



FINAL REPORT

FAYETTEVILLE MOBILITY PLAN



FAYETTEVILLE MOBILITY

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1 INTRODUCTION

WHY A MOBILITY PLAN?

Fayetteville is thriving. Consistently rated one of the best places in the country to live, retire, study, and do business in, Fayetteville continues to attract new residents and investors. The city's success, however, also creates problems: Traffic congestion is on the rise. There is an increasing demand for more walkable streets, safer bikeways, and more useful public transit. An unacceptable number of people are injured or killed on the city's streets every year.

During peak hours, auto traffic has slowed, resulting in a transportation system that is capable of moving fewer people per peak hour, even as jobs and residents increase. Fayetteville's current success threatens its future. But given the constraints on the city's road network and the intrinsic inefficiencies of the car, conventional solutions will no longer work.

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THE SOLUTION

Fayetteville can accommodate more people and jobs, but it lacks the street width necessary to accommodate more cars in many areas of the city. Even if the city were prepared to take more land to widen its roads, the “Law of Induced Demand” means that congestion would continue to increase (see “What Causes Congestion,” below). Instead, Fayetteville must make its transportation system more efficient -- working to make walking, bicycling, and transit more convenient and pleasant -- and reduce the need to travel long distances for the needs of daily life. However, making the transportation system more efficient will require tradeoffs, and this report recommends strategies to guide those decisions. Investments in Fayetteville’s multimodal transportation system to increase connectivity, coupled with programmatic strategies to encourage people to leave their cars at home, is the strategy for continued growth.

ECONOMIC DEVELOPMENT AND QUALITY OF LIFE

Fayetteville consistently outcompetes most cities of its size, and nearly all cities in its region, in attracting jobs and talent. The base of its success is its extraordinary quality of life. To maintain and improve upon today’s city while ensuring the city’s future economic prosperity and quality of life, Fayetteville’s civic leaders must pursue a strategic mobility plan that promotes growth and addresses the city’s aging population, housing affordability concerns, social equity, and transportation system congestion.



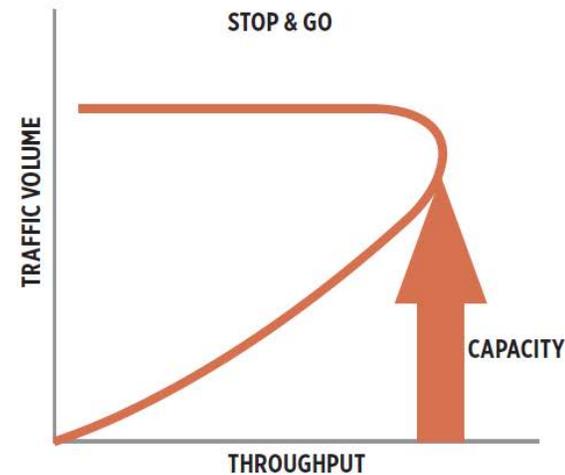
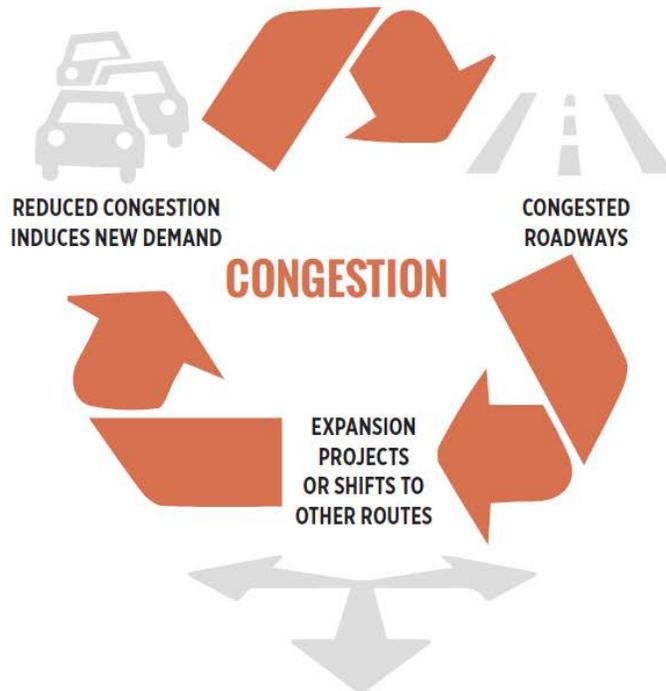
WHAT CAUSES CONGESTION?

Congestion is best understood not as an infrastructure problem, but as an economic problem—a case of demand exceeding available supply. Congestion results from a strong, dynamic economy, where commerce is humming, workers are going to work, and people are spending discretionary income on things they enjoy. This is the Fayetteville of today.

And what could the Fayetteville of tomorrow become? Traffic capacity itself can be thought of as a limited, renewable resource. Given the city’s built form and its desire to create walkable, attractive streetscapes, there are few

opportunities for road widening. Even if the city were able to widen its congested streets, it would likely attract even more drivers through the law of “induced demand.” It is a vicious cycle leading to continued congestion and dampened growth opportunities.

In a growing economy with this constraint, traffic congestion is inevitable. As traffic volumes increase, the vehicle throughput on a given street increases steadily until the street starts to reach capacity. At that point, throughput begins to decline rapidly to the point where there are so many cars that none can move.

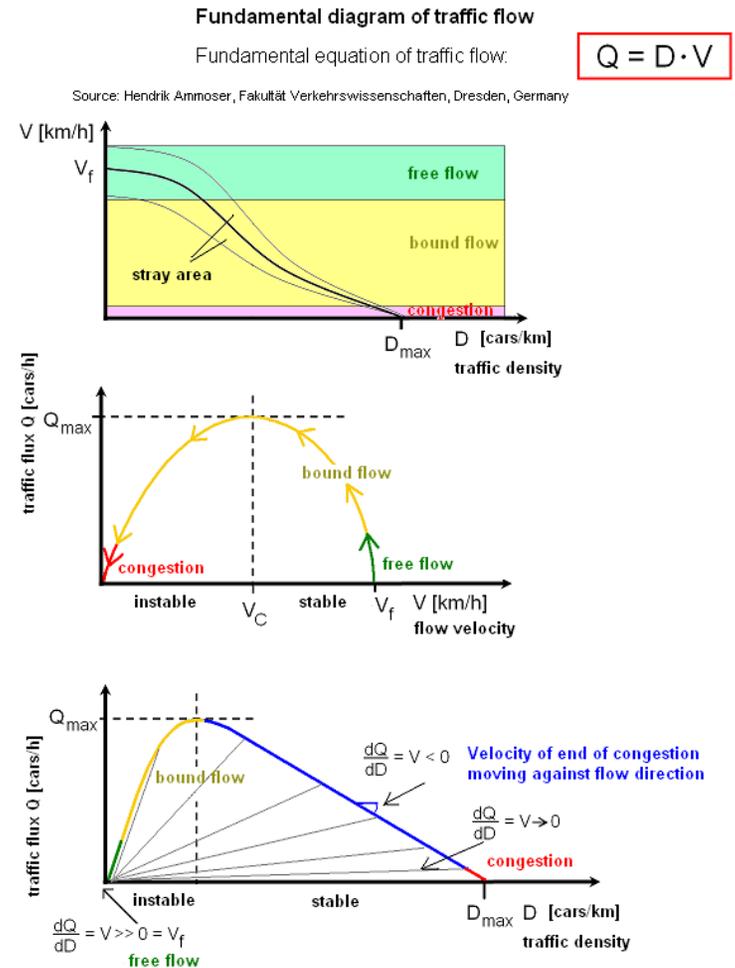


INTRODUCTION

The only way to support a growing economy in a constrained environment is to increase the efficiency with which all transportation options operate. A city's transportation system can support a greater volume of travelers by absorbing trips across a diversity of modes. This means making investments in things like more frequent transit, a comfortable and inviting bicycling and walking environment, telework facilities and opportunities, deployment of managed lanes that provide improved transit access to key employment centers, and development focused around transit nodes (i.e., land use decisions).

A small shift can make a big difference. Cars may be the most convenient form of transportation, but they're also the least space efficient, taking up about ten times as much road space to move a person compared to walking, biking, or transit. As the "Fundamental Diagram of Traffic Flow" has taught us for over 75 years, to make gridlocked streets flow again, we only need to remove about ten percent of vehicles.¹ So the city doesn't need to get everyone out of their cars. It only needs to make walking, biking, and transit sufficiently attractive for about ten percent more people. This can be seen every year during school breaks when travel on Fayetteville's roadways is observably less congested. Ironically, the best way to make driving a reasonable choice for those who need to drive, is to make not-driving an attractive choice for those who don't need to drive.

Figure 1 The Fundamental Diagram of Traffic Flow Shows a Small Decrease in Volume Result in a Big Improvement in Traffic Flow



V_f = "free velocity" - maximum velocity on free lane, selectable by the driver depending on car, skill etc.

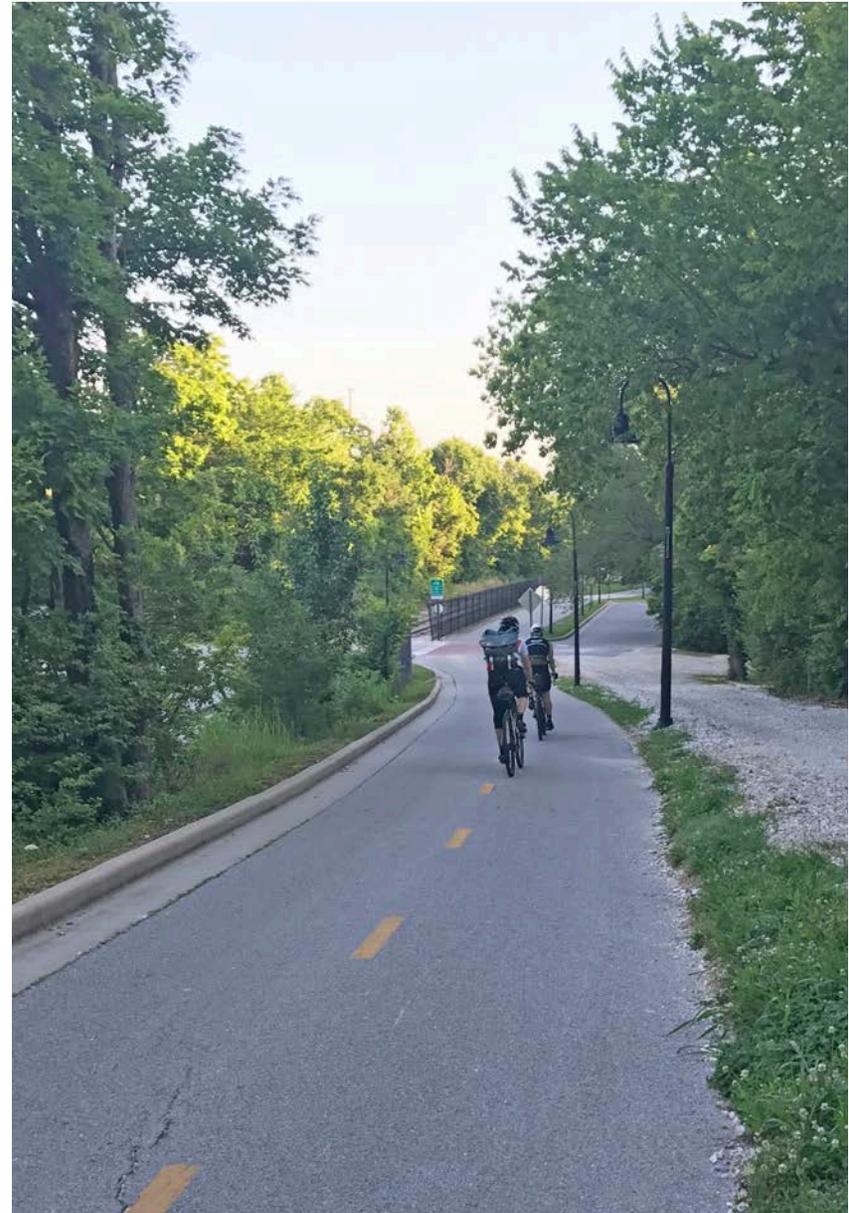
V_C = "critical velocity" with maximum traffic flux (about 70...100 km/h)

Image source: Hendrik Ammoser image and translation. Creative Commons Attribution-Share Alike. <https://commons.wikimedia.org/w/index.php?curid=1675321>

¹ The Fundamental Diagram of Traffic Flow was initially developed by Dr. B. D. Greenshields and presented at the 13th Annual Meeting of the Highway Research Board in 1933. For a rich history of thinking about congestion and highways, see "75 Years of the Fundamental Diagram for Traffic Flow Theory: Greenshields Symposium," Transportation Research Circular Number E-C149, June 2011.

TRANSPORTATION IS AN INVESTMENT STRATEGY

Traffic congestion is inevitable in a successful urban economy – perhaps the only American city that “solved” its congestion problem is Detroit because of contractions in population and jobs. More strategic investment in mobility is necessary to accommodate continued prosperity in Fayetteville. Transportation is also a critical investment for helping the city achieve its quality of life, environmental, and public health goals, and to ensure that all residents can enjoy the city’s remarkable opportunities



PLAN DEVELOPMENT

The Fayetteville Mobility Plan (FMP) process, timeline, public feedback, and deliverables are documented on the project website at www.fayetteville-ar.gov/mobility. The project began with a thorough review of existing transportation data and current planning and policy documents to provide a basis of understanding of the current state of transportation in Fayetteville, as well as its challenges and opportunities. Transportation data from a variety of sources was organized and synthesized to create spatial and systemic contexts for the Plan. Additionally, previous and concurrent planning analyses were identified and summarized to reveal the policy framework within which the FMP would coexist.

After this introduction, Chapter 2 examines the city’s existing policies and goals and provides recommendation for measuring how well its transportation investments align with the city’s values. Chapter 3 summarizes the state of today’s transportation system, drawing from the detailed findings in the Existing Conditions Factbook provided as Appendix A. Similarly, Chapter 4 summarizes the findings from the project’s significant public outreach, including the community events, conventional workshops, and mobile pop-up workshops; more detail can be found in Appendix B.



Chapter 5 then integrates the findings of Chapters 2-4 to identify and prioritize needs for all modes. Chapter 6 provides more specific guidance on how the overall street system could be organized to meet the goals in Chapter 2. Chapter 7 provides more detailed recommendations for redesigning seven street segments, along with analysis of the impacts of those changes; more detail on the transportation analysis can be found in Appendices C and D. Finally, Chapter 8 recommends next steps for the city, including tools for better aligning its budget with its values.



TRANSPORTATION CONTEXT

Fayetteville was originally laid out on a compact, gridded street pattern centered first around the town square. The town grid appears in Washington County's General Land Survey of 1831, with nine blocks at the crossroads of what are now Mount Comfort, Old Wire, Huntsville, and Cato Springs roads.² Starting in the 1880s, Fayetteville also became the crossroads of several railroads, including the St. Louis & San Francisco and the Pacific & Great Eastern, which established depots at the edge of town at what is now Dickson Street. The city's two crossroads – rail and highway – resulted in today's pair of commercial centers at Downtown Square and Dickson Street.

Through the middle of the 20th century, the city's development patterns grew outward from these two centers, maintaining a pattern of small, walkable blocks and a mix of commercial and residential uses, often with the latter stacked on top of the former. Like most American cities, however, Fayetteville's street and development patterns became more auto-oriented and less connected in the post-World War II era, with land use patterns based on the idea that residential, industrial, and commercial uses should be separated from one another. This post-War conventional development pattern continued in Fayetteville until a recent paradigm shift in thinking as the planning, engineering, economics and health professions began to recognize the unintended fiscal, social, and environmental impacts of sprawling, auto-oriented development patterns.

The post-war conventional suburban development pattern presents a different and unique set of challenges for integrating active living with practical transportation solutions. The disconnected nature of low-density cul-de-sac developments do not necessarily warrant the considerable expenditure of constructing sidewalks along streets that do not lead anywhere. In these cases, opportunities for sidewalk and trail connections between adjacent cul-de-sacs or along utility easements may be more useful for providing neighborhood-level pedestrian or bicycle connectivity. These connections may be extremely desirable for non-driving residents that would benefit from access to nearby commercial centers, institutional uses such as schools, or transit stops that cannot be safely accessed from their primary entrances along high volume/high speed roadways.

Fortunately, much of Fayetteville was developed in a traditional development pattern that easily lends itself to street retrofits that can improve connectivity for all forms of transportation. Many of these multimodal retrofits can take place in the existing roadway. For instance, sidewalk replacement and enlargement or road diets to calm traffic can free up right-of-way for other transportation modes like walking and bicycling. The core of the city is poised to greatly benefit from multimodal mobility infrastructure improvements that align with the prescribed future land use and density outlined in the City's Comprehensive Land Use Plan.

² Fayetteville historic maps found at <http://www.fayettevillehistory.com/maps/>

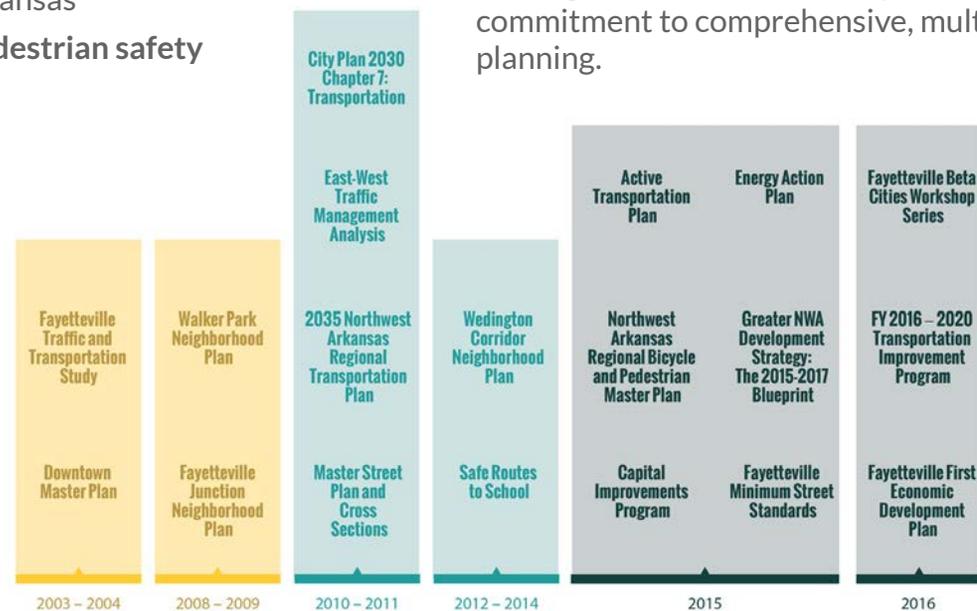
PLANNING AND POLICY CONTEXT

Several recent and relevant planning and strategy documents provide guidance for, and shape the direction of, the future of mobility in Fayetteville and its unique neighborhoods and areas. Broadly, these plans put forward a vision for a more multi-modal Fayetteville, in which the city and region meet future mobility demands through holistic transportation network improvements. Key themes across these documents include:

- **Connectivity & accessibility** as guiding principles for transportation planning
- **Creating a robust network** of active transportation infrastructure, particularly trails
- **Enhancing walkability** in downtown Fayetteville and near the University of Arkansas
- **Improving bicycle and pedestrian safety**

- **Reducing congestion** by maximizing the potential of roadway capacity and enabling the use of alternative modes
- **Enhancing the city’s public spaces and neighborhoods** through infrastructure improvements and land use management
- **Fostering social and economic vibrance** to make northwest Arkansas attractive to businesses and people

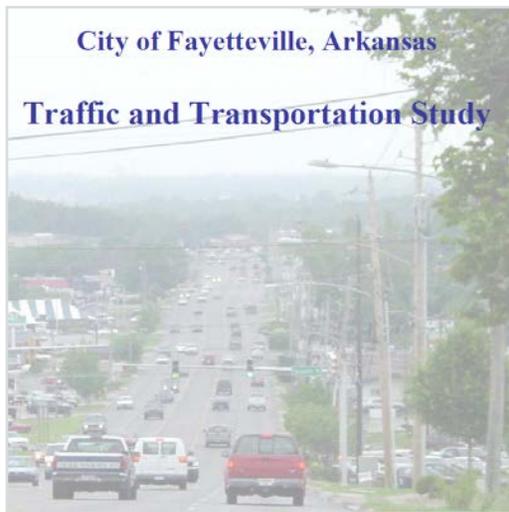
Roughly half of these plans identify broad aspirations for mobility in Fayetteville, while the others include concrete objectives. There is a general acknowledgment that mobility improvements are needed in the city for practical, economic, social, and environmental reasons, as well as an understanding that funding availability will be a potentially limiting factor. Overall, these plans demonstrate a regional commitment to comprehensive, multi-modal mobility planning.



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City Plan 2030 (2011) serves as a vision to guide urban development in Fayetteville until 2030. The fourth of its six main goals is to grow a livable transportation network. Chapter 7 of the plan examines the current state of citywide transportation conditions and provides an overview of vehicular, active, transit, and aviation mobility conditions in the city. It identifies transportation priorities, including the expansion of active and public transportation options. City Plan 2030 includes the Master Street Plan (2011) that outlines Fayetteville’s street classifications and their associated cross sections. These 10 street classifications consist of the following: alleys, residential, local, collector, minor arterial, principal arterial, Hilltop-Hillside Overlay District streets, downtown master plan streets, and the two-way square.



The Fayetteville Traffic and Transportation Study (2003) was developed to determine the needs and priorities of Fayetteville’s transportation network and projects until 2023. The study’s objectives were to develop transportation and land use policies to guide development practices and transportation investment decisions; identify and prioritize street improvements to accommodate existing and future traffic demands; and develop an overall transportation plan that provided for a street master plan, a multimodal plan, and a basis for a transportation capital improvement plan.



The Active Transportation Plan (2015) provides a guide for implementation of future bicycle and sidewalk infrastructure. The plan’s vision is for Fayetteville to develop an interconnected, accessible network of sidewalks, trails, and on-street bicycle facilities that encourage citizens to use active modes of transportation to safely and efficiently reach any destination. The primary goals of the plan include building inclusive networks, providing trail connections within one-half mile from every residence, increasing the active transportation commuting mode share from 7.5% to 15% by 2020, identifying missing linkages, creating active transportation partnerships, and earning a League of American Bicyclists Bicycle Friendly Community designation of Silver by 2017, which has been achieved.

The Energy Action Plan (2018) is structured around one overarching goal: reducing Greenhouse Gas Emissions (GHG) for activities occurring in Fayetteville. While GHG reduction is the guiding goal, a host of co-benefits accompany GHG-reducing actions. This plan outlines ways that the City can increase energy efficiency, transition to cleaner fuel sources, improve public health outcomes, build more resilient local businesses, and more. The plan outlines strategies, goals, and actions in transportation, energy supply, buildings, waste, and cross-sector activities.



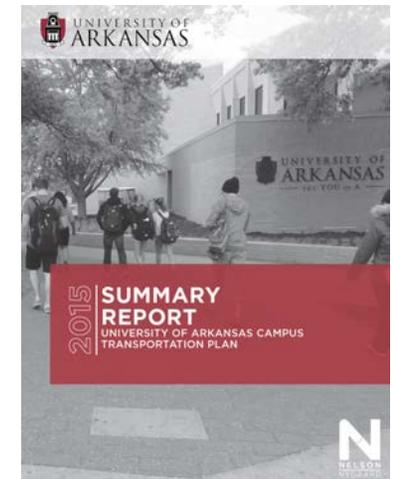
The Fayetteville First Economic Development Plan (2016) was created to guide the economic development of the city for five years. The plan identifies targeted business sectors and their projected growth, as well as reviews Fayetteville’s existing base economy, recent project expansions, and new investments. The plan’s Lifestyle Quality strategy plan outlines the importance of enhancing public transportation, such as supporting rapid transit or light rail, and improving existing local and regional transit systems.



The Capital Improvements Plan (2015-2019) is a mid-term planning tool used in the budgeting process. The program has an estimated total expenditure of \$112,620,000, of which transportation, street, and trail improvements accounts for \$28,590,000. About one-third of the Sales Tax Capital Fund, which accounts for 25.5% of the total program costs, will be allocated to transportation improvements, with almost \$8 million allocated to the trails program.



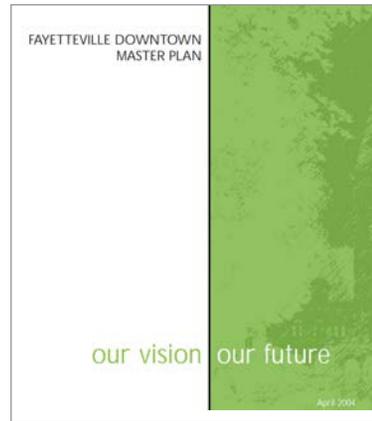
The University of Arkansas Campus Transportation Plan (2015) outlines transportation challenges facing the rapidly growing university up to 2025. It identifies an expected campus core parking shortage, barriers to campus access, transportation dependence on regional connections, and a lack of communication as the major transportation challenges. It recommends a variety of measures to address these issues, including simplification of the parking system, enhancing parking efficiency, orienting campus gateways to people, increasing transit efficacy, building transportation partnerships, establishing last-mile bike



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network connections, and consolidating information online. A financial forecast suggests improvements could cost between \$10 million and \$15 million by 2025, and revenues could range between \$12 million and \$15 million. The Fayetteville Mobility Plan recommendations build significantly from the campus transportation plan.

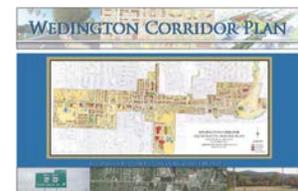
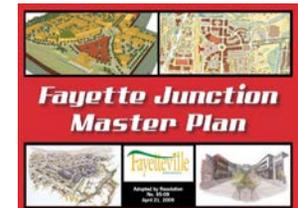
The Downtown Master Plan (2004-2006) outlined six fundamental strategies: a superbly walkable environment, a larger population living downtown, efficient and sustainable parking, smart zoning, creation of place-based public spaces, and expansion of the arts, culture and entertainment of Downtown as an “experience economy.” Important projects include the completion of Dickson Street, preservation of Lafayette Street, one-way street conversions to two-way, creation of additional on-street parking, redesign of Archibald Yell Boulevard, and the taming and continued redevelopment of College Avenue.



The East-West Traffic Management Analysis (2010) identified and prioritized street projects to help relieve traffic congestion throughout the city through east-west traffic management alternatives. These alternatives were concentrated east of Garland Avenue, west of Crossover Avenue, and north of Lafayette Street/Mission Boulevard.

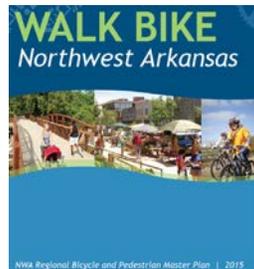
Several Neighborhood Plans provided identified neighborhood goals and preferred project priorities, including:

- **The Walker Park Neighborhood Plan (2008)** encouraged a balance of uses and housing, improvement of connectivity and walkability, creation of accessible green space, and keeping Jefferson Square a neighborhood core as primary goals of the neighborhood.
- **The Fayette Junction Neighborhood Plan (2009)** identified a vision and goals for the neighborhood including integration of built and natural environments, creation of a clean-tech cluster, and support of multi-modal transit.
- **The Wedington Corridor Neighborhood Plan (2012)** reiterated the importance of four street extensions that were identified in the Master Street Plan: Salem Road, Shiloh Drive, Persimmon Street, and Ruppel Road.



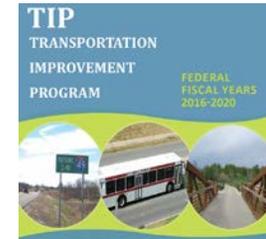
Fayetteville’s Minimum Street Standards (2015) outline requirements for development projects within the city, and are intended to address public safety and convenience, maintenance, standardization of design and materials, optimization of public right-of-way uses, protection of private property, and inspection criteria. The standards pertain to planning, design, approval, construction, inspection, testing, and documentation of street improvements, and act as a guide to define the minimum acceptable criteria.

The Northwest Arkansas Regional Bicycle and Pedestrian Master Plan, also known as **Walk Bike NW Arkansas (2015)** serves as a blueprint to comfortably, safely, and efficiently accommodate bicycle and pedestrian transportation. The plan builds upon existing bicycle and pedestrian infrastructure, using the 36-mile Razorback Greenway as a spine. The plan ultimately aims to create on- and off-street infrastructure within 32 communities of NW Arkansas through eight primary goals and eight related performance measures.

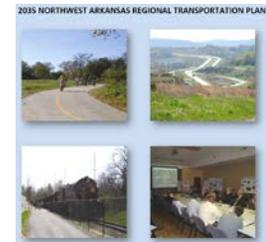


A catalyst program in the Walk Bike NW Arkansas plan, **the Regional Safe Routes to School program** includes planning, development, and implementation of projects and activities to improve safety and reduce traffic, fuel consumption, and air pollution in school neighborhoods. The Walk Bike NW Arkansas plan includes 12 recommendations to enhance the program’s effectiveness.

The Transportation Improvement Program, Fiscal Years 2016-2020, from the Fayetteville Area Metropolitan Planning Organization, summarizes financial information for federal highway funds, state funds (including division needs, regional impact, and statewide mobility), and other funds such as Fayetteville Area System of Transit ridership revenue, inter-fund transfers from the City of Fayetteville’s General Fund to the Transit Fund, and vehicle registration fees.

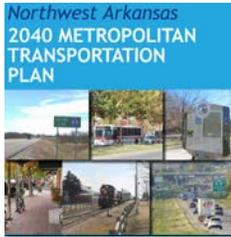


The 2035 NW Arkansas Regional Transportation Plan provides a comprehensive framework for regional transportation planning. The plan outlines design standards for multi-modal transportation improvements and makes a range of recommendations, with a focus on expanding active transportation infrastructure, implementing a transit development plan, and improving regional roadway connectivity. The plan includes specific goals such as the completion of an Alternatives Analysis for fixed-guideway transit, the completion of the Heritage Trail network, and the completion of several roadway projects. It identifies roughly \$40 million in proposed active transportation improvements, \$200 million in proposed bus improvements, and \$6 billion in proposed roadway improvements.



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The 2040 Metropolitan Transportation Plan outlines major improvements, actions, and plans to enhance the transportation system of Northwest Arkansas. These improvements, actions, and plans are based on seven goals that support the vitality of the metropolitan area by increasing the accessibility, safety and security of the transportation system for all users while protecting and enhancing the environment and improving quality of life.



The Greater NWA Development Strategy, also known as **Building On Success: The 2015-2017 Blueprint**, identifies regional strengths and areas that need attention. The plan outlines 16 recommendations and 56 actions based on four program goals, including: investing in physical infrastructure that will enable sustainable, long-term growth and improve competitiveness; developing a comprehensive, regional approach to proactive economic development in Northwest Arkansas; ensuring Northwest Arkansas remains a vibrant and attractive community for business, residents, families and retirees for decades to come; elevating educational attainment and workforce skills so that Northwest Arkansas can more effectively compete for 21st Century jobs.



ENERGY AND HEALTH, ECONOMICS, AND LAND USE

ENERGY AND HEALTH

Outside the downtown, Fayetteville’s built environment is currently reflective of the auto-oriented era in which it was built. This low-density development style forces people to default to use private vehicles for most trips, which in turn yields a transportation system that uses significant energy and produces high levels of emissions. Fayetteville’s recently adopted Energy Action Plan’s specific goals regarding transportation are to reduce per capita vehicle miles traveled to 2010 levels by 2030 and to achieve a 25% bike/walk/transit mode share by 2030.



TRANSPORTATION AND ECONOMICS

In many ways, transportation is better seen as a branch of economics than civil engineering. The two biggest impacts of transportation investments are the creation of land value and individual economic opportunity. After all, land is worth more at a rural crossroads than at the end of a dirt road, and it is worth even more in a thriving downtown like Fayetteville’s, where so many roads meet. Transportation saves us time, which allows us to collapse distance. The result is accessibility, an indicator of how well we can get the services, goods, and experiences we desire.

As Adam Smith explained in 1776:

“Good roads, canals, and navigable rivers, by diminishing the expense of carriage, put the remote parts of the country more nearly upon a level with those in the neighborhood of the town. They are upon that account the greatest of all improvements. [...] It is not more than fifty years ago that some of the counties in the neighborhood of London petitioned the Parliament against the extension of the turnpike roads into the remoter counties. Those remoter counties, they pretended, from the cheapness of labor, would be able to sell their grass and corn cheaper in the London market than themselves, and would thereby reduce their rents, and ruin their cultivation. Their rents, however, have risen, and their cultivation has been improved since that time.”³

³ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, (first published in 1776) edited by Joseph Shield Nicholson (T. Nelson, 1895), p. 62.

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Transportation is driven by economics in many other ways. As detailed in the Fayetteville Parking Strategies document, downtown's success is dependent upon its parking system. But downtown does not so much need a specific number of parking spaces, but rather the right availability of parking, in all locations, at all times of day and night. Balancing parking supply and demand requires an understanding of economics, including establishing the lowest price that ensures about 15% of spaces are always available for those who need them.



TRANSPORTATION AND LAND USE

The best transportation plan is a good land use plan. When housing is placed far from jobs or shopping, residents must travel long distances to get the things they need. When roads lack sidewalks, bike facilities, or transit, people must use a car to get around – or be dependent upon others if they do not have a car. When communities are more mixed and compact, and where streets are welcoming to all users, travel distances are shorter, and many people choose walking, biking, or transit when those modes work for their trip.

The adoption of City Plan 2025 and the Downtown Master Plan led to the adoption of form-based zoning districts that emphasize the form of development rather than the separation of uses. The code was designed to ensure that the areas where it is applied retain livability and a human scale, while allowing for an increase in density and economic value.

Since the adoption of the City Plan, four form-based zoning districts are utilized within the Downtown and Walker Park neighborhood area, each with separate building height, use, and build-to line requirements. In 2010 the City Council also adopted three form-based zoning districts that parallel three conventional commercial zoning districts.

There is extensive research on the impact of the built form on travel behavior.⁴ These are sometimes summarized as the “six D’s,” based upon three original factors coined by Cervero and Kockelman in 1997. They are:

⁴ A recent meta-analysis is “Does Compact Development Make People Drive Less?” The Answer Is Yes, by Reid Ewing & Robert Cervero. Journal of the American Planning Association Vol. 83, Iss. 1, 2017, found at <http://www.tandfonline.com/doi/full/10.1080/01944363.2016.1245112>

DESTINATIONS

When land use and transportation are well coordinated, transit can provide fast, direct, and cost-effective access to more destinations for more people. Transit-oriented communities coordinate land use and transportation in two important ways: At the neighborhood scale they locate most new development along reasonably direct corridors so that most destinations are ‘on the way’ to other destinations. At the regional scale they locate the highest densities of development and the most important destinations at the intersection of several frequent transit corridors.

DISTANCE

A well-connected street network shortens travel distances, making it possible for people to quickly and conveniently walk or cycle to where they want to go, or to easily connect with transit en route to their destination.

DESIGN

Highly accessible communities are carefully designed with the needs of people in mind. Whether walking, cycling, pushing a stroller, catching a bus, or using a mobility device, people of all ages and abilities should be able to access and enjoy a comfortable, safe, delightful, and inviting public realm.

DENSITY

Most successful communities concentrate most growth and development within a short walk of frequent transit stops and stations. A higher density of homes, jobs, and other activities creates a market for transit, allowing frequent service to operate efficiently.

DIVERSITY

A vibrant mix of land uses helps to create complete, walkable neighborhoods around transit stops, and supports a transit system that is well-utilized throughout the day. Transit oriented communities encourage a mix of land uses at both the neighborhood and corridor scales.

DEMAND MANAGEMENT

Transportation Demand Management (TDM) strategies discourage unnecessary driving and promote walking, cycling, transit, and other more space-efficient modes. TDM provides incentives for travelers to shift automobile trips to other modes in a number of ways, including increasing travel options, setting appropriate prices for parking or road usage, providing information and marketing, and allocating more road space to transit, cycling, and pedestrian uses.





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2 VISION, GOALS AND METRICS

INTRODUCTION

Transportation is not an end in itself but rather an investment strategy for achieving Fayetteville's larger goals. As described in Chapter 1, transportation is a key driver of every community's economic success, including shaping the value of residential land, determining whether industry can be competitive, and offering opportunities for residents to find work and get the services they need. It also shapes quality of life, including reasonable commutes and welcoming neighborhood streets. Transportation is the leading cause of air pollution and CO₂ emissions. It also has a big impact on public health, offering active lifestyles on one hand, while killing over 40,000 Americans a year in auto crashes on the other. The costs and benefits of transportation are rarely distributed evenly, resulting in a long history of inequitable outcomes from transportation projects.

To best allocate the city's limited transportation resources, it is important that the city have clear goals it seeks to achieve.

Those goals must then be translated into objectives that provide clear direction for city staff, and specific strategies staff can implement. Most importantly, each objective must be supported by performance metrics that determine the degree to which higher-level goals are being achieved. Finally, goals, objectives, and performance measurements must be reflected in the city's capital and operating budgets. Budgets are the ultimate reflection of a city's values.

The first round of public engagement for the Fayetteville Mobility Plan focused on goals and objectives.¹ The results of those workshops were then synthesized with the goals and objectives in key plans from the policy context section above to produce the complete vision and goals statement below.

¹ For a full summary of public outreach activities see Appendix B



A VISION FOR THE FUTURE OF MOBILITY IN FAYETTEVILLE

Fayetteville envisions a transportation system that is equitable and safe for all users, provides desirable access opportunities for all transportation modes, and promotes and supports the continued economic growth and prosperity of the city and its citizens.

Fayetteville also envisions a sustainable future for its residents, businesses, students, and visitors. A sustainable future includes managing the triple bottom line, which requires balancing environmental, social and economic elements. The integration of these elements provides the foundation to reduce environmental impacts, enhance social equity, and facilitate economic prosperity.

Fayetteville has demonstrated a strong commitment to a sustainable future through the development of supportive plans and policies. The Fayetteville Mobility Plan identifies how transportation will help reduce carbon emissions, provide more equitable transportation options, and contribute to the community's economic success. The reduction of congestion and more efficient use of roads may be maximized by integrating transportation into effective land use planning and design. Better land use efficiency will provide an opportunity to enhance the city's public spaces and foster social and economic prosperity for people and businesses. The transportation framework will create a strong foundation to achieve a sustainable future in Fayetteville.

