

DRAFT

ARKANSAS

Long Range Intermodal Transportation Plan

Executive Summary



Director's Letter

February 2017

Greetings!

Every day, Arkansans rely on our transportation system to get to work, to school, to go shopping, and visit our beautiful lakes and mountains. Our local businesses use this same system to move products to local, regional and global markets. A healthy intermodal transportation system is the backbone of a modern, competitive, and productive economy that connects highways, rail, waterways, and air transport making the movement of people and goods more efficient, supporting trade and commerce, connecting supply chains, and reducing operating costs for everyone.

Over the past 18 months, our staff updated the Statewide Long Range Intermodal Transportation Plan to create a performance-based blueprint for the future of transportation in Arkansas. Thousands of citizens were involved in the development of the Plan goal, objectives, and implementation strategies. The Plan examines all aspects of the Arkansas' intermodal transportation system including highways, bridges, public transportation, rail, bicycle, pedestrian travel, ports and waterways, and aviation.

Tough issues were addressed - such as a growing and aging population and the expected growth in travel and freight shipments over the next 25 years. More and more, businesses and individuals want a certain reliability in their travel options whether it is knowing how long a certain trip will take or if they can deliver their cargo on time.

With the completion of this Plan we have collectively identified policies and strategies that will assist in moving our transportation system forward to meet the challenges of our 21st Century economy and promote the high quality of life we enjoy in Arkansas. Investing in Arkansas' intermodal transportation system will increase jobs, productivity, travel time reliability, and in turn, improve Arkansas' economic competitiveness. While the challenges of preserving, maintaining and modernizing our intermodal transportation systems are significant, reinvesting in Arkansas' system is needed to support population and economic growth and to provide our hometown businesses a competitive edge in delivering goods to local, regional and global markets.

These are exciting, but challenging times for transportation in our state. However, this Plan outlines how we can move the Arkansas intermodal transportation system forward and I look forward to working together to implement this Plan.

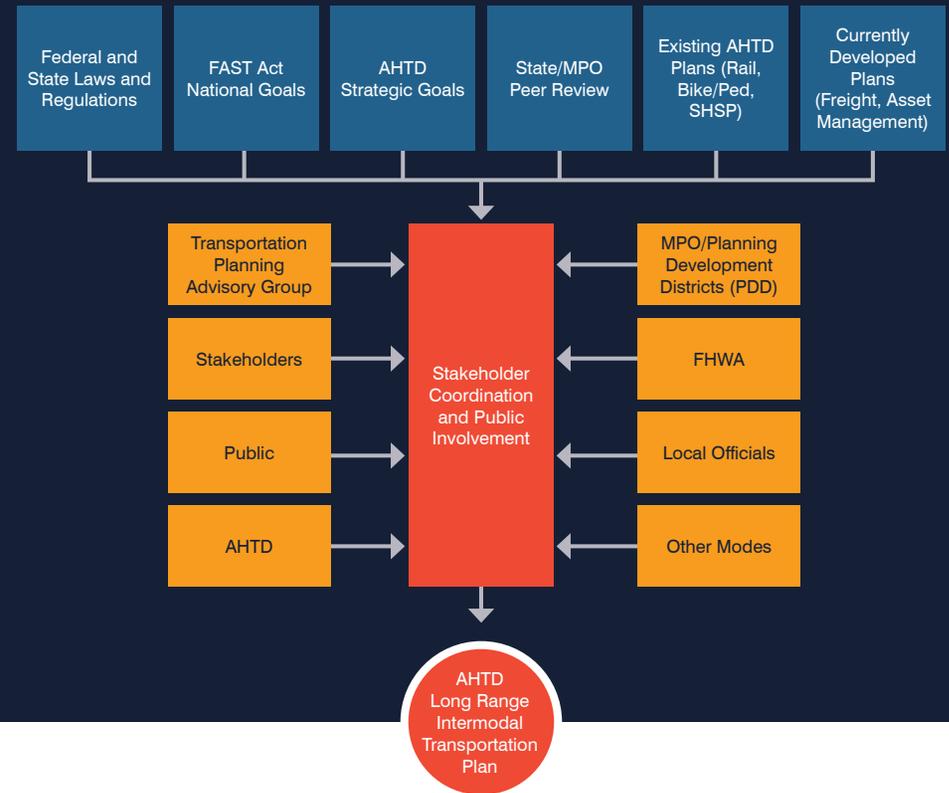
Scott Bennett, PE
Director of Highways and Transportation
AHTD



Introduction to the Plan

Legislation enacted by the State of Arkansas and the federal government underlies the goals and strategies of the Arkansas State Highway and Transportation Department (AHTD) Long-Range Intermodal Transportation Plan (LRITP).

