

Avondale

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City of Avondale
Active Transportation Plan

Final Report

January 2023

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INTERNATIONAL

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1 INTRODUCTION

PURPOSE & OBJECTIVES

The City of Avondale (Avondale) prepared a city-wide Active Transportation Plan (ATP/Plan). The project study area for this ATP included the areas within the incorporated limits of the Avondale, which is approximately 34 square miles.

This ATP followed-up on efforts from the recently completed Avondale Parks, Recreation, Libraries and Trails Master Plan which was not tasked with evaluating and recommending a comprehensive and cohesive network of on-street and off-street bicycle facilities and pedestrian paths - The Avondale ATP fills that need.

The objectives of the Avondale ATP included:

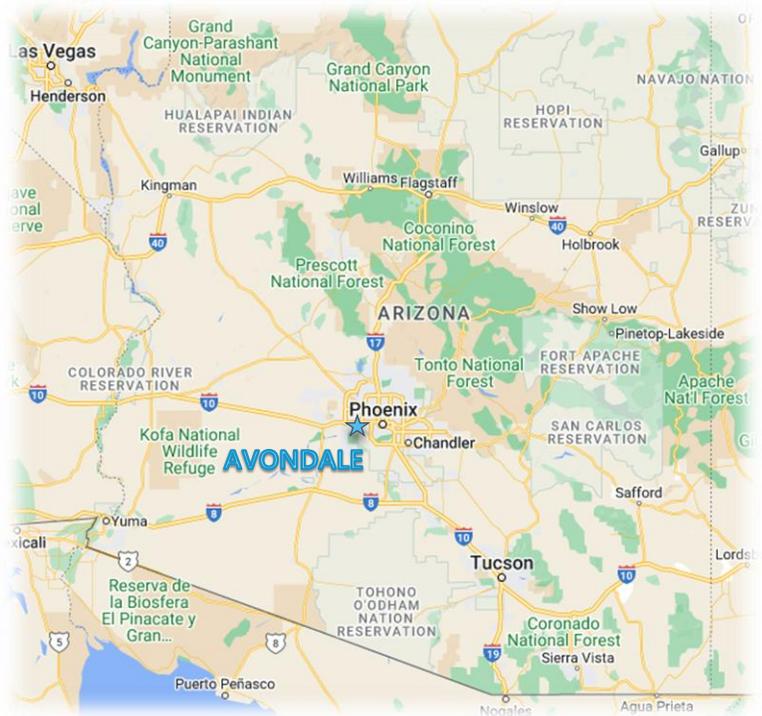
- Conduct a city-wide inventory and gap analysis of all existing bicycle and pedestrian facilities in Avondale;
- Recommend a comprehensive and cohesive series of city wide on street and off-street bicycle facility types and pedestrian facility types;
- Develop policies and procedures necessary to create a system for bicycle and pedestrian traffic in an integrated, safe and efficient multimodal transportation system;
- Identify locations where Avondale bicycle and pedestrian facilities connect to regional facilities;
- Establish a hierarchy of bicycle facilities and pedestrian path/trail types and planning-level cost estimates; and
- Establish a formal ATP for enhancing the potential design assistance funding.



STUDY AREA CONTEXT

Avondale is part of the west Phoenix metropolitan area that has established itself as a manufacturing and healthcare hub as well as a world-class sports and entertainment destination for residents and visitors alike.

Rapid residential development in Avondale during the local and national housing boom in the 1990s and early 2000s quickly transformed what had been a farming community into a major suburb of Phoenix. This accelerated growth brought the population from just 8,000 in 1980 to over 87,000 in 2020. During this span, Avondale has welcomed a consistent influx of small businesses and large corporations that have created a unique blend of big-city amenities with a small-town charm.



The Historic Avondale area along Western Avenue preserves the historic business district and safeguards opportunities for small, independent businesses. The public art installations around Avondale and the family-friendly community events hosted by the city create a welcoming cultural environment. From events such as Cycle Avondale, to the Tres Rios Nature Festival, to Billy Moore Days, the events celebrate and highlight the communities, businesses, facilities, and natural environment of the city.

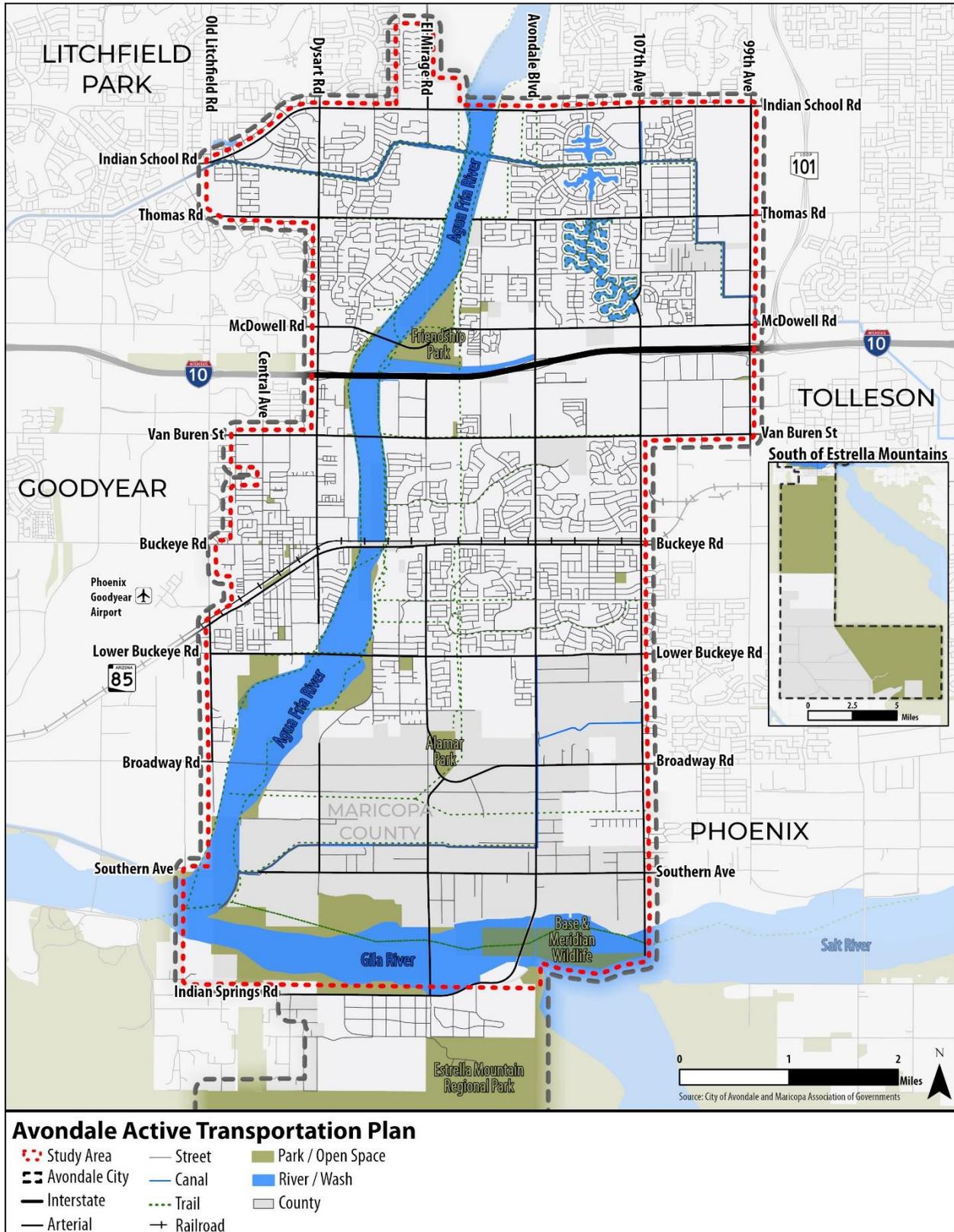
Once an important supply stop for travelers heading west, Avondale is now a destination for many entertainment and recreation options in the Phoenix area. Nearby Estrella Mountain Regional Park and Avondale's 255 acres of additional parks and open spaces provide residents and visitors with dedicated places to exercise, fish, skate, play, and gather. Avondale is home to the Phoenix Raceway, which hosts two NASCAR race weekends annually, and the American Sports Center, which is one of the largest multi-sports facilities in the state and welcomes more than 500,000 visitors to its soccer, volleyball, and basketball facilities every year.



Avondale's Municipal Planning Area (MPA) is approximately 94.4 square miles and is roughly bounded by Indian School Road in the north, Litchfield Road and Dysart Road in the west,

99th Avenue and 107th Avenue in the east, and extends far south, wrapping around the Estrella Mountain Regional Park and Gila River Indian Community, as depicted in **Figure 1-1**. Forecasted growth in the MPA over the next 25 years, however, is anticipated to occur in the portion of the MPA located north of the Estrella Mountains. Therefore, the study area defined for this ATP is within the municipal limits of Avondale.

Figure 1-1: Study Area Map



WHAT IS AN ACTIVE TRANSPORTATION PLAN?

Active Transportation is generally defined as human powered movement such as walking and bicycling or using an assistive mobility device. What was once referred to as 'non-motorized transportation' has now taken on a new title to capture those that walk and bike to and from destinations, not just those that walk and bike for recreation. What works for recreation, does not always work for destination-based travel. For example, recreational trails often do not connect major employers, nor connect community to community. Both non-motorized recreational use facilities and destination-based non-motorized transportation facilities are part of a successful active transportation network.

Active transportation is an important component to the overall mobility of a community and region, providing a low-cost (relative to traditional vehicular infrastructure) and accessible form of transportation. Investing in walking, biking, and other forms of active transportation results in a more balanced, accessible transportation system. Active transportation benefits also include the alleviation of socioeconomic and health disparities, the support of economic diversity and prosperity, and assists in creating a more livable and sustainable community.

WHY IS ACTIVE TRANSPORTATION IMPORTANT?

There are many benefits from active transportation that contribute positively to our quality of life. Infrastructure investments in trails, sidewalks, traffic-calming, and public transit support active travel and increase routine physical activity, which improves health, the quality of the environment and livability of communities. The following are just a few of the benefits of active transportation.

Heathy & Active Community

There is a clear-cut connection between health and the built environment. Individuals are at an increased risk of many health problems - predominantly obesity, diabetes, and heart disease - with the absence of physical activity in their lifestyle. Active transportation allows people to seamlessly integrate physical activity into everyday life by enabling them to walk or bike to their destinations. Implementing walking and biking facilities creates access to places where residents can be physically active and provides more opportunities for social interaction and community cohesion that have positive impacts for mental health.

Transportation Modal Shift

There is a current paradigm shift occurring that is evident from people altering the way they travel between origins and destinations through a change in travel behaviors, evolving technologies, and social trends. Recent studies suggest that younger and emerging generations are driving less, owning fewer cars, and/or not obtaining a driver's license. As a result, abundant and adequate active transportation infrastructure and options will continue to become more important in communities across the country.

Environmental Benefits

As previously mentioned, as more and more people shift from vehicular trips to active transportation trips, there will be environmental benefits along with the community health benefits. Vehicular travel one of the



highest producers of greenhouse gases, and as active travel replaces some vehicular trips, there can be a reducing in car-related emissions, noise pollution, and traffic congestion. Other environmental benefits include energy savings, less water pollution, reduced dependency on fossil fuels, and even reduced pressure to develop agricultural and open spaces.

Economic Prosperity

New Tourism Opportunities

Investment in active transportation facilities such as trails and on-street bike lanes can create new tourism opportunities. These facilities provide recreational activities for residents and visitors. A bike-friendly community with multiple recreational options for biking and walking can encourage return visits. Bicycle related events can be held with additional bicycle facilities, which can attract bicycle tourists.

Talent Attraction

An efficient multi-modal transportation system that includes active transportation options with Complete Streets and bike lanes and trails for both recreation and daily transportation helps create a vibrant city that can attract workforce talent and new companies.

Higher Property Values

Communities with strong Active Transportation Networks typically have a strong tourism economy, attract higher profile employers and a talented, educated workforce, benefit from increased property values, and maintain a strong small business culture. Complete Streets projects are specifically reported as resulting in increased property values.

Capital Savings

The personal automobile in America once meant freedom and status, but vehicle costs can be burdensome, and behaviors are changing as a result. According to the U.S. Department of Labor's U.S. Bureau of Labor Statistics (September 2018), the average vehicle costs \$9,576 per year to own and operate (\$4,054 for purchasing, \$1,968 in gasoline and motor oil expenses, and \$3,554 in other vehicle-related costs). During the last recession, bicycle commuting saw a major increase as drivers opted for a less expensive form of travel. Using alternative modes including transit saves money but riding a bike or walking can save vehicle costs as well as fitness related expenses resulting in an increased savings for the user. As personal vehicle and individual health costs decrease, disposable income increases allowing for more money to be funneled back into the local economy.

Community Livability

Baby boomers, retirees, and millennials are increasingly moving to locations where they can walk or ride a bike to access their daily needs. Research conducted by the Bureau of Transportation Statistics shows that nearly two-thirds of homebuyers consider the walkability of an area in their purchase decision. Furthermore, employers are increasingly looking for locations that offer their employees walkable and bikeable communities in which to live, work, and play.



HOW IS ACTIVE TRANSPORTATION PLANNING DEVELOPED?

The following framework is a comprehensive approach to active transportation planning. As unequal access has been discovered as a significant factor in a user's commute, "Equity" was recently added to the original 5 E's. The expanded 6 E's are as follows:

- **Engineering:** Create pedestrian and bicycle improvements throughout communities and neighborhoods that provide safety and connectivity, keeping in mind that physical environment is key to use. Provide options for all non-motorized users and level of skill, as well as bike parking.
- **Education:** Provide bicycle safety education classes at the community level to ensure knowledge and confidence in all ages. Inform the community about their multi-modal options (maps/ ad campaigns) and educate the community about pedestrian and bicycle friendly driving habits.
- **Encouragement:** Host event-based walking and bicycling promotion such as a walk-a-thon or ciclovia. Open Streets events attract participants of all ages and encourage local spending. National events provide an easy opportunity for encouragement through schools and employers such as National Walk to Work Day (April), National Bike to Work Day (May) and National Walk and Bike to School Day (October).
- **Enforcement:** Ensure law enforcement training is current and increase law enforcement in areas of conflict to enforce traffic and safety laws. Ensuring there is accurate and ample signage in place for pedestrians and bicyclists is also key.
- **Equity:** Work to support safe, active, and healthy opportunities in underrepresented and vulnerable communities. Incorporate equity concerns throughout the other E's to understand and address obstacles, create access, and ensure safe and equitable outcomes.
- **Evaluation:** Like equity, this step is applied to all other E's throughout the process. From gathering existing conditions data to conducting surveys gauging community perception, the issues and challenges must first be understood. Trends must be monitored throughout the process, and the success of outcomes must be measured.

2 EXISTING & FUTURE CONDITIONS FRAMEWORK

An existing and future conditions evaluation can offer insight and guidance on opportunities and constraints for active transportation improvements in Avondale. After identifying a viable candidate corridor for pedestrian or bicycle improvements and exploring existing opportunities, various concepts can be developed. These concepts can help both the public and stakeholders envision potential improvements and drive the decision-making process. In the past two decades, the City has seen tremendous growth, and as a result, the current active transportation infrastructure does not provide seamless connectivity across the entire community. Inventory and analysis was an integral element and essential to the creation of this ATP.

This section provides a contextual understanding of Avondale, which includes gaining an understanding of the history of the city, in order to establish the framework, objectives and goals for the ATP. As part of the planning process, a thorough gathering of information included assembling electronic information balanced with aerial photography and field review verification.

The information gathered and presented in this Section was ultimately provided to Avondale in a GIS database. The electronic data gathering was focused on collecting and verifying infrastructure with the intention of adding to the City's current GIS database relative to components and features that may influence the development of an active transportation plan.

This electronic data was reviewed, and associated mapping was balanced against a field appraisal of existing conditions to better ascertain the physical and environmental opportunities and constraints associated with each potential active transportation corridor.

The GIS data provided by the City identified areas of concern that have been physically evaluated. The site field work included review of the known gaps in pedestrian connectivity throughout Avondale as well as



evaluating connections that are a potential link to City identified activity centers or areas of known interest as voiced by local residents and the Parks & Recreation Advisory Board.

EXISTING PLANS, STUDIES & RELEVANT INFORMATION

There are a variety of existing studies and reports that influence and inform the preparation of the Avondale ATP. The studies outlined in **Table 2-1** were reviewed for applicable bicycle and pedestrian facilities, planned parks and regional open spaces, development requirements, design standards, and existing alignments and designations of pedestrian and bicycle routes and facilities in and around Avondale. A detailed review of the key studies is included in Appendix A.

Table 2-1: Inventory of Existing Plan, Studies, & Relevant Information Reviewed

Plan Title		Plan Type	Year	Key Study	
City of Avondale Plans	Avondale Transportation Master Plan		Transportation	2017	✓
	Avondale General Plan 2030		General Plan	2012	✓
	Avondale Strategic Plan		Strategic Plan	2021	✓
	Avondale Parks, Recreation, Libraries and Trails Master Plan Update		Recreation & Trails	2017	✓
	Avondale Wayfinding Master Plan		Active Transportation	2015	✓
	City of Avondale 5-year CIP				✓
	El Rio Design Guidelines & Planning Standards		Design	2015	✓
	Public Art Master Plan		Community	2021	
	North Avondale Specific Plan		Community	2013	✓
	The BLVD Specific Plan		Community	2019	✓
	Healthy Lifestyle Plan		Community	2011	✓
	Freeway Corridor Specific Plan		Transportation	2015	✓
	Tres Rios Greenway Specific Plan		Community	2002	✓
	Old Town, Cashion, Las Ligas/Rio Vista Specific Area Plan		Community	2021	✓
	Community Sustainability Plan		Community	2022	✓
	Street Tree Master Plan		Community	2014	
	Safe Routes to School Plans	<i>Completed:</i> Canyon Breeze, Michael Anderson, Estrella Vista, Garden Lakes, Littleton <i>Ongoing:</i> Lattie Coor, Eliseo C Felix, Corte Sierra, Rio Vista, Avondale Middle Schools	Active Transportation	2020	✓
Stormwater Management Plan		Design	2016		
Avondale General Engineering Requirements Manual		Design	2018	✓	
Regional Plans	MAG Active Transportation Plan		Active Transportation	2020	✓
	MAG Multimodal Level-of-Service Study		Active Transportation	2017	✓
	MAG 2040 Regional Transportation Plan Update		Transportation	2017	
	MAG Regional Bikeway Master Plan		Active Transportation	2007	✓
	MAG Regional Pedestrian Plan		Active Transportation	2000	✓
	MAG West Valley Multimodal Transportation Corridor Plan		Transportation	2001	



County Plans	Plan Name	Category	Year	Checkmark
County Plans	MCDOT 2035 Regional Transportation System Plan (2040 Update underway)	Transportation	2014	
	MCDOT Active Transportation Plan	Active Transportation	2018	✓
	Maricopa County Regional Trail System Plan	Trails	2004	✓
State Plans	ADOT Bicyclist Safety Action Plan	Active Transportation	2018	✓
	ADOT Pedestrian Safety Action Plan	Active Transportation	2017	✓
	ADOT An Economic Impact Study of Bicycling in Arizona	Economic	2013	

COMMUNITY PROFILE

Current Land Ownership

As noted in **Table 2-2** and **Figure 2-1**, Avondale’s MPA covers approximately 94.4 square miles of land owned and maintained by numerous sources, though privately-owned property is the majority ownership category covering over 36 percent of all land in the Avondale MPA.

The Bureau of Land Management (BLM) is the second largest landowner with nearly almost 30 percent of Avondale’s MPA located in far south Avondale within and adjacent to Estrella Mountain Regional Park. There are also about 15.5 square miles of other public lands, or about 16 percent.

A map of the current land ownership is illustrated in **Figure 2-2**.

Table 2-2: Land Ownership Distribution

Land Ownership Category	Percent	Square Miles
Private	38.9%	36.8
Bureau of Land Management (BLM)	29.3%	27.7
Local or State Parks	16.4%	15.5
Arizona State Land Department (ASLD)	14.5%	13.6
US Fish and Wildlife (FWS)	0.7%	0.6
Bureau of Indian Affairs (BIA)	0.2%	0.2
Total	100.0%	94.4

Source: Bureau of Land Management, 2021

Figure 2-1: Land Ownership Distribution

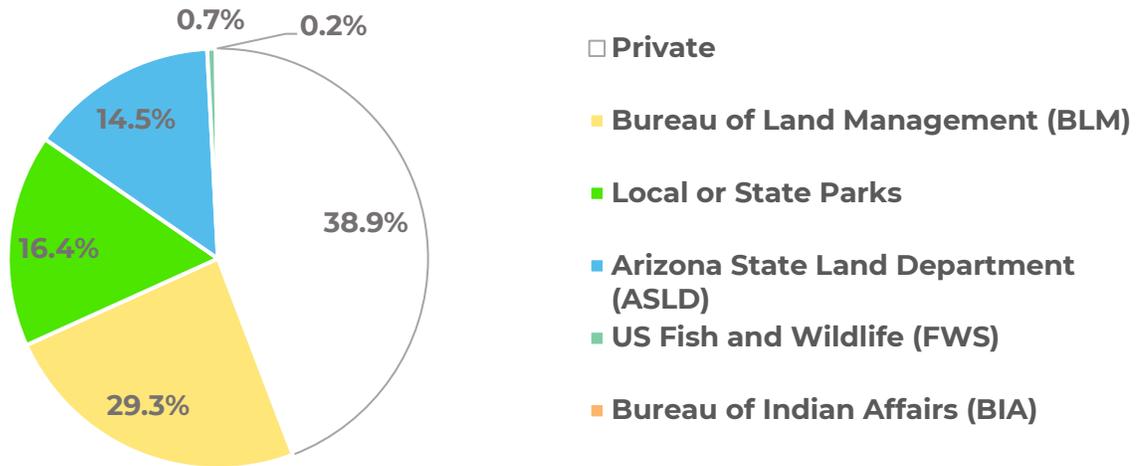
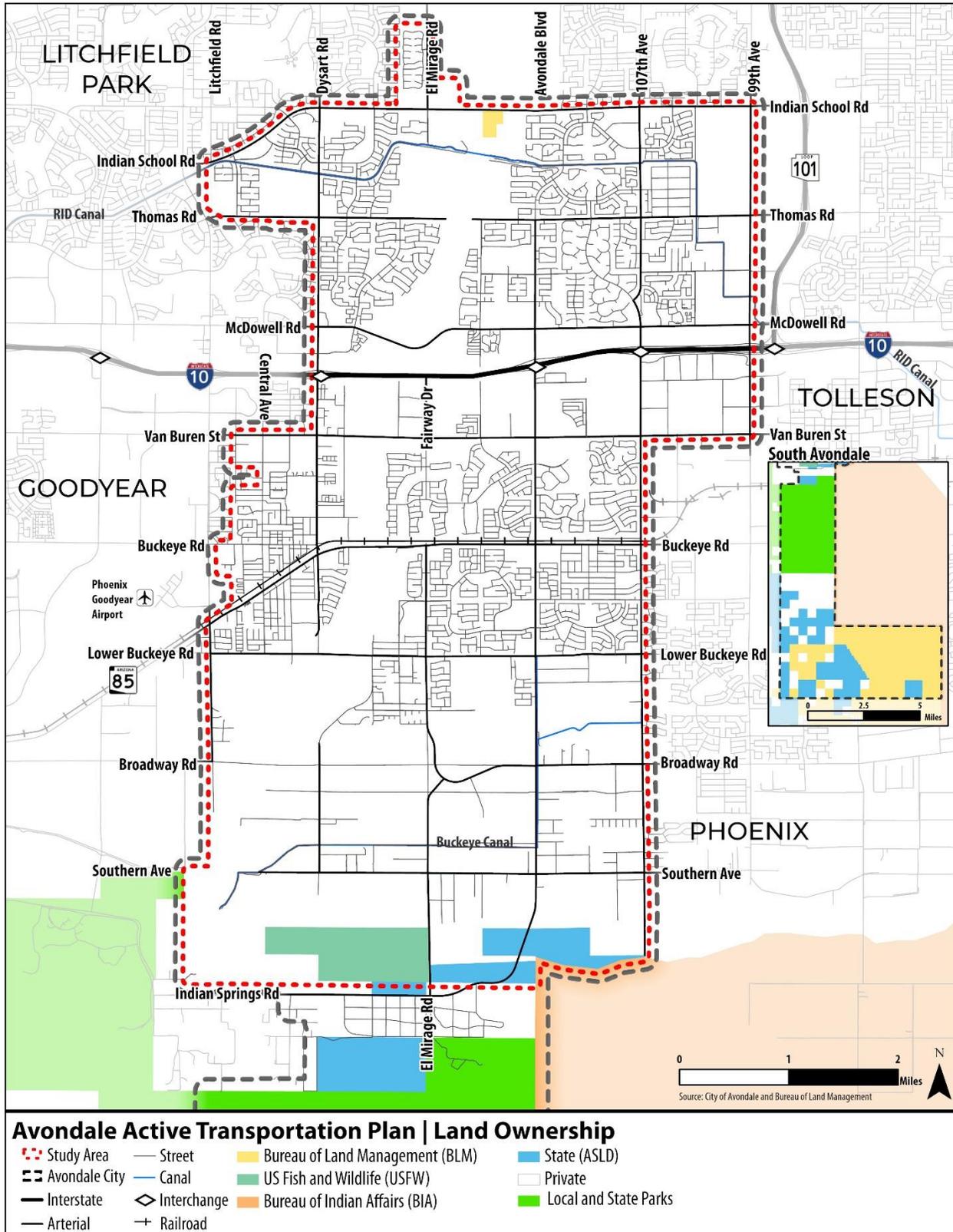


Figure 2-2: Land Ownership Map



Existing Land Use

As shown in **Table 2-3** and **Figure 2-3**, the existing land use composition in Avondale is predominately open space (52.5 percent) and vacant (22.0 percent). Although this is largely due to the large swaths of land of open space that is located within the Estrella Mountain Regional Park, Aqua Fria, Salt, and Gila Rivers, there is vast potential for urban growth within Avondale private land ownership areas. To further reinforce said statement, agriculture land uses account for 6.6 percent of the land within Avondale which present additional opportunities for urban development.

Outside of open space, vacant, and agricultural land, the most predominant land use is traditional single family development accounting for 10.3 percent of the total land within Avondale.

A map of the existing land use in Avondale is provided in **Figure 2-4**.

Table 2-3: Existing Land Use Distribution

Land Use Category	Square Miles	Percent
Agriculture	6.2	6.6%
Commercial	1.1	1.2%
Industrial	0.6	0.6%
Multi-Family Residential	0.5	0.5%
Office	0.1	0.1%
Open Space	49.4	52.5%
Other/Public Employment	4.4	4.5%
Single Family Residential	9.8	10.3%
Transportation	1.7	1.7%
Vacant	20.6	22.0%
Total	94.4	100.0%

Source: Maricopa Association of Governments (2020)



Figure 2-3: Existing Land Use Distribution

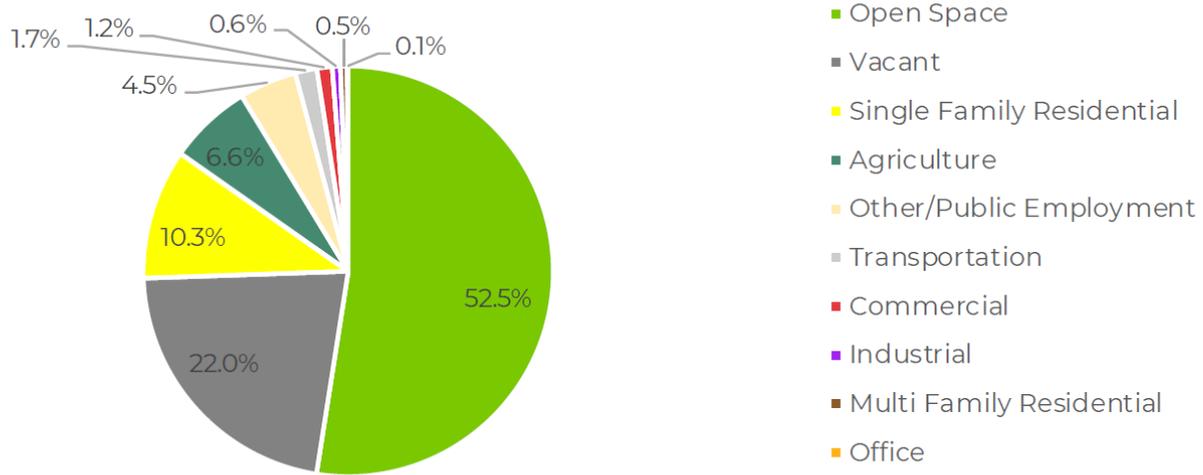
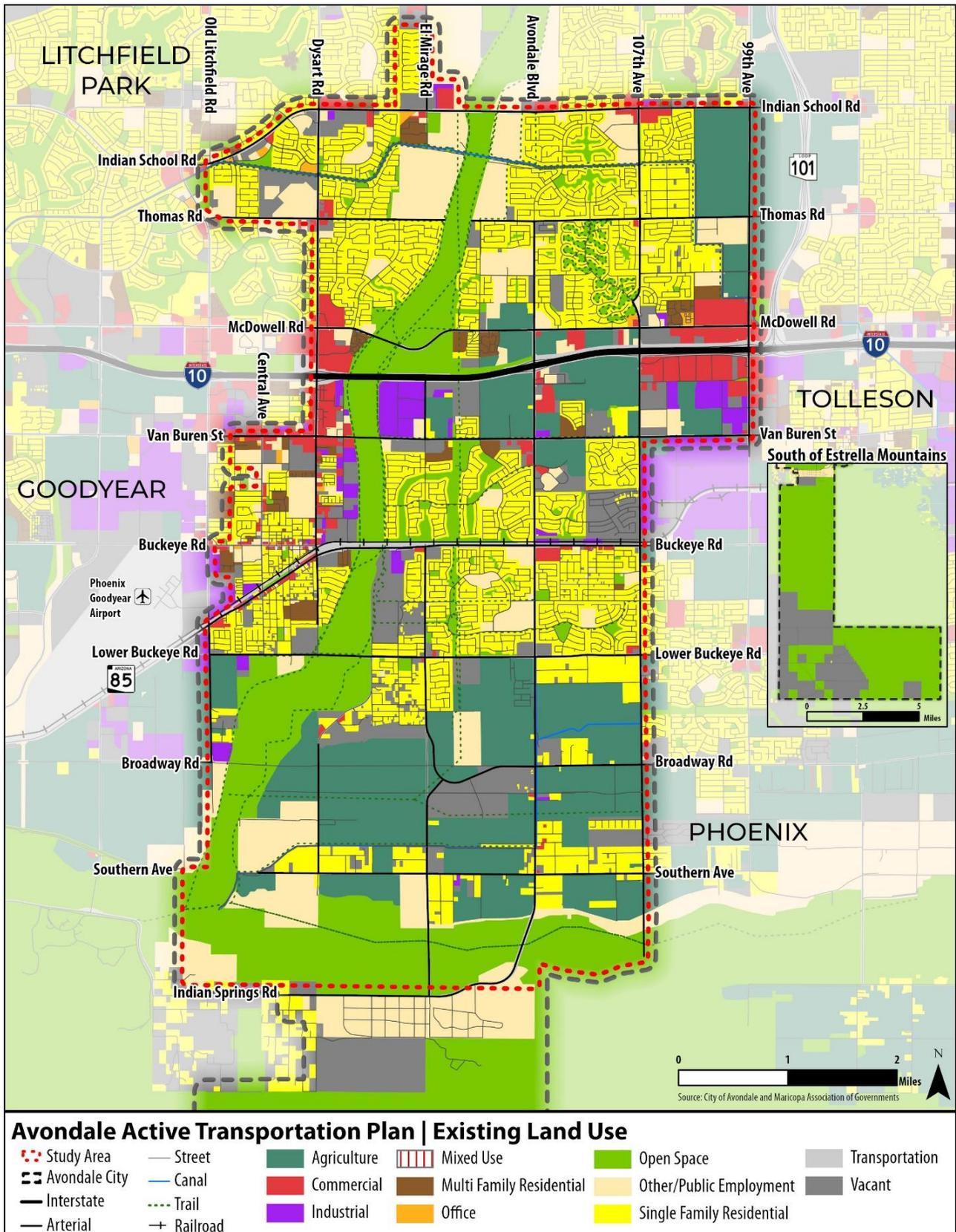


Figure 2-4: Existing Land Use Map



Zoning

Zoning districts in Avondale are established in order to promote the orderly development of the City and in order to classify, regulate, restrict, and separate the use of land, buildings and structures. While the General Plan offers guidance on Avondale’s future growth for the entire municipal planning area (94.4 square miles), an evaluation of the existing zoning districts within the Avondale’s municipal limits (32.8 square miles) begins to offer a more precise indicator of the existing and future mix, density and intensity of land uses that can be expected in the Avondale ATP study area. Avondale currently contains the following zoning districts within their municipal limits. A breakdown of the various districts and their respective square miles are shown in **Table 2-4**. Refer to **Figure 2-5** for a map illustrating the existing zoning districts.