GOALS AND OBJECTIVES

The primary goal of the Fayetteville Mobility Plan is to establish street guidelines, policies, and maintenance practices that comprehensively work towards the vision for Fayetteville's transportation system. To this end, the plan is guided by the following goals and objectives:

GOAL #1: A TRANSPORTATION NETWORK THAT IS SAFE FOR ALL USERS

- **Objective #1:** Provide pedestrian safety
- **Objective #2:** Prioritize a walk-friendly environment at popular destinations (make it convenient, safe, and enjoyable to walk to popular destinations)

GOAL #2: A TRANSPORTATION NETWORK THAT IS EQUITABLE

- **Objective #1:** Consider the needs of diverse populations (urban, rural, mobility impaired, elderly, children, and others)

GOAL #3: A TRANSPORTATION NETWORK THAT EMPHASIZES MULTI-MODAL MOBILITY

- **Objective #1:** Provide multiple transportation options
- **Objective #2:** Enhance access to, and use of, local transit services
- **Objective #3:** Expand dedicated and comfortable bicycle facilities
- **Objective #4:** Provide reliable connections and travel times to where people want to go
- **Objective #5:** Manage parking to support local businesses, visitors, safety, and convenience

GOAL #4: A TRANSPORTATION SYSTEM THAT PROMOTES AND SUPPORTS ECONOMIC GROWTH AND SUSTAINABILITY

- **Objective #1:** Invest in state of good repair before investing in new projects
- **Objective #2:** Encourage street design that supports surrounding land uses

PERFORMANCE MEASURES

The Fayetteville Mobility Plan recognizes that, in order to be meaningful, all of Fayetteville’s mobility objectives must be measurable. As a rule, cities should establish the shortest list of performance metrics to address all their objectives and those that can be measured with existing or readily available data. Some metrics may be subjective while also being quantitative, such as public opinion surveys. Other metrics may be both subjective and qualitative, such as walkability.

This section is intended as a starting point for conversations about how best to determine the degree to which the above objectives are being met. Different metrics may be appropriate for evaluating a corridor, intersection, development project, or citywide success. Some metrics lend themselves to future projections, while others can only be measured after-the-fact.

CITY TRANSPORTATION GOALS PRIORITIZATION

Which of these goals are most important to you?

All of these goals can play a prominent role in shaping Fayetteville’s transportation future. This exercise helps us prioritize them.

Please take **5 sticky dots** and prioritize the goals by placing your votes in the associated rows (one vote per goal).

It is most important that Fayetteville’s transportation system...

Considers the needs of diverse populations (urban, rural, mobility impaired, elderly, children, and others)	10
Prioritizes safety for people over vehicles	10
Invests in state of good repair before investing in new projects	10
Expands dedicated and comfortable bicycle facilities	10
Enhances access to and use of local transit services	10
Prioritizes a walk-friendly environment at popular destinations	10
Encourages street design that supports surrounding land uses	10
Provides multiple transportation options	10
Has reliable connections and travel times to where people want to go	10
Manages parking to support local businesses, visitors, safety, and convenience	10
Other (please write down other goals you think need to be prioritized)	10

Hashtag: #whichwayfay

Find the workshop schedule and participate online: www.fayetteville-ar.gov/mobility

Contact: Phone: 479-325-2000 Email: ar@greenplanningcenter.com

CITY OF Fayetteville ARKANSAS



SAFETY

OBJECTIVE #1.1: PROVIDE PEDESTRIAN SAFETY

Performance Measures:

- **Average Travel Speed** – Assess vehicle speeds along public roadways to help determine how safe or stressed people may feel along different roads and determine traffic calming opportunities to facilitate greater safety for people.
- **Crash/Collision Rates** – Evaluate the frequency, rates, and locations of crash and collision rate data to identify potential areas where pedestrians and bicyclist safety should be prioritized.
- **Traffic Fatalities and Injuries** – Evaluate the frequencies, rates and locations of traffic fatalities and injury data to identify areas of concern regarding the safety of pedestrians and bicyclists.
- **Intersection Density** – Calculate the intersection densities to help inform how safe people feel. This can be calculated by evaluating the number of intersection opportunities within an area.

OBJECTIVE #1.2: PRIORITIZE A WALK-FRIENDLY ENVIRONMENT AT POPULAR DESTINATIONS

Performance Measures:

- **Average Travel Speed at Popular Destinations** – Assess the vehicle speed limits at popular destinations to help determine how safe or stressed people may feel along different roads. It will also help identify opportunities to facilitate greater safety for people, and highlight if traffic calming measures are necessary to help prioritize a walk-friendly environment.
- **Number of Signalized and Marked Crossings**– Identify the number of signaled and marked crossings at popular destinations to help determine if there is an appropriate number of crossings that prioritize a walk-friendly environment.
- **Number of Points of Interest connected to Pedestrian Facilities** – Evaluate the number of Points of Interest that can be accessed within a ½ mile of walking facility to help determine if pedestrians have been prioritized.



EQUITY

OBJECTIVE #2.1: CONSIDER THE NEEDS OF DIVERSE POPULATIONS (URBAN, RURAL, MOBILITY IMPAIRED, ELDERLY, CHILDREN, AND OTHERS)

Performance Measures:

- **Percent of elderly population, zero household vehicle, population under 16 years old within 15 minutes of a bus stop** – Analyze these demographics against bus routes and stops to identify if this population segment is currently underserved, and where service adjustments could be made.
- **Percent of elderly population, zero household vehicle, population under 16 years old connected to the Active Transportation network** – Analyze these demographics against the Active Transportation Network to help identify areas where these population groups are not served by the walking/biking network.
- **Percent of Accessible Services and Facilities** – Analyze the number of services and facilities that provide accessible amenities to help determine gaps in serving a population that may require special assistance in their modes of transportation. This analysis could include, but is not limited to the number of accessible vehicles in the bus fleet, number of accessible parking spaces at destinations, and the number of paths and street crossings that meet standards and offer accessibility enhancements.
- **Bus Service Hours in areas with Low Vehicle Ownership** – Compare bus service hours against the demographics that identify areas with lower vehicle ownership to identify hours of operations gaps in serving a population segment that would benefit from accessing bus services.
- **Bus Service Coverage Area** – Compare bus service coverage area against the demographics that identify areas with lower vehicle ownership to identify gaps in serving areas with a population segment that would benefit from accessing bus services. This should include the analysis of number of households with low vehicle ownership within 15 minutes of a bus stop.



MOBILITY

OBJECTIVE #3.1: PROVIDE MULTIPLE TRANSPORTATION OPTIONS

Performance Measures:

- **Commute Mode Share** – Evaluate the commute mode share by demographic and neighborhood segments.
- **Identify areas covered by more than one mode (overlap of modesheds in GIS).**
- **Number of Park & Rides** – Evaluate the number of available Park & Rides and peak period availability of spaces.
- **Number of Pedestrian and Bicycle Miles** – Evaluate the number of centerline miles of connected and accessible designated routes or facilities for pedestrians.
- **Identify the percent of gaps in connectivity for pedestrians and bicyclists**

OBJECTIVE #3.2: ENHANCE ACCESS TO, AND USE OF, LOCAL TRANSIT SERVICES

Performance Measures:

- **Percent of people who live with a ¼ mile of a bus stop** – Determine the percentage of the population who live within a ¼ mile of a bus stop to help identify opportunities to increase ridership through the enhancement of services.
- **Number of Points of Interest in the 15 minute walkshed from a Bus Stop - Analyze the number of points of interest within a 15 minute walkshed from a bus stop to help determine if the bus routes are serving effective routes and connections for people traveling by bus.**
- **Bus Stop Amenities** – Identify and increase the number of well-defined bus stops with amenities (sheltered, signed, paved platform, bench, etc.)

VISION, GOALS AND METRICS



OBJECTIVE #3.3: EXPAND DEDICATED AND COMFORTABLE BICYCLE FACILITIES

Performance Measures:

- **Quality of Bicycle Facilities** – Evaluate the number of dedicated facilities by type, using a comfort or suitability index.
- **Percent of dwelling units in close proximity to bicycle facilities** – Evaluate the percentage of dwelling units within ½ of a dedicated bicycle facility.
- **Person Throughput** – Evaluate the total daily trips made within the city by bicycle.
- **Identify the percent of gaps in connectivity filled for bicyclists.**

OBJECTIVE #3.4: MAINTAIN RELIABLE CONNECTIONS AND TRAVEL TIMES TO WHERE PEOPLE WANT TO GO

Performance Measures:

- **Average Travel Speed** – Assess the vehicle speeds along public roadways to help determine how safe or stressed people may feel along different roads and determine traffic calming opportunities to facilitate greater safety for people.
- **On-time Performance** – Analyze performance of on-time rates.
- **Transit Speeds** – Analyze average bus speeds.

OBJECTIVE #3.5: MANAGE PARKING TO SUPPORT LOCAL BUSINESSES, VISITORS, SAFETY, AND CONVENIENCE

Performance Measures:

- **Parking Utilization** – Measure parking demand and utilization by assessing utilization rates. Evaluate the amount of parking available during peak and off-peak periods, and especially parking within a target range of 10-25%.
- **Parking Facilities** – Evaluate the number of on-street and off-street parking spaces.
- **Parking Pricing** – Evaluate the price of parking by parking facility, when parking may be charged (peak vs. off-peak), and how well pricing is achieving availability targets.



ECONOMIC

OBJECTIVE #4.1: INVEST IN STATE OF GOOD REPAIR BEFORE INVESTING IN NEW PROJECTS

Performance Measures:

- **Operational Finances** – Evaluate the percent of the budget dedicated for transportation infrastructure maintenance (road re-pavement, sidewalk maintenance).
- **Transit System Conditions** – Evaluate the current state of the system to determine how much investment for state of good repair is necessary (age of the bus fleet, public records requests for road or sidewalk improvements).
- **Farebox Recovery** – Determine the farebox revenue by dividing the system's total fare revenue by its total operating expenses.

OBJECTIVE #4.2: ENCOURAGE STREET DESIGN THAT SUPPORTS SURROUNDING LAND USES

Performance Measures:

- **Property Values** – Assess the property values in proximity to transit and active transportation facilities.
- **Assess Retail Sales Tax per Square Foot along key commercial corridors.**
- **Assess space dedicated to pedestrians within 0.5 mile of commercial areas.**

OTHER POTENTIAL METRICS

After this document is completed, the final stage of the Fayetteville Mobility Plan effort will include a final shortlist of performance metrics, and an application of those metrics on the City’s Capital Improvement Program project list. To facilitate that effort, the following table provides some additional metrics used by an array of comparable cities, such as Austin TX, Grand Rapid MI, Des Moines IA, and other mid-sized college towns.

Figure 2-1 Other Potential Performance Metrics

Performance Category	Potential Performance Metrics
Citywide	<ul style="list-style-type: none"> ▪ Citywide combined bicycle and pedestrian mode share for trips of one mile or shorter ▪ Single occupant vehicle commuting ▪ Number of pedestrian or bicycle-related collisions ▪ Number of pedestrian or bicycle-related fatalities ▪ Total roadway crashes and injuries from all roadway crashes ▪ Ratio of bicycle facility miles to road miles ▪ Linear feet of sidewalks or % of linear feet with sidewalks within ½ mile of transit stops ▪ Vehicle miles traveled (VMT) per capita ▪ Total transportation-related greenhouse gas (GHG) emissions per capita ▪ Street connectivity index by neighborhood (measures of how finely grained the street network is) ▪ Public perception survey results
New Development	<ul style="list-style-type: none"> ▪ VMT per capita ▪ Total transportation-related GHG emissions per capita ▪ Vehicles per unit/household ▪ Square footage of provided green infrastructure in the public right-of-way for projects with a street frontage of 100’ linear feet or more ▪ Connectivity index (ratio of roadway links to nodes or intersections)—for new development sites that include internal streets ▪ Measures of access to transit and other multimodal transportation options

Performance Category	Potential Performance Metrics
Corridors	<p><i>Capacity</i></p> <ul style="list-style-type: none"> • Person throughput and person delay • Automobile • Average travel time <p><i>Transit</i></p> <ul style="list-style-type: none"> • Peak travel time • Average peak period speed compared to free-flow speed • Average person delay <p><i>Bicycle</i></p> <ul style="list-style-type: none"> • Lane miles of dedicated facilities • Peak travel time • Bicycle level of service (LOS) based upon level of dedicated facility, in comparison to automobile speeds • Percent of dwelling units within 1/2 mile of a dedicated bicycle facility <p><i>Pedestrian</i></p> <ul style="list-style-type: none"> • ADA compliance for accessible paths of travel, particularly near state and local government offices, bus stops and transportation services, and retail and employment locations • Centerline miles of connected and accessible designated routes or facilities for pedestrians • Available sidewalk width and lane miles of sidewalks (refined by ½-mile buffers from transit stops) <p><i>Green Streets and Walkability</i></p> <ul style="list-style-type: none"> • Percentage of corridor provided with tree canopy • Stormwater runoff levels <p><i>Safety</i></p> <ul style="list-style-type: none"> • Speed limit compliance <p><i>Economic Development</i></p> <ul style="list-style-type: none"> • Retail sales along corridor (as measured by sales tax) <p><i>Operations and Maintenance</i></p> <ul style="list-style-type: none"> • Pavement Condition Rating for key corridors





3 TODAY'S SYSTEM

OVERVIEW OF TRAVEL PATTERNS IN FAYETTEVILLE

Travel in and around Fayetteville is heavily influenced by the University and its students, faculty, and staff that commute to campus daily. Other major influences to travel demand include:

- Daily commutes by parents and students to the public and private schools throughout the city;
- The medical campus around the Washington Regional Hospital;
- Shopping and office areas in Uptown Fayetteville;
- Industrial and manufacturing centers in the southern part of the city;

TODAY'S SYSTEM

- City's close proximity to numerous large corporations headquartered in the region (most notably, Walmart in nearby Bentonville, and Tyson Foods in Springdale) and;
- The various neighborhood and regional attractions in and around the downtown area and the University.

The spatial distribution of these major institutions and employers dictate the commute patterns in the city, which move in generally north-south patterns between several neighborhoods around the city's center and the industrial areas in the southern part of Fayetteville. Commute patterns in the satellite neighborhoods of the city tend to be spread more evenly throughout higher-density employment areas of Fayetteville.

As of the most recent US Census data, Fayetteville is host to about 44,000 workers aged 16 years or older. Of these workers, nearly 25% travel less than 3 miles to work, and nearly 50% of workers travel less than 7 miles to work. The

private vehicle is the most used mode for commute trips in the city, with a share of 86%. About 6% walk for their daily commute, 2% ride a bicycle, 1% use public transportation, and less than 1% used a taxicab or motorcycle. About 4% of workers reported working from home.

Travel modes for faculty, staff, and students of the University of Arkansas are much different than those for workers in the city in general. A survey conducted for the recent University of Arkansas Transportation Plan showed that only 60% of the campus community drives alone, while 16% each walk and use transit as their primary travel modes. These figures reflect the much higher usage of walking and transit among the university's on-campus and off-campus resident students.

For further detail on the state of the transportation network and its usage see Appendix A.

DRIVING CONDITIONS

ROADWAY NETWORK CHARACTERISTICS AND USAGE

The Master Transportation Plan is the guiding policy that the community, city staff, the Planning Commission and the City Council utilize to guide decisions regarding the classification, design, location, form and function of streets in Fayetteville. The Master Transportation Plan contains the Master Trails Plan, the Master Street Plan (which illustrates street classifications and locations), and cross section diagrams that show the dimensional requirements of each street type.

Currently, all streets in Fayetteville are classified as one of the following street types: Alley, Residential, Local, Collector, Minor Arterial, Principal, Hilltop-Hillside Overlay District and Downtown Master Plan. Altogether, including freeways, there are about 470 miles of roadways in the city which account for over 10% of the city's total land area.

DAILY TRAFFIC VOLUMES

In Fayetteville, high capacity continuous corridors are mainly north-south, and more than half of the commute flows follow this direction. The heaviest commute flows are found on I-49, which carries daily traffic of 65,000 to 80,000 vehicles per day in the Fulbright Road-Highway 16 segment, decreasing to 50,000 vehicles per day in the adjacent segment south of Highway 16. College Avenue carries 30,000 vehicles per day at the northern end, which gradually decreases to 20,000 vehicles per day near MLK Jr

Boulevard. The east-west corridors with the heaviest daily traffic are MLK Jr. Boulevard with 30,000 vehicles per day on both sides of Razorback Road; Wedington Drive with 20,000 vehicles per day; Joyce Blvd. with 20,000-29,000 vehicles per day; North/Mission/AR-45 with 13,000-20,000 vehicles per day; and Township Street with 12,000 vehicles per day.



ROADWAY NETWORK DEFICIENCIES AND GAPS

STREET GRID CONNECTIVITY

While Fayetteville's network has roadway connection opportunities in all directions, there are fewer opportunities to make east-west connections than north-south connections. East-west connections are also generally less direct than north-south connections¹, and tend to have more barriers as well. The primary east-west barriers include:

- As a freeway, the Fulbright Expressway has an inherent requirement for fewer local connections, and the costs to build more overpasses can be prohibitive.
- The Arkansas & Missouri Railroad crosses several east-west roads within the city creating conflict points between both networks². Most of the crossings are equipped with proper signalization and physical barriers, but others only have stop signs.
- Several of the intersections along the Frisco Trail are not signalized and present challenges for the users.
- The University of Arkansas' main campus has no east-west street network beyond its western border.
- The steepness of certain areas of the city make it difficult for the configuration and design of the section and alignment of the street network, in particular the residential areas along the ridge east of College Avenue.

1 The ratio of real distance to straight distance is greater for east-west trips (1.38) than for north-south trips (1.34).

2 The railroad also crosses two north-south connections – S University Avenue and S Hill Avenue.

CONGESTION

Fayetteville's road network sees its highest levels of congestion during PM peak hours on the primary north-south corridors, as well as at some key intersections including:

- I-49 from the northern city limit to Highway 16
- Entries and exits from I-49 to principal arterials
- College Avenue from the northern city limit to E Township Street

East-west routes operating at capacity during the same time period include Huntsville Road from Mashburn Ave to Crossover Road.

Some roads experiencing peak congestion have had capacity expansion projects since 2010, including the flyover between College Avenue and I-49, widening of Crossover Road from Mission Boulevard to Joyce Boulevard, and the widening of Huntsville Road.

ONGOING ROADWAY PROJECTS

Existing asphalt streets within Fayetteville city limits are on a master schedule to be repaved or resurfaced every 15 years. The Transportation Division also installs and maintains traffic signals, traffic signs, street markers, and signs, and up to \$750,000 from sales tax revenues are allocated for signal projects. The Traffic Control and Maintenance Program is currently upgrading the wireless traffic signal communication system, which will connect both the traffic signal controller and the video detection equipment to a central location.

Approximately 84% of road projects listed as priority projects in the 2003 Traffic and Transportation Plan are completed, as are 16% of the priority intersection projects, and half of the long-range road projects. Other projects managed by the Arkansas Department of Transportation (ArDOT) have increased the capacity of I-49 within the city, including interchange improvements and widening.



PEDESTRIAN AND BICYCLING CONDITIONS

WALKING NETWORK

Fayetteville has been working diligently to expand the pedestrian and bicycle network throughout the city. The City has undertaken several planning efforts in the last decade that have significantly enhanced the active transportation network, including the adoption of a Master Street Plan and complete street cross-sections in 2005, the completion of the Scull Creek Trail in 2008, and the 2015 Active Transportation Plan. As of 2016, the citywide pedestrian network is made up of about 435 miles of public sidewalks, and 43 miles of 10-12' wide paved shared-use trails. There are also 577 crosswalks (some equipped with audible signals), most of which lie at busier and/or signalized intersections. The highest pedestrian volumes in the city are found in the areas near the Harmon Street and Dickson Street intersection within UA Campus, and, despite being designed primarily to accommodate vehicle traffic, the Maple Street and Garland Street intersection.

WALKING NETWORK DEFICIENCIES AND GAPS

Almost half of the street network has a complete sidewalk on both sides of the street. The rest of the street network has either semi-continuous sidewalks or no sidewalk at all. Further, in some cases, even where sidewalks exist, they do not comply with ADA requirements. In the downtown, the most notable gaps in the network are found along College Avenue and, particularly, Archibald Yell, which is among the

most difficult roadways for pedestrians to cross. Crosswalks are mainly concentrated in the city center and in signalized intersections along the principal arterials, but are inexistent in most residential areas. With the hilly terrain, previous inconsistent requirements, and a dense roadway network, completing new connections has proved difficult.



Figure 3-1 Existing Walking Network

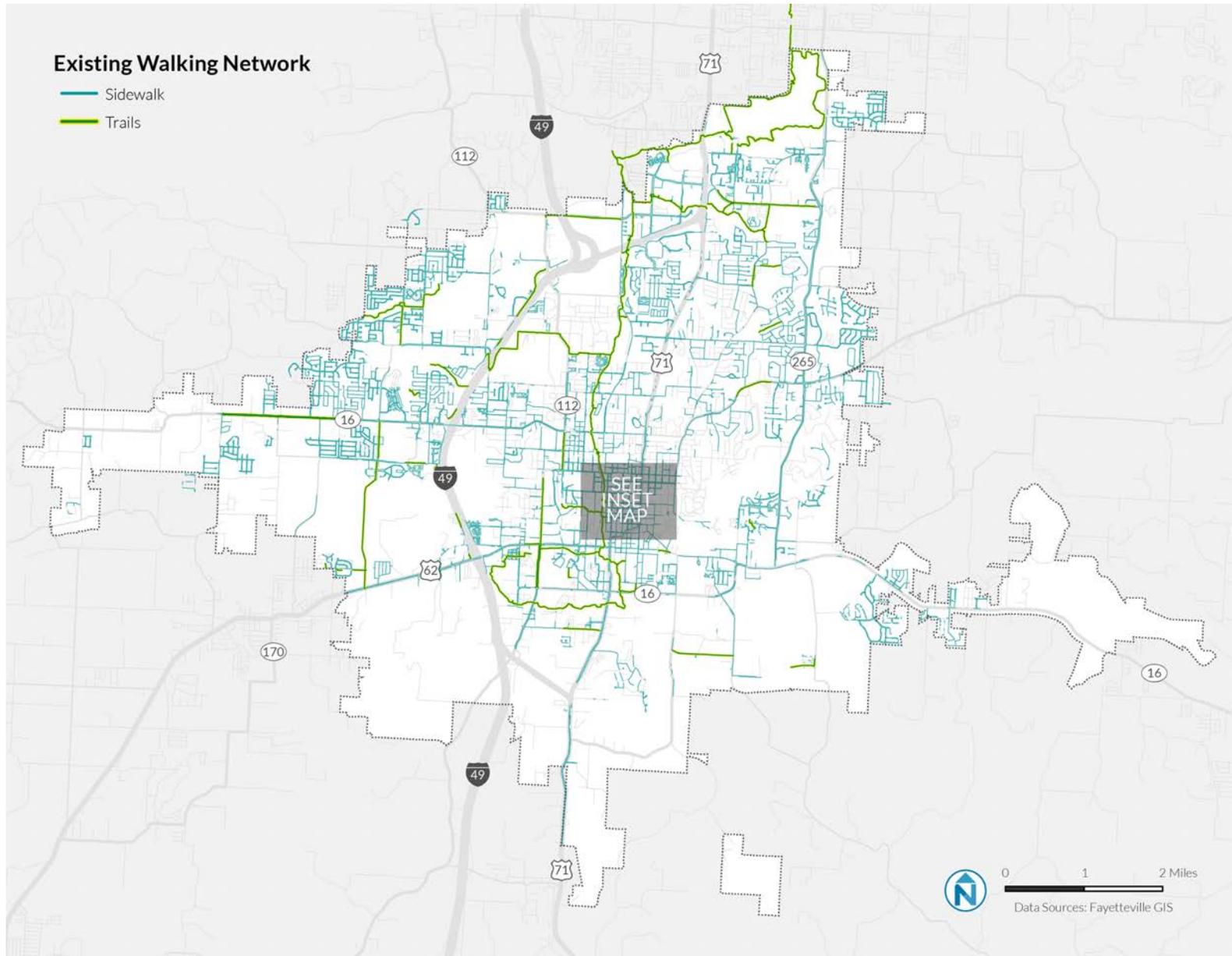


Figure 3-2 Downtown Pedestrian Network



BICYCLING NETWORK

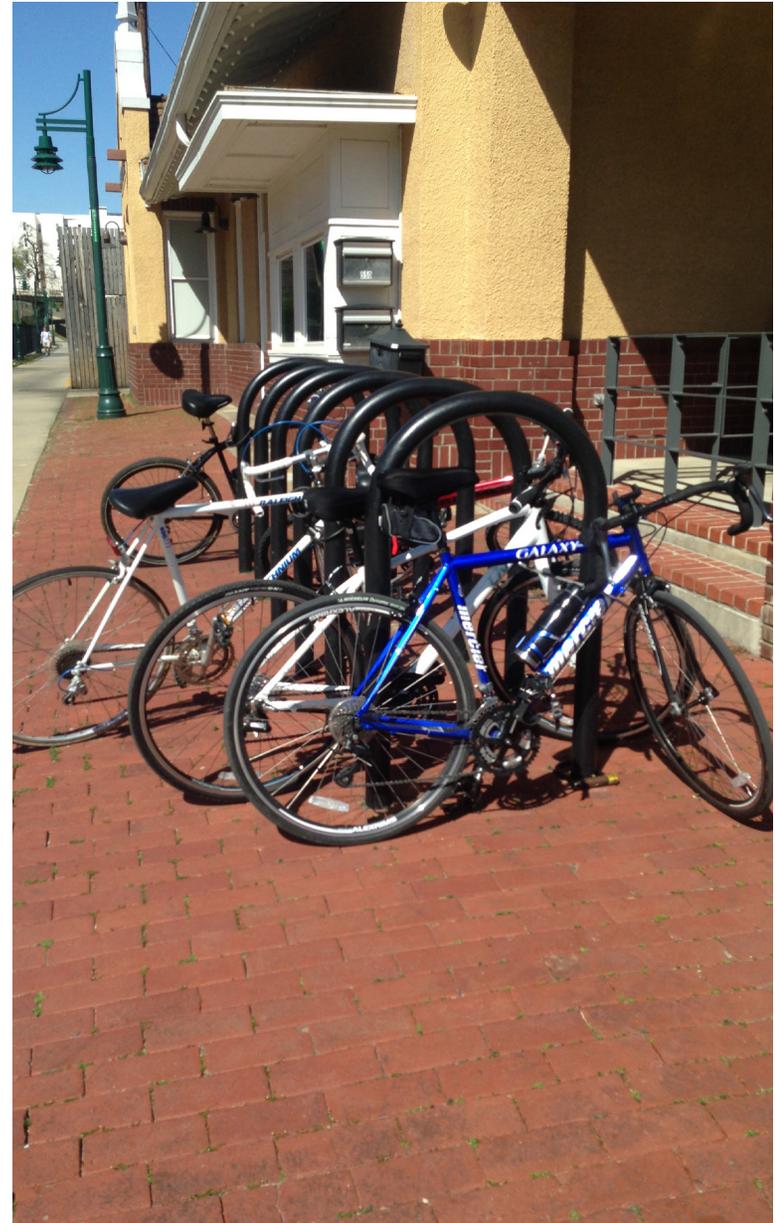
The existing biking network is composed of 43 miles of 10-12'-wide, paved shared-used trails, as well as of 30 miles of on-street bikeways. The City also owns and maintains 124 bike racks in and around Fayetteville, with a capacity for 277 bikes, and recently installed its first bike-parking corral with six racks and a capacity to accommodate twelve bikes. In addition to city-managed bike parking, there are bike racks available at some private businesses, as required by development codes.

BICYCLING NETWORK DEFICIENCIES AND GAPS

Much of the bicycle network remains disconnected, particularly in areas where roadway volumes are high or limited street widths require trade-offs in allocating space among vehicular traffic, pedestrians, cyclists, or neighboring land uses. Only 19% of the street network has some type of bike facility, and these streets serve about 25% of commute trips of less than three miles. While the Razorback Regional Greenway serves most north-south trips, the current bike network lacks the east-west connections to feed it.

Figure 3-3 shows Fayetteville's bikeable commutes, identifying the shortest paths for commute trips less than three miles long. Thicker lines show where the most commuters are, with blue lines having a bike facility, and the red lines lacking one. Bike facilities on the thickest red lines would benefit the highest number of commute trips.

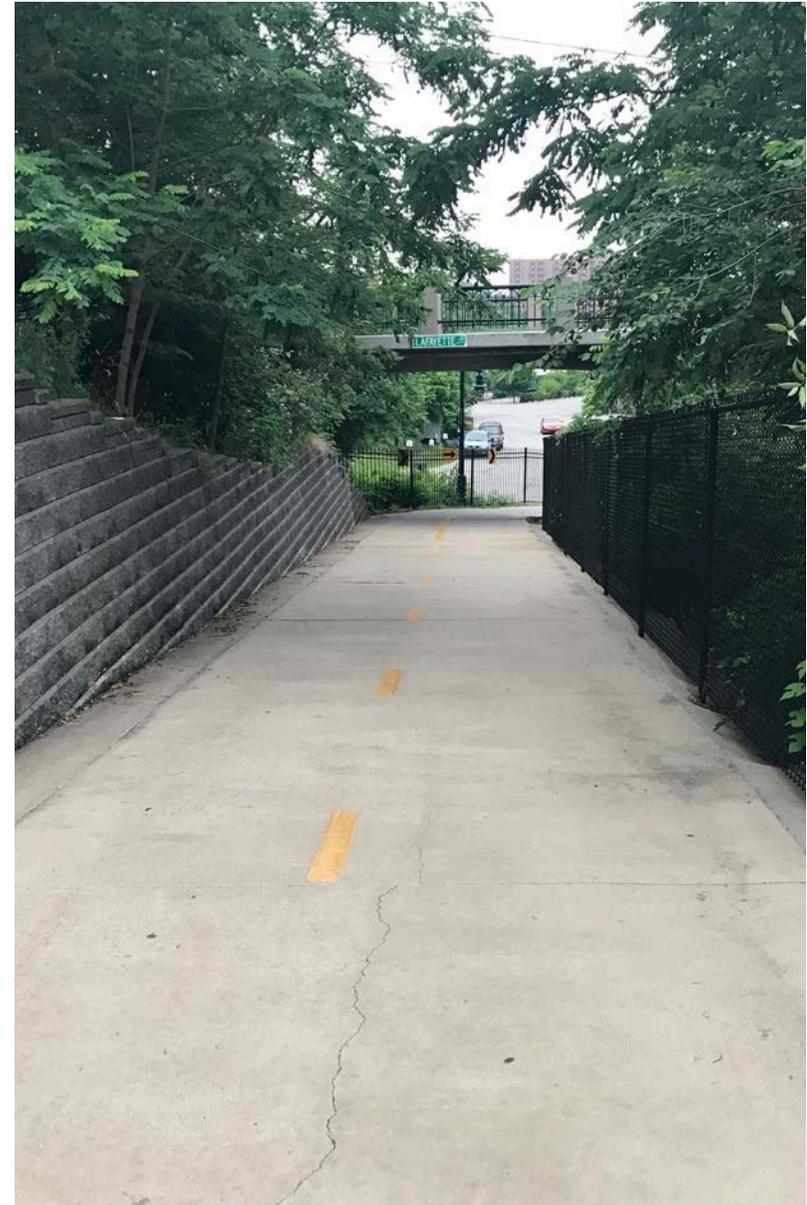
The lone bike share service currently operating in the city is Razorbikes, a program that is sponsored jointly by University of Arkansas' Transit and Parking Department and Student Government. This service is provided free of charge to the university's students, faculty, and staff, but currently cannot be used by anyone not affiliated with the university.



ONGOING BICYCLE AND PEDESTRIAN PROJECTS

The Capital Improvement Program (CIP) 2015-19 allocates \$7 million for sidewalk improvements, and the 2017-2022 Trail Construction Plan expects to increase the trail network by 16.7 miles, a rate of approximately three miles per year, based on continued CIP funding at current levels and continued grant funding. Also, City Plan 2030 recommends all new street projects and significant street reconstruction to incorporate some form of bicycle infrastructure in the public right-of-way in locations where the City Plan indicates bicycle infrastructure is appropriate.

A joint effort between the City and the University of Arkansas for a citywide bikeshare system that would replace the existing Razorbikes system is in the development and planning stages.



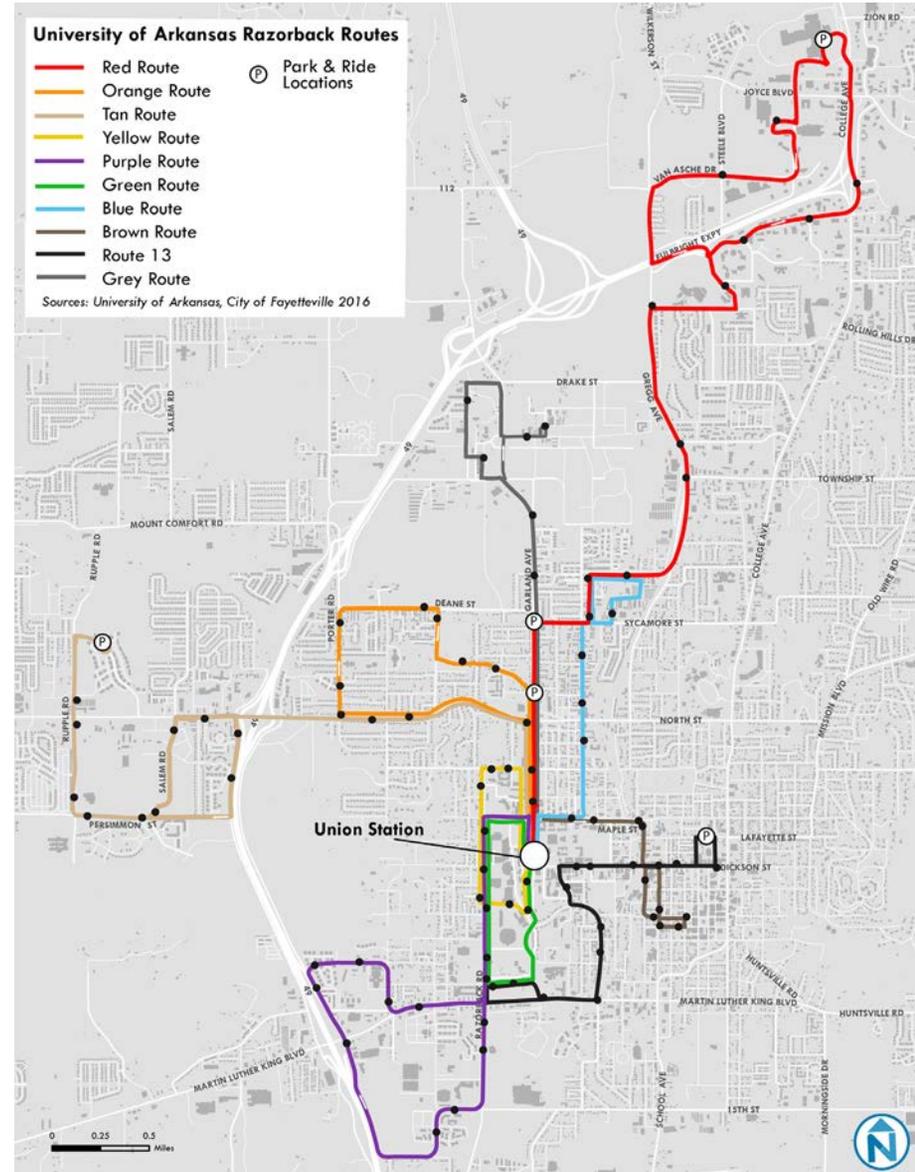
TRANSIT CONDITIONS

Two transit operators serve Fayetteville and connect its neighborhoods and job centers to the wider region: Razorback Transit and Ozark Regional Transit (ORT). Peripheral areas are not served by the transit network, as there are no bus services east of College Ave/ Highway 71 and on the west fringe of the city.

RAZORBACK TRANSIT

Razorback Transit is run by the University of Arkansas (UA) and provides fare-free fixed-route and paratransit bus services on the UA campus and to major off-campus living and shopping areas. The service is free for anyone who wishes to ride, including UA students, faculty, and staff as well as the general public. Razorback Transit is funded with Federal Transit Administration Grants, UA Student Transportation Fees, the UA Administration, and the City of Fayetteville. Razorback Transit's annual ridership during fiscal year 2015-16 was 1.8 million passengers.

Figure 3-4 Razorback Transit, Fall 2016



Source: University of Arkansas

OZARK REGIONAL TRANSIT

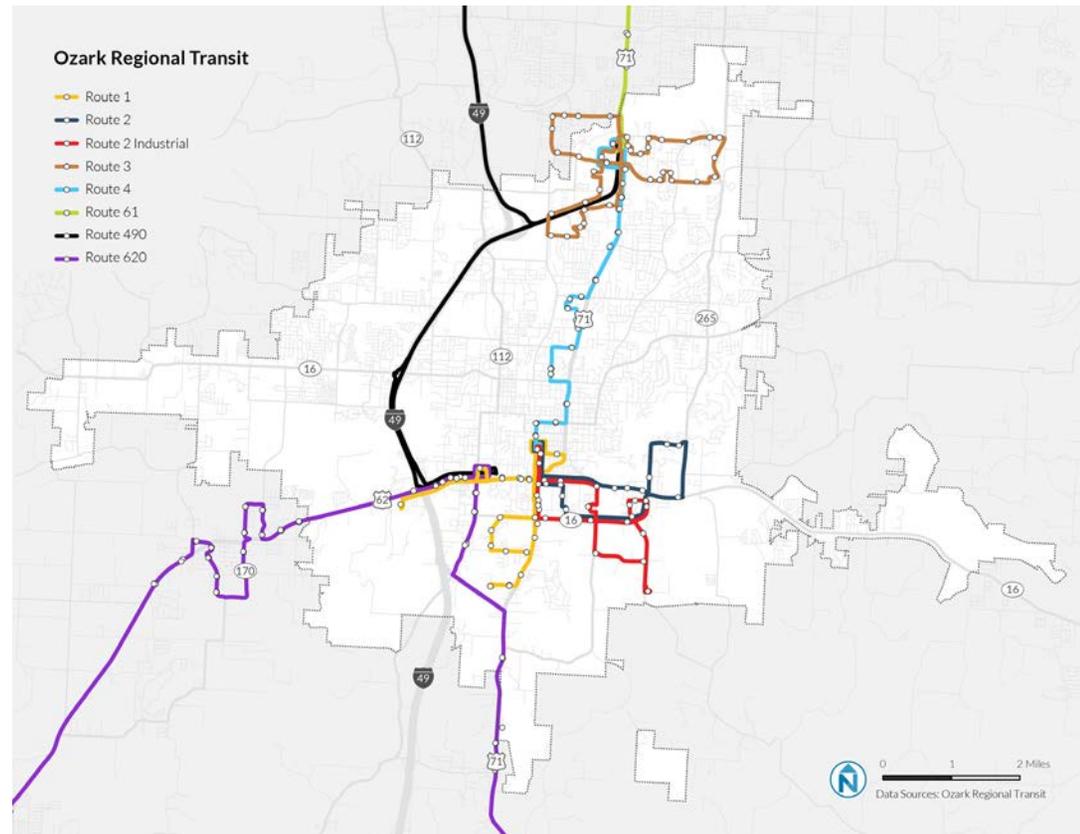
Ozark Regional Transit (ORT) serves the broader metropolitan area with fixed and limited routes, as well as paratransit service: 12 fixed routes and two limited routes (as of 2016), of which five and two, respectively, operate with either an origin or destination in Fayetteville. ORT is funded by direct revenues (fare, advertising), and Federal, State and Local funding sources, and cities in the region who are served by the ORT with an average ridership of 300,000 passengers per year.

TRANSIT DEFICIENCIES AND GAPS

A key, ongoing challenge for both transit operators has been the dispersal of population, employment, and travel demand generators beyond the range of existing transit service. For instance, 21% of the residential units and 22% of the non-residential square footage approved during the last decade fall outside of the 15-minute walkshed from the existing bus stops. Both operators have also reported an inability to improve services and amenities due to funding constraints.

