trips. With the changing demographics, it is anticipated that more medical trips will continue to be needed in the future. (Transportation Needs - Graphic Below)

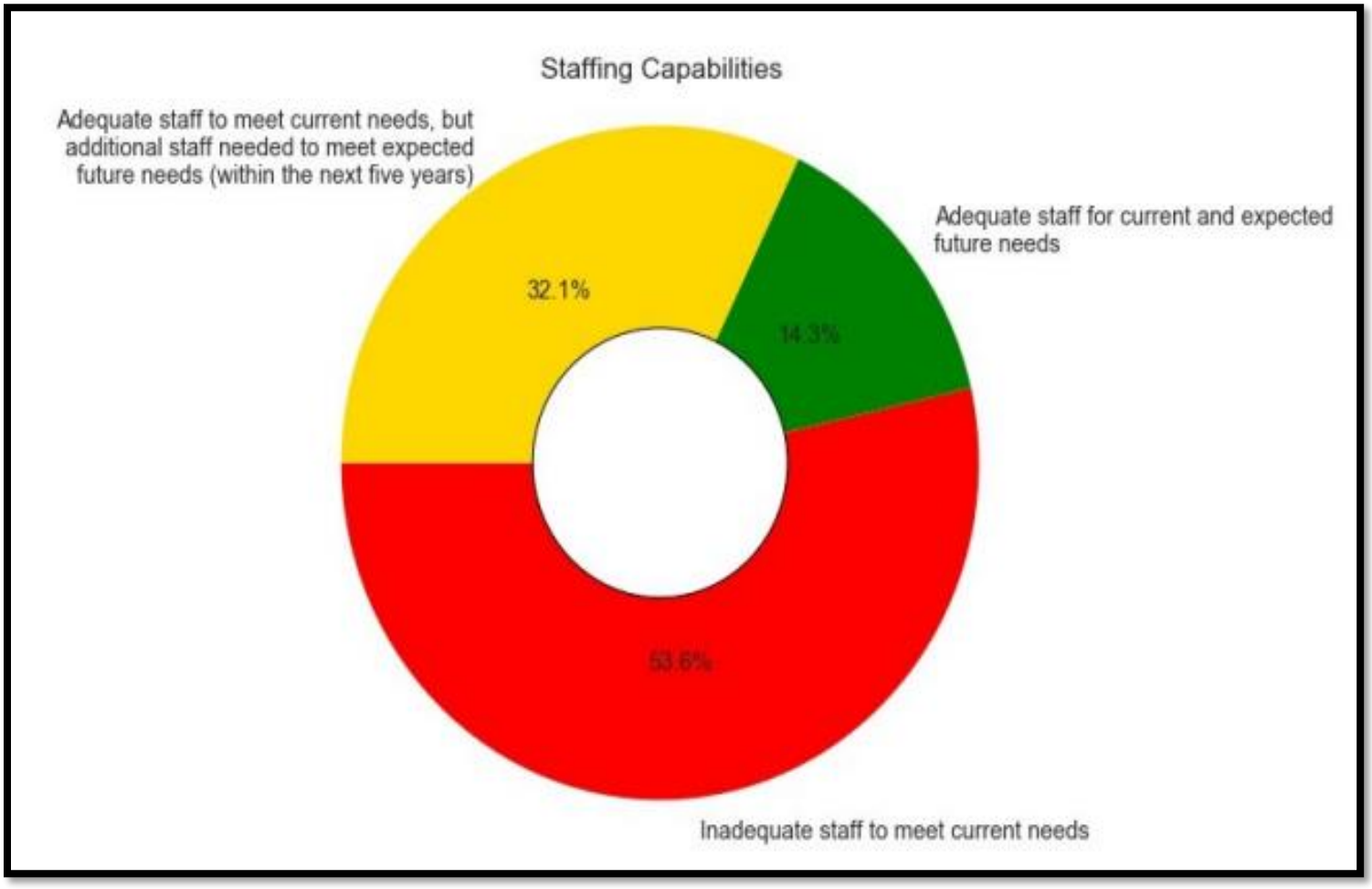


In NORTPO, Cimarron, Harper, and Woods counties are areas with no consistent service 5 days of the week. Texas, Alfalfa, Major, Garfield, Kingfisher, Grant, and Noble each have service 6 days a week. Kay county varies from 5 to 6 days a week. Beaver, Ellis, Woodward, Dewey, and Blaine are all 5 days a week of service. (Days Per Week of Service - Map Below)



(Source: (OTA) Statewide Personal Mobility Needs for Oklahoma 2018-2028.)

Staffing issues are the primary concern for the transit services in the NORTPO area with lack of drivers to meet the demand. OTA's survey shows that staff is inadequate to meet expected future needs as well as current needs. Only 14 percent of respondents from transit services believed they had adequate staff for current, and future needs. (Staffing Capabilities - Graphic Below)



Other areas for concern are both drivers, and passenger's safety. For driver's, harassment and assault are both worrying developments amongst drivers in Oklahoma that must be addressed through education of riders, drivers, and can even be helped via legislation at the state level. For passenger's it's important that drivers properly know how to secure them, and protect them from dangers when necessary. OTA has launched the (ROC) Rolling Oklahoma Classroom bus that provides hands-on mobile training to transit agencies and awareness to the public. This training includes wheelchair securement, and sensitivity training. Another aspect of the ROC bus is its initiative to educate and ultimately prevent human trafficking. Utilizing this resource in the NORTPO region is important to the overall goals of transportation planning in Northwest Oklahoma and will be facilitated by the mobility management program alongside the rest of the RTPO.

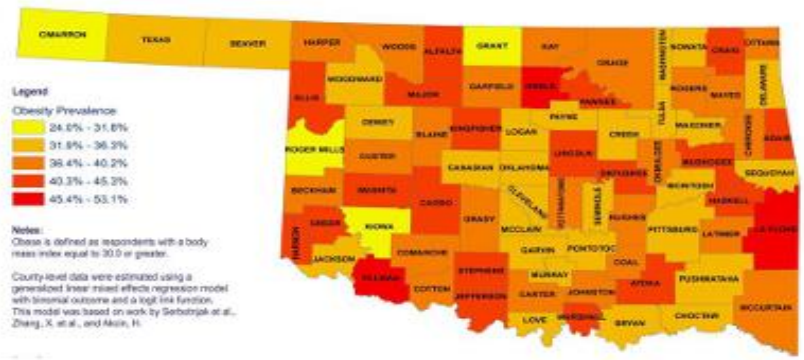
Transportation Services –

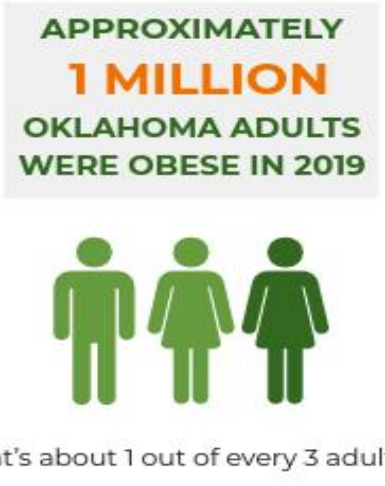
Public transportation services for the area is limited to on demand van services. Cherokee Strip Transit based in Garber, White Eagle Transit based in Ponca City, MAGB Transit based in Major county, The Ride, Guymon, based in Guymon, Beaver City Transit based in Beaver county, Red River Public Transit based in Frederick Oklahoma, Enid Transit based in Enid, Cimarron Public Transit based in Pawnee, and Cheyanne & Arapaho Tribal Transit based in Concho. (NORTPO Public Transit Information - Table Below) Further down is information on each transit service in the area. These agency profiles provide general agency information, financial, and modal data, as well as performance and trend indicators. (Sources: OTA's Statewide Personal Mobility Needs for Oklahoma 2018-2028, and the National Transit Database Reports from 2021.) (Survey's and Graphics for each agency in the appendix – Infographics – 3.7 – 3.15)

Name	Office	Phone	Email	Service Area	Website
Cherokee Strip Transit	Garber	(580) 863-2279	clerk@nodawireless.net	Counties of Garfield, Major, Blaine, Noble, Grant, Alfalfa, Kay, and Kingfisher	https://noda-ok.org/cherokee-strip-transit/
White eagle Transit	Ponca City	(580) 763-0139	poncatransit@gmail.com	Ponca City, Newkirk, Kaw City, Red Rock, Marland, Tonkawa, Blackwell. Medical appointments: OKC, Enid, Tulsa, Stillwater, etc.	http://www.ponca.com/white-eagle-transit.html
MAGB Transit	Fairview	(580) 227-3374	magbtransportation@yahoo.com	Counties of Cimarron, Texas, Beaver, Harper, Woods, and Major	http://www.magb.org
The Ride, Guymon	Guymon	(580) 338-7433	street@guymonok.org	Guymon city Limits	https://www.guymonok.org/transportation
Beaver City Transit	Beaver	(580) 625-4835	beavertransit@yahoo.com	Beaver city limits and 10 mile radius	https://www.odot.org/transit/s5311/beaver.htm
Red River Public Transit Service	Multiple	(580) 335-5588	cadc@pldi.net	Counties of Ellis, Woodward, Roger Mills, Dewey, Custer, Beckham, Washita, Kiowa, Caddo, Canadian, Comanche, Cotton, Stephens, Tillman, Carter, and Jefferson	http://www.cadcconnection.com/public-transportation.html
Enid Transit	Enid	(580) 233-8050	epta@enid.org	Enid and the surrounding areas	http://www.enid.org/departments/a-e/enid-public-transportation
Cimarron Public Transit	Multiple	(918) 762-3041	lcorff@ucapinc.org	Counties of Creek, Kay, Osage, Pawnee, and Washington	http://www.ucapinc.org/Transit_Sites.html
Cheyanne & Arapaho Tribal Transit	Clinton	(580) 331-2600	NA	Counties of Roger Mills, Beckham Dewey, Custer, Canadian, and Blaine	https://cheyenneandarapaho-nsn.gov/project/tribal-transit-program-ttp/

Active Transportation -

There is a myriad of health related benefits related to active transportation and being physically active and living an active life. Active transportation, which refers to physical activity as a means of transportation such as walking, biking, or using public transportation, can have numerous health benefits including improving cardiovascular health by reducing the risk of heart disease, high blood pressure, and stroke. Helps with weight management by engaging in regular physical activity, can help you manage your weight and reduce the risk of obesity. Increases strength and endurance via walking or cycling regularly making it easier for you to engage in other physical activities. Improves mental health, reducing symptoms of depression and anxiety. Reduces the risk of chronic diseases such as type 2 diabetes, osteoporosis, and certain types of cancer. Improves respiratory health by increasing lung capacity and reducing the risk of respiratory diseases. Increases bone density via weight-bearing activities such as walking and cycling can help increase bone density, reducing the risk of osteoporosis and bone fractures. Active transportation also enhances cognitive function, reduces stress levels, fosters social connections, and improves sleep quality by increasing your physical activity for the day. Other benefits include both economic, and ecological scales outside of health. Active transportation saves money and can be a cost-effective way to get around, reducing the need for car ownership, fuel, and vehicle maintenance. Active transportation also supports local businesses by walking or cycling which can help people discover local businesses and support the local economy, contributing to a sense of community and social well-being. Active transportation also reduces air pollution and improves air quality in urban areas whilst also decreasing the carbon footprint and contributing in efforts to combat climate change. Other benefits include increased productivity and focus which leads to better job/academic performance, and saves time in some cases where active transportation can be faster than driving, or taking public transportation especially in congested areas or during peak hours. The Journal of the American Medical Association reported that obesity has doubled among children and quadrupled among adolescents over the past 30 years, and more than one-third of children or adolescents in 2012 were overweight or obese. These children are at an increased risk for developing health problems such as heart disease, diabetes, cancer, and hypertension as adults. The Centers for Disease Control and Prevention reported that overweight and obesity are leading cancer risk factors, and that 40 percent of all cancers diagnosed are associated with overweight and obesity (2017). Activity levels for many children have declined, due in part to a built environment that is unsafe for walking and bicycling, reduced physical education in school, and increased popularity of sedentary leisure-time activities. In 2020, Oklahoma had the 9th highest obesity prevalence in the nation and is among the top-ten most obese states according to America's Health Rankings. (Oklahoma Obesity - Graphic Below) U.S. areas with greater multi-modal transportation options (i.e., walking, bicycling, public transit) have better public health outcomes because people make healthier lifestyle choices, have more quality leisure time, exercise more, have lower obesity rates, and ultimately live longer. Children aren't the only one's effected too. A significant portion of adult deaths in the United States is attributed to inadequate levels of physical activity. Increasing adults' physical activity levels to meet current guidelines can help reduce the risk of premature death. Promoting active transportation is a great way to help increase physical activity levels, optimize health benefits, and reduce the risk of premature death.





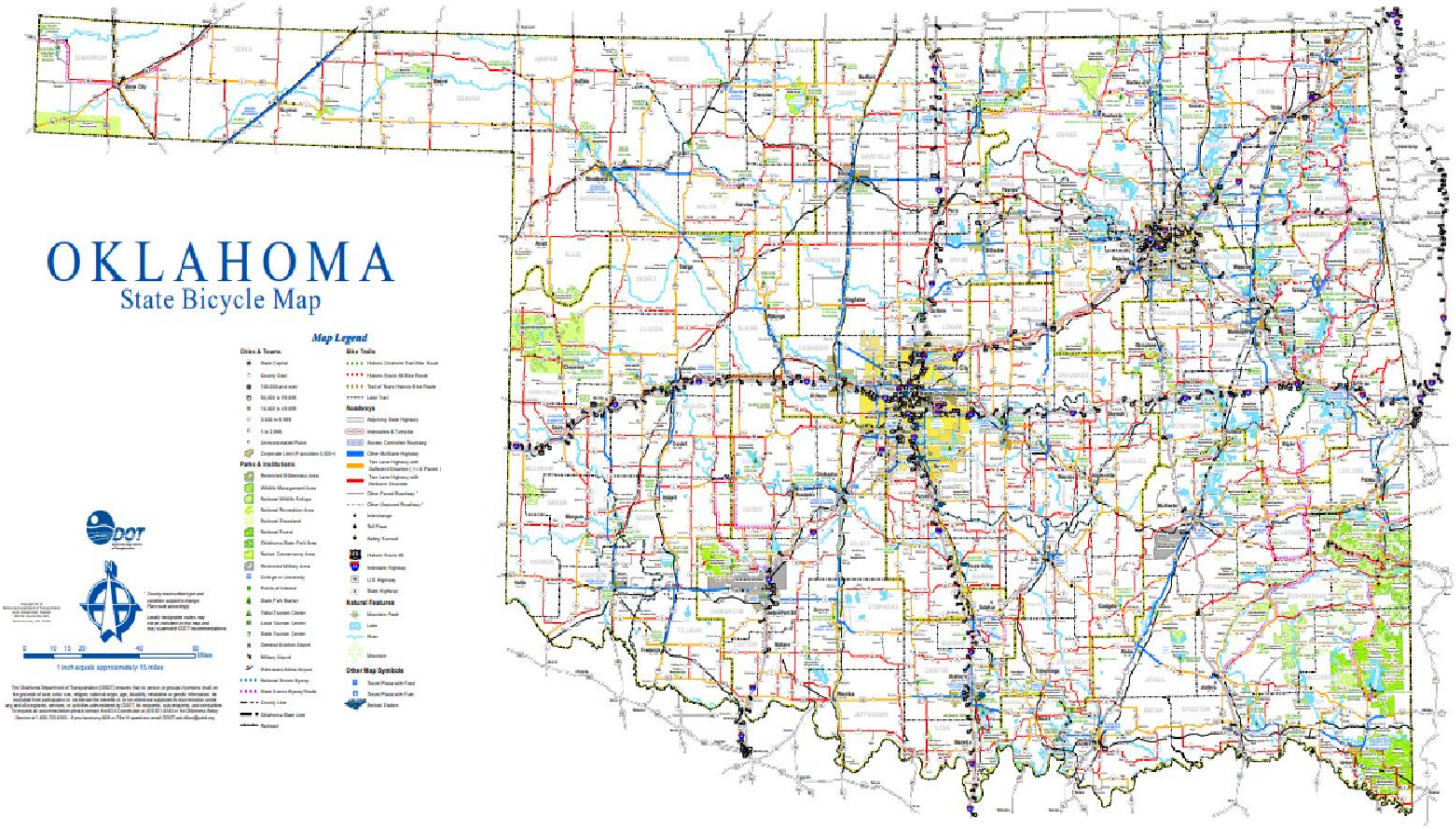
(Source: Obesity Prevention Plan, Oklahoma State Department of Health (2020)

Transportation planning can have a significant impact on active living, as it can influence the availability and accessibility of infrastructure for active transportation modes such as walking, cycling, sidewalks, bike lanes, pedestrian crossings, and public transit. The presence of these features can make it safer and more convenient to walk, cycle, or take public transit, encouraging people to adopt active transportation habits. Transportation planning is closely linked to land use planning, which can affect the availability and accessibility of destinations such as schools, workplaces, and retail areas. Ensuring that these destinations are located in areas that are accessible by active transportation modes can encourage people to walk, cycle, or take public transit, rather than relying on cars. Another way planning can improve active transportation is by improving the visibility of pedestrians and cyclists, reducing vehicle speeds, and providing signage and lighting. Improving safety can encourage more people to use active transportation modes as well. Overall, transportation planning plays a crucial role in promoting active living and encouraging people to adopt active transportation habits. Promoting active transportation through policy investments often require coordination across federal, state, and local agencies to implement a successful active transportation system. ODOT is dedicated to supporting a multimodal transportation network that promotes the health and safety of our residents and visitors, the environment and our economy. ODOT understands that walking and bicycling are important modes of travel for people of all ages and abilities throughout our state. ODOT considers a wide variety of transportation needs for pedestrians and bicyclists and strives to provide appropriate amenities. Our hope is to connect people to every available infrastructure option that makes our state a premier destination for people using all modes of transportation. Bicycle and pedestrian accommodations are supported by federal and state legislation, policies, and practices. ODOT follows its Roadway Design Manual and guidelines developed by the American Association of State Highway and Transportation Officials (AASHTO). All state and federally funded transportation projects are constructed in compliance with the Americans with Disabilities Act (ADA). (Source: ODOT) Health professionals and organizations should be engaged in these partnerships as well as other stakeholders when focusing on active transportation. Helping in identifying relevant savings from active transportation projects can help garner support for funding projects. Current development practices such as single-use zoning and design roadways that are made to maximize motor vehicle level of service often create environments that discourage routine active transportation because their priority is on increasing flow of traffic in the area. Building awareness and maintaining support until active transportation projects are completed are critical because vocal opposition to changing infrastructure is very common. Utilizing communication channels is key to build larger public support for these active transportation projects.

NORTPO can play a critical role in improving active living in the region it serves specifically by working together with local governments and transportation agencies to prioritize the development of infrastructure for active transportation. NORTPO can also encourage education and outreach efforts to promote safe behaviors for people who walk, bike, or use public transit. NORTPO can promote the development of mixed-use areas that combine residential, commercial, and retail spaces, which can make it easier for people to walk or bike to their destinations. Mixed-use development can also support the local economy and create more vibrant and livable communities. NORTPO can engage in community outreach and education efforts to promote the benefits of active living and encourage people to adopt more active transportation habits. This can include partnering with local organizations to host events that promote walking, cycling, and public transit, as well as providing information about the benefits of active living through social media and other channels. NORTPO can prioritize equity in transportation planning by ensuring that infrastructure and services for active transportation modes are accessible to all members of the community, regardless of income or background. NORTPO can also work to identify and address transportation barriers that disproportionately affect low-income and marginalized communities. By incorporating these strategies into its transportation planning efforts, NORTPO can improve active living in the region it serves, making it easier and safer for people to walk, bike, and use public transit for their daily transportation needs.

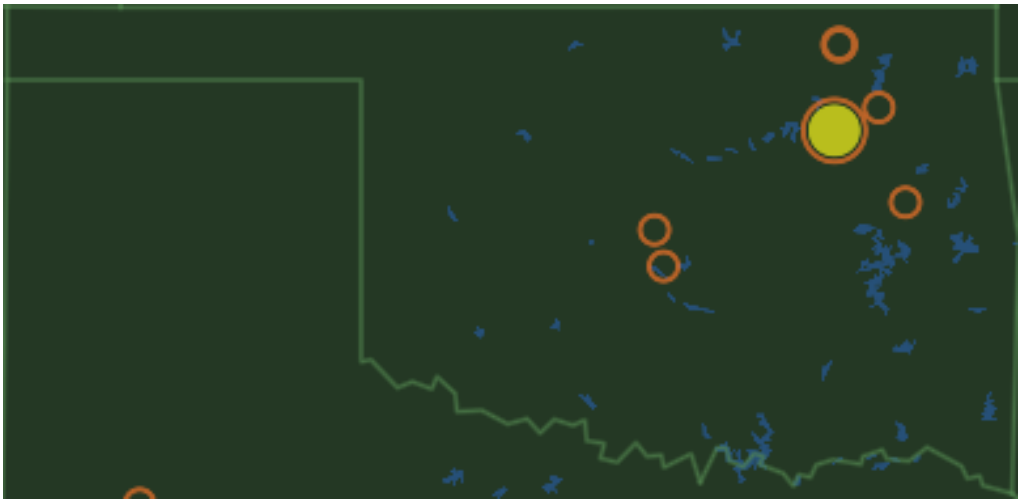
Bicycle and pedestrian facilities are vital components in a community's transportation infrastructure. Oklahoma's active transportation system includes approximately 520 miles of multi-use trails, bicycle routes, and sidewalks. Multiuse trails, bicycle routes, and sidewalks in Oklahoma are owned and maintained by partners of ODOT, including county and city

governments. ODOT coordinates with local governments and applicable metropolitan planning organizations in considering active transportation. Bicycle and pedestrian facilities have been implemented through statewide initiatives, including the federal TAP fund. ODOT receives applications for TAP funds as the funds are made available. ODOT's bicycle and pedestrian needs were estimated by examining regional long range plans bicycle/pedestrian plans, prior TAP funding requests, and conferring with ODOT and MPO staff directly to estimate bicycle and pedestrian needs for small towns and counties outside of MPO regions, the average funds requested from TAP between 2016 and 2019 are calculated. The average funds requested are typically two to three times larger than the funds available, and this is assumed to be a reasonable expectation of bicycle and pedestrian needs for small town and county governmental entities. The average amount requested is applied biennially over the 25-year planning horizon beginning with 2021, the next request year, and extending to 2045 and summed to determine total needs. (Source: ODOT) For further reference there is a (Oklahoma State Bicycle - Map Below)



Oklahoma has 7 docked, or dockless bikeshare and e-scooter locations. The Bureau of Transportation Statistics' (BTS) interactive bike share and e-scooter map shows, by city, the name of the bikeshare (docked or dockless) and/or e-scooter system serving it for every year from 2015 to present. The total number of these systems and the number of cities served declined from 2019 to 2020 due to many systems temporarily suspending operations or closing permanently in response to COVID-19. (Oklahoma Bike Share - Map Below) As of July 2022, 61 docked bikeshare systems open to the general public operated 8,473 docking stations in the U.S (Figure 1 and 2). On average, there are 137 docking stations operated by a system, with the largest system (Citi Bike serving New York City, NY; Jersey City, NJ; and Hoboken, NJ) operating over 1,500 stations and 4 systems having 10 or fewer stations. NORTPO has zero of these listed, but growth should be increasing with the technology especially in larger populated areas such as Enid, and Ponca City. These bike and e-scooter systems have the potential to help supplement public transit needs and comes with all of the same health, and economic benefits listed above from public transit.

Bike share and E-Scooter Map – Oklahoma



(Source: https://data.bts.gov/stories/s/Bikeshare-and-e-scooters-in-the-U-S-/fwcs-jprj_

The NORTPO region hosts at least 89 activity location sites that includes 17 lakes, 26 parks, and 17 golf courses, 51 different camping site locations with 28 cabin, and lodging locations. (Source: Ch. 2 – Regional Characteristics) Along with these parks many cities across the region have built walking trails, sidewalks, and cycling lanes. Some communities have at least a partial system of sidewalks to aid pedestrians, particularly in the vicinity of schools and parks. NORTPO is working on creating an active living map to update regional trails for walking, and biking in the region to update on the website. Mapping of the area can be key to connecting existing bicycle facilities, and connecting people to local destinations including residential, shopping, and recreational areas. This will help create safe cycling experiences with safety being a priority. A main focus will be mapping and show deficiencies in barrier crossings and where to create or use man made, or natural barriers. These enhancements protect bicyclists and pedestrians by improving roadway crossings and making crossing more visible to vehicles which in turn helps prevent pedestrian accidents. Transportation Alternative Programs are key to the region. NORTPO can help facilitate the program and issue letters of support and other methods of assistance to ensure awards to grants. NORTPO's area currently has 10 TAP projects in 7 separate counties approved for FFY 22, 23, and 24. Two of these are trails, 6 are sidewalks, and 2 are streetscape projects. The total federal funds being allocated is $7,235,382.25, and sponsor match is $1,481,329.19. (Tap Projects - Table Below)

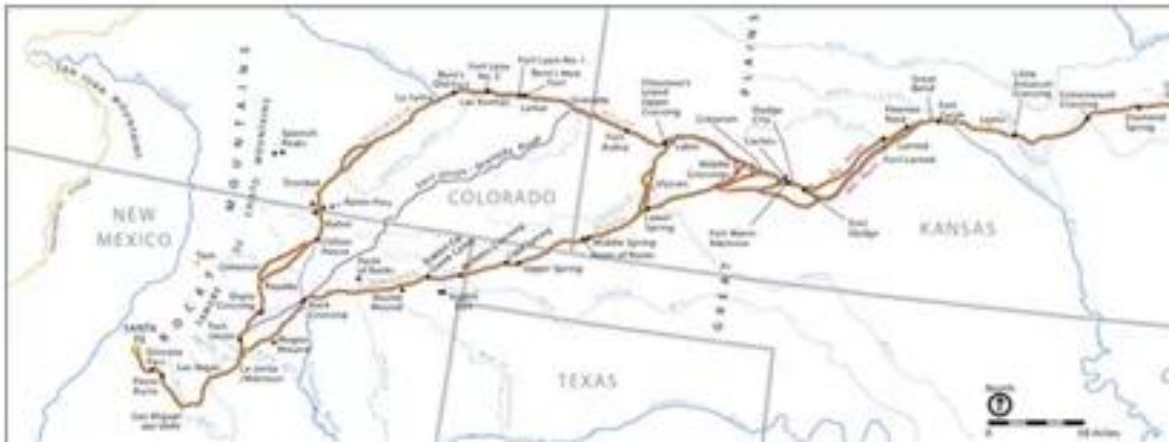
TAP Projects in NORTPO - FFY 22, 23, 24

County	*City /Town*	*Project Description/Location*	*Federal Funds*	*Sponsor Funds*	*ODOT District*	*Project Type*
Kay	Ponca City	Hartford Ave. from Red Bud Park to Mockingbird Dr.	$1,004,112.58	$251,028.15	4	Trails
Kay	Tonkawa	Along Grand Avenue from 6th Street to Jenkins Street.	$682,436.00	$93,059.00	4	Sidewalk
Garfield	Enid	Trail on W. Willow Rd. from Prairie View Elementary to N. Oakwood Rd.	$1,189,345.97	$297,336.49	4	Trails
Garfield	Covington	Sidewalk on Main Street from 4th St. to Oklahoma St	$568,086.30	$63,120.70	4	Sidewalk
Noble	Perry	Sidewalks along Fir Street/US-64 from N3180 Road to west of 25th Street	$746,829.00	$186,707.00	4	Sidewalk
Noble	Perry	Along Locust St. from N 15th St. to N 7th Street, along 7th Street from Maple Street to Christ Lutheran Church and School	$651,527.00	$93,075.00	4	Sidewalk
Kingfisher	Kingfisher	Streetscape on Miles Ave.from 6th to 7th, Admire Ave. from 6th to 7th, and Roberts Ave. from 6th to 7th	$960,000.00	$240,000.00	4	Streetscape
Blaine	Okeene	Streetscape on Main St./SH-8, from F Street to E Street; and 6th Street, from F Street N. to Broadway Avenue.	$615,509.00	$108,619.00	5	Streetscape
Alfalfa	Cherokee	Sidewalk on 10th Street from Grand Avenue (US-64) to Nebraska Avenue, then along Nebraska Avenue to the Elementary School.	$435,601.00	$48,400.00	6	Sidewalk
Woodward	Woodward	Beginning and including the intersection of US-183/US270 at 34th Street, then extending a new sidewalk from 34th Street along the southside of US-183/US-270 to 22nd Street on the western side of Woodward	$399,935.40	$99,983.85	6	Sidewalk
		NORTPO Total --	***$7,253,382.25***	***$1,481,329.19***		

(Source: ODOT)

The Santé Fe (NHT) National Historic Trail is the only designated historic trail in NORTPO's region. In 1821, the Santa Fe Trail became America's first great international commercial highway, and for nearly sixty years thereafter was one of the nation's great routes of adventure and western expansion. (Source: Santé Fe Trail Association) (Santé Fe NHT - Map Below)

Santé Fe National Historic Trail



Oklahoma has 23 National Recreational Trails (NRT's). NORTPO has 3 NRT's, Eagle Roost Nature Trail which is 1.25 miles in length in Alfalfa county, adjacent to the refuge headquarters, the trail gives visitors the opportunity to enjoy a wide variety of wildlife and habitats. The trail is open year-round and allows visitors a chance to see the wildlife of Eagle Roost Pond and Sand Creek Bay. Frank Raab Nature Trail which is 1.60 miles in length in Blaine county, adjacent to the North Canadian River this trail has two loops, the longer loop is 1.6 miles and shorter loop is 0.8 miles, and is marked with interpretative signs to help the user which includes two foot bridges crossing a small creek and several benches located throughout the trail. Trestle Pond which is 2.40 miles, and is in Texas county. There are no additional details known about Trestle Pond at this time as the trail was designated over 35 years ago in 1989. (Source: NRTDatabase.org)

National trails are officially established under the authorities of the National Trails System Act (16 USC 1241-51). The National Trails System Act of 1968 made it Federal policy to recognize and promote trails by providing financial assistance, support of volunteers, coordination with States, and other authorities. As a result, 11 national scenic trails (NSTs) and 19 national historic trails (NHTs) have been established by law (and are administered by the National Park Service, the USDA Forest Service, and the Bureau of Land Management, depending on the trail). There are 4 different types of trials. (Map 3.15 - National Scenic and Historic Trails)

First, National Scenic Trails (NSTs) are 100 miles or longer, continuous, primarily non-motorized routes of outstanding recreation opportunity and display significant characteristics of the nation's "physiographic regions," representing desert, marsh, grassland, mountain, canyon, river, forest, or other areas. NSTs are extended trails that provide for outdoor recreation and for the conservation and enjoyment of significant scenic, historic, natural, or cultural qualities. Such trails are established by Act of Congress.

Second, National Historic Trails (NHTs) commemorate historic (and prehistoric) routes of travel that are of significance to the entire Nation. NHT's identify and protect travel routes of national historic significance, along with associated remnants and artifacts, for public use and enjoyment. NHTs can include land or water segments, 4 marked highways paralleling the route, and sites that together form a chain or network along the historic route. They must meet all three criteria listed in Section 5(b)(11) of the National Trails System Act. Such trails are established by Act of Congress.

Third, are National Recreational Trails (NRT's). Almost 1,300 national recreation trails have been recognized by the Secretaries of Agriculture and Interior. National Recreation Trails (NRTs) are on federal, state, or private lands that are in, or reasonably accessible to, urban areas. They provide for a variety of outdoor recreation uses.

