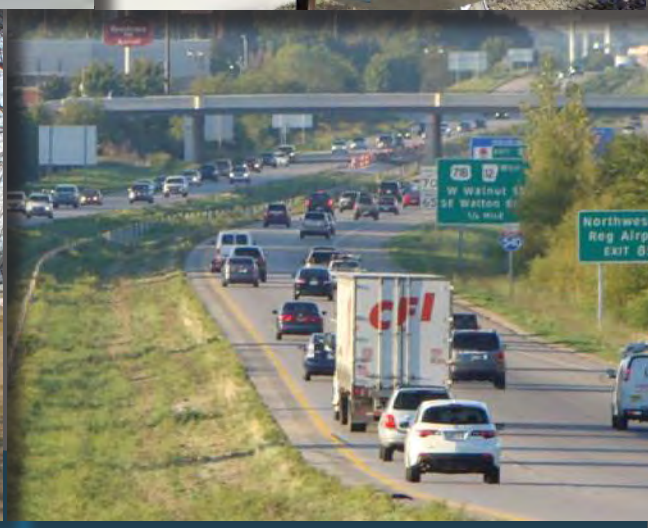
Northwest Arkansas

2040 METROPOLITAN TRANSPORTATION PLAN



Prepared by the Northwest Arkansas Regional Planning Commission in cooperation with the Arkansas State Highway and Transportation Department, Missouri Department of Transportation, Federal Highway Administration and Federal Transit Administration

March 23, 2016

NWA Regional Planning Commission

Northwest Arkansas Regional Planning Commission Membership:

City of Avoca
City of Bella Vista
Benton County
City of Bentonville
City of Bethel Heights
City of Cave Springs
City of Centerton
City of Decatur
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Washington County
City of West Fork
Arkansas Highway and Transportation Department (AHTD)
Missouri Department of Transportation (MODOT)
Beaver Water District
Ozark Regional Transit Inc.
Razorback Transit
University of Arkansas

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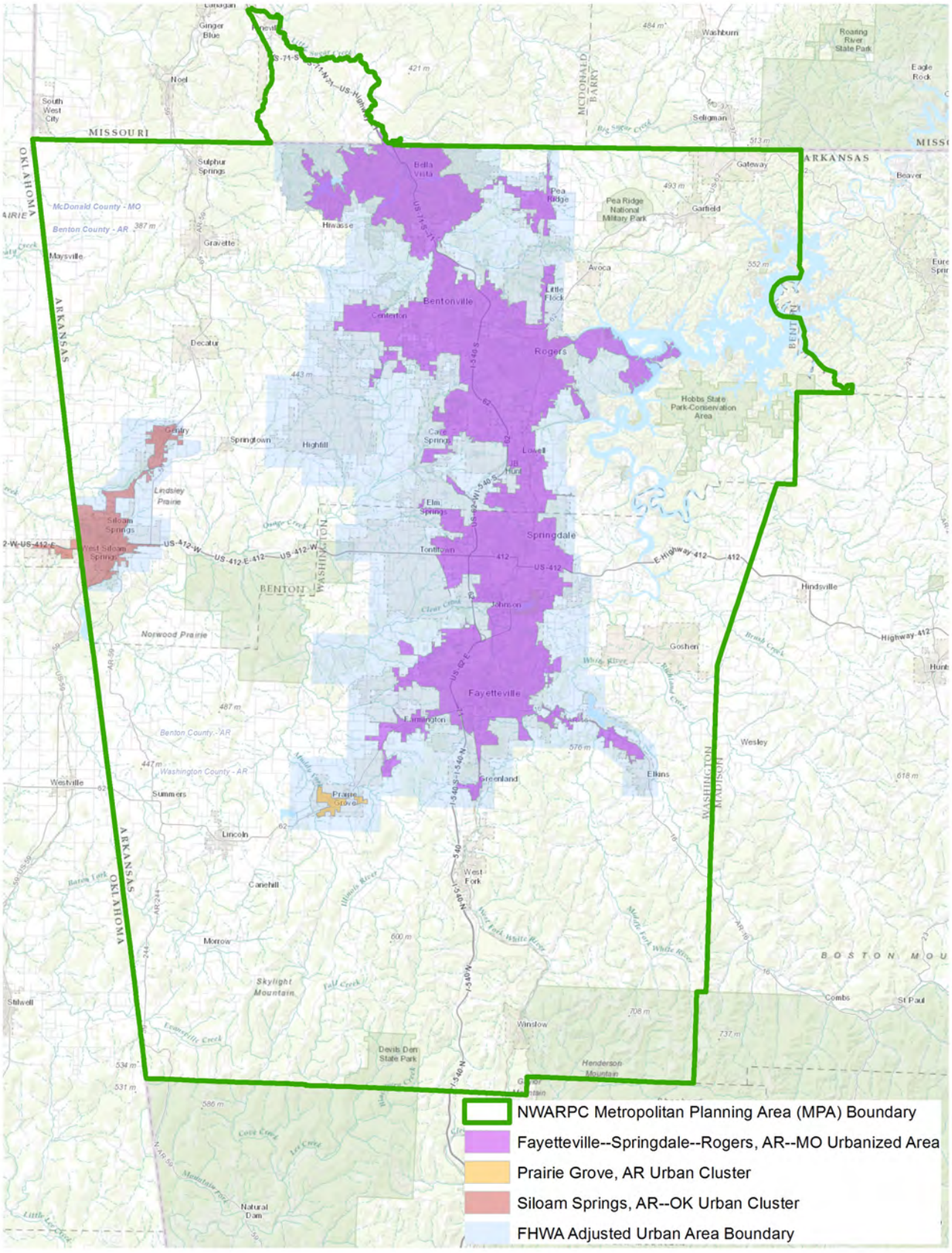


METROPOLITAN PLANNING AREA BOUNDARY

NARTS MISSION

The mission of the Northwest Arkansas Regional Transportation Study (NARTS) is to "Develop and Maintain a Regional Transportation Plan for the Metropolitan Area".

In January 2003 the TAC recommended that the NARTS area be expanded to include the entire two-county region. The Policy Committee approved the expansion and the Governor signed the request in August 2003. Therefore, the NARTS area is truly a reflection of the region as a whole, which is rapidly urbanizing.

REGIONAL TRANSPORTATION GOAL

"Provide a comprehensive intermodal transportation system which most efficiently serves the human and economic needs of the metropolitan area and Northwest Arkansas region."

LOCAL AUTHORITY

This plan was developed to provide a regional transportation plan for Northwest Arkansas. Part of the plan includes recommendations for transportation improvements and infrastructure. Local development requirements and transportation decisions will be the responsibility of the applicable governing authority.

PUBLIC PARTICIPATION PLAN PROCEDURE

The Northwest Arkansas 2040 Metropolitan Transportation Plan (MTP) was developed using the procedures outlined in Chapter X of the Public Participation Plan (see Chapter 4 Public Involvement in the MTP for greater detail).

The Draft MTP was posted on the NWARPC website on December 21, 2015. An email announcing that the Draft MTP was available for review was sent to the Technical Advisory Committee (TAC) and NWARPC/Policy Committee on January 4, 2016.

A Display Ad announcing the Final Public Forum and 30-day Public Comment Period was published in the Arkansas Democrat Gazette on January 14, 2016. A Legal Notice was published in the same paper announcing the Final Public Forum, Public Comment Period, TAC and NWARPC/Policy Committee meetings where the Draft MTP would be discussed. A Display Ad was published on January 14, 2016 in the La Prensa Newspaper containing the same information as the Legal Notice.

A Final Public Forum was held at the NWARPC office, located on the bus route, on January 21, 2016. A 30-day Public Comment Period commenced on January 23, 2016 and ran through February 21, 2016. No significant public comment was received.

A Legal Notice was published in the Arkansas Democrat Gazette on March 10, 2016 announcing a TAC meeting and NWARPC/Policy Committee meeting in which each committee would vote on approval of the Draft Northwest Arkansas 2040 Metropolitan Transportation Plan. A Display Ad containing the same information was published on March 10, 2016 in the La Prensa Newspaper.

The TAC met on March 17, 2016 and unanimously voted to forward the Draft Northwest Arkansas 2040 Metropolitan Transportation Plan to the NWARPC/Policy Committee for approval. The NWARPC/Policy Committee met on March 23, 2016 and voted unanimously to approve the 2040 Northwest Arkansas Metropolitan Transportation Plan.

This notice is in accordance with the 2040 NWA Metropolitan Transportation Plan, the Moving Ahead for Progress in the 21st Century (MAP-21) Act and Fixing America's Surface Transportation (FAST) Act, in cooperation with local agencies, the Arkansas State Highway and Transportation Department, the Missouri Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration. This report was funded in part through grant(s) from the Federal Highway Administration, the Federal Transit Administration, and/or the U.S. Department of Transportation. The views and opinions of the agency expressed herein do not necessarily state or reflect those of the U.S. Department of Transportation.

NORTHWEST ARKANSAS REGIONAL PLANNING COMMISSION NOTICE OF NONDISCRIMINATION

The Northwest Arkansas Regional Planning Commission (NWARPC) complies with all civil rights provisions of federal statues and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the NWARPC does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in NWARPC's programs and activities, as well as the NWARPC's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the NWARPC's nondiscrimination policies may be directed to Celia Scott-Silkwood, AICP, Regional Planner – EEO/DBE (ADA/504/Title VI Coordinator), 1311 Clayton, Springdale, AR 72762, (479) 751-7125, (Voice/TTY 7-1-1 or 1-800-285-1131) or the following email address: cscott-silkwood@nwarpc.org. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille. If information is needed in another language, contact Celia Scott-Silkwood. Si necesita informacion en otro idioma, comuniqese Celia Scott-Silkwood, cscott-silkwood@nwarpc.org.

Acronyms Used in this Plan

AADT	Average Annual Daily Traffic
A&M	Arkansas and Missouri Railroad
ACS	American Community Survey
ADA	Americans with Disabilities Act of 1990
ADAAG	Disabilities Act Accessibility Guidelines
ADT	Average Daily Traffic
AHTD	Arkansas State Highway and Transportation Department
ALOP	Annual Listing of Obligated Projects
ASSHTO	American Association of State Highway and transportation Officials
ATRI	American Transportation Research Institute
BFC	Bicycle Friendly Community
BMP	Best Management Practices
BPR	Bureau of Public Roads
BRT	Bus Rapid Transit
CAP	Connecting Arkansas Program
CI	Congestion Index
COP	Community Outreach Plan
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMP	Congestion Management Process
CSDC	Census State Data Center
CSS	Context Sensitive Solutions (aka as Context Sensitive Design)
CTTP	Census Transportation Planning Package
DA	Drive Alone
DOT	Department of Transportation
DMVT	Daily Vehicle Miles Traveled
EJ	Environmental Justice
E's (5)	Engineering, Enforcement, Education, Evaluation, Encouragement
EPA	Environmental Protection Agency
FARS	Fatality Analysis Reporting System
FAST ACT	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year
FHWA	Federal Highway and Transportation Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
HBO	Home-Based Other Trips
HBW	Home-Based-Work Trips
HBSB	Home-Based-Shop/Personal Business Trips
HBSC	Home-Based School Trips
HBU	Home-Based-University/College Trips
HCM	Highway Capacity Manual
HHTS	Household Travel Survey
HSIP	Highway Safety Improvement Program
HTP	Heritage Trail Plan
IPF	Iterative Proportional Fitting
IRP	Interstate Rehabilitation Program
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent Transportation System
KNR	Kiss-and-Ride/drop-off
KSC	Kansas City Southern Railroad
LB	Local bus
LEP	Limited English Proficiency Plan
LOS	Level of Service
LPA	Locally Preferred Alternative
LR	Light Rail
LRP	Long Range Plan
MAP-21	Moving Ahead for Progress in the 21st Century
MODOT	Missouri Department of Transportation
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization

MS4	Municipal Separate Storm Sewer Systems
MSA	Metropolitan Statistical Area
MTP	Metropolitan Transportation Plan
NARTS	Northwest Arkansas Regional Transportation Study
NBI	National Bridge Inventory
NBIS	National Bridge Inspection Standards
NHB	Non-Home-Based Trips
NHBW	Non-Home Based Work Trips
NHS	National Highway System
NHPP	National Highway Performance Program
NHTS	National Household Travel Survey
NLCD	National Land Cover Database
NTD	National Transit Database
NWA	Northwest Arkansas
NWADG	Northwest Arkansas Democrat Gazette
NWARPC	Northwest Arkansas Regional Planning Commission
ORT	Ozark Regional Transit
PB	Parsons Brinckerhoff
PNR	Park-and-Ride
POP	Program of Projects
PPP	Public Participation Plan
PRMSE	Percent Root Mean Square Error
PRT	Personal Rapid Transit
ROW	Right of Way
RMSE	Root Mean Square Error
RPC	Regional Planning Commission
RT	Razorback Transit
RTP	Recreational Trails Program
SAFEEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SH	State Highway
SR2	Shared ride of two
SR3+	Shared ride of three or more
SRTS	Safe Routes to School Program
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
STP-A	Surface Transportation Program – Attributable Funds
STBGP	Surface Transportation Block Grant Program
STBGP-A	Surface Transportation Block Grant Program - Attributable
TAC	Technical Advisory Committee
TAP	Transportation Alternatives Program
TAD	Traffic Analysis Districts
TAZ	Traffic Analysis Zone
TCSP	Transportation, Community, and System Preservation Program
TDM	Transportation Demand Management (aka Mobility Management)
TDP	Transit Development Plan
TIP	Transportation Improvement Plan
TIGER II	Transportation Investment Generating Economic Recovery Grant Program
TLFD	Trip Length Frequency Distributions
TOD	Transit Oriented Development
TMA	Transportation Management Area
TMIP	Travel Model Improvement Program
TRB	Transportation Research Board
TEA-21	Transportation Equity Act for the 21st Century
UACES	University of Arkansas, Division of Agriculture Cooperative Extension Service
UALR	University of Arkansas at Little Rock
UPWP	Unified Planning Work Program
U.S.DOT	United States Department of Transportation
UZA	Urbanized Area
VDF	Volume Delay Function
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled

CHAPTER 1. INTRODUCTION

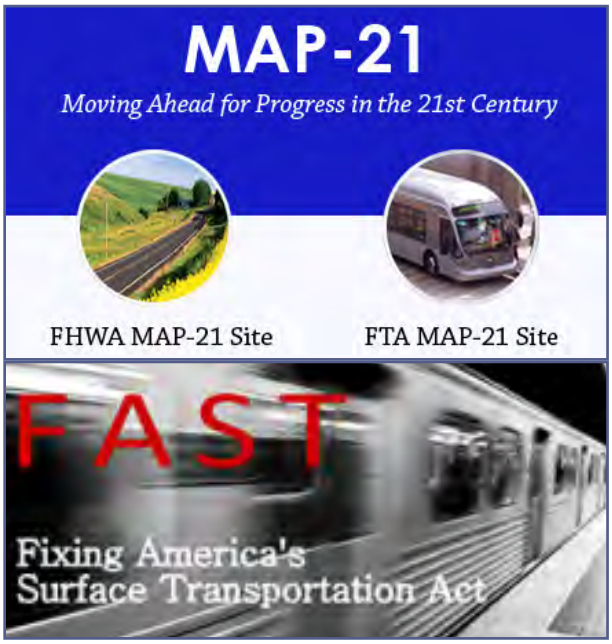
OVERVIEW OF TRANSPORTATION LEGISLATION

The two landmark bills that brought surface transportation into the 21st century, the Intermodal Surface Transportation Efficiency Act (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21), shaped the Federal highway and transit programs to meet the nation's changing transportation needs.

President Clinton signed the Transportation Equity Act for the 21st Century (TEA-21) into law on June 9, 1998. TEA-21 was the primary authoritative direction for the development of previous long-range transportation plans, including the 2030 Northwest Arkansas Regional Transportation Plan. TEA-21 continued and enhanced the Federal programs and priorities established in the previous Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

On August 10, 2005 President Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU promoted more efficient and effective Federal surface transportation programs by focusing on transportation issues of national significance, while providing state and local transportation decision makers more flexibility for solving transportation problems in their communities. In SAFETEA-LU, the policy for the metropolitan planning process was to promote consistency between transportation improvements and state and local planned growth and economic development patterns. Additionally, other factors were to be considered, such as environmental considerations, multi-modal capacity, bicycle and pedestrian and disabled interests.

The Moving Ahead for Progress in the 21st Century (MAP-21) transportation bill was signed into law on July 6, 2012 and was the first long-term highway authorization enacted since 2005. A key feature of MAP-21 was the establishment of a performance- and outcome-based program. The objective of this program was for the metropolitan transportation planning process to provide for the establishment and use of a performance-based approach to transportation decision-making.



President Obama signed the Fixing America's Surface Transportation (FAST) Act on December 4 , 2015, building upon MAP-21. The 2040 NWA Metropolitan Transportation Plan (MTP) was developed under MAP- 21/FAST Act guidance.

NATIONAL GOALS AND PERFORMANCE MANAGEMENT MEASURES

MAP-21/FAST Act establishes a national policy in support of performance management and establishes national performance goals for the Federal-aid highway program in seven areas:

GOAL AREA	NATIONAL GOAL
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair.
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System.
System reliability	To improve the efficiency of the surface transportation system.
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment.
Reduced project delivery delays	To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

23 U.S.C. & 150(b)

METROPOLITAN TRANSPORTATION PLANNING FACTORS

MAP-21/FAST Act requires that the metropolitan planning process for a metropolitan planning area shall provide for consideration of projects and strategies that will:

(A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

(B) Increase the safety of the transportation system for motorized and nonmotorized users;

(C) Increase the security of the transportation system for motorized and nonmotorized users;

(D) Increase the accessibility and mobility of people and for freight;

(E) 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 development patterns;

(F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

(G) Promote efficient system management and operations;

(H) Emphasize the preservation of the existing transportation system;

The FAST Act has added two additional planning factors:

(I) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and

(J) Enhance travel and tourism.

These factors and the manner in which they have been addressed in the MTP are presented as follows:

(A) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency:

- Infrastructure that supports a high level of service for mobility.
  1. Hwy. 412 Northern Bypass (Hwy. 612) – Interstate-type facility will aid in alleviating congestion on Hwy. 71B in Springdale and I-49 by providing a controlled-access highway for freight to by-pass the business corridors of Springdale.
  2. Continue the widening of Hwy. 265 from Hwy. 412 (Springdale) to Hwy. 62 (Rogers) – This transportation improvement will provide better north-south movement for freight by adding lanes to an existing federal highway that connects the industrial parks of Fayetteville, Springdale, and Rogers.
  3. Airport Access Road will provide more efficient access to the Northwest Arkansas Regional Airport.
  4. I-49 (Hwy. 549) will provide interstate access connecting the region to I-40 to the south and I-49 to the north.
  5. Hwy. 112 will provide north-south regional mobility west of I-49 from Fayetteville to Bentonville.

(B) Increase the safety of the transportation system for motorized and non-motorized users; and

(C) Increase the security of the transportation system for motorized and non-motorized users:

- Improvements to traffic signalization/pavement markings.
- Use of cable median barrier systems, rumble strips, and pavement surfaces to reduce fatality and serious injury crash rates on interstates/freeways.
- Use of congestion management techniques, including access management and ITS.
- Bicycle/pedestrian facilities – maintain a regional commitment to bicycle and pedestrian facilities through implementation of the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
- Public Transportation – maintain a regional commitment to public transit service.
- Widening of congested arterial roads, and improving the rural county road network.
- Bridge improvements.

(D) Increase the accessibility and mobility for people and freight:

- Airport Access Road.
- Establish a regional arterial network.
- Maintain a regional cohesiveness and unity by requesting Federal funding for these specific corridor projects:
  1. Hwy. 412 Northern Bypass
  2. I-49 (Hwy. 549) Bella Vista Bypass
  3. I-49 Improvements
  4. Hwy. 112 Improvements
  5. Hwy. 265
- Investigate innovative funding mechanisms.

Hwy. 549- the Future I-49

(E) 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 development patterns:

- Consider environmental factors, both natural and cultural, as transportation projects are developed.
- Bicycle/pedestrian trail and sidewalk improvements in the region.
- Maintain and expand a regional commitment to public transit service.
- Encourage and explore all modes of transit alternatives.

- Design, manage, and operate transportation facilities that improve system reliability and safety for all modes.

(F) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight:

- Establish a regional arterial network, including improving east/west connections and new north/south arterials.
- Airport Access Road.
- Bicycle/pedestrian facilities.
- Public Transportation – support public transit integration and connectivity.
- I-49 improvements, including improvements to interchanges, improvements to existing grade separations, and widening the mainline.
- Utilize ITS technologies to maximize infrastructure efficiency.

(G) Promote efficient system management and operation:

- Signalization improvements.
- Utilize ITS technologies to maximize infrastructure efficiency.
- Improve and expand existing transit services.
- Encourage and explore all modes of transit alternatives.

(H) Emphasize the preservation of the existing transportation system:

- I-49 improvements, including improvements to interchanges, improvements to existing grade separations, and widening the mainline.
- Strong financial commitment to maintenance of existing roadways.
- Maintain public transit busses and facilities.
- Upgrade and maintain existing bridges.
- Improve the rural county road network.

Many of the preceding projects, strategies and recommendations may be used to implement the new FAST Act planning factors.

LIVABILITY PRINCIPLES

In June 2009, the Environmental Protection Agency (EPA) and Housing and Urban Development (HUD) joined the Department of Transportation (DOT) in forming the Partnership for Sustainable Communities. The Partnership's goal is to "help American families gain better access to affordable housing, more transportation options and healthier communities. This Partnership will ensure that these housing and transportation goals are achieved while also better protecting the environment, promoting equitable development, and helping to address the challenges of climate change". The Partnership invests taxpayer money more efficiently and gets better results for communities. By sharing knowledge and coordinating investments in infrastructure, facilities, and services, the Partnership can meet numerous economic, environmental, and community objectives with each dollar spent.

By using the six guiding Principles of Livability, the Partnership continues to coordinate investments and align policies to support communities that desire to provide citizens with more housing choices, make transportation systems more efficient and reliable, reinforce existing investments, protect the environment, and support vital and healthy neighborhoods that attract businesses and jobs.

1. Provide more transportation choices.
2. Promote equitable, affordable housing.
3. Enhance economic competitiveness.
4. Support existing communities.
5. Leverage Federal investment.
6. Value communities and neighborhoods.

In 2015, the Partnership for Sustainable Communities brought the skills and expertise of the member agencies to support each agency's priority efforts, as well as offering support to the U.S. Department of Agriculture and the Federal Emergency Management Agency. These actions focus on three key areas:

- Using agencies' resources to advance Ladders of Opportunity for every American and every community.
- Helping communities adapt to a changing climate, while mitigating future disaster losses.
- Supporting implementation of community-based development priorities.

Source: Parnership for Sustainable Communities https://www.sustainablecommunities.gov/ The 2040 MTP presents various transportation strategies and choices in an effort to support the above Principles.

METROPOLITAN PLANNING ORGANIZATION (MPO)

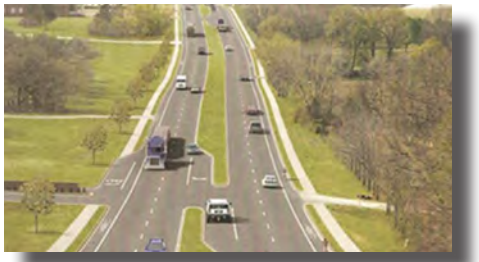
The Northwest Arkansas Regional Planning Commission (NWARPC) was formed in 1966 through a cooperative agreement between Benton County, Washington County, and the cities of Bentonville, Fayetteville, Rogers, Siloam Springs, and Springdale. In 1983, NWARPC was designated as the Metropolitan Planning Organization (MPO) under U.S. DOT regulations for transportation planning purposes. The MPO is designated by the Governor to conduct the Federally mandated 3C (Comprehensive, Continuing and Cooperative) planning process necessary for transportation projects to qualify for Federal transportation funds.

Transportation Management Area (TMA) status was recognized after 2010 Census Bureau data indicated the Fayetteville-Springdale-Rogers, AR-MO Urbanized Area (UZA) had grown from 172,585 in 2000 to 295,083 in 2010. The 200,000 population mark is the threshold for an area to become a TMA. With the new UZA boundary extending into Missouri, the Metropolitan Planning Area (MPA) for transportation planning now extends into McDonald County, Missouri. Today, NWARPC's membership includes 35 units of government in Benton, Madison, and Washington Counties, Arkansas; McDonald County and Pineville, Missouri; the Arkansas State Highway and Transportation Department (AHTD); the Missouri Department of Transportation (MoDOT). Other members include Ozark Regional Transit Inc., Razorback Transit and Beaver Water District.

A primary planning activity of NWARPC is serving as the MPO and managing TMA functions. The MPO has two permanent committees, the Norhtwest Arkansas Regional Planning Commission/Policy Committee (RPC/Policy Committee) and the Technical Advisory Committee (TAC). The RPC/Policy Committee is the chief decision-making body for the MPO and consists of the member jurisdictions' chief elected official and/or other appointed representatives. The TAC develops the technical aspects of plans and reports and makes recommendations to the RPC/Policy Committee. The TAC and RPC/Policy Committee make up the Northwest Arkansas Regional Transportation Study (NARTS).

Three documents are the major NARTS products:

- The Unified Planning Work Program (UPWP)
- The Transportation Improvement Program (TIP)
- The Metropolitan Transportation Plan (MTP)



Hwy. 265 Improvement Project

The **UPWP** outlines the MPO's annual work activities. Each year the TAC and RPC/Policy Committee reviews and approves proposed planning activities to submit to AHTD, MODOT and FHWA/FTA for approval for Federal planning funds.

The **TIP** contains all short-term commitments for State and Federal transportation funding in the metro area. Beginning with Federal Fiscal Year (FFY) 2016 this document covers a five-year period (FFY 2016-2020). No Federal expenditures can be made on transportation facilities within the MPA unless they are listed in the TIP. The TIP is a major tool for shaping the region's transportation infrastructure.

NWARPC prepares what in the past has been known as the Northwest Arkansas Regional Transportation Plan, with updates every five years. With the advent of MAP-21/FAST Act the long-range transportation plan is now called the **Metropolitan Transportation Plan (MTP)**. It is a Federal requirement that the long-range transportation plan cover at least a period of 20 years into the future. This document is in its fifth update, and is titled the 2040 Northwest Arkansas Regional Metropolitan Plan. The MPA for the Plan consists of Washington and Benton Counties, and a portion of McDonald County, Missouri, including the towns of Jane and Pineville.

In the years since the last regional transportation plan update the Northwest Arkansas region continues to see a significant amount of growth and development, including a continuing increase in population. With that growth comes many challenges to the area's transportation system, such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, improving transit service, and protecting the environment. As growth and development continues, it is clear that the current transportation system will not be sufficient to accommodate future needs. Consequently, a long-range plan is necessary to effectively integrate citizen and business needs and wants and the circulation system that will efficiently carry them through the region on their various trips.

In 1995, the 2020 Regional Transportation Plan was developed to address transportation planning for our region. The 2025 Regional Transportation Plan was adopted in 2000 as an update of the previous Plan. The 2030 Northwest Arkansas Regional Transportation Plan was developed in 2005. The 2035 Northwest Arkansas Regional Transportation Plan was approved in April 2011. The 2040 MTP continues the process of addressing the need for appropriate planning to assist in the region's preparation for continued growth. The MTP functions as a framework for continued regional awareness and cooperation between the region's governments.

It is imperative that the MTP is viewed not as the end of a process, but a continuation of a process that must be on going in its implementation. Now, more than ever, it is important for the governments of Northwest Arkansas to consider transportation issues on a regional basis, and to cooperate in meeting the demands of accelerating growth. The fact that previous plans have been developed and adopted by the RPC/Policy Committee is evidence that area governments are committed to approaching transportation challenges in Northwest Arkansas on a united front.

REGIONAL TRANSPORTATION HISTORY

An early road was established through Northwest Arkansas in the 1830s linking Fort Smith to Springfield, Missouri and on to St. Louis. This was the road used for the Cherokee Indian removal known as the Trail of Tears and later the historic Butterfield Overland Coach Road that linked St. Louis and San Francisco. This road also brought Civil War troop movements through the area utilizing this primary route with major battles being fought at Pea Ridge and Prairie Grove. The University of Arkansas was established in 1872, further enhancing the importance of the region and increasing the need for transportation improvements.

The railways came in the later part of the 1800s bringing a new mode of transportation to the region. The railroad through the Boston Mountains was considered an engineering marvel at that time. By World War I, motorized vehicles were appearing in Northwest Arkansas creating new demand for improved roads.

In the 1930s an airport was built at the location of Fayetteville's Drake Field. During World War II, the War Training Service used this airport as a training center for pilot trainings. By the mid 1950s Central Airlines and Skyways were flying regular flights in and out of Northwest Arkansas.

After World War II, entrepreneurial seeds were being sown that would eventually call for an improved transportation infrastructure to Northwest Arkansas. Harvey Jones, J. B. Hunt and Willis Shaw started locally based trucking firms that were destined to be among the nation's leaders. In 1963 Sam Walton established his first 5 and Dime in Bentonville, Arkansas, home now to the Wal-Mart Corporation. Abundant water from Beaver Lake was now available for new populations and industry. Tyson and George's poultry operations had their beginning in the 1950s and have become economic mainstays.

These and many more locally based operations have contributed to abundant employment opportunities in the region. Employment opportunities, when combined with the natural beauty of the area and its friendly people, have brought increased population and thus the need for an ever-improving transportation infrastructure.

Two highways are principal links to the rest of the country. I–49 (formerly I-540) links to the north and south, and Hwy. 412 links to the east and west.

I-49 was opened in various time frames in the two county area. The first segment known as the "Fayetteville Bypass" was built in the early 1970s and bypassed Hwy. 71 from south to north Fayetteville. The section north of Fayetteville as opened next in 1988 bypassing Hwy. 71 from Fayetteville to Bentonville. The final section from Fayetteville south

to Mountainburg was completed in 1998 creating an interstate-quality highway from Fort Smith to north Bentonville. The "Bella Vista Bypass" is now under construction in Arkansas and will eventually connect to I-49 in Pineville, Missouri.

Hwy. 412, the area's major east west route also has a planned bypass. A section of the planned bypass for Hwy. 412 was let to contract on December 17, 2014 and at $100.62 million dollars is the largest single highway construction project in the history of Arkansas. It will connect I-49 to Hwy. 112 and will be known as Hwy. 612.

Rail lines connect the region to Kansas City to the north and Fort Smith to the south. The Northwest Arkansans Regional Airport located in southwestern Benton County was opened in November 1998 and now provides improved air service to the region.

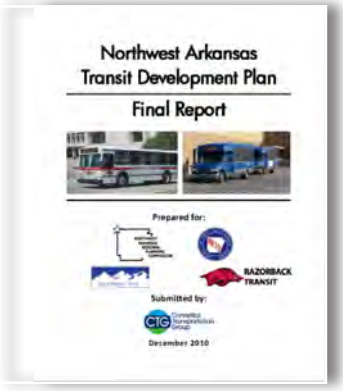
These facilities are providing the region access to increased people, goods and services. The region is an emerging metropolitan area with a rich blend of agriculture, education, recreation, tourism, business and industry. Northwest Arkansas has experienced the greatest population and economic growth of any region in Arkansas during the last three decades. The region's transportation system, which now serves approximately 435,000 people, is expected to serve approximately 800,000 people by the year 2040 if current growth trends continue. Consequently, the MTP must continue to be updated appropriately and used as a long-range tool for managing the area's transportation infrastructure.

Hwy. 112 Study Map

RELATED PLANS AND PROGRAMS

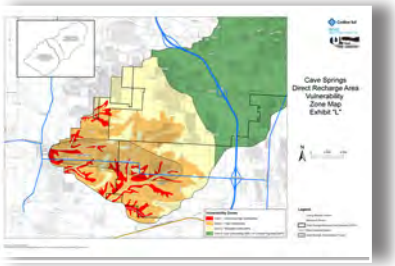
- **Arkansas Statewide Transit Coordination Plan: 2012**

  Sixteen separate local transit coordination plans were developed Statewide in June 2007 and February 2008. AHTD took the lead role in the development of the Statewide Transit Coordination Plan to satisfy MAP-21/FAST Act requirements and all FTA rules and regulations. The next update for the Plan will occur in 2017. The Plan was adopted on January 11, 2013 by the Arkansas Public Transit Coordination Council.



- **Cave Spring Area Karst Resource Conservation Study (Fall 2014-Spring 2016)**

  The Cave Springs Area Karst Resource Conservation Study (Karst Study) includes specific objectives such as analyzing existing water quality and species population data, working with the scientific community to determine appropriate actions necessary to ensure adequate protection of local karst recharge zones and also working with local, county and State officials and other stakeholders to determine the best conservation actions and mechanisms for the karst area. More information can be found at http://www.cavespringskarststudy.com/

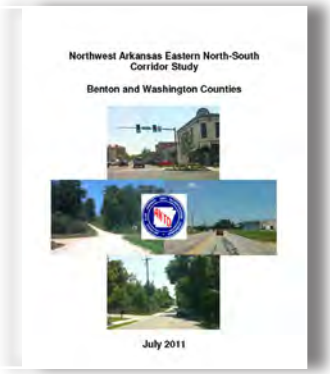


- **Congestion Management Process Report (May 2014-May 2015)**

  The Congestion Management Process (CMP) objectives are to develop procedures for evaluating the relative congestion of facilities, develop procedures to determine if congestion mitigation strategies should be implemented for a particular facility, and develop a procedure or procedures for evaluating the effectiveness of congestion mitigation strategies implemented. More information can be found at http://nwarpc.org/transportation/cmp. The NWARPC approved the first phase of the CMP on May 27, 2015.

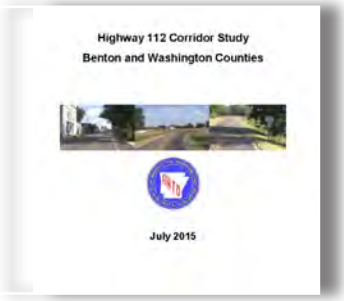
- **Eastern North/South Corridor Study (July 2011)**

  At the request of the NWARPC, the Arkansas State Highway Commission passed Minute Order 2009-093, which authorized AHTD to conduct a study of an eastern North-South corridor from Hwy. 16 in Fayetteville to Hwy. 62 in Rogers with considerations of possible connections and alternatives. The purpose of the study was to determine the need for improvements to the eastern North-South corridor with a possible extension to Bentonville. The Study includes a traffic analysis, safety analysis, pavement analysis, and environmental considerations, as well as a discussion of alternatives to existing Hwy. 265 and possible extensions. More information can be found at this link http://nwarpc.org/transportation/cmp/



- **AR Hwy 112 Corridor Study (June 2015)**

  At the request of the NWARPC, the Arkansas State Highway Commission passed Minute Order 2012-027, which authorized a study of Hwy. 112, from Fayetteville to Bentonville, a total length of approximately 20 miles. The purpose of the study was to determine the feasibility of improvements to Hwy. 112 to address capacity and safety needs. The Study includes a traffic analysis, safety analysis and an analysis of alternatives. Additionally, the Study points out environmental concerns, such as the Cave Springs Recharge Area, and recommends implementing access management strategies in order to preserve corridor capacity and protect transportation investments. The study can be found here http://nwarpc.org/

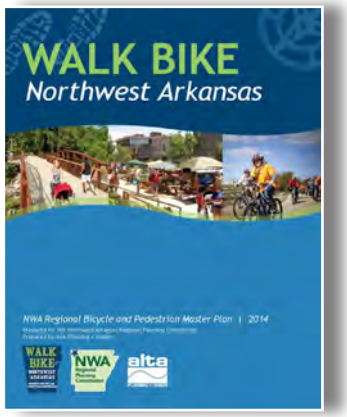


- **NWA Regional ITS Architecture and Deployment Plan (Spring 2007)**

  Intelligent transportation system (ITS) is the application of electronic technologies and communications to increase the safety and efficiency of the transportation system. The development of the NWA ITS provides a framework for implementing ITS projects, encouraging inter-operability and resource sharing among agencies, identification of applicable standards to apply to projects, and allowing for cohesive long-range planning among regional stakeholders. A list of recommended ITS projects was developed through input from stakeholders, and grouped into timeframes for deployment based on priority, dependence on other projects, technology, and feasibility. As part of the ITS maintenance, and the MTP update, the ITS Architecture and Deployment Plan has recently been updated. More information can be found at this link: http://nwarpc.org/transportation/its/

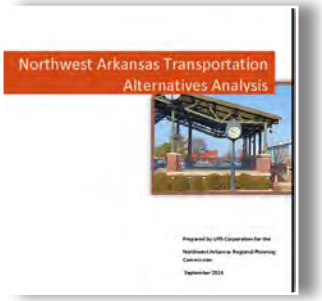
- **NWA Regional Bicycle and Pedestrian Regional Master Plan (2014-2015)**

  A major Plan goal was for each city with a population of over 1,000 to have a unique individual Master Trail Plan and for the area to work towards linking all these communities through a regional trail system. Individual city plans were adopted by fall 2015 for 25 cities. Extensive public input was sought for the Regional Master Plan, as well as the individual plans. The Plan was adopted by the RPC/Policy Committee on December 1, 2015. The Plan was utilized as the cornerstone of the bicycle and pedestrian component of the MTP. More information can be found at http://www.nwabikepedplan.com/



- **NWA Open Space Plan (Fall 2014-Winter 2015)**

  The purpose of this Plan was to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal is to preserve these assets, thereby maintaining a high quality of life as the region continues to grow and prosper. The Plan was utilized as the basis of the environmental component of the MTP. More information can be found at http://nwaopenspace.com



- **NWA Transportation Alternatives Analysis Study (2014)**

  The Study approach followed the planning guidelines of the FTA, especially those that apply to New Starts and Major Capital Investment funding. The purpose of the project was to carry out a transportation alternatives analysis concentrating on three major alternatives: Light Rail (new location on I-49 corridor), Commuter Rail (on A&M Railroad Corridor), and Bus Rapid Transit (on Hwy. 71B). In September 2014 the RPC/Policy Committee accepted the Alternatives Analysis Study with the understanding that none of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and did not meet the FTA threshold to receive Federal funding, and that the A&M Railroad has the most potential for a future fixed guide way commuter rail system. More information can be found at http://nwarpc.org/transportation/alternatives-analysis/.

MAJOR ACCOMPLISHMENTS

Northwest Arkansas and Southwest Missiouri accomplished many highway and roadway projects between 2010 and 2015. The following are highlights from AHTD, MoDOT, and local jurisdictions.

AHTD, DISTRICT 4

COMPLETION YEAR	JOB NUMBER	LOCATION	LENGTH (MILES)
2011	004938	West Fork-South (Brs. & Apprs.)(S); Hwy. 71	
2011	040442	Ballard Creek Str. & Apprs. (S); Hwy. 59	
2011	040498	Hwy. 16/Hwy. 74 Signal (Elkins)(S)	
2011	040468	Hwy. 156-I-540 (Fayetteville)(Rehab)(S); Hwy. 71	1.74
2011	040592	Hwy. 16-North (Sel. Secs.)(Fayetteville)(Overlay)(S); Hwy. 71B	1.73
2012	040597	West Fork White River-North (Overlay)(S), Hwy. 71	2.07
2012	040485	I-540/Hwy.62/180 Interchange Interim Impvts. (Fayetteville)(F); I-49	
2012	040489	Hwy. 112 Spur-North (Fayetteville)(S); Hwy. 112	0.71
2012	040561	Bobby Hopper Tunner-Hwy. 74 Safety Impvts. (S); I-49	4.30
2012	040583	Hwy. 62/180-Hwy. 16 Widening (Fayetteville)(F); I-49	1.45
2012	BR7207	West Fork White River (Tilly Willy) Str. & Apprs. (S); CR 69	0.70
2013	040524	Hwy. 62 Bypass (Gr. & Strs.)(Prairie Grove)(S); Hwy. 62	4.26
2013	040644	Hwy. 220 Slide Repairs (Devil's Den)(S); Hwy. 220	
2013	040650	Hwys. 71B & 16 (Fayetteville)(Sel. Secs.)(Overlay)(S); Hwys. 71B&16	1.34
2014	040521	Hwy. 62 Bypass (Bs. & Surf.)(Prairie Grove)(S); Hwy. 62	4.72
2014	040535	Fulbright Expwy./Hwy. 71B Flyover (Fayetteville)(S)	
2014	040665	Hwy. 170-South & North (Overlay)(S); Hwy. 71	2.37
2014	BB0412	Johnson Mill Blvd. Intchng. Impvts. (S); I-49	
2014	C72001	Farmington & Elkins Overlay (Sel. Secs.)(S); City Streets	3.60
2015	040670	Hwy. 112-West (Tonitown)(Overlay)(S); Hwy. 412	1.69
2015	040490	South City Limits-Hwy. 412 (Springdale)(S); Hwy. 265	1.26
2015	040517	Hwy. 45-E. Joyce Blvd. (Fayetteville)(S); Hwy. 265	2.20
2015	040518	E. Joyce Blvd.-City Limits (Fayetteville)(S)	1.92
2015	040569	West Fork White River Str. & Apprs. (Fayetteville)(S); Hwy. 16	0.39
2015	040570	Branch of Illinois River Str. & Apprs. (S); Hwy. 170	
2015	040575	Armstrong Ave.-Stone Bridge Rd. (Sel. Secs.)(Fayetteville)(S) Hwy.16	1.29
2015	040581	Hwy. 180-Leroy Pond Dr. (Hwy. 112)(Fayetteville)(S); Hwy. 112	0.36
2015	040646	Crawford Co. Line-Fayetteville (Sel. Secs.) (Cable Median Barrier): I-49 & Hwy. 71B	2.72
2015	040605	Hwy. 16-Porter Rd. (Widening)(S); I-49	1.29
2015	BB0416	Elm Springs Rd. Intchng. Temp. Sig. (I-49)(Springdale)(S); I-49	
2015	C72002	Greenland & Johnson Overlay (Sel. Secs.)(S)	2.87

AHTD, DISTRICT 9

COMPLETION YEAR	JOB NUMBER	LOCATION	LENGTH (MILES)
2011	090276	Hwy 71-Missouri State Line-South (Overlay) (S)	4.30
2011	090234	Hwy. 71B/Robinson Ave. Signal (Lowell) (S)	0.01
2011	SA0438	Hwy. 72-Hwy. 62 (Surfacing) (S)	8.40
2011	090308	Hwy. 279-Hwy. 71 (Bella Vista) (Overlay) (S)	4.26
2011	090261	Hwy. 279/Hwy. 340/Highlands Blvd. Signal (Bella Vista) (S)	0.01
2011	090178	Hwy. 72 Widening & Hwy. 112/8th St. nters. Impv.(Bentonville)(S)	1.58
2012	090254	Shell Road Str. & Apprs. (Bentonville) (S)	0.01
2012	FA0404	Osage Creek Str. & Apprs. (S)	0.47
2012	090307	I-540-Hwy. 94 & I-540-Hwy. 71B (Overlay) (S)	3.90
2012	090357	Hwy. 112-Hwy. 12 (Overlay) (S)	7.20
2012	090368	Spavinaw Creek-Decatur (Overlay) (S)	3.92
2012	090179	Greenhouse Rd.-Hwy. 71B (Bentonville) (S)	2.35
2013	090286	Spring Creek Str. & Apprs. (North 56th St.) (Springdale) (S)	0.01
2013	090207	Hwy. 112/Hwy. 264 E. Sig. & Inters. Impvts.(Cave Springs)(S)	0.10
2013	012169	Siloam Springs-Tontitown (Sel. Secs.) (Cable Median Barrier)	10.50
2013	012111	Hwy. 112/265-Hwy. 62/102 Cable Median Barrier (F)	23.70
2013	090241	Oklahoma State Line-Washington St. (F)	1.61
2013	090383	Hwy. 62-West & South (Rogers) (Sel. Secs.) (Overlay) (S)	1.48
2013	090395	Hwy. 59-East & West (Overlay) (S)	6.03
2013	090369	Hwy. 62/102-North (Cable Median Barrier) (S)	4.96
2014	C04001	Cave Springs & Sulphur Springs Overlay (Sel. Secs.) (S)	1.72
2014	090268	Sager Creek Str. & Apprs.(University St.)(Siloam Springs)(S)	0.02
2015	090411	Pleasant Grove Rd.-Walnut St. (Rogers) (Overlay) (S)	3.50
2015	090292	Hwy. 72 South-Hwy. 72 North (Bella Vista Bypass) (F)	3.03
2015	C04002	Bethel Heights, Centerton & Gravette Overlay (Sel. Secs.)(S)	6.15
2015	090174	Hwy. 102B-Greenhouse Rd. (Centerton) (S)	1.73
2015	090269	Cherry St.-Mt. Olive St. (Kenwood St.) (Siloam Springs) (S)	0.38
2015	BR0404	Osage Creek Str. & Apprs. (S)	0.27
2015	BB0901	Wagon Wheel Rd. Intchng. Impvts. (S)	0.05

BENTON COUNTY

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2011	Georgia Flat Bridge	Gravette	
2012	Lime Kiln Bridge	Garfield	
2014	Fisher Ford Bridge	Siloam Springs	
2014	Colonel Myers Bridge	Cave Springs	
2014	Bill Billings Boxes	Garfield	
2014-2015	Wilson Rd Boxes	Garfield	
2014	Perry Rd Boxes	Garfield	
2014	Liberty Rd Boxes	Garfield	
2014	Benton County #74 Boxes	Avoca	
2014	Posey Mt. Boxes	Avoca	
2014	Sugar Creek Slabs	Garfield	
2015	Easterling Slabs	Pea Ridge	
2015	Buttler Creek Slabs	Sulphur Springs	
2015	State Line Rd Slabs	Pea Ridge	
2015	Kinchloe Rd	Siloam Springs	2.1
2015	Chamber Springs Rd	Siloam Springs	2.4
2015	Y City Rd	Decatur	2.33
2015	Looney Rd	Pea Ridge	1.8
2015	Commonwealth Rd	Pea Ridge	1.2
2015	Miser Rd	Pea Ridge	1.0
2015	Stoney Point Rd	Lowell	1.0
2014	Miller Church Rd	Bentonville	1.3
2015	Little Rd	Bentonville	1.5
2014	Avoca Hollow Dr	Avoca	0.3
2012	Tilly Hill Rd	Centerton	1.42
2013	Bethlehem Rd	Centerton	1.41
2014	Windmill Rd	Bentonville	1.2

BENTONVILLE

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2011	Hwy 72	"J" Street to I-49	1.58
2011	Downtown Square Phase 3	NW 2nd from Main to NW "A"	0.05
2011	28th/Olive Bridge & Appr	Moberly to 40th	0.51
2012	Shell Road Bridge & Appr	Tributary 2 to Little Osage	0.17
2012	Hwy 102	Hwy 71B to Greenhouse Rd.	2.35
2013	SW "I" South	Hwy 102 to SW 41st	2.63
2013	East Central Ave.	Downtown Square to "J" Street	0.36

2014	NE 2nd Bridge & Appr	Town Branch	0.07
2014	NW 2nd	NW "A" to Hwy 71B	0.62
2014	Windmill Road	Hwy 112 to Morningstar Rd.	1.27

CAVE SPRINGS

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2015	Brown/Ford	Brown Road and Ford Lane ½ mile Brown Road & ½ Ford Lane Note: Benton County road department did all the labor and the City provided the materials. It was a great joint effort that assisted residents in the county and Coutny and the City of Cave Springs.	1

ELM SPRINGS

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2015	Gumm Street Paving	City of Elm Springs	0.1
2015	Downum/Snavely Paving	City of Elm Springs	1.1
2015	Plantation Subdivision	City of Elm Springs	
2015	Oak Ridge Subdivision	City of Elm Springs	
2015	Plantation and Oak Ride Subdivision Curb and Gutter & drainage aprons, 2 each	City of Elm Springs	

FAYETTEVILLE

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2011	Mt. Comfort Rd	Rupple Rd to Alpine Ave	1.1
2013	Cato Springs Rd	Hwy 112/Razorback Rd to Hwy 71B/School Ave	0.98
2013	Futrall/North Hills Roundabout		
2013	Hwy 112/Garland Ave	North St to Melmar Dr	0.70
2013	Hwy 265 Ph. I	Mission Blvd to Joyce Blvd	2.20
2014	Hwy 71B Flyover Bridge		0.49
2014	Hwy 16	Armstrong Ave to Stonebridge Rd	1.49
2014	Hwy 112/Razorback Rd	MLK to Leroy Pond Dr	0.35
2015	Van Asche Dr	Garland Ave/Hwy 112 to Gregg Ave	1.00
2015	Hwy 265 Ph. II	Joyce Blvd to City Limits	1.96
2015	Hwy 16 – West Fork White River Bridge & Approaches		0.49

LOWELL

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2011-2012	East Monroe Improvements	Lowell	0.5
2013	Concord Improvements	Lowell	0.5
2013	Mt. Hebron Rd. Extension	Lowell	250 FT
2014	Phase 1 McClure St. to Lincoln	Lowell	3,000 FT
2014-2015	Micro Seal Subdivision Streets	Lowell	3.5
2015	N. Goad Springs Intersection w/Traffic Signal	Lowell	N/A
2015	Dixieland Sewer Project	Lowell	2
2015	E & W Apple Blossom Drainage Pipes & Wing Walls	Lowell	N/A

MODOT

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2012	I-49 Designation	Kansas City to Pineville (1.36 miles in NARTS MPA)	178

ROGERS

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2015	Oak & Dixieland and Olrich & Dixieland	Added turn lanes to intersections	
2014	Mt. Hebron Road	Partner project with City of Lowell on Mt Hebron (2 to 4 lanes in front of school)	0.25
2014	Garrett Road Intersection	Took out dangerous curve in road	0.1
2015	Dixieland Road Widening	Widened 3 to 5 lanes south of Hudson	0.5
2013	Dixieland Road Rehab	Improved Dixieland north of Laurel	0.25
2013	Country Club Estates	Improved roads in Country Club Estates	0.8
2014	2nd Street & Locust Street	Improved intersection	
2013	21st Street	Added curb and cutter and sidewalks and widened road on 21st between New Hope and Perry Road	0.8
2011	24th Street Improvements	Changed 2 lanes to 4 lane Blvd. north of New Hope	0.5
2015	Pleasant Grove Road	Improved 2 to 4 lanes on Pleasant Grove Road from Bellview to Champions	1.38
2015	First Street	Improved 2 to 5 lanes from Olrich to Birch	0.36
2015	Price Lane	Improved 2 to 3 lanes from 8th to Dixieland	1.0
2015	Monte Ne South	Improved from 2 to 4 lanes from New Hope to Gum Street	0.72
2013	New Hope Widening from First to 71-B	Added lane on north side of New Hope from First Street to 71-B	0.5
2012	Price Lane	New road three lane road from 8th to 1st	0.5

2015	Pinnacle Hills Parkway	New 4 lane Blvd. from Pauline Whitaker Pkwy to Pleasant Grove Road	0.5

SILOAM SPRINGS

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2011	Tahlequah Street	New Location- east/west	0.80
2011	Anderson St.	Improvements - west of JBU	0.25
2011	Sue Anglin Dr. – Ph. 1	New street connecting Cheri Whitlock St. to Tahlequah St.	0.25
2012	Sue Anglin Dr. – Ph2	New street	0.25
2013	Holly St.	Improvements	0.25
2014	Dogwood St.	Improvements	0.35

SPRINGDALE

COMPLETION YEAR	PROJECT NAME	LOCATION	LENGTH (MILES)
2014	Don Tyson Parkway Interchange	Don Tyson Parkway and I-49	NA
Ongoing	Don Tyson Parkway Extension	Don Tyson Parkway between Hylton Road and Habberton Road	0.60
Ongoing	Don Tyson Parkway Widening	Don Tyson Parkway between Carley Road and 40th Street	0.50
Ongoing	56th Street Widening	56th Street between Don Tyson Parkway and Bleaux Avenue	1.80
2014	Johnson Road Realignment	Johnson Road/Johnson Mill Blvd between I-49 and Chapman Avenue	3.25
Ongoing	Johnson Road Widening	Johnson Road between Chapman Avenue and Hwy 412	0.65
2014	Hylton Road Widening	Hylton Road Between Don Tyson Parkway and Hwy 412	0.75
2012	Elm Springs Road Widening	Elm Springs Road between I-49 and Oak Grove Road	0.40
2010	Wagon Wheel Phase II Widening	Wagon Wheel between I-49 and Robins	1.70

WEST FORK

COMPLETION YEAR	PROJECT NAME	DESCRIPTION	LENGTH (MILES)
2011	Bullard Street annexation	Provided gravel base	
2011	Church Street improvements	Widened Church Street	
2012	Red Hawk Road annexation	Provided gravel base	
2012	Kelly Street improvements	Replace drainage tiles	
2012	James Place annexation	Provided gravel base	
2013	Ann Street traffic control	Installed speed limit signs and speed bumps in response to residents' complaints	
2015	School Zone establishment	Established along McKnight Ave. with cooperative efforts of the WFISD	
2015	Hwy 170 safety improvements	3' to 4' widening of the highway at the Doke Ave. and McKnight Ave. curves with cooperative of AHTD	
2015	White Street safety improvements	Addition of pedestrian cross walks and residentially appropriate traffic control devices	
2015	Hwy 170 improvements	Addition of pedestrian cross walks to establish trail head access to additional walking and bike trail at Riverside Park	

SUMMARY OF RECOMMENDATIONS BY IMPLEMENTATION STRATEGIES FROM THE 2035 NWA REGIONAL TRANSPORTATION PLAN

The TAC and RPC/Policy Committee advanced numerous recommendations as a result of technical evaluation and community input throughout the 2035 Plan update process. The following are examples of actions taken to implement the 2035 Northwest Arkansas Regional Transportation Plan Recommendations, and are not meant as an exhaustive list.

TRANSPORTATION DESIGN

1. **Adhere to Cross-Section Guidelines:**
   - Local jurisdictions, AHTD, and MoDOT consult the Plan and use the appropriate cross-sections whenever possible.

2. **Cities, counties, and AHTD should be encouraged to apply techniques of access management:**
   - Hwy. 265 Access Management Agreement – between Fayetteville, NWARPC, and AHTD. All three entities must sign off on a break in access. This Agreement is a prototype for the region.
   - The RPC/Policy Committee approved Resolution 15-5 on December 1, 2015, stating that "NWARPC agrees to participate in the approval process for amendments (variances) to any access management for Hwy. 265 that may be prescribed by affected entities and jurisdictions, including the section from Randall Wobbe to Hwy. 264."

3. **Continue the regional goal of promoting parkways/boulevards including potential locations:**
   - Most local master street plans have parkway/boulevard street standards and attempt to construct boulevards where appropriate and possible.
   - Examples:

- » Hwy. 256 (Crossover Rd) in Fayetteville
- » Don Tyson Boulevard in Springdale
- » S. Dixieland in Rogers
- » Pauline Whitaker Boulevard in Rogers
- » Hwy. 412 in Siloam Springs

4. **Utilize Intelligent Transportation System (ITS) technologies to maximize infrastructure efficiency:**
   - While the 2035 Plan included an ITS section, and a stand-alone ITS Regional Architecture and Deployment Plan was adopted in 2007, the funding has not been available for large ITS projects, such as dynamic message signs.

5. **Examine use of Alternative Traffic Controls:**
   - Roundabouts have been implemented in Fayetteville, Springdale, Rogers, and Bentonville.

6. **Encourage Transit Oriented Design practices:**
   - Downtown master plans have been developed in Bentonville, Rogers, Springdale, Fayetteville and Siloam Springs encouraging complete, compact and connected land use and transportation system design.

7. **Encourage cities, counties, AHTD, MoDOT and the Federal government to install signs naming waterways at road crossings:**
   - Fayetteville has implemented a program to sign all waterways within the city limits.
   - AHTD has some signage on waterways in the region.
   - The Northwest Arkansas Stormwater Education Program has emphasized naming of waterways to remind the public where stormwater drains to.

8. **Encourage and support a regional signage and way-finding plan:**
   - NWARPC was instrumental in development and deployment of regional way-finding signage.

BICYCLE AND PEDESTRIAN FACILITIES

1. **Continue a regional commitment to bicycle and pedestrian facilities:**
   - NWARPC obtained a grant from the Walton Family Foundation to hire a consultant to develop a regional bicycle and pedestrian plan.
   - The NWA Regional Bicycle and Pedestrian Master Plan calls for 25 cities with population over 1,000 to adopt individual community plans. All 25 cities, throughout both Benton and Washington Counties have adopted their plans.
   - The NWA Regional Bicycle and Pedestrian Master Plan was adopted by the RPC/Policy Committee December 1, 2015 and has been incorporated into the MTP.

2. **Adhere to the Active Transportation Plan:**
   - All local community trail plans support the standards in the 2035 Plan. The MTP has and will continue to incorporate any and all local and regional bicycle and pedestrian plans.
   - The NWA Regional Bicycle and Pedestrian Master Plan has been adopted as replacement of the Active Transportation Plan.

3. **Support development of the Razorback Regional Greenway:**
   - The Razorback Regional Greenway project began in 2010 and officially opened on May 2, 2015. This is a 37 mile trail stretching from south Fayetteville to north Bentonville. The middle section of the trail, through Springdale and Lowell and into Rogers, was funded by a public-private partnership between the Walton Family Foundation and the Federal Highway Administration. NWARPC administered the Federal TIGER II grant portion of the project.

4. **Encourage cities to develop master trail plans:**
   - The NWA Regional Bicycle and Pedestrian Master Plan called for 25 cities with population over 1,000 to adopt individual community plans and all 25 cities have adopted their plans.

5. **Continue support of the Heritage Trail Plan:**
   - NWARPC hosts the Heritage Trail Partnership monthly meetings.
   - Signage was created and placed at strategic locations along the Butterfield Trail, the Trail of Tears and the Civil War troop routes.

6. **Seek out and use alternative funding for construction and maintenance of existing and new facilities:**
   - TCSP – Transportation, Community, and System Preservation Program grant (FHWA) was awarded to Springdale in 2012 for the Sanders Avenue Trailhead Construction to provide bicycle and pedestrian access to the Razorback Greenway.
   - TAP – Transportation Alternatives Program – MAP-21/FAST Act created a new program called the Transportation Alternatives Program (TAP) by combining the Transportation Enhancements Program, the Recreational Trails Program and the Safe Routes to School Program. The TAP is a Federally funded, 80 percent/20 percent reimbursable program available to local jurisdictions. The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities.
     - Since becoming a TMA, local jurisdictions may submit TAP applications to the RPC/Policy Committee who ultimately votes on the projects as they are recommended by the TAC.
   - TIGER II - Transportation Investment Generating Economic Recovery grant – This grant was awarded to NWARPC for design, ROW acquisition, and construction of the Razorback Regional Greenway. The Walton Family Foundation provided the 20 percent match.
   - NWARPC and local jurisdictions partnered with the private sector to advance multiple projects in the region, such as the Don Tyson Parkway Interchange, Hwy. 265 Improvements, and Elm Springs Road Interchange.
     - » Local jurisdictions may also apply for State TAP funds.

INTERMODAL FACILITIES

1. **Efforts should continue to finance and build the Airport Access Road:**
   - The access road will eventually connect to the Hwy. 412 Northern Bypass. The Environmental Impact Statement process has begun for the access road corridor, and the Hwy. 412 Northern Bypass was started in April 2015.

TRANSIT

1. **Implement the Transit Development Plan:**
   - The local transit agencies are implementing the TDP through expanded routes and additional buses. ORT is continuing to exploring options for a fixed source of income. A ¼ cent tax for dedicated transit funding and implementation of the TDP was rejected by the public in April 2012.

2. **Explore funding options for bus and fixed guideway service:**
   - FFY 2015 and FFY 2016 STP-A funds were awarded to ORT and Razorback Transit for the purchase of new buses.
   - New Starts program – The Federal New Starts program (Chapter 53 of Title 49, U.S.C, as amended by MAP-21/FAST Act, Section 5309) requires an Alternatives Analysis study to determine if this program funding can be used for alternative transportation options. The NWA Alternatives Analysis Study, completed fall 2014, concluded that none of the alternatives considered were financially feasible at this time based on low ridership forecasts, high capital costs, and not meeting the FTA threshold to receive Federal funding.

3. **Encourage the development of transit service by human service agencies and taxi companies:**
   - Human service agencies forward grant applications to the Regional Clearinghouse Review. The NWARPC is the Clearinghouse for the region. Many agencies request funding for vehicles that are used to transport individuals or groups to locations around the region.

TRANSPORTATION ALTERNATIVES

1. **Continue to pursue an Alternatives Analysis of potential fixed guideway systems for the North-South corridor (such as passenger rail, bus rapid transit and High Occupancy Vehicle lanes):**
   - The Alternatives Analysis Study final report was published in September 2014.

2. **Meet the Federal requirement to implement a Congestion Management Process:**
   - The NWARPC CMP Report was approved in May 2015.

PROJECT PRIORITIZATION

1. **Establish a Regional Arterial Network:**
   - Encourage local governments to protect and acquire ROW on routes identified on the 2035 Network.
   - Rupple Road and Van Asche Drive in Fayetteville.
   - Hwy. 265 in Fayetteville and Springdale; Hwy. 265 extension in Rogers (1st Street improvements).
   - 8th Street in Bentonville.
   - Dixieland Road extension and Monroe Street in Lowell.
   - Improve East-West connections.
     - » Hwy. 62 West Prairie Grove Bypass.
     - » 8th Street in Bentonville.
     - » Van Asche Drive, the Hwy. 71 Flyover, and Hwy. 16 East in Fayetteville.
     - » Johnson Road in Springdale and Johnson.
     - » Don Tyson Boulevard in Springdale.
     - » Hwy. 264 and Wagon Wheel Road in Springdale.
     - » Hwy. 102 in Bentonville and Centerton.

- Establish North-South regional arterials including those close to both sides of I-49 with connecting grade.
- Plan for an additional interchange on the Hwy. 412 Northern Bypass between Hwy. 265 and the Beaver Lake Bridge.
    - » Construct the Hwy. 412 Northern Bypass at four lanes but plan for and buy ROW for six lanes.
    - » The ROW for the western portion of the Bypass has been purchased, and project construction began in April 2015.
- Improve the rural county road network.
- Refine and Improve the 2035 Network with the aid of the travel demand model.
    - » The model has been updated and has been used in improving the Arterial Network.

2. **Maintain a regional cohesiveness and unity by pursuing all funding alternatives for these specific major corridor projects:**
    - I-49 Improvements.
        - » CAP – Connecting Arkansas Program.
        - » IRP – Interstate Rehabilitation Program.
    - I-49 (Hwy. 549 - Bella Vista Bypass).
        - » TIGER and CAP.
    - Hwy. 412 Northern Bypass.
        - » CAP.

3. **I-49 Improvements:**
    - Focus first on short and interim improvements to interchanges.
        - » Improvements to several interchanges were made, for example the Johnson Mill Boulevard interchange and Hwy. 62 interchange in Fayetteville.
    - Improve existing grade separations on I-49.
        - » Multiple IRP projects.
    - Develop new locations of grade separations on I-49.
        - » Don Tyson Boulevard overpass and interchange in Springdale.
        - » Olive Street overpass in Rogers/Bentonville.
    - Long term interchange improvements.
        - » The IRP is underway.
    - Widen mainline.
        - » The CAP is underway. One section of 6 lane is open, between Wagon Wheel Road (Exit 76) and Hwy. 264 (Exit 78) in Lowell.
        - » Another 6 lane section is under way between New Hope Road (Exit 83) and Hudson Road (Exit 86).
    - Possible new interchanges at:
        - » Don Tyson Parkway in Springdale (Complete).
        - » “J” Street in Bentonville.
        - » Eighth Street in Bentonville.

4. **Continue study and funding of the Eastern North-South corridor.**
    - AHTD completed a corridor study.
        - » A section of Hwy. 265 from Hwy. 264 north is scheduled to be built in the near future.

5. **Request AHTD to study the potential of Hwy. 112 as a major North-South corridor.**
    - AHTD completed the corridor study.

6. **Utilize ITS technologies to maximize infrastructure efficiency.**
    - Some cities have improved synchronized signals.
    - The CMP recommends ITS solutions before adding capacity.

2040 METROPOLITAN TRANSPORTATION PLAN RECOMMENDATIONS

The TAC and RPC/Policy Committee advanced the following Recommendations as a result of technical evaluation and community input throughout the 2040 MTP update process. Many of the Recommendations/Implementation actions from the 2035 Plan are being carried forward into the 2040 MTP.

1. **Continue to establish a Regional Arterial Network.**

2. **Continue the regional goal of promoting parkways/boulevards.**
   - Access Management.
   - Context Sensitive Solutions.
   - Complete Streets.

3. **Adhere to Cross-Section Guidelines.**
   The Northwest Arkansas Regional Bicycle and Pedestrian Master Plan offers cross-sections that conform to acceptable AASHTO standards and may be applied within the recommended standard right-of-way and curb-to-curb dimensions for Minor and Collector Streets, and Minor and Major Arterials.

4. **Meet the Federal requirement to implement a Congestion Management Process.**
   - The NWARPC CMP Report was approved in May 2015. This is the first phase, or step, in the congestion management process. The following outlines the Tasks in the Congestion Management Process:
     Task 1. Develop Regional Objectives for CM – Complete.
     Task 2. Define CMP Network – Complete.
     Task 3. Develop Multimodal Performance Measures – This involved developing performance measures that will be used to measure congestion on a regional and local scale and should relate and support the regional objectives.
     Task 4. Collect Data/Monitor System Performance – Data is collected and analyzed to determine how the transportation system performs. Data collection is on-going and may involve a wide range of data sources and partners.
     Task 5. Analyze Congestion Problems and Needs – Using data and analysis techniques, the CMP should address what congestion problems are present or anticipated and what are the sources of unacceptable congestion. The CMP Committee decided the time periods when congestion was the worst (7:00 to 9:00 AM and 4:30 to 6:30 PM); what was congested versus unacceptable; and decided to use the top fifteen percent of the worst routes as a screening/priority tool for funding for CM mitigation.
     Task 6. Identify and Assess Strategies – This involves identifying and assessing potential strategies appropriate to mitigating congestion. Common mitigation categories include: Access Management /Signal Timing/Planned Improvements/Acceptable Delays/Intersection Geometry/Stop Signs/Added Capacity. Some MPOs have established “regional initiatives” to address operation deficiencies such as signal timing.
     Task 7. Program and Implement Strategies – These are items that need to be addressed going forward – how and when will solutions be implemented.
     Task 8. Evaluate Strategy Effectiveness – What has been learned about implemented strategies? This action may be tied to monitoring system performance under Task 4. It should inform future decision making about the effectiveness of transportation strategies.
   - Assessment of implemented strategies including before/after analysis of recent projects such as:
     - » Springdale and Rogers Adaptive Signal Control.
     - » Hwy. 265 Access Management Plan.
     - » I-49 Capacity and Interchange Improvements.
   - Increase focus on management and operations of the traffic signals on the CMP network.

5. **Utilize ITS technologies to maximize infrastructure efficiency.**
   - Work toward implementation of the Regional ITS Architecture and Deployment Plan, with a priority to be dynamic message signs.

6. **Examine use of Alternative Traffic Controls.**
   - Roundabout.
   - Single Point Urban Interchange.
   - Diverging Diamond Interchange.

7. **Begin a regional discussion on self-driving cars, and the impact this technology may have on transportation infrastructure in the future.**
   - Become more knowledgeable about connected/automated and autonomous vehicles, such as how services like driverless vehicles rollout and how soon this will begin to unfold.
   - Envision the role that public transit, local buses, active transportation and private cars play in the region.

8. **Cities, counties, AHTD, and MoDOT are encouraged to apply techniques of access management.**
   - Tri-party access management agreements with a local jurisdiction, State highway department, and NWARPC have proved very successful in the past and should continue to be employed.
   - In applying access management, the use of the jurisdiction's ordinance is preferred, if one exists. If one does not exist, the highway department policy should be adhered to.
   - A Model Access Management Ordinance is included in Appendix C.

9. **Continue funding of the Eastern North-South corridor (Hwy. 265).**
   - Implement access management strategies as recommended in the AHTD corridor study.
   - Continue to fund recommended phases based on the AHTD corridor study.

10. **Complete the Northwest Arkansas Regional Airport access road.**
    - Continue to work with AHTD, the Federal government and private partners to identify funding opportunities.

11. **Explore funding options for bus and fixed guideway service.**
    - Delve into the grant program FTA Ladders of Opportunity Initiative. These funds may be used to modernize and expand transit bus service specifically for the purpose of connecting disadvantaged and low-income individuals, veterans, seniors, youths, and others with local workforce training, employment centers, health care, and other vital services.

12. **Continue to pursue the Alternatives Analysis Study recommendations of potential fixed guideway systems for the North-South corridor (such as passenger rail, bus rapid transit and High Occupancy Vehicle lanes).**
    - The Northwest Arkansas region should create and adopt an integrated land use and transportation plan that is based on promotion of mixed use development patterns.
    - Communities in Northwest Arkansas can become "transit ready" ahead of a system being built.
    - Keep the development focused in the corridor.
    - Look for ways to add energy and developer interest in the communities and downtowns.
    - When feasible, in addition to the commuter rail Locally Preferred Alternative (LPA) along the A&M railroad, begin a phased development of high quality Bus Rapid Transit (BRT) along Hwy. 71B.
    - Update the Transit Development Plan.

13. **Promote the use of public transit as an alternative to the automobile.**
    - Support a regional public relations campaign to educate the public.
    - Support a study to identify potential transit markets with Northwest Arkansas businesses and municipalities.

14. **Encourage Transit Oriented Design practices.**
    - Coordinate regional land use and transportation systems to serve existing and future transit markets.
    - Use Complete Street principles to create a connected sidewalk, bicycle, and roadway system.
    - Encourage land use policies that promote the use of other-than-auto modes of transportation.

15. **Cities, counties, AHTD, MoDOT and the Federal government are encouraged to install signs naming waterways at road crossings and trail crossings.**

16. **Continue a regional commitment to bicycle and pedestrian facilities.**
    - Apply program and policy recommendations as outlined in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
    - Support extended development of the Razorback Regional Greenway to the north and south.
    - Seek out and use alternative funding for construction and maintenance of existing and new trail facilities.

CHAPTER 2. VISION, GOALS AND MTP FRAMEWORK

MTP VISION

In order to create a framework for the 2040 Metropolitan Transportation Plan (MTP), a vision statement was drafted by the Vision/Goals Committee and presented to the TAC, RPC/Policy Committee and the public. As is evident in the following vision statement, this region understands the rapid growth rate of the area and the need for a multimodal (alternative, innovative, resilient, sustainable) transportation system.

A vision was developed for the MTP to guide its development. The vision is as follows:

> The Northwest Arkansas region will develop and maintain a safe, reliable, and efficient transportation system for the movement of people and goods throughout the area. The system will include a safe, secure, well-integrated and connected roadway, transit, freight, pedestrian and bicycle network. The system will enhance and sustain a high level of economic vitality, community livability and quality of life by providing movement of goods, choice, mobility, convenience and energy efficiency.

GOALS, PRINCIPLES AND OBJECTIVES

In order to create a plan to complement the aforementioned vision, five goals and supporting principles and objectives were adopted. The Goals, Principles and Objectives were derived from the extensive public input gathered throughout MTP development, and approved by the TAC and RPC/Policy Committee. The MTP Goals, Principles and Objectives create the groundwork for future policies to ensure that Northwest Arkansas is able to meet the demands of the transportation system in the most economical manner. Additionally, they challenge the region to think beyond strictly transportation and begin to make the connection between transportation and the broader society.

MAP-21/FAST Act established national performance goals. The MTP Goals, Principles, and Objectives strive to align with the national performance goals in five main areas:

- Safety and Security
- Infrastructure Condition
- Congestion Reduction and System Reliability
- Freight Movement and Economic Viability
- Environmental Sustainability

NATIONAL GOAL I: TRANSPORTATION SAFETY AND SECURITY – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

MTP Goal I: Increase transportation safety for all modes of travel.

Principle I.1: Provide safe and secure travel for all modes of transportation, including walking, bicycling, transit and vehicular.

Objectives:

1. Encourage improved traffic operations, access management and other strategies and measures to reduce the number and rate of crashes and improve system reliability.
2. Encourage the use of intelligent transportation systems (ITS) that improve the emergency response to incidents and clearing of incidents to improve safety and system reliability.
3. Implement strategies that help reduce fatality and serious injury crash rates for all modes.
4. Promote and improve safety for pedestrians, bicyclists, and other non-motorized travelers through adherence to the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
5. Encourage transit agencies to implement safety performance targets and measures and safety management systems.

Principle I.2: Provide for system safety, reliability, and lower crash rates.

Objectives:

1. Design, manage, and operate the transportation system to reduce crashes and identify safety improvements based on a data-driven process.
2. Use the Arkansas Strategic Highway Safety Plan 2013 as a guide toward development of state and local strategies to reduce roadway fatalities and serious injuries.
3. Collect, analyze and maintain crash data as it relates to the transportation system as a performance measure of safety.

NATIONAL GOAL II: INFRASTRUCTURE CONDITION – To maintain the transportation system in a state of good repair.

MTP Goal II: Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation.

Principle II.1: Identify and protect corridors needed for future highway, transit, freight, or other transportation system requirements.

Objectives:

1. Support the adoption of local right-of-way plans, policies and ordinances as needed to identify, acquire and protect the right-of-way within corridors as development continues.
2. When feasible, identify future corridors for advance right-of-way acquisition for highways, local roads, transit, bicycle and pedestrian use.
3. Promote shared right-of-way/easements for multiple purposes and utilities.
4. Maintain and preserve existing highway, transit and other facilities in good condition. Employ system performance measures, such as Maintenance Principles – Age of Transit Fleets; Pavement Management Systems (Overlay Programs); Bridge Repair based on ratings; and the Pavement Performance Index to gauge the transportation system's optimum use and efficiency.

NATIONAL GOAL III: CONGESTION REDUCTION AND SYSTEM RELIABILITY

MTP Goal III: Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.

Principle III.1: Address congestion and system reliability and maximize efficiency and effectiveness through management and operations.

Objectives:

1. Align the Northwest Arkansas Congestion Management Process closely with the MTP and use the Congestion Management Process performance measures in project prioritization and funding that will maximize capacity and system reliability.
2. Manage access to and from adjacent property in key corridors, thus improving vehicular and pedestrian safety and reliability.
3. Safeguard transportation investments by promoting access management policies.
4. Encourage use of management and operations such as ridesharing, transit service, and coordinated traffic signals and traffic operations.

Principle III.2: Endeavor to reduce congestion by supporting alternative transportation modes.

Objectives:

1. Provide adequate and steady funding to operate existing public transit systems.
2. Provide improved pedestrian connectivity by providing sidewalks and/or trails to goods, services, jobs, schools, and recreation activities and providing safe crossings of roadways.
3. Continue development of the regional trail system for bicycles and pedestrians that provides a safe route of travel between home, work and services as an alternative means of transportation through use of the principals included in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan.
4. Encourage and support bus rapid transit and commuter rail transportation alternatives with the understanding that financial feasibility will depend on ridership, capital costs, and potential federal, state and local funding.

Principle III.3: Encourage land development patterns that promote transportation efficiency.

Objectives:

1. Support in-fill development and the concentration of new commercial and office space activity that enhance the utilization of alternative forms of transportation.
2. Identify transit corridors that allow higher density mixed-use areas to be served by public transit.
3. Encourage major facilities to locate along planned public transit lines and implement “transit friendly” strategies.
4. Encourage transit stops/stations within convenient walking distance of major concentrations of employment.

NATIONAL GOAL IV: FREIGHT MOVEMENT AND ECONOMIC VITALITY

MTP Goal IV: Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.

Principle IV.1: Support an integrated system with efficient connections between transportation modes.

Objectives:

1. Minimize travel time and increase reliability.
2. Increase accessibility to employment centers.
3. Increase accessibility to other major commercial, industrial, educational, medical, and recreation centers.
4. Provide for access to developing areas in the region.
5. Encourage transit supportive infrastructure to be implemented at the time of new construction or improvements.

Principle IV.2: Enhance commerce.

Objectives:

1. Promote improvements that facilitate the efficient movement of freight and enhance regional and global competitiveness.
2. Encourage cooperative planning with other transportation agencies to insure regional goals.
3. Promote reliable travel time to aid in just-in-time manufacturing processes.

NATIONAL GOAL V: ENVIRONMENTAL SUSTAINABILITY – To enhance the performance of the transportation system while protecting and enhancing the natural environment.

MTP Goal V: Provide a transportation system that protects and enhances the environment, promotes energy conservation and improves the quality of life.

Principle V.1: Support the regional implementation of recommendations covered in the Cave Springs Karst Area Resource Conservation Study and the Northwest Arkansas Open Space Plan.

Objectives:

1. Encourage and assist local jurisdictions in adoption of drainage ordinances.
2. Encourage implementation of Best Management Practices in the Karst geology direct impact area.
3. Promote conservation of various types of open space through use of strategies contained in the Open Space Plan.

Principle V.2: Identify and encourage the use of developing technologies and sources of energy that assist in protecting the natural environment.

Objectives:

1. Minimize energy consumption on a system-wide basis by reducing congestion and improving reliability.
2. Minimize air, water, noise and visual pollution.
3. Minimize disturbances of the region's natural aesthetics and wildlife habitat.
4. Provide for needed highway and transit system enhancements.

MTP FRAMEWORK

To guide decision-making and comply with the Federal transportation legislation, MAP-21/FAST Act the MTP Framework was developed around national goals, AHTD goals, and MTP goals. Table 2.1 illustrates how Federal and State transportation goals align with MTP goals. The MTP Framework also establishes potential MTP System Measures tied to each of the national, State and MTP goals with the opportunity to track progress towards these goals.

2040 Metropolitan Transportation Plan - Framework - National, State, and Region					
National Goal Area	**National Goals**	**AHTD Goals**	**NWARPC 2040 MTP Goals**		**Potential 2040 MTP System Measures**
Infrastructure Condition - State of Good Repair	To maintain the highway infrastructure asset system in a state of good repair	Invest in the existing highway and bridges to maintain and preserve the existing system.	**Preserve and Maintain Infrastructure**	Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation.	Bridge Condition on NHS Pavement Condition on NHS Transit Bus/Fleet Age/Condition
Safety and Security	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads	Improve statewide safety for all modes and all users and reduce system vulnerability and improve system resiliency to maintain essential travel during extreme events.	**Improve safety**	Increase transportation safety for all modes of travel	Serious Injures per VMT Fatalities per VMT Number of Serious Injuries per 100K Pop Number of Fatalities per 100K Pop
Congestion Reduction and System Reliability	To achieve a significant reduction in congestion on the National Highway System. To improve the efficiency of the surface transportation system	Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods.	**Reduce Congestion Improve Reliability**	Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.	Volume Delay Per Mile on CMP Congestion Index on CMP Travel Time Index on CMP
Freight Movement and Economic Vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development	Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness. Partner with Metropolitan Planning Organizations, Planning and Development Districts, local governments, and other responsible modal agencies to improve intermodal transportation system safety, accessibility, and connectivity.	**Improve Regional Mobility**	Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.	Miles of Complete Streets Miles of roadways with Access Management Number of Bike and Pedestrian Catalyst Projects Miles of improved Arterial Network % population served by public transit with 1/4 mile Unlinked Trips per Passenger Mile (Transit, NTD) Unlinked Trips per Revenue Hour (Transit, NTD)
Environmental Sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment	Enhance the performance of the transportation system while avoiding, minimizing, and/or mitigating impacts to natural and cultural resources.	**Protect the Environment**	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Number of Jurisdictions with drainage criteria manuals Number of jurisdictions with Karst BMP's Cave Springs Recharge Area

* Potential Performance Measures based on FHWA Notice of Proposed Rule Making (NPRM) and also includes on-going NWARPC initiatives and implementation of plans

Table 2.1 - 2040 MTP Framework

CHAPTER 3. POPULATION AND LANDUSE

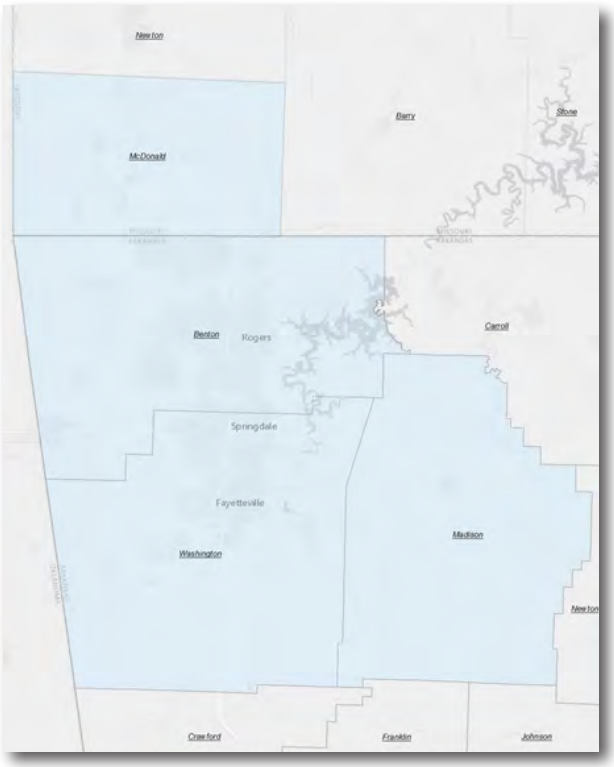
OVERVIEW OF EXISTING SOCIO-ECONOMIC CONDITIONS

The NWARPC is the federally designated Metropolitan Planning Organization (MPO) for Benton and Washington Counties, Arkansas and a portion of McDonald County, Missouri.

The Urbanized Area for this region, as identified by the U.S. Census Bureau includes Benton and Washington Counties and a portion of McDonald County.

The U.S. Census Bureau designated Fayetteville-Springdale-Rogers Metropolitan Statistical Area (MSA) includes Benton County, Washington County and Madison County, Arkansas and McDonald County, Missouri (four-county area).

For the purpose of this chapter, "Northwest Arkansas" will refer to the two-county area of Benton and Washington Counties in Arkansas, and, when specified, will include the portion of McDonald County, Missouri.



Fayetteville- Springdale-Rogers, AR-MO MSA Area

Geographic Profiles

Metropolitan Planning Area (MPA) population characteristics:

Benton County

- 153,406 based on the Census Bureau's 2000 population.
- 221,339 based on the Census Bureau's 2010 population.
- This represents a 44.3 percent increase and an annual growth rate of 3.73 percent.
- On average there were 6,793 people per year moving to Benton County between 2000 and 2010.
- 242,321 based on the Census Bureau's 2014 annual population estimates.

- Contains nineteen incorporated cities.
- All or part of nine Benton County cities fell within the Census defined Urbanized Area in Census 2010, including the cities of Bella Vista, Bethel Heights, Bentonville, Cave Springs, Centerton, Little Flock, Lowell, Pea Ridge, Rogers and Springdale.
- Siloam Springs meets the Census Bureau's definition of an Urban Cluster.

Washington County

- 157,715 based on the Census Bureau's 2000 population.
- 203,065 based on the Census Bureau's 2010 population.
- This represents a 28.8 percent increase and an annual growth rate of 2.56 percent.
- On average there were 4,535 people per year moving to Washington County between 2000 and 2010.
- 220,792 based on the Census Bureau's 2014 annual population estimates.
- Contains thirteen incorporated cities.
- Nine of these cities fall within the urbanized area criteria. These cities include Elkins, Elm Springs, Farmington, Fayetteville, Greenland, Johnson, Springdale, Prairie Grove, and Tontitown.

Portion of McDonald County

- The portion of the MPA in McDonald County, Missouri had approximately 2,089 population and approximately 751 housing units (2010 Census).
- Pineville (the county seat for McDonald County), has a total area of 3.11 square miles, population of 791, and 287 households (2010 Census).
- Jane is a small community of 301 people in 2010 and is situated on Route 90 at the intersection with US 71.

Population Growth

In 2000, Benton and Washington County had a total population of 311,121 (2000 Census). In 2010, the two-county population grew to 424,404 (2010 Census). The Northwest Arkansas regional population has grown annually at a 3.15 percent rate from Census 2000 to 2010. This represents, on average, an annual population increase of about 11,328 in Northwest Arkansas. By July 2014, the Census Bureau estimated the annual resident population of the two counties in the interval from April 1, 2010 to July 1, 2014 to be 463,113 (242,321 for Benton County and 220,792 for Washington County). In this period of four years, there was an increase of 38,709 people in the two counties.

Figure 3.1 illustrates the population change in the three counties and the different population components of change from the U.S. Census Bureau's estimates between April 1, 2010 and July 1, 2014. Benton County added the highest total population numbers compared to the other two counties with 20,977 people. However, Washington County had the most births in this period, 14,012. Benton County also had the highest migration numbers due to high domestic migration.

In the MSA (four-county area), according to the ACS 2009-2013, the total population was 473,913 with a median age of 33.3. Figure 3.2 illustrates the population by age group as a percentage of the total population. The largest population group is from 35 to 44 years old (15 percent) followed by both the 35 to 44 and 45 to 54 years age groups (13 percent) as illustrated in Figure 3.2.

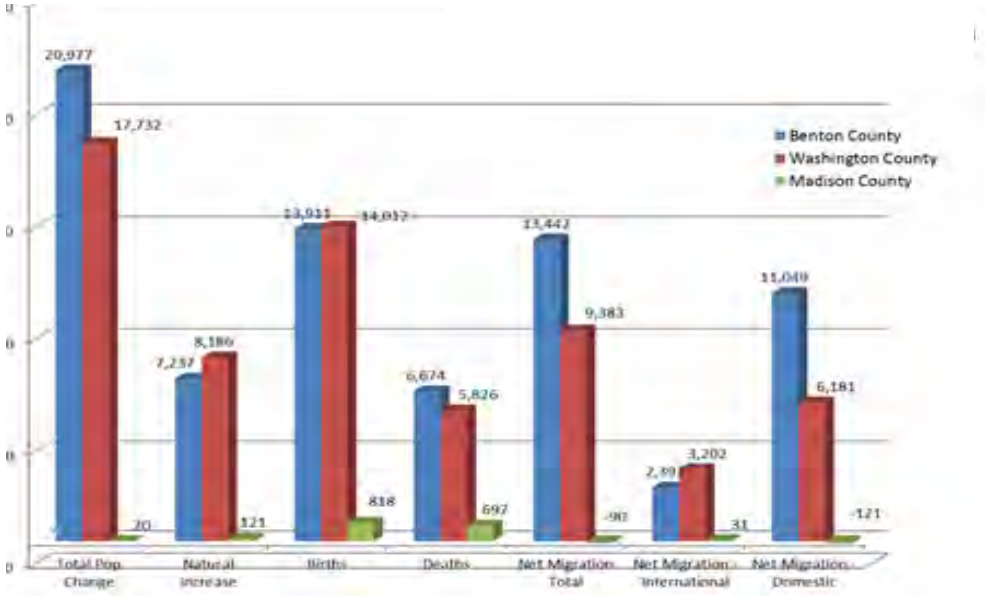


Figure 3.1 - Cumulative Estimates of Population Change 2010 to 2014

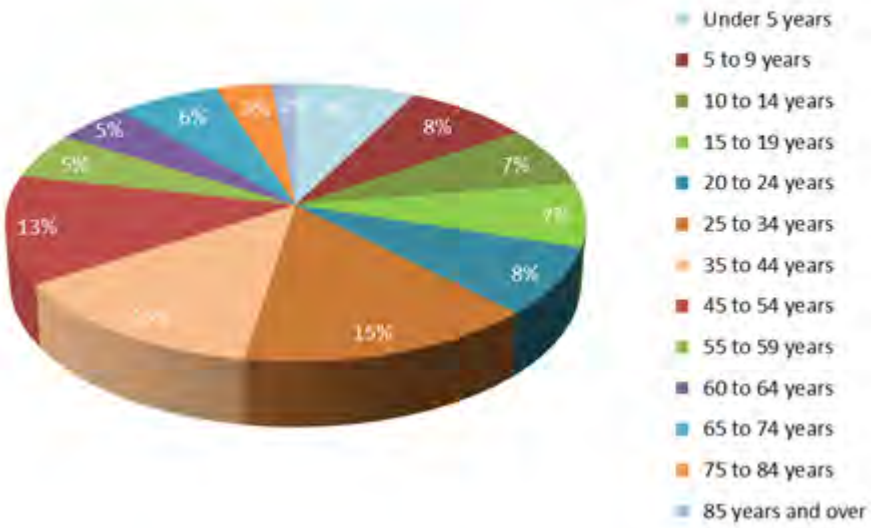
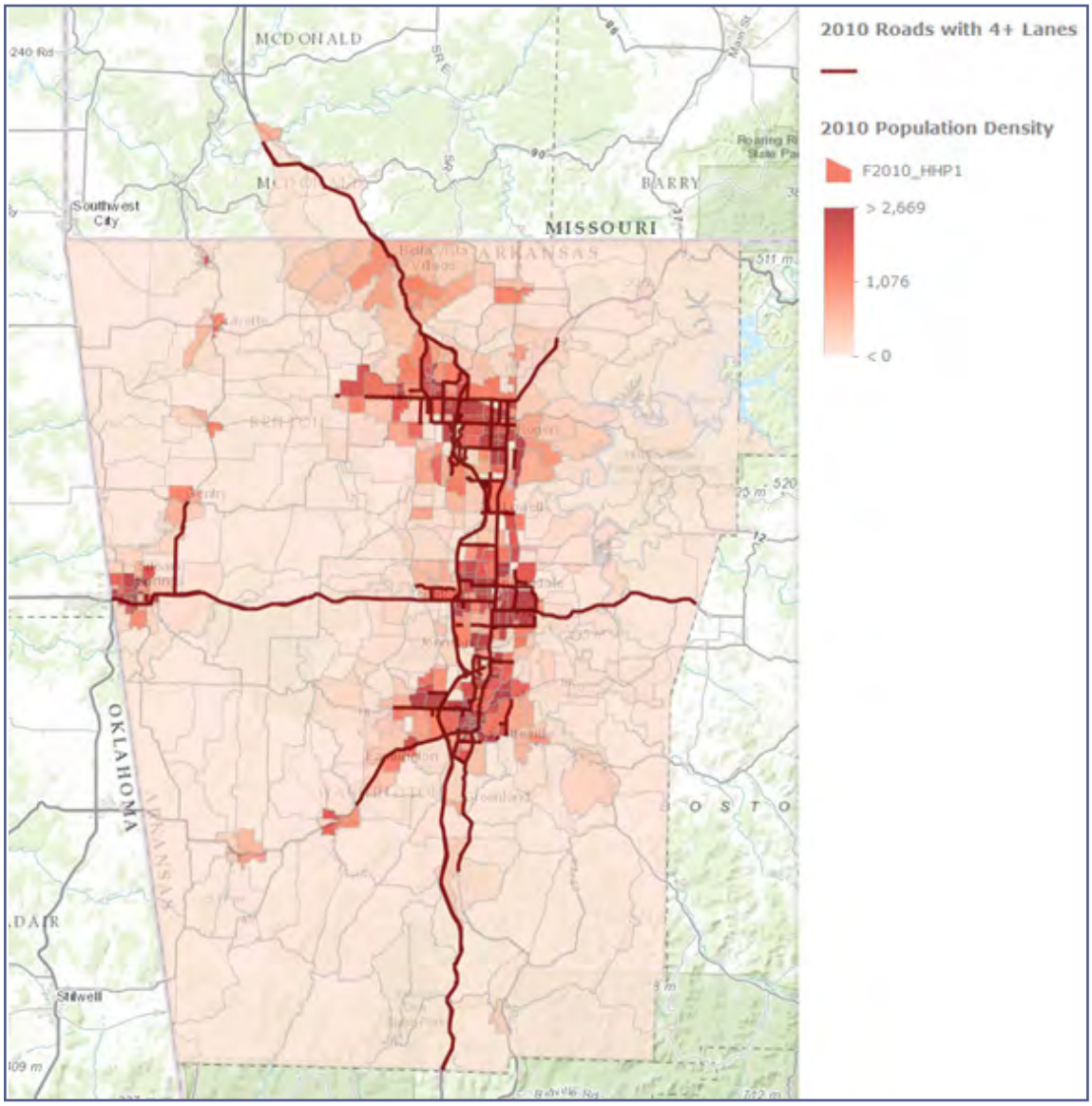


Figure 3.2 - Population by Age in the Fayetteville, Springdale, Rogers, AR-MO MSA

At the city level geography, Table 3.1 reflects the population trend by jurisdiction in the two-county area since 1990. The Census Bureau's data clearly indicates an increase in population for the majority of the 32 city jurisdictions. A comparison has also been made between the last Census Bureau's data (2010) and the latest estimates from the ACS 2009-2013. Looking at the trend for these last three years, only eight communities have a decreasing population and most of these are small communities, under 500 population (such as Highfill, Springtown, Sulphur Springs or Winslow). The majority of the cities in the two-county area are continuing to add population in their jurisdictions, with Fayetteville, Springdale and Rogers as still the most populated cities in the area.

In terms of population density, the highest density is concentrated in the urban corridor along I-49 and Hwy. 71B. Map 3.1 illustrates the 2010 population density by Traffic Analysis Zones (TAZ) geography as it was developed for the Northwest Arkansas Travel Demand Model.



Map 3.1 - Population Density by TAZ and Arterial Roads

Population Projections

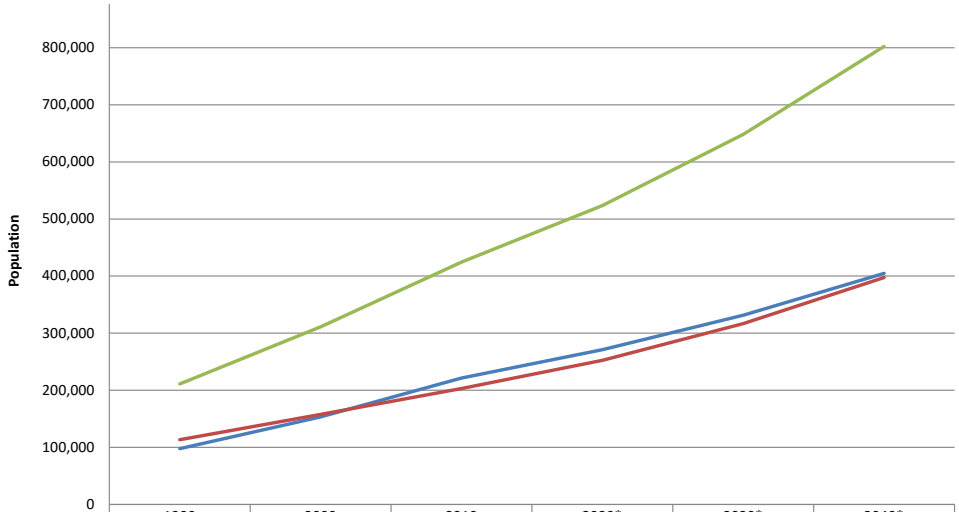
During the 2035 Plan update, NWARPC projected that population for the two county area would reach approximately 691,274 by 2035. NWARPC is currently using the estimated projections that the Arkansas Census State Data Center (CSDC) published in 2015 to project the population growth through the year 2040.