As Razorback Transit's primary focus is serving the UA campus community, its schedule is tailored towards the times of year when the whole student body is present. Also, most ORT routes only run every 60 minutes, and there is no service over the weekend.

Figure 3-5 Ozark Regional Transit 2016 – Fayetteville Coverage



PARKING CONDITIONS

A key component of the FMP is the Parking Strategies document that focuses on the downtown. The full document can be found at the FMP website. A summary is provided below.

The downtown Parking Study Area encompasses the Downtown Business District and Entertainment District, some paid parking areas on the University of Arkansas campus, and surrounding residential areas to the east of campus. A summary of the parking supply and management approaches in this area are shown in Figure 3-6 and Figure 3-7.

Figure 3-6 Parking Inventory by Category

Parking Location	Entire Study Area	Downtown District	Entertainment District	Other Spaces in Study Area
Publicly Available	3,217	1,499	1,625	93
Restricted Use/Private	5,853	1,751	3,226	876
Off-Street	7,796	2,671	4,249	876
On-Street	1,274	579	602	93
Unavailable (Construction)	639	-	601	38
Total	9,070	3,250	4,851	969

Figure 3-7 On-Street Parking Rates and Regulations

On-Street Weekday Regulation/Rate, Time Limit, and Time Span(s)	Total	%
Unrestricted	408	32%
Daytime Metered - \$0.25/Hour, 2 Hour Limit until 6PM	282	22%
Residential Permit Only	191	15%
\$0.50/Hour (2-5PM), \$1/Hour (5PM-2AM), \$5/Day Option	146	11%
Residential Permit or Metered (\$0.50/Hour (2-5PM), \$1/Hour (5PM-2AM))	86	7%
Free, 2 Hour Limit (in 4 Hour Period)	77	6%
Loading Zone	35	3%
Daytime Metered - \$0.15/Hour, Long Term until 6PM	15	1%
Police Parking Only	14	1%
Motorcycle	9	<1%
Free, 10 Minute Limit from 8AM to 6PM	8	<1%
University Parking Only	3	<1%
Total	1,274	

WEEKDAY CONDITIONS

Over the total study area, parking is never more than 50% occupied even though there can be specific locations with crowded conditions. However, much of this unoccupied parking is privately owned and not currently open to the public outside of customer parking. At peak occupancy, over 4,000 parking spaces of the total 9,070 are unused. However, in a two-minute walk area around the “core” of the Entertainment District, parking is nearly 70% full at the evening peak. Similarly, parking within a two-minute walk of the downtown square is 66% occupied or unavailable during the daytime peak of 11 a.m.

On-street parking is generally used at a slightly higher rate than off-street parking throughout the day. Privately-owned garages and lots across the entire study area are generally more occupied compared to publicly-owned facilities, especially during the evening. Publicly-accessible off-street facilities have a comparable utilization rate to that of restricted-access garages and lots. About one-third of publicly available spaces in the “core” of the downtown business district remain unoccupied during the mid-day peak.



WEEKEND CONDITIONS

Over the total study area, parking is never more than 40% occupied. Peak parking demand for the weekend is at night (9:00-11:00 p.m.) with a minor peak at midday. This trend is accentuated in the Entertainment District where the elevated use period lasts from 7:00 p.m. to 1:00 a.m. At the evening peak, parking is functionally full (over 90%) in the publicly available parking in the “core” of the Entertainment District, with some capacity in private parking. The peak demand in the Downtown Business District occurs between 11:00 a.m. and 1:00 p.m. (45%). Evening occupancy in this area is very low (less than 25%). Even at peak occupancy, there are almost 5,000 unused spaces throughout the study area.

On-street parking use is very steady throughout the day but does not exceed 55% occupancy. Certain corridors, such as Dickson Street and Center Street are heavily utilized, while others are nearly vacant. Off-street parking, including both publicly and privately owned assets, is never more than 40% full, regardless of the time of day. Publicly owned and available off-street parking in the Entertainment District approaches functionally full at the evening peak. The utilization in publicly-owned garages and lots increases in the late evening but does not exceed 50% occupied.

On Sunday, demand in the northeast corner of the study area is extremely high on Highland Street and in the large surface lot behind Fayetteville First Baptist church. However, at this time over 400 spaces go unused within a short walk of this area.

TRAFFIC COLLISIONS

As would be expected, the most highly trafficked corridors see more traffic incidents and collisions than other locations around the city. From 2011 to 2015, 14,058 total traffic collisions were reported in Fayetteville, reflecting a yearly increase from 2,474 collisions in 2011 to 3,296 in 2015. However, the number of traffic fatalities per 100,000 people dropped from 6.5 in 2012 to 3.7 in 2014— almost half the state average. There were more than 3,200 incidents of varying degrees reported in 2015, predominantly concentrated along the routes with greatest activity and trip-making, although it is noteworthy that 25% of collisions took place within a 15-minute walkshed of a major point of interest, such as a school, library, or recreation center, which represents 17% of the city area (See Figure 3-8).

In the past five years, there were 58 severe and fatal collisions, four of which involved pedestrians. All incidents involving pedestrians added up to 121 (including severe and fatal collisions). Severe incidents and fatalities involving pedestrians and cyclists focused mostly around the city's 101 signalized intersections on major arterials, as well as within the downtown area where pedestrian and biking activity is higher. The highest densities of such incidents were found along College Avenue/Highway 71, Garland Avenue, Highway 16, MLK Jr. Boulevard, North Street, and Sycamore Street, but collisions also took place on local streets within residential neighborhoods, where crosswalks are inexistent, and vehicles regularly exceed speed limits.



Figure 3-8 Half Mile Walkshed from Places of Interest and Traffic Collisions (2011-2015)

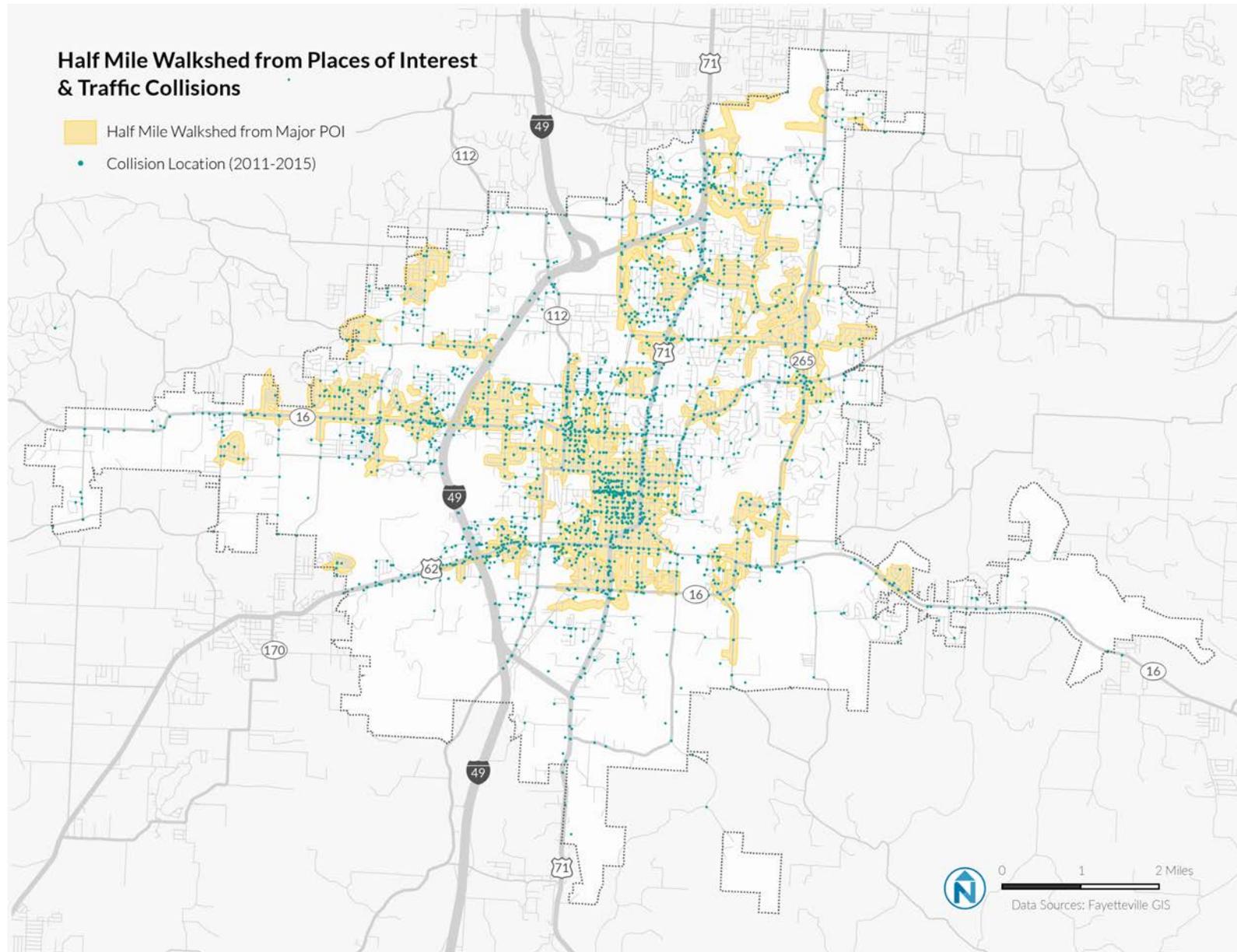


Figure 3-9 Auto Collisions and Severe Pedestrian/Bicycle Injuries (2011-2015)

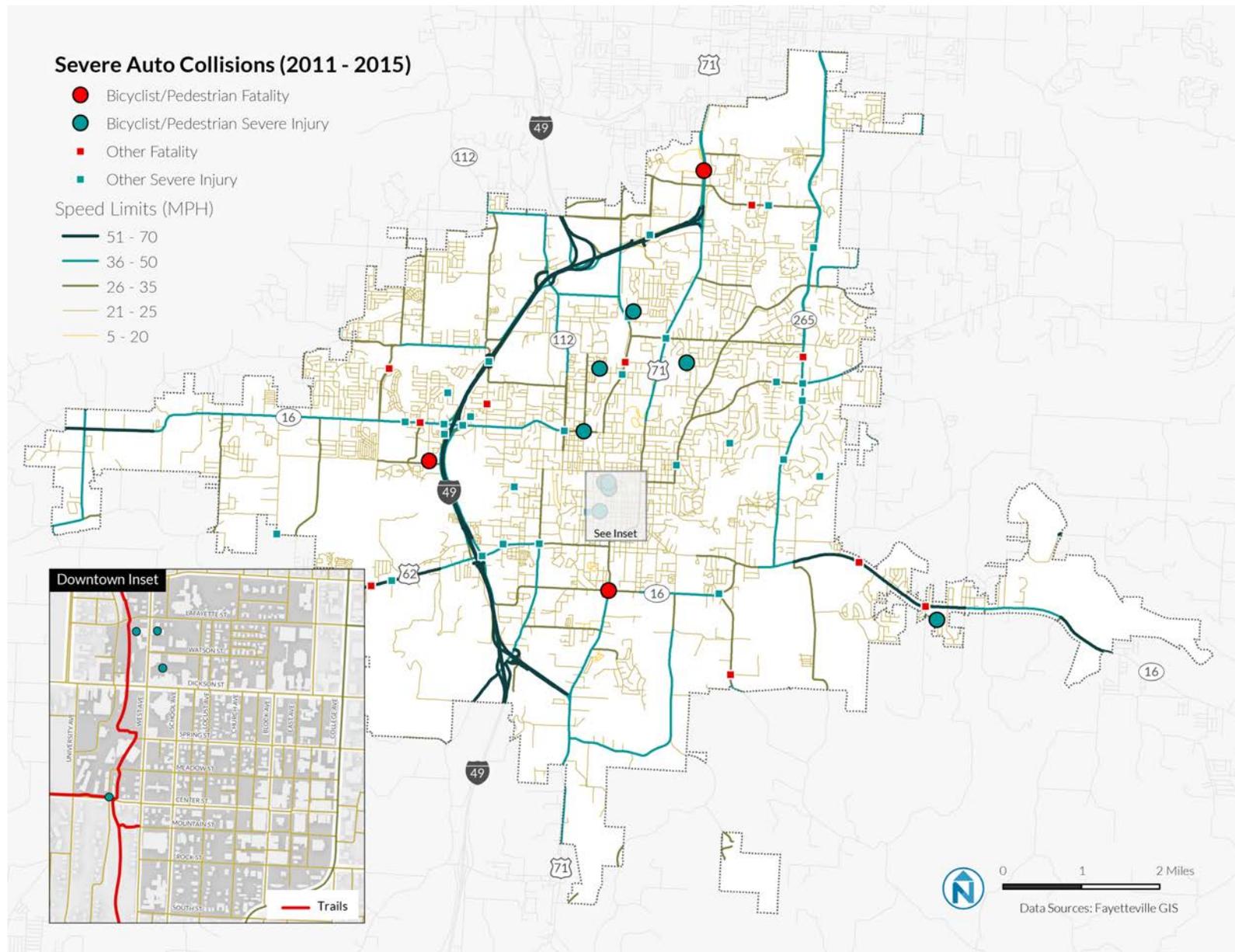


Figure 3-10 Traffic Collision Density (2011-2015)

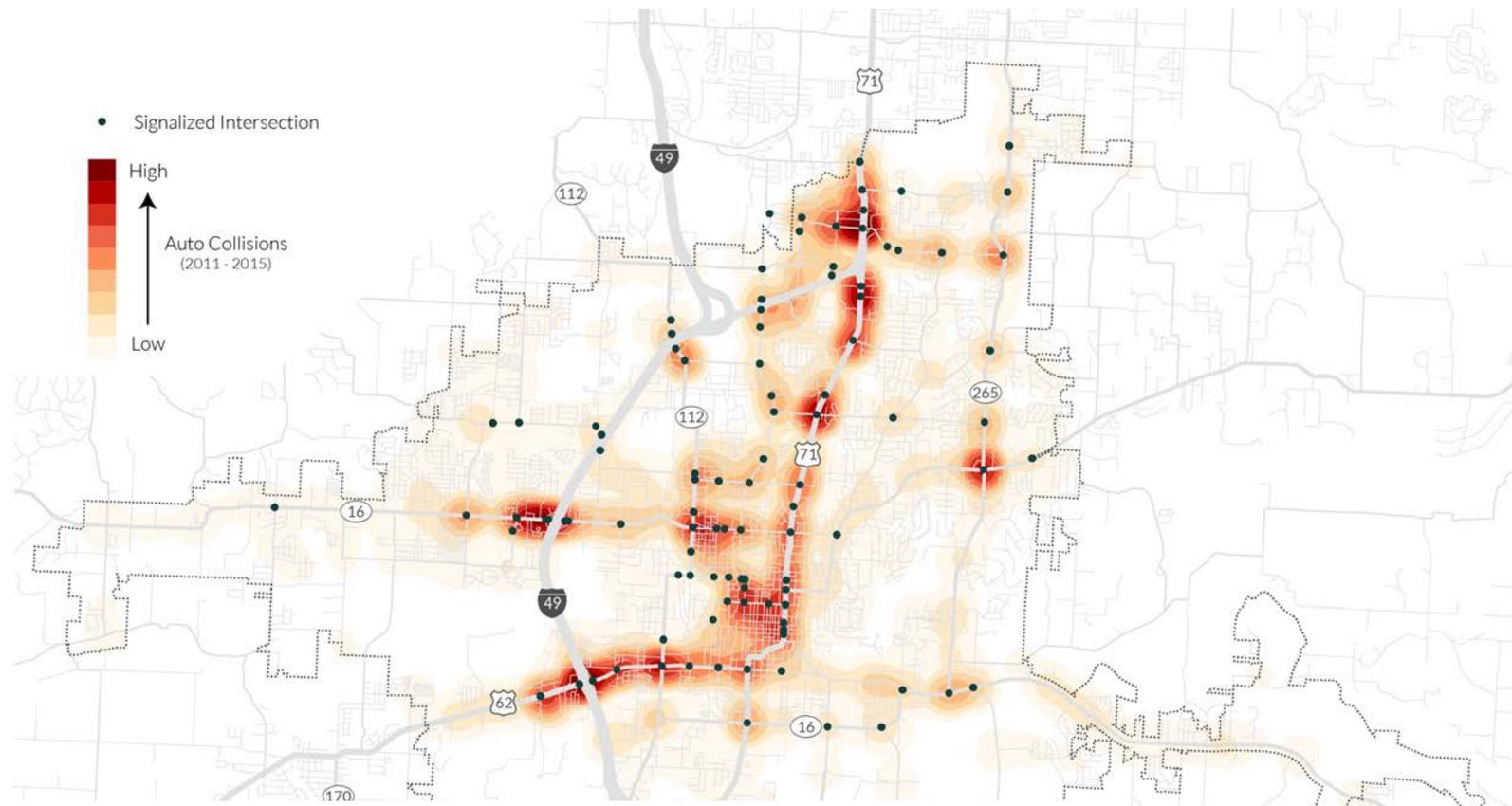


Figure 3-11 Average road Characteristics Where Collisions Have Occurred from 2011 to 2015

	Traffic Volumes (AADT 2012)	Posted Speed Limit (mph)	Road Segment Length (ft)	Road Segment Slope (%)	Road Segment Width (ft)
Where severe collisions occurred	13,949	32	661	2.1	42
Where collisions occurred	12,337	33	691	2.3	41
All network	8,565	27	523	2.5	29



Source: City of Fayetteville



U-HAUL

TM 3451 F

FAYETTEVILLE MOBILITY

Share your transportation ideas for Fayetteville...

WHAT ARE STREETS FOR?

Streets serve a different purpose depending on where they are.

Informational poster titled 'WHAT ARE STREETS FOR?' containing sections for 'TODAY', 'IN THE FUTURE', 'Street Elements', and 'Land Uses'. It includes small images of various street types and a grid for notes.

PARKING TRADEOFF VOTING (DOWNTOWN/ENTERTAINMENT DISTRICT)

Informational poster titled 'PARKING TRADEOFF VOTING (DOWNTOWN/ENTERTAINMENT DISTRICT)'. It features a grid of options for parking tradeoffs, with yellow dots indicating voter preferences. The poster includes a 'I would rather...' section and a 'Find the workspace mobility and parking area' section.

VOTER'S VOTES VOTER'S VOTES VOTER'S VOTES VOTER'S VOTES

Hashtag: #publicway102

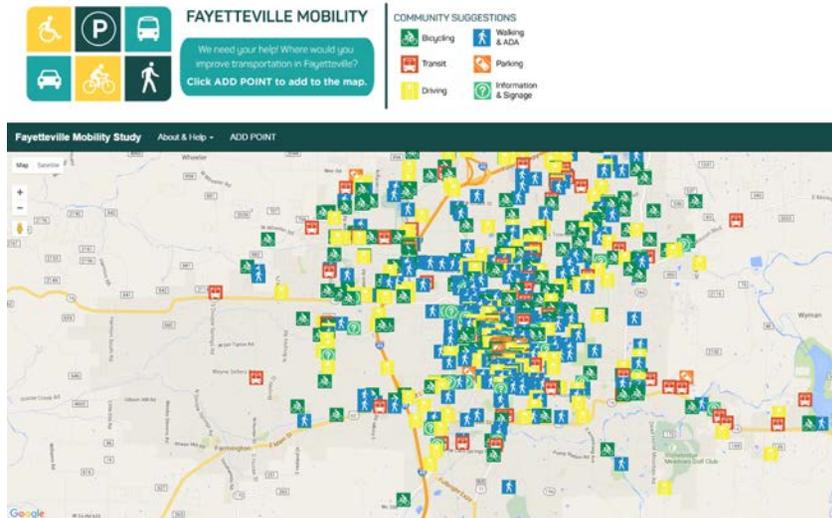


4 PUBLIC OUTREACH

The Fayetteville Mobility Plan (FMP) was informed by an extensive public outreach process that included several rounds of outreach, each with its own distinct purpose and goals. Each round of outreach featured online engagement activities and several mobile visioning workshops held throughout the city. These activities were designed to engage stakeholders and the public to ensure that the plan accurately reflects and addresses the issues, concerns and experiences of Fayetteville residents.



PUBLIC OUTREACH



ROUND 1: VALUES

The first round of public engagement served as a welcome and public kickoff for the project. It was held in the spring of 2016 and consisted of mobile visioning workshop at various key locations across the City. During the workshops, staff and the consultants presented the goals and objectives. The public was asked to rank the objectives, provide concerns and comments about the current transportation network on a blank map. They were also asked to comment about preferred transportation features desired in different urban environments. For those who couldn't participate in these events, a WikiMap was available on the Plan's website. Throughout this first round, nearly 850 separate comments were entered into the WikiMapping project, and the online survey was answered by 500 community members.

The collective results of these outreach activities showed that Fayetteville residents have a desire for improved mobility options, and a balanced and equitable multi-modal



transportation system. When considering the state of the transportation system at present, many participants presented issues or identified improvements involving little to no major construction, including additional bus stops and crosswalks at certain locations, bike racks on the front of buses, more taxi and Transportation Network Company (e.g. Uber, Lyft) services. For the future of the transportation system, many were focused on regional services, as opposed to local improvements, when considering transit, and were also keenly interested in the incorporation of new technologies into the city's future transportation network.

Participants identified several preferred transportation features in the city's different land use areas, such as: pedestrian priority at intersections in downtown crosswalks and wider sidewalks in both downtown areas and residential neighborhoods. They also identified better transit facilities and bicycle facilities in downtown areas, big box retail/office parks, and institutional settings. The most desirable elements were identified as wider sidewalks in neighborhood retail areas, and pedestrian-priority intersections in institutional settings.



PUBLIC OUTREACH



ROUND 2: IMPROVEMENT PRIORITIES

A second round of public engagement held in the fall of 2016 presented the public with the key findings from the first round of public engagement exercises as well as the existing conditions analysis. Staff and consultants held mobile visioning workshops at various key locations across the city, and an online survey provided for additional feedback. This round of engagement informed the public on current or anticipated challenges, and presented a set of conceptual strategies designed to address each specific challenge.

In total, between 225-250 community members engaged with the outreach team at the mobile public workshops. Nearly all of them voted on at least one of the strategies listed on the voting boards. Throughout all of the boards, community members provided nearly 1800 total votes. Also, many members of the community supplied open ended comments on the blank board which receive nearly 100 write-in responses, some of which received a few “unofficial” dot votes.

The Fayetteville Mobility Survey launched online on October 25 and closed on December 7 with 314 responses collected. Respondents were asked to identify their relationship to the city, and were allowed to select more

than one option. About 90% of survey respondents identified themselves as Fayetteville residents, and 15% identified themselves as University of Arkansas students. Further, about 40% of respondents claimed to be workers or visitors at one of Fayetteville’s businesses. Also, about 10% identified themselves as owners of a Fayetteville business, though only 2% identified themselves as the owner of a business in the downtown entertainment district.

Of the ten most favored strategies, six were related to walking and bicycling (three each), and four were related to parking and transit (two each). Notably, though, the favored parking strategies related to improving the walking environment, and the favored transit strategies related to improving multi-modal connections and amenities at bus stations. The single most favored strategy involved improving low-stress neighborhood connections to the trails network through signage and traffic calming measures (Figure #-#).

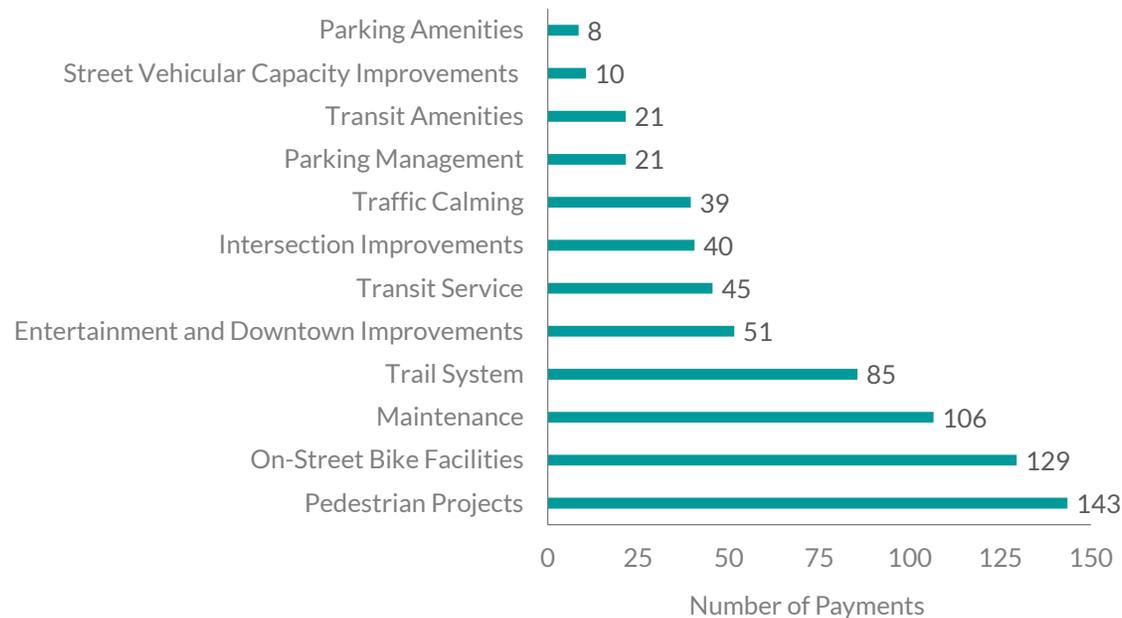


ROUND 3: DRAFT PLAN WORKSHOP

Staff and consultants hosted the final round of public workshops in late spring 2017. These workshops updated the community on the current state of the FMP and presented the community with conceptual improvement scenarios and projects. These scenarios included updates to the city’s street typologies as well as corridor improvements and connections designed to reduce automobile through-traffic in the central city. Participants were encouraged to comment and leave feedback about the information presented and about their thoughts on how the city should prioritize future improvements to the citywide transportation network in general, and to the Downtown area in particular.

During the investment exercise, participants were given a representative \$10M budget and asked to identify which projects they believe the City should prioritize by ‘paying’ for the full cost of the representative projects. The results are shown in Figure 4-1. The workshops were attended by about 200 community members, nearly 140 of which participated in the prioritization exercise. Overall, the prioritization of active transportation was the dominant theme of the community’s response to the project and the concepts presented at the workshops.

Figure 4-1 Improvement-Project Prioritization Activity Results



PUBLIC OUTREACH

Like previous outreach rounds, an online survey accompanied the workshop events. Like the workshops, the survey was designed to update the community on the current state of the plan, present the community with conceptual improvement scenarios and projects, and encourage participants to comment and leave feedback about the information presented. Over two-thirds of survey respondents were between the ages of 26 and 50. Nearly half reported an annual income between \$50,000 and 125,000 per year, and about 30% reported an annual income of less than \$50,000 per year. In total, about one-quarter of respondents, each reported living in Wards 3 and 4, while about 20% each reported living in Wards 1 and 2 (about 10% did not identify their ward). In total, over 1200 community members accessed the survey.

Key findings of the exercise include:

- Active transportation projects were favored heavily, with pedestrian improvements and on-street bicycle facilities receiving the greatest votes, respectively, and the trail system with the fourth-highest votes.
- Maintenance received the third most payment-votes, showing community dedication and understanding of the need to maintain the existing network.
- Combined transit-related improvements were favored more than parking-related improvements, despite having higher costs.
- In addition to the funding exercise mentioned above, workshop participants had the opportunity to provide written comments on the proposed corridor improvements, street typologies, multimodal network improvement strategies, or other general



comments. Key takeaways from the comments include:

- Of the improvement strategies for each mode, those related to walking received the most comments. In particular, participants noted a desire to fill in missing sidewalks and to widen existing sidewalks, as well as increase the safety of pedestrian street crossings through road diets and dedicated pedestrian-only areas.
 - Some community members simply agreed with the strategies listed, but requested even more transit connections and more protected bicycle lanes.
 - Comments related to parking fees were mixed, with some participants in support of free public parking, and others opposed to free parking citing the importance of limiting cars downtown and improving bicycle and pedestrian access. However, most supported increasing or improving access to available parking spaces.
 - Demand-based parking pricing was suggested for Downtown, as well as shared parking in lots that have low utilization during off-hours.
 - There was a general opposition to increased traffic volumes, particularly near schools, and generally low prioritization of increasing roadway capacity. Similarly, participants were supportive of improving neighborhood connections to schools by improving street lighting, adding crosswalks, and reducing vehicle traffic.
 - Participants noted a need for improved enforcement of speed limits, especially in downtown areas where more people are walking.
- Feedback for the conceptual corridor improvements was mainly positive, and focused mostly on the importance of safety for pedestrians and cyclists. The College Avenue South street design concepts garnered the most interest of all the corridors, and participants were generally supportive of the proposed designs.
 - Most comments related to the proposed street typologies were related to sidewalks or pedestrian safety, including several noting the importance of sidewalk maintenance.







5 NEEDS & OPPORTUNITIES

KEY FINDINGS AND CONCERNS

During the first round of public engagement, the public was asked to provide concerns and comments about the current transportation network on a blank map, as well as online via a Wikimap to those who could not attend the workshops or wanted to add more feedback. Figure 5-1 summarizes key concerns by mode collected during this exercise, as well as key findings from the analysis of the existing transportation networks.

NEEDS & OPPORTUNITIES

Figure 5-1 Top Concerns from the Public and Key Findings by Mode



DRIVING

TOP CONCERN

- East-west connectivity is limited
- Poor connectivity between secondary roads and main corridors
- Speed limit features and traffic calming are needed near areas frequented by children

TOP FINDING

- Most traffic flows north-south, and existing east-west connections are capable of absorbing all east-west traffic
- In 2015, 25% of traffic collisions took place within a 15 minute walk of a school, library, or recreational center



TRANSIT

TOP CONCERN

- Transit options along College Ave need improvement
- Areas outside of the central city have insufficient transit coverage
- Park and Ride is desired along I-49, Martin Luther King Jr Blvd using unused lots

TOP FINDING

- Nearly two-thirds of all residents, and half of low income residents, live within a 15 minute walk of a bus stop
- About 80% of Fayetteville jobs are within a 15 minute walk of a bus stop
- About 80% of developments approved in the last decade are within a 15 minute walk of a bus stop



WALKING

TOP CONCERN

- Sidewalks are narrow and/or contain obstacles
- Visibility of pedestrians for motorized vehicles in the intersections
- Lack of, or insufficient, crosswalks
- Lack of, or insufficient, lighting

TOP FINDING

- There are often long distances between safe or comfortable crossing opportunities, even in the downtown
- Adding only 1.25 miles of new sidewalks would create complete connections that could serve hundreds of commute trips



BIKING

TOP CONCERN

- Safety features are needed for bike lanes and trails
- Protected bike lanes are needed in downtown areas and priority corridors
- Lack of standard and covered bike parking facilities
- Safer connections to parks and trails

TOP FINDING

- Nearly 25% of Fayetteville's workers travel less than 3 miles to work, but only about 2% bike to work
- Small additions to the bike network could connect a large number of disconnected bike trips to the trail system



PARKING

TOP CONCERN

- Off-campus parking of UA students is unregulated
- Need more parking lots for trail users
- Parking regulations in or near commercial activity does not promote turnover
- Underused off-street parking takes up valuable downtown space

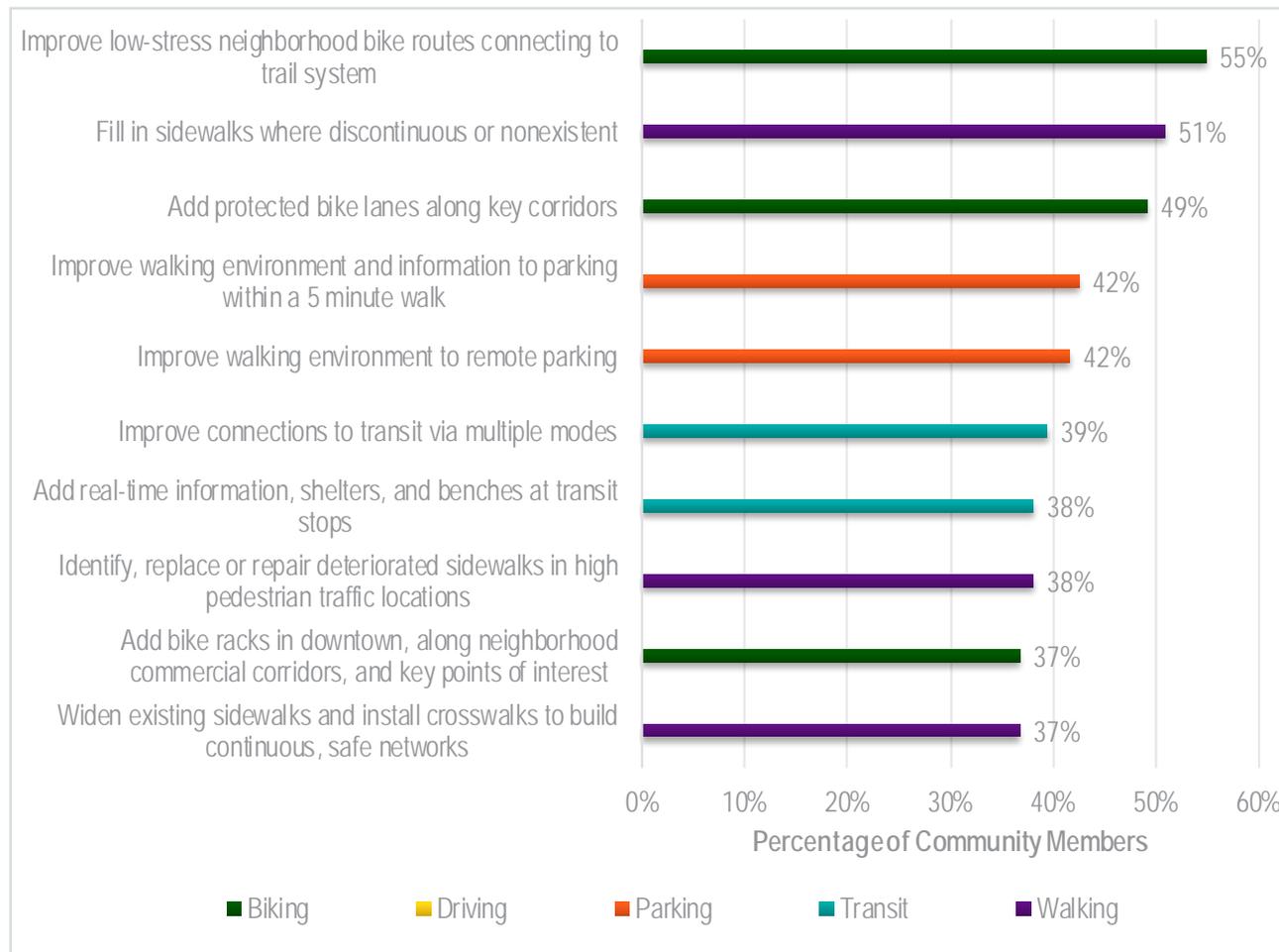
TOP FINDING

- The Parking Study Area contains approximately 9,000 parking spaces, 86% of which are located off-street, occupying approximately 25% of the land in the study area
- Approximately 40% of spaces in the Parking Study Area are publicly owned
- There are almost 30 lots and garages open to the public, occupying about 25% of the land in the study area

STRATEGIES TO IMPROVE THE NETWORKS

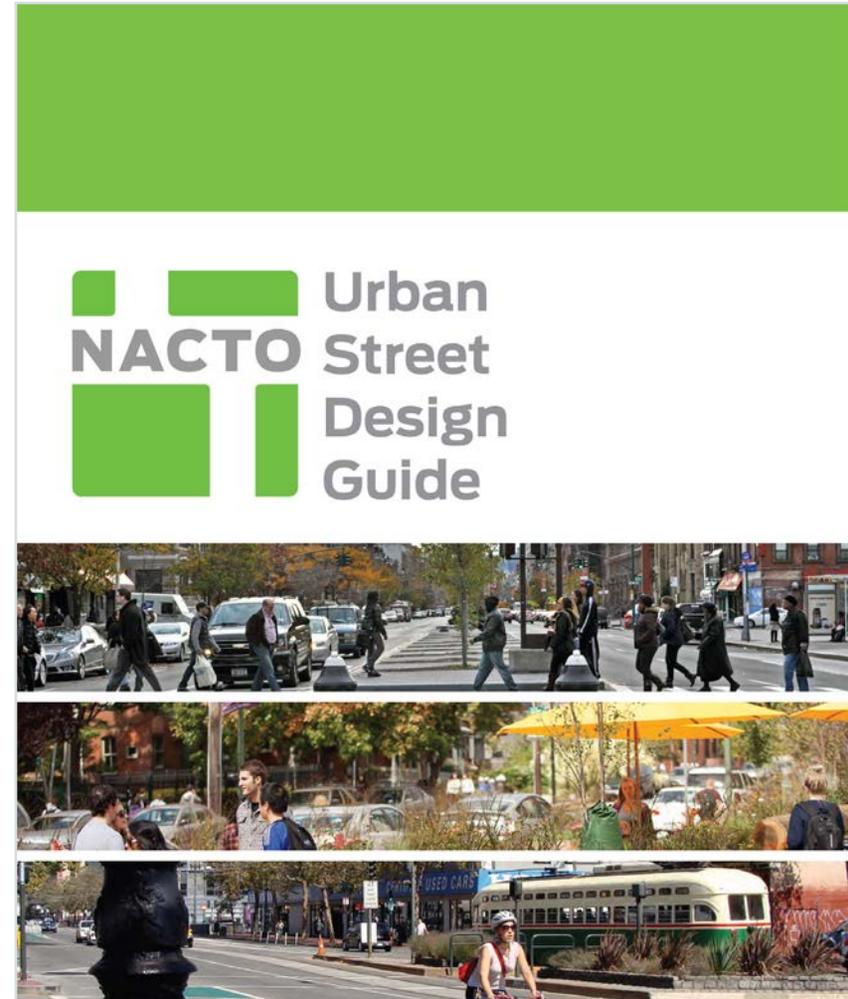
A second round of public engagement held in the fall of 2016 presented the public with the key findings of current transportation networks. The public was then asked to vote for strategies to address each specific challenge. The results are summarized in Figure 5-2.

Figure 5-2 Most Favored Strategies



ACTIVE TRANSPORTATION NETWORK IMPROVEMENTS

Great facilities for walking and biking start with good design approaches. For all its streets, the city should use the latest editions of the design manuals published by the National Association of City Transportation Officials, or NACTO. NACTO regularly updates its *Urban Street Design Guide* and *Urban Bikeway Design Guide*, and it recently presented a guide on *Designing for All Ages and Abilities*.¹



1 All NACTO guidance is available for free download at www.nacto.org



IMPROVING THE PEDESTRIAN NETWORK

For much of the last half of the 20th century, cities like Fayetteville made extensive investments to accommodate rising rates of automobile use. While these changes in street design benefited motorists, they resulted in safety problems for pedestrians. Figure 5-3 shows typical situations that pedestrians face in Fayetteville, along with some general solutions developed more fully in later chapters of this report.