Lastly, is connecting or side trails. Connecting or Side Trails provide public access to the other types of nationally designated trails or connections between such trails. Seven side-and-connecting trails have also been certified. In addition, other Federal statutes support and fund trails through programs such as FHWA's Recreational Trails Program

and Transportation Enhancements programs, HUD block grants, and the NPS Rivers, Trails, and Conservation Assistance Program. (Source: National Park Service)

Congress plays an ongoing role in shaping the National Trails System through legislation and oversight. Congress establishes new trails within the system; directs the Administration to study potential new trails; determines the level of agency funding for trail management; and considers whether new trail categories (such as "national discovery trails") should be included in the system, among other roles. For individual trails, Congress has made specific provisions concerning land acquisition, trail use, and other matters. Ongoing issues for Congress include whether to designate additional trails, how to balance trail designation with other potential land uses, whether trail designation should be accompanied by federal land acquisition, what activities should be permitted on trails, and how to appropriately balance federal and nonfederal funding for trails, among other issues.

There is potential for more nationally recognized trails in the NORTPO region. In 2009 congress passed legislation for a study of both Chisholm Trail, and Dodge City Trails (also known as Western National). The Chisholm Trail (also known as the 'Abilene Trail') encompasses from the vicinity of San Antonio, Texas, segments from the vicinity of Cuero, Texas, to Fort Worth, Texas, Duncan, Oklahoma, alternate segments used through Oklahoma, to Enid, Oklahoma, Caldwell, Kansas, Wichita, Kansas, Abilene, Kansas, and commonly used segments running to alternative Kansas destination. The Great Western Trail (also known as the 'Dodge City Trail') encompasses from the vicinity of San Antonio, Texas, north-by-northwest through the vicinities of Kerrville and Menard, Texas, north-by-northeast through the vicinities of Coleman and Albany, Texas, north through the vicinity of Vernon, Texas, to Doan's Crossing, Texas, northward through or near the vicinities of Altus, Long Wolf, Canute, Vici, and May. A feasibility study was completed by the National Parks Service on both of these trails. Public review was in 2015, and was overwhelmingly supportive. In 2016 it was found the designations of each trail would be of no significant environmental impact. The study was sent to congress in 2019 for their consideration and was last in the Committee on Energy and Natural Resources Subcommittee on National Parks on 10/06/2021. Future understanding on how national trail designation may affect the area's transportation infrastructure is important to note. (Chisholm and Western National Trail - Map Below)

Chisolm Trail, and Western National Trail

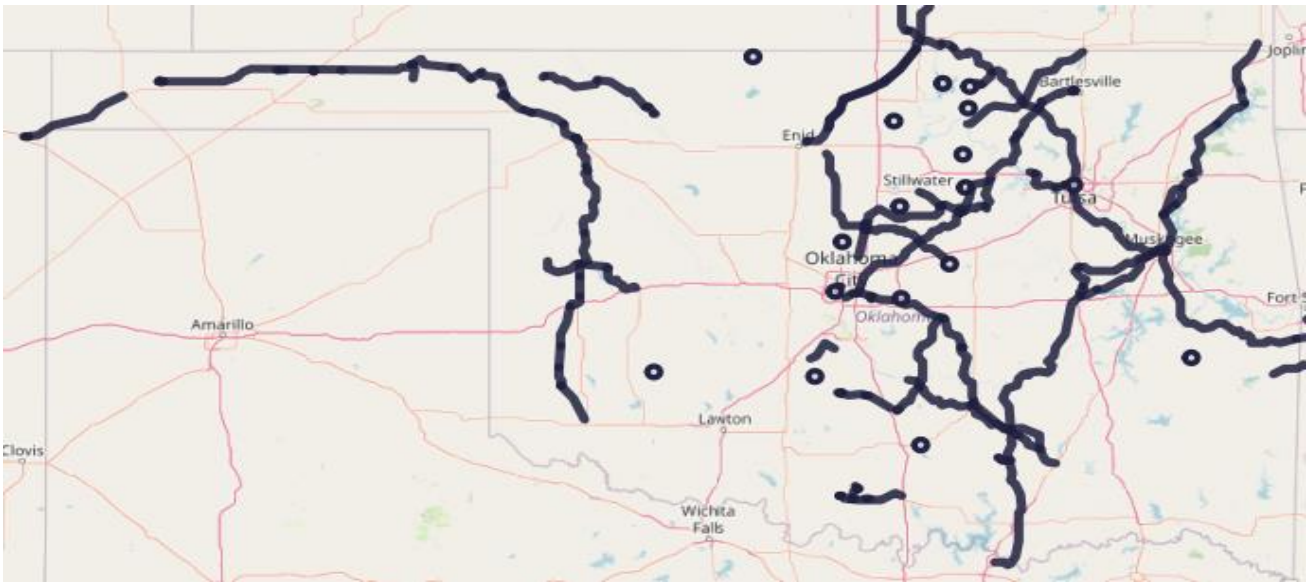
If designated, the trails would be administered by the Secretary of the Interior through formal and informal partnerships with private and federal landowners, state and local governments, and others on a strictly voluntary basis for resource protection, visitor experience, and interpretation/education. The NPS would be the administering agency based on its study responsibilities and its familiarity with the resources and partners along the two trails. If Congress designates the

trails, a comprehensive plan would be prepared covering administration of the trails. The planning process would involve federally recognized American Indian tribes; federal, state, and local agencies; landowners; and site managers. NEPA analysis and other regulatory compliance requirements for the comprehensive plan will be completed as appropriate. The plan would outline resource protection and interpretation of the trails. The plan also would identify high potential trail segments and historic sites. Cooperative agreements would outline strategies for partners to accomplish national historic trail goals. Regardless of this evaluation, the trails and their resources would continue to be owned and managed by the current owners.

Another potential area for trails is abandoned rail road tracks. In some instances, these abandoned corridors provide an opportunity for bicycle / hiking trails if the appropriate right-of-way agreements can be reached. NORTPO currently has 9 separate sections of abandoned rail roads. (Abandoned Rail Lines in Oklahoma - Map Below) Many of these run past the NORTPO area and have no ICC Interstate Commerce Commission filling with the exact mileage available. Staff used best approximate mileage indicators along the route to determine how many miles of abandoned rail road's there are in the region. According to our best approximation there are 558 miles of abandoned track. *Margin of error ~+-25 miles* (Table Below) (Source: https://www.abandonedrails.com/oklahoma)

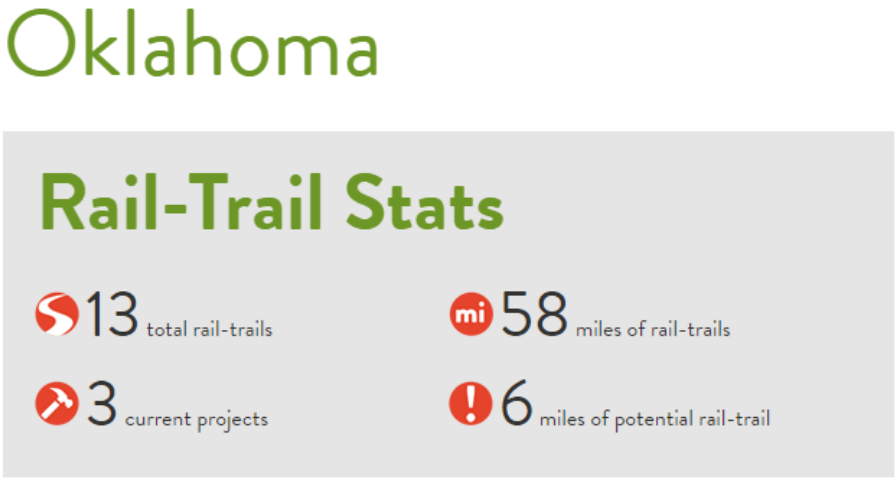
Approximate Miles of Abandoned Rail	Point A to B - Cities
51.06 miles	(Waynoka-Buffalo)
32.63 miles	(Cherokee-Anthony)
95.35 miles	(Boise City – Clayton)
9.87 miles	(Marland-Rio)
108 miles	(Beaver-Keyes)
90 miles	(Enid-Chilocco)
23 miles	(Fairmont-Marshall)
23.8 miles	(Newkirk-Burbank)
125 miles	(Beaver-Leedey)

Abandoned Rail Lines in Oklahoma



(Source: https://www.abandonedrails.com/oklahoma)

Converting railroad lines to trails is a huge transportation movement. The national Rails-to-Trails Conservancy has worked since 1986 converting old railroad lines into multi-use trails. Nationwide, there are more than 31,000 miles of rail-trails and multi-use trails. The trails attract visitors from outside their states, according to a survey by the rails to trails conservancy. Bicyclists from Oklahoma go to Missouri to ride those (rail-to-trails). In 1990, the Oklahoma Legislature introduced a resolution to prevent converting abandoned rail lines into recreation trails. HCR1080 is NOT law, merely an indication of the will of the legislature in 1990. It is very limited in scope, but has gained some mythic power and become a barrier to overcome. Helping overcome this stigma can promote more rails to trails options. Oklahoma currently has 13 total rails-trails with 58 total miles. (Oklahoma Rails to Trails - Graphic Below) In 2017, Rep. Lewis Moore introduced legislation to promote Rails to Trails., HB1725 permitted railroads to cease operations on a line without abandonment, and allows temporary recreational trail use of the rights-of-way. The bill specified how the trails will be established and maintained, permitted and prohibited uses, and liability protections for railroads, trail managers, adjacent landowners. A feature of the bill was the permit "rails with trails" use if a railroad wishes to allow it. The bill went off track when the entire text of the bill was changed and replaced with an entirely different bill, one that moves the financial responsibility of a train crossing at an intersection from the railroad company to the county or city. (Source: Rails to Trails Conservatory, and OKbike.org)



In his first week in office, President Joe Biden issued an executive order establishing a first-of-its-kind national goal of conserving 30 percent of U.S. lands and oceans by 2030, later expanding on this commitment through his "America the Beautiful" initiative. The "America the Beautiful" Initiative states: Efforts to conserve and restore America's lands and waters must respect the rights of private property owners. Many of these lands follow trails that are designated as national historical trails. Such efforts for conservation must build trust among all communities and stakeholders, including by recognizing and rewarding the voluntary conservation efforts of private landowners. The path toward 30x30 is both voluntary and exhaustively community driven. Currently, about 12% of American lands are protected. In America, adhering to the 30×30 framework would mean saving an area twice the size of Texas. 30x30 isn't only about protecting nature, it is also about supporting local communities. Protected areas are correlated with significant public health benefits to nearby communities, including better mental health and lower risks of disease and obesity. More than 50 countries have already pledged their support for the 30x30 target. This initiative has received some pushback from local officials questioning if this is an attempt at a federal land grab, and how it will effect publically owned property near trails. Oversight of this initiative, and how it potentially effects local transportation policies will be key over the coming years for NORTPO employees.

Safety Analysis

This section provides details on transportation conditions in the areas as it relates to safety issues as well as security management techniques that can be used to prevent those safety concerns. All of these safety concerns are best understood in context with the trends, and challenges outlined in the regional characteristics chapter (Ch.2) as those fluctuations in demographics, and development dictate transportation policy in the NORTPO region. A safety analysis is essential for transportation planning because it helps identify and mitigate potential risks and hazards in the transportation system and develop strategies to implement in the future. This is important because transportation systems are inherently complex and involve many different modes of transportation, including cars, buses, trains, bicycles, and pedestrians. Without a safety analysis, transportation planners and policymakers may overlook potential safety risks and hazards, which could lead to accidents, injuries, and even fatalities. By conducting a safety analysis, transportation planners can identify high-risk areas, such as intersections or stretches of roadway with high accident rates, and develop strategies to reduce the risk of accidents, such as adding traffic signals or reducing speed limits. In addition, a safety analysis can help transportation planners prioritize projects and allocate resources more effectively. By focusing on high-risk areas and implementing targeted interventions, transportation planners can improve safety while also maximizing the impact of their investments. Maintaining an updated safety analysis for the NORTPO region can also help reduce costs associated with transportation accidents and incidents. Accidents and incidents can result in significant economic losses, including medical expenses, property damage, and lost productivity. By identifying potential risks and hazards and developing strategies to mitigate them, transportation planners can reduce the frequency and severity of accidents and incidents, resulting in cost savings. A safety analysis is essential for transportation planning because it helps ensure that transportation systems are designed and operated in a way that minimizes the risk of accidents and promotes the safety and well-being of all users. NORTPO's goal is to provide and promote the safest roadway transportation system for all travelers which would ultimately be zero deaths, and zero injuries. In order to reach such a lofty statistic NORTPO must set (SMART) specific, measurable, attainable, realistic, and timely goals that adhere to statewide performance measures.

Transportation Conditions

An inventory of safety concerns is vital to understand our current transportation conditions. This inventory includes two lane unpaved roadways, steep hills and curves, deficient shoulders, pavement surface rating, and collision data for the NORTPO region. Roadway features that impact safety also include rumble strips, cable barrier, paved shoulders and intersection modifications. Utilizing this inventory in conjunction with the transportation inventory is useful for NORTPO to provide accurate locations where improvements can be made to infrastructure. According to CoPilot's study, 33.4 percent of major roads in Oklahoma are in poor condition, which is eight percent higher than the national average of 26.4 percent. When it comes to accidents, people aged 21 to 24 are most at risk. While there are more female license holders in the U.S., men are more likely to drive at least occasionally. Across all age groups, the male population has substantially higher death rates than the female population. This is largely due to the fact that men speed more often in the crashes indicated. The report went on to say that Oklahoma has the sixth highest traffic fatality rate nationally. Between 2015 to 2019, 3,276 people were killed in traffic crashes statewide. Rural roads require being extra cautious because of the lack of shoulders which increases the risk of an accident. These figures are something local leaders and the Oklahoma Department of Transportation are working on, but according to the report, the improvement projects planned by ODOT will only allow the agency to address 15% of pavement needs through 2028. The report also said the state's bad roads cost Oklahoma drivers almost $400 dollars a year in vehicle maintenance (Source: TRIP, 2017) In Oklahoma, the percent of road mileage in acceptable condition: 93.4% (14,245.1 miles). Total road mileage is 15,249.3 miles. (Source: USDOT, and US CENSUS, 2023 https://www.bts.gov/road-condition)

Below is a summary of the data for Oklahoma:
Percentage of all major roads in poor condition--33.4%
Interstates and freeways in poor condition--6.4%
Arterials in poor condition--19.8%
Minor arterials in poor condition--46.4%
Daily vehicle-miles per capita--25.7
Miles of road per 1,000 people--7.6
Below are statistics for the entire United States:
Percentage of all major roads in poor condition--26.4%
Interstates and freeways in poor condition--5.8%
Arterials in poor condition--26.4%
Minor arterials in poor condition--34.5%
Daily vehicle--miles per capita--24.9
Miles of road per 1,000 people--4.9

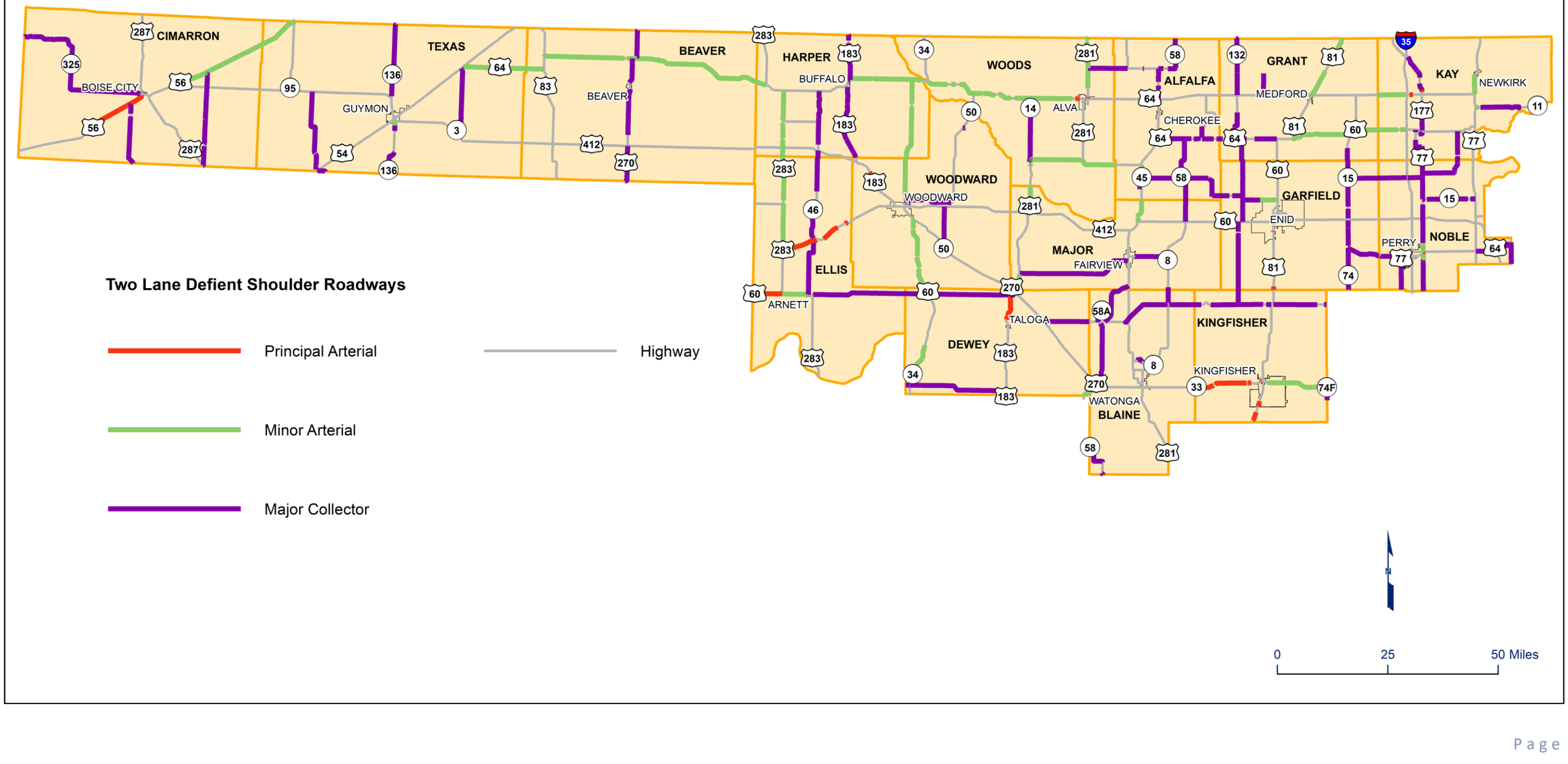
(Source: FHWA, 2016-2020)

Deficient Shoulders

Rural roadways as mentioned above are extremely dangerous due to their lack of shoulders, bumpers, or lighting. Most of these are 2 lane unpaved highways without shoulders. A highway shoulder is a portion of the road that falls outside the outer lane and is designed for emergency use by traffic. There are two types of highway shoulders: hard and soft. A hard shoulder consists of a hardened strip of land, while a soft shoulder usually consists of gravel or dirt. Shoulders provide an area for drivers to maneuver to avoid crashes. This is particularly important on high-speed, high-volume highways or at locations where there is limited stopping sight distance. Shoulder widths of approximately 8 feet or greater are normally required for this function. (FHWA) More than half – 56 percent -- of two-lane, state-maintained highways in Oklahoma have deficient shoulders (5,299 of 9,500 miles) In order to improve traffic safety and reduce the number of fatalities on the state's roads, ODOT's eight-year 2021-2028 construction work plan includes the addition of 780 miles of paved shoulders on two-lane highways, improving 15 percent of the state-maintained, two-lane highways that currently have deficient shoulders. (Map 3.17 – Oklahoma Two Lane Highways Without Paved Shoulders)

In NORTPO there are 1,489 separate sections of shoulder locations that are considered deficient. (The table for deficient shoulders is made and available at NORTPO, but will not be included in the plan as it is 65 pages long, but here's a link to a google drive folder with the table if interested: https://docs.google.com/document/d/1-aVCgf0-ALakopDLnrCoSPmWbeE5-oH9/edit?usp=sharing&ouid=101154568667714147552&rtpof=true&sd=true) The AADT for these deficient shoulders is a total of 2,190,840, and an average AADT of 1,472 per section. The average construction year of these roads is 1973 with the oldest being almost 100 years old at 1926. The average updated maintenance construction year is 2011. The average one of these sections is classified as a 5 on the functional classification scale of being a principal arterial which equals to a freeway, or expressway. This functional classification requires a minimum of 8-12 ft. of shoulder according to the FHWA, but the median shoulder width in this area is only 4ft with many being less than 4 ft. The median MPH for these areas with deficient shoulders is 65 MPH with an average of 55.2 MPH. The combination of high speeds, high traffic, and older construction of these roads without a proper shoulder increases the risk of crashes, and explains why on survey data that adding shoulders to 2 lane highways remains a key priority in Northwestern Oklahoma. NORTPO will continue to push for projects that help ensure shoulders are meeting the quality required for the functional classification of the roadways. (Map of 2 Lane Deficient Shoulders Below)

Two Lane Deficient Shoulders



Pavement Surface Conditions

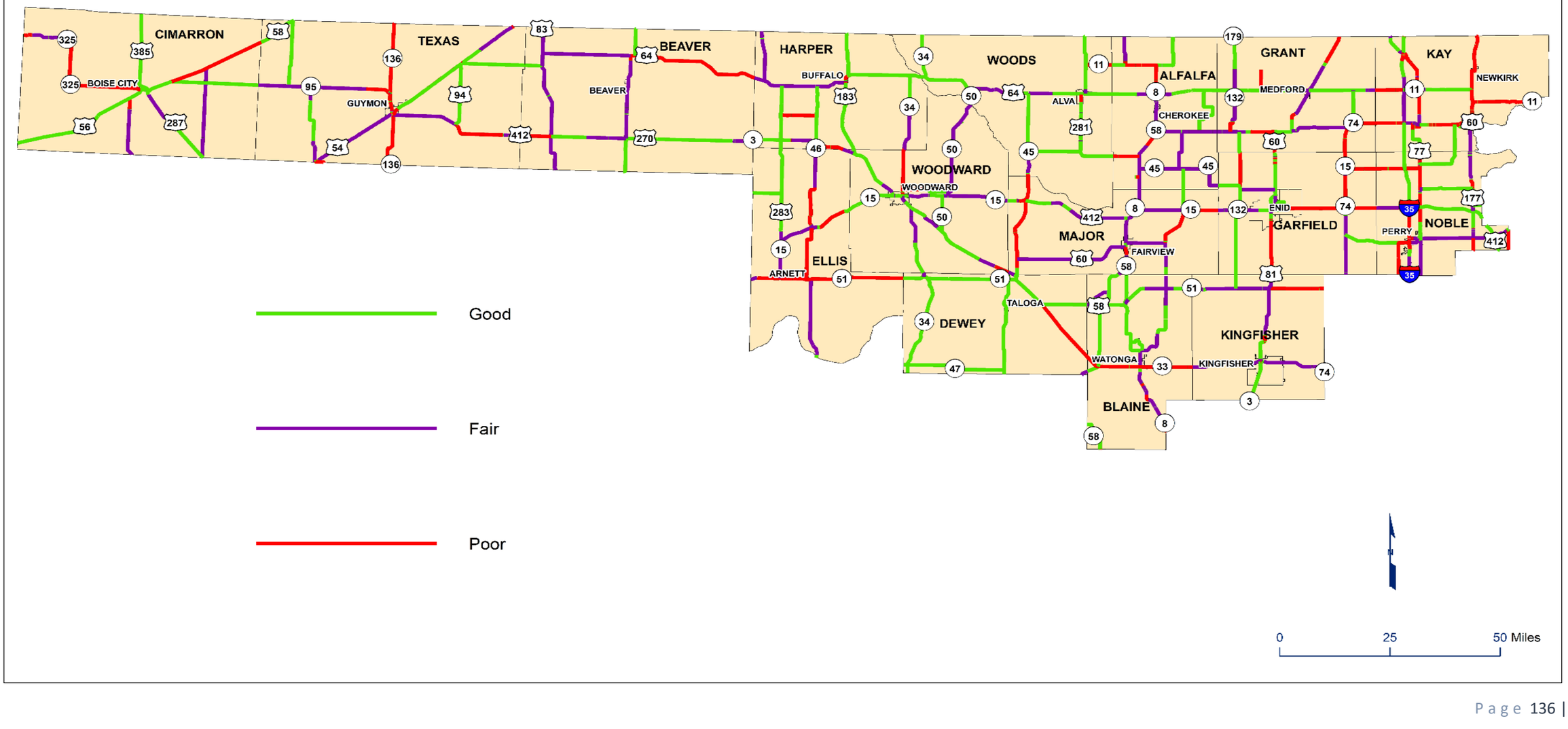
Oklahoma's population as a whole is more thinly spread than most states'. Consequently, Oklahoma has a relatively large amount of road surface relative to its population, ranked tenth among the states in this regard lane miles per capita. Oklahoma's very outsized road network relative to the population (though not relative to the state's physical size) results in relatively little traffic demand on roads in the state, on average. Heavy truck traffic comprises a relatively large share of traffic in Oklahoma. While Oklahoma has made great strides in improving state maintained bridges, interstate pavement condition ranks poorly among the states. Rural interstate pavements conditions ranking in Oklahoma is 39th at 2.49% being poor condition. Urban Interstate is 41st with 6.36% poor condition. Other rural areas Oklahoma ranks 22nd overall at 5.04% in poor condition. Other Urban areas, Oklahoma is ranked 25th overall, and 18.12% in poor condition. Peak hours in congestion for urban drivers Oklahoma is ranked 35th. (USDOT) (Table 3.14 – Oklahoma Road Performance Data) The pavement improvement projects planned by ODOT through 2028 will allow the agency to address approximately 15 percent of the pavement needs during this period. The need for maintenance can be determined by several factors, which bear on each other. One factor is weather, with water playing a large role in impacting road surface. Water interacts with soils, especially those with a high clay content, causing sub-surface soil expansion (when wet) and contraction (when dry) that can crack and buckle pavement. Freeze/ thaw cycles are particularly hard on road surfaces due to the forces water exerts as it freezes in surface cracks. States with maintenance costs comparable to Oklahoma's are mostly well north of Oklahoma and would be expected to suffer far more from freeze/thaw cycles. There is a degree to which any pavement surface must be repaired and, eventually, replaced. Examples of pavement distresses include pits, cracking, wrapping, net cracking, manhole covers, and fissures etc.

There are no extensive comparative statistics on pavement age across states, but NORTPO could help develop these for the region. The primary factor for pavement distress in the state is due to Oklahoma's highway pavement being old. It is not uncommon for complete reconstruction of a road to occur about every 40 years. Many pavements in Oklahoma are a good deal older than 40 years, and the paint has worn off as well. Given that there are limited funding options priority for pavement conditions must be given based upon return on investment. ODOT's Assets Preservation plan takes this into account with their pavement resurfacing, and rehabilitations. The Long-Term Pavement Performance (LTPP) program was established to collect pavement performance data as one of the major research areas of the Strategic Highway Research Program (SHRP). The LTPP program is a large research project that includes two fundamental classes of studies and several smaller studies to investigate specific pavement related details that are critical to pavement performance. The fundamental classes of study are the General Pavement Study (GPS) and the Specific Pavement Study (SPS) experiments. The LTPP Information Management System (IMS) is the central database where all the data collected under the LTPP program are stored. LTPP data analysis is used with the following objectives: 1. Improve traffic characterization and prediction. 2. Improve materials characterization. 3. Improve consideration of environmental effects in pavement design and performance prediction. 4. Improve evaluation and use of pavement condition data in pavement management. 5. Evaluate existing and develop new pavement response and performance models applicable to pavement design and performance prediction. 6. Provide guidance for maintenance and rehabilitation strategy selection and performance prediction. 7. Quantify the performance impact of specific design features (e.g., presence or absence of positive drainage, differing levels of prerehabilitation surface preparation) (FHWA, https://infopave.fhwa.dot.gov/)

ODOT evaluates pavement condition by using the International Roughness Index (IRI), a global standard for measuring pavement smoothness. IRI measures pavement roughness by the number of inches per mile that a laser (mounted in a specialized vehicle) moves vertically as it is driven down the road. Reported in units of inches-per-mile, the IRI describes how much total vertical movement a standard passenger vehicle's body would experience if driven over a 1-mile segment of the subject pavement at 50 mph. (Criteria for IRI Scores is listed as Table 3.15 in the appendix) IRI is useful for assessing overall pavement ride quality; a higher IRI value indicates a rougher road surface. The lower the IRI number, the smoother the ride and the better the pavement condition. The road roughness index is the weighted average value of the observed measurements of the international roughness index (IRI) for the state. The higher the score, the rougher the road is. The Federal Highway Administration indicates that an IRI measure of less than 95 indicates a road in good condition, between 95 and 170 is acceptable, and greater than 170 is poor condition. (Map 3.16

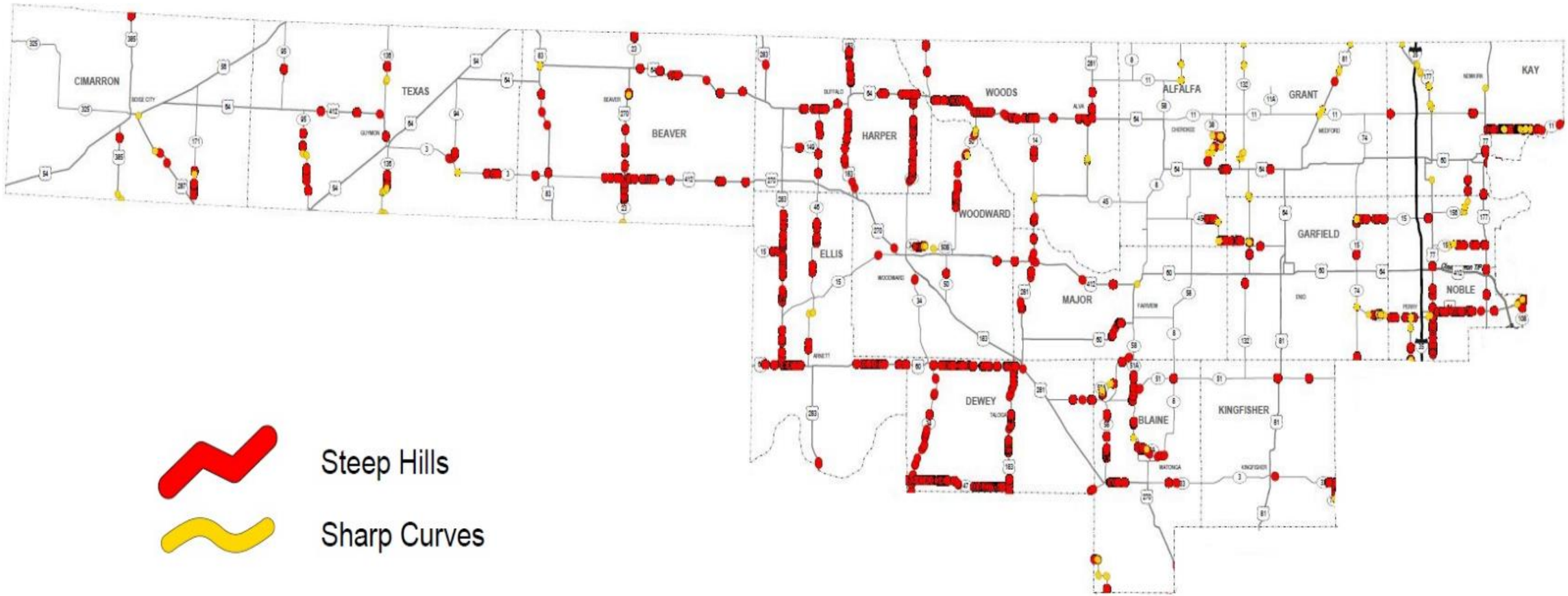
– Highway Roughness by State) An improvement in surface roughness contributes to an extension of pavement service life, thus reducing annual maintenance costs. IRI data is rated in either, poor, good, or fair conditions for specific areas of pavement. ODOT has an established Pavement Management System with a key function of forecasting pavement performance using Pavement Quality Index, anticipated funding levels and detailed analytical models based on years of historical pavement condition and performance data. Targets were established by looking at historical trends and data ODOT collected in 2016 and submitted to FHWA to forecast for a 10-year timeframe. "Good" conditions are expected to stay stable for the Interstate, while "Poor" conditions are expected to worsen. In 2020, pavement conditions are expected to be 55% "Good" on the Interstate, and 50% "Good" on Non-Interstate NHS. Projections also show 4% "Poor" Conditions for the Interstate and 6% "Poor" for non-Interstate NHS for 2020. In 2022, pavement conditions are projected to be 56% "Good" on the Interstate and 50% "Good" on non-Interstate NHS. Projections also show 4% "Poor" conditions for the Interstate and 6% "Poor" for non-Interstate NHS. (Infographic 3.16 – Pavement Performance Measures by ODOT) In NORTPO 1,493 sections we're fair condition, 1396 are poor condition, and 8,213 are rated good condition. This comes out to 74 percent rated good, 13.4 percent rated fair, and 12.5 percent rated poor in the NORTPO area on roads maintained by ODOT as shown in the map below.