Table 2-4: Zoning Distribution

Zoning Districts	Square Miles	Percent
Agriculture	9.7	29.7%
Cashion Business District	<0.1	<0.1%
City Center District	0.1	0.4%
Commerce Park	0.1	0.2%
Commercial Office	<0.1	<0.1%
Community Commercial	0.6	1.8%
Community Commercial with Historic Avondale Infill Overlay	<0.1	<0.1%
Freeway Commercial	0.1	0.1%
General Industrial	1.8	5.5%
Historic Avondale Infill Overlay	<0.1	<0.1%
Major Sports and Entertainment District	1.0	2.9%
Manufactured Home Park	0.3	0.8%
Multi-Family Residential	0.5	1.6%
Neighborhood Commercial	<0.1	<0.1%
Old Town Avondale Business	<0.1	<0.1%
Planned Area Development	15.1	46.0%
Rural Residential	1.3	4.0%
Special Use District	0.1	0.4%
Suburban Residential	1.8	5.5%
The BLVDD	0.3	0.9%
Total	32.8	100.0%

Source: City of Avondale, 2021

Nearly half of Avondale consists of the Planned Area Development (PAD) zoning district. The PAD zoning district is primarily designed to accommodate master planned communities that typically consist of a mixture of land uses. The purpose of PADs in Avondale is to promote the development of mixed-use developments



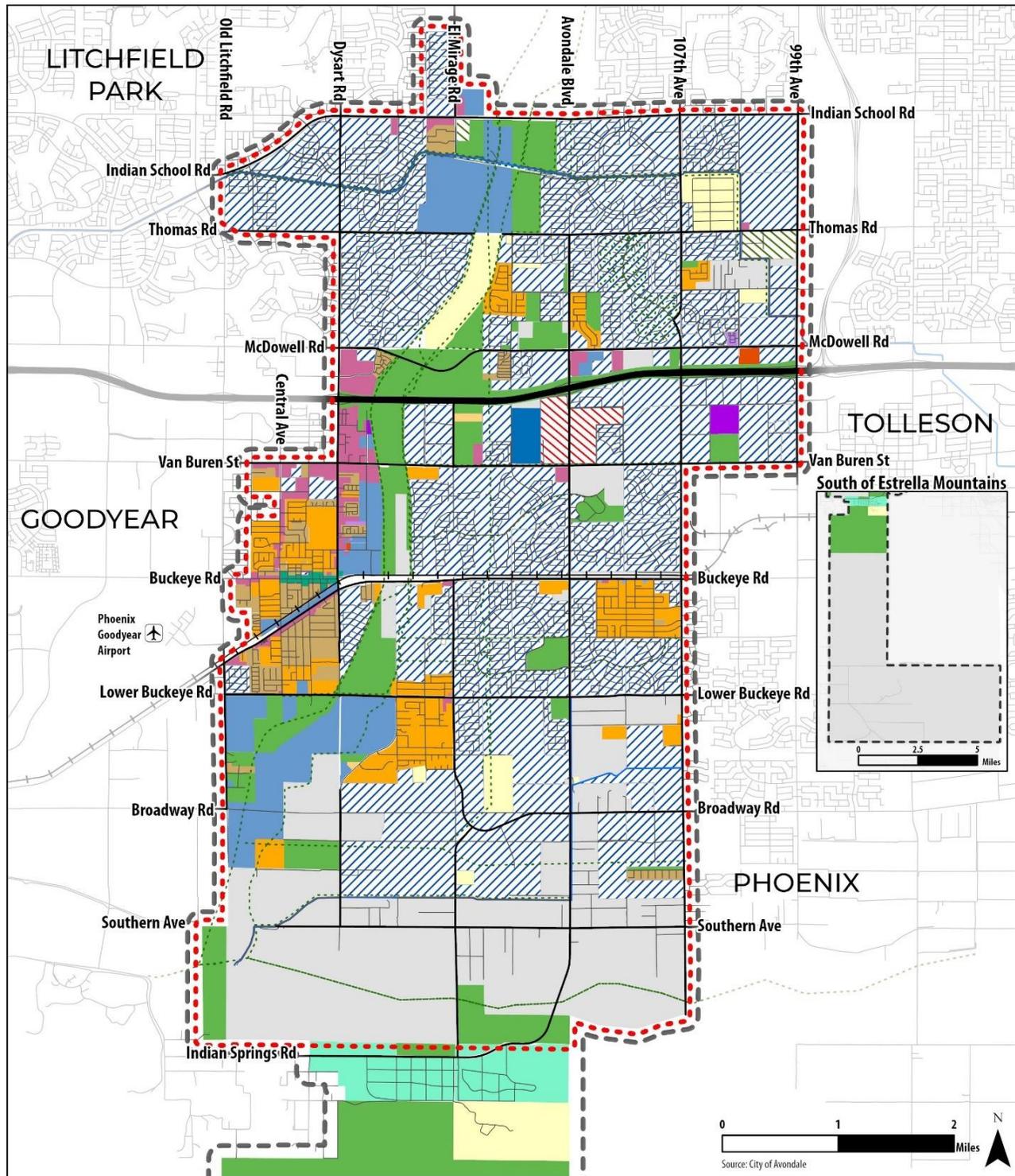
and/or residential subdivisions that include residential, commercial or business park development according to an overall development plan.

The lands in the western and parts of northern Avondale maintain a greater mixture of zoning designations. Old Town Avondale, along Western Avenue from Main Street to Dysart Road, has its own zoning designation classified as Old Town Avondale Business District (OTAB). The OTAB is to further the revitalization of the City's original town site and its immediate vicinity by encouraging pedestrian-oriented development and by emphasizing a unique mix of uses intended to make Old Town a destination, with street level activity that takes one back to an earlier place in Avondale's history.

The residential zoning surrounding the OTAB is a higher density of residential land uses which consist of Multi-Family and Urban Residential zoning designations. The Urban Residential zoning districts include R1-7, R1-6, and R1-5 with the intended purpose of providing a variety of single-family detached residential dwelling types at an urban density. The Multi-Family zoning designation include R-2, R-3, and R-4 zoning districts with the intended purpose of providing a mixture of higher density housing. The R-2 zoning district distinctly provides more of a transition from Single-Family Residential neighborhoods to a mixture of higher intensity land uses found in the other Multi-Family zoning districts. Properties in R-2 zoning districts are intended to be developed as single-family detached and attached, townhomes and patio homes. The R-3 zoning district is intended to provide for townhome, condominium and apartment uses, while the R-4 zoning district intended to be located near high activity commercial areas of Avondale and providing for high intensity townhome, condominium, apartment, and loft apartments.

Another notable area with unique zoning designations is around the BLVD District (BLVDD) near the center of the City at Avondale Boulevard and Van Buren Street. The BLVD Specific Plan ("The BSP") was created to implement the City Council's vision of creating a vibrant, urban, mixed-use environment that will become a premier destination for shopping, dining, entertainment, employment and various types of residential uses. The BLVDD is intended to complete the vision expressed in The BSP by prescribing building form, site design and architectural standards for The BLVD area. The BLVDD area is divided into six different sub-districts which include Village, Park Avenue, Residential, Neighborhood, and Promenade Districts. The adjacent City Center District (CCD) and the related City Center Specific Plan (CSP) were the precursors to the BLVDD and the BSP. The CCD and CSP have similar intentions of the BLVDD and BSP such as creating a high-density, mixed-use environment that will become a premier destination for shopping, dining, entertainment, employment and various types of residential uses for the area.

Figure 2-5: Zoning Map



Avondale Active Transportation Plan | Zoning

Study Area	Street	General Industrial	Freeway Commercial	Old Town Avondale Business	Planned Area Development
Avondale City	Canal	Agricultural	Fashion Business	Rural Residential	Historic Avondale Infill Overlay
Interstate	Trail	Commercial Office	City Center District	Suburban Residential	Special Use District
Arterial	Railroad	Neighborhood Commercial	Commerce Park	Urban Residential	The BLVDD
		Community Commercial	Sports and Entertainment	Multi-Family Residential	



Subdivisions

Subdivisions are the act of dividing land into parcels that are easier to sell or otherwise develop, usually via a plat. Subdivisions may be simple, involving only a single seller and buyer, or complex, involving large tracts of land divided into many smaller parcels.

As illustrated in **Figure 2-6**, Avondale has a mixture of subdivisions throughout the City that have either been completed, currently in progress, or planned to be developed. Much of northern Avondale consists of completed residential subdivisions while central and southern Avondale contains more of the residential subdivisions in progress of being completed or planned to be completed.

Avondale currently has 29 completed subdivisions, seven subdivisions in process of being completed, and eight subdivisions planned to be completed.

Floodplain

Floodplain Delineation Studies identify land areas (floodplains) subject to inundation by a flood that has a one percent probability of being equaled or exceeded in any given year, also known as a 100-year flood. The results of a Floodplain Delineation Study are often submitted to the Federal Emergency Management Agency (FEMA) in order for the study to be incorporated onto the Flood Insurance Rate Maps.

Any development in an area that is determined to be in a FEMA-designated floodplain must meet the requirements of local, state and federal regulations.

One of these requirements is to build the structure so the lowest floor is above the base flood elevation. The Base Flood Elevation (BFE) is the predicted highest flood water elevation expected to occur at a location during a 100-year flood event. New habitable construction must be built above the BFE.

As illustrated in **Figure 2-7**, the existing floodplains within Avondale predominately follow the regulatory floodways of the Agua Fria Rivers and the Gila/Salt River. These floodplain corridors often present opportunities for regional active transportation facilities due to their inviting natural open space features and their length and separation from roadways. In fact, the completion of a segment of trail along the Agua Fria Trail was completed in 2021. This segment of the Agua Fria Trail is located approximately a half mile north of Van Buren Street along the Agua Fria River east levee, beneath the I-10 overpass. The work consists of constructing asphaltic concrete and a cement concrete pathway, soil cement bank protection, landscaping



and other related work. Access to businesses and residential properties will be maintained throughout the duration of the project, and there will be no impact to travel lanes as most of the work will be in the Agua Fria River levee.



Figure 2-6: Subdivisions Map

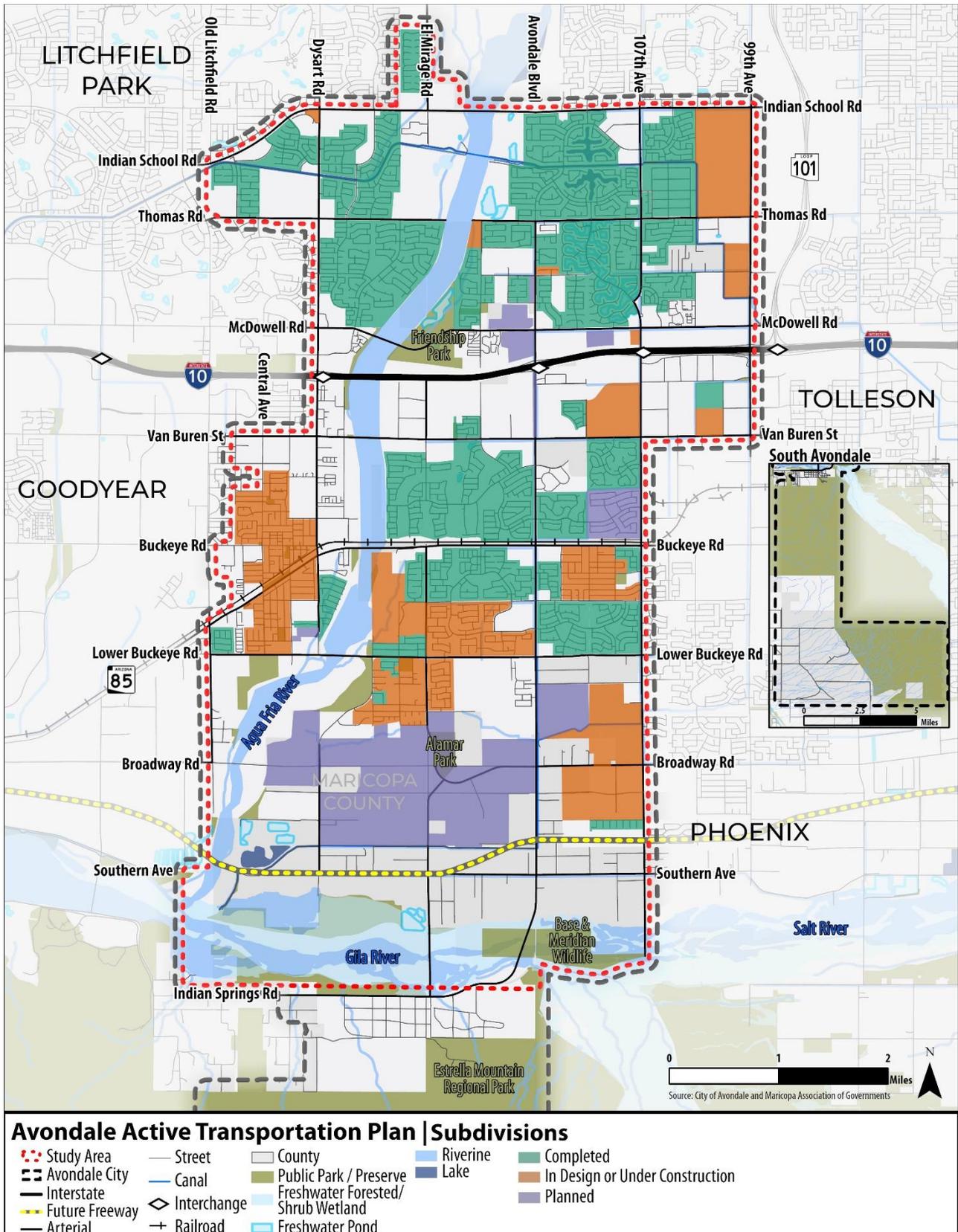


Figure 2-7: Flood Hazard Map



Avondale Active Transportation Plan | FEMA's National Flood Hazard

- Study Area
- Avondale City
- Interstate
- Arterial
- Street
- Interchange
- Railroad
- County
- Existing Trail
- Public Park / Preserve
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Change Flood Hazard



Future Land Use

Open space remains the most predominant land use under the Avondale General Plan future land use plan. The vast amounts of open spaces are largely attributable to the presence of the Aqua Fria and Gila Rivers and Estrella Mountain Regional Park in Avondale. The location and configuration of future planned land uses will provide vast opportunity for recreational trails to navigate throughout the entire City by leveraging the linear nature of the Agua Fria and Gila Rivers. The majority of the developable land (current vacant and agricultural land) under the existing land use scenario is projected to develop into single family residential (except along the I-10 corridor) with an additional 21.6 square miles of new residential development – more than tripling the amount in the current condition. As more residential development occurs, it will result in greater demand for safe, connected active travel infrastructure and implementation of safety measure to ensure motorists traverse the roadway network safety and efficiently with the modes of active transportation. Refer to **Table 2-5** and **Figure 2-8** for a summary of the future land use distribution, and **Figure 2-9** for a map illustrating the future land uses.

Table 2-5: Future Land Use Distribution

Land Use Category	Square Miles	Percent
Commercial	2.6	3%
Industrial	1.1	1%
Mixed Use	1.5	2%
Multi-Family Residential	0.9	1%
Office	0.2	1%
Open Space	50.0	53%
Other/Public Employment	5.0	5%
Single Family Residential	31.4	33%
Transportation	1.7	2%
Total	94.4	100%

Source: Maricopa Association of Governments (2020)

Figure 2-8: Future Land Use Distribution

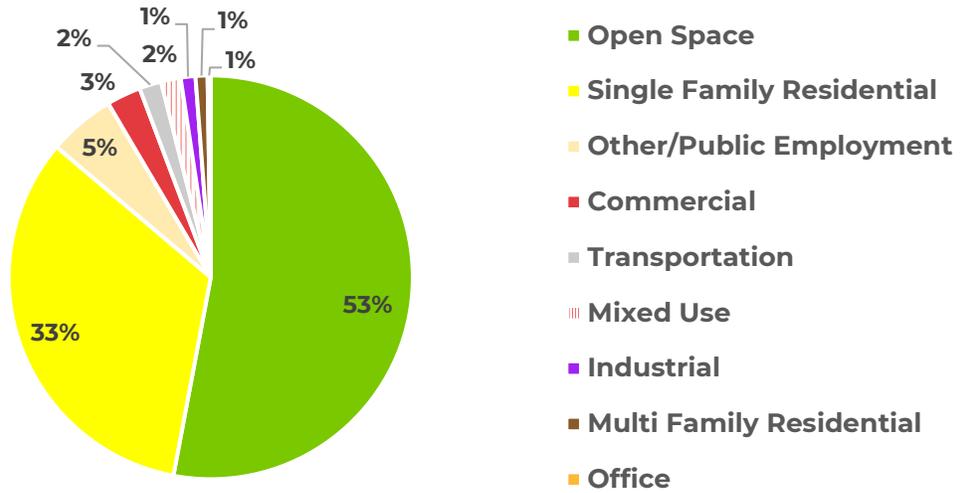
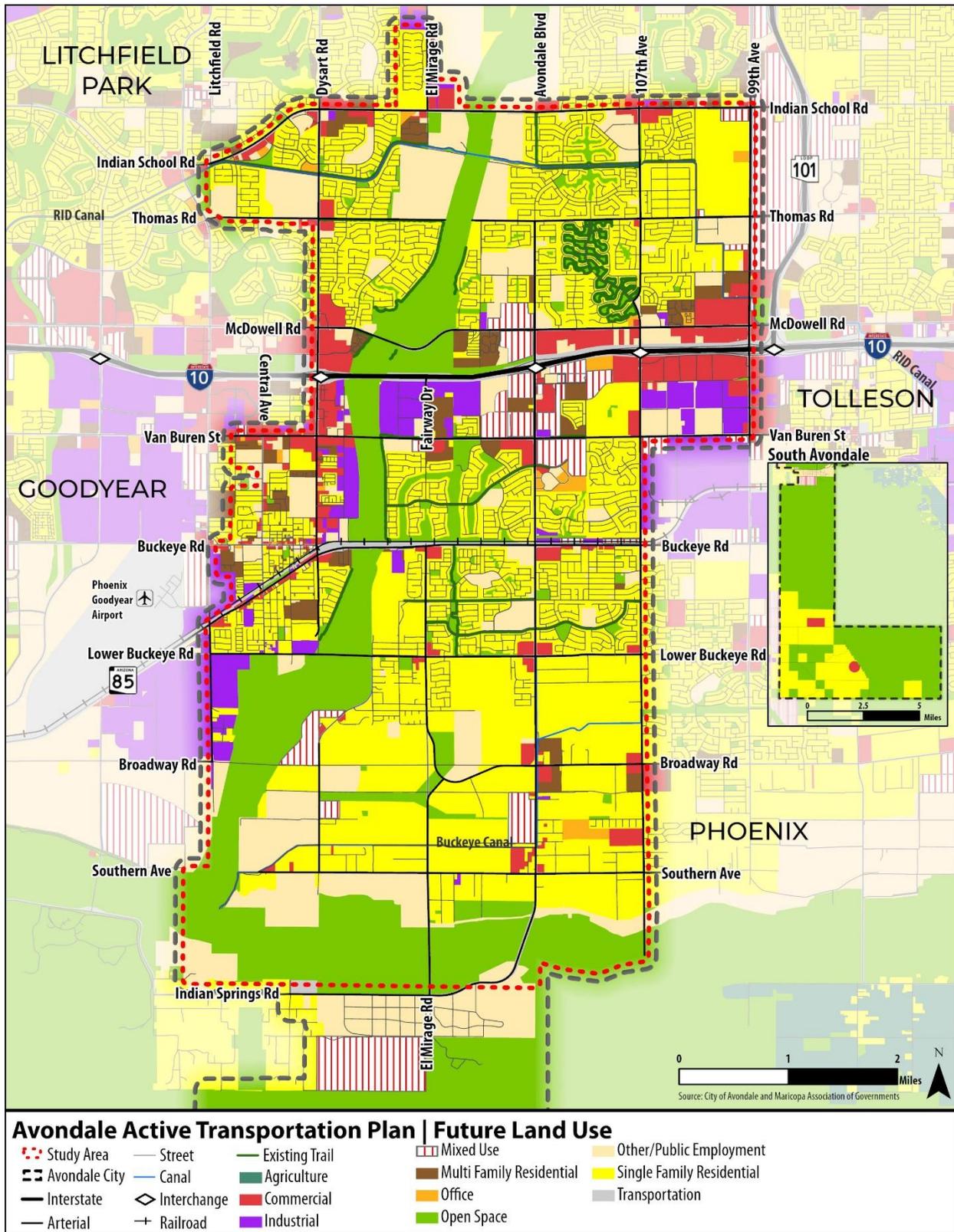


Figure 2-9: Future Land Use Map



DEMOGRAPHIC & SOCIOECONOMIC CONDITIONS

A thorough understanding of the existing and projected demographic and socioeconomic conditions in Avondale can help influence, determine and prioritize areas of Avondale where new or improved active transportation infrastructure should be considered. In addition, this analysis and inventory can aid the identification of active transportation user needs, behaviors and tendencies.

This section includes an inventory of various demographic and socioeconomic conditions which is summarized in **Table 2-6**.

Population & Jobs

According to MAG, 84,736 people lived in Avondale in 2020 with a population of approximately 898 people per square mile with a median age of approximately 30 years old, substantially younger than the median age of 36 in Maricopa County.

Per MAG projections (**Figure 2-10**), the population is expected to reach approximately 101,800 in 2030, 111,900 in 2040, and 119,00 by 2050. Similar to much of metro Phoenix, Avondale experienced rapid growth between 2000 and 2010 with a total population increase of approximately 112 percent. Since 2010, the rate of population growth recessed some to 11 percent with an increase of 8,467 people from 2010 to 2020. Population in Avondale is expected to increase by around 20 percent between 2020 and 2030 and then begin to plateau thereafter with a population growth of 10 percent and six percent between 2030 and 2040, and 2040 and 2050 as the community nears build out.

As illustrated in **Figure 2-11**, the density of population throughout Avondale is fairly consistent within the MPA with the areas of highest density of population being near Old Town Avondale and few other residential areas north and south of I-10.

As of 2020, there were approximately 23,200 jobs within Avondale and MAG is forecasting a 31 percent increase in jobs, with the city reaching approximately 30,400 jobs by 2030. The rate of job growth is projected to slow with 36,200 jobs projected in 2040, a 10 percent increase from 2030 projections; and ultimately reaching around 42,800 jobs by 2050, a six percent increase from 2040. With the amount of population and employment growth expected to occur in Avondale over the next 20 to 30 years, now is the time to plan, prioritize and invest to incrementally develop bicycle and pedestrian facilities that will help Avondale become a premier community for livability and active transportation.

Figure 2-10: Population & Job Growth



Source: Maricopa Association of Governments, 2020



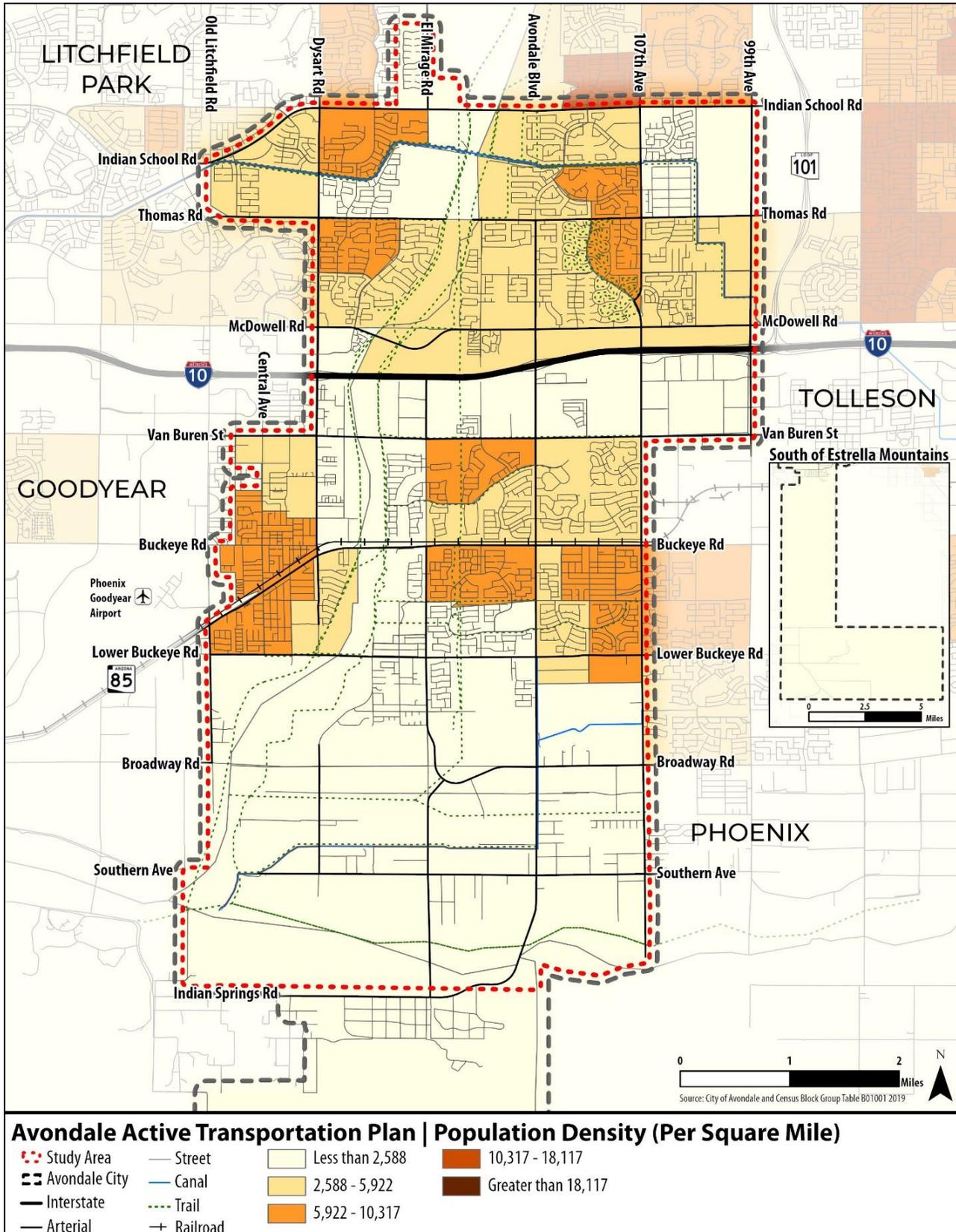
Table 2-6: Demographic & Socioeconomic Conditions Summary

Demographic & Socioeconomic Conditions	City of Avondale	Maricopa County
Population		
Population	84,736	4,328,810
Population Density (per square mile)	897.72	469.39
Median Age	30.8	36.4
Housing & Households		
Median Household Income	\$61,825.00	\$64,468.00
Households	26,067	1,552,096
Renters	45.00%	37.80%
Mobile Homes	3.80%	4.50%
Families with Female Head of Household	18.08%	12.22%
Income Below Poverty	11.90%	12.11%
No-Vehicle Households	4.80%	5.94%
One-Vehicle Households	29.97%	35.33%
Title VI		
Minority (% of total population)	69.01%	44.76%
Age 65 and older (% of total population)	8.43%	16.09%
Age 17 and younger (% of total population)	30.57%	24.31%
Disability: Households with person(s) with a disability	10.40%	11.20%
Limited English Proficiency (% of population 5 and older)	11.30%	8.80%
Commuting		
Workers 16 years and older	39,960	2,040,912
Car or Truck - drive alone	78.69%	76.00%
Car or Truck - carpool	13.51%	11.00%
Public transportation	0.73%	2.00%
Bicycle	0.40%	0.80%
Walked	1.50%	1.50%
Other means (taxicab, motorcycle, etc.)	1.20%	1.70%
Work at home	7.70%	7.00%

Source: Maricopa Assortation of Governments and US Census Bureau, 2020



Figure 2-11: Existing Population Density Map



Housing

In 2020, approximately 26,067 households existed within Avondale at a median household size of 3.24 people and a median household value of \$215,100 dollars. The median household income in Avondale is \$61,802 dollars, slightly lower than Maricopa County average of \$64,498. The median household income is consistent across the City with the most affluent area being north of I-10. Refer to **Figure 2-12** for a map of Avondale with the median household income.