The LRITP covers the 25-year period between 2016 and 2040, is the fourth long-range plan approved by the Arkansas Highway Commission as well as being Arkansas's first performance-based plan to address the performance areas in MAP-21 and the FAST Act. The LRITP provides a foundation for the use of transportation data and public and agency input to continually monitor AHTD's progress toward desired outcomes. By detailing anticipated LRITP results, AHTD can use feedback from collected transportation data and track its progress over time to monitor the success or failure of different strategies. As the LRITP progresses, Arkansas will fine-tune its State's investment decisions and procedures to identify the most effective uses of capital, equipment, and staff.



The LRITP specifically includes the following:

- *Goals and objectives*
- *Analysis of trends and the role of transportation in the economy*
- *Description of the existing multimodal transportation system and its condition*
- *Multimodal transportation system needs through 2040*
- *Baseline revenue forecast through 2040 with funding options*
- *Performance measures aligned with the identified goals and objectives*
- *Analysis of alternative future scenarios*
- *Policy recommendations and implementation strategies*

The LRITP is aligned with AHTD's strategic goals which are:

- **Provide a safe and efficient intermodal transportation system**
- **Maximize external and internal customer satisfaction**
- **Strive for continual improvement**
- **Enhance the social, economic, and environmental qualities of Arkansas**



Safety and Security

Improve statewide safety by funding projects reducing fatal and serious injury crashes, reducing vulnerability (the magnitude of impact on the system due to events such as major traffic incidents, flooding, lane closures, bridge failures, and seismic activity), and improving resiliency of the system (the ability of the system to recover from these events)

Multimodal Transportation System

Partner with responsible modal agencies, local jurisdictions, and planning organizations working to improve safety, accessibility, and connectivity for the movement of people and goods



Economic Competitiveness

Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness

Infrastructure Condition

Invest in existing highways and bridges to maintain and preserve the existing system

Congestion Reduction, Mobility, and System Reliability

Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods

Vision and Goals

Vision

Provide a safe, efficient, aesthetically pleasing and environmentally sound intermodal transportation system for the user

Goals

A key component of the performance-based planning process is the establishment of goals and objectives that create a framework for the performance-based plan. Goals and objectives provide a foundation for the development of performance measures and establish the strategic direction that will drive investment decisions over the life of the plan.

The goals and objectives development process included a review of federal and state laws and regulations, guidance from AHTD leadership and AHTD staff, an examination of the existing AHTD strategic goals, a review of existing AHTD plans, coordination with the concurrent development of the Statewide Freight Plan and the Transportation Asset Management Plan, and a peer review of goals and objectives from other states and MPOs.

Engagement Process

The development of the LRITP included an extensive engagement process that gave a variety of stakeholders the opportunity to provide input into the plan and its development. Input from stakeholders was collected through a variety of tools:

Stakeholder Interviews

Some of the key takeaways included the need to prioritize maintaining the current transportation system, a need for a multimodal focus in the State, the importance of regional connectivity and the need to improve it, a recognition that safety is very important, a concern about long-term funding for transportation, a desire for the agency to focus on improving partnerships, and a recognition of transportation's role in the State's economy.

Transportation Planning Advisory Group (T-PAG)

The T-PAG was formed as an advisory committee to guide the development of the LRITP. The group met three times and as part of their discussions provided input on issues important to Arkansas and transportation within the State and outlined the next steps that AHTD or other organizations need to take to meet the LRITP goals and objectives.

MPO Coordination

During the plan development process all eight Metropolitan Planning Organizations were engaged through a meeting and presentation regarding the goals and objectives of the LRITP. Additionally, feedback from the MPOs was solicited regarding the alternative future scenarios.

Public Open House Meetings and Comment Cards

AHTD held five open house public meetings in October 2015 in North Little Rock, Monticello, Springdale, Jonesboro, and Hope. Feedback requested at the meetings and through comment cards included feedback on the LRITP goals and the state's transportation priorities. The majority of stakeholders indicated they were comfortable with the goals presented with Infrastructure Condition and Safety and Security ranked most often as extremely important. In response to identifying top transportation priorities, maintaining the current transportation system assets was ranked most often as a top priority..

Targeted Stakeholder Meetings

AHTD held nine targeted stakeholder meetings in June 2016 in Batesville, Conway, El Dorado, Greenwood, Harrison, Hot Springs, Pine Bluff, Pocahontas, and Wynne. Of the future scenarios presented, Keep It Smooth – Preserve the Investment, had the most support. Some of the other major themes coming out of the meetings included the importance of the city/county/state funding split, the importance of supporting the transportation needs of existing businesses and economic development opportunities, a need for increased communication and coordination between AHTD and the cities and counties, concerns about AHTD's mowing policies and practices, and the need to find a long-term funding solution.