Pavement Condition



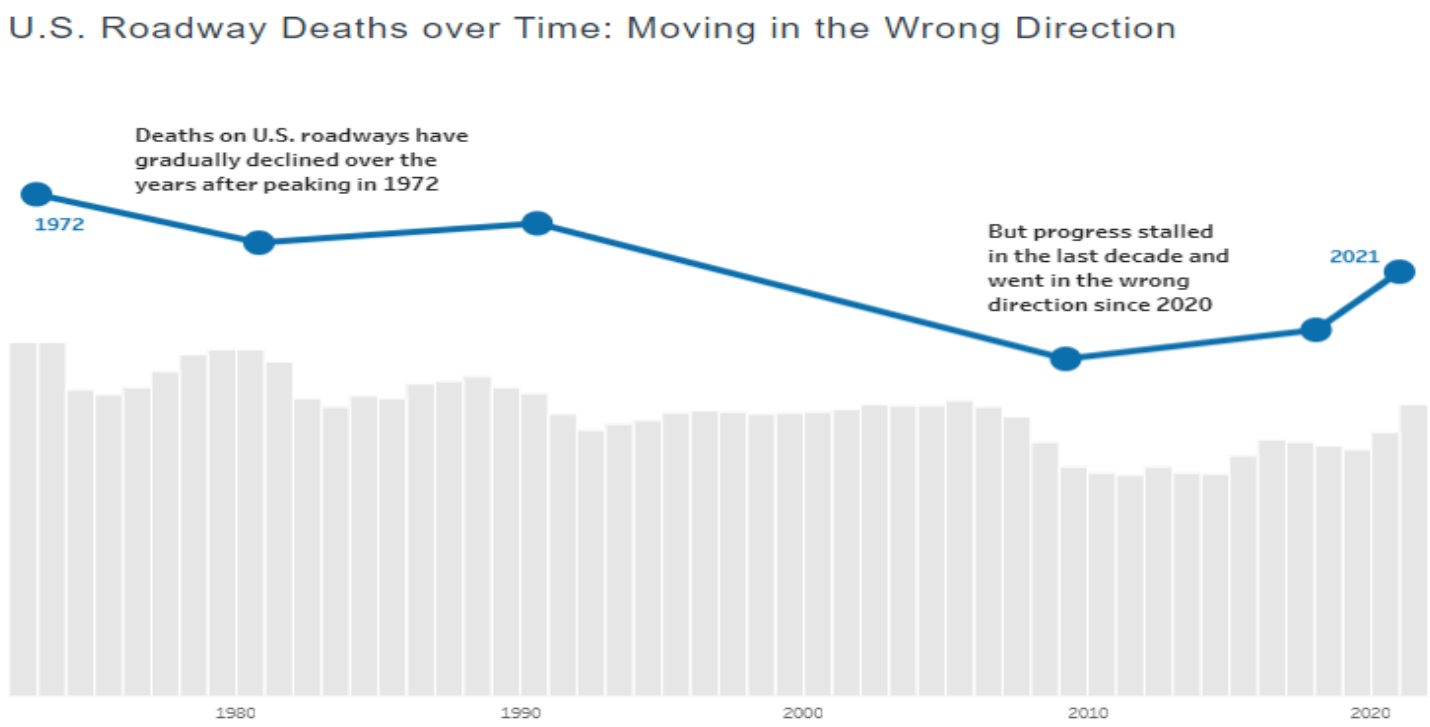
Steep Hill and Curves –

Steep hills, and curves represent areas where traffic incidents are more likely. There's a larger concentration of these in the NORTPO area around the entrance to the panhandle in Ellis, Harper, Woods and Beaver counties. These are areas where NORTPO can focus on traffic studies, and specifically evaluations for speed limit designs in these locations that don't have adequate shoulders and provide adequate recommendations to ODOT.



Collisions –

Over many decades, the United States has experienced reductions in roadway fatalities through successful interventions like the widespread use of seat belts and air bags in motor vehicles, effective State laws such as a 0.08 or lower blood alcohol concentration limit to reduce impaired driving, and consistent improvement of roadway design and traffic operation practices. Roadway fatalities declined consistently for 30 years, but progress stalled over the last decade and is moving in the wrong direction. In 2021, an estimated 42,915 lives were lost on U.S. roads, and early estimates for 2022 show similar numbers of people dying on our roadways. (Source FHWA) (National Roadway Deaths - Infographic Below)



(Source: FHWA)

ODOT has installed nearly 716 miles of cable barrier and more than 250 miles of centerline rumble strips to improve roadway safety by reducing crossover and lane departure traffic fatalities. ODOT is currently installing an additional 820 miles of centerline rumble strips on two-lane rural highways across the state, and includes pavement markings for improved visibility under wet and dark conditions in 2021.Crashes per mile are a good indication of the potential for delays that could occur on a particular stretch of roadway. Crashes per mile tend to cluster in metropolitan areas and near the interchanges where freeways and highways intersect. For safety analysis, crashes are typically normalized by VMT. Crashes per million VMT points to locations where safety conditions exist that might result from roadway configuration or other physical conditions. The top 10 percent of crashes per million VMT identified problematic stretches of highways in rural areas including segments of U.S. 69, U.S. 412, U.S. 75, and U.S. 81. (Source:https://www.odot.org/federal-grants/infra/2018/grady-county-us-81-realignment/reports-and-technical-information/Draft-Oklahoma-Freight-Plan-2018-2022.pdf) Traffic crashes in Oklahoma imposed a total of $3.3 billion in economic costs in 2019 According to a 2015 National Highway Traffic Safety Administration (NHTSA) report, the economic costs of traffic crashes include work and household productivity losses, property damage, medical costs, rehabilitation costs, legal and court costs, congestion costs and emergency services. Improving safety on Oklahoma's roadways can be achieved through further improvements in vehicle safety; improvements in driver, pedestrian, and bicyclist behavior; and, a variety of improvements in roadway safety features. The severity of serious traffic crashes could be reduced through roadway improvements and intersection modifications, including construction of roundabouts, J-Turn intersections, RCUT intersections and innovative interchange designs. The U.S. has a $146 billion backlog in needed roadway safety improvements, according to a 2017 report from the AAA Foundation for Traffic

Safety. The report found implementing these cost-effective and needed roadway safety improvements on U.S. roadways would save approximately 63,700 lives and reduce the number of serious injuries as a result of traffic crashes by approximately 350,000 over 20 years.

To help identify safety issues, traffic safety data must be analyzed. Trend analyses based upon multiple-years' worth of data will give a more accurate reflection of the safety condition of the study area. This type of analysis assists in weeding out data that may not truly reflect the safety condition. As of recent nationwide "Fatalities have not increased for two quarters now, but we have far more work to do to save lives and address the crisis on our nation's roadways. That means investing in safety, implementing strategies that work, and embracing the safe system approach outlined in the Department's National Roadway Safety Strategy. (Source: NHSTA, 2023) The analysis is based on ratio-adjusted estimates of 2022 fatal crash data coded thus far into NHTSA's Fatality Analysis Reporting System (FARS), as described in the Data and Methodology section. There is a mixture of increases and decreases across the sub-categories. For instance, the total fatalities (fatality counts) on rural roads increased from 8,110 in 2021 to 8,539 in 2022, a 5-percent increase. However, the total estimated unrestrained passenger vehicle occupant fatalities decreased by 7 percent from 2021 to 2022. The trends of traffic fatalities in the first half of 2022 as compared to the first half of 2021 in the key sub-categories are summarized as follows:

Crash data Nation Wide

- ***Rural interstate roads (up 12%)***
- ***Rural collector/ local (up 9%)***
- ***Urban collector/local (down 10%)***
- ***During daytime (up 2%)***
- ***Nighttime (down 2%)***
- ***During weekday (up 1%)***
- ***Weekend (down 2%)***
- ***During out-of-state travel (down 10%)***
- ***In older (vehicle age ≥ 10 years) passenger vehicles (down 7%)***
- ***In vehicle rollover crashes (down 9%)***
- ***Ejected (down 7%);***
- ***In single-vehicle crashes (up 1%)***
- ***In in roadway not departure crashes (up 1%)***
- ***Speeding-related crashes (down 2%)***
- ***In the <16 age group (down 10%), the 16-24 age group (down 8%), the 25-34 age group (down 3%), the 35-44 age group (up 3%), the 45-54 age group (up 1%), the 55-64 age group (up 4%), and the 65 and older age group (up 8%)***
- ***Males (up 1%) and females (down 1%)***
- ***Unrestrained occupants of passenger vehicles (down 7%)***
- ***In police-reported alcohol involvement crashes (up less than 1%);***
- ***Motorcyclist fatalities (up 5%***
- ***Pedestrian fatalities (up 2%);***
- ***Pedal cyclist fatalities (up 8%)***
- ***Crashes involving at least one large truck (up 10%)***

Reading into this national data, and applying it to NORTPO is helpful to see trends that overlap, or could possibly become an issue in coming years. Based upon demographic and regional data for the NORTPO region, many of these national trends are worrying for the area, such as the increase in collisions in rural interstate roads, and rural collector roads by 10 percent, as well as large truck crashes increasing by 10 percent. NORTPO's region is predominantly rural, and relies upon larger trucks for many of the agricultural needs of the region as data show below.

During the five years analyzed for this plan, January 1, 2016 to December 31, 2020, there were 19,049 collisions in the NORTPO region involving 7,681 persons and resulting in 281 fatalities. Based on analysis, 3.66% of all persons involved in a collision died due to the incident -- an average of 3,810 collisions and 56 fatalities annually. For comparison, in the State of Oklahoma during this same period, there were 346,844 collisions involving 162,790 persons resulting in 3,314

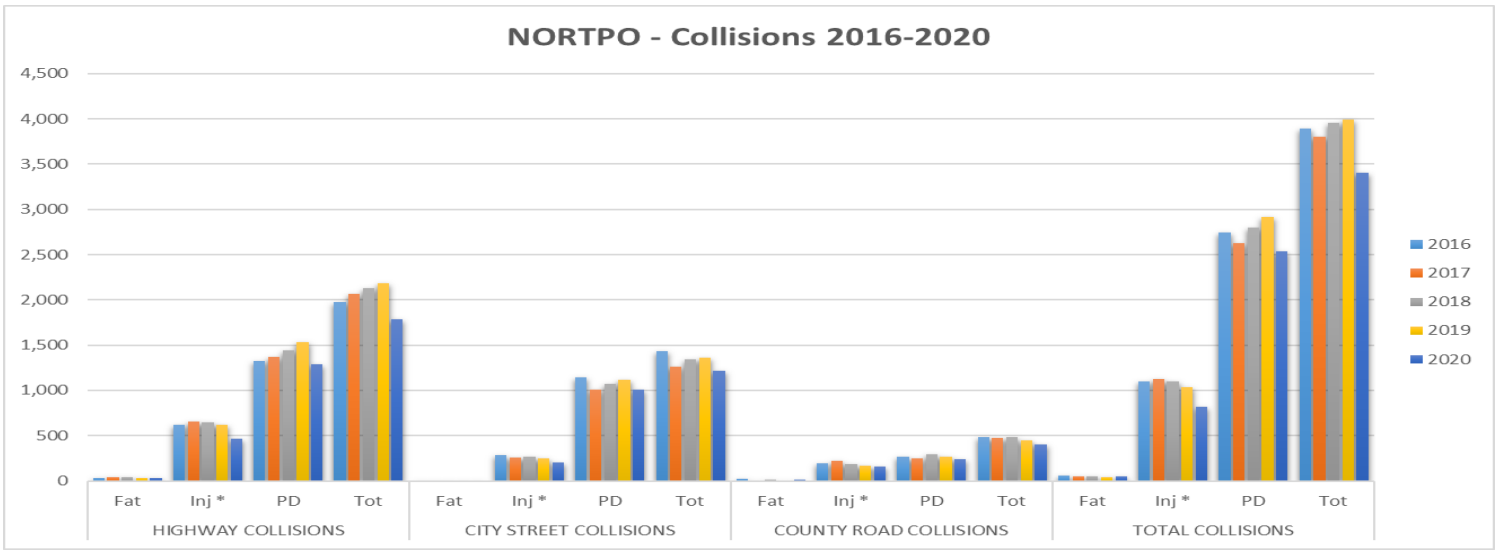
fatalities. This resulted in the NORTPO Region generating 5.49% of the collisions and 8.48% of the fatalities. *Important notes, data was retrieved on 11/19/2021 and as time goes on collisions will continue to increase in number as they are reported which can take up to a year following the incident. (Chart and Map of Collisions by County/Heat Map Below)

Collision Study Total - NORTPO
2016-01-01 - 2020-12-31

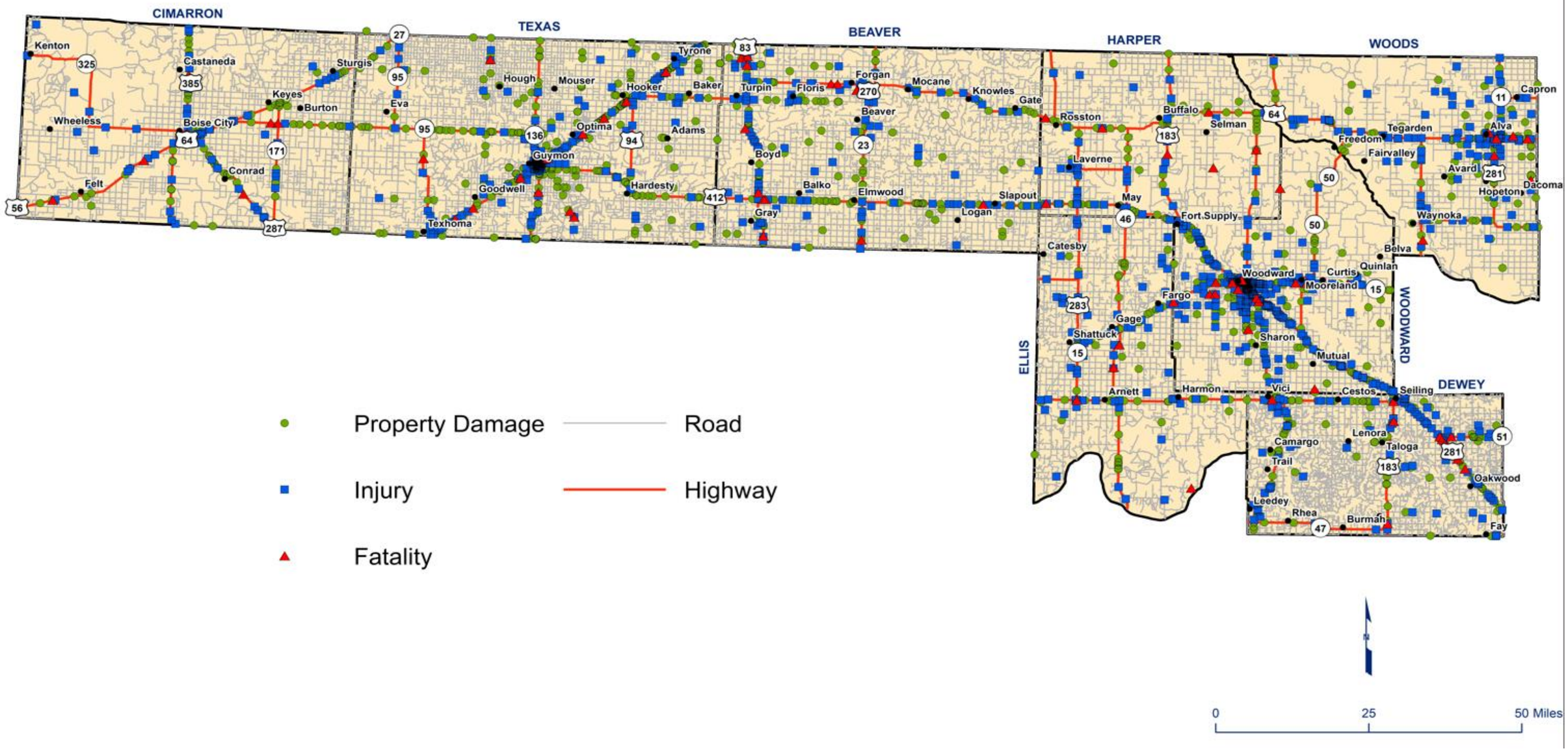
	HIGHWAY COLLISIONS				CITY STREET COLLISIONS				COUNTY ROAD COLLISIONS				TOTAL COLLISIONS			
Yr.	Fat	Inj *	PD	Tot	Fat	Inj *	PD	Tot	Fat	Inj *	PD	Tot	Fat	Inj *	PD	Tot
16	33	620	1,327	**1,980**	4	283	1,144	**1,431**	22	192	271	**485**	**59**	**1,095**	**2,742**	**3,896**
17	40	652	1,371	**2,063**	2	255	1,005	**1,262**	8	220	251	**479**	**50**	**1,127**	**2,627**	**3,804**
18	39	648	1,438	**2,125**	3	268	1,072	**1,343**	10	183	292	**485**	**52**	**1,099**	**2,802**	**3,953**
19	31	616	1,534	**2,181**	3	245	1,113	**1,361**	8	171	268	**447**	**42**	**1,032**	**2,915**	**3,989**
20	30	464	1,291	**1,785**	4	201	1,010	**1,215**	13	156	238	**407**	**47**	**821**	**2,539**	**3,407**
Ov.	**173**	**3,000**	**6,961**	**10,134**	**16**	**1,252**	**5,344**	**6,612**	**61**	**922**	**1,320**	**2,303**	**250**	**5,174**	**13,625**	**19,049**

Collisions by Type
2016 - 2020

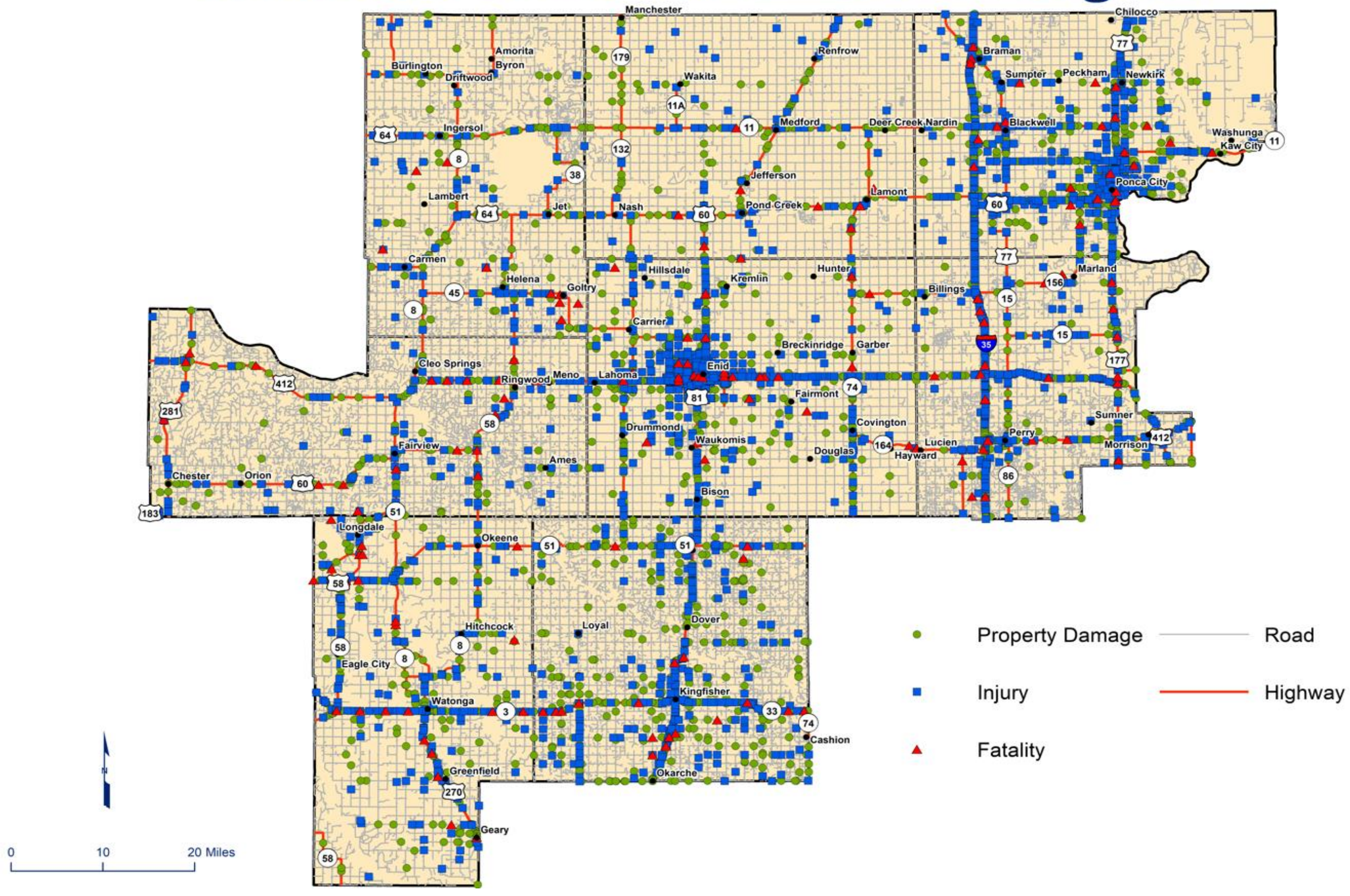
	Fatal	Injury	Prop. Dam.	Total	Percent
Rear-End (front-to-rear)	22	1,021	2,956	**3,999**	20.99%
Fixed Object	47	1,082	2,332	**3,461**	18.17%
Angle Turning	19	746	2,523	**3,288**	17.26%
Right Angle (front-to-side)	34	853	1,396	**2,283**	11.98%
Other	18	198	1,706	**1,922**	10.09%
Overturn/Rollover	45	638	529	**1,212**	6.36%
Animal	4	191	852	**1,047**	5.50%
Sideswipe Same Direction	2	78	859	**939**	4.93%
Sideswipe Opposite Direction	9	102	208	**319**	1.67%
Other Single Vehicle Crash	3	36	148	**187**	0.98%
Head-On (front-to-front)	30	85	56	**171**	0.90%
Pedestrian	8	87	12	**107**	0.56%
Pedal Cycle	2	44	6	**52**	0.27%
Vehicle-Train	7	6	22	**35**	0.18%
Other Angle	0	7	20	**27**	0.14%
Total	**250**	**5,174**	**13,625**	**19,049**	100.00%
Percent	1.31%	27.16%	71.53%	100.00%	



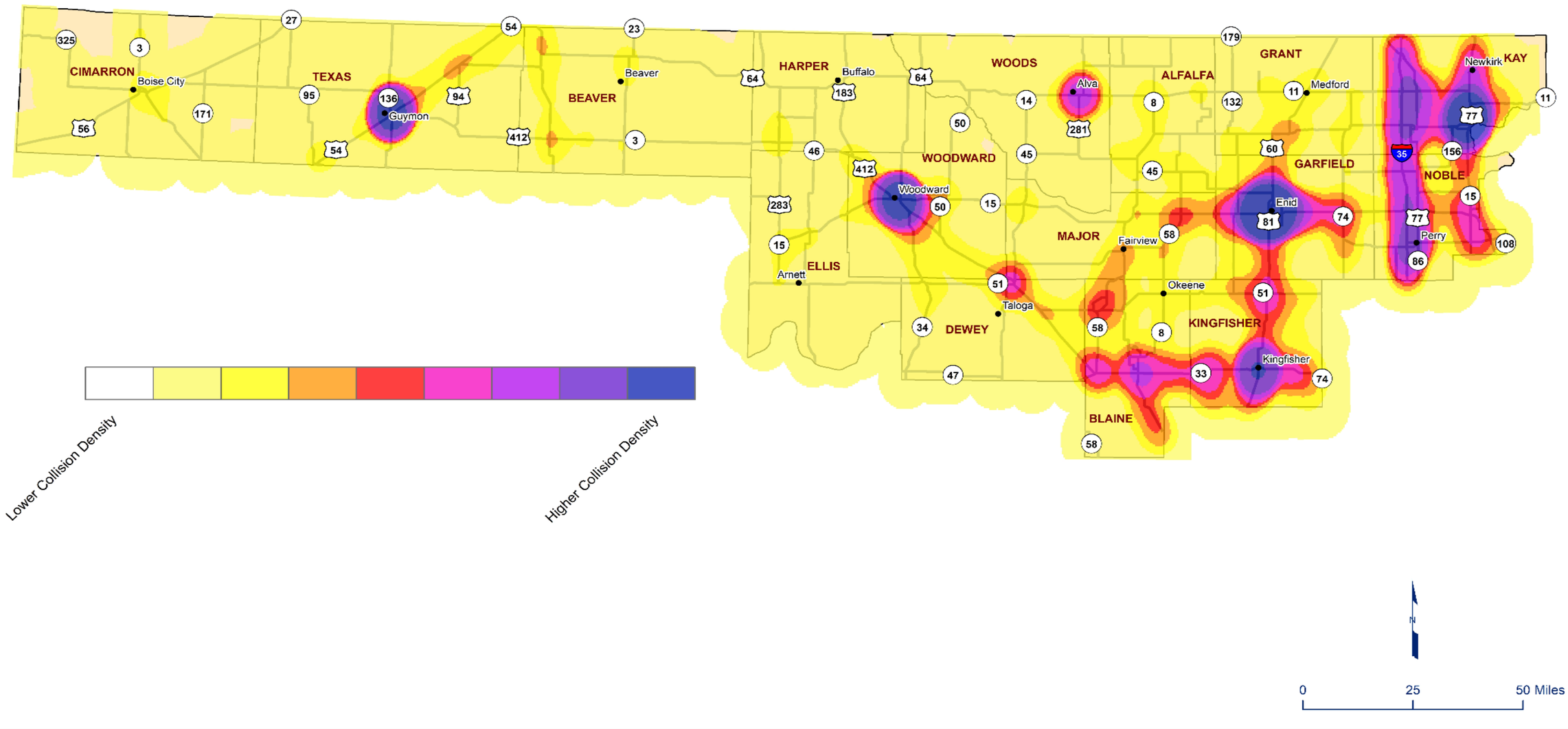
Collisions 2016-2021 - OEDA Region



Collisions 2016-2021 - NODA Region



Collisions by Density



Crash data in NORTPO for 2016 - 2020 obtained from ODOT shows:

- **Number of collisions:** There were 19,049 collisions reported in NORTPO during the study period. This is an average of 10.44 collisions per day.
- **Number of fatalities:** There were 281 fatalities reported in NORTPO during the study period. This is an average of 1 fatality every 6.45 days.
- **Location of collisions:** The majority of collisions occurred in Garfield County (6,924) and Kay County (3,415).
- **Type of road:** The majority of collisions occurred on highways (10,134) followed by city streets (6,612) and county roads (2,303).
- **Type of collision:** The highest number of collisions were from rear-end collisions (6,371), followed by sideswipe collisions (4,558) and head-on collisions (3,120).
- **Fatality rate:** The fatality rate in NORTPO was 1.43%, which is higher than the national average of 1.1%.
- **Pedestrians involved in collisions:** There were 107 pedestrians involved in collisions resulting in 8 fatalities.
- **Property damage:** 71.53% of collisions had property damage.
- **Injuries:** 27.16% of collisions had injuries.
- **Fatalities:** 1.31% of collisions had a fatality.
- **Overturn/Rollover collisions:** Overturn/Rollover collisions had the highest percentage chance of being an injury or a fatality (2.97%).
- **Weather conditions:** 84.39% of collisions we're during dry weather events. Wet roadways (9.05%) were the second most common roadway condition, followed by icy/snowy/slushy roadways (3.78%), mud/dirt/gravel/sand (1.33%), and other conditions (1.44%).
- **Lighting Conditions:** 67.70% of collisions we're during daylight hours. darkness (19.71%) was the second most common lighting condition, followed by twilight (3.84%), lighted (7.64%), and unknown (1.11%).
- **Day of collision:** Friday's is the day with the highest percent of collisions with (16.70%)
- **Vehicle type:** Pickup trucks were the most involved vehicle type involved in a collision at (29.96%), with Passenger Vehicle-4 doors there was (29.07%.)
- **Special features:** The most common special feature involved in collisions is work zones, accounting for 41.00% of all collisions. This is likely because work zones can be chaotic and unpredictable, and drivers may not be paying attention to their surroundings. The second most common special feature is bridges, accounting for 40.24% of all collisions. This is likely because bridges can be narrow and winding, and drivers may not be able to see oncoming traffic.

Overall, the data shows that there is a ***significant problem with traffic safety*** in NORTPO. The high number of collisions, fatalities, and injuries is a cause for concern. There are a number of factors that contribute to this problem, including distracted driving, speeding, and impaired driving which will be discussed further in the planning section on behaviors. Data suggests that the majority of collisions occur under dry and daylight conditions, while collisions under wet and icy/snowy/slushy conditions are much less common. Darkness was the second most common lighting condition, highlighting the importance of ensuring proper lighting on roadways, particularly during nighttime driving. The majority of collisions occur on dry roads during daylight hours. This is likely because drivers are more likely to be paying attention and driving safely in these conditions. It is worth noting that even though work zones and bridges had a similar number of total collisions (271 and 266, respectively), the percentage of fatal collisions was twice as high in train collisions (8 fatalities out of 34 total collisions) than in any of the other special feature categories. (Table 3.16 - Collision by Vehicle Type, Table 3.17 - Day and Time of Collisions, Table 3.18 - Day of Week of Collisions, Table 3.19 - Period of Day for Collisions, Table 3.20 – Lighting Conditions During Collisions, Table 3.21- Collisions by Special Features, and Table 3.22 – Study totals by Jurisdiction are all in the Appendix)

Planning Assessment

This will be the section where we outline what specific planning measures to be adopted such as behavioral management studies, and educational programs about seat belt safety, and speeding prevention. Planning will also include security management techniques which includes, signage, performance measures, congestion/traffic incident management and zones of concern such as, school, and construction zones. Planning for NORTPO will focus on many emphasis areas in the context of behavior, and security such as, tackling climate change, equity initiatives, public involvement, and data management. Planning will also take into account the rapidly changing environment of transportation, and seek to understand, and ultimately utilize tools such as GPS, AI integration, and drones/aerial mapping technology. Identifying other regional, state, tribal, county, and community plans will be key in ensuring collaboration amongst all stakeholders are being met and sharing a common vision for transportation planning. Technical assistance to local governments on transportation planning and implementation plays an important role in ensuring systems are efficient, safe, and accessible for all. This assistance includes advocating for transportation funding, and policies for local stakeholders on both state, and federal levels. Another aspect of planning that NORTPO specifically will adopt is assistance in grant acquisition. This will include research about grants, how to apply, and any help required to facilitate the grant writing process, as grants for rural areas have become such an integral part of transportation planning and especially funding. Overall, this plan developed by NORTPO provides a comprehensive and strategic approach to transportation planning that takes into account the needs of the region, balances competing priorities, and provides a roadmap for sustainable investment in transportation infrastructure and services over a long term period that this long range transportation plan can be utilized by federal, state, or local county authorities.