Title VI

To help inform the “Equity” component of the Six E’s throughout the study process, the following vulnerable populations groups were analyzed in Avondale:

- Minority Population
- Poverty Status
- Age 65 and older
- Age 17 and younger
- Disabled
- Limited English Proficiency

As noted in **Table 2-6**, approximately 69 percent of the population in Avondale is a minority which is higher than the Maricopa County ratio of nearly 45 percent. The percent of the population age of 65 or older is just over eight percent which is lower than the county’s 16 percent of the population; while the percent of the population age 17 and younger is around 30 percent which is higher than the county’s percentage of 24 percent. This means that Avondale has a much higher percentage of a younger population while the amount of older population is less when compared to Maricopa County as a whole. Refer to **Figure 2-13** and **Figure 2-14** for a map illustrating where the younger and older populations live within Avondale. Approximately 10.5 percent of the households within Avondale have at least one person with a disability which is slightly lower than Maricopa County at 11.2 percent. The percent of the population at the age of 5 and older with limited English proficiency in Avondale is over 11 percent which is higher than the County’s percent of 8.8 percent.

Zero-Vehicle Households

The percent of no-vehicle households in Avondale is roughly 4.8 percent which is lower than the County’s 5.9 percent. The no-vehicle ownership data shown in **Figure 2-16** reflects areas around Old Town Avondale and on the east boarder south of Buckeye Road having the highest percentage of households without access to a personal vehicle, equating to roughly one-fifth to over one-third of the households in those areas. Areas adjacent to I-10 and south of the railroad tracks along MC 85 also have a higher percentage of no-vehicle households than the County ranging from 11 to 20 percent of the homes in those areas not having access to a personal vehicle.

Existing Commuting Patterns

According to the 2020 US Census Bureau, an estimated 40,545 people in Avondale are employed that commute either within Avondale or to the surrounding areas. Refer to **Figure 2-17**, **Figure 2-18**, and **Figure 2-19** for maps of people who commute to work by either walking, biking or taking public transit.

Figure 2-12: Median Household Income Map

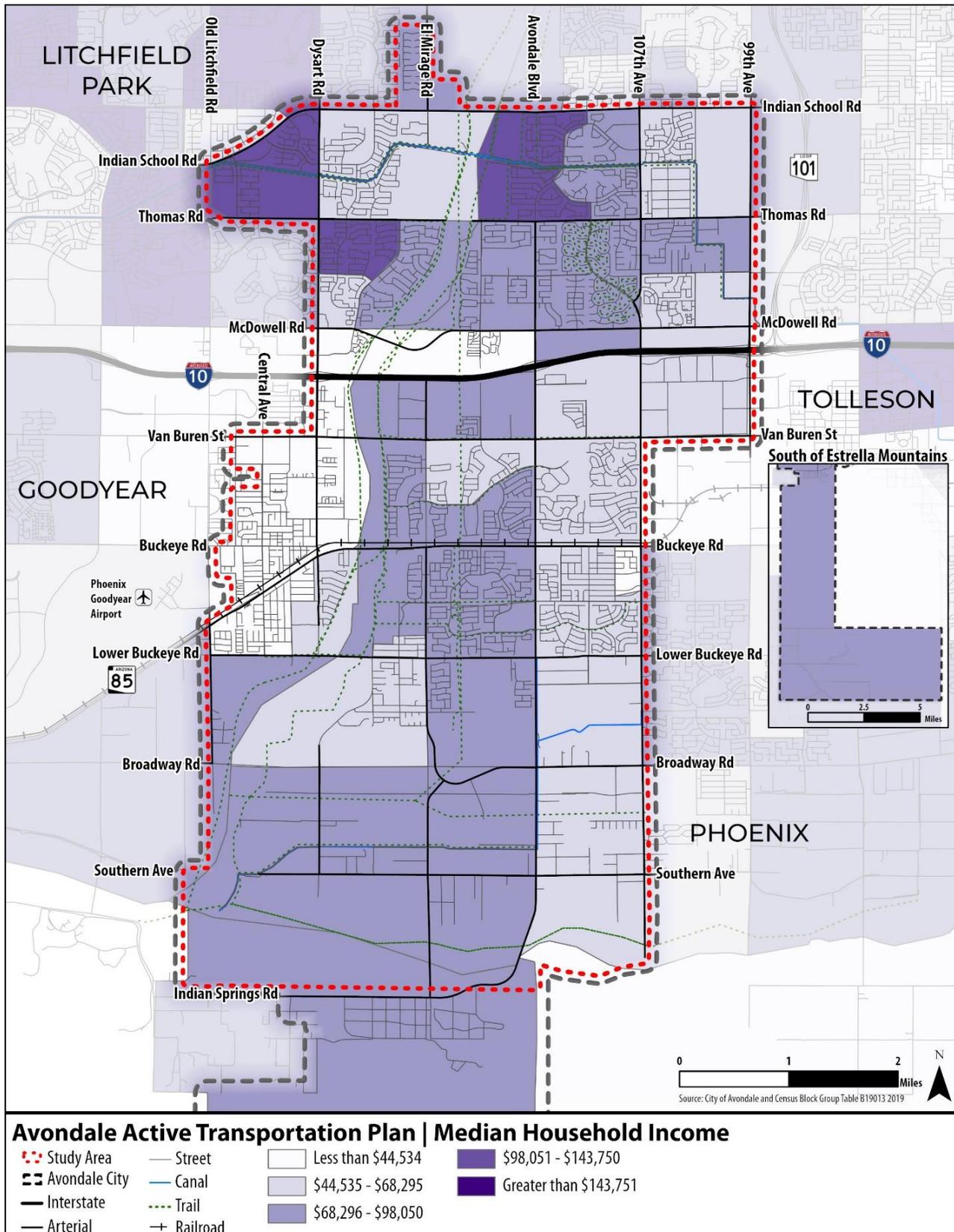
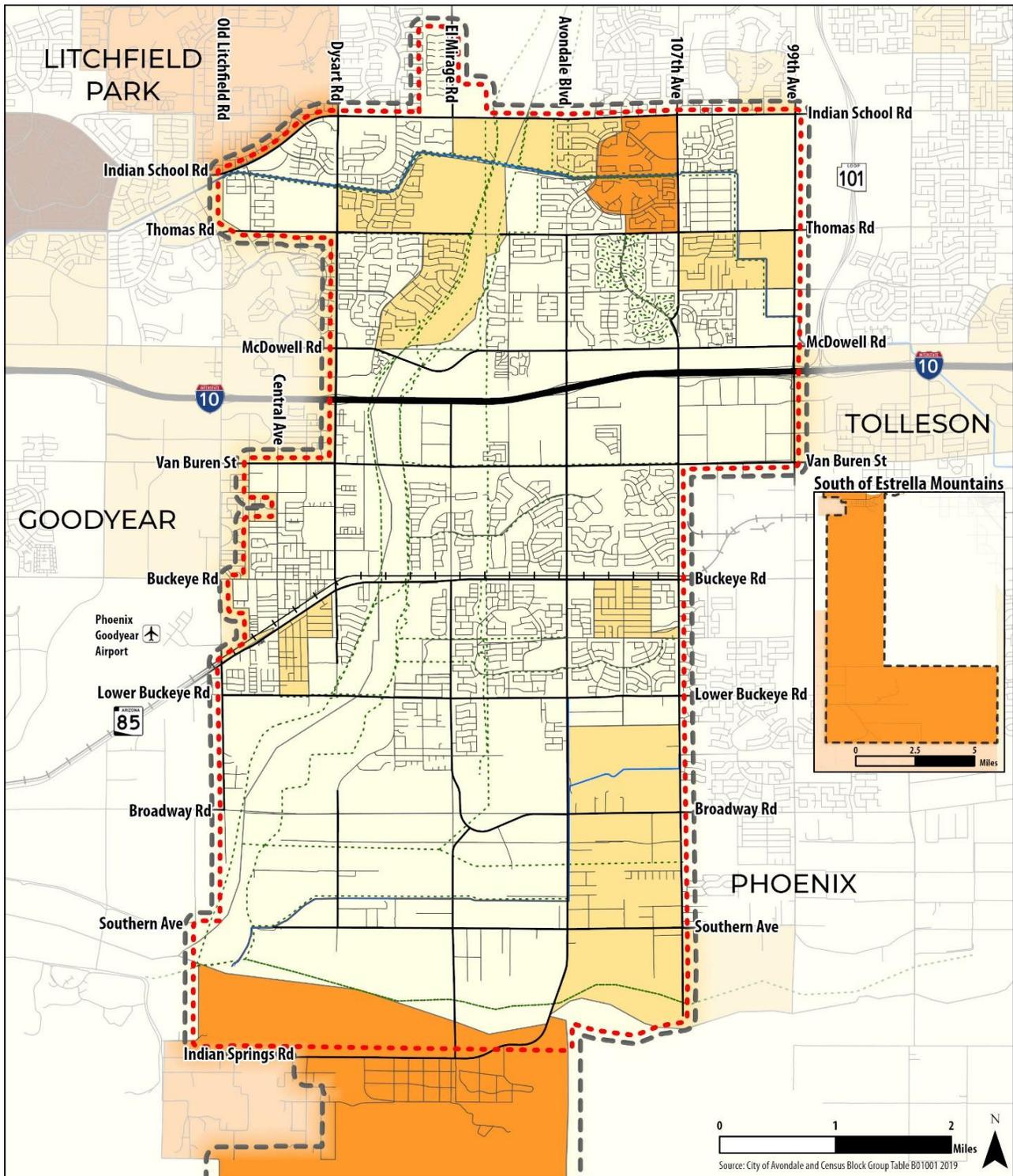


Figure 2-13: Population of 65 Years & Older Map

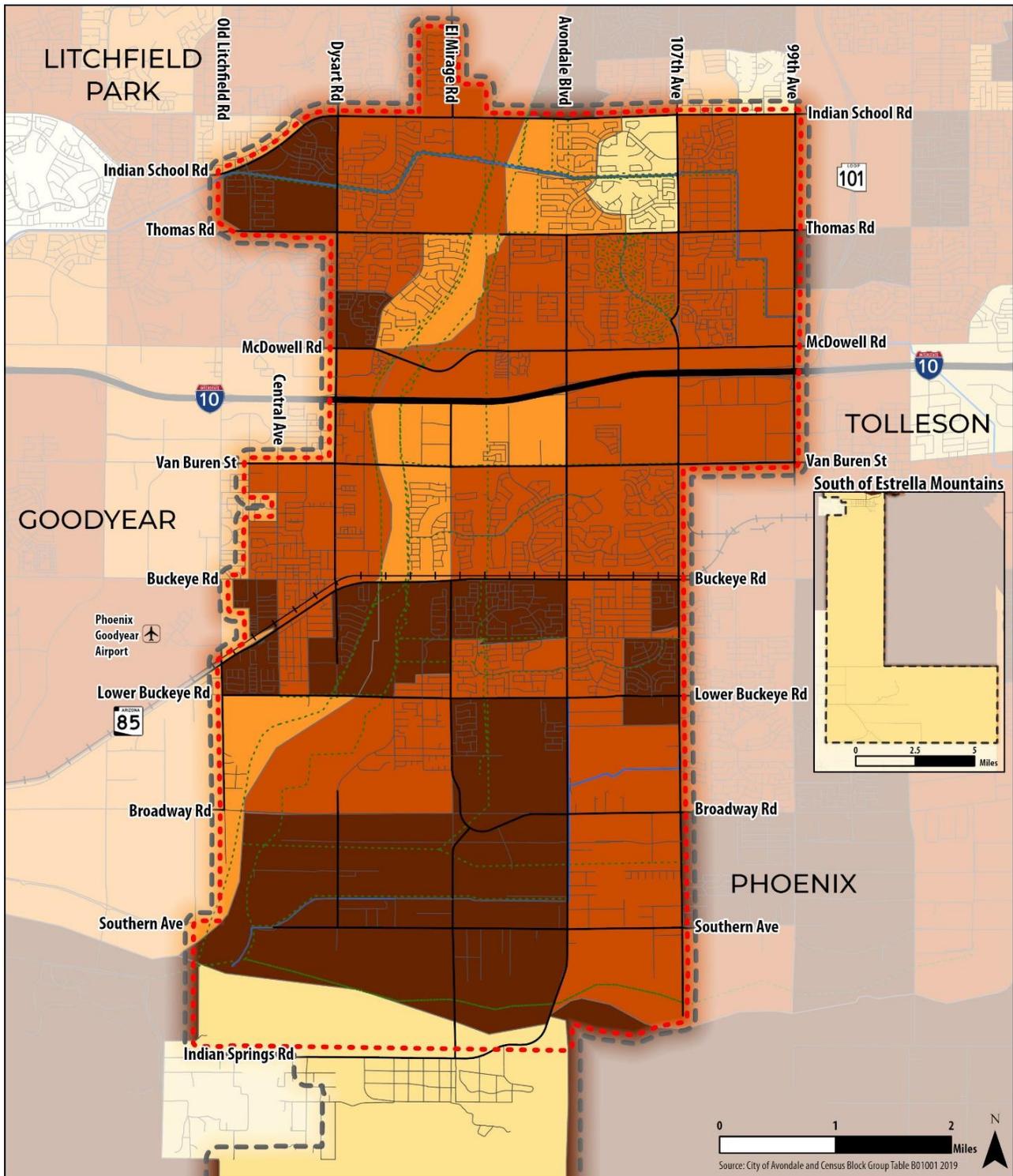


Avondale Active Transportation Plan | 65 Years and Older (% of Population)

Study Area	Street	Less than 10.91%	36.15% - 60.85%
Avondale City	Canal	10.91% - 21.24%	Greater than 60.85%
Interstate	Trail	21.24% - 36.15%	
Arterial	Railroad		



Figure 2-14: Population of 17 Years & Younger Map



Avondale Active Transportation Plan | 17 Years and Younger (% of Population)

Study Area	Street	Less than 7.82%	24.72% - 33.03%
Avondale City	Canal	7.82% - 16.89%	Greater than 33.03%
Interstate	Trail	16.89% - 24.72%	
Arterial	Railroad		



Figure 2-15: Poverty Map

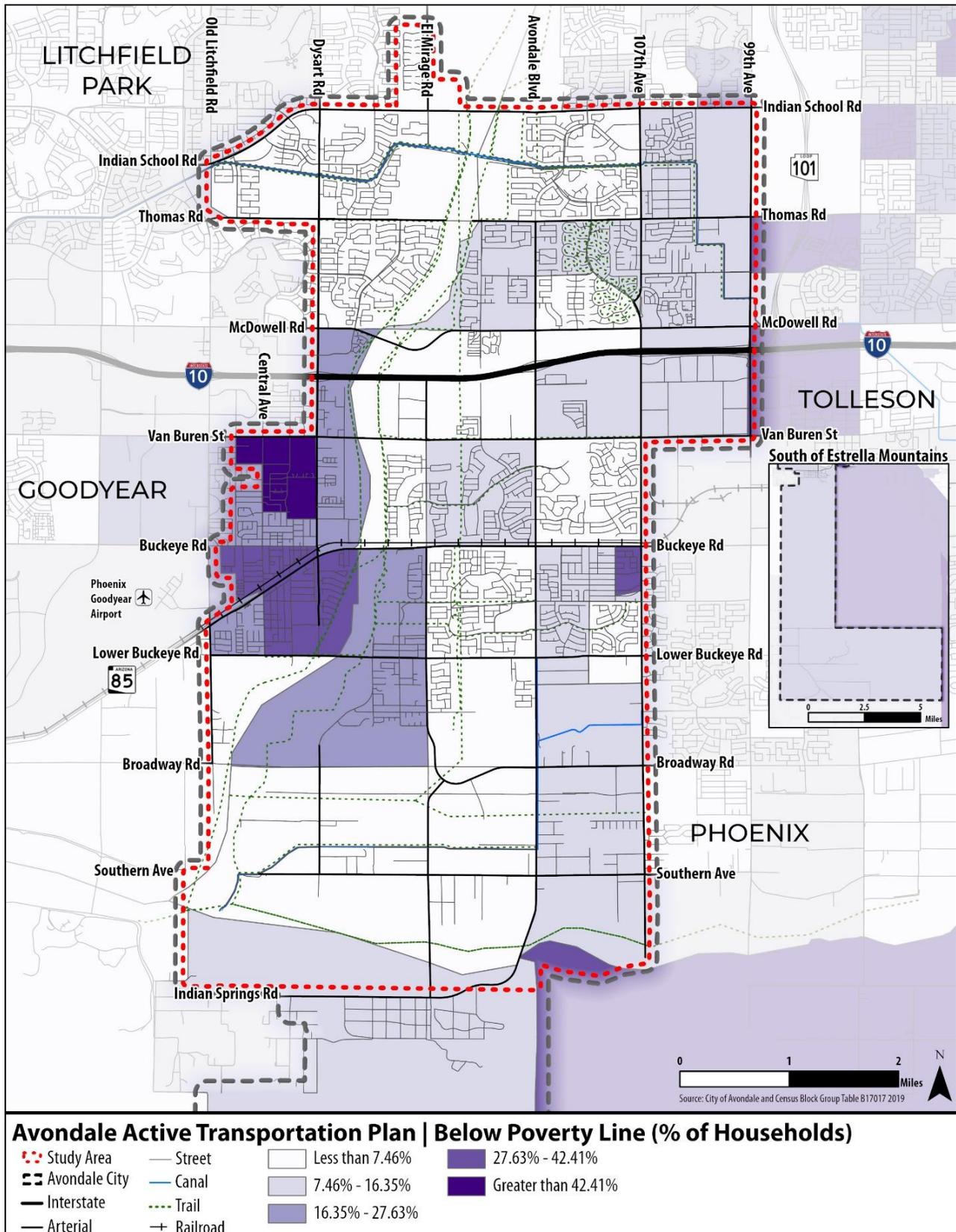


Figure 2-16: Zero-Vehicle Households Map

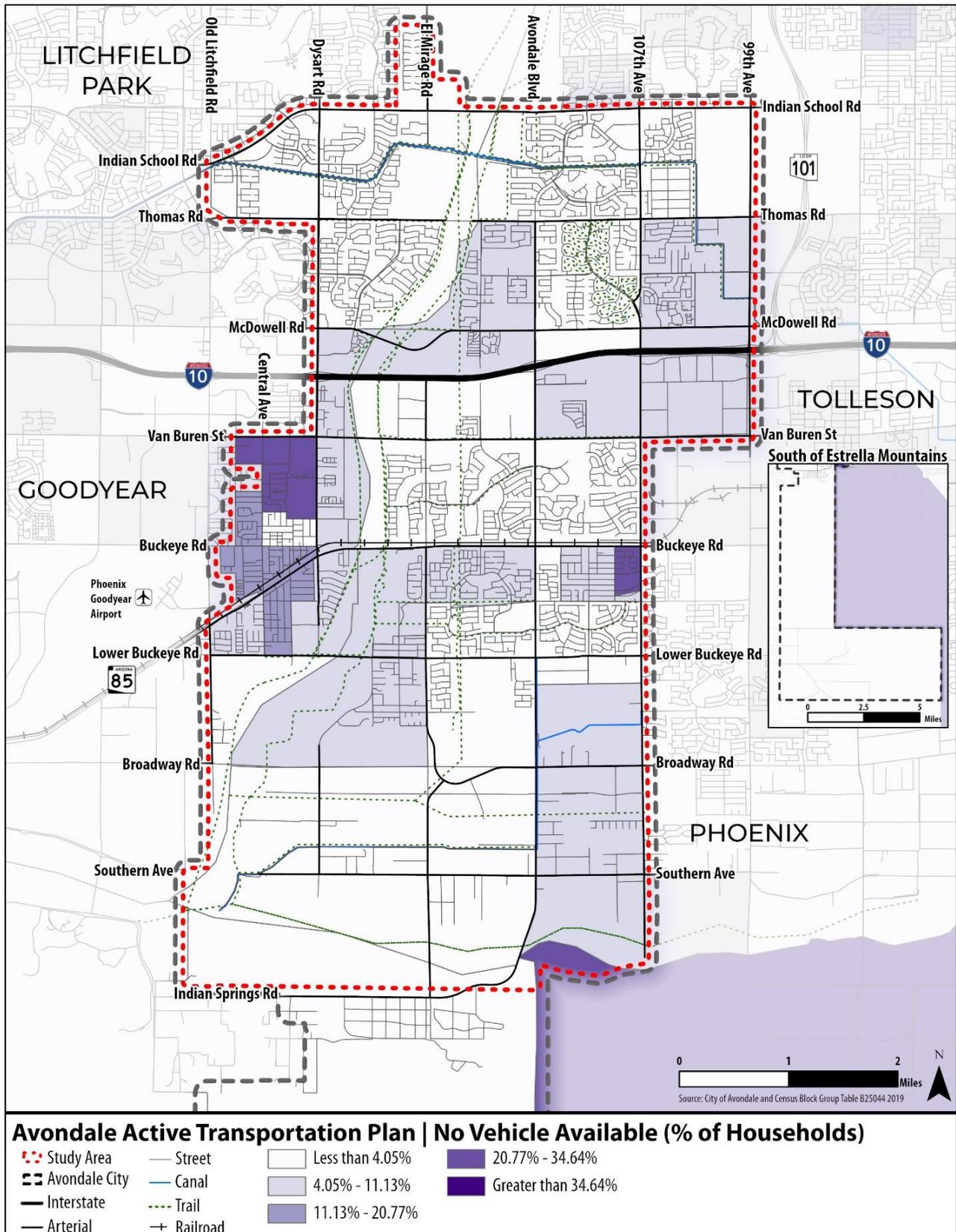
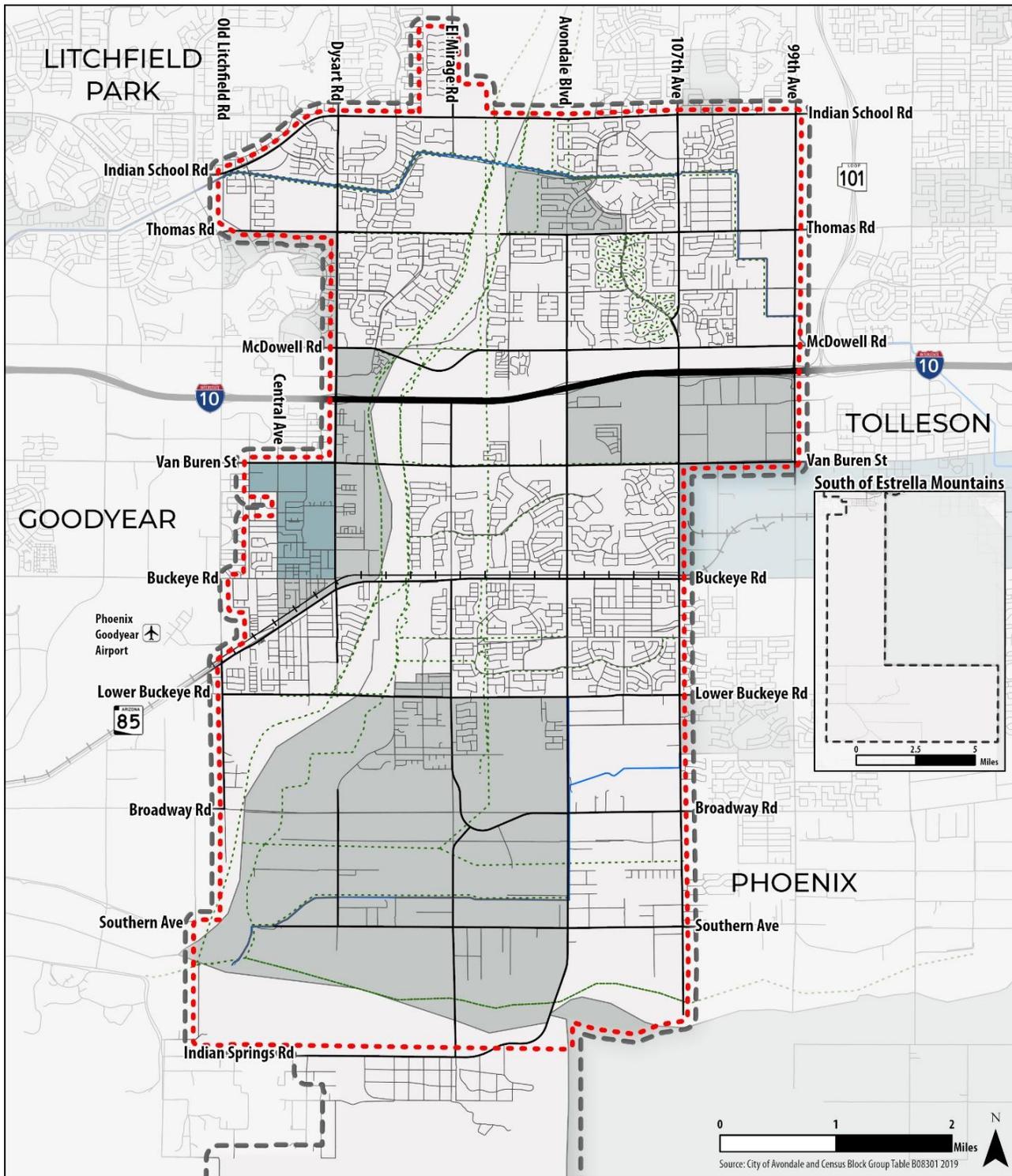


Figure 2-17: Percent of Population that Walk to Work Map



Avondale Active Transportation Plan | Walk to Work (% of Population)

- | | | | |
|---------------|----------|-----------------|---------------------|
| Study Area | Street | Less than 2.14% | 16.54% - 35.36% |
| Avondale City | Canal | 2.14% - 7.05% | Greater than 35.36% |
| Interstate | Trail | 7.05% - 16.54% | |
| Arterial | Railroad | | |



Figure 2-18: Percent of Population that Bike to Work Map

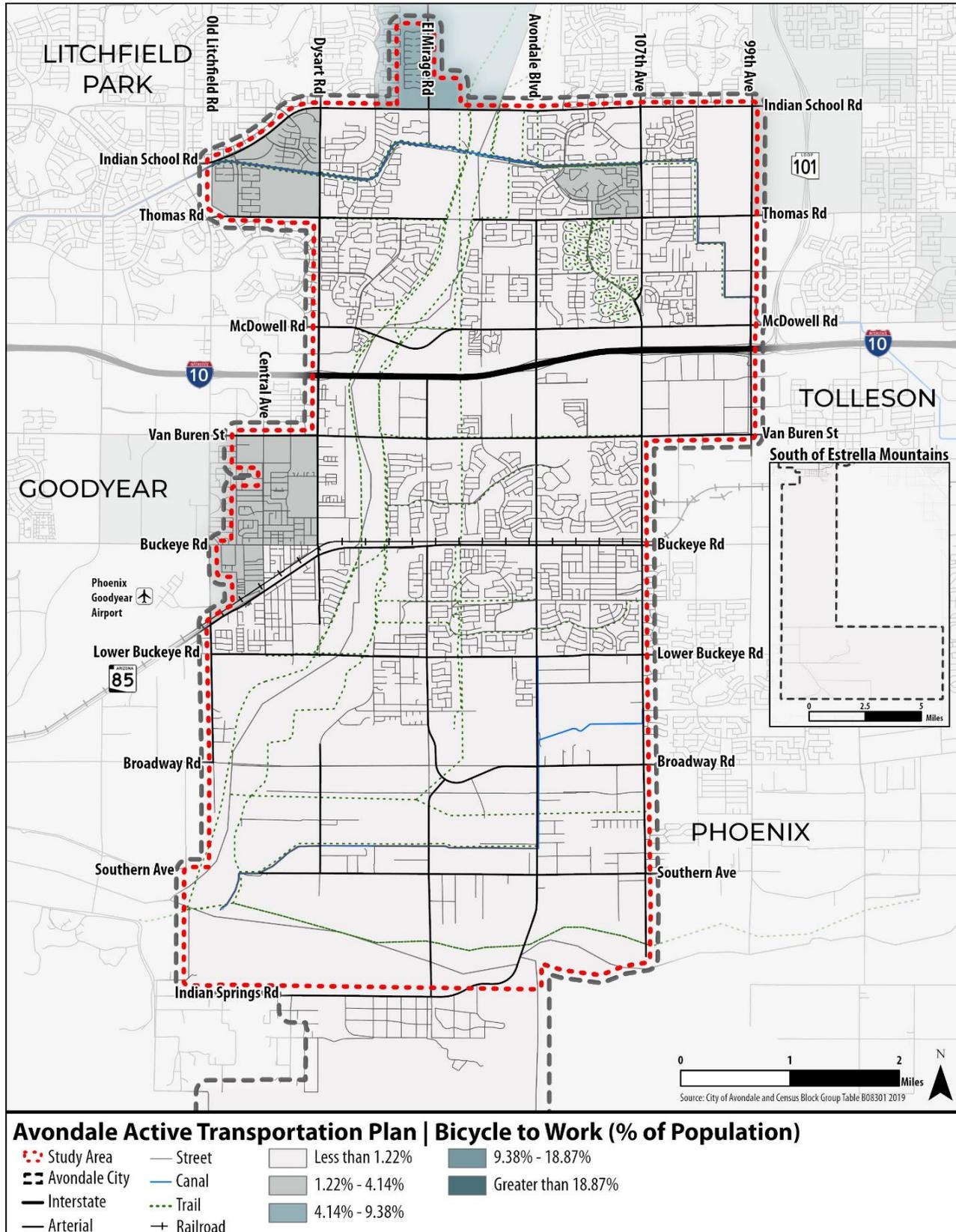
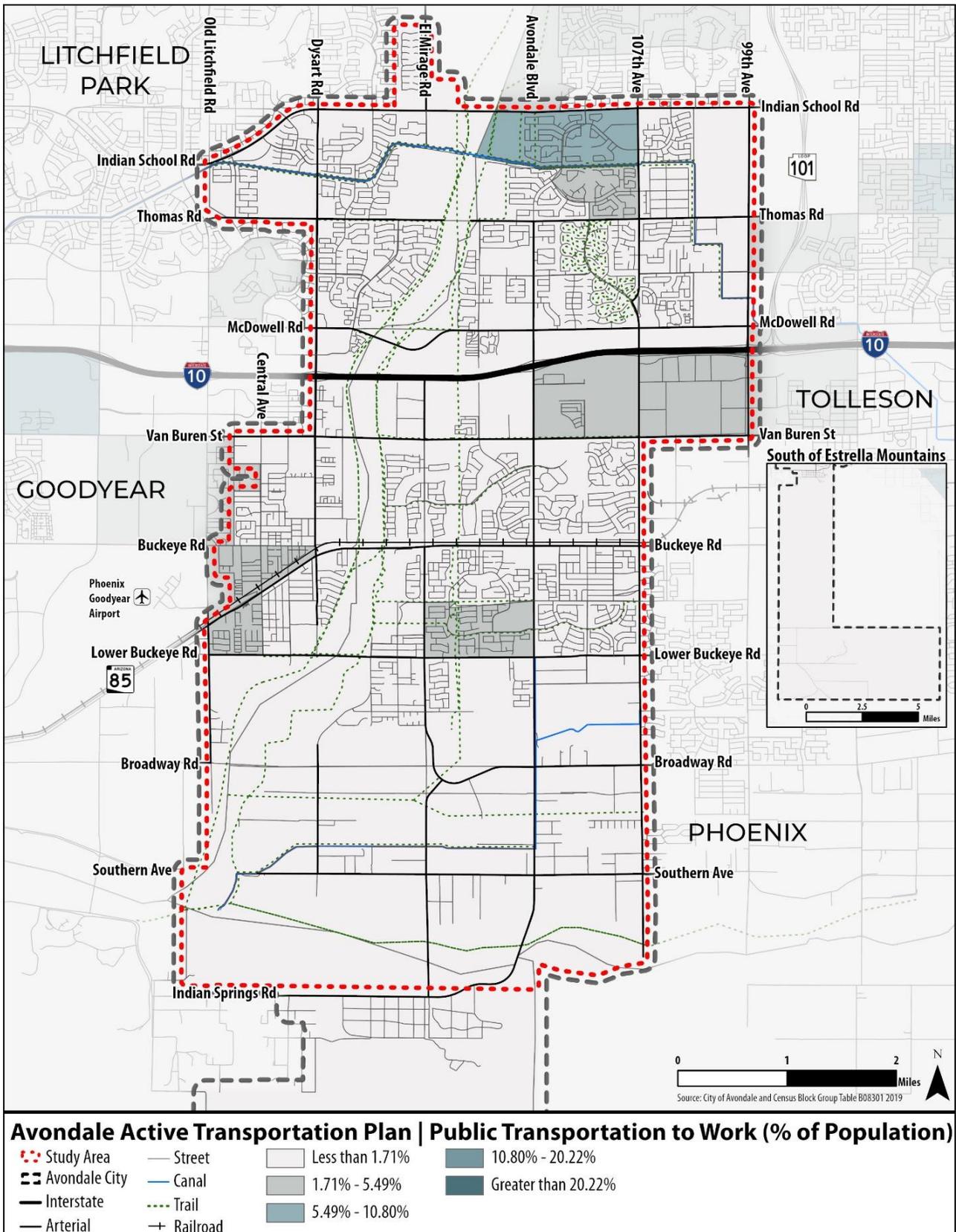


Figure 2-19: Percent of Population that take Public Transportation to Work Map



TRANSPORTATION NETWORK

The existing and planned Avondale transportation network was reviewed taking an in-depth analysis of the existing roads, bikeways, sidewalks, and transit system within the Avondale MPA boundary. The existing transportation infrastructure helped guide the needed expansion of the proposed network and specific bicycle and pedestrian infrastructure improvements presented in *Section 4 – Project Recommendations*.