According to CSDC, see Figure 3.3, Benton County's population is projected at 404,736 while Washington County population is projected to be at 397,636 (a total of 802,372 people for the two county area by 2040). This projection was also utilized in determining the control total population for the NWARPC Travel Demand Model that has a forecast year of 2040 (see Map 3.2).

The CSDC develops detailed demographic data for counties in Arkansas and is using an Age and Gender cohort methodology in order to project population in Arkansas. This method also takes into consideration births and deaths as well as migration. The population projection graphics illustrated here used the 2015 CSDC projections for counties in Northwest Arkansas.

CITY/COUNTY	CENSUS 1990	CENSUS 2000	CENSUS 2010	ACS 2009-2013
Unincorporated Benton Co.	33,079	44,009	42,483	n/a
AVOCA	269	423	488	543
BELLA VISTA	9,083	16,582	26,526	26,875
BENTONVILLE	11,257	19,730	35,301	37,131
BETHEL HEIGHTS	281	714	2,372	2,331
CAVE SPRINGS	465	1,103	1,931	2,069
CENTERTON	491	2,146	9,515	9,850
DECATUR	918	1,314	1,699	1,880
ELM SPRINGS - Benton Co.		13	137	n/a
GARFIELD	308	490	502	603
GATEWAY	65	116	405	464
GENTRY	1,726	2,165	3,425	3,243
GRAVETTE	1,412	1,810	3,113	3,000
HIGHFILL	84	379	583	482
LITTLE FLOCK	944	2,585	2,585	2,639
LOWELL	1,224	5,013	7,327	7,536
PEA RIDGE	1,620	2,346	4,794	4,877
ROGERS	24,692	38,829	55,964	57,603
SILOAM SPRINGS	8,151	10,843	15,039	15,378
SPRINGDALE - Benton Co.	907	2,011	6,554	n/a
SPRINGTOWN		114	87	76
SULPHUR SPRINGS	523	671	511	398
BENTON CO. TOTALS	**97,499**	**153,406**	**221,339**	**227,439**
Unincorporated Washington Co.	31,794	38,341	37,350	n/a
ELKINS	692	1,251	2,648	2,702
ELM SPRINGS - Washington Co.	893	1,031	1,756	n/a
ELM SPRINGS (Total)	893	1,044	1,893	1,722
FARMINGTON	1,322	3,605	5,974	6,085
FAYETTEVILLE	42,099	58,047	73,580	75,602
GOSHEN	589	752	1,071	1,123
GREENLAND	757	907	1,294	1,417
JOHNSON	599	2,319	3,354	3,436
LINCOLN	1,460	1,752	2,249	2,219
PRAIRIE GROVE	1,761	2,540	4,426	4,539
SPRINGDALE - Washington Co.	29,034	43,787	64,195	n/a
SPRINGDALE (Total)	29,941	45,798	70,749	72,070
TONTITOWN	460	942	2,460	2,517
WEST FORK	1,607	2,042	2,317	2,375
WINSLOW	342	399	391	350
WASHINGTON CO. TOTALS	**113,409**	**157,715**	**203,065**	**207,911**
TWO-COUNTY TOTAL	**210,908**	**311,121**	**424,404**	**435,350**

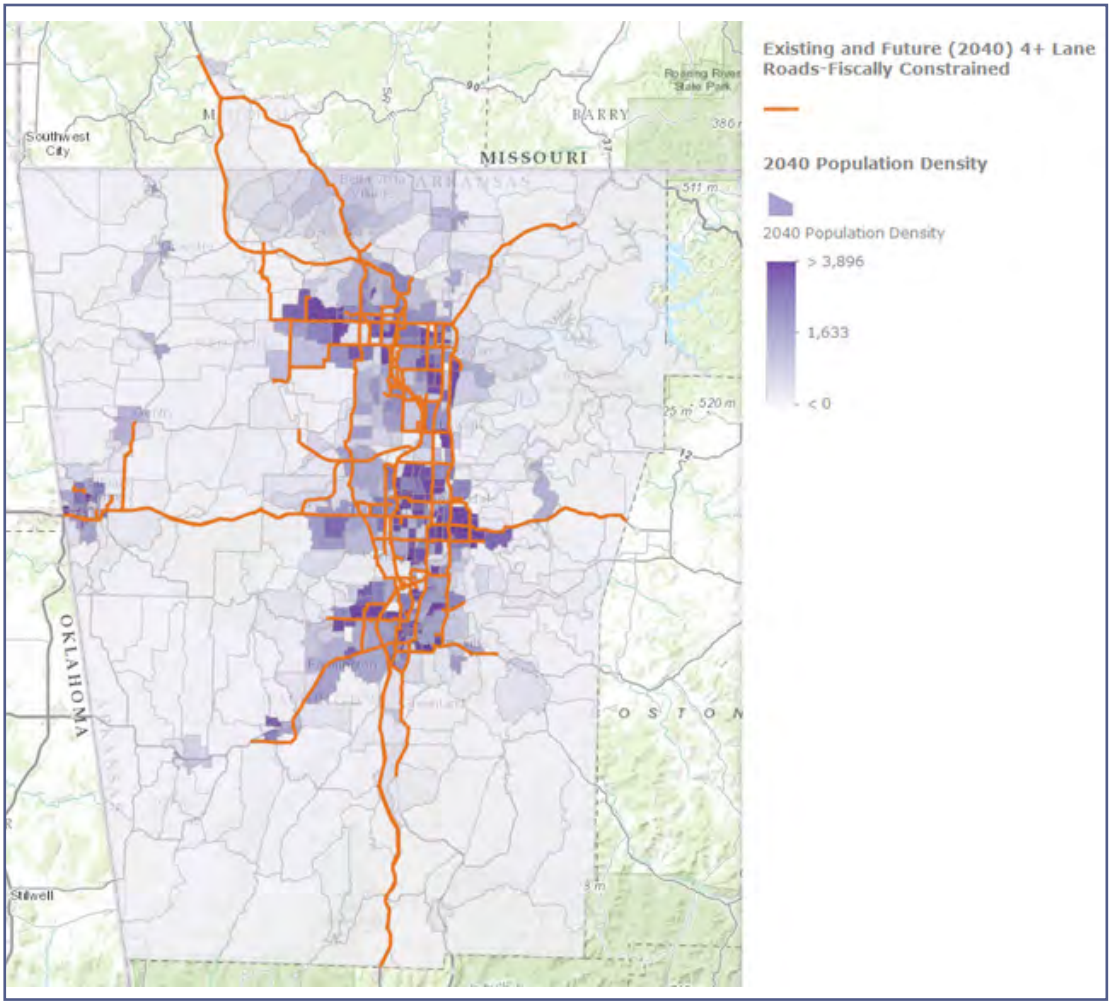
Table 3.1 - Population Trend by Jurisdiction



	1990	2000	2010	2020*	2030*	2040*
Benton	97,499	153,406	221,339	271,031	331,370	404,736
Washington	113,409	157,715	203,065	252,532	316,885	397,636
Two county	210,908	311,121	424,404	523,563	648,255	802,372

*Years projections by the Arkansas Census State Data Center (CSDC) (2015)

Figure 3.3 - Population Projection by County



Map 3.2 - NWARPC Projected Population Density for 2040 by TAZ and Arterial Roads

City Population Projections

The estimated and projected populations for 2040 is shown in Table 3.2 for all the cities and incorporated Benton and Washington Counties area. These projections were based on the population projection from CSDC and also used previous growth rates developed for the 2035 Plan. In both counties many jurisdictions have an overall percent growth over 100 percent between 2010 and projected 2040. The highest percent growth in Washington County is projected for the city of Johnson which could grow 156 percent to 8,578 by 2040. The highest total population number is projected for Springdale at 150,932, a 113 percent increase. Fayetteville will have a projected growth of 94 percent to reach 142,496 people by 2040. In Benton County the highest population number is projected in Rogers at 102,281, an increase of 83 percent from 2010. Centerton still has one of the highest percent population increase projected to grow by approximately 135 percent reaching 22,376 people in 2040. These population projections are useful to city planning departments as well as for regional planning. These projections will also be used for forecasting traffic in the travel demand model.

Demographic Estimates - Race

According to the ACS 2009-2013 five year estimate in Benton County, 87.2 percent of the population is white and about 12.8 percent other race than white; in Washington County 78.3 percent is white and 21.7 percent other race than white; and in McDonald County 89.4 percent is white and 10.6 percent is other race than white. The black or African-American population represents 1.2 percent in Benton County, 3.4 percent in Washington County and 1.2 percent in McDonald County. The Hispanic or Latino population makes up 15.7 percent of the population in Benton County, 15.7 percent in Washington and 11.3 percent in McDonald County. Another notable minority group in Benton and Washington Counties is the Native Hawaiian or Pacific Islanders, which would include Marshallese Island immigrants. The most recent ACS estimates 0.2 percent of Native Hawaiian and Other Pacific Islanders in Benton County, 2.2 in Washington County and 1.3 percent in McDonald County.

For the MSA, Figure 3.4 illustrates the racial distribution within this geographic area of a total population of 473,913 of which 461,518 identifies as one race. Figure 3.5 also illustrates the Hispanic or Latino population in this Census designated area.

For the three counties, the break-down demographics in Figure 3.6 and Figure 3.7 shows the percentage for each race and ethnic group by county.

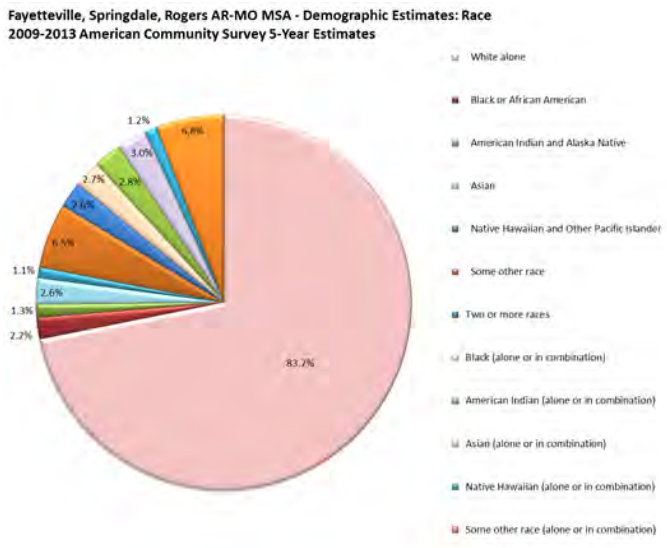


Figure 3.4 - Demographic Estimates - Race in MSA

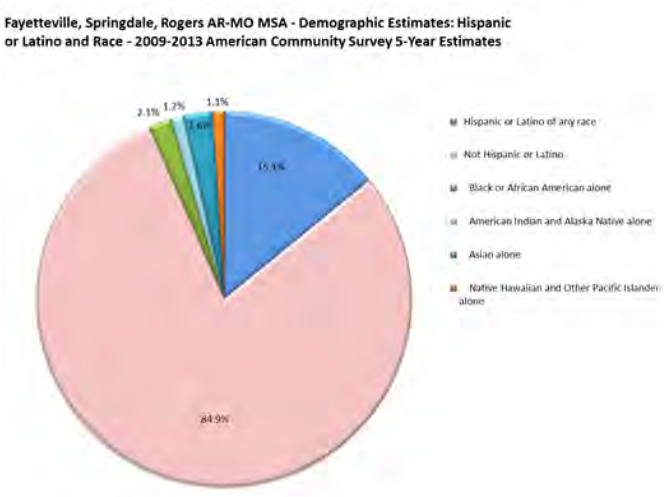
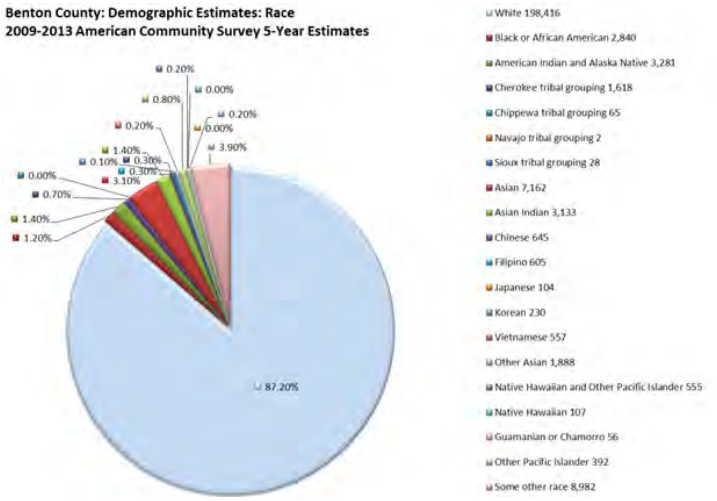
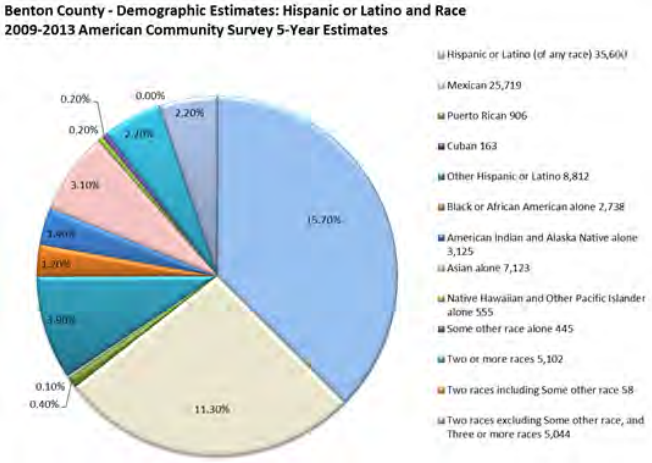


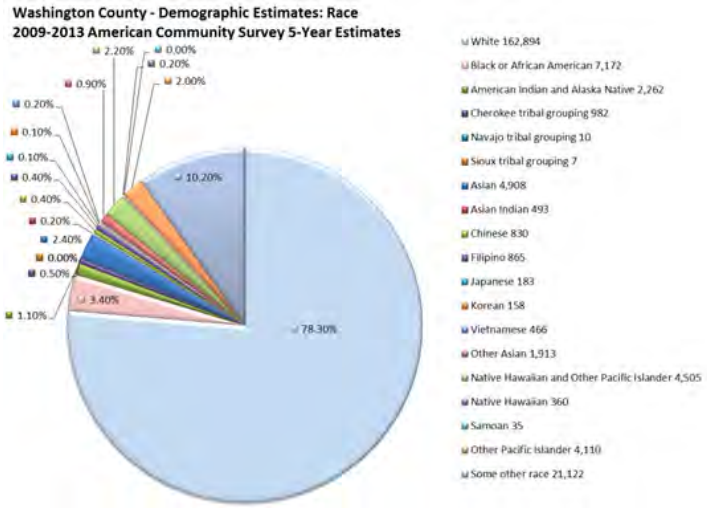
Figure 3.5 - Demographic Estimates -Hispanic or Latino and Race in MSA

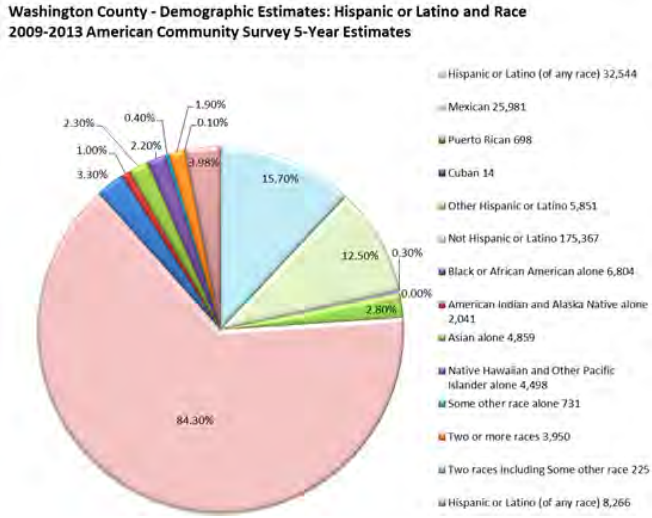
CITY/COUNTY	CENSUS 1990	CENSUS 2000	CENSUS 2010	Projection 2020	Projection 2030	Projection 2040
Unincorporated Benton Co.	33,079	44,009	42,483	47,903	53,496	63,008
AVOCA	269	423	488	572	679	820
BELLA VISTA	9,083	16,582	26,526	33,633	42,085	51,847
BENTONVILLE	11,257	19,730	35,301	45,280	56,971	70,325
BETHEL HEIGHTS	281	714	2,372	3,270	4,284	5,365
CAVE SPRINGS	465	1,103	1,931	2,259	2,873	3,561
CENTERTON	491	2,146	9,515	13,421	17,797	22,376
DECATUR	918	1,314	1,699	2,000	2,381	2,878
ELM SPRINGS - Benton Co.		13	137	168	205	221
GARFIELD	308	490	502	573	668	802
GATEWAY	65	116	405	550	715	893
GENTRY	1,726	2,165	3,425	3,707	4,406	5,324
GRAVETTE	1,412	1,810	3,113	3,251	3,389	3,730
HIGHFILL	84	379	583	797	1,039	1,299
LITTLE FLOCK	944	2,585	2,585	3,259	4,057	4,988
LOWELL	1,224	5,013	7,327	9,931	12,893	16,093
PEA RIDGE	1,620	2,346	4,794	6,106	7,649	9,428
ROGERS	24,692	38,829	55,964	68,509	83,746	102,281
SILOAM SPRINGS	8,151	10,843	15,039	17,685	21,050	25,447
SPRINGDALE - Benton Co.	907	2,011	6,554	8,256	10,753	13,437
SPRINGTOWN		114	87	125	167	211
SULPHUR SPRINGS	523	671	511	483	479	534
BENTON CO. TOTALS	97,499	153,406	221,339	271,031	331,370	404,736
Unincorporated Washington Co.	31,794	38,341	37,350	42,089	48,163	58,140
ELKINS	692	1,251	2,648	3,694	4,984	6,426
ELM SPRINGS - Washington Co.	893	1,031	1,756	1,833	2,274	2,842
ELM SPRINGS (Total)	893	1,044	1,893	2,058	2,562	2,950
FARMINGTON	1,322	3,605	5,974	8,455	11,503	14,875
FAYETTEVILLE	42,099	58,047	73,580	90,993	113,734	142,496
GOSHEN	589	752	1,071	1,337	1,681	2,112
GREENLAND	757	907	1,294	1,538	1,906	2,381
JOHNSON	599	2,319	3,354	4,821	6,613	8,578
LINCOLN	1,460	1,752	2,249	2,693	3,289	4,082
PRAIRIE GROVE	1,761	2,540	4,426	5,796	7,577	9,658
SPRINGDALE - Washington Co.	29,034	43,787	64,195	82,616	106,579	135,175
SPRINGDALE (Total)	29,941	45,798	70,749	90,871	117,332	148,612
TONTITOWN	460	942	2,460	3,525	4,828	6,259
WEST FORK	1,607	2,042	2,317	2,722	3,277	4,044
WINSLOW	342	399	391	424	476	570
WASHINGTON CO. TOTALS	113,409	157,715	203,065	252,532	316,885	397,636
TWO-COUNTY TOTAL	210,908	311,121	424,404	523,563	648,255	802,372

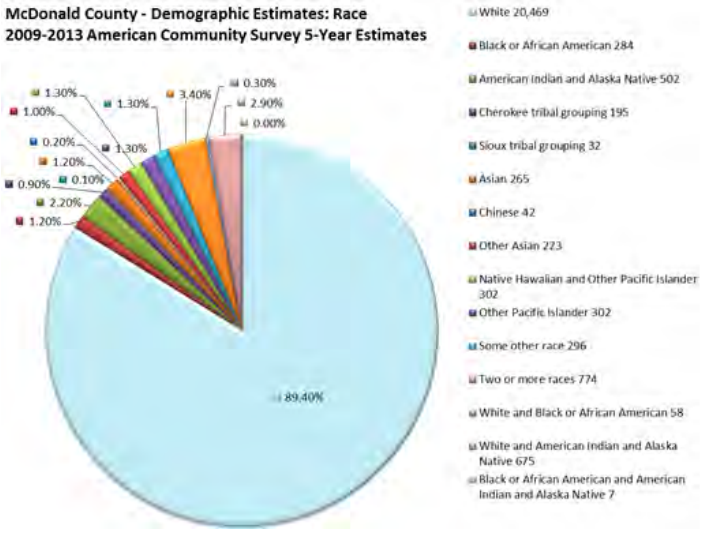
Table 3.2 - NWARPC Population Projections for the two-county region municipalities











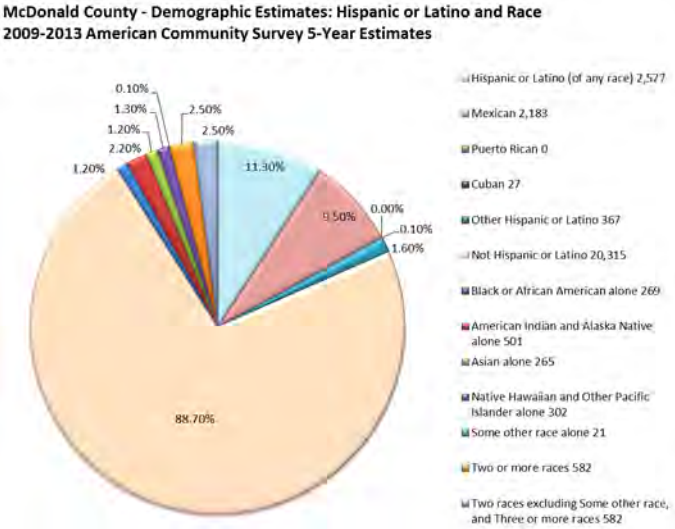


Figure 3.6 - Demographic Estimates Race by County

Figure 3.7 - Demographic Estimates Hispanic or Latino and Race by County

Minority Population Trends

Table 3.3 shows an in-migration of Latino or Hispanic population. Between the year 2000 and 2010 the two county regions' total population grew by 36.4 percent while the Hispanic population grew from 26,401 to 65,741 or by 149.0 percent. The Hispanic population in Northwest Arkansas continues to increase at a faster rate than the general population. The Census Bureau's 2010 Hispanic population figure of 65,741 makes up 15.5 percent of the 424,404 two-county total population. This Hispanic total population ratio is higher in the cities of Northwest Arkansas with an 18.4 percent and 26.7 percent ratio for Washington and Benton County cities respectively.

Geographic	Total Population Census 2000	Hispanic Population Census 2000	Total Population Census 2010	Hispanic Population Census 2010	Total Pop. Change 2000-2010	Hispanic Pop. Change 2000-2010	Total Population Percent Change 2000-2010	Hispanic Population Percent Change 2000-2010	Percent Hispanic to Total Population in 2010
AVOCA	423	26	488	85	65	59	15.37%	226.92%	17.4%
BELLA VISTA (CDP)	16,582	169	26,461	688	9,879	520	59.58%	309.52%	2.6%
BENTONVILLE	19,730	1198	35,301	3074	15,571	1876	78.92%	156.59%	8.7%
BETHEL HEIGHTS	714	24	2,372	823	1,658	799	232.21%	3329.17%	34.7%
CAVE SPRINGS	1,103	24	1,729	77	626	53	56.75%	220.83%	4.5%
CENTERTON	2,146	87	9,515	1161	7,369	1074	343.38%	1234.48%	12.2%
DECATUR	1,314	217	1,699	483	385	266	29.30%	122.58%	28.4%
ELKINS	1,251	15	2,648	213	1,397	198	111.67%	1320.00%	8.0%
ELM SPRINGS	1,044	45	1,535	131	491	86	47.03%	191.11%	8.5%
FARMINGTON	3,605	79	5,974	352	2,369	273	65.71%	345.57%	5.9%
FAYETTEVILLE	58,047	2821	73,580	4725	15,533	1904	26.76%	67.49%	6.4%
GARFIELD	490	7	502	5	12	-2	2.45%	-28.57%	1.0%
GATEWAY	116	0	405	32	289	32	249.14%	---	7.9%
GENTRY	2,165	121	3,158	379	993	258	45.87%	213.22%	12.0%
GOSHEN	752	6	1,071	10	319	4	42.42%	66.67%	0.9%
GRAVETTE	1,810	53	2,325	94	515	41	28.45%	77.36%	4.0%
GREENLAND	907	20	1,259	41	352	21	38.81%	105.00%	3.3%
HIGHFILL	379	4	583	19	204	15	53.83%	375.00%	3.3%
JOHNSON	2,319	74	3,354	347	1,035	273	44.63%	368.92%	10.3%
LINCOLN	1,752	89	2,249	147	497	58	28.37%	65.17%	6.5%
LITTLE FLOCK	2,585	413	2,585	318	0	-95	0.00%	-23.00%	12.3%
LOWELL	5,013	449	7,327	1808	2,314	1360	46.16%	303.57%	24.7%
PEA RIDGE	2,346	24	4,794	276	2,448	252	104.35%	1050.00%	5.8%
PRAIRIE GROVE	2,540	52	4,380	196	1,840	144	72.44%	276.92%	4.5%
ROGERS	38,829	7490	55,964	17619	17,135	10129	44.13%	135.23%	31.5%
SILOAM SPRINGS	10,843	1518	15,039	3128	4,196	1610	38.70%	106.06%	20.8%
SPRINGDALE	45,798	9005	69,797	24692	23,999	15687	52.40%	174.20%	35.4%
SPRINGTOWN	114	10	87	11	-27	1	-23.68%	10.00%	12.6%
SULPHUR SPRINGS	671	112	511	22	-160	-90	-23.85%	-80.36%	4.3%
TONTITOWN	942	21	2,460	140	1,518	119	161.15%	566.67%	5.7%
WEST FORK	2,042	64	2,317	76	275	12	13.47%	18.75%	3.3%
WINSLOW	399	3	391	8	-8	5	-2.01%	166.67%	2.0%
Benton County (Cities Total)	107,373	11,944	112,547	30,102	5,174	18,158	4.82%	152.03%	26.7%
Washington County (Cities Total)	120,456	12,273	168,555	30,938	48,099	18,665	39.93%	152.08%	18.4%
Benton County Total	153,406	13,469	221,339	34,283	67,933	20,814	44.28%	154.53%	15.5%
Washington County Total	157,715	12,932	203,065	31,458	45,350	18,526	28.75%	143.26%	15.5%
NWA Regional Total	311,121	26,401	424,404	65,741	113,283	39,340	36.41%	149.01%	15.5%
Arkansas	2,673,400	86,866	2,915,918	186,050	242,519	99,184	9.07%	114.18%	6.4%

Source: U.S. Census Bureau, Census 2000. Table prepared by Northwest Arkansas Regional Planning Commission.

Table 3.3 - Hispanic Population Growth in Northwest Arkansas - 2000 to 2010

Table 3.4 and Table 3.5 and Figure 3.8 and Figure 3.9 show that while the diversity of the region's population is increasing rapidly, especially in the Hispanic or Latino population group, the total population in absolute numerical terms is still predominantly white.

Total Benton and Washington Counties	US Census 2010	ACS 5-year Estimate (2009-2013)	Percent Change
Tota Population:	**424,404**	**435,350**	**2.6%**
White alone	345,070	361,310	4.7%
Black or African American alone	8,820	10,012	13.5%
American Indian and Alaska Native alone	6,144	5,543	-9.8%
Asian alone	10,735	12,070	12.4%
Native Hawaiian and Other Pacific Islander alone	4,799	5,060	5.4%
Hispanic or Latino (of any race)	37,231	68,144	83.0%

Table 3.4 - Population change from 2010 to 2013 based on Census 2010 and the ACS five-year estimates (2009-2013) - Race and Hispanic or Latino in Washington and Benton Counties, Arkansas

McDonald County, Missouri	US 2010 Census	ACS 5-year Estimate (2009-2013)	Percent Change
Total Population:	**23,083**	**22,892**	**-0.8%**
White alone	19,619	20,469	4.3%
Black or African American alone	133	284	113.5%
American Indian and Alaska Native alone	663	502	-24.3%
Asian alone	192	265	38.0%
Native Hawaiian and Other Pacific Islander alone	258	302	17.1%
Hispanic or Latino (of any race)	2587	2577	-0.4%

Table 3.5 - Population change from 2010 to 2013 based on Census 2010 and the ACS five-year estimates (2009-2013) – Race and Hispanic or Latino in McDonald County, Arkansas

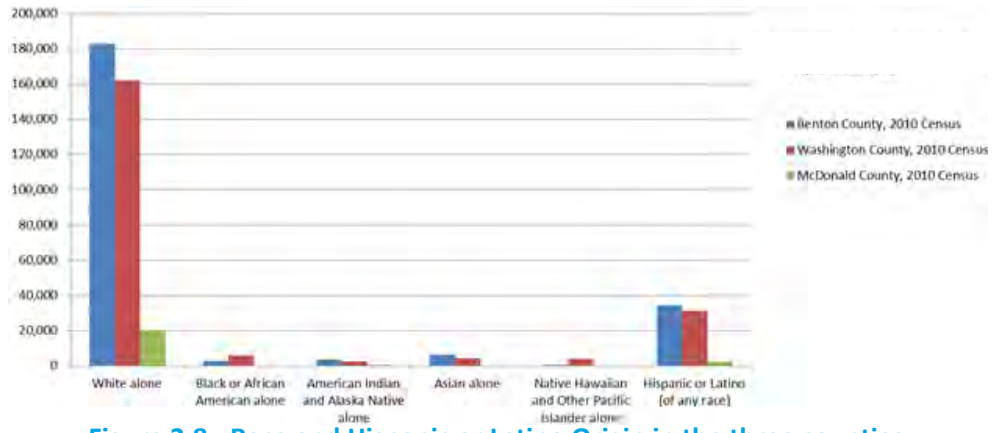


Figure 3.8 - Race and Hispanic or Latino Origin in the three counties U. S. Census 2010

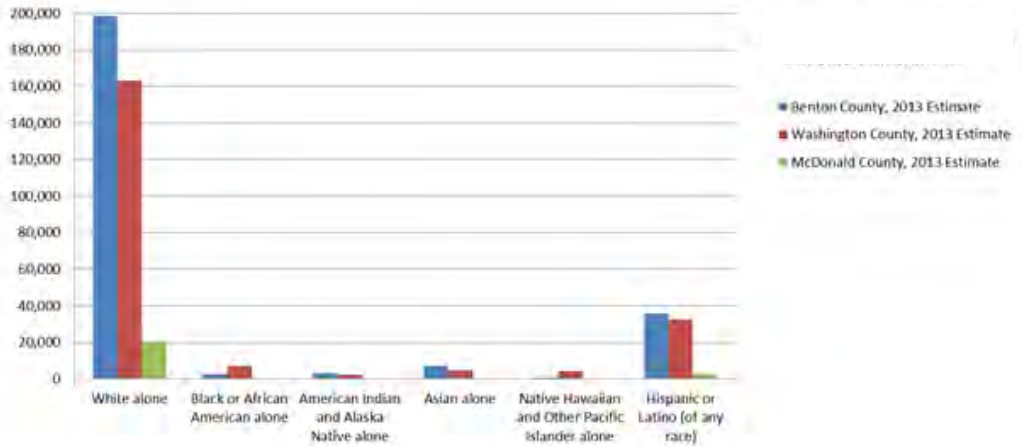


Figure 3.9 - Race and Hispanic or Latino Origin in the three counties 2009-2013 ACS

Employment Data and Trends

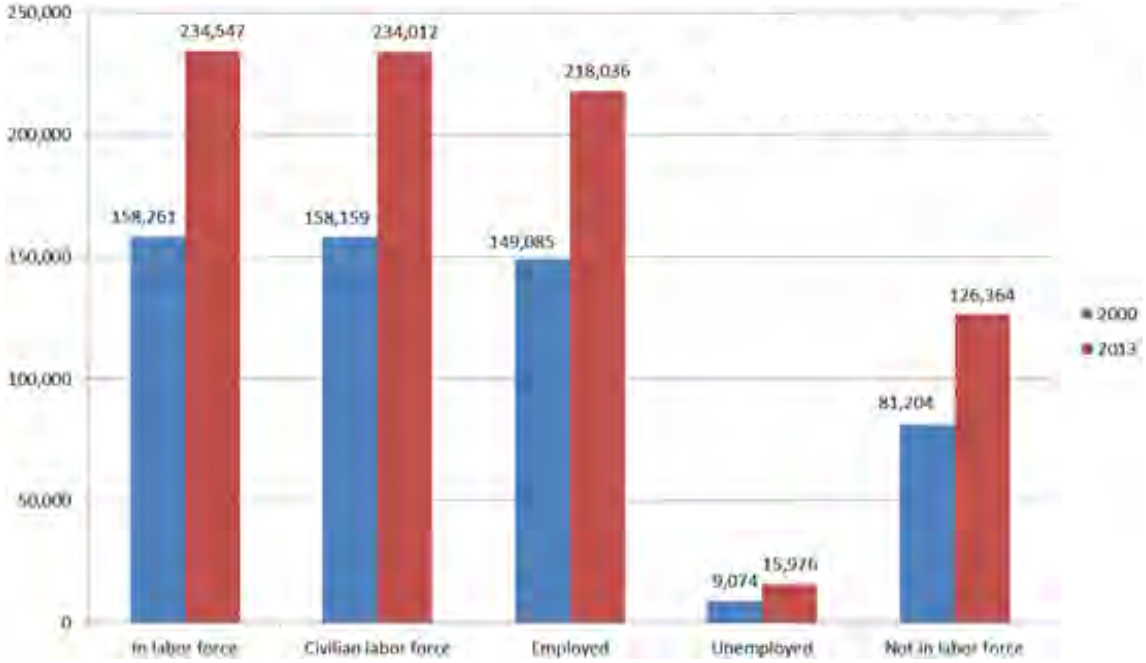
Given the fact that most jobs require commuting, employment trends are important in helping to predict transportation needs into the future. Employment predictions and commuting patterns are a major part of travel demand modeling. Table 3.4 shows the region's labor force growing trend in the past five years and the unemployment rate continuing to decrease after the recession. As can be seen in Table 3.4 the annual unemployment rate started at 6.4 percent and continued to decrease to a low of 4.6 in 2014. This unemployment rate was lower than other MSA in Arkansas as well as the Arkansas State rate of 6.1 percent and 6.2 percent in the United States in 2014. A historically low unemployment rate may have been a major factor in attracting population into Northwest Arkansas and a relatively low rate should continue to attract migration into the area.

	2009	2010	2011	2012	2013	2014
Labor Force	225,225	227,625	231,750	233,050	232,925	238,925
Employment	201,725	212,325	216,650	219,375	219,800	227,950
Unemployment	14,500	15,300	15,100	13,675	13,125	10,975
Unemployment Rate	6.4	6.7	6.5	5.9	5.6	4.6

Data Source: Arkansas Department of Workforce Services

Table 3.4 - Employment Trend in the Fayetteville-Springdale-Rogers AR-MO MSA

To compare, the data in Figure 3.10 are based on the Census Bureau's data and ACS Estimates and represent workers 16 years and over and the employment trends from 2000 to 2013. In 2000, the population 16 years and over in the MSA was 239,465 while in 2013 it was 360,911.



* Note, the 2000 Census Bureau's data did not include the Missouri portion of the MSA

Figure 3.10 - Employment trend based on the 2000 U.S. Census Bureau and 2009-2013 American Community Survey estimates data for the Fayetteville-Springdale-Rogers AR-MO MSA*

The ACS 2009-2013 estimates the Fayetteville-Springdale-Rogers AR-MO MSA total number of civilian employed population 16 years and over to be at 218,036. From this total, Figure 3.11 illustrates the workers by industry as a percent.

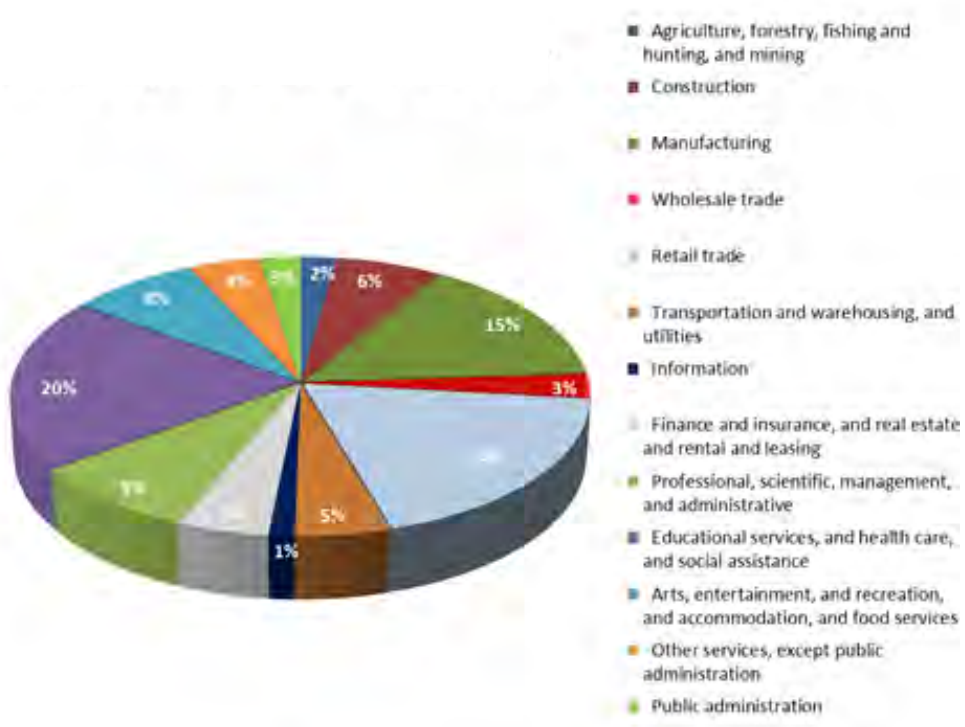
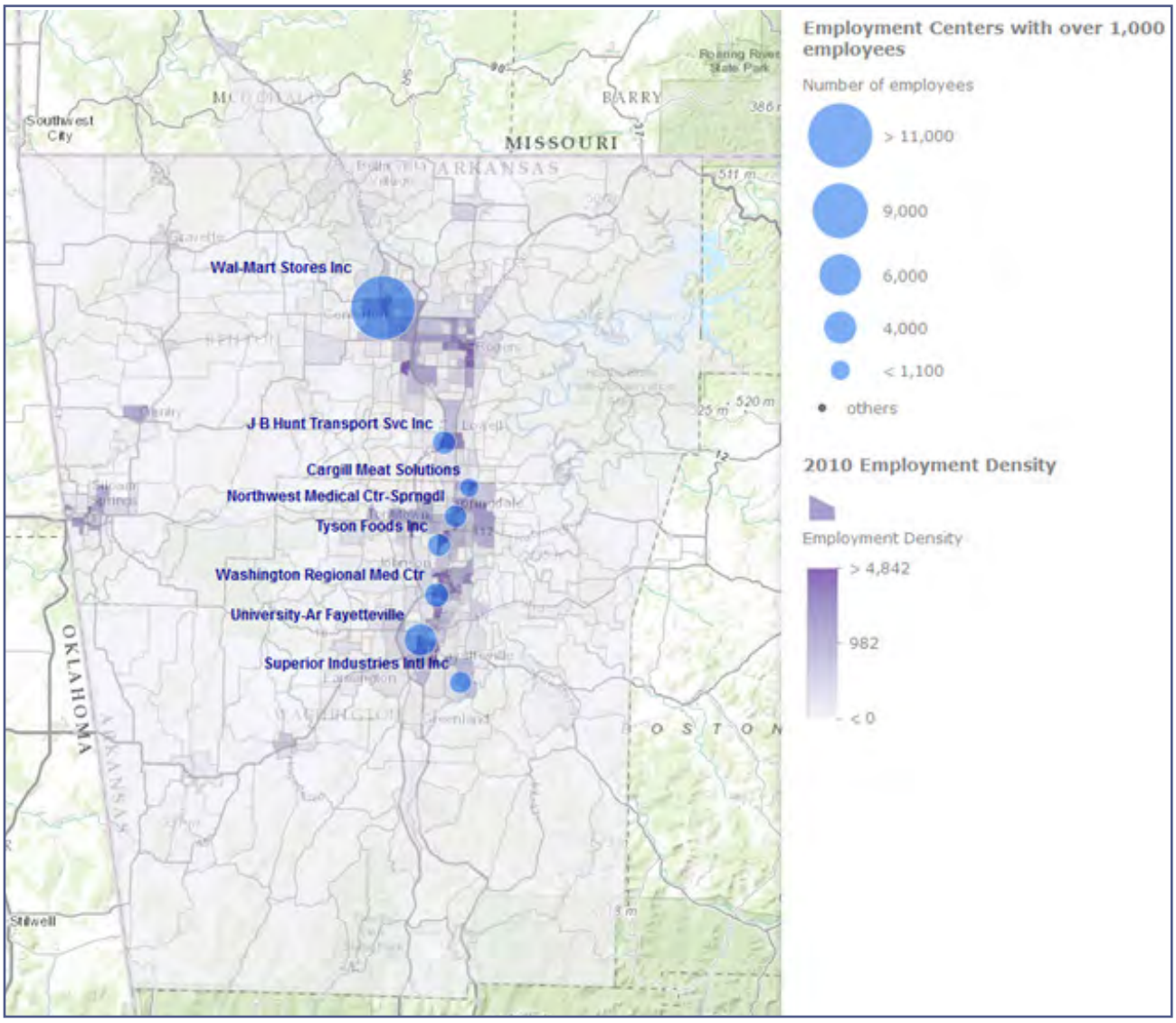


Figure 3.11 - Workers by Industry - Civilian Population 16 Years and Over
ACS 2009-2013 Fayetteville-Springdale-Rogers AR-MO MSA

As Figure 3.11 illustrates, there are a wide variety of industries present in the MSA region, with the educational services, health care and social assistance being the highest (at 20 percent) followed by the retail trade (19 percent) and the manufacturing sector at 15 percent. The sectors with the smallest percent are information and agriculture, forestry, fishing and hunting, and mining.

Map 3.3 shows the employment density based on the Census Transportation Planning Products as they have been developed for the 2010 Traffic Analysis Zones (TAZ) for the Northwest Arkansas Travel Demand Model. The map also shows the locations of the employers with more than 1,000 employees. The density of the employment and the largest number of employees in the region are located in the urban corridor, along I-49 between south Fayetteville and Bentonville. The largest employers in Northwest Arkansas include the WalMart Stores, Inc. in Bentonville, JB Hunt Transport SVC Inc., in Lowell, Tyson Foods, Inc. in Springdale and the University of Arkansas in Fayetteville.

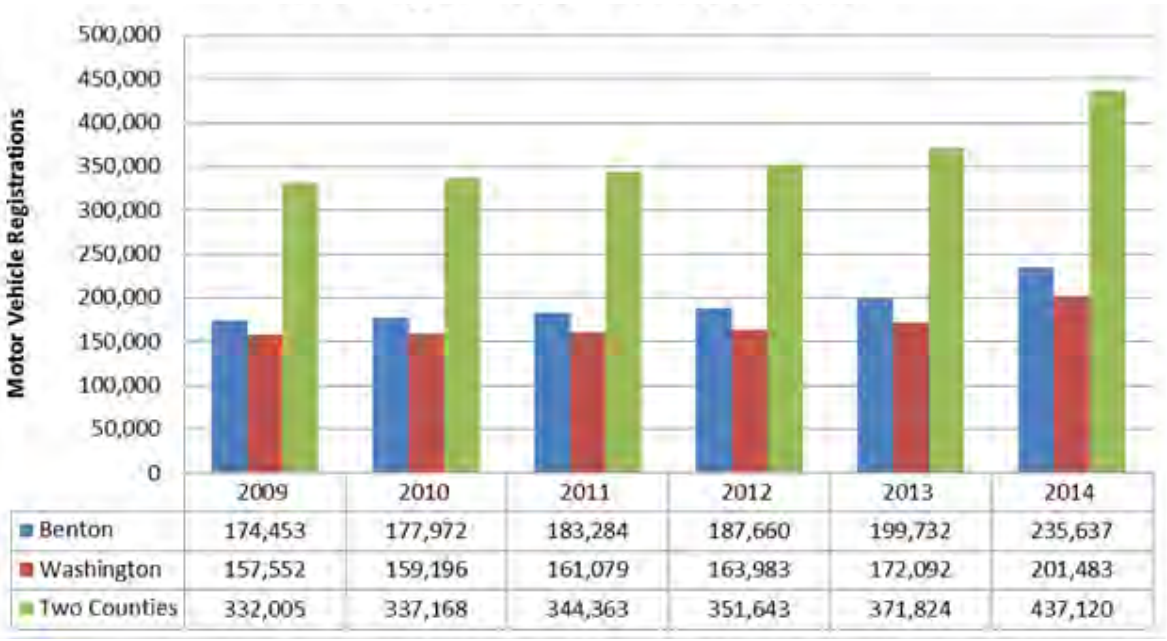


Map 3.3 - Employment Centers with Over 1,000 Employees (Infogroup Employment from May 2015) and 2010 Employment Density, by TAZ

Vehicle Trends in Northwest Arkansas

The percentage of automobile registration in Northwest Arkansas as a percentage of the State has steadily increased over the years. Since 1990 this percentage share grew from 10.0 percent to 14.0 percent in 2014. Data provided by the Arkansas Finance and Administration Department was utilized to compile Table 3.5 and Table 3.6 that show trends in total vehicle registrations in the two counties as well as total passenger vehicle registrations in these counties.

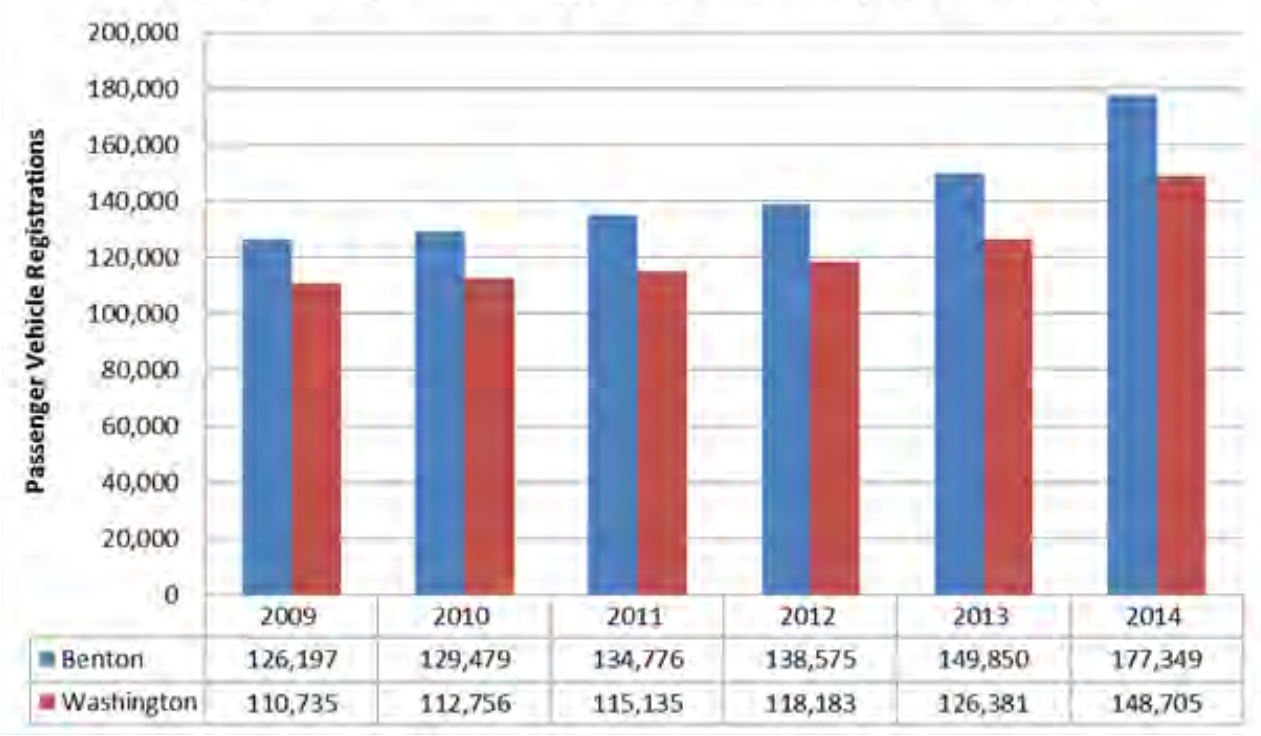
These vehicle registration figures are another metric that demonstrate population growth in the region and indicate the need to analyze and plan for future infrastructure to support this level of growth.



	2009	2010	2011	2012	2013	2014
Benton	174,453	177,972	183,284	187,660	199,732	235,637
Washington	157,552	159,196	161,079	163,983	172,092	201,483
Two Counties	332,005	337,168	344,363	351,643	371,824	437,120

Data Source: Arkansas Department of Finance and Administration. Total Motor Vehicles =Total Passenger Vehicles + Pick-ups +Total Trucks + Motorcycles

Figure 3.12 - Total Motor Vehicle Registrations in Benton and Washington Counties 2009-2014



	2009	2010	2011	2012	2013	2014
Benton	126,197	129,479	134,776	138,575	149,850	177,349
Washington	110,735	112,756	115,135	118,183	126,381	148,705

Data Source: Arkansas Department of Finance and Administration

Figure 3.13 - Total Passenger Vehicle Registrations for Benton and Washington County 2009-2014

These vehicle registration figures are another metric that demonstrates population growth in the region and indicate the need to analyze and plan for future infrastructure to support this level of growth.

Table 3.6 compares the number of vehicles according to occupied housing units looking at the change from Census 2000 to the most recent five year estimates from ACS 2009-2013. The data shows that the number of occupied housing units grew by 41 percent in Benton County and 32 percent in Washington County. The table also shows that the number of households with three or more vehicles available grew by 76 percent in Benton County and 56 percent in Washington County. In Washington County the number of housing units with no vehicle available has increased to 35 percent compared to the 28.6 percent estimated in the previous ACS data. This may mean that there is a growing segment of the population in Washington County that either use, or may need other means of transportation while this category is experiencing a decline compared to previous estimates in Benton County.

Vehicles Available	Census 2000		ACS Estimate 2009		ACS Estimate 2013		Percent Change	
	Benton County	Washington County	Benton County	Washington County	Benton County	Washington County	Benton County	Washington County
Occupied housing units	58,212	60,151	77,174	74,569	82,150	79,214	41%	32%
No vehicles available	2,513	3,423	3,501	4,401	2,816	4,614	12%	35%
1 vehicle available	18,026	21,243	23,663	25,598	23,939	27,824	33%	31%
2 vehicles available	27,502	25,300	34,761	27,988	37,448	30,854	36%	22%
3 or more vehicles available	10,171	10,185	15,249	16,582	17,947	15,922	76%	56%

Table 3.5 - Vehicles by Occupied Household Units

Commuting – Means of Transportation

Table 3.6 shows that commuters in the MSA mostly use a car, truck or van and that they generally drive alone. The number of almost all other modes of transportation has remained nearly the same when comparing the ACS composite figures for four consecutive periods from 2010 to 2013.

Means of Transportation to Work	2010	2011	2012	2013
Total	197,641	200,561	204,197	206,208
Car, truck, or van - drove alone	156,043	158,218	160,560	163,997
Car, truck, or van - carpooled	25,951	24,805	25,033	24,062
Public transportation (excluding taxicab)	731	796	929	1,085
Walked	4,767	5,315	5,293	4,826
Taxicab, motorcycle, bicycle, or other means	2,555	2,815	2,568	2,672
Worked at home	7,594	8,612	9,814	9,566

Table 3.6 - Fayetteville-Springdale-Rogers, AR-MO MSA - Means of Transportation to Work
Workers 16 years and over (the table is based on data from ACS 5 year estimates 2006-2010, 2007-2011, 2008-2012, and 2009-2013)

Commuting Time – Travel time to work

In general terms, the mean travel time to work for Northwest Arkansas is approximately 20 minutes. Figure 3.14 shows the three counties and the time increments percentages based on the latest ACS estimates.

The mean travel time to work is estimated at 20.1 minutes for Benton County, 20.6 minutes for Washington County and 27.1 minutes for McDonald County.

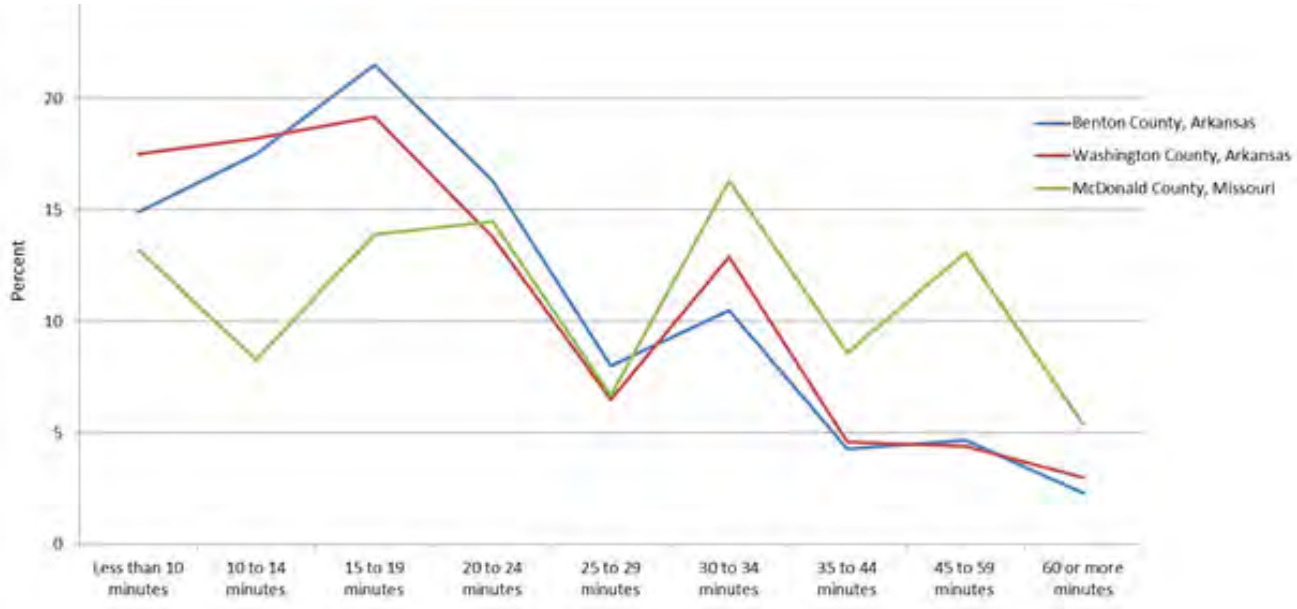


Figure 3.14 - Mean Travel Time to Work - ACS Estimates

In the Fayetteville-Springdale-Rogers, AR-MO MSA Figure 3.15 shows the travel time to work for workers 16 years and over who did not work at home based on the 2009-2013 ACS data. This category of workers had a total of 205,350 in this estimated time period. As it can be observed from the graphic below, about 40,000 workers spend 15-19 minutes to get to work followed by the group of workers who spend 30-34 minutes to reach their workplace, about 24,000.

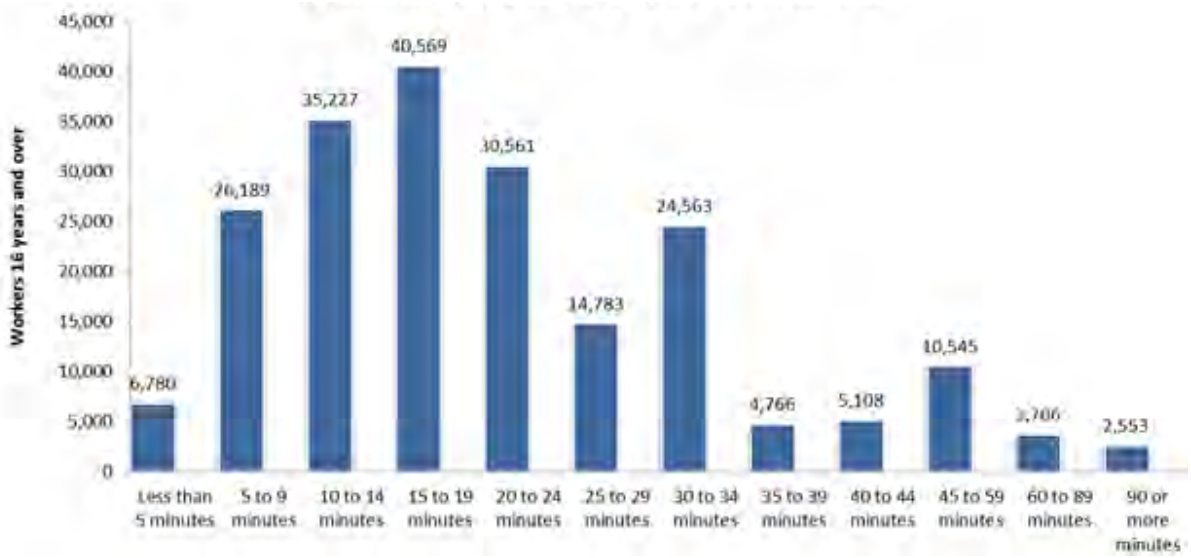


Figure 3.15 - Travel Time to Work - Workers 16 years and over who did not work at home in the Fayetteville-Springdale-Rogers, AR-MO Metro Area - ACS 2009-2013

Summary of Demographic Factors

The population information and the map presentations demonstrate three major trends. First, the population in Northwest Arkansas continues to increase. For over 25 years the region sustained the highest population growth rate of any two-county region in Arkansas. Population projections through the year 2040 are based upon the region's demonstrated growth from 1990 through 2010. There are a number of factors, such as relocation of major employers, which could very possibly prevent a repeat of the exceptional growth that took place in the past. However, regional governments and institutions must be prepared for the possibility of even more growth in the future. Should the rate of growth significantly change, new projections will reflect these changes.

Secondly, the building permit figures as translated to a population density map show that there is a significant western growth pattern in the two-county area. The city boundary change map reveals that cities such as Bentonville, Centerton, Highfill, Springdale, Fayetteville and Tontitown continue to annex land to the west. These annexations, along with the development of water and sewer capacity in these areas, suggest that the western urban development will continue.

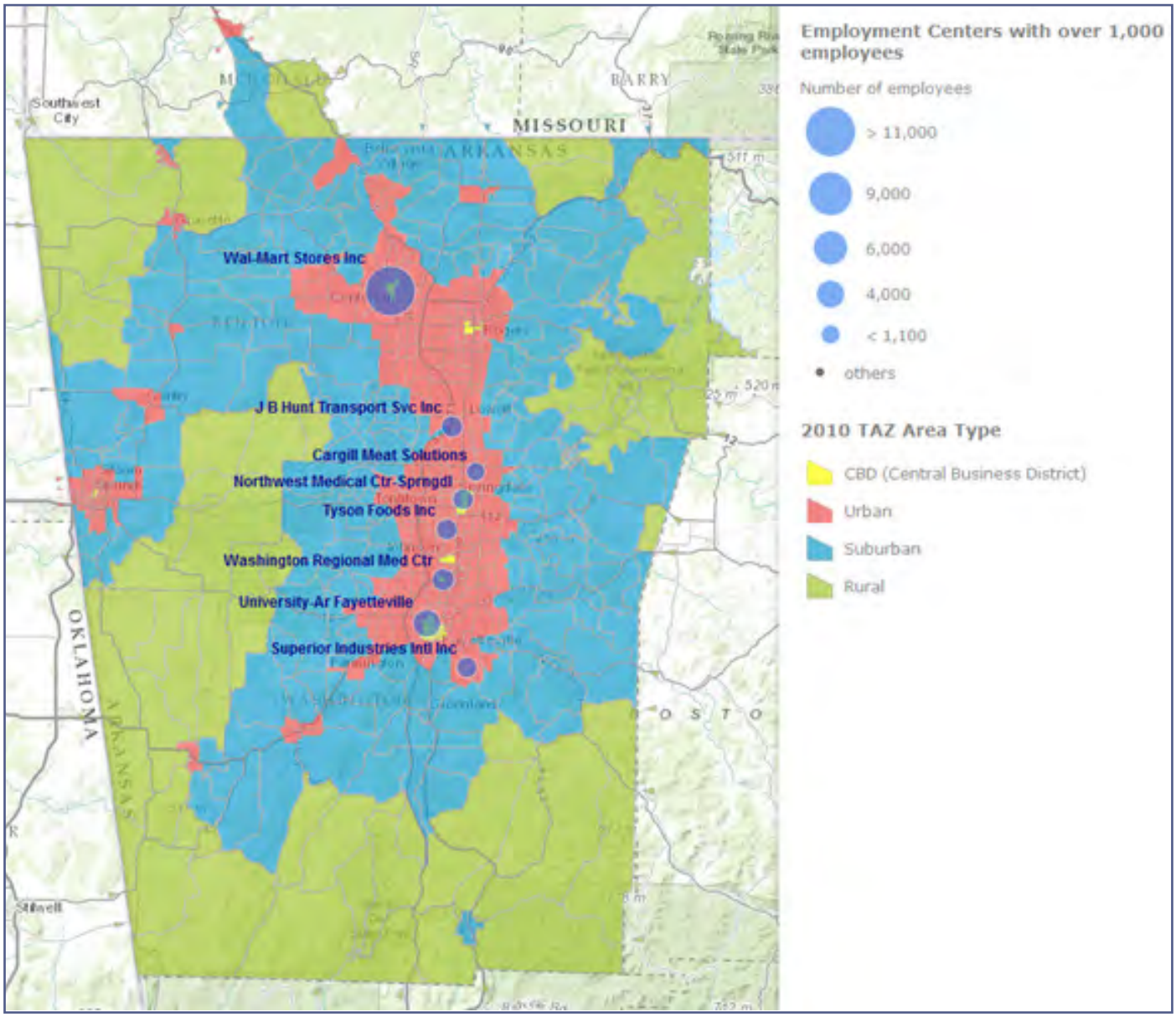
This rapid growth of population to the west creates demand with regard to local finances, infrastructure facilities, and the environment. The region will need to meet these challenges by implementing conventional road improvements as well as planning for alternative transportation. Future growth will likely require a more connected, reliable and efficient transportation system through the development of alternate modes of transportation, the use of new developments in ITS, and by employing a strategy to address congestion and efficiently use travel demand management.

A third factor is the changing demographic makeup of the Northwest Arkansas population. Aging population may have a growing need for public transit or other forms of transportation to maintain mobility. Another changing demographic is the growing Hispanic and Marshallese Islander populations. These populations may also have different mobility needs as well as environmental justice concerns.

LANDUSE

As part of the Northwest Arkansas Travel Demand Model upgrade, the area type for the MPA was calculated utilizing an algorithm that took into account population and employment density thresholds. The area type classifications resulting from this analysis include the following: Central Business Districts (CBD), Urban, Suburban and Rural Areas.

Map 3.4 illustrates this classification along with locations of the largest employers in the MPA. It is noticeable from the map that the development still occurs to the western part of the urban corridor with more defined expansions as fringes to northwest as well as to the southwest. If the existing major employment centers continue to be concentrated within the urban corridor and along I-49, planners need to concentrate their efforts in analyzing what the transportation demands could be in the near and long term future.



Map 3.4 - Employment Centers with over 1,000 Employees in the MPA and Area Type by TAZ

Map of Northwest Arkansas City Boundary Changes

The change in city boundaries shown in Figure 3.16 and Map 3.5 were based on the Census Bureau's data from 2000 and 2010, as well as from the 2015 Census Bureau's estimates. The data shows generally a continuous growth of the incorporated cities area, with a notable increase from 2000 for a number of cities including Fayetteville, Rogers, Springdale, Bentonville, as well as Centerton, Highfill and Gravette (from the smaller size cities category). Data also shows that a relatively larger portion of Benton County rural area has been annexed over the same time period than in Washington County.

Northwest Arkansas has experienced increasing economic growth in the past 25 years as can be observed from the series of maps in Figure 3.17. The maps illustrate land cover change from 1992 to 2011 based on the National Land Cover Database (NLCD). The developed land can be easily depicted as it continues to expand in the urban corridor as well as other communities out in the western portion of the two-county area. As the region continues to grow with new residential and commercial development, it is important to ensure that this growth does not impact key natural cultural and historic resources that make the region unique and attractive.

Another way of looking at the land use in the MPA is by analyzing the land use type as they are recorded by the County Assessor's offices. Map 3.6 was developed based on the Land Use Type from Benton and Washington Counties' Assessors databases and include the following categories:

- Agriculture
- Commercial
- Industrial
- Residential
- Exempt

Based on this data, Washington County has about 81 percent of agricultural land, while Benton County has approximately 57 percent of land assessed as agriculture. The next highest category in Benton County is residential area, at 23 percent, while in Washington County the same area is represented by 8 percent of the land. Commercial land in both counties represent about 3-4 percent while industrial land in both is represented by 1 percent of the land area. Table 3.7 illustrates all the data that was used to compile the map and the assessment categories in areas and as percent from the total area.

Land Use Type	Benton County Acres	Benton County Percent	Washington County Acres	Washington County Percent
Agriculture	319,270.40	57%	486,733.84	81%
Commercial	20,013.86	4%	15,290.55	3%
Industrial	3,045.00	1%	3,018.61	1%
Residential	139,877.97	25%	48,480.34	8%
Exempt	74,923.20	13%	48,330.29	8%
Total	**557,130.42**		**601,853.63**	

Data Source: Counties' Parcel Data Land Assessment Type

Table 3.7 - Land Use in Benton and Washington Counties (Acres)

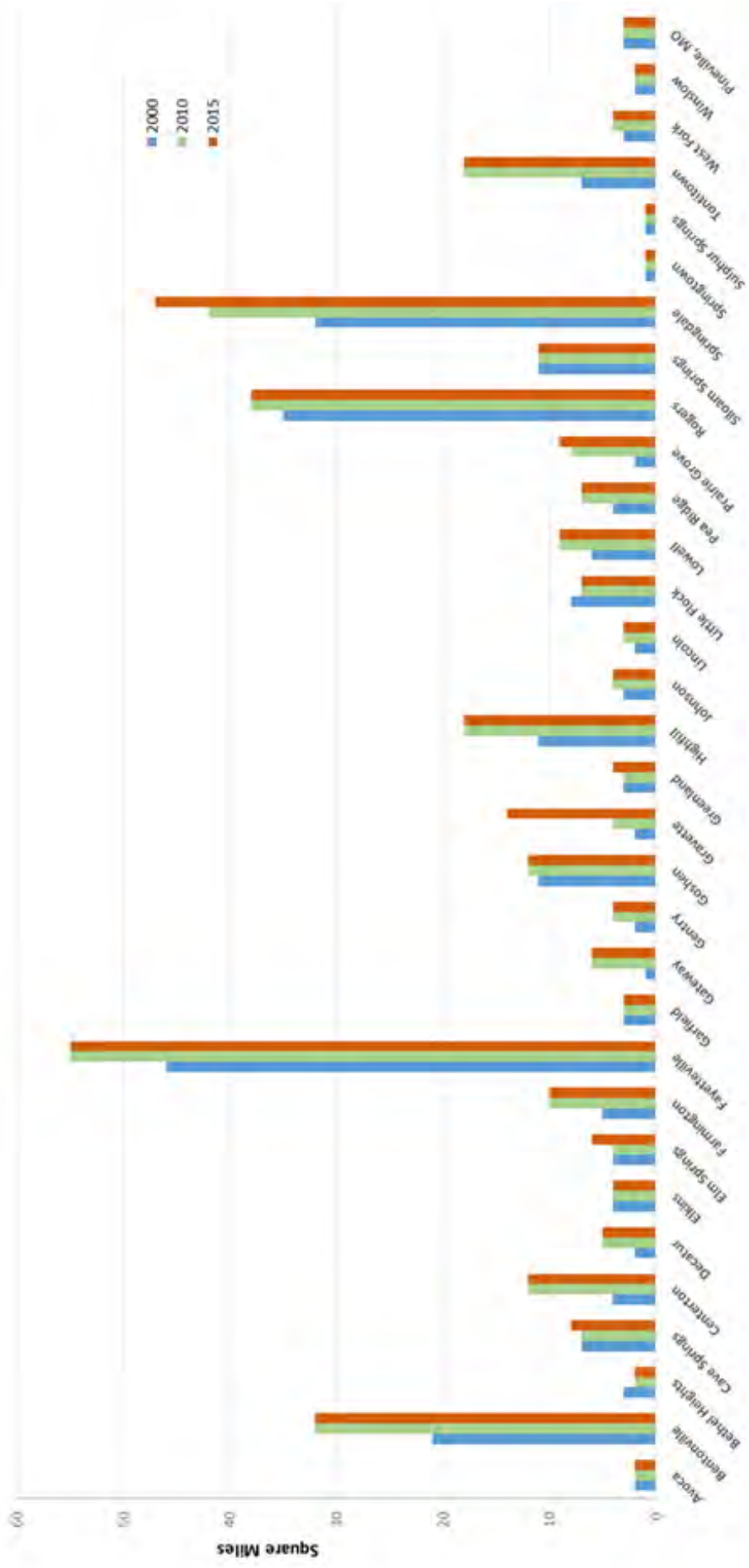
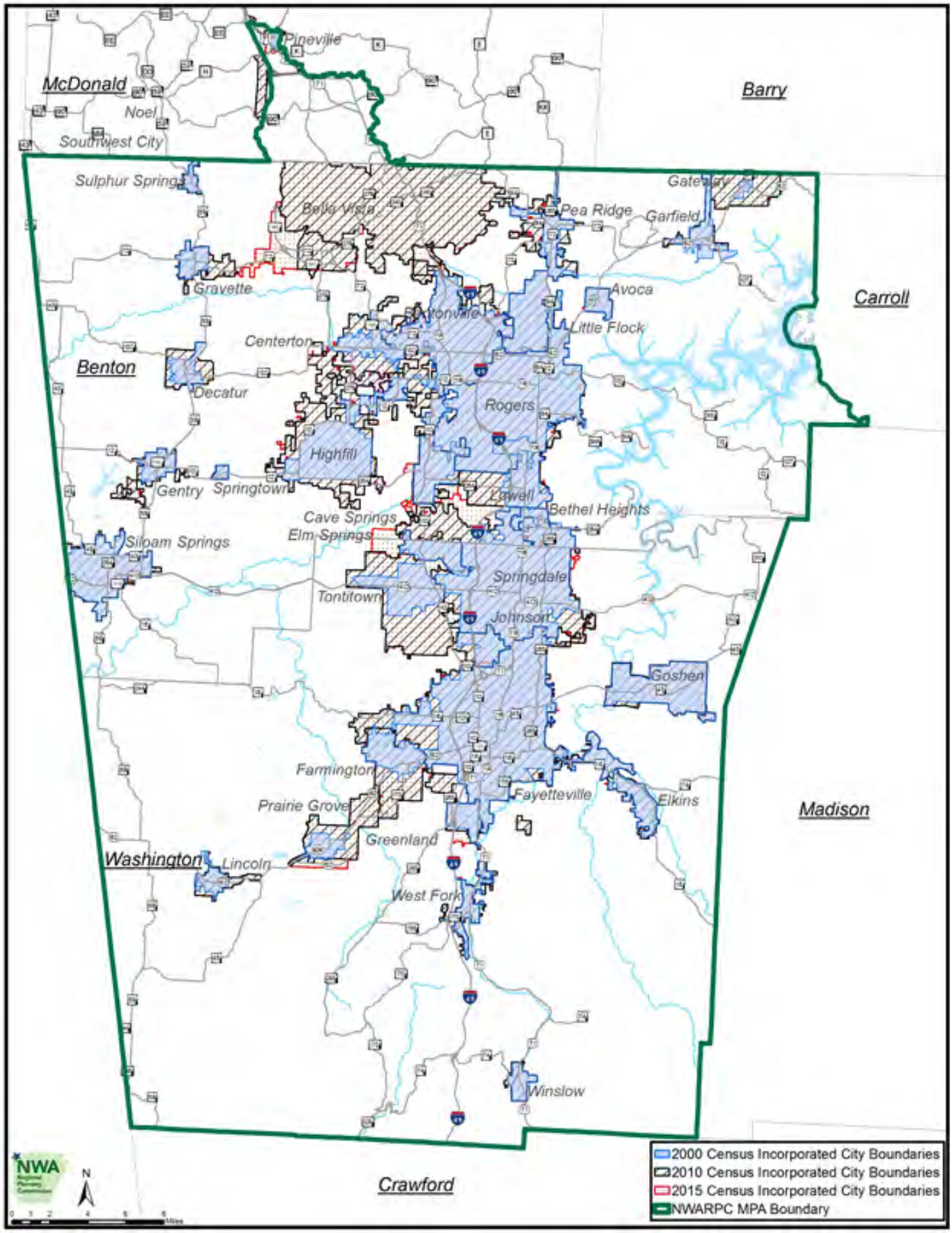


Figure 3.16 - City Limits Change in square miles in the MSA Area based on the Census Bureau data 2000-2015



Map 3.5 - Incorporated City Limits for the MPA – Data source: U.S. Census Bureau 2000-2015

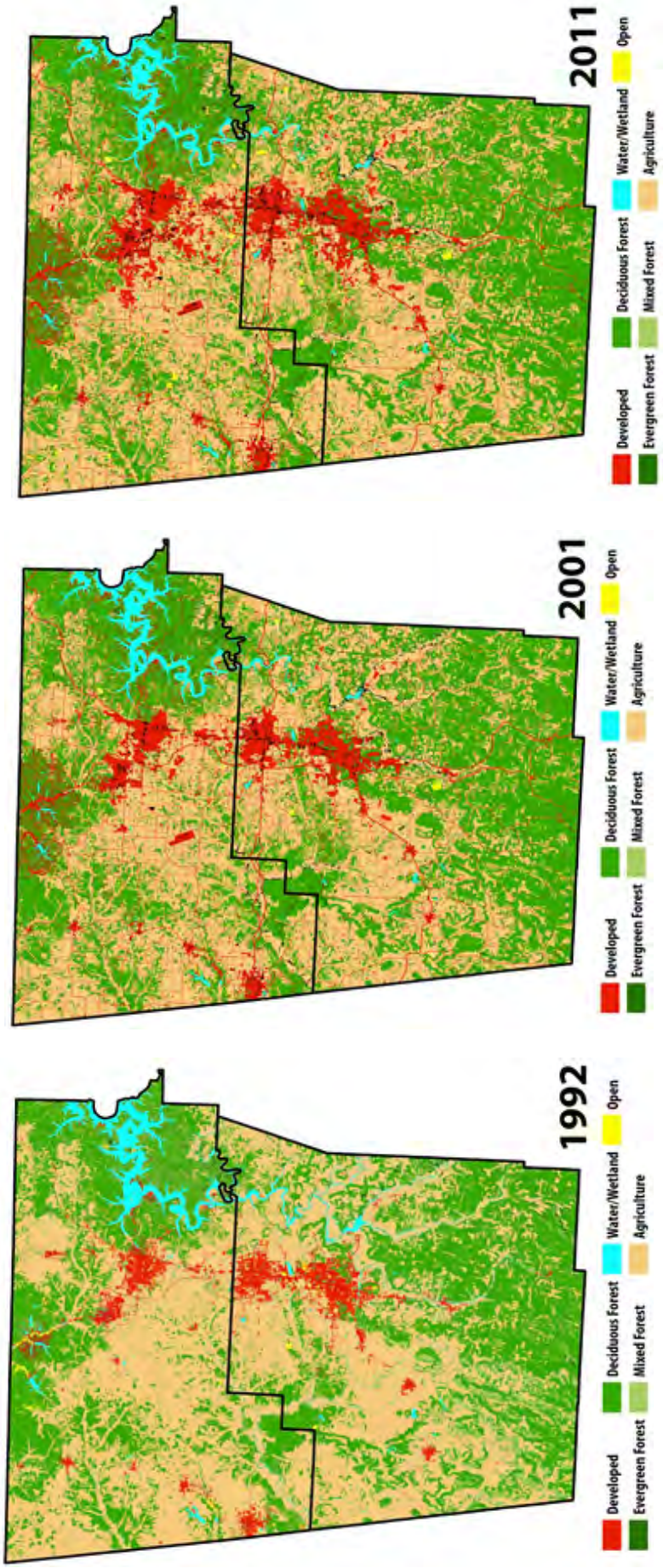
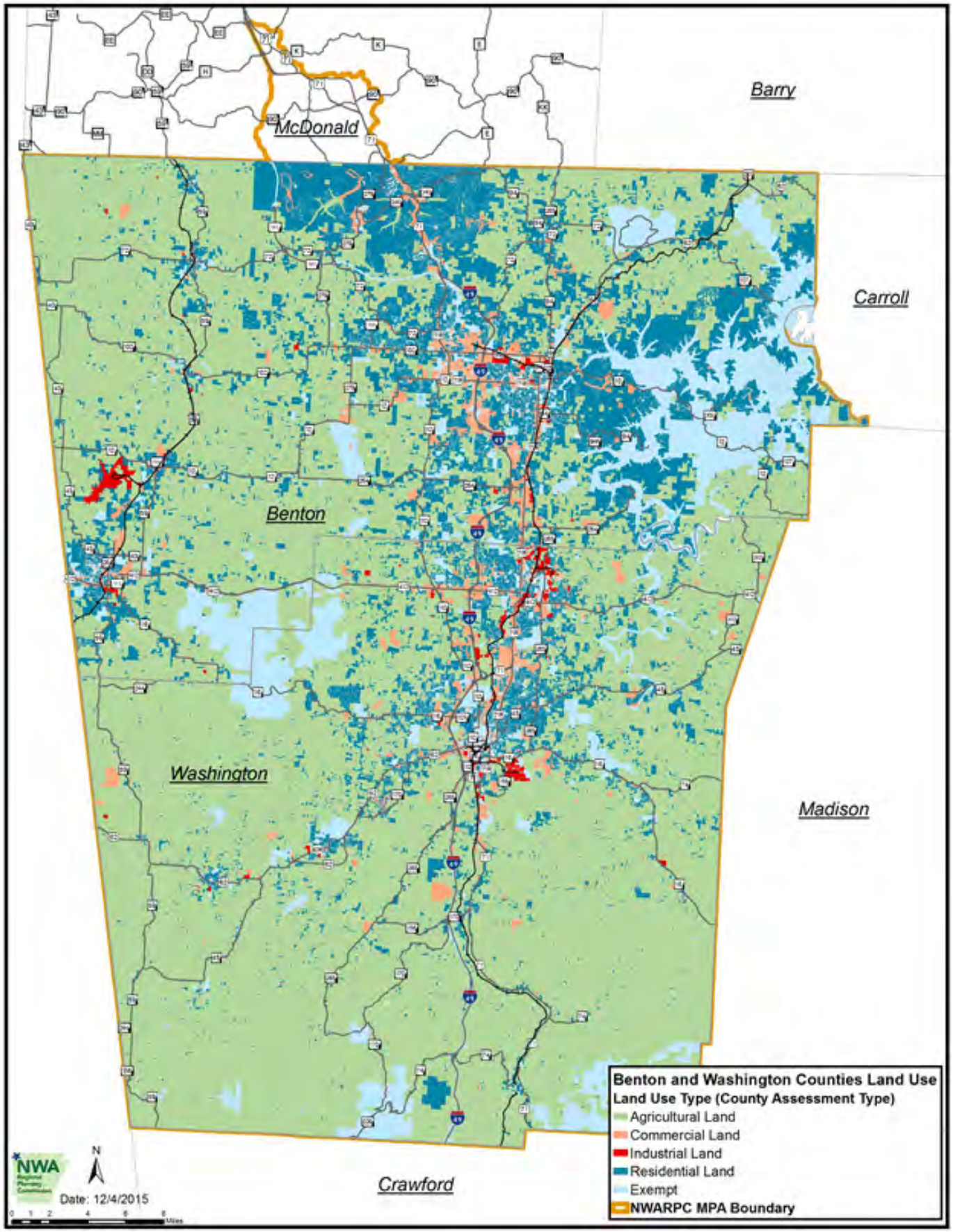


Figure 3.17 - Land Cover Change in Benton and Washington Counties – Data Source: National Land Cover Database (NLCD) 1992-2011



Map 3.6 - Land Use in Benton and Washington Counties – Data Source: Counties' Parcel Data Land Assessment Type

CHAPTER 4. PUBLIC INVOLVEMENT

COMMUNITY OUTREACH PLAN (COP)

The NWARPC has established a proactive community involvement process in the planning of regional transportation projects. The Public Participation Plan (PPP) was adopted in 2007, with an update approved in September 2014, and sets out the process by which the MTP, and other documents, will accomplish public outreach throughout the development process. The PPP outlines procedures that are designed to promote and encourage public participation and involvement in the transportation planning process. The COP incorporates the PPP procedures and provides an outline for community outreach and engagement specific to the MTP update.

The TAC was actively involved in the COP and in the many community outreach events that took place during the development of the MTP. The TAC met in advance of community outreach sessions to understand what information would be shared, attended the community outreach sessions to hear the issues and concerns of the citizens first hand and finally, met after the community meetings to make technical recommendations, which reflected the input of the meeting participants. Additionally, the TAC tackled many projects during the spring 2011 to fall 2015 time frame, meeting virtually every month. All TAC recommendations were forwarded to the RPC/Policy Committee for formal approval or adoption.

The 2040 MTP COP was developed to guide the community outreach efforts throughout the development of the MTP. Because the COP is a guide, it contains suggestions for community outreach and tentative dates to fulfill the outreach efforts. Community outreach and engagement is necessary as a way to gage public sentiment and to mold and inform the development of MTP goals and recommendations.

The initial COP was developed in late summer 2014 as a beginning to the MTP update process. As time progressed and the process of MTP developed, the COP changed slightly with respect to specifics, such as exact outreach efforts and dates. Additionally, although the COP as it appears in the MTP begins in 2014, many public outreach opportunities were realized through other plan development processes. All plans and studies that NWARPC was involved in from 2010 through 2015 included community outreach and input and have been documented in the Community Outreach Log.

"Transportation alternatives should be taken seriously now, and ways to make our communities easier and safer for walking and biking become critical as the area population grows and our communities become denser. Simple projects like building sidewalks or safe road crossings where none existed before lessen the reliance on cars and lead to better urban growth where cars and parking are not needed for every trip outside of the house.

Finally, NWA needs to become serious about public transportation and what our needs will be in 20 to 30 years. I am not at all opposed to car traffic, but we cannot continue to develop in NWA with only car transportation in mind as we will only be creating greater and greater transportation problems to solve in the future, and also will only be making less livable and enjoyable communities as a result" - Public Comment

For the complete COP please see Appendix A: Community Outreach Plan, 2040 MTP Public Opinion Survey and Public Comments.

SUMMARY, ANALYSIS, AND REPORT ON COMMUNITY OUTREACH

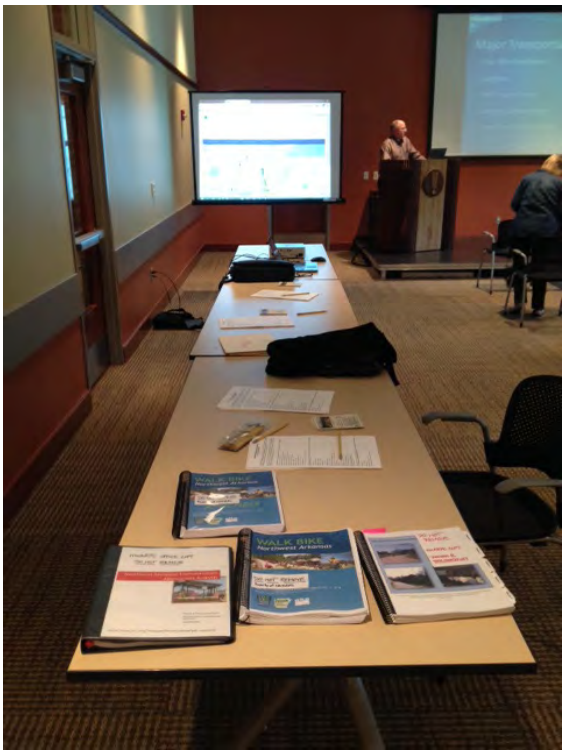
In this section community outreach notifications, activities, and events are summarized and analyzed. Also, a report on public comments, as well as comments received during the final review of the document by the TAC and RPC/Policy Committee, are included here.

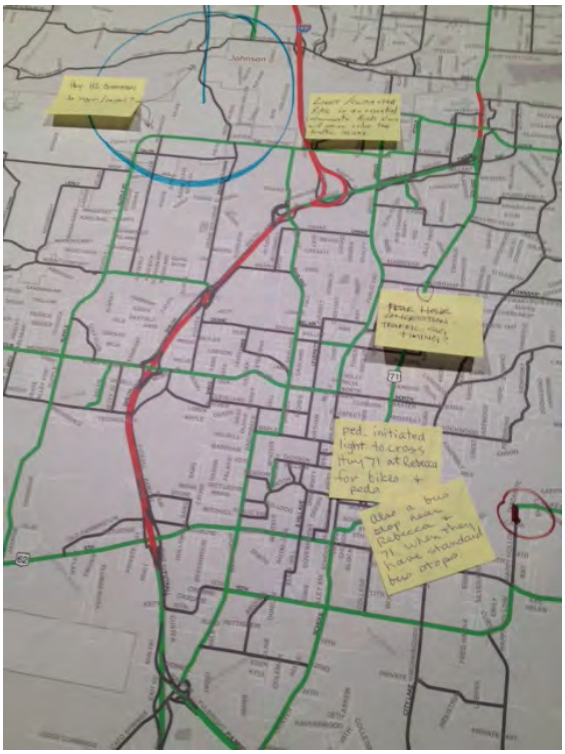
A number of public relations tools were used to communicate with the public, provide information on the progress of the MTP, and generate public input into the MTP in an effort to develop consensus and direction. The following tools focus on notifications and communications:

- Legal Notification
- Newspaper articles, photos, and TV/radio interviews
- Website – Interactive online map, survey, and email comments
- Email broadcasting
- Community events, activities, and meetings
- Interactive public input forums

In addition to reaching out to the public at-large, the existing professional knowledge base was maximized by taking advantage of local staff and elected officials throughout the development process.

MTP updates were provided to the TAC and the RPC/Policy Committee throughout the process, and member comments were integrated into the document.





Public Input meeting at the Fayetteville Public Library

COMMUNITY OUTREACH LOG

Staff kept a detailed Community Outreach Log. Dates, type of outreach, locations, and attendance were among the items tracked. The following tables and text summarize the Community Outreach Log.

- **LEGAL NOTIFICATION** – Legal notification, per the PPP, was provided to the Northwest Arkansas Democrat Gazette (NWADG) and the La Prensa Libra newspapers. Table 4.1 reflects the dates of all published legal notifications.

- **NEWSPAPER ARTICLES, PHOTOS AND TV/RADIO INTERVIEWS** The public outreach effort was greatly aided by the numerous articles and photos in the NWADG pertaining to many of the activities that NWARPC was involved in through the MTP development process. For example, many articles or photos concerned highway/roadway projects; trails; bicycle and pedestrian plans; transit; open space planning; and the Cave Springs Area Karst study. Over 60 articles and photos were printed over the course of the MTP community outreach period. One article appeared in the McDonald County Press. Other methods of informing the public included TV and radio interviews, as well as national publications featuring the Razorback Regional Greenway.

- **INTERACTIVE PUBLIC INPUT FORUMS** Eighteen public forums were conducted throughout the MTP community outreach process. Generally, these forums were open house style, held from late afternoon to early evening, and located on a bus route whenever possible. Presentations at the forums included a presentation featuring NWARPC plans, studies, and the MTP process; posters highlighting such things as the 2035 Arterial map, current long range plan recommendations; demographics; Alternatives Analysis Study findings and Local Preferred Alternative; Northwest Arkansas Regional Bicycle and Pedestrian Master Plan displays and a map of Razorback Regional Greenway; FFY 2013-2016 TIP projects and map; Connecting Arkansas Program map and current status; STBGP-200K and TAP status of projects; CMP map and explanation; MPA boundary, UZA boundary, and MSA boundary maps; and Open Space Plan displays and maps. The hard copy Public Opinion Survey was available in English and Spanish, and comment cards contained information on how to go online to complete the survey or use the Wiki map, or could be used to write comments on and leave with staff at the forum. At each meeting the public had the opportunity to ask questions and comment on what they would like to see in the future for the region, while staff kept track of verbal comments expressed. At the Final Public Input Forum, the public had the opportunity to comment on the Draft 2040 MTP. Posters were displayed illustrating highlights from each of the 12 chapters. Comments forms were available as was staff to answer questions and take comments.

DATE	LEGAL NOTICE NWADG	DISPLAY AD NWADG	LA PRENSA AD
9.07.14		X	
9.10.14	X		
11.13.14	X		
1.08.15			X
1.13.15	X		
1.15.15			X
1.18.15		X	
3.11.15	X		
3.12.15			X
4.9.15	X		X
5.14.15	X		X
5.17.15		X	
6.04.15			X
6.14.15		X	
8.13.15			X
8.16.15		X	
8.20.15	X		
9.10.15			X
9.10.15	X		
10.08.15	X		X
11.12.15			X
11.12.15	X		
1.14.16	X	X	X
1.22.16	X		
2.11.16	X		X
3.10.16	X		X

Table 4.1 - Legal Notifications Dates

Public Input Meeting at the Bentonville Public Library

Public Forum at the Fayetteville Public Library

The public forums, as shown in Table 4.2, were advertised in a variety of ways. The NWARPC website and calendar listed each forum. A press release was sent out ahead of each meeting to both the English and Spanish speaking newspapers, along with email notifications to State press; State and local governmental agencies; State legislators and U.S. Senators; and current and previous public input participants.

DATE	OUTREACH	LOCATION	ATTENDANCE
4.11.13	Alternatives Analysis Study Forum	Jones Center, Springdale	75
9.12.13	Alternatives Analysis Study Forum	Bentonville Public Library, Bentonville	22
9.18.14	MTP Kick-Off Public Input Forum	NWARPC, Springdale	33
1.21.15	Open Space Plan Public Forum	Fayetteville Public Library, Fayetteville	84
1.22.15	Open Space Plan Public Forum	Bentonville Public Library, Bentonville	76
5.21.15	MTP Public Input Forum	Fayetteville Public Library, Fayetteville	33
5.26.15	MTP Public Input Forum	Siloam Springs City Hall, Siloam Springs	45
5.28.15	MTP Public Input Forum	Bentonville Public Library, Bentonville	13
6.8.15	MTP/Open Space Public Forum	Garfield Community Center, Garfield	26
6.9.15	MTP/Open Space Public Forum	Jones Center, Springdale	46
6.10.15	MTP/Open Space Public Forum	Prairie Grove Battlefield State Park, Prairie Grove	29
6.11.15	MTP/Open Space Public Forum	Gentry City Library, Gentry	54
6.17.15	MTP/Open Space Public Forum to include this area of the MTP; held from 11:00 am until 1:00 pm	McDonald County Coalition Building, Pineville, Missouri	43
6.18.15	Karst Study Public Input Forum	Darr Elementary School, Rogers	108
7.20.15	MTP/Open Space Public Forum	Community Building, Siloam Springs	21
9.23.15	Open Space Plan Public Forum	Rogers Public Library, Rogers	27
9.23.15	Open Space Plan Public Forum	Fayetteville Public Library, Fayetteville	36
1.21.16	MTP Final Public Forum	NWARPC, Springdale	31

Table 4.2 - Public Forums

NWARPC took advantage of the numerous public input forums and public opinion surveys conducted in conjunction with the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, the Open Space Plan, the Cave Springs Area Karst Resource Conservation Study, and the Northwest Arkansas Alternatives Analysis Study. Valuable input from concerned citizens was gathered at each of these forums and through the surveys. A list of comments and suggestions from the public can be found in Appendix A.

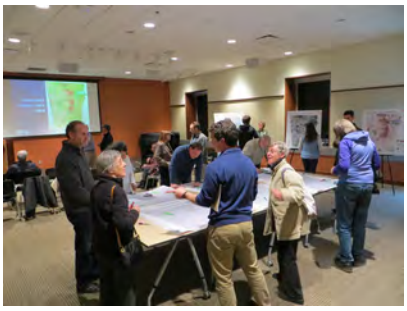
- **COMMUNITY EVENTS AND ACTIVITIES**

  Table 4.3 illustrates the dates and locations of the community events and activities that contributed to community outreach.

DATE	PROJECT	LOCATION	ATTENDANCE
1.28.15	MTP/Open Space/Bike-Ped Plan	Lincoln Kiwanis	28
3.16.15	Open Space Plan	Illinois River Watershed Partnership	18
3.15.15	Open Space Plan – Outreach focus group	NWARPC	7
3.16.15	Open Space Plan – Built Environment focus group	NWARPC	6
3.17.15	Open Space Plan – Heritage focus group	NWARPC	8
3.18.15	Open Space Plan – Natural Environment focus group	NWARPC	8
3.18.15	Benton County AG Day	Benton County Extension Service Building, Bentonville	19
3.19.15	Open Space Plan – Built Environment focus group	NWARPC	5
3.20.15	Open Space Plan – Implementation focus group	NWARPC	7
3.30.15	MTP/Open Space/Bike-Ped Plan	Shiloh Museum, Springdale	11
4.2.15	MTP and Open Space Plan surveys	Washington County Regional Library System	50
4.12.15	MTP/Open Space/Bike-Ped Plan	Siloam Springs Kiwanis	22
4.14.15	MTP and Open Space Plan surveys	AR Natural Resources Commission Floodplain training at NWARPC	16
4.20.15	MTP and Open Space Plan surveys	AR Dept of Parks and Tourism Outdoor Recreation Grant workshop at NWARPC	14
4.23.15	MTP Public Forum information	Info signs posted on ORT buses throughout the region	Everyone on routes
4.24.15	MTP and Open Space Plan	Univ. of Arkansas Architecture students	14
4.30.15	MTP and Open Space Plan	NWA Tourism Association, Fayetteville Chamber of Commerce	26
5.2.15	MTP and Open Space Plan	Razorback Regional Greenway Grand Opening, Springdale	1,000
5.18.15	MTP and Open Space Plan	Environmental Action Committee, Fayetteville	12
6.25.15	MTP and Open Space Plan	Benton County Health Coalition, Bentonville	14
7.16.15	MTP outreach to freight industry	NWARPC	5
7.25.15	MTP outreach to rail industry	Arkansas and Missouri RR, Springdale	3
7.28.15	MTP outreach	Rogers Rotary	50
7.31.15	MTP outreach to aviation industry	NWA Regional Airport, Highfill	3
8.4.15	MTP outreach to transit agencies	NWARPC	6
8.13.15	Open Space Plan	Beaver Watershed Alliance, Rogers Library	31

Table 4.3 - Community Events and Activities

"The choices we make today are affecting who we become tomorrow. Compare communities with active cycling communities (practical, real transportation - NOT just recreation) and look at the quality of life.
Who do we want to be?" - Public Comment



Community Meetings in Siloam Springs, Fayetteville and Bentonville

- **COMMUNITY MEETINGS**
  Additional public input was gathered at the community meetings listed in Table 4.4.