Behavioral Management

A substantial concern for why roadway fatalities have increased is due to passenger behaviors. In 2020 nationwide, 10,674 passenger fatalities we're with unrestrained drivers, 7,725 we're speeding, and 8,643 we're total alcohol impaired. 1,638 fatalities we're a mix of all three of these behaviors. (Source: FHWA) (Info-Graphic in Appendix) These are preventable fatalities that can be reduced by adopting planning initiatives of safety planning, and public outreach programs that focus on safe ways to operate a vehicle. Although weather is typically involved in security management of resilience planning, behavior can also be a key reason why there's increased collisions during times of unfair weather. Even though Taylor Swift says "there's something about the way the street looks when it's just rained as if there's a glow off the pavement", drivers and pedestrians should be cautioned and drive slower, and be more aware of their surroundings. In all of these areas NORTPO can be a leader in this outreach, and planning. ODOT has also identified alcohol, distracted driving, and lack of seatbelts as top three causes of fatalities and maintains its focus on each of these issues as well. Oklahoma's overall traffic fatality rate of 1.43 fatalities per 100 million vehicle miles of travel. In 2019, Oklahoma is higher than the national average of 1.11 and the sixth highest rate in the nation for fatality rates. The fatality rate on Oklahoma's non-interstate rural roads is more than double that on all other roads in the state (2.27 fatalities per 100 million vehicle miles of travel vs. 0.94). This is particularly troubling in the NORTPO region due to the pervasiveness of rural roads. During the study period in NORTPO's area there are multiple driver behaviors that accounted for collisions. (Table on Unsafe Driving and Collision Behavior Below)

Driver Condition During Collision

2016 - 2020

Unsafe/Unlawful	Apparently Normal			Alcohol Involved						Sleep Suspected			Drug Use Indicated			Unknown Condition		
				Ability Impaired			Order Detected											
	Fat	Inj*	PD	Fat	Inj*	PD	Fat	Inj*	PD	Fat	Inj*	PD	Fat	Inj*	PD	Fat	Inj*	PD
Other	128	3,428	8,887	0	3	12	0	9	7	0	0	2	0	2	9	11	105	870
Negligent Driving	17	929	2,348	0	3	10	0	32	22	9	265	295	1	4	6	7	64	220
Failed to Stop	22	1,062	2,160	0	2	7	0	10	5	0	3	4	1	2	4	8	37	122
DWI	18	687	1,138	2	5	6	4	24	17	0	5	10	2	3	3	15	72	129
Unsafe Speed	6	322	879	0	1	0	0	3	3	1	3	1	0	1	4	0	14	42
Improper Parking	0	22	904	0	0	2	0	0	2	0	0	3	0	1	0	1	3	117
Improper Start	4	165	625	0	0	2	0	1	4	0	1	4	0	1	2	3	7	68
Inattention	6	7	23	19	212	291	10	68	62	0	0	1	2	52	70	3	8	8
Failed to Signal	4	207	361	0	3	3	0	3	1	0	1	1	1	2	4	10	9	38
Left of Center	0	40	497	0	1	0	0	0	1	0	0	1	0	0	2	1	3	48
Wrong Way	3	119	312	0	0	2	0	1	1	0	1	2	0	0	0	2	3	21
Following Too Close	9	90	195	1	2	2	1	1	4	0	8	5	2	2	0	21	16	51
Defective Vehicle	2	35	198	0	0	0	0	1	1	0	0	2	1	0	1	3	3	38
Improper Lane Change	0	34	172	0	0	3	0	0	1	0	0	0	0	0	0	1	2	37
Improper Stop	0	7	46	0	0	0	0	1	1	0	0	0	0	0	0	0	1	10
Improper Passing	0	7	20	0	0	0	0	0	0	0	0	0	0	0	0	0	7	32
Improper Backing	0	7	31	0	0	0	0	3	0	0	0	0	0	0	0	0	1	5
No Improper Action	0	5	10	0	0	0	0	1	0	0	0	1	0	0	0	0	0	4
Improper Turn	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Failed to Yield	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Total	231	7,307	19,309	22	233	342	19	164	136	10	287	334	11	70	108	102	410	2,393

Unsafe/Unlawful	Total				
	Fat	Inj	PD	Total	Percent
Other	139	3,547	9,787	**13,473**	42.79%
Negligent Driving	34	1,297	2,901	**4,232**	13.44%
Failed to Stop	31	1,116	2,302	**3,449**	10.95%
DWI	41	796	1,303	**2,140**	6.80%
Unsafe Speed	7	344	929	**1,280**	4.07%
Improper Parking	1	26	1,028	**1,055**	3.35%
Improper Start	7	175	705	**887**	2.82%
Inattention	40	347	455	**842**	2.67%
Failed to Signal	15	225	408	**648**	2.06%
Left of Center	1	44	549	**594**	1.89%
Wrong Way	5	124	338	**467**	1.48%
Following Too Close	34	119	257	**410**	1.30%
Defective Vehicle	6	39	240	**285**	0.91%
Improper Lane Change	1	36	213	**250**	0.79%
Improper Stop	0	9	57	**66**	0.21%
Improper Passing	0	14	52	**66**	0.21%
Improper Backing	0	11	36	**47**	0.15%
No Improper Action	0	6	15	**21**	0.07%
Improper Turn	0	2	8	**10**	0.03%
Failed to Yield	1	0	0	**1**	0.00%
Total	**395**	**8,471**	**22,622**	**31,488**	100%
Percent	1.25%	26.90%	71.84%	100%	

For the NORTPO region, the most common unsafe/unlawful driving behavior is **other**, accounting for 42.79% of all violations. This category includes **a variety of behaviors**, such as **driving without a license, driving with a suspended license, and driving without insurance.**

The second most common unsafe/unlawful driving behavior is **negligent driving**, accounting for *13.44%* of all violations. This behavior is defined as driving in a manner that is careless, reckless, or inattentive, and can lead to accidents and injuries.

The third most common unsafe/unlawful driving behavior is **failed to stop**, accounting for *10.95%* of all violations. This behavior is defined as failing to stop at a red light, stop sign, or yield sign.

The fourth most common unsafe/unlawful driving behavior is **DWI**, accounting for *6.80%* of all violations. This behavior is defined as driving while under the influence of alcohol or drugs.

The fifth most common unsafe/unlawful driving behavior is **unsafe speed**, accounting for *4.07%* of all violations. This behavior is defined as driving at a speed that is unsafe for the conditions.

Improper parking, improper start, inattention, failed to signal, left of center, and wrong way driving were also contributing factors, but at lower rates (ranging from *3.35% to 1.48%*).

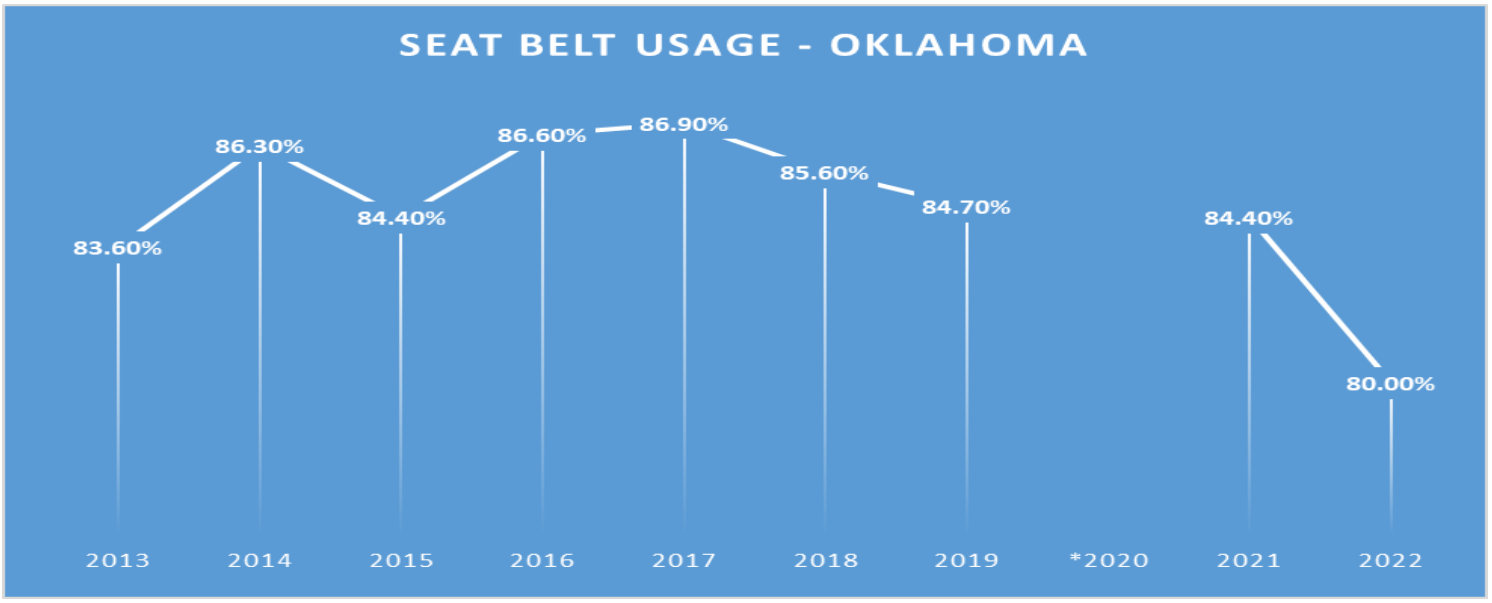
It is clear from the data that unsafe and unlawful driving behaviors are a major cause of crashes in the area. This information can be used to inform targeted enforcement efforts and education campaigns aimed at reducing these types of behaviors and improving safety on the roads. Additionally, the data suggests that addressing the contributing factors with higher rates (such as negligent driving and failed to stop) may have a greater impact on reducing overall crashes than addressing those with lower rates. The data also shows that unsafe/unlawful driving behaviors are

associated with a high risk of accidents and injuries making up the majority with 71.84% of all collisions. For example, drivers who are under the influence of alcohol or drugs are 10 times more likely to be involved in a fatal crash than sober drivers. Drivers who are speeding are also more likely to be involved in a crash. Aggressive and risky driving actions are difficult to measure accurately, but is generally understood to mean driving actions that exceed the norms of safe driving behavior and that directly affect other road users by placing them in unnecessary danger. Aggressive driving may involve driver anger, attempts to gain an advantage over other drivers, and deliberate violations and deviations from normal traffic speeds.

NORTPO will address these behavioral management issues by continuing to collect and identify these trends, sharing that information with local stakeholders, and developing educational materials that address the primary drivers of unsafe driving in the region.

Seat Belt Usage –

NORTPO has not had a seat belt usage study done for each county in the region, but there have been studies by the National Highway Traffic Safety Administration (NHTSA) in 299 sites in 19 counties across Oklahoma that have included parts of NORTPO. Garfield county specifically has the 4th highest seat belt usage rate in the state for the sampled counties at 85.8% in 2021. The observed statewide seat belt use rate reported in 2022 was 80.0 percent, (the last most recent surveys had rates of 84.4 percent in 2021, 84.7 in 2019; 85.6% in 2018, 86.9% in 2017, 86.6% in 2016, 84.4% in 2015, 86.3% in 2014, and 83.6% in 2013). (Source: ahref="https://crashstats.nhtsa.dot.gov/) (Table 3.23 - Seat Belt Usage in Oklahoma)



No Survey During Covid in 2020

Seat belt usage was improving gradually every year until 2017, but now has decreased every subsequent year a study has been completed. It's worth noting that in 2020 there was no study due to the Covid pandemic. Comparing overall usage rates in 2022 to previous years provides useful comparisons as the overall usage rate in 2022 was 80.0% which was a significant decrease from recent surveys. Recent results have ranged from a low of 83.6% in 2013 to a high of 86.9% in 2017. This decrease appears to be broadly-based with virtually every category examined being lower than recent years especially the gap between pickup trucks (78.3%), and other vehicles (86%) increasing to (7.7%) difference. Program assessments for key factors on occupant protection have repeatedly noted that the lack of a law requiring seat belt use in all seating positions. In conjunction with the low fine for the offense ($20) is contributing factors to a seat belt use rate that remains considerably below the national use rate of 90.3% reported in the 2020 National Occupant Protection Use Survey (NOPUS). From 2016 to 2019, an average of 400 people was killed in crashes on Oklahoma roads. Roughly half were not wearing seat belts. (OKDOT) In 2015, state law enforcement agencies took part in the national Click-it or Ticket campaign, which included seat belt usage and sobriety checks with an increased police presence on state roads and highways. According to Oklahoma Dept. of Transportation, the first 15 days of 2021 included 10 deaths

on the state's highways, and half of those occurred when people weren't wearing their seat belts. To address low seat belt usage, the Oklahoma Turnpike Authority and Oklahoma Department of Transportation, along with other safety partners, launched a year-long safety education initiative called Make Safety Stick: Everybody Click, which includes overall safe driving education with a specific focus on increased seat belt usage. A statewide behavioral highway safety program is offered by the Oklahoma Highway Safety Office with federal funding from the National Highway Traffic Safety Administration. Although seat belt rate is still not at the rate desired by NORTPO there has been an increase since 2003 when the seat belt rate throughout the state was 76.7%. NHSTA has done these surveys' in regions of the state that include Southeast, West, and Northeast. In 2021, the Southeast regions showed a substantial decrease in usage compared to the previous year's survey (from 75.2% down to 68.0%). The West region showed a small decrease (86.6% to 85.1%), whereas the Northeast region showed a small increase in usage (84.7% to 85.3%). In 2021, Drivers and passengers observed traveling on primary and local roads were more likely to be restrained (85.3 and 84.5 percent) than those observed on secondary roads (82.6%). This pattern remains the same from the previous survey that was conducted.

A recent study assessing Click It or Ticket programs confirms that primary law states had substantially higher seat belt use and higher levels of enforcement than secondary states. They also noted that Click It or Ticket programs aimed at the general driving population and supplemented by more targeted programs directed at low use groups (e.g., occupants of pickups and rural residents) are key to increasing seat belt use. However, media programs without enforcement are not nearly as successful. Thus, enforcement is important. The more seat belt laws are enforced, the higher the seat belt use rate. (Source: NHSTA) When worn correctly seatbelts reduce the risk of moderate to critical injury by 50%. Death rates are more than 8 times higher when the occupant is not buckled or restrained.

NORTPO also echoes the key considerations and recommendations from the observation study which included:

- Targeting specific counties and regions with low usage rates (i.e., low use counties) would likely have a positive impact on rates in those areas.
- Consider targeted initiatives to address the low usage rates among the occupants of pickup trucks. A reasonably large proportion of vehicle travel in Oklahoma takes place in pickup trucks and the usage rates of pickup truck occupants significantly lags other vehicle types. A rise in usage rates among pickup truck occupants would have significant positive impacts on the state's overall usage rate.
- Continue to encourage law enforcement agencies to vigorously enforce the Oklahoma mandatory Seat Belt Use Act on a consistent basis.
- Collect county-level data on enforcement of the use of seat belts to document the relationship between enforcement efforts and safety restraint use
- Continue to pursue a multimedia strategy for educating the public about the benefits of using seat belts and the consequences of non-compliance with the state seat belt law.
- Overall, NORTPO will advocate, and help facilitate studies in each county of the region on seat belt usage to share with local officials, and help deliver a multimedia strategy for engaging the public about the benefits of using a seat belt restraint. Our goal for the region is to increase seat belt usage in the area to 90 percent by 2045.

Speeding –

NHTSA defines a crash to be speeding-related if any driver involved in the crash is charged with a speeding-related offense or if a police officer indicates that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor in the crash. Speeding is legally defined by States and municipalities in terms of a "basic speed rule" and statutory maximum speed limits. The basic speed rule generally requires drivers to operate a vehicle at a speed that is reasonable and prudent for roadway conditions. Making a determination to take enforcement action is at the LEO's discretion, which may be impacted by weather, surface conditions, traffic volume, and special locations (e.g., work zones, school zones, or other environmental conditions). Statutory speed limits set maximum limits for different types of roads, and generally apply to all roads of that type even when the limits are not posted. Speeding is a contributing factor for 26% of fatalities in motor vehicle traffic crashes in the United States, a percentage that decreased from 31% since 2009. (Source: https://www.nhtsa.gov/book/countermeasures/countermeasures-work/speeding-and-speed-management) Younger drivers, particularly young males, continued to be the most likely to be identified as speeding in fatal crashes in 2018 (NCSA, 2020). In 2018 nearly one-third (30%) of male drivers in the 15- to 20-year-old age group involved in fatal crashes were speeding at the time of the crashes, compared to 18% for the female drivers in the same age group. In complex environments the limitation on our ability to "read" our environment and react appropriately becomes a deadly problem as margins of error are reduced, and small mistakes become deadly.

Speeding is more than just breaking the law although as the consequences are far-ranging:

- Greater potential for loss of vehicle control
- Reduced effectiveness of occupant protection equipment
- Increased stopping distance after the driver perceives a danger
- Increased degree of crash severity leading to more severe injuries
- Economic implications of a speed-related crash
- Increased fuel consumption/cost.

In Oklahoma, traffic safety officials recognize how speeding drivers are one of the main reasons why motor vehicle fatalities continue to increase to record levels nearly every year. State officials estimate that 1 out of 4 fatal car accidents occurs due to speeding drivers, in line with the national numbers. (ODOT). In the NORTPO region often vehicles are traveling at faster speeds on highways, and when the vehicles travel through a town, or exits an off ramp, the drivers are more inclined to continue the higher rate of speed than posted speed limits which increases risks of crashes in our area.

NORTPO's speed management initiatives will involve the following:

- Continuing to analyze the relationship between speed, speeding, and safety.
- Ensuring road design and engineering measures obtain appropriate speeds based on their arterial.
- Effectively marketing communication and educational messages that focus on high-risk drivers.
- Soliciting the cooperation, support, and leadership of traffic safety stakeholders.
- Supporting the installation of signage that includes, but is not limited to radar speed signs, updated speed signs, and slow down signs.
- Studies of speeding in the northwest regional area.
- NORTPO's goal by 2045 is to decrease the number of speed related fatalities to below 20 percent in the region.

Security Management

Security management for transportation planning refers to the process of identifying, assessing, and mitigating security risks associated with transportation systems and infrastructure. It is a critical component of transportation planning, as it helps to ensure the safety and security of passengers, employees, and infrastructure. This involves developing strategies, policies, and procedures to ensure the safety and security of people, goods, and information during transportation operations.

Security management for transportation planning typically includes the following steps:

- **Identifying security risks:** The first step is to identify the potential security risks to transportation systems. This can be done by conducting a risk assessment, which involves identifying and evaluating the likelihood and impact of potential threats and vulnerabilities within the transportation system by evaluating factors such as infrastructure, operations, technology, and personnel.
- **Mitigating security risks:** Once the security risks have been assessed, they need to be mitigated. This can be done by implementing a variety of security measures, such as physical security, employee security, and cybersecurity measures.
- **Security Planning:** Developing comprehensive plans and protocols to address identified risks. This may involve implementing physical security measures, deploying surveillance systems, establishing emergency response procedures, and enhancing cybersecurity.
- **Regulatory Compliance:** Ensuring compliance with applicable security regulations, standards, and guidelines set by government agencies or industry bodies.
- **Incident Response and Crisis Management:** Establishing protocols and procedures to respond effectively to security incidents or crises. This includes establishing communication channels, coordinating with law enforcement agencies, conducting drills and exercises, and developing contingency plans.
- **Security Training and Awareness:** Providing training programs and awareness campaigns to transportation personnel and stakeholders to enhance their understanding of security threats and their roles in maintaining security. This includes training on recognizing suspicious behavior, handling hazardous materials, and maintaining cybersecurity.
- **Collaboration and Coordination:** Fostering collaboration and coordination among different stakeholders involved in transportation security, such as government agencies, transportation operators, law enforcement agencies, and intelligence organizations. Sharing information, intelligence, and best practices is essential for effective security management.
- **Continual Monitoring and Evaluation:** Regularly monitoring the effectiveness of security measures, identifying any gaps or vulnerabilities, and making necessary adjustments. This involves conducting security audits, risk assessments, and performance evaluations to ensure ongoing security improvement.

By implementing a comprehensive security management plan, NORTPO can help to protect their transportation systems from a variety of threats. This helps to ensure the safety of passengers, employees, and infrastructure, and it also helps to protect the economy and security of the region. Overall, security management for transportation planning aims to minimize security risks, protect critical transportation infrastructure, and maintain the efficient and secure movement of people, goods, and information. Security management for transportation planning is an ongoing process. As security threats evolve with modern technology, and climate change so too must the security measures that are implemented to mitigate them. By continuously evaluating and updating security plans, NORTPO can help to ensure the safety and security of transportation systems in the region.

In NORTPO, each classification of traffic crashes is analyzed to establish priorities for program implementation. The following are safety investigation areas identified for further, and or continued analysis by this plan:

NORTPO - Safety Investigation Areas	Description
Change in crashes, fatalities, and injuries from the previous year	Analyzing the changes in the number of crashes, fatalities, and injuries compared to the previous years
5-year trend of crashes, fatalities, and injuries	Evaluating the trends in crashes, fatalities, and injuries over a 5-year period
Actual numbers of crashes, fatalities, and injuries	Examining the specific numbers of crashes, fatalities, and injuries
Comparison of rural versus urban crashes	Contrasting the occurrence of crashes in rural and urban areas
Causes of crashes	Investigating the underlying causes of crashes
Comparison of state, county, and city fatal and injury crash rates per VMT and actual crash numbers	Comparing the rates and numbers of fatal and injury crashes per vehicle miles traveled (VMT) in different geographical areas
Resiliency	Evaluating the ability of significant roads to withstand flooding, wildfires, or seismic events.

Mobility and System Reliability	Addressing recurring congestion in major urban areas, inadequate passing opportunities in rural areas, and inconsistent access management
Infrastructure Condition	Assessing the condition of pavements and structures including their vulnerability to seismic events
Multimodal Transportation System	Studying the integration of bicycles and pedestrians into the regional transportation plans in the NORTPO area
Economic Competitiveness	Recognizing the importance of Highway 412 for local, regional, and long-haul freight movements, rural commutes, and tourism/recreation
Constraints	Noting the requirement for further environmental study on a project-by-project basis and the presence of numerous small utility providers in the study area

Performance Measures and Targets

Performance-based planning allows State and Federal DOT's to examine data, past and present, and evaluate the performance of their transportation investments against a number of federally required measures in order to make progress toward the achievement of national goals. The Federal Highway Administration defines transportation performance managements as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Federal and state legislation have focused on measuring progress toward RTP goals to ensure that resources are producing the desired results. NORTPO intends to utilize the performance targets identified by FHWA listed in (TPM) Transportation Performance Metrics (Source: https://www.fhwa.dot.gov/tpm/rule.cfm) and in ODOT's performance metrics which requires performance measures in safety, pavement, bridge condition, and system performance. The Oklahoma Department of Transportation has set targets in all areas and is working aggressively to provide Oklahomans with a safe, economical, and effective transportation network. NORTPO will work in collaboration with these goals set by OKDOT. (Source: https://experience.arcgis.com/experience/807832f37c10433c9fd055723b139d63) 23 CFR 490 addresses requirements established by the Moving Ahead for Progress in the 21st Century Act (MAP21) and reflects passage of the Fixing America's Surface Transportation (FAST) Act.

As established by 23 CFR 490, FHWA set performance measures for Traffic Safety (PM1) for the following criteria:

- Total fatalities
- Total serious injuries
- Total non-motorized fatalities and serious injuries
- Rate of fatalities per hundred million Vehicle Miles Traveled
- Rate of serious injuries per hundred million Vehicle Miles Traveled

ODOT established PM1 targets on August 31st, 2017.

As established by 23 CFR 490, FHWA defined condition criteria and established the following performance measures for Pavement and Bridge condition (PM2) and System Performance (PM3):

- Assess the condition of pavements and bridges on the National Highway System (NHS)
- Assess performance of the Interstate and non-Interstate NHS
- Freight movement on the Interstate system ODOT established PM2 and PM3 targets on May 16th, 2018.

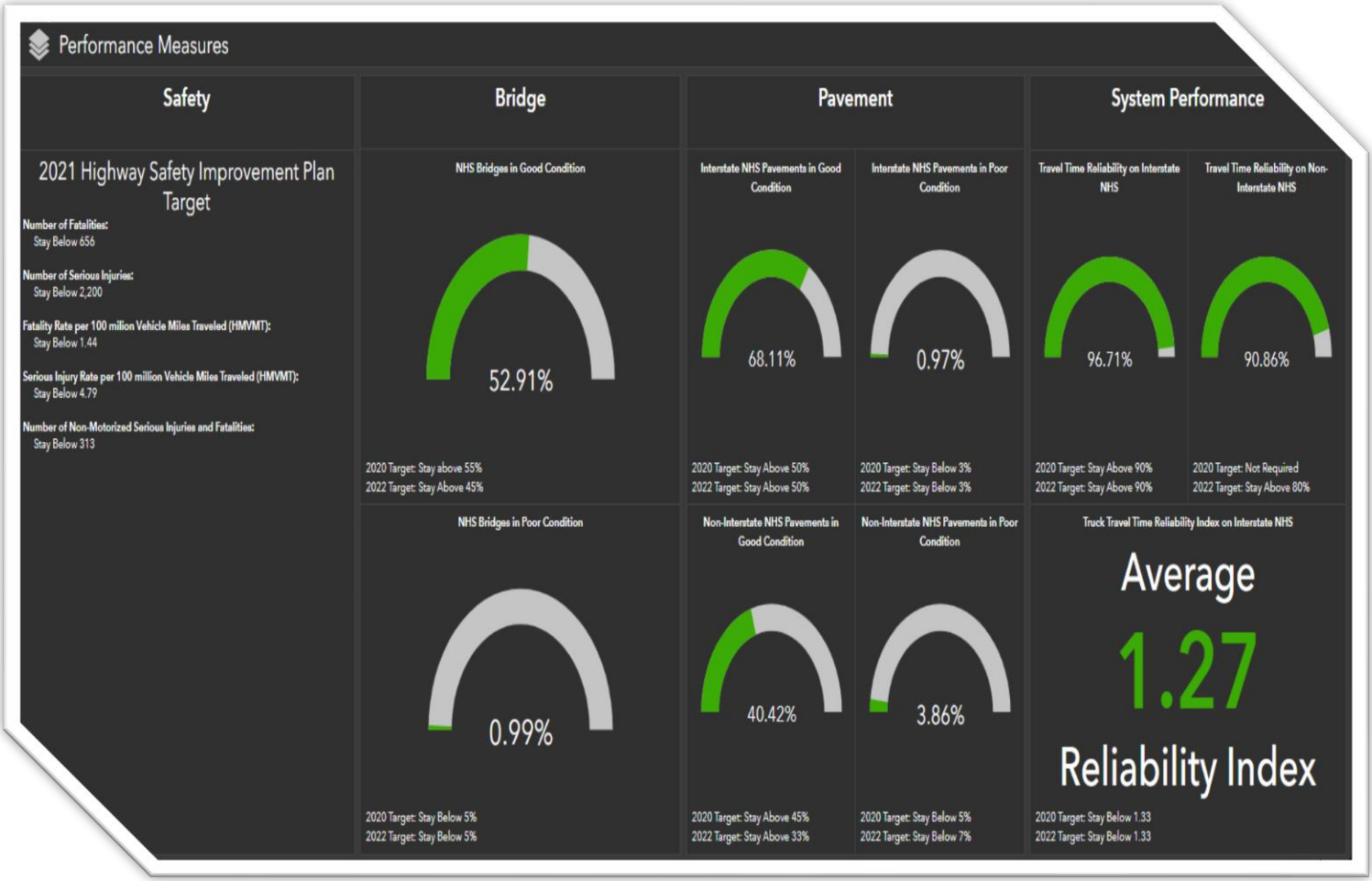
Performance measures for safety are:
Number of fatalities, number of serious injuries, fatality rate, serious injury rate, number of non-motorized serious injuries and fatalities

What areas are assessed?
ODOT must establish targets, regardless of ownership, for the full extent of the public roadways in Oklahoma.

How are conditions calculated?
State DOTs and MPOs must adopt annual targets for each safety measure, with state DOTs required to establish quantitative targets. Each year FHWA evaluates whether states have met, or made significant progress toward meeting their targets. FHWA will consider states to be in compliance if states have met or improved from the baseline for at least four of the five required performance targets.