1,375
MEETING
ATTENDEES



179
COMMENTS
RECEIVED



6,432
FACEBOOK
REACHES



1,798
SURVEY
RESPONDENTS

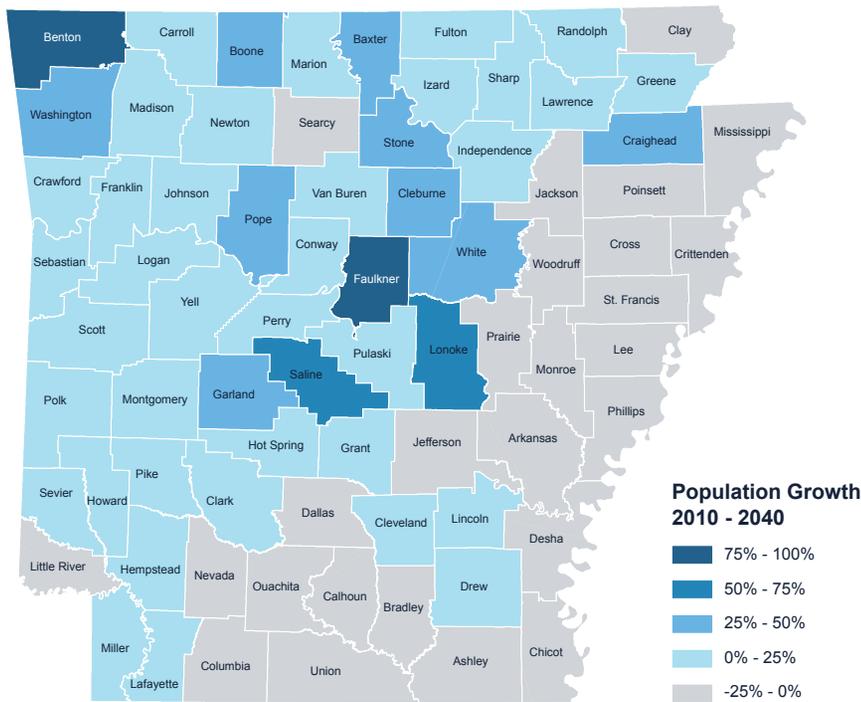
Existing Trends

Arkansas's Population is expected to surpass 3.3 million by year 2040. Out of 72 counties, 52 counties are expecting a decrease in population. The decrease in population is concentrated in rural counties and is offset by the increase in population in counties near urban and suburban population centers such as Little Rock and the northwest part of the state.

Arkansas' GSP has increased steadily from \$101 billion in 2009 to \$121 billion in 2014, an annualized increase of approximately 3.7 percent per year, which is lower than current inflation. Total employment is expected to grow from 1.42 million to 1.55 million (a 9.6 percent increase) between 2012 and 2022.

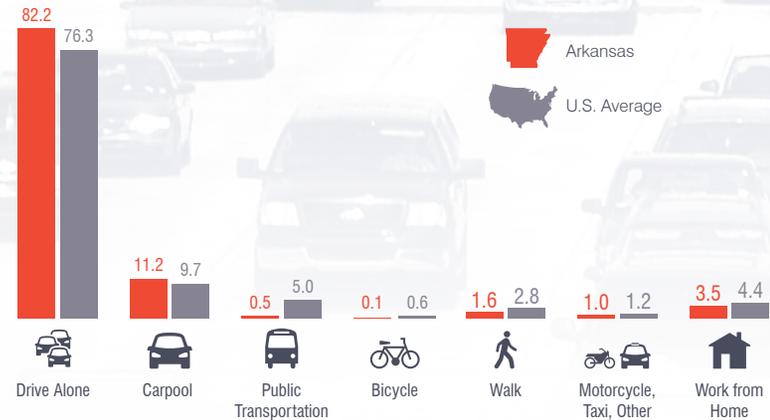
Increasing population on and employment are putting greater demand on the existing statewide transportation system. Mirroring the population and employment growth, vehicles miles travel (VMT) and transit ridership are projected to continue to increase.