DATE	PROJECT	LOCATION	ATTENDANCE
1.30.13	Alternatives Analysis Study Stakeholder meeting	Jones Center, Springdale	26
6.13.13	Alternatives Analysis Study Stakeholder meeting	Northwest Arkansas Community College, Bentonville	27
12.15.14	Bike-Ped Plan	City Council, Elm Springs	15
12.16.14	Bike-Ped Plan	City Council, Fayetteville	40
12.16.14	Bike-Ped Plan	City Council, Lowell	20
12.18.14	Bike-Ped Plan	City Council, Elkins	10
12.30.14	Bike-Ped Plan	City Council, Tontitown	10
1.6.15	Bike-Ped Plan	Board of Directors, Siloam Springs	25
2.2.15	Bike-Ped Plan	Planning Commission, Greenland	10
2.3.15	Bike-Ped Plan	City Council, Goshen	10
2.24.15	Bike-Ped Plan	Planning Commission, Centerton	12
3.12.15	Bike-Ped Plan	City Council, Gravette	19
3.12.15	Bike-Ped Plan	Committee of the Whole, Centerton	25
3.12.15	Bike-Ped Plan	City Council, Centerton	15
3.19.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	40
4.23.15	MTP outreach	ORT Board of Directors meeting at NWARPC	14
5.20.15	MTP and Open Space outreach	NWA MS4 Stormwater Compliance Group meeting	21
5.21.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	35
6.9.15	Open Space Plan	Elected Officials Resource Group, NWARPC	17
7.1.15	MTP/Open Space/Bike-Ped Plan	NWA Council-Infrastructure Work Group, Springdale	14
8.20.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	43
9.17.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	42
10.15.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	31
11.19.15	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	28
1.21.16	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	24
2.18.16	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	35
3.17.16	MTP/Open Space/Bike-Ped Plan	TAC meeting, NWARPC	39

Table 4.4 - Community Meetings

COMMUNITY OUTREACH SUMMARY

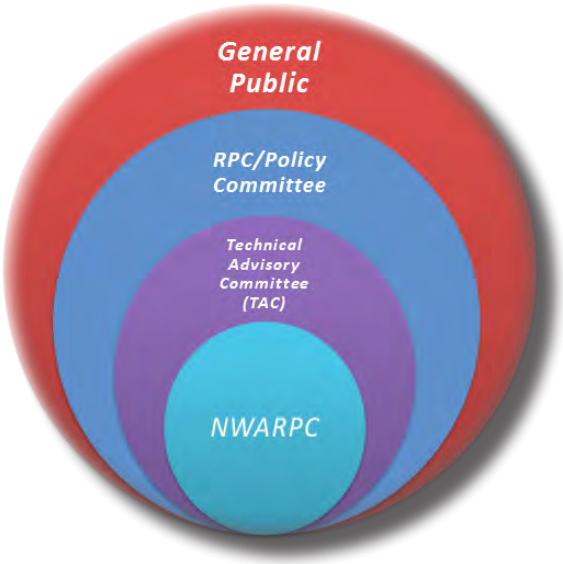
- Over 2,700 individuals attended the community outreach activities. Input was gathered throughout the region and regardless of where the outreach took place, many comments at each meeting addressed transportation issues for the entire region, in addition to those community-specific concerns.
- In addition to numerous outreach activities and events, one-on-one meetings/briefings were held with local representatives from the aviation, rail and trucking industries, as well as local transit operators.
- The first Draft MTP was posted online December 31, 2015. The TAC and RPC/Policy Committee were invited to review and comment on the Draft.
- Community outreach and input continued throughout the entire MTP development process, culminating in a Final Public Forum held January 21, 2016 at NWARPC. The purpose of this session was to present the Draft MTP through posters, maps, and interaction with staff, and receive comments from the public.
- After a 30-day public comment period, running from January 23, 2016 through February 21, 2016 the RPC/ Policy Committee met on March 23, 2016 and adopted the MTP.
- Notice for the meetings were published through advertisement with the local newspapers and press releases were developed and distributed to all local media outlets, which attracted great interest for the plan. In addition, email notification was given to government agencies, special interest groups, local officials, business leaders, NWARPC committees, news media, and other interested citizens.
- The COP provided the opportunity for public involvement and comment throughout the MTP development process.

SUMMARY, ANALYSIS AND REPORT ON COMMUNITY INPUT THROUGH THE PUBLIC OPINION SURVEY AND ONLINE MAP

This section summarizes the community input that took place during the development of the MTP through hard copy and online survey solicitations and online Wiki map input. 444 total survey responses were received, while the Wiki map had 235 visits with 105 comments.

SURVEY RESULTS

The 2040 MTP Public Opinion Survey was made available between September 11, 2014 and October 1, 2015 with links to the online version from the NWARPC website, the NWARPC Facebook page, and also by providing the link through emails, media, newspaper articles, etc. A paper copy of the survey was also made available at open houses, public input meetings and presentations. Both the online and paper surveys were published in both English and in Spanish. 444 surveys were received in English and 7 surveys were received in Spanish.



The following questions were answered by survey participants. The graphics represent the weighted average for each question. A copy of the English and Spanish surveys can be found in Appendix A: Community Outreach Plan, 2040 MTP Public Opinion Survey, and Public Comments.

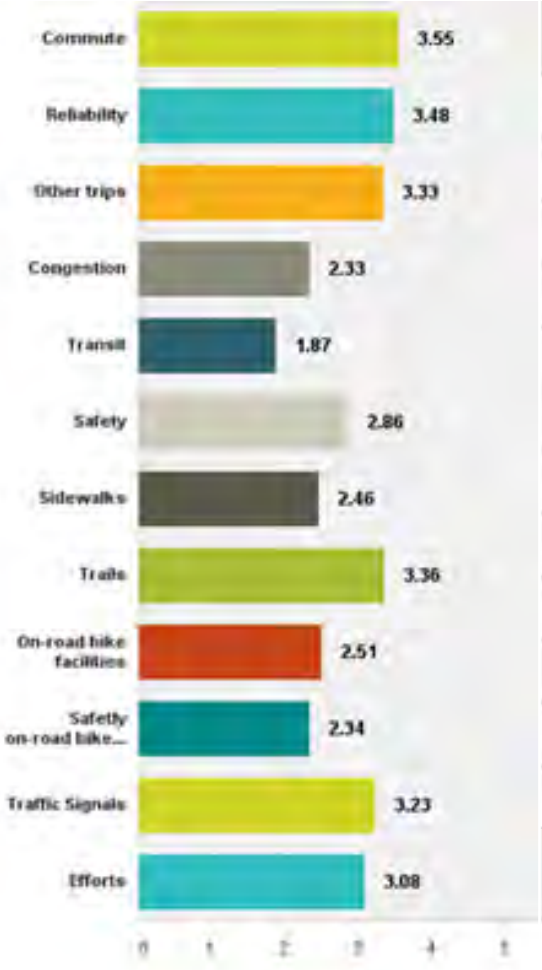
The first question asked the responders to weigh the following options on a scale from 1 (unacceptable) to 5 (excellent):

- Commute time to work (length of time)
- Reliability of commute (same length of time every day)
- Other trips, such as shopping (length of time)
- Traffic congestion on Northwest Arkansas roadways
- Availability of transit in Northwest Arkansas
- The safety of Northwest Arkansas roadways
- Availability of sidewalks
- Availability of multi-use trails
- Availability of on-road bicycle facilities
- Safety of on-road bicycle facilities
- Traffic signals and signage
- Northwest Arkansas efforts to improve transportation

434 people answered this question (See Figure 4.1). The options with the most unacceptable choices were the availability of transit and the traffic congestion in Northwest Arkansas. The choices that were highly rated were the commute time to work (length of time) and the reliability of commute (same length of time every day).

"The streets are far more congested than they have ever been due to population growth here. Thank you for trying to ask people what their ideas and opinions are about the needed changes and updates." - Public Comment

"Investment in other forms of transport is far past due. These would give citizens options. Right now, nearly everyone must drive." - Public Comment



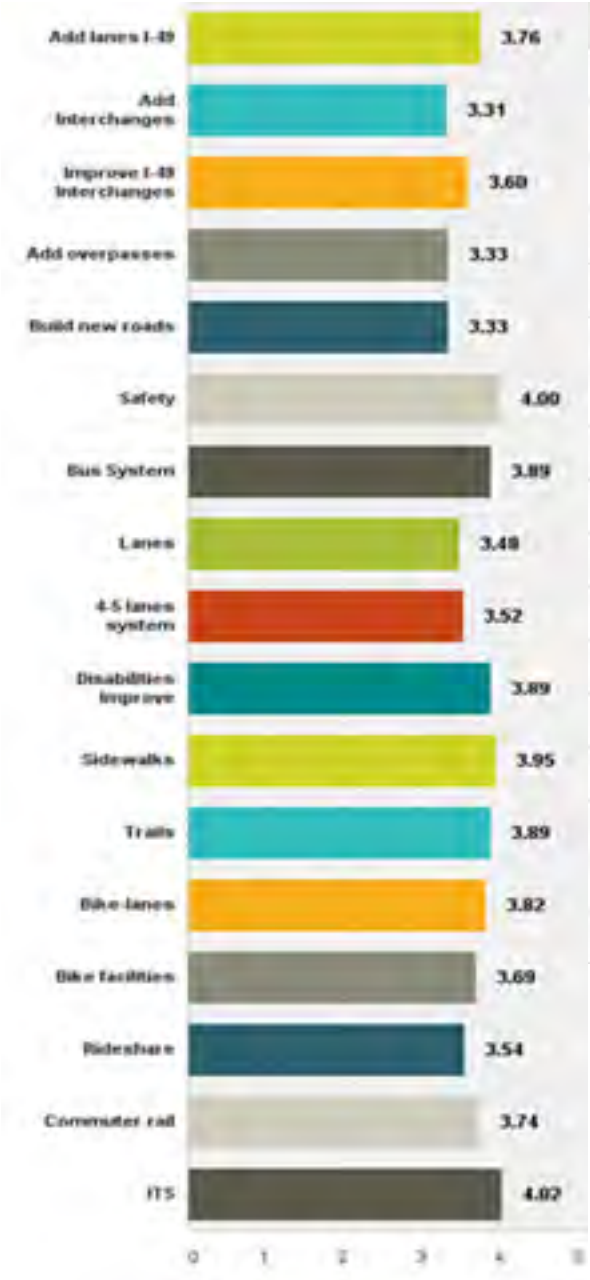
	1	2	3	4	5	I Don't Know	Total	Weighted Average
Commute	7.58% 31	14.18% 58	23.96% 98	20.05% 82	31.54% 129	2.69% 11	409	3.55
Reliability	10.27% 42	14.18% 58	19.56% 80	24.69% 101	28.61% 117	2.69% 11	409	3.48
Other trips	5.35% 23	14.19% 61	33.95% 146	34.65% 149	11.40% 49	0.47% 2	430	3.33
Congestion	25.29% 109	33.41% 144	27.61% 119	9.74% 42	3.71% 16	0.23% 1	431	2.33
Transit	45.54% 194	28.40% 121	14.32% 61	5.87% 25	2.35% 10	3.52% 15	426	1.87
Safety	11.63% 50	23.02% 99	36.98% 159	23.95% 103	4.19% 18	0.23% 1	430	2.86
Sidewalks	22.09% 95	28.84% 124	30.47% 131	14.19% 61	3.02% 13	1.40% 6	430	2.46
Trails	6.50% 28	15.78% 68	27.15% 117	32.48% 140	15.78% 68	2.32% 10	431	3.36
On-road bike facilities	20.23% 87	28.14% 121	27.21% 117	14.42% 62	3.95% 17	6.05% 26	430	2.51
Safety on-road bike facilities	24.88% 106	30.05% 128	25.82% 110	9.86% 42	3.76% 16	5.63% 24	426	2.34
Traffic Signals	6.96% 30	13.69% 59	36.43% 157	34.80% 150	7.89% 34	0.23% 1	431	3.23
Efforts	12.33% 53	15.81% 68	31.63% 136	29.07% 125	9.77% 42	1.40% 6	430	3.08

Figure 4.1 - Question 1

The second question asked the responders to weigh the following options on a scale from 1 (not important) to 5 (very important):

- Adding lanes to I-49
- Adding interchanges to I-49
- Improving I-49 interchanges
- Adding overpasses to I-49
- Building new roads
- Improving road safety
- Expanding the bus system
- Adding lanes to other roadways
- Completing a 4 and 5 lane regional grid network
- Providing transportation for people with disabilities
- Building sidewalks
- Building multi-use trails
- Providing bicycle lanes
- Providing bicycle facilities
- Developing rideshare/carpool programs
- Planning/developing a commuter rail system
- Using technology to improve congestion (changeable highway message signs, signal coordination, etc.)

434 people answered this question. The transportation improvements that were considered the least important were adding interchanges to I-49, adding overpasses to I-49 and also building new roads. The improvements that were considered most important were using technology to improve congestion, improving road safety, building sidewalks, building multi-use trails and expanding the bus system (See Figure 4.2).



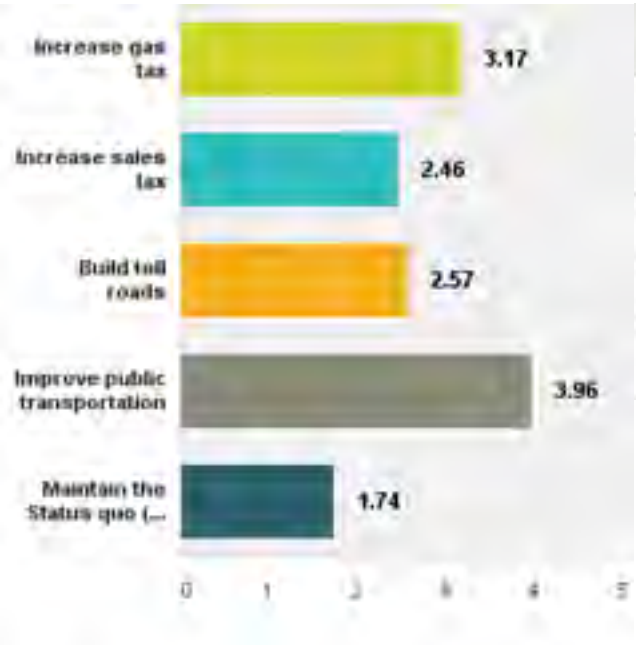
	1	2	3	4	5	I Don't Know	Total	Weighted Average
Add lanes I-49	11.81% 51	8.80% 38	15.28% 66	18.75% 81	44.21% 191	1.16% 5	432	3.76
Add Interchanges	12.56% 54	14.19% 61	25.35% 109	20.23% 87	24.42% 105	3.26% 14	430	3.31
Improve I-49 Interchanges	9.28% 40	11.14% 48	20.19% 87	25.52% 110	31.09% 134	2.78% 12	431	3.60
Add overpasses	10.21% 44	16.24% 70	24.36% 105	19.95% 86	24.13% 104	5.10% 22	431	3.39
Build new roads	12.85% 55	16.12% 69	22.43% 96	19.86% 85	27.10% 116	1.64% 7	428	3.33
Safety	2.11% 9	7.04% 30	18.78% 80	30.99% 132	39.67% 169	1.41% 6	426	4.00
Bus System	7.23% 31	6.99% 30	14.92% 64	26.57% 114	40.33% 173	3.96% 17	429	3.89
Lanes	8.22% 35	14.08% 60	24.65% 105	25.82% 110	25.82% 110	1.41% 6	426	3.48
4-5 lanes system	11.57% 50	9.26% 40	20.60% 89	21.53% 93	29.40% 127	7.64% 33	432	3.52
Disabilities Improve	3.26% 14	5.83% 25	23.31% 100	27.51% 118	34.73% 149	5.36% 23	429	3.89
Sidewalks	3.72% 16	7.67% 33	18.37% 79	28.84% 124	40.23% 173	1.16% 5	430	3.95
Trails	4.17% 18	10.42% 45	19.44% 84	21.76% 94	41.90% 181	2.31% 10	432	3.89
Bike lanes	6.50% 28	9.51% 41	19.26% 83	22.04% 95	39.91% 172	2.78% 12	431	3.82
Bike facilities	6.84% 29	10.85% 46	22.64% 96	21.46% 91	35.14% 149	3.07% 13	424	3.69
Rideshare	9.84% 42	11.71% 50	22.01% 94	21.78% 93	30.91% 132	3.75% 16	427	3.54
Commuter rail	13.15% 56	9.39% 40	12.44% 53	16.43% 70	45.54% 194	3.05% 13	426	3.74
ITS	4.40% 19	4.40% 19	18.06% 78	28.94% 125	42.13% 182	2.08% 9	432	4.02

Figure 4.2 - Question 2

The third question asked the responders to rank the following options from 1 (unacceptable) to 5 (acceptable) as strategies to improve transportation in Northwest Arkansas:

- Increase gas tax
- Increase sales tax
- Build toll roads
- Improve public transportation
- Maintain the status quo (no change to current progress)

430 people answered this question. Maintaining the status-quo was the option that most respondents considered unacceptable. The majority of the respondents also selected to improve public transportation as the most acceptable strategy to improve transportation, followed by the gas tax increase strategy. See Figure 4.3.



	1	2	3	4	5	I Don't Know	Total	Weighted Average
Increase gas tax	21.60% 92	12.68% 54	16.90% 72	22.07% 94	25.35% 108	1.41% 6	426	3.17
Increase sales tax	30.75% 131	21.13% 90	26.76% 114	11.50% 49	8.92% 38	0.94% 4	426	2.46
Build toll roads	34.43% 146	17.22% 73	17.45% 74	14.62% 62	14.62% 62	1.65% 7	424	2.57
Improve public transportation	7.26% 31	5.15% 22	18.27% 78	20.14% 86	46.37% 198	2.81% 12	427	3.96
Maintain the Status quo (no change to current progress)	58.73% 249	15.57% 66	15.80% 67	4.95% 21	2.59% 11	2.36% 10	424	1.74

Figure 4.3 - Question 3

Questions four and five asked the respondents to identify three transportation priorities in Northwest Arkansas and also to share any additional comments regarding transportation in the region. In general, the comments were referencing the identified need in the region for a rail system, whether commuter or light rail, adding lanes to I-49, expanding the bus system, adding more sidewalks and continue improving the trail system. These comments can be found at the end of this chapter.

Question six asked the respondents where their residence was. 424 people answered this question. Approximately 96 percent of the respondents live in Northwest Arkansas (with 52 percent in Washington and 44 percent in Benton Counties). There were about 2 percent respondents from McDonald County, Missouri and less than 1 percent from other counties. See Figure 4.4.

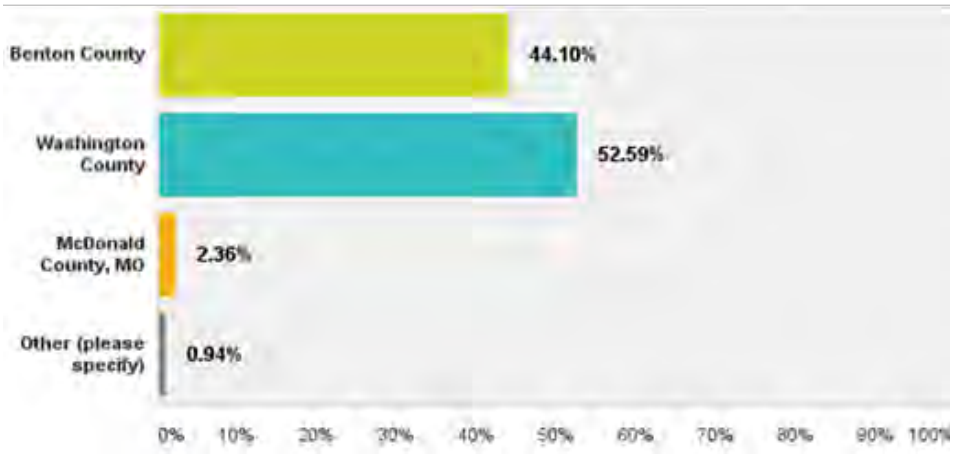


Figure 4.4 - Question 6

Question seven asked the respondents to select their representative age group. 425 people answered this question. More than half of the respondents were identifying themselves in the 21-45 age group followed by the 56-65 age group and the 46-55 age group. See Figure 4.7.

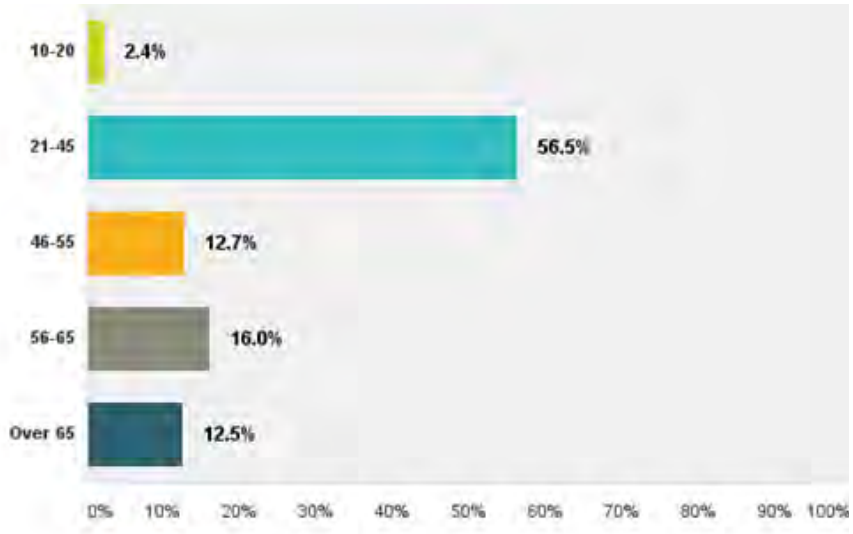


Figure 4.5 - Question 7

"Begin a campaign and educate everyone in Northwest Arkansas why it is important to vote for an increased gas tax." - Public Comment

Questions eight and nine asked the respondents to identify the ZIP codes of their residence and ZIP codes of their work place. There were 423 respondents for question eight (ZIP code of home) and 386 respondents for question nine (ZIP code of workplace). The tables below illustrate the number or respondents for each ZIP code identified in these two questions. See Figure 4.6 and Figure 4.7

Question ten was answered by 414 people. The respondents were asked how far away they lived from I-49. According to the answers, more than 55 percent of the respondents live within 5 miles from I-49 and approximately 19 percent between 5-10 miles from it. Twelve percent of the respondents live within 21-30 miles from I-49. See Figure 4.8

Question eleven was completed by 424 persons. The question asked if the respondents used either a bicycle or if they walked to reach their work place or for other types of trips. Sixty two percent of the respondents answered "no" to this question while thirty eight percent answered "yes". See Figure 4.9.

Question twelve was a follow up from question eleven in asking respondents to select how many times they do use either a bicycle or walk to commute or for other types of trips. From the percent of the people who use a bicycle or walk to work approximately 23 percent do so 2-3 times a week and the same percent selected the several times a month option. Also, 22 percent of those bike or walk to work or for other trip purposes on a daily basis. 175 people completed this question. Some respondents though still chose the Other category even if they did not answer "yes" to Question 11. See Figure 4.10.

Question thirteen asked if the respondents use public transportation to commute to work or for other types of trips. The overwhelming majority, almost 92 percent of the respondents, answered "no". 427 people responded to this question. See Figure 4.11.

ZIP Code of Residence	Respondents
64831	1
64856	5
64859	1
65730	2
68745	1
72223	1
72661	1
72701	91
72702	1
72703	33
72704	24
72712	30
72714	15
72715	14
72717	1
72718	5
72719	4
72722	2
72727	3
72730	2
72732	7
72734	22
72735	1
72736	4
72739	1
72740	1
72744	1
72745	8
72751	6
72753	2
72756	17
72758	10
72761	38
72762	29
72764	30
72766	1
72774	3
74331	1
76762	1
78701	1
78734	1
84054	1

Figure 4.6 - Question 8

Zip Code of Workplace	Respondents
64831	2
64856	4
71852	1
72209	1
72701	98
72702	6
72703	19
72704	4
72712	50
72714	42
72715	14
72716	2
72718	1
72719	2
72730	2
72732	1
72734	15
72741	2
72745	4
72756	17
72758	6
72761	30
72762	26
72764	26
72765	1
72774	1
75761	1
78756	1
78765	1
84054	1
92136	1

Figure 4.7 - Question 9

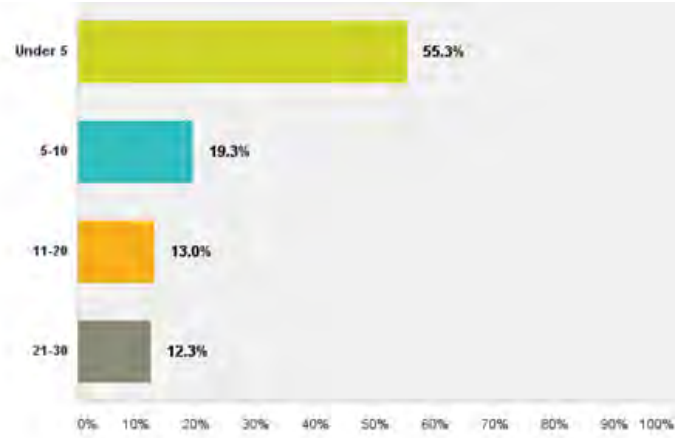


Figure 4.8 - Question 10

Public Forum in Bentonville

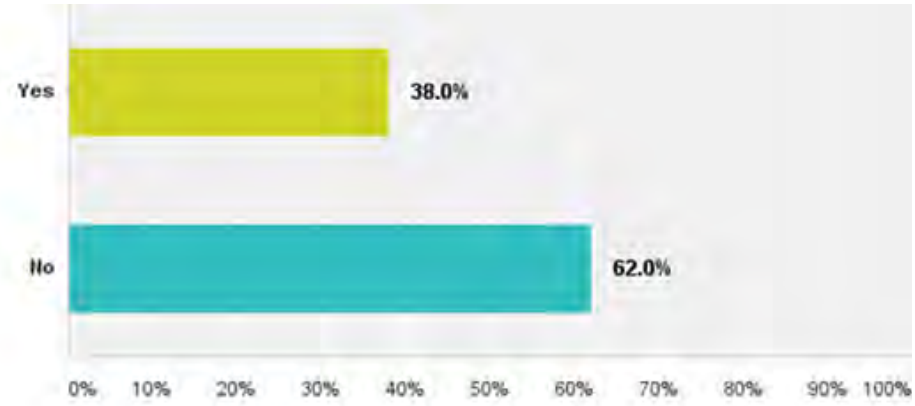
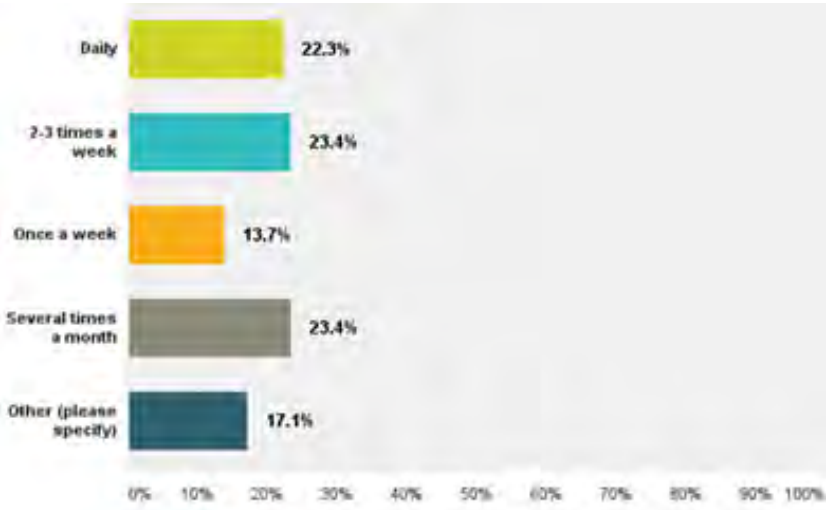
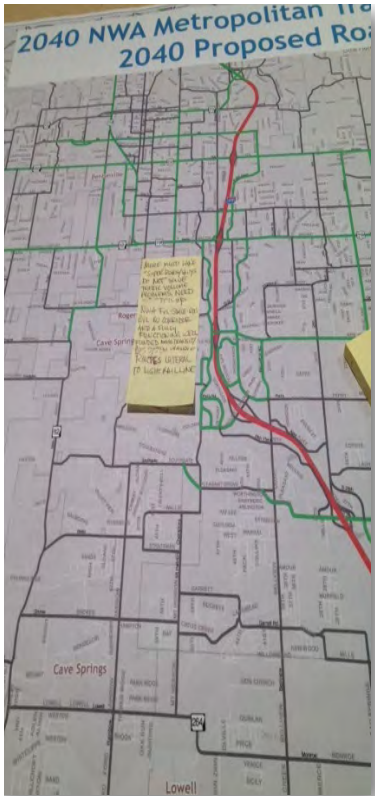


Figure 4.9 - Question 11

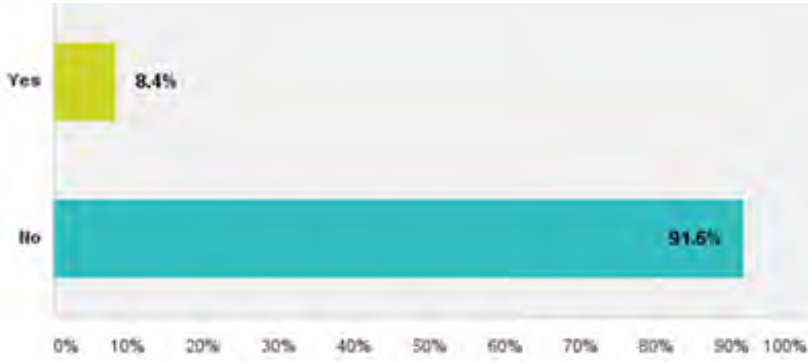


Answer Choices	Responses	
Daily	22.3%	39
2-3 times a week	23.4%	41
Once a week	13.7%	24
Several times a month	23.4%	41
Other (please specify)	17.1%	30
Total		175

Figure 4.10 - Question 12



Map Display at Public Input Forum

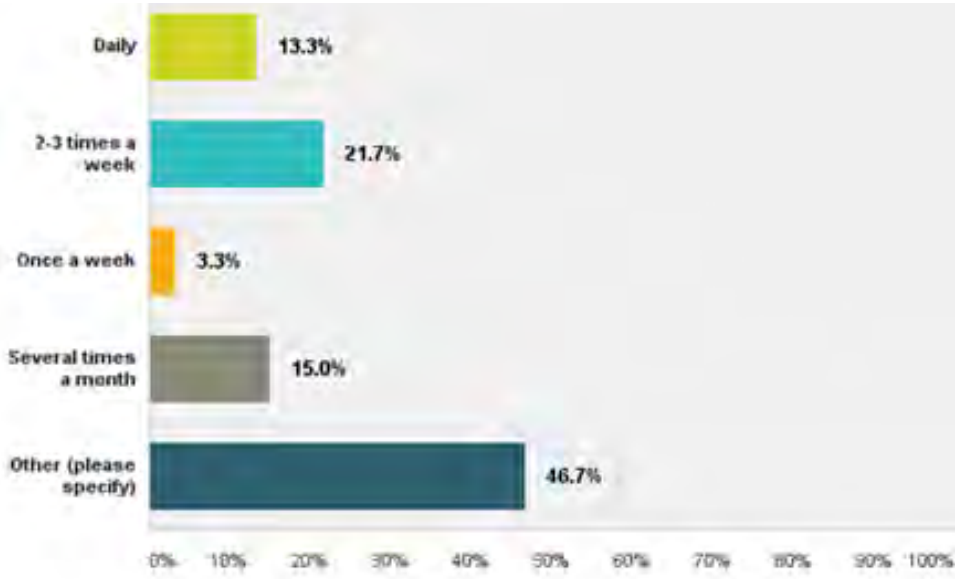


Answer Choices	Responses	
Yes	8.4%	36
No	91.6%	391
Total		427

Figure 4.11 - Question 13

Question fourteen was addressed to the respondents who answered "yes" to the previous question. From the percent of the respondents who answered "yes" to the previous question, 13 percent said that they use public transportation on a daily basis, while about 47 percent selected the "other" category. The question was completed by 60 people. Some respondents, though, still chose the Other category even if they did not answer "yes" to Question 13. See Figure 4.12.

The last question asked if the respondents had regular access to a motor vehicle for work and other types of trip purposes. The overwhelming majority of 97 percent answered "yes". The question was completed by 420 people. See Figure 4.13.



Answer Choices	Responses	
Daily	13.3%	8
2-3 times a week	21.7%	13
Once a week	3.3%	2
Several times a month	15.0%	9
Other (please specify)	46.7%	28
Total		60

Figure 4.12 - Question 14

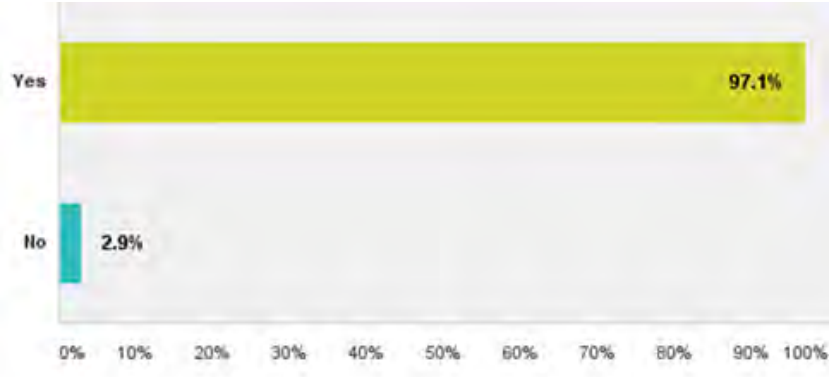


Figure 4.13 - Question 15

The survey was also published online and distributed on paper in Spanish. 7 responses were received. In general, the responses from the Spanish speakers were comparable with the overall English responses. On the first question, the safety of on-road and bicycle facilities was rated by most as unacceptable and the commute time to work (length of time) and the reliability of commute (same length of time every day) the most acceptable. The majority of choices in question 2 were considered of major importance, especially providing bicycle facilities. The respondents were from both Washington (four people) and Benton Counties (three people) and mostly between the 21-45 and 46-55 age groups. They also have regular access to a motor vehicle, with one exception. The comments from these surveys were mainly identifying the need for bicycle facilities, a better public transportation system and adding more lanes on major roads. The comments also mentioned the lack of sidewalks for pedestrians and the fact that the traffic lights are not synchronized in certain areas. The abrupt change in speed limit without adequate signalization was identified as a problem as well.

WRITTEN COMMENTS

Written comments were received via public input forums, and paper and online surveys. Sample responses are shown below; all public comments are shown in Appendix A.

- "NWA is on a good path and I want to see the region become even better and with that come improvements to the roadways and finding new ways to improve public transportation."
- "I get to see I-49 at its worst, and regularly take HWY 112 as an alternate route. As I-49 congestion in-creases, more people will start to use State highways as an alternative which will quickly increase the need for repairs."
- "There are just too many people for a road system that was made to handle small town traffic. There needs to be drastic changes to allow the continued growth the area has been seeing in the recent years".
- "If possible, would like to bike or take public transit to work or other types of trips."
- "Top priority is additional funding for transportation facilities."
- "I do greatly appreciate the completion and quality of the trail system."
- "Encourage cities to adopt "roundabouts" to keep traffic flowing."
- "Love, love, love the newly opened Razorback Greenway! Fantastic!"
- "Driver Education is important, so that vehicle and bicycles can operate together. Education - so texting is stopped, and tailgating is stopped - safe driving is an issue. If people would obey the speed limit, all would arrive in a timely and safe manner. Education - to look out for motorcycles."
- "Though it is off the corridor, XNA should certainly be included in any transit plan (bus, commuter rail). This would help thousands of residents and more thousands of visitors (business visitors and tourists)."

ONLINE INPUT MAP

http://WIKIMAPPING.COM/WIKIMAP/METROPOLITAN-TRANSPORTATION-PLAN-2040-UPDATE

The online input map was designed to offer the public the opportunity to make specific comments and suggestions on transportation needs and/or identify locations for improvements. The map was made available in September 2014 and was active until October 2015. Figure 4.14 illustrates the online Wiki Map interface.

People were offered a list of potential improvements or to identify and place a point or draw a line that would identify a transportation problem, as well as the option to write in comments. The following list was available:

For Routes:

- Road Safety Improvement Needed
- Turn Lane Needed
- Road Repair/Maintenance Needed
- Add Lane
- Shoulder Needed
- Crosswalk Needed
- Add Sidewalk
- Add Bike Lane
- Add Multiuse Trail
- Add Transit Route
- Increase Buses Frequency

For Points:

- Add Traffic Signal
- Crosswalk/Sidewalk Needed
- Difficult Intersection
- Bridge Repair Needed
- Parking Near Trail Needed

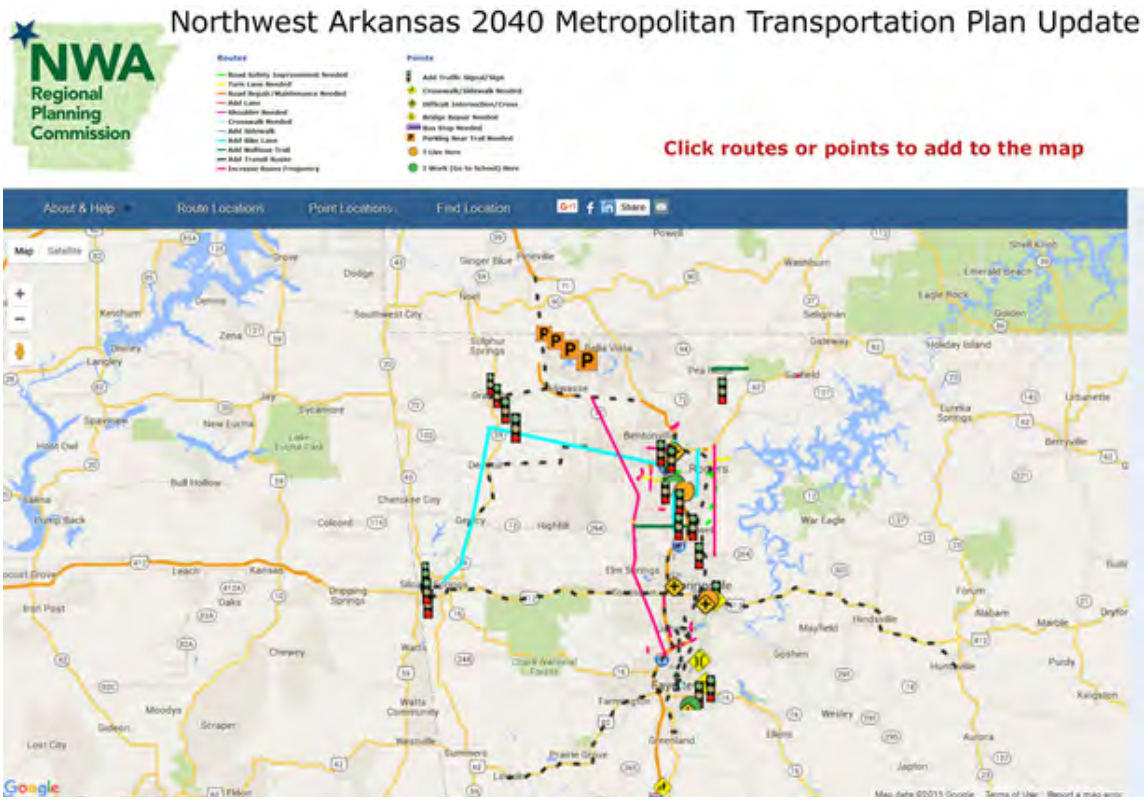


Figure 4.14 -Online Wiki Map Interface

The map provided another way of involving the general public in identifying their areas of concern or where they would like to see a particular type of mobility improvement. Map 4.1 is an illustration of these locations showing all the public input from the online map.

The respondents identified the following number of locations on the interactive map where improvements were needed:

- 16 where a traffic signal/sign is needed
- 3 where a bridge repair is needed
- 1 where a bus stop is needed
- 5 crosswalk/sidewalk is needed
- 7 where difficult intersections/cross are located
- 1 parking near a trail is needed
- 4 where road safety improvements are needed
- 13 where a turn lane is needed
- 3 where a road repair/maintenance is needed
- 22 where adding another lane is needed
- 3 where a crosswalk is needed
- 9 where adding a sidewalk is needed
- 4 where adding a bike lane is needed
- 5 where multiuse trails are needed
- 3 where adding a transit route is needed

Community Input Meeting

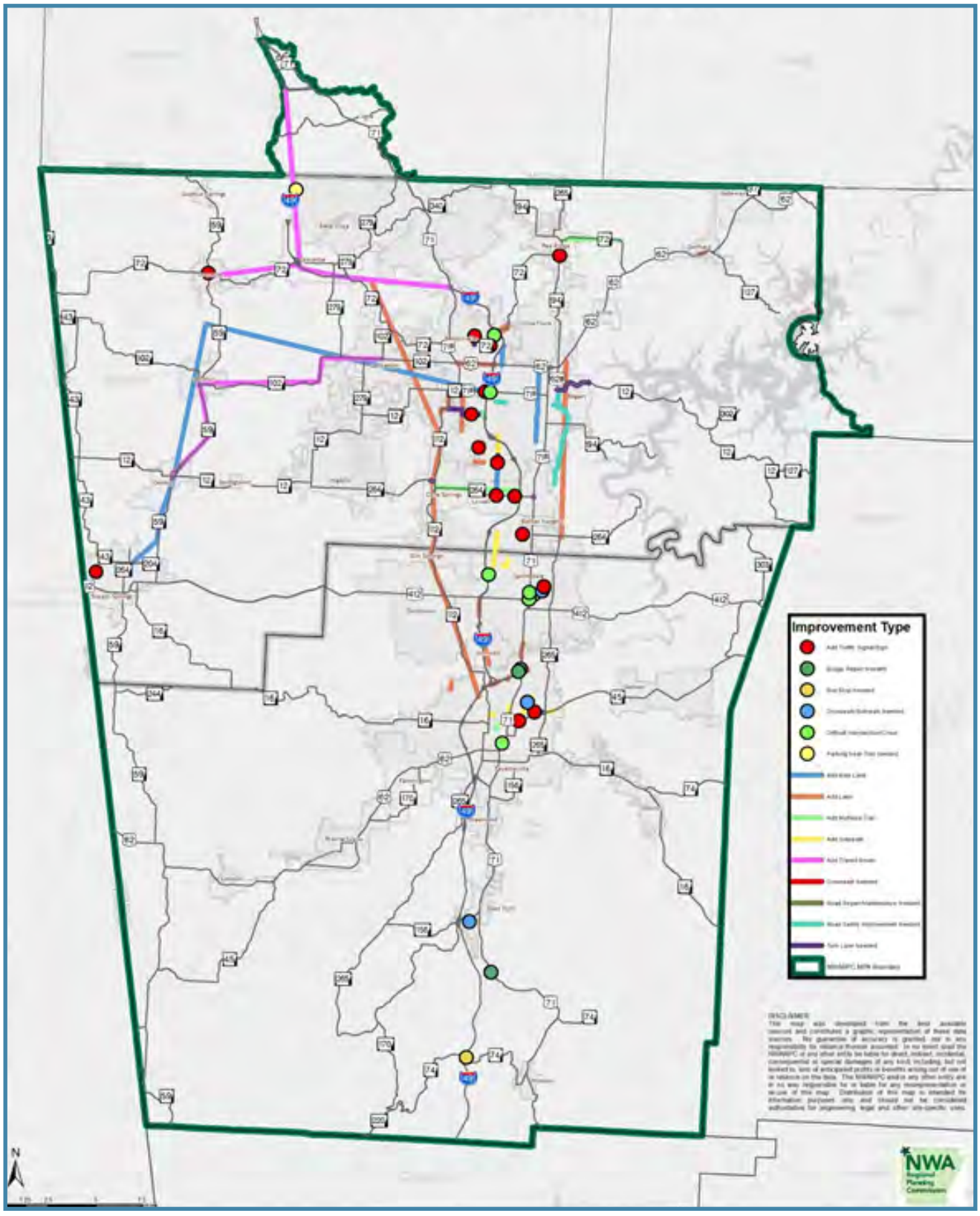
CONCLUSION

Northwest Arkansas was able to meet the challenge of involving the community during the development of the MTP through regular input sessions in the community as well as regular media attention to engage citizens in the development of a long-range transportation plan. NWARPC has taken effective action in engaging the public in this process and the end result reflects the opinions of those who took the time and effort to provide input.

Involving the public in the decision-making process was an essential part in developing public consensus in the MTP. The public was invited to provide information, offer alternatives, present their interests and opinions, and react to the recommended MTP. This allowed important community concerns and technical issues to be identified and addressed. By using techniques outlined in the Public Participation Plan and the Community Outreach Plan, NWARPC was able to engage the citizens of this region to participate in the development of a transportation blueprint for this region for future generations.

Even as the public indicates its preference for certain types of transportation modes and improvements, the fact remains that as the projected costs and anticipated revenues for the projects in the MTP were analyzed and updated, it became apparent that there were not enough anticipated resources to complete all of the listed improvements. To determine what would be “cost feasible” to build, the projects were evaluated by the TAC from a technical and financial perspective to determine the most crucial regional transportation needs. The RPC/Policy Committee was informed of the project lists as recommended by the TAC and gave its approval to include these in the final MTP. Due to the fact that transportation needs are significantly greater than expected revenues, the issue of adequate funding and alternative funding will remain an issue for the region.

Many of the area’s citizenry highly support expanded transit, especially bus transit. In regards to transit projects, anticipated revenues determine the level of service. These revenues will only maintain the existing service. Without a dedicated funding source, transit service is at risk within the area. With dedicated funds, transit service will not only be preserved but may be expanded to adequately serve the entire region.



Map 4.1 - Online Map Comments

CHAPTER 5. ENVIRONMENTAL JUSTICE

INTRODUCTION

Environmental Justice (EJ) is a process that ensures that the minority and low-income populations are not excluded from policy-setting or decision making processes with regards to transportation and are also not negatively impacted by environmental burdens.

The framework for the approach to environmental justice is found in Title VI of the 1964 Civil Rights Act. The Executive Order 12898, 'Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations' was signed on February 11, 1994. The Presidential memorandum accompanying EO 12898 identified Title VI of the Civil Rights Act of 1964 as one of several federal laws that should be applied 'to prevent minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.' According to the U.S. Department of Justice, '…the core tenet of environmental justice – that development and urban renewal benefitting a community as a whole not be unjustifiably purchased through the disproportionate allocation of its adverse environmental and health burdens on the community's minority – flows directly from the underlying principle of Title VI itself'.

The Executive Order identifies minority populations as belonging to any of the following groups:

- Black - a person having origins from any of the black racial groups of Africa;
- Hispanic or Latino - a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian-American - a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian and Alaskan Native - a person having origins from any of the original people of North America, South America (including Central America) and who maintain cultural identification through tribal affiliation or community recognition: or
- Native Hawaiian and Other Pacific Islander - people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- Minority population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed DOT program, policy of activity.

The Executive Order defines low-income populations as those whose household incomes are at or below the U.S. Department of Health and Human Services poverty guidelines. There are three fundamental environmental justice principles:

1. To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.

2. To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

3. To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

NWARPC ACTIVITIES

NWARPC's activities with regard to Environmental Justice are described in detail in two documents: the Public Participation Plan (PPP) and the Limited English Proficiency Plan (LEP).

The mobility needs of minority populations are identified through engagement efforts, data collection, and analysis of available Census data, public comment, and other available sources. The policy and guidance for public engagement is established in the NWARPC Public Participation Plan. NWARPC's policy for public engagement includes activities and outreach efforts such as soliciting the opinions of those under-served by existing transportation systems, including but not limited to, the transportation disadvantaged, minorities, elderly, low-income households, and people with disabilities. Also, NWARPC is committed to periodically reviewing adopted public comment processes to determine their effectiveness in assuring that the process provides full and open access to all, through surveys, public meetings, open houses, public notices, website posting, emails and public comments.

Data analyses using GIS and the Northwest Arkansas Travel Demand Model are key techniques used to identify and target underrepresented populations. NWARPC utilizes data for planning products and can identify other population groups by sex, age, persons per square mile, and persons over the age of 65, disabled population, zero car households, employment density and other population characteristics as needed.

The NWARPC's efforts in reaching people who have not been traditionally participating in the transportation process include translation and publication of all the public participation notices, surveys or announcements in Spanish on both the nwarpc.org website and the printed local media. NWARPC held all of the public input meetings in public/community locations that were handicap accessible and accessible through public transit and pedestrian/bike facilities, such as public libraries or community centers.

The following measures were used to identify EJ populations in relation to transportation projects:

- Gathering and analyzing the 2010 Census Bureau's data, as well as the ACS five-year estimates to depict the concentration and distribution of the minority and low-income populations across the MPA.

- Overlaying the 2040 MTP future road network with the population distribution estimates from the ACS to help determine where resources should be directed and also recognize if environmental justice communities are adversely impacted or denied the benefits of the anticipated projects.

- Creating GIS maps and analysis of potential transit routes and stops that the two transit agencies in the region are planning in order to identify where minority and low income population are concentrated in relation to these future routes.

- Coordinating with the communities that adopted the Northwest Arkansas Regional Bike and Pedestrian Master

Plan and assisting them in developing pertinent data and maps to identify areas of planned trails that are accessible to minority and low income populations.

Minorities Distribution

Maps 5.1 - 5.6 in this chapter display locations of higher concentration of populations considered to be minority ethnicities in Benton and Washington Counties, and McDonald County, MO. These include African-American, Asian-American, Hawaiian and Other Pacific Islands population, Hispanic population and Native American population.

Benton County

Higher concentrations of minorities in Benton County can be found east of Lowell and Rogers; in Bethel Heights; south of Bentonville; and the eastern part of Centerton.

Washington County

The highest distribution of minorities in Washington County can be found in the cities of Springdale and Fayetteville. The tracts east of Springdale have the highest concentration of minority population in the two-county region.

McDonald County

In the McDonald County portion of the MPA, the minority population concentration is represented in the western tracts, mainly the city of Pineville, MO.

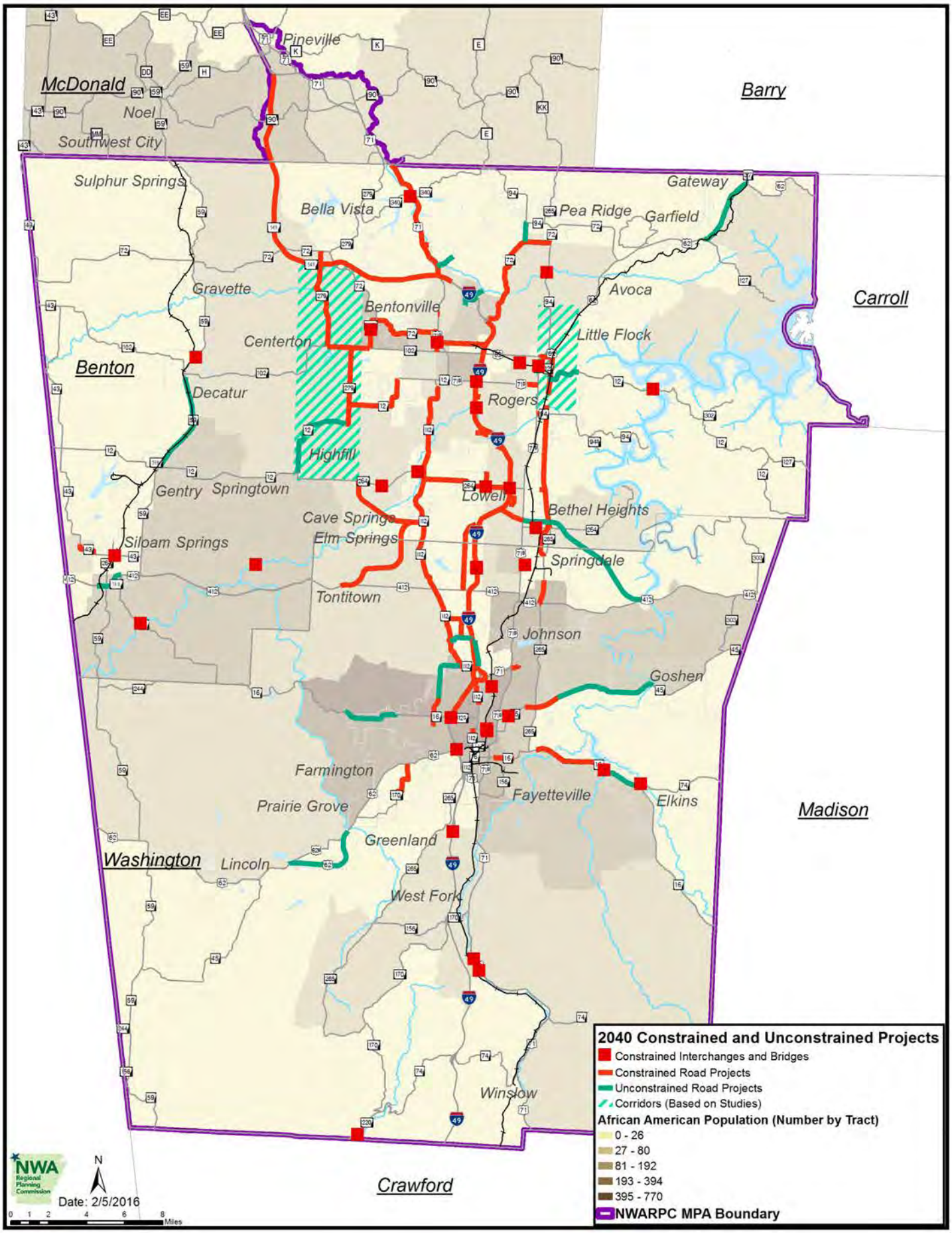
Analysis

An analysis of whether transportation projects either underserved or unduly impacted minority groups was performed by overlaying the developed list of financially constrained projects over a map depicting concentrations of minority groups. It was determined that the minority populations were neither underserved nor disproportionately impacted by adverse impacts.

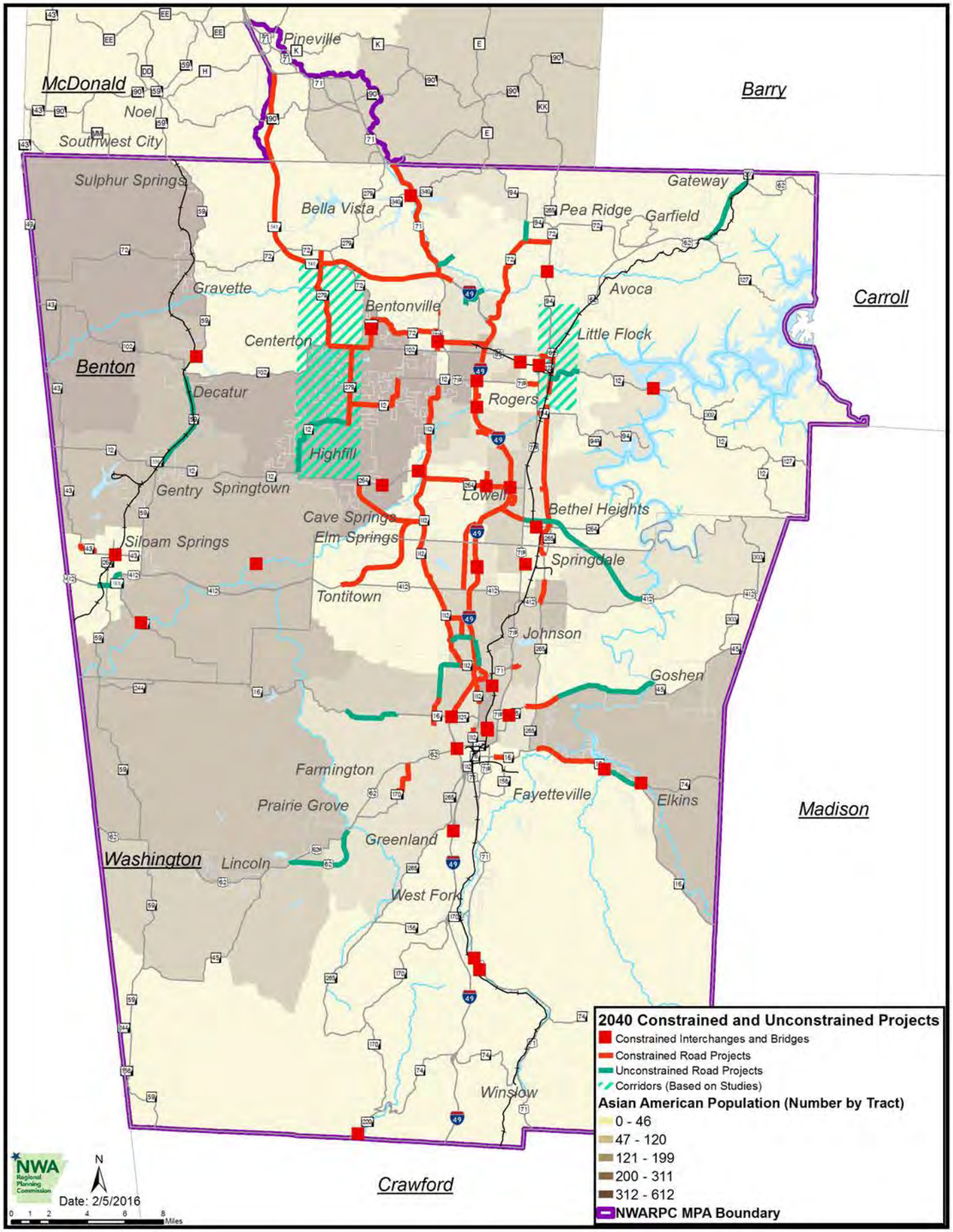
Low-income Distribution

The distribution of low-income population is also represented in Map 5.7 and Map 5.8. The highest percentages of low-income tracts are in the cities of Fayetteville, Johnson, Siloam Springs and Pineville, MO; an area east of Springdale; and in northeastern Rogers. Other high percentages of low-income population are located in the northwestern part of Benton County and the northeastern part of Washington County.

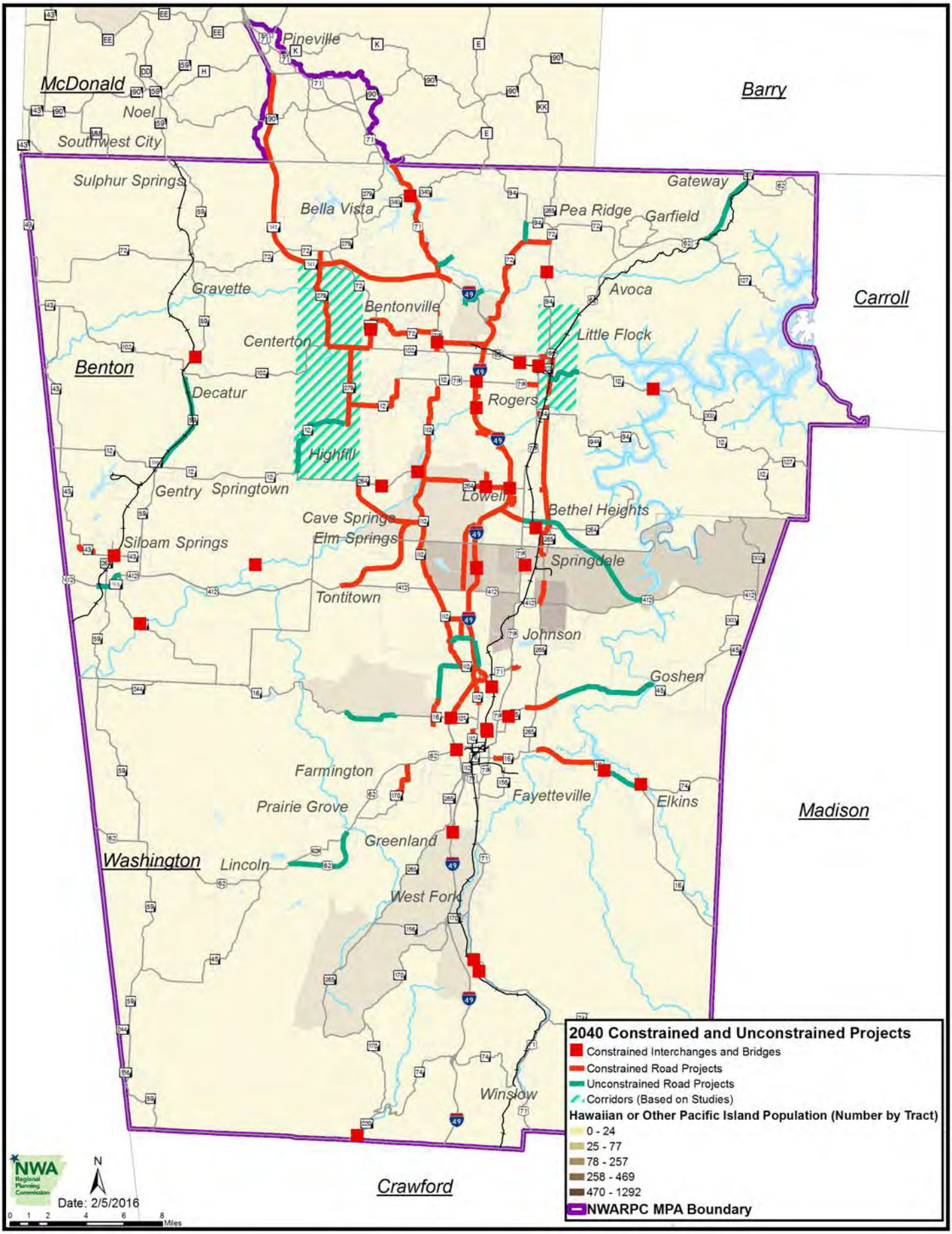
Projects such as the Northwest Arkansas Razorback Regional Greenway have completed a thorough Environmental Justice Analysis to ensure that minorities or low income populations have not been adversely impacted by the project. The Razorback Regional Greenway is a multi-use shared-use trail that passes through an area of Springdale where low income and minority population residents live. The EJ analysis completed for this project provided the recommendations, analysis, and decision-making for the trail location of the Razorback Regional Greenway through this area, discussed the populations affected by the route and alignment, defined the impacts and benefits of the Greenway to these populations, and addressed other issues that have been resolved by the project sponsor and design team. The complete E*nvironmental Justice Analysis Northwest Arkansas Razorback Regional Greenway* document can be found in Appendix B.



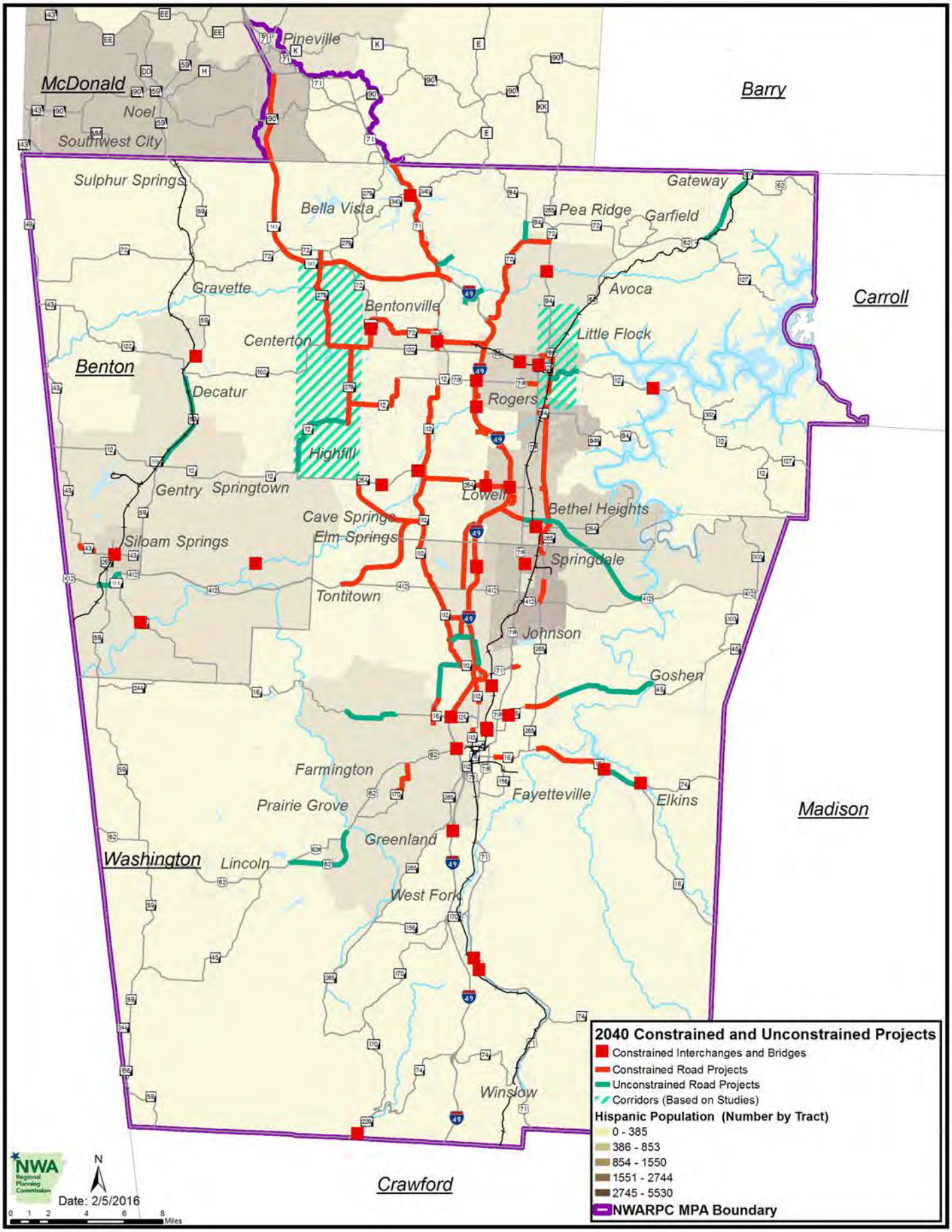
MAP 5.1 - African American Population – 2040 Road Improvement Projects



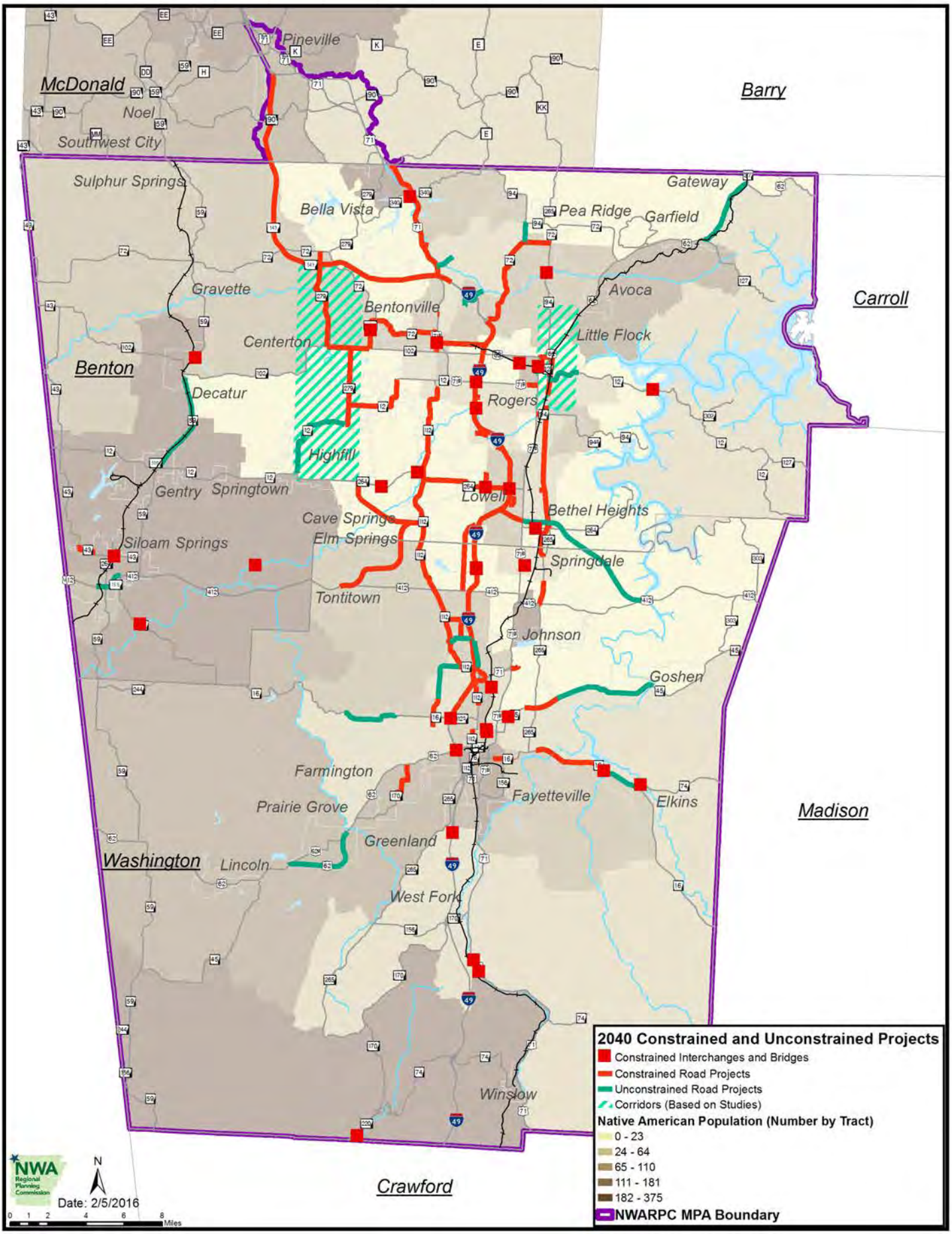
MAP 5.2 - Asian American Population – 2040 Road Improvement Projects



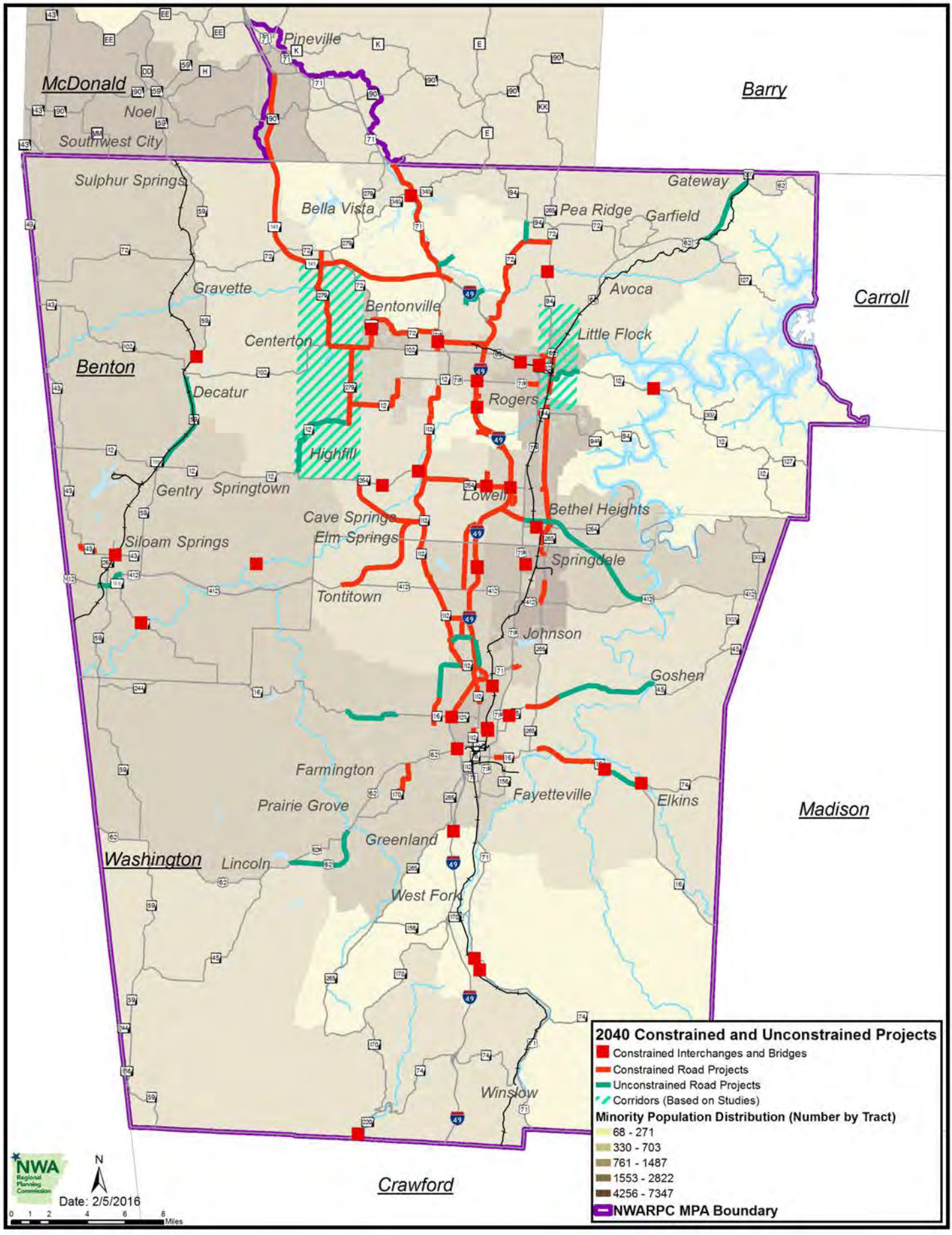
Map 5.3 - Hawaiian or Other Pacific Island Population – 2040 Road Improvement Projects



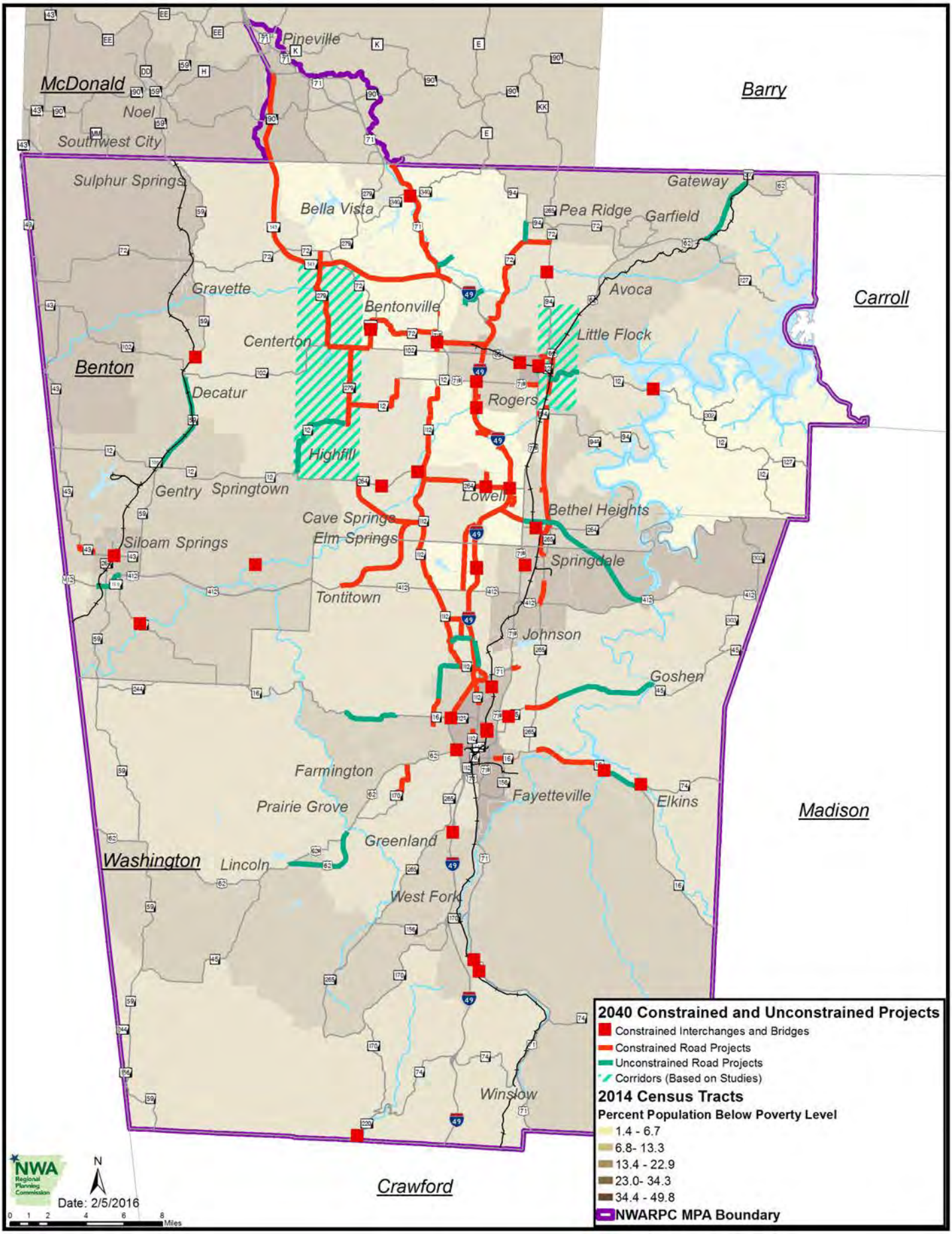
Map 5. 4 - Hispanic Population – 2040 Road Improvement Projects



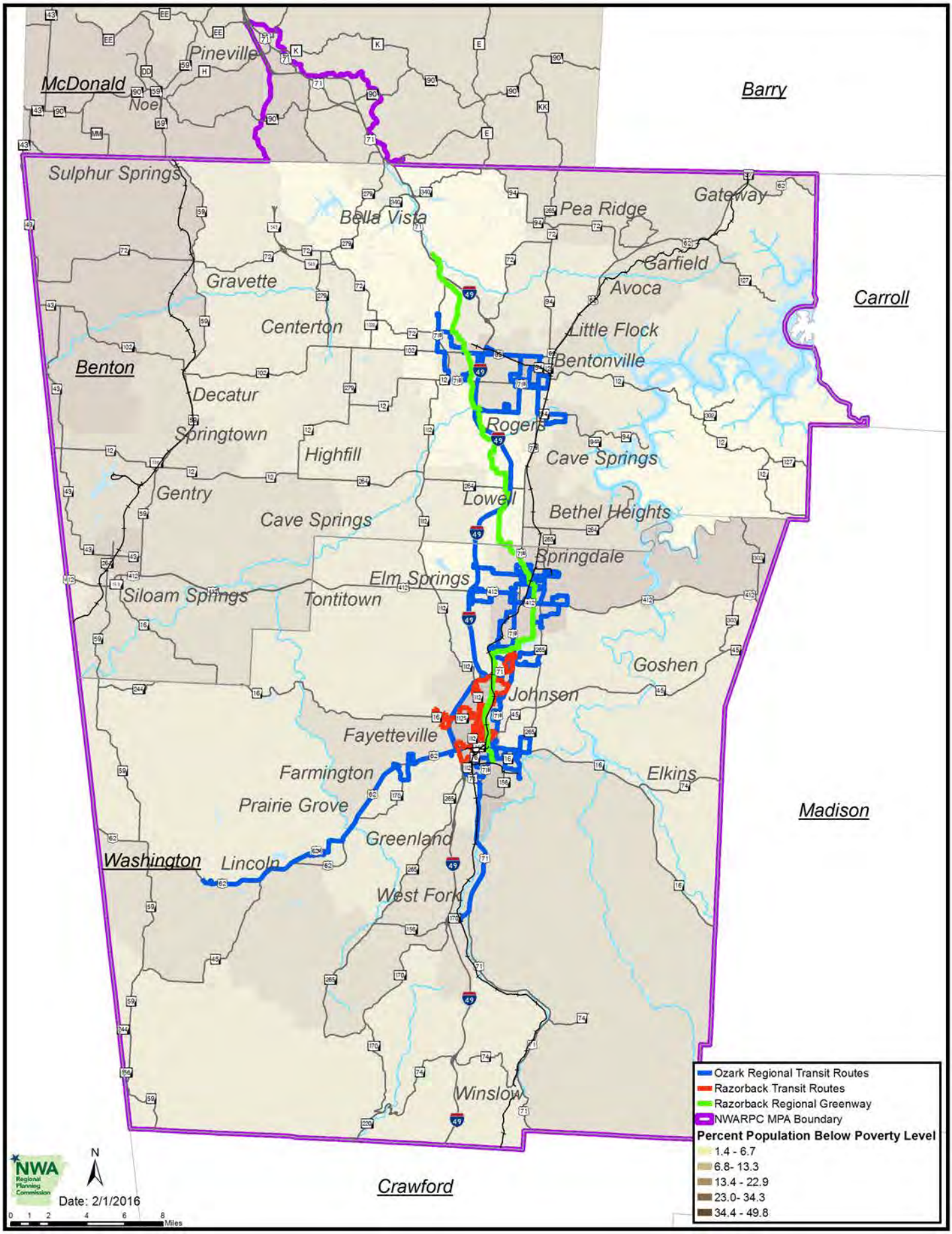
Map 5.5 - Native American Population – 2040 Road Improvement Projects



Map 5.6 - Minorities Population – 2040 Road Improvement Projects



Map 5.7 - Population Below Poverty Level – 2040 Road Improvement Projects



Map 5.8 - Population Below Poverty Level and Transit Service

CHAPTER 6. ENVIRONMENT

The natural environment has become increasingly important in the transportation planning process. Environmental assessment studies are often required for transportation projects in order to ensure that impacts on wildlife habitats and natural resources would be mitigated as much as possible. The Northwest Arkansas region faces typical environmental challenges such as soil erosion during road construction or impact on water quality and, as a result, there is an increasing need to protect the habitats of unique species such as the threatened Ozark Cavefish (Amblyopsis rosae) and to protect ground-water recharge areas as the region continues to grow. Important environmental factors to consider for transportation planning purposes include expanding urban land area, the widening and building of new roadways, and the choice of travel modes.

Northwest Arkansas has a rich cultural history. Transportation plans must also take historic and cultural factors into consideration as roadways are aligned or widened. Historic and cultural environmental factors of Northwest Arkansas include the Cherokee Trail of Tears, the Civil War trails and the Old Missouri Road/Old Wire Road/Butterfield Coach Trail. Historic buildings, battlefield sites, archeological sites, and cemeteries are additional examples of historic and cultural factors. It is important that these factors be considered when road alignments, the type of roadways, and the scale of roadways are chosen. For example, a limited access boulevard with a greenway median may be more appropriate than a five-lane highway through a historic-scenic area.

A series of studies and initiatives have been undertaken to address the environmental and cultural factors for preservation or mitigation in the region.

THE CAVE SPRINGS KARST RESOURCE CONSERVATION STUDY

Northwest Arkansas is an area of the State that has experienced unprecedented periods of growth over the last decade, most notably from 2003 to 2007. The location of the corporate headquarters of Wal-Mart, Tyson Foods, J.B. Hunt, and other companies in Northwest Arkansas has been the primary factor in this growth. The rapid population growth has strained the local infrastructure. As a result, many new transportation infrastructure projects have been proposed to keep pace with the residential and commercial development.

Some of the major proposed transportation projects include the Hwy. 412 Northern Bypass, Northwest Arkansas Regional Airport Access Road, upgrade of I-49 to six lanes between Fayetteville and Bentonville, an improved north-south travel corridor along Hwy. 112, an improved eastern north-south travel corridor along Hwy. 265, Bellview Road improvements, Hwy. 264 Improvements, the Razorback Greenway Trail, and Hwy. 549 (Bella Vista Bypass). The existing development, the proposed transportation projects, and future development may affect local karst resources that support threatened and endangered species, as well as having potentially detrimental effects to groundwater and wildlife resources in general. This Study was undertaken to mitigate for any potentially adverse effects to sensitive resources resulting from possible secondary and cumulative development.

Cave Springs Cave is located in the northwest Arkansas community of Cave Springs, near the intersection of Highways 264 and 112 in southern Benton County. The Cave Springs Recharge Area encompasses lands that are included in the municipalities of Cave Springs, Rogers, Lowell, and Springdale and has a total recharge area of 12,515 acres (19.5 square miles).

Cave Springs Cave provides habitat for the largest known population of Ozark Cavefish, a Federally listed threatened species. In addition to providing habitat for Federally protected species, water quality in the cave is an indicator of regional water quality in the shallow aquifer.

Cave Springs Cave

NWARPC entered into a contract in early 2014 to begin the Cave Springs Area Karst Resource Conservation Study. The project is nearing completion with the four municipalities considering the Study recommendations. To date, the City of Rogers has amended their drainage criteria manual to incorporate the recommended Best Management Practices (BMPs).

The Study consisted of three primary objectives:

Objective One was to seek out, consolidate and analyze existing water quality data; species population data; and development data in and around the Study area, defined as the Cave Springs Recharge Area. This information was used to determine trends and needs for additional data.

Objective Two was to work with the scientific community to determine appropriate actions necessary to ensure adequate protection of local karst recharge zones that support threatened and endangered species, and builds on previous efforts for karst conservation.

Objective Three was to work with local, county and State officials/administrators and other relevant stakeholders to determine and implement the best mechanisms to ensure that conservation actions are used effectively in the appropriate areas.

As part of the study, the Nature Conservancy and Ozark Underground Laboratory (OUL) performed an extensive literature review of cave hydrology, biology and water quality. Based on this Study, primary water quality goals for the Cave Springs Recharge Area are to limit discharges of oxygen-depleting contaminants, turbidity/fine sediments, nutrients, and metals to the groundwater system through the use of best management practices (BMPs). Additional criteria and guidance for BMPs to protect the unique karst resources of the Cave Springs Recharge Area have been developed while allowing for future growth and development. In July 2015, the city of Rogers adopted the recommended BMP's as part of an amendment to the Rogers Drainage Criteria Manual. The other jurisdictions are in the process of considering the recommendations of the Study.

Map 6.1 shows the Cave Springs Recharge Area, which is comprised of two major areas:

The **Direct Recharge Area** includes 5,702 acres (8.9 square miles) and provides most of the recharge water for the Cave Springs cave system. This is an area where soils allow for relatively rapid recharge, and there is a direct hydrologic connection between infiltrating runoff and the karst system. The northeastern boundary of the Direct Recharge Area lies roughly parallel to, and west of, Interstate 49 (I- 49).

The **Indirect Recharge Area** encompasses 6,813 acres (10.6 square miles) and lies to the northeast of the Direct Re-

charge Area. Groundwater tracing has shown that very little of the water from losing streams in this area reaches the Cave Springs cave system. However, the dye tracing indicates that there is some groundwater movement from the Indirect Recharge Area into the Direct Recharge Area and ultimately to Cave Springs Cave. I-49 crosses the Indirect Recharge Area.

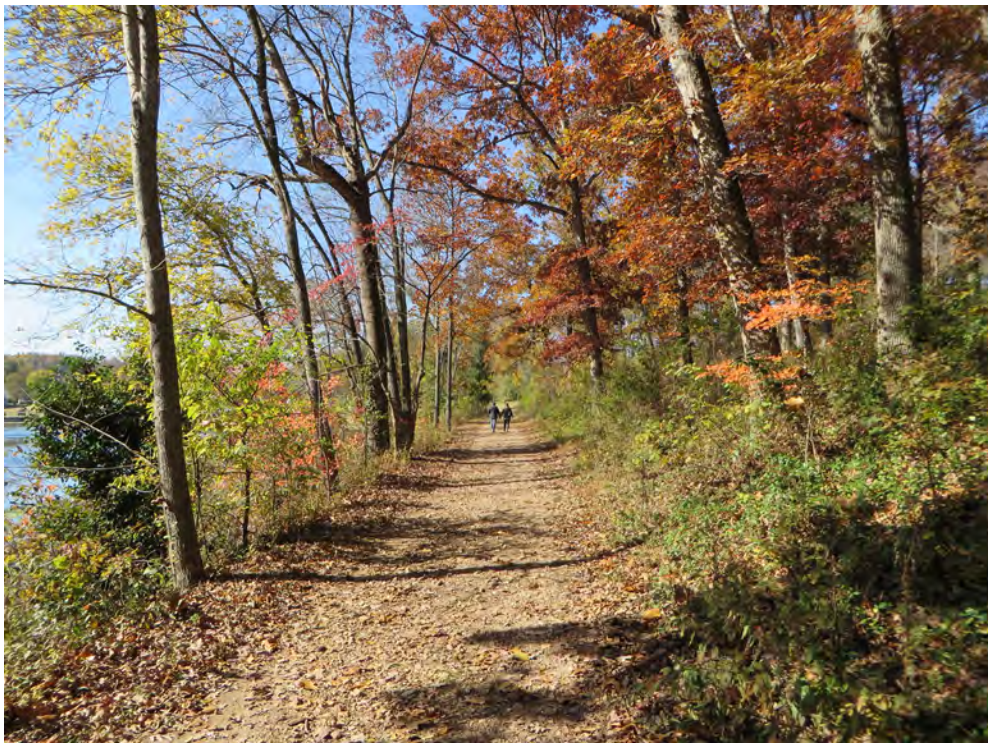
The Study also included a groundwater vulnerability assessment for the recharge area for Cave Springs Cave. The vulnerability assessment is based on the concept that not all lands pose equal risks of introducing contaminants into karst groundwater systems. Vulnerability mapping is based on physical and hydrogeologic conditions of the land being mapped. The approach permits planners and others to tailor the level of management attention to the likely severity of groundwater impacts from particular land uses.

The vulnerability of a karst groundwater system and its associated biological community is a function of the hydrobiological characteristics of its particular groundwater system and is intimately connected with land use within its recharge area.

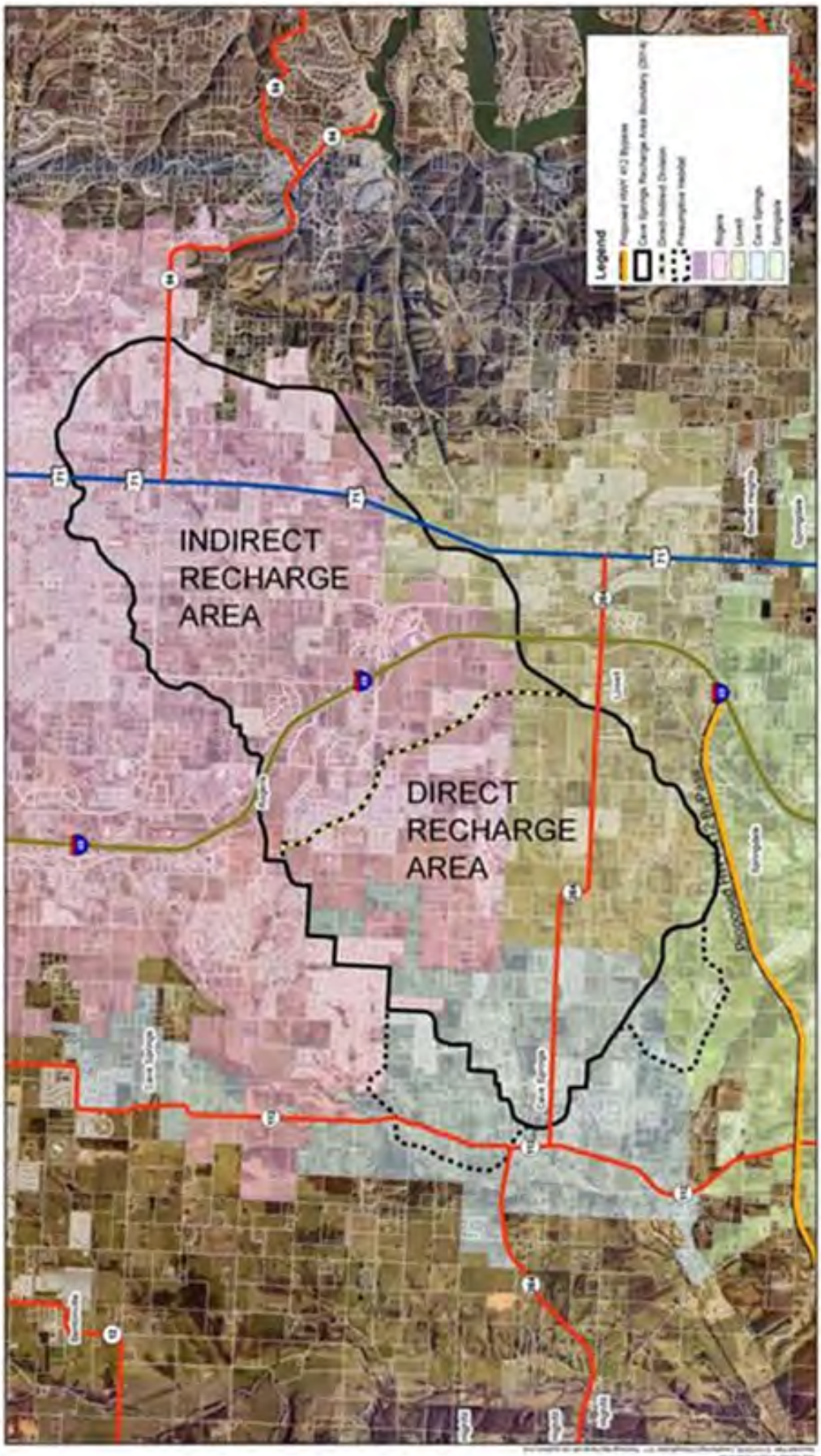
The vulnerability map (Map 6.2) qualitatively depicts risks posed to groundwater quality by various portions of the direct and indirect recharge area. The Cave Springs recharge area was mapped to show the following categories of relative risk:

- Low Vulnerability Lands including lands within the Indirect Recharge Area for Cave Springs, with additional scrutiny required along the I-49 corridor;
- Moderate Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having good natural soil treatment capability;
- High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having fair natural soils treatment capability; and
- Extremely High Vulnerability Lands including lands within the Direct Recharge Area with soils that have been classified as having poor natural soils treatment capability. Locations within the groundwater trough and along losing stream corridors are also considered as extremely high vulnerability factors.