PRIORITIZE INVESTMENTS THAT SERVE THE MOST PEOPLE

The team evaluated potential walking trips citywide to understand how discontinuous sidewalks negatively impact trip-making in neighborhoods. Commute trips under 1.5 miles were mapped and cross referenced with the sidewalk network to determine where completing missing segments might enable more walk trips. The results are shown below in Figure 5-4 noting that over one hundred daily walking

commute trips could be served by filling in between one and five miles of new sidewalks. This is a conservative number, however, since this analysis could only be conducted for commute trips, not leisure and shopping trips, and includes only those under 1.5 miles, or about twenty minutes.

Following this analysis are recommendations for completing the pedestrian network through investment in direct, on-street sidewalks. Additionally, pedestrian connections may also be possible in easements located outside of street rights-of-way to connect local residential areas, schools and institutional destinations, and other points of interest, such as the transit network. Much like the corridor improvements, these recommendations are intended to offer sample interventions that can be replicated in other districts and locations. Note that this simple GIS analysis may reveal very low-traffic-volume street segments as gaps that may not be high priority for sidewalk installation.

Figure 5-3 Typical Pedestrian Safety Concerns and Solutions

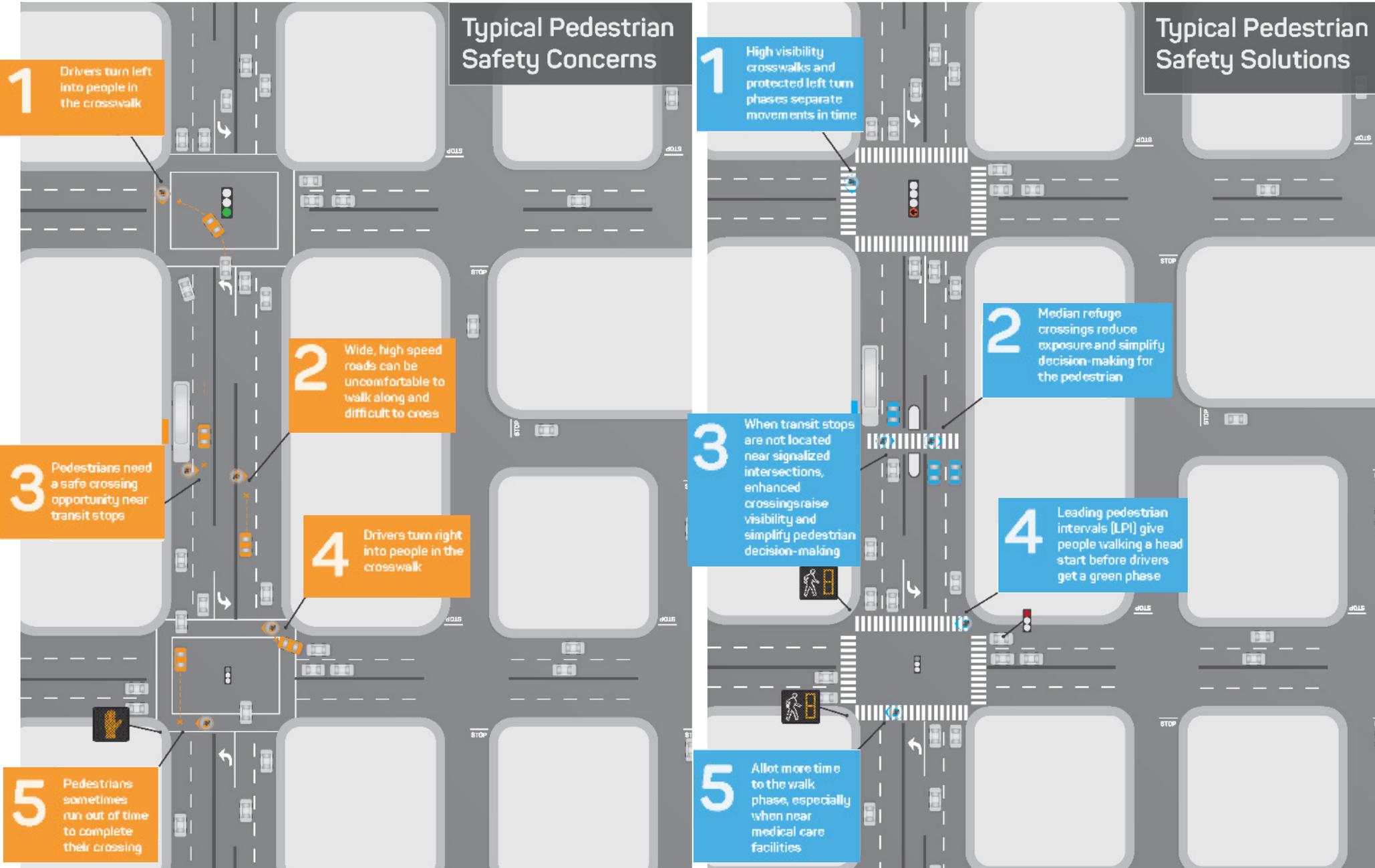
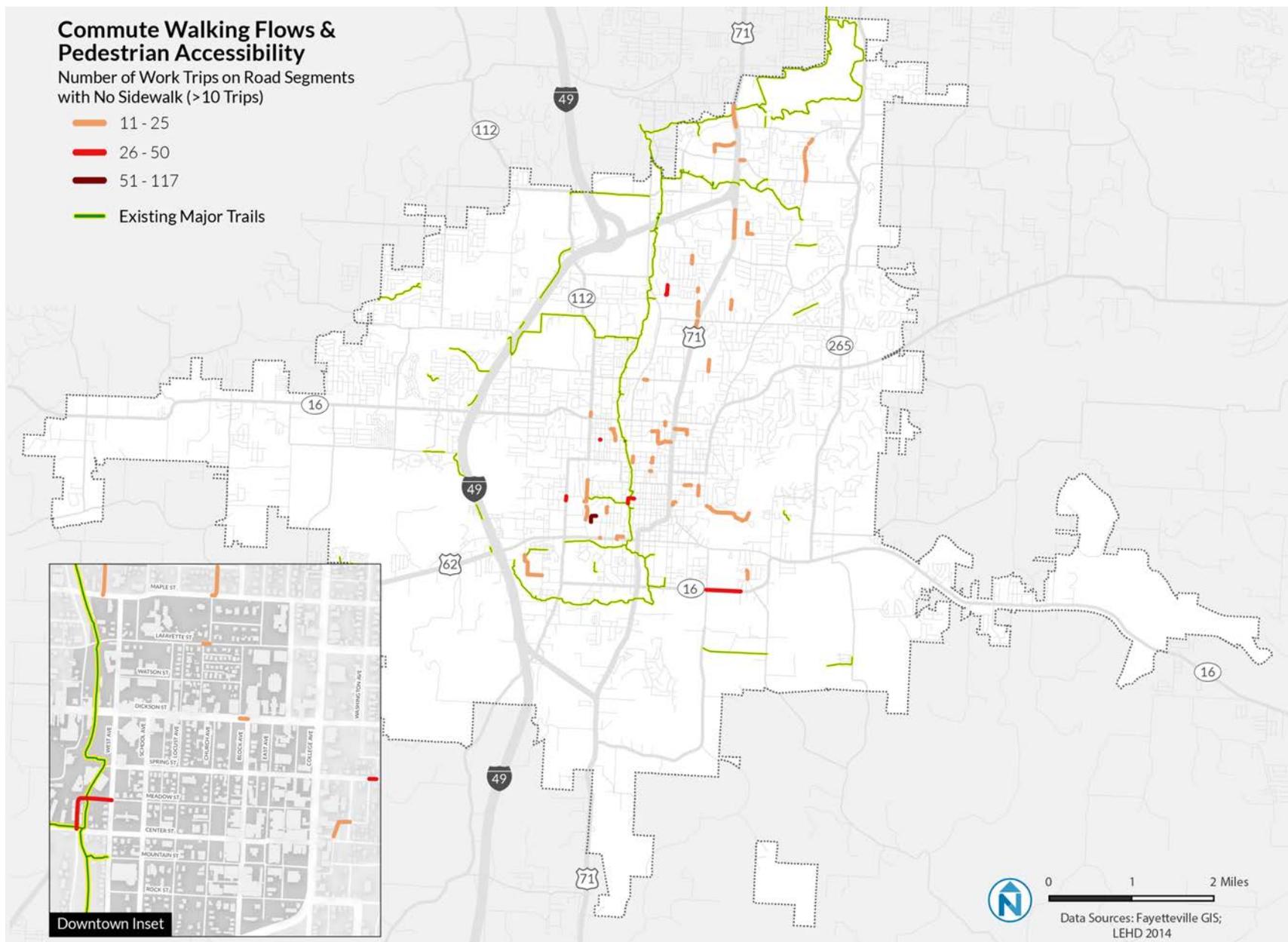


Figure 5-4 Gaps in the Commute Walking Network



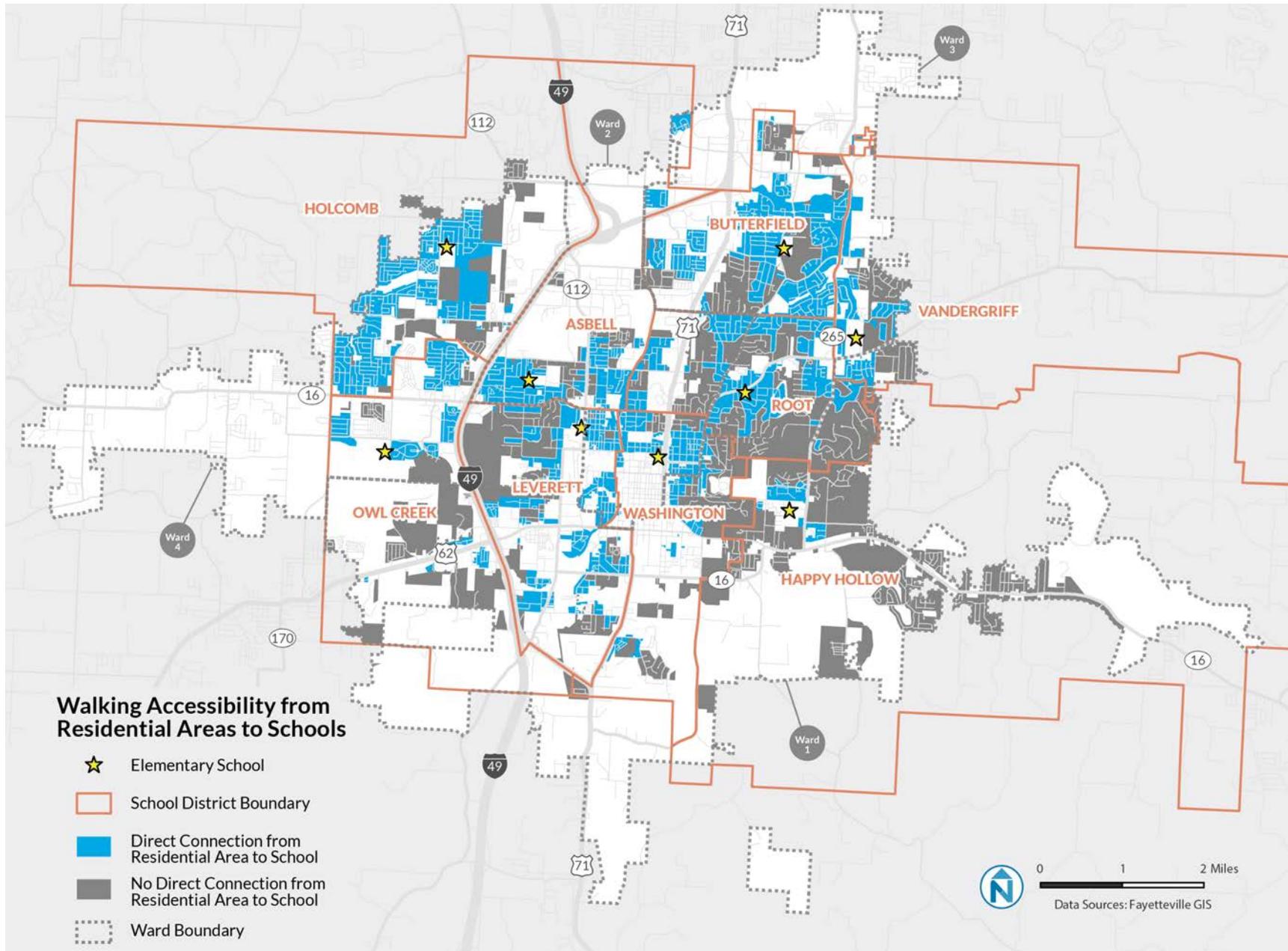


PRIORITIZE SCHOOL ACCESS & SAFETY

Gaps or deficiencies in the active transportation network can impact pedestrian and bicyclist safety, and reduce rates of walking and biking. To identify gaps, the project team focused on accessibility to schools, in part because crash data from 2011-2015 period showed that 25 percent of auto collisions in 2015 took place within the 15-minute walkshed of a school, library or recreational center. In addition, elementary and middle school students are an ideal target population for walking and biking given their short, predictable daily commute trips, and lack of personal car ownership.

The following figures distinguish residential areas in each City Council ward that have good walking accessibility to school from areas that lack connections. Potential solutions are presented for each ward that could improve school accessibility.

Figure 5-5 Walking Accessibility from Residential Areas to Schools



NEEDS & OPPORTUNITIES

Ward 1

Ward 1 contains Happy Hollow Elementary School located west of Crossover Road. This school is in a residential area that has varying degrees of density in close proximity to the school. Streets and neighborhoods east of the school would benefit from crossing facilities at the intersection of

E. Peppervine Drive and Crossover Road. Two new crossings on Huntsville Road and a new trail as a continuation of Cherry Lane connecting with Hollow Park would improve the accessibility for the residents south and west of the school.

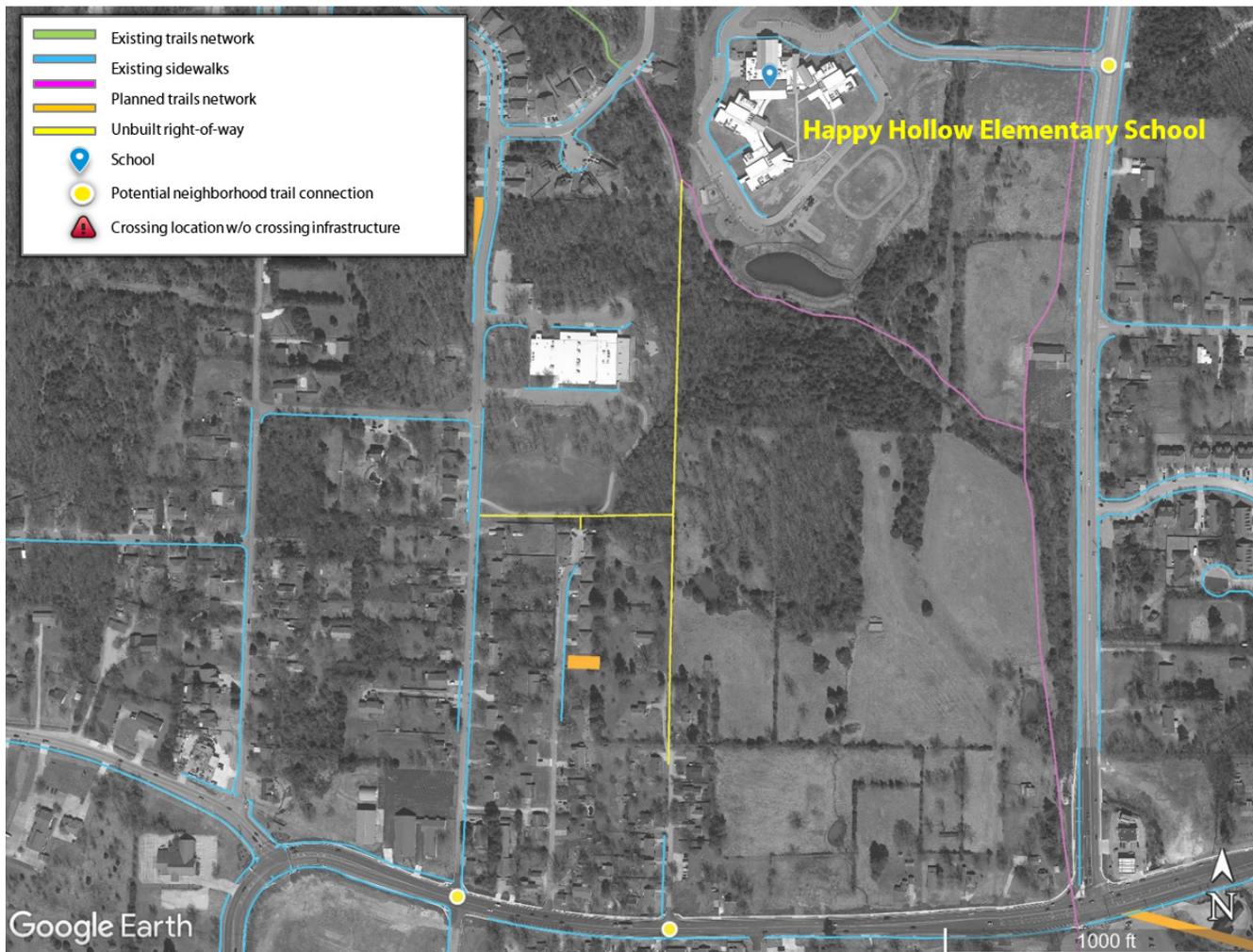


Figure 5-6 Potential Connections to Happy Hollow Elementary

Ward 2

Ward 2 is the most connected of the four wards due to its centrality and higher densities, though there are still some areas negatively impacted by disconnected or discontinuous routes. Woodland Junior High School was selected for analysis in this area. Streets and neighborhoods to the north, west, and south of the school are well connected, but streets east of College Avenue are not. A few simple connections would greatly improve connections to large neighborhood areas. Figure 5-7 illustrates a future pedestrian connection

that may be possible through the Brooks-Hummel Nature preserve connecting Sycamore Street to E. Broadview Drive. This area has significant topographical constraints, but it also presents a unique opportunity to connect the neighborhoods along Mission Boulevard and Old Wire Road to the College Avenue corridor and Woodland Junior High through a natural woodland tucked away in the center of the city.



Figure 5-7 Potential Path Connections to Woodland Jr High

Ward 3

The street networks located in Ward 3 were primarily developed in the post-war era and as such this area is predominantly low density residential, with cul de sacs and disconnected streets. The Ward has many disconnected areas that are undeveloped and wooded. McNair Middle School and Vandergriff Elementary were chosen as sample destinations for this analysis in Ward 3. Both schools are located on the same plot surrounded by a small wooded area, though they have very different student catchment areas. The plot itself is fairly disconnected, particularly from neighborhoods to the north and west. An existing informal path to the immediate north of Vandergriff Elementary should be formalized and improved. A long utility easement corridor also has the potential to connect several dead-end streets, and additional connections to the planned trails network.

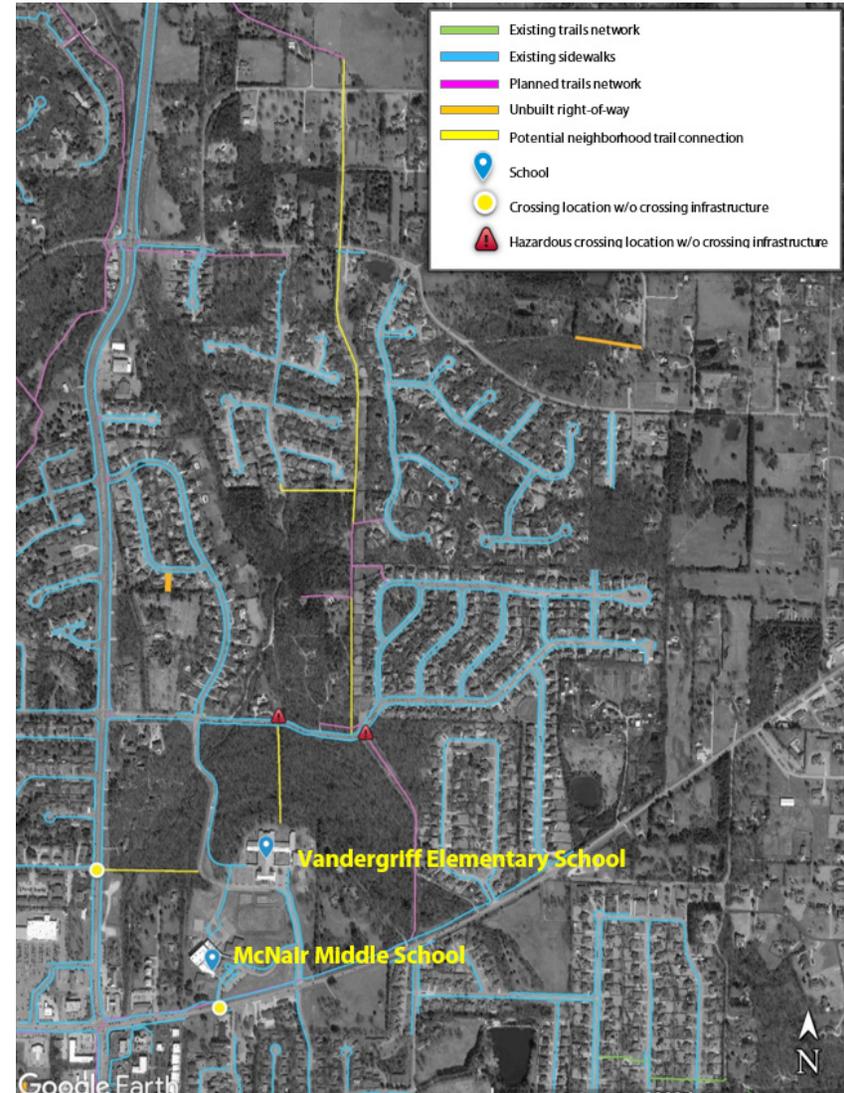


Figure 5-8 Potential Path Connections to Mcnair Middle School/Vandergriff Elementary

Ward 4

Ward 4 consists primarily of areas west of I-49 that have been developed in the last two decades. This ward has seen the most residential development in the last few years and there are several new residential developments under development. The on-going development growth in Ward 4 has resulted in substantial opportunities to create connections going forward into the future. Holt Middle School and Holcomb Elementary were chosen as sample locations in this area. Fortunately, the existing east-west connections from Salem Road to Deane Solomon Road allow

students from several streets in the adjacent neighborhoods to avoid traversing Mount Comfort Road.

Making a new pedestrian connections between Firefly Catch Drive and Edgewater Drive would provide much improved access to Holt Middle School from a limited entry/exit neighborhood. A north-to-south extension from the east-west Salem Road to Deane Solomon Road connection could be added to simplify access to Holcomb Elementary School and allow younger students to avoid Salem Road.



Figure 5-9 Potential Path Connections to Holt Middle School and Holcomb Elementary School

NEEDS & OPPORTUNITIES

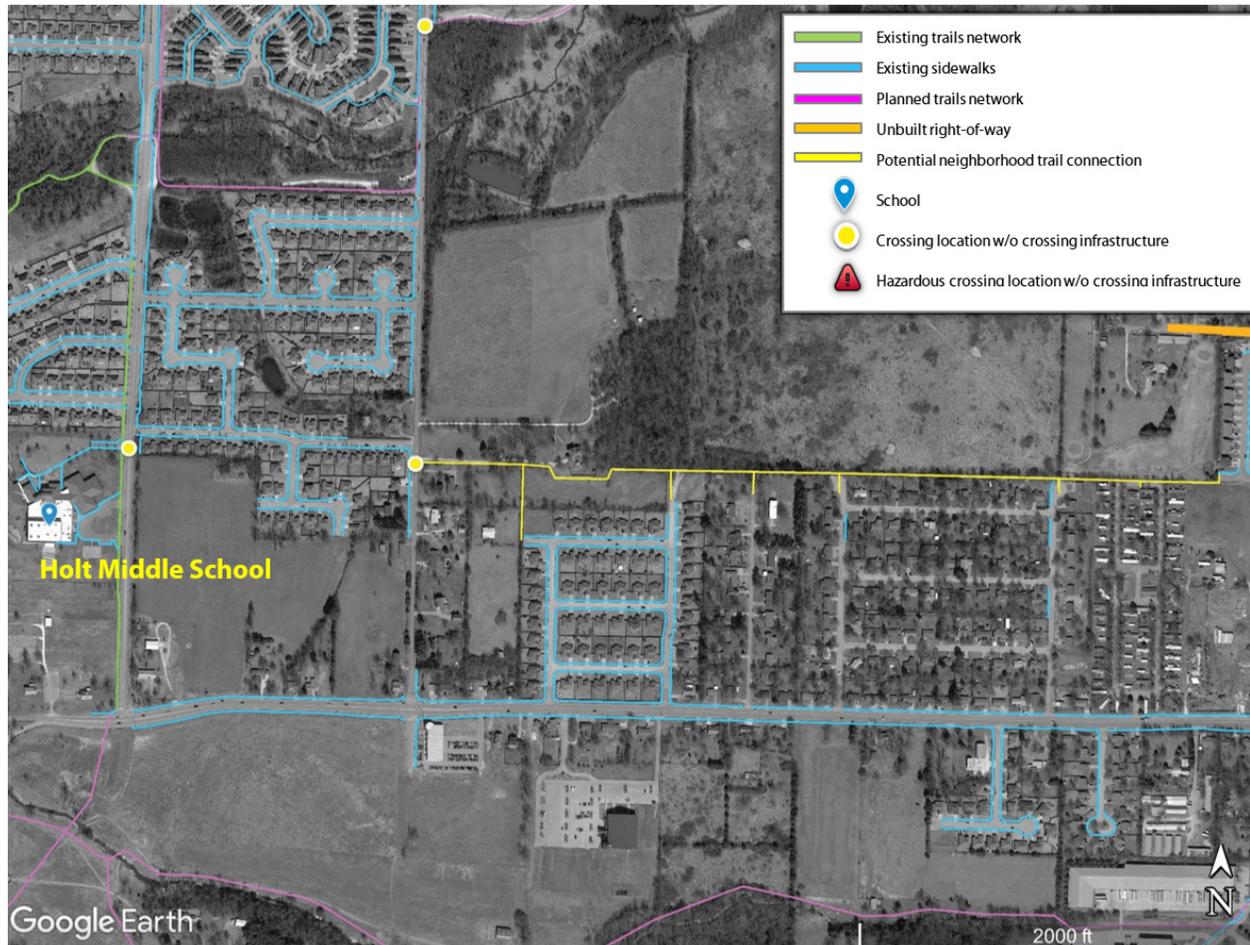


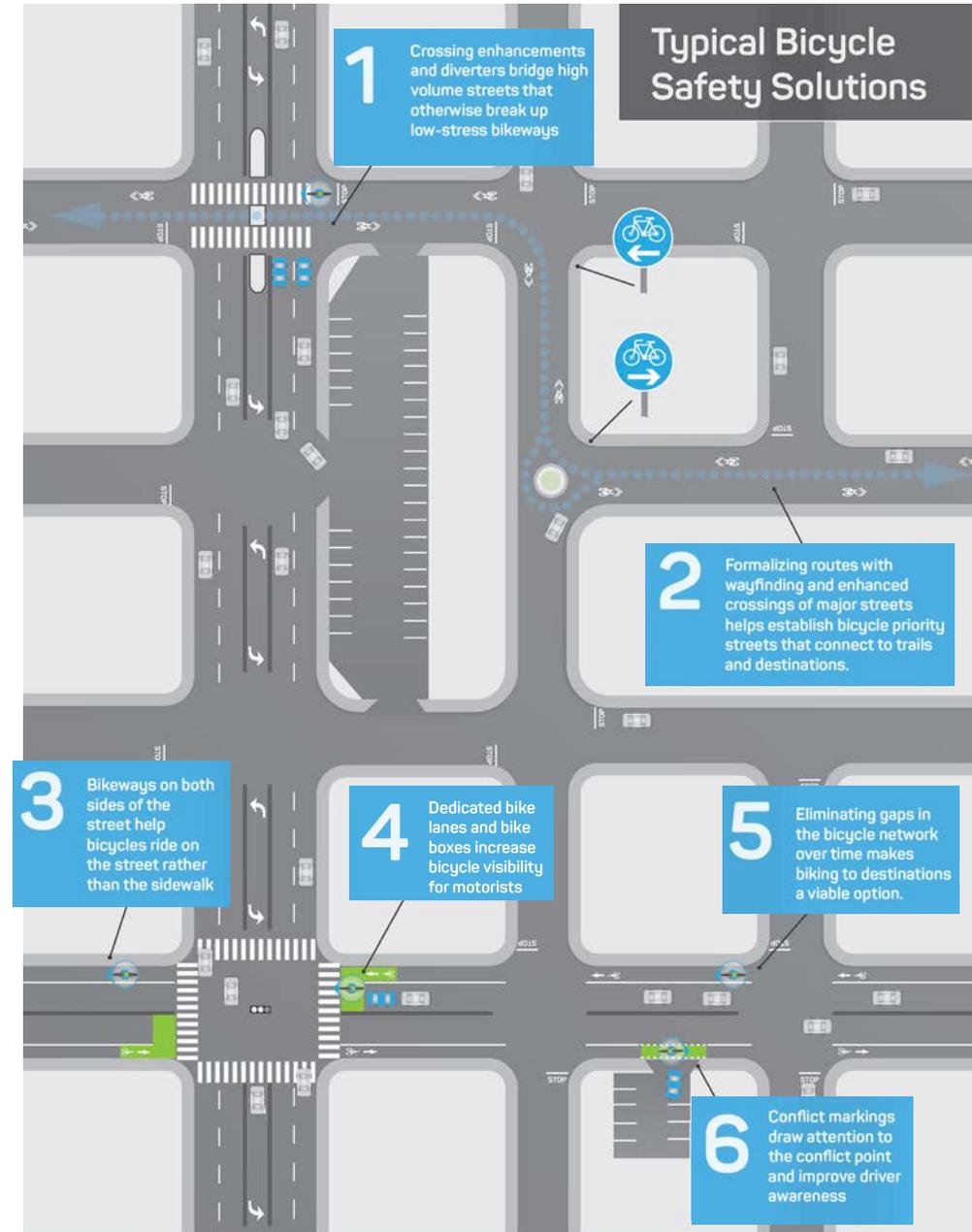
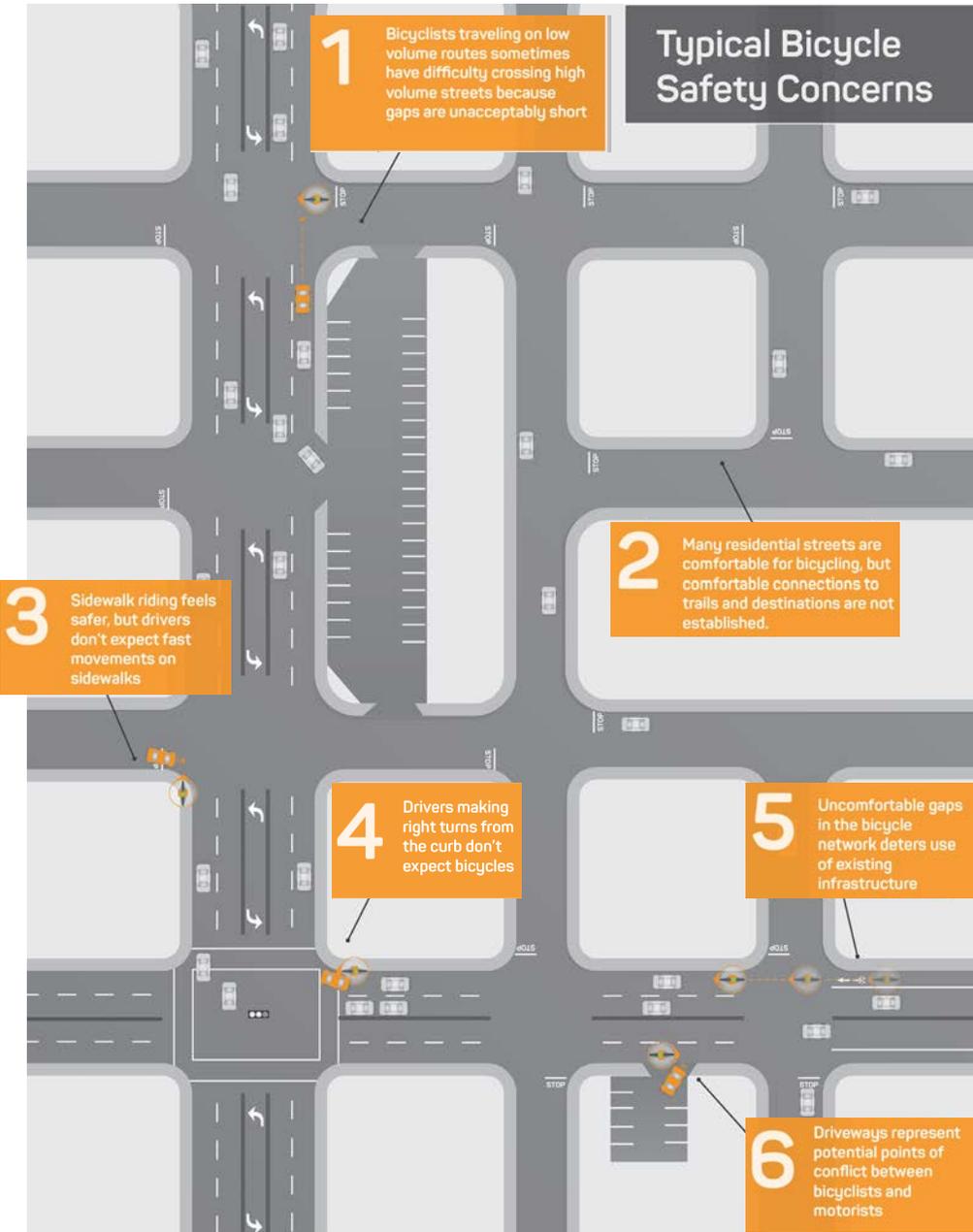
Figure 5-10 Continued: Potential path connections to Holt Middle School and Holcomb Elementary School (Salem Road to Solomon Road)

ADDITIONAL STRATEGIES TO IMPROVE SAFETY

- Add traffic calming features within residential areas, such as speed humps and curb extensions at the main entrances of residential areas. See the Traffic Calming section in the Street Plan Chapter.
- Improve signalization in places where more than one collision has occurred, and in the shared routes.
- Add ladder-style crosswalks at intersection legs where they are missing.
- Add median refuges for pedestrians, particularly at unprotected intersections.
- Use pedestrian countdown indicators and Leading Pedestrian Intervals at traffic signals.
- Include automated pedestrian detection at signalized intersections.



Figure 5-10 Typical Bicycle Safety Concerns and Solutions



IMPROVING THE BICYCLE NETWORK

Roadway conditions that facilitate fast cars and trucks can also create hazardous conditions for people on bicycles. Figure 5-10 summarizes typical situations cyclists experience on Fayetteville’s streets, along with generic solutions. These solutions are developed in greater detail in later chapters.

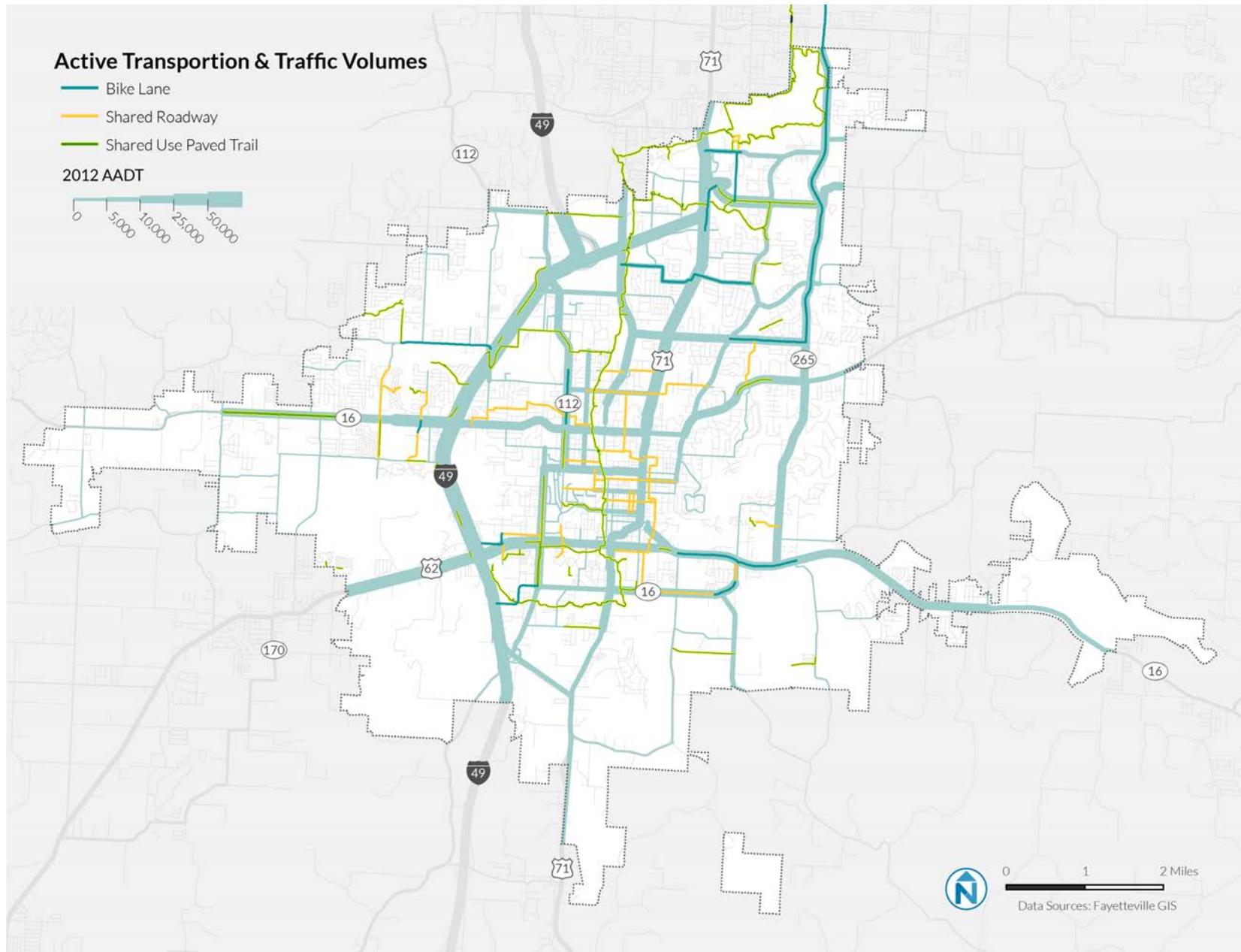
Figure 5-11 Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facilities
Target Motor Vehicle Speed*	Target Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts.	Protected Bicycle Lanes
< 10 mph	Less Relevant		Pedestrians share the roadway	Shared Street
≤ 10 mph	≤ 1,000 - 2,000	No centerline, or single lane one-way	< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
	≤ 500 - 1,500			
≤ 25 mph	≤ 1,500 - 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 3,000 - 6,000			Buffered or Protected Bicycle Lane
	> 6,000			Protected Bicycle Lane
	Any	Multiple lanes per direction	Protected Bicycle Lane	
> 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
		Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	> 6,000	Any	Any	Protected Bicycle Lane
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-use Path or Protected Bicycle Lane

Source: NACTO

NEEDS & OPPORTUNITIES

Figure 5-12 Existing Traffic Levels and Bike Networks



ACCOMMODATING ALL AGES AND ABILITIES

Fayetteville has many of the makings of a great biking city: A compact core, large student populations, a trail system, and a moderate climate. Beyond the trail system, however, the city lacks a connected network of bike facilities that attract riders beyond the most confident. If Fayetteville is typical of national data, only about 1% of its residents would feel comfortable riding on typical city streets. Meanwhile, about 60% of residents would be interested in riding a bike, but only feel comfortable on separated bikeways or very low speed, low traffic volume streets (another 32% are not interested in cycling at all).