PROJECTED POPULATION GROWTH



HOW RESIDENTS GET TO WORK

Percentage of workers over age 16, 2012



POPULATION



EMPLOYMENT



LICENSED DRIVERS



REGISTERED VEHICLES



TRANSIT RIDERSHIP



AIR CARRIER ENPLANEMENTS



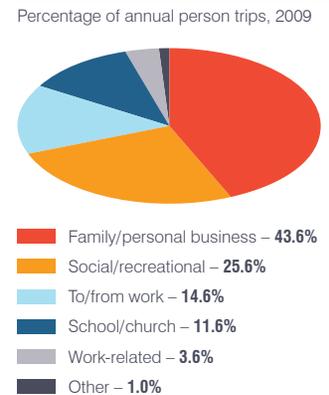
AVERAGE DAILY PERSON MILES



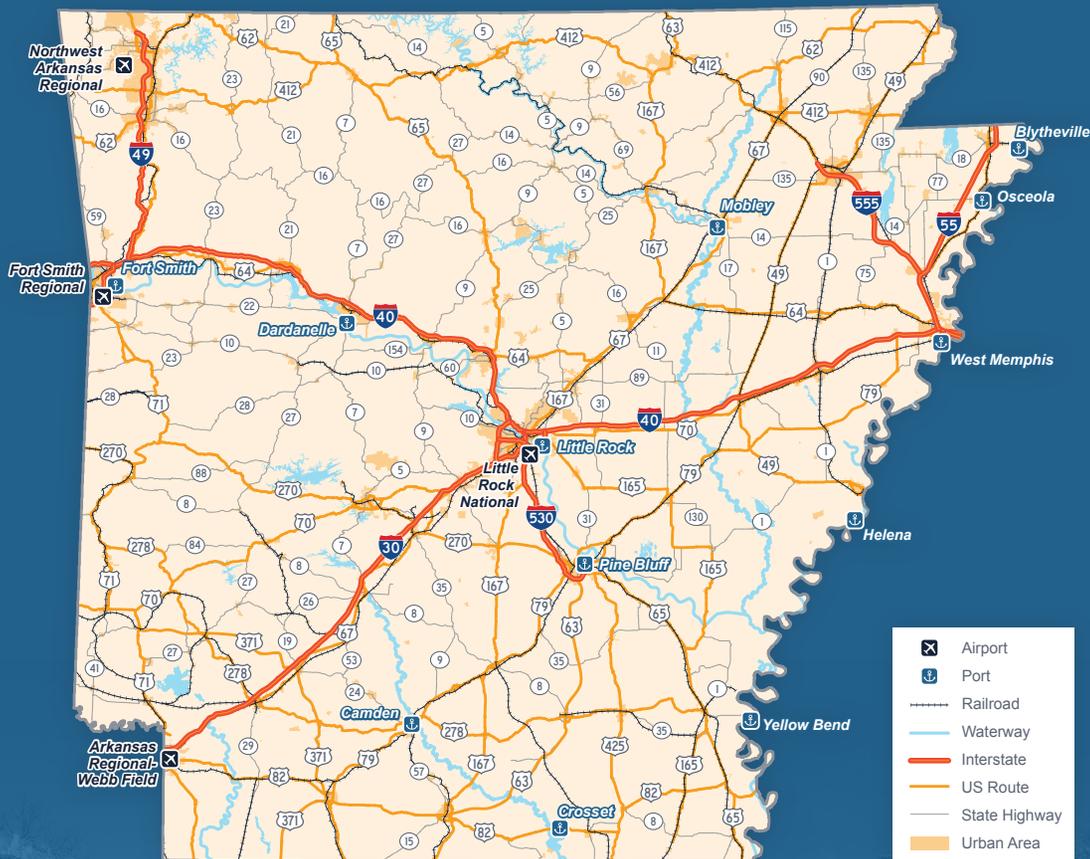
AVERAGE DAILY PERSON TRIPS



PASSENGER TRAVEL BY PURPOSE



Transportation Infrastructure



MILES OF STATE HIGHWAY

16,424

Roads to be reconciled with acceptable pavement ride quality based on International Roughness Index, 2012

Arkansas 80.1%
U.S. Average 81.3%

AHTD is responsible for maintaining and improving the SHS, which includes 16,424 miles and 7,279 bridges. Although the SHS constitutes only 16 percent of the total public roadway miles (102,609), it carries 75 percent of the total traffic and 95 percent of all heavy truck traffic.

BRIDGES

12,644

Bridges classified as functionally obsolete, 2012

Arkansas 16.0%
U.S. Average 13.9%

Bridges classified as structurally deficient, 2012

Arkansas 7.1%
U.S. Average 11.0%

AHTD is responsible for inspecting all 12,644 bridges on public roads and for replacing, maintaining, and preserving the 7,279 state-owned bridges that are part of the SHS.

MILES OF FREIGHT RAILROAD

2,662

Approximately 70 percent of Arkansas rail traffic is through traffic without an Arkansas origin or destination. Coal has been by far the highest tonnage commodity carried on the Arkansas rail network.