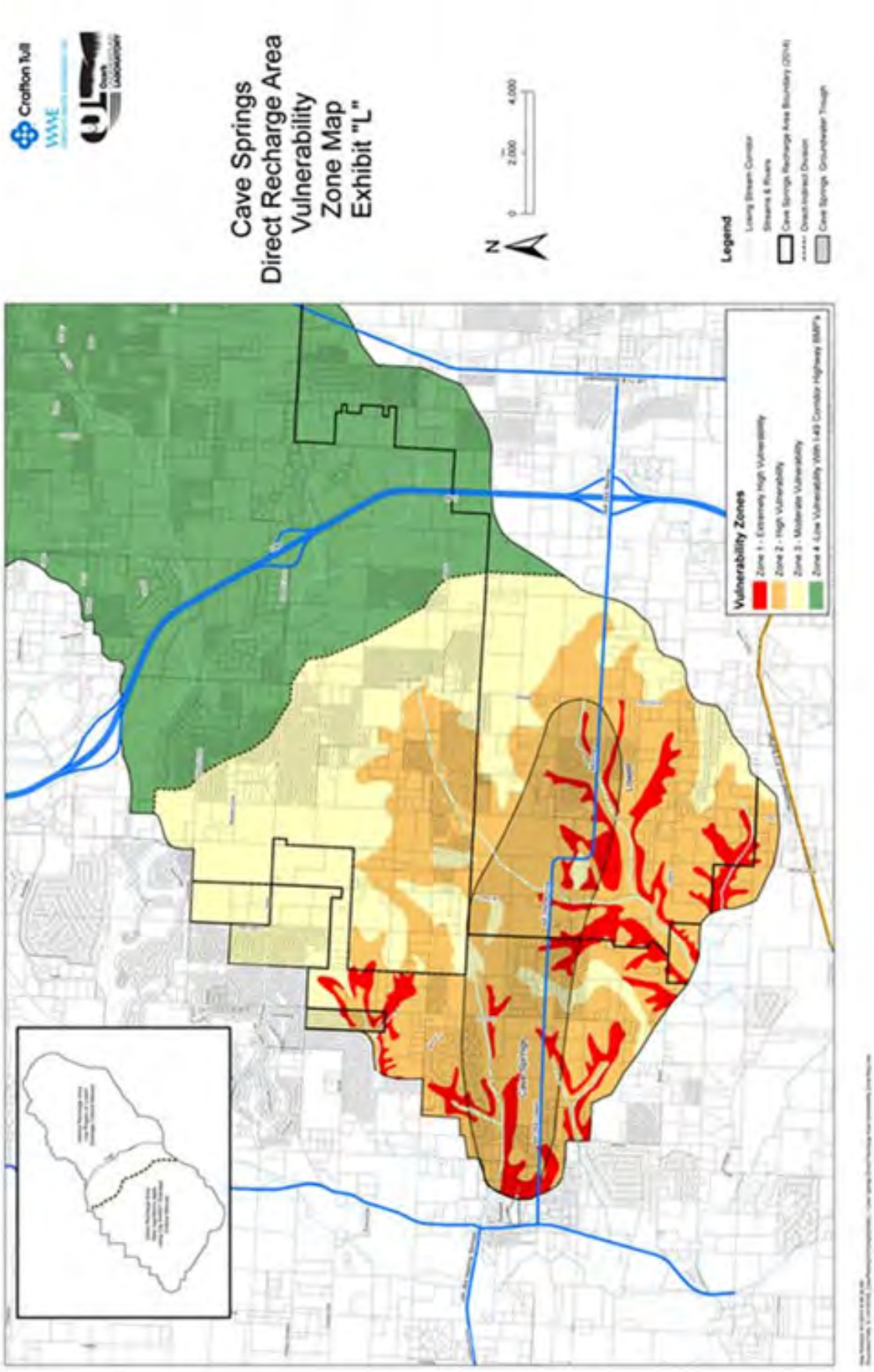
Potential hazards to groundwater quality were also identified within the Cave Springs recharge area. The major groundwater hazards identified include runoff and spills from highways; sewage conveyance, treatment and disposal facilities; and stormwater detention basins. The vulnerability mapping performed in this assessment helps to ensure that land development BMPs are only applied to necessary areas where they will do the most good in protecting water quality at Cave Springs.



Cave Springs Trail



Map 6.1 - Cave Springs Recharge Area



Map 6.2 - Cave Springs Vulnerability Assessment

PHASE II STORMWATER REGULATIONS

Over the past decade, the NWARPC has partnered with the University of Arkansas, Division of Agriculture Cooperative Extension Service (UACES) to assist communities, counties and the University of Arkansas in Washington and Benton Counties to meet EPA's Phase II stormwater regulations. In urbanized areas, stormwater picks up pollutants and flows, untreated, through Municipal Separate Storm Sewer Systems (MS4s), into local creeks, streams and lakes. To prevent harmful pollutants from being washed or dumped into a storm drain system, the U.S. EPA requires that jurisdictions obtain permits to properly manage and discharge stormwater.

On August 1, 2014 the Arkansas Department of Environmental Quality issued the third consecutive five-year MS4 Stormwater General Permit which mandates that each of 21 regulated jurisdictions in Northwest Arkansas develop and implement their own stormwater management program to reduce the contamination of stormwater runoff and prohibit illicit discharges. These jurisdictions include: Bella Vista, Benton County, Bentonville, Bethel Heights, Cave Springs, Centerton, Elkins, Elm Springs, Farmington, Fayetteville, Greenland, Johnson, Little Flock, Lowell, Pea Ridge, Prairie Grove, Rogers, Springdale, Tontitown, University of Arkansas, and Washington County.

Northwest Arkansas MS4 Stormwater Compliance Group

A key role of the NWARPC is coordinating regular meetings of the MS4 Stormwater Compliance Group. Composed of local MS4 representatives, NWARPC staff and the UACES, the group meets monthly to discuss permit compliance challenges, local stormwater education program needs and accomplishments, and regional coordination of stormwater protection efforts.

The MS4 Stormwater Compliance Group continues to be a model for other MS4s in Arkansas. NWARPC continues the work of assisting the Northwest Arkansas MS4s, as well as others, in the development of their stormwater management programs and meeting the EPA Phase II requirements.

Regional Stormwater Education Program

A Stormwater Education Steering Committee meets annually to guide and direct the UACES's regional urban stormwater education and involvement programs. UACES programming is increasing public awareness and understanding of stormwater runoff, through the development and distribution of print and electronic educational materials, displays, mass media promotion, youth and adult education programs, and public engagement events including creek and lake clean-ups. UACES staff provides Quarterly Reports and Annual Reports for the MS4s and conducts annual municipal employee trainings.

Stormwater Coordination Meeting

NORTHWEST ARKANSAS OPEN SPACE PLAN

Northwest Arkansas has abundant open space today, but the rapid growth of the region has already begun to replace forests, prairies, farmland and other valued natural lands with housing, shopping centers, highways, office parks and other forms of development. Between 2010 and 2030, Northwest Arkansas is projected to have the highest growth rate in the central United States. The projected population growth rate of 58 percent roughly translates to an increase in population from 500,000 today, to 800,000 in 2040. Without question, people need places to live, work, shop and be entertained. However, people also need places that support outdoor activities, protect water supply from pollution, conserve habitat for native plants and animals, and ensure the quality of life for all residents. People value the beauty and function of their natural lands and waters and open space conservation is important to the region.

Gentry Prairie (photo by Terry Stanfill)

The work on the Northwest Arkansas Regional Open Space Plan began in late 2014, with the public process to develop the Plan being carried out throughout 2015 and adopted in early 2016. The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. Though focused on conservation, this Plan is consistent with the regional goal of continued growth and development. Landowner participation in conservation programs is welcome and encouraged, but strictly voluntary. To this end, the Plan features a detailed mapping inventory of regional resources, and a 'toolbox' of strategies that landowners, developers, and governments can draw upon to balance regionally important goals of land conservation and development.

The Plan identifies the natural landscapes and open spaces that make Northwest Arkansas an attractive place to live, and includes a comprehensive strategy for the conservation of these natural assets. The Plan was adopted by the NWAPRC on December 1, 2015. The complete Plan and Appendix are a part of the MTP and can be viewed at http://www.nwarpc.org or at http://www.nwaopenspace.com.

Background

Since its formation in 1966, the NWARPC has been working toward making Northwest Arkansas a more desirable place to live and work. Open space has been a subject of discussion in Northwest Arkansas for decades, beginning with NWARPC's first open space plan in the 1970s. Since then, many other local and regional studies have focused on open space, or included it as a key component. This new Plan build upon these previous and ongoing efforts and provide the rationale and strategies necessary to implement Plan recommendations. The Plan was financed through a grant by the Walton Family Foundation to the NWARPC.

BENEFITS OF OPEN SPACE

Creating Value & Generating Economic Activity

- Proximity to parks and open space enhances the value of residential properties.
- Parks and greenways attract non-resident visitors who put new dollars into local economies.
- Quality parks and scenic landscapes help attract and retain a high quality workforce.

Water Quality Benefits

- Open space provides protective natural buffers to critical water resources, such as Beaver Lake (the primary source of drinking water for Northwest Arkansas), the White River, the Illinois River, and their tributary creeks, streams, and wetlands.
- A 2008 survey of Arkansans found that "Nearly all respondents viewed water as an important issue for Arkansas' long-term growth and prosperity."

Natural Wildlife Habitats

- According to the Northwest Arkansas Land Trust, "While some cities are beginning to incorporate connective greenways into their planning process, natural areas are being rapidly consumed in Northwest Arkansas, resulting in the fragmentation of important ecosystems, scenic areas and wildlife habitats."
- Northwest Arkansas' karst topography (including caves, springs, and sink holes) supports clean water and native habitats unique to the region. These are areas highly sensitive to pollution and open space helps to protect them.

Recreation, Health and Safety Benefits

- Recreation areas help to increase physical activity, thereby preventing obesity and reducing chronic medical conditions, not to mention improving mental health and overall quality of life. Parks may also improve public health by increasing social interaction, reducing stress through exposure to nature, and more.
- The protection of natural floodplains along rivers and streams also protects people and property from flood damage.

Historic & Cultural Benefits

- Open space provides context for historic and cultural attractions. The quality of experience for visitors is critical to the success of tourism for such sites, and open space planning can help protect them and buffer them from nearby development.
- Example: Pea Ridge National Military Park is the most intact Civil War battlefield in the United States, and a key goal for management of the park is "preserving the character of the landscape".

Farmland & Rural Landscapes

- Scenic landscapes, such as family farms, prairies, forested ridgelines and Ozark vistas help define Northwest Arkansas' very character.
- According to the Northwest Arkansas Council's 2014 Regional Food Assessment, "The continued viability of agriculture in Northwest Arkansas depends significantly on three interdependent factors: farms remaining economically viable, farmland staying in production (and out of development), and new farmers succeeding retirees"
- Working closely with landowners is a cornerstone of successful open space protection, whether it is a farmer who wants to keep their land in farming, or a property-owner who simply wants their children to recognize the land they grew up on.

PLANNING PROCESS

The main steps in the planning process are listed below.

1. Project Initiation (Nov 2014 - Jan 2015)
2. Inventory, Assessment, & Mapping (Nov 2014 - April 2015)
3. Steering Committee Meetings
4. Public Involvement
5. Map Creation, Analysis, & Recommendations (Mar-Dec 2015)
6. Implementation Strategy (Jul-Sept 2015)
7. Draft Plan (April 2015 - January 2016)
8. Final Plan (Oct 2015 - Mar 2016)

- 25 Steering Committee Members, with 5 official meetings
- 60+ participants in stakeholder interviews and meetings
- 7 Open house public workshops
- 350+ Participants at open house public workshops
- 392 unique visitors to the project website per month (avg)
- 260 Likes on the project Facebook page
- 5 Draft and Final Plan presentations
- 800+ Public Comment Forms

PUBLIC MEETINGS:

- 01/20/15 Fayetteville Public Library 81
- 01/21/15 Bentonville Public Library 76
- 06/08/15 Garfield Community Center 26
- 06/09/15 Springdale Jones Center 46
- 06/10/15 Prairie Grove Battlefield State Park 29
- 06/11/15 Gentry City Public Library 54
- 07/20/15 Siloam Springs Community Building 21
- 09/23/15 Rogers Public Library (Draft Plan) 29
- 09/24/15 Fayetteville Public Library (Draft Plan) 39
- 12/1/2015 Fayetteville Town Centre (Final Plan) 45
- 12/2/2015 Bentonville Public Library (Final Plan) 39
- 12/3/2015 Siloam Springs City Hall (Final Plan) 13

"A strategically planned and managed network of wilderness, parks, greenways, conservation easements, and working lands with conservation value that supports native species, maintains ecological processes, sustains air and water resources, and contributes to health and quality of life for America's communities and people" (Benedict, Mark A. and McMahon, Edward T. "Green Infrastructure: Linking Landscapes and Communities", 2006).

STAKEHOLDER INTERVIEWS & TECHNICAL RESOURCE GROUP MEETINGS

In March 2015, the NWARPC and project consultants led a series of stakeholder interviews and technical resource group meetings. Twenty-two people were interviewed, and more than 60 people representing a wide range of interests participated in resource group meetings.

SPECIAL OUTREACH PRESENTATIONS

Between January 2015 and September 2015, the NWARPC staff presented on 32 separate occasions to local and regional community groups and organizations in addition to the official project workshops.

ONLINE INPUT MAP: www.nwaopenspace.com/participate

There were 268 likes on the project page as of the draft plan in September 2015.

For the month of September 2015:

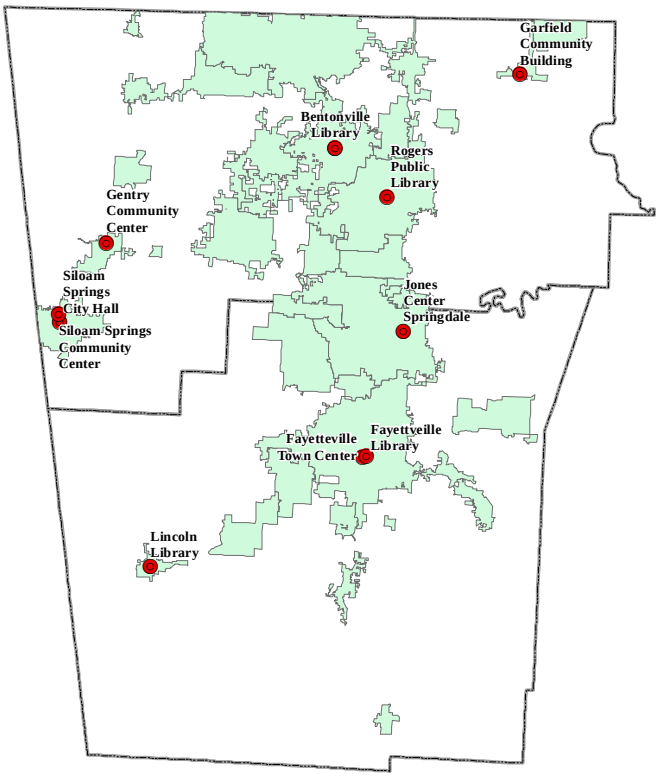
- Website (Unique Visitors): 534
- Website (Page Views): 1,576
- Online Input Map: Online map stats: 12 users, 9 points
- Facebook Total Reach in September: 957
- Facebook Likes (total): 277
- Online Comment Form (total): 793 (through 10/1/15)
- Draft Plan Comment Form: 42

HOW PRIORITIES WERE DEVELOPED: PUBLIC PROCESS + OPEN SPACE MAPPING

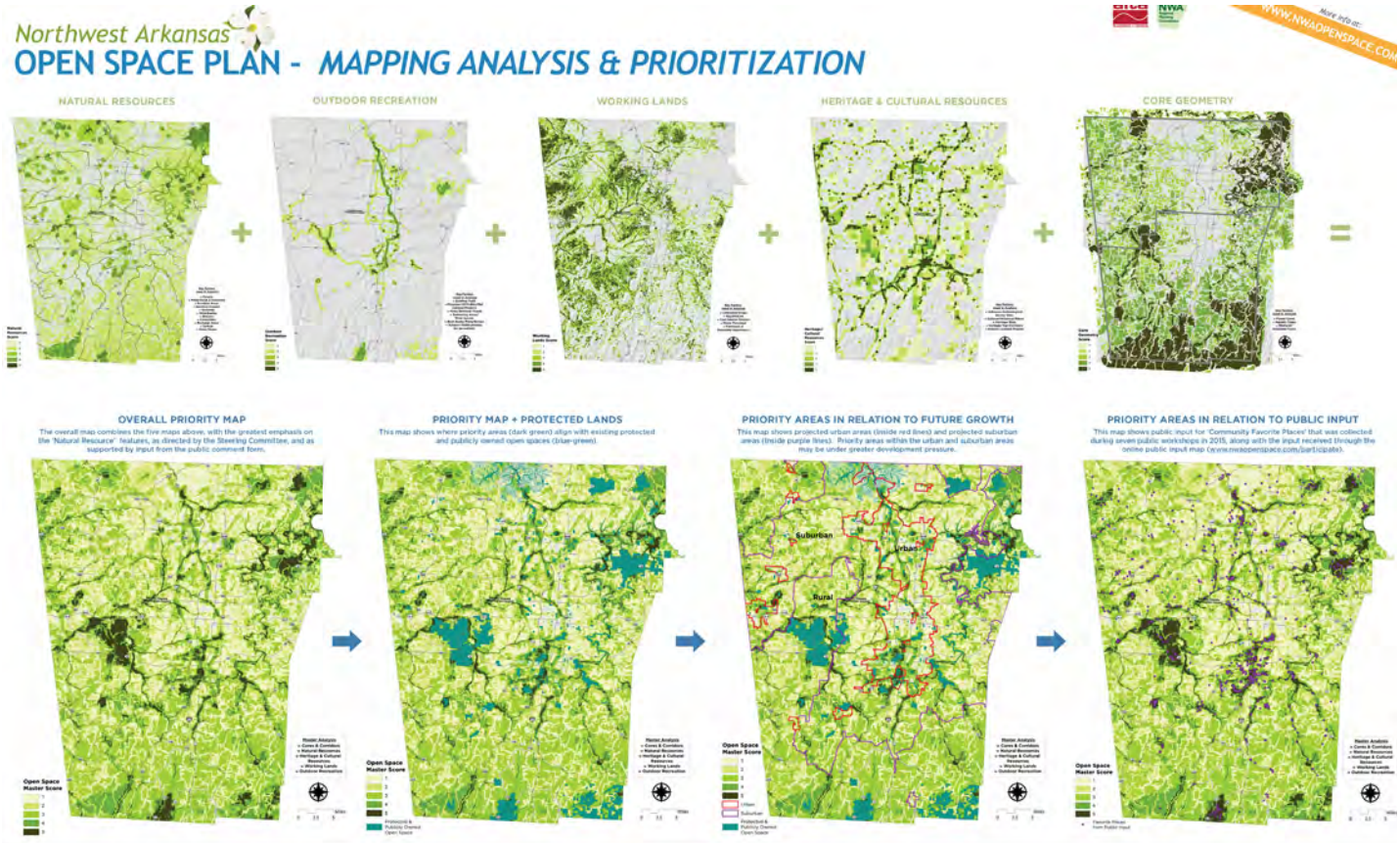
As a region, the communities in Northwest Arkansas can be strategic in protecting their most valued natural landscapes and heritage resources as they grow. This Plan identifies such landscapes by combining extensive public input and stakeholder involvement (Chapter 2) with state-of-the-art analysis of the region's natural, cultural, historic, agricultural, and recreation resources (Chapter 3). The result is a set of maps and data that show priority areas for conservation throughout the region. These main input maps cover:

- Natural Resources
- Outdoor Recreation
- Working Lands
- Heritage & Cultural Resources
- Cores & Corridors

These five resources maps, in the Open Space Plan, were overlaid and combined to create the Overall Open Space Priority Map, with the greatest emphasis on natural resource features, as directed by the Steering Committee, and



Map 6.3 -Open Space Public Input Meetings Locations

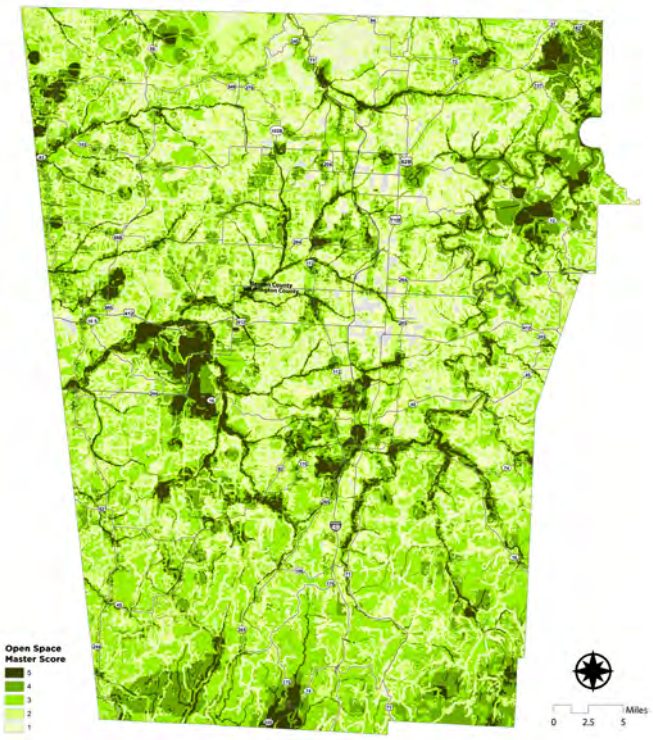


Map 6.4 -Open Space Mapping Analysis and Prioritization

OVERALL PRIORITY OPEN SPACE MAP

Open space resources are shown with a priority range of 1-5, with the higher values shown in darker shades of green. This map should be considered as a starting point for regional discussions about conservation priorities (Map 6.4). The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

All landowners are welcome to submit ideas for land conservation, regardless of the priority ranking on these maps.

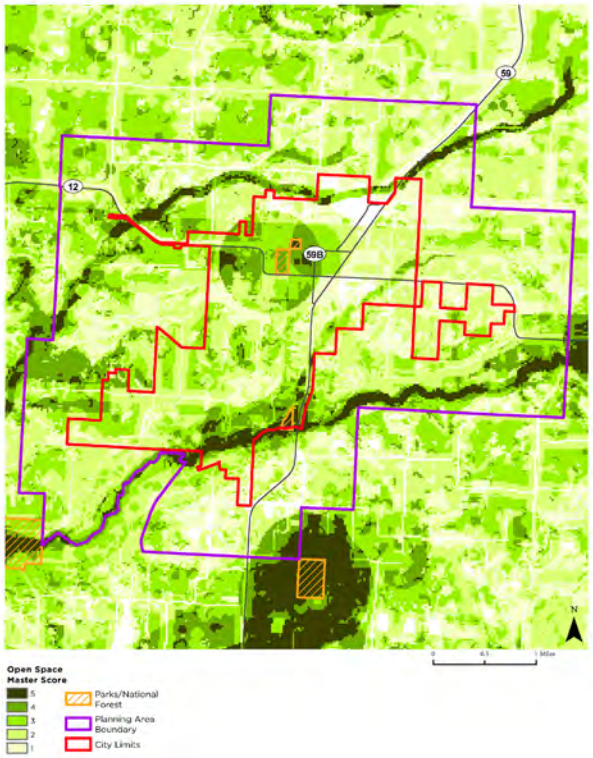


Map 6.5 - Overall Priority Open Space Map

LOCAL COMMUNITY OPEN SPACE PRIORITY MAPS

Community maps for 32 cities have been prepared and included in the Appendix. The Appendix provides a municipal-scale version of the overall priority map for each community in the region. GIS data will be available for creation of local maps for local purposes. The maps should be considered as starting points for local discussions about conservation priorities.

Open space resources are shown on the maps with a priority range of 1-5, with areas that have a higher potential for conservation value shown in darker shades of green. These areas were identified through an extensive analysis of existing conditions throughout the region. Map 6.5 illustrates an example of a community open space priority map.



Map 6.6 - Gentry Community Open Space Priority Map

HOW TO USE THE PRIORITY MAPS

The main approach taken in most open space planning projects is to analyze the physical characteristics of a region's environment to find priority areas that would be the most beneficial to protect, according to what the community values most in terms of open space. There are important aspects of this to highlight when considering how to use these priority maps:

1. Priority areas will be considered as candidates for protection only when there is a willing landowner that desires to conserve their land. Willing landowners can protect their land by selling or donating their land, or through conservation easements or other methods identified in this plan's conservation toolbox.

2. The intention is not to protect all lands identified as a high priority, nor is it to protect land only within the high priority areas. All landowners who wish to participate in the open space program should be considered, regardless of whether the land in question is identified as a priority in the mapping analysis.

3. Different sites will have different objectives for conservation. A balanced approach should be taken in selecting a range of site types that reflect what people value most in terms of open space in Northwest Arkansas. Refer to the results of this plan's public comment form, which focused on what people feel is most important in terms of open space.

4. The priority mapping in this appendix is data-driven and fact-based, but is still only a tool. The methodology used in this plan combines the best practices for geographic information system (GIS) analysis outlined by the U.S. Forest Service and the Arkansas Forestry Commission, as well as best practices for analysis from award-winning open space projects in other communities. This does not mean it is a perfect tool. Care should be taken when considering candidates for protection to be sure on-the-ground conditions reflect what is communicated by the analysis.

5. The priority mapping will need to be updated regularly to remain relevant. It is recommended that a comprehensive list of data updates and needs be kept on an ongoing basis, with the actual updates to the data and analysis occurring on a quarterly or semiannual basis. Adjustments and improvements to the methodology are also anticipated, as new tools for analysis and new data become available.

6. Not all aspects of this plan can be addressed by protecting priority areas identified in the mapping analysis. The best practices related to open space, along with this plan's conservation toolbox, represent the many other ways in which the goals of this plan could be addressed.

IMPLEMENTATION & EXPECTED OUTCOMES

A voluntary, regional approach to conservation is recommended, involving willing landowners and the region's existing conservation organizations. As recommended by the project Steering Committee and the project consultant, the recommended leader of this effort is NWARPC. This is due to the level of trust, transparency, and regional representation that the organization provides. A new Open Space Committee of the NWARPC would accept conservation projects nominations from landowners, community groups, municipalities, and others, with actions approved by the regional representatives of the NWARPC leadership.

The near-term next steps for this initiative are to continue education and outreach efforts throughout 2016, while also documenting the level of financial need for the program from interested landowners and conservation groups. Gauging public interest in funding a conservation program will be another important task for 2016, since some form of local funding is typically needed to leverage outside investment from State, Federal or private sources.

Expected outcomes of this Plan include:

1. An established regional vision for open space conservation priorities,
2. An established leadership structure, operation framework, and funding source for carrying out the open space program, and
3. The protection of open spaces, allowing us to "conserve some country as we grow".

The Northwest Arkansas Regional Open Space Plan is a plan to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal is to preserve these assets; thereby maintaining our high quality of life as the region continues to grow and prosper.

RECOMMENDATIONS

Compelling Vision

This Plan defines a compelling vision for open space conservation. The benefits of open space are clearly articulated in this Plan. Open space protects the water we drink, the air we breathe, and the landscapes we call home. Open space is important to everyone in Northwest Arkansas, as it shapes the lives and wellbeing of the people that reside in the region.

Leadership

Based on work in other communities in the U.S., project consultants recommended that the managing entity should be a group that has

- Public trust and a proven record of success
- Regional representation through an existing operating framework
- The ability to update and manage Geographic Information Systems (GIS) mapping
- An understanding of open space concepts
- An understanding of the regional political landscape

Given these parameters, the NWARPC is the most appropriate organization, and leadership entity, to guide the implementation of this Open Space Plan. An Open Space Committee can be established by the NWARPC. Committee membership number should be approximately 15 to 20 persons. Under the above proposal, the ultimate authority and decision maker for the implementation of the Open Space Plan would be the leadership (members) of the NWARPC. NWARPC staff and the Open Space Committee would provide technical support and advice to NWARPC. The NWARPC should adopt an annual work plan, at the beginning of each fiscal year that outlines the goals and objectives of the Northwest Arkansas Open Space program. This should include an annual budget that supports the actions and activities of the Program.

RECOMMENDED PROGRAM FRAMEWORK

As noted at the outset of this planning process, the purpose of this Plan is to develop a coordinated, voluntary program to protect and promote the region's most valued natural landscapes and open spaces. The goal of the program is to create opportunities for landowners, organizations, and local governments to have a place to go to nominate projects for conservation, and to provide a strategy for how those nominations are addressed.

Selecting Projects

This Plan's prioritization maps serve as a guide only. They show prioritized tracts of land throughout the region based on technical data. Rather than generating a listing of project based on mapping, the selection of projects should instead be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis.

The size of the Open Space Committee can be established by the NWARPC with input from NWARPC staff. It is recommended that the Committee membership number approximately 15 to 20 persons.

The selection of projects should be based on a community-driven approach that uses the mapping as a starting point and a tool for analysis. Communities, organizations, and individual landowners will decide what they consider as priorities to submit as part of the program. Potential projects will be nominated to the open space committee through a periodic call for proposals. Nominations would come from individual land owners, non-profits, community groups, businesses, and municipalities.

Technical evaluation: How well does the project align with the priority mapping analysis? Community-driven evaluation: How well does the project compare given other key factors?

FUNDING THE OPEN SPACE PROGRAM

Every successful open space program in the United States shares one common trait – a local source of funding that is used to match and leverage other funding in support of open space conservation. A regional sales tax is a recommended funding method. Other local opportunities may include: city sales tax, bond referendum, or project-by-project basis.

PRIORITY ACTIVITIES AND PHASING

Upon adoption of this Open Space Plan, a variety of work activities will need to be undertaken by the NWARPC, NWARPC staff, project partners and the Open Space Committee. These activities are described in greater detail as:

PHASE ONE PROGRAM (2016)

- Education and Outreach
- Maintain Official Open Space map
- Land Conservation

PHASE TWO PROGRAM (2017-2018)

- Open Space Funding
- Education and Outreach
- Land Conservation

PHASE THREE PROGRAM (2019 AND BEYOND)

- Land Conservation
- Conservation Toolbox 25 ways to conserve. Examples include: fee simple acquisition, donation, conservation easement, right of first refusal, donation via bequest, intergovernmental partnership, etc.

SUMMARY

This Plan combines extensive public input and stakeholder involvement with state-of-the-art analysis of the region's natural, cultural, historic, agricultural, and recreation resources. The result is a set of maps and data that show priority areas for conservation throughout the region. The goal is not to protect all priority areas, but rather to work with willing landowners who wish to conserve their land, using the maps as a tool in evaluating potential projects.

A voluntary, regional approach to conservation is recommended, involving only willing landowners, and in coordination with the region's existing conservation organizations. As recommended by the project Steering Committee and the project consultant, the recommended leader of this effort is NWARPC. This is due to the level of trust, transparency, and regional representation that the organization provides. A new Open Space Committee of the NWARPC would accept nominations for conservation projects from landowners, community groups, municipalities, and others, with any actions being approved by the existing regional representatives of the NWARPC leadership.

The recommended next steps for this initiative are to continue education and outreach about the benefits of open space and about the needs, goals, and results of this study throughout 2016. Another aim of work in 2016 would be to begin documenting the level of financial need for the program from interested landowners and conservation groups, while also gauging public interest in funding the program to fulfill that need. Based on other successful open space programs in the U.S., a dedicated local funding stream is recommended, such as a quarter-penny sales tax, which could be leveraged against outside investment from State, Federal or private sources.

Table 6.1 represents a list of State and Federal grants related to this Study, some of which could be pursued in the 2016-2017 time-frame in order to initiate the program.

FEDERAL AGENCIES	OTHER ORGANIZATIONS (CONT.)
U.S. Forestry Service	Fayetteville Natural Heritage Association
Federal Highway Administration	Fayetteville Public Schools
National Park Service	Friends of Ark Single Track (FAST)
US Army Corps of Engineers	FTN and Assoc
USGS Water Science Center	Fugro Geospactial, Inc
USGS Cooperative Fish and Wildlife Research Center	Goddard Geographics
USDA - Natural Resource Conservation Service	Historic Cane Hill
U.S. Fish and Wildlife Service	Illinois River Watershed Partnership
STATE AGENCIES	Internation Mountain Bike Assoc
Arkansas Forestry Commission	Joe Neal Conservation
Arkansas Historic Preservation Program	Karen Rollet-Crocker
Arkansas Department of Health	KNWA and FOX 24 news
Arkansas Game and Fish Commission	KNWA News
Arkansas Highway and Transportation Dept	Kucera Inc.
Arkansas Natural Heritage Commission	Lewis and Clark Outfitters
Arkansas Natural Heritage Commission	McGoodwin Williams and Yates
Arkansas Parks and Tourism	Mt. Kessler Greenways
Arkansas State Parks	Nature Conservancy in Arkansas
Arkansas Department of Environmental Quality (ADEQ)	Northwest Arkansas Conservation Authority (NACA)
OTHER ORGANIZATIONS	Northwest Arkansas Council
AECOM	Northwest Arkansas Land Trust
AEP/SWEPCO	Northwest Arkansas Master Naturalists
Alta Planning + Design	NWA Economic Development District
Arkansas Archeological Survey	NWA Home Builders Assoc
Arkansas Association of Conservation Districts	NWA Tourism Association
Arkansas Canoe Club, NWA Chapter	Ozark Highland's Trail Association
Arkansas Climbers Coilition	Pack Rat Outdoor Center
Arkansas Natural Resources Commission	Parker Restoration
Arkansas SARE Program	Partnership for Southern Forestland Conservation
Arkansas Urban Forestry Council	Phat Tire
Arkansas Rec and Parks Assoc - SW Region	Pictometry Inc
Assoc General Contractors of Ark	Pure Fishing
Association for Beaver Lake Environment (ABLE)	Shiloh Museum
Aubrey Shepherd Conservation	Sierra Club - Arkansas Chapter
Audubon Arkansas (NWA Audubon Society)	Ozark Water Watch
Beaver Water District	Ozarks at Large
Beaver Watershed Alliance (Beaver Water District)	The Applied Sustainability Center
Beaver Watershed Alliance (Beaver Water District)	The Ozark Society
Benton County Beekeepers	University of Arkansas Extension Office - Benton County
Benton County Historical Preservation Commission	University of Arkansas Extension Office - Benton County 4-H
Benton County Historical Society	University of Arkansas Extension Office - Washington County
Bicycle Coillition of the Ozarks	University of Arkansas Landscape Department
Botanical Garden of the Ozarks Society	Universtiy of Arkansas Facilities Management Planning Group
Care Community Center (Community Garden)	USI Engineering
CEI Engineering	Washington County Historical Scoiety
Chamber of Commerce - Regional Rep	Waste Management Sustainbility
CoPlan LLC	Watershed Conservation Resource Center
Crafton Tull	Wild Wilderness Drive-Thru Safari
Endeavor Foundation	Wright Water Engineers
Farm Bureau of Arkansas	WSP Parsons Brinckerhoff

Table 6.1 - State, Federal and Local Consultation List

CHAPTER 7. TRAVEL PATTERNS AND TRAVEL FORECASTING

TRAVEL PATTERNS

Northwest Arkansas has experienced unprecedented growth in population and employment in the past 25 years. The economic vitality and diversity of population have been strong catalysts for the growth of the region.

In Northwest Arkansas, the majority of the population uses an automobile for work related trips. According to the American Community Survey (ACS) 5 year estimate of 2013, the vast majority, over 90 percent of workers 16 years and over in Benton and Washington Counties in Arkansas and McDonald County in Missouri, commuted to work by car, truck, or van.

Figure 7.1 and Figure 7.2 illustrate the percentages for each mode of transportation that workers 16 years and over used to commute to work for two five-year estimates (2005-2009 and 2009-2013). In Benton County, the percent of workers who drove alone increased from 79.9 percent in 2009 to 82.4 percent in 2013. In Washington County this group decreased from 79.3 percent in 2009 to 76.8 in 2013. McDonald County experienced an increase from 76.2 to 78.6 percent. A notable difference from 2009 to 2013 was estimated for the public transportation mode in Washington County which increased from 0.4 percent to 1 percent by 2013. In the same category, Benton County percent stayed at 0.4 percent while McDonald County's decreased from 0.4 percent to 0.1 percent.

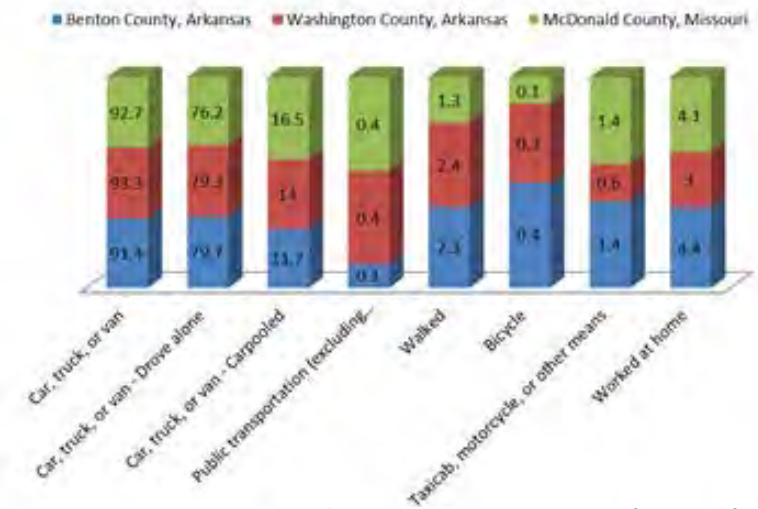


Figure 7.1 - Mode of Transportation to Work (percent) ACS 2005-2009

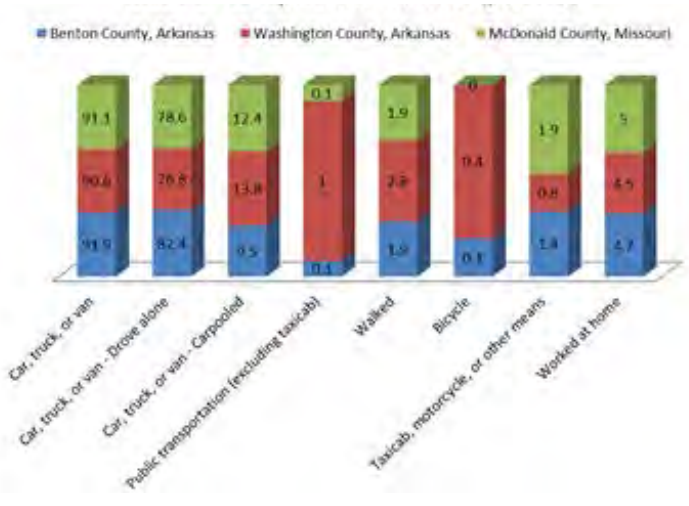
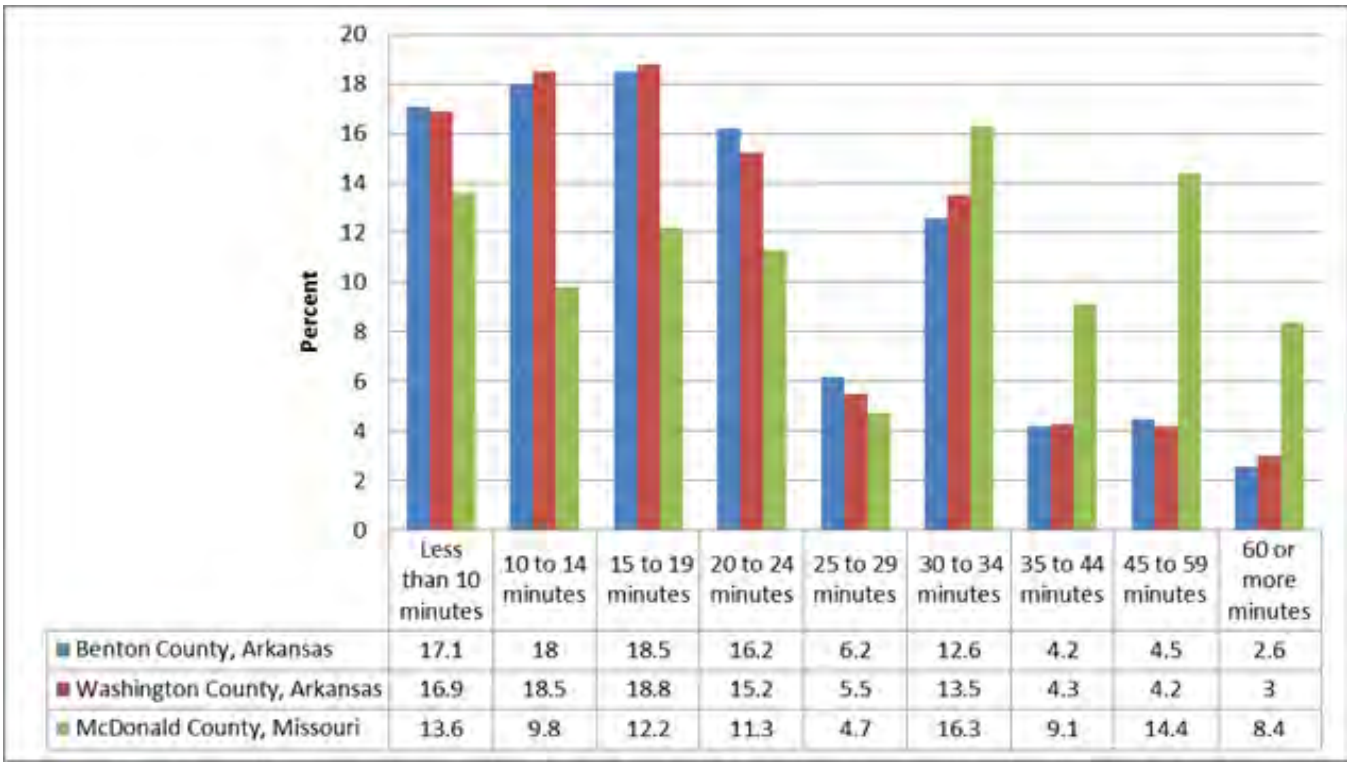


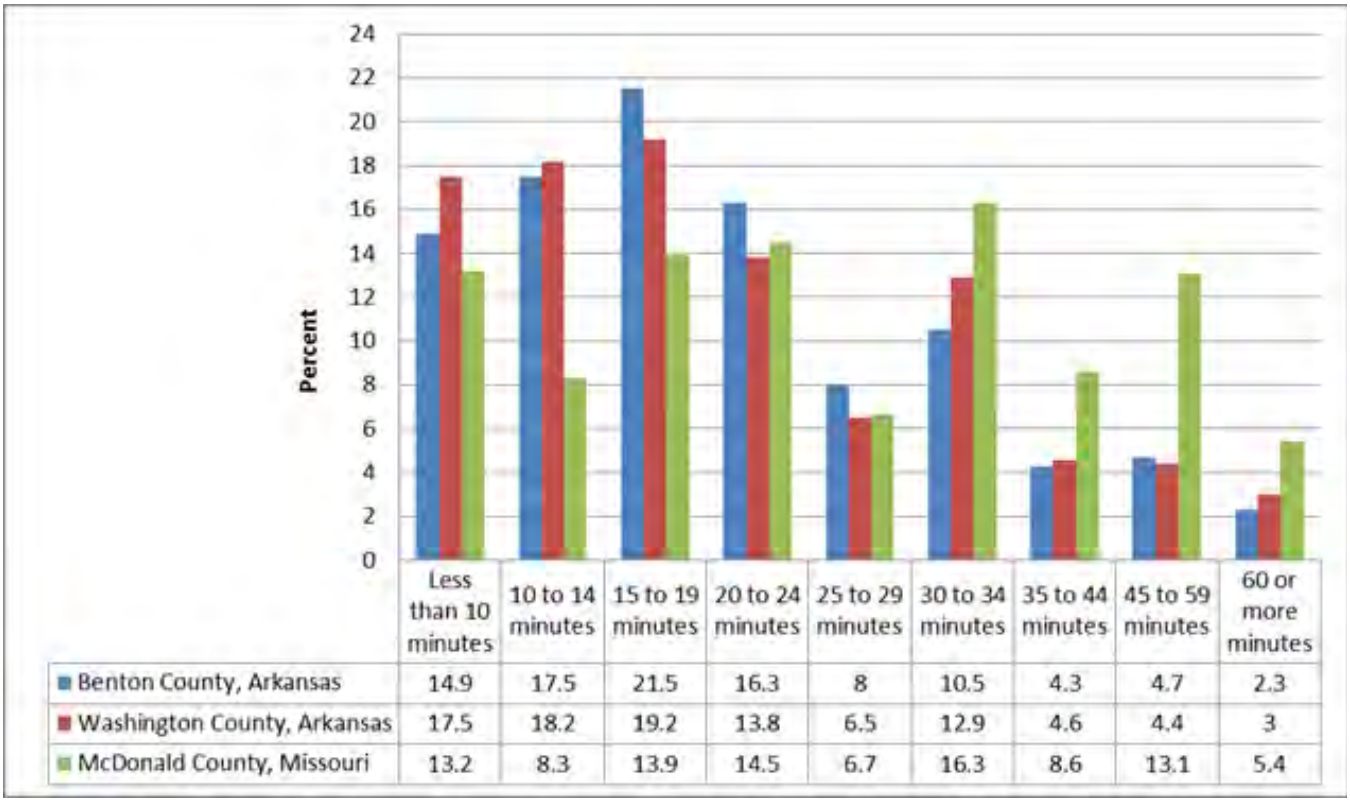
Figure 7.2 - Mode of Transportation to Work (percent) ACS 2009-2013

In terms of travel time, the ACS data collected between 2005-2009 illustrates the following percent by travel time in minutes and patterns by county:



	Less than 10 minutes	10 to 14 minutes	15 to 19 minutes	20 to 24 minutes	25 to 29 minutes	30 to 34 minutes	35 to 44 minutes	45 to 59 minutes	60 or more minutes
Benton County, Arkansas	17.1	18	18.5	16.2	6.2	12.6	4.2	4.5	2.6
Washington County, Arkansas	16.9	18.5	18.8	15.2	5.5	13.5	4.3	4.2	3
McDonald County, Missouri	13.6	9.8	12.2	11.3	4.7	16.3	9.1	14.4	8.4

Figure 7.3 -Travel Time Estimate ACS 2005-2009



	Less than 10 minutes	10 to 14 minutes	15 to 19 minutes	20 to 24 minutes	25 to 29 minutes	30 to 34 minutes	35 to 44 minutes	45 to 59 minutes	60 or more minutes
Benton County, Arkansas	14.9	17.5	21.5	16.3	8	10.5	4.3	4.7	2.3
Washington County, Arkansas	17.5	18.2	19.2	13.8	6.5	12.9	4.6	4.4	3
McDonald County, Missouri	13.2	8.3	13.9	14.5	6.7	16.3	8.6	13.1	5.4

Figure 7.4 -Travel Time Estimate ACS 2009-20013

Daily Vehicle Miles Traveled

Table 7.1 and Table 7.2 summarize the daily vehicle miles traveled in 2014 by road functional class for Benton and Washington Counties.

Route Sign	Functional Class	Pop: < 5,000 Rural		Pop: 5,000 to 49,999 Small Urban		Pop: >=50,000 Urbanized		Total	
		Road Length	DVMT	Road Length	DVMT	Road Length	DVMT	Road Length	DVMT
State Highway	Interstate	0.00	0	0.00	0	17.30	1,117,250	17.30	1,117,250
	Other Freeways & Expressways	0.00	0	0.00	0	0.43	18,920	0.43	18,920
	Other Principal Arterials	22.52	298,747	5.26	120,975	36.92	950,692	64.70	1,370,414
	Minor Arterials	48.55	178,891	18.42	168,231	77.20	639,667	144.17	986,789
	Major Collectors	88.23	191,422	7.56	27,733	40.81	151,844	136.60	370,999
	Minor Collectors	0.00	0	0.00	0	0.00	0	0.00	0
	Locals	0.00	0	0.20	26	0.00	0	0.20	26
	Total	159.30	669,060	31.44	316,965	172.66	2,878,372	363.40	3,864,398
County Roads	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	0.00	0	0.00	0
	Minor Arterials	2.65	1,677	0.00	0	3.55	4,470	6.20	6,147
	Major Collectors	105.46	53,738	9.65	11,443	37.87	96,128	152.98	161,310
	Minor Collectors	59.53	17,345	0.00	0	12.06	3,375	71.59	20,720
	Locals	1,807.37	162,761	28.85	5,653	119.87	23,210	1,956.09	191,623
	Total	1,975.01	235,521	38.50	17,096	173.35	127,183	2,186.86	379,800
City Streets	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	0.00	0	0.00	0
	Minor Arterials	0.32	51	9.53	40,070	98.90	747,585	108.75	787,706
	Major Collectors	16.25	4,872	24.97	39,083	180.63	310,657	221.85	354,612
	Minor Collectors	4.00	3,413	1.26	728	8.75	3,283	14.01	7,424
	Locals	53.19	14,428	132.62	46,452	1,481.58	581,474	1,667.39	642,355
	Total	73.76	22,764	168.38	126,333	1,769.86	1,643,000	2,012.00	1,792,097
BENTON County Total		2,208.07	927,346	238.32	460,394	2,115.87	4,648,556	4,562.26	6,036,296

Table 7.1 - Benton County Daily Vehicle Miles Traveled (DMVT) for 2014 – Source: AHTD

Route Sign	Functional Class	Pop: < 5,000 Rural		Pop: 5,000 to 49,999 Small Urban		Pop: >=50,000 Urbanized		Total	
		Road Length	DVMT	Road Length	DVMT	Road Length	DVMT	Road Length	DVMT
State Highway	Interstate	16.35	321,679	0.00	0	17.73	959,464	34.08	1,281,143
	Other Freeways & Expressways	0.00	0	0.00	0	3.24	87,440	3.24	87,440
	Other Principal Arterials	10.34	124,705	0.00	0	47.32	998,575	57.66	1,123,280
	Minor Arterials	70.90	179,406	0.00	0	55.99	459,119	126.89	638,525
	Major Collectors	79.95	76,445	0.00	0	16.43	44,296	96.38	120,741
	Minor Collectors	6.07	3,678	0.00	0	0.00	0	6.07	3,678
	Locals	2.59	135	0.00	0	5.80	4,236	8.39	4,371
	Total	186.20	706,048	0.00	0	146.51	2,553,131	332.71	3,259,179
County Roads	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	0.00	0	0.00	0
	Minor Arterials	0.00	0	0.00	0	2.60	9,480	2.60	9,480
	Major Collectors	98.47	81,409	0.00	0	44.09	49,456	142.56	130,865
	Minor Collectors	148.02	48,492	0.00	0	19.48	13,780	167.50	62,271
	Locals	1,466.17	127,169	0.00	0	55.06	8,453	1,521.23	135,622
	Total	1,712.66	257,069	0.00	0	121.23	81,169	1,833.89	338,238
City Streets	Other Freeways & Expressways	0.00	0	0.00	0	0.00	0	0.00	0
	Other Principal Arterials	0.00	0	0.00	0	1.02	17,380	1.02	17,380
	Minor Arterials	0.00	0	0.00	0	61.20	496,529	61.20	496,529
	Major Collectors	9.14	5,919	0.33	204	174.43	517,324	183.90	523,447
	Minor Collectors	3.42	5,062	0.00	0	10.06	6,509	13.48	11,571
	Locals	41.95	12,353	0.00	0	851.71	319,637	893.66	331,990
	Total	54.51	23,335	0.33	204	1,098.42	1,357,379	1,153.26	1,380,917
WASHINGTON County Total		1,953.37	986,452	0.33	204	1,366.16	3,991,679	3,319.86	4,978,335

Table 7.2 - Benton County Daily Vehicle Miles Traveled (DMVT) for 2014 – Source: AHTD

As it can be noted from Table 7.3, the Daily and Annual VMT have increased comparing 2009 to 2014; however, the daily VMT per capita in the two county area has remained constant.

Year	Population Estimate July 1st	Daily VMT	Annual VMT	Daily VMT per capita
2009	416,394	9,840,518	3,591,789,070	23.63
2010	426,942	9,983,349	3,643,922,385	23.38
2011	435,662	10,094,273	3,684,409,645	23.17
2012	444,473	10,514,234	3,848,209,644	23.66
2013	454,054	10,761,582	3,927,977,430	23.70
2014	463,113	11,014,630	4,020,340,096	23.78

Table 7.3 - Annual Vehicles Miles of Travel in the Two County Area
Source: Arkansas Highway and Transportation Department

Both the Table 7.4 and Figure 7.5 indicate an increasing trend of the VMT in both Washington and Benton Counties.

	2009		2010		2011		2012		2013		2014	
	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT	DVMT	AVMT
Benton	5,209,912	1,901,617,880	5,273,634	1,924,876,410	5,297,149	1,933,459,385	5,561,922	2,035,663,452	5,690,060	2,076,871,900	6,036,296	2,203,247,952
Washington	4,630,606	1,690,171,190	4,709,715	1,719,045,975	4,797,124	1,750,950,260	4,952,312	1,812,546,192	5,071,522	1,851,105,530	4,978,335	1,817,092,144
2 Counties	9,840,518	3,591,789,070	9,983,349	3,643,922,385	10,094,273	3,684,409,645	10,514,234	3,848,209,644	10,761,582	3,927,977,430	11,014,630	4,020,340,096
Statewide	90,854,940	33,162,052,936	92,188,754	33,648,895,210	90,288,068	32,955,144,820	91,423,220	33,460,898,520	91,756,533	33,491,134,545	93,169,936	34,007,026,742

Table 7.4 - Daily Vehicles Miles of Travel and Annual Vehicles Miles of Travel in the 2 County Area and Statewide Arkansas (2009-2014)
Data Source: AHTD

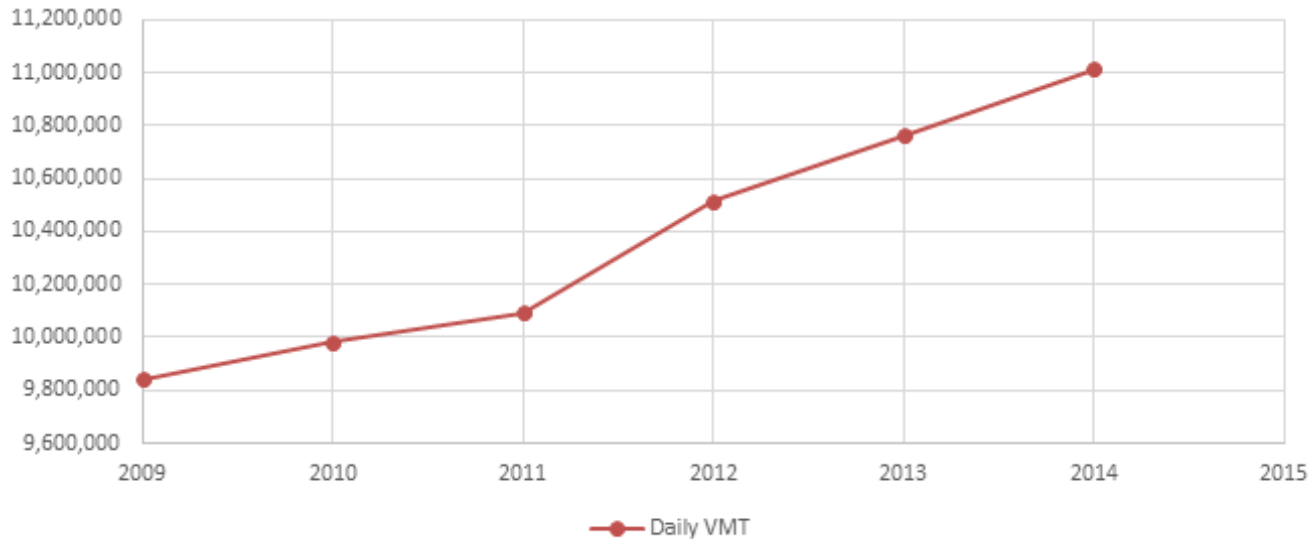


Figure 7.5 - Daily Vehicle Miles of Travel (VMT) Benton and Washington Counties 2009-2013

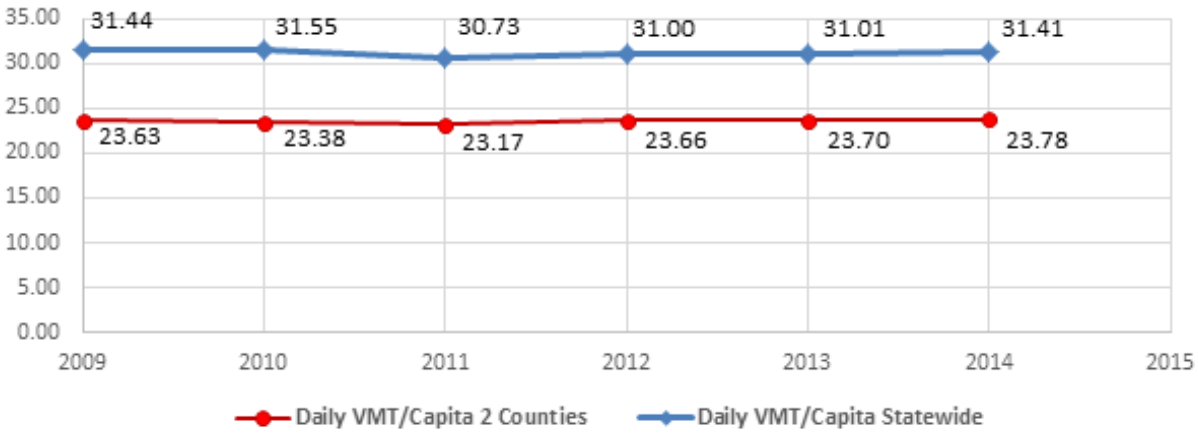
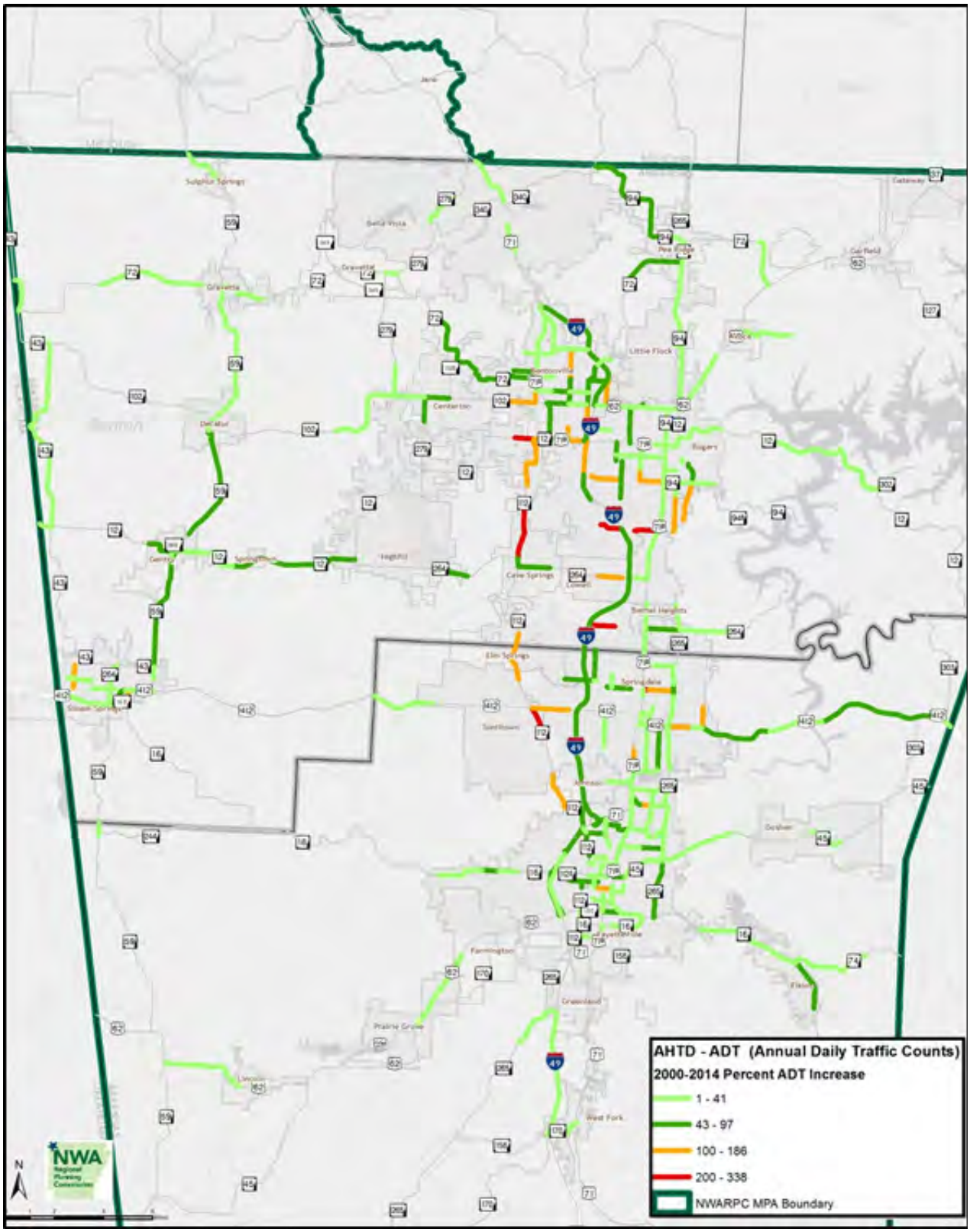


Figure 7.6 - Daily Vehicles Miles Traveled Per Capita for Benton and Washington Counties and Arkansas Statewide

In terms of the amount of travel geographically, Map 7.1 illustrates the percent increase of ADT between 2000 and 2014. Only the road segments that have a recorded count for this period of time were included in this map. The data is collected and reported by AHTD.

Notable road segments that have experienced an increase in ADT over 100 percent are on I-49, Hwy. 412, Hwy. 112, and Hwy. 102. Increases in ADT within this period between 43 and 97 percent occurred on I-49, Hwy. 412, Hwy. 59, Hwy. 72, Hwy. 265 and Hwy. 12.



Map 7.1 - Annual Daily Traffic Counts – Percent Increase between 2000-2014 – Data Source: AHTD

TRAVEL FORECASTING MODEL

A travel demand or forecasting model is typically utilized by planners, engineers, MPOs and state departments of transportation to forecast future year transportation system deficiencies that may not exist today. These agencies also use models to evaluate the impact of alternative transportation solutions for development of long range transportation plans. They are primarily used to forecast traffic flows on the transportation system. Models are generally mathematical expressions that are used to replicate the movement of people and vehicles within a transportation system. The traffic forecasts are based on forecasted land use, demographic data, socio-economic factors and travel patterns unique to the region. Travel models are also created to support decision making by providing information about the impacts of alternative transportation and land use policies, as well as demographic and socio-economic trends.

A Travel Forecasting Model can be used in a variety of ways, such as for:

Specific Highway Construction Projects

- Five to thirty year forecasts
- Traffic impact of changes in land use and development
- Traffic pattern and volumes that are used by city and regional planners before deciding on roads improvements or construction

Transportation Studies

- Major investment studies
- Interchange justification studies
- Bypass studies
- Freight studies
- Corridor studies

General Highway Planning

- Traffic impact of changes in land use and development
- Traffic impacts of new roadways or closing roadways
- Evaluate bypasses
- Generate inputs to micro simulation models
- Accident prone locations identification

Development of Long Range Transportation Plans

- State and Regional Plan and TIP development
- Traffic impact of changes in land use and development
- Congestion Management Programs
- Forecast regional pollution from vehicles
- Evaluate Environmental Justice
- Transit route planning

Other uses for the model:

- Provides inputs for site-specific studies (including whole cities) that will make studies more accurate (by looking at the big picture) and less costly (future projections for major roads will be readily available to cities and consultants).
- Gives the local jurisdictions an on-going resource of traffic count projections to answer “what-if” questions such as:
    - » What if we build a four lane segment here versus a three lanes road segment?
    - » What if we add an additional lane?
    - » What if a large shopping mall will be built at this location versus that location?
    - » What if we put in this east/west corridor?

- Provides jurisdictions with results for traffic scenarios such as:
  - » Projected traffic counts for the base year as well as forecast years
  - » Traffic counts for different road improvement scenarios
  - » Traffic counts for intersection improvement and signalization analysis
  - » Daily vehicle miles traveled in a region

NORTHWEST ARKANSAS TRAVEL FORECASTING MODEL

In 2004 NWARPC and the AHTD hired Bernardin, Lochmueller & Associates, Inc. to develop the Northwest Arkansas Travel Demand Model for Benton and Washington Counties, AR. The base year for the model was 2005 and scenario runs have been developed for 2010, 2030 and 2035.

Between the years 2007-2010 NWARPC maintained the model in-house with continuous updates to the network, TAZs, socio-economic data, land use, etc. and used it for projects prioritization, scenarios and the 2035 Regional Transportation Plan and TIP.

In 2010, NWARPC hired Parsons Brinckerhoff to conduct a Western Beltway Corridor Study in Benton and Washington County that would connect to the future Hwy. 549 (Bella Vista bypass) in the northern part of Benton County. Part of the Study was to update the existing model to add McDonald County, Missouri to the study area. The model structure and code were also improved as part of the analysis.

In 2010, NWARPC also administered a study to develop a Transit Development Plan (TDP) in cooperation with the two area transit agencies, Ozark Regional Transit, Inc. and the University of Arkansas Razorback Transit, and Connetics Transportation Group consulting firm.

In November 2012, NWARPC started a Transportation Alternatives Analysis Study that was funded by FTA and NWARPC matching funds as part of an Alternatives Analysis grant awarded that year. NWARPC contracted URS Corporation to determine the need for a major transit investment in the corridor, and to estimate costs, benefits and possible environmental impacts of the various alternatives. As part of the analysis, the consultants used the existing travel demand model to generate ridership estimates in the analyzed corridor. Alliance Transportation Group was the sub-consultant hired to develop the conceptual transit ridership for the Study.

As a requirement of the Census Bureau, the MPO delineated new TAZs and Transportation Analysis Districts (TADs) for the 2010 Census Bureau data collection. The newly delineated 673 internal TAZs and 11 TADs were accepted by the Census Bureau in 2011 and are available at NWARPC.

In July of 2014, the upgrade of the existing travel forecasting model began which added mode choice to the model for the purpose of modeling vehicular travel as well as transit in the MPA. Under this scope of work NWARPC hired Parsons Brinckerhoff to conduct a travel forecasting model upgrade that addressed all the model needs for a functional true mode choice model. The purpose of the project was to develop the mode choice model to include the transit component; upgrade the model from the 2005 base year to 2010 base year; add the Missouri portion of the MPA into the model; and develop the 2020, 2030 and 2040 forecast years. The upgraded model also incorporated a special generator that is easier to configure and update, reconfigured the GISDK code to current industry standards, and identified ways of utilizing the travel time results from the model to aid the local transit agencies in their route planning, evaluation and needs assessment.

The Northwest Arkansas Travel Forecasting Model is a regional model based on the traditional four-step sequential modeling method with a feedback loop. The process is summarized in the following steps:

- Skims – Calculation of travel times and cost between origin and destination zones using the various modes of transportation.
- Household Generation – The Population synthesizer generates synthetic households i with attributes x_i to match total counts and TAZ average characteristics x_a.

- Trip Generation – Trip Generation calculates P_{ip}, the decimal number of trips of each purpose produced by each household. It does this via regression models estimated on data collected in a 2005 household travel survey.
- Trip Distribution – Trip Distribution aggregates the household trip productions by purpose and by TAZ and calculates the trip attractions by purpose by TAZ. Productions (Ps) and Attractions (As) are matched up based on a gravity model whereby productions are pulled towards TAZs based on their number of attractions and the travel time from the production TAZ. The skims are used to determine travel times.
- Mode Choice – The mode of travel for each PA pair is determined based on a logit model which takes the level of service characteristics, the household attributes and the cost of each mode into consideration. The skims are used to determine level of service and cost for each mode.
- Time Of Day – The PA matrices are transformed into origin/destination pairs by time period (am peak, pm peak, off-peak) based on observed percentages of daily traffic.
- Assignment – The auto trips are assigned to the highway network and the transit trips are assigned to the transit network. Travel times and costs are re-calculated and are fed back to the trip distribution and mode choice steps. This feedback is done multiple times so that congested travel times are considered in the final set of choices.

Figure 7.7 also illustrates the model steps:

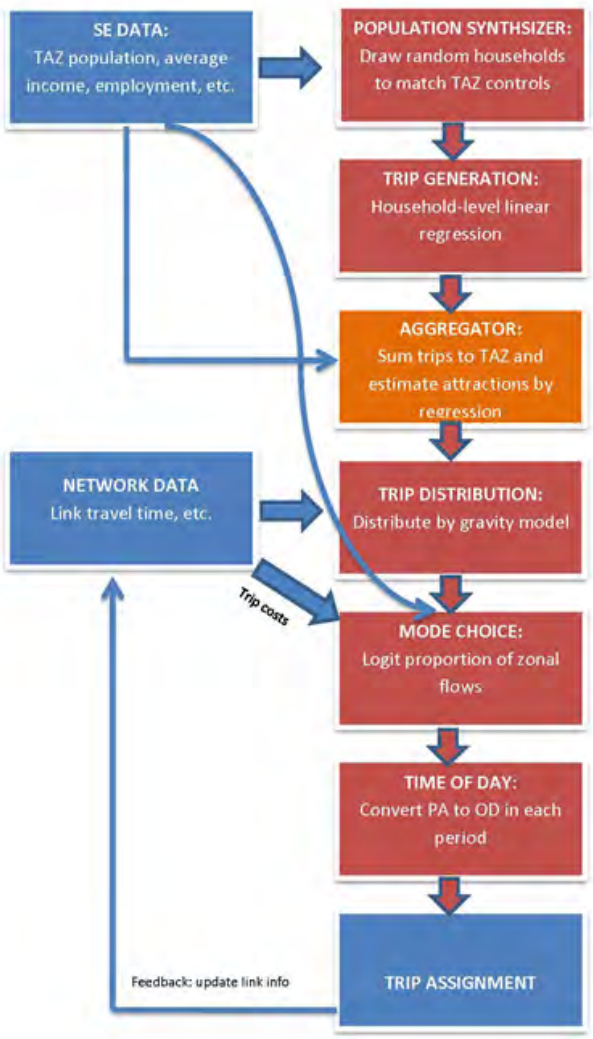
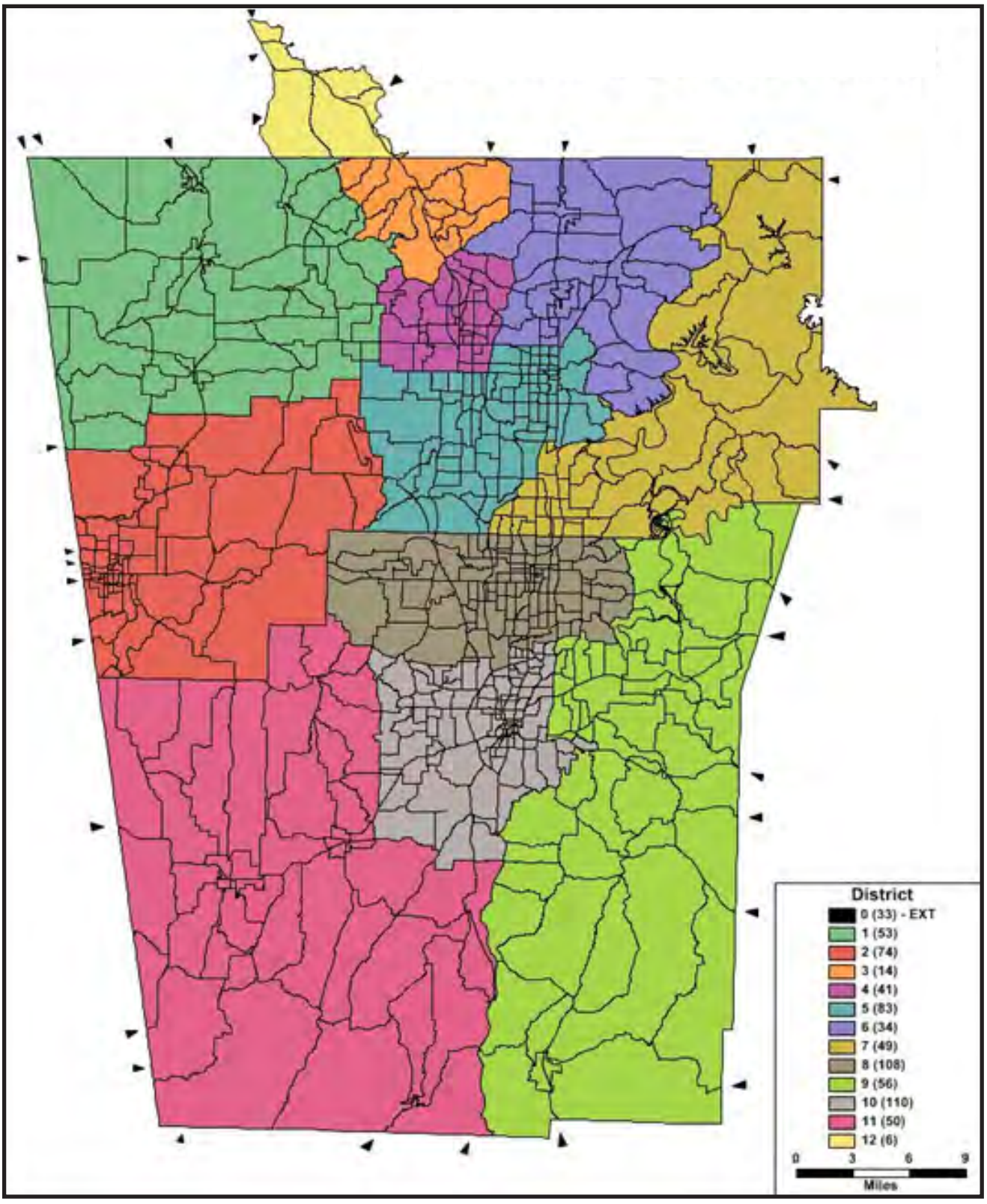
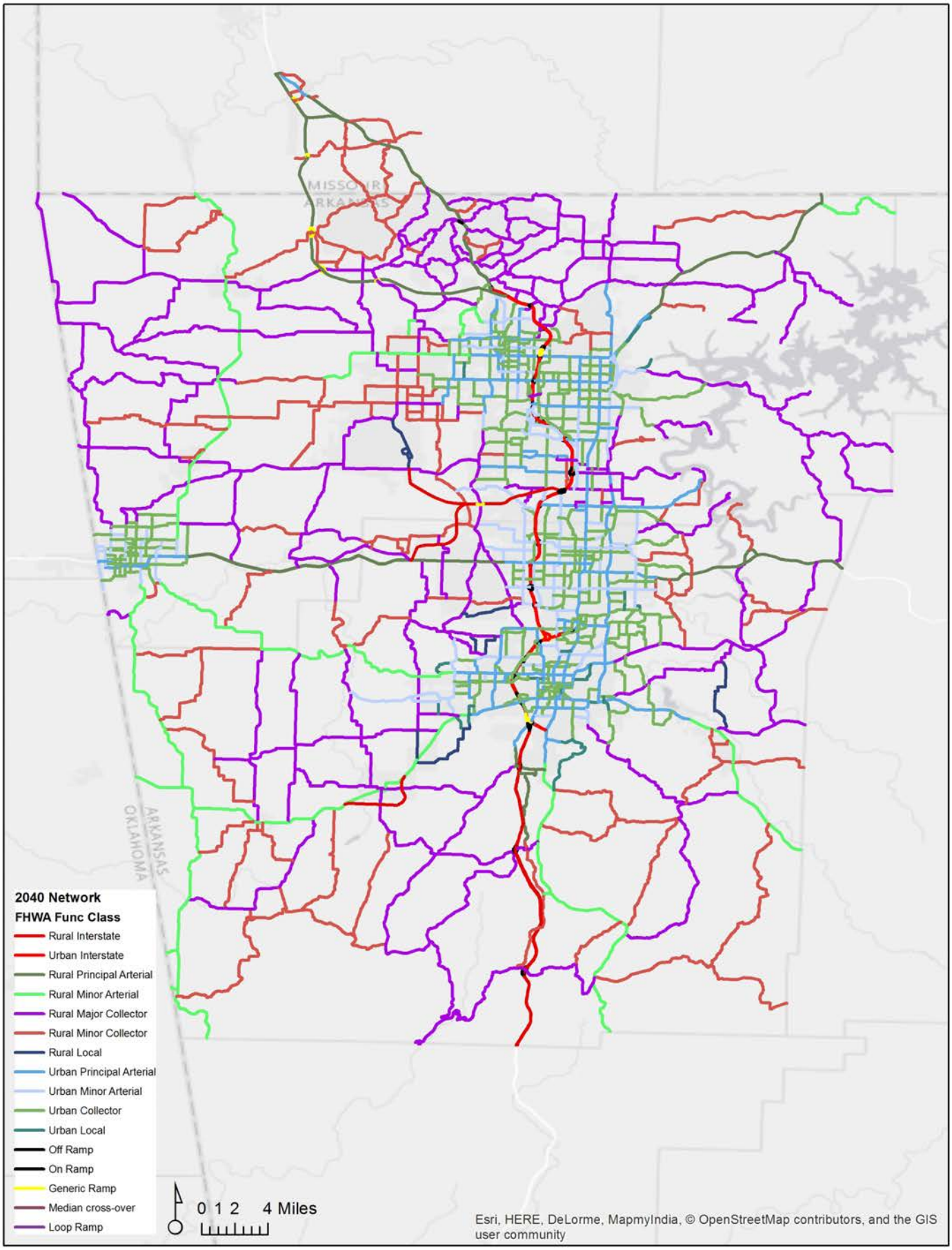


Figure 7.7 -Travel Demand Forecasting Steps

The model area includes Washington and Benton Counties in Arkansas and the McDonald County, Missouri portion of the MPA. This area encompasses 711 TAZs (Traffic Analysis Zones) as illustrated in Map 7.2, which were also grouped into 11 TADs (Traffic Analysis Districts).



Map 7.2 -Transportation Analysis Districts and Zones



Map 7.3 - Northwest Arkansas Travel Forecasting Model Traffic 2040 Road Network (by FHWA Functional Classification)

The model road network consists of local roads, collectors, arterials and highways and is summarized in Table 7.5 and Table 7.6 for the base year 2010 and forecast year 2040. As a note, the model network is dualized for the entire Urban Interstate and part of the Rural Interstate, as well as for a portion of the Rural Principal Arterial (Hwy. 412), and so the tables below reflect the model's network mileage and not the actual road mileage.

2010 Road Network Types	Miles
Rural Interstate	40.02
Rural Principal Arterial	89.30
Rural Minor Arterial	144.92
Rural Major Collector	623.73
Rural Minor Collector	365.40
Rural Local	21.49
Urban Interstate	67.06
Urban Principal Arterial	175.08
Urban Minor Arterial	127.85
Urban Collector	313.57
Urban Local	21.26
Off-Ramp	11.37
On-Ramp	11.66
Generic Ramp	2.68
Median Cross-Over	1.16
Total	2,016.55

Table 7.5 - 2010 Road Network Miles
Source: NWARPC Travel Forecasting Model
(2010 Base Model Network)

2040 Road Network Types	Miles
Rural Interstate	58.66
Rural Principal Arterial	108.90
Rural Minor Arterial	144.92
Rural Major Collector	624.44
Rural Minor Collector	365.40
Rural Local	21.49
Urban Interstate	67.06
Urban Principal Arterial	180.19
Urban Minor Arterial	141.88
Urban Collector	324.19
Urban Local	21.26
Off-Ramp	12.80
On-Ramp	12.54
Generic Ramp	8.42
Median Cross-Over	1.16
Total	2,093.32

Table 7.6 - 2040 Road Network Miles
Source: NWARPC Travel Forecasting Model
(2040 Forecast Fiscally Constrained Model Network)

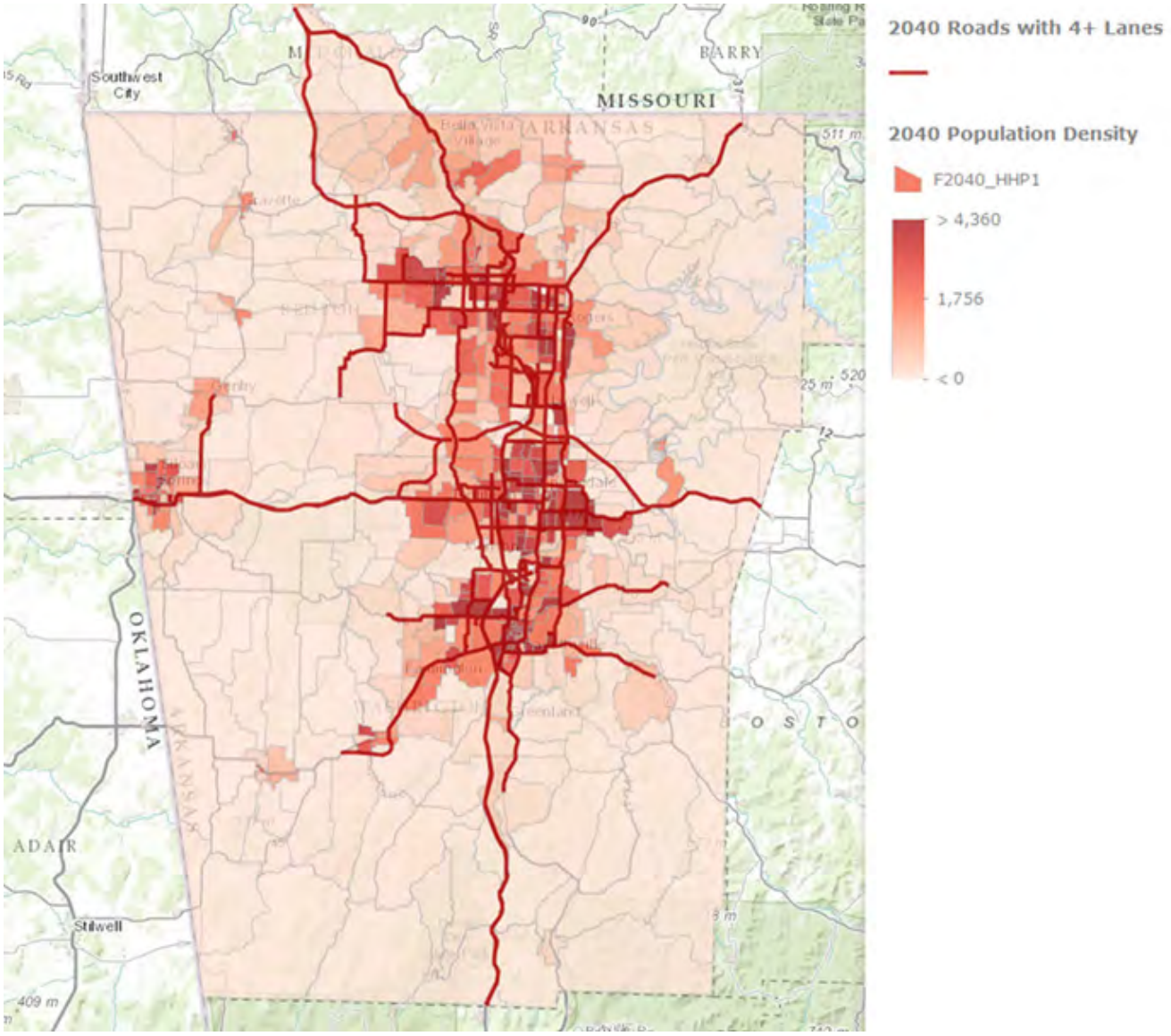
Types of Trips: In the Regional Travel Forecasting Model, trips are classified by trip purpose. Broadly, trips are grouped into the following purposes:

Home-Based Work (HBW): These trips are from home to work and from work back to home. They occur more in peak hours and are a large component of congestion.

Home-Based Shop/Personal Business (HBSB): These trips begin or end at home and cover the range of other trips that people make - shopping, visiting friends, or appointments.

Non-Home-Based (NHB): These are the trips made while people are out of their residence, either at work (e.g., a trip to lunch), or between stops while running errands (e.g., a trip from the grocery store to the cleaners). Generally, given their nature, non-home-based trips are shorter than home-based trips and are often made at off-peak travel times.

In addition to these trips, the model also includes the following types of trips: **Home-Based School (HBSC), Home-Based University/College (HBU) and Home-Based Other (HBO)** as well as **Non-Home Based Work (NHBW).**

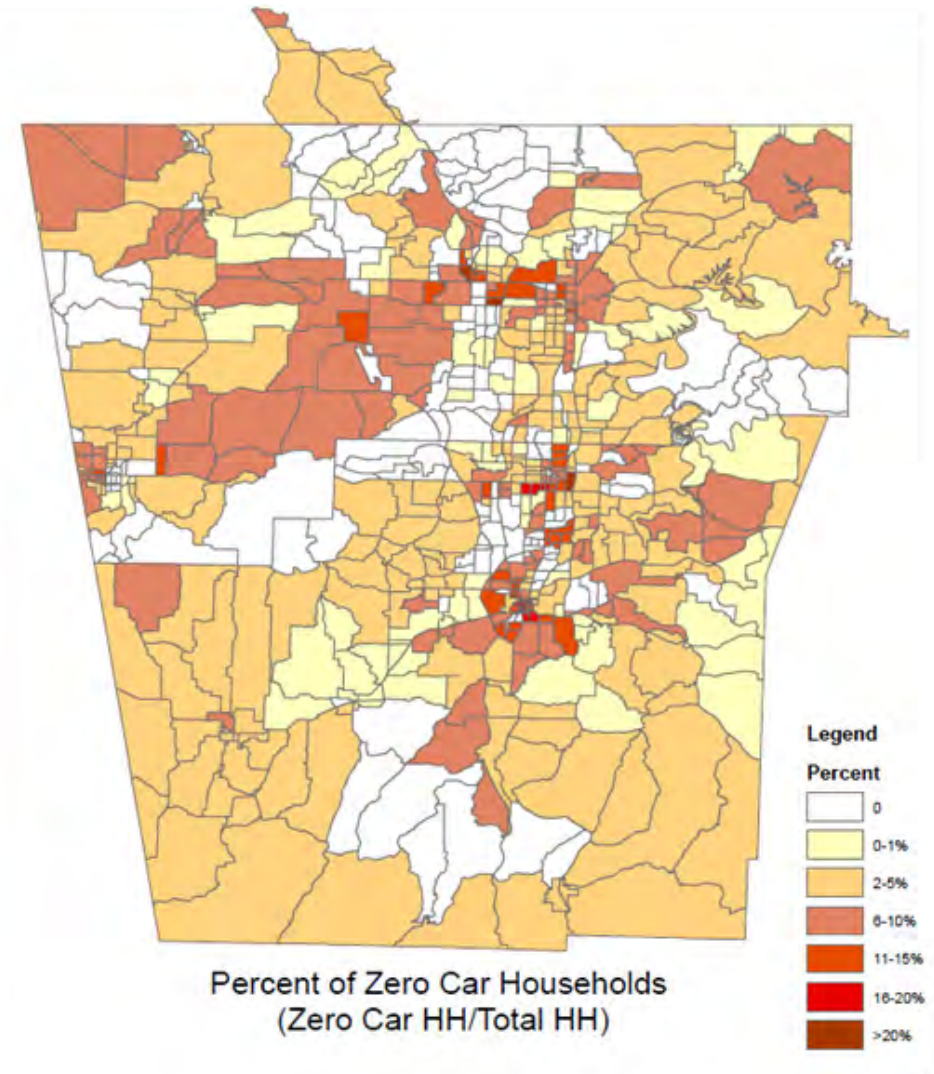


Map 7.4 - NWARPC Projected Population Density For 2040 by TAZ and Arterial Roads (4 lanes and more)

The mode choice model segments by trip purpose as well as by income level and vehicle sufficiency for HBW trips. That is, for HBW trips, the following segments were included:

- Zero-vehicle
- Insufficient high income
- Insufficient low income
- Sufficient high income
- Insufficient low income

Map 7.5 illustrates the observed zero-vehicles households by TAZ based on the CTPP data for 2010. Figure 7.8 represents the average traveled distance from the 2010 Base Year validation report that illustrates these mode choice segments by trip purpose and vehicle sufficiency:



Map 7.5 - Zero-Vehicle Households by TAZ (CTPP data)

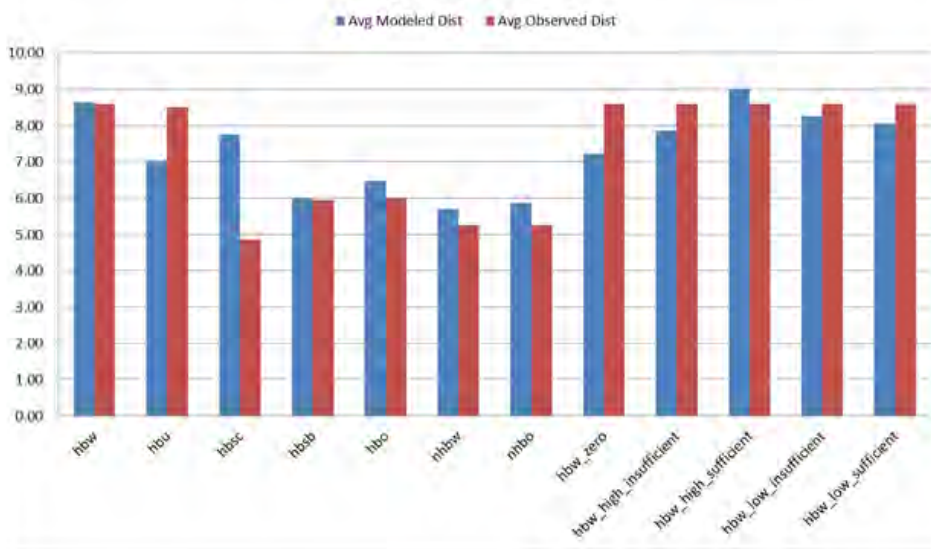


Figure 7.8 - Average Traveled Distance

Another example from the validation report is the table below that depicts the trip length frequency for the Home-Based-Work trip type. Figure 7.9 suggests that the majority of the trips is concentrated in the 5-25 minute time interval and also suggests that commutes to work longer than 40 minutes are not very prevalent in the region.

Trips are made either by driving alone or carpooling/vanpooling with others; by riding transit; or by biking or walking. Two other major groups of travelers use the roadway system and include commercial vehicle/truck trips and external/internal trips.

Internal/External trips are those that start in the region and end outside the region, or conversely, those that start outside of the region and end at a destination inside of the region. These trips also include those that pass through without stopping.

There are a number of indicators that can be used to help measure the efficiency of the transportation system and how well the system is supporting the mobility needs of the public. These indicators include trip related information as well as infrastructure related data. Utilizing these indicators planners can identify deficiencies and steps to help address these deficiencies. These indicators can include person trips, vehicle trips, roadway lane miles, daily vehicle miles of travel and volume over capacity ratio.

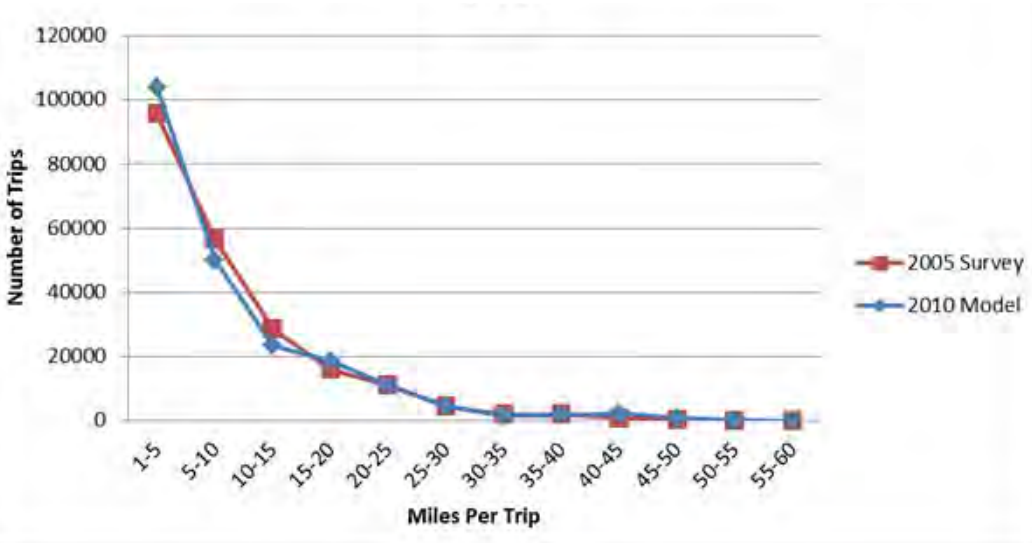


Figure 7.9 - Estimated Trip Length Frequency (Home Based Work trips)

Mode Choice Model

The mode of travel is a critical part of the model upgrade. The mode choices that were included in the model are the following:

- Vehicle
  - » DA: Drive alone
  - » SR2: Shared ride 2
  - » SR3+: Shared ride 3+

- Transit: There are three access nests, each with the transit modes listed under Walk.
  - » Walk: walk-access transit
    - o LB: Local bus (Ozark Transit)
    - o RT: Razorback Transit, University of Arkansas
    - o Additional modes can be added such as BRT, LR, Express Bus – currently none of those modes exist in the region

    - PNR: park-and-ride
        - RT: Razorback Transit
    - KNR: “kiss-and-ride”/drop-off
        - RT: Razorback Transit
- Non-Motorized
    - Bike
    - Walk

Figure 7.10 illustrates the nested mode choice model:

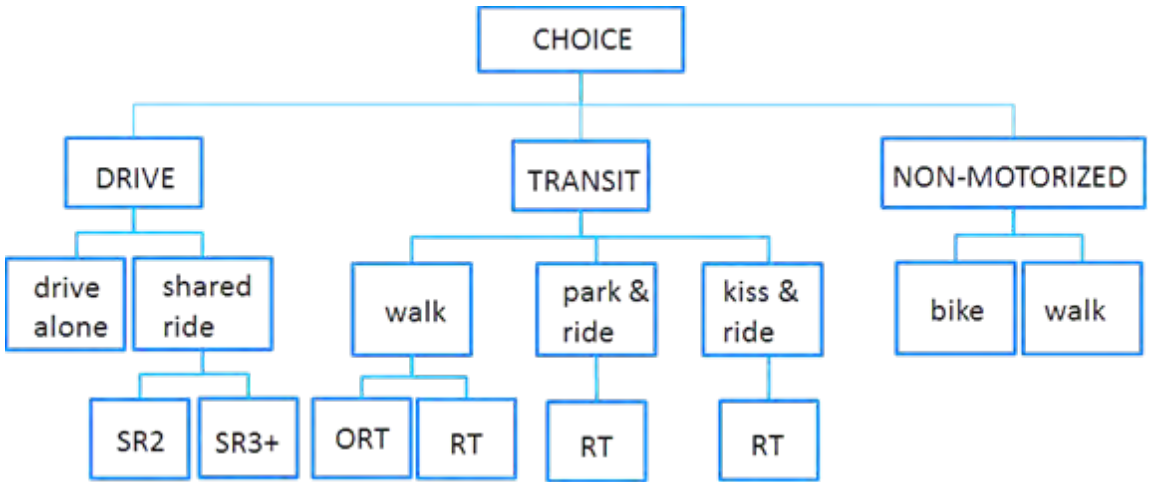


Figure 7.10 -Mode Choice Model Nests

The newly implemented mode choice can identify the type of trips by trip purpose and mode. Figure 7.11 shows the number of trips by Home-Based-University trip purpose in the 2010 model validation (which also includes observed data):

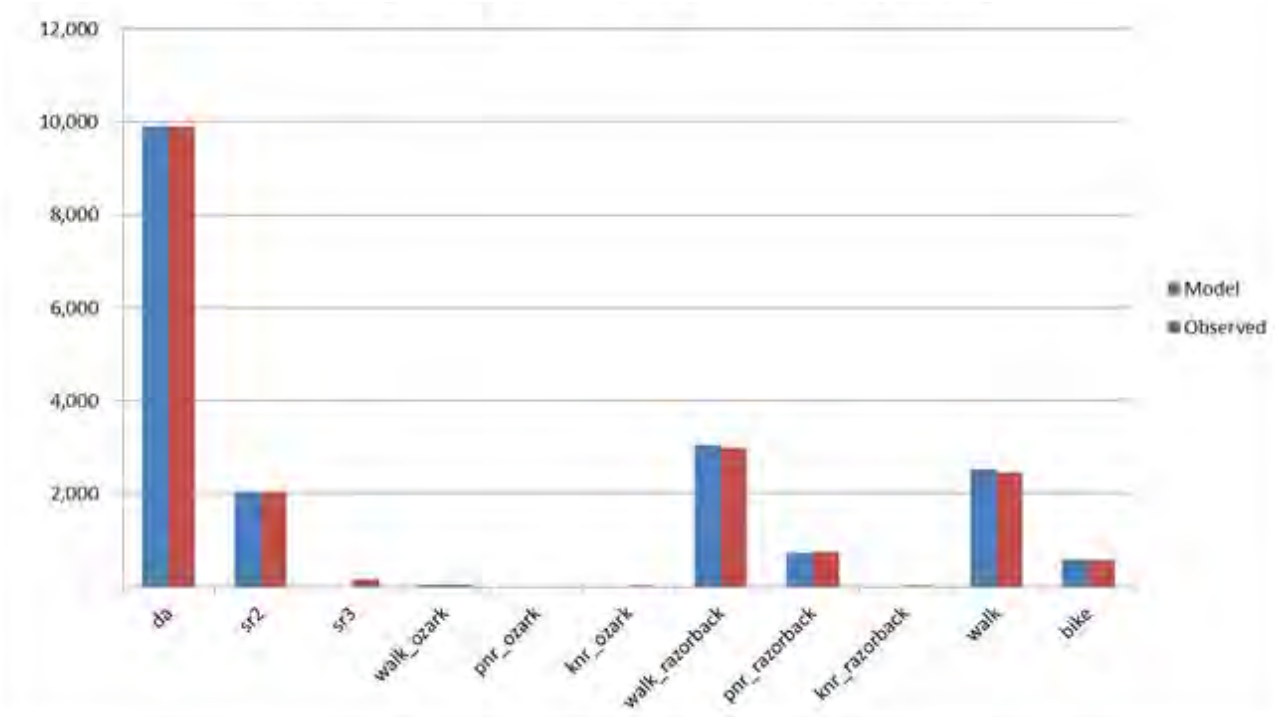


Figure 7.11 -Home Based University Trip Purpose (Auto, transit and Non-Motorized)

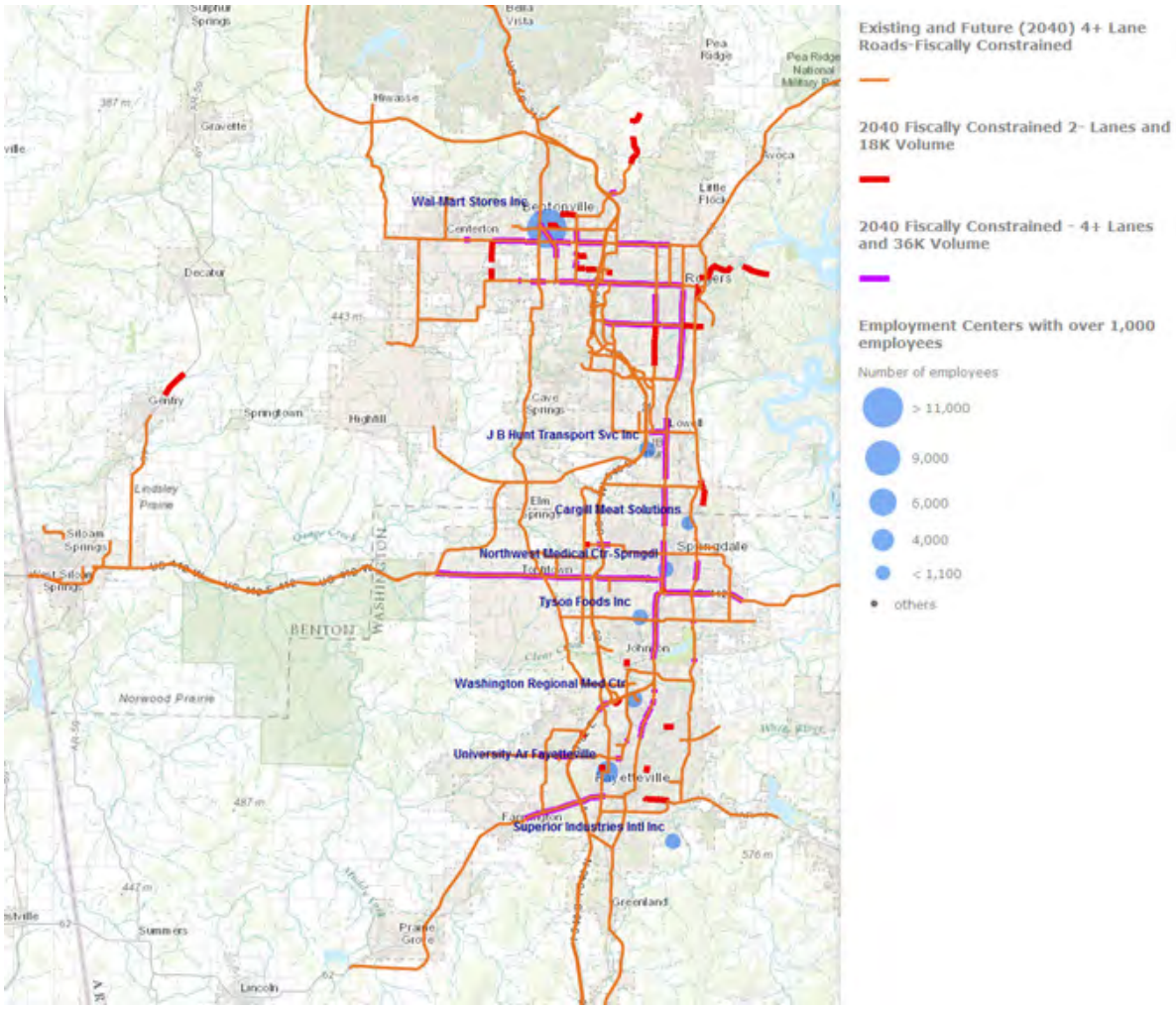
Travel Forecasting Results

The 2040 forecast model has proved beneficial in identifying segments of the network that may need improvements in the next 25 years. A series of selection sets have been developed based on a 2040 Fiscally Constrained and Unconstrained List of projects and using forecasted socio-economic data from the model.