Proper bicycle facility design is rooted in context. Streets with fast, heavy traffic require greater separation between bike riders and traffic lanes. Streets with very low traffic speeds and volumes allow cars and bikes to share the same space. Figure 5-11, on page 5-17, is NACTO's guidance for the types of bike facilities most suited to different roadway and traffic conditions. To the extent practicable, these recommendations were included in the plans recommended street designs in later chapters. For more detail, see the NACTO *Urban Bikeway Design Guide* at www.nacto.org.





ROAD NETWORK IMPROVEMENTS

NEW CONNECTIONS

Among the most frequent comments collected during the public outreach process relate to improving the connectivity between secondary roads and main corridors, such as extending Township Street to Garland Avenue and Drake Street.

Together with the City of Fayetteville, the project team selected eight of the “Planned Streets” included in the 2011 Fayetteville Master Street Plan and evaluated their usefulness to distribute traffic and accommodate active transportation by quantifying the distribution of commute trips among the road network. These new road connections would create travel time savings for some commutes by reducing delay or increasing directness. Figure 5-13 summarizes the advantages and disadvantages of each of these projects in terms of traffic distribution and provision of space for other modes.

As shown below, the completion of the “Arterial Loop” would benefit the highest number of commute trips, because it would provide a higher speed (minimum posted speed of 40 mph), higher capacity link than the current options, even though some trips would cover a longer distance.

Appendix C includes an explanation of the assumptions and process taken for the evaluation of new road connections such as the speed, as well as a summary of the traffic distribution in key corridors.

Figure 5-13 Planned Street Key Findings

Description	Advantages	Disadvantages
Extension of E Township Street. to Garland Ave	Decreases Traffic along MLK Jr Boulevard, Mission Boulevard and Garland Avenue to provide room for other modes, transit and non-motorized	Increases traffic along College Avenue.
Extension of Garrett Street to Gregg Ave	Decreases Traffic along MLK Jr Boulevard, Mission Boulevard and Garland Avenue to provide room for other modes, transit and non-motorized	Modest traffic shifts
Completion of the Arterial Loop*	Removes through traffic, with a significant decrease during the peak hour along College Avenue (-15%), MLK Jr Boulevard (-45%), Mission Boulevard, North Street, Dickson Street, and Garland Avenue. Reduced travel time for 40% of commute trips.	Increases trip length (total vehicles miles traveled)
Extension of W Drake Street to College Ave	Decreases traffic from College Avenue, North Street, MLK Jr Boulevard	Modest traffic shifts
Shiloh Drive-connection between Wedington Drive and Mount Comfort Road.	New connection parallel to I-49 between non-residential areas; Potential transit corridor	Slight traffic improvements
Rockwood Trail Connection to Crossover Road	Decreases Traffic during peak hour along MLK Jr Boulevard, Mission Boulevard and Garland Avenue to provide room for other modes, transit and non-motorized	Modest traffic shifts
Rolling Hills extension from Old Missouri to Crossover Road	Decreases Traffic along MLK Jr Boulevard, Mission Boulevard and Garland Avenue to provide room for other modes, transit and non-motorized	Modest traffic shifts, and adds traffic through residential areas
Persimmon Street I-49 overpass and connection to Wedington east of I-49	Could decrease congestion in the Wedington Dr-I-49 interchange	Unless the existing characteristics of Persimmon improve (speed), Wedington is still more attractive

* <https://www.fayetteville-ar.gov/1942/Transportation-Projects>



TRAFFIC REDISTRIBUTION

The following figures show traffic redistribution in relation to the existing conditions. Road segments highlighted in red would experience an increase commute traffic volumes, while those in blue would see traffic volumes decrease.

Figure 5-14 below shows how traffic would redistribute if the proposed Arterial Loop were completed around downtown. When completed and with wayfinding to attract all through traffic, it would help decrease traffic along College Avenue (Highway 71) and M.L.K. Jr. Blvd.

Figure 5-15 shows how traffic would redistribute by constructing the Persimmon/Cleveland connection and Figure 5-16 by extending Rolling Hills Drive to Crossover Road. Figures showing the traffic redistribution for the other new connections are included in Appendix C.

Figure 5-14 Traffic Redistribution: Closing the Arterial Loop

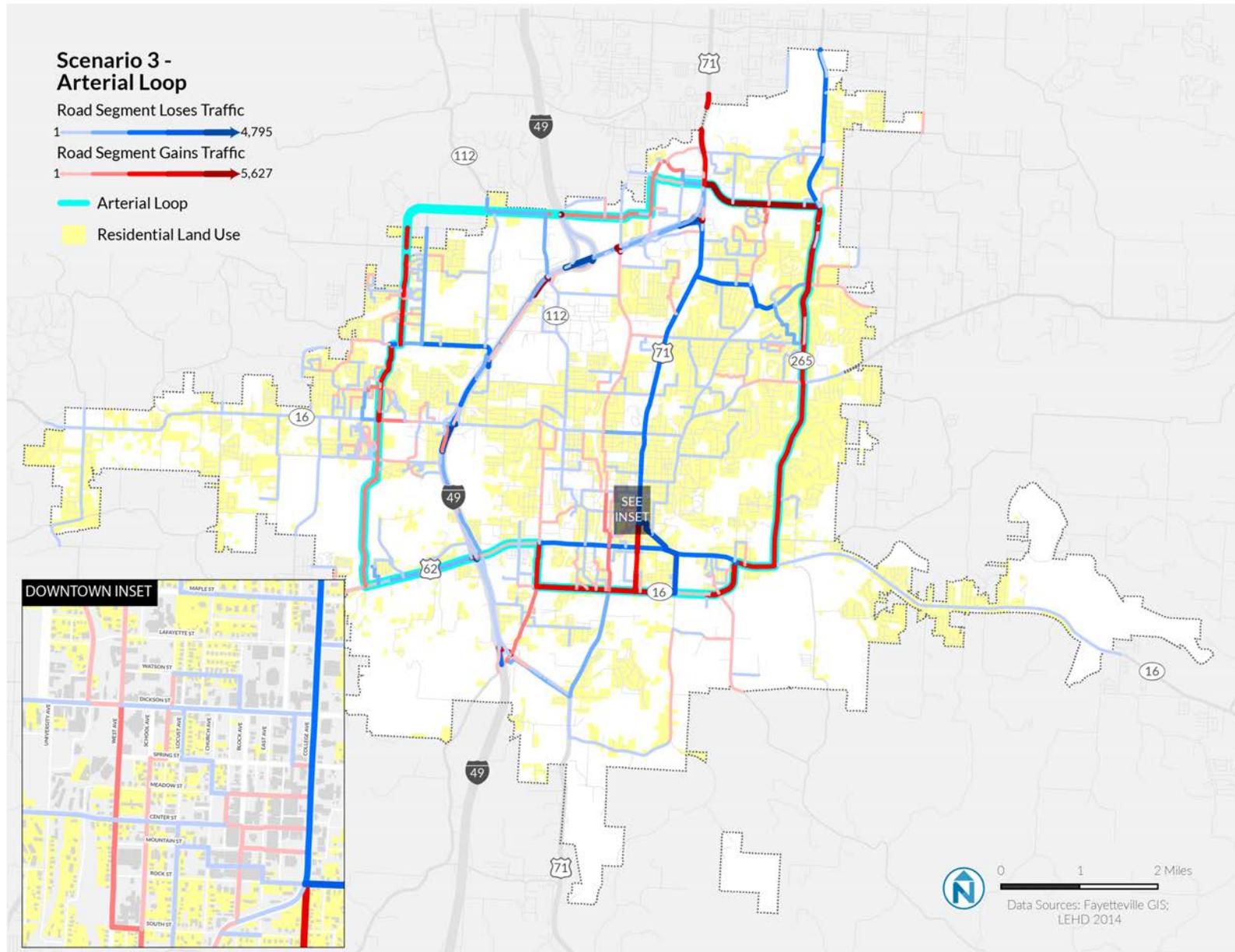


Figure 5-15 Traffic Redistribution: Connection of Persimmon Street to Cleveland St

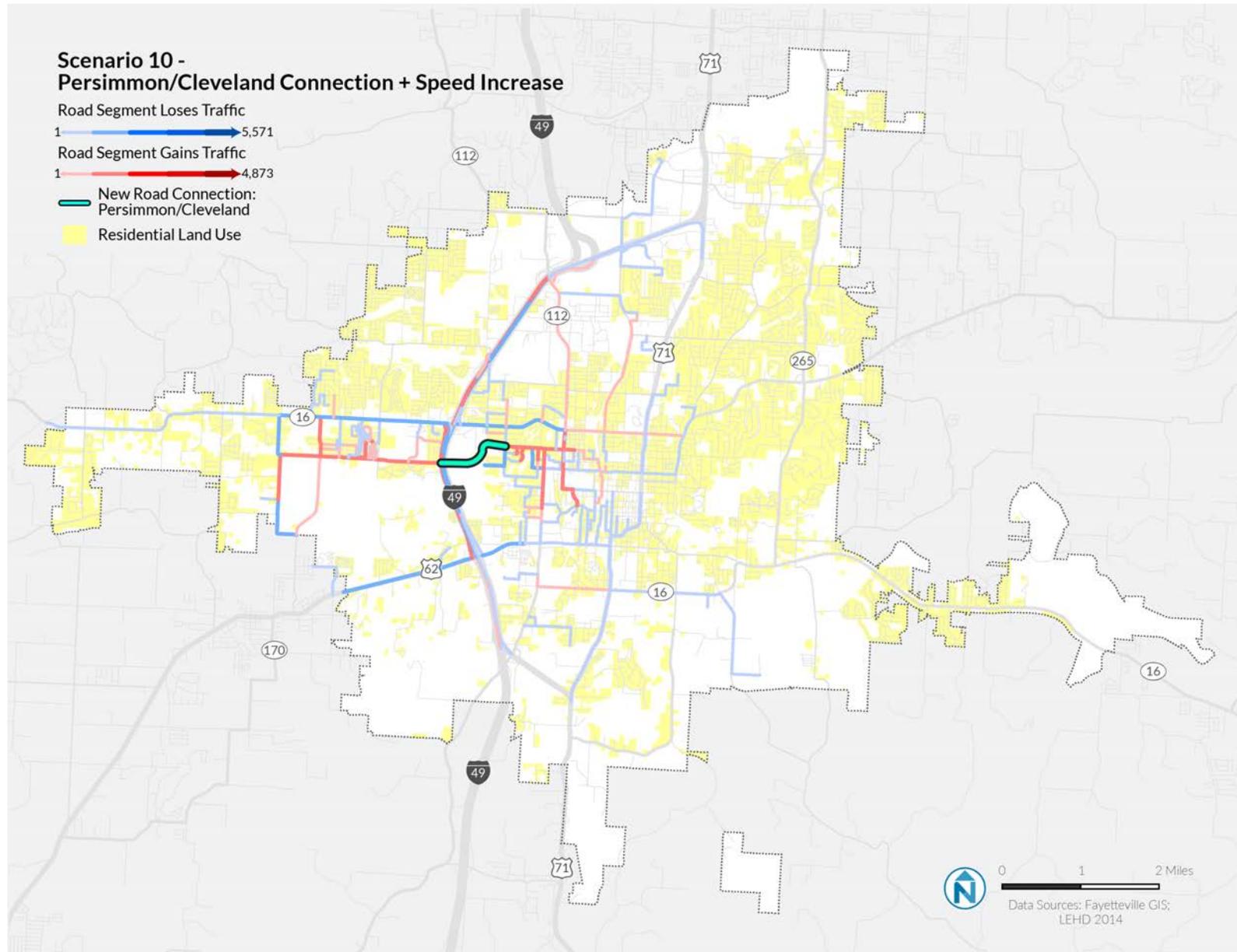
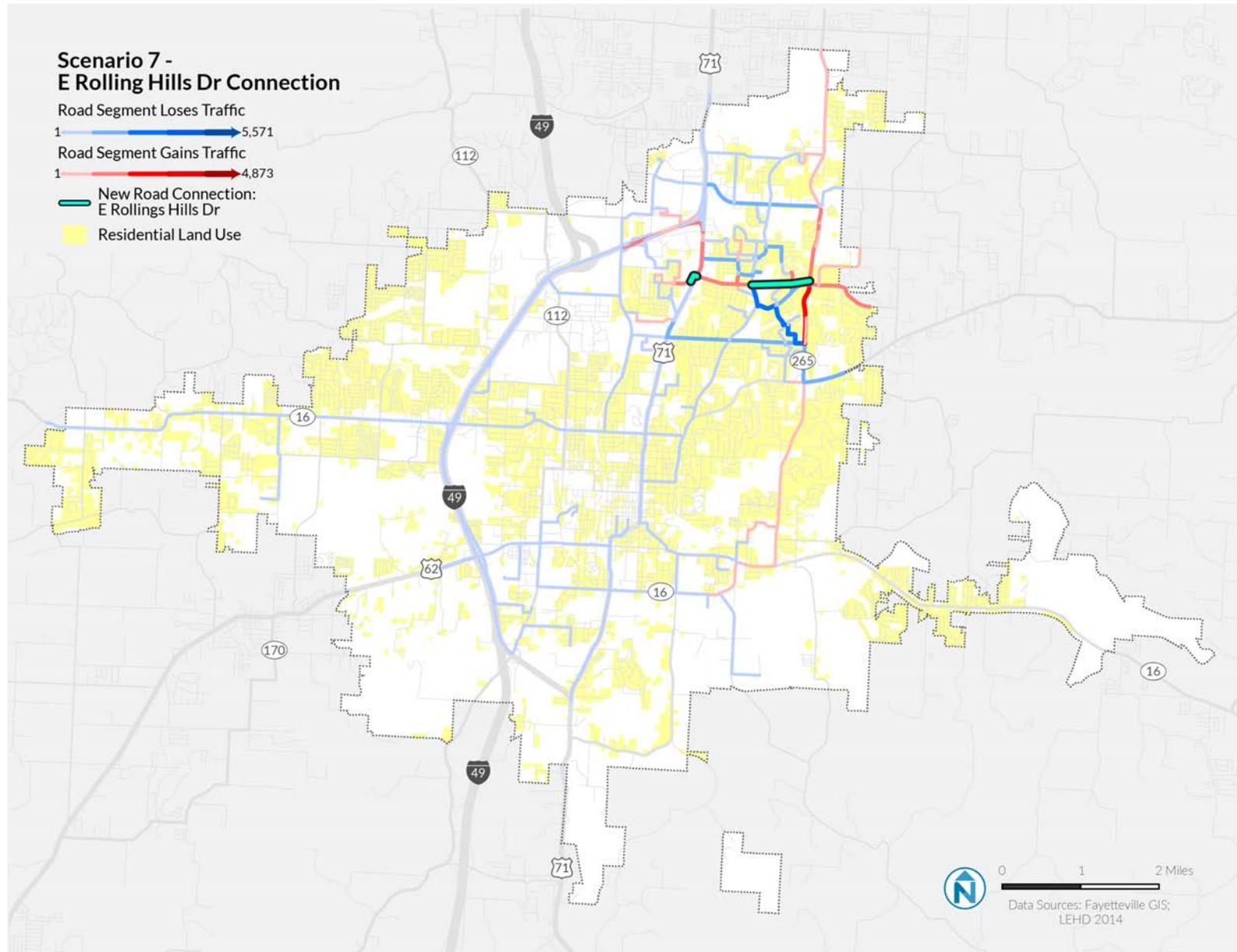


Figure 5-16 Traffic Redistribution: Connection of Rolling Hills Drive to Crossover Dr





TRANSIT NETWORK IMPROVEMENTS

As mentioned in Chapter 3, “Today’s System,” Fayetteville is served by two transit providers: the University of Arkansas Razorback Transit (RT), and Ozark Regional Transit (ORT). Having two providers complicates the City of Fayetteville’s ability to influence changes in the transit network. The City of Fayetteville sets policy and contributes to funding, but does not operate transit service. As such, transit recommendations are split into planning or design improvements (as a municipality), and policy or programming recommendations (as a policy and funding agency).



PLANNING AND DESIGN RECOMMENDATIONS FOR TRANSIT

Many transit agencies operate in environments controlled by local governments who support the vision of accessibility for all road users, including those who do not own a car by choice or by circumstance. In Fayetteville, about 7% of households do not own a personal vehicle. For these households, a robust transit service offers them access to jobs, school, shopping, and leisure activities. The following recommendations are intended to support everyday transit operations and improve access:

- Partner with ORT and RT to offer park & ride opportunities across the city, using existing underutilized parking areas, such as those at churches and major retail areas like Fiesta Square. These locations should be within walking distance of existing major transit stops, with adequate sidewalk access to ensure that pedestrians and transit riders have safe options for accessing transit.
- Increase bike-to-transit options by adding bike parking to park and ride facilities. Ensure safe bike access from major bike routes and trails – including the Razorback Greenway -- to transit stops.
- Incorporate transit-friendly street design elements in high-frequency, high-ridership corridors and stops. Many of the recommendations within the proposed street network typology discuss standards that are more accommodating to transit vehicles such as lane-widths, turning radii, stop bar locations, etc. These conditions are solely within the purview of the local agencies, and in some cases ArDOT, but they have a large impact on transit travel times and reliability.
- Complete the Shiloh Drive connection, which could create a new transit corridor parallel to the expressway and connect the Urban Centers as detailed in Chapter 6.
- Explore Transit signal priority to reduce bus delay and invest the time savings in improved frequency or route extensions.



POLICY AND PROGRAMMING RECOMMENDATIONS FOR TRANSIT

As a contributing funder, the City shares common goals with the transit agencies that serve it and the region, and further can support the following activities to support those goals:

- Partner with ORT, RT, and ArDOT to implement bus rapid transit along a high-capacity/high-ridership corridor, such as College Avenue. Dedicated transit lanes, transit signal priority, and other design and technology treatments can greatly improve transit operations for thousands of existing riders while paving the way for higher capacity transit for the longer term. This is especially important as the City continues to focus on infill development in the city core and along major arterial roadways.
- Target land use growth in areas where transit growth is appropriate and likely.
- Partner with ORT and RT to expedite transit amenities through funding or policy relief. Such activities might include programs to support the installation of transit shelters on key local and regional routes or the prioritization and construction of new sidewalks adjacent to transit lines, particularly any future bus rapid transit route.
- Consider new development impact fees, Transportation Demand Management requirements, or developer agreements that could raise funds from new development for transit enhancements. Over the last decades, approximately 20% of new development is beyond a 15-minute walk of transit stops. Redistributing existing bus service to newly developed areas, however, would simply worsen service for existing corridors, and likely result in a net loss of transit ridership.





6 STREET PLAN

OVERVIEW

Different streets have different needs. In order to provide designers with guidance on dimensions, engineering details, and management approaches, almost all cities divide streets into “types” or typologies. Most cities use the Federal Highway Administration’s “functional classification” system, which divides streets into arterial, collector, and local streets. Functional classification can be a useful approach, but it provides limited information about the street. Functional classification says nothing about the role of streets in serving people on foot, bicycles, or transit. It also does not take into account how good street design should accommodate different land uses. A retail main street has very different design needs from a rural highway, though they can both be classified as an “arterial.” Similarly, a collector road through an industrial area has different design needs from a collector through a residential neighborhood.

The current Fayetteville Master Street Plan Map and street cross-sections were adopted by the City Council

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in 2011. They illustrate future street locations for capital planning, identify new street connections through future developments, and provide detailed dimensions for new streets, sidewalks and green space. This Master Plan classifies streets in nine groups, based on functional classification, and provides some guidance based upon land use context options for different urban developments to accommodate different modes and low-impact development neighborhoods.

The FMP builds upon the Master Street Plan and ongoing land use planning updates to provide additional guidance for designers, with a particular emphasis on how design approaches change based upon land use context, and how to address tensions among different modes when there is competition for space. These street types establish clearer priorities, with allowed and required dimensions for all roadway elements.

Efforts to update the city's land use plan, City Plan 2030, are underway. The recommendations presented below for updating the street typologies will be folded into the Master Street Plan as part of the overall City Plan update.



STREET TYPES

Street types may not be consistent for the whole of a corridor. Just as land use context changes –from low density residential neighborhoods to neighborhood business districts to areas of industry and production to the core downtown – so too do the street types change.

Figure 6-1 Definition of Street Types

Street Types	Definition	FHA Classification
Urban Center	Serve the dense, mixed-use downtown core Accommodates heaviest pedestrian activity Incorporates bike/transit facilities as needed	Local Road
Regional High Activity Links	Regional connector carrying local and regional multimodal traffic Serves a variety of densities and land uses	Principal Arterials
Regional Links	Regional connector carrying local and regional multimodal traffic Serves low-density residential areas, open spaces	Principal Arterials
Neighborhood Links	Spines through residential neighborhoods Collects vehicles, cyclists and pedestrians from residential streets and connect to Regional Links	Minor Arterials/ Collectors
Residential Links	Provides access to local residences Functions as shared spaces for vehicles, cyclists, and pedestrians	Local Road



URBAN CENTER

Urban Center Streets are critical to the quality of place in Fayetteville neighborhoods. These special areas are local destinations for residents from adjacent neighborhoods and further afield. They support unique dining, shopping and employment opportunities and add character and commerce to the Fayetteville economy. These typically compact areas often have moderate- to higher-volume multimodal streets, but may include low-traffic-volume streets as well. These streets prioritize access for delivery vehicles, patrons, and workers arriving by foot, bicycle, transit or vehicle.

Equally critical is the quality of the pedestrian environment. Inviting sidewalk zones correspond positively with higher retail sales and greater commercial value of properties along these streets. The pedestrian zone should be buffered from roadway traffic by curbside parking or a generous amenity zone to increase pedestrian comfort. Formal or informal seating is crucial for inviting pedestrians to gather, visit and linger along the street. Additionally, pedestrian scaled street

lighting increases the perceived safety and attractiveness of the street during evening hours.

Street vehicle speeds should be slow and well managed through street design, traffic calming techniques, traffic signal management, and speed limit enforcement. Slow speeds should permit pedestrians to cross the street from curbside parking or sidewalk to the opposite side of the street at any point along the block face. Where this is impractical, marked crosswalks should be provided at frequent intervals. For more detail, see the Traffic Calming section below.

Robust tree canopies contribute positively to economic productivity of the street. Studies have shown that patrons will stay longer and spend more on tree-lined streets due to the benefits that trees bring, such as a safer walking environment, sun and rain protection, pollutant reduction and increased security¹.

¹ <http://ucanr.edu/sites/sjcoeh/files/74156.pdf>

It is vital that streets accommodate safe access and mobility by all modes of travel. It is a priority in the Urban Center typology to provide a wide pedestrian zone to accommodate pedestrian volumes. Given also the variety and volume of mobility demands from the other modes, it may be difficult to provide separated or protected bicycle facilities. When the segment is a component of the bicycle priority network, however, designated and marked facilities should be accommodated.

EXAMPLE STREETS:

- Dickson Street, Locust Avenue

ANTICIPATED AND DESIRED USES:

- Commercial activities such as café dining or retailing.
- Residential uses both at the ground and upper levels.
- Patron, client and worker access by way of vehicle and bicycle parking, quality transit stops and inviting pedestrian zones.
- Moderate to higher pedestrian volumes.
- Moderate to higher frequency bus transit service and access.
- Delivery truck access.

PRIORITY USERS

- Commercial patrons and visitors.
- Delivery vehicles, which should be accommodated to ensure they do not park on sidewalks or block travel lanes or bike lanes.
- Workers and proprietors.

DESIGN OBJECTIVES

- Support and strengthen economic productivity and value.
- Enable efficient and unobtrusive delivery of goods and removal of waste.
- Accommodate high frequency and short duration commercial transactions.
- Enhance street quality and image.
- Enhance access via all modes (pedestrian, bicycle, transit, vehicle).
- Accommodate multimodal through travel.

TYPICAL DESIGN FEATURES AND TREATMENTS

- Narrow travel lanes help slow traffic speeds and minimize pedestrian crossing distance.
- Bi-directional street operations are preferred. Center line may or may not be marked.
- One-direction streets needs to be designed with narrow traffic lanes to avoid high speeds
- Short block lengths and frequent intersections are preferred. Intersections may be stop or signal controlled or uncontrolled.
- On-street parking on one or both sides of the street is preferred. Parking should be well managed to optimize occupancy while at the same time providing a limited but continuous amount of available access. Parking may or may not be metered.
- Adequately scaled and spaced loading zones are required to support commercial needs. Loading

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periods may be managed and loading zone usage enforced.

- Sufficient and convenient bicycle parking is required.
 - Curb lane should be used for on-street parking, bike facilities, parklets or clear zones to increase visibility near intersections and allow for emergency vehicle minimum width requirements.
 - Pedestrian crossings along the length of the segment should be anticipated. Crosswalks may or may not be marked at uncontrolled locations. Midblock crossings connect trip generators on opposing sides of the street and minimize out of direction travel for pedestrians. Crosswalks should be marked at controlled intersections.
 - Transit service is common and encouraged. Transit stops should provide adequate amenities for a quality rider experience. Transit amenities must not constrain the minimum required pedestrian clear zone.
- Curb cuts and driveways should be discouraged and minimized in favor of alleys and shared access points from minor/intersecting streets.
 - Large canopy trees are desired. Pervious hardscape amenity zone may take the place of planted parkways.
 - Streetscape should provide a quality environment. Standard materials, installed with quality workmanship, are acceptable and in many cases encouraged. Special materials may be used if maintenance agreements are provided.
 - Public art, wayfinding and other unique features of place are appropriate and encouraged.
 - Access to Urban Center streets by foot, bicycle, transit, and vehicles are all vitally important. They must adequately accommodate necessary through travel at speeds and volumes that do not substantially degrade the economic viability of the corridor.



REGIONAL HIGH-ACTIVITY LINK

Fayetteville has several larger, regionally significant streets that move a high volume of motor vehicle traffic and serve destinations such as big employers and shopping malls, while accommodating transit stops, pedestrians and bicycle activity. Generally serving low density commercial strips, parkland, institutional and residential land uses, street environments at present often lack a distinctive character. Given high traffic volumes of somewhat higher speeds, these streets typically require that bicyclists and pedestrians be physically separated from traffic. Crossings must be safe and well-marked with adequate crossing time.

The current character of a Regional High-Activity Link could vary substantially at present, from the more sprawling strip retail character of MLK Jr Boulevard to the more commercial and office dense areas appearance of Joyce Boulevard.

Regional High-Activity Links are critically important in the regional travel network and together with Regional Links are generally continuous from one end of the city to another. They may also connect from a point in the city to travel corridors that continue out into the region. They commonly have large vehicle volumes and may have a significant number of trucks as well. In addition to automobiles, these streets often have significant demands by transit users and bicyclists. Although at present, the pedestrian environment is often challenging, pedestrian mobility is imperative. Given the high volumes and relatively high speeds, non-motorized users should be well protected and buffered from moving traffic.

It is recommended to have a minimum greenspace or furnishing zone as a buffer between the roadway and walkways. Pedestrian buffers may take a variety of forms, but trees parallel to the curb line establish an attractive and unifying character for the street and improve the overall environment.

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EXAMPLE STREETS:

- College Avenue (Highway 71), MLK Jr Boulevard.

ANTICIPATED AND DESIRED USES:

- Significant through vehicle travel.
- Access to major employment and commercial destinations.
- Safe non-auto travel options both day and night through all seasons.
- Robust Street trees to define street edge.

PRIORITY USERS

- Through vehicle travel.
- Through person travel via all modes.
- Worker and patron access.

DESIGN OBJECTIVES

- Improve street character while maintaining critical connectivity for through travel.
- Support land uses or any planned transition of adjacent land uses.
- Improve safety and operation for all users.

TYPICAL DESIGN FEATURES AND TREATMENTS

- Appropriately scaled travel lanes to support through travel as well as safe pedestrian crossings.
- Medians and pedestrian refuges for pedestrian safety and safe vehicular movement.
- High visibility lane markings.
- Sufficiently frequent pedestrian crossings to minimize crossing at uncontrolled locations. Marked crosswalks must be provided at all transit stops.
- Continuous sidewalks on both sides of the street.
- Streets generally do not have on-street parking, though parking may be provided.
- Bicycle lanes need to be protected from vehicles.
- Bicycle parking in the sidewalk zone of the street should be provided.
- If transit service is provided, transit stops should be well lit with appropriate amenities.
- Intersections are signalized.
- Large canopy trees along the curb line help delineate the street edge and provide a sense of enclosure to the street.



REGIONAL LINK

Regional Links correspond closely with the network of streets designated as “arterial roadways” in the classification system used by State and Federal agencies, however with more sensitive attention to non-auto users than is typical in this traditional roadway classification system. The main difference between Regional Link and the Regional High-Activity Link is the adjacent land-uses they serve, which instead of being key destinations are likely open spaces and low-density residential areas. Similar to Regional High-Activity links, they carry high traffic volumes and typically require that bicyclists and pedestrians be physically separated from traffic. Crossings must be safe and well-marked with adequate crossing time.

EXAMPLE STREETS:

- Crossover Road, Ruppel Road

ANTICIPATED AND DESIRED USES:

- Significant through vehicle travel.
- Safe non-auto travel options both day and night through all seasons.

PRIORITY USERS

- Through vehicle travel.
- Through person travel via all modes.

DESIGN OBJECTIVES

- Improve street character while maintaining critical connectivity for through travel.
- Support land uses or any planned transition of adjacent land uses.
- Improve safety and operation for all users.

STREET PLAN



TYPICAL DESIGN FEATURES AND TREATMENTS

- Appropriately scaled travel lanes to support through travel as well as safe pedestrian crossings.
- Medians and pedestrian refuges for pedestrian safety and safe vehicular movement.
- High visibility lane markings.
- Sufficiently frequent pedestrian crossings to minimize crossing at uncontrolled locations. Marked crosswalks must be provided at all transit stops.
- Continuous sidewalks on both sides of the street.
- Streets generally do not have on-street parking, though temporal (rush hour prohibited) parking may be provided.
- Bicycle lanes need to be protected from vehicles.
- If transit service is provided, transit stops should be well lit with appropriate amenities.
- Intersections are signalized.
- Streets generally do not have on-street parking, though parking may be provided.



NEIGHBORHOOD LINK

Neighborhood links are streets that serve both residential areas and have a larger network function by providing connectivity between nearby neighborhoods or local destinations; collecting vehicles, cyclists and pedestrians from residential streets and connecting to Regional Links.

Despite their regional network role, these streets should still be designed to contribute to and enhance the residential character and support typical neighborhood activities including active use of front yards for play or leisure, active use of sidewalks, and safe accommodation of community bicyclists – including very young, less experienced or less confident riders.

These streets may have moderate to higher volumes of traffic – particularly during peak travel hours. As with other residential streets, however, vehicle travel must be maintained at modest speeds through traffic calming. Neighborhood links are connector streets in the local transportation network for all modes of travel including pedestrians, bicyclists, transit, trucks and private vehicles. They often have some level of transit service and some may serve as critical backbones to the regional bicycle network. Given the higher vehicle volumes, streets designated as part of the bicycle network should include bike lanes where right of way allows, or employ traffic calming techniques to maintain traffic speeds at or under 25 mph.

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EXAMPLE STREETS:

- Mission Boulevard, Gregg Ave

ANTICIPATED AND DESIRED USES:

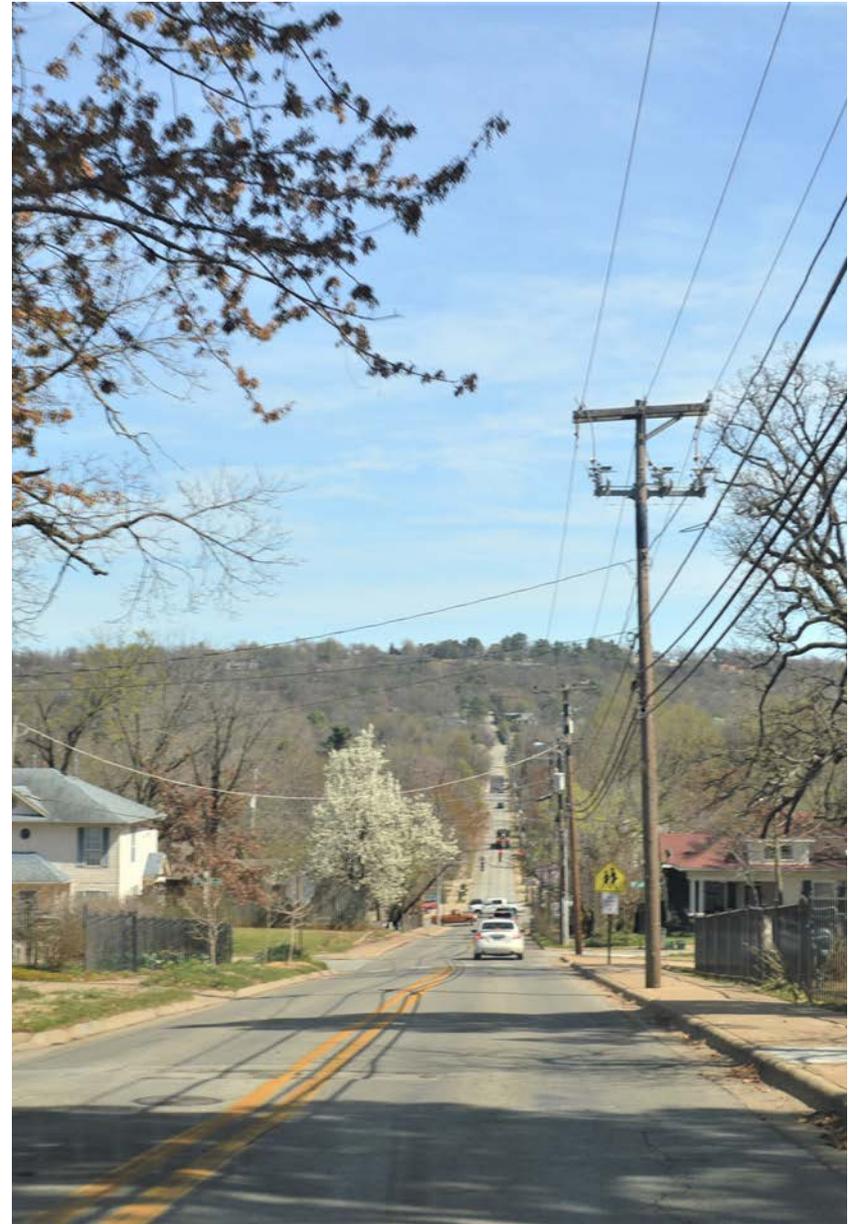
- Community travel, uses and interactions in the public rights of way typical of a strong and healthy residential community.
- Low to moderate pedestrian volumes.
- City or regional commuter bicycle travel; community bicyclists.
- Low to moderate frequency bus transit.
- Modest truck volumes.
- Moderate to significant local and longer distance (cross-town) vehicle travel.

PRIORITY USERS

- Neighborhood Links are complete streets and must provide safe accommodation for all users.
- Some streets may be designated as key links in a modal network (bicycle, transit, or cross-town vehicle) and thus be designed with a slight prioritization for accommodation and efficient travel of that mode.

DESIGN OBJECTIVES

- Protect residential quality of life.
- Accommodate safe and efficient cross-town connectivity via a diversity of modes.
- Provide a quality street and natural environment and the unique sense of place.





TYPICAL DESIGN FEATURES AND TREATMENTS

- Narrow travel lanes to effectively manage traffic speeds while maintaining safety.
 - Certain traffic calming design interventions may be used to further manage vehicle speeds to maintain speeds that are consistent with a safe and quality residential environment. Speed humps are generally not used on Neighborhood Links.
 - Marked centerline. Streets are most commonly bi-directional with one lane per direction.
 - Intersections are commonly signal controlled or uncontrolled (side streets are stop controlled).
 - High visibility crosswalks should be provided at signalized intersections. Typical crosswalks may be provided at higher volume or otherwise significant non-signalized locations. Crossings may be unmarked at intersections with Residential Links.
 - Curb cuts and other access points should be limited to the extent possible.
- Large canopy trees are desired, however, the many demands on these streets may compromise the amount of space that can be provided for tree growth in the parkway of the street. Creative solutions are encouraged, such as planting trees in curb extensions into the parking lane.
 - Gateway or identity elements to mark transition into/out of distinct neighborhoods and celebrate/highlight unique character or identity should be considered.
 - Streets must provide sidewalks on both sides. Sidewalk width is generally 6' or greater. Pedestrians should be buffered from the curb of the street by at least 6' of furnishing zone.
 - Neighborhood Links are key links for bicycles and pedestrians as well as for vehicles (transit, trucks and private autos). Key bicycle corridors must have designated marked and/or protected bicycle facilities.



RESIDENTIAL LINK

Much of Fayetteville's street network serves quiet residential neighborhoods that use the streets as common gathering places and linear parks.

Many streets in these post-War conventional neighborhoods have limited connections to the larger network. Residential Link streets located in neighborhoods within the historic urban grid typically have a higher degree of connectivity. Land use along these streets is primarily low to moderate density in nature, generally with a preponderance of single-family detached or duplex type homes.

Residential Links are not typically principal streets in the regional vehicular transportation network, although they may serve as important connections for pedestrians and community bicyclists who generally travel at lower speeds. They generally do not have transit service and truck traffic may be restricted on these streets.

EXAMPLE STREETS:

- Most streets in post-War neighborhoods.

ANTICIPATED AND DESIRED USES:

- Community interactions in the public rights of way such as neighbors visiting.
- Recreational use of the street such as walking or running, learning to ride a bicycle, or shared use of the street as an extension of recreational space.
- Community low-stress non-motorized travel by foot or bicycle.
- Short distance (last block) vehicle travel.

PRIORITY USERS

- Highly vulnerable pedestrians including young children, seniors, persons with disabilities and pedestrians of all abilities.

DESIGN OBJECTIVES

- Maintain low vehicle volumes and low travel speeds.
- Design streets as linear parks and open space.
- Provide access to homes and residences.