MILES OF WATERWAY

1,860

Arkansas has the nation's third largest inland waterway system. It consists of four commercially active waterways and one river (the Red River) designated as a future navigable waterway. Arkansas' has nine public river-ports and slackwater harbors.

TRANSIT SYSTEMS

17

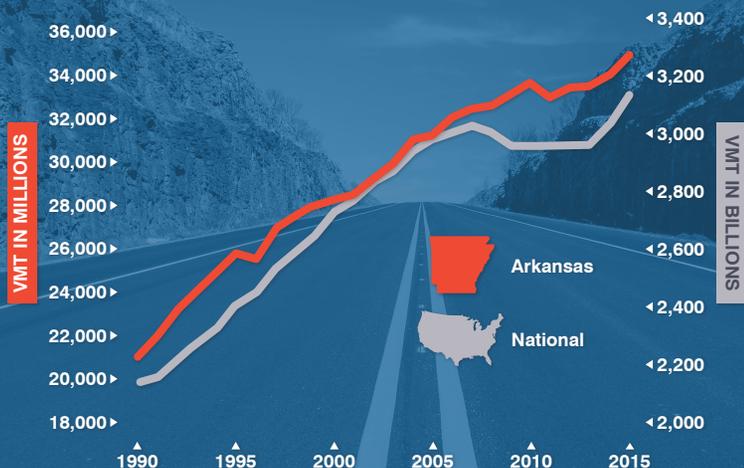
There are eight urbanized and nine rural transit systems providing service in Arkansas, and AHTD provides funds to over 200 human service agencies to support transportation services for seniors, persons with disabilities, and persons seeking employment opportunities.

PUBLIC USE AIRPORTS

92

Arkansas is home to four primary airports, four non-primary airports, and 83 general aviation and public use airports. Over 39,700 jobs can be traced to aviation.

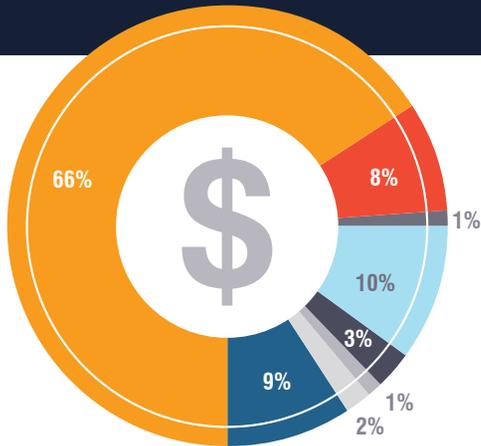
Arkansas vs National VMT Trends



Arkansas ranks 6th in the nation in Annual Vehicle Miles Traveled (AVMT) per registered vehicle.

Transportation System Needs

The estimated cost of meeting the 25-year needs to preserve, maintain, modernize, and expand the Arkansas state system (bridges, highways, interchanges and transportation support system) totals **\$53.7 billion** (2014\$). In addition to these needs, AHTD works with its local, regional, federal, and private partners to address other needs including passenger and freight rail operations, ports and waterways, bicycle and pedestrian facilities and public transportation. The 25-year cost of these (partner entity) needs is estimated at **\$9.1 billion** (2014\$).



- **Highways** \$41.54 Billion
- **Bridges** \$4.93 Billion
- **Interchanges** \$0.82 Billion
- **Transportation Support System** \$6.38 Billion
- **Rail Facility** \$1.72 Billion
- **Ports and Waterways** \$0.74 Billion
- **Bicycle and Pedestrian** \$1.00 Billion
- **Public Transportation** \$5.69 Billion

Highways

- Approximately 1,175 centerline miles of highway need to be expanded in order to accommodate future traffic
- Approximately \$41.54 billion is needed to preserve and maintain existing roadways

Transportation Support System

- \$5 billion is needed to perform routine maintenance on the existing system
- Safety improvements for \$1.5 billion are needed to reduce fatality rates over the next 25 years

Arkansas's 25-year transportation system needs total \$62.8 billion, out of which \$53.7 billion is estimated for highways.

Bridges

- 1,170 bridges in the State are classified as deficient and require major rework
- Approximately \$4.9 billion is needed to rehabilitate existing bridges

Rail Facility

- 286 miles of class III rail lines are in poor state of repair and require upgrades
- Passenger rail service is needed between central Arkansas and northwest Arkansas

Bicycle and Pedestrian

- Creation of statewide bike-way network
- Improve the physical network of pedestrian accommodations, especially as they relate to travel along and across arterial roadways

Interchanges

- 61 centerline miles of new interchanges need to be added over the next 25 years
- Six major intersections around the State require modification

Ports and Waterways

- Deepening of MKARNS channel to 12 feet is needed to accommodate future demand
- The locks and ports along the MKARNS channel has a maintenance backlog of \$78 million

Public Transportation

- An additional 8.4 million passenger trips are expected over the next 25 years
- Expansion of feeder services from rural areas are needed to connect with the national and regional bus carriers



Baseline Revenue Forecast and Funding Gap

The baseline revenue forecast includes state revenues and federal funding for surface transportation infrastructure investment over the 25-year forecast period between 2016 and 2040. The forecast includes state highway and transit funds as well as federal highway and transit funds. The forecast does not include local funding unless local funds are required as matching funds to receive certain federal transit funds.