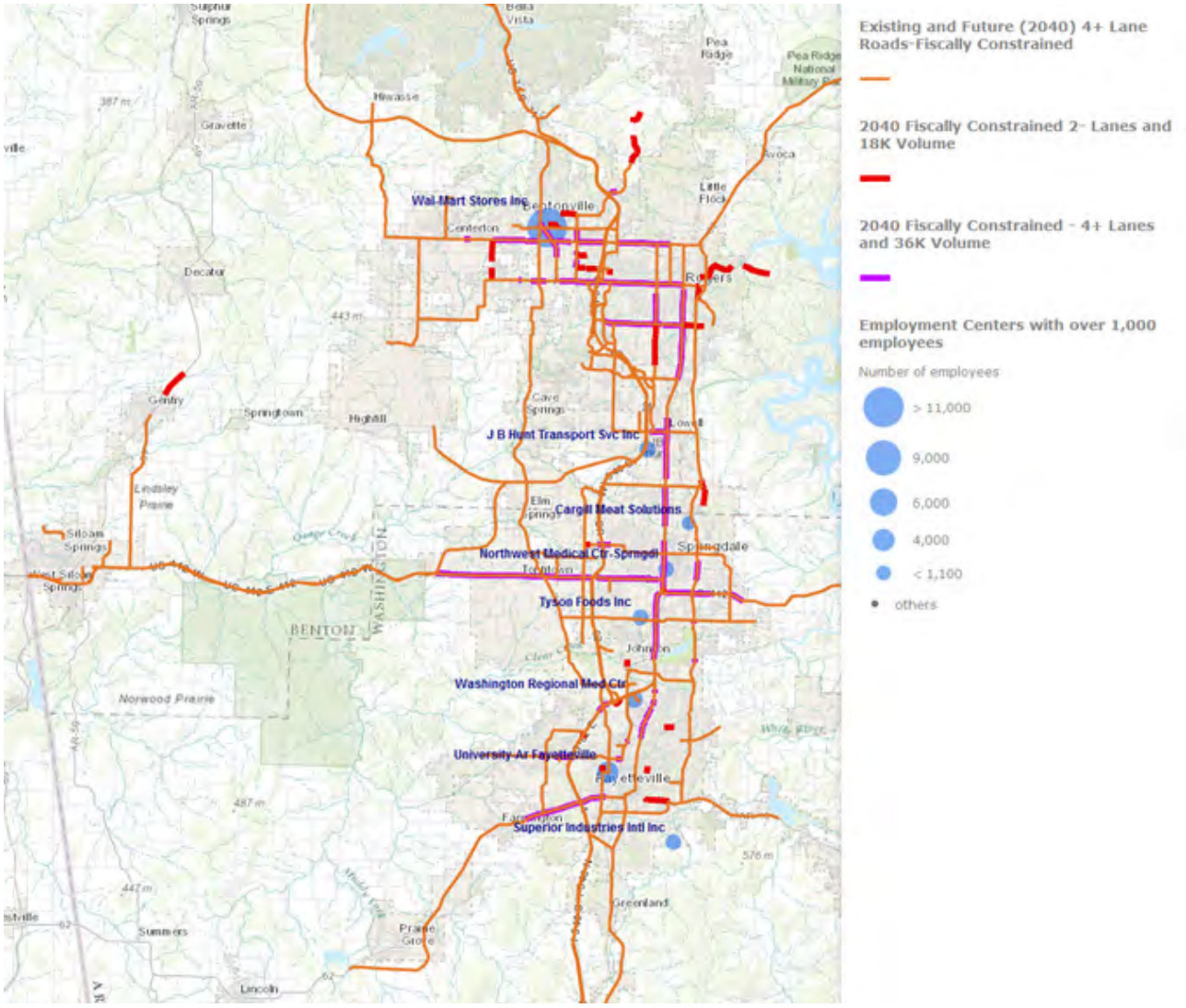
The Fiscally Constrained List for the road network consists of projects that can reasonably be expected to be funded with Federal-aid funds during the 25 year planning period. This is determined by estimates of Federal-aid funds that can reasonably be expected to come to the area given the area's highway network, Urbanized Area, population, etc. These estimates are provided by AHTD and MoDOT and are not limits, nor are they guarantees of funding. They are conservative, reasonable estimates of future funding to guide development of the 2040 MTP. The Fiscally Unconstrained List includes projects not limited to the estimated available funding.

The following two maps represent selections from the 2040 Constrained and Unconstrained Model runs with the following specifications:

- Two lane roads with at least 18,000 vehicles per day (vpd) and roads with four lanes or more and 36,000 vpd for the Constrained List of Projects (Map 7.6)
- Two lane roads with at least 18,000 vpd and roads with four lanes or more and 36,000 vpd for the Unconstrained List of Projects (Map 7.7)

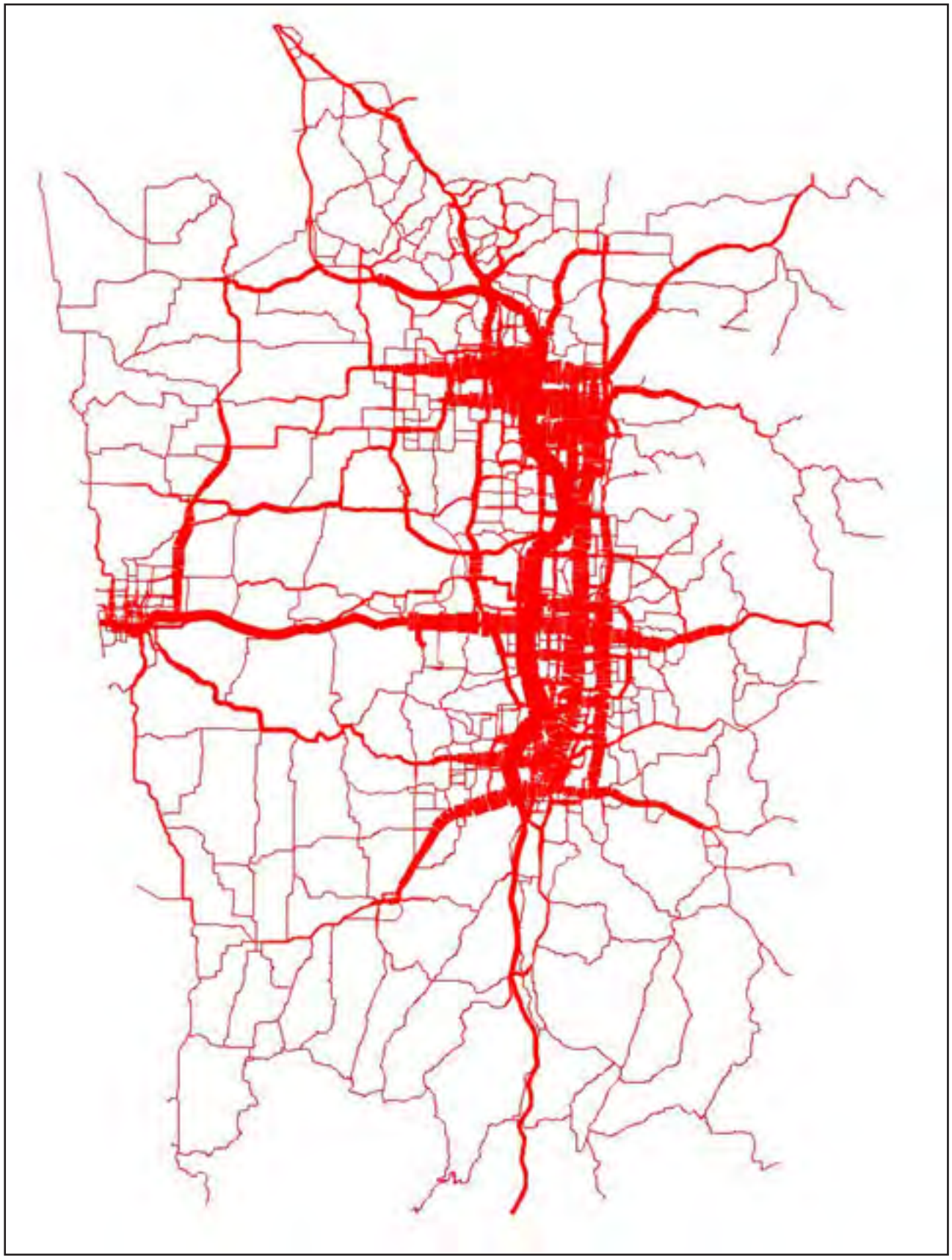


Map 7.6 - 2040 Constrained List of Projects with selected 2 lanes and 18,000+ volumes and 4+ lanes and 36,000+ volumes

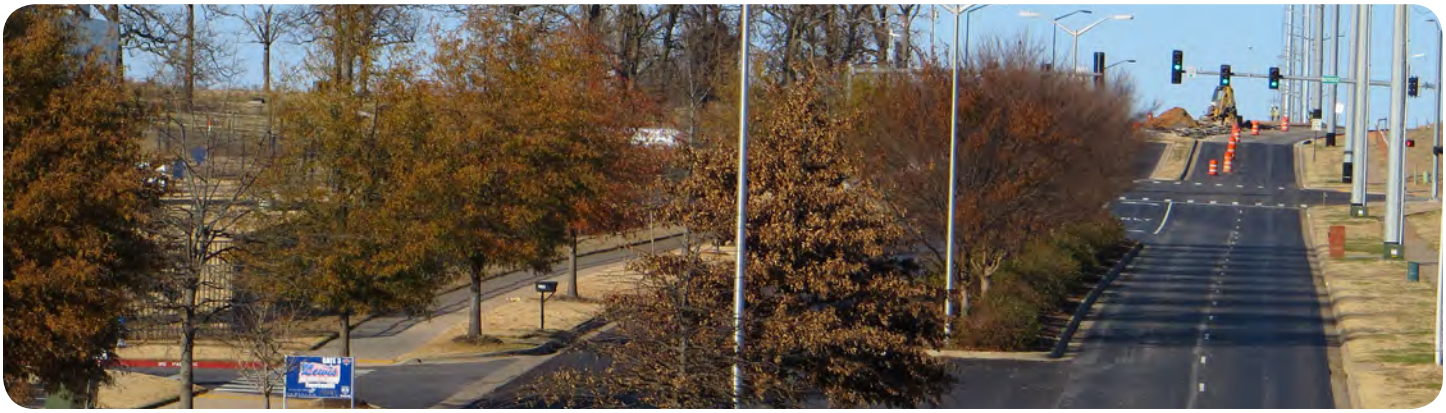


Map 7.7 - 2040 Unconstrained List of Projects with selected 2 lanes and 18,000+ volumes and 4+ lanes and 36,000+ volumes

Map 7.9 illustrates the total volume of traffic as a gradient on the 2040 Constrained forecast network.



Map 7.8 - 2040 Total Volume Map – NWA Travel Forecasting Model



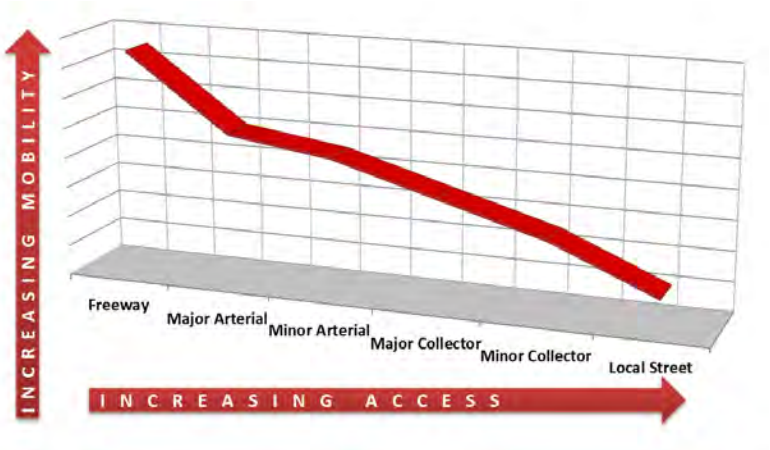
CHAPTER 8. FACILITY DESIGN, MANAGEMENT AND OPERATIONS, AND SYSTEM PERFORMANCE

TRANSPORTATION DESIGN

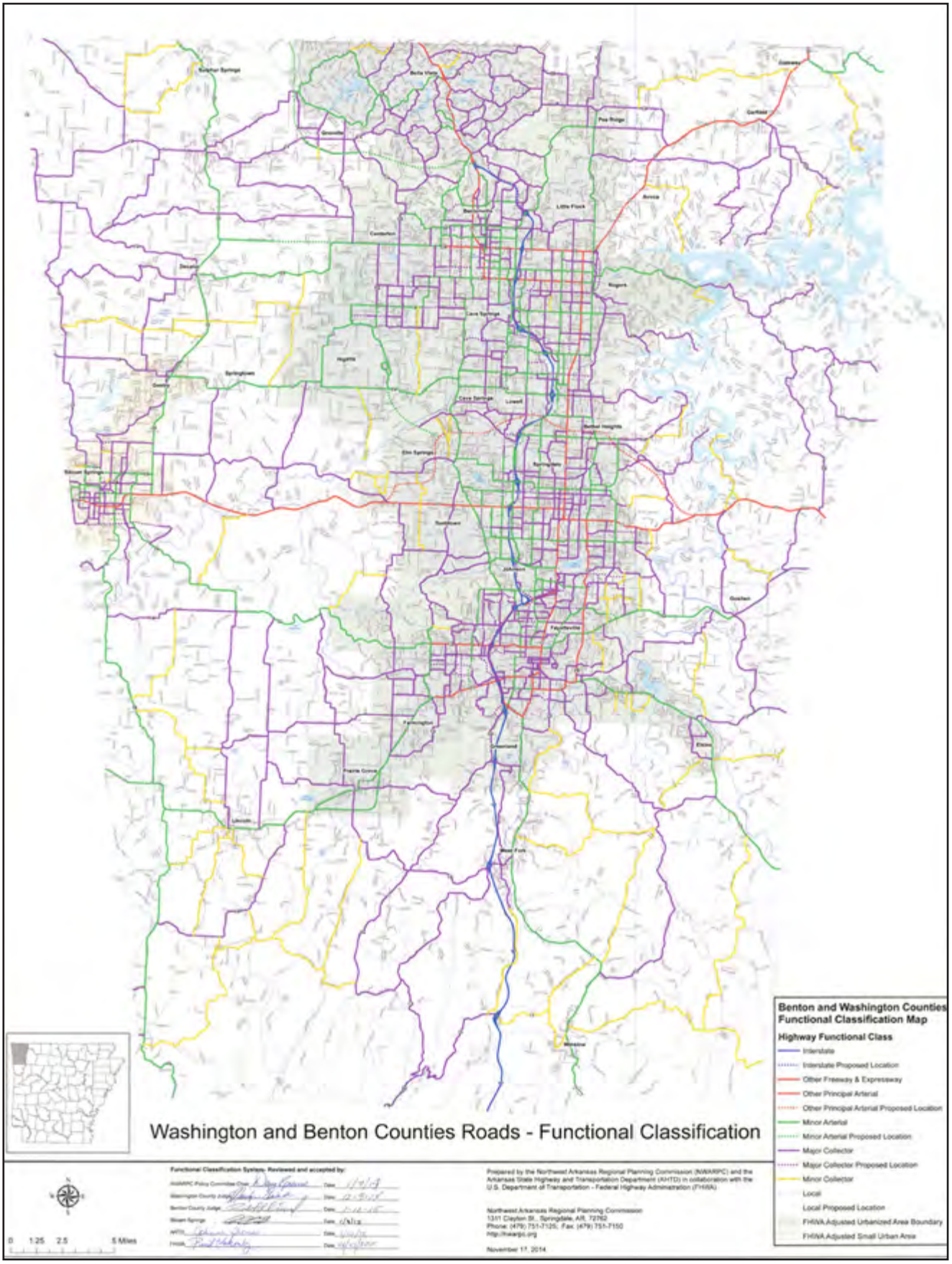
Roadway facilities are classified as Freeway/Expressways, Major Arterials, Minor Arterials, Major Collectors, Minor Collectors and Local Streets. These classifications reflect the utility of the various facilities as illustrated below, with the higher classifications more responsible for moving traffic long distances while the lower functional classes are primarily responsible for access to land. It is necessary for roadways to be on the State's functionally classified system to qualify for State and Federal funding. Map 8.1 on the next page shows the functionally classified system.

Of particular importance to the rapidly growing area of Northwest Arkansas is adequate protection of right of way and setbacks adjacent to current and proposed roads. A primary tool for this protection is the adopted master street plan of the cities and road plan of the counties.

The area's cities and counties are urged to consider the existing functionally classified system as well as the proposed 2040 network to protect the necessary rights-of-way through their adopted plan and ordinances.



It should also be noted that the cross-section designs in the 2040 MTP reflect recommended designs and that some areas of commercial or industrial development will require cross-section designs higher than the typical cross-section of the designated functional class of the roadway. Cities should identify those areas and preserve the necessary right-of-way for the higher design.



Map 8.1 - Washington and Benton Counties Functionally Classified Roads

COMPLETE STREETS

"Complete Streets" involves designing streets not just for the automobile but for all users. Generally, the elements that make up a complete street, according to the National Complete Streets Coalition, are sidewalks, bicycle lanes, shared-use paths, designated bus lanes, safe and accessible transit stops, and frequent and safe crossings for pedestrians, including median islands, accessible pedestrian signals, and curb extensions. There is no one design for complete streets since different areas have different road uses. However, all complete street designs should balance safety and convenience for everyone using the street.

The MTP recommends the development and adoption of Complete Streets policies. Complete Streets policies direct transportation planners and engineers to consistently design the right-of-way to accommodate all users – drivers, transit riders, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities. Complete streets provide a safer and more accessible transportation system for all users.

The MTP identifies a series of cross-sections as a guide to implement complete streets concepts as transportation facilities are designed. The illustrations demonstrate how complete street design elements may be incorporated as part of the design process. The complete street cross-sections illustrated in the MTP are based on the following National Complete Street policy, guidance, and resources:

National Complete Streets Coalition:
http://www.smartgrowthamerica.org/complete-streets

NACTO Urban Street Design Guide:
http://nacto.org/usdg/

ITE - Designing Walkable Urban Thoroughfares: A Context Sensitive Approach:
http://www.ite.org/css/RP-036A-E.pdf

Jurisdictions are also encouraged to implement complete streets policies. These polices are also included in the adopted Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. In addition to the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, 25 individual community plans have been developed and adopted along with recommended complete streets catalyst projects. All jurisdictions making major improvements to roads shown in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan should make every effort to include bicycle and pedestrian facilities. The following sample resolution has been developed to encourage complete streets throughout the region.

Sample Complete Streets Resolution for NWA Communities:

WHEREAS Complete Streets are important for our community's economy, health, mobility, and quality of life for residents, businesses and visitors,

LET IT BE RESOLVED that [Municipality / Adopting body] hereby recognizes the importance of creating Complete Streets that enable safe travel by all users, including pedestrians, bicyclists, transit riders and motorists, and people of all ages and abilities, including children, youth, families, older adults, and individuals with disabilities.

BE IT FURTHER RESOLVED that [Municipality / Adopting body] affirms that Complete Streets infrastructure addressing the needs of all users can be incorporated into all planning, design, approval, and implementation processes for construction, reconstruction, retrofit, maintenance, alteration, or repair of streets, bridges, or other portions of the transportation network; provided, however, that such infrastructure may be excluded, upon written approval by [insert senior manager, such as City Manager or the head of an appropriate agency], where documentation and data indicate that: 1. Use by non-motorized users is prohibited by law; 2. The cost would be excessively disproportionate to the need or probable future use over the long term; 3. There is an absence of current or future need; or 4. Inclusion of such infrastructure would be unreasonable or inappropriate in light of the scope of the project.

BE IT FURTHER RESOLVED that the head of each affected agency or department should report back to the [Adopting body] [annually / within one year of the date of passage of this resolution] regarding: the steps taken to implement this Resolution; additional steps planned; and any desired actions that would need to be taken by [Adopting body] or other agencies or departments to implement the steps taken or planned.

BE IT FURTHER RESOLVED that a committee is hereby created, to be composed of [insert desired committee composition] and appointed by [the Mayor / President of adopting body / other], to recommend short-term and long-term steps, planning, and policy adoption necessary to create a comprehensive and integrated transportation network serving the needs of all users; to assess potential obstacles to implementing Complete Streets in [Municipality]; and to suggest revisions to the [insert name of Municipality's comprehensive plan equivalent], zoning code, subdivision code, and other applicable law.

The following COMPLETE STREET cross-sections have been developed as a guide:

MINOR STREET

Description

Provides access to properties within a neighborhood or district. Not intended for long-distance auto trips.

Conforms to Minor Street dimensions of 30 feet from curb-to-curb.

- Minor streets generally require no lane markings.
- Minor streets can be further optimized for bicycle travel by applying bicycle boulevard treatments (described in these design guidelines in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan).
- Parking may be permitted or prohibited based on demand and adjacent land use.

COLLECTOR STREET

Description

Provides traffic circulation within neighborhoods, commercial and industrial areas. Collects traffic from local streets in neighborhoods and channels it into the arterial system.

Conforms to Collector Street dimensions of 40 feet from curb-to-curb.

Function

- Connections between arterials should be indirect in order to discourage use by traffic from outside the neighborhood.
- Design Service Volume: 4,000 vpd; 6,000 vpd with left turn bays
- Speed: 25-30 mph

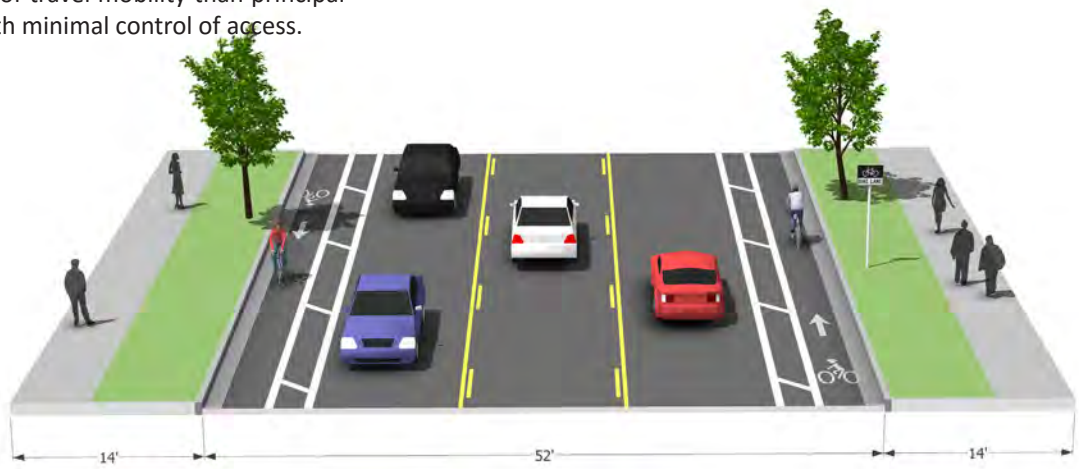
MINOR ARTERIAL

Function

Connects higher functional class facilities, activity centers, regions of the area, and major county roads at the edge of the metropolitan area. Traffic is composed predominantly of trips across and within regions of the city.

Provides service to traffic at a somewhat lower level of travel mobility than principal arterials with minimal control of access.

- Ideally does not penetrate neighborhoods.
- Design Service Volume: 12,200 vpd; 14,800 vpd with left turn bays
- Speed: 35-40 mph



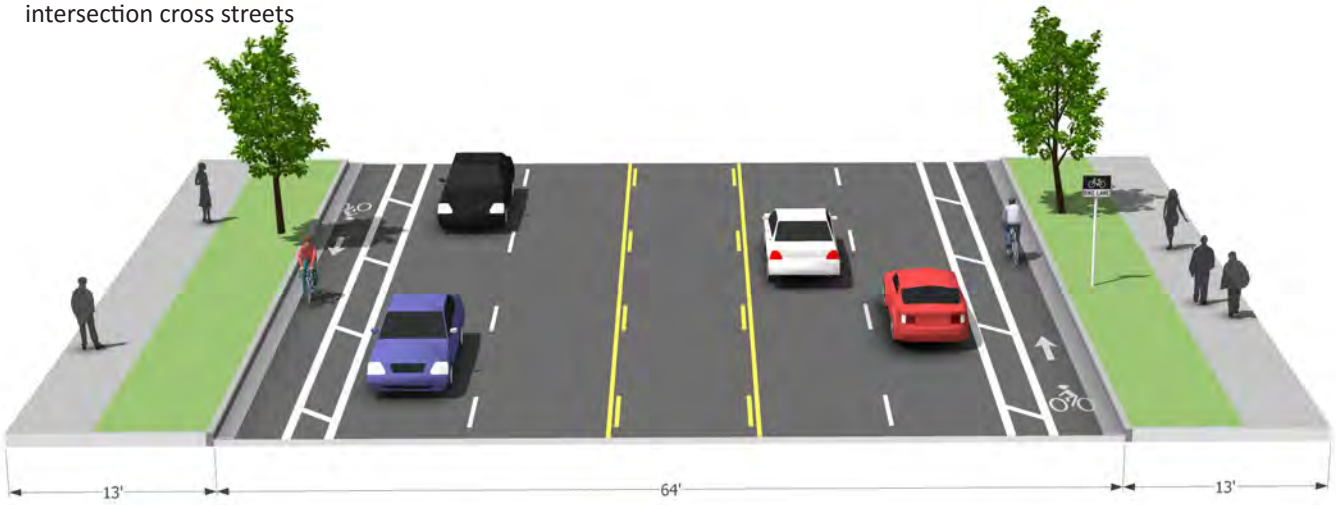
MAJOR ARTERIAL

Function

Connects freeway/expressways, rural highways at the edge of the metropolitan area, and major urban activity centers within the metropolitan area. Traffic is composed predominantly of traffic across or through the city.

Access may be controlled through medians or by the limitation of curb cuts through the orientation of access for new developments, especially residential subdivisions, to intersection cross streets

- Design Service Volume: 17,600 vpd – 20,600 vpd with left turn lane
- Speed: 40-45 mph



FREEWAY/EXPRESSWAY

Function

High speed, multi-lane facilities with a high degree of access control. These facilities serve the major centers of activity of the metropolitan area and are well integrated with the urban arterials and major rural arterials routes entering the region. They should provide a high level of traffic service to travelers who do not have local destinations and wish to bypass the city.

- Design Service Volume: 28,300 vpd expressway; 44,800 vpd freeways
- Speed: 55-70 MPH
- Lanes: Four or more 12-foot lanes; 10-foot outside shoulders and 6-foot inside shoulders
- Median: Either acceptable depressed median or raised median with safety barrier

AHTD POLICY REGARDING BICYCLE LANES AND SIDEWALKS:

The AHTD Policy regarding sidewalks calls for five foot sidewalks with a three foot buffer between the roadway and the sidewalk. Any State Highway project with wider sidewalks or buffer zones will have a cost share requirement from the local jurisdiction. AHTD Policy regarding bike lanes indicates that they will be considered if the facility is on an adopted master trail plan. From the AHTD Policy:

- When bicycle accommodations are to be made on routes with an open shoulder section, the paved shoulder will be used to accommodate bicycles. Shoulder widths shall conform to the widths recommended in the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets" 6th Edition, 2011.
- When bicycle accommodations are to be made on routes with a curb and gutter section, the bicycle lane will be in accordance with recommendations in the AASHTO Guide for the Development of Bicycle Facilities. Generally, a bicycle lane width of four feet (measured from the lane edge to the edge of the gutter) will be considered.
- If local or regional design standards specify bicycle facility widths greater than the standards noted above, the additional right-of-way and construction costs associated with the greater width shall be funded by the local jurisdiction that adopted the higher design standards.

The complete AHTD Policy for Pedestrian and Bicycle Facilities can be found at http://www.arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/AR%20bike%20ped%20policy.pdf.

The MTP recommends that all roads (AHTD and local) crossing named waterways prominently display a sign naming the waterway.

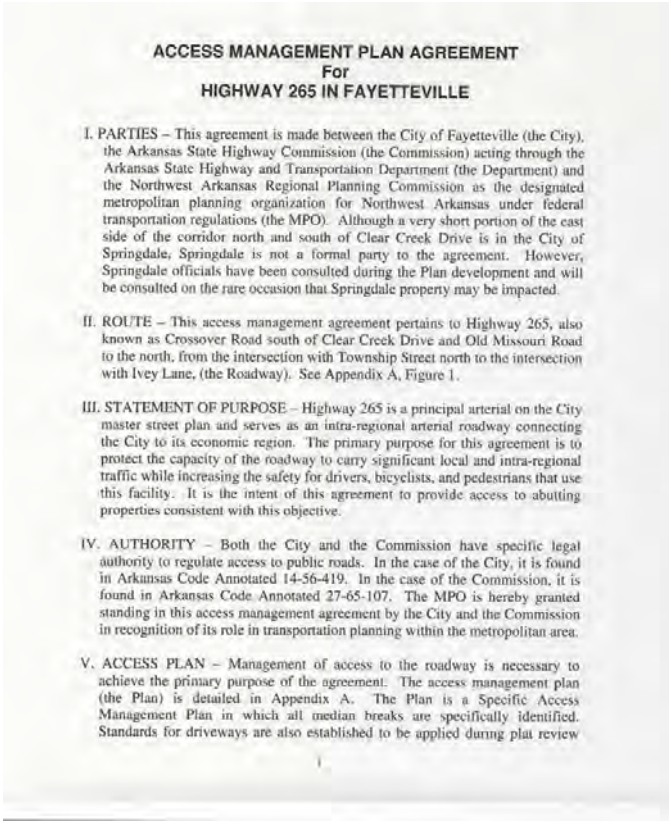
ACCESS MANAGEMENT

Access Management provides an important means of maintaining mobility, improving safety and system reliability. It calls for effective ingress and egress to a facility, efficient spacing and design to preserve the functional integrity and overall operational viability of street and road systems. Good access management promotes safe and efficient use of the transportation network.

NWARPC has worked toward development of regional policies and a Model Access Management Ordinance. The Model Access Management Ordinance is available to local governments to use and tailor to their unique and specific needs and situations. Please see Appendix C: Model Access Management Ordinance.

Access Management should address, among other things, the following areas:

- **Facility hierarchy**
- **Intersection and interchange spacing**
- **Driveway spacing**
- **Traffic signal spacing**
- **Median treatments and median openings**
- **Turning lanes and auxiliary lanes**
- **Street connections**



ACCESS MANAGEMENT PLAN AGREEMENT
For
HIGHWAY 265 IN FAYETTEVILLE

I. PARTIES – This agreement is made between the City of Fayetteville (the City), the Arkansas State Highway Commission (the Commission) acting through the Arkansas State Highway and Transportation Department (the Department) and the Northwest Arkansas Regional Planning Commission as the designated metropolitan planning organization for Northwest Arkansas under federal transportation regulations (the MPO). Although a very short portion of the east side of the corridor north and south of Clear Creek Drive is in the City of Springdale, Springdale is not a formal party to the agreement. However, Springdale officials have been consulted during the Plan development and will be consulted on the rare occasion that Springdale property may be impacted.

II. ROUTE – This access management agreement pertains to Highway 265, also known as Crossover Road south of Clear Creek Drive and Old Missouri Road to the north, from the intersection with Township Street north to the intersection with Ivey Lane, (the Roadway). See Appendix A, Figure 1.

III. STATEMENT OF PURPOSE – Highway 265 is a principal arterial on the City master street plan and serves as an intra-regional arterial roadway connecting the City to its economic region. The primary purpose for this agreement is to protect the capacity of the roadway to carry significant local and intra-regional traffic while increasing the safety for drivers, bicyclists, and pedestrians that use this facility. It is the intent of this agreement to provide access to abutting properties consistent with this objective.

IV. AUTHORITY – Both the City and the Commission have specific legal authority to regulate access to public roads. In the case of the City, it is found in Arkansas Code Annotated 14-56-419. In the case of the Commission, it is found in Arkansas Code Annotated 27-65-107. The MPO is hereby granted standing in this access management agreement by the City and the Commission in recognition of its role in transportation planning within the metropolitan area.

V. ACCESS PLAN – Management of access to the roadway is necessary to achieve the primary purpose of the agreement. The access management plan (the Plan) is detailed in Appendix A. The Plan is a Specific Access Management Plan in which all median breaks are specifically identified. Standards for driveways are also established to be applied during plat review

Highway 265 in Fayetteville

In areas of rapid land development, it is important for jurisdictions to develop access standards that achieve a balance between property access and functional integrity of the road system. Studies show that implementing access management provides three major benefits to transportation systems:

- Increased roadway capacity
- Reduced crashes
- Shortened travel time for motorists

Effective access management will accomplish the following:

1) Limit the number of conflict points at driveway locations. Conflict points are indicators of the potential for accidents. The more conflict points that occur at an intersection, the higher is the potential for vehicular crashes. When left turns and cross street through movements are restricted, the number of conflict points is significantly reduced.

2) Separate conflict areas. Intersections created by streets and driveways represent basic conflict areas. Adequate spacing between intersections allows drivers to react to one intersection at a time, and reduces the potential for conflicts.
3) Reduce interference for through traffic. Through traffic often needs to slow down for vehicles exiting, entering, or turning across the roadway. Providing turning lanes, designing driveways with appropriate turning radii, and restricting turning movements in and out of driveways allows turning traffic to get out of the way of through traffic.
4) Provide sufficient spacing for at-grade, signalized intersections. Good spacing of signalized intersections reduces conflict areas and increases the potential for smooth traffic progression.
5) Provide adequate on-site circulation and storage. The design of good internal vehicle circulation in parking areas and on local streets reduces the number of driveways that businesses need for access to the major roadway.

Access Management encompasses a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. The FHWA lists the following techniques:

- Access Spacing: Increasing the distance between traffic signals improves the flow of traffic on major arterials, reduces congestion, and improves air quality for heavily traveled corridors.
- Driveway Spacing: Fewer driveways spaced further apart allow for more orderly merging of traffic and present fewer challenges to drivers.
- Safe Turning Lanes: Dedicated left and right-turn, indirect left-turns and U-turns, and roundabouts keep through traffic flowing. Roundabouts represent an opportunity to reduce an intersection with many conflict points or a severe crash history (T-bone crashes) to one that operates with fewer conflict points and less severe crashes (sideswipes) if they occur.
- Median Treatments: Two-way left-turn lanes (TWLTL) and non-traversable, raised medians are examples of some of the most effective means to regulate access and reduce crashes.
- Right-of-Way Management: As it pertains to right-of-way reservation for future widening, good sight distance, access location, and other access-related issues.

REGIONAL ACCESS MANAGEMENT POLICIES AND OBJECTIVES

Regional Policy:
The MTP recommends that local jurisdictions, AHTD and MoDOT implement access management techniques and plans as transportation facilities are planned, programmed, and constructed.

Regional Objectives:

- Coordinate with AHTD and MoDOT.
- Protect the capacity of the roadway to carry significant local and regional traffic while increasing the safety for drivers, bicyclists, and pedestrians that use the facility.
- Maximize safety and capacity of the corridor in light of possible future development and/or redevelopment.
- Provide a mechanism to balance national, State, regional, and local interests in a manner that protects the function of the roadway as well as the existing and future investments in it, along with allowing reasonable economic development opportunities.
- Improve the environment for pedestrians, bicycles, and motor vehicles by reducing and consolidating driveway conflict points.
- Effective local access management requires planning as well as regulatory solutions. Where applicable, communities should establish a policy framework that supports access management in the local comprehensive plan, prepare corridor or access management plans for specific problem areas, and encourage good site planning techniques. Local comprehensive plans should establish how the community would balance mobility with access, identify the desired access management approach, and designate corridors that will receive special treatment. This may be supplemented through functional plans, such as an access management or thoroughfare plan, or through sub area plans, such as an interchange or corridor plan. By establishing the relationship between regulatory strategies and public health, safety, and welfare, the comprehensive plan can serve as the legal basis for access controls.

- Remedial access management techniques are recommended for areas that are already developed. Remedial access management focuses on reducing congestion, improving safety and improving aesthetic conditions on arterials that have developed into the familiar strip pattern with numerous separated driveways.
    - » Closing or consolidating driveways, sharing driveways, improving on-site circulation, linking adjoining parking lots, and constructing parallel access roads are common access management techniques applied in existing developed areas.
    - » Remedial access management efforts can be accomplished through alternative driveway design and applied during site plan review for a parcel as it goes through the permitting process for changes in use, expansion, etc.
    - » Another effective time to implement remedial access management techniques is when new roadway improvements are being made.

AHTD/Local Jurisdiction Individual Corridor Access Management Plans on State Numbered Highways:

- Individual Access Management plans will specifically identify all median breaks.
- Establish standards for driveways to be applied during plat review prior to development approval by the local jurisdiction.
- Access Management Plan Agreement - Each Access Management Plan Agreement will be deemed adopted when passed in identical form by the local jurisdiction, the NWARPC acting in its capacity as MPO, and the Arkansas State Highway Commission (when the Plan applies to a State Highway).
- The Access Management Plan agreement may be terminated or modified, in whole or in part only by mutual agreement of all of the parties as evidenced by resolutions adopted by each governing body.
- Amending the Access Management Plan – An Access Management Plan amendment (variance) will be considered at the request of any of the parties to the Agreement or at the request of an applicant whose permit request has been denied by any of the parties. The proposed amendment must be adopted in identical form by the local jurisdiction, the NWARPC, and Arkansas State Highway Commission to become effective. The Access Management Plan will be updated immediately after construction of each widened portion of the roadway is completed to reflect any changes to driveway location due to that construction if necessary.

Access Management Model Ordinance

Local government adoption of implementing regulations, standards and procedures is critical to an effective regional access management effort. Without local government enforcement of implementing regulations, the regional access management effort may be undermined by inconsistent decisions during the development review and permitting process. The MTP includes an Access Management Model Ordinance whose purpose is not to identify specific projects, rather, it is to establish guidelines that will promote safe and efficient traffic flow and which will enhance and sustain economic development along the corridor over which it is laid. It is understood that the Model Ordinance may be amended or tailored to suit each local jurisdiction's individual needs. The Access Management Model Ordinance may be found in Appendix C.

CONTEXT SENSITIVE SOLUTIONS

Context Sensitive Solutions (CSS), previously known as Context Sensitive Design, is another "alternative approach" to transportation development that has shown very promising results throughout the country. By resolving design issues in the beginning of a transportation project much time and money can be saved. The FHWA defines CSS as: "a collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions." http://www.fhwa.dot.gov/planning/csstp/css_primer/whatis.cfm#consensus

The process differs from traditional processes in that it considers a range of goals that extends beyond the transportation problem. It includes goals related to community livability and sustainability, and seeks to identify and evaluate diverse objectives earlier in the process and with greater participation by those affected. The result is greater consensus

and a streamlined project during later stages of project development and delivery. And although CSS processes are often associated with design, the approach is most effective when used during each step of planning and project development – from long-range transportation plans to individual corridor strategies.

While every project has unique circumstances, all CSS processes should build consensus around these issues before solutions are identified:

- Project context, including geography and community values.
- Problem to be addressed.
- Implementation plan and decision-making process and roles.
- Vision, goals, and evaluation factors.

Once stakeholders agree on these, the team can begin to identify and evaluate alternatives and make decisions. The steps for building agreement are flexible and can be adapted to suit individual projects. At the heart of the approach is the methodical integration of diverse values at each step of the process.

Figure 8.1 illustrates a CSS process that becomes less contentious as the design becomes more complex. Public and stakeholder involvement might be a primary activity early in the project, but by the time engineers are producing detailed plans, stakeholders only wish to be kept informed about progress and involved when changes arise. This front-loaded community participation and decision-making process allows stakeholders to influence outcomes by raising issues early when they can still be addressed.

Figure 8.1 - CSS Process

Characteristics of the CSS Products or Design:

- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area.
- The project is a safe facility for all users and the community.
- The project solves problems and satisfies the purpose and needs identified by a full range of stakeholders.
- The project exceeds the expectations of both designers and stakeholders and is perceived as adding lasting value to the community as a whole.
- The project involves efficient and effective use of resources (time, budget) of all involved parties.

These before and after photos from the College Ave/Hwy. 71B (Fayetteville, Arkansas) illustrate how context sensitive projects improve safety and mobility for a variety of users. The photo illustrates improved sidewalks, street trees, and tree-lined boulevard.

CSS projects consider new and emerging technologies, funding sources, and public policy issues aimed at addressing major drivers such as energy supply, climate change, and sustainability initiatives. CSS projects also address livability issues such as bicycle and pedestrian facilities, transit, and multimodal connections. Additionally, CSS projects embrace sustainability principles such as stormwater management, water quality, and the use of recycled materials throughout their lifecycles.

Given the potential of avoiding transportation project delays and costs, and at the same time meeting the needs of interested individuals and stakeholders, the CSS process would be an important alternative approach for the Northwest Arkansas region to consider adopting into the planning process.

CONGESTION MANAGEMENT PROCESS

Congestion management is the use of strategies to optimize operations of a transportation system through management and operation of the existing system. As such, a congestion management process (CMP) is a systematic regional approach that provides current performance measures detailing the system performance and evaluates strategies that meet the local objectives.

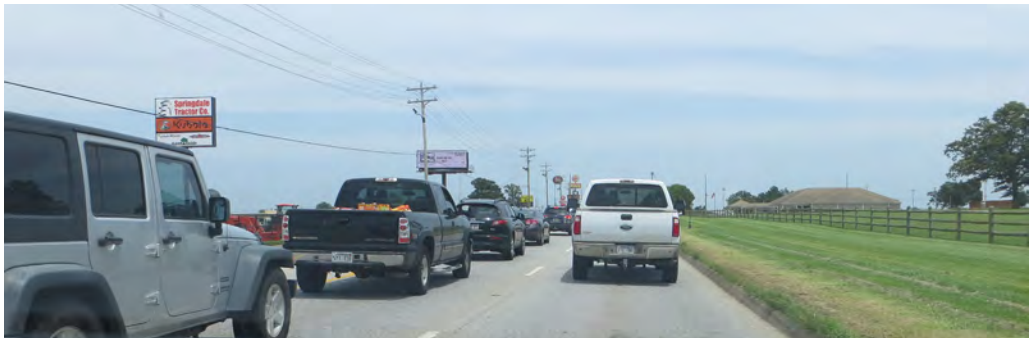
The CMP is intended to serve as a systematic process that provides for safe and effective integrated management and operation of the multimodal transportation system. The process includes:

- Development of congestion management objectives.
- Establishment of measures of multimodal transportation system performance.
- Collection of data and system performance monitoring to define the extent and duration of congestion and determine the causes of congestion.
- Identification of congestion management strategies.

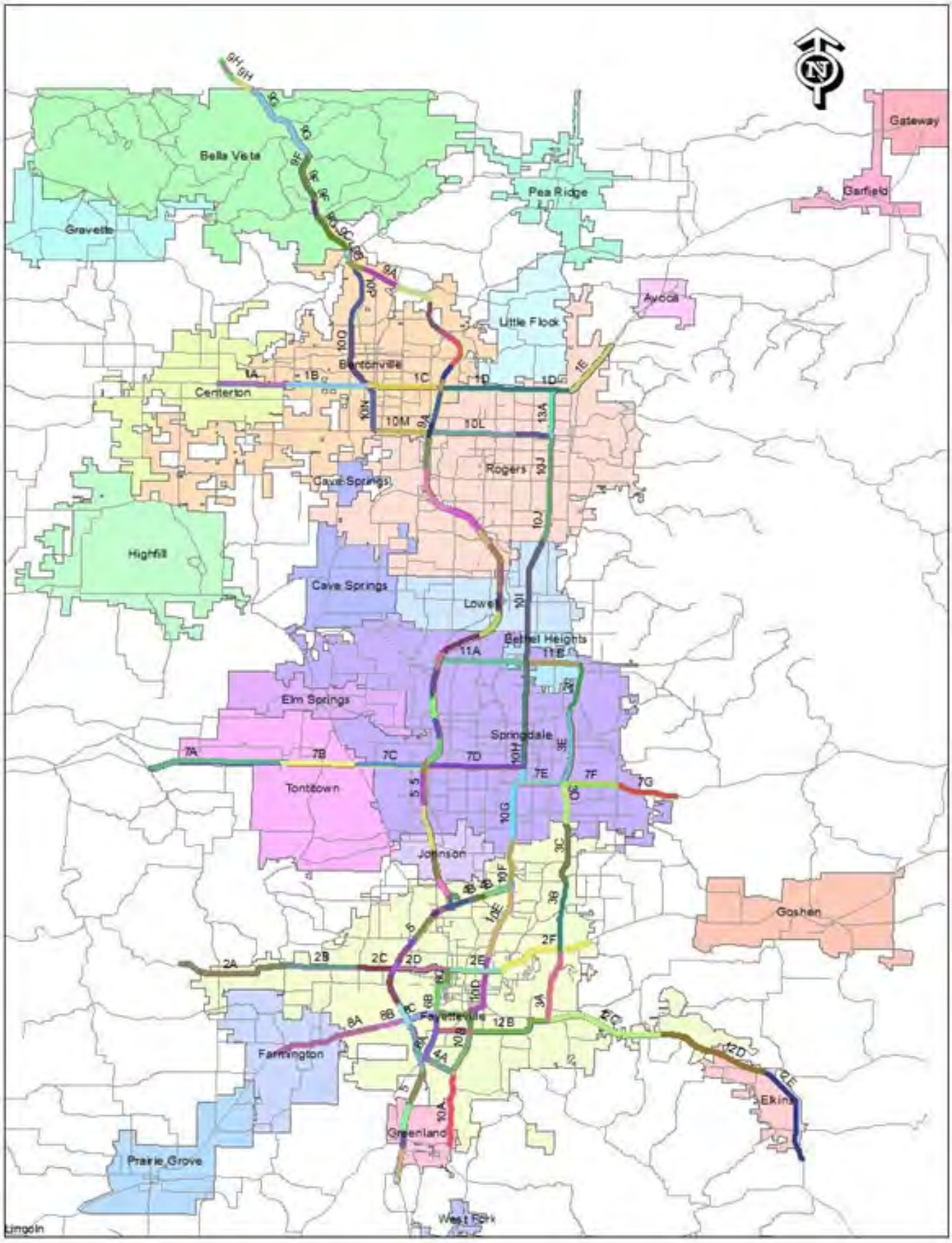
The Northwest Arkansas CMP provides a structure for responding to congestion in a consistent, coordinated fashion by responding to congestion through a process that involves developing congestion management objectives, developing performance measures to support these objectives, collecting data, analyzing problems, identifying solutions, and evaluating the effectiveness of implemented strategies.

The goal of the CMP is to ensure optimal performance of the transportation system by identifying congested areas and related transportation deficiencies.

The CMP network includes 224.5 centerline miles of roadway spread over 13 different roadways divided into 234 directional links bound by a traffic signal, stop sign, or major cross street. Of the 242 directional miles studied in the morning peak and afternoon peak periods, it was determined to classify the top 15 percent of the segments as congested including both the results of the AM and PM periods. The AM period was defined from 7:00-9:00 AM, while the PM period was defined from 4:30-6:30 PM. Map 8.2 shows the 2015 CMP Network.



Hwy. 412 (Sunset Ave)



Map 8.2 - 2015 CMP Network

CONGESTION PERFORMANCE MEASURES

The purpose of the CMP Study was to identify and quantify problem areas in the region using 2013 private sector travel speed data and AHTD volume data. Private sector 2013 travel speed data was procured for the region which covered the National Highway System (NHS) and arterial network in the urbanized area. Through the use of private sector travel speed data, various performance measures were calculated.

NWARPC has introduced the use of congestion index (CI) as one element of performance in the CMP. This performance measure allows easy comparison of the efficiency of roadways as a ratio of average travel speed to the posted speed limit. The second measure is volume delay per mile. This performance measure calculates the delay or amount of time drivers wait as compared to traveling at the posted speed. Also, by multiplying it by the link volume, the overall impact of the delay can be measured. CI is purely a measure of delay time, but does not relate the number of cars in the delay. In many cases the minor or secondary roads are high on the CI ranking but rank lower on the volume delay because fewer vehicles and people are affected on these secondary roads. The CMP segments vary in length across the board between those on arterials and freeways. In order to standardize the results and allow direct comparison across the network, the volume-delay results were divided by the length. This measure provides a result with the units of vehicle hours of delay per mile, thus allowing a more direct comparison between segments. As a result, the preferred performance measure was determined and used to identify the operating results of each link of the CMP network.

Congestion Index (CI)	**Actual Average Speed / Weighted Average Posted Speed Limit**
Actual Average Speed	**Average speed of all INRIX data on the segment**
Weighted Average Posted Speed Limit	**Average of all posted speed limits on the segment weighted by length**
Volume Delay (VD/mile)	**Delay X Segment Volume / Segment Length**

Based on the local conditions in the region, attention was focused on the peak periods. The duration of congestion and other performance measures were not as much of a concern with the short peaking of congestion within the region. This also is applicable in most areas of the region to performance measures based on volume. There are a few areas within the region where capacity is an issue, but most delay occurs at the node level and is not a link problem. Because volume is measured mid-block and does not consider the operations of the nodes (intersections), attention is being focused at the location where the MPO can get the most benefit.

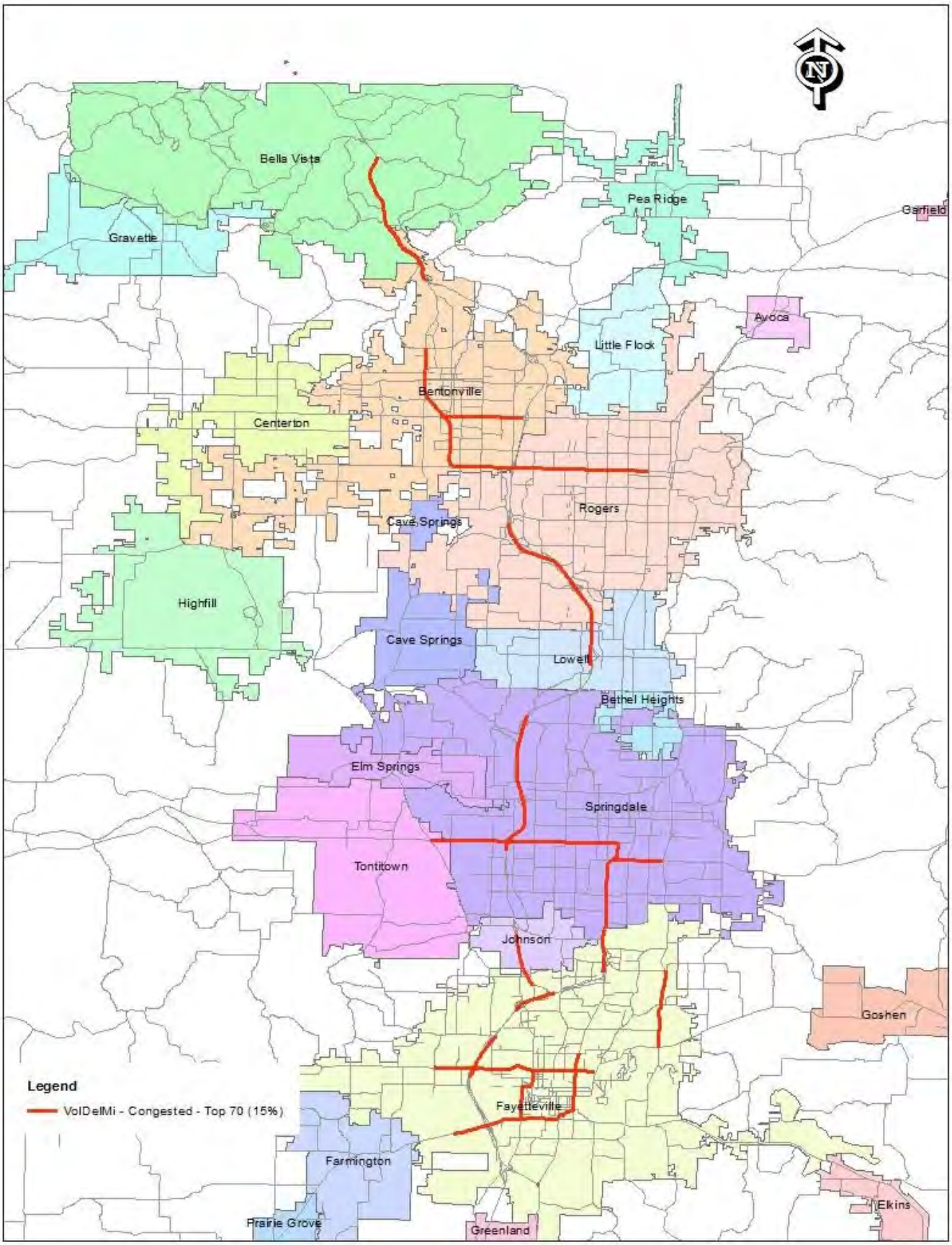
The primary performance measure is volume delay per mile. In order to narrow the focus on those roadway segments that need attention and commonly have recurring delay, the results were tabulated and the highest 15 percent of the network was categorized as congested. Over time, with future updates, the region will be able to revisit these thresholds and adjust as desired. FHWA encourages flexibility with the process and customization of the methodology and performance measures to respond to the local and regional objectives.

The region can also consider adding other performance measures in future updates that are multi-modal based that reflect the accessibility of transit, bike, and pedestrian facilities. This can be as direct on the regional level as the percent of jobs or households within ¼ mile of transit. This will serve as an indicator of the accessibility to transit and should have some correlation to the ridership.

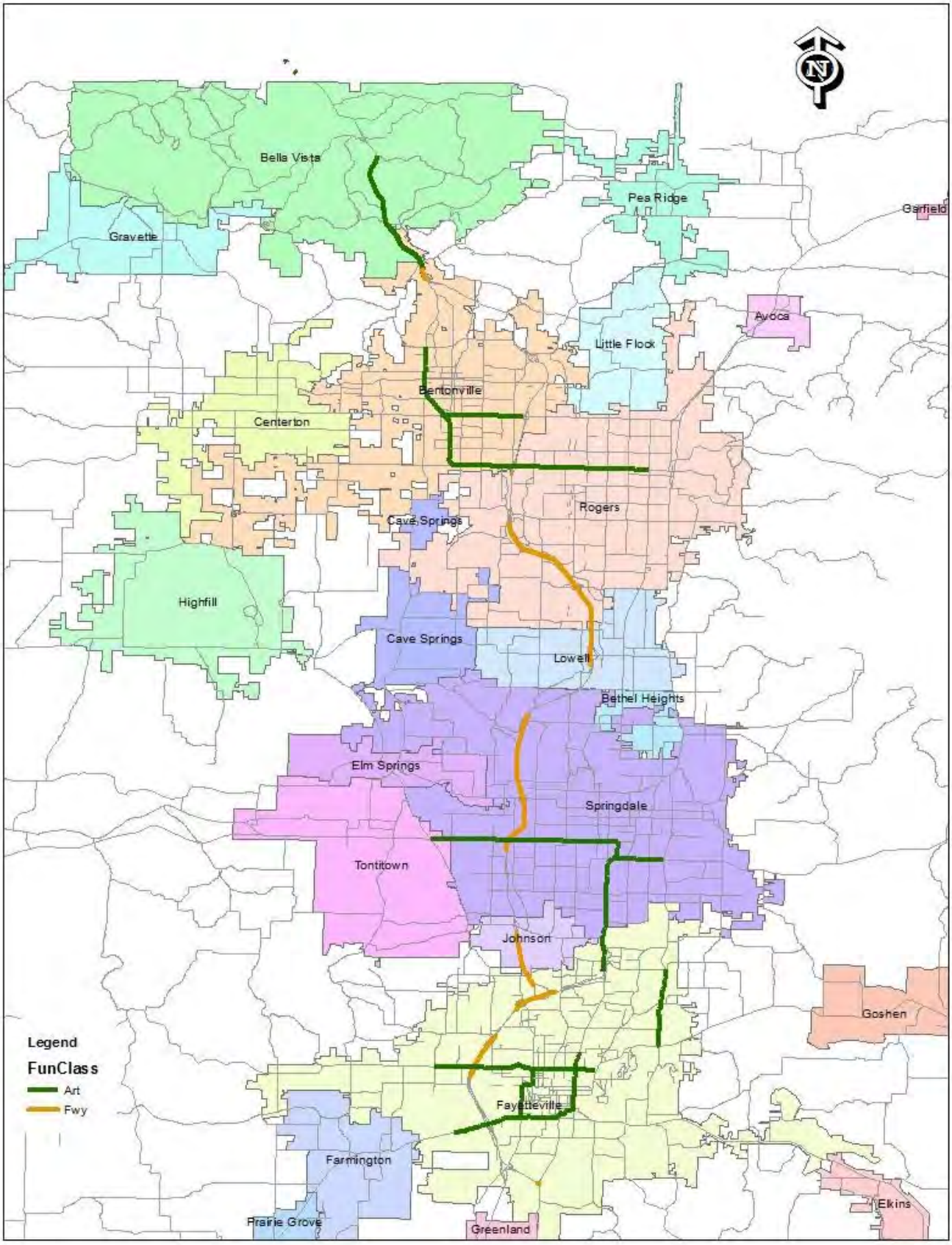
Table 8.1 and Maps 8.3 and 8.4 show the Top 20 congested segments in CMP Study based on the volume-delay per mile performance measure for both the AM and PM peak period. This results in some segments being classified as “congested” for both periods.

Top 20 Rank (Art/Fwy)	SegmentId	Route	Segment Name	Time Period	Func Class	City	Length (mi)	Weighted Avg Speed Limit	Congestion Index	Volume Delay per Mile
1	9E	Hwy 71 - SB	Mercy Way to Riorden Rd	AM	Art	Bella Vista	1.61	45.0	0.51	194.2
2	9C	Hwy 71 - SB	Peach Orchard Rd to Mercy Way	AM	Art	Bella Vista	1.34	45.0	0.49	168.1
3	2E	North St - EB	Oakland Ave to Hwy 45	PM	Art	Fayetteville	1.37	26.4	0.38	155.0
4	5389030	I-49 - SB	South of Fullbright	PM	Fwy	Fayetteville	0.27	60.0	0.68	123.3
5	2E	North St - EB	Oakland Ave to Hwy 45	AM	Art	Fayetteville	1.37	26.4	0.45	106.4
6	5369443	I-49 SB	Short segment at on-ramp from Walnut	PM	Fwy	Rogers	0.21	70.0	0.44	103.4
7	10M	Hwy 71B - EB	I-49 to Rainbow Rd	PM	Art	Bentonville	1.34	45.0	0.46	79.2
8	5369443	I-49 SB	Short segment at on-ramp from Walnut	AM	Fwy	Rogers	0.21	70.0	0.48	73.1
9	2C	Hwy 16 - EB	Rupple Rd to Futtrall	PM	Art	Fayetteville	1.07	43.9	0.48	70.1
10	2C	Hwy 16 - WB	Rupple Rd to Futtrall	PM	Art	Fayetteville	1.07	43.9	0.48	69.7
11	5389031	I-49 - SB	West of Hwy 112	PM	Fwy	Fayetteville	0.25	60.0	0.65	67.2
12	5369409	I-49 - NB	South of Walton on-ramp	PM	Fwy	Bentonville	0.34	54.4	0.47	66.6
13	10M	Hwy 71B - Walton Blvd - WB	I-49 to Rainbow Rd	PM	Art	Bentonville	1.34	45.0	0.50	65.7
14	9C	Hwy 71 - NB	Peach Orchard Rd to Mercy Way	PM	Art	Bella Vista	1.34	45.0	0.71	60.9
15	5402368	Hwy 71 - SB	North CMP limits	PM	Art	Missouri	0.06	45.0	0.40	58.5
16	10F	Hwy 71B - NB	Shiloh to Tyson Pkwy	PM	Art	Springdale	1.70	43.3	0.55	55.4
17	5389276	I-49 - NB	North of Hwy 412	AM	Fwy	Springdale	0.54	70.0	0.67	53.6
18	5402369	Hwy 71 - NB	North CMP limits	PM	Art	Missouri	0.06	45.0	0.42	52.7
19	5389139	Fullbright - WB	Within I-49 interchange	PM	Fwy	Fayetteville	0.61	60.0	0.71	51.6
20	5389081	I-49 - NB	South of Fullbright interchange	AM	Fwy	Fayetteville	0.43	63.5	0.73	51.0

Table 8.1 - Top 20 Congested Segments in the CMP Study



Map 8.3 - Congested Road Segments

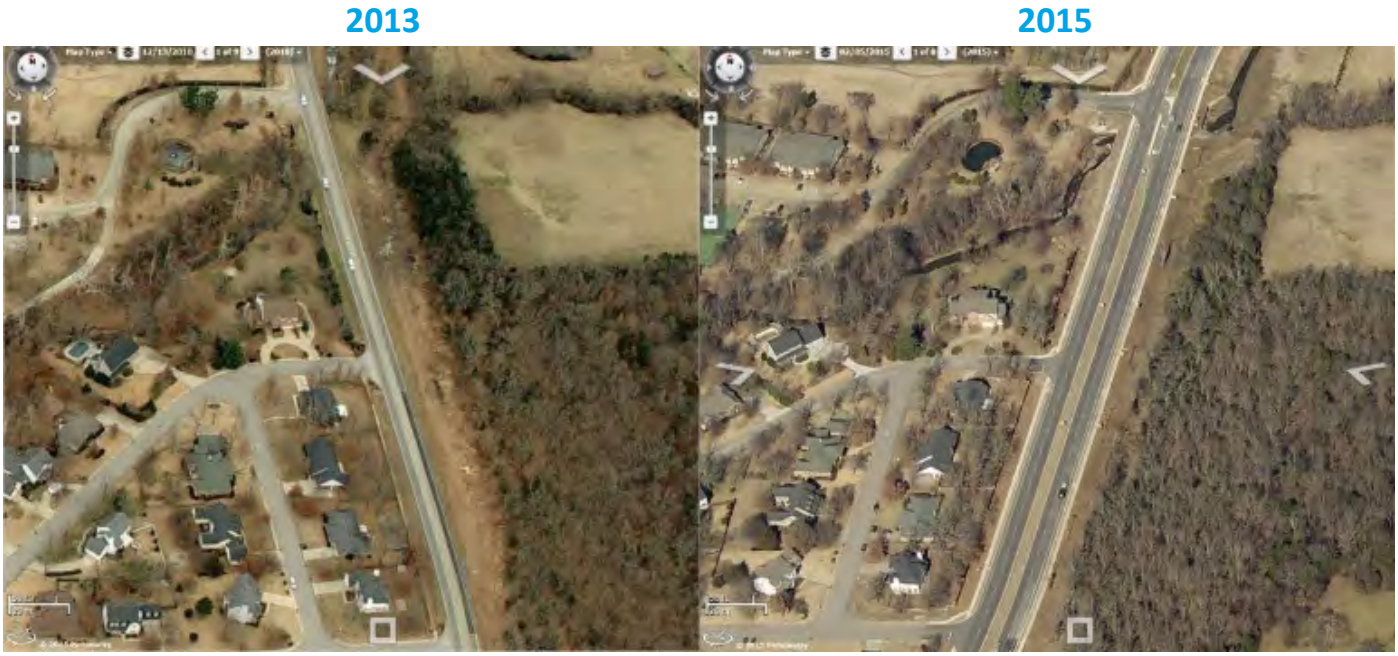


Map 8.4 - Congested Road Segments by Functional Class

CONGESTION MANAGEMENT STRATEGIES

Access Management

Access management is accomplished in a variety of ways such as managing the design of access points, the location of access points, the number of access points allowed within a given distance (access density), and the roadway median treatment. Generally, the number of access points is minimized and regularly spaced from each other so that conflict points are separated.



Highway 265 Access Management Plan – 3-lane Undivided to 4-lane Divided Median Boulevard, Bike Lanes, and Sidewalks

Signal Timing

Signal timing improvements are a relatively inexpensive way to make significant improvements on a transportation network. Improved signal timing can decrease delay by appropriately allocating green time among competing phases. This allows more traffic to pass through the signal with less delay. By adjusting cycle lengths and offsets, drivers can travel longer distances along a corridor before having to stop for a red light. This decreases travel time and improves air quality. Both signal timing optimization and traffic signal progression are low cost improvements to make the best use of existing capacity and optimize allocation of funding. The cost for a signal timing improvement project varies depending on the number of traffic signals, the controller capabilities, the location of the traffic signals and adjacent signals, the number of timing plans required, and implementation and fine-tuning needs. Adaptive signal control as has been implemented along Hwy. 71B in Springdale and Rogers and Hwy. 62 in Rogers and will be more expensive per intersection than just occasional signal optimization, but depending on the application, may be cost effective in the long run.

Signal timing is an area that deserves attention within the region to allow maximum efficiency of the existing system before costly widening to add capacity. The results will be very evident as has been demonstrated previously with localized projects. A regional perspective would produce consistent travel time runs even when crossing from one city/agency to another.

As transportation funding continues to be limited, operations are being highlighted by many regions across the country. It has been clearly proven locally and nationally that operational improvements provide the highest benefit/cost ratio and on a regional scale as compared to local capacity projects that benefit a smaller portion of the area.

Data collection, development of a model for each desired timing plan, signal timing optimization, and implementation can be accomplished along a corridor for around $3,000 per intersection (not including any necessary hardware in the signal cabinet).

The methods will vary as to how to accomplish the desired results depending on the signal hardware currently in place and the expansion capabilities. It can be as simple as installing a GPS clock at each intersection ($500) to synchronizing the controller clocks, to more advanced systems where each intersection needs vehicle detection ($15,000) and wireless communications ($2,500) between signals. Either way, the benefit/cost ratio of this type of work is unmatched in today's funding environment.

Intersection and Interchange Geometrics and Control

Adding signals or roundabouts, when warranted, may be an improvement at all-way stop intersections or intersections with heavy major-street and cross-street traffic. This reduces delay for previously stop-controlled movements but may increase delay for movements that were not controlled. As traffic volumes increase, traffic signals or other types of intersection design such as roundabouts or continuous flow intersections should be considered to efficiently move traffic. Local intersection improvements also can result in big reductions in delays through bottleneck mitigation. Local improvements include geometric changes related to increased queue storage to channelized right turns and overlapping signal phases.

Fulbright Expressway - Northhills Boulevard - Futrall Drive Roundabout

2010 2015

Fayetteville Flyover/Fulbright Expressway

Incident Management

Non-reoccurring congestion based on traffic incidents (crashes) can account for up to 25 percent as the source of congestion. Incident management plays a large roll in reducing delays and secondary incidents. By identifying incidents early and having quick responses from tow trucks available in close proximity that may be stationed or roving, clearing of incidents helps traffic return to normal operations as quick as possible.

Safety Projects – Roadway Departures, Grade Separated Bicycle and Pedestrian Crossings

Safety projects reduce crash rates and the severity of crashes. The region should continue to deploy rumble strips as needed, cable median barriers, enhanced signing at curves and high friction pavements to reduce crash rates on the CMP network. Additionally, two Razorback Regional Greenway trail crossings have been grade separated (MLK/Hwy 180, and S. Walton Blvd./Hwy. 71B) on the CMP network which improves the safety and reliability of both systems.

2010 2015

I-49 Cable Median Barrier Project, Springdale, AR

AHTD is installing approximately 600 miles of cable barrier installations statewide. Within the MPA, AHTD has installed approximately 46 miles of cable barrier with 24 miles of cable barriers along I-49 between Fayetteville and Bentonville (Table 8.2). The safety project was completed in 2012 between Fayetteville and Rogers. AHTD reported that from 2007 to 2011, before the cable barriers were installed, there were 17 serious median crossover crashes that resulted in 10 fatalities along I-49, an average of two fatalities per year. In areas where I-49 is being widened, a concrete barrier wall will preplace the cable median barrier.

Jobs Completed/Under construction/Programmed

County	Location	Length	Total Length
Benton	Hwy 71, Section 190, LM 0 - 5.5	5.5	25.97
	Hwy 412, Section 010, LM 4.83 - 13.64	8.81	
	I-49, Section 050, LM 74.19 - 85.85	11.66	
Washington	Hwy 71, Section 160, LM 22.39 - 23.32	0.93	18.54
	Hwy 412, Section 020, LM 0 - 2.49	2.49	
	I-49, Section 040, LM 40.2 - 41.13	0.93	
	I-49, Section 040, LM 60 - 60.56	0.56	
	I-49, Section 040, LM 60.56 - 74.19	13.63	

Table 8.2 - Cable Barrier Jobs

2010 2015

MLK Blvd - Razorback Regional Greenway Pedestrian and Bicycle Underpass

Capacity

Roadway widening is necessary where traffic signal timing and access management are unable to provide enough capacity for heavy traffic volumes. Some segments may improve in the short term with optimized signal timing, but may ultimately warrant additional capacity through widening. Widening could include adding a through lane for a long section of road, or providing turn lanes at intersections. Capacity improvements on I-49 (widening) and designing urban interchanges to accommodate anticipated traffic continues to be a priority for the region.

Don Tyson Parkway Interchange/I-49

TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM (also known as Mobility Management) is a general term for various strategies that increase transportation system efficiency. TDM treats mobility as a means to an end, rather than an end in itself, and so helps individuals and communities meet their transport needs in the most efficient way, which often reduces total vehicle traffic. TDM prioritizes travel based on the value and costs of each trip, giving higher value trips and lower cost modes priority over lower value, higher cost travel, when doing so increases overall system efficiency. It emphasizes the movement of people and goods, rather than motor vehicles, and so gives priority to public transit, ridesharing and non-motorized travel, particularly under congested urban conditions.

There are many different TDM strategies with a variety of transportation impacts. Some improve the transportation options available to consumers. Some cause changes in trip scheduling, route, destination or mode. Others reduce the need for physical travel through more efficient land use, or transportation substitutes such as telecommuting. TDM is an increasingly common response to transport problems. Although most individual TDM strategies only affect a small portion of total travel, the cumulative impacts of a comprehensive TDM program can be significant.

TRANSIT ORIENTED DEVELOPMENT (TOD)

Urban designers and planners who advocate more infill and compact development suggest TOD as one alternative. TOD is compact, walkable development occurring within one-half mile of a transit stop. In general, transit oriented developments include a mix of uses, such as housing, shopping, employment, and recreational facilities within a design that puts a high priority on accommodating transit, pedestrians and bicycles. Besides providing direct access to transit, transit oriented developments can offer a variety of destinations close to one another, making it possible to move around without exclusive reliance on a car. If possible, transit oriented developments should incorporate an attractive public area —for example, streets with trees, furniture, and plazas—to encourage pedestrian activity.

Opportunities for TOD in Northwest Arkansas may include downtown locations in large and small cities. Also, locations near major freeways, such as I-49, might be adaptable to TODs should bus rapid transit become available.

Proponents of TOD maintain that people living within walking distance of public transit can reduce their transportation costs considerably by becoming a one-car family and driving less.

Dickson Street in Fayetteville

Lower transportation costs, according to TOD advocates, can offset the higher housing costs of living in an urban neighborhood. Urban neighborhoods tend to have high housing costs but lower transportation costs. Current mortgage assessments only consider housing costs and treats automobile ownership as a financial asset rather than a liability, encouraging homebuyers to choose automobile-dependent locations. Higher density, location-efficient development creates a more neutral housing market.

Even though there may be many benefits with TOD, there are also many obstacles to their development. Neighborhood groups usually oppose high-density developments that might attract more traffic. Local development codes around transit stations usually favors low-density, auto-oriented uses. Mixed-use, higher density projects with reduced amounts of parking (such as in TOD) can significantly increase risks for developers and financers. TOD can be more costly, and can be subject to more regulations and more complex local approval processes, as compared to conventional automobile oriented development. Lenders typically have concerns about financing mixed-use projects or those with lower parking ratios as with TOD.

Given the listed potential advantages of TOD and the possible funding sources the region should consider how such developments might be encouraged in Northwest Arkansas.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

ITS is the application of advanced sensor, computer, electronics, and communication technologies and management strategies—in an integrated manner—to improve the safety and efficiency of the surface transportation system.

ITS covers a broad range of wireless and wireline communications-based information, control and electronics technologies. When integrated into the transportation system infrastructure, and in vehicles themselves, these technologies help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers, enhance productivity, and save lives, time and money. Intelligent Transportation Systems provide the tools for transportation professionals to collect, analyze, and archive data about the performance of the system during the hours of peak use. Having this data enhances traffic operators' ability to respond to incidents, adverse weather or other capacity constricting events.

Examples of Intelligent Transportations Systems include:

Advanced Traveler Information Systems deliver data directly to travelers, empowering them to make better choices about alternate routes or modes of transportation. When archived, this historical data provides transportation planners with accurate travel pattern information, optimizing the transportation planning process.

Advanced Traffic Management Systems employ a variety of relatively inexpensive detectors, cameras, and communication systems to monitor traffic, optimize signal timings on major arterials, and control the flow of traffic.

Incident Management Systems, for their part, provide traffic operators with the tools to allow quick and efficient response to accidents, hazardous spills, and other emergencies. Redundant communications systems link data collection points, transportation operations centers, and travel information portals into an integrated network that can be operated efficiently and "intelligently."

ITS Regional Architecture Development

The FHWA issued a final rule to implement Section 5206(e) of the Transportation Equity Act for the 21st Century (TEA-21) in January 2001. This final rule requires that ITS projects funded through the Highway Trust Fund conform to the National ITS Architecture and applicable standards.

To meet these requirements and ensure future Federal funding eligibility for ITS, NWARPC in conjunction with the AHTD initiated the development of a Regional ITS Architecture and Deployment Plan. The Regional ITS Architecture provides a framework for ITS systems, services, integration, and interoperability, and the Regional ITS Deployment Plan identifies specific projects and timeframes for ITS implementation to support the vision developed by stakeholders in the Architecture.

The NWARPC in conjunction with local stakeholders and the consulting firm Kimley Horn developed the Regional ITS Architecture and Deployment Plan in 2006 and 2007. A kick off meeting was held on September 14, 2006 and numerous meetings and workshops followed. The final ITS Regional Architecture and Deployment Plan was presented to the TAC and RPC Policy Committee on April 26, 2007. A process was initiated to amend the Architecture and Deployment Plan into the 2030 Northwest Arkansas Regional Transportation Plan. The TAC and Policy Committee met on May 24, 2007 and voted in favor of the amendment.

Some of the benefits of the Regional ITS Architecture are:

- Allows ITS implementation to be efficiently structured.
- Builds a foundation for explicitly incorporating operations and management into decision-making.
- Encourages stakeholder buy-in.
- Assists in estimating funding needs.
- Serves as a tool for education/regional information exchange.
- Assists in identifying gaps in existing services.

The Regional ITS Architecture and Deployment Plan was evaluated in early 2011 and was retained without any changes as a part of the 2035 Northwest Arkansas Regional Transportation Plan.

A committee was established to evaluate the Regional ITS Architecture and Deployment Plan as a part of the 2040 NWA Metropolitan Transportation Plan update process. The committee met on October 15, 2015 and November 19, 2015. As a result of the work of this committee, the following updates were made to the Regional ITS Architecture and Deployment Plan as it is retained in the 2040 Northwest Arkansas Regional Transportation Plan:

- The Geographic Boundary was expanded to include the part of Missouri that is in the MTP Study Area.
- The ITS Stakeholder List was updated as shown in Tables 8.3A and 8.3B.
- AHTD, the cities, and transit agencies have implemented significant ITS projects in the last five years as shown in the following summary. Since the implementation of ITS technologies is not fully complete in each project category, the Regional Priorities have remained unchanged from the original document.

A brief summary of Regional Priorities from the ITS Deployment Plan:

- Continue municipal and county traffic signal system coordination and signal equipment upgrades.
- Continue pursuit of DMS deployment on I-49.
- Transit agencies will continue implementation of vehicle tracking and traveler information deployments.
- AHTD will continue deployment of the I Drive Arkansas system.

An additional favorable outcome of the Management and Operations Committee was the determination to begin meeting on a regular basis to discuss ITS progress and challenges such as signal coordination between cities and signal preemption issues.

NORTHWEST ARKANSAS ITS ACCOMPLISHMENTS 2010-2015:

Razorback Transit:

- Vehicle AVL System for operational data collection.
- Implemented Electronic Vehicle Inspection and Remote Diagnostics Solution.
- Transit Station and Maintenance Facility Security Cameras.
- Fixed Route Stop Annunciators.
- Implemented Real Time Passenger Information System (Mobile Real Time Route Tracking and Alert Notification).
- Installed Security Cameras in all revenue service vehicles.
- Digital Route Departure Board in Union Station.

Ozark Regional Transit:

- Installation of vehicle AVL.
- Installation of voice annunciator.
- Installation of on-board cameras.
- Installation of facility cameras.
- Installation of fixed route mobile application.
- Installation of web portal.

Bentonville:

- Hired Traffic Engineering Consultants annually to coordinate 22 traffic signals along three main corridors, with TACTICS Central Traffic Management Software.
- Worked with AHTD to coordinate a corridor of three traffic signals that adjoin a TEC coordinated corridor and a neighboring community.
- Worked with AHTD to coordinate a corridor of four signals with TACTICS Central Traffic Management Software using their Traffic Responsive technology.
- Used the server based TACTICS Central Traffic Management Software for reporting, once per second controller status, controller database management, coordination control, traffic responsive, diagnose and correct malfunctions remotely. TACTICS sends instant messaging to the technicians on major malfunctions and power outages for quicker response.
- GPS Emergency Vehicle Preemption installed in 38 traffic signals, the full fleet of 25 Fire Department vehicles and one Transportation Department vehicle.
- The server based Opticom Central Management Software is used for monitoring, maintaining, data logging,

reporting, diagnosing and troubleshooting all preemption equipment remotely.

- Battery Backup Systems installed at all traffic signal locations. This BBS will operate on battery power for a minimum of eight hours.
- Use fiber communication with one Gbit Ethernet throughout City traffic signals with over four miles of fiber installed and maintain over 215 pieces of equipment with an IP Address.
- Have 33 traffic signals with 200 video feeds for live video and recording over the fiber communications and used in the Traffic Management Center, with Video Management Software. The video wall has eight large format monitors for displaying live or recorded video.
- Assist the Police Department with the Video Management Software recording cameras for a large variety of Police matters.
- Assist the City Planning Department with collecting and compiling traffic count data from the video detection software.

Rogers:

- The City of Rogers implemented adaptive signal technology on approximately one-third of its signal network and has installed radio communication equipment in approximately one-half of its signal network.

Fayetteville:

- Expanding/upgrading the wireless communication system to 100 traffic signals to an IP based network. Currently 58 percent are updated and all new construction meets those requirements. All signals are connected to the central office.
- Approximately 36 percent of the City's signals are involved in coordination systems at various times of the day. There are nine subsystems on five arterial corridors. All are by time-based coordination settings.

Springdale:

- Has adaptive signal technology on 18 intersections which is approximately 25 percent of their signals.
- Added wireless communications to 31 intersections and have fiber to 10 intersections, and over 50 percent of City intersections have high speed communications.

Arkansas Highway and Transportation Department:

- Implemented the I Drive Arkansas system.

Tables 8.3A and Table 8.3B include the Northwest Arkansas Stakeholder Agencies and Contacts:

Hwy. 12 Regional Airport Intersection

Stakeholder Agency	Address	Contact	Phone
Arkansas Highway Patrol	P.O. Box 6633 Springdale, AR 72766	Capt. Lance King	479-751-6663
AHTD District 4	PO Box 1424 Ft. Smith, AR 72901	Chad Adams	479-646-5501
AHTD District 9	P.O. Box 610 Harrison, AR 72601	Mitchell Archer	870-743-2100
AHTD Transportation Planning & Policy Div.	10324 Interstate 30 Little Rock, AR 72209	Paul Simms	501-569-2100
Benton County	1206 SW 14th Street Bentonville, AR 72712	Bob Clinard	479-271-1000
Benton County	215 East Central Avenue Bentonville, AR 72712	John Sudduth	479-871-1096
Benton County Public Safety	215 East Central Avenue Bentonville, AR 72712	Marshal Watson	479-271-1004
Benton County Roads	1206 SW 14th Street Bentonville, AR 72712	Jeff Clark	479-271-1053
Benton County Sheriff's Office	1300 SW 14th Street Bentonville, AR 72712	Shawn Holloway	479-271-1008
City of Bentonville	305 Southwest A Street Bentonville, AR 72712	Brian Bahr	479-271-5997
City of Bentonville	117 West Central Bentonville, AR 72712	Mike Churchwell	479-271-6840
City of Bentonville	117 West Central Bentonville, AR 72712	Bob McCaslin	479-271-5966
City of Bentonville Fire Department	211 S.W "A" Street Bentonville, AR 72712	Brent Boydston	479-2713151
City of Bentonville Police Department	908 SE 14th Street Bentonville, AR 72712	Jon Simpson	479-271-3170
City of Fayetteville	113 West Mountain Fayetteville, AR 72701	Brad Anderson	479-575-8376
City of Fayetteville Fire Department	303 W. Center St. Fayetteville, AR 72701	Brian Sloat	479-575-8365
City of Fayetteville Police Department	100-A West Rock Street Fayetteville, AR 72701	Greg Tabor	479-587-3555
City of Fayetteville School District	PO Box 849 Fayetteville, AR 72702	Tommy K. Davenport	479-444-3095
City of Lowell	PO Box 979 Lowell, AR 72745	Eldon Long	479-770-2185
City of Lowell	PO Box 979 Lowell, AR 72745	Kris Sullivan	479-770-2185
City of Pea Ridge	PO Box 10 Pea Ridge, AR 72751	Jackie Crabtree	479-451-1100
City of Prairie Grove	PO Box 1275 Prairie Grove, AR 72753	Sonny Hudson	479-846-2961
City of Rogers	301 West Chestnut Rogers, AR 72756	Nathan Becknell	479-621-1186
City of Rogers Police Department	1905 South Dixieland Rogers, AR 72758	Hayes Minor	479-636-4141
City of Rogers Street Department	3101 West Oak Street Rogers, AR 72758	Frankie Guyll	479-621-1140
City of Siloam Springs Planning Department	P.O. Box 80 Siloam Springs, AR 72761	Ben Rhoads	479-238-0932
City of Siloam Springs Engineering Department	P.O. Box 80 Siloam Springs, AR 72761	Justin Bland	479-238-0927

Table 8.3A - NWA Stakeholder Agencies and Contacts

Stakeholder Agency	Address	Contact	Phone
City of Siloam Springs Traffic Department	P.O. Box 80 Siloam Springs, AR 72761	Glen Severn	479-524-3777
City of Springdale Public Works	269 East Randall Wobbe Springdale, AR 72764	Sam Goade	479-750-8135
City of Springdale Police Department	201 N. Spring Street Springdale, AR 72764	Mike Peters	479-751-4542
J. B. Hunt Transport Services, Inc.	615 JB Hunt Corporate Drive Lowell, AR 72745	Greer Woodruff	479-820-0000
Northwest Arkansas Regional Airport	One Airport Boulevard Bentonville, AR 72712	Scott Van-Landingham	479-205-1000
Northwest Arkansas Regional Planning Commission	1311 Clayton Street Springdale, AR 72762	Celia Scott-Silkwood	479-751-7125
Northwest Arkansas Regional Planning Commission	1311 Clayton Street Springdale, AR 72762	Tim Conklin	479-751-7125
Ozark Regional Transit	2423 East Robinson Avenue Springdale, AR 72764	Joel Gardner	479-361-8742
Razorback Transit University of Arkansas	240 Eastern – Bus B Fayetteville, AR 72701	Gary Smith	479-575-3304
University of Arkansas Facilities Management	521 S. Razorback Road Fayetteville, AR 72701	Mike Johnson	479-575-6601
Washington County Road Department	280 North College Av Fayetteville, AR 72701	Charles Ward	479-444-1610
Washington County Department of Emergency Management	2615 Brink Drive, Suite 104 Fayetteville, AR 72701	John Luther	479-444-1722
Washington County Sheriff's Department	1155 Clydesdale Drive Fayetteville, AR 72701	John Moore	479-444-5700
Frontier MPO	P.O. Box 2267 Fort Smith, AR 72901	Dianne Morrison	479-785-2651
HWA Arkansas Division	700 W. Capital Room 3130 Little Rock, AR 72201	Amy Heflin	501-324-6435
Missouri Department of Transportation	3025 E. Kearny Springfield, MO 65803	Frank Miller	417-895-7727

Table 8.3B - NWA Stakeholder Agencies and Contacts

PERFORMANCE MANAGEMENT AND SYSTEM MEASURES

MAP-21/FAST Act established a performance and outcome-based program. NWARPC, AHTD and MoDOT are required to develop plans and programs that help achieve the national goals for (1) Safety, (2) Infrastructure Condition, (3) Congestion Reduction, (4) System Reliability,(5) Freight Movement and Economic Vitality, (6) Environmental Sustainability, and (7) Reduced Project Delivery Delays.

Over the next several years, final rules on performance measures and targets will be published by FHWA and FTA. MoDOT, AHTD, and NWARPC will continue to work together to identify measures and develop systems/ methodologies to implement performance-based transportation planning and programming.

NWARPC 2040 MTP Goals		Potential 2040 MTP System Measures
Preserve and Maintain Infrastructure	Maintain the existing and planned transportation system through ongoing maintenance, rehabilitation, reconstruction, and/or preservation.	Bridge Condition on NHS Pavement Condition on NHS Transit Bus/Fleet Age/Condition
Improve safety	Increase transportation safety for all modes of travel	Serious Injures per VMT Fatalities per VMT Number of Serious Injuries per 100K Pop Number of Fatalities per 100K Pop
Reduce Congestion Improve Reliability	Maximize the capacity and reliability of existing facilities on regionally significant routes and minimize the need for new roadways.	Volume Delay Per Mile on CMP Congestion Index on CMP Travel Time Index on CMP
Improve Regional Mobility	Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region.	Miles of Complete Streets Miles of roadways with Access Management Number of Bike and Pedestrian Catalyst Projects Miles of improved Arterial Network % population served by public transit with 1/4 mile Unlinked Trips per Passenger Mile (Transit, NTD) Unlinked Trips per Revenue Hour (Transit, NTD)
Protect the Environment	To enhance the performance of the transportation system while protecting and enhancing the natural environment.	Number of Jurisdictions with drainage criteria manuals Number of jurisdictions with Karst BMP's Cave Springs Recharge Area

SAFETY

Safety of the transportation system is one of the national goals and a performance measurement area under MAP-21/FAST Act. Safety currently is measured nationally, by individual state, and by county based on data reported to the States and U.S. DOT. Safety performance is generally measured by calculating the fatality and serious injury rates of the system based on vehicle miles of travel (VMT) and 100,000 population.

Travel is measured as vehicle miles of travel (VMT) and is calculated and published each year by AHTD in the Road and Street Mileage Report. This annual calculation is based on the Annual Average Daily Traffic (AATD) counts and mileage of the transportation system (AADT x Length of the roadway system = Vehicle Miles of Travel).

The rate of fatalities is generally expressed as rate per 100,000 population and as 100 million annual vehicle miles of travel (100 million VMT). These rates are generally compared to the U.S., State, and other counties.

NWARPC has provided the fatality and serious injury rates expressed in per 100,000 population and 100 million VMT. The Arkansas portion of the MPA boundary (Benton and Washington County) is calculated as one rate and McDonald County is calculated separately utilizing the Fatality Analysis Reporting System (FARS) and the Arkansas State Police Database.

The rates shown should be viewed as a baseline data for the region in anticipation of future safety performance targets and performance measures as required by the final rule making by FHWA and FTA. NWARPC will work with its planning partners as AHTD, MoDOT, and NWARPC identify and develop safety performance targets and/or performance measures under MAP-21/FAST Act.

Safety Analysis

From 2009–2013, Benton and Washington County, Arkansas averaged 43 fatalities and 318 serious injuries each year. The total number of fatalities has ranged from 49 in 2011 to 33 in 2015.

Year	Fatalities	Rate per 100K
2009	48	394
2010	45	297
2011	49	313
2012	40	269
2013	33	317

Table 8.4 - Benton and Washington County Serious Injury and Fatalities

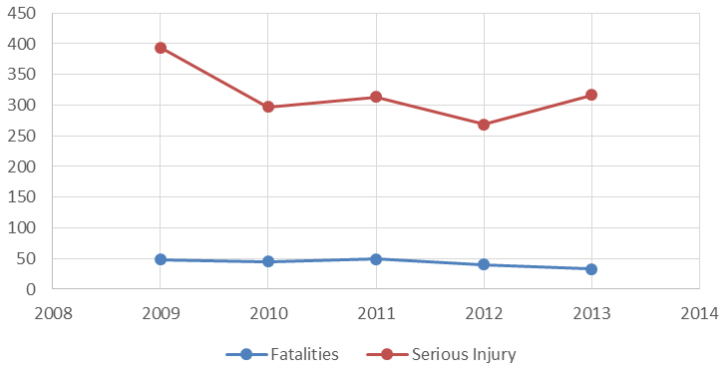


Figure 8.2 - Benton and Washington Counties Fatalities and Serious Injury 2009-2013

2013 Fatalities per 100,000 Population

Benton and Washington County fatal crash rate for 2013 was 7.27 per 100,000. The national rate for 2013 was 10.34 per 100,000 and the rate for Arkansas was 16.32 per 100,000. The last two years have seen a declining rate that is below the national average.