How were targets selected?
The regulations require state DOTs and MPOs to establish safety targets as five-year rolling averages on all public roads for: (1) number of fatalities, (2) number of serious injuries, (3) rate of fatalities per hundred million vehicle miles traveled (HMVMT), (4) the rate of serious injuries per HMVMT, and (5) the number of non-motorized fatalities and serious injuries. The 2018 target is based on the 2012-2016 average for each of the measures with 2016 data being the most recently available. Injuries and fatalities from traffic crashes vary considerably from year to year due to numerous factors, and the five-year rolling average is meant to smooth large changes. State DOTs are required to establish safety targets as part of their annual Highway Safety Improvement Program (HSIP) report to FHWA. A trend line projection was used to guide the development of the safety targets. As required by federal regulation, ODOT coordinated with the Oklahoma Highway Safety Office to establish statewide targets for the first three performance measures (number of fatalities, number of serious injuries, and rate of fatalities) that were reported to the National Highway Traffic Safety Administration in the State Highway Safety Plan. ODOT also established statewide targets for the rate of serious injuries and the number of non-motorized fatalities and serious injuries that were reported to the FHWA. (2018, and 2021 Performance Graphics Below) (Source: ODOT)

ODOT - 2018 Performance Targets		
Number of Fatalities:	Stay below 691	
Number of Serious Injuries:	Stay below 14,083	
Fatality Rate:	Stay below 1.41	
Serious Injury Rate:	Stay below 28.90	
Number of Non-Motorized Serious Injuries and Fatalities:	Stay below 698	
Pavement		
	2020 Target	2022 Target
Interstate NHS pavements in Good Condition:	Stay above 50%	Stay above 50%
Interstate NHS pavements in Poor Condition:	Stay below 3%	Stay below 3%
Non-Interstate NHS pavements in Good Condition:	Stay above 45%	Stay above 45%
Non-Interstate NHS pavements in Poor Condition:	Stay below 5%	Stay below 7%
Bridge		
	2020 Target	2022 Target
NHS Bridges in Good Condition:	Stay above 55%	Stay above 60%
NHS Bridges in Poor Condition:	Stay below 5%	Stay below 7%
System Performance		
	2020 Target	2022 Target
Travel Time Reliability on Interstate NHS:	Stay above 90%	Stay above 90%
Time Travel Reliability on non-Interstate NHS:	2020 not required	Stay above 80%
Truck Travel Time Reliability Index on Interstate NHS:	Stay below 1.33	Stay below 1.33



Signalizations/Signage –

Signage plays a crucial role in transportation planning because it helps to provide vital information to drivers and pedestrians**.** Signage can be used to provide information about upcoming hazards, road closures, and other important traffic conditions. This can help drivers to make informed decisions about their travel plans and avoid accidents by using signs, such as warning signs, caution signs, and advisory signs. This is especially important with the increased use of electrical vehicles in knowing where available EV charging locations are in the NORTPO region. This information also helps with efficient navigation with directions, destinations, exits, intersections, and other important points of interest which helps reduce confusion, congestion, and ultimately improves overall safety and reduces GHG emissions. Other key reasons to emphasize signage in the region are as follows:

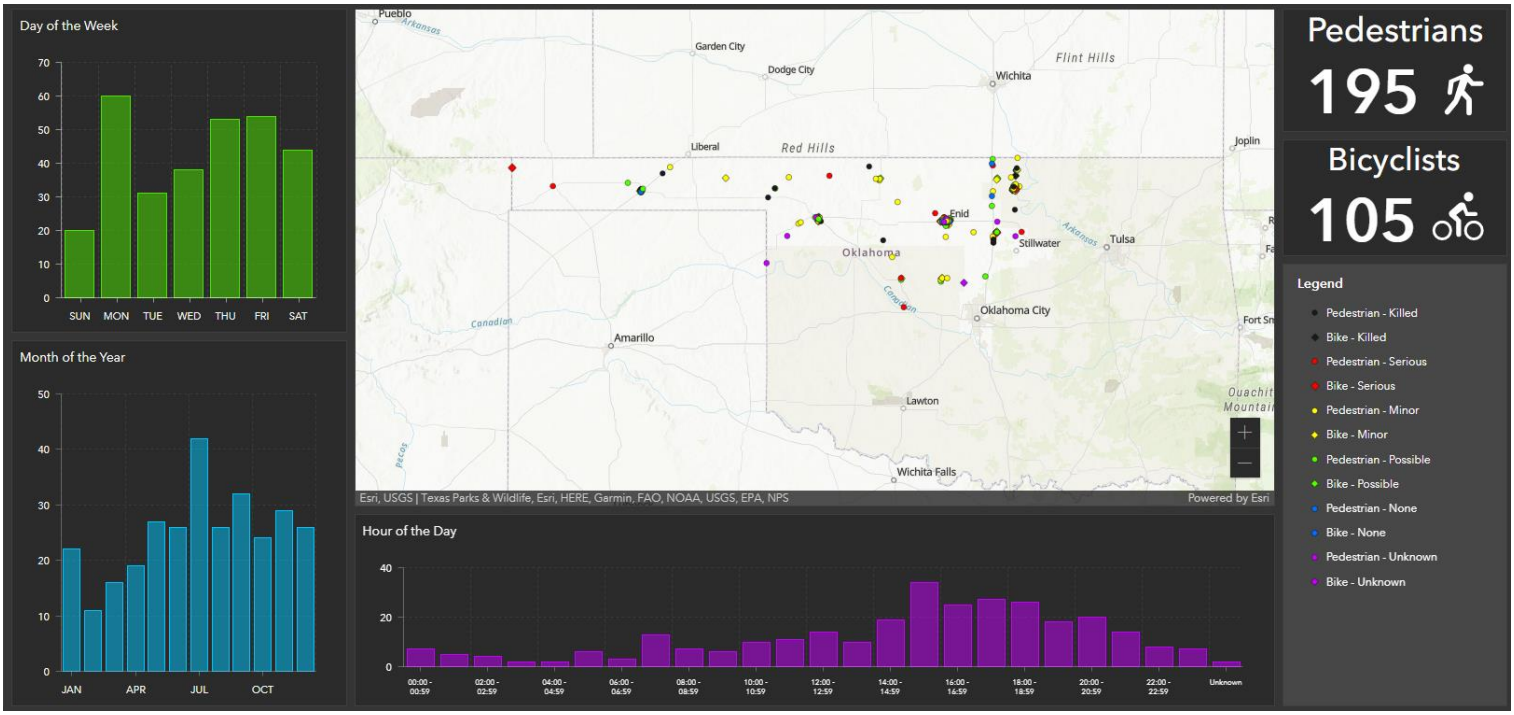
- **Direct traffic: Signage can be used to direct traffic to its destination by using a variety of signs, such as street signs, highway signs, and directional signs, whether it is a specific address or a general area. This can help to reduce congestion and improve traffic flow.**
- **Encourage safety: Signage can be used to encourage safe driving practices, such as obeying the speed limit, wearing a seatbelt, child safety, and distracted driving. This can help to reduce the number of traffic accidents and fatalities by making informed decisions.**
- **Promote tourism: Signage can be used to promote tourism by directing visitors to popular attractions. This can help to boost the local economy.**
- **Encourage economic development: Signage can be used to encourage economic development by directing businesses to areas with good transportation access. This can create jobs and improve the local economy.**
- **Consistency and Standardization: Signage follows established standards and conventions, ensuring consistency across different regions and jurisdictions. This uniformity helps road users understand and interpret signs regardless of their location, making travel more predictable and user-friendly.**
- **Accessibility and Inclusion: Signage that incorporates principles of universal design ensures that transportation information is accessible to all individuals, including those with visual impairments, cognitive disabilities, or language barriers. Features such as clear fonts, contrasting colors, Braille, and international symbols make signage usable by a diverse range of road users, promoting inclusivity and equal access to transportation services.**

Overall, signage is important for transportation planning as it enhances safety, improves traffic flow, provides guidance, communicates information, and promotes accessibility. It is an integral part of creating a well-organized, efficient, and user-friendly transportation system. A useful tool for signage in Oklahoma is Drive-Safely Road Signs. (Source: https://www.drive-safely.net/oklahoma-road-signs/) NORTPO will continue to help identify locations where signing is lacking and promote ways to procure better signage for the region.

Pedestrian Protection –

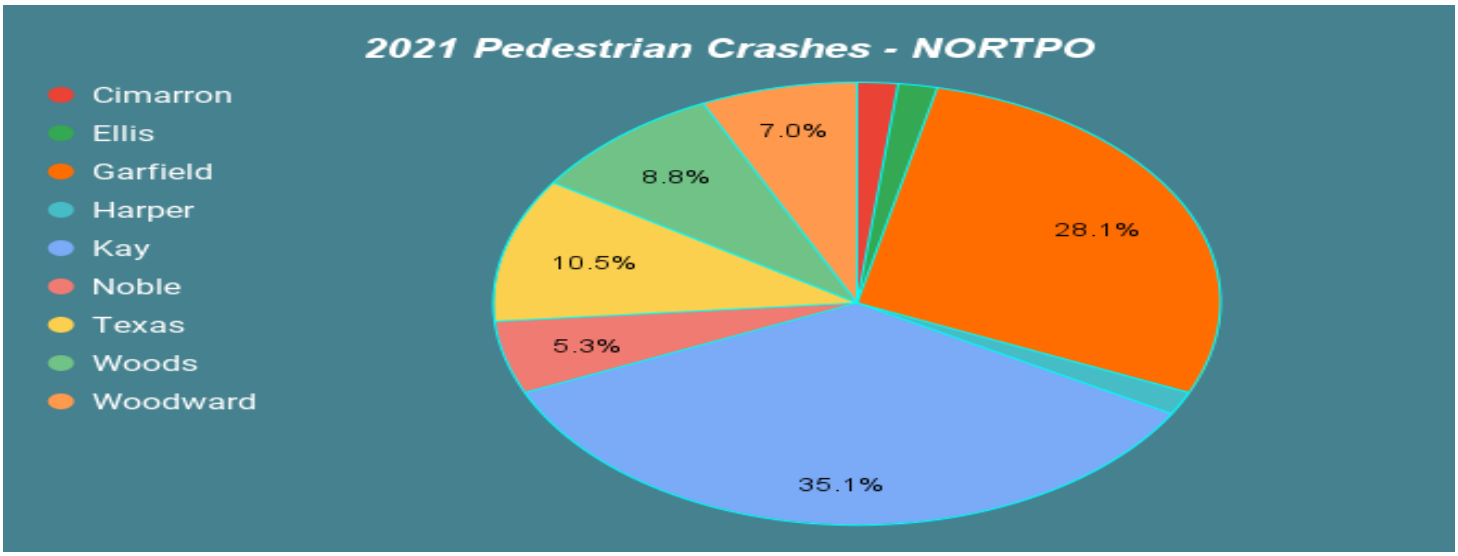
Over the period from 2009 to 2018, pedestrian fatalities in the United States increased 53%, from 4,109 to 6,283, after decreasing for three decades (National Center for Statistics and Analysis, 2019.). According to the National Highway Traffic Safety Administration (NHTSA), 2018 witnessed the most pedestrian fatalities since 1990, accounting for approximately 17% of all roadway fatalities (6,283). In 2018, 74% of pedestrian fatalities occurred away from intersections (e.g., mid-block locations) and approximately 25% occurred at intersections. Safety Association data shows that Oklahoma had 102 pedestrian deaths in 2021, up from the 86 deaths in 2020 and 88 deaths in 2019. ODOT currently maintains a database of all motor vehicle crashes, including those involving pedestrians. ODOT has the capacity to map the location of crashes involving pedestrians showing high crash locations and roadway segments which the region can utilize for safety projects. Where we see pedestrian crashes occurring we recommend doing a road safety audit. In NORTPO, a total of 23 fatalities from pedestrian and bicyclists crashes from the study period, 52 serious injuries, and 121 minor injuries reported. (Map of Pedestrians and Bicyclists Crashes in NORTPO Below)

Pedestrian and Bicyclist Crashes – 2015-2021 - NORTPO



(Source: https://okdpswf.maps.arcgis.com/apps/MapSeries/index.html?appid=bbceac52ab4644cb8e9d9753bfd8f137)

The majority of the pedestrian crashes occurs on city streets in downtown urban areas. (Map 3.18 – Pedestrians in Crashes by Highway Class – Oklahoma) Safety projects for these areas should be prioritized especially with the addition of further TAP projects in our region. For 2021 in NORTPO the 2 largest counties with higher population in downtown areas have the highest percentage of pedestrian crashes, Garfield, and Kay counties.



(Source: Oklahoma Public Safety Office – 2021, https://ohso.ok.gov/sites/g/files/gmc751/f/2021_s4_nonmotorists.pdf)

Roadways identified of concern for NORTPO for pedestrians are as follows:

- **SH-177 -** 8 of these fatalities occurred within 2 miles of the highway as far south as Red Rock, and North of Newkirk with the majority near Ponca City
- **I-35 -** 3 fatalities occurred on I-35, just south of Perry.
- **SH-412** - 7 occurred off of SH-412, 3 in Enid, 1 in Woodward, and 2 in Guymon metro areas.
- **SH-64** – 5 Serious to Minor injuries from Alva to Buffalo.

Recommendations by NORTPO include the following echoed by FHWA: (https://safety.fhwa.dot.gov/ped_bike/step/)

- Creation of pedestrian count programs in order to better understand where pedestrians are focused at, and where to prioritize funding.
- Reduction of vehicle speeds and the number of lanes pedestrians cross.
- Create space to add new pedestrian facilities.
- Pedestrian refuge islands allow pedestrians a safe place to stop at the midpoint of the roadway before crossing the remaining distance. This is particularly helpful for older pedestrians or others with limited mobility.
- Raised crosswalks that can reduce vehicle speeds.
- Crosswalk visibility enhancements, such as crosswalk lighting and enhanced signing and marking, help drivers detect pedestrian–particularly at night.
- Leading Pedestrian Intervals (LPIs) at signalized intersections allow pedestrians to walk, usually 3 to 4 seconds, before vehicles get a green signal to turn left or right. The LPI increases visibility, reduces conflicts and improves yielding to pedestrians.

All of these countermeasures improve safety by offering proven solutions to reducing pedestrian crashes, and create targeted investments by focusing on currently uncontrolled areas which significantly contribute to the pedestrian safety problem. These countermeasures lead to an increased quality of life for all individuals.

School Zones Management

Sadly, there were more than 1,000 fatal school-transportation-related crashes between 2011 and 2020 nationwide with an average of 113 fatalities per year. Some studies have found that as many as 40 students are hit by a vehicle while walking each day, resulting in more than 15,000 injuries on an annual basis. (NHSTA) A joint study from Safe Kids Worldwide and FedEx found that crosswalks were missing in 3 out of 10 school zones. It was also discovered that only 4 in 10 school zones had posted speed limits of 20 mph or below. In 2019 and 2020, there were 116 collisions in school zones in Oklahoma, resulting in two fatalities and five serious injuries. Elementary school children are very active and impulsive. Although they are learning and growing, school-age children 10 and younger still need guidance and supervision when playing and walking near traffic. More than 50 percent of school-age pedestrians killed in school transportation vehicle crashes from 2011-2020 were between 5-10 years old. Fatalities among young pedestrians most often occur during the after school hours, and the majority of the young pedestrian fatalities are boys. In 2018, Zendrive did a data study on school safety, and found Oklahoma to be ranked 42 in safety for school zones. (Source: https://www.zendrive.com/data-studies/2018-school-safety-study) By 2020, ODOT has completed 47 projects to upgrade school zones with new signage and flashing beacons, primarily in smaller communities.

NORTPO can contribute to preventing accidents in school zones through various initiatives and strategies:

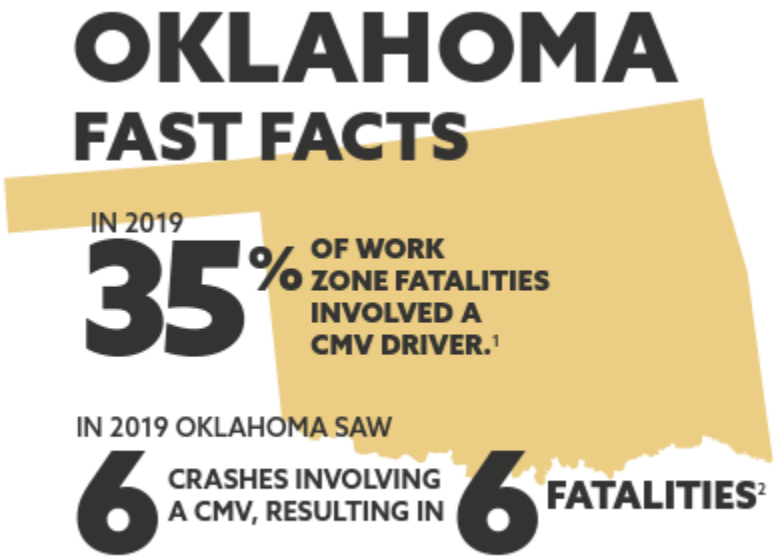
- **Enhanced Signage and Markings:** NORTPO can collaborate with local jurisdictions to ensure appropriate signage and pavement markings are installed in school zones. This includes clearly marked crosswalks, school zone signs, and lighting such as flashing beacons to indicate reduced speed limits during school hours.
- **Safe Routes to School Programs:** NORTPO can support and promote Safe Routes to School programs in collaboration with local schools and communities. These programs encourage walking or biking to school by providing safe and well-maintained pedestrian and bicycle infrastructure, organized walking groups, and educational campaigns.
- **Traffic Education and Enforcement:** NORTPO can assist in developing educational programs that raise awareness about safe driving practices in school zones. This can include outreach events, school assemblies, and campaigns that educate both students and parents about pedestrian safety and the importance of following traffic laws near schools. NORTPO can also collaborate with law enforcement agencies to increase enforcement efforts in school zones.
- **Infrastructure Improvements:** NORTPO can prioritize funding for infrastructure improvements in school zones, such as sidewalk expansions, speed bumps, raised crosswalks, and traffic circles in school zones These enhancements provide safer routes for pedestrians and help drivers better navigate through school zones.

- **Collaboration and Data Analysis:** NORTPO can facilitate collaboration among different stakeholders, including school officials, law enforcement, transportation departments, and community organizations, to share information and data related to school zone safety. By analyzing accident data and identifying trends, NORTPO can recommend targeted interventions and improvements.
- **Community Engagement:** NORTPO can encourage community involvement and engagement in school zone safety efforts. This can be done through public meetings, workshops, and the establishment of local committees or task forces focused on school zone safety. Engaging parents, teachers, and students in the process can help generate ideas and support for effective solutions.

It's important to note that NORTPO's role is to provide guidance, support, and coordination in these efforts, working in collaboration with local authorities, schools, and other stakeholders to ensure the safety of school zones.

Work Zone Management

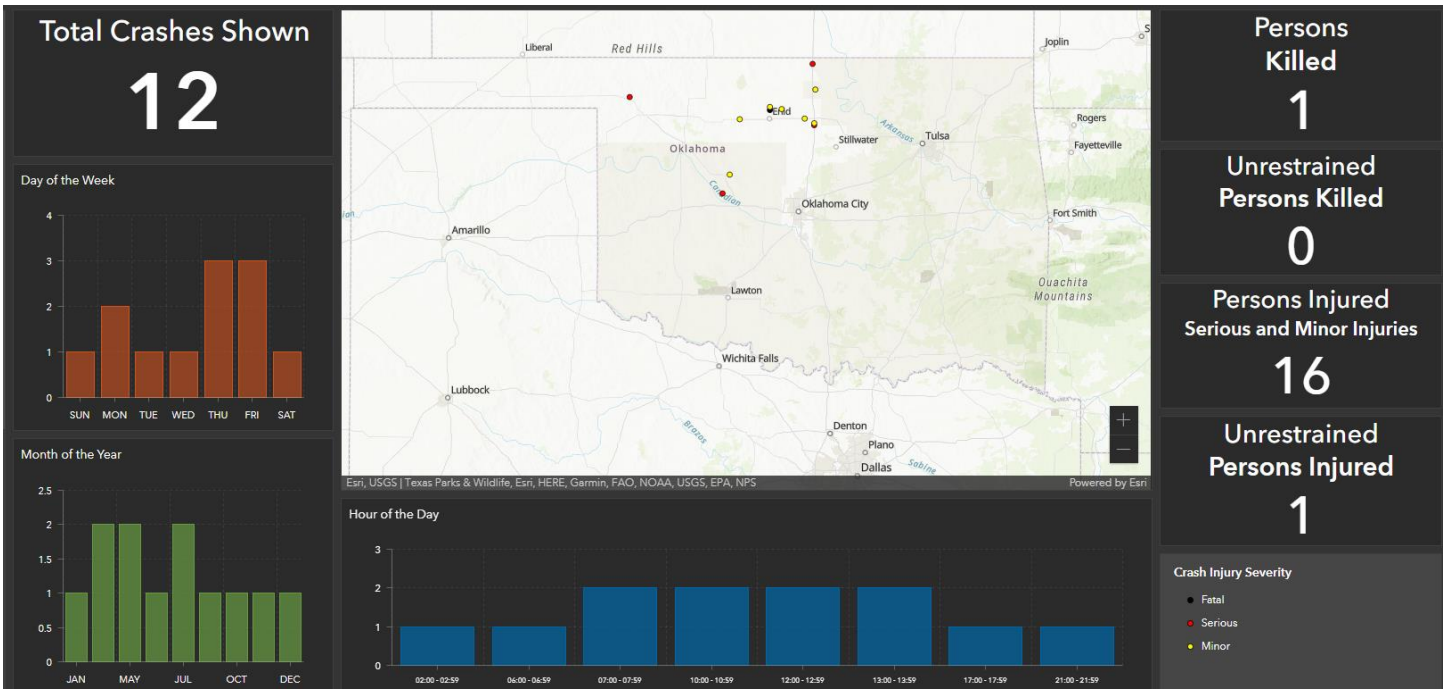
Oklahoma ranks ninth in the country for fatal crashes involving commercial motor vehicles in the state's active work zones. From 2018-2023, 91 people died and more than 1,200 others have been injured in work zone crashes across Oklahoma. A work zone is an area of a traffic way where construction, maintenance, or utility work activities are identified by warning signs/signals/indicators, including those on transport vehicles. It extends from the first warning sign, signal, or flashing lights to the "END ROAD WORK" sign or the last traffic control device pertinent for that work activity. Work zones present challenges for truck drivers across Oklahoma – narrowed lanes, sudden stops, traffic pattern shifts, and uneven road surfaces can lead to crashes and fatalities if they are not prepared and alert. On average, large trucks are overrepresented in work zone crashes. In 2019, over 35 percent of fatal crashes involved commercial motor vehicles (CMV)



Source: ShareTheRoadSafety.Org, 2019 Fast Facts, Oklahoma)

ODOT has been raising awareness about the importance of construction zone safety throughout the month of April dedicating the month to work zone awareness, and is actively sharing the applications that show where current construction is at or being planned on their interactive road conditions map. (Source: https://oklahoma.public.dotmapsapp.com/map) The Work Zone Operations Best Practices Guidebook (Third Edition) provides an easily accessible compilation of work zone operations practices used and recommended by various States and localities around the country for effectively managing work zones and reducing the impacts of work zones on mobility and safety. (Source: FHWA) As most construction sites move it's hard to identify specific locations where there is room for improvement, but overall roadways with higher functional classification have had increased crashes. (Map Below of Fatal and Injury Crashes in Work Zones from 2021)

Fatal and Injury Crashes in Work Zones - 2021 – NORTPO Region



(Source – ODOT, https://okdpswf.maps.arcgis.com/apps/MapSeries/index.html?appid=bbceac52ab4644cb8e9d9753bfd8f137)

NORTPO can play a crucial role in preventing accidents in work zones by implementing various strategies and initiatives such as:

- **Work Zone Planning and Design: NORTPO can collaborate with transportation agencies, construction companies, and local authorities etc. to develop effective work zone plans and designs. This includes considering factors such as traffic flow, signage placement, lane closures, and detour routes to minimize disruptions and enhance safety.**
- **Public Awareness and Education: NORTPO can lead public awareness campaigns to educate drivers about the importance of work zone safety. This can involve distributing informational materials, organizing workshops or safety events, and leveraging media channels to raise awareness about the risks associated with work zones and the need for caution.**
- **Enhanced Signage and Markings: NORTPO can work with transportation departments to ensure proper signage and pavement markings are in place in work zones. Clear and visible signs provide drivers with important information such as reduced speed limits, lane closures, and upcoming road conditions, helping them navigate through work zones safely.**
- **Temporary Traffic Control Measures: NORTPO can collaborate with construction companies and transportation agencies to implement temporary traffic control measures in work zones. This includes deploying traffic cones, barrels, barriers, and flaggers to direct traffic and create a safe buffer between motorists and construction activities.**
- **Technology and Innovation: NORTPO can promote the use of innovative technologies in work zones to improve safety. This may include intelligent transportation systems (ITS), variable message signs, and real-time traffic monitoring to provide drivers with up-to-date information and alerts about work zone conditions.**
- **Work Zone Training and Certification: NORTPO can support training programs and certifications for construction workers and contractors involved in work zone operations. This helps ensure that personnel working in work zones are knowledgeable about safety protocols, equipment usage, and best practices to minimize risks.**

- **<u>Data Collection and Analysis:</u> NORTPO can collect and analyze data on work zone accidents and near-miss incidents to identify common causes and trends. This information can be used to develop targeted strategies and improvements to enhance work zone safety**
- **<u>Coordinated Communication:</u> NORTPO can facilitate effective communication among stakeholders, including construction companies, transportation agencies, and the public. Coordinated communication ensures that timely and accurate information about work zones, including schedules, lane closures, and detour routes, is disseminated to minimize confusion and promote driver awareness.**

By focusing on these strategies, NORTPO can help reduce accidents and create safer work zones for both workers and motorists. Collaboration with various stakeholders is essential to ensure effective implementation of work zone safety measures.

Traffic Incident Management -

Traffic incidents are unplanned roadway events that affect or impede the normal flow of traffic. Traffic incidents increase the likelihood of secondary crashes and pose a threat to the safety of incident responders as well as the traveling public. Incidents affect travel reliability, commerce, and transportation system performance. One of the essential responsibilities of transportation and public safety agencies is to ensure the safe and quick clearance of traffic incidents. Traffic Incident Management (TIM) consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM reduces the duration and impacts of traffic incidents; improves the safety of motorists, crash victims, and emergency responders; and reduces the frequency of secondary crashes. (FHWA) TIM is integral the National Roadway Safety Strategy (NRSS), and is specifically called out as a key element for the post-crash care objective. The goal for the Federal Highway Administration (FHWA) TIM Program is to continuously improve the safety of responders and road users, the reliability of travel, and the efficiency of incident and emergency response through institutionalization of TIM programs. **<u>To achieve this goal, the FHWA TIM Program focuses on five tracks:</u>**

- National Leadership and TIM Organization
- Data and Performance Management
- Research and Development for Technology, Tools, and Practice Innovation
- Training, Education, and Outreach
- Policies, Procedures, and Laws

Oklahoma currently has Oklahoma Traffic Incident Management (OKTIM) that focuses on how to reduce the duration and impacts of traffic incidents and improves the safety of motorists, crash victims and emergency responders. The TIM Program of the Federal Highway Administration (FHWA) is part of a larger all-hazards program called Emergency Transportation Operations (ETO). More information on OKTIM can be found here, https://oktim.org/public/resources.

<u>OKTIM lists 6 main goals of the coalition that NORTPO supports in its planning activities:</u>

- Reduce the number of struck-by and deaths of roadway workers and responders.
- Reduce the number of secondary crashes that raises risks and costs tied to traffic management.
- Reduce the lateral economic, financial, and productivity insults caused by traffic queues.
- Lower the risks and cost associated with insuring vehicles and personnel (specifically those on state plans).
- Reduction of on-scene times of responders of roadway incidents.
- Continue public education with regard to Okla. traffic laws pertaining to this issue.

NORTPO can play a significant role in (TIM) by facilitating coordination among various agencies and stakeholders. Here are some ways NORTPO can assist with TIM:

• **TIM Training and Education**	• **NORTPO can organize and support TIM training programs for transportation professionals, emergency responders, law enforcement, and other relevant personnel. These training sessions can focus on incident response protocols, traffic control techniques, communication strategies, and the importance of quick and coordinated actions during traffic incidents.**
• **Multi-Agency Collaboration**	• NORTPO can foster collaboration and communication among agencies involved in TIM, including transportation departments, law enforcement agencies, emergency medical services, and towing companies. By bringing these stakeholders together, NORTPO can facilitate the development of joint response plans, standard operating procedures, and mutual aid agreements.
• **Incident Management Plans**	• NORTPO can assist in the development and implementation of comprehensive incident management plans that outline strategies and responsibilities for managing traffic incidents. These plans can address incident detection, response, traffic control, alternate routes, and recovery procedures, with a focus on minimizing traffic disruptions and ensuring the safety of responders and motorists.
• **Public Awareness and Communication**	• NORTPO can lead public awareness campaigns to educate drivers about the importance of safe and responsible driving during incidents. These campaigns can highlight the need for driver awareness, following directions from responders, and adhering to traffic control measures. Clear communication through media channels and public outreach initiatives can help improve driver behavior and reduce secondary incidents.
• **Data Collection and Analysis**	• NORTPO can collect and analyze data on traffic incidents, including response times, clearance rates, and congestion impacts. This information can be used to identify trends, evaluate the effectiveness of TIM strategies, and guide future improvements in incident management practices.
• **Performance Monitoring and Evaluation**	• NORTPO can establish performance measures and metrics to assess the effectiveness of TIM efforts. By regularly monitoring and evaluating performance, NORTPO can identify areas for improvement and advocate for necessary changes in policies, procedures, and resource allocation.

By actively engaging in these activities, NORTPO can help enhance coordination, response efficiency, and overall safety in traffic incident management within the region.

Congestion Management –

Congested roads and bottlenecks choke commuting and commerce and cost Oklahoma drivers $1.5 billion each year in the form of lost time and wasted fuel. Due to the Covid-19 pandemic, vehicle travel in Oklahoma dropped by as much as 33 percent in April 2020 (as compared to vehicle travel during the same month the previous year) but rebounded to five percent above March 2019 levels by March 2021. A congestion management process (CMP) is a systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meet State and local needs. This is used to identify, evaluate, respond to and alleviate traffic congestion. A CMP is required in metropolitan areas with population exceeding 200,000, known as Transportation Management Areas (TMAs).

NORTPO currently has no cities exceeding that population threshold, and has no expectations of that growth in the near future, but utilizing CMP's performance-based approach to planning for congestion management is a useful strategy in the more populated cities of Enid, and Ponca City. Survey respondents also show no sign of concern when it comes to congestion management in the region. NORTPO will utilize the federal regulations provided in the 23 Code of Federal Regulations (CFR) Section 450.32 when conducting any analysis of congestion in the region, which can be found here: Federal Highway Administration (FHWA) Fixing America's Surface Transportation (FAST) Act Website, Summary, https://www.fhwa.dot.gov/fastact/summary.cfm. It is the goal of NORTPO to work with member entities in addressing recurring and non-recurring congestion management issues in key corridors identified by the public.

Safe System Approach/Vision Zero

USDOT has adopted a Safe System Approach as the guiding paradigm to address roadway safety. The Safe System Approach has been embraced by the transportation community as an effective way to address and mitigate the risks inherent in our enormous and complex transportation system. It works by building and reinforcing multiple layers of protection to both prevent crashes from happening in the first place and minimize the harm caused to those involved when crashes do occur. It is a holistic and comprehensive approach that provides a guiding framework to make places safer for people. This is a shift from a conventional safety approach because it focuses on both human mistakes AND human vulnerability and designs a system with many redundancies in place to protect everyone. The zero deaths vision acknowledges that even one death on our transportation system is unacceptable and focuses on safe mobility for all road users. Applying the Safe System approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body doesn't result in a fatality or serious injury. Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity. The Safe System Approach is based on five elements as shown in the graphic below—Safer People, Safer Roads, Safer Vehicles, Safer Speeds, and Post-Crash Care—and differs significantly from a conventional safety approach in that it acknowledges both human mistakes and human vulnerability and designs a redundant system to protect everyone. (Source: https://visionzeronetwork.org/resources/demystifying-the-safe-system-approach/)

NORTPO intends to adopt this approach to its planning with the inclusion of vision zero in all planning actives, and the development of a safety plan that focuses on prevention of fatalities. The principles of this approach include:

- **Death and Serious Injuries Are Unacceptable:** A Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries.
- **Humans Make Mistakes:** People will inevitably make mistakes and decisions that can lead or contribute to crashes, but the transportation system can be designed and operated to accommodate certain types and levels of human mistakes, and avoid death and serious injuries when a crash occurs.
- **Humans Are Vulnerable:** Human bodies have physical limits for tolerating crash forces before death or serious injury occurs; therefore, it is critical to design and operate a transportation system that is human-centric and accommodates physical human vulnerabilities.
- **Responsibility is Shared:** All stakeholders—including government at all levels, industry, non-profit/advocacy, researchers, and the general public—are vital to preventing fatalities and serious injuries on our roadways.
- **Safety is Proactive:** Proactive tools should be used to identify and address safety issues in the transportation system, rather than waiting for crashes to occur and reacting afterwards.
- **Redundancy is Crucial:** Reducing risks requires that all parts of the transportation system be strengthened, so that if one part fails, the other parts still protect people.

Resiliency Planning

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience. Recognizing that extreme weather such as flooding and wildfire, and changes in environmental conditions may threaten the condition and longevity of the region's transportation infrastructure, transportation agencies have begun to assess vulnerabilities and consider the resilience of their transportation assets during the transportation planning process in project development and design and optimizing operations and maintenance practices. The resiliency planning ensures the region's communities better prepare for, respond to, and recover from any challenging, changing conditions, and unexpecting events. The goal is to reduce the impacts in the area, build and sustain community capabilities, protect the resources, and support the economy. Resilience, with respect to a project, means the ability to anticipate, prepare for, or adapt to conditions or withstand, respond to, or recover rapidly from disruptions, including the ability to: (A) resist hazards or withstand impacts from weather events and natural disasters; or reduce the magnitude of. For more information on resiliency planning tools view, https://www.efc.csus.edu/reports/resilience-planning-tools-and-resources-for-communities.pdf. An example of successful resilience planning can be found by the response to Covid-19 pandemic. Having tools that describe ways that local governments can increase transportation safety by prioritizing essential over non-essential workers.

In the NORTPO region, NODA produces hazard mitigation plans that have a focus on resiliency. Utilizing these is necessary to find areas where transportation projects may run into environmental stresses. NORTPO intends to adopt a resiliency improvement plan that prioritizes projects and assets that are vulnerable. The steps for this plan will be the following:

A.) Assessing Risks:

Step 1: Understand the threats and hazards posed to assets

Step 2: Identify vulnerable assets and determine potential impacts

B.) Developing Action Plans:

Step 3: Identify and evaluate adaptation, mitigation, and recovery actions

Step 4: Develop plan to implement actions

System Management & Technology

Utilization of technology in planning at is necessary as there are increasingly more options available for system management. Monitoring the use of technology and change is a key component for NORTPO staff members, and sharing that knowledge in the engagement with stakeholders is a key task. Examples of emerging technologies include, vehicle automation and related technologies with the connection of autonomous vehicles; telework, which rapidly increased during the pandemic, and will create further uncertainties in travel patterns; e-commerce is an evolving form of how goods and services have taken shape, effecting the patterns of land use and travel; electrical vehicles are also undergoing a rapid revolution in the transition away from fossil-fueled internal combustion engines. The timing and nature of this transition remains uncertain in the area due to lack of infrastructure, and maintenance, but comes with with implications for infrastructure and planning for long range transportation. Ongoing changes in safety technology and behavior present unique challenges. Adapting to these changes, and also viewing changes as new opportunities for solutions to road safety issues will be an ongoing process that will require analysis. (Source: Source https://www.nhtsa.gov/technology-innovation/automated-vehicles-safety#topic-road-self-driving)

Human behavior in management will also be effected by technology as technology often creates new hurdles for humans to interact with such as distracted phone driving did in the early 2000's. Understanding and reacting to this uncertainty in technology in the transportation industry is a key role to be understood at NORTO. Another area where NORPTO will have to be diligent, in the context of system management is policy and regulations of technology. Funding with policy is always a concern due to the dynamics of the political process and the variations of sources such as fuel tax, and other fees. Government regulations and policies change overtime and can shift the entire priority of transportation agencies. Economic flows also effect the pace and change of forecasting for transportation. This includes the supply chain costs, labor market, and other market dynamics such as inflation. All of these factors affect the way transportation systems are managed. Emerging threats in systems include cyber security threats that disrupt transportation system and the ability for people to navigate. Utilizing risk management will involve identifying risk and vulnerabilities in the region and developing plans and methods for how to reduce the likelihood of those impacts. Another way of using risk management includes scenario planning which involves the analysis and preparation for multiple potential futures. By using contingency factors, we can help account for unknown costs.