Projected transportation revenues over the next 25-years total \$15.4 billion in current-year dollars, but when accounting for inflation the purchasing power is decreased to \$11.0 billion. Of this amount, \$500 million is dedicated to public transportation and the remaining \$10.5 billion is dedicated to highways, bridges, interchanges, and transportation support services.

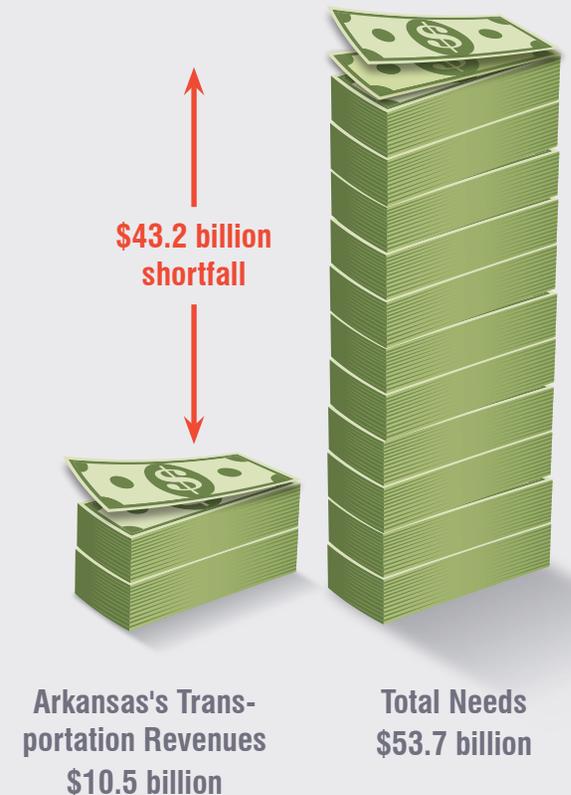
Based on the 2040 needs analysis, the estimated costs of AHTD-owned functions (highways, bridges, interchanges, and transportation appurtenances) totals \$53.7 billion (2014 dollars) and

the projected 25-year revenue totals \$10.5 billion in inflation adjusted dollars (2014 dollars). This results in a \$43.2 billion funding gap and equates to a \$1.7 billion average annual funding gap. The projected revenues will only cover approximately 20 percent of the projected needs.

Arkansas' faces a significant funding challenge in part due to a decline in purchasing power and more fuel efficient vehicles. Between 2016 and 2025, annual revenues are projected to decline 23 percent and by 2040 annual revenues will decline 40 percent.

Over the next 25-years, Arkansas's transportation annual revenues will decline to unprecedented levels and the Department will struggle to maintain current infrastructure conditions and struggle more to adequately address highway expansion that is needed to improve our congested corridors and overall economic competitiveness. Combined with the growth in population and travel demand, achieving all of the transportation goals and objectives will be challenging.

2016 - 2040 Revenue Forecast



Future Scenarios

Arkansas' population is increasing and is expected to grow 16% to nearly 3.4 million by 2040. Employment is expected to grow at a rate of approximately 1.3% per year to over 1.8 million

in 2040. To prepare for this growth, the LRITP identifies and explores the potential outcomes of four alternative future scenarios.

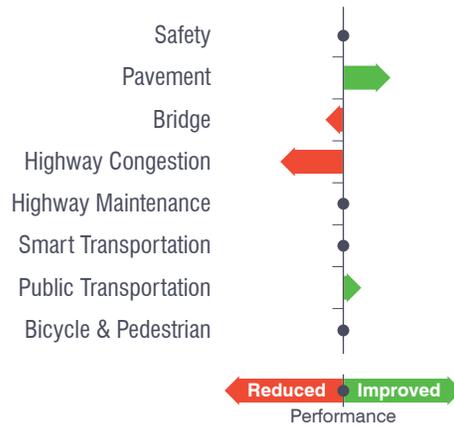
The four alternative future scenarios reflect different priorities, expected outcomes, and investment levels based on the 25-year baseline

revenue forecast. Four alternative future scenarios were selected to understand the trade-offs, consequences, and outcomes of potential planning scenarios representing changes in travel and investment decisions. Brief descriptions and expected performance for the four selected scenarios are shown below.