TYPICAL DESIGN FEATURES AND TREATMENTS

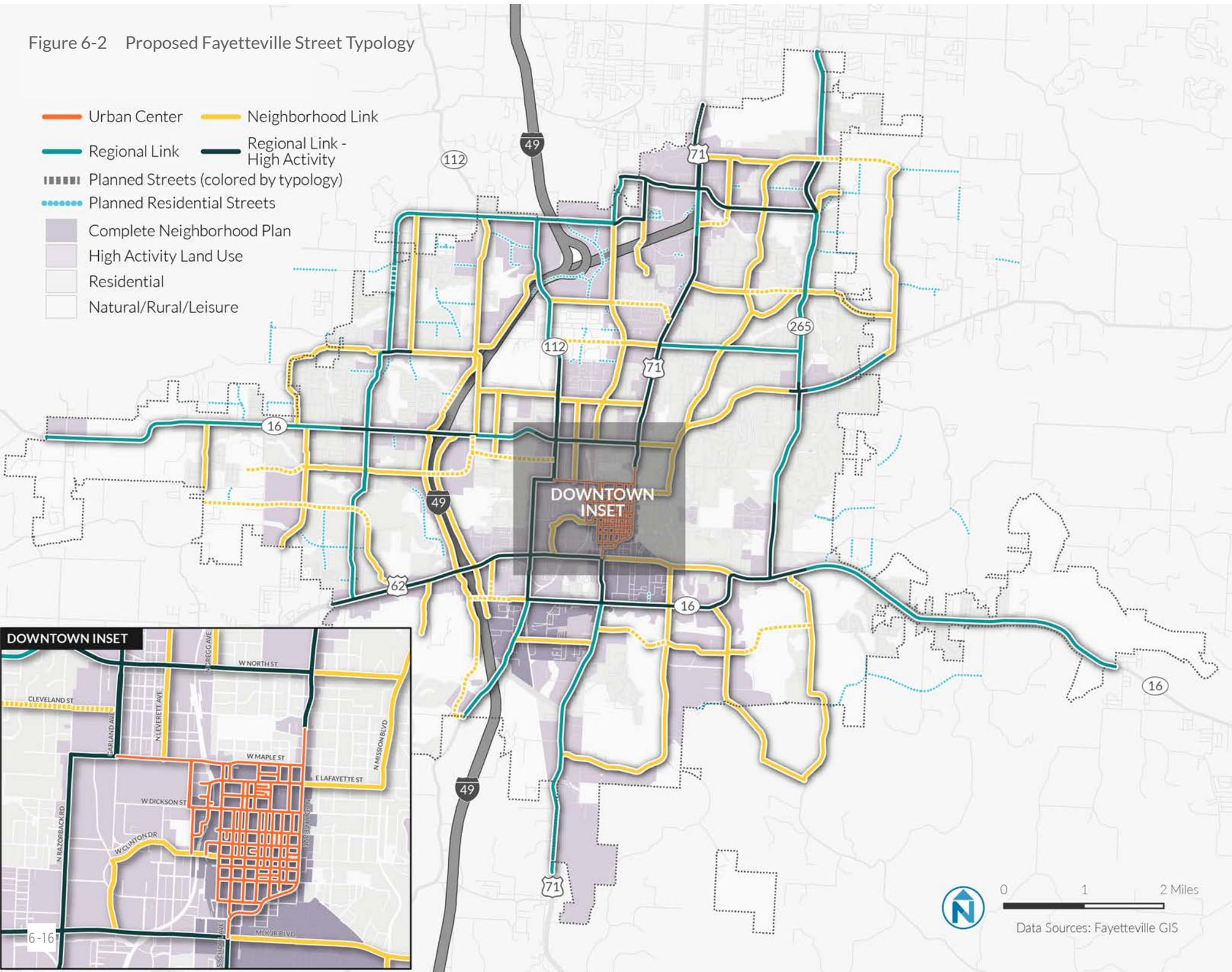
- Narrow street travel ways. Streets are most commonly bi-directional, with no centerline provided. Streets may be a “yield street” where vehicles must pull to the side and slow or stop to enable an approaching vehicle to pass. Two-way yield streets are appropriate in residential environments where drivers are expected to travel at low speeds, and where on-street parking utilization ranges from 40-60%, allowing motorists to move into the parking lane to allow oncoming vehicles to pass². To accommodate emergency services, some jurisdictions allow new yield streets only in areas with high street connectivity, fully sprinklered buildings, frequent fire hydrants, and/or designated locations for fire trucks to use their stabilizers.
- The limited connectivity and narrow travel lanes generally manage speeds and deter non-local traffic; however in some cases active speed control or traffic deterrents may be needed.

- Intersections may be stop-controlled, yield-controlled or uncontrolled. Intersections may have diverters, neck downs, or other traffic calming treatments.
- Crosswalks generally are not marked. Pedestrians may generally comfortably cross the street at any point along its length.
- Buildings may be accessed through rear alleys, although streets may have multiple access points and driveways.
- Adequate growing space to support large street trees and dense canopies. Substantial lawn panels and parkways.
- Sidewalks on both sides of the street are preferred (6' is typical) reflecting the generally lower pedestrian volumes in these areas.
- On-street parking is generally provided on one or both sides of the street.
- Separate bicycle facilities are generally not provided. Vehicle speeds and volumes are low enough to provide safe and low-stress bicycle accommodation.
- For streets on the low stress bicycle network, traffic calming, diverters, wayfinding and other treatments should be provide

² <https://nacto.org/publication/urban-street-design-guide/streets/yield-street/>

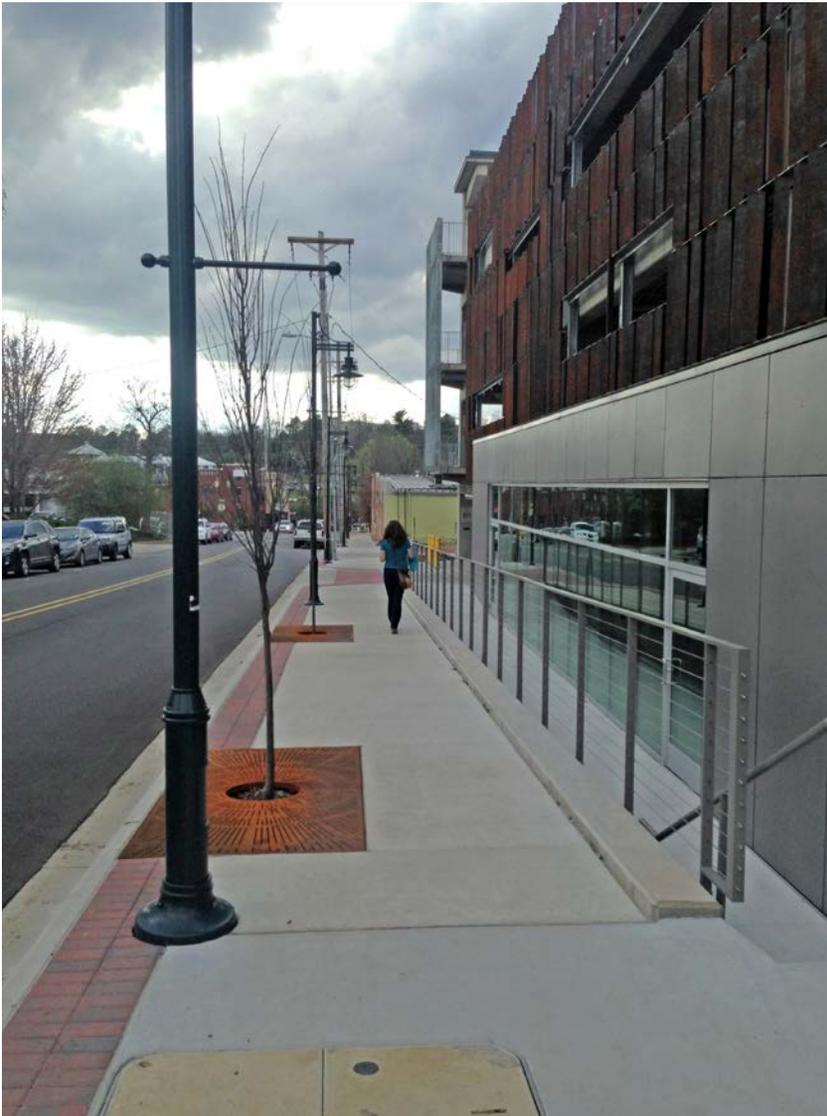
Figure 6-2 Proposed Fayetteville Street Typology

- Urban Center
- Neighborhood Link
- Regional Link
- Regional Link - High Activity
- Planned Streets (colored by typology)
- ⋯ Planned Residential Streets
- Complete Neighborhood Plan
- High Activity Land Use
- Residential
- Natural/Rural/Leisure



STREET ELEMENTS

STREET ZONES



SIDEWALK ZONES

The Sidewalk zone spans from the building façade to the curbside and is the accessible pathway for pedestrians. It has three different subzones:

- Frontage zone: area adjacent to building edges that provides a buffer for pedestrians from opening doors and architectural elements.
- Pedestrian zone: area reserved for pedestrian travel.
- Greenspace/Furnishing zone: area where objects ranging from green strips to benches are placed to provide a buffer for pedestrians from the adjacent roadway.



ROADWAY

The roadway or cartway is the pathway for motorized and non-motorized vehicles, and it includes up to four different subzones, the combination of which depends on the street type and the modes they serve.

- Gutter space, located at both edges of the roadway adjacent to the sidewalk zone.
- Flex Lane: space adjacent to the gutter space designed to be used as parking/parklet lane, bike lane, curb extension, or painted strip. Often there are more than one of these elements contiguous in the flex lane, such as a parking lane and a bike lane.
- Travel Lane: dedicated space to be used by motorized vehicles running in the same direction
- Median/Turning Lane/Pedestrian Island: painted or physical lane separating general through traffic lanes, used for turning traffic, to physically separate through traffic lanes and or to provide a pedestrian refuge for long crossing points in wide streets.

Figure 6-3 Street Elements Features

Street Typology	Most common adjacent Community Forms	Sidewalk Features			Roadway Features				
		Façade Zone	Furnishing Zone	Pedestrian Zone	Crossings	Bicycle	On-Street Parking	Travel lanes	Transit
Urban Center	<ul style="list-style-type: none"> Commercial corridors Corridors with "Main Street" feel 	<ul style="list-style-type: none"> At least 2' wide 	<ul style="list-style-type: none"> At least 4' wide Street trees (Tree Grate) Landscaping Bicycle parking Benches Refuse container at every corner Pedestrian-scale lighting Outdoor seating Bus shelters 	<ul style="list-style-type: none"> Continuous Sidewalks on both sides of street Minimize curb cuts At least 10' wide, 8' under exceptional conditions Curb extensions at wide roadways Curb extensions at conflict intersections Pedestrian ramps with warning strips 	<ul style="list-style-type: none"> At every intersection Midblock on blocks longer than 500' High visible crosswalks Countdown and audible pedestrian signals 	<ul style="list-style-type: none"> Bike facilities considered where appropriate according to the NACTO Contextual guidance for selecting all ages & abilities bikeways 	<ul style="list-style-type: none"> High priority. Generally metered 	<ul style="list-style-type: none"> 1 lanes each direction (streets can be unidirectional) 10'-11' lanes 12' for bus lanes 20-30 mph Road diet appropriate 	<ul style="list-style-type: none"> Bus shelters
Regional High-Activity Link	<ul style="list-style-type: none"> Mixed-Use Commercial Industrial 	<ul style="list-style-type: none"> At least 2' wide 	<ul style="list-style-type: none"> At least 6' wide Bicycle parking Street trees Landscaping Pedestrian lighting Bus shelters 	<ul style="list-style-type: none"> Continuous Sidewalks on both sides of street Limited curb cuts At least 10' wide sidewalks 	<ul style="list-style-type: none"> Crosswalks at all intersections High visibility crosswalks and signage near schools Automated countdown pedestrian signals 	<ul style="list-style-type: none"> Minimum 6' wide protected bike lanes Separated bicycle path 	<ul style="list-style-type: none"> Desired, but context sensitive. On bike routes, lower priority than bike facility. 	<ul style="list-style-type: none"> 2-4 lanes each direction 11'-12' lanes 30-40 mph Road diet may be appropriate depending on traffic conditions 	<ul style="list-style-type: none"> Well-marked bus stops Shelters at busier stops
Regional Link	<ul style="list-style-type: none"> Low density residential Industrial Open spaces Rural 	<ul style="list-style-type: none"> At least 2' wide 	<ul style="list-style-type: none"> At least 6' wide Street trees Landscaping Pedestrian-scale lighting Well-marked bus stops 	<ul style="list-style-type: none"> Continuous Sidewalks on both sides of street Limited curb cuts At least 8' wide 	<ul style="list-style-type: none"> Same as Regional High-Activity Link 	<ul style="list-style-type: none"> Same as Regional High-Activity Link 	<ul style="list-style-type: none"> Desired, but context sensitive. On bike routes, lower priority than bike facility. 	<ul style="list-style-type: none"> Same as Regional High-Activity Link 	<ul style="list-style-type: none"> Same as Regional High-Activity Link
Neighborhood Link	<ul style="list-style-type: none"> Residential Mixed use/ neighborhood commercial 	<ul style="list-style-type: none"> At least 2' wide 	<ul style="list-style-type: none"> At least 6' wide Landscaping where appropriate Street trees Well-marked bus stops 	<ul style="list-style-type: none"> Continuous Sidewalks on both sides of street Limited curb cuts At least 6' wide 	<ul style="list-style-type: none"> Same as Regional High-Activity Link 	<ul style="list-style-type: none"> Minimum 5' wide buffered or protected bike lanes 	<ul style="list-style-type: none"> Desired, but context sensitive 	<ul style="list-style-type: none"> One per direction 15-25 mph 	<ul style="list-style-type: none"> Well-marked bus stops
Residential Link	<ul style="list-style-type: none"> Residential 	<ul style="list-style-type: none"> At least 2' wide 	<ul style="list-style-type: none"> At least 6' wide Landscaping where appropriate Street trees Well-marked bus stops 	<ul style="list-style-type: none"> Sidewalks on both sides of street. Sidewalks on one side are accepted under exceptional conditions. At least 6' wide 	<ul style="list-style-type: none"> Sidewalks should be provided adjacent to schools and parks 	<ul style="list-style-type: none"> Signed with sharrows bicycle boulevard where designated as part of the Active Transportation Network 	<ul style="list-style-type: none"> Desired, but context sensitive 	<ul style="list-style-type: none"> One per direction (streets can be unidirectional) 15 mph ideal to support preventing fatalities from crashes in city streets 	<ul style="list-style-type: none"> None

STREET CROSS-SECTIONS BY TYPE

This chapter presents the street cross-sections by street type, with the required and allowed widths of each of the elements of each zone. Widths indicated as “Required” are requested under standard conditions, while widths indicated as “Allowed” are acceptable only under exceptional conditions, such as in the areas designated under the Hilltop-Hillside District in the Master Street Plan 2011 due to topography constraints.

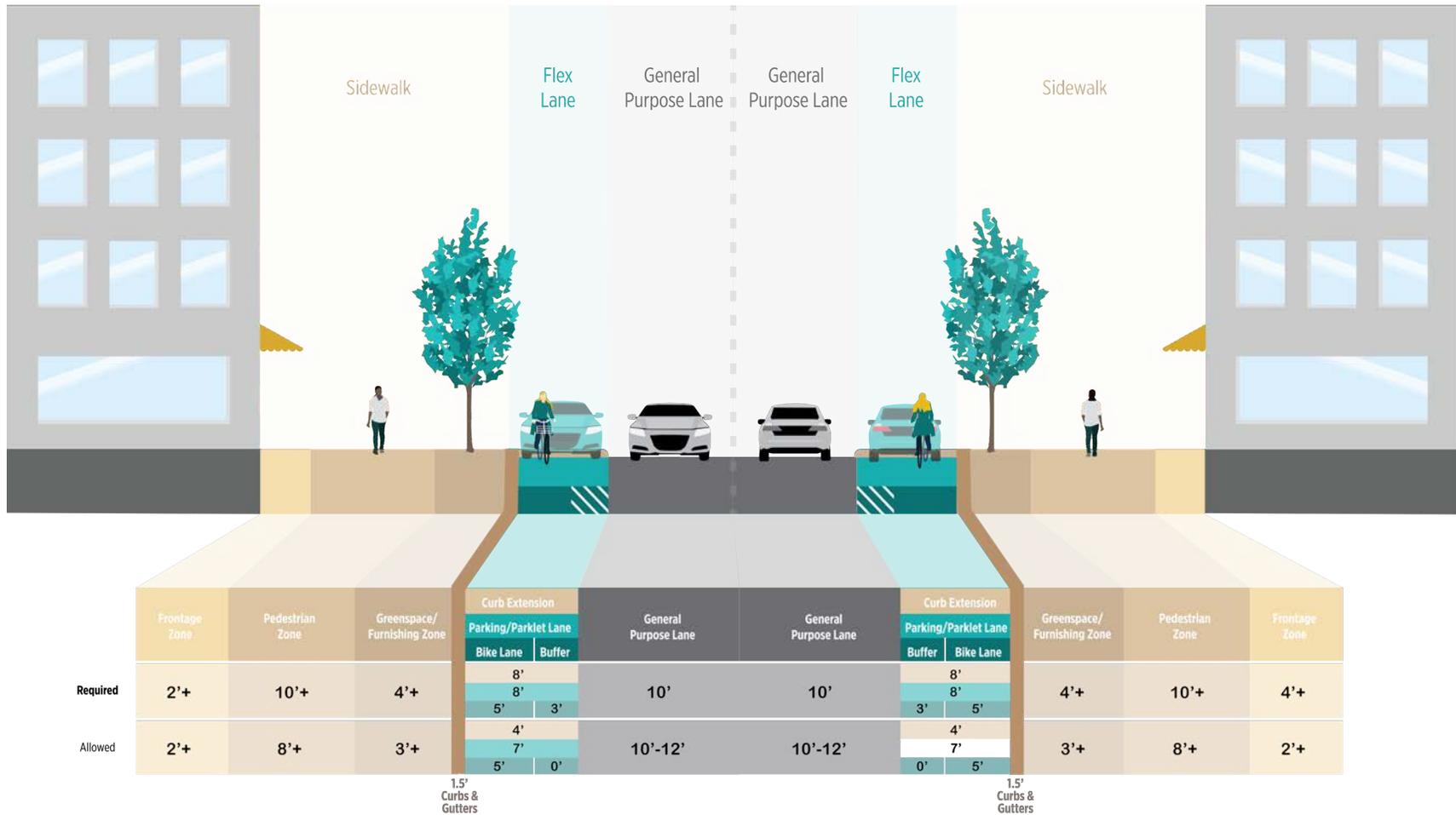
Other considerations to account for when looking at the required widths are as follows:

- One foot of the gutter space can be accounted to the Flex Lane if there is not sufficient space for the indicated minimum widths. As an example, a parking lane should be 8’ minimum, but 7’ would suffice if placed adjacent to the gutter. Similarly, a bike lane could be 4’ instead of 5’ minimum required if located in the same place, and outside driving lanes can be 10’ pavement width.
- When wider streets are forced by the fire code, it is recommended to keep the indicated travel lanes widths per cross-sections clearly painted, and use painted strip zones in the flex-lane or provide a rolled curb to the transition to the sidewalks zone if necessary.



URBAN CENTER

Figure 6-4 Typical Cross Section Characteristics of Urban Center Street Type

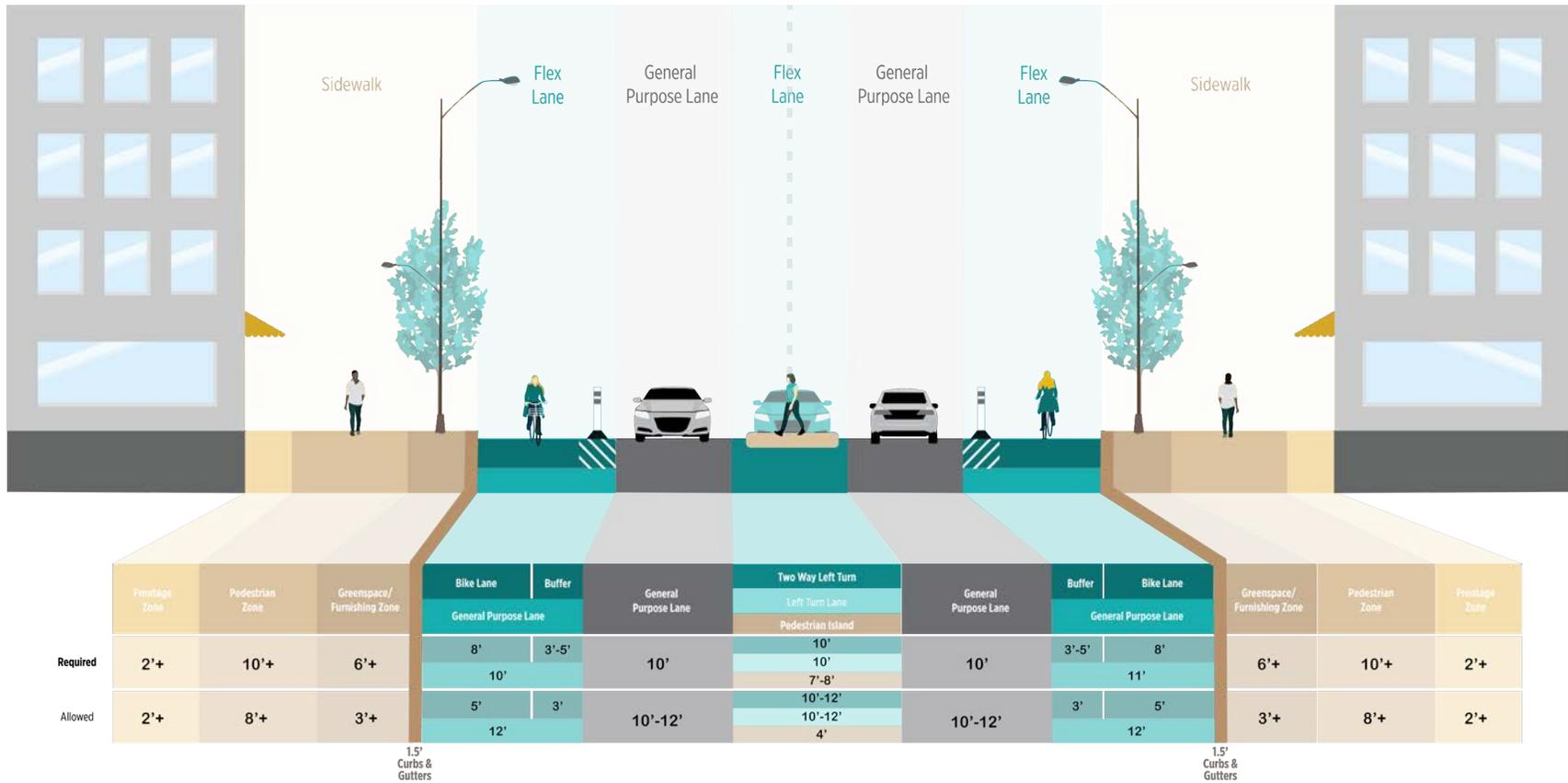


Additional Considerations:

- A bike lane is recommended in Urban Center Streets with >3,000 daily traffic volumes and speed limit > 25 mph, and separation between bike lane striping and parking lane boundary is required if placed adjacent to a parking lane.
- Bus stops can be placed in curb extensions in the Flex Lane.

REGIONAL HIGH-ACTIVITY LINK

Figure 6-5 Typical Cross Section Characteristics of Regional High-Activity Link Street Type

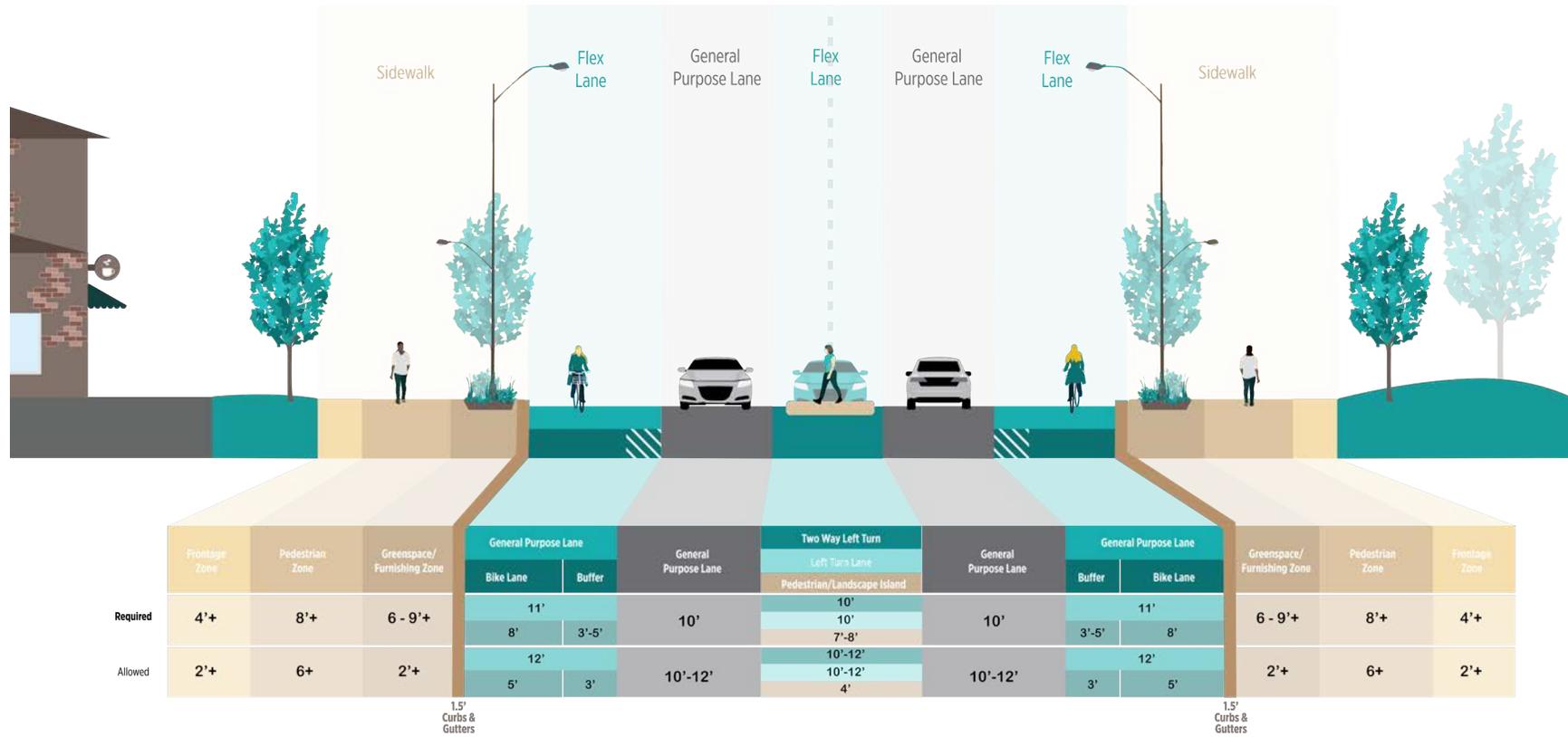


Additional Considerations:

- If the flex lane is needed for general traffic, it is recommended to accommodate bicyclists in a separated path, such as a shared-use path or a trail.

REGIONAL LINK

Figure 6-6 Typical Cross Section Characteristics of Regional Link Street Type



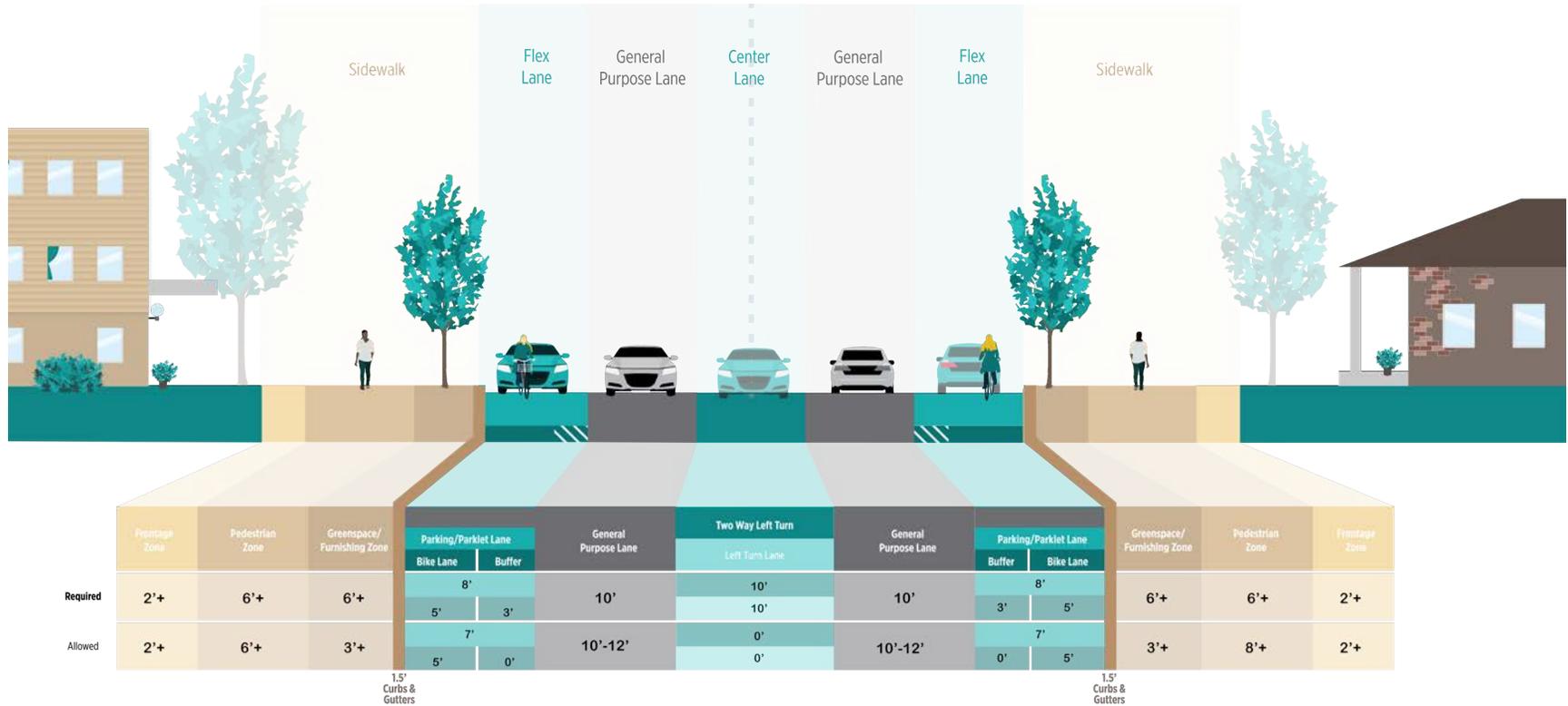
Additional Considerations:

- If the flex lane is needed for general traffic, it is recommended to accommodate bicyclists in a separated path, such as a shared-use path or a trail.

STREET PLAN

NEIGHBORHOOD LINK

Figure 6-7 Typical Cross Section Characteristics of Neighborhood Link Street Type



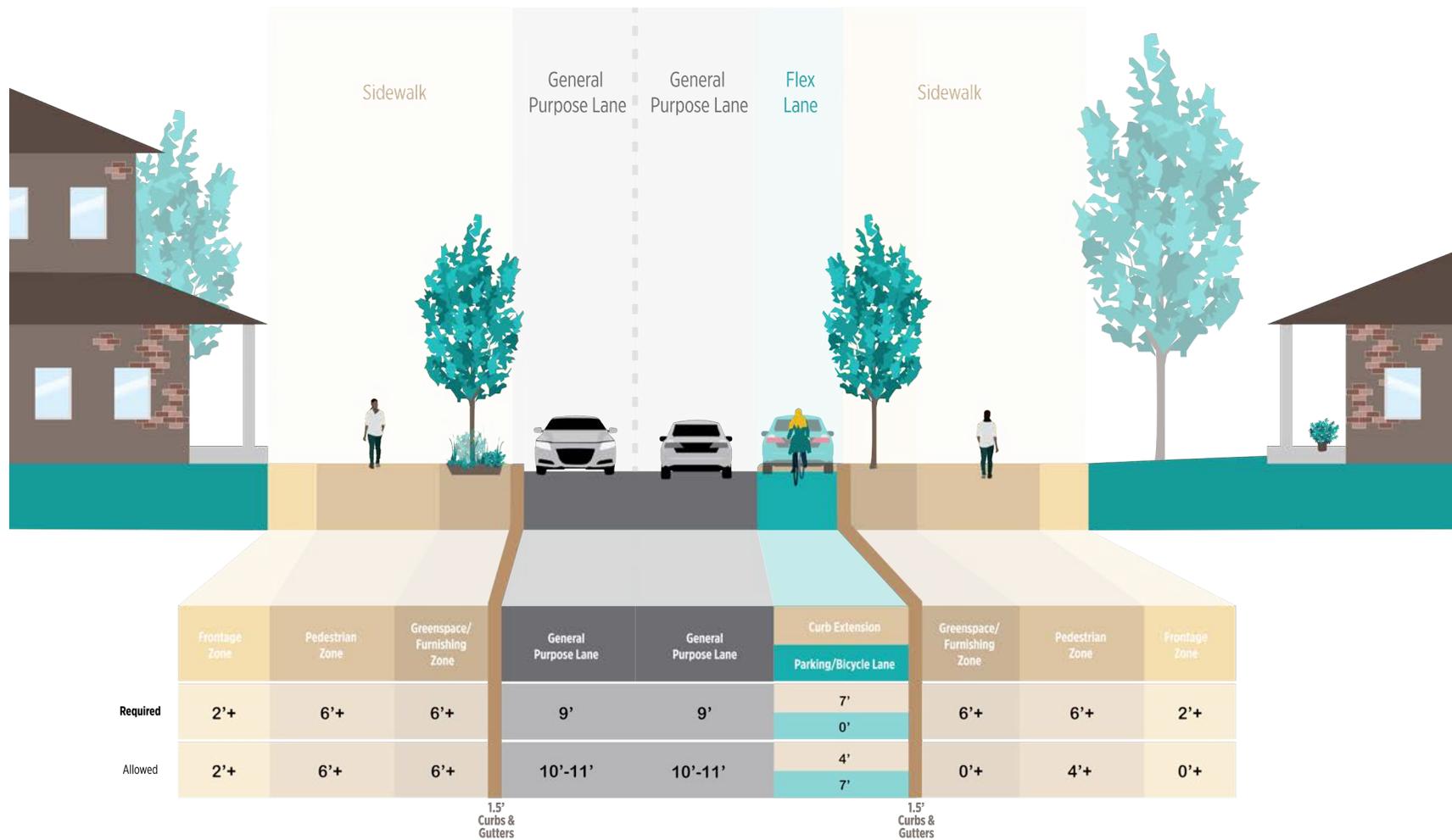
Additional Considerations:

- A bike lane is recommended in Neighborhood Link Streets with >3,000 daily traffic volumes and speed limit > 25 mph, and separation between bike lane striping and parking lane boundary is required if placed adjacent to a parking lane.*

* <https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/conventional-bike-lanes/>

RESIDENTIAL LINK

Figure 6-8 Typical Cross Section Characteristics of Residential Link Street Type



TRAFFIC CALMING TOOLKIT

The following Traffic Calming Toolkit is not meant to be prescriptive, but rather as a menu of possible design treatments. As always, engineering judgment should be used within the context of the Fayetteville street network.

The table below provides a list of street design elements, the street types where they are applicable, and relative costs. For more detail, see the NACTO guidance on speed management at <https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/speed-management/>.



Figure 6-9 Traffic Calming Treatments

Treatment	What is it?	Where is it effective?	Applicable Street Types	Cost ¹	Example
Traffic cameras	Cameras that use radar to identify and photograph drivers exceeding the speed limit or running red lights	They are usually implemented on major arterials with a history of crashes	<ul style="list-style-type: none"> Regional High-Activity Links Regional Links Neighborhood Links 	\$\$	
Radar speed signs	Signs that detect and displays drivers' speeds as they pass	They are best used on busy streets where drivers are frequently observed driving above the speed limit	<ul style="list-style-type: none"> Regional High-Activity Links Regional Links Neighborhood Links 	\$	
Raised crosswalks	Extension of the sidewalk across the road and bringing motor vehicles to the pedestrian level	They are best used to reinforce the transition to a lower speed and residential	<ul style="list-style-type: none"> Residential Links Urban Center 	\$	
Speed cushions	Raised areas of the street have flat wheel cutouts spaced so that larger vehicles can pass through them	They are best used on busier streets where emergency vehicles operate frequently	<ul style="list-style-type: none"> Urban Center 	\$	
Pavement treatments	Textured or colored areas of pavement	They are best used in areas with substantial pedestrian activity	<ul style="list-style-type: none"> Urban Center 	\$\$	

\$ = Less than \$10,000
 \$\$ = \$10,000 - \$100,000
 \$\$\$ = Over \$100,000

STREET PLAN

Treatment	What is it?	Where is it effective?	Applicable Street Types	Cost ¹	Example
Lane reduction	Removing one or more drive lanes from use	Lane reduction is recommended for busier multilane streets with wide lanes, excess capacity, or large numbers of bicycles and pedestrians	<ul style="list-style-type: none"> Regional High-Activity Links Regional Links 	\$	
Width reduction	Narrowing existing drive lanes	Width reduction is recommended on narrower streets where lane removal is not possible	<ul style="list-style-type: none"> Urban Center Residential Links Neighborhood Links 	\$\$	
Traffic diverters	Raised areas of concrete placed in a street to slow, redirect, or block vehicles	They are primarily used at intersections and are recommended on neighborhood streets experiencing speeding or shortcutting	<ul style="list-style-type: none"> Urban Center Residential Links 	\$\$	
Traffic circles	Central islands installed in intersections to direct traffic flow around an intersection, rather than through it	They are used on all types of streets to slow traffic proceeding through an intersection and reduce collisions	<ul style="list-style-type: none"> Urban Center Residential Links 	\$\$	

\$ = Less than \$10,000
 \$\$ = \$10,000 - \$100,000
 \$\$\$ = Over \$100,000



GREEN INFRASTRUCTURE

Green infrastructure is a planning and design approach to managing stormwater, the urban heat island effect, health, and air quality based on ecosystem network models. A flooded street is not a complete street. During storm events, people walking, bicycling, and using transit are the first users to encounter barriers and lose access to the street, and are the last to regain it. Green street design tools, which integrate stormwater control and management within the right-of-way, are a critical component of complete street design, ensuring the street remains usable and safe for all people during storm events, regardless of mode.

Greenery and trees—especially those that introduce shade canopy—make the walking environment more inviting and

pleasant by reducing temperature, attenuating noise, and improving air quality³.

- Green Infrastructure can be integrated into transit facilities, including boarding bulbs and islands, to improve passenger comfort and natural drainage near stops.
- Green stormwater infrastructure can be incorporated alongside bikeways to improve drainage and increase bicycling comfort and access during and after storms of any size.
- Permeable pavements can be implemented on bikeways and raised cycle tracks to reduce the period of time required for pavement to dry.

³ <https://nacto.org/publication/urban-street-stormwater-guide/streets-are-ecosystems/complete-streets-green-streets/>

STREET PLAN

- Planters or vegetation may be incorporated into protected bikeway buffer elements to increase rider comfort and reduce stress.
- Green infrastructure facilities that capture runoff and reduce flooding and ponding promote safer driving conditions, but they need to be visible to the driver

Economic performance is tied to the comfort and attractiveness of streets—urban environments with green expressions, from planters to street trees to stormwater infrastructure, perform better than streets without green improvements.