NORTPO has identified the following as ways to assist in transportation system management:

- **Visioning and GIS Planning Tools: Mapping tools help stakeholders develop a shared vision for the future, and can help illustrate the types, direction, and size of impacts in an area.**
- **Pavement Management Systems: Pavement management systems assist in pavement management decisions, often by storing data on pavement inventory and conditions, storing information on inspections, forecasting pavement condition, and selecting optimal preservation activities.**
- **Bridge Management Systems: Bridge management system assist in bridge management decisions, often by storing data on bridge condition and inspections, forecasting bridge condition, and selecting optimal activities to maintain a state of good repair.**
- **Transit Asset Management Systems: Transit asset management systems store condition data and maintenance activity, prioritize maintenance and replacement activities within limited funding, and calculate investment needs.**
- **Travel Demand Models: Travel demand models predict future travel activity within their modeling region under specified conditions.**

GPS

The increase of people's use of smart-phones has enabled planners to have a source of large amounts of mobility data such as commuters GPS records. NORTPO beginning to leverage GPS trajectory data will help draw additional insight into travel behavior and enhance data-driven decision-making capabilities for the region. Utilization of GPS data can help tract movements and analyze transport activities. Information gathered from GPS data can help gain better insight into operations costs from an environmental perspective, and provide solutions to making routes more efficient. Transportation costs, and CO2 emissions are directly related to the costs in the supply chain. These are controllable costs although and reducing CO2 emissions is part of any effective transportation solution. GPS can track truck movements and analyze transport activities such as stop times, loading and unloading times, driving distances and speed. Each of these variables contributes to further CO2 emissions. GPS data can also be used to show trips between counties, trips entering and leaving main cities, and the number of vehicles traveling. This information can easily be shown in infographic charts, or maps for stakeholders to view and utilize when making policy decisions. Information gained from GPS analysis can also help with where to place facilities such as the determination on where truck, or rest areas meet the traffic demands of the region. GPS data is not limited to vehicles as cyclists can benefit from accurate information on traffic flow, and volume as well.

Adaptive Signal Control Technology (ASCT)

ASCT makes traffic signals more efficient, and effective in helping drivers reach their destinations safer and faster by reducing traffic delays, and congestions. Unlike traditionally timed traffic signals, signals with ASCT are able to react to the changing traffic conditions on the roadway caused by traffic crashes, special events, road construction, and other roadway incidents in real-time. According to the Federal Highway Administration (FHWA), adaptive signal technology can improve a signal's performance metrics. The technology works by collecting data using strategically placed sensors typically placed through the vehicle detection system, evaluating how the signal is performing with its current settings and then implementing modifications based on the evaluation. Many studies have shown that adaptive signal control improves average performance metrics (travel time, control delay, emissions, and fuel consumption) by 10 percent or more. In systems with extremely outdated signal timing, and under saturated conditions, the improvement can be 50 percent or more. Adaptive signal control technologies are widely used in the United Kingdom, Asia, and Australia. In the United States, adaptive signal control technologies are being used on less than one percent of all signalized intersections. The cost of hardware can be an issue, but other barriers include the expertise necessary to configure and maintain the system, a lack of active performance measurement, and myths about the benefits of adaptive signal control technology. (Source: https://www.fhwa.dot.gov/innovation/everydaycounts/edc-1/pdf/asct_brochure.pdf) The traditional signal timing process is time-consuming and requires substantial amounts of manually collected traffic data. The process for ASCT is rather simple as the sensors collect data, and then the data is evaluated and signal timing improvements are developed. Finally, the adaptive signal control technology implements signal timing updates every few minutes, whereas signal retiming might only repeat this process every 3 to 5 years. NORTPO can work together with communities in order to incorporate this technology in areas where there are more delays, and congestion, primarily in the urban areas of the region.

Drones

Unmanned aerial vehicles (UAVs), or unmanned aerial systems (UAS), which are commonly referred to as drones, have been widely used for various applications, such as security, search and rescue, monitoring of infrastructure systems, package delivery and disaster management. The benefits of UAS are wide ranging and impact nearly all aspects of highway transportation-replacing boots on the ground, increasing accuracy, speeding up data collection, and providing access to hard-to-reach locations. Drones can be productive for rural and suburban areas for transportation planning as rural areas have less resources for hands on activities. An example for next generation technology includes being able to inspect difficult locations such as tunnels and bridges, and utilize those images in the regional plans for transportation improvements. Another helpful tool is drones can help assist with environmental assessments, aerial mapping, and traffic data collection. NORTPO will consider the best ways to utilize this new technology in transportation planning

whilst noting any drone usage should comply with local regulations, privacy considerations, and safety protocols. (Source: https://www.fhwa.dot.gov/uas/hif20091.pdf)

Data in Transportation Planning

To address the emerging topic areas of data sharing, needs, and analytics, FHWA Division and FTA regional offices should encourage State DOTs, MPOs, RTPO's and providers of public transportation to incorporate data sharing and consideration into the transportation planning process, because data assets have value across multiple programs. Data sharing principles and data management can be used for a variety of issues, such as freight, bike and pedestrian planning, equity analyses, managing curb space, performance management, travel time reliability, connected and autonomous vehicles, mobility services, and safety. Developing and advancing data sharing principles allows for efficient use of resources and improved policy and decision-making at the State, MPO, regional, and local levels for all parties.

The impact of automation is potentially high for operational processes, especially repetitive processes, but the impact is lower for processes with strategic importance that benefit from increased data availability and advanced analytics to support manual decision taking. Planners can be found in a wide range of supply chain functions, including demand planning, inventory planning, supply planning, production planning, distribution requirements planning, order management and more. Planners typically account for one third of administrative roles in supply chain management—more than any other function. NORTPO will actively work together with other transportation leaders including transit agencies, engineers, city/county officials etc. in order to create the efficient use of data and analysis of transportation in the region.

Emphasis Areas

In transportation planning, emphasis areas refer to specific focus areas or key priorities that receive special attention and resources to achieve specific objectives. These emphasis areas vary based on the unique needs, goals, and challenges of a particular region or transportation system. We have already listed our overall goals in Chapter 1, but emphasis areas from FHWA include creating sustainable, active, transit oriented, equitable, safe, multi-modal and resilient transportation systems. Source: 2021 Planning Emphasis Areas (dot.gov) Below we will emphasize some of our plans for how to enact these emphasis areas in our planning for NORTPO.

Equity/Justice40

The Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (EO 13985) pursues a comprehensive approach to advancing equity for all, including individuals who have been historically underserved and adversely affected by persistent poverty or income inequality.) EO 13985 defines the term "equity" as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian 3 Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, as exemplified by the list in the preceding definition of "equity." In addition, Executive Order 14008 and M-21-28 provides a whole-of-government approach to advancing environmental justice by stating that 40 percent of Federal investments flow to disadvantaged communities.

An important area for U.S. DOT's focus is the disproportionate, adverse safety impacts that affect certain groups on our roadways. For example:

- Fatalities among Black people increased by 23% between 2019 and 2020 compared to an overall increase of 7.2%.
- People who are American Indian and Alaska Native have roadway fatality rates more than double the national rate on a per population basis.
- Although men consistently represent more than 70% of drivers involved in fatal crashes, when comparable crashes are analyzed and risk-taking differences are accounted for, studies have shown that motor vehicle fatality risk is, on average, 17% higher for a female than for a male of the same age.
- The 40% of counties with the highest poverty rates in 2019 experienced a fatality rate 35 % higher than the national average on a per population basis.

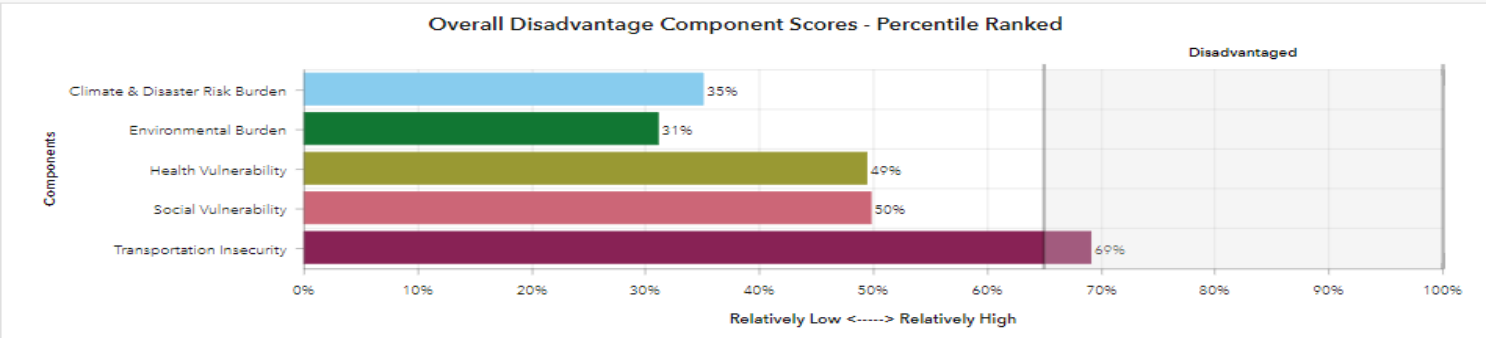
NORPTO will help advance equity as an instrumental component of transportation safety and convene key stakeholders – government at all levels, law enforcement, advocacy and community organizations, and the general public – to develop both a better understanding of the intersection of equity and roadway safety, and a comprehensive approach to incorporating equity into all of the planning efforts in order to achieve zero roadway fatalities and serious injuries. Another focus for NORTPO will be on neighborhood bifurcation that shows how communities are segregated/divided by physical barriers. The study on these divisions will be identified in future planning initiatives, and will be supported by NORPTO at a neighborhood, and city level project. These projects include new or improved walking, biking, and rolling access for individuals with disabilities, especially access that reverses the disproportional impacts of crashes on people of color and mitigates neighborhood bifurcation. Federal transportation funding focused on responding to travel demand and moving vehicles quickly, so 4-lane and 6-lane arterials started radiating out from city centers while others encircled them. Because of political resistance from white, wealthy, and well-connected residents, the paths of destruction mostly went through poor, Black, and brown neighborhoods. As a result, low-income families who cannot afford a car are disproportionately exposed to traffic violence as they attempt to walk and bike to work, school, and other destinations.

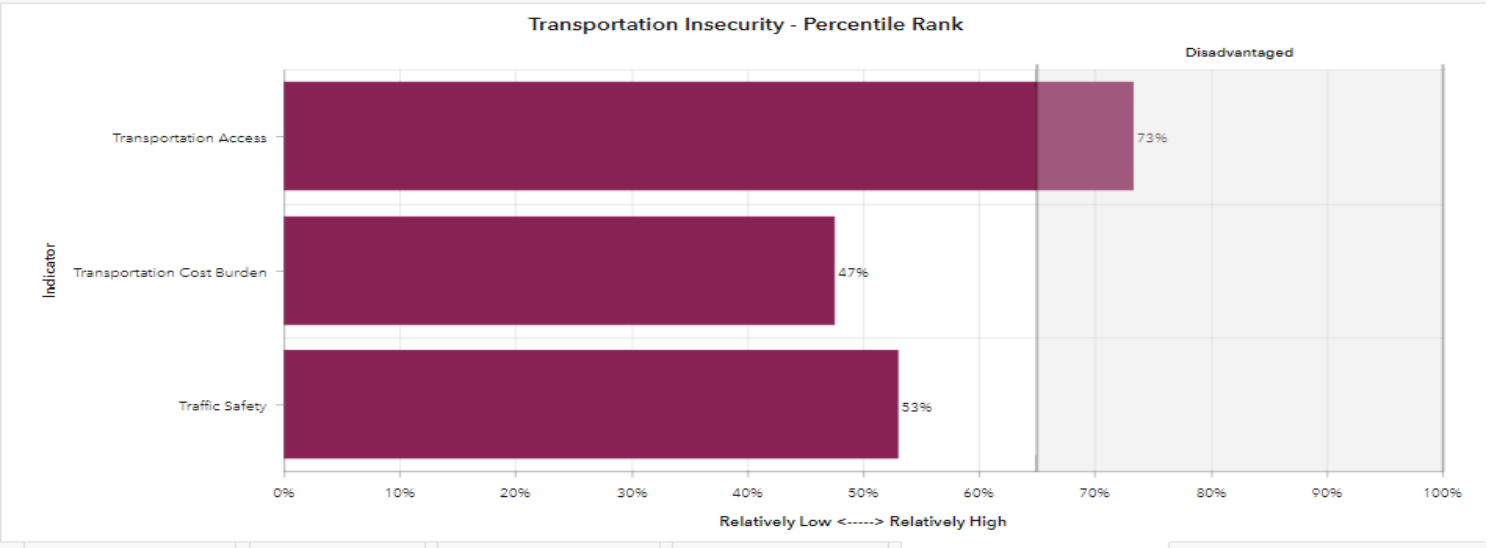
The FHWA has long embraced non-discrimination policy to make sure federally-funded activities (planning through implementation) are not disproportionately adversely impacting certain populations. These populations include low income persons and populations as defined by the U.S. Department of Health and Human Services (HHS) Poverty Guidelines, and persons and populations of color. As such, public involvement and outreach for the LRTP must adhere to Presidential Executive Order 12898, Environmental Justice. FHWA Division and FTA regional offices should work with State DOTs, MPOs, RTPO's and providers of public transportation to advance racial equity and support for underserved and disadvantaged communities. This will help ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas. In NORTPO, transportation insecurity is the highest disadvantaged percentile rank at 69%. This is largely due to lack of transportation access, and traffic safety. 33% (79.8k) of people living in the region are located in a disadvantaged census tract. (Infographic below)

NORTPO encourages the use of strategies that:

- Improve infrastructure for non-motorized travel, public transportation access, and increased public transportation service in underserved communities.
- Plan for the safety of all road users, particularly those on arterials, through infrastructure improvements and advanced speed management.
- Reduce single-occupancy vehicle travel and associated air pollution in communities near high-volume corridors.
- Offer reduced public transportation fares as appropriate
- Target demand-response service towards communities with higher concentrations of older adults and those with poor access to essential services.
- Consider equitable and sustainable practices while developing transit-oriented development including affordable housing strategies and consideration of environmental justice populations

NORTPO – Disadvantaged Percentile Rank – USDOT Equitable Transportation Community – 2023





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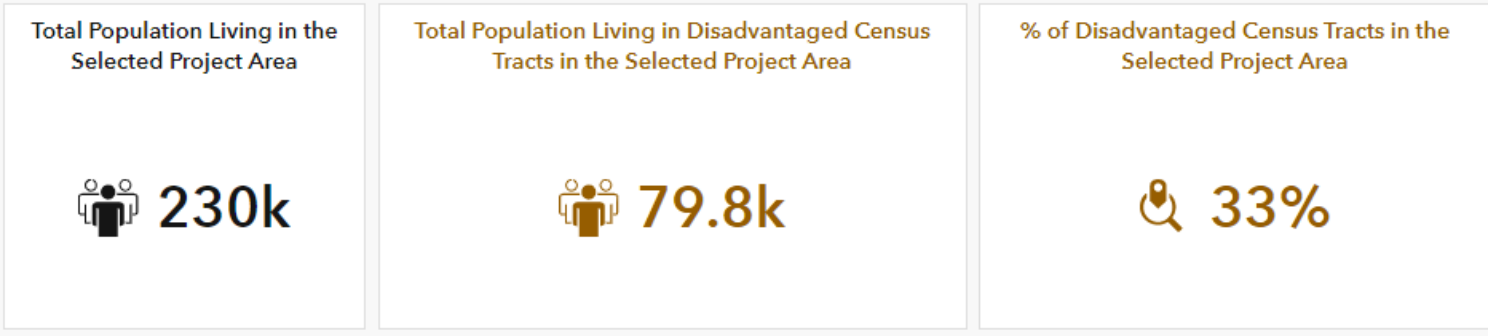


Climate Change

The Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad deploys the full capacity of Federal executive agencies to combat the climate crisis. As climate change continues to re-shape our environment, its future effects on roadway safety will need to be taken into account. Improved safety on our roadway is needed to increase use of transit, walking, rolling, and riding as a key strategy for achieving transportation greenhouse gas reductions goals. People who select climate-friendly transportation options decrease transportation-related emissions that contribute to climate change. Yet compared to people in vehicles, walkers and bikers suffer disproportionately from serious injuries and fatalities when a crash occurs. Moreover, in the past decade, fatalities among pedestrians and bicyclists have been increasing faster than roadway fatalities overall, which has a chilling effect on climate-friendly transportation options such as walking, biking, rolling, or taking public transportation. To unlock the climate benefits of those modes, we need road and street systems that feel and are safe for all road users.

Federal Highway Administration (FHWA) divisions and Federal Transit Administration (FTA) regional offices should work with State departments of transportation (State DOT), metropolitan planning organizations (MPO), and providers of public transportation to ensure that our transportation plans and infrastructure investments help achieve the national greenhouse gas reduction goals of 50-52 percent below by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change. Field offices should encourage State DOTs, RTPO's and MPOs to use the transportation planning process to accelerate the transition toward electric and other alternative fueled vehicles, plan for a sustainable infrastructure system that works for all users, and undertake actions to prepare for and adapt to the impacts of climate change. Appropriate Unified Planning Work Program work tasks could include identifying the barriers to and opportunities for deployment of fueling and charging infrastructure; evaluating opportunities to reduce greenhouse gas emissions by reducing single-occupancy vehicle trips and increasing access to public transportation, shift to lower emission modes of transportation; and identifying transportation system vulnerabilities to climate change impacts and evaluating potential solutions.

Following the planning emphasis areas, the FHWA Division and FTA regional offices should also encourage State DOTs, MPOs and Public Transportation Agencies to implement Planning and Environment Linkage (PEL) as part of the transportation planning and environmental review processes. The use of PEL is a collaborative and integrated approach to transportation decision making that considers environmental, community, and economic goals early in the transportation planning process, and uses the information, analysis, and products developed during planning to inform the environmental review process. PEL leads to interagency relationship building among planning, resource, and regulatory agencies in the early stages of planning to inform and improve project delivery timeframes, including minimizing duplication and creating one cohesive flow of information. This results in transportation programs and projects that serve the community's transportation needs more effectively while avoiding and minimizing the impacts on human and natural resources.

Some types of projects tend to increase greenhouse gas emissions. For instance, expansions in roadway capacity induce additional travel, counteracting congestion reduction benefits, resulting in increased emissions. If the project would not reduce greenhouse gas emissions, we should ask what actions within the project will be taken to reduce emissions relative to standard practice? For instance, including elements in the project such as use of low carbon materials; express lanes that charge a toll for single occupancy vehicles but not for buses or carpools; solar panels; pedestrian

facilities; and additional transit service. NORTPO will work to develop Carbon Reduction Strategies outlining how they will reduce greenhouse gas emissions from transportation in all planning activities.

Complete Streets

Following the planning emphasis areas, FHWA Division and FTA regional offices should work with State DOTs, MPOs and providers of public transportation to review current policies, rules, and procedures to determine their impact on safety for all road users. This effort should work to include provisions for safety in future transportation infrastructure, particularly those outside automobiles. A complete street is safe, and feels safe, for everyone using the street. FHWA and FTA seek to help Federal aid recipients plan, develop, and operate streets and networks that prioritize safety, comfort, and access to destinations for people who use the street network, including pedestrians, bicyclists, transit riders, micro-mobility users, freight delivery services, and motorists. NORTPO intends to study the streets in the area and find the bottlenecks to complete streets. The goal is to provide an equitable and safe transportation network for travelers of all ages and abilities, including those from marginalized communities facing historic disinvestment. This vision is not achieved through a one-size-fits-all solution – each complete street is unique and developed to best serve its community context and its primary role in the network. Per the National Highway Traffic Safety Administration's 2019 data, 62 percent of the motor vehicle crashes that resulted in pedestrian fatalities took place on arterials. Arterials tend to be designed for vehicle movement rather than mobility for non-motorized users and often lack convenient and safe crossing opportunities. They can function as barriers to a safe travel network for road users outside of vehicles. To be considered complete, these roads should include safe pedestrian facilities, safe transit stops (if present), and safe crossing opportunities on an interval necessary for accessing destinations. A safe and complete network for bicycles can also be achieved through a safe and comfortable bicycle facility located on the roadway, adjacent to the road, or on a nearby parallel corridor. Jurisdictions will be encouraged to prioritize safety improvements and speed management on arterials that are essential to creating complete travel networks for those without access to single-occupancy vehicles. (Below is a table on how NORTPO can help with a complete streets policy.)

An ideal Complete Streets policy includes the following:

1. **Establishes commitment and vision:**
   How and why does the community want to complete its streets? This specifies a clear statement of intent to create a complete, connected network and consider the needs of all users.

2. **Prioritizes underinvested and underserved communities:**
   Requires jurisdictions to define who are their most underinvested and underserved communities and prioritize them throughout.

3. **Applies to all projects and phases:**
   Instead of a limited set of projects, it applies to all new projects, retrofit or reconstruction projects, maintenance projects, and ongoing operations.

4. **Allows only clear exceptions:**
   Any exceptions must be specific, with a clear procedure that requires high-level approval and public notice prior to exceptions being granted.

5. **Mandates coordination:**
   Requires private developers to comply, and interagency coordination between government departments and partner agencies.

6. **Adopts excellent design guidance:**
   Directs agencies to use the latest and best design criteria and guidelines, and sets a time frame for implementing this guidance.

7. **Requires proactive land-use planning:**
   Considers every project's greater context, as well as the surrounding community's current and expected land-use and transportation needs.

8. **Measures progress:**
   Establishes specific performance measures that match the goals of the broader vision, incorporate equity considerations, and are regularly reported to the public.

9. **Sets criteria for choosing projects:**
   Creates or updates the criteria for choosing transportation projects so that Complete Streets projects are prioritized.

10. **Creates a plan for implementation:**
    A formal commitment to the Complete Streets approach is only the beginning. It must include specific steps for implementing the policy in ways that will make a measurable impact on what gets built and where.

(Source: https://smartgrowthamerica.org/10-elements-of-complete-streets/)

Regional Coordination

Regional-Coordination between municipalities at every level, county commissioners, elected officials, state officials including the DOT, and local stakeholders is the foundation of RTPO's. NORTPO establishes collaborative partnerships with neighboring transportation planning organizations, municipalities, counties, and tribal entities in Oklahoma. By working together, sharing resources, and exchanging information, NORTPO helps develop a comprehensive understanding of transportation needs and challenges in the region and provide that information to stakeholders. This collaboration can also help to identify and address common transportation challenges, such as traffic congestion, air pollution, and accessibility for people with disabilities. By leveraging regional coordination, NORTPO can enhance its transportation planning efforts, foster collaboration among stakeholders, optimize resource allocation, and develop a cohesive and efficient transportation network that benefits the communities and economies of Northwestern Oklahoma.

(NORTPO) can utilize regional coordination to enhance its transportation planning efforts in a number of ways:
Data Sharing: Coordinating with other transportation planning entities allows NORTPO to share data and information related to traffic volumes, road conditions, population trends, economic development, and other relevant factors. This data sharing facilitates a more accurate and informed decision-making process for transportation planning initiatives.
Joint Planning: NORTPO can engage in joint planning efforts with neighboring regions and organizations to develop integrated transportation plans. By considering the transportation needs and goals of the larger region, NORTPO can ensure that its initiatives align with and complement those of neighboring areas, fostering connectivity and regional cooperation.
Standardization: Regional coordination enables NORTPO to work towards standardizing transportation policies, guidelines, and practices across jurisdictions in northwestern Oklahoma. This standardization can include design standards for roadways and infrastructure, transit service parameters, safety protocols, and other aspects. Standardization enhances consistency and efficiency in regional transportation systems.
Resource Allocation: By coordinating with other entities in the region, NORTPO can collaborate on prioritizing transportation projects and optimizing the allocation of resources. Sharing information about funding opportunities and leveraging regional partnerships can maximize the impact of transportation investments and address regional priorities effectively.
Public Engagement: NORTPO engages the public through joint public outreach initiatives with neighboring organizations. Coordinating public meetings, workshops, and surveys can provide opportunities for residents, businesses, and stakeholders to contribute input, voice concerns, and participate in the transportation planning process for the entire region.

Here are some specific examples of how NORTPO can utilize regional coordination:

- Collaborate with neighboring jurisdictions to develop a regional transit plan that connects communities across the region.
- Coordinate with local governments to identify and address transportation needs in underserved areas.
- Work with state and federal agencies to secure funding for transportation projects that benefit the region as a whole.
- Engage the public in transportation planning discussions to ensure that the needs of all stakeholders are met.

By taking advantage of regional coordination, NORTPO can play a vital role in ensuring that Northwestern Oklahoma has a safe, efficient, and accessible transportation system that meets the needs of its residents and businesses for years to come. Included in parts of this coordination, that will be specified more below, is collaboration with other plans for the region by identifying overlapping and common issues.

County Transportation Plans

NORTPO has authored nine other long range transportation plans for the counties of Garfield, Kay, Kingfisher, Noble, Grant, Alfalfa, Major, Blaine, and Woodward. These plans should be updated every five years and are written with a 20-year forecast period. (Source: https://nortpo.org/plans/) These plans are available on the nortpo.org website and have been delivered to staff of each incorporated city and town of the previously mentioned counties. NORTPO staff is planning on completing more county specific plans for the remainder of OEDA's district after the completion of this R-LRTP.

Native American Tribe Transportation Plans

Kaw, and Ponca tribes each have their own long range transportation plans, and we're consulted during the planning process. NORTPO echoes the issues identified in each tribal nations plans, and addresses those issues with an increased importance due to their status of being historically underserved communities within the region. These emphasis issues include the following; occupant protection devices, roadway departure crashes, fixed object crashes, availability of public safety services, and intersection safety. Source: (https://www.kawnation.gov/wp-content/uploads/2022/06/Kaw-Nation-LRTP-2020-FINAL.pdf)

The U.S. Department of Transportation's (USDOT) Federal Highway Administration (FHWA) announced cooperative agreements re-establishing regional Tribal Technical Assistance Program (TTAP) centers. The centers will assist Tribal communities as they seek to access $3 billion in Tribal Transportation Program Funding made available by President Biden's infrastructure package, as well as additional Federal funding opportunities. FHWA's move from a centralized technical assistance model – headquartered in a single, centralized location under a two-year pilot program – back to a regional technical assistance model responds to the input of Tribes gathered in 13 listening sessions over seven months, and input from Tribal stakeholders through a Federal Register Notice Request for Information. These conversations illuminated the diversity of needs across the wide range of geographic, topographic, and climate conditions that exist across Indian country. The regional centers will ultimately serve the 12 Bureau of Indian Affairs (BIA) regions and associated Tribes and meet the transportation training and education needs of Native American communities, building skills and expertise to ensure the safety and maintenance of Tribal roads. TTAP centers are established to deliver the Tribal component of FHWA's Local Technical Assistance Program to Tribal communities. The centers provide American Indian and Alaska Native Tribal governments with training, technical assistance, and technology services that best meet the needs of Tribal communities, including on-demand, virtual, and hands-on services that strengthen Tribal capacity for self-governance of transportation programs. TTAP centers complement other DOT technical assistance resources designed to support Tribal, rural and disadvantaged communities. The Southern TTAP Center is located just outside of NORTPO's region in Stillwater at the campus of Oklahoma State University. NORTPO often attends their technical trainings for assistance in the region and will continue to provide technical assistance to tribal nations in the area.

Coordinated Human Services/5310 Transit Plan

Currently the Coordinated Human Services plan has NORTPO counties in both regions 2, and 3. These boundaries we're deemed rather arbitrary by ODOT in 2023, and have been amended for the newest version of this plan to match the local RTPO's boundaries. NORTPO has been involved in the Northwest Region 5310 Coordination Plan Working Group that assists in bringing together multiple transit organizations, and stakeholders in the region. The collaboration with the Oklahoma mobility management program has been significant, as NORTPO hosted the state's first ever mobility manager, and remains highly involved in transit related discussions at every level.

City Comprehensive Plan/Capital Improvement Plan

The communities that have comprehensive plans are the city of Enid, the city of Ponca city, the city of Woodward, and city of Guymon. Many of these planning documents have not been updated. For example, Enid's plan's for long range transportation plan is from 1994, and the trails master plan is from 2009. (Sources: https://www.cityofwoodward-ok.gov/DocumentCenter/View/144/Woodward-Comprehensive-Plan-PDF , http://www.poncacityok.gov/533/Comprehensive-Plan, https://www.enid.org/business/community-

development/comprehensive-plans-and-studies, https://irp-cdn.multiscreensite.com/e7a31057/files/uploaded/City%20of%20Guymon%202017%20Comprehensive%20Plan.pdf)

Towns and Cities also have capital improvement plans that are authored by the COG's in the region. (Table 3.24, and 3.25 - CIP's completed in NODA and OEDA areas.) NODA has completed 44 CIP's in their 8 county region, and has 4 currently in progress being updated, and OEDA has completed 11 CIPs for their 8 county region in the past 8 years. Each of these plans we're evaluated and utilized as a resource for this R-LRTP to assist in determining project selection recommendations.

Community Economic Development Strategy (CEDS)

NODA and OEDA both have CEDS plans for their eight county regions. A CEDS is the result of a local planning process designed to guide the economic growth of an area. The CEDS process provides the capacity building foundation to help create jobs, foster more stable and diversified economies, and improve living conditions. The strategy provides a mechanism for coordinating the efforts of individuals, organizations, local governments, and private industries concerned with economic development. (NODA Source: https://noda-ok.org/wp-content/uploads/2023/05/CEDS-2023-Update.pdf OEDA Source: https://www.oeda.org/wp-content/uploads/2020/07/20-24.pdf) In the CED's in NORTPO's region, transportation systems are mentioned as a key component as transportation expenses, and logistics are vital to the agricultural industry. The promotion of expanded transportation systems is encouraged, and specifically the promotion of I-35 as a central transportation corridor in the region. Continuing to assist with TAP is another important component that the CED plan specifically mentions NORTPO as playing an important role for the regions alternative transportation, and grant acquisition. Improving multi-modal transport is mentioned as another important improvement for the region as the current transportation network in OEDA's area is viewed as an economic weakness. NORTPO works in tandem with the regional COG's on these economic plans, and identifies overlapping concerns where transportation plays a role.

State Plans

ODOT authors a myriad of plans that are related to transportation which includes:

- Statewide Long Range Transportation Plan (SLRTP)
- Statewide Transportation Improvement Plan (STIP)
- County Investment for Roads and Bridges Construction Work Plan (CIRB)
- Eight-year Construction Work Plan (CWP)
- Asset Preservation Plan
- Oklahoma Freight Transportation Plan
- Active Transportation Plan
- Safe Transportation for Every Pedestrian (STEP)
- Strategic Highway Safety Plan (SHSP)

All of which are available on the state website and in the resource list in the appendix. NORTPO works together with ODOT on these plans by adding any necessary input for the region, and also helps in prioritizing the projects listed in the plans with the northwest community.