Existing & Planned Roadway Network

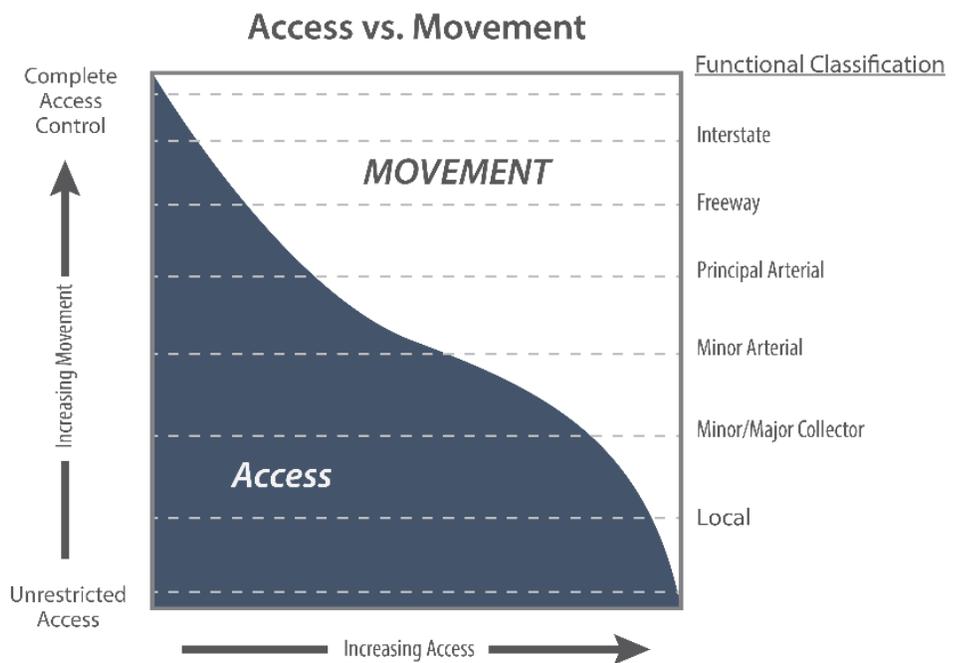
Roads provide for two distinct and competing functions: mobility and land access. As mobility increases, land access decreases and vice versa as shown in **Figure 2-20**. Both functions are vital, and no trip is made without both. Roads are functionally classified by the relative amounts of through and land-access service they provide, amounts of traffic they can support, and the distance of trips they facilitate.

Functional classification is used by the planners and engineers to establish a roadway's design standards, speed, capacity, access management features, and land use development. Functional classification also impacts a roadway's eligibility for federal transportation funds for roadway improvements and maintenance.

Per the Avondale's General Engineering Requirements Manual, there are four primary functional classifications, which include:

- **Interstates/freeway** facilities are provided to service long distance trips between cities and states. No land access is provided by these facilities – only via traffic interchanges.
- **Arterial/parkway** facilities are provided to primarily serve through-traffic movement. While some land-access service may be accommodated, it is clearly a minor function. All traffic controls and the facility design are intended to provide efficient through movement.
- **Collector** facilities, the "middle" classification, are intended to serve both through and land-access functions in relatively equal proportions. For long through trips, such facilities are usually inefficient, nevertheless they are frequently used for shorter through movements associated with the distribution and collection portion of trips.

Figure 2-20: Access versus Movement Graphic



- **Local** facilities primarily serve land-access functions. Local Street design and control facilitates the movement of vehicles onto and off the street system from land parcels. Through movement is difficult and is discouraged by both the design and control of this facility.

As noted in **Table 2-7**, of the total 395.2 linear miles of roads within the Avondale MPA, there are nine miles of interstates/freeways/state routes, 65.7 miles of arterial roads, 41.5 miles of collector roads, and 279 miles of local roads. This distribution of functionally classified roads is typical for a suburban community such as Avondale.

Table 2-7: Roadway Functional Classification

Functional Classification	Length (Linear Miles)
Interstate/State Route	9
Arterial	65.7
Collector	41.5
Local	279
Total	395.2

Illustrated in **Figure 2-21**, the interstate classified roadway facility in Avondale includes only I-10 which traverse the community east to west between 99th Avenue, and Dysart Road with traffic interchanges at 99th Avenue, 107th Avenue, Avondale Boulevard, Fairway Drive (partial access), and Dysart Road. I-10 has a speed limit of 65 miles per hour (MPH) throughout the entire length that spans through Avondale. Although no active transportation infrastructure will be planned or developed on I-10, it is important to understand how other surface streets – particular the arterial network – interface with the interstate to ensure safe crossings for pedestrian and bicyclists.

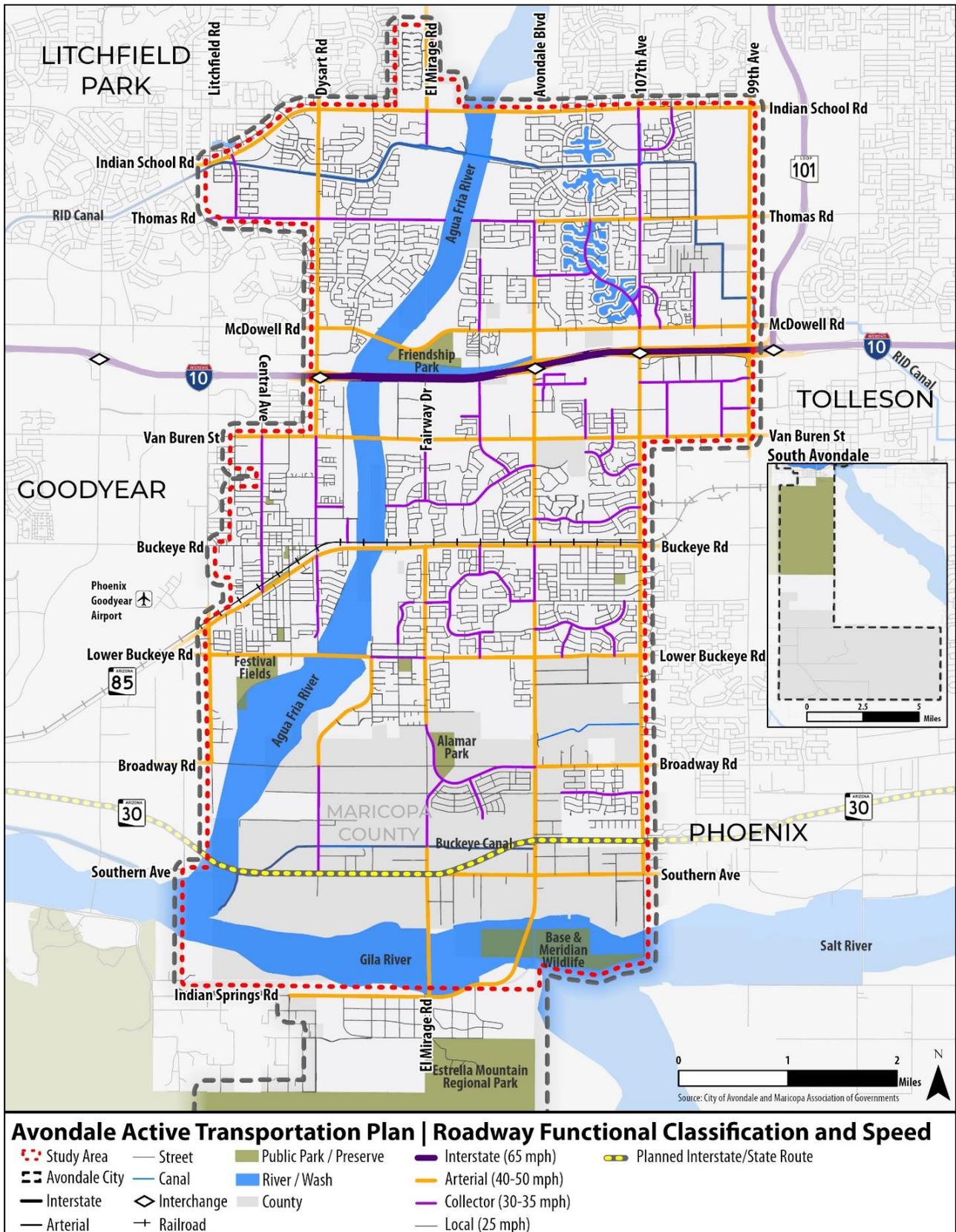
The arterial roadway network is an important street type to ensure adequate facilities for pedestrians and bicycles because they provide access to the highest variety of destinations; However, balancing the access and safety on arterial streets is a challenge between motorists and other users of the roadways. The north-south arterial roads within Avondale include Dysart Road, Fairway Drive/El Mirage Road, 99th Avenue, Avondale Boulevard and 107th Avenue. The major east-west arterials are Indian School Road, Thomas Road from 99th Avenue to Avondale Boulevard, McDowell Road, Van Buren Street, Buckeye Road, Lower Buckeye Road, Broadway Road from 99th Avenue to Avondale Boulevard, and Southern Avenue. The speed limit on the arterial network ranges from 40 to 50 mph. Collector roadways offer a balance of mobility and access, and for this reason, they provide some of the ideal conditions for bicyclists and pedestrian due to the increased level of access when compared to local roads, and the reduced speed limits and vehicular traffic volume when compared to arterial roads. Collectors tend to lie on the midsection line while arterial roads fall on the section lines; However, some roads on the section line are classified as collectors, such as Thomas Road from Avondale Boulevard to the west MPA boundary (no bridge crossing over the Aqua Fria River), 107th Avenue from McDowell Road to Indian School Road, and Dysart Road south of Van Buren Street. Another primary collector road includes Central Avenue in the Old Town Avondale area.



The balance of the roadway network includes local roads which are typically two-lane facilities that include on-street parking at times. Local roads provide the highest level of comfort for pedestrian, bicyclists, and other active transportation users due to the lower speed limits and vehicular traffic volumes. However, since the speed limits and traffic volumes are lower, there are often not very wide sidewalks and typically no dedicated bike facilities are located on local roads.



Figure 2-21: Roadway Functional Classification Map



State Route 30

As shown in **Figure 2-21**, the only future roadway not yet constructed within the Avondale MPA is State Route 30 (SR-30) which is currently in the planning process. In April 2020, The Arizona Department of Transportation (ADOT) released the Final Location/Design Concept Report (L/DCR) for SR-30 which included the selected alternative/alignment. In November 2020, the Final Environmental Assessment and Finding of No Significant Impact (FONSI) was issued, resulting in the selected alternative to move forward to the next study phases and future implementation process.

The purpose of SR-30 is to alleviate traffic congestion on I-10, often referred to as the “I-10 reliever”. The future facility is located approximately 4.5 miles south of I-10 and will run parallel to I-10 for about 13 miles (5 miles within Avondale). The ultimate configuration of SR-30 is expected to be 10 lanes – four travel lanes and one high occupancy vehicle (HOV) lane in each direction – with the mainline predominately having an at-grade profile with the freeway crossing over the crossroads. Each arterial crossroad was evaluated on a case-by-case basis to determine the need for an interchange. The L/DCR identifies potential traffic interchanges within Avondale to include 107th Avenue, Avondale Boulevard, El Mirage Road, and Dysart Road.

Bicycle and Pedestrian Considerations: Bicycle and pedestrian facilities in the corridor generally fall into two categories – those that fall on the arterial roadways and those that have dedicated trails or paths. The intent of the SR-30 corridor is to perpetuate and/or accommodate all existing and planned bicycle and pedestrian facilities that cross the SR 30 corridor.

Along the arterials, each City’s ultimate planned cross sections (according to the Cities’ general plans and roadway classification maps) is accommodated at each crossing. If the City’s section includes space for sidewalks, paths, or bike lanes, that space is perpetuated through the planned freeway crossing.

Existing and planned trails and pathways also cross the SR 30 corridor. Many of this follows or are planned to follow other existing features such as canals, washes, rivers, and powerlines. Since SR 30 must cross each of these elements, it is the intent that the existing or planned trails and pathways that would cross SR 30 would also be spanned to preserve the continuity of the trail or pathway. Additional coordination will be needed during final design with the local agencies on how to accommodate all the bicycle and pedestrian facilities crossing the corridor. It should be noted that no trail or pathway is included in and along the SR 30 corridor.

It is important to note that House Bill 2685 (Proposition 400) was vetoed by the Governor in July 2022, and as a result, the SR-30 and other major highway/roadway projects are currently on-hold until further notice and/or supplemental funding sources are identified.

State Route 30 Active Transportation Conceptual Plan

As previously noted, MAG in partnership with the ADOT have been studying the SR-30 proposed freeway. The project spans about 13 miles and roughly follows the Rio Salado and the Lower Gila River. During the development of this Plan, MAG kicked-off the SR-30 Active Transportation Conceptual Plan which is aiming at developing a strategy and conceptual plan to integrate active transportation infrastructure and routes along the proposed SR-30 corridor as well as routes that intersect with the proposed facility.



In September, 2022, MAG closed a survey that to help develop a vision for alternative transportation options along future SR-30 corridor. Survey results would help inform development of a vision and conceptual plans for an active transportation facility alongside SR-30.

Existing Bikeways

Bicycling is an essential component of any transportation system and yields benefits in numerous ways including health, economics, environment, and equity. As Avondale has grown over the last two decades, the City has made steady progress in providing bicycle facilities along its maintained arterial and collector roadways.

Location & Types of Bicycle/Multi-Use Facilities

As shown in **Table 2-8**, there are 92.3 centerline miles of bike lanes and routes and 1.5 miles of paved shoulders within Avondale. In addition, there are 34.5 miles of multi-use paths that are either paved or unpaved. As illustrated in **Figure 2-22**, bike lanes and routes are primarily located on arterial and collector streets. Multi-use paths are largely constructed as part of the various master planned communities. Other multi-use paths are located along the Agua Fria River and the Roosevelt Irrigation District (RID) Canal.

Table 2-8: Existing Bicycle & Multi-Use Facilities

Bikeway Facility Type	Length (Miles)
Bike Lane Miles	88
Bike Route	4.3
Multi-Use Path – Paved	20.5
Multi-Use Path – Unpaved	14
Paved Shoulder	1.5
Recreation Trails	23.7
Total	152

Source: Maricopa Association of Governments, 2020

Currently, Avondale's General Engineering Requirements Manual does not contain specific design guidelines for bicycle facilities and only notes that all arterial and collector roads are required to include a bike lane. For the purposes of the active transportation inventory, typical bicycle facilities available in the Avondale ATP study area include:

- **Bike Lane** – striped lane (4 ft or wider) with pavement markings separating the bike lane from motor vehicle travel lanes. Bike lanes also may have a designated buffer space, further separating bicycles from motor vehicle traffic. Facilities may have curb and gutter present or a flush shoulder (the gutter pan may be included in the 4 ft width).
- **Bike Route** – signed, shared roadway without pavement markings that provides shared use for bicyclist and vehicles.
- **Paved Shoulder** – wide shoulder adjacent to the roadway that provides a functional space for bicyclists to travel. Typically, does not have curb and gutter.
- **Multi-Use Path** - bidirectional pathway (8 ft or wider) that is physically separated from motorized vehicular traffic by an open space or barrier. Multi-use paths may be used by pedestrians, bicyclists, skaters, wheelchair users, joggers and other nonmotorized user.

Regional Bikeway Networks

Regional bicycle networks help to resolve complex, interrelated issues concerning traffic congestion, air quality, public health, and livability. Avondale’s bicycle network is supported by a larger, regionwide network of bicycle facilities that has been partially developed and is maintained by the numerous municipalities and agencies in the region. Collectively, this regional bicycle network consists of a combination of bike lanes, bike routes, paved shoulders, and multi-use paths. While the network is vast and far-reaching, Avondale has a tremendous opportunity to collaborate with neighboring jurisdictions to expand the region’s bicycle network through the current canal network and the Agua Fria and the Salt/Gila River corridors.

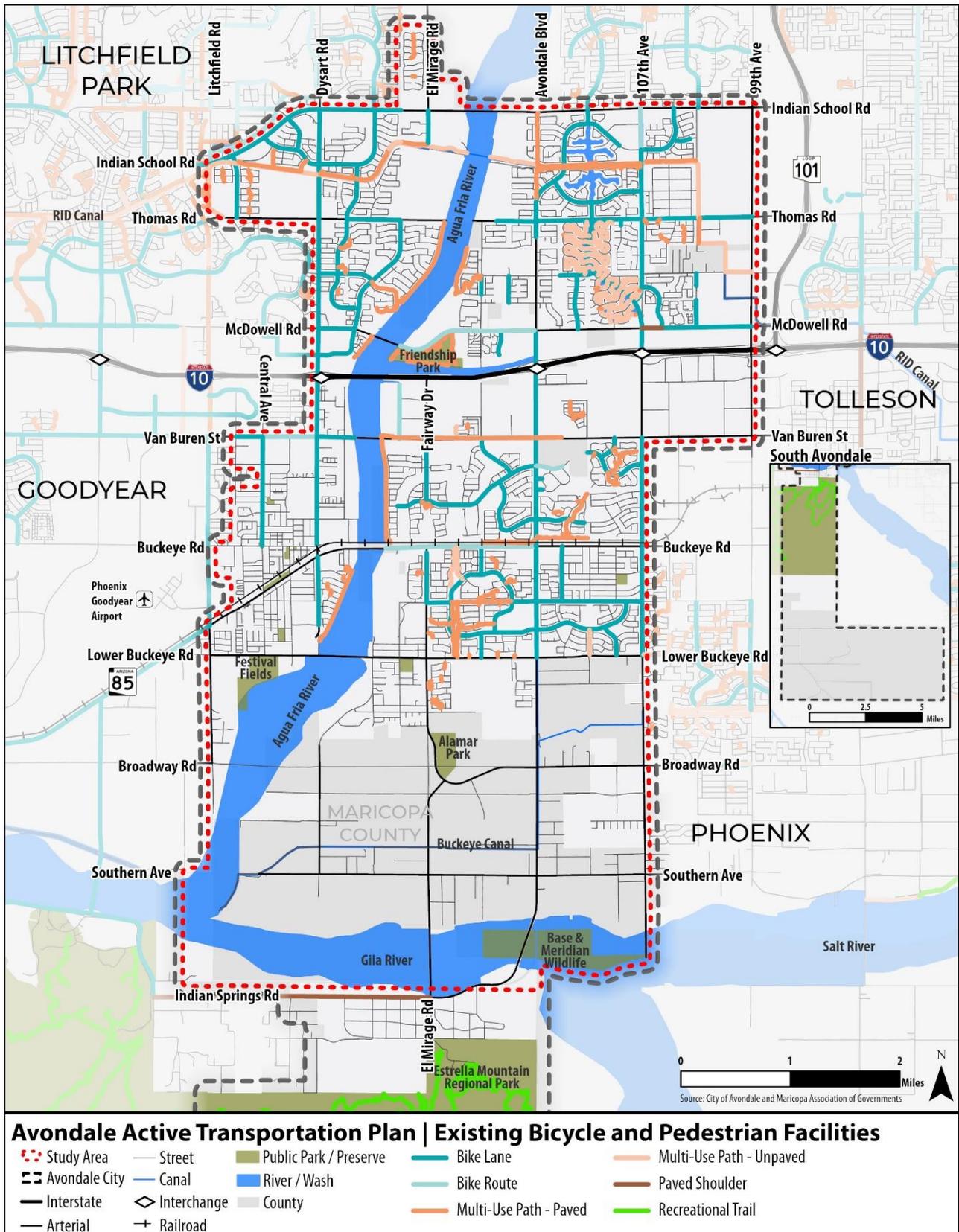


Off-Street Paths and Trails

When bicycle and pedestrian facilities are connected to recreational areas they act as an extension of the transportation system. Connecting parks, open spaces and other recreational facilities via bicycle and pedestrian facilities is a way to make parks and open spaces more accessible and provide a safe and convenient means for residents to explore the recreational system. Off-street paths and trails are open to bikers, walkers, hikers, runners, and often equestrians. **Figure 2-22** illustrates the locations of major local and regional trails.



Figure 2-22: Existing Bicycle & Multi-Use Facilities Map



Examples of Bicycle & Multi-Use Facilities



Dysart Rd

Bike Lane

- Striped lane with pavement markings and signs that designate an exclusive lane for bicycle use.
- Typically 4-6 ft or greater in width.



McDowell Rd

Buffered Bike Lane

- Increases riding space and comfort by adding a painted buffer to a standard bike lane.
- Typically 4-6 ft or greater in width.



McDowell Rd

Bike Route/ Shoulder

- Route where the travel lane is shared by drivers and bicyclists.
- Shoulders on the edge of pavement can be widened and enhanced to allow bicyclists more separation from vehicles.



Central Ave

Protected Bike Lane

- Like sidewalks for bikes, these facilities use physical dividers (such as bollards, medians, raised curbs, armadillos, and planters) to separate bike lanes from both cars and sidewalks.



Del Rio Ranch Path

Multi-Use Path

- Off-street facility dedicated exclusively for nonmotorized travel that can be paved or unpaved.



Estrella Mountain

Recreational Trail

- Like multi-use trails, hikers, bicyclists, and horses share the dirt on these off-street recreational trails, the main difference is these meander open space and don't connect to urban destinations.

Bike Lane Conditions

From field verification and aerial review, an inventory of the existing conditions of the bike lanes to help inform recommendations and identify deficiencies was conducted.

As illustrated in **Figure 2-23**, approximately 7 percent of the bike lanes in Avondale have some level of barrier or buffer between bicyclists and motorists. The existing buffered bike lanes are along Garden Lakes Parkway and two short segments at the intersection of McDowell Road and 107th Avenue. Central Avenue has a protected bike lane with a physical landscaped median between the travel lane and the bike lane. The majority of the arterial roads with bike lanes do not have a buffer, and with the typical traffic volume and speeds they support, they are prime candidates for improved bike lanes with a buffer.

The on-street bike lanes range in width from 5 ft to 8 ft, as shown in **Figure 2-24**. Over 70 percent of the bike lanes in Avondale are 5 ft wide and almost 30 percent are 8 ft wide. The minimum width of a bike lane is 4 ft, meaning the majority of the bike lanes in Avondale are generally regarded as sufficient and similar to conditions throughout other comparable cities but could be widened for enhanced comfort and increased safety of cyclists. More than 97 percent of the roads with bike lanes have them included in both directions. Avondale Boulevard from McDowell Road to I-10 only has a bike lane in the northbound direction largely due to the undeveloped parcel on the west side of the roadway.

Bikeway Network Gaps

The existing bicycle network facilities are scattered and lack connectivity in some areas of Avondale, limiting their function to the community. The on-street bicycle facilities are often isolated and missing mode separation safety features. As for the off-street facilities gaining traction, linear parks which extend along local waterways, canals, and utility corridors provide access to green space and multimodal thoroughfares away from traffic. Although Avondale does have some facilities and potential to grow, there are still areas in portions of Avondale that lack any bikeway facility.



As shown in **Figure 2-25**, there is considerable opportunity for new on-street bike facilities. In fact, almost 45 miles (roughly 41 percent) of arterial and collector roadways do not have any on-street bike facility. Some of the primary arterial roads with gaps in the on-street bike facility network include:

- Indian School Road from 99th Avenue to El Mirage Road;
- Thomas Road from Litchfield Road to Santa Fe Trail;
- McDowell Road from Rancho Santa Fe Boulevard to Harbor Shore Boulevard; and
- Van Buren Street from Central Avenue to Dysart Road, on the Agua Fria River bridge, and from Avondale Boulevard to 99th Avenue.