Year	Fatalities	Rate per 100K
2009	48	11.53
2010	45	10.54
2011	49	11.25
2012	40	9.00
2013	33	7.27

Table 8.4 - Benton and Washington Counties Fatalities and Rate per 100,000 Population 2009-2013

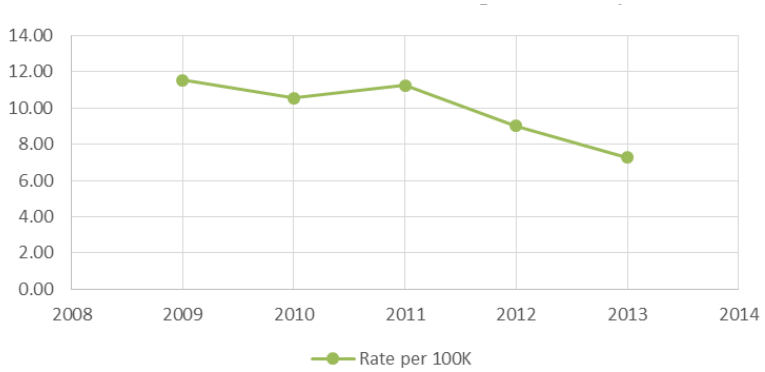


Figure 8.3 - Benton and Washington Counties Fatalities per 100,000 Population 2009-2013

Crash Rate per Vehicle Miles of Travel (VMT)

In 2013, Benton and Washington County fatalities per 100 million vehicles traveled was 0.84 which was below the national and state rate. The Arkansas rate was 1.44 fatalities per 100M VMT and the U.S. rate of 1.09 fatalities per 100M VMT.

Fatalities	Fatalities per 100M VMT		
Year	Benton& Washington Co.	Arkansas	U.S.
2009	1.34	1.8	1.14
2010	1.23	1.7	1.11
2011	1.33	1.67	1.1
2012	1.04	1.67	1.14
2013	0.84	1.44	1.09

Table 8.5 - Benton and Washington Counties, Arkansas and U.S. Fatalities per 100M VMT 2009-2013

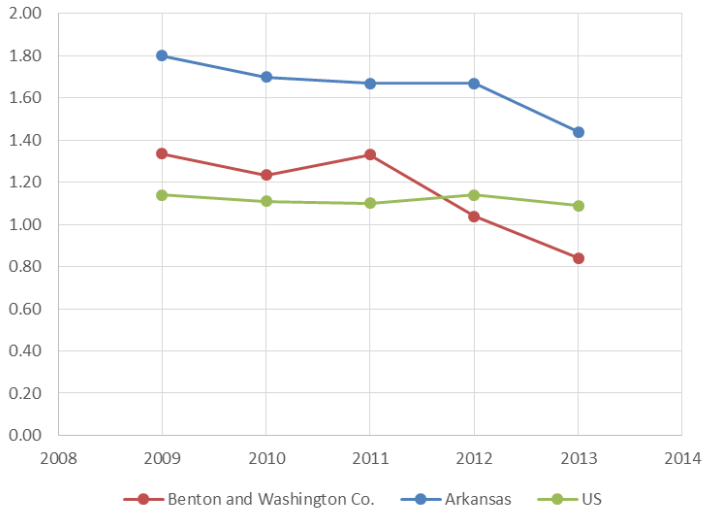


Figure 8.4 - Benton and Washington Counties Fatalities per 100M VMT 2009-2013

Arkansas and U.S. Rates

The Arkansas rates per 100 million VMT and 100K population have declined over the last four years but are still higher than the U.S. rate.

	Fatalities Per 100 Million VMT		Fatalities Per 100,000 Population	
	Arkansas	US	Arkansas	US
2010	1.7	1.11	19.54	10.67
2011	1.67	1.1	18.75	10.42
2012	1.67	1.14	18.99	10.75
2013	1.44	1.09	16.32	10.34

Table 8.6 - Benton and Washington Counties, Arkansas and U.S. Fatalities per 100M VMT, 2010-2013

Bicycle and Pedestrian Safety Analysis

This section reviews data for crashes involving pedestrians and bicyclists in Benton and Washington Counties (2009-2013), as reported by the Arkansas State Police.

There are approximately 75-110 reported crashes annually that have resulted in 245 or more injuries and 27 fatalities over the course of five years. While 2013 saw a dip, bicyclist crashes in particular appear to be trending upwards, perhaps reflecting the fact that bicycling is becoming more common. Additional data on the number of bicycle trips that took place each year would be needed to understand if the crash rate (i.e., crashes per bicycle trip) is going up or down.

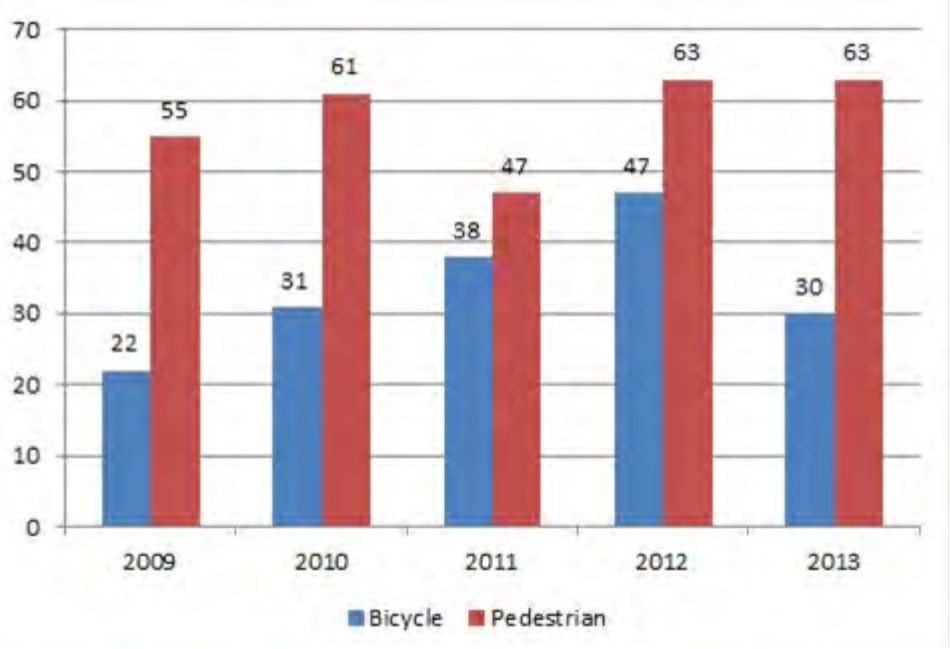


Figure 8.5 - Number of Bicyclist and Pedestrian Crashes (2009-2013) Benton and Washington County

Severity	Bicycle	Pedestrian	Total
Fatal Injury	2	25	27
Incapacitating Injury	14	42	56
Non-Incapacitating Injury	54	109	163
Possible Injury	63	71	111
Non-Injury/Property Damage Only	35	42	77
Grand Total	168	289	457

Table 8.7 - Number and Severity of Bicyclist and Pedestrian Crashes (2009-2013) Benton and Washington County

Opportunities for Improved Crash Data

The crash data provides only limited information to understand the nature of crashes involving pedestrians and bicyclists. Below are three categories that could be improved or added to the data to provide greater clarity and increase the ability to match appropriate countermeasures with particular safety issues:

There may be opportunities to change and increase use of the contributing factor field for collision reports. More than 40 percent of crashes listed the contributing factor as 'none' while over 10 percent listed the factor as 'unknown'. Common contributing factors are 'careless/prohibited driving' and 'failure to yield,' which yield little insight.

Similarly, the pedestrian action/location listed a response of "other" or "N/A" for 32 percent of pedestrian crashes and 65 percent of bicyclist crashes. Regular trainings with police officers can result in a higher response rate to this category for both bicyclist and pedestrian involved crashes.

Bicyclist and pedestrian crash maps

Map 8.5 and Map 8.6 illustrate the location and severity of reported bicyclist and pedestrian crashes in NWA.

These maps illustrate several themes:

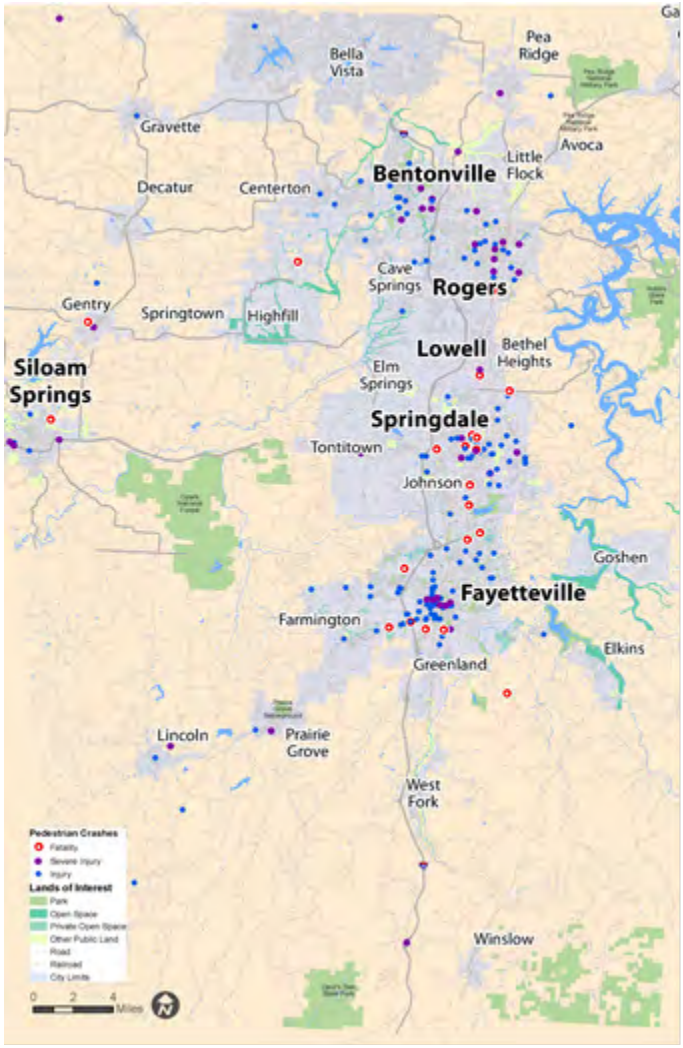
Downtown Centers – Clusters of bicyclist and pedestrian crashes are found in the downtown centers of Rogers, Springdale, and Fayetteville. Within these cities, there are many crashes along higher traffic corridors where bicyclists and pedestrians are likely attempting to access businesses, schools, and connect to residential areas. These higher crash corridors include:

- Walnut St., Dixieland Rd., and 8th St. in Rogers
- Thompson St. and Sunset Ave. in Springdale
- North St., Garland Ave., Razorback Rd., Maple St., Hwy. 71B, and Martin Luther King Jr. Blvd. in Fayetteville

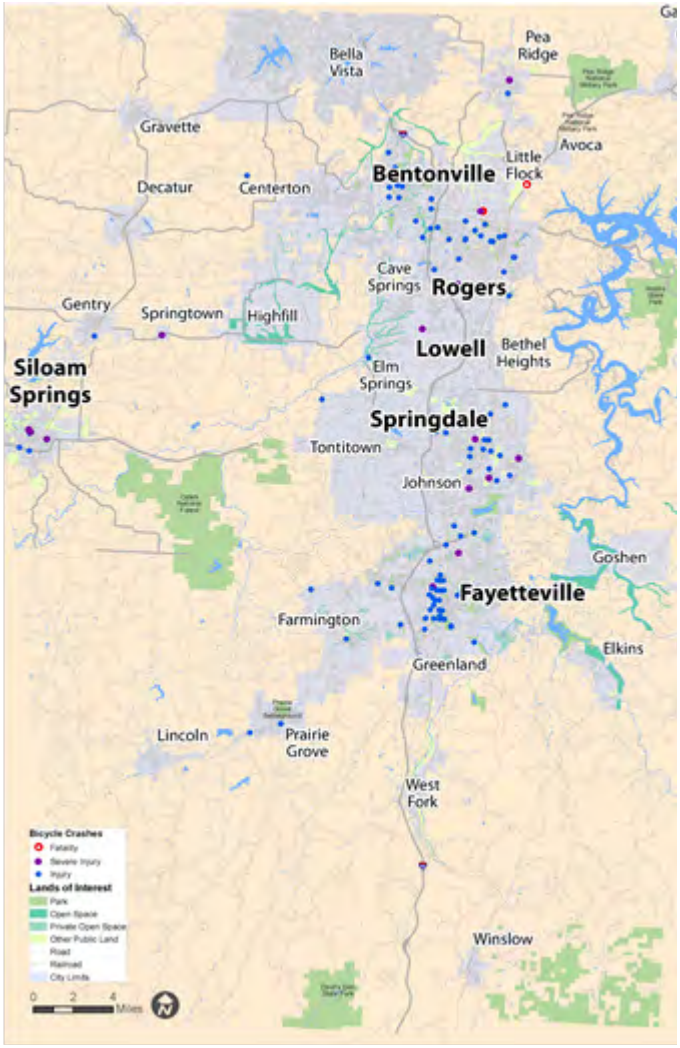
University of Arkansas – Thousands of students from the University of Arkansas, located in downtown Fayetteville, walk and bike to campus daily. The crash data highlights several corridors through campus where conflicts occur, with Garland Ave., Razorback Rd., Dickson St., Maple St., and Martin Luther King Blvd. each experiencing multiple crashes.

Arterial corridors – Northwest Arkansas has many wide, high traffic roads that are difficult to walk or bike along and which also serve as barriers that inhibit connectivity between adjacent areas that are more comfortable for walking and biking.

Several of these corridors have experienced multiple reported crashes, including Highways 71, 112, 62, and 412.



Map 8.5 - Pedestrian Crash Locations in NWA by Severity (2009-2013)



Map 8.6 - Bicyclist Crash Locations in NWA by Severity (2009-2013)

Statewide Safety Plans

State highway system safety is addressed through the Arkansas Strategic Highway Safety Plan – 2013 (AHTD) and the Arkansas Highway Safety Office (Arkansas State Police). Both plans have goals, performance measures, and specific strategies to reduce the number of fatalities and serious injuries rates on the state highway system.

Arkansas Strategic Highway Safety Plan's focus is "Toward Zero Deaths." This goal supports the national goal of a "Toward Zero Death" strategy. The 2013 plan is organized into primary, secondary and special emphasis areas with a focus on specific engineering, education, enforcement, and emergency services strategies to reduce the rate of fatalities and serious injuries.

The Arkansas State Police-Arkansas Highway Safety Office "coordinates a statewide behavioral highway safety program making effective use of federal and state highway safety funds and other resources to save lives and reduce injuries on the State's roads."

Primary Emphasis Areas	Secondary Emphasis Area
Roadway Departure	Pedestrians
Intersections	Bicyclists
Impaired Driving	Older Drivers
Aggressive Driving	Drowsy Driving
Distracted Driving	Large Commercial Vehicles
Younger Drivers	Work Zones
Safety Restraints	Railroad Crossings
Motorcycles	Emergency Services Capabilities
	Traffic Data Systems
	Safety Management System

The annual Highway Safety Plan is prepared by the Highway Safety Office and includes safety goals, objectives and recommended projects each year. The plan outlines the goal of reducing fatalities by "identifying driver behaviors that cause fatal crashes and targeting problem areas where fatal crashes occur." The plan has focused in areas of impaired driving, occupant protection and speed issues.

CHAPTER 9. TRANSPORTATION PROJECTS AND FUNDING

INTRODUCTION

The 2040 Proposed Network and the Constrained and Unconstrained Road Project Lists represent potential roadway and highway improvements in the region. The individual cities and counties also have important projects that will utilize a combination of Federal, State, and local funding. A major component of the 2040 MTP is to take the estimated available funds through the year 2040 and prioritize the potential projects within the limits of the estimated funds. The purpose of developing the Constrained List is to demonstrate fiscal constraint as part of the transportation planning process.

The Constrained List consists of projects that can reasonably be expected to be funded with Federal-aid funds during the 25 year planning period. This is determined by estimates of Federal-aid funds that can reasonably be expected to come to the area given the area's highway network, Urbanized Area, population, etc. These estimates are provided by AHTD and MoDOT and are not limits, nor are they guarantees of funding. They are conservative, reasonable estimates of future funding to guide development of the 2040 MTP. The costs of the transportation projects in the MTP have been adjusted to represent future inflated construction costs at a rate of 4 percent annually.

The Constrained List of projects necessarily starts with the adopted FFY 2016-2020 TIP and STIP which shows the projects that already have Federal, State, and local commitments. The full TIP is included in Appendix D: FFY 2016-2020 Transportation Improvement Program (TIP) and many of the projects are also represented on various figures and maps throughout the chapter.

Note: The FAST Act renames STP and STP-A as Surface Transportation Block Grant Program (STBGP) and Surface Transportation Block Grant Apportionment for Urbanized Areas with Population Greater than 200,000 (STBGP GT 200K).

SUMMARY OF FEDERAL AID PROGRAMS AND FUNDING

AHTD has provided Federal funding estimates for transportation projects in the Metropolitan Planning Area (MPA) . The estimated totals by period (2016-2020, 2021-2030, and 2031-2040) reflect the estimated Federal funds and required matching funds and have been inflated by 3 percent per year to 2040. Federal-aid Programs include:

- National Highway Performance Program (NHPP)
- Surface Transportation Block Group Program (STBGP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Highway Safety Improvement Program (HSIP)
- Railway-Highway Crossings (set-aside from SIP)
- Metropolitan Planning
- Construction of Ferry Boats and Ferry Terminal Facilities
- Transportation Alternatives Program (TAP) - part of STBGP

Public Transportation Programs include:

- Urbanized Area Formula Grants
- Fixed Guideway Capital Investment Grants
- Mobility for Seniors and Individuals with Disabilities
- Formula Grants for Rural Areas
- State of Good Repair Grants
- Bus and Bus Facilities Formula Grants

SUMMARY OF ESTIMATED FUNDS

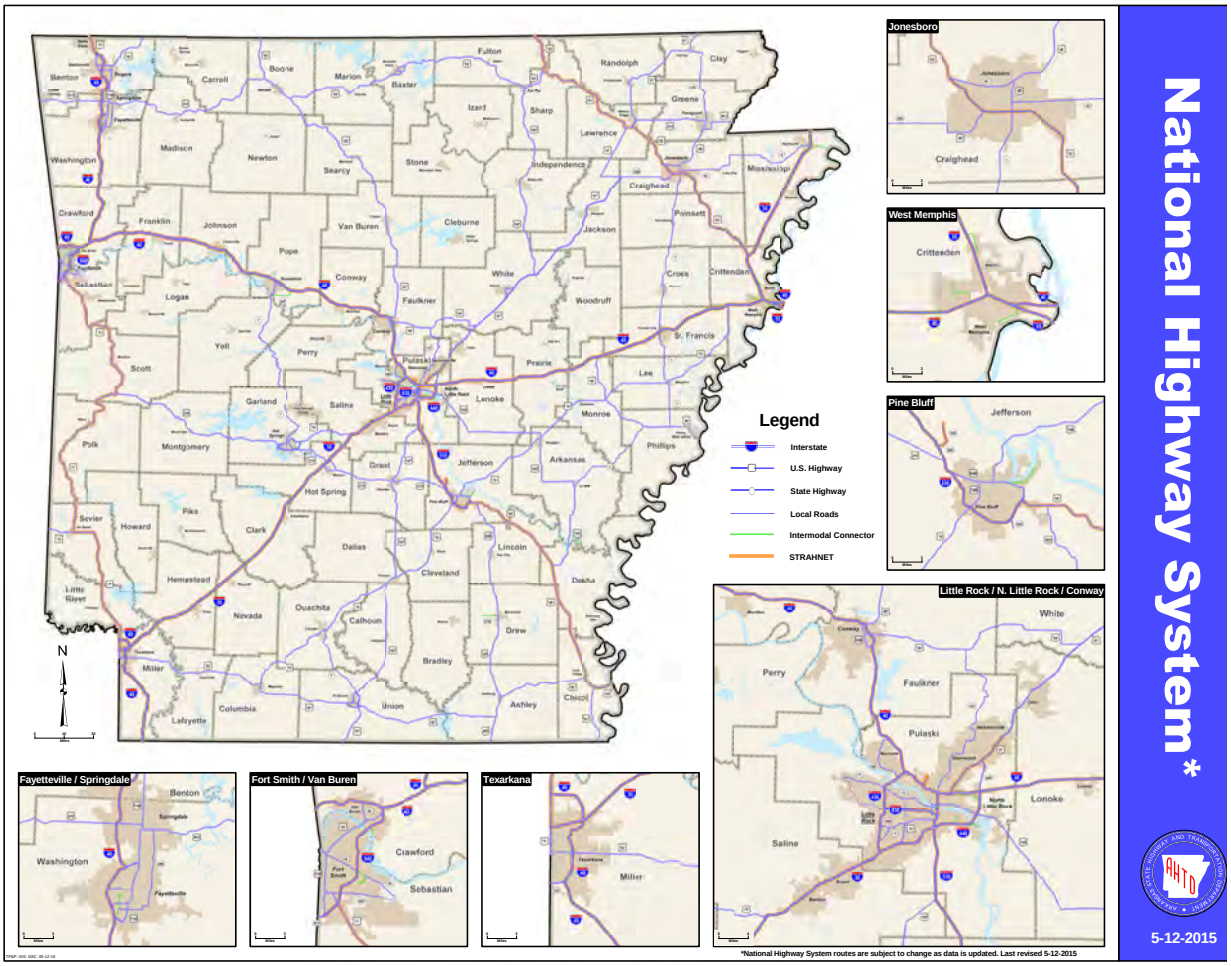
National Highway Performance Program (NHPP):	$ 872.91
Surface Transportation Program (STP):	$ 1,528.51
Highway Safety Improvement Program (HSIP):	$ 141.02
Transportation Alternatives Program (TAP):	$ 54.64
Total	**$2,597.08**
Urbanized Area Formula Program (49 U.S.C 5307):	$ 100.0
Bus and Bus Facilities Program (49 U.S.C. 5339):	$ 8.5
Enhanced Mobility of Seniors and Individuals with Disabilities Program (49 U.S.C. 5310):	$ 6.9
Rural Area Formula Program (49 U.S.C. 5311):	$ 7.5
Total	**$ 122.9**

(Millions of dollars of estimated obligation limitation; Federal plus State/Local Match, at 3 percent inflation/year FHWA and 1 percent per year for FTA transit)

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

The NHPP includes the Interstate System, the Enhanced National System Highway (NHS) principal arterials, and other highways that connect to intermodal transportation facilities. The program provides funding to support the performance and condition of the NHS, new facilities on the NHS, and to direct funding to projects that achieve performance targets as may be established by the AHTD and MoDOT.

The Enhanced NHS in the MPA includes I-49, Hwy. 71, Hwy. 71B, Hwy. 16 (Fayetteville), Hwy. 180 (Fayetteville), Hwy. 412, Hwy. 62 (Rogers-East Benton County), and the Hwy. 112 Spur (Fayetteville).



Map 9.1 National Highway System (NHS) for Arkansas

Under MAP-21/FAST Act, both AHTD and MoDOT are required to develop performance-based asset management plans for preserving and improving the condition of the NHS. Required performance measures and standards include:

- Minimum standards in developing and operating bridge and pavement management systems.
- Performance measures for Interstate and NHS pavement condition, NHS bridge condition, and Interstate and NHS performance.
- Minimum conditions for Interstate pavements.
- Data elements necessary to collect and maintain standardized data to carry out a performance-based approach.

Targets for these measures will be established by AHTD and MoDOT within 1 year of the final rule on National Performance Measures.

The NHPP funding that is apportioned to Arkansas is further allocated by AHTD into the following funding categories: National Highway System, Bridge, and Interstate Maintenance (IM). The estimated funding that will be available within the Metropolitan Planning Area (Arkansas portion) is shown below:

NHPP Estimated Funding (Federal, plus State match, 3 percent inflation/year):

Time Period (FFY)	NHS	Bridge	IM
2016 to 2020	$ 70.1	$2.3	$20.6
2021 to 2030	$175.5	$5.7	$132.7
2031 to 2040	$235.8	$7.7	$201.9
Total	**$481.4**	**$15.7**	**$355.2**

(Millions of dollars of estimated obligation limitation)

SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)

The STBGP provides funding that may be used on a variety of State and local transportation projects to preserve and improve the condition and performance of the transportation system. A portion of the STBGP funds are required to be used on the off-system bridge program.

The Fayetteville-Springdale-Rogers, AR-MO Urbanized Area receives a portion of the STBGP funding as sub-allocated STBGP-GT 200K Attributable (STBGP-GT 200K) funding. Projects are selected through a competitive process and approved by the RPC/Policy Committee.

STBGP Estimated Funding (Federal, plus local match, 3 percent inflation/year):

Time Period (FFY)	STBGP	State Bridge	City Bridge	Inters. Imps.	STBGP -GT 200K
2016 to 2020	$ 156.8	$ 18.7	$ 2.0	$0.3	$44.8
2021 to 2030	$ 392.5	$ 46.8	$ 5.1	$0.7	$112.1
2031 to 2040	$ 527.5	$ 62.8	$ 6.8	$0.9	$150.7
Total	**$1,076.8**	**$128.2**	**$13.9**	**$1.9**	**$307.6**

(Millions of dollars of estimated obligation limitation)

SURFACE TRANSPORTATION BLOCK GRANT APPORTIONMENT FOR URBANIZED AREAS WITH POPULATION GREATER THAN 200,000 (STBGP-GT 200K)

In 2012, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) designated the Fayetteville-Springdale-Rogers, AR-MO Urbanized Area as a Transportation Management Area (TMA). The TMA designation provides STBGP-GT 200K funds to NWARPC based on the 2010 Census Bureau Urbanized Area population of 295,083. STBGP-GT 200K funds can be utilized for all eligible transportation projects at the discretion of the RPC/Policy Committee.

The RPC/Policy Committee has adopted a policy to focus on Projects of Regional Significance. Regional Significance is defined as an improvement to major routes such as north/south corridors and the east/west corridors and frontage roads that improve access, reduce crash rates, and/or relieve congestion to the north/south routes. A model of the regional arterial system would be the four lane road network grid shown as the 2040 Proposed Arterial Network in the MTP.

Federal Fiscal Year (FFY) 2013 was the first year NWARPC became eligible for STBGP-GT 200K funds. By the end of 2015, the RPC/Policy Committee had obligated over $21 million dollars in Federal funds within this region for FFY 2013, 2014 and 2015 and had completed the selection of projects for FFY 2016 and FFY 2017. The Federal share is typically 80 percent and local 20 percent for selected STBGP-GT 200K projects.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

Safety of the transportation system is one of the national goals for the transportation program. The HSIP provides funding to help reduce the number of fatalities and serious injuries on all public roads – State and non-State. The Federal share is typically 90 percent with the local share at 10 percent.

HSIP Estimated Funding (Federal, plus local match, 3 percent inflation/year):

Time Period (FFY)	HSIP
2016 to 2020	$ 20.5
2021 to 2030	$ 51.4
2031 to 2040	$ 69.1
Total	**$141.0**

(Millions of dollars of estimated obligation limitation)

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

MAP-21/FAST Act consolidated the Safe Routes to School, Transportation Enhancements, and Recreational Trails programs into the TAP.

Half of the TAP funds are sub-allocated based on population and the remaining funds are allocated to anywhere in the State. The Urbanized Area, based on 2010 Census Bureau population, receives approximately $480,000 in funds annually. Past projects have included trailhead and trail construction within the region.

TAP Estimated Funding (Federal, plus local match, 3 percent inflation/year):

Time Period (FFY)	Urbanized	Statewide
2016 to 2020	$ 3.1	$ 4.8
2021 to 2030	$ 7 .8	$12.1
2031 to 2040	$ 10.5	$16.3
Total	**$21.4**	**$33.2**

(Millions of dollars of estimated obligation limitation)

A competitive application process is conducted through AHTD and NWARPC for each program.

URBANIZED AREA FORMULA PROGRAM (49 U.S.C. §5307) - TRANSIT

FTA apportions Urbanized Area Formula Program funds to designated recipients within urbanized areas with populations of 200,000 or more. NWARPC is the designated recipient for the Fayetteville-Springdale-Rogers AR-MO Urbanized Area.

The Urbanized Area Formula Program Section 5307 provides operating and capital funds to local public transit operators Razorback Transit and Ozark Regional Transit. MAP-21/FAST Act expanded the use of these funds for operating expenses. Expanded eligibility included operating expenses for transit systems in Urbanized Areas over 200,000 in population.

The region receives approximately $2,366,978 in Section 5307 Federal funds per year matched by approximately $1,382,450 in local funds. Funds are utilized by public transit agencies and for transit planning purposes.

Section 5307 Estimated Funding (Federal, plus local match, 1 percent inflation/year):

Time Period (FFY)	Section 5307
2016 to 2020	$ 19.0
2021 to 2030	$ 39.5
2031 to 2040	$ 41.5
Total	**$ 100.0**

(Millions of dollars of estimated obligation limitation)

BUS AND BUS FACILITIES PROGRAM (49 U.S.C. §5339) - TRANSIT

MAP-21/FAST Act created a new formula grant program for bus and bus facilities that replaced the 5309 discretionary program. The program provides funding for replacing, rehabilitating, and purchasing new buses and bus-related equipment and facilities. The Urbanized Area receives approximately $241,527 annually in Federal funds matched by $60,382 in local funds for the replacement of vehicles and related capital projects. Funding is utilized by both Razorback and Ozark Regional Transit for replacing buses.

Section 5339 Estimated Funding (Federal, plus local match, 1 percent inflation/year):

Time Period (FFY)	Section 5339
2016 to 2020	$ 1.5
2021 to 2030	$ 3.0
2031 to 2040	$ 3.3
Total	**$ 7.8**

(Millions of dollars of estimated obligation limitation)

ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES PROGRAM (49 U.S.C. §5310) - TRANSIT

Enhanced Mobility of Seniors and Individuals with Disabilities Program is a formula assistance program to improve mobility for seniors and individuals with disabilities. Public transportation projects may be implemented in areas where public transportation is insufficient, inappropriate, or unavailable; public transportation projects that exceed the requirements of the Americans with Disabilities Act (ADA); projects that improve access to fixed-route service and decrease reliance on complementary paratransit; and alternatives to public transportation projects that assist seniors and individuals with disabilities. The Section 5310 program funding was $156,606 in 2013 and $206,922 in 2014 for the urbanized area.

Section 5310 Estimated Funding (Federal, plus local match, 1 percent inflation/year):

Time Period (FFY)	Section 5310
2016 to 2020	$ 1.3
2021 to 2030	$ 2.7
2031 to 2040	$ 2.8
Total	**$ 6.8**

(Millions of dollars of estimated obligation limitation)

RURAL AREA FORMULA PROGRAM (49 U.S.C. §5311) – TRANSIT

The Rural Area Formula Program is a formula grant program that provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. Currently, ORT receives approximately $140,000 per year in Federal funds and requires a 20 percent to 50 percent local match depending on the type of project. ORT provides demand response service to the rural areas within the Metropolitan Planning Area.

Section 5311 Estimated Funding (Federal, plus local match, 1 percent inflation/year):

Time Period (FFY)	Section 5311
2016 to 2020	$ 1.4
2021 to 2030	$ 2.9
2031 to 2040	$ 3.0
Total	**$ 7.3**

(Millions of dollars of estimated obligation limitation)

CONNECTING ARKANSAS PROGRAM (CAP)

In 2012, 58 percent of the Arkansas voters approved a constitutional amendment and passed a temporary ten-year ½ cent sales tax. The State sales tax increased from 6 percent to 6.5 percent and will generate approximately $1.8 billion in funding for the ten-year transportation program. The tax is scheduled to sunset after the ten-year bonds are paid off in 2023 or before.

The annual amount generated by the temporary tax is estimated at approximately $230 million per year. The CAP program also included sharing the additional tax revenue with 70 percent directed to the State of Arkansas, 15 percent to cities, and 15 percent to counties.

AHTD included 35 projects on 19 corridors as part of the CAP program with approximately $700 million going to cities and counties for transportation projects. A permanent State-Aid Street Fund was also created by allocating one-cent from the per-gallon motor fuels tax and generates $20 million annually in additional funds for city-owned street projects.

The MPA's transportation system has greatly benefited from the CAP program which included funding for eight projects for a total of $378 million, and approximately $86 million in additional turn back funds to the 34 jurisdictions over ten years, and establishment of the State Aid Street Fund. Table 9.1 provides a summary of the annual and ten-year estimated amounts that each county and city will receive in additional turn back funds.

Connecting Arkansas Program (CAP) Sales Tax Estimate to Cities and County	Annual	10-Year Total
Benton County	$1,288,884	$12,888,836
Avoca	$8,692	$86,923
Bella Vista	$471,325	$4,713,255
Bentonville	$628,784	$6,287,843
Bethel Heights	$42,250	$422,503
Cave Springs	$30,797	$307,971
Centerton	$169,482	$1,694,820
Decatur	$30,263	$302,627
Garfield	$8,942	$89,417
Gateway	$7,214	$72,139
Gentry	$56,251	$562,506
Gravette	$41,413	$414,131
Highfill	$10,384	$103,844
Little Flock	$46,044	$460,442
Lowell	$130,509	$1,305,091
Pea Ridge	$85,391	$853,911
Rogers	$996,835	$9,968,353
Siloam Springs	$267,876	$2,678,759
Springtown	$1,550	$15,497
Sulphur Springs	$9,102	$91,020
Washington County	$1,229,701	$12,297,010
Elkins	$47,166	$471,664
Elm Springs	$27,342	$273,415
Farmington	$106,409	$1,064,094
Fayetteville	$1,310,613	$13,106,129
Goshen	$19,077	$190,767
Greenland	$22,425	$224,254
Johnson	$59,742	$597,417
Lincoln	$40,059	$400,594
Prairie Grove	$78,017	$780,169
Springdale	$1,243,230	$12,432,298
Tontitown	$43,818	$438,177
West Fork	$41,271	$412,706
Winslow	$6,965	$69,645
Total	**$8,607,823**	**$86,078,227**

Table 9.1 - CAP Sales Tax Estimate to City and County

The CAP projects are fully funded in the MTP and are listed below.

CONNECTING ARKANSAS PROGRAM - AHTD Projects Benton and Washington Counties:

Job No.	Hwy	Project	Miles	Funding
CA0401	I-49	Hwy. 71B-Hwy. 412 (Widening)	4.50	$35,000,000
CA1101	I-49	Hwy. 412-Wagon Wheel Rd. (Widening)	3.90	$30,000,000
CA0901	I-49	Hwy. 264-New Hope Rd. (Widening)	4.96	$41,400,000
CA0902	I-49	Hwy. 62/102-Hwy. 72 (Widening & Inchng. Impvts.)	2.01	$24,800,000
CA0903	I-49	Hwy. 71 Interchange (Bella Vista Bypass)	-	$43,100,000
CA0904	549	Hwy. 71-Hwy. 72 South (Bella Vista Bypass)	5.05	$35,000,000
CA0905	549	Co. Rd. 34-MO St. Line (Bella Vista Bypass)	2.14	$26,000,000
CA0907	412	Hwy. 112-I-540	4.30	$151,767,000
Total				**$387,067,000**

INTERSTATE REHABILITATION PROGRAM (IRP)

In 2011, the Arkansas voters, in a special election, approved the issuance of $575 million in Grant Anticipation Revenue Vehicles (GARVEE) bonds to address the maintenance needs of the existing Interstate system. The overall program is estimated at $1 billion when combined with State matching funds and other existing Federal funding sources. Program bonds are retired utilizing the Interstate Maintenance category of Federal funds.

This program includes funding for 10 projects estimated at $158 million on I-49 within the MPA. These projects include nine interchange projects and one 31-mile pavement rehabilitation project. These projects are fully funded in the MTP and are listed below.

Route	Hwy	Project	Miles	Funding
BB0412	I-49	Johnson Mill Blvd. Interchange (Complete)	0.28	$ 1,500,000
BB0901	I-49	Wagon Wheel Rd. Interchange (Complete)	0.2	$ 1,523,000
BB0902	I-49	Hwy. 264 Interchange	0	$ 4,000,000
BB0416	I-49	Elm Springs Rd. Interchange Temp. Sig.	0	$ 83,136
BB0409	I-49	I-49 Pavement Rehabilitation (Sel. Secs.)	31.2	$25,756,000
BB0413	I-49	Elm Springs Rd. Interchange	0	$ 6,000,000*
BB0414	I-49	Porter Rd.-Hwy. 112/71B Widening & Intchng.	3.28	$55,000,000**
BB0903	I-49	Hwy. 71B Intchng. Impvts.	0	$23,000,000
BB0411	I-49	Hwy. 16/112 Spur Intchng. Impvts.	0	$19,300,000
BB0410	I-49	Hwy. 62 Intchng. Impvts.	0	$25,375,000
Total				**$161,537,136**

*$1,480,000 in STBGP-GT 200K Funding to Six Lane Interchange Overpass
**$33,119,000 STP, $7,400,000 IM, $9,102,000 State, $5,356,000 Local

LOCAL AND PARTNERSHIP PROJECTS

Many of the local jurisdictions have dedicated funding for transportation projects using local sales tax associated with bond issues. The MTP assumes that each of these corridors will continue to be funded with local capital improvement programs and constructed in phases over the next 25 years:

Corridor	City	From	To
Rupple Road	Fayetteville	Hwy. 62	Howard Nickel Rd.
56th Street	Springdale and Johnson	Johnson Mill Blvd.	Don Tyson Blvd.
Bellview Road	Lowell and Rogers	Hwy. 264	Promenade Blvd.
8th Street	Bentonville	I-49	SW I St.
Hwy. 265/1st Street	Rogers	Pleasant Grove Rd.	Hwy. 62

CONSTRAINED PROJECT LIST

Significant work went into past long range transportation plans to identify and program future projects and many of these projects are still regional priorities. In developing the 2040 MTP Constrained List, identified projects have been adjusted for inflation and projects that are already completed have been removed.

The project listing provides a planning estimate of how much Federal and State/local match may be available, what roadway improvements were identified, and the time period in which the project may be completed. Projects in past transportation plans have been carried forward as identified regional needs. The Constrained List was developed as follows:

- List projects with existing AHTD Job Numbers and agreements with jurisdictions
- List projects submitted to AHTD by the NWARPC/Policy Committee - May 2014
- List projects based on the Eastern North-South Corridor Study and Hwy. 112 Study
- List projects based on corridors with on-going studies – Hwy. 71 and Hwy. 62
- List projects that complete the 2040 Network – Start with segments that complete the four-lane to four-lane system in the urban areas and phase additional projects in rural areas that are forecasted to become urbanized
- List projects in areas that are forecasted to have significant growth in traffic, employment, and population

The TAC was involved in evaluating the projects as the Constrained List was developed. The 2040 Travel Demand Model was used as an analysis tool to check the reasonableness of the draft Constrained List. The proposed projects were entered into a model run and then two queries were made:

1. Show all roads in 2040 that still have two lanes but have over 18,000 ADT.
2. Show all roads in 2040 that are four lanes and have over 36,000 ADT.

The model did show some significant sections of arterial roads that were still two lanes in 2040 with a forecast ADT of over 18,000. These roads were added to the Unconstrained List of needed road improvements.

The model analysis also showed several arterials that are currently four lanes with traffic counts above 36,000 vehicles per day approaching 50,000 to 60,000 vehicle per day in 2040. These routes are located in the urbanized area and are located in traffic analysis zones that are forecasted to see significant growth in employment and households.

CONSTRAINED PROJECT LIST

AHTD #	State Highway	County	Project	From	Dir.	To	Miles	2016-2020
090338	Hwy 71B	Benton	Add Center Left Turn Lane	Dixieland Rd.	East	8th St.	1	$14,300,000
012007	Hwy 265	Benton-Wash.	Widen to 5 Lanes -New Location	Randall Wobbe Rd.	North	Hwy 264	2.28	$20,000,000
B275	Hwy 12	Benton	Beaver Lake Str. and Apprs					$10,500,000
090434	Hwy 59	Benton	Wolf Creek and Spring Branch Str. Apprs.					$1,800,000
090431	Hwy 94	Benton	Little Sugar Creek Str. and Apprs.					$2,100,000
CJ7	Hwy 112	Benton-Wash.	Hwy 112 Corridor Improvements (PE and ROW)				17.93	$13,000,000
09X002	Hwy 264	Benton	Hwy 264/North Bellview Rd. Intersection					$400,000
090402	Hwy 264	Benton	Little Osage Creek Str. and Apprs.					$2,600,000
CJ8	Hwy 340	Benton	Little Sugar & Tanyard Creeks Strs & Apprs.					$3,900,000
040X016	Hwy 71B	Washington	Hwy 71B System Preservation	Hwy 16	North	Fulbright Expressway	5.3	$2,600,000
C95	Hwy 112	Washington	Widen to 5 Lanes	Poplar	North	I-49	1.7	$6,400,000
040579	Hwy 16	Washington	Widen to 4 Lanes (Sel. Secs.)	College Ave.	East	Huntsville Road (Sel. Secs)	0.9	$5,500,000
040683	Hwy 170	Washington	Widen to 3 Lanes	US 62	South	Clyde Carnes Rd.	1.9	$7,000,000
090443	Hwy 12	Benton	Springtown - Hwy 279 (Overlay)	Springtown		Hwy 279	8.32	$1,400,000
P233	Hwy 16	Washington	Benton Co Line - East (System Preservation)	Benton Co. Line		East	5.1	$1,200,000
P195	Hwy 16	Washington	Hwy 71 B - Co Rd 49 (System Preservation)	Hwy 71 B		Co Road 49	13	$3,600,000
P560	Hwy 43	Benton	Hwy 264 - North Siloam Springs (System Preservation)	Hwy 264		N. Siloam Springs	2.46	$400,000
090441	Hwy 59	Benton	Sulphur Springs - Spavinaw Creek (Overlay)	Sulphur Springs		Spavinaw Creek	6.4	$1,100,000
P576	Hwy 71	Washington	County Rd 3115 - Hutchens Creek (System Preservation)	County Rd. 3115		Hutchens Creek	2.1	$500,000
P526	Hwy 94	Benton	Hwy 71B - North of Hwy 62 (System Preservation)	Hwy 71B		Hwy 62	2.2	$900,000
P658A	Hwy 102	Benton	Decatur - Centerton (System Preservation)	Decatur		Centerton	6.7	$1,600,000
S20902	Hwy 94/264	Benton	Hwys 94 and 264 (Sel. Secs.) (Overlay)				4.46	$1,200,000
P15	Hwy 265	Washington	Hwy 412 - North	Hwy 412		North	2.63	$2,600,000
090408	Hwy 264	Benton	Goad Springs Road - Dixieland Road (Widening)	Goad Springs Road		Dixieland	0.6	$1,400,000
						Total	**84.98**	**$106,000,000**

AHTD #	State Highway	County	Project	From	Dir.	To	Miles	2021-2030
090238	Hwy 102	Benton	Widen to 5 Lanes	Hwy. 279 N	East	Hwy 102B	2.23	$22,017,673
	Hwy 16	Washington	Widen to 4 lanes	Stonebridge Rd.	East	Westfork White River Bridg	0.93	$9,155,983
	US 71	Benton	Various Imps. per Study Rec.	US 71B	North	State Line		$5,000,000
	Hwy 112	Washington	Widen to 5 Lanes	Truckers Dr.	North	Greathouse Springs Rd.	2.79	$32,206,098
	Hwy 112	Washington	Widen to 5 Lanes	Greathouse Springs Rd	North	Hwy 412	2.51	$17,000,000
	Hwy 112	Washington	Widen to 5 Lanes	Hwy 412	North	Scott St.	2.39	$24,500,000
	Hwy 112*	Benton	Widen to 5 Lanes	Wallis Rd.	North	Hwy 12	2.3	$37,000,000
	Hwy 112*	Benton	Widen to 5 Lanes	Hale St.	North	Wallis Rd.	4.88	$70,000,000
	Hwy 264	Benton	Widen to 5 Lanes	Goad Springs Rd.	West	Bellview Rd.	0.91	$9,000,000
	Hwy 102B	Benton	Widen to 5 Lanes	Hwy 102	North	Hwy 72	1.76	$17,500,000
	Hwy 12	Benton	Widen to 5 Lanes	Shell Rd.	South	Regional Dr.	5	$49,000,000
	Hwy 94	Benton	Widen to 5 Lanes (4 to 5)	U.S. 71	East	1st Street	0.65814394	$4,200,000
	Hwy 72	Benton	Widen to 5 lanes	I-49	East	Little Sugar Creek	1.85	$18,000,000
	Hwy 265 (Future	Benton	Widen to 5 Lanes	Oak St.	North	Hwy 62	2.15	$24,760,001
040677	Hwy 112	Washington	Widen to 5 Lanes	Leroy Pond Rd.	North	Maple St.	0.67	$6,500,000
						Total	**30.36**	**$345,839,754**

AHTD #	State Highway	County	Project	From	Dir.	To	Miles	2031-2040
	Hwy 16	Washington	Widen to 4 Lanes	Westfork White River Bridge	East	Middle Fork -White River	2.98	$43,416,301
	Hwy 265	Benton	Widen to 5 Lanes (3 to 5) Ph. 2	Hwy 264	North	1st Street/Pleasant Grove	4.02	$49,000,000
	Hwy 265	Benton	Widen to 5 Lanes (3 to 5)	1st Street/Pleasant Grove	North	Hwy 94/New Hope Rd.	3.2	$46,000,000
	Hwy 265	Washington	Widen to 5 Lanes (4 to 5)	Hwy 412	North	Emma Ave.	1.25	$12,000,000
	Hwy 265 (Future)	Benton	Widen to 5 Lanes (3 to 5)	Hwy 94/New Hope Rd	North	Olrich St.	0.49	$7,071,648
	Hwy 279	Benton	Widen to 5 Lanes	Hwy. 102	South	Hwy 12	2.96	$43,000,000
	Hwy 264	Benton	Widen to 3 Lanes	Bellview Rd.	West	Hwy 112	3.25	$34,500,000
	Hwy 279	Benton	Widen to 5 Lanes	Hwy. 102	North	Hwy 72	5.39	$79,000,000
	Hwy 72	Benton	Widen to 5 lanes	Little Sugar Creek	East	Pea Ridge	4.55	$66,500,000
	Hwy 112	Washington	Widen to 5 Lanes	Scott St.	North	Hale St.	0.61	$12,500,000
	Hwy 45	Washington	Widen to 5 Lanes	Lisa Lane	East	Starr Rd.	1.07	$15,658,157
	Hwy 45	Washington	Widen to 5 Lanes	Starr Rd.	East	Oakland Zion Rd.	0.76	$11,000,000
	Hwy 43	Benton	Widen to 4 lanes	Cheri Whitlock Parkway	West	Sycamore Heights	1.14	$16,658,202
	Hwy 72	Benton	Widen to 5 lanes	US 71B	West	Hwy 102B	3.7	$54,006,286
						Total	**35.37**	**$490,310,593**

Projects	2016-2021	2021-2030	2031-2040
Various Intersection, Bridge, and Safety Projects	$ 15,000,000	$ 20,000,000	$ 25,000,000
Various Resurfacing, Restoration, Rehab, and Reconstruction Projects	$ 15,000,000	$ 20,000,000	$ 25,000,000

UNCONSTRAINED PROJECT LIST

The Unconstrained List consists of projects not limited to estimated available funding. These projects are shown as projects worthy of future funding.

AHTD #	State Highway	County	Project	From	Dir.	To	Miles	2031-2040
	Hwy 62	Washington	Widen to 5 Lane	City - Prairie Grove East	West	City - Lincoln	4.72	$58,500,000
	Hwy 12	Benton	Widen to 5 Lane	2nd St.	East	City Limits (Rogers)	1.89	$28,000,000
	Hwy 12	Benton	Widen to 5 Lane	Regional Dr.	Southwest	Hwy 264	4.84	$70,500,000
	Hwy 16	Washington	Widen to 4 Lane	Middle Fork -White River Bridge	East	Hwy 74	2.03	$29,500,000
	Hwy 16	Washington	Widen to 4 Lane	Double Springs Rd.	West	Weddington Woods	2.87	$42,000,000
	Hwy 45	Washington	Widen to 5 Lane	Oakland Zion Rd.	East	White River	5.37	$78,500,000
	Hwy 59	Benton	Widen to 5 Lane	Gentry	North	Decatur	5.54	$70,283,711
						Total	**27.26**	**$377,283,711**

Note: Routes with existing AHTD Studies that have multiple corridor options have been estimated with one option for listing and for fiscal constraint. The actual route has not been determined by AHTD. Federal funds inflated 3 percent per year and project costs by 4 percent per year with cost estimate averaged in period.

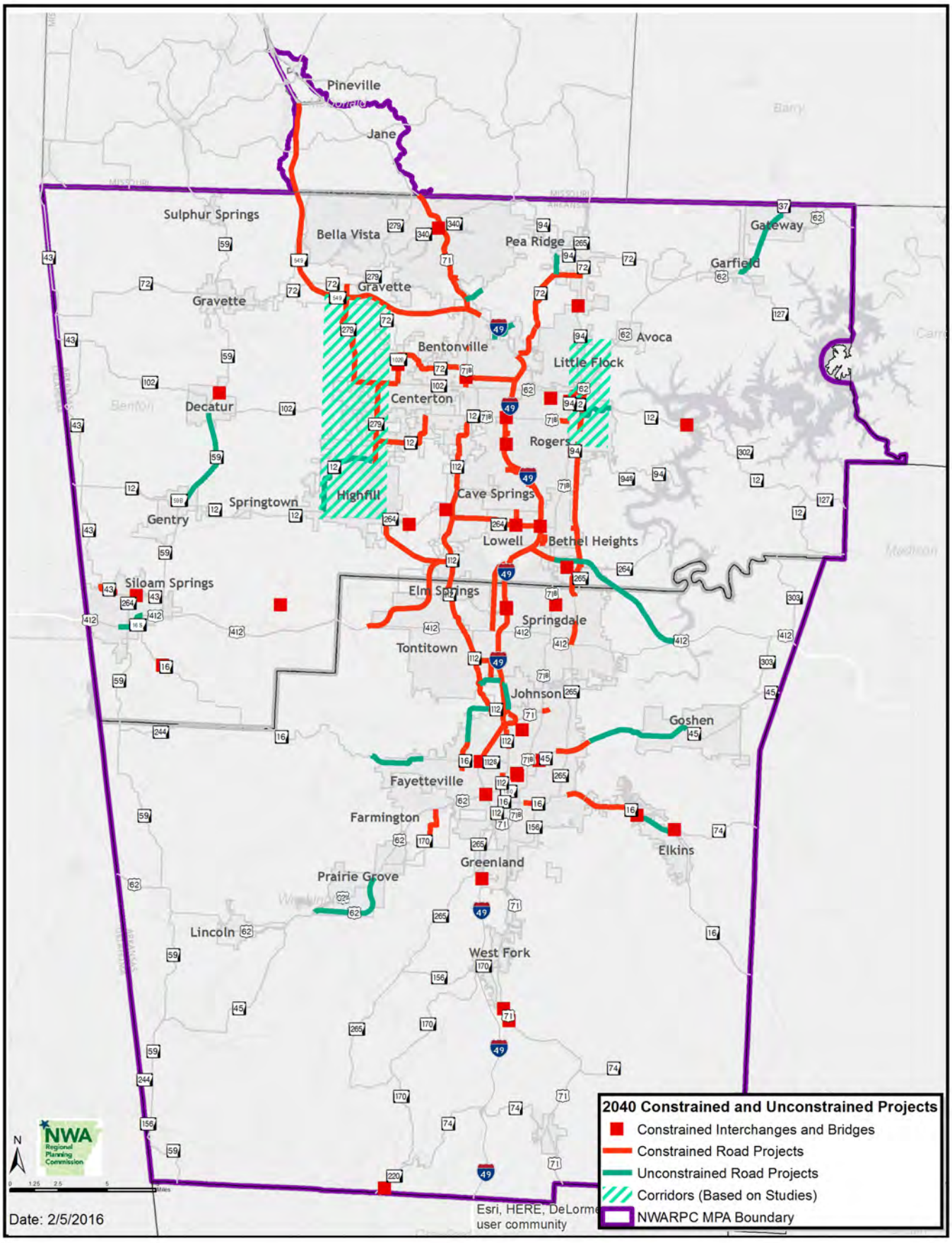
NHPP FUNDING AND OTHER FUNDING

NATIONAL HIGHWAY PERFORMANCE PROGRAM, HIGHWAY SAFETY IMPROVEMENT PROGRAM, SURFACE TRANSPORTATION PROGRAM, AND EASTERN FEDERAL LANDS

The MTP recognizes that additional "Statewide Generic Projects" will be programmed in the STIP and TIP that will address the following projects:

- IRP Debt Service
- Various Resurfacing/ Restoration / Rehab / Reconstruction
- Various Bridge Rehab / Replacement
- Bridge Guard Rail / Scour Control / Inspection / Inspection Equipment
- Railroad Xing Protect Devices / Surfacing / Hazard Elimination
- Various Transportation Alternative Projects
- Various Trail Projects
- Various Resurfacing / Restore / Rehab / Recon / Bridge Replacement / Bridge Rehabilitation on County Roads
- Various Bridge Rehab / Replacement on County Roads
- PE / Right-of-Way / Utilities / CENG
- Bridge Painting
- Motor Fuel Enforcement Activities
- Various Statewide Safety Improvements
- Various Pavement Marking & Signing Projects
- Workforce Training and Development
- Various Signal and Intersection Improvements

These "Statewide Generic Projects" are considered to be listed in the MTP and may be eligible for future federal-aid funding.



Map 9.2 - 2040 MTP Projects Location

National Highway Performance Program (NHPP) Project Listing to complete each corridor - Includes NHS, CAP, IRP, and Earmark Funding for Projects

National Highway Performance Program (NHPP) and Highway Safety Improvement Program (HISP) Project Listing to complete each corridor - Includes NHS, HSIP, CAP, IRP, and Earmark Funding for Projects

							Period of Expenditure				Time Period Costs (STP + Match) Year/Period of Expenditure			
Corridor	Job No.	Route	Type of Project	From	Direction	To	2016-2020 Est.	2021-2030 Est.	2031-2040 Est.	Constrained	2016-2020	2021-2030	2031-2040	Unconstrained
I-49 Bella Vista Bypass		I-49/Bella Vista Bypass -MO*	New Freeway (4 Lanes)	Pineville	South	Stateline	$50,000,000	$73,000,000	$108,000,000	Yes		$73,000,000		
	CA0905	I-49/Bella Vista Bypass -AR (CAP Funded)	New Freeway (First 2 Lanes)	Co. 34	North	Stateline	$26,000,000			Yes	26,000,000			
		I-49/Bella Vista Bypass -AR	New Freeway (Add 2 Lanes)	Stateline	South	US 71	$50,000,000			Yes	$50,000,000			
	CA0903	I-49/US71 Interchange (CAP Funded)	New Interchange (Replace interim round-a-bout)				$43,000,000			Yes	43,000,000			
I-49		I-49 (Various segments based on study)	Widen to 8 lanes	Hwy 16	North	Hwy 62	$178,000,000	$240,000,000	$356,000,000	No				$356,000,000
US 412 Bypass		US 412 Bypass	New Freeway (4 Lanes)	Hwy 112	West	US 412	$135,000,000	$182,000,000	$270,000,000	Yes		$182,000,000		
		US 412 Bypass	New Freeway (4 Lanes)	I-49	East	US 71B	$74,500,000	$100,000,000	$148,500,000	Yes			$148,500,000	
		US 412 Bypass	New Freeway (4 Lanes)	US 71 B	East	Hwy 265	$35,000,000	$47,000,000	$70,000,000	No				$70,000,000
		US 412 Bypass	New Freeway (4 Lanes)	Hwy 265	East	US 412	$178,000,000	$240,000,000	$355,000,000	No				$355,000,000
US 412		US 412	Widen to 6 lanes	Siloam Springs City Limits	West	Existing 6 lanes	$14,500,000	$19,500,000	$29,000,000	No				$29,000,000
US 62		US 62	Widen to 5 Lanes	City of Garfield	Northeast	City of Gateway	$29,000,000	$39,000,000	$57,000,000	No				$57,000,000
Various CAP and IRP Projects* *		Various CAP and IRP Projects with multiple funding sources					$19,800,000	$5,700,000	$7,700,000	Yes	$9,000,000			
NHS System		Various Interchange, Intersection, Bridge, and Safety Projects					$2,300,000	$5,700,000	$7,700,000	Yes	$8,000,000	$5,700,000	$25,000,000	
NHS System		Various Resurfacing, Restoration, Rehabilitation, Reconstruction Projects (Interstate Maintenance Funds)					$5,000,000	$10,000,000	$15,000,000		$5,000,000	$10,000,000	$20,000,000	
										Total	$141,000,000	$270,700,000	$193,500,000	$867,000,000
										Est. Available Funding***	$141,380,000	$254,300,000	$243,500,000	
										Difference	$380,000	-$16,400,000	$50,000,000	

*Funding Assumptions: MoDOT will identify funding to complete I-49 in Missouri by 2030
** NHP Funding
***Est. Available Funding includes CAP funding

Other Projects with Federal Funding

							Period of Expenditure	
Corridor	Job No.	Route	Type of Project	From	Direction	To	2016-2020 Est.	Constrained
XNA Access Road		XNA Airport Access Road (Earmark Funded)	New Freeway	Hwy 112	North	XNA	$30,000,000	Yes
8th Street	090218	8th Street (Earmark Funded)						
	090377	SW "I"-Moberly Lane	Major Widening	SW "I"		Moberly Lane	$15,000,000	Yes
	090376	Hwy 62/102 Interchange & 8th Street	New Interchange/Arterial	Hwy 62/102		Moberly Lane	$24,900,000	
Hwy 43	090406	Hwy 43 KCS Railroad Overpass	New Overpass	NA	NA	NA	$8,700,000	Yes

STBGP-GT 200K FUNDING

In 2012, the FTA and the FHWA designated the Fayetteville-Springdale-Rogers, AR-MO urbanized area as a Transportation Management Area (TMA). This TMA designation provides Surface Transportation Program – Attributable (STBGP-GT 200K) funds to the NWARPC based on the 2010 Census Urbanized Area population of 295,083.

The NWARPC selects projects through a competitive process for STBGP-GT 200K funding. The current policy has a focus on selecting projects of regional significance which is defined as an improvement to major routes such as north/south corridors and the east/west corridors and frontage roads that improve access, reduce crash rates, and/or relieve congestion to the north/south routes.

Projects have been selected for FFY 2013 to 2017. These projects have been programmed as part of the NWARPC FFY 2016-2020 TIP which has been made part of the 2040 MTP. A list of potential other STBGP-GT 200K projects was approved, in 2013, by the NWARPC/Policy Committee and potentially could be funded with STBGP-GT 200K funds. Also, additional projects were identified as the 2040 MTP was being developed and are shown in the "Potential Projects " listing on page 9-17. **Additional projects will be selected by the RPC/Policy Committee for FFY 2018 to 2020 and are considered to be made part of the MTP once approved by the RPC/Policy Committee.**

FFY 2016 STBGP-GT 200K LIST OF PROJECTS:

FFY 2016 STBGP GT 200K	Location	Project Type	STBGP GT 200K	Match	Total	Total Project Cost (All Phases, Federal, Match, and Local Match)
Rogers	Walnut Street/US 71B (Dixieland Rd to 8th St.)	ROW, utilities and construction (Add two-way center left-turn lane)	$3,250,000	$812,500	$4,062,500	$14,800,000
Fayetteville	Rupple Road (Starry Night View to Mt. Comfort)	Env. ROW, Utilities (New Location)	$680,000	$170,000	$850,000	$5,610,000
Springdale	Hwy. 265 (Randal Wobbe to Hwy. 264)	ROW, utilities and construction (5 lane road, traffic signals)	$1,000,000	$250,000	$1,250,000	$24,500,000
Bentonville	SW I St. and Hwy. 102 Intersection	Design and Environmental (Right-turn lane southbound on SW I St.)	$100,000	$25,000	$125,000	$1,375,000
Springdale	Don Tyson Parkway Ext. (S. 56th St. to Hwy. 112)	Design and Environmental (Extension)	$300,000	$75,000	$375,000	$4,500,000
Centerton	Hwy 102B/Seba Rd. Intersection Improvements	Design and Env. (North and south left-turn lane and traffic signal)	$80,000	$20,000	$100,000	$900,000
Razorback Transit and ORT	Rolling Stock for Public Transit Operations	New Buses (Razorback and ORT)	$704,000	$176,000	$880,000	$1,395,000
Bentonville	US 71B (N. Walton Blvd.) and 12th St. Intersection	Construction (Left-turn lanes on 12th St./Tiger Blvd.)	$500,000	$125,000	$1,250,000	$1,390,000
TOTAL			**$6,614,000**	**$1,653,500**	**$8,892,500**	

FFY 2017 STBGP-GT 200K LIST OF PROJECTS:

FFY 2017 STBGP GT 200K	Location	Project Type	STBGP GT 200K	Match	Total	Total Project Cost (All Phases, Federal, Match, and Local Match)
Bentonville	US 71B (N. Walton Blvd.) and 12th St. Intersection	Construction (Left-turn lanes on 12th St./Tiger Blvd.)	$500,000	$125,000	$625,000	$1,390,000
Bentonville	SW I St. and Hwy. 102 Intersection	Construction (Right-turn lane southbound on SW I St.)	$1,000,000	$250,000	$1,250,000	$1,375,000
Fayetteville	Rupple Road (Starry Night View to Mt. Comfort)	Construction (New location)	$2,488,000	$622,000	$3,110,000	$5,610,000
Fayetteville	Sain Street Ext. (N. Front St. to Vantage Blvd.)	ROW and Utilities (Extension)	$160,000	$40,000	$200,000	$2,800,000
Lowell	S. Dixieland Road Ext. (S. of Hwy. 264 to Apple Blossom)	ROW and Utilities, Const. (Extension)	$800,000	$200,000	$1,000,000	$5,400,000
Centerton	Hwy 102B/Seba Rd. Intersection Improvements	ROW, utilities and construction (North and southbound left-turn lane and traffic signal)	$640,000	$160,000	$800,000	$900,000
Farmington	Hwy 170 (Hwy. 62 to Clyde Carnes Road)	ROW	$600,000	$150,000	$750,000	$9,700,000
Bella Vista	Mercy Way	Design and Env. (Widening to 4 lanes with turn lane)	$256,000	$64,000	$320,000	$3,499,760
Razorback Transit and ORT [4]	Rolling Stock for Public Transit Operations	New Buses (Razorback and ORT)	$200,000	$50,000	$250,000	$1,410,000

The list below shows potential STBGP-GT 200K projects, identified by jurisdiction, that were amended into the 2035 Plan and have subsequently become a part of the MTP.

Potential STP-A Projects		Route	Project	Funding	Total	Federal	Match	
040582	Fayetteville	112	Hwy112 - Maple Street Impvts. and Traffic Signal - Razorback to Garland	STBGP GT 200K	$3,000,000	$2,400,000	$600,000	Local
090----	Lowell	CS	South Dixieland Road Extension South of 264 to Apple Blossom Rd.	STBGP GT 200K	$450,000	$360,000	$90,000	Local
012----	NWARPC		NARTS Planning Set-aside	STBGP GT 200K	$125,000	$100,000	$25,000	Local
	Various	CS/State	Intersection Improvements and Traffic Signals	STBGP GT 200K	$1,250,000	$1,000,000	$250,000	Local
	Various		Transit/Planning/Program	STBGP GT 200K	$250,000	$200,000	$50,000	Local
040657	Fayetteville	CS	Rupple Rd. - (Wedington Drive to Starry Night)	STBGP GT 200K	$1,250,000	$1,000,000	$250,000	Local
090392	Rogers	CS	28th Place Phase 1 (Pleasant Grove to Greens/Blossom Way)	STBGP GT 200K	$1,250,000	$1,000,000	$250,000	Local
090393	Rogers	CS	28th Place Phase 2 (Whitaker Park to Bellview Road)	STBGP GT 200K	$1,250,000	$1,000,000	$250,000	Local
	Springdale	CS	56th Street - Don Tyson Parkway to Greathouse Springs Road	STBGP GT 200K	$450,000	$360,000	$90,000	Local
	Springdale	CS	Elm Springs Road Interchange	STBGP GT 200K	$1,250,000	$1,000,000	$250,000	Local
	Fayetteville	CS	Sain Street Extension - Front Street to Joyce Blvd	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Bentonville/Rogers	CS	47th/ Extension	STBGP GT 200K	$420,000	$336,000	$84,000	Local
	Rogers	CS	Fir Street overpass over I-540	STBGP GT 200K	$320,000	$256,000	$64,000	Local
	Bentonville	US 71B	Intersection 12th and 71B	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Johnson	CS	48th St. south to Van Ashe	STBGP GT 200K	$360,000	$288,000	$72,000	Local
	Bella Vista	CS	Mercy Way Bridge and Corridor improvements	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Bella Vista	US 71	US 71 intersection and Corridor improvements (Sunset to Little Sugar Creek)	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Bella Vista	US 71	US71 intersection and Corridor improvements (Little Sugar Creek to Mo. State Line)	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Farmington	Hwy 170	Hwy 170 from Hwy 62 to Clyde Carnes	STBGP GT 200K	$400,000	$320,000	$80,000	Local
	Bethel Heights	Hwy 264	Intersection Improvements N. Oaks and	STBGP GT 200K	$150,000	$120,000	$30,000	Local

Projects shown below are additional potential STBGP-GT 200K projects identified by local jurisdiction. These projects are considered to be listed in the 2040 MTP and may be eligible for future STBGP-GT 200K funding.

Farmington	**Hwy. 170 (Hwy. 62 to Clyde Carnes Road) (Future Phases)**
Rogers	**28th Place (Future Phases)**
Rogers	**Hwy. 62 Study Recommendations**
Bella Vista	**Hwy. 71 Study Recommendations**
Fayetteville	**Hwy. 71B Flyover/Interchange Improvements (Future Phases)**
Springdale	**Don Tyson Parkway (Future Phases)**
Lowell	**Dixieland Ext. (Future Phases)**
Springdale	**56th Street (Future Phases)**
Bella Vista	**Mercy Way (Future Phases)**
Lowell	**East Monroe Ave.**
Fayetteville	**Rupple Road/Howard Nickel Road**
Springdale/Johnson	**48th Street**
Lowell	**Bellview Road**
Springdale	**56th Street**
Rogers	**Fir Street Overpass**
Benton Co.	**It'll Do Road**
Bentonville	**J Street/I-49 Interchange**
Benton Co.	**W. McNelly Road (County Road 40)**

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The NWARPC selects projects through a competitive process for TAP funding. TAP funds are awarded for the construction phase of a selected project. Preliminary Engineering and Final Design, Environmental, Right-of-way, and Utility Relocation is the responsibility of the applicant and must meet Federal-aid requirements.

The NWARPC has focused on implementing the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan projects. Projects have been selected for FFY 2013 through 2017 and have been programmed as part of the NWARPC FFY 2016-2020 TIP which has been made part of the 2040 MTP. Additional projects will be selected by the RPC/Policy Committee and are considered to be made part of the MTP once approved by the RPC/Policy Committee. Funded projects are shown below:

- Mercy Way Trailhead – Razorback Regional Greenway - Rogers
- Town Branch Trail - Fayetteville
- Lake Springdale Trailhead – Razorback Regional Greenway - Springdale
- New Hope Bicycle and Pedestrian Bridge – Razorback Regional Greenway - Rogers
- Gordon Long Park Trail Head – Razorback Regional Greenway - Fayetteville
- North Walton Trail - Bentonville
- Dean's Trail Phase 1 - Fayetteville
- Riordan Road Trailhead - Bella vista
- Cave Springs Trail - Cave Springs

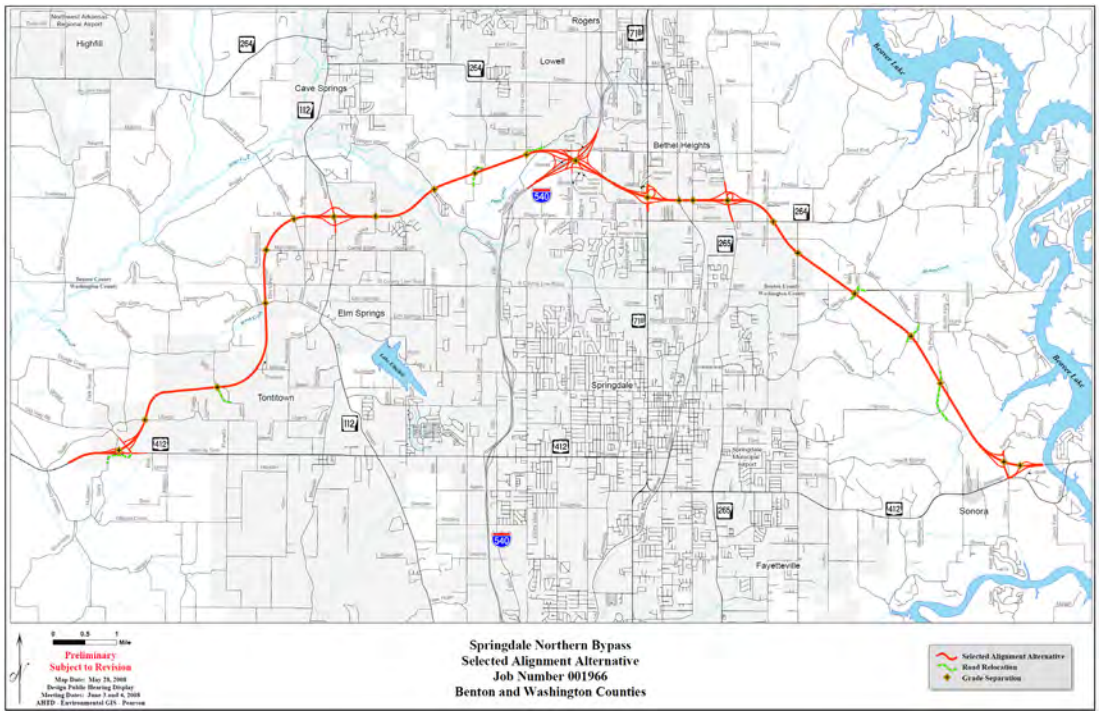
MAJOR CORRIDOR SUMMARIES

HWY. 412 NORTHERN BYPASS

FHWA issued a Record of Decision on February 15, 2006 that approved a Selected Alignment Alternative for the proposed bypass. This project is considered an essential improvement to the highway system in the MPA. While not fully funded in the Constrained List, the project is still considered one of the top priorities in the area.

In 2012, the CAP program was approved by Arkansas voters and included funding for the segment between I-49 and Hwy. 112 including one-half of the interchange within I-49. The contract was awarded in December 2014 and a groundbreaking was held in April 2015 on the $100 million, 4.57 mile segment.

The Constrained List includes the portion from Hwy. 412 (west) to Hwy. 112. The remaining portions of Hwy. 412 from I-49 to Hwy. 412 (east), approximately 10 miles, are included on the Unconstrained List. Every funding option will need to be explored to complete this project over the next 25 years.



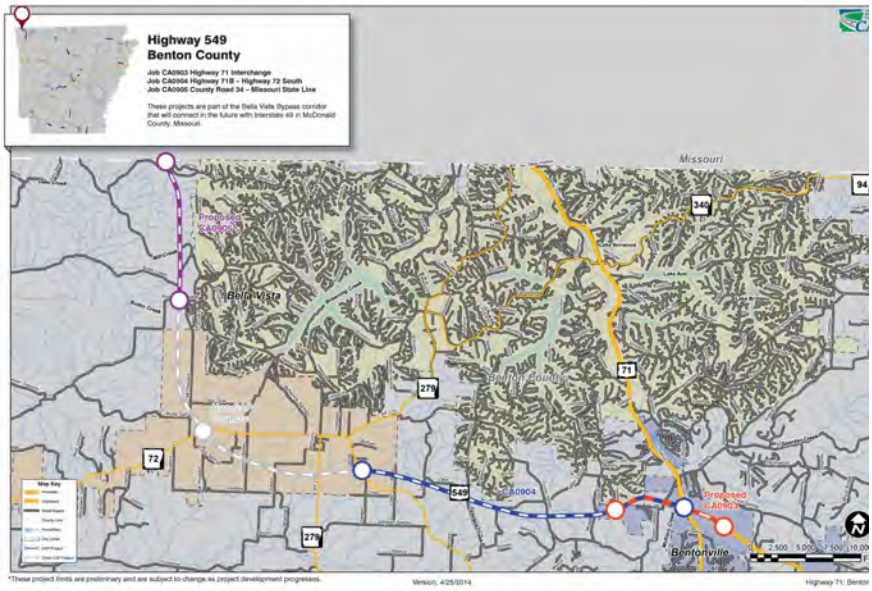
HWY. 549, FUTURE I-49, BELLA VISTA BYPASS

FHWA issued a Record of Decision approving the location of the Bella Vista Bypass on April 19, 2000. The bypass will be constructed as a four-lane, divided, interstate type facility west of existing Hwy. 71 from Bella Vista, Arkansas to Pineville, Missouri. In SAFETEA-LU Congress set aside $37,000,000 for Arkansas' portion of the bypass. The ROW acquisition is complete and $10 million in funding made available through the TIGER I Program allowed construction to begin on a portion of the bypass in the Hiwassee area of Benton County.

In 2012, the Connecting Arkansas Program (CAP) was approved by Arkansas voters and included funding for the construction of two of the four lanes of the bypass from Bentonville to the Missouri Stateline and included the new Interchange at Hwy. 71. Five miles have been completed to date, with the three mile segment between Hwy. 72 North and Hwy. 72 South opening in 2014 and the two mile segment between Hwy. 72 and County Road 34 opening in 2015. A six mile, two lane segment between Hwy. 71 in Bentonville to Hwy. 72 is currently under construction.

The portion of I-49 from the Arkansas/ Missouri Stateline to Pineville, Missouri is partially funded to complete the section of the Bella Vista Bypass.

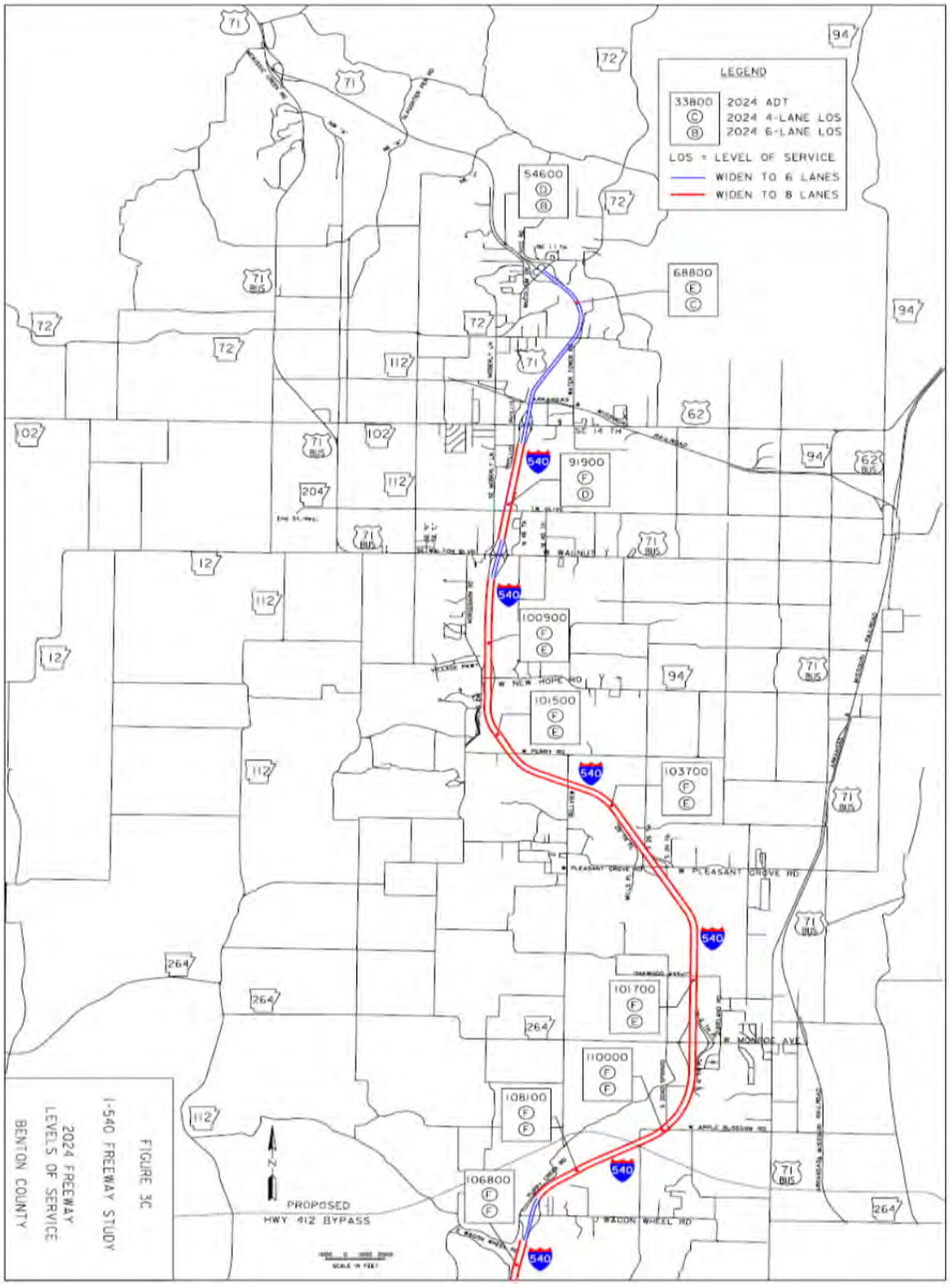
MoDOT has purchased the right-of-way for the future roadway and has partial funding in the MoDOT STIP. The project is shown in the MTP as funded with the assumption that funding will be identified to complete the project over the next 25 years. Completion of I-49 as a fully controlled access interstate is a high priority and all funding options must be explored to complete the project.



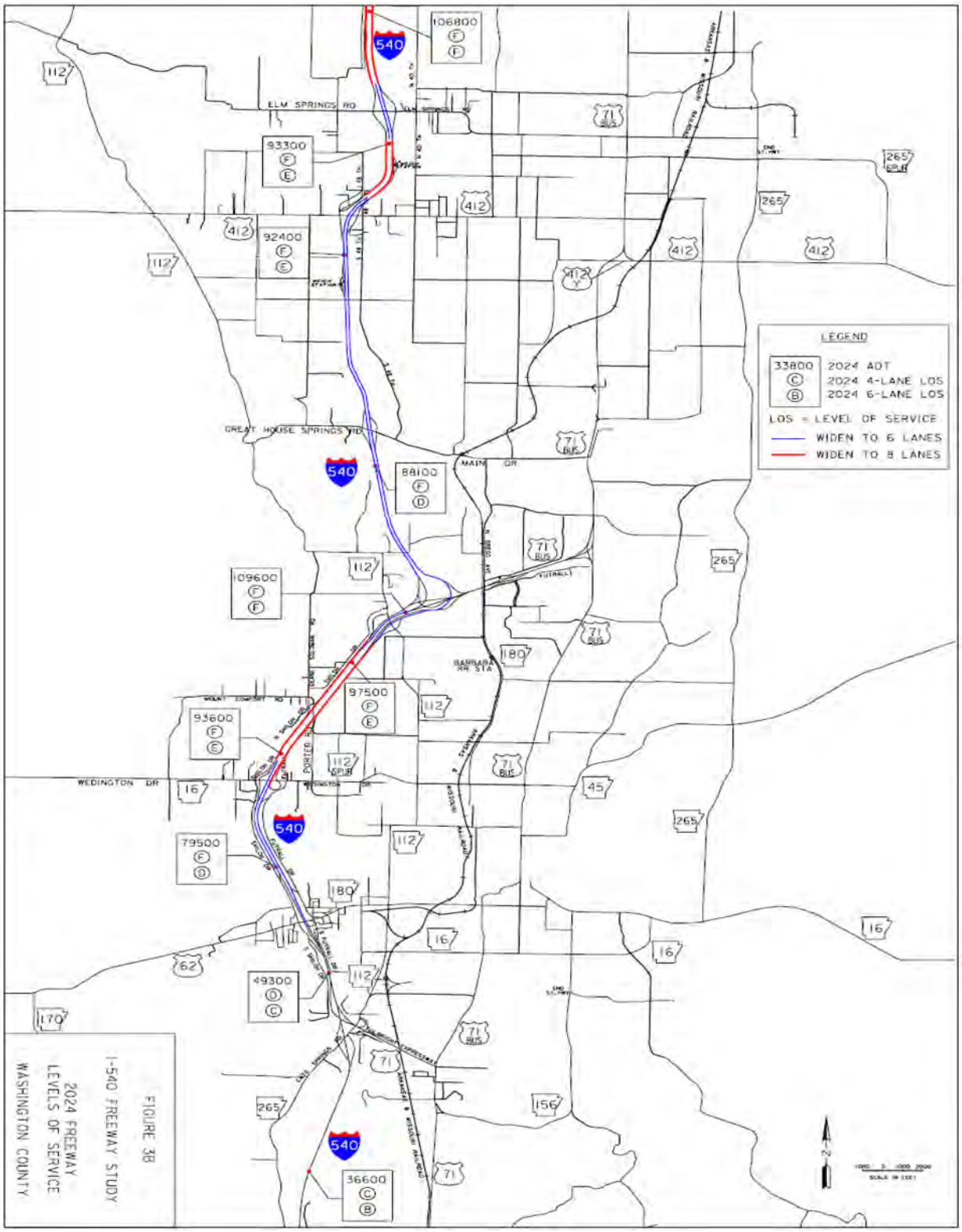
I-49 IMPROVEMENTS

In summer 2002, NWARPC requested that AHTD undertake a study of future capacity needs for the I-49 corridor through Washington and Benton Counties. In September 2003, Parsons Transportation Group was selected to perform the Interstate I-540 (I-49) Improvement Study and it was completed in April 2006. The recommendations in the Study provided the basis for allocating estimated funding resources in past plans and helped guide the CAP planned projects over the next 5 years. The Study recommended widening the Interstate from Fayetteville to Bentonville and recommended short term, mid-term and long term improvements for interchanges and number of travel lanes. The study recommendations are provided in much greater detail in the full Interstate I-540 Improvement Study.

I-49 View from Watson St. Bridge in Springdale



Source: Interstate I-540 (I-49) Improvement Study



Source: Interstate I-540 (I-49) Improvement Study

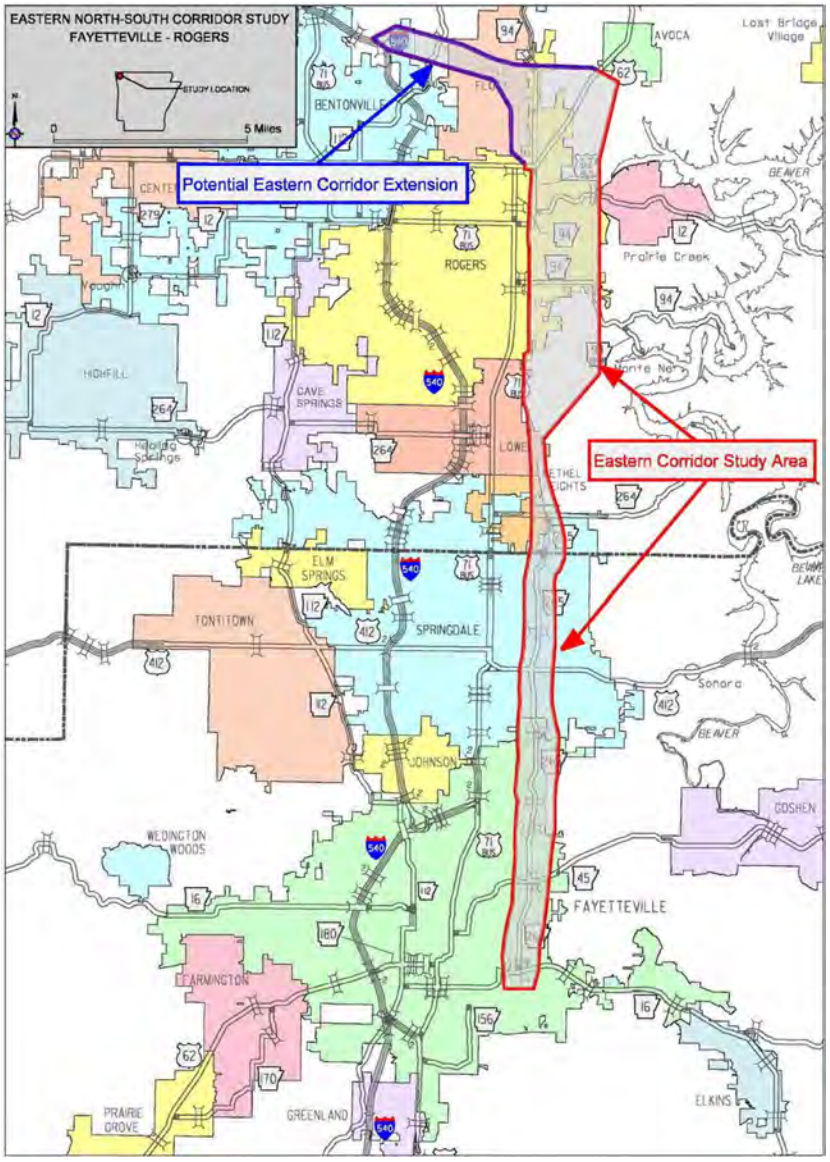
HWY. 265

At the request of NWARPC, the Arkansas State Highway Commission passed Minute Order 2009-093, which authorized AHTD to conduct a study of an eastern corridor from Hwy. 16 in Fayetteville to Hwy. 62 in Rogers with consideration of possible connections and alternatives.

The Study area encompasses multiple local jurisdictions including Fayetteville, Springdale, Bethel Heights, Lowell, Rogers, Bentonville, Washington County, and Benton County. The purpose of the Study was to determine the need for improvements to an eastern North-South corridor from Hwy. 16 in Fayetteville to Hwy. 62 in Rogers.

Projects completed in Fayetteville and Springdale to widen the highway to four lanes include from Hwy. 16 East to Hwy. 412. Two additional projects are programmed and include the segments from Randall Wobbe Lane to Hwy. 264 (widen to four lanes) and Hwy. 264 to Pleasant Grove Road (widen to three lanes).

The MTP has listed additional projects over the next 25 years to improve the entire corridor as a four lane arterial from Fayetteville to Rogers based on the Study recommendations and anticipated available funding.



Highway 265 in Fayetteville

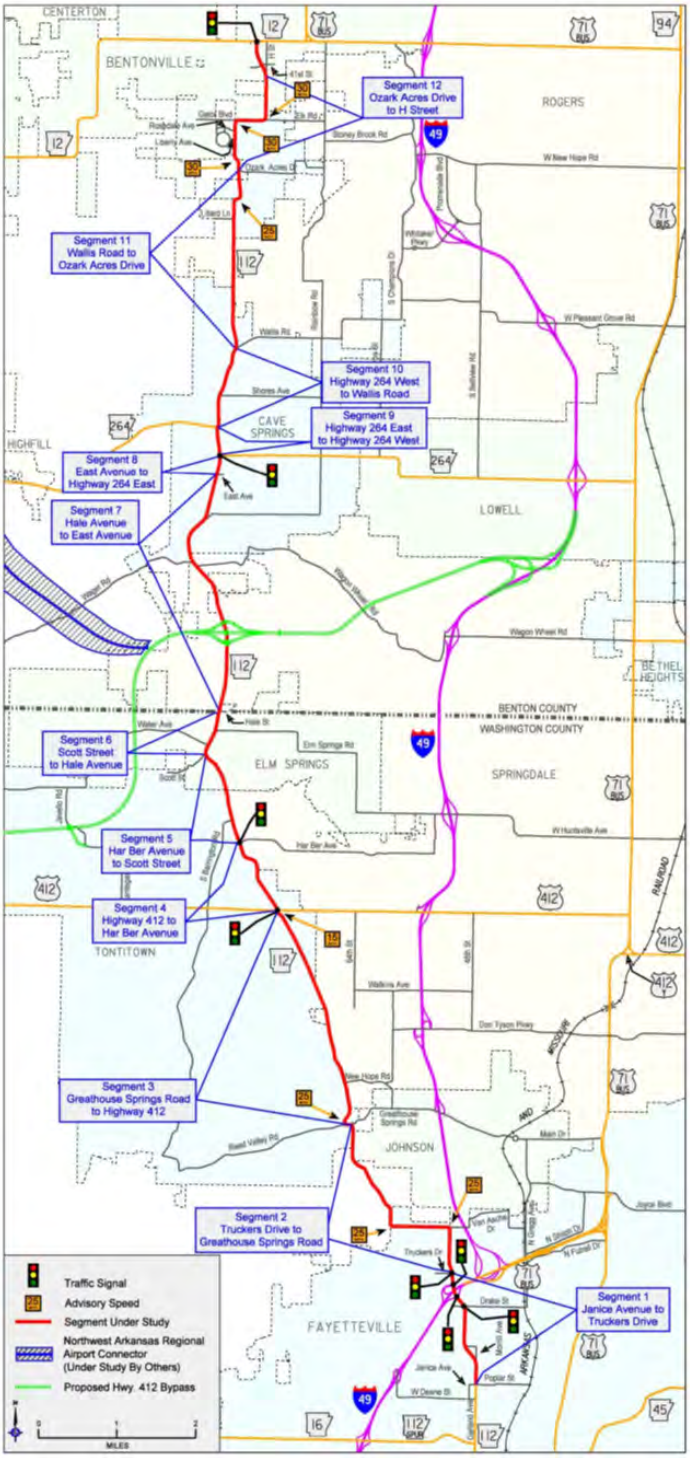
HWY. 112

Hwy. 112 is a two lane highway that parallels I-49 to the west. It traverses through or near several environmentally sensitive areas, including the Cave Springs Recharge Area. The posted speed limit ranges from 30 to 55 miles per hour, with several areas of reduced advisory speeds located throughout the corridor. It is the only continuous North-South route west of I-49, serving local and regional traffic between Fayetteville and Bentonville, making it crucial for regional mobility.

At the request of NWARPC, the Arkansas State Highway Commission passed Minute Order 2012-027, which authorized a study of Hwy. 112 from Fayetteville to Bentonville, a total length of approximately 20 miles. The purpose of the Study was to determine the feasibility of improvements to Hwy. 112 to address capacity and safety needs.

With the exception of the northern-most portion of Hwy. 112, the corridor has two 10-foot lanes and no shoulders. Due to the continuing development in the area, much of the route is transitioning from a rural to an urban setting. The southern portion of the Study area has the highest traffic volumes with approximately 14,000 vehicles per day (vpd) south of Drake Street and 20,100 vpd at the I-49 interchange in Fayetteville. Hwy. 112 south of Drake Street is also a Razorback Transit bus route.

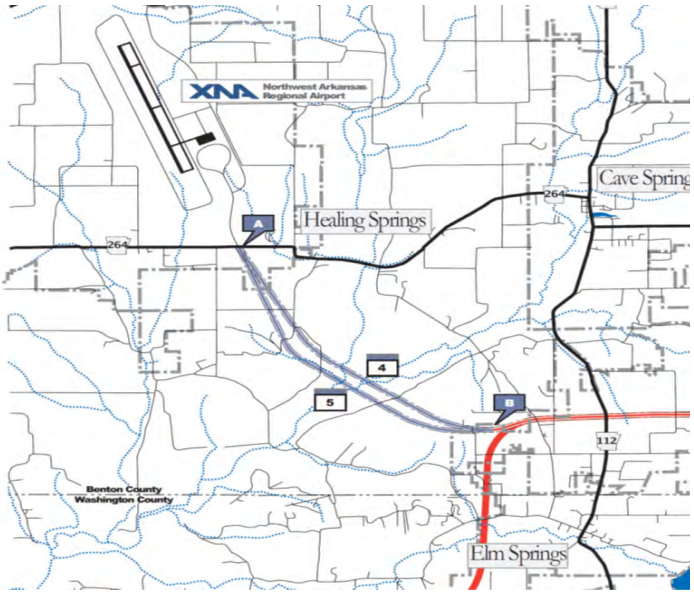
The Improvement Alternative considered as part of the Study would widen Hwy. 112 to four travel lanes, improve geometry, and provide access management. Strategies to manage access such as adequate driveway spacing, a raised median, and deceleration lanes will be necessary to maximize operations and safety through this corridor. Hwy. 112 currently has four travel lanes with a raised median in the northernmost portion of the Study area (from 41st Street to Hwy. 12 in Bentonville). The portion south of the Study area from Hwy. 112 Spur to Deane Street (in Fayetteville) that was recently improved also has four travel lanes with a raised median. This alternative would also realign selected locations of Hwy. 112 to improve safety and mobility. The total estimated cost for this alternative ranges from $108.8 million to $134.0 million (2015 dollars).



NORTHWEST ARKANSAS REGIONAL AIRPORT ACCESS ROAD

The proposed airport access road will provide an intermodal access road that will connect XNA to Hwy. 412 Northern Bypass and I-49. The roadway is designed to provide a high speed fully-controlled access roadway for airline passengers, employees, and air freight cargo with access from the Interstate and major highway system. The need for improved access was identified as part of the site selection study in the early 1990's.

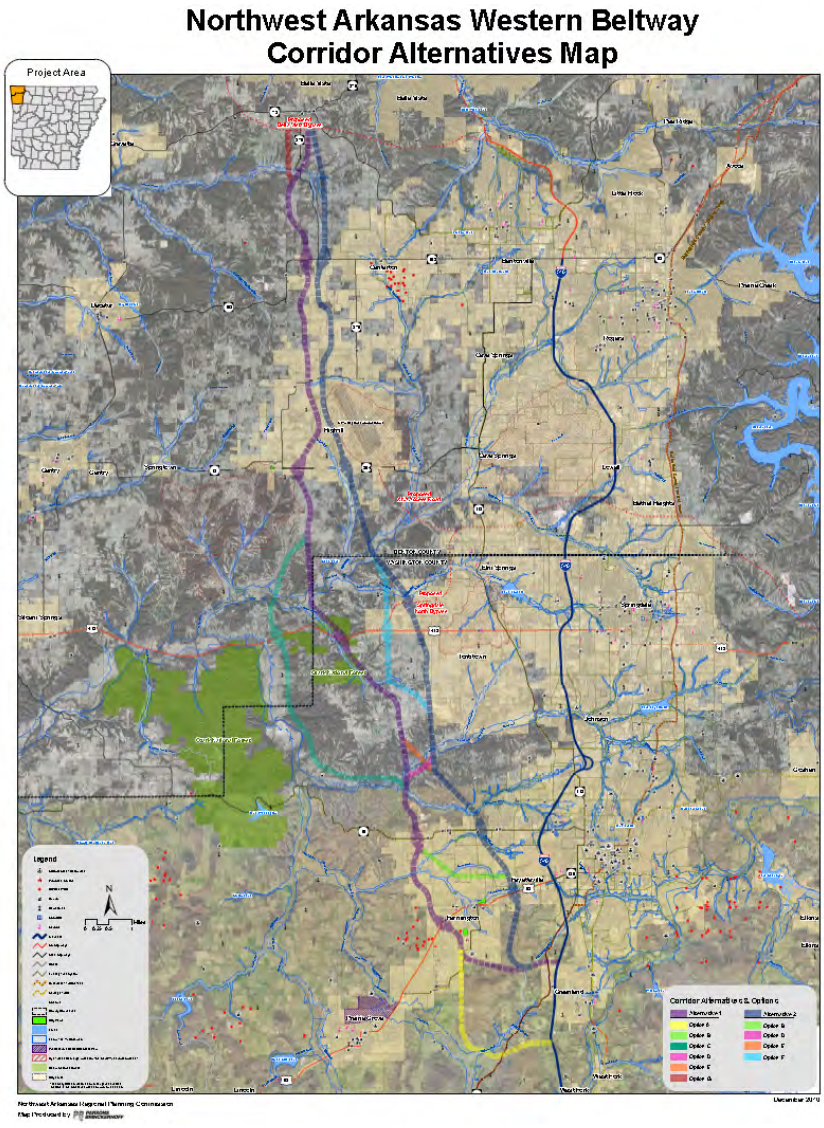
In 1998, TEA-21 identified the access road to the airport as a high priority project and authorized Federal-aid under the High Priority Project Program to partially fund the construction of the project. The project remains a priority for the region and is included in the 2040 MTP.