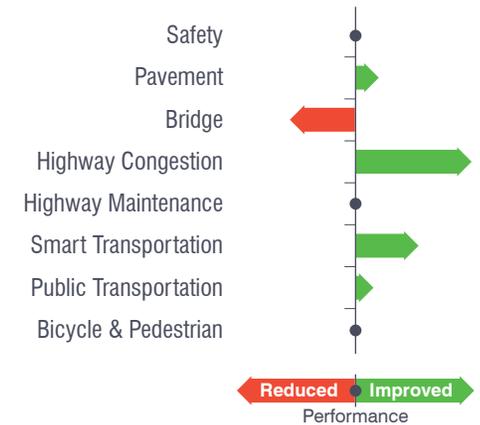
Keep it Smooth – Preserve the Investment

Focus is on maintaining and preserving the existing highway and bridge system in a State-of-Good-Repair. A higher priority will be given toward maintaining highway and bridge assets on the National Highway System (NHS) with a balance struck with APHN and non-APHN assets to ensure equity in meeting systemic performance goals by roadway classification.



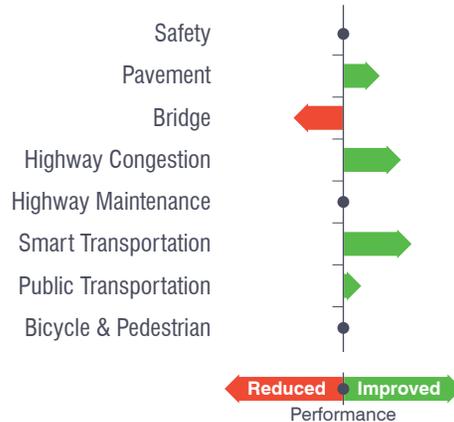
Connecting Communities – Forging Opportunities

This scenario would analyze the results of allocating resources to complete the Four-lane Grid System. The focus of this scenario would emphasize increasing capacity to improve economic competitiveness throughout the state. System preservation and freight movement investments on existing roadways would be lower in this scenario than the previous two scenarios.



Think Locally – Trade Globally

Enhanced infrastructure investments that support industry retention and attraction, with resources focused on existing major Interstates, major four-lane highways, and other freight corridors as identified in the State Freight Plan. The focus of this scenario would emphasize adding capacity to alleviate freight bottlenecks on the Interstate.



Bigger Cities – More Mobility

This scenario emphasis is on allocating funds to alleviate urban congestion by focusing on congested corridors (TDM and ITS improvements), increasing transit operations, preserving the existing urban system, and addressing gaps in the bicycle and pedestrian network. Rural system preservation, rural freight movements, and economic competitiveness investments would be lower in this scenario than those previously defined.





Policies and Strategies

To meet the long term needs and accomplish the vision, internal and external strategies have been identified. The LRITP policies and strategies are intended to inform AHTD decision makers and its partners in how the system is preserved, maintained, modernized, and expanded to meet 21st Century needs in the era of performance-based planning. As Arkansas moves forward and addresses these challenges and opportunities, it requires partnerships across public agencies and active support from the private sector.



Highways

- Optimize the use of maintenance funds to provide a smooth riding surface on all roads
- Use asset management strategies to minimize the life-cycle cost for state-maintained roads
- Identify corridors and work with local governments and MPOs to establish Corridor Management Plans to protect existing assets and identify cost effective transportation systems management and operational solutions
- Prioritize and enhance intermodal connections for both passenger and freight movement by establishing an appropriate network of intermodal connectors

Bridges

- Use asset management strategies to minimize the life-cycle cost for state-maintained bridges
- Prioritize the use of bridge funds to prevent fracture-critical bridges in Arkansas
- Identify the minimum amount of annual funding required to maintain less than 10 percent of deficient bridge deck area

Interchanges

- Evaluate, adjust, and enforce weight and size restrictions on roads and bridges to balance the competing needs of infrastructure preservation and freight mobility
- Investigate roundabouts as alternatives to 4-way stops

Transportation Support System

- Conduct a vulnerability assessment on the Arkansas Primary Highway Network transportation assets to improve system resiliency and redundancy
- Use technology, information, and operations strategies to improve transportation security and emergency preparedness and response

Rail Facilities

- Continue working with the Freight Advisory Committee to identify infrastructure improvements that are important to economic competitiveness for Arkansas
- Continue meeting as the FAC to educate the public and law-makers regarding the importance of multimodal cooperation for planning, funding, and implementation of improvements
- Develop a multimodal inventory for economic development to quantify non-highway needs