The development of Construction Work Plan begins with the Field Division Engineers and is guided by their knowledge of the transportation needs and priorities in their respective divisions. They and their staff work to maintain an understanding of the condition of the roads and bridges in their areas of responsibility. In addition, other key department divisions collect and analyze transportation data factoring the following general characteristics as applicable and listed in no particular order:

- surface condition
- bridge condition
- geometrics (vertical and horizontal alignment)
- average annual daily traffic (AADT)

- percentage of truck traffic
- accident history
- local, regional and national traffic patterns
- capacity

The understanding gained from this information is then coupled with the careful consideration of the Field Division's condition and capacity assessments of the highway network and the associated critical needs, their anticipated improvement budgets, and further communication with the Division's Transportation Commissioner. The Field Division Engineers then review and validate the scheduled Construction Work Plan projects and formulate a group of new projects to be added in accordance with the projected funding availability. The Strategic Asset & Performance Management Division and Programs Division are responsible for coordinating the State's transportation planning efforts with those of Oklahoma's Metropolitan Planning Organizations, and consulting with the tribal governments and local officials with responsibilities for transportation. The development of the Long Range Plan, the maintenance of the Statewide Transportation Improvement Plan as derived from the first four years of the ODOT Eight Year Construction Work Plan, Corridor Studies, as well as early project development all include opportunities for public participation and review. The results of this public involvement, input from ongoing coordination and consultation, and the planning documents are provided to the Field Division Engineers for their consideration as the Work Plan is developed. The Project Management Division works directly with and assists the Field Division Engineers in the development of their respective Division's Construction Work Plan and in the subsequent daily management of the project development activities. Projects proposed by the Field Division Engineers that did not previously exist in the Construction Work Plan are validated to the extent possible in order to institute a preliminary scope, schedule and budget. Concurrently and to the extent possible, the scope, schedule and budget of projects that previously existed in the Construction Work Plan are re-validated. The Project Management Division then continues to facilitate necessary modifications to the scope, schedule and/or budgets of approved Construction Work Plan projects as more detailed information becomes available during the course of Project Development. Validation of projects is accomplished through drive outs and/or other project team meetings with the complete participation of appropriate Engineering and Operations Divisions as deemed necessary. The responsible Project Manager schedules, coordinates, documents and facilitates these meetings. The Director, Deputy Director and the Chief Engineer, in concert with the Director of Engineering, Director of Operations, Director of Capital Programs, the Programs Division, the Project Management Division and the Field Division Engineers work to fiscally constrain and balance the Construction Work Plan in accordance with the allocation requirements of the applicable Federal funding categories. The Work Plan balancing is performed with foremost consideration for maintaining the integrity of the Field Division Engineer's and the Transportation Commissioner's project priorities. In addition, the balancing process seeks to insure that each Field Division is allocated available funding in accordance with the aggregate State and Federal budget projections.

Given the number of extreme variables and the inherent need to maintain a balance between available funds and the Divisional funding commitments, the final Divisional projections are adjusted within a given year. Any adjustments are initiated with consideration for the ongoing debt service requirements of the previous Corridor Plan projects, the ability to schedule and prepare projects for construction in the appropriate Federal-Aid funding categories and the ability to sustain a reasonable annual Construction Work Plan in each Division. The Construction Work Plan is balanced within these guidelines and has been determined to be an equitable representation to the satisfaction of the Department and the Transportation Commission.

Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination

The Strategic Highway Network (STRAHNET) is critical to the Department of Defense's (DoD's) domestic operations. The STRAHNET is a 62,791-mile system of roads deemed necessary for emergency mobilization and peacetime movement of heavy armor, fuel, ammunition, repair parts, food, and other commodities to support U.S. military operations. Even though DoD primarily deploys heavy equipment by rail, highways play a critical role. FHWA Division and FTA regional offices should encourage MPOs, RTPO's and State DOTs to coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure and connectivity needs for STRAHNET

routes and other public roads that connect to DOD facilities. According to the Declaration of Policy in 23 U.S.C. 101(b)(1), it is in the national interest to accelerate construction of the Federal-aid highway system, including the Dwight D. Eisenhower National System of Interstate and Defense Highways, because many of the highways (or portions of the highways) are inadequate to meet the needs of national and civil defense. The DOD's facilities include military bases, ports, and depots. The road networks that provide access and connections to these facilities are essential to national security. The DOD's facilities are also often major employers in a region, generating substantial volumes of commuter and freight traffic on the transportation network and around entry points to the military facilities. Stakeholders are encouraged to review the STRAHNET maps and recent Power Project Platform (PPP) studies. These can be a useful resource in the State and MPO areas covered by these route analyses. (Source: https://ops.fhwa.dot.gov/etotimpse/preparedness/eto/index.htm) NORTPO will continue to pursue partnerships with the DOD as Vance Air Force base in Enid plays a key role in the region's transportation impacts, and I-35 is a part of the strategic highway network for national defense.

Federal Land Management Agency (FLMA) Coordination

FHWA Division and FTA regional offices should encourage MPOs, RTPO's and State DOTs to coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands. Through joint coordination, the State DOTs, MPOs, RTPO's, Tribal Governments, FLMAs, and local agencies should focus on integration of their transportation planning activities and develop cross-cutting State and MPO long range transportation plans, programs, and corridor studies, as well as the Office of Federal Lands 5 Highway's developed transportation plans and programs. Agencies should explore opportunities to leverage transportation funding to support access and transportation needs of FLMAs before transportation projects are programmed in the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP). Each State must consider the concerns of FLMAs that have jurisdiction over land within the boundaries of the State (23 CFR 450.208(a)(3)). MPOs must appropriately involve FLMAs in the development of the metropolitan transportation plan and the TIP (23 CFR 450.316(d)). Additionally, the Tribal Transportation Program, Federal Lands Transportation Program, and the Federal Lands Access Program TIPs must be included in the STIP, directly or by reference, after FHWA approval in accordance with 23 U.S.C. 201(c) (23 CFR 450.218(e)).

Chapter 4 – Public Participation

Summary

This chapter presents and describes the public participation tools that NORTPO utilized as part of their planning process for the R-LRTP. Public participation is a federal requirement of MAP-21 and NORTPO abides by those requirements to facilitate equitable public involvement in their planning activities. Public participation is often used interchangeably with public involvement, and is an integral part of the transportation process which helps to ensure that decisions are made in consideration of and to benefit of public needs and preferences. Early and continuous public involvement brings diverse viewpoints and values into the decision-making process. One of the primary benefits of the RTPO is the conduction of meaningful public participation which has involved seeking public input at specific and key points in the decision-making process, where such input has a real potential to help shape the final decision or set of actions. This engagement in the NORTPO region is extremely valuable due to the regions rural nature which has historically been less involved. Before every key section of the R-LRTP process public participation is used to inform the decisions. The characteristics of an effective public participation process include the following:

- Clearly defined purpose and objectives
- Proper identification of the public and affected stakeholder groups
- Clear identification of techniques for engaging the public
- Concerted effort to identify how future visions and goals of the community will affect transportation
- Effective procedures for notifying groups of meetings, progress, and benchmarks
- Methods and measures for evaluating whether a public involvement program is effective
- Education techniques that lead to an accurate and full public understanding of transportation issues
- Follow-through to demonstrate that decision-makers fully considered public input
- Feedback from the public on whether involvement process is effective

Source: Transportation Planning Process Briefing Book (2019)

Pursuant to Executive Order 12898, Federal Actions to address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994, and the subsequent U.S. Department of Transportation Order 5680.3, issued April 15, 1997, NORTPO promotes Environmental Justice (EJ) in all aspects of the transportation planning process. NORTPO embraces nondiscrimination policies to ensure federally funded activities do not disproportionally adversely impact certain populations. These populations include low-income populations as defined by the U.S. Department of Health and Human Services (HHS) Poverty Guidelines, as well as minority persons and populations (Black, Hispanic, Asian-American, American Indian and Alaskan Natives). As such, public involvement and outreach for the Plan adhered to Presidential Executive Order 12898, Environmental Justice.

The consideration of vulnerable populations plays a vital role in regional planning and NORTPO's policy is to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which NORTPO receives federal financial assistance. Additional protections are provided in other federal and state statutes for religion, sex, disability, and age. NORTPO strives to ensure nondiscrimination in all programs and activities, whether they are federally funded or not. These include federal regulations for accessible locations and activities for persons with disabilities under the Americans with Disabilities Act (ADA) (Title II, Subpart D-Program Accessibility §35.149) and Rehabilitation Act of 1973 (Section 504). The Plan conforms to guidelines set forth in transportation

legislation, Fixing America's Surface Transportation (FAST) Act. NORTPO continually reviews the plan to ensure it remains viable for the public and compliant with all federal regulations. Actions taken by NORTPO in order to include disabled populations include the sharing of Title VI brochures, and translation cards that are available for every public meeting, and event. Specifically, NORTPO has adopted a Limited English Proficiency Plan (LEP) which identifies concentrations of populations with limited English proficiency and outlines how we will make reasonable accommodations to provide translation services to our identified language group(s). These documents can be found on our website, and available at NORTPO offices, and are located in Chapter 2 of this planning document. NORTPO abides by all federal public participation requirements for statewide and nonmetropolitan transportation planning organizations outlined in 23 CFR part 450.210. This chapter will include summaries of the Public Participation Plan (PPP) and (LEP) plans. Additionally, this chapter includes criteria and tools for the examination of projects to determine if they have disproportionally adverse, and or positive effects on at risk populations by utilizing tools shared by FHWA and also identified key issues and trends from public involvement phases throughout plan development.

Coordination Plans

Coordination efforts included the development, and usage of the (PPP) and a (LEP). The PPP was adopted by the NORTPO in 2016, with the latest amendment on Jan 24th, 2019. (https://nortpo.org/wp-content/uploads/2021/01/NORTPO-Public-Participation-Plan-FFY2019-with-Resolution.pdf) The PPP includes many activities to enhance public participation and involvement such as surveys, visualization techniques, such as banners, fact sheets, circulation of documents, and expanded digital photography and advertisements; public meetings that fit in accordance with the open meetings act, public engagement, surveys, press outreach, website maintenance, planning reviews, and increased translation materials. NORTPO utilizes these techniques at libraries, DHS, community centers, retirement centers, court houses, chambers, and local newspapers within the region. The purpose of the PPP is to outline methods and approximate timeframes for encouraging citizens to be involved in and comment on development of the R-LRTP, and the ongoing planning process with explicit public comment periods. All of the NORTPO Board meetings are open to the public and will be conducted in a location that complies with the Americans with Disabilities Act (ADA). A reasonable period of time (15-20 minutes) for comments from members of the public will be provided prior to the adjournment of said meetings. The plan indicates reasonable public access to technical and policy information by being available during normal business hours to discuss technical and policy information with citizens and other interested parties. These procedures will provide opportunities for citizens to contribute ideas and opinions early and at every stage of the planning process. Efforts will be made to assure participation in the transportation planning and programming process by traditionally underserved individuals including elderly, low income, minority, persons with disabilities, and persons with limited English proficiency.

The LEP was developed, and executed by NORTPO in April of 2022. (https://nortpo.org/wp-content/uploads/2022/05/NORTPO-LEP-Plan-Executed-2022.pdf) The purpose of the LEP is for individuals who do not speak English as their primary language, and are limited in their ability to read, write, or understand it are classified as LEP. According to the U.S. Census Bureau's American Community Survey, individuals who experience LEP are defined as individuals 5 years or older who self-identify as speaking English less than "very well". Total LEP population equals the sum of all individuals who speak a language other than English and of that population speak English less than "very well." As a recipient of funding from the US Department of Transportation (USDOT) via SPR funds administered by the Oklahoma Department of Transportation (ODOT), NODA must assure that individuals experiencing LEP have meaningful language assistance by reasonable means when using NODA or NORTPO services. There is a notice in English provided for all public and committee meeting notices that is stated as "Any person requiring special accommodation for participation in the meeting should contact the NODA/NORTPO office at least seventy-two hours in advance of the meeting time with their request." NORTPO will make reasonable efforts to provide language assistance to ensure meaningful access for individuals who experience LEP by conducting a Four-Factor Analysis to assess the need.

The assessment constitutes:

- The number or proportion of individuals who experience LEP eligible to be served or likely to be encountered by a program, activity, or service
- The frequency with which individuals who experience LEP come into contact with programs, activities, and services
- Nature and importance of the program or service to the individuals who experience LEP
- Resources available to the recipient and costs for the organization

NORTPO staff is informed of our process for interacting with any individual who experiences LEP. "I Speak" cards are located within the NORTPO office and will be available at all NORTPO community engagement events. Any interaction where cards are used will be documented.

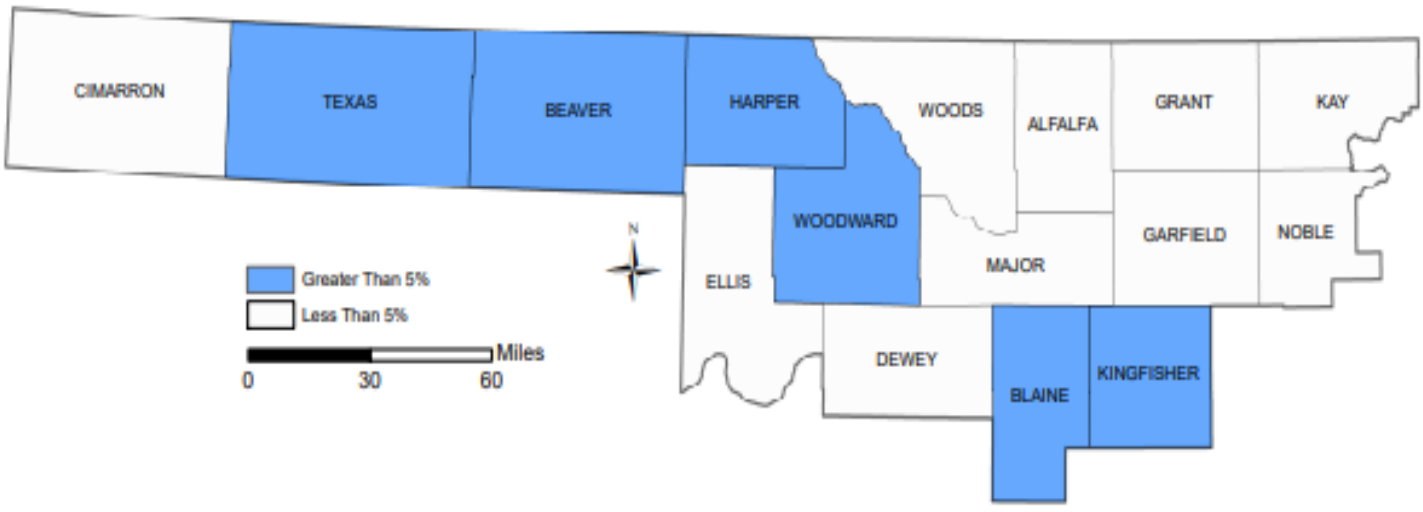
A review of the LEP Plan coincides with the review of the Public Participation Plan. For each review, NORTPO staff considers the following:

- How many individuals who experience LEP were encountered and were their needs met?
- What is the current population of individuals who experience LEP, and how has it changed?
- Has there been a change in the types of languages where translation services are needed?
- Have available resources, such as technology, staff, and financial costs changed?
- Were any complaints received?
- Has NORTPO fulfilled the goals and intent of the LEP and PPP Plans?

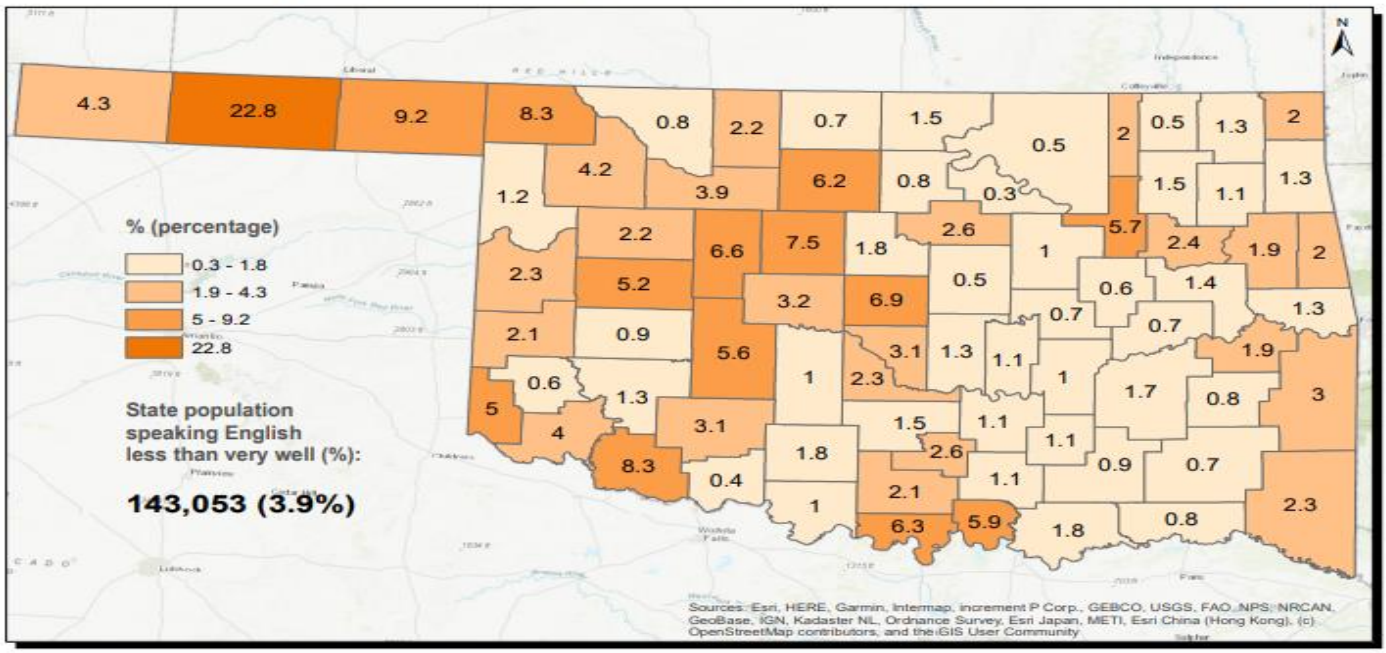
The maps below indicate that Beaver, Blaine, Harper, Kingfisher, Texas, and Woodward counties all have higher LEP, and there should be a focus on providing accessible materials when having events and discussions in or about these areas. Specifically, Texas county is host to the highest percentage at 22.8 percent at LEP. Garfield, and Kay county should also be taken into consideration as well due to the sheer size of population in those counties that may have LEP individuals in the area. NORTPO is currently working on including "I speak translation cards" for the Marshallese who have a higher population in the Enid area.

Limitied English Proficiency (LEP) Map

Counties Identified as LEP for Spanish Speakers

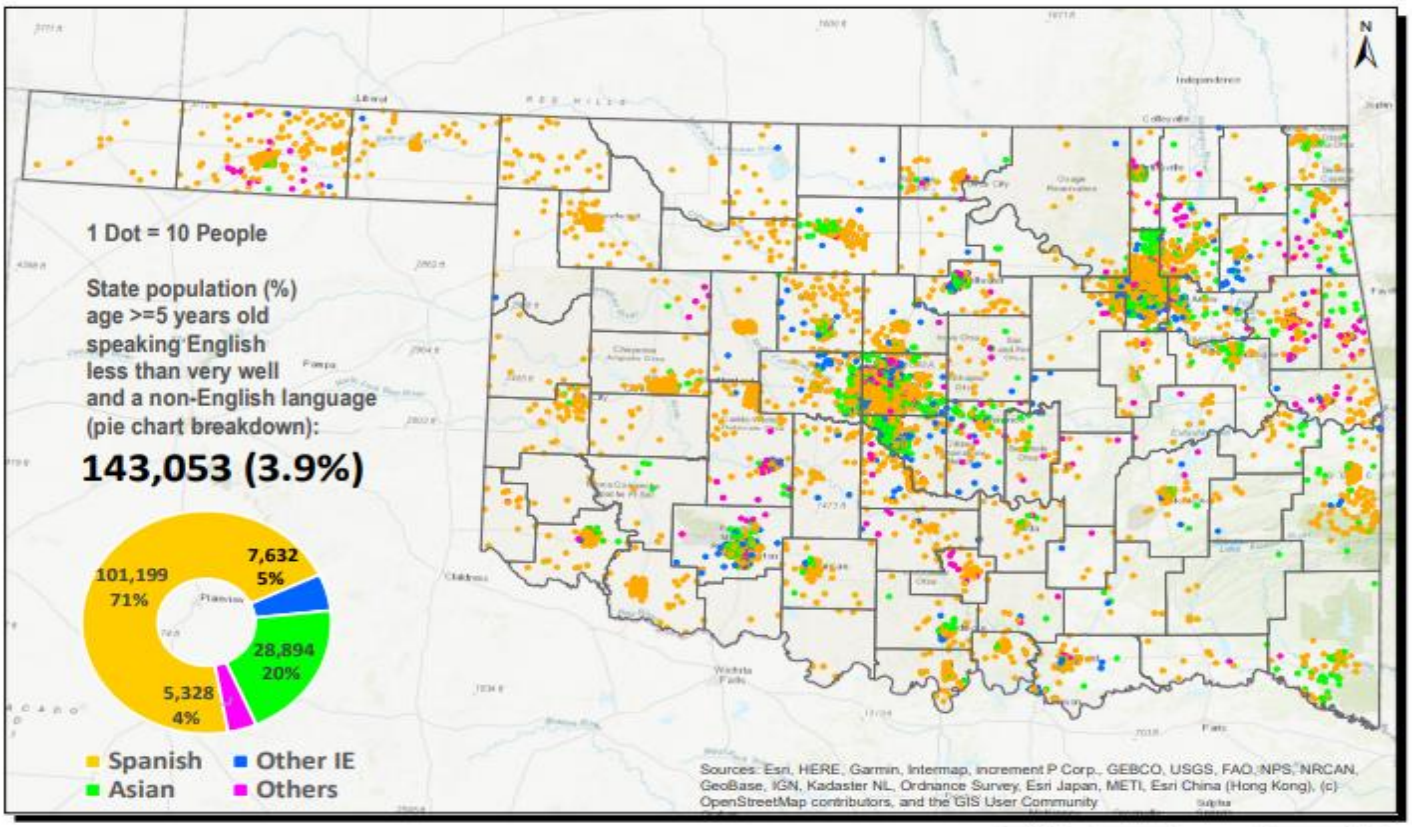


% of County Population Speaking Limited English, Age >= 5yr.



• Notes: County Percentage = county population speaking English less than very well / county population.
• Data Source: U.S. Census, The American Community Survey, ACSST5Y2020.S1601. • Created by OMHHE (OSDH) in May 2022.

Speak Limited English and A Non-English Language, Age >= 5Yr.



• Notes: Dots are randomly placed within their respective census tracts.
• Abbreviations: Asian → Asian and Pacific Islander languages, Other IE → Other Indo-European languages.
• Data Source: U.S. Census, The American Community Survey, ACSST5Y2020.S1601. • Created by OMHHE (OSDH) in May 2022.

Engagement Activities

As part of Plan development process, NORTPO conducted surveys, presented information at public meetings, solicited input from local governments and included information on the NORTPO website and social media accounts. Local government input included direct email communications soliciting input to identify transportation needs by soliciting input directly for elected officials, government agencies, and stakeholders were kept apprised of the LRTP planning status. Legal advertisements announcing the public hearing dates that were placed in local newspapers as shown in the infographics of the appendix.

The process to identify goals and objectives for the region started with a review and comparison of goals and objectives from other related planning documents and policies to ensure general consistency. This review included, but was not limited to the following:

- MAP-21 Federal Planning Factors
- ODOT, - Intermodal Long Range Transportation Plan - 2010-2035
- ODOT, Action Plan for Implementing Pedestrian Crossing Countermeasures at Uncontrolled Locations - 2018
- ODOT, Active Transportation Plan
- ODOT, Asset Preservation Plan – 2023-2026
- ODOT, Construction Work Plan – 2023-2030
- ODOT, Long Range Transportation Plan - 2020-2045
- ODOT, Post-Earthquake Response Plan for Oklahoma Bridges – 2017
- ODOT, Transportation Asset Management Plan - 2019-2028
- 2012 Freight Flow Study
- 2012 Transit Gap Overview and Analysis
- 5310 Coordinated-Human Services Plan
- All other county long range plans developed by NORTPO
- Oklahoma National Electric Vehicle Plan – 2023
- Oklahoma Public Transit Policy Plan - 2020
- Oklahoma, Freight Transportation Plan – 2023-2030
- Ponca City Comprehensive Plan
- NODA - Comprehensive Economic Development Strategies
- OEDA - Comprehensive Economic Development Strategies
- Kaw Nation Long Range Transportation Plan – 2020
- Local Capital Improvement Plans

Early, effective, and continuous public involvement brings diverse viewpoints into the decision-making process. FHWA Division and FTA regional offices should encourage MPOs, State DOTs, and providers of public transportation to increase meaningful public involvement in transportation planning by integrating Virtual Public Involvement (VPI) tools into the overall public involvement approach while ensuring continued public participation by individuals without access to computers and mobile devices. The use of VPI broadens the reach of information to the public and makes participation more convenient and affordable to greater numbers of people. Virtual tools provide increased transparency and access to transportation planning activities and decision-making processes. Many virtual tools also provide information in visual and interactive formats that enhance public and stakeholder understanding of proposed plans, programs, and projects. Increasing participation earlier in the process can reduce project delays and lower staff time and costs. More information on VPI is available here.

Engagement with transportation users, existing regional planning groups, tribal nations, state agencies, legislators, and the general public occurred throughout the process. Engagement activities included formal meetings as well as collaborative or small group conversations based on topic and needs of the task. Information on upcoming engagement activities are continuously posted on both the website and social media accounts. Engagement activities support all parts of plan development, starting with input to support PWP development and continuing through the characterization of potential issues, and the development of policy solutions in the plan as shown in the public involvement section below.

Public Involvement

NORTPO's process is proactive in its efforts to incorporate the public in their planning activities. NORTPO hosted 18 public meetings during the development of the Northwest Forward plan, at least one meeting was hosted in each county during the plan writing process (excluding Ellis County) and plans to host additional meetings during the public review phase– prior to adoption by the NORTPO Board. Outside of these formal public meetings NORTPO staff attended numerous community events throughout the region to inform the public of their activities and get their feedback on the transportation system.

During the 18 public meetings, numerous community leaders, and citizens were reached during staffs' attendance at various community events throughout the region. Serval ads and classifieds were taken out throughout the region to advertise the occurrence of the meeting(s) as shown in the appendix under infographic 4.1. These meetings took place in FFY2022 as shown in infographic 4.2 for the schedule of meetings. These materials we're shared on NORTPO's Facebook page several times, distributed through CST, and paper surveys/brochures were distributed during public engagement events such as GIS day at the Capitol, etc. In the appendix there is also examples of the newspaper fliers, event fliers, and brochures used for events. (Infographic 4.3, 4.4, and 4.5)

Through the public meetings in each county, NORTPO staff heard a variety of concerns from those who attended, ranging in areas from safety, tourism, economic development, policy recommendations and alternative transportation to name a few. The complete sets of notes taken during each meeting can be found in the appendix under table 4.1. The table below is a summary of these comments from the public meetings.

Comments from NORTPO Public Meetings FY22 and FY23 - Summarized Below

County	*Summarized - Public Comments:*
Alfalfa	Speed limits on SH 6 in town need to be changed, RR crossings on many county roads have no arms, and roads need to be maintained to great salt plains for economic development.
Beaver	Beaver EMS has to show up to all collisions/accidents within the county so personnel is stretched thin, speeding along highways is an issue throughout the county, Would support an Amtrak connection to Garden City KS through Beaver.
Blaine	State highway 8 in Hitchcock is too fast, County Road E0720 is in very poor condition, Okeene municipal airport is need of GPS and fueling capabilities, and the stripped line on SH 51 coming into town is seen as a hazard.
Cimarron	OK 325 is crucial to access the Mesa for emergency response and a lot of elderly residents live along that roadway, emergency response along OK 325 is difficult to provide, and OK 325 needs expansion to meet safety needs.
Dewey	Dewey County airport is in poor condition, US 183 going 4 lanes made collisions along that road decrease, US 60 and SH 47 are too narrow, and US 60 from Chester to Fairview needs improvement.
Garfield	Transportation hub between OKC and Wichita, overpass on Garriott at Grand in Enid is needed, and policy: Fuel and all trucks must not be allowed to stop in the left lane at RR tracks on US 412. Either change law or give tickets.

Grant	Safety complaint about lack of crossing arms or lights at railroad crossings, county roads are virtually impassable after heavy rains, and Red Hill Road needs to be widened or shoulders added.
Harper	Comments about cities having a lack of control over speed limits on highways going through their city limits for safety concerns related to speeding, and county-wide issues with culverts and bridges being too narrow.
Kay	The City of Ponca City wants Quite Zones built out for every rail road crossing within city limits, and Amtrak expansion from OKC OK through Ponca City to Newton KS.
Kingfisher	Cherokee Strip Transit needs to improve their ride request system, County roads being used as shortcuts around the Town of Hennessey is causing serious road condition problems, and SH 33 was noted as being in poor condition throughout the county.
Major	There have been conversations about expanding a fixed route transit service servicing Northwestern Oklahoma State University in Alva through MAGB, and US 60 and SH 58 in Major County are in poor condition.
Noble	There are stretches of US 177 that can be narrow, and all three rail road crossings in Perry cause considerable problems with traffic and emergency service response.
Texas	Desired fixed route Public transportation to Sea Board Farms in Guymon, sidewalks needed on US Hwy 54 and 24th St in Guymon since people bike and walk there, more transit/transportation options are needed for health care services out of town, and regular transportation service from Panhandle State University to Walmart in Guymon is a big need due to food insecurity on the university campus.
Woods	If you are ineligible for SoonerCare or Medicaid, you are ineligible to ride on MAGB transit, the local skilled nursing facility uses MAGB because patient's trips are eligible to be reimbursed through SoonerCare, and "10 percent of the population is served by transit" in Alva.
Woodward	Cities having a lack of control over speed limits on highways going through their city limits for safety concerns related to speeding, and major truck traffic on 412 causing congestion.

Survey's

NORTPO also distributed 4 surveys for stakeholders that we're specific to this R-LRTP construction to indicate locations of concern in regards to transportation amongst other relevant questions. 430 responses came from the initial survey and was supplemented by the next 3 surveys with an additional 158 responses, with a total of ***588 responses***. These surveys took place from FY22-FY23. This level of public involvement in the area is rather significant as shown by comparison with other surveys in the region such as the 2023 mobility coordinated plan that reached 62 stakeholders for the same regional area. NORPTO also utilizes data from that mobility survey, and OTA surveys for more in depth information on transit in the region. There was also made available survey's in Spanish for regions in the LEP areas. (Infographic 4.6)

Through the usage of surveys developed on Survey Monkey, and linked to the NORTPO website over the planning period, NORTPO was able to gather useful data on a variety of subjects by respondents including the following:

- Demographic Info (Race, Age, Gender)
- County and Work Residence
- Travel Mode Choice
- Reliable Transportation
- Nearest Grocery Store
- Active Transportation
- Tourism
- Transit Usage and Needs
- Covid Impact
- Total Miles Traveled (outside of work)
- Road Surface Quality for Towns, County and State
- Quality of Rail Road Crossings
- Challenges and Safety Concerns to The Transportation System
- Prioritization of Regional and County Transportation Issues
- Specific Locations of Transportation Issues

The results of these surveys are summarized below:

- Every county was represented in survey results with 588 respondents with an average of 33 respondents per county.
- Age category for responses varied, but the highest percentage of respondents we're 50-64.
- 80 percent of respondents we're white, and the other 20 percent varied with Native American at 8 percent, and Hispanic and African American at both 4 percent with another 4 percent as other.
- 80 percent of respondents from all survey's work in the same county they live in.
- Over 50 percent of respondents from all surveys indicated that they drive over 50 plus miles in trips outside of work.
- Only 24 percent of respondents from survey #3 said they worked remote at all during the pandemic.
- Over 98 percent in the region currently drive to work.
- 60 percent said they would consider utilizing other methods of transportation such as biking, or walking if it was easier to do so.
- Only 5 percent of respondents found railroad crossings to be in excelling shape.
- The most important priority for respondents was to improve safety and maintenance, and preservation of the current infrastructure.
- Adding shoulders to highways was the 2nd largest priority for respondents followed by connecting to larger infrastructure system at number 3.
- Bicycle and Pedestrian infrastructure was the least important goal for most individuals.