WESTERN BELTWAY FEASIBILITY STUDY

One of the findings of the Western Beltway Feasibility Study was the identification of the mobility benefits of constructing the northern portion of the beltway combined with expansion of Hwy. 112. The proposed corridor begins at the southern end of Hwy. 549 (Bella Vista Bypass) and connects with the proposed Airport Access Road to the south.

The 2040 MTP has identified the need to improve the Hwy. 279 /Hwy. 12 north-south corridor over the next 25 years as identified in the Western Beltway Feasibility Study.



BRIDGES – STATE, COUNTY, AND CITY OWNED

FHWA requires inspections on all bridges on Federal, State, and local (city/county) roadways based on National Bridge Inspection Standards (NBIS) and National Bridge Inventory (NBI). AHTD is the coordinating agency between FHWA and local jurisdictions for the NBIS program.

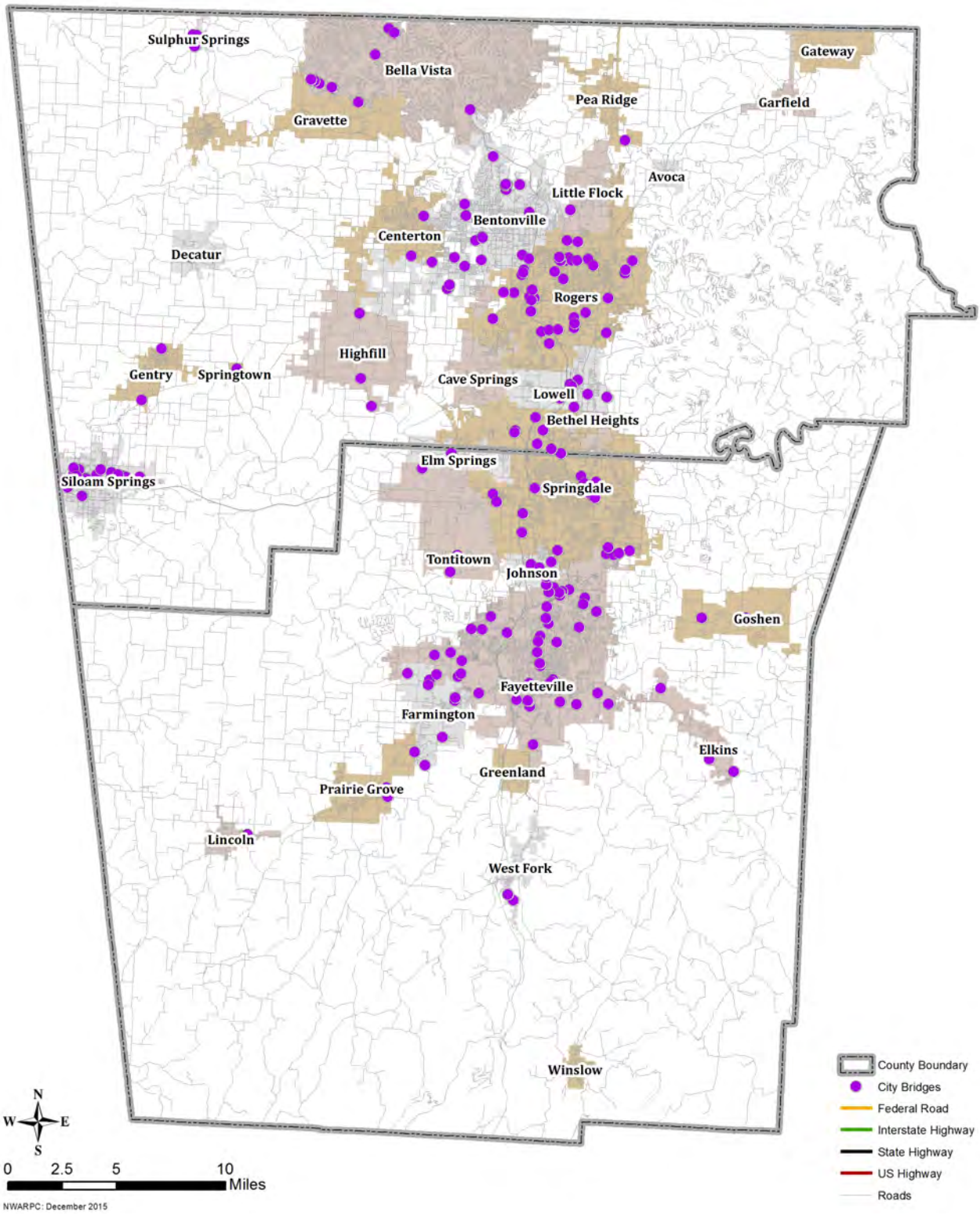
Public safety is the principal objective of the inspection program. AHTD has developed "Local Government Procedures for Compliance with the National Bridge Inspection Standards" as prepared and distributed by AHTD, September 2013.

In 2015, the Arkansas State Highway Commission passed Minute Order 2015-083 to develop a Bridge Management System. The Bridge Management System will be utilized to meet MAP-21/FAST Act requirements that will help establish targets for the condition of the bridge inventory and performance measures to determine progress in meeting those targets. AHTD currently uses the Deighton Total Infrastructure Asset Management System (dTIMS) software for pavement management. The same software will be utilized for State-owned bridges to help "predict the future condition of the bridge inventory based on different funding scenarios, priorities, and project selections."

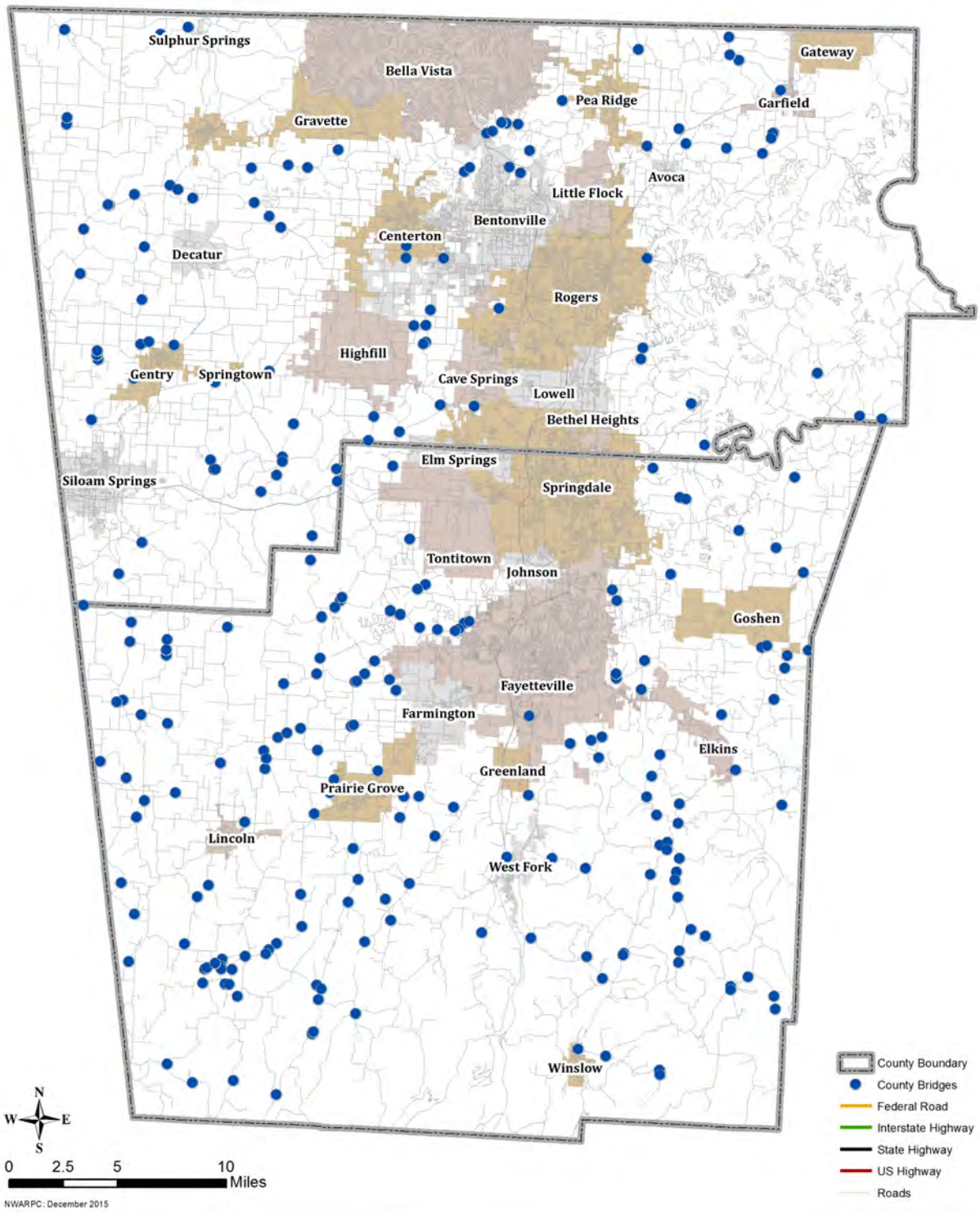
The NBIS inventory contains 808 bridges/structures within Benton and Washington County.

- 338 State and State Agency-Owned
- 260 County-Owned
- 210 City-Owned

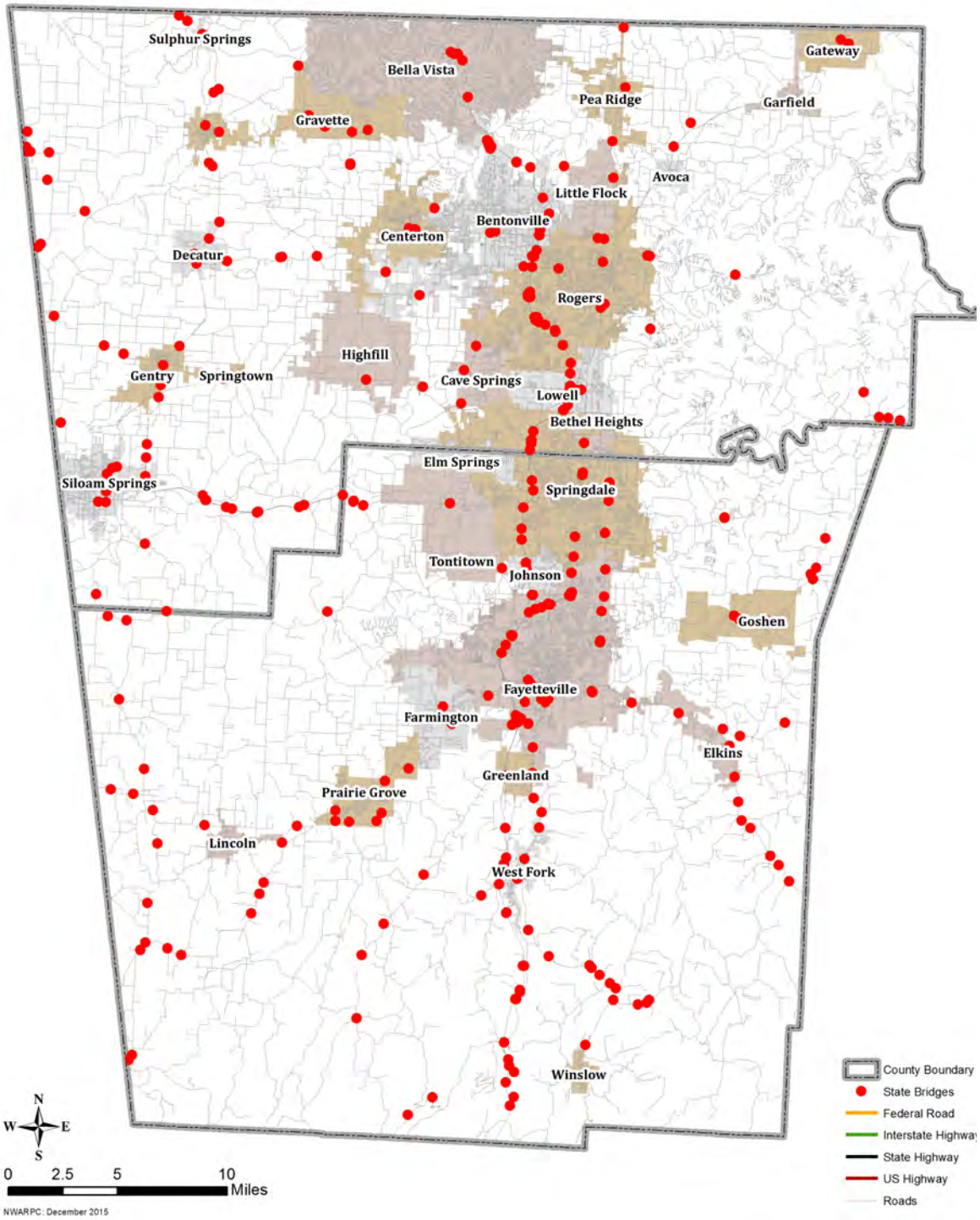
For bridge priorities in Missouri, projects are selected as identified in MoDOT's Southwest Bridge Plan. There are currently 29 State owned bridges within the MPA boundary in Missouri (McDonald County). The MoDOT bridge plan's goal is to "ensure safety for the traveling public and to preserve connections over water features, railroads and other roads." The MoDOT Southwest District Bridge Plan provides priorities for bridge rehabilitation and replacement projects based on condition, available funding, and designation as a primary or supplementary route.



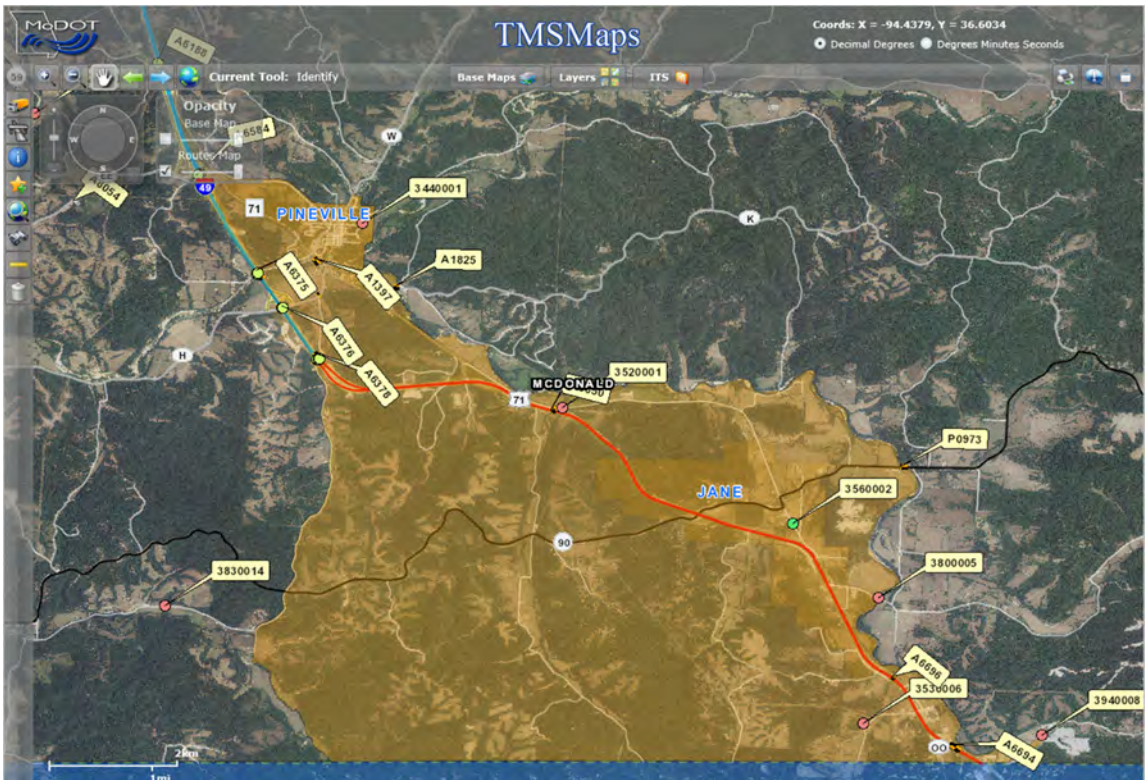
Map 9.5 - Northwest Arkansas City Bridges



Map 9.6 - Northwest Arkansas County Bridges



Map 9.7 - Northwest Arkansas State Bridges



Missouri State Owned Bridges

BRIDGE FUNDING

Funding of bridge projects varies depending on how the bridge is functionally classified – on-system or off-system and the National Highway System (NHS) designation. The use of NHPP, STBGP, and STBGP-GT 200K Federal funds is based on meeting the current Federal eligibility requirements of the specific program. Bridges that meet the eligibility requirements and required local match may apply for Federal-aid through AHTD, MoDOT or NWARPC.

AHTD NHPP funding estimates are based on the area's proportion of the Statewide highway lane miles of functionally obsolete and structurally deficient bridges on the NHS but off the Interstate system. STBGP on-system bridge funding estimates are based on the area's proportion of Statewide non-NHS functionally obsolete/structurally deficient bridge lane miles. STBGP off-system bridge fund estimates are based on the area's proportion of Statewide locally owned functionally obsolete/structurally deficient bridges on off-system routes (functionally classified as minor collector or local). These funds can only be spent on bridges on off-system routes. STBGP-GT 200K funds may also be used for bridge projects designated as on-system or off-system.

Bridge projects to replace or rehabilitate bridges are based upon bridge sufficiency ratings developed through regular inspections by AHTD of all public bridges.

Estimated Funding for Bridges (Federal funds plus match - millions):

Type	2016-2020	2021-2030	2031-2040
NHPP Bridge	$ 2.3	$ 5.7	$ 7.7
STBGP-On-System	$18.7	$46.8	$62.8
STBGP-Off-System	$ 2	$ 5.1	$ 6.8

The complete list of bridges and structures are shown Appendix E: Bridges and Structures in the Metropolitan Planning Area.

STATE MAINTENANCE

State Maintenance funds are spent on routine maintenance of State Highways and the annual overlay program. These funds are programmed by the District Engineer and are a significant part of maintenance of the existing system.

Annual fund estimates supplied by AHTD indicate that $347 million is available for the 2016–2040 timeframe:

Year	State Maintenance Cost
2016-2020	$ 51,000,000
2021-2030	$ 126,000,000
2031-2040	$ 170,000,000
Totals	**$ 347,000,000**

CHAPTER 10. BICYCLE AND PEDESTRIAN FACILITIES

Northwest Arkansas' population is growing rapidly. Public support and advocacy for improved conditions for bicycling and walking have grown even faster, as evidenced in community input sessions and surveys presented in the 2035 Plan and the 2040 MTP. This emphasis on non-motorized transportation reflects a desire by the region's population for livable communities, in which young and old alike are able to move about.

Bicycle and pedestrian facilities are important factors in developing a comprehensive transportation plan. Federal law states that "bicyclists and pedestrians shall be given due consideration in the planning process…bicycle facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities except where bicycle use and walking are not permitted".

The benefits of non-motorized transportation include health and environmental as well as economic. The environmental benefits of walking and bicycling – decreased air, water and noise pollution, less vehicular traffic, and hence, decreased congestion, etc. have been well documented, as have been the health benefits to individuals.

Businesses are increasingly concerned about locating in livable communities in order to attract and retain employees. It is important that communities in Northwest Arkansas be aware of the bicycling and pedestrian initiatives that are taking place in neighboring communities so that eventually, these efforts can be integrated into a network of multi-use trails, sidewalks and other amenities for bicyclists and pedestrians.

Bicycling and walking are important elements of an integrated, intermodal transportation system. Constructing sidewalks, installing bicycle parking at transit, teaching children to ride and walk safely, installing curb cuts and ramps for wheelchairs, striping bike lanes and building trails, all contribute to our national transportation goals of safety, mobility, economic growth and trade, and to the enhancement of communities and the natural environment, and national security.

NORTHWEST ARKANSAS REGIONAL BICYCLE AND PEDESTRIAN MASTER PLAN

The Northwest Arkansas Regional Bicycle and Pedestrian Plan was adopted by the RPC/Policy Committee on December 1, 2015 and is considered part of the MTP. The Plan is online at http://www.nwabikepedplan and http://nwarpc.org. The NWARPC, with the support of communities and advocates throughout Northwest Arkansas has led the development of this Plan. The purpose of this Plan is to build upon previous regional bicycle and pedestrian initiatives, including the 37-mile Razorback Regional Greenway, in setting a clear path for Northwest Arkansas to link its communities and regional destinations with a world-class transportation network.

This Plan is a regional network of bicycle and pedestrian on-road and off-road trail facilities and routes within 32 communities of Northwest Arkansas in Benton and Washington Counties. The planning team led a comprehensive regional planning process involving extensive public involvement and community participation, including the development of 25 Individual Community Action Plans for communities with a population of over 1,000.

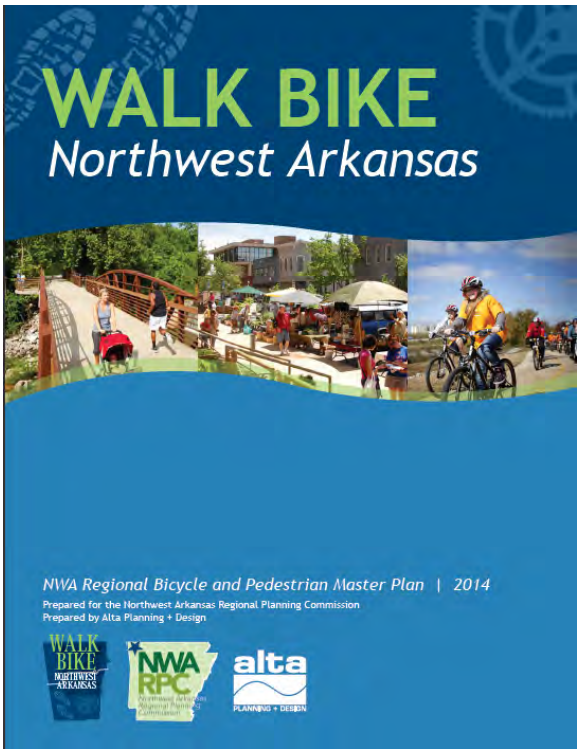
Upon the completion of the development of these plans, all 25 communities were able to adopt their local Plan and endorsed the Regional Plan.

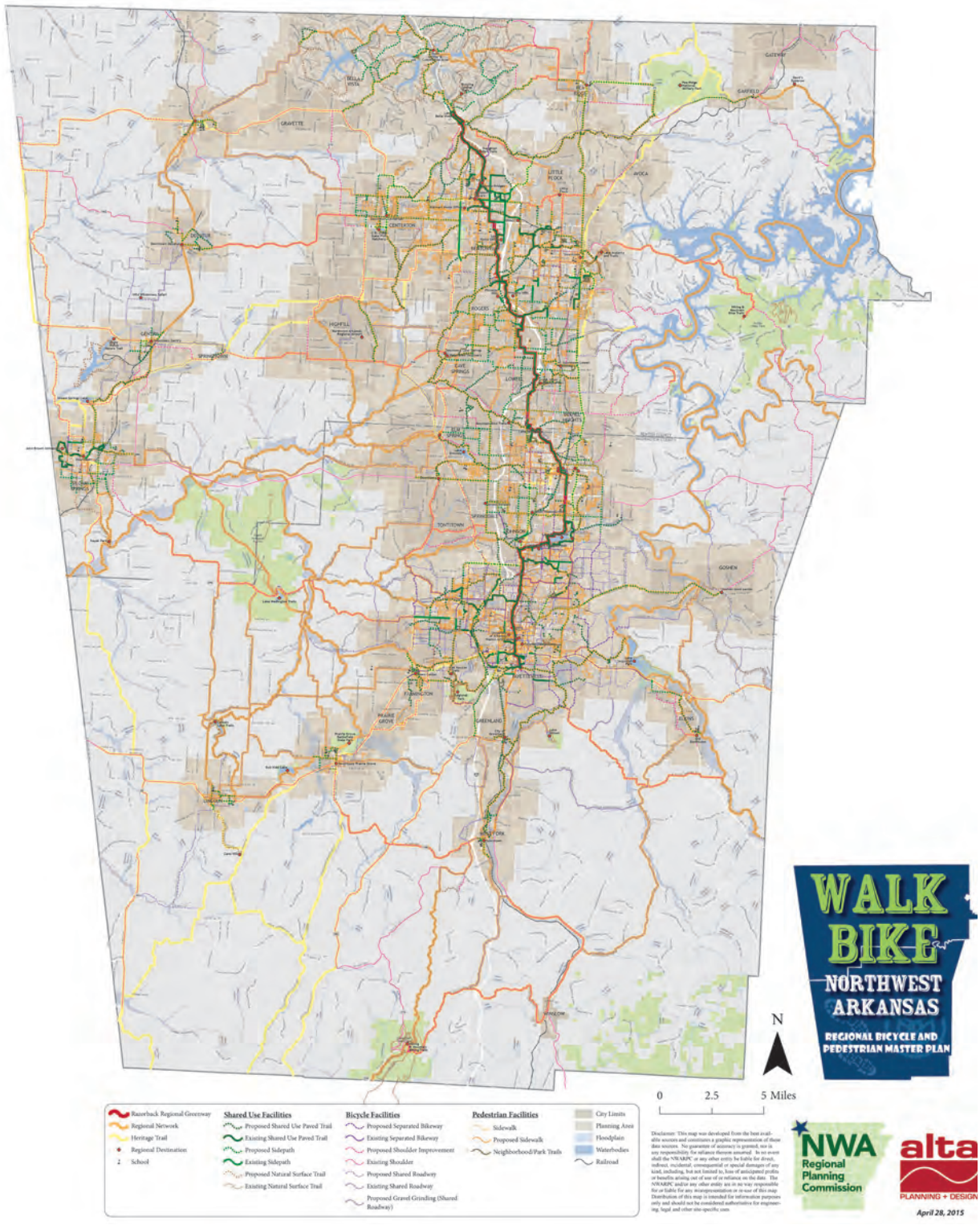
Vision Statement:

Northwest Arkansas' trail and roadway system will comfortably, safely, and efficiently accommodate bicycle and pedestrian transportation. The linking of local and regional attractions will make the area a world-class bicycle and pedestrian destination. Walking and bicycling will become a common, enjoyable, and viable transportation and recreation choice that promotes active living and a high quality of life in Northwest Arkansas.

This Plan builds upon the successful work of NWARPC, its member municipalities, and the momentum created by the Razorback Regional Greenway project. With the Razorback Regional Greenway serving as a regional 'spine,' this Plan focuses on connecting communities to the regional greenway system, and helping each community to be a safer, healthier and more enjoyable place for residents, businesses, and visitors.

The Plan recommendations provide both a long-term vision and short-term steps that move communities quickly towards projects on the ground and Walk/Bike Friendly Community (BFC/WFC) designations. Short-term recommendations address bicycle and pedestrian safety issues, provide bicycle and pedestrian connectivity to important destinations, connect to the Razorback Regional Greenway spine, and include programmatic recommendations covering all Five E's: Engineering, Education, Encouragement, Enforcement, and Evaluation. The mid-term and long-term actions recommended are geared towards communities earning higher designations such as Silver, Gold, and Platinum BFC over the coming decade. The Plan is also built around the integration of a "6th E" for Equity, ensuring that a balanced approach is provided for people of all ages, abilities and backgrounds. The Plan also includes a Resource Appendix with design guidelines, sample complete street resolutions, a needs analysis, program recommendations, a complete project list and much more. The final Northwest Arkansas Regional Bicycle and Pedestrian Master Plan trails are represented on Map 10.1.





Map 10.1. - NWA Regional Bicycle and Pedestrian Master Plan

INDIVIDUAL COMMUNITY PLANS

Individual Community Plans detail existing and proposed bicycle and pedestrian transportation and recreation facilities for the 25 Northwest Arkansas communities with a population of 1,000 or more. The network includes on-road and off-road facilities such as shared use paved trails, separated bikeways, sidewalks, and shared roadways. This section also covers the methodology for developing the network, descriptions of the facility types, and maps and descriptions by community.

The recommended bicycle and pedestrian network was designed by assembling all existing recommendations and information from current plans and studies.

DECATUR COMMUNITY PLAN

THE E'S FOR BECOMING A BIKE/WALK FRIENDLY REGION

A comprehensive approach to create bicycle and walk-friendly communities is more effective than a singular approach that only addresses infrastructure issues. Recognizing this, the national Bicycle Friendly Community program, administered by the League of American Bicyclists, and the Walk Friendly Community program, administered by the National Center for Walking and Bicycling, recommend a multifaceted approach based on the five **E's**: **Engineering, Education, Encouragement, Enforcement, and Evaluation**. A **sixth 'E', Equity**, is included in order to fulfill the goals and vision of this Plan. The recommendations in this Plan are based on addressing all of these categories at the regional and local level. Short term recommendations are made based upon an assessment of community readiness and need. The individual community plans for all 25 communities call for implementing the 5 E's. Each community was requested to implement an item from the list below by December 2015 and to generate a summary report card that will count as an "evaluation". The following are the recommended steps:

- Step One – Identify community bike/pedestrian champion/liaison.
- Next Steps – Implement one aspect in each of the 5 E's and generate an annual bike/pedestrian report card by the end of November 2015.
    - **ENCOURAGEMENT**
        - » Organize a local event and promote a regional event
        - » Visibility campaign
        - » Social media outreach campaign/website link
    - **EDUCATION**
        - » Attend a training session on ways to implement education goals
        - » Implement one goal from training session (or other goal)
        - » Coordinate with local Safe Routes to Schools efforts
    - **ENGINEERING**
        - » Attend a training session on trail design
        - » Make progress toward an improvement project
        - » Increase number of bike racks in the city
    - **ENFORCEMENT**
        - » Attend a training on bike/pedestrian, safety/laws
        - » Provide bike/pedestrian crash/incident reports quarterly
        - » Establish a police program for bike/pedestrian safety
    - **EVALUATION**
        - » Generate an annual bike/pedestrian report card (needed by all entities)
        - » Continue or establish trail surveys and counts
        - » Attend annual meeting with policy, planners and engineers to evaluate collision trends, infrastructure needs and areas for targeted enforcement
        - » Complete Bicycle Friendly Community application (starting in 2016)

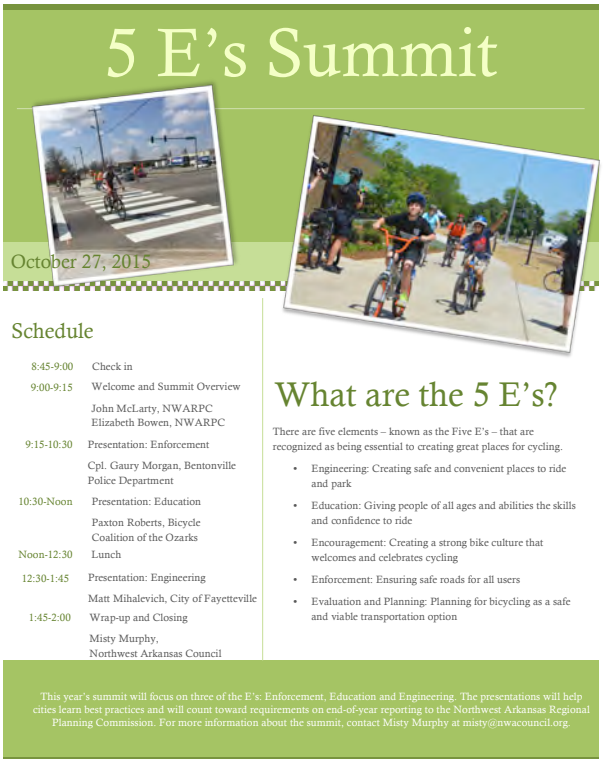
    Table 10.1 shows the items that were accomplished and reported by each city.

	Adoption Process				Implementation of 5 E's				
CITY	Presentation City Council	Presentation to Planning Commission	Endorse Regional Plan	Adoption	ENFORCEMENT	EDUCATION	ENGINEERING	ENCOURAGEMENT	EVALUATION
Bella Vista City	X	X	X	X	X	X	X		
Bentonville	X	X	X	X	X	X	X		
Bethel Heights	X	X	X	X					X
Cave Springs	X	X	X	X		X	X		X
Centerton	X	X	X	X	X	X	X		X
Decatur	X	X	X	X	X	X	X	X	X
Elkins	X	X	X	X					
Elm Springs	X	X	X	X	X	X	X		X
Farmington	X	X	X	X	X	X	X		X
Fayetteville	X	X	X	X	X	X	X	X	X
Gentry	X	X	X	X					X
Goshen	X	X	X	X					
Gravette	X	X	X	X					
Greenland	X	X	X	X	X	X	X	X	X
Johnson	X	X	X	X	X	X	X	X	X
Lincoln	X	X	X	X					
Little Flock	X	X	X	X					
Lowell	X	X	X	X					X
Pea Ridge	X	X	X	X	X	X			X
Prairie Grove	X	X	X	X	X				
Rogers	X	X	X	X	X	X	X		X
Siloam Springs	X	X	X	X	X	X	X		X
Springdale	X	X	X	X	X	X	X		X
Tontitown	X	X	X	X					
West Fork	X	X	X	X	X	X	X		X

Table 10.1 - Implementation of 5 Es by City

5 E'S SUMMIT

A summit with an overall session and a session for Education, Engineering and Enforcement was held on October 27, 2015 for all cities. Many law enforcement, planners, engineers, trail coordinators, etc. attended these training sessions to gain more knowledge and to meet the 5 E's requirements.



REPORT CARD

A report card was generated at the end of December, 2015 for all the cities.

BICYCLE FRIENDLY COMMUNITY DESIGNATION

Every community in the region is unique and will develop in its own way – but will do so with a common vision of becoming more walkable, bikeable and livable places for residents, visitors, and businesses in Northwest Arkansas. At the first Steering Committee meeting for the Plan, participants from each community were asked to define the level of success they would like to achieve, based on the national Walk/Bike Friendly Communities award levels of bronze, silver, gold and platinum. The consensus was that the region wanted to strive for platinum – to be recognized as one of the best places in the world for walking, bicycling, and quality of life.

This Plan was developed with that goal in mind, using the best available models for innovative design guidelines, support programs, and policies based on the specific conditions of Northwest Arkansas.

From left: Mayor Long, Mayor Keeney, Mayor Sprouse, John McLarty, Paxton Roberts and Mayor Jordan at the Designation Ceremony

"The League of American Bicyclists has designated Northwest Arkansas - Benton and Washington Counties as a Bicycle Friendly Community at the Bronze level. This decision involved careful review of your application, supplemental material and consultation with local cyclists. As you know, this award is presented only to communities with strong commitments to bicycling. You should be very proud of this accomplishment. Your designation is valid for four years and will be due for renewal in the summer of 2019."

The League of American Bicyclists Bicycle Friendly Community Report Card

The report card is Northwest Arkansas - Benton and Washington County's public profile on the League's award page, and can be easily shared with elected officials and the media. It features key recommendations and statistics, and category scores. The report card features the most important – but not the only – indicators that were taken into consideration as part of the award decision.

NW ARKANSAS - BENTON & WASHINGTON COUNTIES

BICYCLE FRIENDLY COMMUNITY
Fall 2015
BRONZE
THE LEAGUE OF AMERICAN BICYCLISTS

TOTAL POPULATION
424,404

POPULATION DENSITY
238

TOTAL AREA *(sq. miles)*
1836

OF LOCAL BICYCLE FRIENDLY BUSINESSES 8

OF LOCAL BICYCLE FRIENDLY UNIVERSITIES 0

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

	Average Silver	*Benton & Washington Counties*
Arterial and Major Collector Streets with Bike Lanes	45%	3%
Total Bicycle Network Mileage to Total Road Network Mileage	30%	3%
Public Education Outreach	GOOD	VERY GOOD
Share of Transportation Budget Spent on Bicycling	7%	10%
Bike Month and Bike to Work Events	GOOD	GOOD
Active Bicycle Advocacy Group	ACTIVE	YES
Active Bicycle Advisory Committee	ACTIVE	MEETS EVERY TWO MONTHS
Bicycle-Friendly Laws & Ordinances	SOME	FEW/GOOD
Bike Plan is Current and is Being Implemented	YES	YES
Bike Program Staff to Population	1 PER 70K	1 PER 15.4K

CATEGORY SCORES

ENGINEERING *Bicycle network and connectivity*	4 /10
EDUCATION *Motorist awareness and bicycling skills*	5 /10
ENCOURAGEMENT *Mainstreaming bicycling culture*	4 /10
ENFORCEMENT *Promoting safety and protecting bicyclists' rights*	3 /10
EVALUATION & PLANNING *Setting targets and having a plan*	3 /10

KEY OUTCOMES

	Average Silver	*Benton & Washington Counties*
RIDERSHIP *Percentage of Commuters who bike*	3.5%	0.2%
SAFETY MEASURES **CRASHES** *Crashes per 10k bicycle commuters*	180	372
SAFETY MEASURES **FATALITIES** *Fatalities per 10k bicycle commuters*	1.4	8.2

KEYSTEPSTOSILVER

» Continue to use the Northwest Arkansas Bicycle and Pedestrian Plan, and associated planning/engineering processes, to foster regional standards and cooperation. Ensure that all appropriate entities in Benton and Washington Counties have adopted Complete Streets policies that ensure consistent and connected bicycling facilities.

» Compared to other applicant communities, you reported a very high percentage of your roadway network having a posted speed of more than 35 mph. Speed has been identified as a key risk factor in road traffic injuries, influencing both the risk of a road traffic crash as well as the severity of the injuries that result from crashes.

» Continue efforts to expand adult bicycle education opportunities. Commuter classes that teach skills that make bike commuter better can be an important part of helping people make what is possible practical.

» Consider offering a 'Ciclovia' or Open Streets type event, closing off a major corridor to auto traffic and offering the space to cyclists and pedestrians.

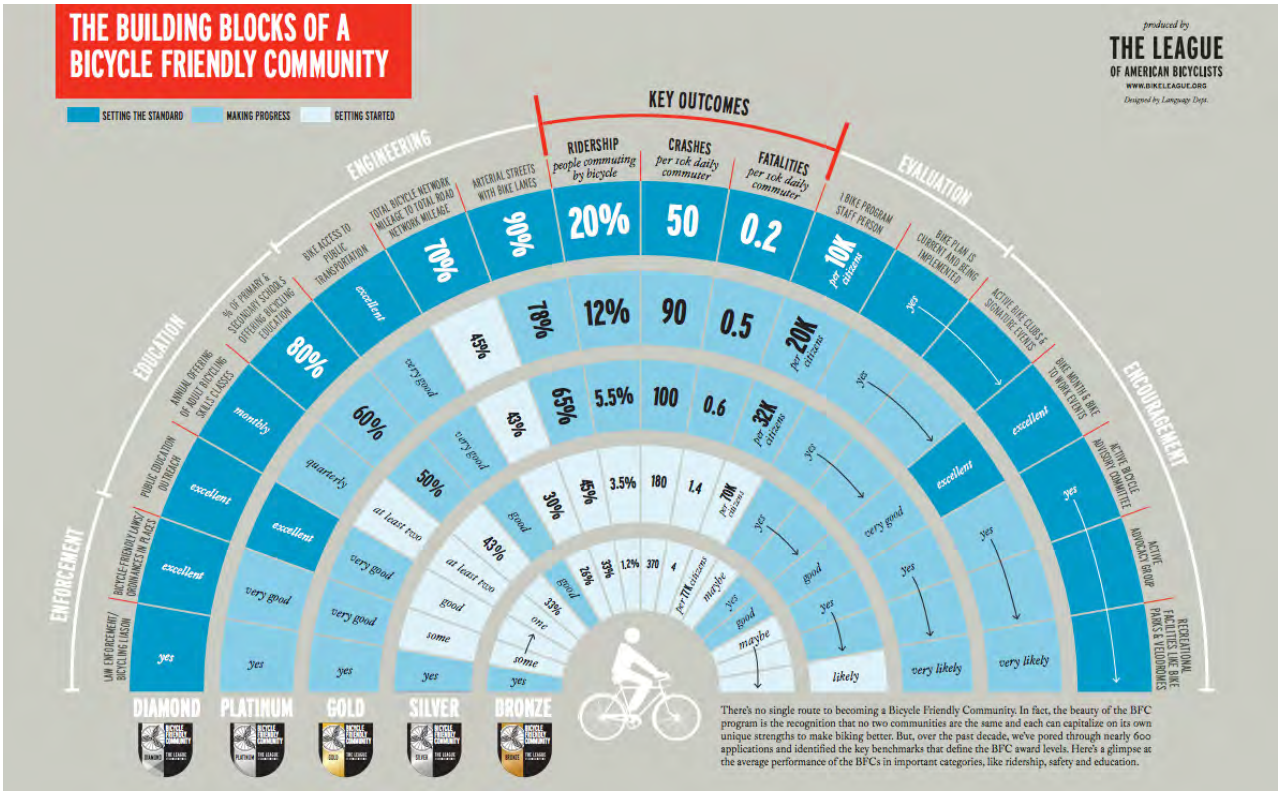
» Continue to ensure that police officers are educated on traffic laws as they apply to bicyclists and motorists and bicycling skills.

» Develop a formal process to reach out to minority/low-income communities to ensure that they are included in the bicycle planning decision-making process.

LEARN MORE » WWW.BIKELEAGUE.ORG/COMMUNITIES

SUPPORTED BY TREK

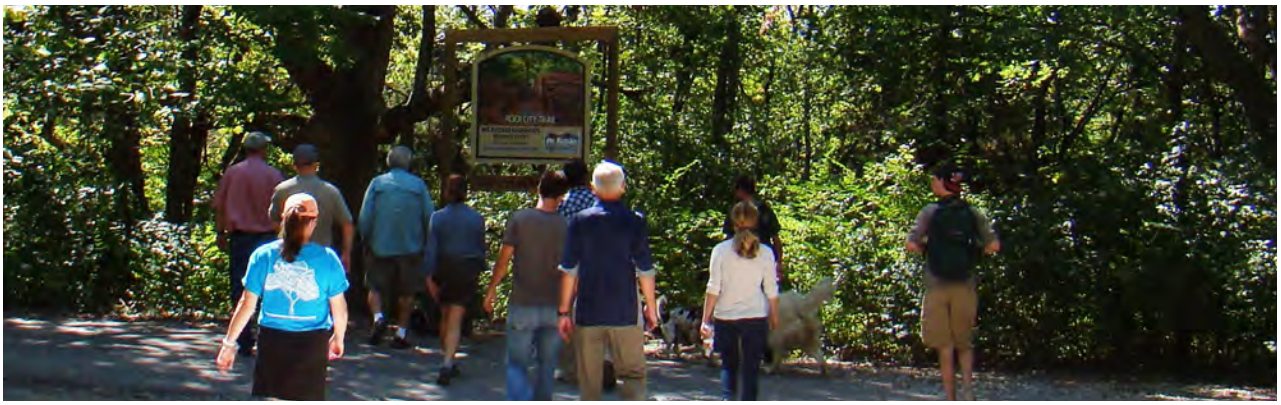
The Plan provides for a comprehensive guide on how to become a bicycle friendly community.



NWA ACTIVE TRANSPORTATION COMMITTEE

NWARPC initiated a committee with open participation from cities, counties and local organizations and citizens who were interested in promoting on and off road trails in Northwest Arkansas. The Northwest Arkansas Active Transportation Committee began to have meetings on a monthly basis at the NWARPC office in the spring of 2009 as a small group of city officials, interest groups representatives and local citizens interested in trails and off road transportation. The participation was open and highly encouraged by postings on the NWARPC website and listserv emails. The meetings concentrated at first on identifying where and how long the trail system in the two counties was and mapping the trails so that the group could get an overall, regional view of the Northwest Arkansas trail system. Another goal identified by the group was to look into expanding the Heritage Trail and develop a more comprehensive bicycle and pedestrian network for Benton and Washington Counties.

In 2014, the Active Transportation Committee identified the main types of trails and routes represented on the regional map and compiled a definition for each type of trail. Additionally, a database with a standard attribute table was created so that all trails across the system would be categorized the same.



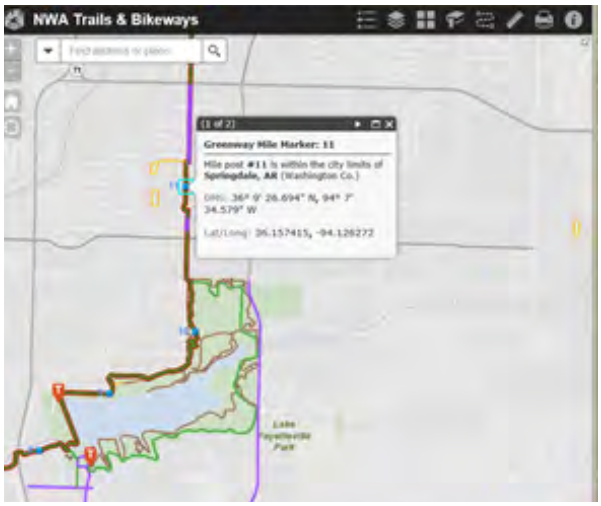
Active Transportation Committee Field Trip to Kessler Mountain

REGIONAL TRAIL GIS AND MAPPING

The NWARPC, the Bicycle Coalition of the Ozarks and the Northwest Arkansas Council staff developed a Northwest Arkansas Trails Online Map and supporting geodatabase at https://trails.cast.uark.edu/. The guidance on how to classify the trail types is based on the "Northwest Arkansas Regional Bicycle and Pedestrian Master Plan." The database structure was developed and outlined in the "Northwest Arkansas Active Transportation Facilities - Reference Guide for GIS Coding, Mapping, and Tracking Existing Facilities by Facility Type" attached in Appendix F. This guidance will be used in collecting, maintaining and mapping the trails in Northwest Arkansas.

ONLINE INTERACTIVE TRAILS AND BIKEWAYS MAP

All completed trails are shown in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan and the online map at www.nwarpc.org or www.nwatrails.org/map/ . As trails are being repaired or are under construction they are represented on the map with a dashed yellow and black line representing that hazard. This map is an interactive map so that the user can select a trail segment and gain information about that segment including everything in the attribute table. The creation of this map was a cooperative effort by NWARPC, The Bicycle Coalition of the Ozarks, the Center for Advanced Spatial Technology, and the Northwest Arkansas Council, with funding provided by the Endeavor Foundation and the Walton Family Foundation.



RAZORBACK REGIONAL GREENWAY

Over the past several years, the municipalities of Northwest Arkansas, the Walton Family Foundation, and other grant sources have demonstrated strong support in planning, funding, and building local trails and greenways. Not only have the cities been working to build sustainable trail systems in the past few years, but they have truly embraced the concept that trails and greenways can provide alternative transportation, health and environmental benefits, as well as economic development.

BACKGROUND

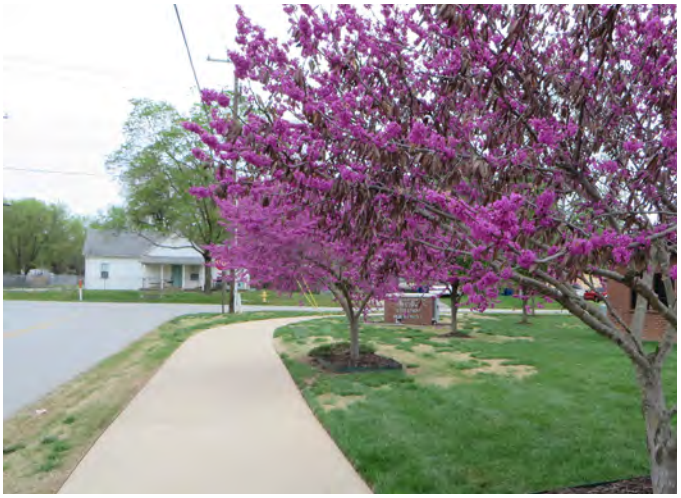
The idea of a regional greenway that stretches along a corridor from south Fayetteville to Bella Vista was discussed at various meetings that the Active Transportation Committee had in the past couple of years at NWARPC. This regional greenway, named the Northwest Arkansas Regional Razorback Greenway, will complement the full regional trail network and the Heritage Trail Plan.

Greenway Springdale Ground-breaking Event

In an effort to further refine the regional greenway concept two workshops were organized in Northwest Arkansas in early 2010. The workshops involved a team of greenway experts from around the country with municipal representatives and corporate leaders from Northwest Arkansas. This effort served as a catalyst that offered the chance for the communities to work neighbor-to-neighbor on shared greenways opportunities and resulted in a coordinated strategy for the elected leadership of the region to capitalize on the exciting opportunities that a regional greenway system represents (Map 10.2).

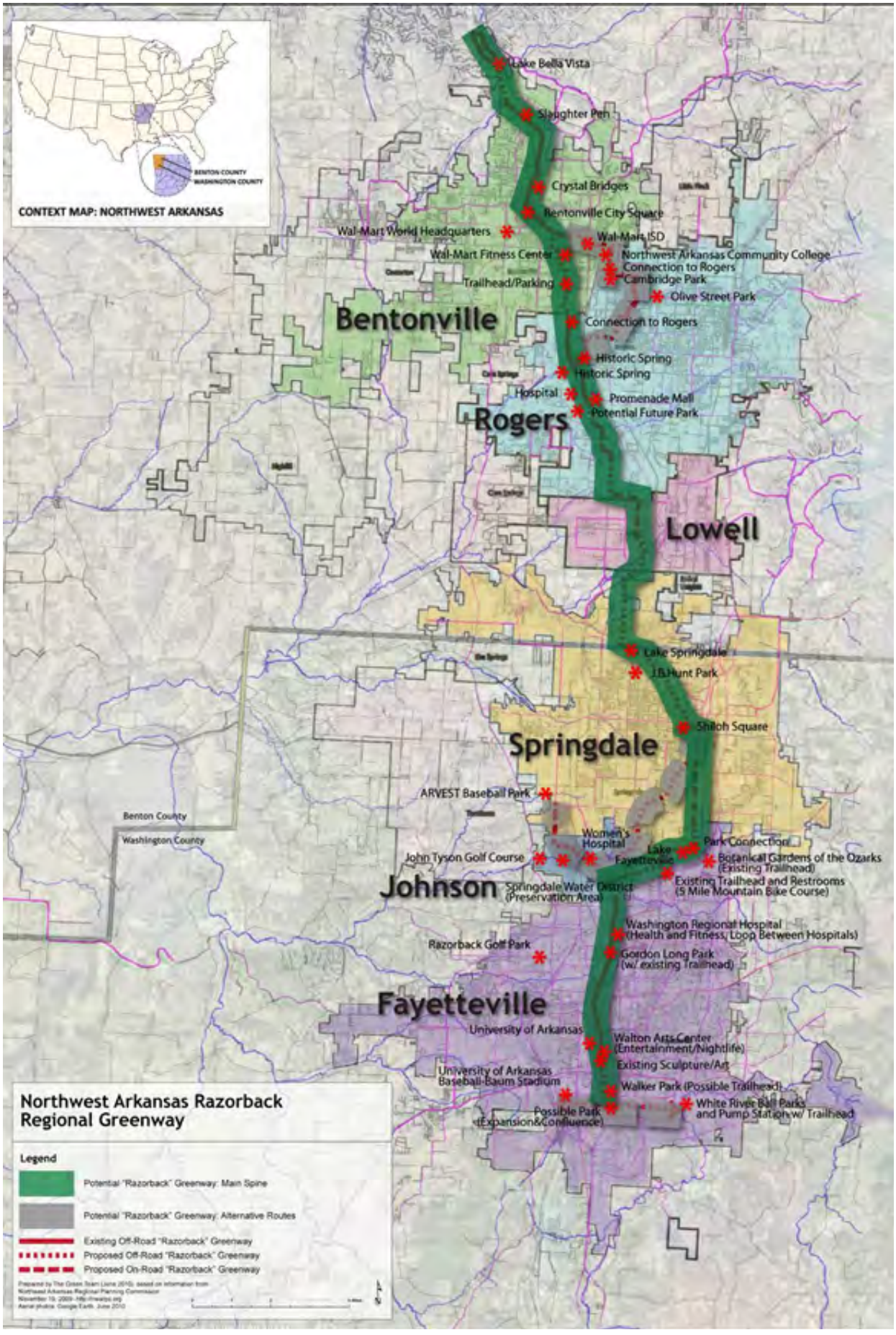
The key outcome of those workshops was the creation of Northwest Arkansas Razorback Regional Greenway, a regional greenway vision that will connect existing and proposed greenway sections into an innovative system. The momentum created by this new greenway vision was remarkable.

The project received funding of $15M from the TIGER II (U.S. DOT's Transportation Improvements Generating Economic Recovery) program, with a match share of $3.75M from the Walton Family Foundation. Because of the unique combination of involved elected officials and community interest, philanthropic support, and private sector leadership, this project was able to capitalize on the TIGER II program to quickly put in place a nationally significant project that would take other regions years to accomplish.



CURRENT

The Northwest Arkansas Razorback Regional Greenway was completed in early 2015. The grand opening was held on May 2, 2015 at the Shiloh Square in Springdale. Many features have been installed along the Greenway including trailheads, benches, watering stations, etc.



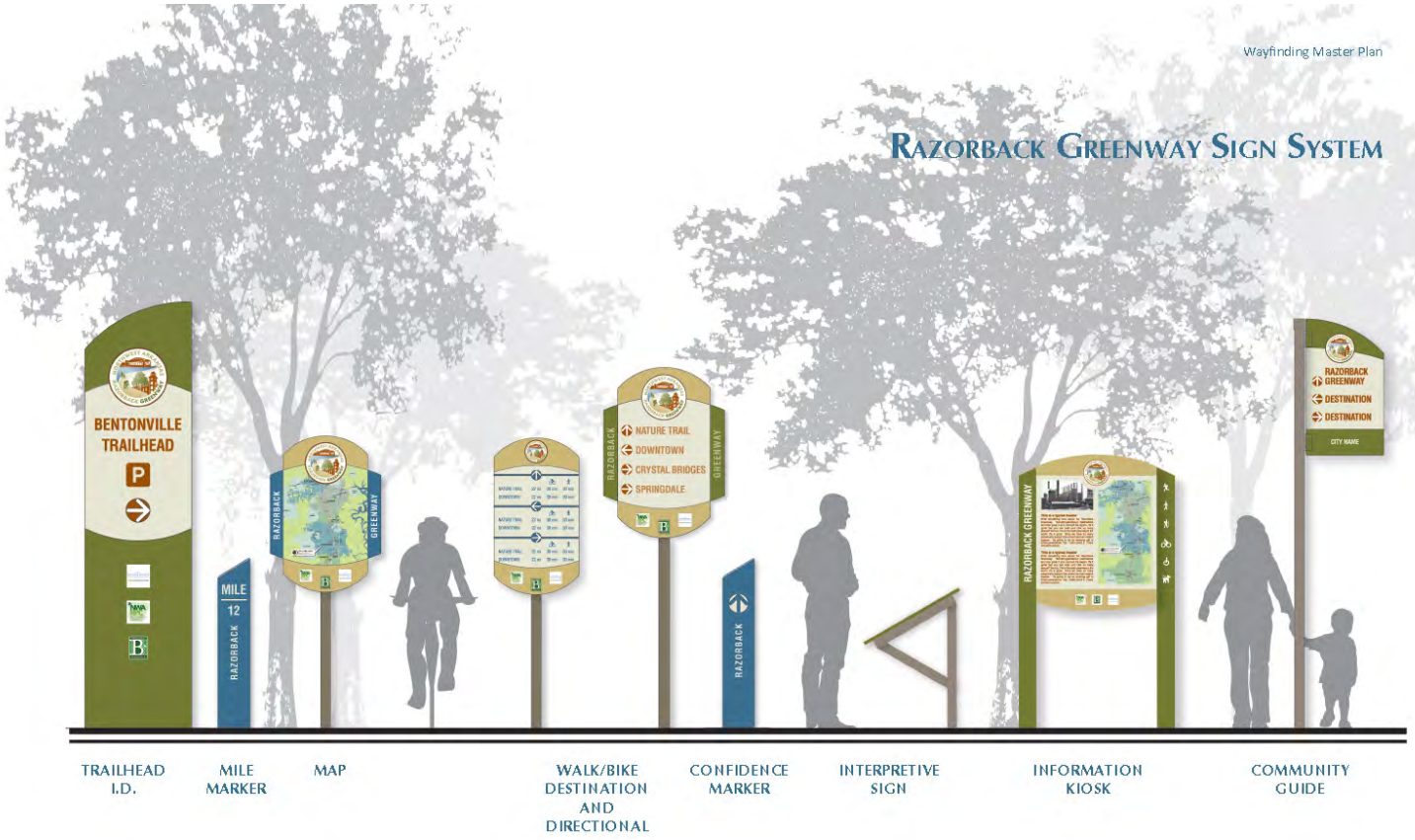
Map 10.2 - Northwest Arkansas Razorback Regional Greenway

RAZORBACK REGIONAL GREENWAY SIGN PROGRAM

Project 1 – In early 2015, a mile marker sign program began with installation of 37 mile markers from the trail beginning in south Fayetteville at "0" to trail end at marker 37 in Bella Vista with funding being provided by each of the six cities.

Project 2 – In late 2015, the wayfinding sign program began to increase the ease of use of the trail. A complete sign package was developed with funding being made available through the Walton Family Foundation for the wayfinding signs. Signage for trailheads, kiosks, etc. will be finished by the cities as funding allows.

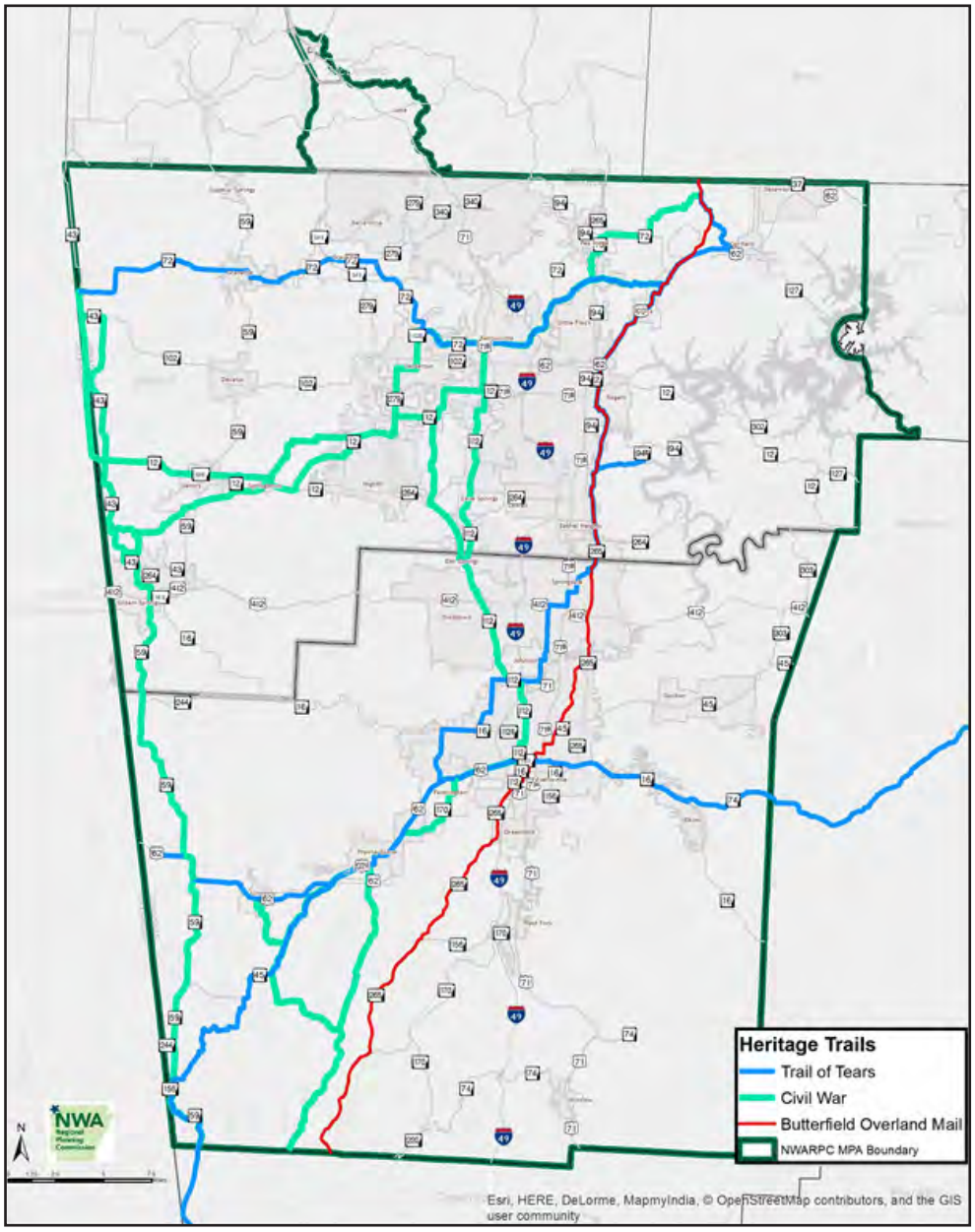
Razorback Greenway Mile Marker



HERITAGE TRAIL PLAN

The Heritage Trail Plan describes a regional network for proposed bicycle and pedestrian facilities within the two counties of Northwest Arkansas, which combines the historic Butterfield Stagecoach Route, the Trail of Tears and Civil War trails into automobile, bicycle, and pedestrian facilities that connect Northwest Arkansas citizens and visitors to heritage, recreational, and cultural assets, a healthier lifestyle, and to each other. The entire network can be seen, at a minimum, as a bicycle route with improvements along the route providing safety for bicyclists. Within the more populated areas, where pedestrian traffic is anticipated, the improvements will also accommodate safe pedestrian travel.

These routes are marked with unique signage and are promoted with informational brochures. As such, the Heritage Trail system can double as an auto tour guiding citizens and visitors to the region's attractions and points of interest. Map 10.3 illustrates the Heritage Trail Plan. The full Plan is considered a part of the 2040 MTP and is included in Appendix F.



Map 10.3 - The Heritage Trail Plan

CITY TRAIL PROJECT HIGHLIGHTS

Table 10.2 summarizes the multi-use trails and other types of trails that have been completed since 2010 in Fayetteville and Bentonville.

Fayetteville:

Trail Name	Trail Type	Section	Length (Feet)	Length (Miles)	Completion Date
Oak Ridge Trail	Shared-Use Paved	Frisco Trail to Garland	3,044.00	0.58	3/31/2011
Meadow Valley Trail	Shared-Use Paved	Razorback Greenway to I-49	12,817.00	2.43	8/8/2012
Owl Creek Trail	Shared-Use Paved	North side of Persimmon Rd	1,354.00	0.26	6/30/2012
Razorback Road Sidepath	Shared-Use Paved	Halsell to Meadow St.	1,962.00	0.37	5/1/2012
Lake Fayetteville Trail	Shared-Use Paved	BGO to Veterans	5,385.00	1.02	3/15/2013
Tsa La Gi Trail	Shared-Use Paved	Hollywood to Beechwood	1,319.00	0.25	4/20/2013
Cato Springs Sidepath	Shared-Use Paved	Cato Springs Branch to 71B	2,429.00	0.46	1/30/2014
Clear Creek Trail	Shared-Use Paved	Mud Creek to Lake Fayetteville	7,937.00	1.50	4/14/2014
Lake Fayetteville Trail	Shared-Use Paved	Softball to North Shore	4,793.00	0.91	9/1/2014
Frisco Trail (Razorback)	Shared-Use Paved	Prairie St. to Walker Park	2,912.00	0.55	4/11/2014
Town Branch Trail	Shared-Use Paved	71B to Greathouse Park	3,064.00	0.58	8/9/2014
Tsa La Gi Trail	Shared-Use Paved	Razorback Rd to Frisco Trail	3,343.00	0.63	5/4/2014
Clabber Creek Trail	Shared-Use Paved	Hwy 112 to Gregg Ave. (Van Asch	4,830.00	0.91	10/20/2015
Frisco Trail (Razorback)	Shared-Use Paved	Walker Park to Town Branch	3,073.00	0.58	7/15/2015
Town Branch Trail	Shared-Use Paved	Razorback Greenway to 71B	1,167.00	0.22	6/15/2015
Mission Blvd. Sidepath	Shared-Use Paved	Mission Heights to Viewpoint	2,527.00	0.48	7/15/2015
St. Paul Trail	Shared-Use Paved	White River to Dead Horse Mt. Rc	2,088.00	0.40	4/20/2015
		Total	**64,044.00**	**12.13**	

Bentonville:

Trail Name	Trail Type	Section	Length (Feet)	Length (Miles)	Completion Date
Arkansas/Missouri RR Trail	SU	I-540 and NWACC	3,960.00	0.75	2011
South Bentonville Trail(Razorl	SU	Medical Center Parkway	13,464.00	2.55	2011
Enfield Park Trail	SU	North of Crystal Bridges	1,108.80	0.21	2011
Members Place Trail	SU	North of Members Place Drive	1,900.80	0.36	2011
Soccer Trail	SU	Memorial Park Soccer fields	1,372.80	0.26	2011
All American Trail	NS	West of Crystal Bridges Trail	4,224.00	0.8	2011
I Street Trail - Heritage Trail	SP	Hwy 102 to Hwy 12	7,814.00	1.48	2013
Wishing Springs Trail	SU	South of Bella Vista Lake	3,537.60	0.67	2013
Downtown Trail Extension, Ph	SU	SE E St to SE B St	950.4	0.18	2013
Downtown Trail Extension, Ph	SU	SE B St to SE A St	369.6	0.07	2014
North Walton Trail	SP	Peel Mansion to NW 13th ST.	7,920.00	1.5	2015
		Total	**46,622.00**	**8.83**	

Table 10.2 - Cities Trail Highlights

PERFORMANCE MEASURES

MAP-21/FAST Act established a performance and outcome-based program. NWARPC, AHTD and MoDOT are required to develop plans and programs that help achieve the national goals for (1) Safety, (2) Infrastructure Condition, (3) Congestion Reduction, (4) System Reliability,(5) Freight Movement and Economic Vitality, (6)Environmental Sustainability, and (7) Reduced Project Delivery Delays. NWARPC will work with AHTD, MoDOT and local jurisdictions to identify measures and to develop methodologies to implement performance-based planning and programming for alternative transportations.

The Northwest Arkansas Regional Bicycle and Pedestrian Master Plan includes performance measures and goals set for the region as described in Figure 10.1. To measure and meet these goals trail counts, crash data, etc. are gathered and analyzed.

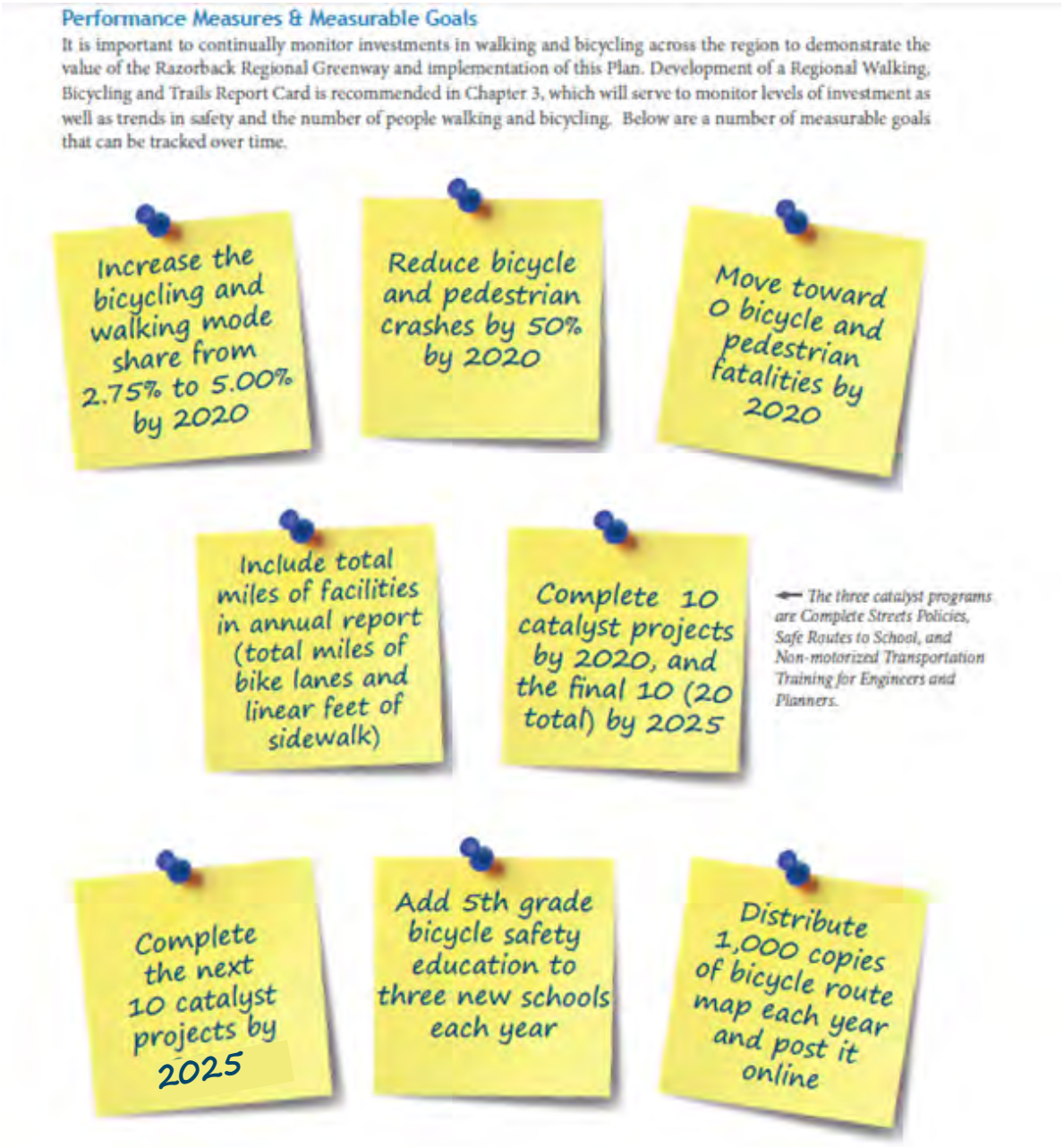


Figure 10.1 - Performance Measures and Goals

TOTAL MILES OF TRAIL AND SIDEWALKS

TRAIL TYPE	MILES OF EXISTING TRAIL
Shared Use Paved Trail	107.7
Protected Bike Lane	1.0
Bike Lane	18.0
Shared Roadway	14.1
Neighborhood/Park Trail	22.5
Natural Surface	143.3
Sidewalk	1408.9
TOTAL	1715.4

Table 10.3 - Total Miles of Trails and Sidewalks

Clear Creek Trail, Ribbon Cutting Event

TRAIL COUNTS

Baseline pre-project counts were taken as a requirment of the TIGER II Grant for the Razorback Regional Greenway at pre-existing trail sections on the north and south end of the Federal project. After-construction counts were taken at these same locations. Counting methodology shows a three day average that includes a weekend and one weekday. Results are shown Table 10.4.

Count Locations	Pre-project - December 2011	After Opening - July 2015
North End Section 8 Mercy Trail	14	500
South End Section 23 Lake Fayetteville Trail	167	665

Table 10.4 - Trail Counts

Counting will continue per the Federal grant requirements on newly constructed trail segments near the locations of the pre-project counts. These counts will show a quarterly average of the three day counts per month. Counts for the fourth quarter of 2015 are shown in Table 10.5

Count Locations	Fourth Quarter Average
North End Section 7 Near New Hope Road	141
South End Section 21/22 Near Powell St. and Don Tyson	157

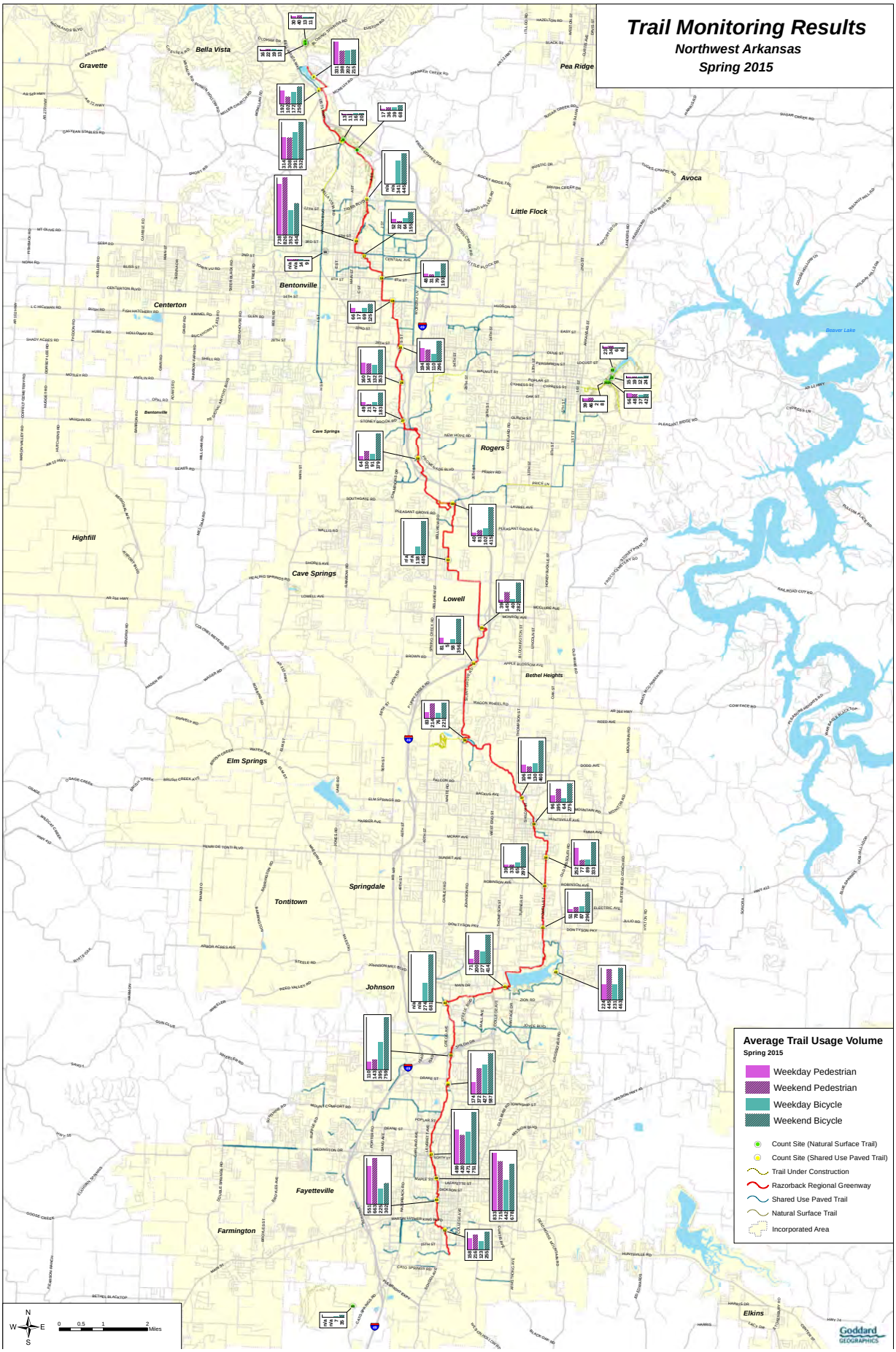
Table 10.5 - Quarterly Trail Counts

Trail counts have been obtained by city officials and the Walton Family Foundation at different locations in the region (See Table 10.6 and Map 10.4).

WALTON FAMILY FOUNDATION COMPREHENSIVE 2015 TRAIL COUNTS

Count Site	WeekDay_Ped_1	WeekEnd_Ped_1	WeekDay_Bike_1	WeekEnd_Bike_1	WeekDay_Both_1	WeekEnd_Both_1
1	30	40	13	11	0	0
2	16	22	19	13	0	0
3	331	198	202	215	0	0
5	192	102	172	250	0	0
6	13	11	16	20	0	0
7	314	308	391	532	0	0
9	17	36	39	68	0	0
11	0	0	341	445	479	816
15	738	826	352	454	0	0
16	13	19	14	9	118	9
17	52	22	64	155	0	0
18	48	31	79	193	0	0
19	66	17	69	125	0	0
20	194	168	110	296	0	0
22	23	34	6	6	0	0
23	15	19	12	24	0	0
24	39	46	2	8	0	0
25	56	48	37	42	0	0
26	160	147	132	353	0	0
27	49	21	47	183	0	0
28	64	130	91	379	0	0
30	40	81	102	415	0	0
32	0	0	118	485	254	375
33	39	145	40	282	0	0
34	81	5	58	356	0	0
36	83	214	76	221	0	0
37	106	81	130	460	0	0
38	96	195	64	275	0	0
39	252	77	89	333	0	0
40	39	33	65	297	0	0
41	51	78	87	296	0	0
42	224	445	231	463	0	0
43	71	200	177	414	0	0
44	0	0	274	681	280	538
45	110	143	395	759	0	0
46	174	372	427	587	0	0
47	499	420	471	751	0	0
48	833	715	442	678	0	0
50	551	663	225	302	0	0
52	158	216	123	255	0	0
53	0	0	7	35	0	0

Table 10.6 - Comprehensive Trail Counts



Map 10.4 - Locations of Trail Counts

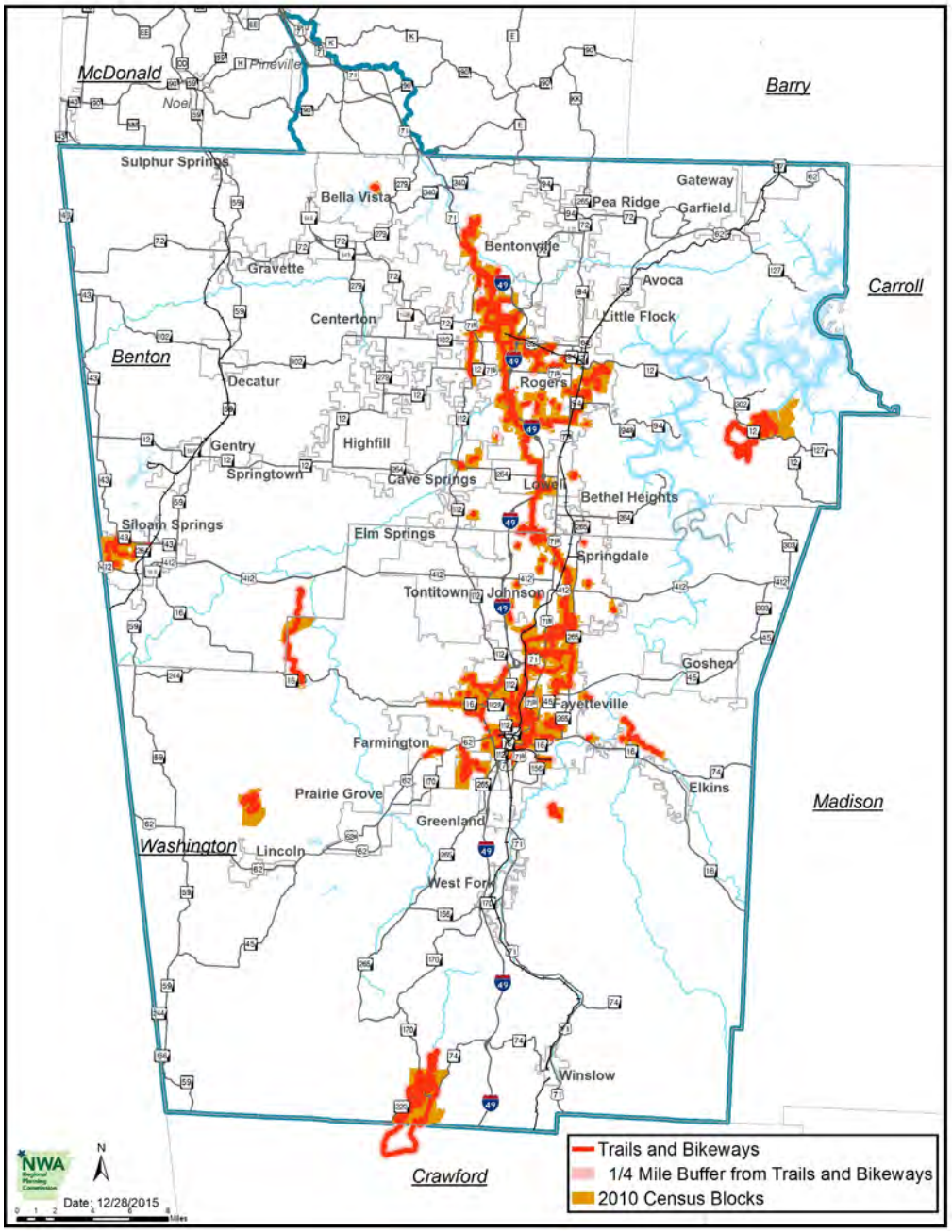
TRAIL ACCESSIBILITY

Trails are accessible by all populations. There are 120,929 people within 1/4 mile of the trails and bikeways (no sidewalks) and 54,260 Housing units (2010 census). Table 10.7 and Map 10.5 were created using the 2010 Census Bureau data at the block level and the 2015 trail database. A buffer of ¼ mile from all trail types was created and the population within the blocks that had the majority of the area in this buffer was summarized.

Demographic		
Population*	**Population Within 1/4 Mile**	**120,929**
	% of Regional Population	**29%**

*Population – Source: 2010 US Census Blocks

Table 10.7- 2010 Census Bureau Population within ¼ Mile of Trails



Map 10.5 - 2010 Census Bureau Population within ¼ Mile of Trails

USER DEMAND AND BENEFITS ANALYSIS

The increased walking and bicycling opportunities provided by the Razorback Regional Greenway and other existing bicycle and pedestrian facilities, combined with potential increases from projects proposed in this and other plans, will result in quantifiable benefits. As more people walk and bike more often, individuals and communities in the region will enjoy economic, health and environmental benefits, such as those that have been carefully documented in many cities and regions known for their high quality of life.

A variety of data sources were used to estimate the number of walking and bicycling trips currently occurring in Northwest Arkansas. Data on the average trip lengths of different trip types were used to convert the trip estimates into estimates of reduced vehicle miles traveled. This trip data, combined with peer reviewed literature, was then used to identify and monetize a number of benefits related to items such as reduced emissions, congestion, and health care costs. The tables below identify a range of potential low, medium, and high mode share scenarios for Northwest Arkansas. These scenarios are then used to estimate the benefits of walking and bicycling in the existing context as well as under each of the three aspirational scenarios (Tables 10.8 and 10.9).

	Commute Mode Share		K-12 Mode Share		College Mode Share	
Scenario	Bike	Walk	Bike	Walk	Bike	Walk
Current*	0.18%	2.57%	0.67%	10.57%	0.77%	11.26%
Low	1.00%	3.00%	2.00%	12.00%	2.00%	12.00%
Medium	3.00%	4.00%	4.00%	15.00%	4.00%	13.00%
High	5.00%	5.00%	8.00%	18.00%	8.00%	14.00%

Table 10.8- Existing and Potential Bicycling and Walking Rates in NWA

	Annual Walking and Bicycling Benefits			
Benefit Factor	Baseline	Low Scenario	Medium Scenario	High Scenario
Annual VMT Reduced	18,334,268	27,466,522	46,755,325	68,227,588
Reduced Hydrocarbons (pounds/year)	54,971	82,353	140,186	204,566
Reduced Particulate Matter (pounds/year)	408	612	1,041	1,519
Reduced Nitrous Oxides (pounds/year)	38,399	57,526	97,924	142,895
Reduced Carbon Monoxide (pounds/year)	501,210	750,861	1,278,165	1,865,159
Reduced Carbon Dioxide (pounds/year)	14,915,032	22,344,174	38,035,726	55,503,535

	Annual Walking and Bicycling Benefits			
Benefit Factor	Baseline	Low Scenario	Medium Scenario	High Scenario
Reduced Vehicle Emissions	$386,475	$578,978	$985,575	$1,438,198
Reduced Traffic Congestion	$751,624	$1,126,007	$1,916,763	$2,797,031
Reduced Vehicle Crashes	$10,267,190	$15,381,252	$26,182,982	$38,207,449
Roadway Maintenance Costs	$2,750,140	$4,119,978	$7,013,299	$10,234,138
Household Transportation Savings	$10,358,861	$15,518,585	$26,416,759	$38,548,587
Reduced Health Care Costs	$2,970,254	$3,944,740	$5,706,420	$7,889,337
Total Annual Benefits	**$27,484,544**	**$40,669,540**	**$68,221,798**	**$99,114,740**

Table 10.9- Potential Annual Walking and Biking Benefits in the NWA Region

SAFETY

Safety of the transportation system is one of the National goals and a performance measurement area under MAP-21/FAST Act. Safety currently is measured nationally, by individual state, and by county based on data reported to the States and U.S. DOT.

Safety Analysis
The existing conditions, as described in the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, provides a series of maps that describe the demand for walking and bicycling throughout the region compared to the supply of existing facilities. It also provides an assessment of the benefits of walking and bicycling based on current walking levels and identifies potential benefits that can be realized through continued investments. Additionally, a safety analysis and suggestions for improved crash data collection are provided.

Data for crashes (2009-2013) involving pedestrians and bicyclists in Benton and Washington Counties, as reported by the Arkansas State Police are used to improve safety of the system.

NUMBER OF CRASHES

Figures 10.2 and Table 10.10 indicate there were approximately 75-110 reported crashes involving pedestrians and bicyclists annually that have resulted in 245 or more injuries and 27 fatalities over the course of five years. While 2013 saw a dip, bicyclist crashes in particular appear to be trending upwards, perhaps reflecting the fact that bicycling is becoming more common. Additional data on the number of bicycle trips that took place each year would be needed to understand if the crash rate (i.e., crashes per bicycle trip) is going up or down.

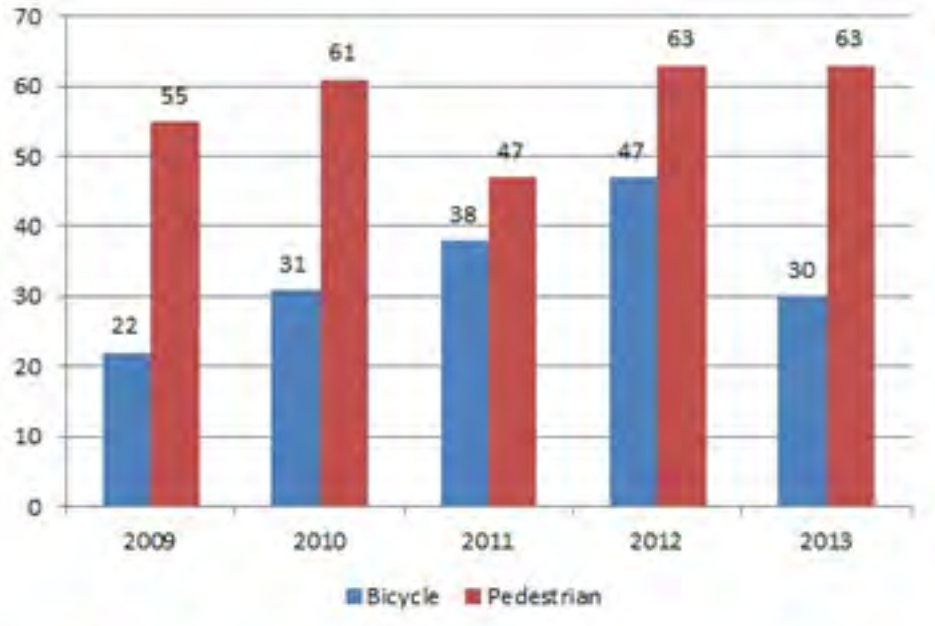


Figure 10.2 - Number of Bicycle and Pedestrian Crashes (2009-2013)

Severity	Bicycle	Pedestrian	Total
Fatal Injury	2	25	27
Incapacitating Injury	14	42	56
Non-Incapacitating Injury	54	109	163
Possible Injury	63	71	111
Non-Injury/Property Damage Only	35	42	77
Grand Total	168	289	457

Table 10.10 - Number and Severity of Bicyclist and Pedestrian Crashes (2009-2013)

Day of Week

Pedestrian and bicyclist crashes happen throughout the week, likely indicating that people walk and bike for both recreational and utilitarian purposes. Collision activity appears to be lower on Sundays (Figure 10.3).

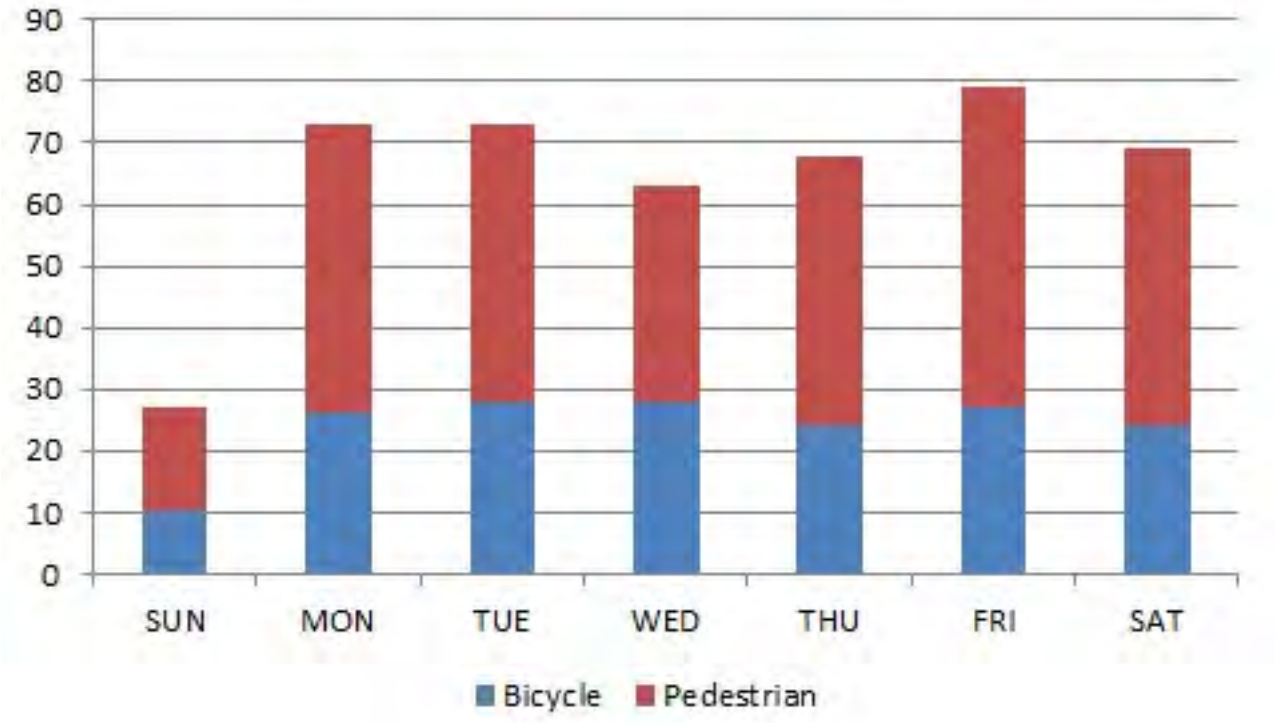


Figure 10.3 - Number of Bicyclist and Pedestrian Crashes (Day of Week)

Month of Year

Similar to the distribution across the week, pedestrian and bicyclist crashes occur throughout the year, though the levels are somewhat higher in the warm summer months when activity is likely higher, due to the pleasant weather and longer daylight hours (Figure 10.4). Nonetheless, walking and biking appear to be year-round activities in NWA.

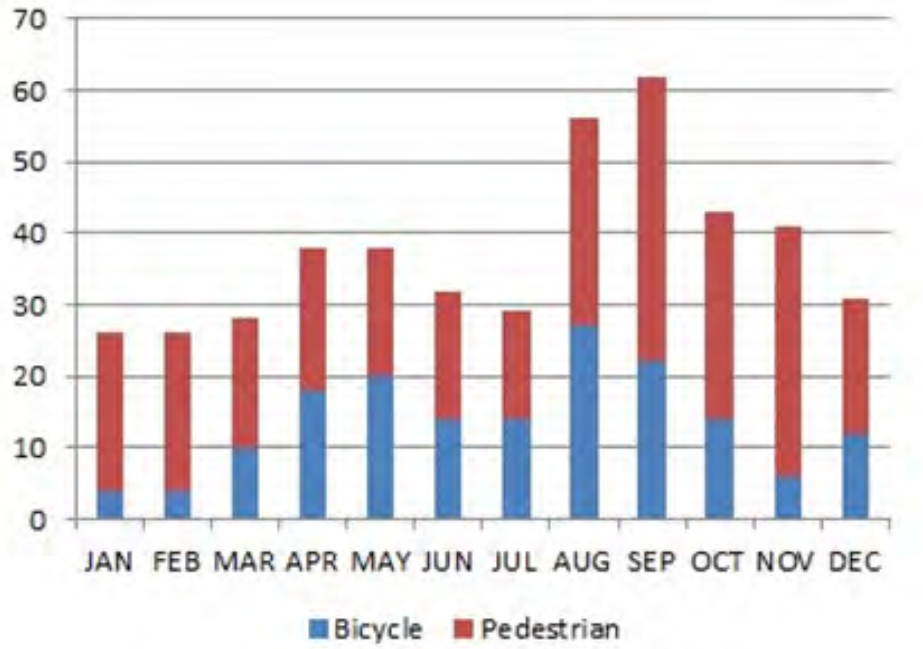


Figure 10.4 - Number of Bicyclist and Pedestrian Crashes (Month of Year)

Time of Day

The crash data show some peaking in the morning and evening commute periods, as well as a small spike in the evening hours, where visibility may be an issue (Figure 10.5).