Ports and Waterways

- Coordinate with the Arkansas Economic Development Commission and other state-wide economic development stakeholders to identify transportation projects or improvements needed to support local and regional economies
- Prioritize and enhance intermodal connections for freight movements by establishing an appropriate network of intermodal connectors

Bicycle and Pedestrian

- Install rumble strips as appropriate; review their relevance and effectiveness along state bike routes
- Improve sight distance, visibility, lighting, pavement friction, signage, and other traffic control devices, particularly at un-signalized intersections
- Coordinate with MPOs and PDDs to implement multimodal transportation infrastructure improvements for increased connectivity among bicycles, pedestrians, and public transit

Public Transportation

- Implement a comprehensive set of rural transportation regions to insure that there is a regional entity responsible for addressing the needs in all areas of the state
- Continue to provide capital assistance for vehicle purchase through the 5310 program or a similar state-provided program and allow agencies to continue to operate services using their own agency operating budgets



Plan Implementation and Next Steps

This Arkansas Statewide Long Range Intermodal Transportation Plan provides a roadmap for the next 25 years and identifies:

2040

GOALS AND OBJECTIVES FOR THE STATEWIDE TRANSPORTATION SYSTEM RELATED TO SAFETY, MOBILITY, ECONOMIC VITALITY, AND MAINTAINING THE SYSTEM

INVESTMENT NEEDS, REVENUE SOURCES, AND A FUNDING GAP

STRATEGIC ACTIONS TO MEET THE STATEWIDE TRANSPORTATION PLAN GOALS

AN OVERALL INVESTMENT STRATEGY

PERFORMANCE MEASURES TO EVALUATE PROGRESS TOWARDS THE GOALS AND OBJECTIVES

Implementation

AHTD will move into an implementation phase following the adoption of the 2040 LRITP by:

- Implement the next steps of the Action Plan
- Coordinate with Metropolitan Planning Organization (MPO) partners on the continued integration of MPO plans into the Statewide Transportation Plan
- Working with its planning partners, AHTD will develop a program of specific projects and initiatives
- AHTD will use performance measures and objectives identified in this plan as a guide to making investment decisions
- Monitoring of the implementation will be an ongoing and continuous process to ensure the state moves efficiently and effectively towards meeting its goals and objectives and implementing strategies
- AHTD will coordinate with planning partners and stakeholders in various parts of the state to update them on the key results of the LRITP and the plan implementation process

Next Steps

The Statewide Long Range Intermodal Transportation Plan does not end with the development of the plan. It is an ongoing process. AHTD will use the plan website and Executive Summary as a framework for continued engagement of the public and planning partners on important transportation issues, key data, and findings. Continuous plan implementation will guide the path for monitoring progress and implementing the Strategies.

To learn more about the progress of the long range transportation plan, please visit www.wemovearkansas.com.

This website features news and updates, access to the plan documents, and interactive ways for residents and businesses to stay involved in planning for the future of transportation in Arkansas.

Acknowledgments

Arkansas State Highway and Transportation Department Staff

Partners

AARP
Arkansas Agriculture Department
Arkansas Association of Counties
Arkansas Department of Environmental Quality
Arkansas Department of Health
Arkansas Department of Human Services
Arkansas Department of Parks and Tourism
Arkansas Economic Development Commission
Arkansas Farm Bureau
Arkansas Game and Fish Commission
Arkansas Good Roads and Transportation Council
Arkansas Municipal League
Arkansas Transit Association
Arkansas Trucking Association
American Society of Civil Engineers – Arkansas Section
Arkansas State Police
Central Arkansas Planning and Development District
City of Bentonville
Department of Arkansas Heritage
East Arkansas Planning and Development District
Federal Highway Administration – Arkansas Division
Frontier MPO
Hot Springs Area Transportation Study
Jonesboro Area Transportation Study
Little Rock Tours
Metroplan
Northwest Arkansas Economic Development District
Northwest Arkansas Regional Planning Commission
Pine Bluff Area Transportation Study
Southeast Arkansas Economic Development District
Southwest Arkansas Planning and Development District
Texarkana Urban Transportation Study
University of Arkansas for Medical Science
West Central Arkansas Planning and Development District
West Memphis–Marion Area Transportation Study
Western Arkansas Planning and Development District
White River Planning and Development District

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- Front cover – Russellville vehicular bridge over UP rail line (photo panel, 2nd from left): Engineering and photograph by [Craffton Tull](#);
- Little Rock bus transit (photo panel, far right): Photograph © [Rock Region METRO](#)
- Page 8 – Razorback Transit (photo panel, top right): Photograph by [Brandonrush](#) / [CC BY-SA 3.0](#)

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Arkansas State Highway and Transportation Department
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