Figure 2-23: On-Street & Off-Street Bike Facility Types Map

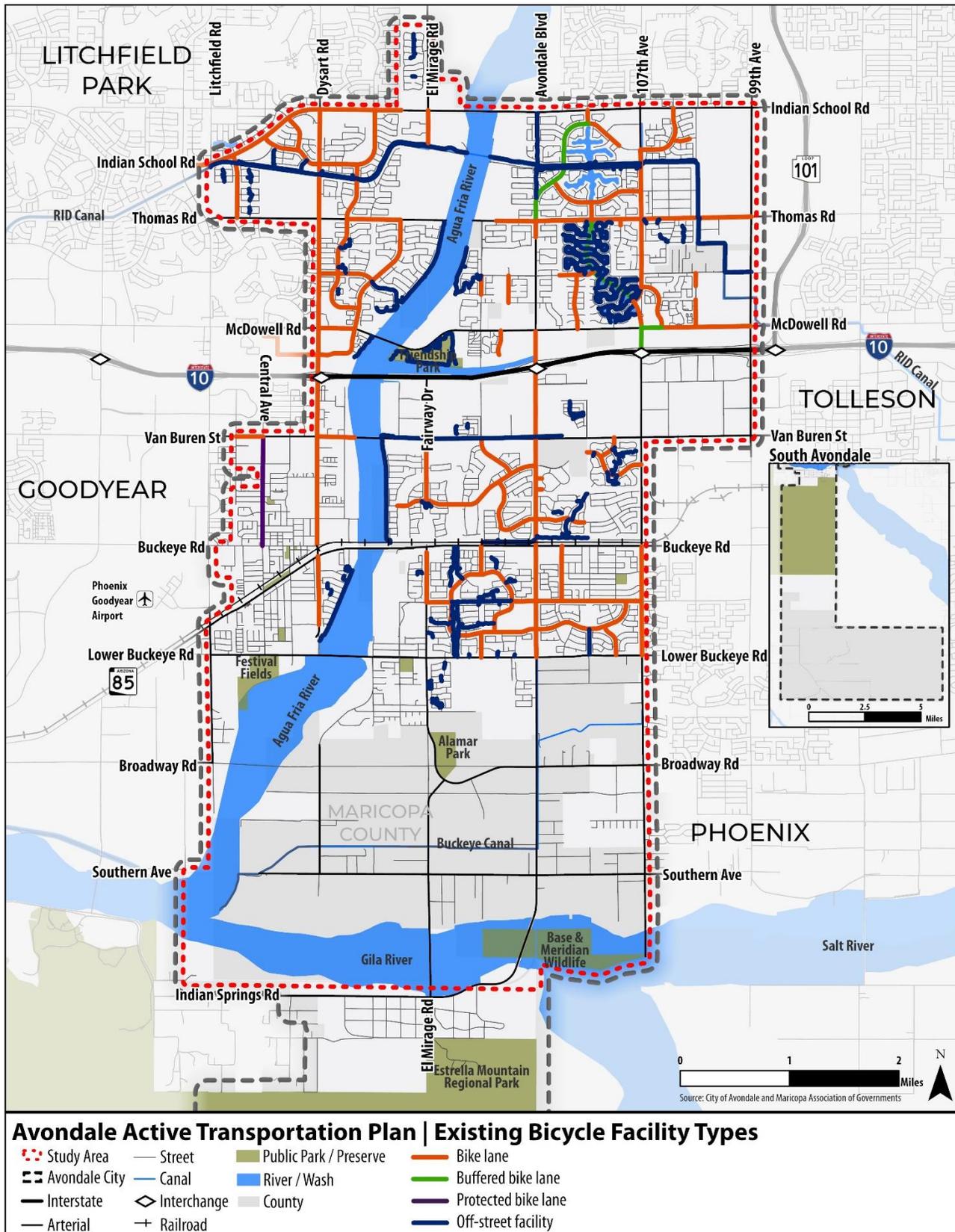
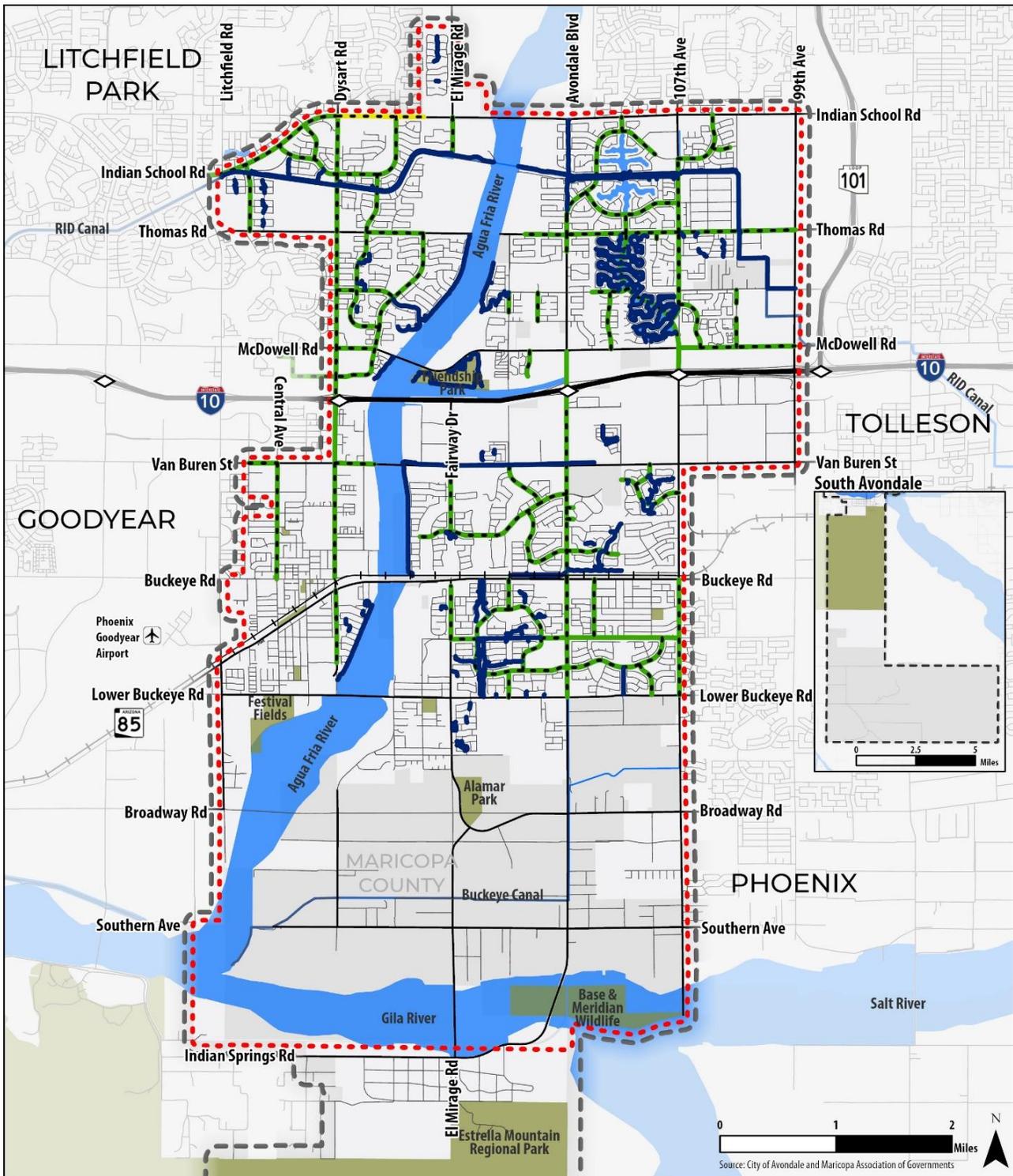


Figure 2-24: On-Street & Off-Street Bike Facility Widths Map

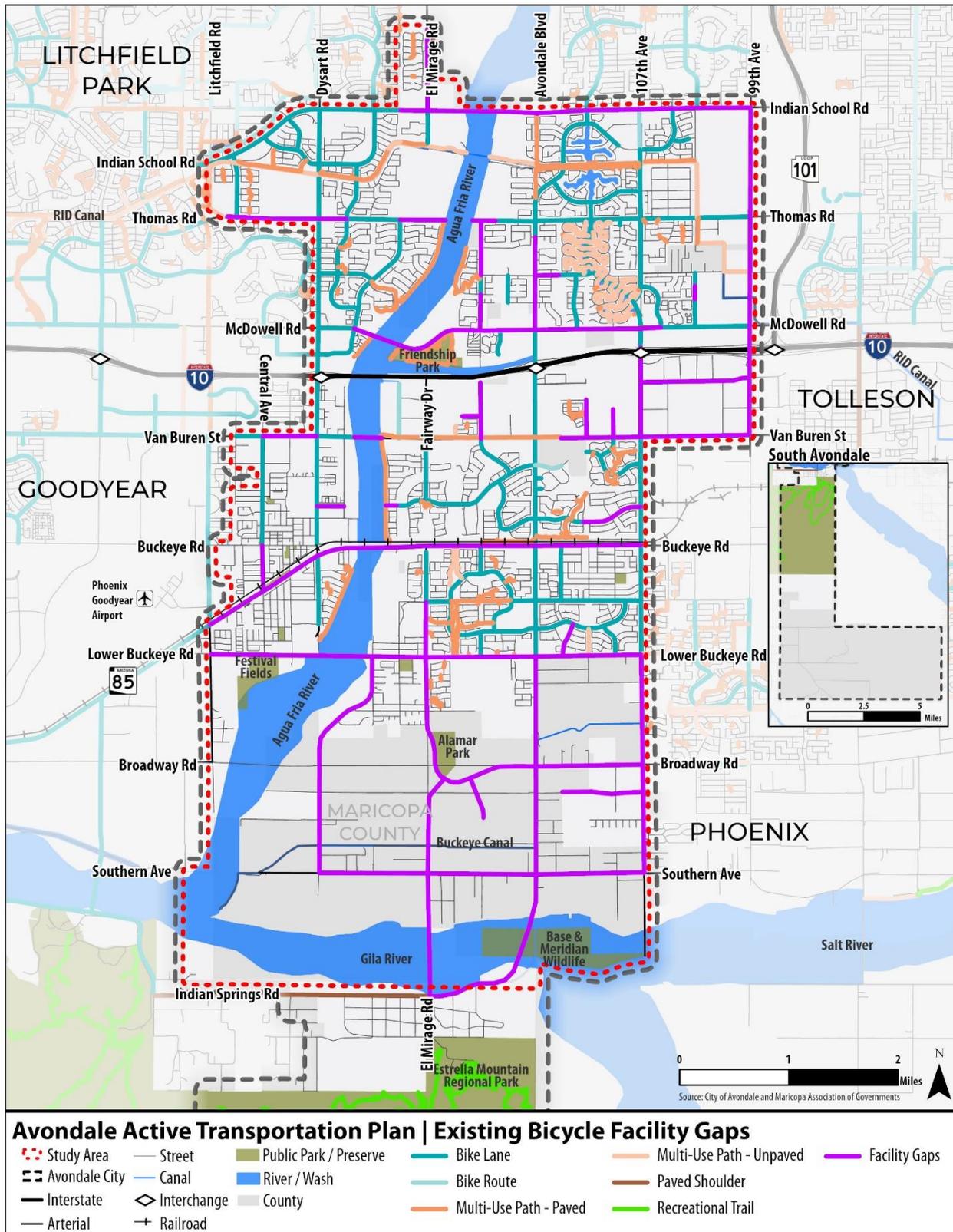


Avondale Active Transportation Plan | Existing Bicycle Facility Widths and Locations

- Study Area
- Avondale City
- Interstate
- Arterial
- Street
- Interchange
- Railroad
- Public Park / Preserve
- River / Wash
- County
- One side, 5 feet
- Both sides, 5 feet
- One side, 8 feet
- Both sides, 8 feet
- Off-street facility



Figure 2-25: Bicycle & Multi-Use Facility Gap Map



Existing Sidewalk Facilities

Sidewalks provide a place for people to walk for commuting or recreational purposes; they are especially important for providing independence to the mobility impaired or persons without access to a vehicle. In addition to sidewalks, pedestrian facilities such as crossings, curb ramps, curb extensions, traffic calming features, and other improvements help create a more comfortable walking environment. In order to understand the walking environment in Avondale, an extensive mapping exercise and inventory of sidewalks was conducted.

Currently, the vast majority of Avondale planned residential communities have sidewalks on both sides of street; However, as illustrated in **Figure 2-26**, there are locations where sidewalks only exist on one side of the road or not all. Sporadic corridor and business development has caused gaps in Avondale’s existing pedestrian network, which creates barriers to pedestrian travel. Currently there are:



- 243.6 miles of roadways with sidewalks on both sides of the road;
- 34.4 miles of roadways with sidewalks on one side of the road; and
- 67.4 miles of roadways with no sidewalks at all.

Intersection Traffic

To complete the pedestrian network, sidewalks are supported by a collection of facilities to create a more visible, navigable, and enjoyable walking experience. Facilities include signage, crosswalks, curb ramps, median refuge islands, overpasses, and signalized pedestrian crossings. At signalized intersections, it is essential that signals are phased and timed to allow pedestrians of all abilities to cross the roadway, including those who are typically slower (children, senior citizens, people with limited mobility). At the same time, signal delay must be minimized to reduce the amount of illegal and unsafe crossing that occurs when pedestrians get impatient waiting for the signal to change.

Sidewalk Widths

Figure 2-27 illustrates the widths of all existing sidewalks. Avondale’s General Engineering Requirements provides standards for sidewalks, which includes:

- Arterial Streets: 6 feet detached sidewalks (except for adjacent to a school, which requires 10-foot detached sidewalks), two bicycle lanes,
- Collector Streets: 6-foot detached sidewalks and striped bicycle lanes. For industrial collectors, sidewalks may be attached, and bike lane markings may be deleted with the City Traffic Engineer’s approval.

- Local Streets: 5 feet wide detached sidewalk
- Sidewalks abutting schools require a minimum width of 10 feet. Sidewalks along designated safe routes to schools may be required to have wider than minimum width as directed by the City. Additional right-of-way or a sidewalk easement may be required to accommodate the extra width sidewalk.

Examples of Sidewalks & other Pedestrian Facilities



Avondale Blvd



Garden Lakes Pkwy

Arterial Road Sidewalks

- Pathway along major travel routes with high vehicle volumes.
- Intermediate and long-distance travel.
- Access to many destinations.
- Typically 5-6 ft or greater in width.

Collector Road Sidewalks

- Pathway that connects residential and commercial areas to arterials with medium to low vehicle volumes.
- Typically 5-6 ft or greater in width.



Granada Rd



107th Ave

Local Road Sidewalks

- Pathways on low volume roads that provide local access to homes, business, schools, etc. Low vehicle speeds.
- Usually includes a combination of standard and rolled curbs.
- Typically 4-5 ft in width.

Buffered Sidewalks

- Pathways offset from a roadway by a landscape, rock, or natural buffer. In this case, the striped bike lane also adds to the sidewalk buffer.
- Most suitable on roads with high speeds and traffic volumes.



Avondale Blvd



Van Buren Street

Curb Ramps and Shade Structures

- Curb ramps provide a detectable warning for physically impaired pedestrians.
- Decorative crosswalks and shade are amenities that offer a more comfortable experience for walkers.

Crosswalks

- Crosswalks improve the visibility of pedestrians walking across a road.

Figure 2-26: Existing Sidewalks Map

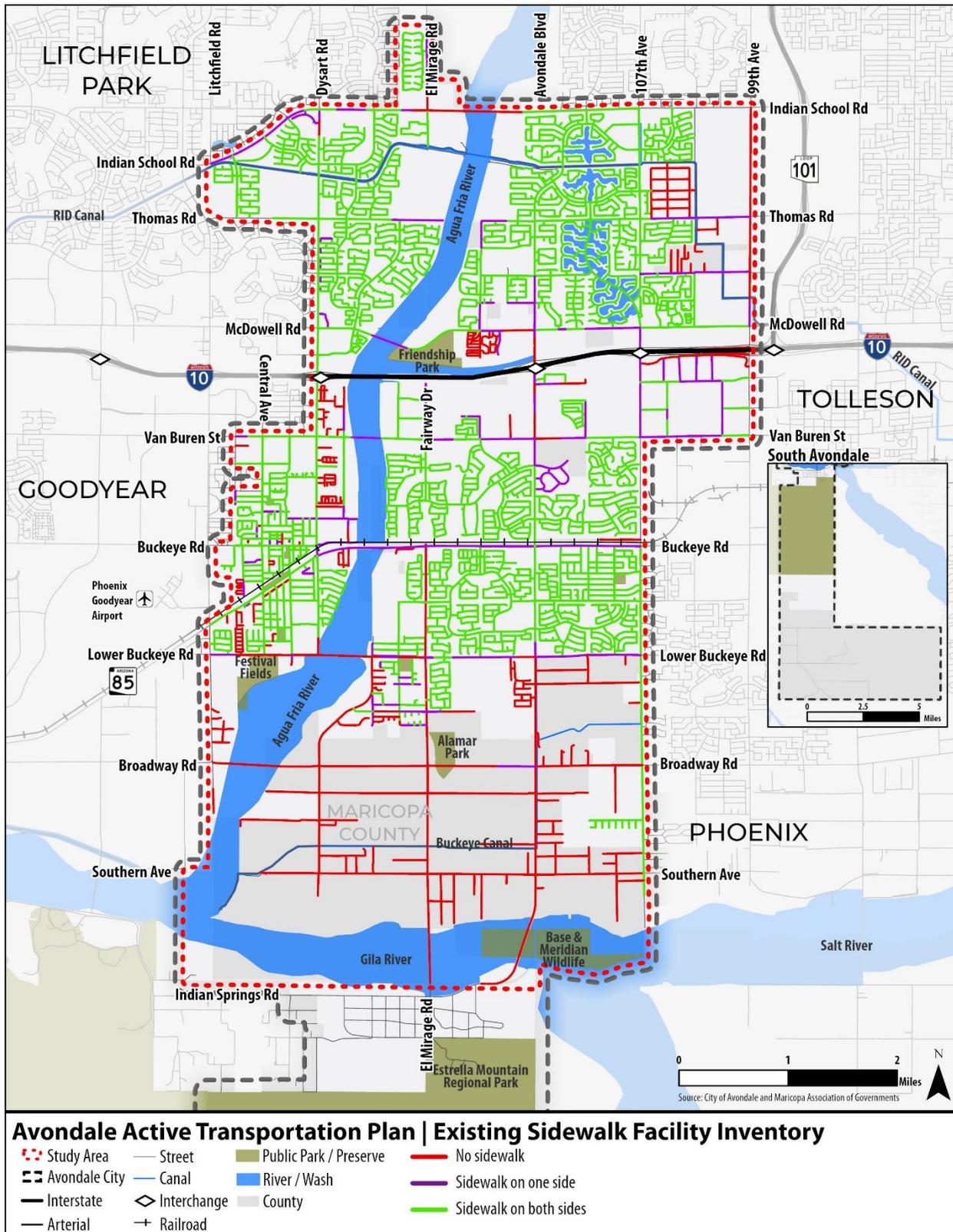


Figure 2-27: Existing Sidewalk Widths Map



TRANSIT SERVICES

Understanding the location of transit routes and stops is critical when developing a walking and biking network, because almost every transit trip begins or ends with walking and/or biking. Often people who could potentially utilize transit choose to drive because no transit stops are conveniently located near their starting points or final destinations. Establishing walking and biking facilities along “first and last mile” paths expands a person’s transportation choices by making transit more accessible. Integrating active transportation networks and transit helps to create a balanced and efficient multimodal transportation network that makes transportation affordable, convenient, and flexible for all users regardless of their age, ability, or socioeconomic status.

As shown in **Figure 2-28**, there are four types of transit services available provided by Valley Metro, the regional transit authority in the Valley:

- ZOOM: a local neighborhood circulator system that connect residential areas to major destinations and the regional transit network. All ZOOM vehicles are wheelchair accessible and include bicycle racks. A one-way fare costs rider \$0.50.
- Fixed Route: three fixed-routes – Routes, 3, 17, and 41 - operate in Avondale primarily along arterial roads including Van Buren Street, McDowell Road, and Indian School Road. Service hours and frequency vary by route, as well as the condition of bus stops.
- Express bus: one express bus routes – route 563 - provides peak hour service to and from downtown Phoenix during the week.
- Rural Connector: the Ajo Express – Route 685 – provides transit service between downtown Phoenix and rural community of Ajo southwest Arizona.

Bus Stops

Bus stops provide a safe boarding location for passengers while each route provides options for Avondale residents and visitors to access nearby and regional destinations. Typically bus stops are located at one-quarter mile intervals for convenience.

In 2017, Valley Metro conducted a bus stop inventory to determine what types of facilities are present at each stop. Data developed by Valley Metro was verified and updated to reflect existing conditions in Avondale. Within the study area, there are 124 bus stops with varying amenities. Typical facilities found within the study area include:

- Bus Shelters: 34 bus stops are sheltered.
- Bicycle Racks: 2 bus stops are equipped with bicycle racks.
- Benches: 35 bus stops have benches.
- Sidewalk Connectivity – 77 bus stops have sidewalk, while 47 bus stops don’t have sidewalks and fall on a sidewalk gap.
- Trash receptacles: 27 bus stops have a trash receptacle.
- Lighting: 3 bus stops have enhanced lighting.
- Bus Bay: 10 bus stops have a bus bay.



Figure 2-28: Existing Transit Service Map



Ridership

Ridership information (Table 2-9) provides important information on where people are accessing transit. Due to the decline in ridership during the COVID-19 pandemic, 2019 ridership data was used in this inventory. In 2019, 303,007 people boarded a bus in within the Avondale MPA; and of those riders, 8,933 were bicyclists and 2,000 were wheelchair users – accounting for roughly 2.9 percent and 0.7 percent of the total riders in Avondale.

Table 2-9: Current Bus Ridership

Bus Route	Total Boarding's	Bikes	Wheelchair
3 – Van Buren Street	56,200	2,105	234
17 – McDowell Road	38,423	1,593	202
41 – Indian School Road	26,599	755	92
563 – Express Route	8,214	4	0
ZOOM	173,571	4,476	1,472
Total	303,007	8,933	2,000

Source: Valley Metro, 2019

Future Transit Service

As noted previously, the SR-30 freeway corridor is in the planning process. With a capped five-lane freeway footprint, there is recognition that the SR-30 corridor will require a next generation high-capacity mode of transportation to serve this unmet travel demand. In addition, with the proliferation of high-speed rail corridors around the country, it is not hard to imagine that a high-speed rail corridor between southern California and the Phoenix area could be built someday. Geography limits the options where this type of facility could be feasibly built. The SR-30 corridor is the most likely route. In response, a 50-foot-wide future transit corridor is being preserved in the proposed SR-30 ROW using geometry sufficient to accommodate all known current modes of transit, including the most restrictive high speed rail option. This future transit corridor will generally follow the south ROW except at the system interchanges with SR-303L and SR-202L, where the corridor will transition into the median of SR-30 to pass through them.

The Final L/DCR does not attempt to define the transit mode or the technology to be used in this future transit corridor. At the speed at which technology changes, any attempt to do so with today's knowledge would almost certainly be wrong in the future. It is also unclear when or if this transit corridor would be built, because it is not funded. However, the travel demand need will clearly exist, so it is imperative that the SR-30 planning process includes provisions in the design so that future generations can respond to this demand in a cost-effective manner.

Avondale-Goodyear Transit Study

The Avondale-Goodyear Transit Study evaluated the need for new and/or improved transit service in the cities of Avondale and Goodyear. In addition to traditional, fixed-route bus service, the study considered emerging alternatives such as microtransit, flex routes, mobility hubs, and other flexible options.

The study included a review of existing conditions, a best practices report, a market analysis, route and service recommendations, and public and stakeholder outreach throughout the project. The year-long effort kicked off in the summer of 2020 and concluded in the summer of 2021.

MAG facilitated this transit study for the cities of Avondale and Goodyear, with support from our consultant team and input from Valley Metro. More information about the results of the Study can be referenced on the project [website](#).

SAFETY ANALYSIS & CRASH STATISTICS

Analysis of pedestrian and bicycle-related crash data provides Avondale with important safety information to help make informed decisions on future, potential improvements. A thorough analysis of the crash data will demonstrate if there are any identifiable trends, patterns, predominant crash types and if there are any locations for re-occurring crashes that trigger notable bicycle and pedestrian safety concerns.

A crash data analysis of pedestrian- and bicycle-related crashes over a five-year period (2016 to 2020) was conducted. **Figure 2-29** shows the number of total pedestrian- and bicycle-related crashes by injury severity.

Crash information is based on historical crash records reported by the Arizona Department of Transportation (ADOT), and although **Figure 2-31** shows crashes within and adjacent to Avondale, the data presented herein only includes crashes within the Avondale MPA, which may include crashes adjacent to, but not located on, Avondale roads.

During the five-year analysis period, there were a total of 166 pedestrian- and bicycle-related crashes located on or adjacent to Avondale roads. As illustrated in **Figure 2-30**, of the 166 crashes, three percent (five crashes) resulted in no injury, 26 percent (44 crashes) resulted in a possible injury, 52 percent (86 crashes) resulted in a non-incapacitating injury, 16 percent (25 crashes) resulted in an incapacitating injury, and three percent (five crashes) resulted in a fatality.

After a nearly a 70 percent increase in bicycle- and pedestrian-related crashes between 2016 and 2017 (an increase of 19 crashes), Avondale has been experiencing a decline in the number of crashes since peaking in 2017 with 41 in 2018, 37 in 2019 and 19 in 2020.

Figure 2-29: Bicycle & Pedestrian Crash Injury Severity Distribution

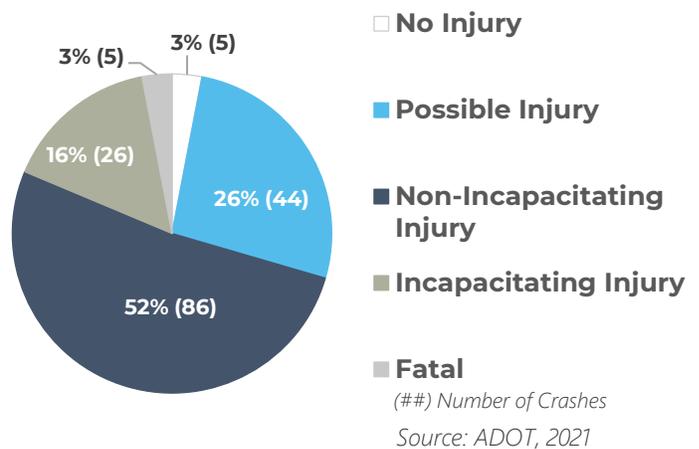
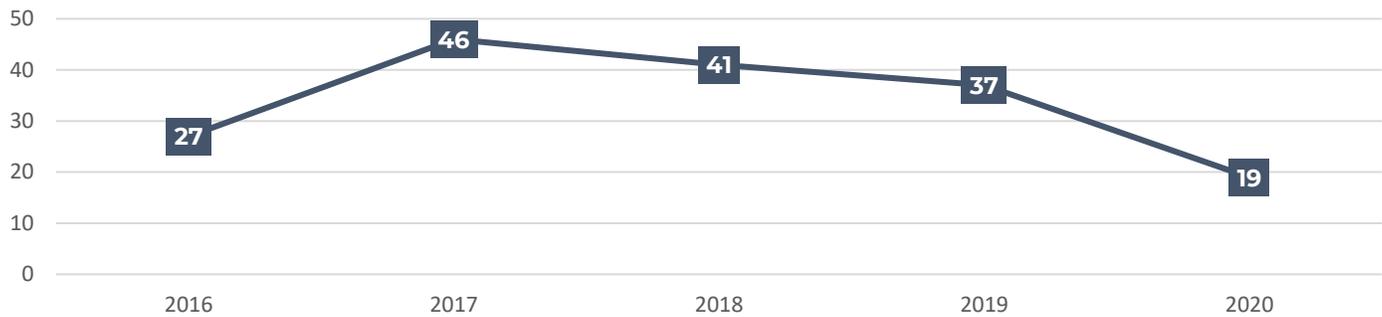


Figure 2-30: Bicycle & Pedestrian Crashes by Year



Source: ADOT, 2021

Crash Locations

The location of pedestrian- and bicycle-related crashes that have occurred in Avondale are illustrated in Figure 2-31. Over 67.4 percent of the 166 pedestrian- and bicycle-related crashes in the Avondale MPA occurred at an intersection. The highest number of crashes occurred at the intersection of Dysart Road and Van Buren Street. Corridors and intersections with a higher number of pedestrian- and bicycle-related crashes include:



- Dysart Road and Van Buren Street intersection;
- Dysart Road from Indian School Road to Buckeye Road;
- Van Buren Street from Central Avenue to Dysart Road;
- Dysart Road and Riley Drive;
- Buckeye Road and Dysart Road intersection;
- Buckeye Road from Central Avenue to Dysart Road; and
- Lower Buckeye Road from Dysart Road to Fairway Drive.

Crash Trend

Roughly 25 percent of all pedestrian- and bicycle-related crashes occurred when a motor vehicle was turning right. This maneuver, often called a “right hook,” takes place when a driver cuts off a bicyclist or pedestrian by turning right across their path onto a road or a driveway. In addition, over 10 percent of pedestrian- and bicycle-related crashes occurred when motorists made a left turn. Left turn crashes are commonly due to a motorist not seeing a pedestrian or bicyclist when turning left onto a road or intersection

A full inventory of the pedestrian- and bicycle-related crashes during the analysis period can be found in Appendix B.

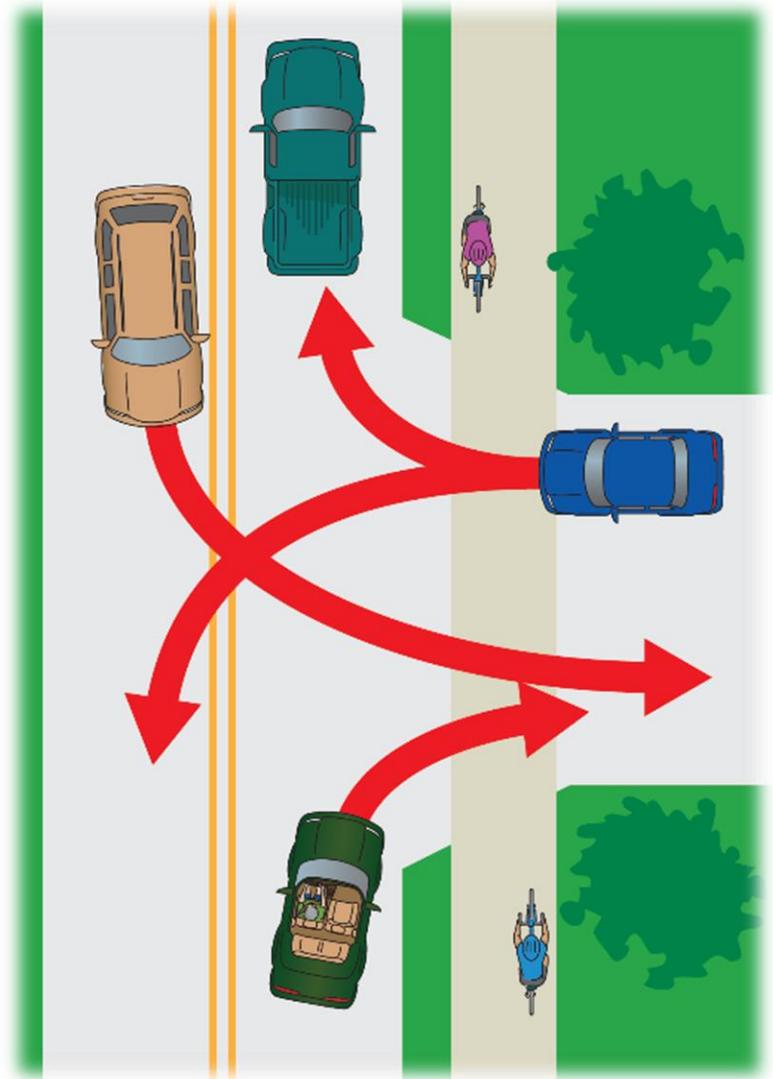
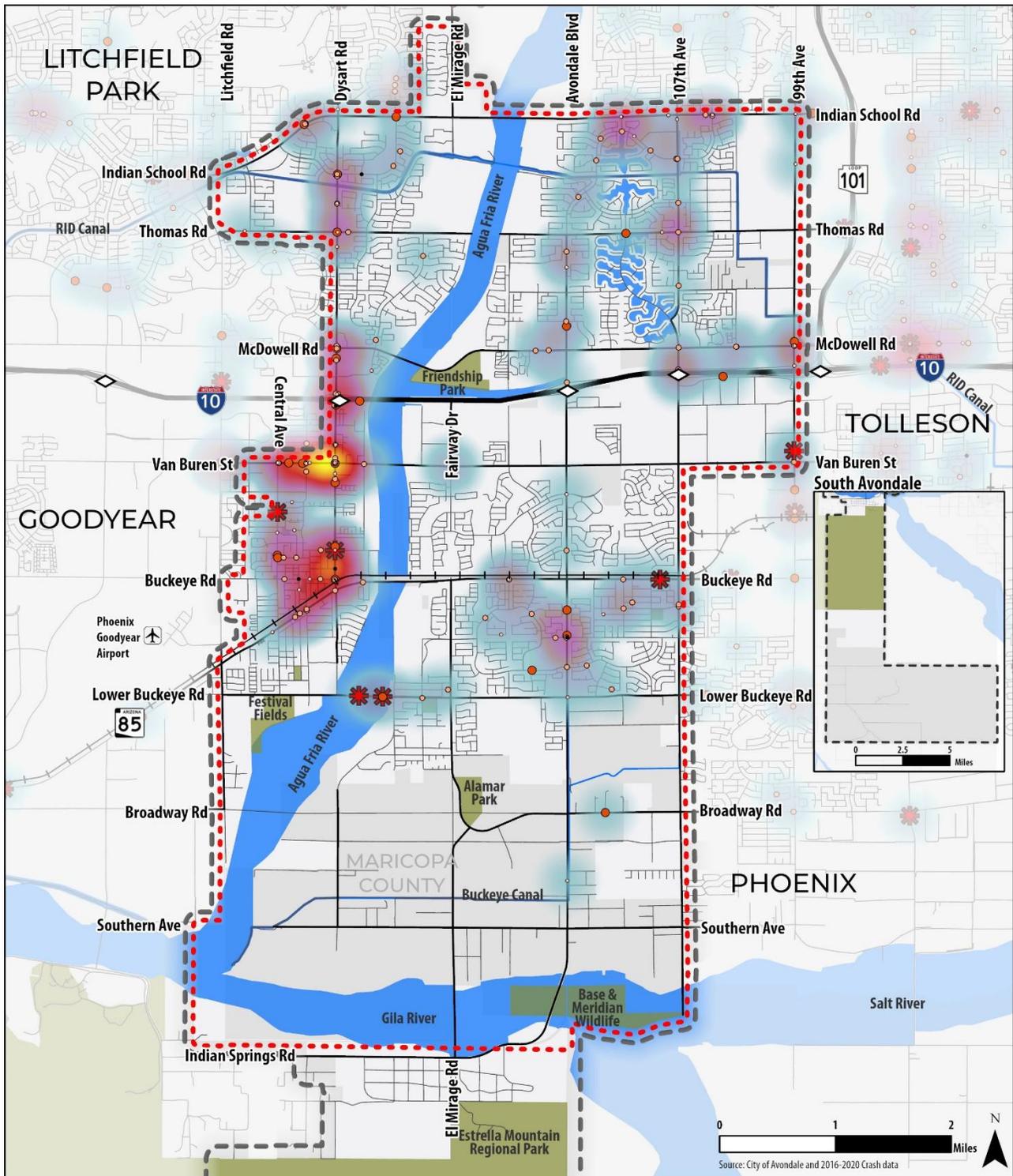


Figure 2-31: Bicycle & Pedestrian Crash Location Map



Avondale Active Transportation Plan | Bike and Pedestrian Crashes

Study Area	Street	Public Park / Preserve	Sparse	No Injury	Incapacitating Injury
Avondale City	Canal	River / Wash	Dense	Possible Injury	Fatal
Interstate	Interchange	County		Non-Incapacitating Injury	
Arterial	Railroad				



PEDESTRIAN & BICYCLE VOLUMES

As part of the inventorying process for the Avondale ATP, pedestrian and bicycle counts were conducted at eight strategic locations in (see **Figure 2-32**). The intent of the bicycle and pedestrian counts are to evaluate targeted locations where there are known levels of pedestrian and bicycle activity. These locations were determined through discussions with City staff and analysis by the consultant to determine the priority locations. The study team collected 24-hour bicycle and pedestrian turning movement counts in fifteen-minute intervals at the following locations on Thursday, December 9, 2021:

1. Dysart Road and Van Buren Street
2. Dysart Road and Rancho Santa Fe Boulevard
3. 99th Avenue and McDowell Road
4. Avondale Boulevard and Van Buren Street
5. Central Avenue and Lower Buckeye Road (in the vicinity of Festival Fields Park)
6. Avondale Boulevard and Encanto Boulevard
7. Avondale Boulevard and Durango Street
8. Central Avenue and La Canada Boulevard

The pedestrian and bicycle counts at the above-mentioned locations were collected on the roadways and also within the existing crosswalks. See Appendix C for details for a full detailed report of the bicycle and pedestrian count results. The following subsections provides a brief synopsis of the results.