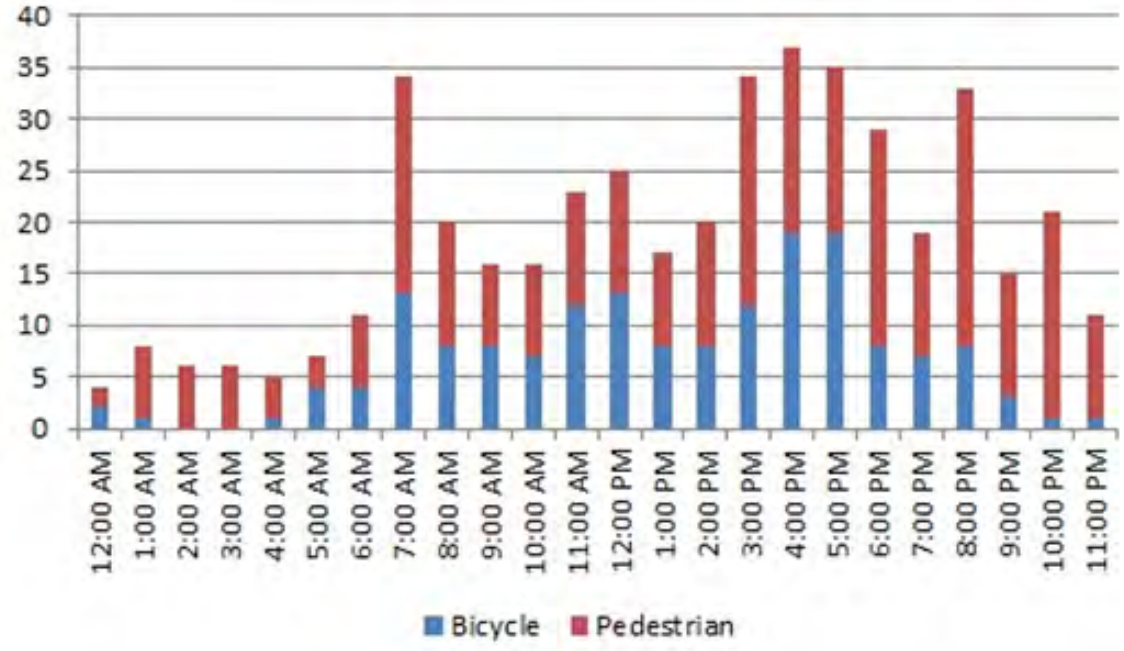


Figure 10.5 - Number of Bicyclist and Pedestrian Crashes (Time of Day)

Pedestrian/Bicyclist Action

A pedestrian action/location field indicates the action of the pedestrian and bicyclist involved in crashes. In Figure 10.6 a response of 'other' or 'N/A' was provided for 32 percent of pedestrian crashes and 65 percent of bicycle crashes. Regular trainings with police officers could result in a higher response rate to this category for both bicyclist- and pedestrian-involved crashes.

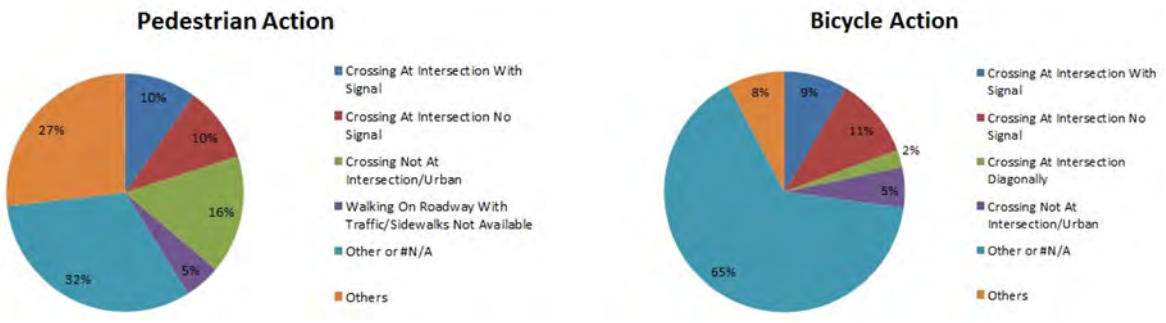


Figure 10.6 - Bicycle and Pedestrian Actions

Opportunities for Improved Crash Data

The crash data provides only limited information to understand the nature of crashes involving pedestrians and bicyclists. NWARPC is striving to improve data by working with local jurisdictions reporting the data to the State Police. In 2015 this was done by holding a summit for law enforcement individuals and discussing crash data.

ARKANSAS STATE BICYCLE AND PEDESTRIAN MASTER PLAN

The Arkansas State Highway and Transportation Department has received public comment through November 20, 2015 and has produced a draft plan. A public meeting was held at NWARPC on November 3, 2015. A final plan will not be available before this 2040 Plan is completed. The website for the State Bike Ped Plan is http://www.arkansasbikepedplan.com.

The Statewide Bicycle and Pedestrian Plan will address state policies related to bicycling and walking, as well as the development of roads, trails, sidewalks and other infrastructure that serve pedestrians and bicyclists. Plan activities include data gathering, outreach to the public and regional and local governments, development of a preliminary bicycling network, training for transportation engineering staff, and development of road design guidance.

CURRENT AHTD BICYCLE FACILITY ACCOMMODATION POLICY – JUNE 27, 2005

1. Accommodation of bicycles will be given due consideration when a proposed highway project is on a route that has been designated as a bicycle route by a locally adopted bicycle plan or master street plan and the Department concurs that the route should be a designated bicycle route. Coordination with local jurisdictions may be necessary to determine the recommended accommodations.
2. Bicycle accommodations on routes that have not been designated as bicycle routes by a locally adopted bicycle plan or a master street plan will be considered if the local jurisdiction will provide the required additional funds.
3. When bicycle accommodations are to be made on routes with an open shoulder section, the paved shoulder will be used to accommodate bicycles. Shoulder widths shall conform to the widths recommended in the American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets" 6th Edition, 2011.

4. When bicycle accommodations are to be made on routes with a curb and gutter section, the bicycle lane will be in accordance with recommendations in the AASHTO Guide for the Development of Bicycle Facilities. Generally, a bicycle lane width of 4 feet (measured from the lane edge to the edge of the gutter) will be considered.
5. If local or regional design standards specify bicycle facility widths greater than the standards noted above, the additional right-of-way and construction costs associated with the greater width shall be funded by the local jurisdiction that adopted the higher design standards.
6. Shared use paths (joint pedestrian/bicycle facilities separated from the roadway) are used primarily for recreational purposes, and as such will not normally be considered for bicycle accommodation on the state highway system. Exceptions will be considered when the local jurisdiction specifically requests the shared use path. In such cases, the minimum shared use path width shall be 10 feet and the local jurisdiction shall bear any additional right-of-way and construction costs required for the shared use path and shall assume all future maintenance of the facility.

AHTD SIDEWALK POLICY

1. When curb and gutter sections are proposed along a highway with existing sidewalks, the sidewalks will be replaced in accordance with this policy.
2. When curb and gutter sections are proposed along a highway with no existing sidewalks, sidewalks will be constructed on both sides of the roadway in developed areas. In undeveloped areas, sidewalks will be considered on one side of the roadway unless evidence of pedestrian traffic warrants sidewalks on both sides of the roadway.
3. All sidewalk construction will conform to the latest edition of the Americans with Disabilities Act Accessibility Guidelines (ADAAG).
4. The minimum sidewalk width will be five feet, and the minimum offset from the back of the curb to the sidewalk edge will be three feet. No obstructions (mailboxes, signs, etc.) will be allowed in the sidewalk. The minimum vertical clearance to the bottom of any obstruction overhanging the sidewalk will be 80 inches.
5. If local or regional design standards specify pedestrian facility widths greater than the standards shown above, the additional right-of-way and construction costs associated with the greater width will normally be funded by the local jurisdiction that adopted the higher design standards.

The AHTD Sidewalk Policy can be found at: https://www.arkansashighways.com/planning_research/statewide_planning/bicycle_pedestrian_planning/AR%20bike%20ped%20policy.pdf

The NWARPC and several area cities made a formal comment on the State Plan requesting the State to reevaluate the AHTD Bicycle and Pedestrian Policy beginning in early 2016.

FUNDING

A variety of funding sources are available for bicycle and pedestrian facilities. Bicycle and pedestrian projects are broadly eligible for funding from almost all the major Federal-aid highway, transit, safety, and other programs. Bicycle projects must be "principally for transportation, rather than recreation, purposes" and must be designed and located pursuant to the transportation plans required of states and MPOs.

Siloam Springs Sidewalk

FEDERAL-AID HIGHWAY PROGRAMS

Surface Transportation Block Grant Program (STBGP)

The Surface Transportation Program provides flexible funding that may be used by states and local jurisdictions for projects on roads, bridges and transit. STBGP funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects related to safe bicycle use and walking.

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) funds safety projects aimed at reducing traffic fatalities and serious injuries. Bike and pedestrian safety projects are eligible for HSIP funding. All public roads – including State, borough and local roads – are eligible for HSIP funding.

Recreational Trails Program (RTP)

Recreational Trails Program (RTP) funds may be used for all kinds of trail projects. Of the funds apportioned to a state, 30 percent must be used for motorized trail uses, 30 percent for non-motorized trail uses, and 40 percent for diverse trail uses (any combination).

Transportation Alternatives Program (TAP)

MAP-21/FAST Act combined previous biking and walking funding programs into the Transportation Alternatives Program. TAP funding is divided up into two amounts distributed by AHTD and by NWARPC through a competitive grant process.

In 2012, the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) designated the Fayetteville-Springdale-Rogers, AR-MO urbanized area as Transportation Management Area (TMA). This TMA designation provides Transportation Alternatives Program funds to the Northwest Arkansas Regional Planning Commission (NWARPC) based on the 2010 Census Bureau urbanized area population of 295,083. Under current MAP-21/FAST Act legislation, TAP funds can be utilized for all eligible transportation alternatives projects at the discretion of the Metropolitan Planning Organization (MPO), which is the RPC/Policy Committee (NWARPC). NWARPC receives approximately $480,000 in TAP funds annually.

A goal of the 2040 MTP is to develop a more comprehensive bicycle and pedestrian network and expand the Heritage Trail system. This regional trail and route system would link the emerging master trail plans of the region's cities and include strategic spurs to connect employment centers, schools, retail shopping, recreational sites, parks, historic sites, and museums.

The 2040 MTP recommends maintaining a regional commitment to bicycle and pedestrian facilities, as well as encouraging cities to develop master trail plans in conjunction with the Northwest Arkansas Regional Bicycle and Pedestrian Master Plan. The TAP selection criterion includes the following categories:

- Razorback Greenway Connections
- Northwest Arkansas Regional Bicycle and Pedestrian Master Plan & The Heritage Trail Plan
- Local Bicycle and Pedestrian or Comprehensive Plan
- Connectivity
- Safety
- Barriers to Mobility

Mercy Way Trailhead

Projects funded by the STBGP-GT 200K and TAP through NWARPC are shown below:

- Mercy Way Trailhead – Razorback Regional Greenway
- Town Branch Trail
- Lake Springdale Trailhead – Razorback Regional Greenway
- New Hope Bicycle and Pedestrian Bridge – Razorback Regional Greenway
- Gordon Long Park Trail Head – Razorback Regional Greenway
- Hwy. 71B/North Walton Blvd. Trail
- Dean's Trail Phase 1
- Riordan Road Trailhead
- Cave Springs Trail

ARKANSAS STATE HIGHWAY COMMISSION GRANT AWARDS

The Arkansas State Highway Commission approved more than $20 million in funding to applicants for Transportation Alternatives Program (TAP), Safe Routes to School (SRTS) Program, and Recreational Trails Program (RTP) projects in Arkansas.

State Transportation Alternatives Program (TAP) 2015 Awarded Projects:

Benton County	War Eagle Bridge	$500,000
City of Bella Vista	Dartmoor Road HAWK Crossing	$ 50,000
City of Bentonville	SW 41st Street Trail	$ 49,500
City of Cave Springs	Cave Springs/IRWP Improvements	$ 97,150
City of Centerton	Traffic Signal and Crosswalk Installation	$240,000
City of Decatur	Highway 102 Sidewalk Project	$130,144
City of Rogers	New Hope Bicycle & Pedestrian Bridge-Razorback Greenway	$500,000
City of Siloam Springs	City Lake Wildlife Trail	$ 67,705
City of Springdale	Pride of Springdale Trail	$500,000
City of West Fork	Riverside Park Connection and Safe Routes to School	$179,231

Safe Routes to School Program (SRTS) 2015 Awarded Projects:

City of West Fork	McKnight Street Safe Routes Connection	$94,995
Prairie Grove Schools	Prairie Grove Comes Together Sidewalks	$77,388

Recreational Trails Program (RTP) 2015 Awarded Projects:

City of Bentonville	Community Center Fitness Trail	$75,000
City of Fayetteville	Lake Fayetteville Nature Trail Boardwalk and Realignment	$56,000

CHAPTER 11. PUBLIC TRANSPORTATION

INTRODUCTION

Public Transportation is an important transportation mode within the region. Public and private transit systems and facilities make the region more accessible. This includes the young, elderly, disabled, low-income and all others without means of personal transportation, or simply those who do not wish to drive a private vehicle and desire public transportation as a choice. Transit can serve more people while causing less environmental impact and traffic congestion. Transit reduces dependence upon the automobile, reduces overall household transportation costs and increases access to job opportunities to those without automobiles and/or households with limited transportation choices. Transit options can provide safe routes to work, school, medical appointments and shopping.

PUBLIC TRANSIT PROVIDERS

Northwest Arkansas has two public transit providers that currently operate in the urban and rural areas of the region and include Ozark Regional Transit, Inc. (ORT) and University of Arkansas Razorback Transit.

Approximately 2.3 million unlinked trips were provided in 2013 between the two public transportation systems with average daily unlinked trips of 1,127 on ORT and 8,500 unlinked trips on Razorback Transit (Table 11.1). Both systems have continued to see growth in ridership as the University of Arkansas enrollment has increased from approximately 21,000 students in 2010 to approximately 27,000 students in 2015. Also new routes are being added by ORT to serve the growing Northwest Arkansas Community College and jurisdictions in Benton County. Both ORT and Razorback Transit coordinate their routes to avoid duplication of service and provide key connections/transfers between the two systems within Fayetteville and University of Arkansas.

7 Year History of Fixed Route Unlinked Transit Trips and Demand Response - Ozark Regional Transit and Razorback Transit

Razorback Transit Annual Unlinked Trips Fixed Route and Demand Response						Ozark Regional Transit Annual Unlinked Trips Fixed Route and Demand Response					
Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response	Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response
2007	1,280,648			1,272,041	8,607	2007	153,242			127,407	25,835
2008	1,223,358	-57,290	-4.47%	1,216,284	7,074	2008	205,256	52,014	33.94%	187,839	17,417
2009	1,335,028	111,670	9.13%	1,327,673	7,355	2009	193,082	-12,174	-5.93%	177,959	15,123
2010	1,575,149	240,121	17.99%	1,567,802	7,347	2010	237,184	44,102	22.84%	212,491	24,693
2011	1,647,481	72,332	4.59%	1,639,066	8,415	2011	263,828	26,644	11.23%	238,048	25,780
2012	1,933,690	286,209	17.37%	1,924,886	8,804	2012	296,405	32,577	12.35%	269,355	27,050
2013	2,015,407	81,717	4.23%	2,006,722	8,685	2013	288,501	-7,904	-2.67%	268,302	20,199

Source: 2007-2013 National Transit Database

Table 11.1 - Fixed Route Unlinked Trips and Demand Response

The American Public Transportation Association has provided the definition for unlinked trips as "unlinked passenger trips is the number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination and regardless of whether they pay a fare, use a pass or transfer, ride for free, or pay in some other way. A person riding only one vehicle from origin to destination takes one unlinked passenger trip; a person who transfers to a second vehicle takes two unlinked passenger trips; a person who transfers to a third vehicle takes three unlinked passenger trips…"

OZARK REGIONAL TRANSIT

Ozark Regional Transit (ORT) began operations in Northwest Arkansas in 1979 under the direction of Community Resources Group (CRG), a local non-profit organization. In 2001, CRG announced that they would no longer provide the service. At that time, the Mayors of Bentonville, Fayetteville, Springdale, and Rogers as well as the County Judges of Benton, Carroll, Madison and Washington Counties formed a Board to manage ORT. One of their first acts as a Board was to hire a professional transit management firm, and First Transit was hired to manage the system.

Prior to 2002, ORT provided only dial-a-ride services in this area, predominately to support the health and human services agencies. ORT received rural FTA funding starting in 1980. With the tremendous growth in Northwest Arkansas, in 1990, the Fayetteville/ Springdale metropolitan area became an Urbanized Area and ORT began receiving FTA financial assistance for Urbanized Areas over 50,000 in population. In 2002, the Urbanized Area FTA funding increased from a total of $750,000 to $1.7 million, which is currently split between ORT and Razorback Transit, which serves the University of Arkansas students.

Currently, ORT receives funding from the FTA in rural and urban funding, a State rental car tax and the local match to FTA monies from the cities and counties it serves.

In 2002, ORT began its first fixed route in south Fayetteville. In 2005, it began six new fixed routes, with two in Fayetteville, Rogers and Springdale, and one in Bentonville.

ORT currently operates 13 fixed transit routes in the region and provides weekday service Monday through Friday within the cities of Bentonville, Rogers, Fayetteville, Farmington, Greenland, Johnson, Lincoln, Prairie Grove, Springdale, and West Fork. The fixed route service generally begins at 6:30 AM and ends at 7:00 PM. Routes generally are one hour long and typically serve an area with a circular "loop" route. ORT is a fare-based service with the current fare at $1.25 per trip. On an average weekday, ORT provides approximately 1,200 fixed route unlinked trips throughout the region. Several of the longer "regional" routes have extended hours into the evening and include service between Northwest Arkansas Community College, the University of Arkansas, and Lincoln and West Fork.

ORT also provides complementary ADA paratransit service within ¾ mile of a fixed route and demand response service in Benton, Washington and portions of Madison and Carroll County. ORT operates nine vans for the paratransit/demand response service. The current fleet consists of 31 vehicles with nine vans and 22 Buses (medium to light weight cut-a-way buses, 16 to 38 passengers). ORT buses are all equipped with bike racks and wireless internet service

ORT continues to work with local industries to develop substantive public transit routes that serve the needs of employers and employees. ORT will investigate industry partnerships to fund the costs associated with regular operation of additional public transit routes. Development of these relationships with the employers is vital in securing the funding necessary to have a fully functional, vibrant and reliable transit system in Northwest Arkansas. These relationships will help ORT build a public transit network that provides meaningful connections for work, entertainment, education and medical trips.

ORT provides approximately 300,000 unlinked trips (Fixed Route, Paratransit-Demand Response, and Charter) with 274,441 unlinked trips on the fixed route bus system (Table 11.2 and Figure 11.1).

Ozark Regional Transit Annual Unlinked Trips Fixed Route and Demand Response					
Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response
2007	153,242			127,407	25,835
2008	205,256	52,014	33.94%	187,839	17,417
2009	193,082	-12,174	-5.93%	177,959	15,123
2010	237,184	44,102	22.84%	212,491	24,693
2011	263,828	26,644	11.23%	238,048	25,780
2012	296,405	32,577	12.35%	269,355	27,050
2013	288,501	-7,904	-2.67%	268,302	20,199
Source: 2007-2013 National Transit Database					

Ozark Regional Transit Average Weekday Unlinked Trips Fixed Route and Demand Response			
Year	Unlinked Trips	Numeric Change	Percent Change
2007	613		
2008	805	192	31.32%
2009	769	-36	-4.47%
2010	927	158	20.55%
2011	1,049	122	13.16%
2012	1,156	107	10.20%
2013	1,127	-29	-2.51%
Source: 2007-2013 National Transit Database			

Table 11.2- Fixed Route Unlinked Trips and Demand Response ORT

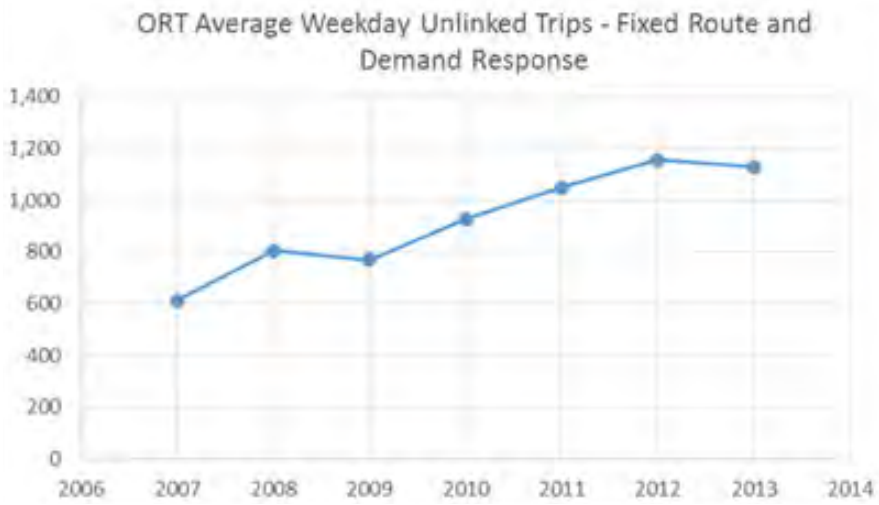


Figure 11.1- ORT Average Unlinked Trips - Fixed Route and Demand Response 2007-2013

The following service improvements and budgets for a 3-5 year and a 10 year model plans were identified by ORT.

3 TO 5 YEAR MODEL

Number of Weekday Routes/Runs

Routes	Runs
Airport Run	1
Wash County Fixed Rural	2
NWACC Express	3
Fayetteville	8
Springdale	8
Bentonville	5
Rogers	5
Bentonville/Rogers Connector	2
Siloam to Springdale Connector	2
71 Business Route	2
Total Fixed Routes/Runs	38

Week Day Service

Projected Hourly Rate	$46.00
Daily Hours per Route/Run	16
Daily Cost per Route/Run	$736.00
Daily System Cost	$27,968.00
Weekday Service Cost	$7,131,840.00
Annual Service Days	255

Table 11.3 - Full Service Weekdays

Number of Saturday Routes/Runs

Routes	Runs
Airport Run	1
Wash County Fixed Rural	1
NWACC Express	1
Fayetteville	5
Springdale	5
Bentonville	3
Rogers	3
Bentonville/Rogers Connector	1
Siloam to Springdale Connector	1
71 Business Route	2
Total Fixed Routes/Runs	23

Saturday Service

Projected Hourly Rate	$46.00
Daily Hours per Route/Run	10
Daily Cost per Route/Run	$460.00
Daily System Cost	$10,580.00
Saturday Service Cost	$550,160.00
Annual Saturdays	52

Table 11.4 - Reduced Service Saturdays

10 YEAR MODEL

Full Service Weekdays

Routes	Runs
Airport Run	2
Wash County Fixed Rural	2
NWACC Express	3
Fayetteville	10
Springdale	10
Bentonville	7
Rogers	7
Bentonville/Rogers Connector	2
Siloam to Springdale Connector	2
Siloam Springs	4
Siloam to Centerton Connector	2
71 Business Route	4
49 Commuter	4
Total Fixed Routes/Runs	59

Week Day Service

Projected Hourly Rate	$55.00
Daily Hours per Route/Run	20
Daily Cost per Route/Run	$1,100.00
Daily System Cost	$64,900.00
Weekday Service Cost	$16,938,900.00
Annual Service Days	261

Table 11.5 - Number of Weekday Routes/Runs

Reduced Service Saturdays

Routes	Runs
Airport Run	2
Wash County Fixed Rural	1
NWACC Express	1
Fayetteville	5
Springdale	5
Bentonville	2.5
Rogers	2.5
Bentonville/Rogers Connector	1
Siloam to Springdale Connector	1
Siloam Springs	3
Siloam to Centerton Connector	1
71 Business Route	2
49 Commuter	2
Total Fixed Routes/Runs	29

Saturday Service

Projected Hourly Rate	55
Daily Hours per Route/Run	$16.00
Daily Cost per Route/Run	$880.00
Daily System Cost	$25,520.00
Saturday Service Cost	$2,654,080.00
Annual Saturdays	104

Table 11.6 - Number of Saturday Routes/Runs

RAZORBACK TRANSIT

Razorback Transit originated in 1979, through the joint efforts of the University of Arkansas - Fayetteville (UA), the AHTD and the NWARPC (the MPO for Northwest Arkansas). In July 2004, Razorback Transit became a direct recipient of Federal Transportation Administration (FTA) funds.

Razorback Transit provides fare-free transportation to on-campus locations and major off-campus living and shopping areas in Fayetteville. Nineteen full size (40 foot long, 102" wide) buses are operated from 7:00 AM to 6:00 PM, Monday through Friday on 10 fixed routes during the fall and spring semesters (mid-August to mid-May) and reduced service is also provided on five combined routes when school is in session from 6:00 PM until 10:00 PM. Additionally, Saturday bus service on the five combined routes is provided year round from 7:00 AM until 10:30 PM. During summer and Christmas breaks, five combined routes are operated from 7:00 AM until 6:00 PM.

Annual fixed route ridership averaged 1.86 million from FY 2010 to FY 2014. In FY 2015, annual fixed route ridership increased to over 2 million (Table 11.7 and Figure 11.2).

- The Green, Blue and Red routes have the highest ridership of all Razorback Transit routes, and account for about one half of all Razorback Transit ridership.
- Weekday evening ridership averages about 400 passengers, with the Blue reduced route typically having the highest ridership in the evenings.
- Saturday ridership averages about 1,000 riders, with the Red route having the highest ridership of the four Saturday routes.
- In the summer, ridership averages over 1,500 passengers per day.

Year	Unlinked Trips	Numeric Change	Percent Change	Fixed Route	Demand Response
2007	1,280,648			1,272,041	8,607
2008	1,223,358	-57,290	-4.47%	1,216,284	7,074
2009	1,335,028	111,670	9.13%	1,327,673	7,355
2010	1,575,149	240,121	17.99%	1,567,802	7,347
2011	1,647,481	72,332	4.59%	1,639,066	8,415
2012	1,933,690	286,209	17.37%	1,924,886	8,804
2013	2,015,407	81,717	4.23%	2,006,722	8,685

Table 11.7- Fixed Route Unlinked Trips and Demand Response
Razorback Transit

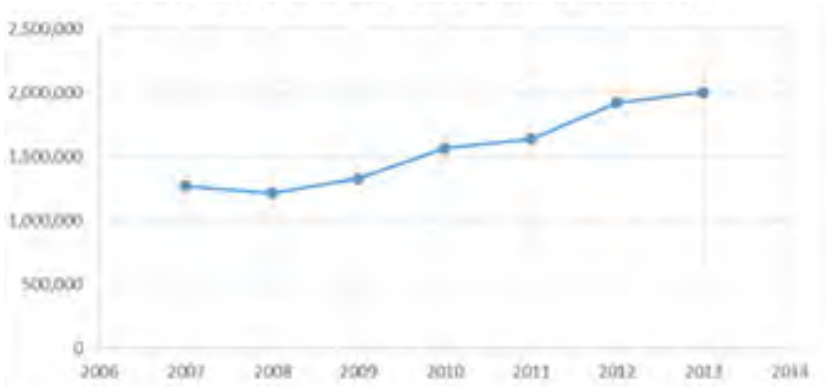


Figure 11.2- Razorback Transit Average Unlinked Trips 2007-2013

TRANSIT RIDERSHIP

Trips are reported to the National Transit Database and the term "unlinked trips" are used to track the number of trips made by system and are reported by transit agency. The American Public Transportation Association defines unlinked trips as "…the number of times passengers board public transportation vehicles. Passengers are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination and regardless of whether they pay a fare, use a pass or transfer, ride for free, or pay in some other way. A person riding only one vehicle from origin to destination takes one unlinked passenger trip; a person who transfers to a second vehicle takes two unlinked passenger trips; a person who transfers to a third vehicle takes three unlinked passenger trips…"

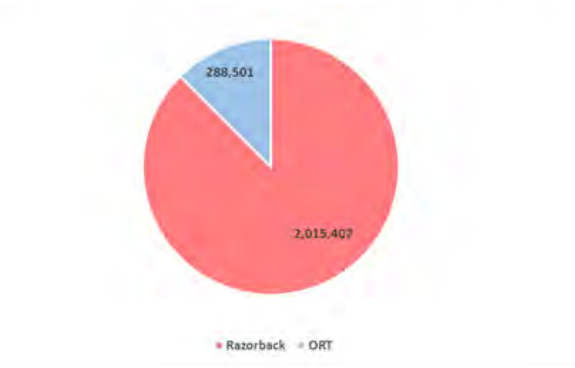


Figure 11.3- Annual Unlinked Trips for 2013

Figure 11.4- Fixed Route Annual Unlinked Trips

System information and performance measures may be found for all U.S. public transit providers through the National Transit Database at the following link: http://www.ntdprogram.gov/ntdprogram/cs?action=showRegionAgencies&region=6 (Figure 11.3 and Table 11.8).

NATIONAL TRANSIT DATABASE PERFORMANCE MEASURES

Fixed route transit performance measures for service effectiveness are calculated for each public transit system as part of the National Transit Database reporting requirements. Two of the performance measures for service effectiveness are based on (1) the number of fixed route unlinked trips per revenue mile and (2) the number of unlinked fixed route trips per revenue hour. These measures are reported from 2007 to 2013 for both ORT and Razorback Transit based on the NTD reports.

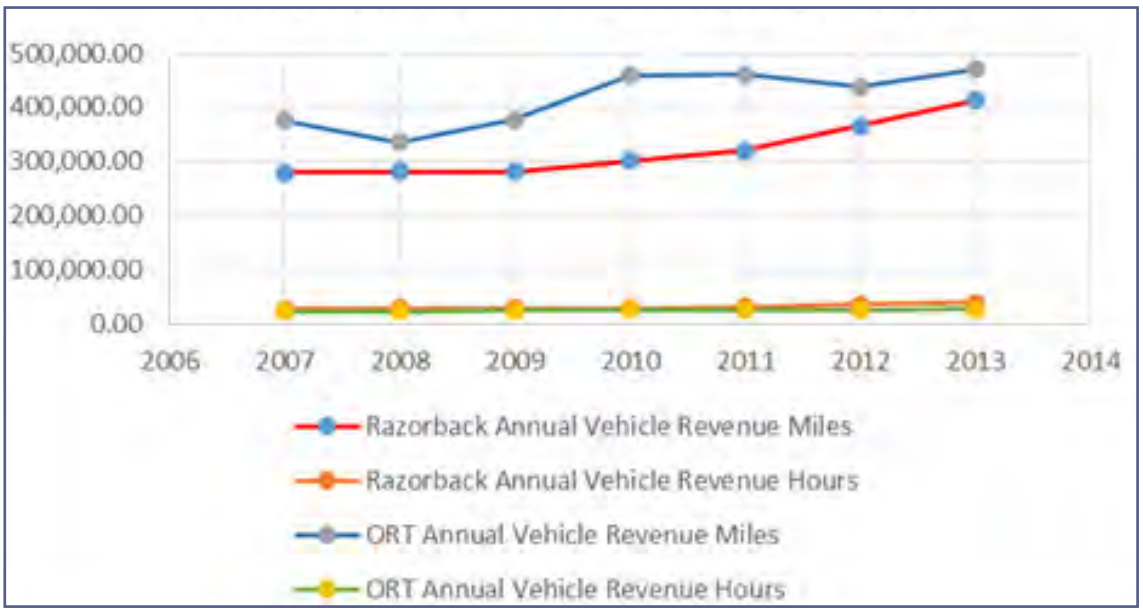


Figure 11.5- Vehicle Miles and Revenue Hours

Ozark Regional Transit Fixed Route Service Measures

Year	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Unlinked Fixed Route Trips per Revenue Mile	Unlinked Fixed Route Trips per Revenue Hour
2007	376,130	23,175	0.34	5.50
2008	336,248	23,566	0.56	7.97
2009	378,216	24,557	0.47	7.25
2010	459,491	26,826	0.46	7.92
2011	460,852	26,643	0.52	8.93
2012	437,791	26,207	0.62	10.28
2013	470,968	27,983	0.57	9.59

Razorback Transit Fixed Route Service Measures

Year	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Unlinked Fixed Route Trips per Revenue Mile	Unlinked Fixed Route Trips per Revenue Hour
2007	279,670	27,870	4.55	45.64
2008	281,280	29,044	4.32	41.88
2009	281,098	29,181	4.72	45.50
2010	302,288	29,937	5.19	52.37
2011	320,554	32,335	5.11	50.69
2012	365,798	36,912	5.26	52.15
2013	413,245	39,636	4.86	50.63

Table 11.8 - Fixed Transit Route Service Measures (ORT and RT)

The unlinked fixed route trips per revenue hour has increased for ORT from under six trips in 2009 to over 9.5 trips in 2013. Razorback Transit unlinked fixed route trips has remained over 50 trips per hour over the last four years.

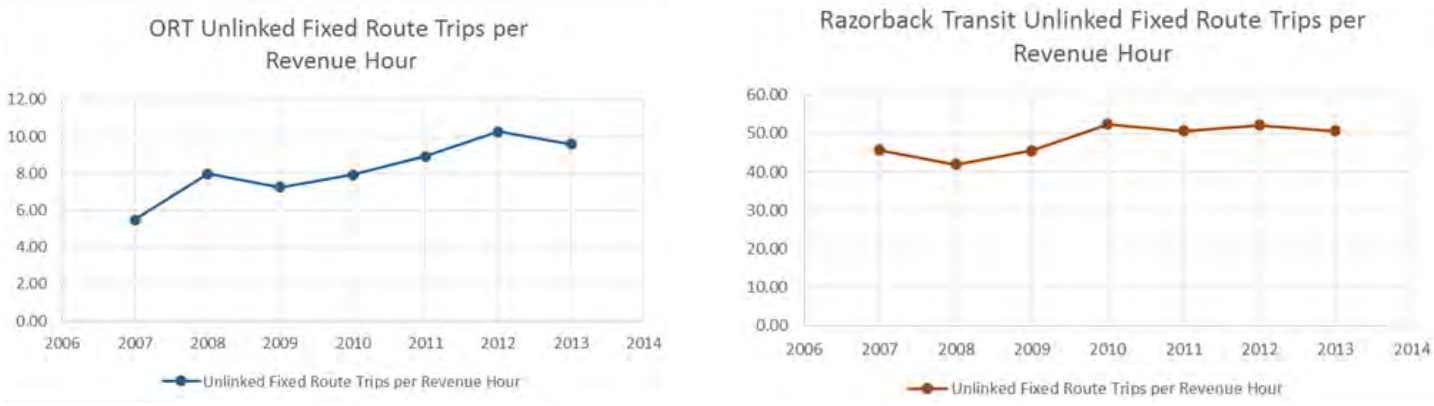


Figure 11.6- Unlinked Fixed Route Trips per Revenue Hour (ORT and RT)

Unlinked trips per revenue hour for ORT has fluctuated between 0.50 and 0.60 trips per revenue mile. Razorback transit unlinked trips per revenue mile has averaged over five trips over the past four years.

Figure 11.7- Unlinked Fixed Route Trips per Revenue Mile (ORT and RT)

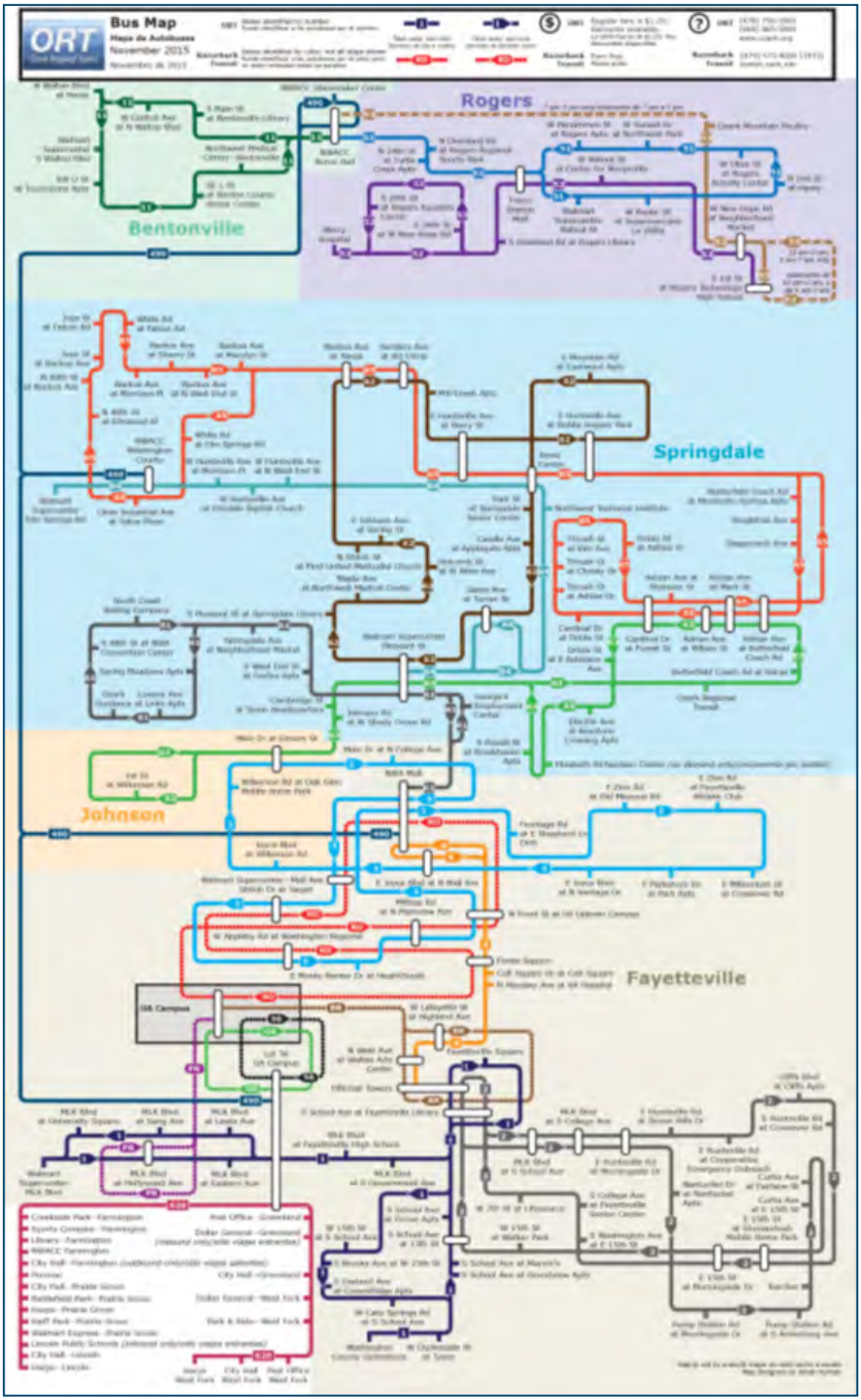


Figure 11.8- ORT Bus Map

FEDERAL FUNDING

The Urbanized Area Formula Program funds are apportioned to designated recipients within urbanized areas with populations of 200,000 or more. NWARPC is the designated recipient for the Fayetteville-Springdale-Rogers AR-MO Urbanized Area.

The Urbanized Area is apportioned annually approximately $120,000 in Section 5339 funds and $2.3 million in Section 5307 FTA Urbanized Area Formula Program funds. These funds are programmed by the NWARPC and are utilized by both ORT and Razorback Transit for capital, operating assistance, preventative maintenance, ADA Paratransit Service, and Enhancements.

The rural area is also apportioned Section 5311 funds and these are used by ORT to provide demand response service.

MAP-21/FAST Act expanded the use of Section 5307 funds for operating expenses. Under current regulations, each transit system that operates 100 or fewer buses may use these funds for operating expenses.

	Total Cost	Federal Share	Local Share
Section 5307 Operating and Capital	$3,707,922	$2,362,405	$1,345,517
Section 5339 Capital	$ 151,189	$ 120,951	$ 30,238

Bus and Bus Facilities Program (49 U.S.C. §5339) – Transit
MAP-21/FAST Act created a new formula grant program for bus and bus facilities that replaced the Section 5309 discretionary program. The program provides funding for replacing, rehabilitating, and purchasing new buses and bus-related equipment and facilities. The Urbanized Area receives approximately $241,527 annually in Federal funds matched by $60,382 in local funds for the replacement of vehicles and related capital projects. Funding is utilized by both Razorback and Ozark Regional Transit for replacing buses.

Enhanced Mobility of Seniors and Individuals with Disabilities Program (49 U.S.C. §5310)
Enhanced Mobility of Seniors and Individuals with Disabilities Program is a formula assistance program to improve mobility for seniors and individuals with disabilities. Public transportation projects may be implemented in areas where public transportation is insufficient, inappropriate, or unavailable; public transportation projects that exceed the requirements of the Americans with Disabilities Act (ADA); projects that improve access to fixed-route service and decrease reliance on complementary paratransit; and alternatives to public transportation projects that assist seniors and individuals with disabilities. The Section 5310 program funding was $156,606 in 2013 and $206,922 in 2014 for the Urbanized Area.

Rural Area Formula Program (49 U.S.C. §5311)
The Rural Area Formula Program is a formula grant program that provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000. Currently, Ozark Regional Transit receives approximately $140,000 per year in Federal funds and requires a 20 percent to 50 percent local match depending on the type of project. ORT provides demand response service to the rural areas within the MPA.

HUMAN SERVICE PROVIDERS

While ORT and Razorback Transit provide fixed route transit service throughout the region, there are many other transit providers in the area. Human service agencies provide a vital role in the overall transportation needs of the region. They provide access to agency services and/or to meet the basic, day-to-day mobility needs of transportation-disadvantaged populations, especially individuals with disabilities, older adults, and people with low incomes.

There are four human service agencies in the Northwest Arkansas region actively participating in AHTD administered transit programs Section 5310. Most of these agencies provide service to specific clientele for shopping, medical appointments, social, work, or education activities.

TRANSIT COORDINATION PLANNING

Within the MPA area there are two public transit systems, Razorback Transit and ORT, as well as a number of human service agencies that provide transit options for specific populations.

In January 2013, AHTD published the Arkansas Statewide Transit Coordination Plan: 2012 (TCP). The TCP replaces the sixteen separate local transit coordination plans that were developed in 2007 and 2008 as a result of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). In Northwest Arkansas, the TCP replaces the NWA Public Transit-Human Services Coordinated Transportation Plan (Coordination Plan).

The Federal transportation legislation under Moving Ahead for Progress in the Twenty-First Century (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act), requires that projects for certain FTA programs be derived from a locally developed, coordinated public transit-human services transportation plan. The TCP applies to Section 5310: Enhanced Mobility of Seniors and Individuals with Disabilities Program, which is a consolidation of the old Section 5310 and Section 5317 programs, and includes the New Freedom program. These requirements are aimed at improving transit services for persons with disabilities, older adults and individuals with low incomes and ensuring that communities are coordinating transit resources provided through multiple federal programs.

For guidance on the administration and preparation of grant applications for the Enhanced Mobility of Seniors and Individuals with Disabilities under 49 U.S.C. 5310, FTA has issued Circular 9070.1G. This revision of an earlier circular incorporated provisions of MAP-21/FAST Act and includes the most current available guidance as of the date of publication (6-6-14).

The ultimate purpose of the Coordination Plan is to provide comprehensive strategies, or opportunities, for meeting local needs. Nine major strategies were developed as a guide to develop and implement projects. These strategies will be revisited every five years and modified as appropriate.

- Maintain existing levels of service is essential.
- Improve access and provide additional, affordable transportation service.
- Build a local coalition of interested parties for transportation service.
- Develop a coordinated local system to provide transportation information to public transportation dependent persons and the general public.
- Provide more efficient and effective service delivery.
- Provide a better quality of life for public transportation dependent persons.
- Coordinate an approach for the development of model contracts or agreements for public, private, and nonprofit providers.
- Coordinate services with emergency response agencies.
- Research new programs, technology and educational/training opportunities that could enhance transportation services.

OTHER TRANSIT SERVICES

School Bus System K-12

The region has fifteen public school districts. The Arkansas Division of Public School Academic Facilities & Transportation reports that in the 2014-2015 school year Average Daily Transported (ADT) school children by bus in Benton and Washington Counties was approximately 60,000 per day (Table 11.9).

District Description	ADT_Q1	ADT_Q2	ADT_Q3	ADT_Q4
BENTONVILLE SCHOOL DISTRICT	14877	14681	14531	14565
DECATUR SCHOOL DISTRICT	244	329	341	344
ELKINS SCHOOL DISTRICT	1008	1000	1003	1021
FARMINGTON SCHOOL DISTRICT	1809	1787	1777	1814
FAYETTEVILLE SCHOOL DISTRICT	4138	4055	4013	4084
GENTRY SCHOOL DISTRICT	1066	1050	1043	1049
GRAVETTE SCHOOL DISTRICT	1611	1622	1569	1586
GREENLAND SCHOOL DISTRICT	651	650	648	654
HAAS HALL ACADEMY	12	12	12	12
LINCOLN SCHOOL DISTRICT	1033	1049	1034	1068
PRAIRIE GROVE SCHOOL DISTRICT	1740	1730	1728	1753
PEA RIDGE SCHOOL DISTRICT	1134	1130	1137	1145
ROGERS SCHOOL DISTRICT	10738	10561	10373	10509
SILOAM SPRINGS SCHOOL DISTRICT	1859	1943	1949	1942
SPRINGDALE SCHOOL DISTRICT	18645	18437	18285	18508
WEST FORK SCHOOL DISTRICT	862	854	839	860
Total	61425	60891	60282	60914

Table 11.9 - School District Average Daily Transported

Inter-City Bus Transportation

The Jefferson Lines Bus Service travels through Northwest Arkansas from Fort Smith to Joplin. A Jefferson Lines depot is located in Fayetteville at 3075 Wedington Drive with the hours of Monday through Saturday, 9:00 AM to 5:00 PM. Another stop is located in Rogers at 4601 W. Walnut Street. The Rogers location hours are Monday through Saturday from 6:30 AM to 3:00 PM. The Jefferson Lines operates in thirteen states including the Arkansas contiguous states of Texas, Oklahoma, Kansas, and Missouri. Other Arkansas stops include Clarksville, Conway, Fort Smith, Harrison, Little Rock, Ozark, Pine Bluff, and Russellville. Out-of-state nearby connections include Tulsa, Oklahoma, Joplin and Springfield in Missouri, and Coffeeville, Kansas.

TRANSPORTATION ALTERNATIVES ANALYSIS

For more than a decade, various groups have promoted interest in a rail transit project that would serve the north-south corridor in Washington and Benton Counties in Northwest Arkansas. The advocacy efforts captured the interest of public officials and private individuals and interests. The concept has been studied or addressed in no fewer than seven planning studies and reports since 2004. These are:

1. The Potential for a NWA Regional Light Rail System. Beta Rubicon, 2004
2. Interstate 540 Improvement Study. Parsons Transportation Group, 2006
3. NWA Rail: Visioning Rail Transit in Northwest Arkansas. UA Community Design Center, 2007
4. Northwest Arkansas Razorback Regional Greenway TIGER II Grant Application. NWARPC, 2010
5. Northwest Arkansas Transit Development Plan. Connetics, 2010
6. Northwest Arkansas Western Beltway Feasibility Study. Parsons Brinkerhoff, 2011
7. Northwest Arkansas Regional Development Strategy. Market Street, 2011

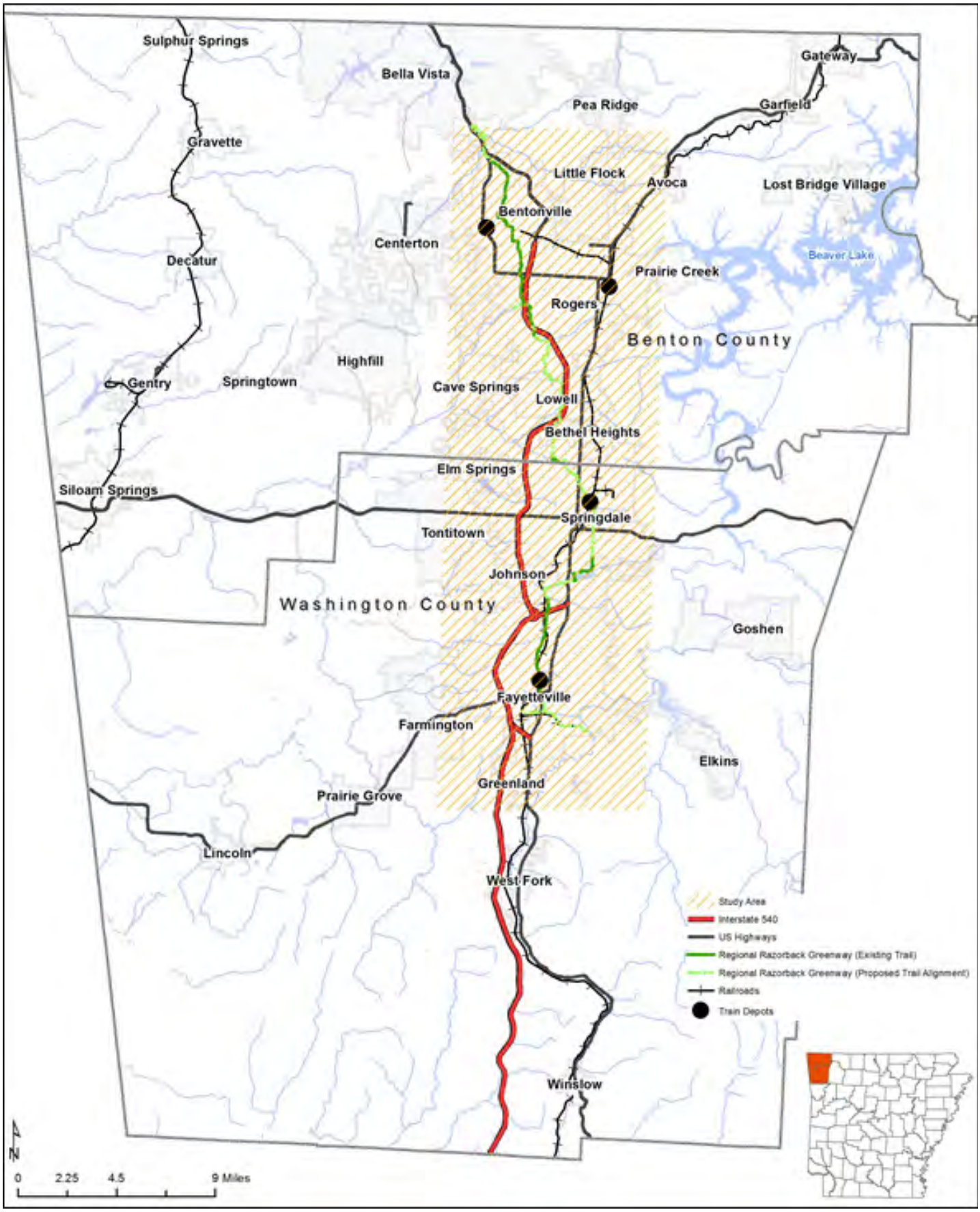
NWARPC responded to the widespread interest by obtaining special Federal funding to conduct an Alternatives Analysis Study in the 40-mile north-south urban corridor. To the greatest extent possible, the Study approach followed the planning guidelines of the Federal Transit Administration (FTA), especially those that apply to New Starts and Major Capital Investment funding.

A significant difference between the Federal planning guidelines and previous studies is that the Alternatives Analysis Study approach required a location-neutral and mode-neutral examination of the options within the broad category of fixed-guideway transit. The selection of alternative locations and the modal (vehicle) technologies were studied and included a review and discussion regarding a common misconception that light rail vehicles can operate on freight rail lines. In the current regulatory environment in the U.S. this alternative is not permitted.

The Study was completed in fall 2014 and NWARPC accepted the final Alternatives Analysis Study (Map 11.1). The NWARPC members accepted the Alternatives Analysis Study with the understanding that none of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and not meeting the FTA threshold to receive Federal funding. The NWARPC also considered the "Path Forward" to focus on a potential future commuter rail corridor following the Arkansas and Missouri (A&M) Railroad as having the most potential for a future fixed-guideway system. The alternatives studied were Light Rail (new location in I-49 corridor), Commuter Rail (in A&M Railroad Corridor), and Bus Rapid Transit on Hwy. 71B.

Key Findings:

- Alternatives studied are not financially feasible. None of the alternatives considered are financially feasible at this time based on low ridership forecasts, high capital costs, and not meeting the FTA threshold to receive Federal funding.
- High Capital Costs. New location Light Rail: $2.286 billion; Commuter Rail: $664.0 million; Bus Rapid Transit: $97.8 million.
- Low Ridership Forecast. New location Light Rail: 356 daily riders; Commuter Rail: 1,368 daily riders; Bus Rapid Transit: 378 daily riders.
- New "double track" is recommended for Commuter Rail within the A&M Corridor. Light rail vehicles cannot operate on active freight rail lines. However, more modern, higher performing, and quieter commuter vehicles such as diesel multiple units (DMU's) are a possible alternative adjacent to freight rail lines on new track (double track).
- The Locally Preferred Alternative (LPA) is the Commuter Rail on the right-of-way of the A&M Railroad, along with a new location segment from Bentonville to Bella Vista.



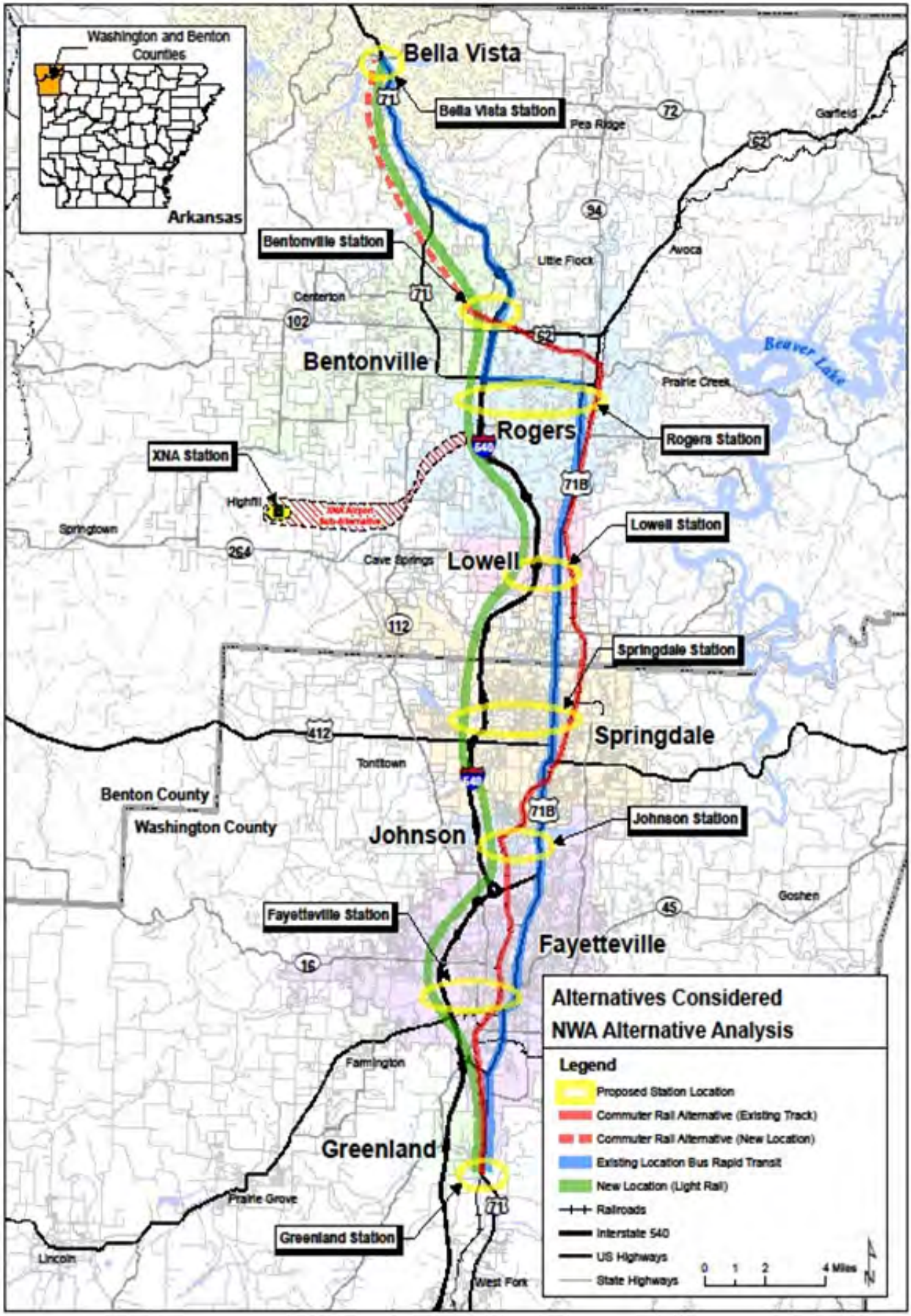
Map 11.1 - Alternatives Analysis Study Area

The Study points out that without a transit component included in the NWARPC Travel Demand Model, the Study was restricted in modeling transit ridership. NWARPC worked throughout the 2015 year to update the travel demand model to include the transit component into the model in order to meet recommendations of incorporating new transit modes (Map 11.2).

The Path Forward:

- Enhance and support existing and emerging transit markets. Northwest Arkansas communities should work with NWARPC to improve the region's existing public transit service and to get "Transit Ready."
- Plan for complete, comprehensive, and coordinated transit service (existing and potential new modes). Whether Federal funding is sought or not, a successful fixed guideway project must be developed side by side with a sound bus service expansion plan.
- Promote transit-supportive development policies. Transit-supportive development policies may go a long way toward making a project eligible for Federal funding for New Starts projects. Even if Federal funds are not received or not sought, the affected municipalities in NWA should work to enhance and develop a comprehensive set of zoning and public finance policies to promote walkable, sustainable neighborhoods in the corridor.

The complete report including the technical memorandum may be found at: http://nwarpc.org/transportation/alternatives-analysis/



Map 11.2 - Alternatives Considered in the Alternatives Analysis Study

THE NORTHWEST ARKANSAS TRANSIT DEVELOPMENT PLAN (TDP)

The 2010 Transit Development Plan was developed in order to create a "blue-print" for expanding transit services in the Northwest Arkansas region and highlighted service improvements recommendations for three periods:

- The Near-Term Plan reflecting Years 1-2 of the 10-year TDP time period. No additional funds have been assumed for transit during this time period. Thus, near-term recommendations focus on cost neutral service adjustments that will increase efficiencies.
- The Short-Range Plan reflecting Years 3-5 of the TDP. The TDP assumes additional funds are available for transit during this time period. Recommendations reflect the transition of the existing limited transit network to a more robust regional network.
- The Long-Range Plan reflecting Years 6-10 of the TDP. Recommendations reflect the continued growth of transit services, with expanded geographic coverage, longer spans of service on routes and the introduction of weekend service.

A major benefit of the TDP service plan is increased accessibility to transit. Table 11.10 represents projected 2010 population and employment within ¼ mile of proposed transit services in each TDP service plan. Accessibility increases significantly with the proposed Short-Range and Long-Range plans.

Demographic		Near-Term	Short-Range	Long-Range
Population	Population Within ¼ Mile	95,036	130,591	199,273
	% of Regional Population	21.8%	30.0%	45.8%
Employment	Employment Within ¼ Mile	105,328	128,657	156,263
	% of Regional Employment	45.6%	55.7%	67.7%

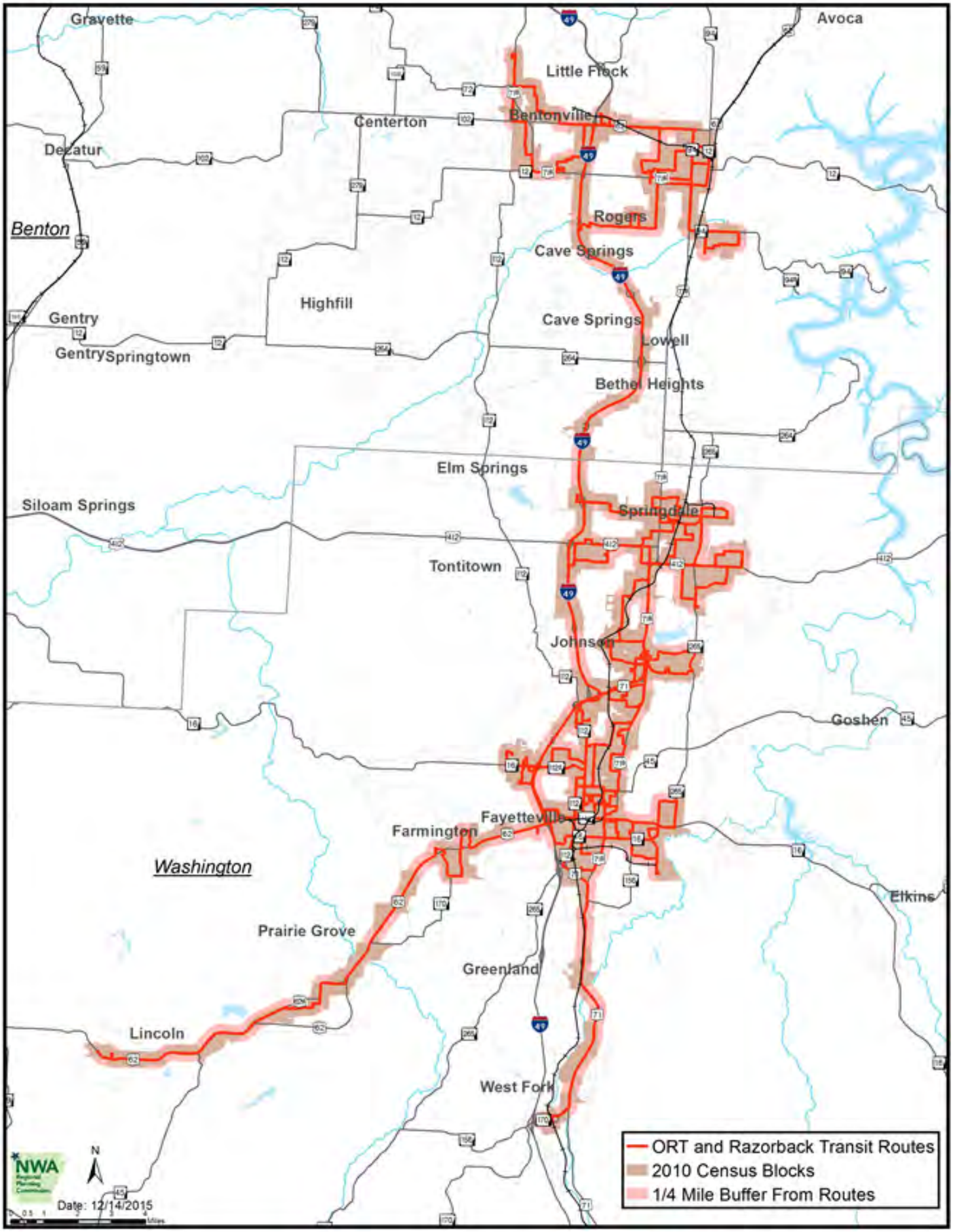
Table 11.10 - 2010 Population and Employment within 1/4 Mile of Proposed Transit Service

Recent data updates for both population and employment indicate that percentages of the total population in the ¼ mile corridor are comparable to what the TDP found in 2010, while the employment percentage from the total regional employment appears to be currently at the projected long-range level based on the best available data. Table 11.11, Map 11.3 and Map 11.4 were created using the 2010 Census Bureau data at the block level and the 2015 InfoGroup Employment database. A buffer of ¼ mile from both transit agencies routes was created and the population within the blocks that had the majority of the area in this buffer was summarized. Employment centers from the 2015 InfoGroup database were also selected in the same buffer area and the total employment at location was also summarized.

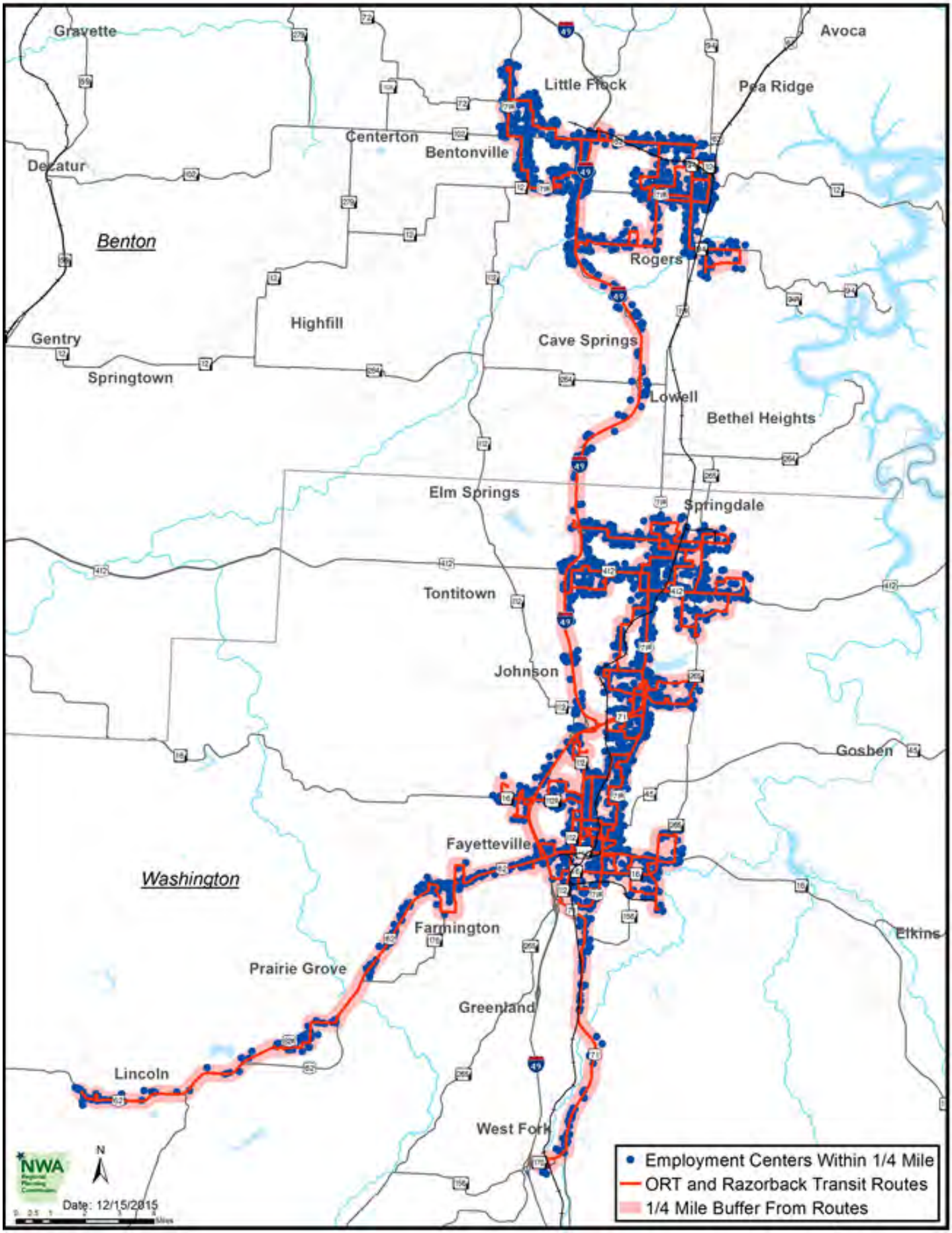
Demographic		
Population*	**Population Within 1/4 Mile**	**116,199**
	% of Regional Population	**27%**
Employment**	**Employment Within 1/4 Mile**	**134,438**
	% of Regional Employment	**67%**

*Population – Source: 2010 US Census Blocks
**Employment – Source: InfoGroup 2015 Employment Database

Table 11.11 - 2010 Census Bureau Population and 2015 Employment Data within ¼ Mile of Transit Routes



Map 11.3 - 2010 Census Bureau Blocks Population Within ¼ mile from Transit Routes



Map 11. 4 - 2015 Employment Centers Within ¼ mile from Transit Routes

Table 11.12 and Table 11.13 as presented in the TDP illustrate a summary of operating requirements for each TDP service plan. Expansion of service will result in the need for $22.7 million to cover annual operating and maintenance expenditures for the two transit systems upon full implementation of the TDP. New equipment and facilities will also be needed, such as expanded bus fleets (including large buses), passenger transit centers, a new maintenance facility, and improved passenger amenities at bus stops. Almost $63 million has been identified for vehicle and facility improvements. The proposed expansion of bus service in the TDP includes service on major roadways. Routes serving those major roadways should be operated with large buses (i.e., 30-40' buses). Safety (pedestrian and vehicular) must be considered with the placement of bus stops on those major roadways, and bus pullout lanes should be pursued where appropriate.

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	12	11	34	59
Annual Hours	29,116	29,116	122,655	234,032
Annual Miles	496,862	488,788	1,570,137	3,178,511
Annual O&M Costs	$2,600,000	$2,600,000	$10,744,900	$20,201,600

Table 11.12 - Ozark Regional Transit – 2010 and Projected Fixed-Route Operating Requirements

	Current	Near-Term	Short-Range	Long-Range
Peak Buses	16	17	18	18
Annual Hours	33,210	33,437	36,426	36,426
Annual Miles	378,622	378,909	394,997	394,997
Annual O&M Costs	$2,350,000	$2,363,6000	$2,542,900	$2,542,900

Table 11.13 - Razorback Transit 2010 and Projected Fixed-Route Operating Requirements

The financial analysis that was completed for the TDP identified projected costs (operations and maintenance, and capital) and potential revenue sources over the TDP's 10-year period. The expansion of transit services would require a significant commitment of local funding.

Finally, the TDP mentioned that the expansion of transit services in the Northwest Arkansas region should be considered as part of a comprehensive strategy that offers viable choices to the single vehicle occupant. This strategy should include other initiatives such as carpool and vanpool programs, and other transportation demand management (TDM) strategies.

The TDP recommendations were based on a thorough analysis of the existing conditions and also had an extensive public input and public survey components. In addition to the standard public outreach process, the consultants also conducted a transit Ridecheck Survey on 100 percent of the ORT and Razorback fixed-route service (Boardings and Alightings by stop, trip, and route) and also an On-Board Survey for trip data (origin, destination, trip purpose) and demographics. The on-board survey was also utilized in the enhancement of the Travel Demand Forecasting for the mode choice validation, as the best available data for this purpose. In the Blue-Print for model enhancement, delivered by Parsons Brinkerhoff in 2015, the need for a more adequate on-board survey was identified in support of modeling existing transit. This survey would collect more information about access and egress modes, transfer information, time of day or certain traveler characteristics necessary in order to expand it in the dimensions necessary for detailed mode choice calibration. An updated, model-focused on-board survey was identified as a need. This on-board survey could be developed in an update of the Transit Development Plan. The current updated model now has the capability to model scenarios that would include increasing service on all existing transit routes, increasing service on select routes, adding new routes and also changing existing routes.

Potential Transit Service Needs

The 2010 Transit Development Plan analyzed demographic data and growth elements compared to the existing transit network to determine areas where new transit services or expanded transit services may be warranted. Potential service expansion needs were identified as follows:

Benton County

- **New Growth Areas** – Population forecasts reflect significant growth in areas west of Bentonville and west/southwest of Rogers. New local route services may be warranted in these areas.

- **Low Income Areas** – The demographic analysis identified some concentrations of low income/zero auto households east of Rogers where expanded/new local transit services may be warranted.

- **Elderly Services** – The community of Bella Vista has a fairly high concentration of elderly citizens, along with the central area of Rogers and Siloam Springs. Services oriented towards the elderly should be considered for these areas.

- **Siloam Springs** – This community is located in the far west portion of Benton County. There are concentrations of population and employment in this community, but there is no existing transit service. Local route service with connections to Bentonville/Rogers should be considered.

- **Commuter Services** – Benton County is home to major employers, such as Wal-Mart. Analysis has identified concentrations of employees that live along the I-49 corridor. Regional commuter services to these major employment centers warrants consideration.

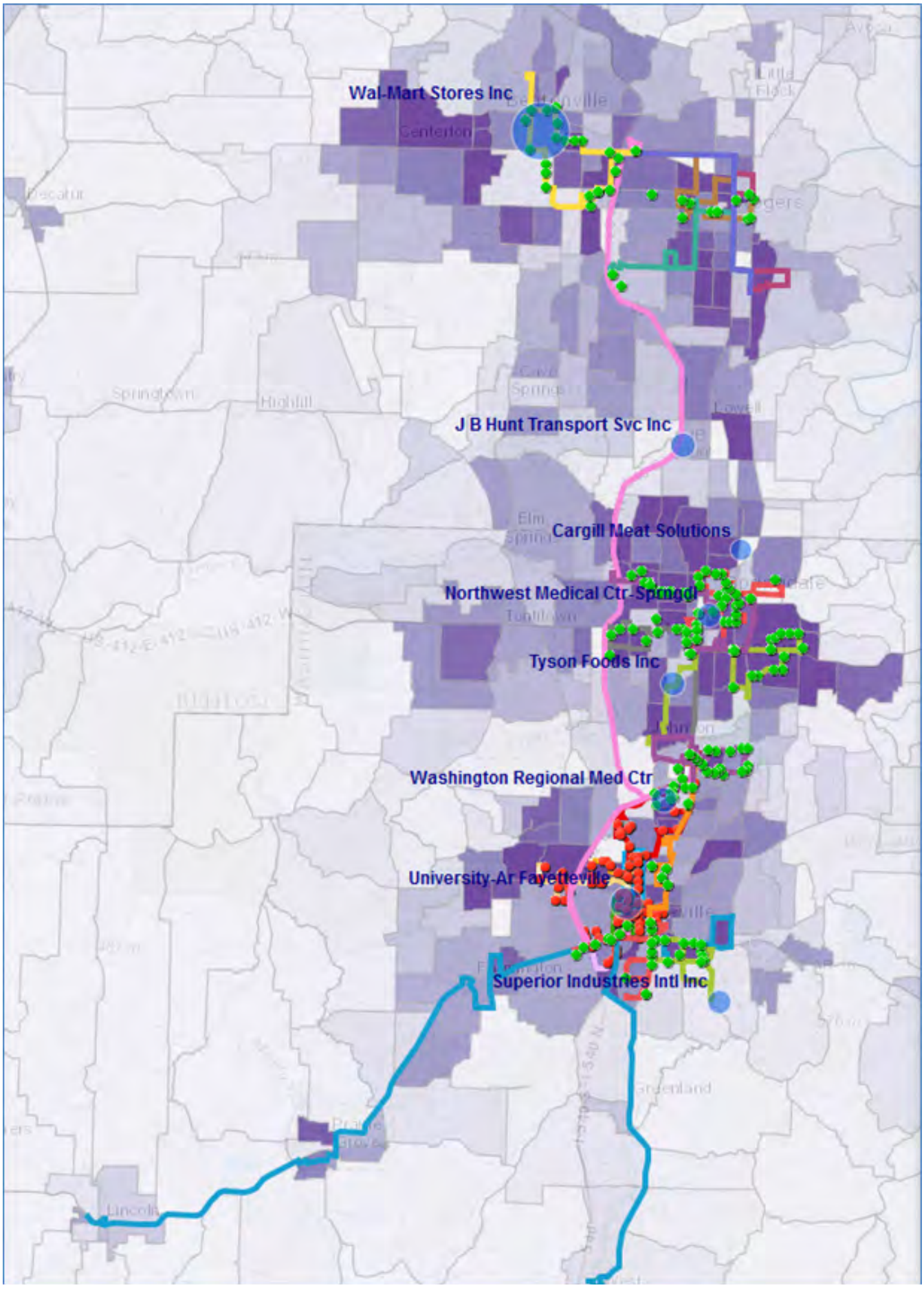
Washington County

- **New Growth Areas** – Population forecasts reflect significant growth in areas west of I-49, directly west of Springdale (Tontitown), the east side of Springdale, West Fayetteville and Farmington. New local route services may be warranted in these areas.

- **Low Income Areas** – The demographic analysis identified moderate concentrations of low income/zero auto households southwest of Fayetteville.

- **University of Arkansas** – The University of Arkansas had an undergraduate and graduate student population of close to 20,000 in 2010 (the enrollment was near 27,000 in 2015). Student transit service needs are presently accommodated by Razorback Transit, although there may be potential to increase usage through route alignment and service frequency modifications. Faculty and staff come from longer distances, with many coming from the Springdale area. Expanded transit service to the University of Arkansas from other areas of the region is likely warranted.

- **Commuter Services** – Besides the University of Arkansas, there are other major employers in Washington County including Tyson Foods in south Springdale. Washington Regional Medical Center and the Northwest Medical Center in Springdale are two major medical facilities with large employment bases. There is also a significant amount of retail employment around the Northwest Arkansas Mall area. Travel to these areas comes from all over the two-county area, and may warrant regional/commuter transit services.



Map 11.5 - ORT and Razorback Transit 2010 Routes and Bus Stops and 2040 Population Density (by TAZ)

Service Needs in Areas Presently Served by Transit

There are other factors to consider besides the proximity of a transit route alignment when traveling to a particular destination. Those factors include:

- Route alignment directness
- Span of service
- Availability of weekend service
- Service frequencies

For example, the central areas of Bentonville and Rogers are served by ORT routes. But, it can be argued that these areas are underserved, for these routes operate in loop patterns (resulting in long transit travel times), at infrequent service levels (60-minute frequencies) and they do not operate in the evenings or on weekends. Residents that have access to an automobile are unlikely to consider using transit under these conditions. Thus, there is a market for increasing transit usage in existing service areas by addressing service deficiencies. It is, of course, important to note that these existing deficiencies exist today because of funding constraints.

Figure 11.9 and Figure 11.10 display a comprehensive view of all demographic groups outlined in the TDP Technical Memorandum. Color scales range from light green (low density) to dark blue (high density) but are depicted at different scales. Together, these two maps identify the areas with the strongest propensity for transit use but do not depict specific numbers here.

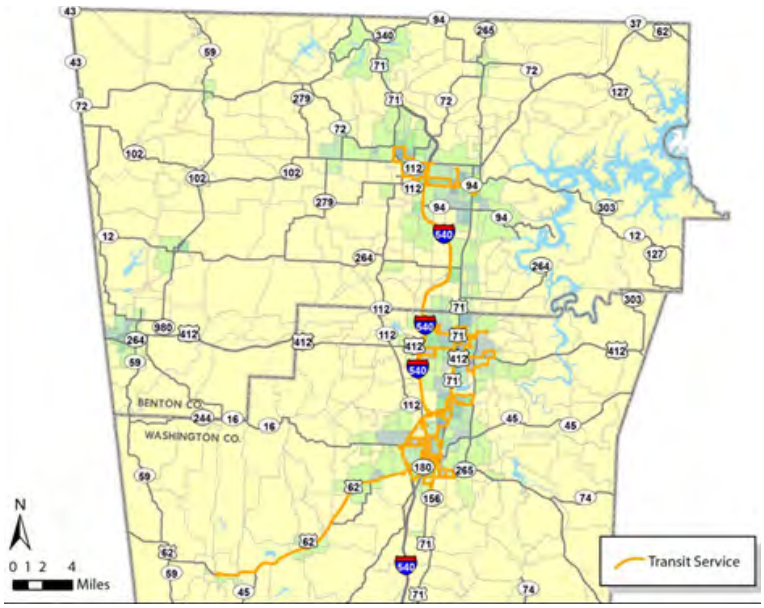


Figure 11.9 - 2010 Comprehensive Transit Propensity

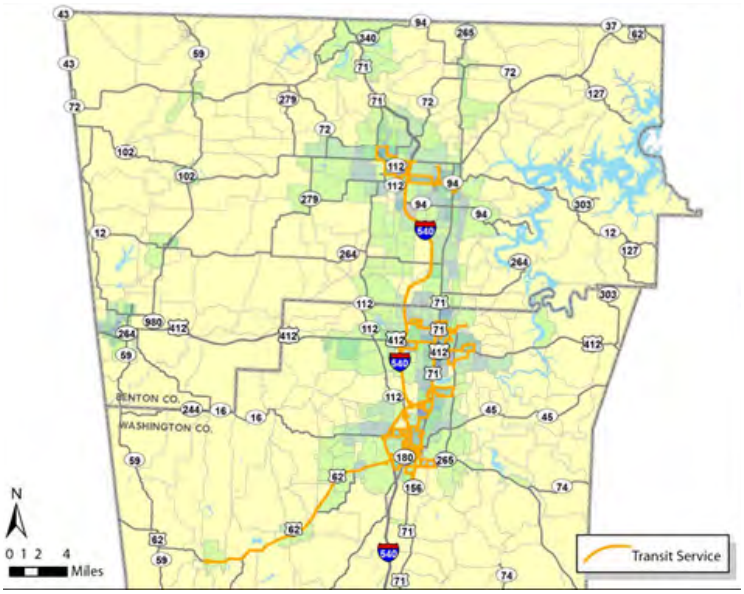


Figure 11.10 - 2030 Comprehensive Transit Propensity

FUTURE OF PUBLIC TRANSPORTATION – NEXT STEPS

- Prepare a transit development plan for the region. The transit development plan should include both ORT and Razorback Transit.
- Recommend ORT conduct a public Relations Campaign / Rebrand Ozark Regional Transit.
- Recommend ORT continue and expand route testing with NWA businesses and municipalities.
- Establish region-wide transit oriented design (TOD) best practices.

CHAPTER 12. INTERMODAL, FREIGHT, RAIL AND AIR

INTERMODAL TRANSPORT

Intermodal transportation is the transfer of products involving multiple modes of transportation – truck, railroad or ocean carrier. Intermodal, freight, rail and air transportation are all modes of transportation that deserve continued and expanded investment in terms of Federal, State and local resources. Several MTP goals, principles and objectives support this investment – **Increase transportation mobility and accessibility for both persons and freight, thus promoting economic vitality in the region; Support an integrated system with efficient connections between transportation modes; Enhance commerce; and Promote improvements that facilitate the efficient movement of freight and enhance regional and global competitiveness.**

- The trucking industry is facing increasing and significant road congestion, which has prompted some carriers to offer intermodal service.
- Diverting traffic from the highway to the railway may be a solution to the enormous cost of adding highway capacity.
- Shipper demands for capacity and trucker productivity and cost issues have combined to move most of the larger trucking fleets towards offering an intermodal service.
- Intermodal trucks and rails are offering dozens of new “corridors” running into shorter and shorter lengths of haul.
- Nearly 25 million containers and trailers are moved using intermodal transportation every year. This is due to the fact that intermodal combines the best abilities of different transportation modes to deliver service, savings and solutions to shippers. (Intermodal Association of North America, http://www.intermodal.org)
- By working together, trucking companies, ocean steamship lines, and railroads are providing a cost-effective, reliable, efficient, safe and environmentally friendly way to move freight.

Recognizing that the use of intermodal transportation in the region will most likely continue to rise, local and state officials must strive to ensure that transportation infrastructure will accommodate this growth.

MOTOR FREIGHT

A survey conducted of the trucking industry at large to identify the top issues of concern for industry stakeholders shows that congestion, truck bottlenecks, infrastructure condition and highway funding consistently place in the top 10 industry issue ranks (2005-2014, American Transportation Research Institute [ATRI], Critical Issues in the Trucking Industry – 2014). In 2013 ATRI identified industry costs of $9.2 billion associated with interstate congestion. In order for the trucking industry to deliver goods throughout the region, State and nation, the highway system must be maintained and improved.

Truck size and weight is another issue that is of concern to the trucking industry and highway officials as well as other drivers. At the writing of the MTP, Congress is considering legislation that would allow trucks to pull two 33' trailers, making for a 91' vehicle. Arkansas is one of 31 states that have a current allowable limit of 28' for twin trailers, coinciding with Federal laws that have been in place since 1982. The Federal weight limit on national highways is currently 80,000 pounds, and truck length and weight limits for longer combination vehicles (tractors with two or more trailers weighing more than 80,000 pounds) were frozen in 1991. In terms of highway and bridge infrastructure, congestion, and safety, there are two schools of thought. Supporters of the longer twin trailers believe that this will increase productivity and efficiency without compromising safety and eliminate millions of truck trips per year, economize millions of gallons of fuel every year, thus reducing carbon emissions, and also preventing highway accidents. Opponents don't believe the potential benefits outweigh the safety risks or impacts on the rest of the industry. The widespread use of longer and heavier trucks could require massive new spending to strengthen or replace bridges and pavement, as well as to widen vehicle lanes and shoulders. On June 5, 2015 the DOT released a series of technical reports for peer review and public comment as a step toward completion of the MAP-21/FAST Act Comprehensive Truck Size and Weight Limits Study, examining the impacts of increasing current federal truck size and weight limits. The DOT reported that the data limitations were so profound that no changes to existing truck size and weight limits should be made at this time. The study noted that more than 4,800 bridges would need to be strengthened or replaced because of added stress, at a cost to taxpayers of more than $1.1 billion. (U.S. Department of Transportation, http://www.fhwa.dot.gov/pressroom/dot1553.cfm)

The nation's trucking industry is a powerful force in the national economy, and Arkansas and Northwest Arkansas are in the forefront of the industry.
In Arkansas, trucking:

- Provides 83,000 jobs (1 in every 11 working people);
- Contributes $3.5 billion in wages annually;
- Pays $448 million in state taxes to fund highways and bridges.

Source: American Transportation Research Institute, Arkansas Trucking Association

Northwest Arkansas has over 150 trucking firms as of Fall 2015 and is the home to several major trucking companies such as ABF Freight, Comstar Enterprises, J.B. Hunt, P.A.M Transportation Services, Willis Shaw Express, and USA Trucking. Companies with large truck fleets include Wal-Mart, Tyson Foods, George's Inc., and Simmons Foods. It appears that the demand for trucking will increase by 20 percent over the next ten years (Arkansas Trucking Association) which contributes to the economy of Northwest Arkansas. Because trucking is the most heavily used mode of transporting goods, the roadways act as the primary element of freight infrastructure. In turn, roadways with high truck volumes are subject to increased levels of deterioration.

The ability of fuel taxes to adequately fund transportation improvements has been declining due to improvements in fuel economy and stagnant fuel tax rates. As the transportation infrastructure ages and repairs and/or new construction become more costly, it is necessary to find additional funding to make up for shortfalls. It has been suggested that an increase in the fuel tax is the best way to ensure the transportation system is adequately funded. Additionally, it may be necessary to prioritize where transportation funding is spent. Some have suggested the creation of a new funding program to focus Federal resources on truck bottlenecks on major freight routes.

Going forward, enhancing the link between freight planning and land use will help identify and prioritize freight issues and needs, and provide for the ability to recommend physical improvements to infrastructure and identify potential freight-related development locations. Planning for the impacts of increased freight volumes in the future can help reduce the negative impacts of freight (increased traffic, noise, and pollution) while promoting economic and operational efficiencies.

RAIL

Unlike most other modes of transportation, freight railroads operate over infrastructure that is built and maintained with private funds. These private investments help sustain jobs and ensure the industry can meet growing demand to move more of what the nation and world needs. Freight railroads plan to spend $29 billion to build, maintain and grow the nationwide freight rail network. The impact of freight rail investments have helped provide a safe, efficient, affordable, and reliable means by which U.S. products can travel to market anywhere in the county and, through ports, anywhere around the globe.

The U.S. freight network consists of 140,000 rail miles operated by more than 560 railroads. While these railroads typically own their own tracks and locomotives, they share a fleet of approximately 1.5 million cars. Moving goods along the freight rail network involves a process called interchange, which means transferring cars from one railroad to another.

Several kinds of railroads share the network:

- **Class I railroads** – Operate in 44 states and the District of Columbia and concentrate largely on long-haul, high density intercity traffic. Class I railroads are the largest railroads based on operating revenue. The seven Class I railroads include BNSF Railway Company, Canadian Pacific Railway, CN, CSX Transportation, Kansas City Southern Railway Company, Norfolk Southern Railway Company, and Union Pacific Railroad. These railroads account for 69 percent of the industry's mileage, 90 percent of its employees, and 94 percent of its freight revenue.
- **Short line and regional rail roads** – Range in size from small operators handling a few carloads a month to multi-state operators. The short line and regional railroads account for 31 percent of U.S. freight rail mileage and 10 percent of employees, operate in every U.S. state except Hawaii and often feed traffic to Class I railroads and receive traffic from Class I railroads for final delivery.
- **Switching and terminal railroads** – Usually perform pick-up and delivery services within a port or industrial area, or move traffic between other railroads.
- **Passenger railroads** – Typically operate over tracks owned by freight railroads. Approximately 70 percent of the miles traveled by Amtrak trains are on tracks owned by freight railroads. Additionally, each year hundreds of millions of commuter trips occur on commuter rail systems that operate, at least partially, over track or right-of-way owned by freight railroads.

Of particular importance to railroad operators, the public, and local, State and Federal officials alike, are the approximately 210,000 grade crossings in the nation. All these players are working together to improve grade crossing safety and promote safe driver and pedestrian behavior. The Federal Section 130 program, which allocates $220 million in Federal funds each year to states for installing new active warning devices, upgrading existing devices, and improving grade crossing surfaces, has helped prevent tens of thousands of grade crossing related injuries and fatalities. (Association of American Railroads, https://www.aar.org) NWARPC has awarded funding to two STBGP-GT 200K projects that address improving rail crossings through gate installation.

The Northwest Arkansas region is served by two railroads: The Arkansas and Missouri Railroad (A&M) and the Kansas City Southern (KSC).

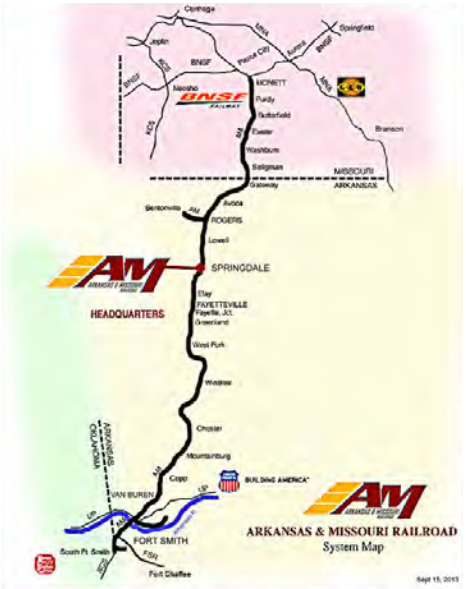
Kansas City Southern Railroad (KCS)

KCS offers the foundational rail route between the industrial heartlands of the U.S. and Mexico and is just one interchange away from every major market in North America. It offers seamless transportation throughout North America and beyond through strategic partnerships with all Class 1 railroads, short line partners, ports, transload centers and intermodal ramps. The KCS operates along a route north and south of Kansas City, through Siloam Springs on the western edge of Benton County.
KCS ships by carload or intermodal:

- **Carload**
  - » Shipping by carload is designed for those with heavy loads or a more flexible time schedule for delivery. With multiple types of equipment within the carload fleet such as boxcars, coil cars, gondolas or tank cars, any commodity ranging from agriculture to steel and anything in between can be shipped via carload.
  - » Given carload's volume capacity and rail's energy efficiency, rail is one of the most environmentally efficient forms of transportation. On average, a single Class I U.S. freight train can haul one ton of freight 473 miles on just one gallon of fuel.
  - » The volume capacity and energy efficiency of rail shipping equates to economical savings for carload shippers.
- **Intermodal**
  - » As companies continue to manage the time vs. money equation as well as the complexities of domestic U.S., Mexico and cross-border transport, more and more shippers are converting to intermodal, taking advantage of the efficiency of container shipping by railroad.
  - » With intermodal facilities in both the U.S. and Mexico, along the International Intermodal Corridor, KCS provides an efficient transcontinental rail line from Mexico to the southeastern U.S., and beyond. (http://www.kcsouthern.com/en-us/)

Map and image courtesy of Kansas City Southern website: http://www.kcsouthern.com/en-us/why-choose-kcs/network-map

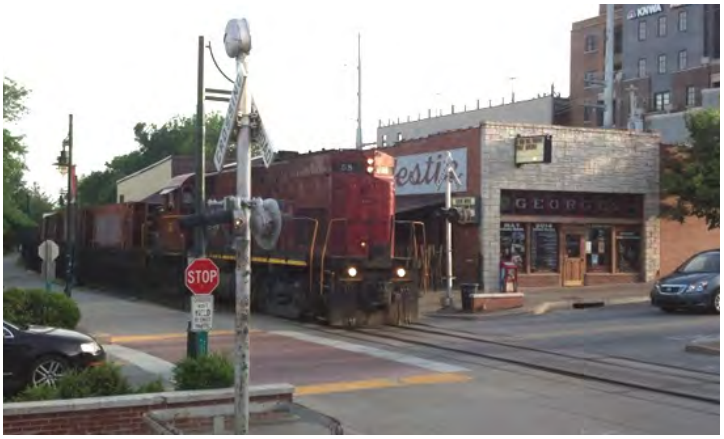
Arkansas and Missouri Railroad



The A&M "was established in 1986 as a Class III Railroad operating a 150 mile route from Monett, Missouri to Fort Smith, Arkansas. A&M's corporate headquarters is located in Springdale, Arkansas; major operations are based there and Fort Smith. The company provides freight service to customers along its route and excursion passenger service between Springdale and Van Buren/Fort Smith. A&M interchanges traffic with three Class I railroads: Burlington Northern Santa Fe (BNSF), Kansas City Southern (KCS), and the Union Pacific Railroad (UP), as well as the Fort Smith Railroad (FSR). All lines are rated at 286,000 lbs. and cleared for double-stack rail cars, and main lines feature continuous welded rail.

The A&M extends its customer reach through collaboration with other Class I and short line railroads across the United States, Canada and Mexico. The A&M enables seamless water-based intermodal options through A & M-served river ports in Van Buren and Fort Smith, Arkansas. Port operators there provide a variety of storage, inspection, transload, packaging and other logistics services." (http://amrailroad.com/freight)

Image and map courtesy of Arkansas Missouri Railroad website:http://www.amrailroad.com/



A&M train at Dickson St. Intersection in Fayetteville

AIR

The area is served by one regional airport, Northwest Arkansas Regional Airport, located in Highfill, and five municipal airports located in Fayetteville, Springdale, Rogers, Bentonville and Siloam Springs.

The Northwest Arkansas Regional Airport (Airport)
In the late 1990s a regional airport was established. The Airport, located in Highfill, is the major commercial airport serving the region. The call letters assigned the Airport are XNA. The Airport opened for commercial passenger business on November 1, 1998. The geographic terrain where the Airport is located provides facilities for regional and larger jet aircraft to operate.

The Northwest Arkansas Regional Airport Authority (NWARAA) operates the airport. NWARAA is comprised of five cities and two counties. The cities, Bentonville, Fayetteville, Rogers, Siloam Springs and Springdale, each appoint two members to the Board of Directors, as do Benton and Washington County. The Board of Directors mission is to build, operate and maintain the runways, structures, roadways, staff and finances required to operate a modern aviation facility.

The Authority is working with the AHTD on a new, direct access from I-49 to the Airport. In an effort to expedite construction of the new access road, the Authority is exploring the issuance of bonds to cover the cost of construction and the local match for the Federal grant. The bonds would be repaid with funds received from the Federal appropriation and the collection of a toll for traffic using the access road (http://www.flyxna.com/).

In spring 2015 crews began earth work for an interchange just south of Cave Springs that will be part of the Hwy. 412 Northern Bypass, and the location where the Airport access road will tie into the Bypass. The access road is expected to be a restricted access roadway about four miles long from the Airport to the Bypass. Two potential routes have been identified and are located around the southwest side of Cave Springs and outside of the Cave Springs Recharge Area. As of December 2015 no concrete decisions have been made on whether to construct the full four lane project or to begin by grading for four lanes and build two. Additionally, as of December 2015, the Airport has about $14 million in Federal money for the estimated $30-$40 million project. The access road is an essential component of the regional transportation network.

Map and image courtesy of XNA website: http://www.flyxna.com/

IN SUMMARY, in order to attain the transportation system as envisioned in the MTP, it will be necessary for State and local officials, industry leaders, and citizens to work together to advance the goals, principles and objectives of the MTP, such as:

- To increase transportation mobility and accessibility thereby promoting economic vitality in the region;
- To develop an integrated system with efficient connections between transportation modes;
- To enhance commerce; and
- To make improvements that facilitate the efficient movement of freight and enhances regional and global competitiveness.

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