Each of the survey results can be found on https://nortpo.org/survey/

Projects included in this public comment project list were selected through information collected through surveys, and public meetings collected in FY22, and FY23. The projects are listed by category type, and it's important to note that many of these are local projects that are not on-system for ODOT, but could be potential projects for TAP, or CIRB. (List of Public Comment Projects - Table 4.2 in appendix)

Trends and Issues

Key findings and universal trends across the region are summarized in this section. NORTPO staff recognizes these issues to be of high priority for state and local elected and appointed officials to work with each other. NORTPO will continue to devise strategies to eliminate these issues which are at times not exclusively unique to the northwest corner of the state. The comments made and recorded from the public meetings reflect the attitudes and opinions of those individuals in attendance and not the view of NORPTO staff, and help guide any and all policy recommendations and planning activities. It's worth noting that most attendees of public meetings were from the host town of public meetings so many comments reflect local concerns so that should be considered for the holistic narrative. (Map Below)

Trends observed throughout the region

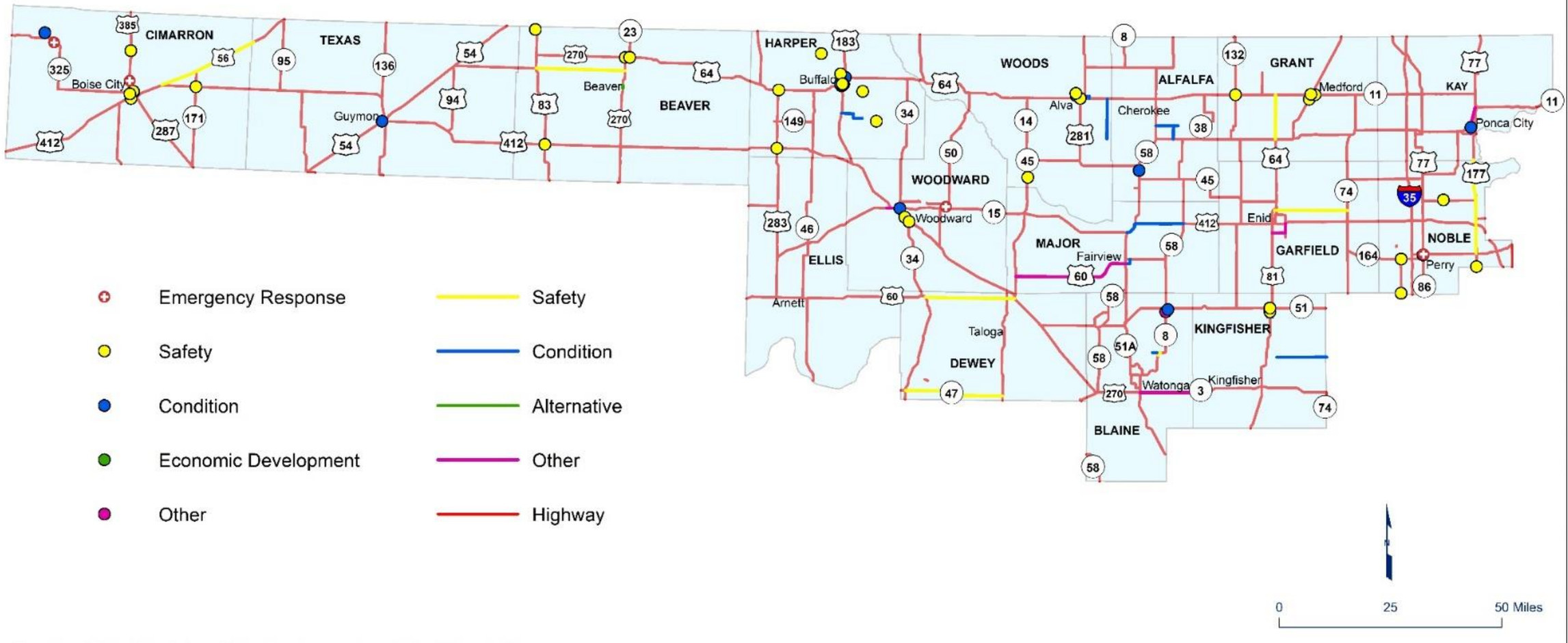
Several common trends can be identified across the comments from both surveys and in person events from various counties in Oklahoma

- **Transit Services:** Public transportation services are a significant need. At large, public transportation is viewed as unreliable, underfunded, and not fit to serve the public to its greatest extent possible. Service area expansion, increased operation times, and more fixed route services are desired across the region. Non-emergency medical transportation is the primary use for many users of the public transportation services departing from within the NORTPO region. Public transit services received attention in several counties. Attendees discussed the need for improved transit coverage, expanded service hours, and quicker response times, particularly for medical appointments. There was also an emphasis on making transit more accessible for various demographics.
- **Dangerous intersections on highways:** Since many of the roadways in the NORTPO region are broad stretches of highway the intersection of two or more can be dangerous. Drivers may not expect to see many other vehicles so when approaching intersections their alertness is lower than it might otherwise be in more populated areas resulting in the inattentiveness that leads to collisions. There are several examples of sharp intersections with no merge lanes or advance warning of approaching intersections.
- **Speed on state highways through downtowns:** Countless municipalities expressed the speed limit on their main streets is much too high to allow for safe pedestrian travel. Since most main streets in the NORTPO region reside along state highways the control of the speed limit is outside of the municipalities control official must petition the state for studies, reductions of speed, or crosswalk enhancements. Communication and state response to these concerns was noted as being difficult and often unfruitful.
- **Condition of roadways - County and State:** The most resounding concerns voiced by participants of our engagement efforts was related to the condition and maintenance of roadways, shoulders and striping on state, county and local roadways.
- **Railroad Crossing Safety:** Many counties expressed concerns about the safety of railroad crossings. Attendees highlighted the need for crossing arms, lights, and other safety features to prevent accidents and improve traffic flows.
- **Road Conditions and Maintenance:** Poor road conditions and maintenance were a widespread concern. Attendees mentioned issues with road surfaces, narrow roads, and lack of shoulders. Suggestions included widening roads, adding shoulders, and addressing poor pavement conditions.
- **Safety Improvements:** Attendees consistently voiced a need for safety improvements on highways and intersections. This includes adding lights, crosswalks, and better signage to enhance pedestrian safety and overall road safety.

- **Economic Development:** Several comments mentioned the importance of transportation infrastructure for economic development. Requests for improvements were often tied to supporting local businesses, industries, and tourism.
- **Amtrak Expansion:** The desire for Amtrak or passenger rail service expansion was expressed in multiple counties, indicating a broader regional interest in accessible and efficient public transportation options.
- **Emergency Access:** In some counties, attendees highlighted challenges related to emergency access, especially in remote areas. They discussed the importance of reliable roadways for emergency response.
- **Speeding Concerns:** Many counties mentioned speeding as a problem, leading to accidents and safety hazards. Attendees called for better enforcement and speed limit adjustments in specific areas.
- **Collaboration and Funding:** Attendees often questioned the accuracy of accident reporting systems, enforcement, and funding allocation. Some mentioned the need for collaboration between counties, cities, and state agencies to address these issues effectively.
- **Pedestrian and Bicycle Safety:** Requests for sidewalks, crosswalks, and bicycle safety improvements were consistent themes. Communities were interested in enhancing safety for pedestrians and cyclists, particularly around schools and high-traffic areas.
- **Access to Health Care:** Attendees highlighted the importance of transportation for accessing health care services, including medical appointments and obtaining health-related items from stores.

These common trends suggest that residents across various counties share similar concerns about transportation safety, infrastructure, accessibility, and its impact on economic development and public services.

Transportation Issues Identified Through Public Meetings



For more information visit our interactive map on our website at www.nortpo.org.

Disadvantaged Populations

Several environmental laws require tribal consultation during project development. Kaw Nation, Ponca Nation, Cheyenne-Arapaho, and Tonkawa Tribes were identified and invited to participate in the planning process via both calls, and emails. This engagement led to meetings with Ponca Nation, and communication with Cheyenne-Arapaho nation. In addition, a copy of the LRTP will be mailed to each tribal headquarters during the public review process. Continued and ongoing engagement and updates has been key in ensuring these tribal regions are updated on the regional plan development.

The maps in chapter 2 referencing poverty, limited language, and minority populations are key areas of focus for the regional plan in development of projects, as those areas are most likely to be impacted because of the disadvantaged populations.

An “Area of Persistent Poverty” is defined for the RAISE grant program by the Bipartisan Infrastructure Law. A project is located in an Area of Persistent Poverty for the RAISE 2023 grant program if:

1. the County in which the project is located consistently had greater than or equal to 20 percent of the population living in poverty in all three of the following datasets: (a) the 1990 decennial census; (b) the 2000 decennial census; and (c) the 2021 Small Area Income Poverty Estimates; OR

2. the Census Tract in which the project is located has a poverty rate of at least 20 percent as measured by the 2014-2018 5-year data series available from the American Community Survey of the Bureau of the Census; OR

3. the project is located in any territory or possession of the United States.

"Historically Disadvantaged Community" is defined for the RAISE program, consistent with OMB's Interim Guidance for the Justice40 Initiative. A project is located in a Historically Disadvantaged Communities if:

1. the project is located in certain qualifying census tracts; OR

2. the project is located on Tribal land; OR

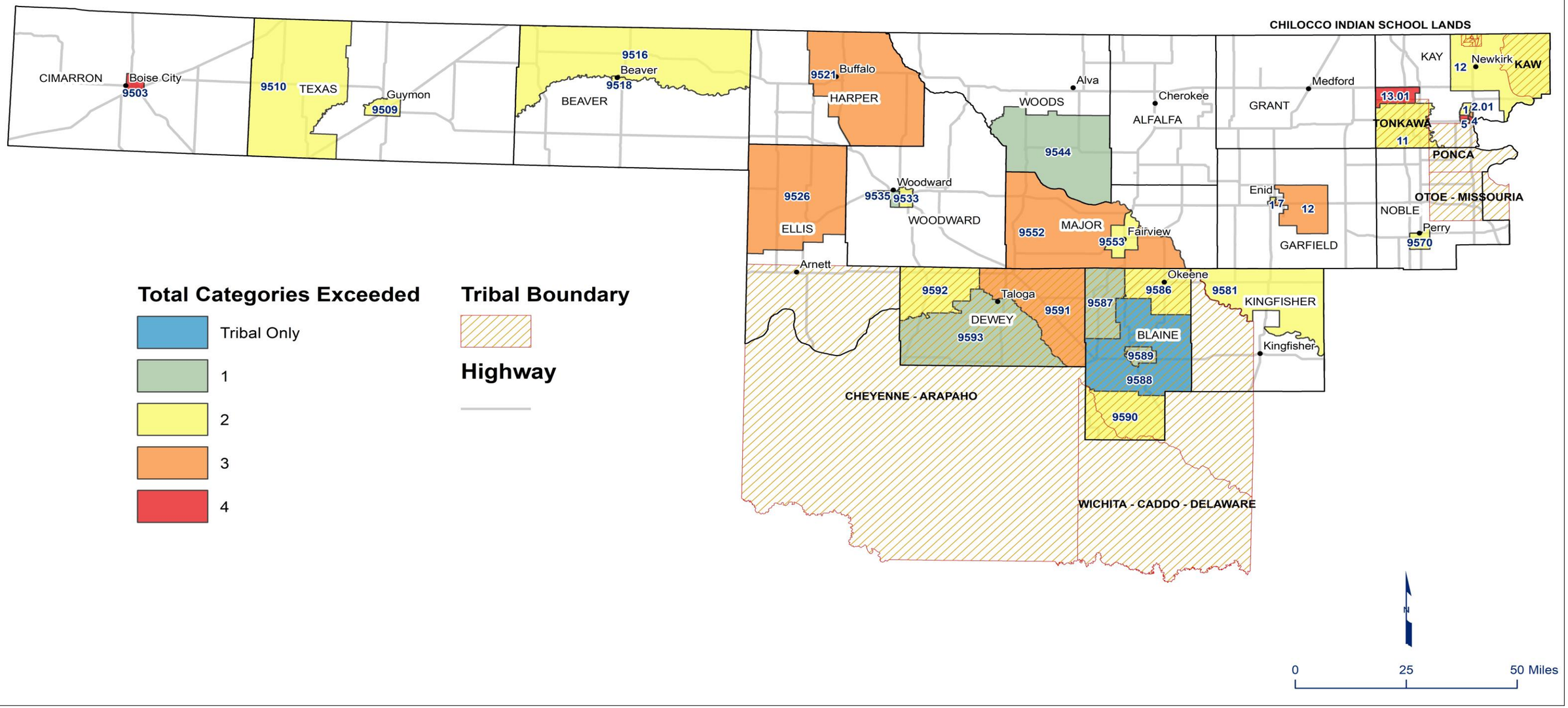
3. the project is located in any territory or possession of the United States.

Attached is a link to a tool that shows which areas in the region qualify - https://maps.dot.gov/BTS/GrantProjectLocationVerification/

(Source - USDOT - Areas of Persistent Poverty & Historically Disadvantaged Communities https://www.transportation.gov/RAISEgrants/raise-app-hdcLast updated: Wednesday, January 11, 2023)

Through the usage of the EJA Justice 40 mapping equity tool, NORTPO was able to identify areas that have the most significant disadvantaged regions, and dig down deeper into why the area is listed as disadvantaged and the number of disadvantages. The data indicates that Kay, and Major counties are the 2 most disadvantaged with 3 to 4 census categories exceeded in the census tracts. The most popular category exceeded in the region is climate and is closely followed by health. Transportation infrastructure could improve many of the health disparities sin the region with increased access to hospitals, and regional clinics. (Justice 40 – Map Below and Table 4.3)

Disadvantaged Communities



Chapter 5 – Financial Summary

This section examines the sources of funding that will be available for transportation investments within the region in the coming years and the general areas of expenditure for those revenues. This chapter identifies the revenues that can reasonably be expected to be available based on the following assumptions:

- Federal funding levels equal to FAST Act funding levels
- State funding levels consistent
- Local Municipalities and Counties
- Local match/Private

The R-LRTP considers ODOT's reports and plans as a guide in the forecasting of future revenues and expenditures for the next 20 years. While the use of this information is convenient it does not take into consideration what to expect in the future such as a pandemic that may curtail travel, resulting in a loss of fuel tax revenues, increase in the number of alternative fuel vehicles, natural disaster, or other potential changes that may negatively impact the funding of transportation projects. Any of these unforeseen events will directly impact the plan, and require further updates as a living document.

Transportation funding in Oklahoma is funded by local, state, and federal government initiatives. The plan will dive into each of these funding streams for availability of future funds. One of the largest concerns for the rural area of NORTPO is the lack of sufficient, and consistent levels of funding in order to complete all of the necessary projects on the transportation system. A consistent level of funding at each of these levels will be key in improving the region's infrastructure. While ODOT has been able to make significant improvements in recent years in the condition, safety and efficiency of its transportation system, additional funding will be needed to continue to make needed improvements, especially in the northwest region.

As Oklahoma strives to continue and expand its economic growth and enhance quality of life for its residents, it will be critical that the state is able to provide a well-maintained, safe and efficient 21st century network of roads, highways, bridges and transit that can accommodate the mobility demands of a modern society. (TRIP, Keeping Oklahoma Moving Forward: Providing a World Class Transportation System in the Sooner State, https://tripnet.org/wp-content/uploads/2021/06/TRIP_Keeping_Oklahoma_Moving_Forward_Report_June_2021.pdf June 2021)

Regarding federally, and state funded projects, the current Plan is fiscally balanced in that the total project costs do not exceed the anticipated federal funds. ODOT policy prohibits start of future projects until all funding is in place and federal regulations dictate projects cannot be programmed in the Statewide Transportation Improvement Program (STIP) unless there is a programmatic and financial game plan for completing the project within six (6) years. Sources and resources for funding information on federal, and state level funding on transportation is in appendix E-5.

Federal

Federal taxes on motor fuel, heavy trucks, tires and trailers, as well as appropriations from the General Fund by Congress, go to the Highway Trust Fund to provide funding for state, city and county road and bridge projects, and also for public transit. Taxes on gasoline and other motor fuels are collected and distributed from the Federal Highway Trust Fund (HTF) and are distributed to the states by the FHWA and the FTA to each state through a system of formula grants and discretionary allocations.

Oklahoma's federal transportation funding allocation is divided among highways, city streets, county roads, transportation research, metropolitan transportation planning, public transit and railroad crossing safety. Oklahoma also competes with other states for special federal grants for transportation projects especially since the passage of BIL.

Since 2008, revenue into the federal Highway Trust Fund has been inadequate to support legislatively set funding levels so Congress has transferred approximately $53 billion in general funds and an additional $2 billion from a related trust fund into the federal Highway Trust Fund. Signed into law in December 2015, the five-year Fixing America's Surface Transportation Act (FAST Act) was scheduled to expire on September 30, 2020. Congress extended the legislation for one year to September 30, 2021. The FAST Act provided modest increases in federal highway and transit spending. The bill also provided states with greater funding certainty and streamlines the federal project approval process. But the FAST Act did not provide adequate funding to meet the nation's need for highway and transit improvements and does not include a long-term and sustainable funding source.

Oklahoma federal-aid eligible roads, bridges and highways include the most critical routes in the state, including the Interstate Highway System, major highways and important rural and urban routes. Federal-aid eligible roadways in Oklahoma account for 31 percent of state lane-miles and carry 89 percent of all vehicle miles of travel in the state. Fifty-six percent of Oklahoma's bridges by count, and 82 percent of bridges measured by deck area are eligible for Federal aid.

Tribal

Within the NORTPO region there are six tribes as referenced in the demographic chapter that have shared the funding sources available to them. The Tribal Transportation Program (TTP) was established by the Surface Transportation Assistance Act of 1982. It addresses transportation needs of the 574 federally recognized Tribes by providing funds for planning, designing, construction, and maintenance activities. The program is jointly administered by FHWA and BIA in accordance with a MOU. Prior to SAFETEA-LU, Indian Tribal governments worked directly with the BIA or the DOI, Assistant Secretary of Indian Affairs in implementing the Tribal Transportation Program (TTP) program.

Since SAFETEA-LU, Indian Tribal governments have a choice in administration of the TTP program. As a result, under 23 U.S.C. § 202(a)(2), the Secretary of Transportation is authorized to enter into a Tribal Transportation Program Agreement (TTPA) with an Indian Tribal government to carry out a transportation program and projects. This allows Tribes the option of working directly with the FHWA in the administration of their Tribal Transportation Program.

For more information and technical assistance with the TTPA The Tribal Transportation Program Delivery Guide clarifies the terms, roles and responsibilities, and provisions for the Tribes and FHWA as outlined in the TTPA. It assists Tribal governments in the administration of the TTP, and sets out the processes and procedures used by FHWA to carry out its program management and oversight responsibilities.

A Tribe with a TTPA administers its own TTP, as authorized by Chapter 2 of Title 23.

The purpose of a TTPA is to:

- Transfer to the Tribe all the functions and duties that the Secretary of the Interior would have performed with respect to a program or project under Chapter 2 of Title 23, other than those that cannot be legally transferred.
- To provide the Tribe or its designee, under a Referenced Funding Agreement (RFA), its share of TTP funds.

The most common allowable activities for Tribes to spend TTP funds on are:

1. **Planning and Design Activities:**

- Indirect general and administrative costs include, but are not limited to, computers, software, office furniture, and other equipment needed to administer the TTP. See the section on Indirect Cost in Chapter IV - TTP Reporting Responsibilities.
- Transportation-related planning and programming activities (including but not limited to roadway, trails, transit, and safety planning and programming, and planning for tourism and recreational travel).
- Identification and evaluation of accident prone locations.
- Planning and design of Tribal transportation facilities.
- Engineering support studies (i.e. geotechnical, hydraulic, etc.)
- Environmental studies, evaluations, and compliance activities.
- Planning and design of mitigation for impacts to environmental resources (i.e. wildlife and their habitat, wetlands, cultural resources, water quality, air quality, etc.).
- Architectural and landscape engineering services including lighting.
- Inspection of bridges and structures.
- Public meetings and public involvement activities.

2. Construction and Maintenance activities:

- Construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements of TTP facilities (i.e. roads, trails, bridges, structures, pedestrian and bicycle facilities, transit facilities, ferry facilities, rest areas, parking areas, etc.).
- Use of a Tribe's allocation of TTP funds for contract support costs.
- Road sealing and chip sealing.
- ADA improvements.
- Seasonal transportation routes including, but not limited to, snowmobile trails, ice roads, and overland winter roads (also see 25 CFR § 170.117).
- Mitigation activities required by Tribal, State, or Federal regulatory agencies, and 42 U.S.C. § 4321 et seq., NEPA. See 25 CFR Part 170
- Maintenance of TTP facilities identified in the NTTFI (25 CFR § 170.805).
- Development and negotiation of Tribal-State road maintenance agreements.
- Purchasing, leasing or rental of construction and/or maintenance equipment.

State

Funding of local transportation projects and programs is heavily influenced by State of Oklahoma's annual budget, and the Highway Trust Fund. Three key components for Oklahoma transportation funding and investment include: House Bill 1078 (Rebuilding Oklahoma Access and Driver Safety), House Bill 2248 and House Bill 2249. Transportation funding sources based on motor vehicle fuel taxes tend to fluctuate with changes in fuel prices and fuel consumption. While most taxes are not tied to fuel prices, when gas prices go up, consumption tends to go down and thus tax revenues decline. Source: https://www.ok.gov/odot/FundingTransportationinOklahoma.html

The Oklahoma Legislature authorizes ODOT's annual budget comprised of federal and state motor fuel taxes, State Transportation Fund, Rebuilding Oklahoma Access, and Driver Safety (ROADS). Primary revenue sources for the Highway and Construction and Maintenance program are derived from the motor fuel taxes (gasoline excise tax, diesel fuel excise tax, special fuel use tax and special fuel decals). Taxes on the sale of heavy vehicles, truck tires and the use of certain kinds of vehicles bring in smaller amounts of revenue for the trust fund. Surface Transportation Program (STP) is federal funds utilized on road projects. These STP funds may provide up to eighty percent (80%) of the construction costs of these projects. Counties fund the remaining twenty percent (20%) match for construction costs, plus the costs for engineering, right of way and utility relocation through local sources or state fund. taxes.

Details on state funding is listed below:

Highways

- A portion of state motor fuel tax, motor vehicle tax and fee collections and income tax revenues go to the State Transportation Fund (STF), the State Highway Construction and Maintenance Fund, the Rebuilding Oklahoma Access and Driver Safety (ROADS) Fund and the High Priority State Bridge Fund for highway construction and maintenance. See below for details.
- By law, ODOT does not receive toll revenue; all toll collections go to the Oklahoma Turnpike Authority for turnpike construction, maintenance, operations and debt service.

Motor Fuel Taxes

- State taxes ($0.20 on gasoline and $0.20 on diesel) are assessed on each gallon of motor fuel purchased. The tax per gallon stays the same regardless of the price of fuel.
- By statute, state motor fuel tax revenue is apportioned to several areas of state government, cities, counties and tribes.
- ODOT receives both apportionments and appropriations of fuel tax revenue.

Motor Vehicle Collections

- Motor vehicle collections include state taxes and fees on automobile purchases, licenses, permits, tags, titles, etc.
- By statute, state motor vehicle collections are apportioned to several areas of state government, cities, counties and school districts

ROADS Fund

- Legislation passed in 2005 directed an annual allocation of state income tax revenue to the Rebuilding Oklahoma Access and Driver Safety (ROADS) Fund for highway construction. The annual allocation was incrementally increased several times by changes in law.

- Legislation passed in 2018 changed the composition of the ROADS Fund to include motor fuel tax and motor vehicle revenue in order to free up more income tax revenue to be returned to the state's General Revenue Fund for appropriation to other areas of government.
- By statute, the total ROADS Fund allocation is capped at $575 million annually.

Transit

- A portion of state motor fuel tax and income tax revenue goes to the Public Transit Revolving Fund to help rural public transit providers match federal funds

Rail

- A portion of state motor fuel tax, freight car tax and income tax revenue goes to the Rail Maintenance Revolving Fund for maintenance of state-owned railroad and rail crossing safety improvements and to the Oklahoma Tourism and Passenger Rail Revolving Fund for operation of the Amtrak Heartland Flyer passenger rail service.

The ODOT 8-Year Construction Work Program FFY 2023-2030 assembles projects according to anticipated state and federal fund categories. ODOT's current Eight-Year Construction Work Plan includes a variety of projects that address multiple needs across the state, including completing interchanges at I-235/I-44 and I-35/I-240 in Oklahoma City, continuing improvements at I-44/US-75 in Tulsa, expanding the I-40 corridor between Oklahoma City and Shawnee, improving pavement conditions and traffic operations on the and I-35 and US-69 corridors, and continuing to address bridge improvements throughout the state.

Despite these improvements, the current needs statewide have outpaced available funding. ODOT is currently able to address only 15 percent of needed pavement improvements in the current Eight-Year Construction Work Plan, which does not reflect additional deterioration over time that will require more investment in the future to keep from falling farther behind.

Revenue from Oklahoma's motor fuel tax – a critical source of state transportation funding -- is likely to erode as a result of increasing vehicle fuel efficiency and the increasing use of electric vehicles. The average fuel efficiency of U.S. passenger vehicles increased from 20 miles per gallon in 2010 to 24.5 miles per gallon in 2020. Average fuel efficiency is expected to increase another 31 percent by 2030, to 32 miles per gallon, and increase 51 percent by 2040, to 37 miles per gallon. The share of electric vehicles of total passenger vehicle sales in the U.S. is expected to increase to five percent by 2023 and 60 percent by 2040, by which time electric vehicles will represent approximately 30 percent of the passenger vehicle fleet. Most federal funds for highway and transit improvements in Oklahoma are provided by federal highway user fees, largely an 18.4 cents-per-gallon tax on gasoline and a 24.4 cents-per-gallon tax on diesel fuel (additional revenue is generated by fees on the sale of large trucks, a highway use tax levied on vehicles in excess of 55,000 pounds and a tax on the sale of large truck tires). Oklahoma has looked into solutions to this problem with the Fair Miles Oklahoma program as a pay per mile revenue model. (https://www.fairmilesok.com/)

Local

Federal transportation planning regulations require the regional plan to account for all transportation revenues and spending expected to occur in the region over the period of the plan, including revenues used by local units of government (cities and counties) on the local road, bicycle, and pedestrian systems. Most of local transportation spending occurs on the local system, the local transportation revenues and spending are not covered in the regional plan in complete detail, but often local match is able to fund federal grant programs.

Local transportation revenue comes from a variety of sources including sales tax, special assessments, county highway fund (gasoline and diesel fuel tax), as well as motor vehicle registration fees and a portion of the of the state's gross production tax on oil and gas in the case of counties that have oil and gas production.

In the summer of 2006, a law created the County Improvements for Roads and Bridges program (CIRB). The funds apportioned to the program are in equal amounts to the eight Transportation Commission Districts. The sole purpose of the funds is for the construction or reconstruction of county roads or bridges on the county highway system that are the highest priority. Funds may accumulate annual funding for a period of up to five years for a specific project. Information obtained from a report published by the National Association of Counties; funds collected by OTC for transportation projects are distributed directly to the counties. Revenues specifically for the CIRB category are collected from state gasoline and diesel tax, special fuel tax and state gross production tax on oil. The county uses a small percentage of tax revenues for maintenance and minor improvements, relying on outside funding sources for major improvements. The County Commissioners established Circuit Engineering Districts (CEDs) to provide common engineering and project support services. All potential transportation projects are initiated by the County Commissioners and are coordinated with the appropriate CED who directs the development of the recommended list of projects to be considered by ODOT for inclusion in the CIRB Construction Work Plan. The 2 CED districts in NORTPO's region are district 8 and district 7. District 8 makes up most of the region as district 7 is only in Blaine and Dewey counties for the NORTPO region. In addition to revenues apportioned by the OTC the recognized tribal governments who receive federal funds and may also designate their own local funds for transportation projects. Counties and tribal governments have been successful in working together to coordinate implementation of transportation projects.

The main source of funding for municipal transportation projects is found in the general operating budgets. These funds are derived by city sales tax and fees. Some municipalities also have funds available for transportation via trusts such as the Ponca City Development Authority (PCDA) Public Trust that was formed in 2003 and is funded by a half cent sales tax for economic development projects. The sales tax is voted on every five years and was last approved in 2013. It generates approximately 1.8 million annually. Ponca City also has a street sales tax that is separate from the Economic Development sales tax that funds PCDA. Blackwell also has funding for transportation projects through their street and alley fund from Gas Sales Tax which generated $103,981.50 in 2014. Funding for rural transportation projects may also be available through federal sources such as Community Development Block Grants (CDBG) through Oklahoma Department of Commerce (ODOC), Economic Development Administration (EDA), and US Department of Agriculture Rural Development (USDA RD) programs. Oklahoma has limited funding available for projects through Rural Economic Action Plan (REAP) administered by the COG's NODA and OEDA in the NORTPO region.

The total expenditures identified in this regional plan are within the total federal, state and local revenues estimated for the R-LRTP and are adequate to fund the projects listed. The coordination with local, regional and statewide agencies in the development of transportation programs and projects is significant in order to accomplish the projects as listed in the next chapter.

Chapter 6 – Project Selection and Phasing

During the Northwest Forward 2045 R-LRTP process, NORPTO was able to incorporate many of the state, tribal and local plans from ODOT's "family of plans" which includes, STIP, TAMP, RLRTP, and CWP. These plans were used to define existing and desired system performance, identify goals and objectives, identify future modal needs, and recommend policies and strategies to include in this plan specific to the NORTPO region. Each of the plans share several common themes for northwest Oklahoma. Many of them focused on both policy initiatives and lists of specific projects. The Eight-Year CWP contains capital improvement projects proposed for the state highway system, including bridge replacement or rehabilitation and highway improvements. ODOT's field district engineers lead the effort in developing this fiscally balanced work plan, in consultation with local officials and the communities they represent. The CWP is updated each fall and the Oklahoma Transportation Commission approves the final plan. The document's projects are consistent with the policies identified in the (STIP) which identifies transportation projects expected to receive full funding and to take place over the four years following the STIP's release. The program identifies highway and transit projects planned for various areas of the state and it is updated every two years. The STIP includes projects listed in the first four years of the CWP, as well as anticipated Transportation Improvement Projects (TIP). The projects listed in the STIP for NORTPO's region are consistent with the policies of the 2045 LRTP, other long range plans, and the tribal long range plans.

NORTPO's regional project selection will be directly from ODOT's STIP and through this process NORTPO has selected goals that the region should strive to achieve. Each of the goals contain a defined set of objectives that are measured using performance measures. These goals are directly from the public participation process and are supported by the NORTPO technical committee. The local plans are mostly outdated throughout the region for example, Ponca city's most recent update for transportation projects is 2019, but was able to contact city officials for local transportation projects to be listed. The most recent for Kaw nation has only 1 project listed as a bridge in 2024 in district 1 which is listed in the construction work plan. There has been the occasional project by organizations such as Main Street Enid, Inc. that won an AARP Community Challenge Grant to do traffic calming elements to improve walkability in downtown Enid. TAP projects are other local projects as listed in Ch.3 under active living. This is added to the total of all of the project costs from the list below.

The impacts of this plan are significant to the northwest Oklahoma region. Effectively putting the plan into action is crucial to manage the environmental, social, and economic impacts that will be required to make sure the plan's benefits are felt by everyone. Below is the list of specific projects that will continually be updated with the maintenance of this R-LRTP. ***The projected costs for this plan are $1,563,470,423.07 for the NORPTO region*****.** As referenced in the financial summary this is fiscally balanced in that the total project costs do not exceed the anticipated funds. **Projects can be found in the appendix under E-6.**