Figure 6-10 Curb Extension Bioswale







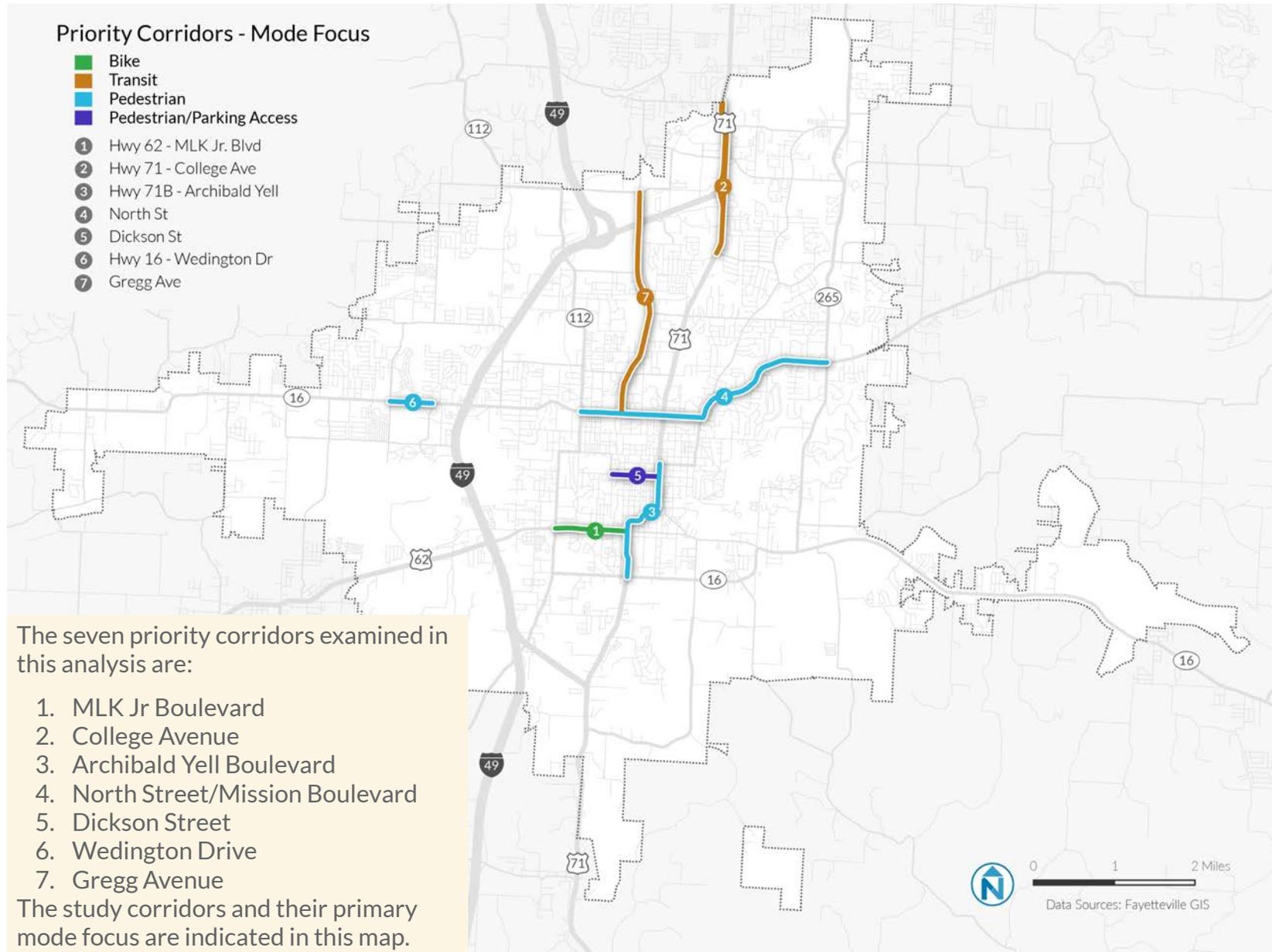
7 CORRIDORS ANALYSIS

OVERVIEW

This chapter identifies and evaluates seven corridors of Fayetteville's Road Network, selected based on a wide range of criteria, including the following:

- Concerns collected from the residents during the Public Workshops held in May 2016
- Findings of the existing conditions analysis of citywide transportation networks, including:
 - Oversized streets (road geometry too wide for the current traffic demand),
 - Traffic collisions concentration,
 - Traffic congestion,
 - Gaps in the Active Transportation network, and
 - Streets with physical or demand characteristics not suited for classification in the Active Transportation Plan.
- Input from Fayetteville City staff

Figure 7-1 Priority Corridors





TRAFFIC ANALYSIS

As part of the corridor analysis, traffic analysis was conducted along the corridors, with the exception of Gregg Avenue corridor. Components of this analysis included a site visit, development of existing and future traffic volumes, operational analysis, and recommendations for improvements. The operational analysis was conducted in selected intersections along each of the corridors for the following scenarios:

- Current conditions (2017)
- No build-Scenario: Projected traffic volumes (2037) with no geometric (roadway) improvements
- Build scenario: Projected traffic volumes (2037) with roadway improvements.

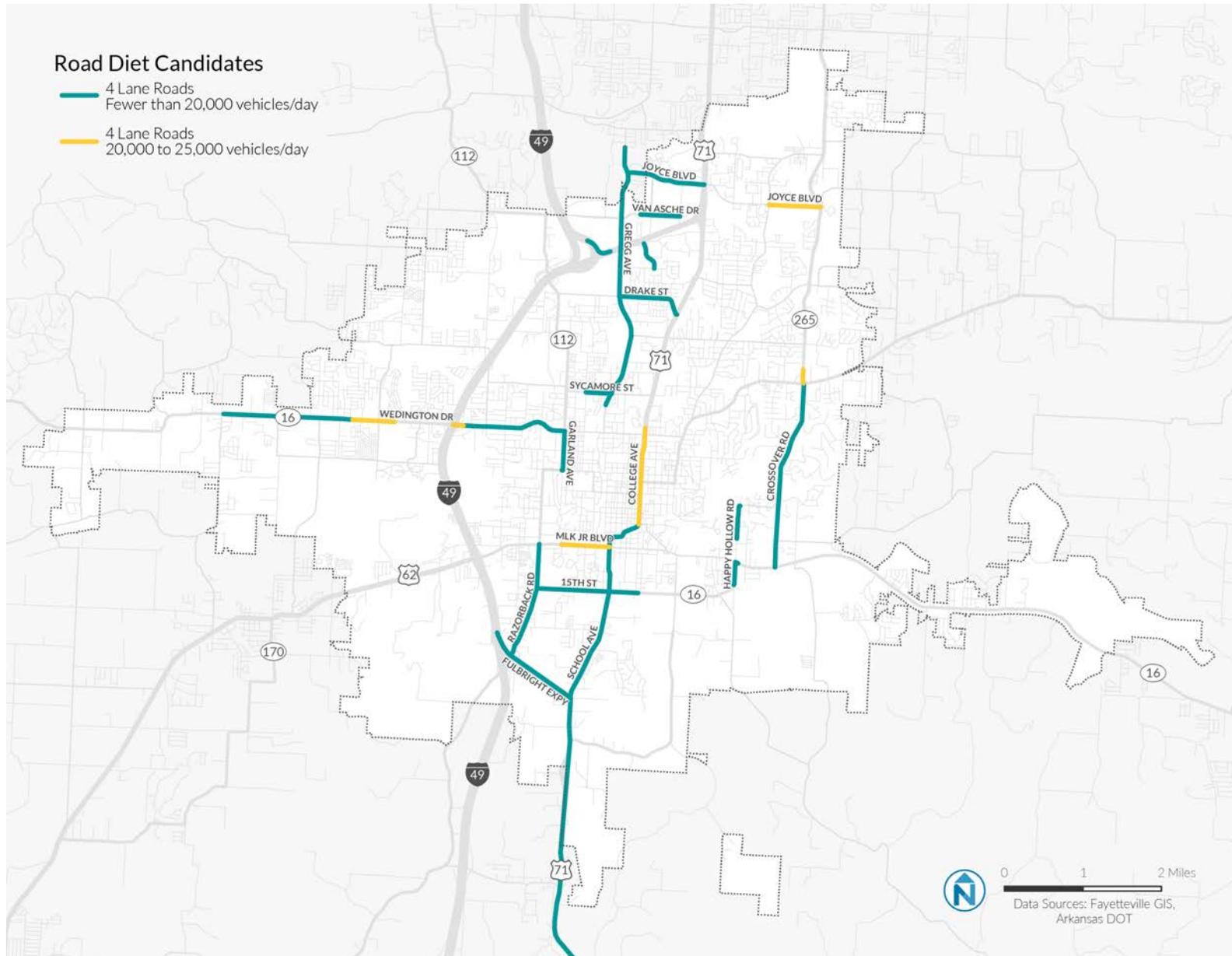
Analyses of these intersections along the six corridors were evaluated in *Synchro* and its companion software *SimTraffic* and are summarized below. For a detailed description of the methodology and results per corridor, see Appendix D.

For Gregg Avenue, a trade-off analysis was developed to understand the relative priorities for transit, walking, and biking within this corridor as well as its primary parallel routes.

Following FHWA guidance, road diets are only considered as potential improvements where average daily traffic is 20,000 vehicles per day or less and there are currently four or more traffic lanes.



Figure 7-2 Road Diet Candidates Based on Current Traffic Volumes



CORRIDOR 1

MLK JR BOULEVARD (HIGHWAY 62)

The study section of MLK Jr Boulevard spans from Razorback Road to the west, to Archibald Yell/School Avenue to the east. It currently separates the main campus area of the University of Arkansas, as well as the downtown business and entertainment districts on the north, from residential areas characterized by apartments that serve primarily as off-campus housing for UA students on the south. The city's only public high school fronts this section of MLK Jr Boulevard, contributing high volume of both vehicles and pedestrians at peak times. This corridor features sidewalks of varying conditions and availability on either side of the street and crossing opportunities are spread far apart, thereby limiting pedestrian access. It also experiences a high density of traffic collisions; and although there have not been any reported deaths or serious injuries, there have been collisions involving pedestrians at each of the intersections.¹

¹ A particular hot spot of collisions between vehicles and objects is the shopping plaza south of MLK Jr from Razorback Road to Stadium Dr.

CORRIDORS ANALYSIS

This corridor carries 26,000-30,000 vehicles daily on average and although some of the approaches in the intersection show congestion during peak hours, overall level of service during this time are acceptable, with the exception of the intersection of MLK Jr Boulevard at Razorback Road, where congestion happens during PM Peak. A similar condition occurs in the southbound approach

of the intersection of MLK Jr Boulevard at School Avenue during the same time. With a 2.5% annual growth of traffic volumes, it is expected that the entire corridor will operate at or over capacity by 2037 unless traffic is diverted to other routes or trips are shifted to other transportation modes. (See Appendix C for traffic engineering analysis)

Figure 7-3 Roadway Characteristics of MLK Jr. Boulevard

Roadway Classification	Distance between signalized pedestrian crossings	# of Lanes	Posted Speed (mph)	AADT (vehicles/day)	Land Use(s)
Principal Arterial	1,500 ft	4-5	35	26,000-30,000	Public Facilities/Institutions City Neighborhood Plan

Figure 7-4 MLK Jr. Boulevard Recommended Improvements

Phase 1 (near-term)	Phase 2 (upon diversion of traffic to other routes)
<ul style="list-style-type: none"> • Access Management Plan (consolidate curb cuts) • Convert two-way left turn lane into a median with dedicated left-turn pockets • Improve pedestrian experience by adding safe crossings across driveway access to adjacent businesses • Add pedestrian crossing opportunities: new signal at Government Avenue and new crossing between Lot 56 of U of A and shopping plaza • Connect the shared use trail south of MLK Jr to the larger trail network (the connection of Tsa La Gi Trail across Razorback Road is included in the 2017-2022 Trail Construction Plan). 	<ul style="list-style-type: none"> • Reduce vehicle travel lanes from 5 to 3 • Widen sidewalks • Create a “South” Transit Hub

MLK JR. BOULEVARD ACCESS MANAGEMENT PLAN - PHASE I



CORRIDORS ANALYSIS

MLK JR. BOULEVARD SIGNALIZATION – PHASE I



CORRIDOR 2

NORTH COLLEGE AVENUE (HIGHWAY 71)

This study segment of College Avenue spans from E Rolling Hills Drive to Zion Road, carries around 35,000 vehicles daily and has 5 to 8 lanes in both directions. The study segment is characterized by high traffic at peak hours, high crash density at certain intersections, and an absence of bicycle/pedestrian facilities at most intersections, with the exception of the Mud Creek Trail underpass. Between 2011 and 2015, this segment of roadway recorded a significant number of collisions, both at the intersections and at nearby shopping and businesses plazas, and a fatality involving a pedestrian was reported at Shepherd Ln in 2013.

While most of this corridor currently operates at acceptable level of service during peak hours, some congestion frequently occurs at the east and west approaches of the Zion Road and Rolling Hills Drive intersections during the PM peak periods, with levels of service below acceptable levels (F). The anticipated traffic annual growth factor for this corridor is 1.30%. All of the Corridor 2 intersections will degrade to an unacceptable operation conditions by 2037. (See Appendix C for traffic engineering analysis)

RECOMMENDED IMPROVEMENTS

The recommended improvements are intended to reconfigure College Avenue to accommodate other transportation modes and to create a better entrance to the city. The proposed near-term improvements consist of reallocating the space from Shiloh Drive to the eastern edge of College Avenue to accommodate all transportation modes, in addition to adding slip lanes to improve access management to adjacent properties.

Long-term improvements in this area would encourage the redistribution of traffic throughout the network and, more importantly, would reduce traffic along College Avenue by the Mall by approximately 10%. Distributing traffic through an expanded grid network in this area would reduce the

need for costly projects such as further widening of the roadway, while also providing new connectivity through the local network, rather than via new flyovers.

While the near-term improvements require little expense or construction, additional analysis will be necessary along with coordination with ARDOT, particularly to evaluate the weave distance for left-turning vehicles exiting the highway segment. Both the mid-term and long-term concepts require additional study and outreach to determine whether and when to explore these proposed changes.

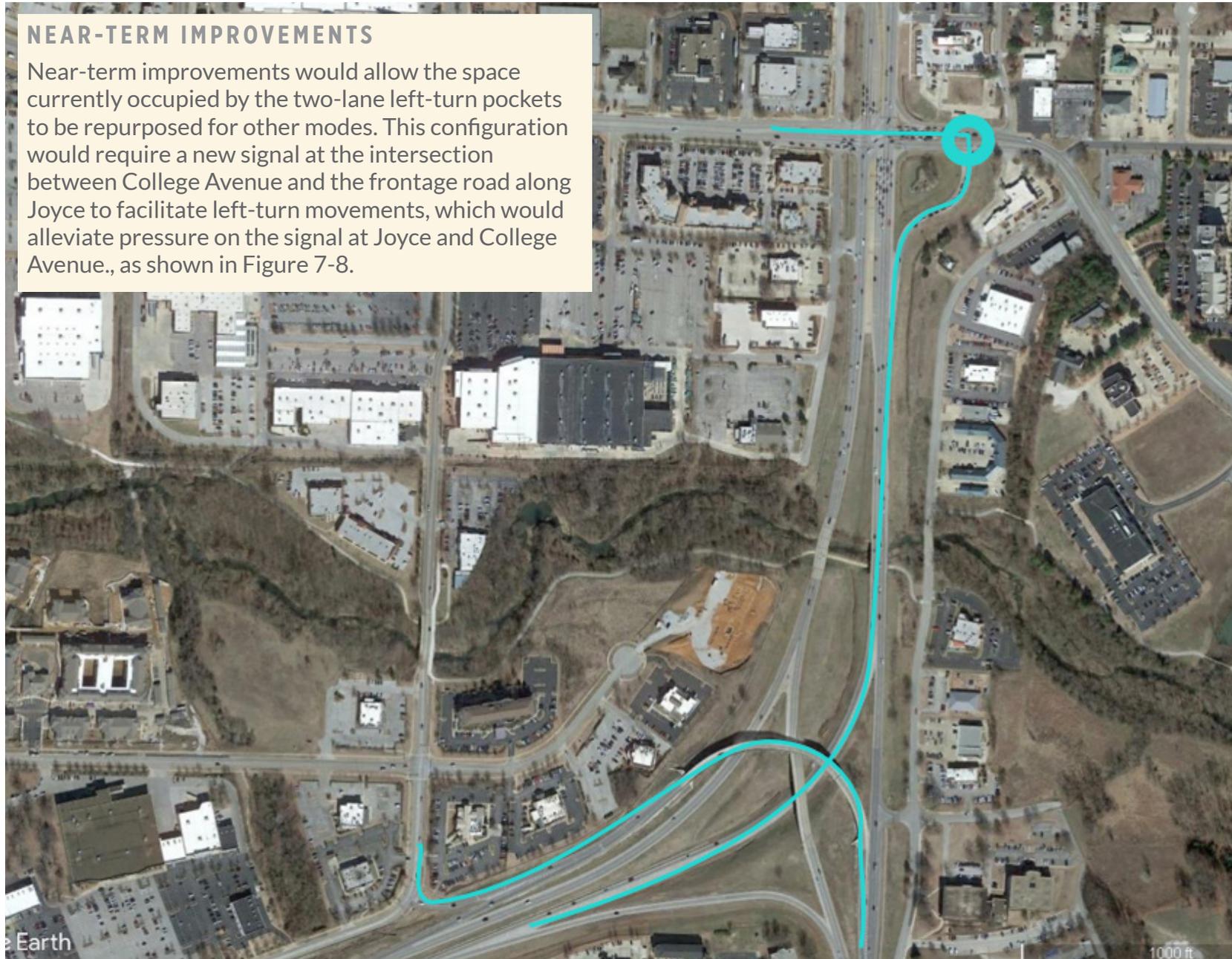
Figure 7-6 Roadway Characteristics of College Avenue

Roadway Classification	Distance between signalized pedestrian crossings	# of Lanes	Posted Speed (mph)	AADT (vehicles/day)	Land Use(s)
Principal Arterial	4,800 ft	5-8	40	32,000-37,000	Urban Center City Neighborhood Plan

Figure 7-7 North College Avenue (Highway 71) – Road improvements

Near/Medium-Term
<ul style="list-style-type: none"> Remove left turns on Joyce Boulevard and have NB traffic using the exit to Joyce and left turn there Reconfigure the segment into a Boulevard with slip lanes to improve access management Accommodate parking and transit as needed Extend sidewalk widths

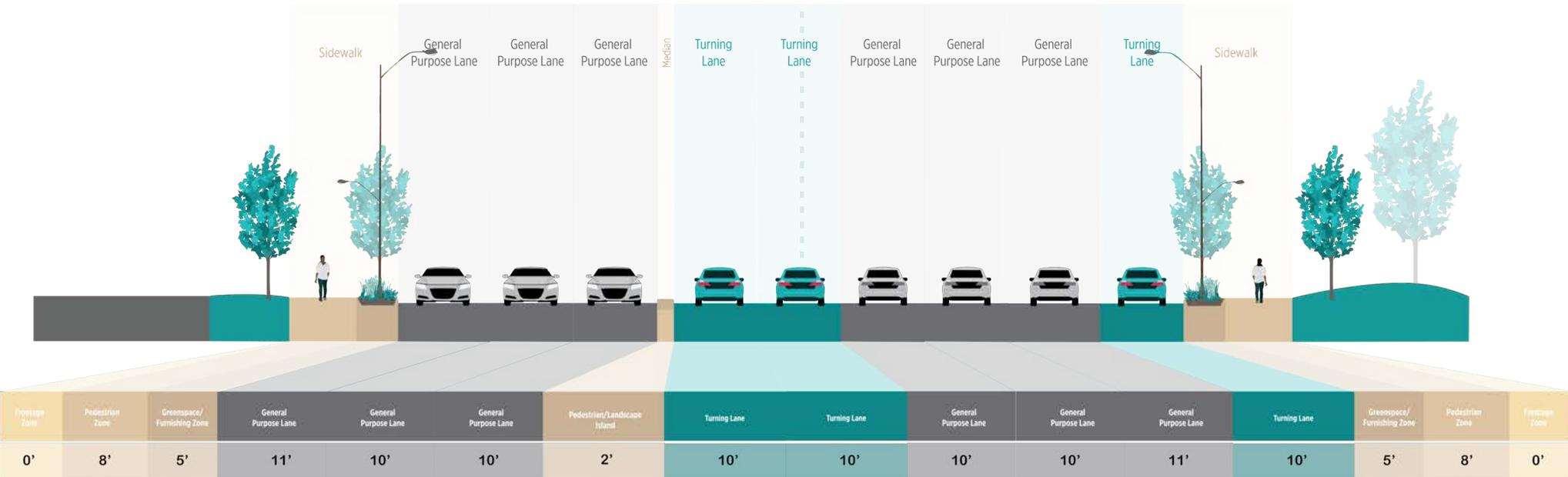
Figure 7-8 N College Avenue (Highway 71) Near-Term Signal Improvements



MEDIUM-TERM IMPROVEMENTS

Further redistribution of space in the medium term could facilitate a boulevard cross-section as indicated below, with slip lanes that would provide better vehicular access management to the adjacent parcels and space for a more inviting walking environment, as well as parking, transit or bike lanes.

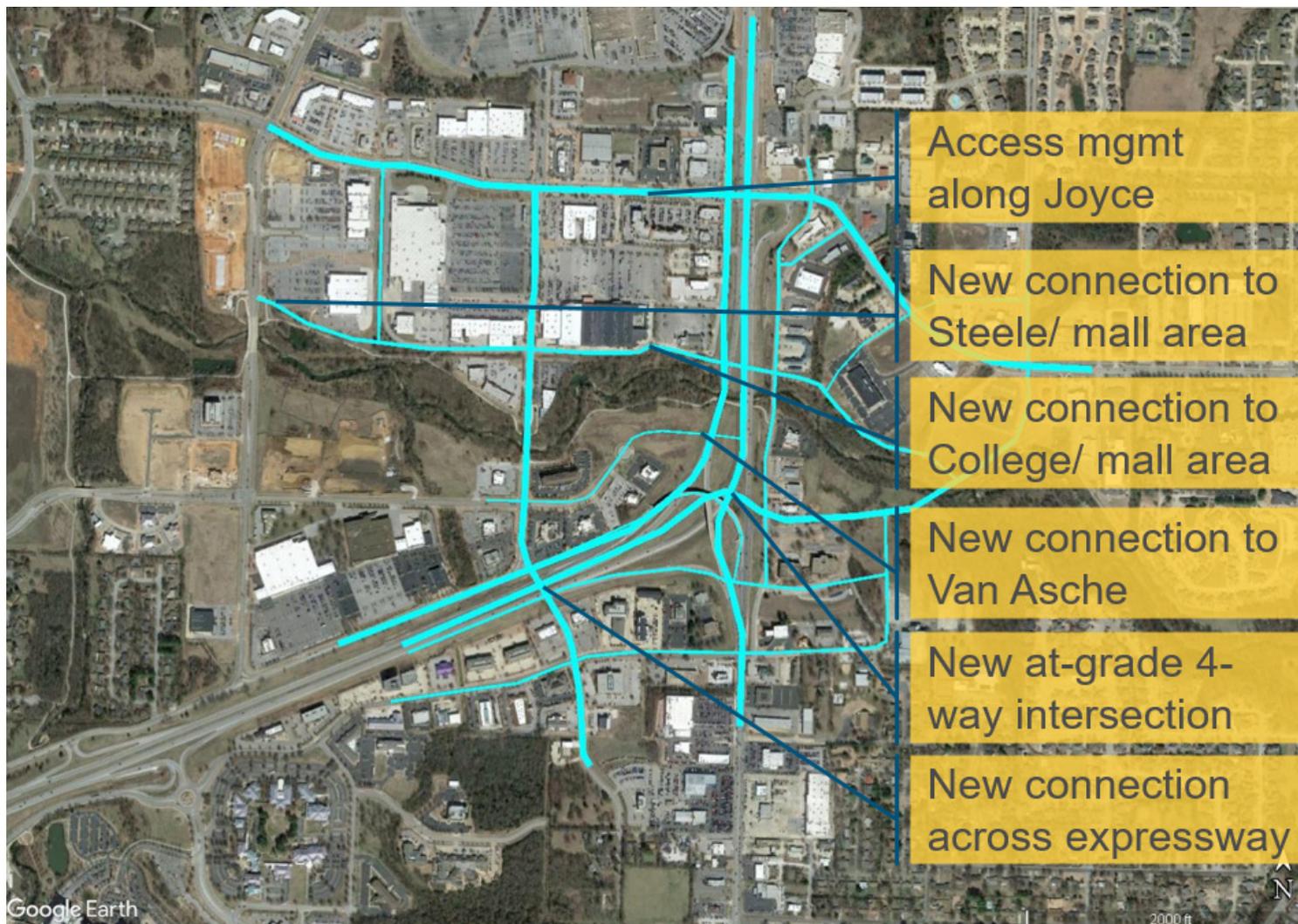
Figure 7-9 N College Avenue (Highway 71) Proposed Cross Section - Boulevard



Long-Term

- Create a new grid connecting streets East and West of College, and North and South of Fulbright Expy to distribute traffic
- Improve access to the Mall area

Figure 7-10 N College Avenue (Highway 71) Long-Term Improvements





CORRIDOR 3

ARCHIBALD YELL

The study segment of Corridor 3 encompasses the entirety of Archibald Yell Boulevard, as well as portions of College Avenue and School Street. This segment spans from Dickson Street on the north, to 15th Street on the South. The segment is characterized by heavy through-traffic and an AADT ranging from 12,000 to 26,000 vehicles per day, with 4 to 5 lanes in both directions. In fact, at the PM peak hour 75% of vehicles travelling south on College Avenue from Lafayette Street to Rock Street continue through Archibald Yell and School Avenue down to MLK. The northbound travel pattern is similar to the southbound pattern, although the northbound traffic volumes are 10% lower.

Sidewalks exist at the back of the curb on the north side of Archibald Yell but there are no crossings for pedestrians along the entirety of this segment. The nearest crosswalks (one at Center Street and the other at MLK Jr Boulevard) are nearly two-thirds of a mile apart. Also, over 200 collisions were reported between Rock Street and the MLK Jr intersection during the last five years. While there have been collisions at all intersections in this segment, about half of them occurred at the intersection of MLK Jr Boulevard and School Avenue, and 10% occurred at the five-legged intersection at College Avenue and Rock Street.

The overall traffic operation for this corridor is acceptable for the existing conditions, with the exception of some movements on the side street approaches, where vehicles need to wait to turn onto College Avenue during peak hours. As already indicated in Corridor 1, the southbound approach at the MLK Jr Boulevard intersection suffers congestion during PM Peak hour. The five-legged intersection at Rock Street also had movements that operated poorly, but overall this intersection operated adequately based on the traffic analysis results. (See Appendix C for traffic engineering analysis)

The anticipated traffic annual growth factor for this corridor is 1.65%. By 2037, all the intersections will have at least one approach movement that will be congested during the PM peak period.

RECOMMENDED IMPROVEMENTS

The improvements that follow are intended to reconfigure the Archibald Yell corridor as a pedestrian-priority corridor with improved bicycle connections.

- New signals and pedestrian crossings, including:
 - New signal at South Street with pedestrian crossing
 - Closing S College Avenue from Rock Street to South St
 - New signal at Rock Street with pedestrian crossing
- A road diet along Archibald Yell, reducing the roadway space dedicated to motorized vehicles from 4 lanes to 3
 - One general-purpose travel lane in each direction for through traffic
 - One center lane designed as median with breaks for left-turn pockets as needed
- A new shared-use path
- Improved sidewalks with adequate buffers between moving traffic and pedestrians

Adding signals at Rock Street and South Street intersections provides safety crossing opportunities while slowing traffic and keeping a good level of operation with no congestion. Closing S College from Rock Street to South Street will redistribute traffic to Archibald Yell to South Street, or to Rock Street.

The Road Diet will also operate well with projected traffic for 2037, although dedicated right-turn lanes for southbound traffic would be needed at MLK Jr. Boulevard intersection to avoid congestion during peak hours.

CORRIDORS ANALYSIS

Figure 7-11 Archibald Yell Proposed Cross Section

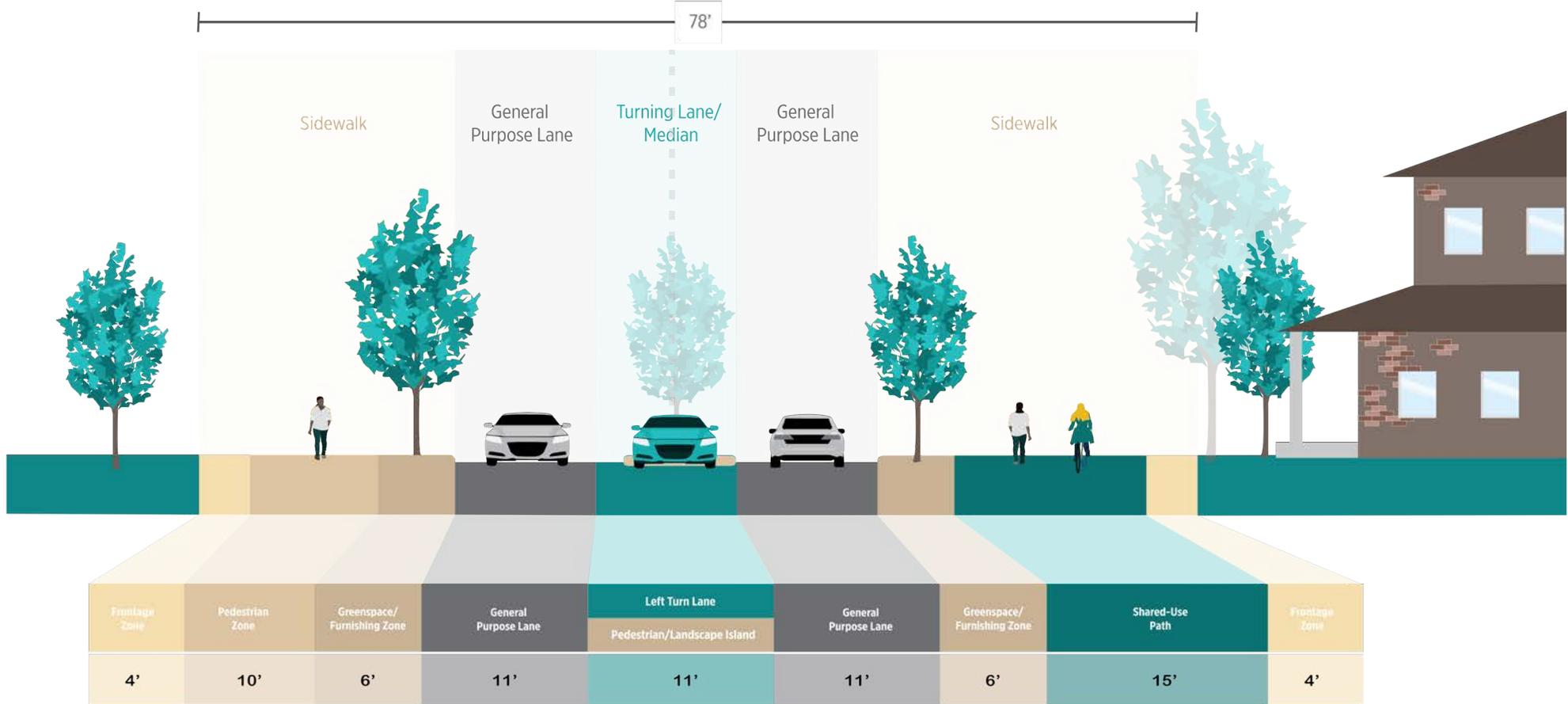
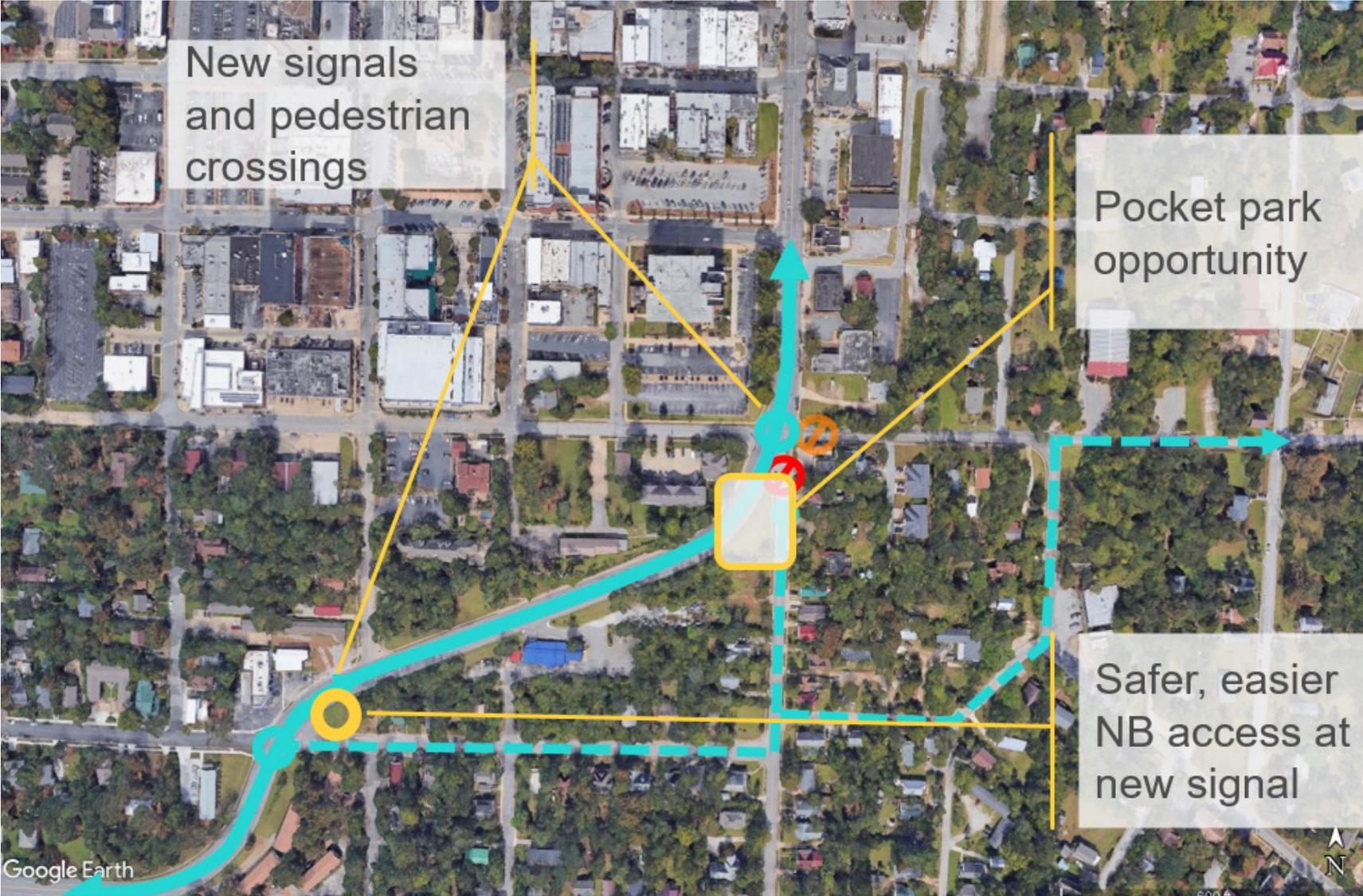


Figure 7-12 Archibald Yell – New Signals and Pedestrian Crossing



CORRIDOR 4

NORTH/MISSION

The study segment of Corridor 4 spans from Garland Avenue to the west to Crossover Road to the east. The segment is characterized by high crash density at certain intersections (see Figure 3-9), gaps in the walking network in some segments, and nonexistent bicycle infrastructure, creating a gap in the bike network between the Frisco Trail to the planned trail along Old Wire/Mission Blvd². Its Annual Average Daily Traffic (AADT) ranges from 7,000 to 20,000 and its posted speed limit ranges from 25 to 40 mph, with a cross section that varies from two to four lanes depending on the segment, creating pinch points in the two-lanes sections for alternatives modes to get to the city core,

Results of the traffic analysis of the current conditions show that all but the Woolsey Avenue intersection has at least one approach movement that operates under acceptable conditions during peak hours. The most significant problems are occurring between College Avenue on the west and Crossover Road on the east. As expected, the traffic conditions only get worse by 2037. (See Appendix C for traffic engineering analysis)

² <https://www.fayetteville-ar.gov/DocumentCenter/View/11621>



RECOMMENDED IMPROVEMENTS

This corridor is the main east-west route across the city. With significant gaps in the Active Transportation network, and with congestion during peak hours at some of the intersections, the improvement of all transportation modes along this corridor is critical.

The improvements are intended to accommodate all transportation users, and include reconfiguring the corridor as a pedestrian-priority corridor with improved bicycle

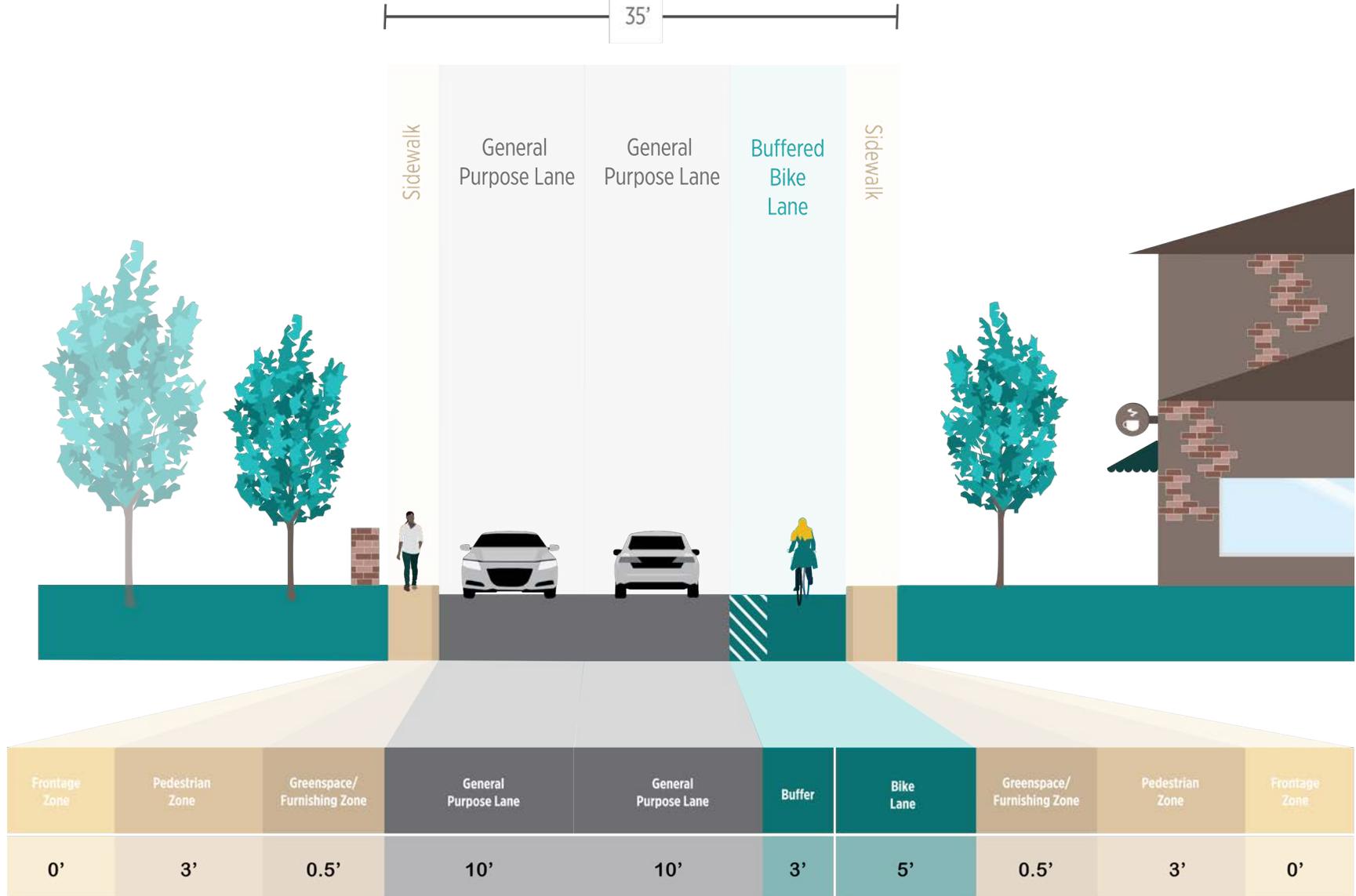
connections, as well as an optimized corridor to move vehicles through improvements in the intersections (signal timings, lane design).