Figure 2-32: Bicycle & Pedestrians Count Locations Map



Avondale Active Transportation Plan | Bicycle and Pedestrian Counter Locations

- Study Area
- Avondale City
- Interstate
- Arterial
- Street
- Trail
- Railroad
- Park / Open Space
- River / Wash
- County
- Counter Location



Pedestrian Counts

Table 2-10 and Figure 2-33 together illustrate a summary of the pedestrian counts conducted at the eight locations in one-hour segments over the 24-hour period. A total of 1,217 pedestrians were counted at all eight of locations over the 24-hour period. The one-hour period with the highest number of pedestrians was from 3:00 to 4:00 PM with a total of 208 pedestrians, while the most active time of the day was during the AM peak period from 7:00 to 11:00 AM with 432 pedestrians over that four-hour time span. The three locations with the highest level of pedestrian activity included Avondale Boulevard and Durango Street with 292 pedestrians, Central Avenue and La Canada Boulevard with 270 pedestrians, and Avondale Boulevard and Encanto Boulevard with 268 pedestrians. The other five locations ranged from 30 to 169 pedestrians over the 24-hour period.

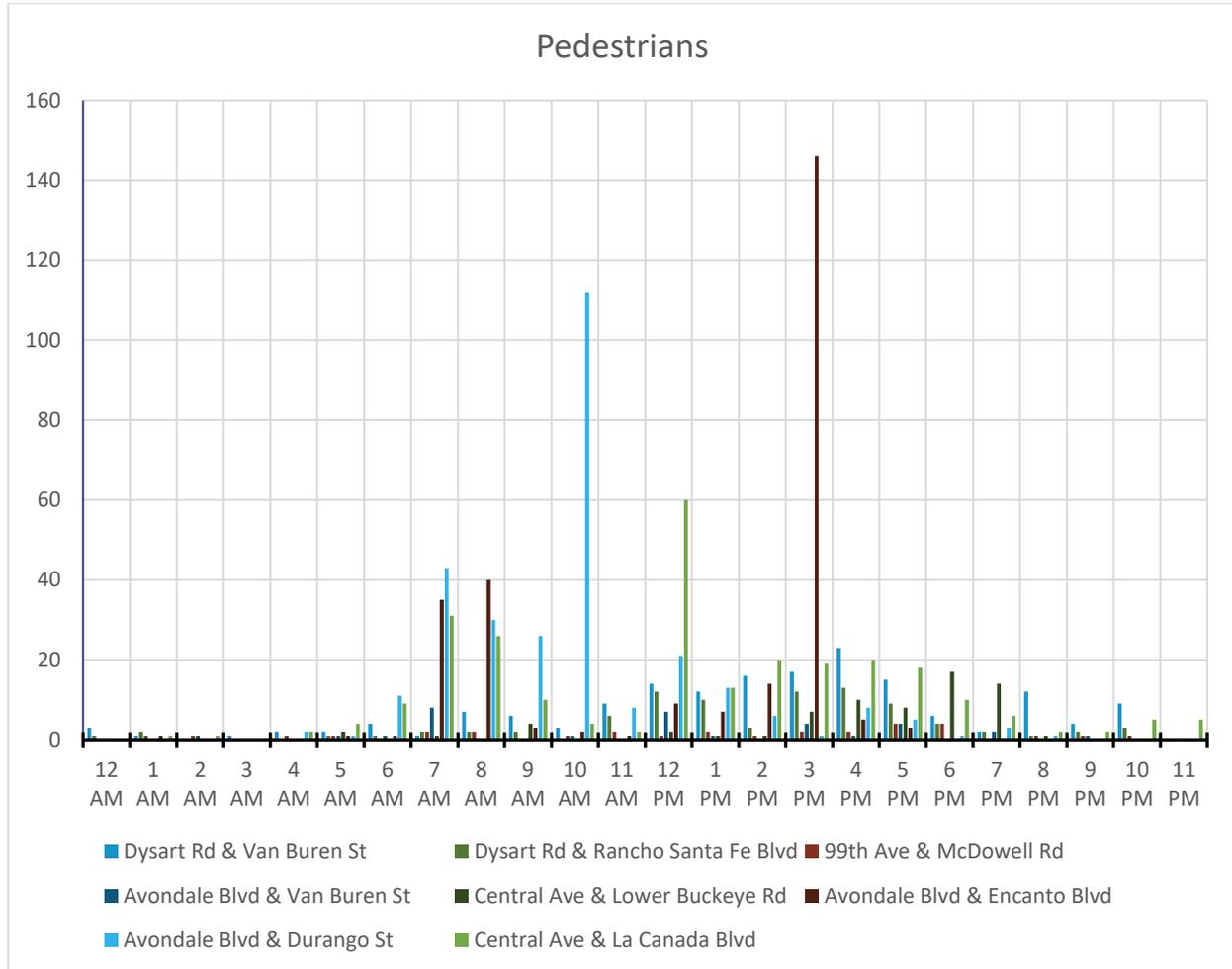
Table 2-10: Pedestrian Count Results

Time	Dysart Rd & Van Buren St	Dysart Rd & Rancho Santa Fe Blvd	99th Ave & McDowell Rd	Avondale Blvd & Van Buren St	Central Ave & Lower Buckeye Rd	Avondale Blvd & Encanto Blvd	Avondale Blvd & Durango St	Central Ave & La Canada Blvd	Total
12:00 AM	3	1	0	0	0	0	0	0	4
1:00 AM	1	2	1	0	0	1	0	1	6
2:00 AM	0	0	1	1	0	0	0	1	3
3:00 AM	1	0	0	0	0	0	0	0	1
4:00 AM	2	0	1	0	0	0	2	2	7
5:00 AM	2	1	1	1	2	1	1	4	13
6:00 AM	4	1	0	1	0	1	11	9	27
7:00 AM	1	2	2	8	1	35	43	31	123
8:00 AM	7	2	2	0	0	40	30	26	107
9:00 AM	6	2	0	0	4	3	26	10	51
10:00 AM	3	0	1	1	0	2	112	4	123
11:00 AM	9	6	2	0	0	1	8	2	28
12:00 PM	14	12	1	7	2	9	21	60	126
1:00 PM	12	10	2	1	1	7	13	13	59
2:00 PM	16	3	1	0	1	14	6	20	61
3:00 PM	17	12	2	4	7	146	1	19	208
4:00 PM	23	13	2	1	10	5	8	20	82
5:00 PM	15	9	4	4	8	3	5	18	66
6:00 PM	6	4	4	0	17	0	1	10	42
7:00 PM	2	2	0	2	14	0	3	6	29
8:00 PM	12	1	1	0	1	0	1	2	18
9:00 PM	4	2	1	1	0	0	0	2	10
10:00 PM	9	3	1	0	0	0	0	5	18
11:00 PM	0	0	0	0	0	0	0	5	5



Total	169	88	30	32	68	268	292	270	1,217
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Figure 2-33: Pedestrian Count Results



Bicycle Counts

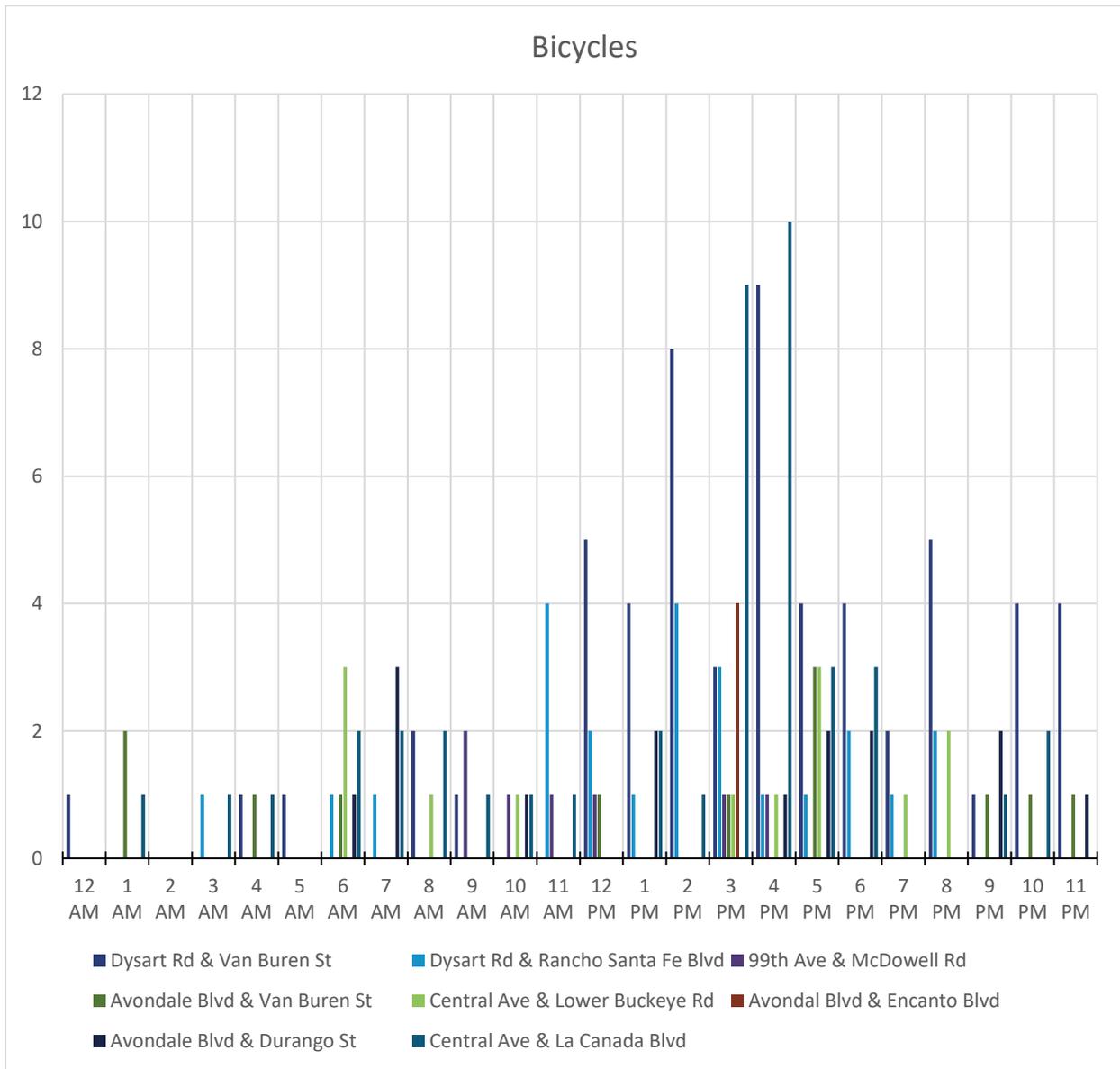
Table 2-11 and Figure 2-34 provide a summary of the bicycle counts conducted at the eight locations in one-hour segments over the 24-hour period. A total of 177 bicycles were counted at all eight of locations over the 24-hour period. The one-hour period with the highest number of bicycles was from 4:00 to 5:00 PM with a total of 23 bicyclists, while the most active time of the day was during the PM peak period from 2:00 to 6:00 PM with 74 bicyclists over that four-hour time span. The three locations with the highest amount of bicycle activity included Dysart Road and Van Buren Street with 59 bicyclists, Central Avenue and La Canada Boulevard with 43 bicyclists, and Dysart Road and Ranch Santa Fe Road with 24 bicyclists. The other five locations ranged from 4 to 15 bicyclists over the 24-hour period.

Table 2-11: Bicyclist Count Results

Time	Dysart Rd & Van Buren St	Dysart Rd & Rancho Santa Fe Blvd	99th Ave & McDowell Rd	Avondale Blvd & Van Buren St	Central Ave & Lower Buckeye Rd	Avondale Blvd & Encanto Blvd	Avondale Blvd & Durango St	Central Ave & La Canada Blvd	Total
12:00 AM	1	0	0	0	0	0	0	0	1
1:00 AM	0	0	0	2	0	0	0	1	3
2:00 AM	0	0	0	0	0	0	0	0	0
3:00 AM	0	1	0	0	0	0	0	1	2
4:00 AM	1	0	0	1	0	0	0	1	3
5:00 AM	1	0	0	0	0	0	0	0	1
6:00 AM	0	1	0	1	3	0	1	2	8
7:00 AM	0	1	0	0	0	0	3	2	6
8:00 AM	2	0	0	0	1	0	0	2	5
9:00 AM	1	0	2	0	0	0	0	1	4
10:00 AM	0	0	1	0	1	0	1	1	4
11:00 AM	0	4	1	0	0	0	0	1	6
12:00 PM	5	2	1	1	0	0	0	0	9
1:00 PM	4	1	0	0	0	0	2	2	9
2:00 PM	8	4	0	0	0	0	0	1	13
3:00 PM	3	3	1	1	1	4	0	9	22
4:00 PM	9	1	1	0	1	0	1	10	23
5:00 PM	4	1	0	3	3	0	2	3	16
6:00 PM	4	2	0	0	0	0	2	3	11
7:00 PM	2	1	0	0	1	0	0	0	4
8:00 PM	5	2	0	0	2	0	0	0	9
9:00 PM	1	0	0	1	0	0	2	1	5
10:00 PM	4	0	0	1	0	0	0	2	7
11:00 PM	4	0	0	1	0	0	1	0	6
Total	59	24	7	12	13	4	15	43	177



Figure 2-34: Bicyclist Count Results



3 PUBLIC & STAKEHOLDER INPUT

Actively informing and engaging the public and stakeholders throughout the Avondale ATP process has been critical to the success of the Avondale ATP. Public and stakeholder input, including a public survey, helped ensure that decisions were informed and influenced by public and stakeholder input, and the plan recommendations reflected community needs and desires. Opportunities to participate were continuous throughout the study schedule to keep open lines of communication, build relationships, encourage mutual understanding, and improve the outcomes of the plan.

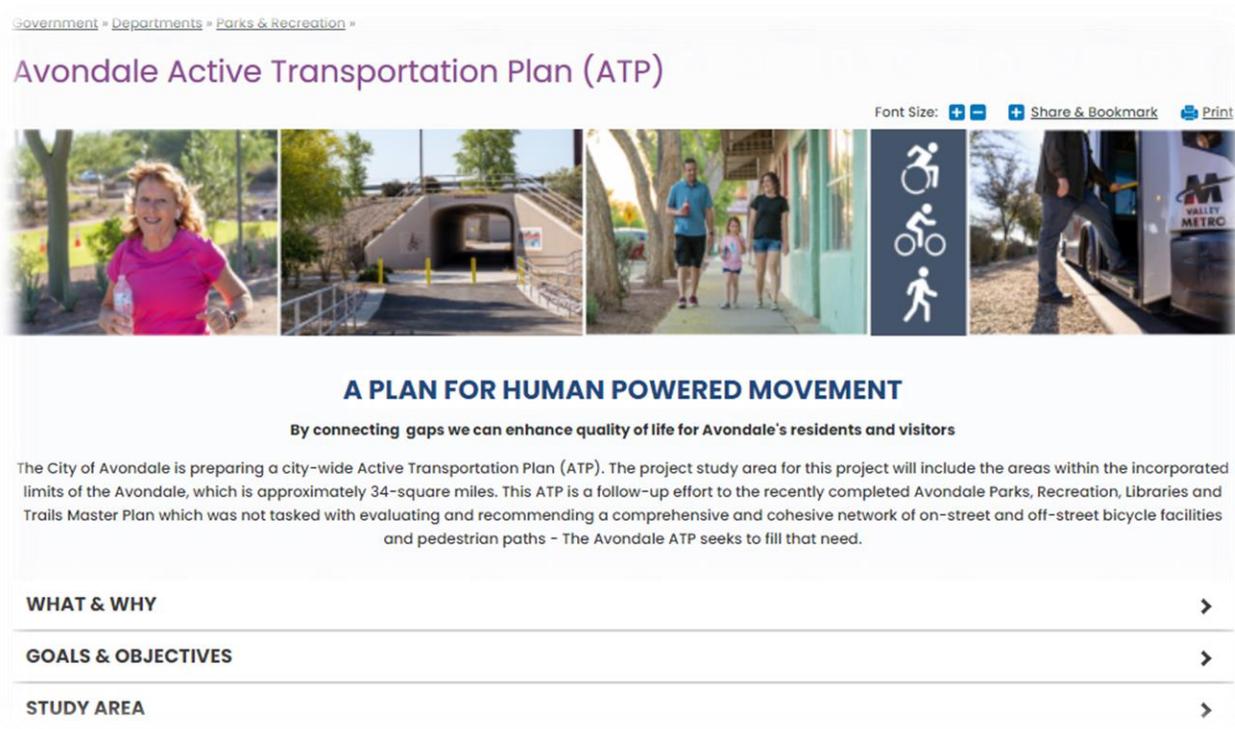
The City of Avondale consists of a collection of many individuals, stakeholders, groups and neighborhoods. This section provides an overview the public and stakeholder involvement that has been employed over the course of the Avondale ATP process. Please reference Appendix D to view the Public Involvement Plan (PIP) for additional detail and structure of the public and stakeholder engagement process.

PROJECT WEBSITE

The City of Avondale's website was utilized as a project information hub to distribute information about the ATP and provided a digital platform to house and share presentations and draft and final documents for the public and stakeholders to review. The project website, svmpo.org/transportation-planning/short-range-transit-plan-update/ and shown in **Figure 3-1**, included the following elements:

- A description of the Avondale ATP and the goals.
- Links to the public survey.
- Links to each of the Avondale ATP documents as they were completed.
- Links to presentations given to stakeholders and the public.

Figure 3-1: Avondale ATP Project Website



PUBLIC & STAKEHOLDER ENGAGEMENT MILESTONES

City Council

City Council was informed of the ATP process over two briefings during the ATP process. The first briefing introduced the project and obtain input and guidance from Council. The second briefing was conducted on November 21, 2022, which focused on a review of preliminary recommendations while also seeking feedback and guidance on suggested project prioritization. The City Council formally adopted the ATP on January 9, 2023.

Project Work Group Meetings

A Project Work Group (PWG) was established to guide and coordinate the day-to-day efforts throughout the course of the Avondale ATP process. The PWG was comprised of Avondale city staff members from various departments to help provide input and oversight to developing a plan that achieves cross department needs and objectives. The PWG held four meetings at key project milestones to provide feedback. In addition, City staff conducted a Department Head Project briefing on November 1, 2022, to solicit feedback and seek guidance on suggested project prioritization.

Parks & Recreation Advisory Board Meetings

The Avondale Parks & Recreation Advisory Board will be briefed to seek input on key elements of the ATP. The first briefing, already conducted on November 10, 2021, introduced the project and obtain input and guidance from board members. The second briefing was held on November 9, 2022, to focus on a review of the Draft Final ATP seeking feedback on recommendations, bike facility and pedestrian path/trail types and locations, evaluation criteria results), and prioritization.

Planning Commission

The City's Planning Commission was informed of the ATP process over two briefings during the ATP process. The first briefing introduced the project and obtain input and guidance from Council. The second briefing was conducted on October 19, 2022, which focused on a review of preliminary recommendations while also seeking feedback and guidance on suggested project prioritization. The Planning Commission formally approved the Draft Final ATP at the conclusion of the meeting.

Public Open House #1 (Virtual)

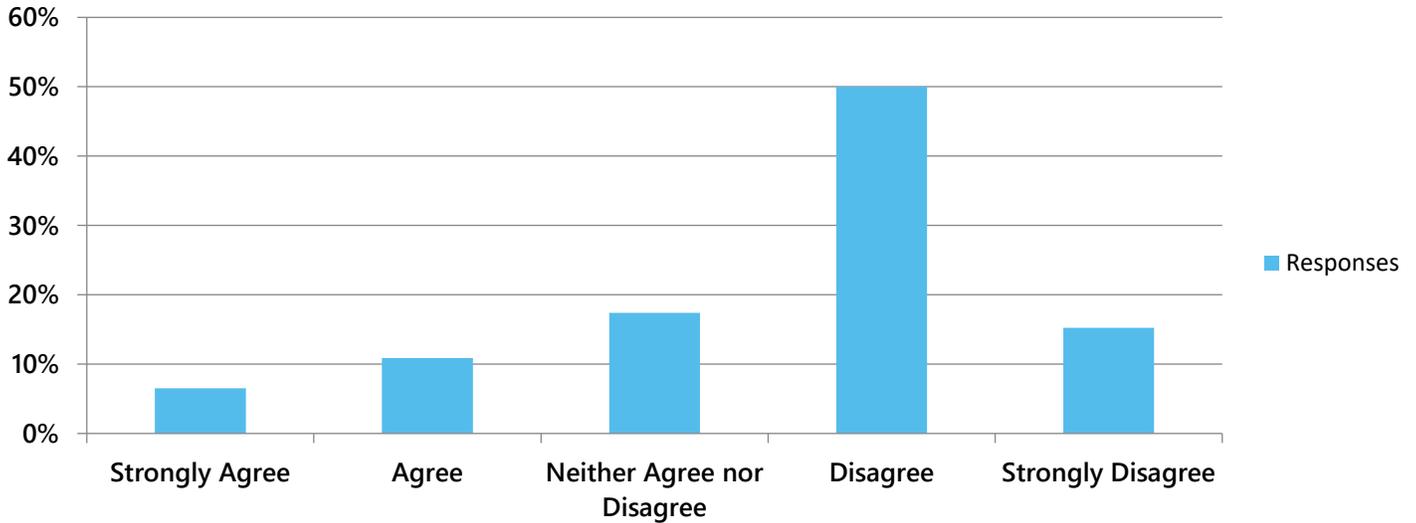
The first public open house meeting, held on March 2, 2022, reviewed existing and future conditions, identified deficiencies as compared to plan objectives and sought public input on their preferences and desires for bicycle and pedestrian facility types, locations and priorities. The meeting consisted of a presentation followed by an open house style meeting with information stations and interactive exercises to engage participants input.

Online Survey

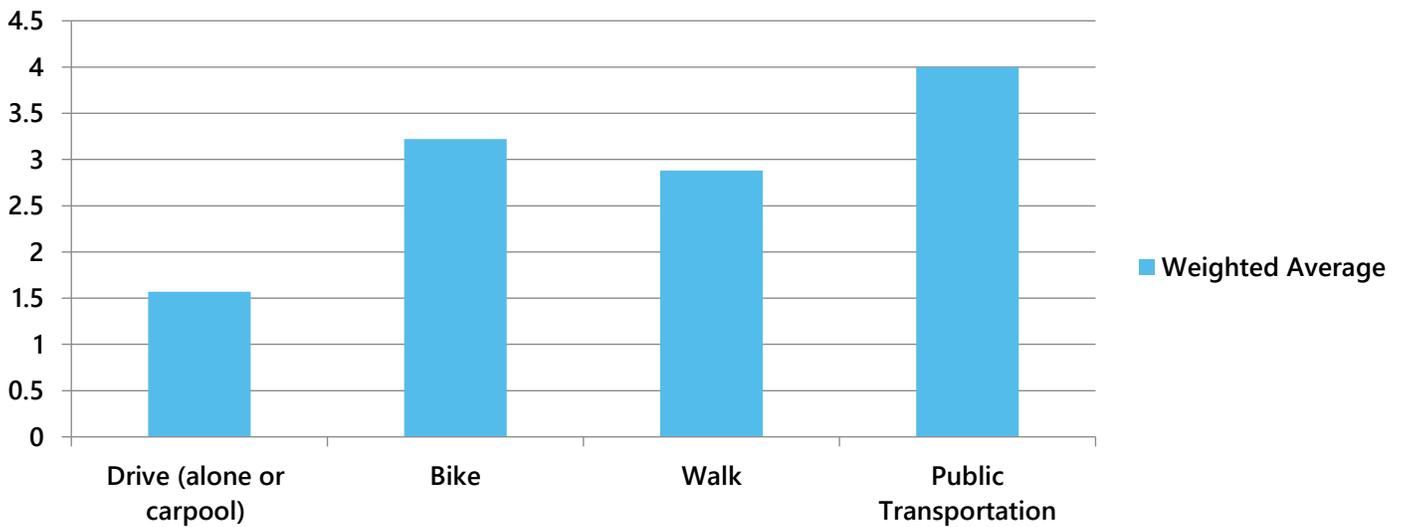
An online survey for the community at-large was provided and conducted to gauge the public's interest, use, and suggestions for active transportation facilities, as well as to guide the direction and recommendations of this Plan. The resident turnout for the survey was considered favorable, with a total of 46 residents responding to the survey.

The survey was available online through the project website and was distributed via several of the City's social media platforms. The survey included 16 questions, with seven required questions focusing active transportation while the remaining eight questions were socioeconomic-related questions to gain additional insight about the nature of the respondents. The responses show a strong desire for the expansion of walking and cycling infrastructure that can be used by all ages and abilities. Improving safety and lighting is another priority identified through the survey. The results of the survey are summarized in this section while the complete survey results are included in the Appendix E.

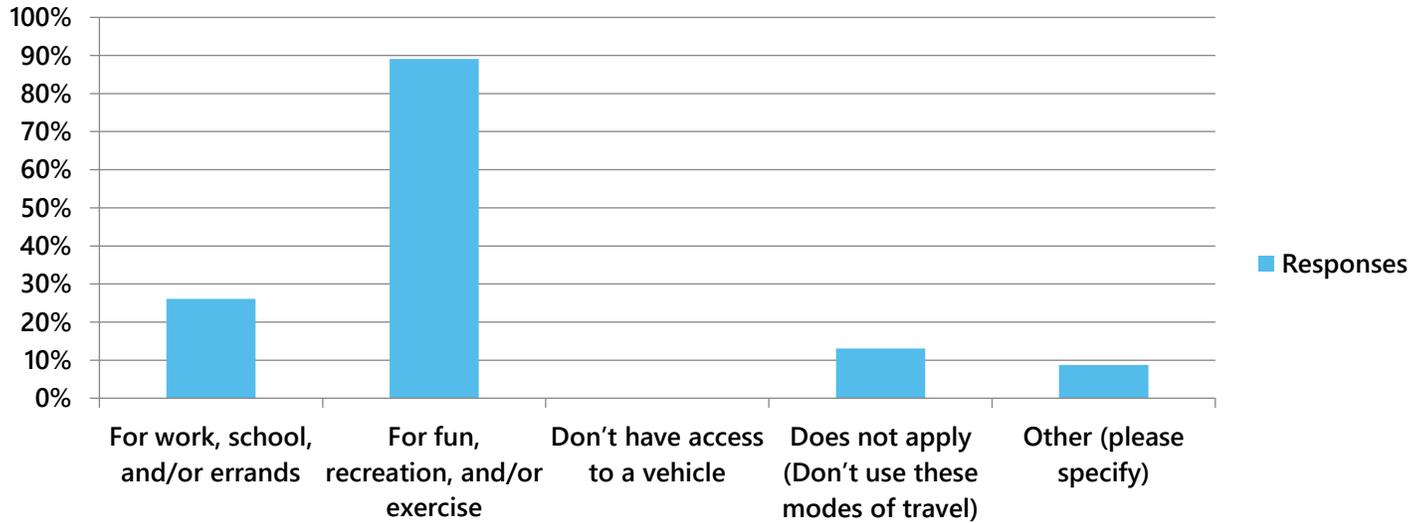
1. Walking and biking in Avondale is a safe and convenient means of traveling from one place to another?



2. During a typical week, how many days do you use the following modes of transportation?



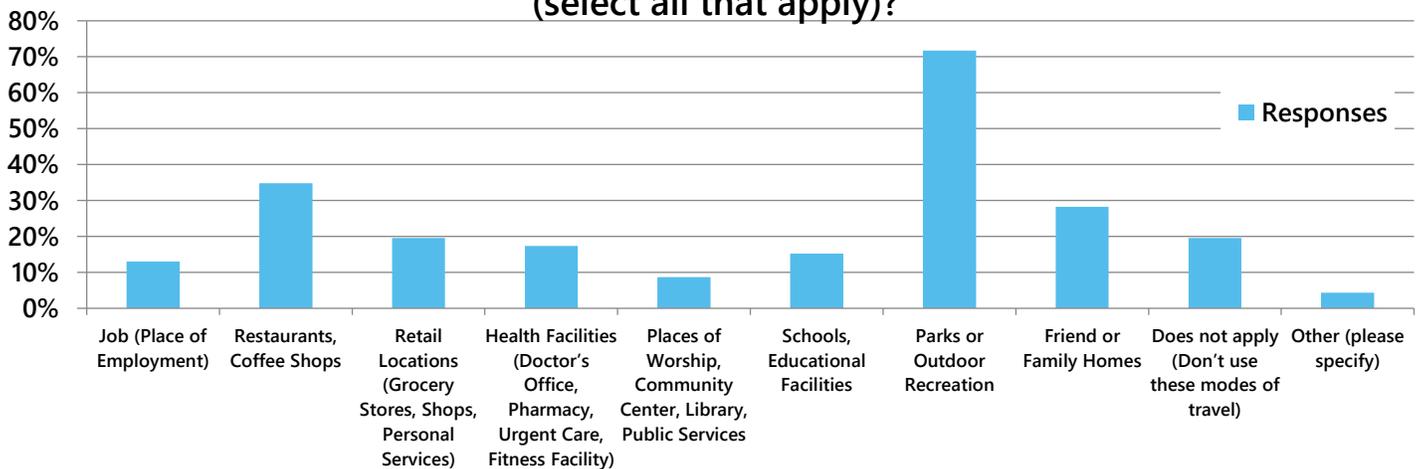
3. For what purpose do you walk, bike, and/or take public transportation (select all that apply)?