Figure 7-13 shows how the 2-lane segment could accommodate a shared-use path for bicyclists and pedestrians by narrowing the travel lanes and acquiring additional right of way in adjacent parcels beyond the public right of way.



CORRIDORS ANALYSIS

Figure 7-13 E North Street West of College Avenue Intersection





CORRIDOR 5

DICKSON ST

The Corridor 5 study segment on Dickson Street spans from Arkansas Avenue on the west, to College Avenue on the east. This street segment is characterized by high crash densities at certain intersections, although there have been no reported fatalities or serious injuries in the last five years. Dickson Street in this location has a 9,000 Annual Average Daily Traffic (AADT) count, high pedestrian volumes and a high demand for parking at certain times. Conditions along Dickson Street were considered in the context of impending developments at the WAC and other locations in the area and should be coordinated with such developments to minimize impacts on the street, as well as to leverage public and private investment in the corridor.

RECOMMENDED IMPROVEMENTS

The improvements that follow are intended to reconfigure Dickson Street as a pedestrian and parking-access priority area.

- Restrict left-turns from Dickson to West Avenue
- Remove left-turn pockets and extend the sidewalk at the West Avenue intersection
- Add new road signage to direct traffic to new routes accessing the West Avenue parking lot and other key destinations

These proposed improvements would create a more comfortable sidewalk zone, ensure safe pedestrian crosswalks, more efficiently control traffic flow and access, and manage parking availability and access points. See Figure 7-14.

OPERATIONAL IMPACT ANALYSIS

By 2037 traffic growth is anticipated to create conflicts between eastbound movements and the rail crossing on Dickson Street at the West Avenue intersection during the peak PM travel time.

Removal of the left-turn allowed from Dickson Street to West Avenue will reduce queue lengths for westbound and eastbound traffic on Dickson Street while eliminating conflicts at the rail crossing.

Figure 7-14 Dickson Street Proposed New Circulation Scheme

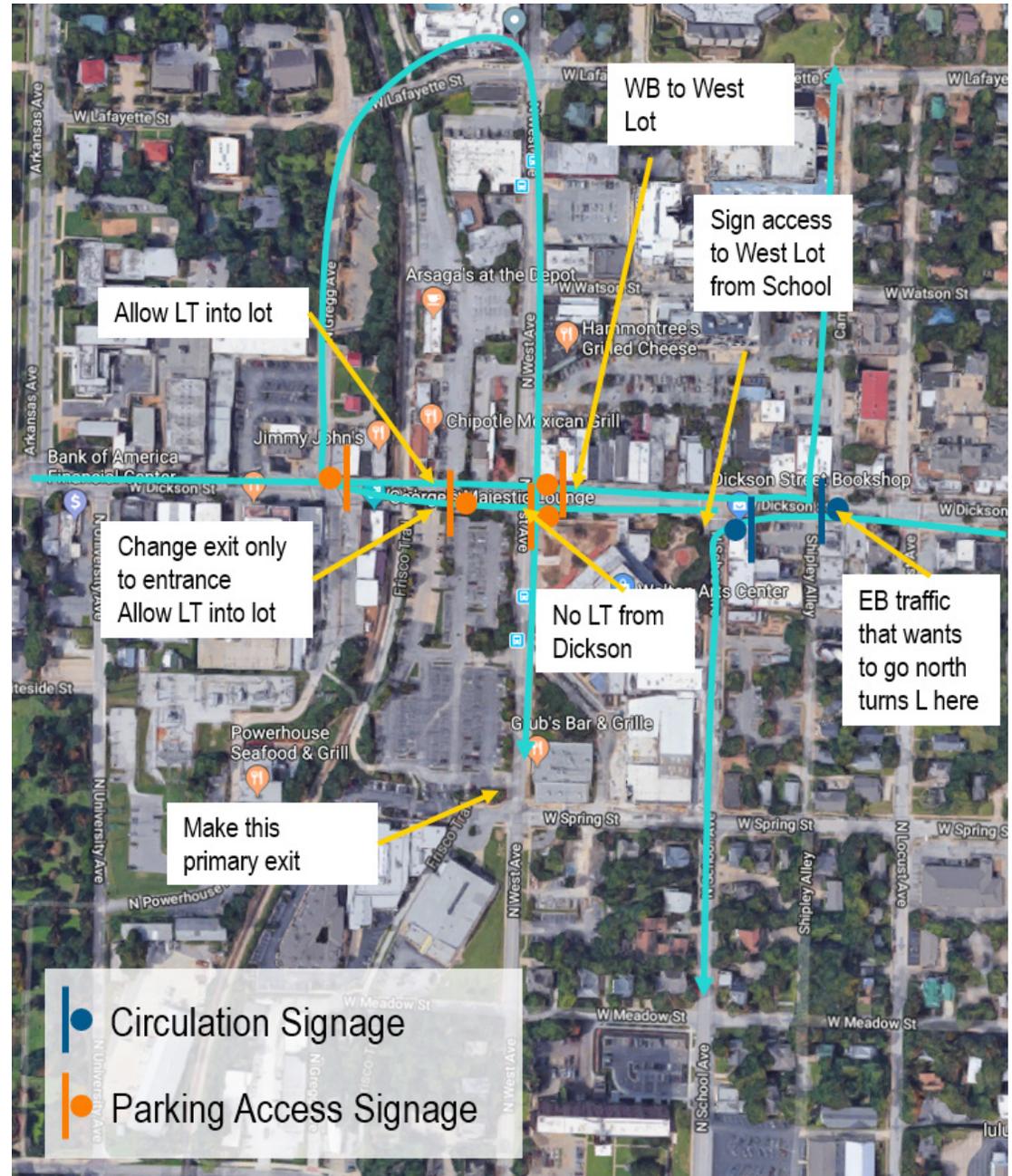
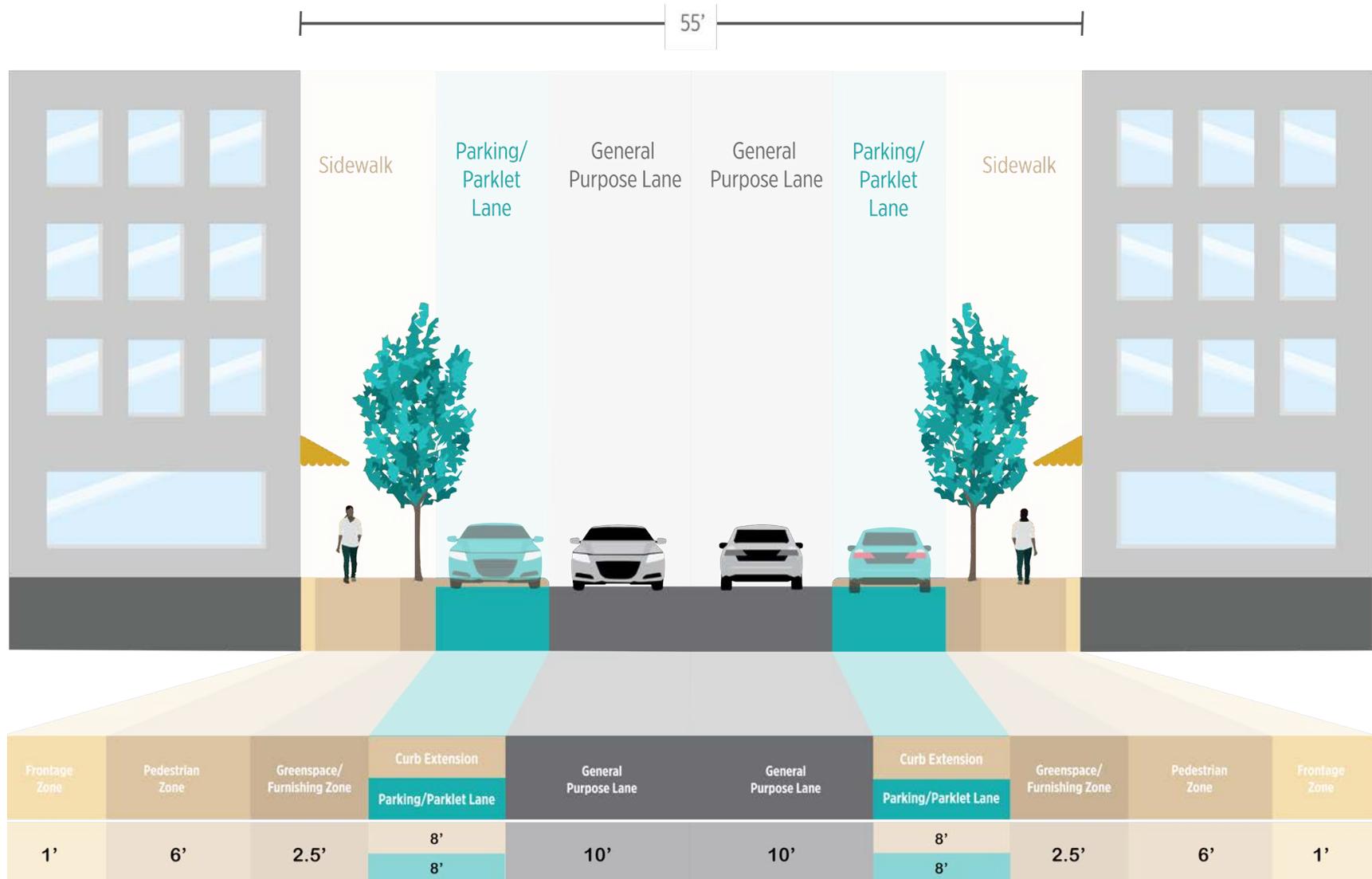


Figure 7-15 Dickson Street East of West Avenue Intersection Proposed (Aerial)



CORRIDORS ANALYSIS

Figure 7-16 Dickson Street East of West Avenue Intersection Proposed Cross Section



CORRIDOR 6

WEDINGTON DR

The study segment for Corridor 6 spans from Ruppel Road on the west, to Salem Road on the east. This segment is characterized by high crash densities (particularly at the Ruppel Road intersection), high traffic volumes (Annual Average Daily Traffic 2015 ranged from 20,000 to 34,000), including multiple collisions resulting in fatalities and serious injuries at the Golf Club and Salem Road intersections. This segment also lacks bicycle infrastructure, and has had several collisions involving bicycles and/or pedestrians.

Under existing conditions, the Wedington Drive intersections experience congestion during peak hours. With an anticipated 2.60% traffic annual growth rate, conditions will worsen by 2037. (See Appendix C for traffic engineering analysis)

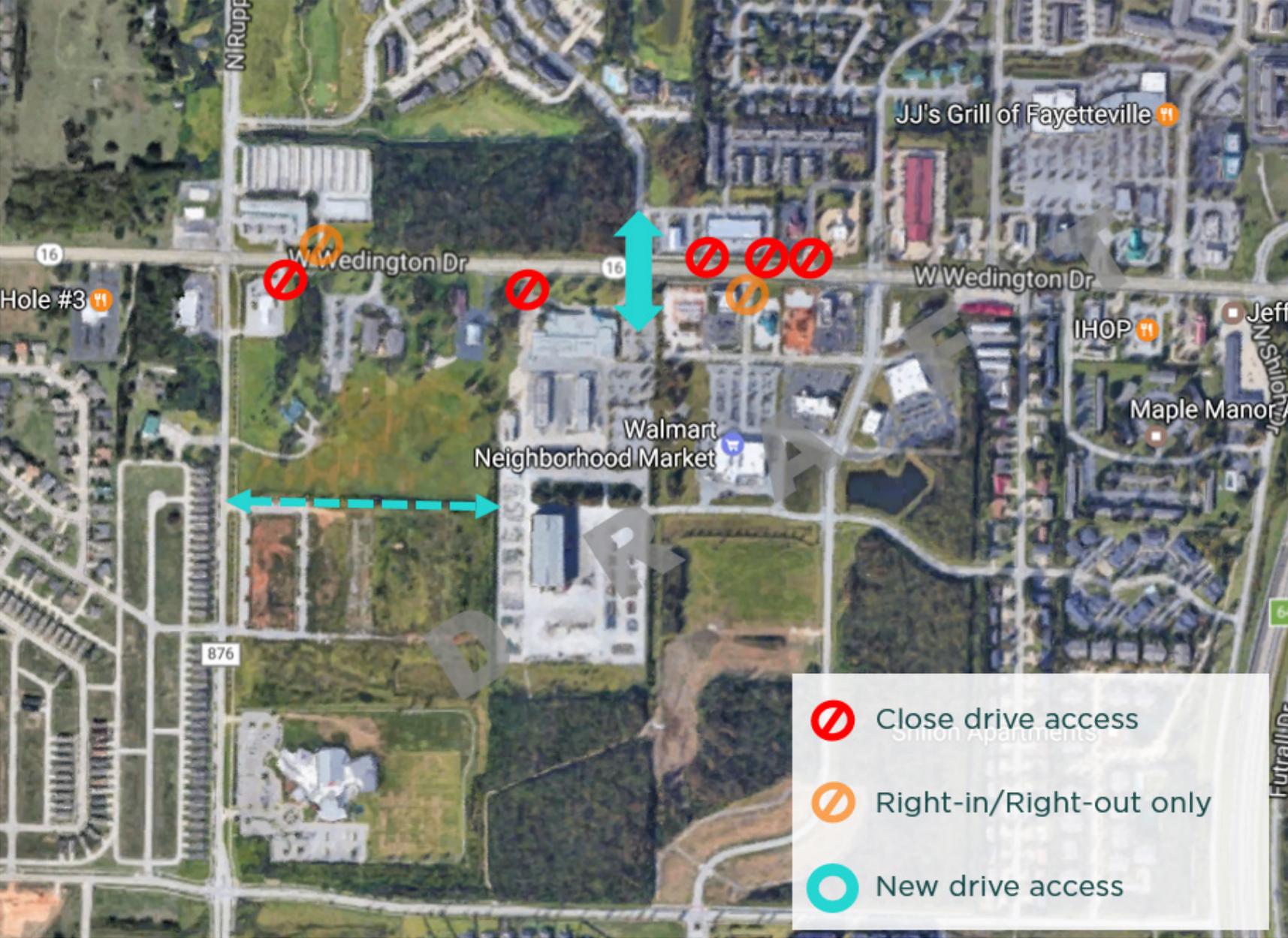


RECOMMENDED IMPROVEMENTS

The following improvements are intended to reconfigure the Wedington Drive corridor as a more pedestrian friendly corridor with improved bicycle connections:

- Create and implement an Access Management Plan (reduce curb cuts), by closing some current access points, and allowing only right-in/right-out with no left-turns at other locations.
- Increase sidewalk width and add bike facilities
- Provide access through parallel roads
- Add signage to new direct travelers to potential alternate routes
- Study the impact of a new signal on Golf Drive to provide a safe crossing
- Increase connections north of Wedington-Salem/Shiloh

Figure 7-17 Wedington Drive - Access Management Plan



CORRIDOR 7

GREGG AVE

The study segment of Gregg Avenue spans from Van Asche Drive on the north, to North Street on the south. The railroad right-of-way runs immediately adjacent to the road from Van Asche to West Spruce Street, leaving no room for sidewalks or bus stops along the western side of the street. The railroad also allows few east-west crossings for pedestrians or vehicles. In 2011-2015, collisions involving pedestrians and bicyclists were reported at nearly all the major intersections, in addition to several vehicle-only collisions at the commercial plazas. Overall traffic volumes stayed below 21,000 in 2015 with collisions resulting in fatalities or serious injuries happening at primary intersections.



OPPORTUNITIES

Gregg Avenue is owned by the City of Fayetteville, and with average daily traffic volumes lower than 25,000 and 4 lanes (and 45' roadway), it is a great candidate for a road diet. By reducing the vehicle travel lanes from 4 to 3, extra space could be utilized to install bus stops in the southbound direction, to widen sidewalks, or to add a dedicated transit lane to serve the residential areas and shopping plazas existing along the corridor.



CONSTRAINTS

The railroad adjacent to Gregg Avenue limits access to existing neighborhoods and constrains opportunities for increased residential and commercial density in this corridor. As development progresses in parallel corridors such as College Avenue and Garland Avenue, plans for higher capacity transit in the Gregg Avenue corridor should be explored to better match the density and travel patterns in this area in the long term.





8 NEXT STEPS

SUMMARY OF RECOMMENDATIONS

Throughout this document there are recommended improvements to address the existing multi-modal mobility problems identified through quantitative analysis and qualitative input from the public. Below we summarize the most critical improvements, based on technical need, staff input, and community feedback.

NEXT STEPS



Fill network gaps, with a focus on transit and active transportation. Safety and connectivity are important for all travelers, and even more critical for the most vulnerable users: pedestrians and cyclists. A missing link in a pedestrian or cycling trip can result in unsafe conditions or avoided trips. Where these walk or bike trips aren't abandoned altogether, they likely become motorist trips, adding unnecessary traffic to the network, often in locations that are already congested. However, a complete sidewalk and bike network means complete trips. The best options for filling gaps include:

- Focusing on areas around schools, senior centers, and cultural attractions to protect the most vulnerable users while encouraging a walking and biking culture for the long term.

- Transit corridor infrastructure investments to ensure that riders have safe, secure access to transit as well as a safe, inviting wait environment.
- Addressing critical issues at hot spot locations, where collisions are highest.

Design interventions are the best solutions for addressing these gaps, since the investments are self-enforcing controls on the ways road users interact.



Additional policy recommendations to improve pedestrian safety and accessibility.

- On existing streets, construct continuous sidewalks along at least one side, even in rural areas, and on both sides of streets in urban centers, regional links, and neighborhood links.
- Replace substandard sidewalks, particularly on key pedestrian routes, to provide an adequate buffer between the walkway and traffic, sufficient clear width for two pedestrians to walk side-by-side, and sufficient shade to be comfortable in the summer.
- Maintain an up-to-date inventory of Americans with Disabilities Act Title II-compliant travelways and curb ramps, and ensure steady progress toward complete accessibility compliance.
- Ensure adequate maintenance of pedestrian ways, including vegetation maintenance and identification and elimination of trip hazards.
- Invest in sidewalk amenities that improve the safety and attractiveness of the walk environment, such as pedestrian-scale lighting, street trees, street furniture, etc.
- Add a dedicated pedestrian phase to traffic signals in urban centers and high-activity corridors, potentially with pedestrian countdown signals.
- Install high visibility crosswalks at high-volume locations, both to provide additional indication of pedestrian crossings to motorists and to slow down traffic vehicular with visual elements.
- Develop warrants for auto-recall for pedestrian crossing signals along high-activity corridors and/or at high-activity intersections, and eliminate push-buttons.

NEXT STEPS



Adopt a multi-year outlook for routine maintenance and capital investments. Currently, routine capital investments like roadway resurfacing or sidewalk installation are determined as part of the annual budget cycle. Many cities have found that employing a three- to five-year outlook builds residents' confidence that the City will invest in neighborhoods equitably on an annual basis. A multi-year outlook also enables greater coordination across City agencies and private partners, by signaling when and where investments and construction are planned. Coordination helps leverage or stretch public dollars with anticipating grant funding availabilities. The coordination of construction activities can also reduce the disruption to on-going and planned local developments and/or transportation projects. Selection criteria utilized to prioritize projects that are typically included in a multi-year program include:

- Need, with a focus on pedestrian and cyclist safety and/or network completion.
- Timing, using a geo-coded database of investments in recent years, to ensure that projects are not duplicative.
- Opportunity, allowing public, private, and utility partners to capitalize on current and upcoming projects.
- Most cities update their multi-year program periodically, for example, a five-year program might be updated every two to three years, in addition to the annual budget allocation for the coming year. This outlook helps improve the current year adoption process, while also creating a pipeline of projects and an identified funding plan for the future.



Corridor-wide improvement plan. The key corridors were selected not only for the conditions along each route, but also for their potential to demonstrate the concepts proposed within this plan. As each corridor is implemented successfully, it becomes a hallmark of the potential for other streets in the city. When taken together they deliver interventions that can be replicated across all modes, a range of land use settings, and all quadrants of the city. In some cases, as with near-term recommendations at Archibald Yell, improvements can be implemented quickly provided ArDOT staff agree to the proposed changes. For other infrastructure improvements, such as those proposed for Dickson Street, it might be prudent to await coordination with other investments to maximize the benefit and minimize the impact on existing adjacent land uses. Still others will require additional analysis or a targeted community outreach program before moving forward, such as College Avenue. More specifically, investments and next steps for these corridors include:

- **Archibald Yell Boulevard:** Stakeholder coordination to implement near-term improvements, i.e. new traffic signal and crossing; continuing outreach and analysis through a neighborhood transportation study; coordination with ArDOT.
- **Wedington Dr:** stakeholder coordination and analysis to implement new traffic signals and crossings; coordination with ArDOT.
- **North St:** Ongoing stakeholder coordination; determine desired right of way acquisition and begin conversations with willing property owners.
- **MLK Jr Boulevard:** stakeholder coordination and analysis to implement near-term improvements, i.e. traffic signals, crossings, and median changes; continuing outreach and analysis through land use planning updates, as well as ongoing Arterial Loop analysis, to confirm the long-term vision and options; coordination with ArDOT.
- **Dickson St:** Continue outreach and coordinate with upcoming developments to maximize benefits and minimize impacts.
- **Gregg Ave:** Stakeholder, community coordination and continue road diet analysis.
- **College Ave:** Stakeholder coordination to evaluate near-term improvements; coordinate street design elements with land use updates for mid- and long-term; coordination with ArDOT.

NEXT STEPS



While completion of this report may be sufficient for some recommendations, other recommendations will require additional actions before they become official City policy. Some recommendations will also lead to additional feedback opportunities related to design such as; neighborhood studies, corridor studies, or traffic calming efforts. A number will also require additional analysis, development and coordination, most notable among these is the adoption of the Street Typology and network plan. Though the Plan has

received strong vetting from the public, stakeholders, and multiple City departments, the impending update to the land use plan presents an opportunity for additional refinement of the street typologies, which are rooted in both the functional classification of streets and their land use setting. Coordinating the adoption of the Street Typology plan with updates to the land use plan, City Plan 2030, will allow additional time to refine the details of each typology and to coordinate with stakeholders.



IDENTIFIED PROJECTS

The following are the key recommended projects, drawing from the project Wikimap comments and project team recommendations. This project list will be updated, finalized and evaluated following Council and staff comments on this draft plan.

Figure 8-1 Key Recommended Projects

Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
Mall Avenue Access Improvements	Mall Avenue Near Joyce Boulevard	Access Improvements	X				
Mission/Lafayette Bicycle Improvements	North Street. to College Avenue.	Bike Facilities			X		
W 15Th St	Razorback Road - School Ave	Bike Facilities			X		
E Huntsville Road	Mill Avenue - MLK Boulevard	Bike Facilities			X		
Old Wire/Old Missouri Road		Bike Facilities			X		
Garland Ave	Morrill Avenue - Maple St	Bike Facilities			X		
Razorback Road		Bike Facilities			X		
Crossover Road	Mission Boulevard- Huntsville Road	Bike Facilities			X		
Morningside Drive	Huntsville Road-E 15th St	Bike Facilities			X		
Spring Street Bikeway	West Ave-Downtown Square	Bike Infrastructure			X		
Maple Street Cycletrack	Gregg Avenue. to Stadium Drive. To Razorback Rd.?	Bike/Pedestrian Improvements		X	X		

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Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
College Avenue Corridor	North Street. to City Limits	Corridor Improvements	X	X		X	
North/Mission Boulevard. Corridor	Garland Avenue. to Old Wire Road.	Corridor Improvements	X	X	X	X	
Porter Road/Deane Street./Sycamore Street. Corridor	Mt. Comfort-College Avenue.	Corridor Improvements	X	X	X	X	
College Avenue/ Millsap Intersection Improvements	College Ave/Millsap Street.	Intersection Improvements.	X	X		X	
Gregg Ave-Left turn lanes at Sycamore and Poplar	Sycamore and Poplar	Intersection Improvements.	X				
Hwy 112/Howard Nickell Road Improvements	112/Howard Nickell	Intersection Improvements.	X				
Shiloh Drive./Fulbright Expressway Intersection	Shiloh Drive and Fulbright Expwy	Intersection Improvements.	X				
Shiloh Drive/Steele Boulevard. Intersection Improvements	Shiloh Drive/Steele Boulevard Int.	Intersection Improvements.	X				
Center Street/Gregg Ave		Intersection Improvements.	X	X	X		
Highway 16/School Ave		Intersection Improvements.	X	X	X		
Futrell Drive/Wedington Dr		Intersection Improvements.	X	X	X		
Futrell Drive/MLK Boulevard		Intersection Improvements.	X	X	X		
Crossover Road/Mission Boulevard		Intersection Improvements.	X	X	X		
Spring St-College Avenue signal warrant		Intersection Improvements.	X	X	X		

Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
MLK Jr/School Avenue SB approach		Intersection Improvements.	X				
Rock/College/Arch. Yell		Intersection Improvements.	X	X	X		
Pavement Overlay and Maintenance	Various	Maintenance					X
Extend Wood Avenue to 15th Street.		New Location	X	X	X	X	
Fulbright Expwy Crossing	Steele Boulevard/Mall Avenue	New Location	X	X	X		
Hemlock Street. Extension	Millsap Street. to Masonic Drive.	New Location	X	X	X		
Longview Extension	West of Plainview Avenue.	New Location	X				
Plainview Avenue Extension	South to Fiesta Square	New Location	X	X	X		
Plainview/Whole Foods connection	Plainview to Whole Foods	New Location	X	X	X		
Rolling Hills Extension	Old Missouri Road-Crossover Road.	New Location	X	X	X		
Rupple Road Extension	Tanyard Drive to Weir Road	New Location	X	X	X	X	
Salem Road Extension	Mount Comfort to Fairfax	New Location	X	X	X		
Shiloh Drive Connection	Mt. Comfort-Wedington	New Location	X	X	X	X	
Shiloh Drive South Extension	Summerhouse Ln to Regional Park	New Location	X	X	X		
Steamboat/Dorothy Jeanne Street. Connection		New Location	X	X	X		
Township Street extension to Garland Avenue		New Location	X	X	X		

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Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
Garrett Street extension to Gregg Avenue		New Location	X	X	X		
Completion of the Arterial Loop		New Location	X	X	X		
Drake Street extension to College Ave		New Location	X	X	X		
Rockwood Trail connection to Crossover Road		New Location	X	X	X		
Persimmon Street connection to Cleveland St		New Location	X	X	X		
Persimmon Street connection to Wedington Drive		New Location	X	X	X		
Fulbright Expwy extension to Sain St		New Location	X				
Extension of Sain Street to Joyce Boulevard		New Location	X				
Extend Millsap Road to Vantage Drive		New Location	X				
Extend Van Asche Drive to Frontage Drive		New Location	X				
North College Pedestrian Improvements	Joyce and Zion	Pedestrian Safety		X			
School Avenue	South of MLK	Road Diet			X		
15th/Razorback Intersection	15th Street. and Razorback Road	Roundabout	X	X		X	
MLK Boulevard. Safety Improvements	Stadium Drive-Razorback Road	Safety Improvements/Signalization	X	X		X	

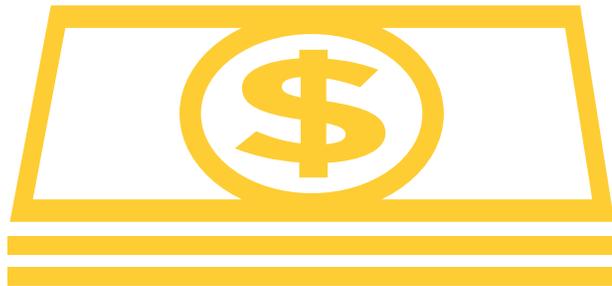
Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
Cleveland Street Area Walkability	Garland-Leverett	Sidewalk/ADA Ramp Const./ Replacement		X			
Downtown Sidewalk/ Walkability Improvements.	Various in Downtown Area	Sidewalk/ADA Ramp Const./ Replacement/ Lighting		X			X
MLK Area Walkability Improvements.	School Avenue-College Avenue	Sidewalk/ADA Ramp Const./ Replacement		X			X
Mount Comfort Road Sidewalks	Garden Park Apts.	Sidewalks		X			
E 15Th St	Morningside Drive – S Fred Hanna Drive	Sidewalks		X			
E Dickson St	Willow Avenue – Walnut Ave	Sidewalks		X			
E Joyce Boulevard	Frontage Road – N College Ave	Sidewalks		X			
W Meadow St	West Ave-Gregg Ave	Sidewalks		X			
N College Ave	Township Street - Sycamore St	Sidewalks		X			
N College Ave	Millsap Road - Harold St	Sidewalks		X			
N Garland Ave	North Street - Comfort Road	Sidewalks		X			
N Old Missouri Road	Joyce Boulevard - Zion Road	Sidewalks		X			
N Willow Ave	Baxter Ln - Prospect St	Sidewalks		X			
Center/Harmon Intersection	Center and Harmon	Signalization	X	X	X	X	
Morningside Drive Signalization	Morningside/Huntsville	Signalization	X	X			
Poplar Street Signalization	Poplar/College Avenue	Signalization	X	X	X		

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Project Name	Location	Type	Driving	Walking	Biking	Transit	Maintenance
River Meadows Drive. Signalization	River Meadows and Hwy 16	Signalization	X				
Spring Street and College Avenue. Signalization	Spring/College	Signalization	X	X			
Wedington/Golf Club Drive Signalization	Wedington and Golf Club Drive.	Signalization	X	X		X	
Beechwood/MLK Signalization	Beechwood/MLK Intersection	Signalization	X	X		X	
Government/MLK Signalization	Government/MLK Intersection	Signalization	X	X	X		
Archibald Yell Boulevard. Safety Improvements	MLK Boulevard. to Rock Street	Signalization/Lane Reallocation		X	X		
Rolling Hills Improvements	Appley Rd./College Ave-Old Missouri Road	Signalization/Safety Improvements	X	X			
Highway 112 (Howard Nickell Road.)	Howard Nickell Road. to Van Asche	Widening	X X	X X	X		
Howard Nickell Road Improvements.	Rupple Road-Hwy 112	Widening	X	X	X		

FUNDING

Like most cities, Fayetteville funds its transportation infrastructure through an array of revenue sources. The city's Transportation Division is responsible for all maintenance and operations on city streets, and they also lead small capital projects that are completed by in-house construction crews. Larger capital projects are typically completed by outside contractors and are managed by the city's Engineering Division. Funding includes state, county, and city level taxes on motor fuels, property, and sales.



REVENUE AND FUNDING

Financing for maintenance and capital improvements to streets, sidewalks, and trails is provided through three primary funds:

- **Street Fund:** Revenue that is placed into the Street Fund is generally ongoing revenue that will be expected to continue year after year, except as noted in the Future Funding section. This revenue is also restricted and can only be used for transportation related expenses. Revenue sources include:
 - Turnback revenue from motor fuel taxes collected by the State of Arkansas. This amounts to approximately \$3.47 million in the 2017 budget year.
 - Turnback from the temporary statewide ½-cent sales tax for highways, amounting to approximately \$1.35 million in the 2017 budget year.
 - A road millage tax levied by Washington County, estimated to be \$1.15 million. This is a 1.1 mil tax of which the City receives 80 percent.
- **Capital Improvement Program (CIP):** Revenue to the CIP fund that is used for transportation related expenditures is generated by a one-cent sales tax that generates approximately \$21 million per year. The CIP fund currently receives 40% (\$8.4 million) of this one-cent tax, with the remaining going to the general fund. (This split is subject to yearly review by the City Council.) This funding is allocated to various types of capital projects, not just transportation. \$2.26 million of the total \$8.4 million available is budgeted to be spent on transportation related capital projects in 2017. The

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yearly CIP budget is based on a 5 year CIP plan, which is updated every two years. Current CIP plans include funding for sidewalks, trails, pavement maintenance, and signal operations, but no large capital projects. In recent years, budget allocations for transportation related items have been less than planned, due to other priority needs.

- **Transportation Bond Program:** This program is funded by proceeds from bonds authorized by voters in 2006, to be paid back with a one-cent dedicated sales tax that will expire upon bond repayment. All of the \$65.9 million available bonding capacity has been issued. Approximately \$5.61 million in bond funds remains to be spent.

In addition to funding through these programs, federal-aid funding through the Surface Transportation Block Grant Program (STBGP) and Transportation Alternatives Program (TAP) is available. This is a competitive grant program through the Northwest Arkansas Regional Planning Commission (NWARPC). Approximately \$7.5 million in STBGP funding and \$490,000 in TAP funding is expected in FFY 2018. These grants require a minimum 20% match from City funds.

Finally, the City has the good fortune to have a relationship with the Walton Family Foundation, which has provided assistance with trail and on-street bike facility funding over the years. These grants are typically 50-50 matching grants.



OPERATION/MAINTENANCE AND SMALL CAPITAL PROJECT EXPENDITURES

Budgets for maintenance, operating and capital expenses for small, in-house projects are primarily managed by the Transportation Division. Planned expenditures in 2017 for various programs are summarized as follows:

As noted in the table below, personnel and equipment account for approximately 55% of the budget; payments directly to transit providers account for \$550,000, leaving less than 40% of the budget available for purchase of materials and contracted labor for projects. Budget numbers for 2018 have since been adjusted for inflation, but allocations remain essentially the same.

LARGE CAPITAL PROJECT EXPENDITURES

Large capital projects in recent years have been funded by the Transportation Bond Program. The Transportation Bond Program is managed by the Engineering Division, and is in the final stages of completion, with the remaining \$5.6 million expected to be spent by the end of 2018. The City has leveraged the bond program to provide matching funds for over \$40 million in state and federal aid since the program began in 2006. In total, with water and sewer funding and capital improvement funds, and the state/federal aid noted above, the bond program will complete approximately \$115 million worth of projects.

Figure 8-2 Operation/Maintenance and Small Capital Project Expenditures (2017)

Program Name	Personnel	Equipment	Materials/ Contract Labor	Total
Overlay Program (Including Microsurfacing)	\$1,219,684	\$ 1,537,912	\$1,332,928	\$4,090,524
Sidewalk Program	\$355,153	\$ 204,534	\$722,494	\$1,282,181
Trails Program	\$425,243	\$ 322,142	\$752,615	\$1,500,000
Signals/Striping	\$334,910	\$ 89,719	\$381,371	\$806,000
Payment to Transit Agencies				\$550,000
TOTALS	\$2,334,990	\$2,154,307	\$3,189,408	\$8,228,705

FUTURE CHALLENGES/OPPORTUNITIES

Future challenges with transportation funding include:

The statewide ½ cent sales tax is a temporary tax that will expire by 2023 unless it is reauthorized. If this tax expires, revenue will be reduced by at least \$1.35 million annually.

Turnback funds from the Washington County road millage are subject to review and approval each year by the County Quorum Court. Last year, the Quorum Court discussed reallocating this tax from streets to general fund. It is expected that this discussion will occur again in 2017, which may reduce City revenue by \$1.15 million.

Costs for materials and labor have continued to rise, while operation and maintenance funding has remained flat or even been reduced in some cases. This has resulted in a reduction in miles of overlay and sidewalk projects in past years. If this trend continues, the overall quality of the transportation system will suffer.

- State and Federal motor vehicle fuel taxes have not kept up with rising road maintenance costs. As vehicles become more efficient and electric vehicles become more common, gas tax revenue is expected to decline.

There are opportunities, however:

- Reauthorization of the temporary 1-cent city sales tax that is financing the transportation bond program will be explored during 2018, with a vote expected in 2019. If approved by voters, this reauthorization would

allow additional bonds to be used to fund another large infrastructure package. The Fayetteville Mobility Plan is an important planning document to inform the process of selecting the projects to be funded by these bonds.

- Federal-aid and private grant funding is expected to continue to be available (assuming matching funding is provided by the City).
- The state legislature is discussing opportunities to make the ½ cent temporary tax permanent, which will provide permanent funding to the state highway department as well as create a permanent source of funding for the City.

Additional funding opportunities include:

- **Impact fees.** The city has development impact fees for water, public safety, and fire protection, but not for transportation. It could consider conducting a nexus study to impose a new fee on development to ensure projects pay their fair share of work necessary to accommodate growth. In other cities with more constrained transportation networks, projects must offset their new vehicle trips by investing in bicycle, pedestrian, and transit projects that result in an equivalent decrease in traffic offsite.
- **Paving program.** The city already coordinates street redesign projects with its planned resurfacing program. In this way, the city reduces project costs significantly. There may be additional opportunities for tighter coordination, however. For example, the road diet recommendations in Chapter 7 can be completed a little marginal cost if pavement resurfacing of those streets were scheduled to coincide.

- Partnerships with the University of Arkansas.** The city already has a strong partnership with the university, but in the future there may be many more opportunities to join forces. As detailed in the 2015 University of Arkansas Campus Transportation Plan, the university is rapidly growing. As new buildings are built on campus parking lots, its current approach to parking and transportation is becoming financially untenable. The plan instead recommends that the campus make major investments in transportation demand management, including major improvements to walking, biking, and transit, both on and off campus. As shown in Figure 8-2, a majority of student beds are off-campus, but nearby. As a result, most of the recommendations in this report directly benefit the university. Access improvements in the city are essential for meeting the university's goals.

Figure 8-2 University of Arkansas Community Members



Source: Campus Transportation Plan, 2015

REMAINING PROCESS

This report will be presented to the City Council in spring 2018, following detailed review by City staff and discussion of the document findings. On its own, this Mobility Plan has no direct, immediate fiscal impacts. The projects and policies within this report, however, are largely consistent with the existing pipeline of investment plans and documents, including the city Capital Improvement Plan (CIP). Where there might be differences, Plan projects or recommendations will cascade through the necessary local and regional plans, including the CIP and the regional transportation plan prior to advancement. Again, this presents another opportunity for refinement, but also brings these projects closer to implementation.

Following acceptance of this draft document, minor edits may be made to accommodate staff and Council direction before this document is made final.

This draft plan and Council and staff comments will also help inform an implementation strategy. The implementation strategy will determine how best to fold the recommendations of this plan into the City's overall CIP and budgeting process, including expanding upon the project chart above, and providing a qualitative evaluation of projects based upon selected performance measures from Chapter 2.