Other responses:

- My kids walk to their school bus stop. Pedestrians are not safe when walking here
- To save gas running errands
- Walking pets

4. What type of destinations do you walk, bike, or take transit to (select all that apply)?

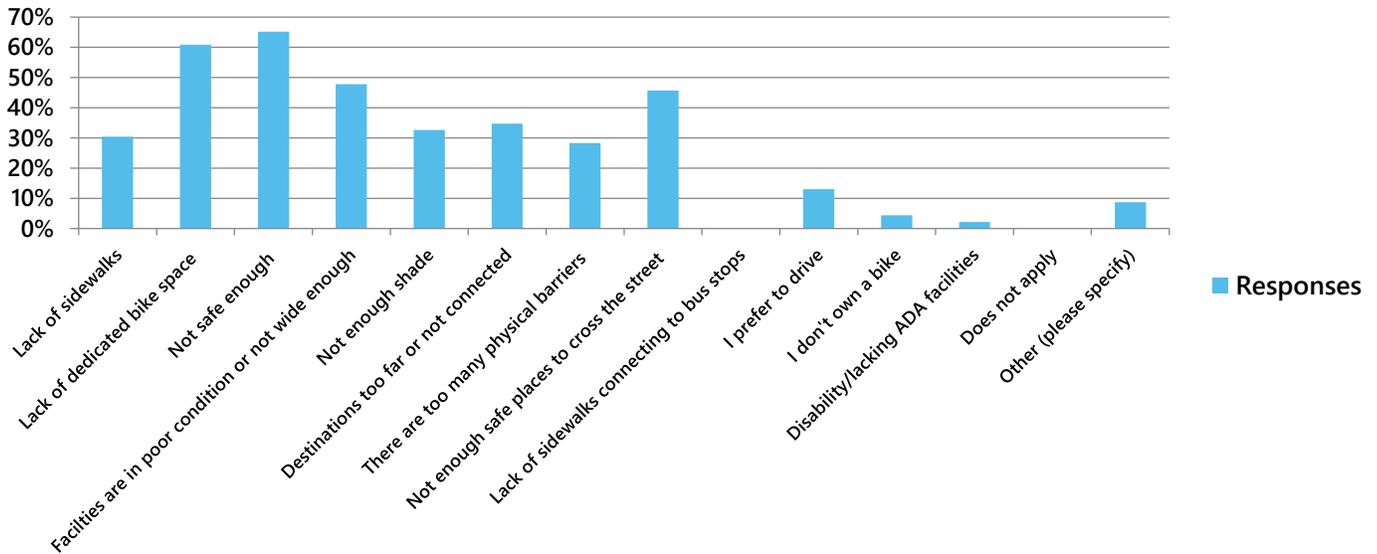


Other responses:

- Exercise only
- "Use trail system from Glendale to Peoria for biking"



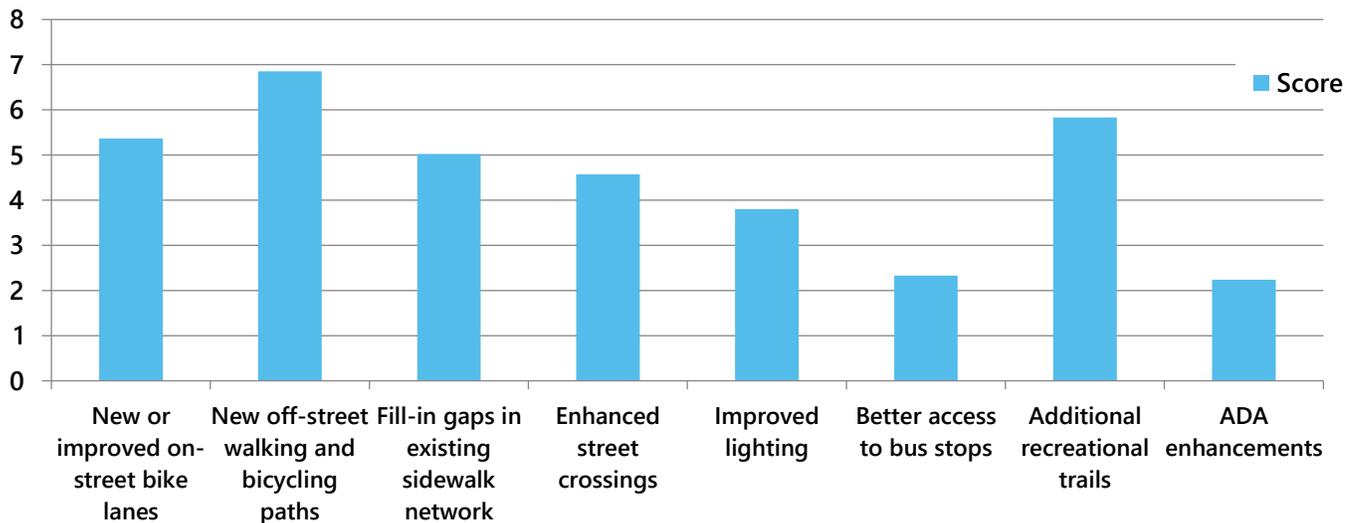
5. What prevents you from walking, biking, and/or taking public transit (select all that apply)?



Other responses:

- Motorists don't give cyclists respect! They drive to close, flip us off, blow exhaust smoke at us.
- My work does not provide a safe place to store my bike.
- Bus service too infrequent, does not connect to places I need to go

6. What improvements would you like to see Avondale invest in? Rank 1 (highest priority) to 8 (lowest priority).



7. What do you view as the greatest challenge(s) to walking and bicycling (mobility) in Avondale?

- Safety of paths lack of lights
- The number of people driving that are not obeying the speed limit makes me feel unsafe.
- Red light runners, people who don't yield to bicycles when using crosswalks, cars going way over the speed limit, cars not looking for bicycles even though you are at an intersection
- places I would walk to are too far from residential area
- Sidewalks that don't connect
- Safe bike lanes
- Lots of homeless around Central Ave. Very little light.
- No sidewalks
- Safety, designated bike lane, lack of enforcement of 3 feet law, driver education programs that bikes share the road.
- Distracted Drivers. Bikers and walkers need a better safe space than right next to cars.
- Crossing I-10 & main roads without bike lanes
- The lack of Safe and maintained bike lanes. Also trail heads that are closed, not marked or difficult to identify. I've called Parks and rec about the trailhead in friendship park and none of the employees knew what I was talking about.
- Cars
- Clearly marked bike lanes on streets.
- Safety. Riding a bicycle on most roads in the west valley isn't for the inexperienced. Dedicated space/lanes like other cities have helps significantly create a safe way to ride.
- Bike lanes are inconsistent and not interconnected. So, I might be able to ride one or two miles on a bike lane, but then the lane ends for a mile or two and then picks back up again. It's very difficult or impossible to plan a route, and have it be safe. Additionally, bike lanes are sometimes not well maintained and have debris and potholes, which make them dangerous.
- Motorists
- Safety along biking/walking paths. They all need barriers like landscaping or poles. Curbs that run flat into the street aren't safe because they encourage cars to cut corners and drive recklessly!
- It's not safe
- Continuous bike paths
- Lack of trails that connect to other trails or pathways.
- The bike path that follows Agua Fria is great. We need more paths like that. Keeps motorists and cyclists / walkers separated from each other. It's safer for everyone.
- There aren't a lot of safe places to ride and the destinations aren't connected.
- Motorized vehicles



- Lack of sidewalks and insufficient or non-existent bike lanes. This is more evident south of I10.
- Traffic, mostly at stop signs
- Shade during summer, city sprawl means locations are far apart
- Crossing major intersections
- Street lighting
- Neighbor areas are not connected to walking paths
- Providing parking to use the trail system and the system is not connected from southern to northern parts of Avondale and connected to Glendale
- Safety
- Lack of bike lanes and few off street bike/walking paths.
- Speeding cars
- High speed and dense traffic conditions.
- The coffee shops or other restaurants are kind of far away for walking or biking
- Lighting, traffic and overall safety
- We need more light systems. There is so much development and new housing. We need traffic lights and speed zones so families feel comfortable walking/riding bikes.
- Bike lanes
- Lighting and continuous sidewalks
- Unfamiliar with available paths and not enough paths / connection
- Safety- crime, and people drive crazy - speeding/unauthorized parking/etc.
- Stores are so far apart and sidewalks don't go everywhere. McDowell west of Avondale is all dirt for a while and my husband, and I both got flat tires when we tried to bike there
- Dangerous intersections and lack of sidewalks completed throughout the path I want to take. Unsafe to take children and cross major roads.
- We need the trail along the Agua Fria River at the I-10 to connect to Friendship Park and then on to Peoria's New River trail. Once that happens the whole valley is open to bike travel.

4 PROJECT RECOMMENDATIONS

Avondale's current and future active communities deserve a safe, connected, and substantive active transportation network that builds upon the existing infrastructure and provides a balance of utilitarian and recreational facilities. The Avondale ATP project recommendations will assist the City in bicycle and pedestrian project decision making and prioritization, resource allocation, design, implementation, and maintenance of the proposed multimodal network. Avondale's active transportation network should include options that provide a variety of choices for users of varying ages and capabilities. This includes existing users such as road cyclists that ride scenic routes to younger cyclists that ride shorter distances recreationally, as well as pedestrians throughout the region. Bicycling and walking infrastructure are most effective when destinations are nearby, as is the case in mixed-use developments, and when multiple transportation options are available for residents near employment centers. A multi-use trail system is also an important element of the proposed active transportation network and can improve community-wide mobility and connectivity, promote economic development efforts and enhance the overall appeal of Avondale.

The Avondale ATP recommends carefully integrating pedestrian, bicycle, and transit planning to ensure an effective and truly connected active transportation system. Connecting both walking and bicycling to transit increases the "catchment area" of transit stations and increases the total possible trip length for all users, which replaces longer car trips and can lead to reduced emissions.

The proposed active transportation network was developed with a focus on connecting people to places and using a place-based approach. The proposed network was developed by documenting the existing infrastructure, reviewing proposed bicycle projects from previous plans and studies, evaluating public and stakeholder inputs and survey responses, and analysis of existing data. The network was carefully designed by developing routes that connect with regional destinations or other multimodal facilities, while ensuring routes were placed with a conscious focus on safety and accessibility.

This section provides a summary of recommendations for new and improved active transportation infrastructure; as well as, recommendations that go beyond the "Engineering", but also take into account on the other five E's of active transportation: Evaluation, Education, Encouragement, Enforcement, and Equity. It is important to keep in mind when planning and implementing active transportation projects and programs, nearly all recommendations in this Plan require a collaborative effort between public, private, non-profit organizations, and local businesses and residents. There must be support and leadership from a network of strong and willing partners in order to implement the recommendations of this Plan.

The active transportation project recommendations included in this Section outline projects are intended to be implemented over the next 20 years to create a safe and equitable active transportation network that is accessible and well-connected throughout Avondale and the broader region. The recommendations were built around the following considerations:

- Building a functional pedestrian/bicycle transportation network;
- Coordinating previous planning efforts;



- Connecting pedestrians and bicyclist to public transit; and
- Improving signage.

The recommendations are broken down into three categories or project types:

1. On-street bicycle network;
2. Off-Street multi-use network; and
3. Pedestrian network.

ON-STREET BICYCLE NETWORK

A primary objective of this Plan is to create a well-connected bicycle network through a series of loops, spines, branches, and protected lanes. An additional objective of the Plan is to focus on investing and creating a connected network of active transportation facilities, not isolated facilities.

Many of the recommendations from previous planning efforts are reiterated and complement the newer and expanded aspects of this Plan. Based on the assessment of bicycle transportation needs and practices in the region, recognition as budget priorities to the recommendations presented in this Plan are necessary to support the City's vision to attract more residents to use alternative modes of transportation.

Methods for creating a safe and desirable bicycle network include the process of making priority destinations accessible. Bicycle networks should strive to accommodate a wide range of bicyclists in the community. Common trends in bicycle networks across the United States are incorporating design features to accommodate for all ages and abilities. Designing an interconnected and accessible network for all ages and abilities provides the entire community a safe alternative mode of transport.

The proposed bicycle network is based on the notion that bike lanes address the desire for efficient bicycle transportation with more cyclist's comfort when compared to sharing the same travel lane with vehicular traffic. This would appeal to those who are not as comfortable to ride in traffic but are frustrated by factors such as indirectness and frequent stops and starts. Creating a high-quality, connected network appeals to a broader range of residents.

The proposed bike facility projects could be implemented incrementally by building on Avondale's existing base of on-street bikeways over the next 20 years to achieve the long-term network.

The proposed on-street bicycle recommendations include adding bike lanes to roads currently lacking a dedicated bicycle facility and implementing wayfinding signage. Some roads currently have no bike lanes on either side of the roadway while some only have a bike lane one side of the road. These gaps can be the result of the development process – vacant parcels yet to develop their roadway and other frontage improvements such as bike lanes and sidewalks. The proposed on-street bicycle network ensures all arterial and collector roadways within Avondale have bike lanes on both side of the road. The proposed and existing on-street bicycle facilities illustrated in **Figure 4-1. Table 4-1** (in no particular order) provides a complete list of the on-street bicycle recommendations.

In total, there are 71 proposed on-street bicycle recommendations which include three projects that would add a bike lane on one side of the street, 53 projects that would add bike lanes on both sides of the street, and 15 wayfinding signage projects.

Currently there are a total of 93.8 miles of on-street bike ways in Avondale, and the proposed on-street bicycle recommendations would add an additional 91.2 miles of bike lanes to the overall on-street network, yielding roughly 185 linear miles of bike lanes in Avondale. As adoption of this Plan, Avondale's General Engineering Requirements Manual does not contain specific design guidelines for bicycle facilities and only notes that all arterial and collector roads are required to include a bike lane. For the purposes of the Avondale ATP, the typical bicycle lane envisioned would consist of a striped lane (4 ft or wider) with pavement marking and a designated buffer space separating the bike lane from motor vehicle travel lanes. Facilities may have curb and gutter present or a flush shoulder.

Figure 4-1: On-Street Bicycle Network Recommendations Map

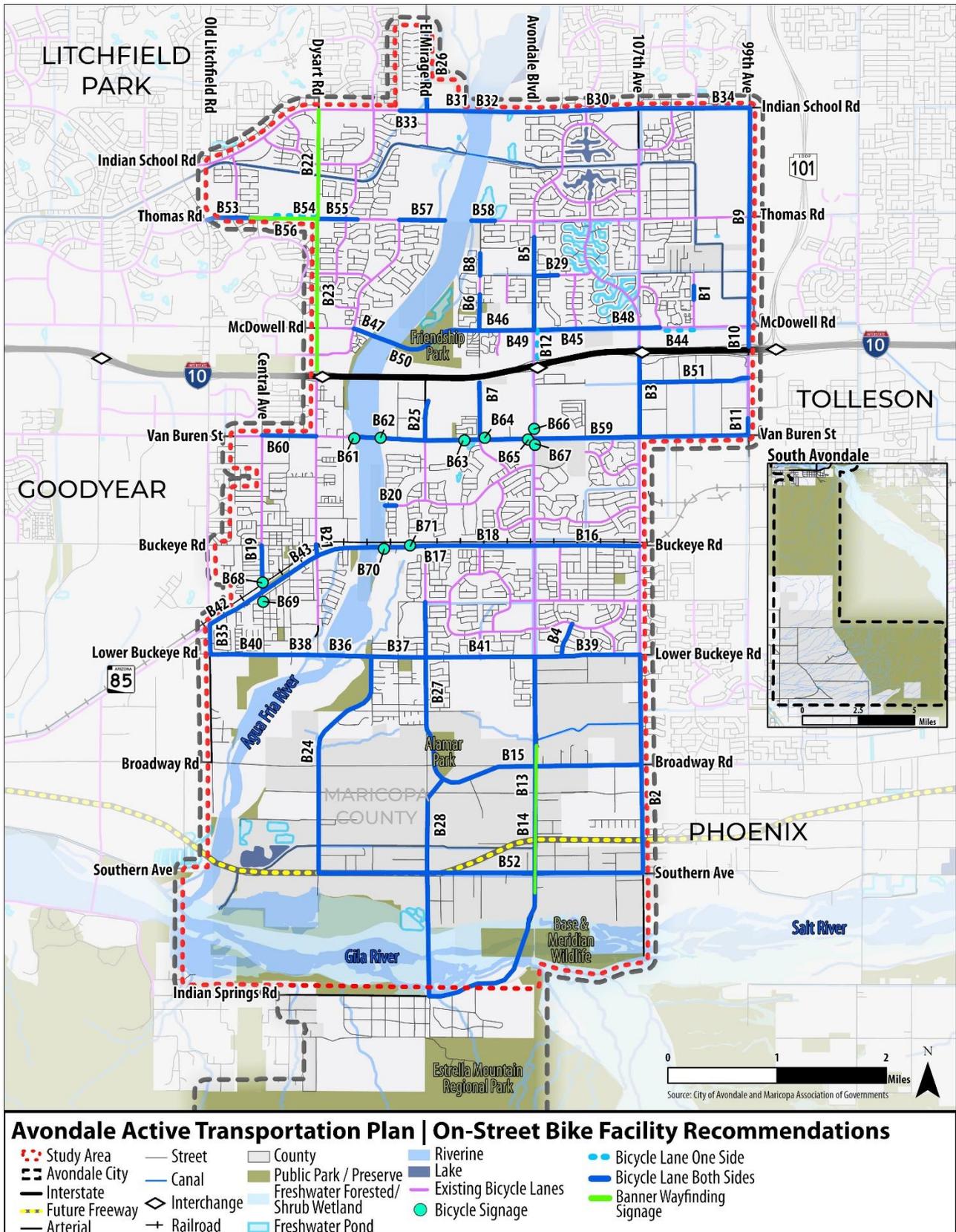


Table 4-1: On-Street Bicycle Network Recommendations

ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
B1	103rd Ave	Bicycle Lane Both Sides	0.13	Zinc Apartment Parcel	Zinc Apartment Parcel
B2	107th Ave	Bicycle Lane Both Sides	1.99	Lower Buckeye Rd	Southern Ave
B3	107th Ave	Bicycle Lane Both Sides	0.81	I-10	Van Buren St
B4	112th Lane	Bicycle Lane Both Sides	0.32	Whyman Ave	Lower Buckeye Rd
B5	115th Ave	Bicycle Lane Both Sides	0.84	Roanoke Dr	McDowell Rd
B6	119th Ave	Bicycle Lane Both Sides	0.33	Monte Vista Rd	McDowell Rd
B7	119th Ave	Bicycle Lane Both Sides	0.51	I-10	Van Buren St
B8	119th Ave	Bicycle Lane Both Sides	0.20	Thomas Rd	Encanto Blvd
B9	99th Ave	Bicycle Lane Both Sides	2.00	Indian School Rd	McDowell Rd
B10	99th Ave	Bicycle Lane Both Sides	0.19	McDowell Rd	I-10
B11	99th Ave	Bicycle Lane Both Sides	0.16	820 feet North Van Buren St	Van Buren St
B12	Avondale Blvd	Bicycle Lane One Side	0.28	McDowell Rd	I-10
B13	Avondale Blvd	Banner Wayfinding Signage	1.35	Broadway Rd	Southern Ave
B14	Avondale Blvd	Bicycle Lane Both Sides	3.74	Lower Buckeye Rd	Southern Ave
B15	Broadway Rd	Bicycle Lane Both Sides	1.85	El Mirage Rd	107th Ave
B16	Buckeye Rd	Bicycle Lane Both Sides	0.96	Avondale Blvd	107th Ave
B17	Buckeye Rd	Bicycle Lane Both Sides	0.35	1000 ft West El Mirage Rd	760 ft East El Mirage Rd
B18	Buckeye Rd	Bicycle Lane Both Sides	0.86	121st Lane	Avondale Blvd
B19	Central Ave	Bicycle Lane Both Sides	0.42	Western Ave	Main St
B20	Coldwater Springs Blvd	Bicycle Lane Both Sides	0.10	126th Ave	125th Ave
B21	Dysart Rd	Bicycle Lane Both Sides	0.11	Western Ave	Buckeye Rd
B22	Dysart Rd	Banner Wayfinding Signage	1.00	Indian School Rd	Thomas Rd
B23	Dysart Rd	Banner Wayfinding Signage	1.39	Thomas Rd	I-10
B24	Dysart/Vermeersch Rd	Bicycle Lane Both Sides	2.19	Lower Buckeye Rd	Southern Ave
B25	El Mirage Rd	Bicycle Lane Both Sides	0.36	Garfield St	Van Buren St
B26	El Mirage Rd	Bicycle Lane Both Sides	0.74	Highland Ave	Indian School
B27	El Mirage Rd	Bicycle Lane Both Sides	1.65	Durango St	Broadway Rd
B28	El Mirage Rd	Bicycle Lane Both Sides	2.02	Broadway Rd	Indian Springs Rd
B29	Encanto Blvd	Bicycle Lane Both Sides	0.22	115th Ave	112th Lane
B30	Indian School Rd	Bicycle Lane Both Sides	1.99	El Mirage Rd	103rd Ave



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
B31	Indian School Rd	Bicycle Lane Both Sides	0.17	1000 ft East El Mirage Rd	Agua Fria River Bridge
B32	Indian School Rd	Bicycle Lane Both Sides	0.31	Agua Fria River West	Agua Fria River East
B33	Indian School Rd	Bicycle Lane Both Sides	0.25	124th Ave	El Mirage Rd
B34	Indian School Rd	Bicycle Lane Both Sides	0.50	103rd Ave	99th Ave
B35	Litchfield Rd	Bicycle Lane Both Sides	0.28	Main St	Lower Buckeye Rd
B36	Lower Buckeye Rd	Bicycle Lane Both Sides	0.57	Agua Fria River West	Agua Fria River East
B37	Lower Buckeye Rd	Bicycle Lane Both Sides	0.49	127th Ave	El Mirage Rd
B38	Lower Buckeye Rd	Bicycle Lane Both Sides	0.16	4th St	Agua Fria River West
B39	Lower Buckeye Rd	Bicycle Lane Both Sides	0.97	Avondale Blvd	107th Ave
B40	Lower Buckeye Rd	Bicycle Lane Both Sides	0.75	Litchfield Rd	4th St
B41	Lower Buckeye Rd	Bicycle Lane Both Sides	1.01	El Mirage Rd	Avondale Blvd
B42	Main St	Bicycle Lane Both Sides	0.28	Litchfield Rd	Hummingbird 2 MPH
B43	Main St / Buckeye Rd	Bicycle Lane Both Sides	1.69	Hummingbird 2 MPH	1000 ft West El Mirage Rd
B44	McDowell Rd	Bicycle Lane One Side	0.31	Harbor Shores Blvd	103rd Ave
B45	McDowell Rd	Bicycle Lane Both Sides	0.48	Avondale Blvd	515 ft East 112th Ave
B46	McDowell Rd	Bicycle Lane Both Sides	0.19	119th Ave	117th Ave
B47	McDowell Rd	Bicycle Lane Both Sides	0.20	Rancho Santa Fe	Agua Fria River
B48	McDowell Rd	Bicycle Lane Both Sides	0.67	112th Ave	Harbor Shores Blvd
B49	McDowell Rd	Bicycle Lane Both Sides	0.31	117th Ave	Avondale Blvd
B50	McDowell Rd	Bicycle Lane Both Sides	1.04	Agua Fria River West	119th Ave
B51	Roosevelt St	Bicycle Lane Both Sides	1.00	107th Ave	99th Ave
B52	Southern Ave	Bicycle Lane Both Sides	2.97	Dysart Rd	107th Ave
B53	Thomas Rd	Bicycle Lane Both Sides	0.63	Litchfield Rd	Estrella Mountain CC
B54	Thomas Rd	Bicycle Lane One Side	0.38	Estrella Mountain CC	Dysart Rd
B55	Thomas Rd	Bicycle Lane Both Sides	0.37	Dysart Rd	560 ft East Santa Fe Trl
B56	Thomas Rd	Banner Wayfinding Signage	0.62	136th Ave	Dysart Rd
B57	Thomas Rd	Bicycle Lane Both Sides	0.42	Rancho Santa Fe Blvd	Agua Fria River West
B58	Thomas Rd	Bicycle Lane Both Sides	0.21	Agua Fria River East	118th Dr
B59	Van Buren St	Bicycle Lane Both Sides	3.62	Agua Fria River West	99th Ave
B60	Van Buren St	Bicycle Lane Both Sides	0.49	Central Ave	Dysart Rd
B61	Van Buren St	Bicycle Signage	-	Van Buren St and Agua Fria River EB	.



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
B62	Van Buren St	Bicycle Signage	-	Van Buren St and Agua Fria River WB	.
B63	Van Buren St	Bicycle Signage	-	Van Buren St and 120th Ave EB	.
B64	Van Buren St	Bicycle Signage	-	Van Buren St and 120th Ave WB	.
B65	Van Buren St	Bicycle Signage	-	Van Buren St and Avondale Blvd EB	.
B66	Avondale Blvd	Bicycle Signage	-	Avondale Blvd and Van Buren St SB	.
B67	Avondale Blvd	Bicycle Signage	-	Avondale Blvd and Van Buren St NB	.
B68	Central Ave	Bicycle Signage	-	Central Ave and Main St SB	.
B69	Central Ave	Bicycle Signage	-	Central Ave and Harrison Dr NB	.
B70	Buckeye Rd	Bicycle Signage	-	Buckeye Rd and Agua Fria River EB	.
B71	Buckeye Rd	Bicycle Signage	-	Buckeye Rd and Agua Fria River WB	.



OFF-STREET MULTI-USE NETWORK

Existing and new paths will serve the on-street bicycle network. These off-street multi-use facilities were selected because they provide an enhanced level of safety considering they are not sharing a road with automobiles. The paths along the Agua Fria and the Gila/Salt Rivers act like spines connecting to other bicycle and pedestrian facilities within the City, while the paths also can provide a regional conduit connecting to neighboring municipalities and destinations outside of Avondale.

The proposed and existing off-street multi-use facilities are illustrated in **Figure 4-2**; and, **Table 4-2** provides a complete inventory of all of the on-street bicycle recommendations. There are a total of 11 proposed off-street multi-use facility recommendations which include either a multi-use path or a trail segment.

The proposed off-street multi-use paths provide facilities on both sides of the Agua Fria River and on the north side of the Gila/Salt River throughout the City. In addition, there are three proposed multi-use paths outside of the river basins; one along the Durango Street alignment just east of El Mirage Road that connects to a proposed Agua Fria River multi-use path (MU7), another along the future State Route 30, and a proposed multi-use path connecting an existing path within the Del Rio community to Alamar Park to the south starting from Lower Buckeye Road and ultimately connecting to the a proposed Agua Fria River path to the west.

Currently there are a total of 34.5 miles of off-street multi-use paths in Avondale, and the proposed off-street multi-use facility recommendations would add an additional 22.7 miles of multi-use paths to the overall off-street facility network, yielding roughly 57.2 linear miles of off-street multi-use paths and 23.7 linear miles of recreation trails across the city upon buildout.

Figure 4-2: Off-Street Multi-Use Network Recommendations Map

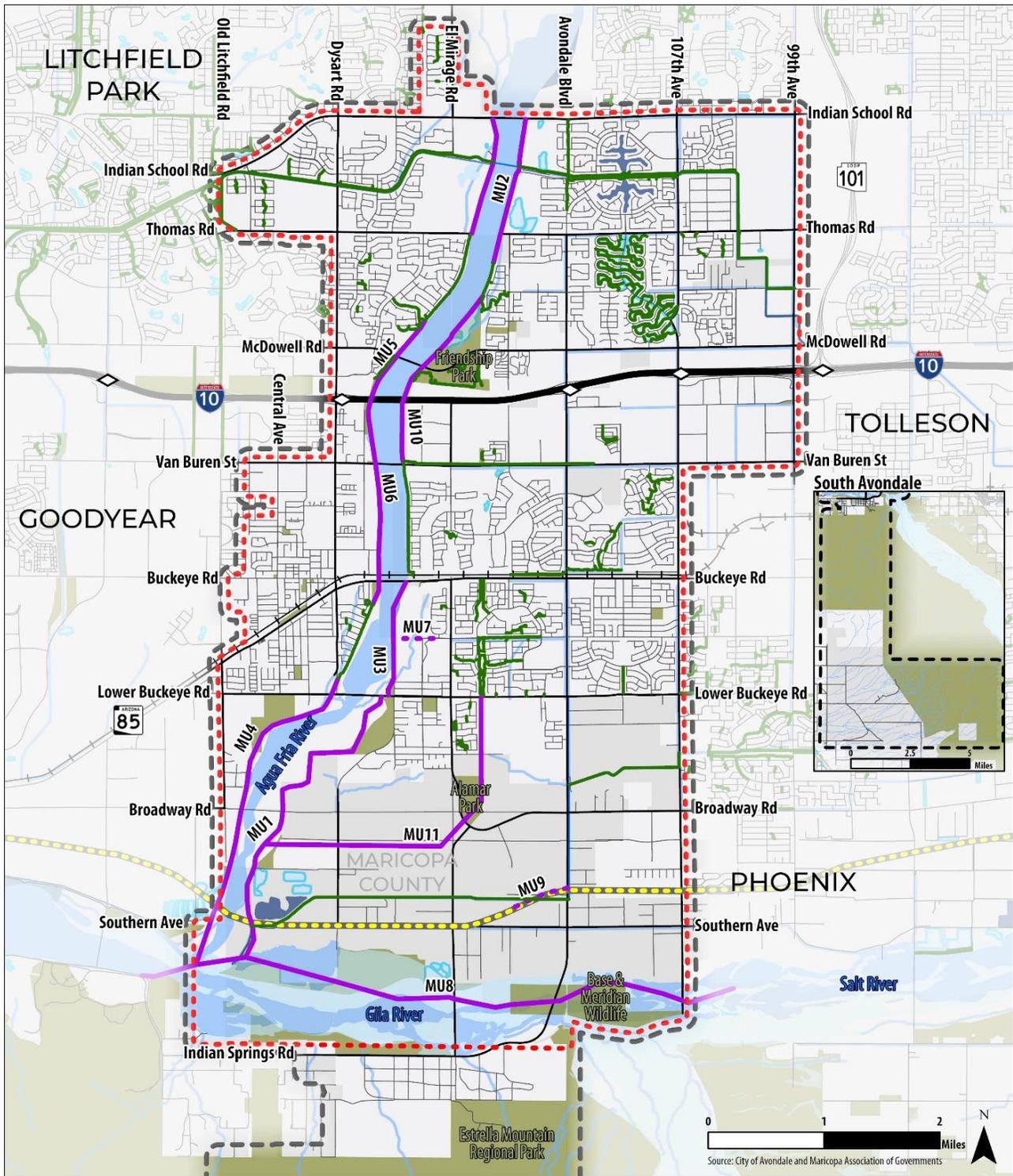


Table 4-2: Off-Street Multi-Use Network Recommendations

ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
MU1	Agua Fria River East	Multi-Use Path	2.97	Lower Buckeye Rd	Gila River
MU2	Agua Fria River East	Multi-Use Path	2.07	Indian School Rd	McDowell Rd
MU3	Agua Fria River East	Multi-Use Path	1.01	Buckeye Rd	Lower Buckeye Rd
MU4	Agua Fria River West	Multi-Use Path	2.81	Lower Buckeye Rd	Gila River
MU5	Agua Fria River West	Multi-Use Path	1.87	Indian School Rd	I-10
MU6	Agua Fria River West	Multi-Use Path	1.92	I-10	Lower Buckeye Rd
MU7	Durango Street	Trail Segment	0.32	125th Ave	Agua Fria Trail
MU8	Gila River	Multi-Use Path	5.27	143rd Ave	East of 107 Ave
MU9	SR-30	Trail Segment	0.57	119th Ave	Avondale Blvd
MU10	Agua Fria River	Multi-Use Path	0.88	McDowell Rd	Van Buren St
MU11	Transmission Lines	Multi-Use Path	2.95	Lower Buckeye Rd	Broadway Rd / Agua Fria River



PEDESTRIAN NETWORK

A priority of this Plan is to ensure residents have safe, secure, reliable, accessible, and connected sidewalks.

The approach to developing the proposed pedestrian network focused on closing existing sidewalk gaps and providing a safe and comfortable experience for users of all ages and abilities. In addition, the proposed pedestrian network aimed to include accessible sidewalk connections to all transit stops equipped with shelters, signage, and education resources should be considered, as well as incorporating accessible boarding and alighting for those with mobility issues.

The existing and proposed pedestrian network is illustrated in **Figure 4-3**, while **Table 4-3** provides a complete inventory of all of sidewalk network recommendations. The result of the proposed pedestrian network would ensure sidewalks are offered on both sides of the street on all roads within Avondale. The proposed pedestrian network would more than 100 miles of new sidewalks within the city – nearly a 20 percent increase from the existing condition.

Sidewalks provide many benefits including safety, mobility, and healthier communities. In addition to reducing walking along roadway crashes, sidewalks reduce other pedestrian crashes. Roadways without sidewalks are more than twice as likely to have pedestrian crashes as sites with sidewalks on both sides of the street. By providing sidewalks on both sides of the street, numerous midblock crossing crashes can be eliminated.

By providing facilities that are more comfortable, we can increase the number of trips made by walking, particularly in areas with mixed land uses. Moreover, we can better serve our local populations. Many people cannot drive a car and are reliant on walking and public transit for transportation. Children, older adults, and people with disabilities make up a substantial portion of the population. Other people might choose to walk if they had better accommodations. Providing sidewalks, widened paved shoulders, or stabilized shoulders—particularly when providing access to transit and schools—can increase the transportation options for these individuals. Additionally, by moving pedestrians off the travel lanes, motorists' operations are improved and capacity increased. Research also indicates that people will walk for recreational purposes if a facility is provided. Recreational walking is one of the easiest ways for people to get the recommended allotment of physical exercise each day.

Figure 4-3: Pedestrian Network Recommendations Map

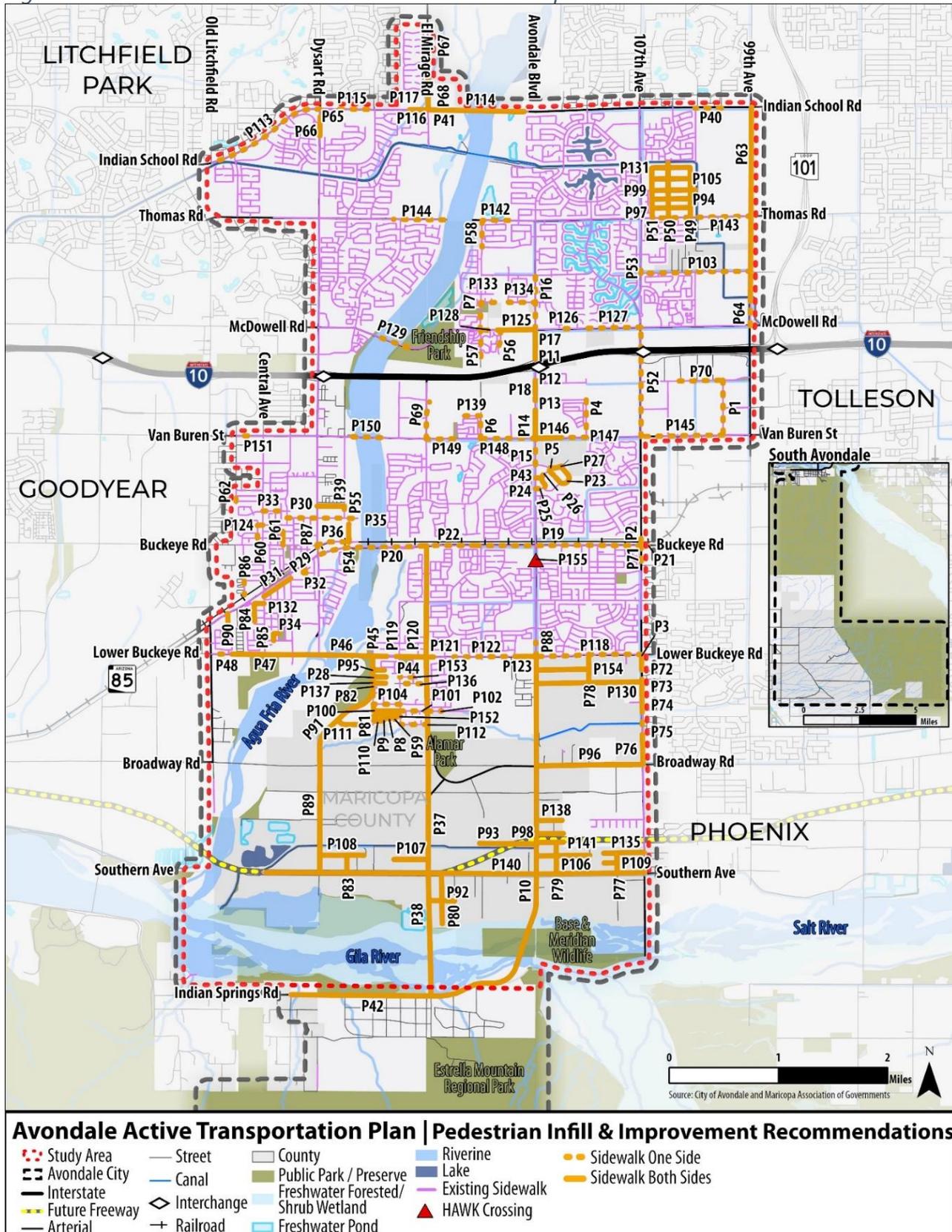


Table 4-3: Pedestrian Network Recommendations

ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P19	Buckeye Rd	Sidewalk One Side	1.53	119th Ln	107th Ave
P124	W Madden Dr	Sidewalk Both Sides	0.05	1st Ave	Central Ave
P87	S 8th St	Sidewalk One Side	0.10	Western Ave	Buckeye Rd
P113	W Indian School Rd	Sidewalk One Side	1.13	Litchfield Park	Dysart Rd
P52	N 107th Ave	Sidewalk One Side	1.00	McDowell Rd	Van Buren St
P46	Lower Buckeye Rd	Sidewalk Both Sides	0.72	4th St	127th Ave
P16	Avondale Blvd	Sidewalk One Side	0.49	Encanto Blvd	McDowell Rd
P31	E Brooke Pl	Sidewalk Both Sides	0.30	Central Ave	4th St
P143	W Thomas Rd	Sidewalk One Side	0.91	106th Ave	99th Ave
P20	Buckeye Rd	Sidewalk One Side	0.97	Dysart Rd	El Mirage Rd
P60	N 1st Ave	Sidewalk One Side	0.12	Madden Dr	Hill Dr
P35	E Riley Dr	Sidewalk One Side	0.65	4th St	420 ft East Eliseo C Felix Jr Way
P71	S 107th	Sidewalk One Side	0.15	350 north Buckeye Rd	2nd St
P36	E Western Ave	Sidewalk One Side	0.29	Dysart Rd	Eliseo C Felix Jr Way
P14	Avondale Blvd	Sidewalk Both Sides	0.23	City Center Dr	Van Buren St
P15	Avondale Blvd	Sidewalk One Side	0.24	Van Buren St	Coldwater Springs Blvd
P61	N 3rd St	Sidewalk Both Sides	0.13	Kinderman Dr	Hill Dr
P126	W McDowell Rd	Sidewalk One Side	0.08	113th Dr	113th Ave
P127	W McDowell Rd	Sidewalk One Side	0.50	415 ft East 112th Ave	107th Ave
P21	Buckeye Rd	Sidewalk Both Sides	0.06	107th Ave	320 ft East 107th
P64	N 99th Ave	Sidewalk One Side	0.22	Palm Ln	McDowell Rd
P12	Avondale Blvd	Sidewalk One Side	0.10	I-10	Roosevelt St
P29	E Agua Fria Ln	Sidewalk One Side	0.08	Corral St	Dead End
P32	E Corral St	Sidewalk One Side	0.10	Corral St	7th St
P2	107th Ave	Sidewalk One Side	0.07	350 ft north Buckeye Rd	Buckeye Rd
P155	Avondale Blvd	HAWK Crossing	-	Avondale and Littleton Elementary	.
P10	Avondale Blvd	Sidewalk Both Sides	3.73	Lower Buckeye Rd	El Mirage Rd
P125	W McDowell Rd	Sidewalk Both Sides	0.32	117th Ave	Avondale Blvd
P129	W McDowell Rd	Sidewalk One Side	0.34	Agua Fria River West	Agua Fria River East
P84	S 1st Ave	Sidewalk Both Sides	0.16	Overlin Ln	Whyman Ave



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P65	N Dysart Rd	Sidewalk One Side	0.10	Indian School Rd	500 ft south of Dysart Rd
P148	W Van Buren St	Sidewalk One Side	0.50	119th Ave	Avondale Blvd
P149	W Van Buren St	Sidewalk One Side	0.25	Fairway Dr	120th Ln
P13	Avondale Blvd	Sidewalk One Side	0.17	515 ft south Roosevelt St	City Center Dr
P18	Avondale Blvd	Sidewalk Both Sides	0.10	Roosevelt St	515 ft south Roosevelt St
P150	W Van Buren St	Sidewalk One Side	0.27	Agua Fria River West	Agua Fria River East
P37	S El Mirage Rd	Sidewalk Both Sides	4.12	Buckeye Rd	Indian Springs Rd
P118	W Lower Buckeye Rd	Sidewalk One Side	0.97	Avondale Blvd	107th Ave
P40	Indian School Rd	Sidewalk One Side	0.24	100th Ave	103rd Ave
P41	Indian School Rd	Sidewalk Both Sides	0.07	El Mirage Rd	El Mirage Rd to East .07 miles
P117	W Indian School Rd	Sidewalk Both Sides	0.14	745 ft West El Mirage Rd	El Mirage Rd
P86	S 3rd Ave	Sidewalk One Side	0.13	Rhodes Ave	Dead End
P90	S Greenleaf Ln	Sidewalk Both Sides	0.08	Main St	Dead End
P132	W Overlin Ln	Sidewalk Both Sides	0.09	1st Ave	Central Ave
P146	W Van Buren St	Sidewalk Both Sides	0.24	Avondale Blvd	1/4 mile west 111th Ave
P63	N 99th Ave	Sidewalk Both Sides	1.78	Indian School Rd	Palm Ln
P151	W Van Buren St	Sidewalk One Side	0.10	137th Ave	535 ft east of 137th Ave
P121	W Lower Buckeye Rd	Sidewalk One Side	0.07	El Mirage Rd	460 ft East El Mirage Rd
P11	Avondale Blvd	Sidewalk Both Sides	0.22	290 ft south McDowell Rd	I-10
P66	N Dysart Rd	Sidewalk Both Sides	0.15	500 ft south of Dysart Rd	Fairmount Ave
P22	Buckeye Rd North	Sidewalk One Side	0.47	West of El Mirage Rd	West of 119th Ave
P53	N 107th Ave	Sidewalk One Side	0.10	320 ft North Encanto Blvd	Encanto Blvd
P116	W Indian School Rd	Sidewalk One Side	0.11	125th Dr	745 ft West El Mirage Rd
P128	W McDowell Rd	Sidewalk One Side	0.18	119th Ave	117th Ave
P48	Lower Buckeye Rd	Sidewalk One Side	0.21	Litchfield Rd	300 ft East of 5th Ave
P33	E Ludlow Dr	Sidewalk One Side	0.17	Central Ave	3rd St
P3	107th Ave	Sidewalk Both Sides	0.02	Lower Buckeye Rd	125 ft south Lower Buckeye Rd
P44	Lower Buckeye Rd	Sidewalk Both Sides	0.03	125th Ave	125th Ave East .01 miles
P115	W Indian School Rd	Sidewalk One Side	0.29	700 ft east Dysart Rd	320 ft east Santa Fe Trl
P34	E Park Dr	Sidewalk Both Sides	0.05	1st St	2nd St
P85	S 1st St	Sidewalk Both Sides	0.06	Park Dr	Elm Ln



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P47	Lower Buckeye Rd	Sidewalk Both Sides	0.52	300 ft East of 5th Ave	4th St
P68	N el Mirage Rd	Sidewalk Both Sides	0.16	825 ft north Indian School Rd	Indian School Rd
P51	N 106th Ave	Sidewalk Both Sides	0.46	Mulberry Dr	Thomas Rd
P134	W Palm Ln	Sidewalk One Side	0.25	116th Ln	Avondale Blvd
P30	E Brinker Dr	Sidewalk Both Sides	0.25	Dysart Rd	Eliseo C Felix Jr Way
P17	Avondale Blvd	Sidewalk One Side	0.06	McDowell Rd	290 ft south McDowell Rd
P88	S Avondale Blvd	Sidewalk One Side	0.13	Rio Vista Ln	Lower Buckeye Rd
P122	W Lower Buckeye Rd	Sidewalk One Side	0.59	121st Dr	116th Ave
P123	W Lower Buckeye Rd	Sidewalk Both Sides	0.17	116th Ave	Avondale Blvd
P103	W Encanto Blvd	Sidewalk One Side	1.01	107th Ave	99th Ave
P145	W Van Buren St	Sidewalk One Side	0.75	107th Ave	101st Ave
P114	W Indian School Rd	Sidewalk Both Sides	0.81	380 ft East El Mirage Rd	Copenhagen Dr
P69	N el Mirage Rd	Sidewalk One Side	0.34	Garfield St	Van Buren St
P142	W Thomas Rd	Sidewalk One Side	0.24	119th Ave	116th Ave
P49	N 103rd Ave	Sidewalk Both Sides	0.46	Mulberry Dr	Thomas Rd
P50	N 105th Ave	Sidewalk Both Sides	0.50	Mulberry Dr	Thomas Rd
P94	W Avalon Dr	Sidewalk Both Sides	0.35	106th Ave	103rd Ave
P97	W Catalina Dr	Sidewalk Both Sides	0.35	106th Ave	103rd Ave
P45	Lower Buckeye Rd	Sidewalk Both Sides	0.08	127th Ave	127th Ave East .07 miles
P82	S 127th Ave	Sidewalk Both Sides	0.31	Lower Buckeye Rd	Superior Ave
P153	W Whyman St	Sidewalk One Side	0.12	125th Ave	124th Ave
P120	W Lower Buckeye Rd	Sidewalk Both Sides	0.21	175 ft East 125th Ave	El Mirage Rd
P105	W Flower St	Sidewalk Both Sides	0.35	106th Ave	103rd Ave
P131	W Mulberry St	Sidewalk Both Sides	0.35	106th Ave	103rd Ave
P147	W Van Buren St	Sidewalk One Side	0.22	1/4 mile west 111th Ave	111th Ave
P39	Elisio Felix Jr Way	Sidewalk One Side	0.11	Brinker Dr	Riley Dr
P62	N 4th Ave	Sidewalk One Side	0.10	Loma Linda Blvd	Brinker Dr
P99	W Earll Dr	Sidewalk Both Sides	0.40	106th Ave	103rd Ave
P91	S Vermeersch Rd	Sidewalk Both Sides	0.67	Superior Ave	1.5 miles south Superior Ave
P96	W Broadway Rd	Sidewalk Both Sides	0.98	Avondale Blvd	107th Ave
P67	N El Mirage Rd	Sidewalk One Side	0.58	<Null>	825 ft north Indian School Rd



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P144	W Thomas Rd	Sidewalk One Side	0.46	350 ft West Rancho Santa Fe Blvd	Agua Fria River West
P6	119th Ave	Sidewalk One Side	0.21	Roosevelt St	Van Buren St
P7	119th Ave	Sidewalk One Side	0.26	Palm Ln	McDowell Rd
P23	Civic Center Dr	Sidewalk Both Sides	0.31	400 ft southeast 114th Ave	Coldwater Springs Blvd
P24	Civic Center Dr	Sidewalk One Side	0.09	Avondale Blvd	Madison St
P56	N 117th Ave	Sidewalk One Side	0.22	McDowell Rd	1/4 mile south McDowell Rd
P57	N 119th Ave	Sidewalk One Side	0.24	McDowell Rd	Roosevelt Ave
P139	W Roosevelt St	Sidewalk One Side	0.16	120 Dr	119th Ave
P1	101st Ave	Sidewalk One Side	0.50	Roosevelt St	Van Buren St
P70	Roosevelt St	Sidewalk One Side	0.40	103rd Ave	101st Ave
P28	County Line Rd	Sidewalk Both Sides	0.12	127th Ave	Dead End
P95	W Bohne St	Sidewalk Both Sides	0.11	127th Ave	Dead End
P119	W Lower Buckeye Rd	Sidewalk One Side	0.16	126th Ave	125th Ave
P54	N 10th St	Sidewalk Both Sides	0.14	435 ft south Riley Dr	Western Ave
P55	N 10th St	Sidewalk One Side	0.08	Riley Dr	435 ft south Riley Dr
P81	S 127th Ave	Sidewalk One Side	0.28	Vermeersch Rd	Illini St
P101	W Elwood St	Sidewalk One Side	0.25	125th Ave	El Mirage Rd
P5	114th Ave	Sidewalk One Side	0.04	Coldwater Springs Blvd	Civic Center Dr
P25	Civic Center Dr	Sidewalk Both Sides	0.09	Madison St	Jefferson St
P26	Civic Center Dr	Sidewalk One Side	0.17	Jefferson St	400 ft southeast 114th Ave
P27	Coldwater Springs Blvd	Sidewalk Both Sides	0.10	114th Ave	Civic Center Dr
P43	Jefferson St	Sidewalk One Side	0.06	Avondale Blvd	Civic Center Dr
P58	N 119th Ave	Sidewalk One Side	0.24	Thomas Rd	Virginia Ave
P42	Indian Springs Rd	Sidewalk Both Sides	1.28	133rd Ave	El Mirage Rd
P136	W Pioneer St	Sidewalk One Side	0.19	125th Ave	330 ft east 124th Ave
P137	W Pioneer St	Sidewalk Both Sides	0.12	127th Ave	Dead End
P154	W Winslow Ave	Sidewalk Both Sides	0.48	Avondale Blvd	111th Ave
P140	W Southern Ave	Sidewalk Both Sides	3.47	Buckeye Canal	107th Ave
P72	S 107th Ave	Sidewalk Both Sides	0.09	125 ft south Lower Buckeye Rd	600 ft south Lower Buckeye Rd
P73	S 107th Ave	Sidewalk One Side	0.14	600 ft south Lower Buckeye Rd	Miami Ave
P74	S 107th Ave	Sidewalk Both Sides	0.25	Miami Ave	1/4 Mile south Miami Ave



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P4	111th Ave	Sidewalk One Side	0.34	Roosevelt St	Van Buren St
P152	W Warner St	Sidewalk Both Sides	0.24	127th Ave	125th Ave
P133	W Palm Ln	Sidewalk One Side	0.12	119th Ave	650 ft East 119th Ave
P112	W Illini St	Sidewalk One Side	0.25	125th Ave	El Mirage Rd
P8	126th Ave	Sidewalk Both Sides	0.03	Warner St	Dead End
P9	126th Dr	Sidewalk Both Sides	0.04	Warner St	Illini St
P59	N 125th Dr	Sidewalk Both Sides	0.03	Warner St	Dead End
P100	W Elwood St	Sidewalk Both Sides	0.24	127th Ave	125th Ave
P104	W Florence St	Sidewalk One Side	0.25	127th Ave	125th Ave
P110	W Illini St	Sidewalk Both Sides	0.09	127th Ave	126th Dr
P111	W Illini St	Sidewalk Both Sides	0.19	Vermeersch Rd	Dead End
P38	el Mirage Rd	Sidewalk Both Sides	0.26	Alta Vista Rd	Gila River
P75	S 107th Ave	Sidewalk One Side	0.26	1/4 Mile south Miami Ave	Jones Ave
P76	S 107th Ave	Sidewalk Both Sides	0.25	Jones Ave	Broadway Rd
P89	S Dysart Rd	Sidewalk Both Sides	1.24	1.5 miles south of Superior St	Southern Ave
P78	S 111th Ave	Sidewalk Both Sides	0.26	Lower Buckeye Rd	Miami Ave
P130	W Miami Ave	Sidewalk Both Sides	0.97	Avondale Blvd	107th Ave
P102	W Elwood St	Sidewalk One Side	0.13	El Mirage Rd	122nd Ave
P77	S 109th Ave	Sidewalk Both Sides	0.19	Pecan Rd	Southern Ave
P79	S 114th Ave	Sidewalk Both Sides	0.29	Sunland Ave	Southern Ave
P80	S 122nd Ave	Sidewalk Both Sides	0.45	Southern Ave	Gila River
P83	S 129th Ave	Sidewalk Both Sides	0.16	Hidalgo Ave	Southern Ave
P92	W Alta Vista Rd	Sidewalk Both Sides	0.24	El Mirage Rd	121st Ave
P93	W Atlanta Ave	Sidewalk Both Sides	0.52	1/2 Mile west Avondale Blvd	Avondale Blvd
P98	W Chambers Ave	Sidewalk Both Sides	0.25	Avondale Blvd	350 ft east 114th Ave
P106	W Hidalgo Ave	Sidewalk Both Sides	0.49	Avondale Blvd	111th Ave
P107	W Hidalgo Ave	Sidewalk Both Sides	0.31	1/4 mile El Mirage Rd	El Mirage Rd
P108	W Hidalgo Ave	Sidewalk Both Sides	0.40	Dysart Rd	830 ft east of 129th Ave
P109	W Hidalgo Ave	Sidewalk Both Sides	0.12	630 ft west of 109th Ave	109th Ave
P135	W Pecan Rd	Sidewalk Both Sides	0.37	625 ft west 109th Ave	107th Ave
P138	W Roeser Rd	Sidewalk Both Sides	0.24	Avondale Blvd	350 ft east 114th Ave



ID	Location	Facility Type	Length (Miles)	Limit From	Limit To
P141	W Sunland Ave	Sidewalk Both Sides	0.25	Avondale Blvd	350 ft east 114th Ave



SUPPORTING POLICY CONSIDERATIONS

In addition to improving Avondale's active transportation network through tangible projects and engineering solutions, a holistic perspective of supporting policy, programmatic, education, enforcement, and encouragement elements will be critical for implementing and sustaining a pedestrian- and bicycle-friendly network. The following supporting policy and programming recommendations are categorized in the six E's of active transportation.

Engineering

Creating safe and convenient places to ride and walk

- Continue to evaluate the City's Capital Improvement Programs annually to include priority projects and programs recommended in the ATP.
- Upgrade roadway design standards to include more modern bicycle pedestrian facility types and conditions.
- The average person feels most comfortable walking or riding a bike off the roadway, particularly with children in-tow. For this reason, residential PUD's or MPC's should be required to improve bicycle and pedestrian facilities within new subdivisions well as connection between subdivisions (or residential communities) in the subdivision platting process. In addition, pedestrian connections should be made to cul- de-sac, and around (not through) retention and detention basins. All connections should be complete with equitable ADA transitions and signage providing access for all abilities. Additional considerations should be made to incorporate a "Behind the Wall" trail system/design connecting neighborhoods and amenities including City-planned paths and trails
- Retrofit existing facilities to incorporate ADA compliant facilities, as needed.
- Canopies, awnings, and similar architectural features that shade public and private sidewalks and accentuate entries should be incorporated into the design of buildings, where appropriate.
- In conjunction with routine roadway maintenance and/or pavement management system, implement a roadway re-stripping program to include provisions for bike lanes when and where feasible.
- Coordinate with Phoenix, Tolleson and Goodyear to achieve continuity of bike lanes across jurisdictional boundaries.
- Consider the creation a Vision Zero Policy and attach a date: recommended 2040 (consistent with the plan horizon of the Avondale Transportation Planning Study). Vision Zero was created to reduce traffic related pedestrian deaths, with the ultimate goal of zero.
- In relation to the ongoing General Plan update, consider a policy that encourages housing at greater densities within transit corridors and transit stops to facilitate walkable neighborhoods that encourage healthy lifestyles.

- Create an ordinance to prohibit illegal uses on the path and trail systems and establish fines that serve as a substantial deterrent. Require removable bollards at entrances to all multi-use paths to prevent OHV's and other forms of unwarranted motorized vehicles (including e-bikes of a certain speed threshold) from entering and to provide access for maintenance vehicles.
- Continue to ensure bicycle racks are placed in public areas and pedestrian activity centers. These areas include, but are not limited to parks, civic uses, churches, and schools. These efforts should consist of the City placing bike racks or working with other public institutions to have them placed on site. The City should add minimum bike parking requirements to their zoning codes for private developments. Typically bike parking requirements should be 10 to 20 percent of the number of off-street spaces that are required with a minimum of two bike parking spaces provided on-site (one inverted U rack). This provision could be waived if public facilities are available nearby. The inverted U is the preferred type of bike rack.
- Formulate a policy to consider access and ways to activate the space along and/or adjacent to canals with all incoming developments
- In high pedestrian activity areas, evaluate pedestrian crossing times to ensure that pedestrians have ample time to cross.
- Create an ordinance or policy that either allows or disallows private companies from operating a bike or scooter share in the City of Avondale. If desired, the City's ordinance can serve as an attractor to such companies.
- The term "Complete Streets" refers to the practice of designing streets so that people of all ages and abilities can choose and use their travel mode safely (i.e. take transit, use a wheelchair or other mobility device, drive a car, walk, ride a bicycle) and not be confined to one choice. The City should consider adopting a Complete Streets policy to ensure that all users are considered, if not accommodated, with each opportunity for changing streets within Avondale City Limits. Some recommended aspects of such policy include, but are not limited to:
 - Drinking fountains/ water bottle fillers (dogs too!) and trash receptacles
 - Shade (art, landscaping, architecture)
 - Lighting and seating
 - Wayfinding
- Identify best practices for all implemented facilities regarding striping, sealing, reconstruction, and environmental damage repair. Utilize volunteer and community service organizations for trail maintenance and litter abatement activities on a quarterly basis.
- Work with the Parks and Recreation Department to install signage on routes that connect to parks and trailheads.
- Collaborate with MAG and local jurisdictions to incorporate wayfinding for regional bicycle routes.

Education

Giving people of all ages and abilities the skills and confidence to ride and walk

- Design and launch a broad reaching bike skills training and bike lock/safety gear distribution initiative.
- Launch a professional driver education program.
- Improve the reach of safety outreach campaigns to drivers.
- Public Service Announcements - Visual Trainings to educate all ages on important safety topics.

Evaluation & Planning

Evaluate use of the active transportation network and impact of implemented projects, programs and policies

- Increase local capacity for pedestrian/bike project planning, implementation, and evaluation.
- Establish a set of performance measures to annually evaluate and report on the progress of active transportation network improvements and mode shift.
- In tandem with developing performance measure, create a “data dashboard” of key metrics and evaluate progress towards walk and bike mode goals and performance measure.

Encouragement

Creating a strong culture that welcomes and celebrate multimodal users

- Expand the landscape of encouragement events to offer new, and more frequent programming.
- Host targeted events and programs to engage underrepresented groups, such as women and seniors.
- Grow awareness of and participation in existing Transportation Demand Management Programs.

Enforcement

Ensuring safe roads for all users

- Revise crash reporting protocol to collect more robust data for crashes involving people walking or biking.
- Increase collaboration between local law enforcement agencies, emergency service providers, City departments, and local organizations.

Equity

Supporting safe, active, and healthy opportunities in underrepresented and vulnerable communities

- Expand education efforts and access to low income and minority communities
- Consider location equity in distributing walk/bike improvements across Avondale's neighborhoods.
- Safeguard against discriminatory enforcement.

5 IMPLEMENTATION PLAN

This section outlines a sequence to help appropriately and effectively implement the recommended active transportation infrastructure. Successfully implementing the Plan’s recommendations will help achieve the Avondale’s vision for a safe and accessible active transportation network. The implementation framework focuses on an equitable and systematic prioritization of projects to determine the Plan’s implementation over a timeframe that spans 20 years. The goal is to incrementally implement as many of the projects as possible while recognizing fiscal limitations and other municipal budgetary needs will influence the specific implementation of the many projects identified in this ATP.

PRIORITIZATION & IMPLEMENTATION TIMELINE

Project Prioritization Approach

Creating a prioritization framework assists in directing Avondale design efforts and funding considerations towards areas which are in the highest need, and likely to yield the highest return on investment in bicycling, walking, and using transit once facilities are installed or upgraded. These areas are prioritized based on factors such as safety, proximity to schools, neighborhoods, jobs, and cultural institutions as well as areas where bicycling, walking, and using transit may be the predominant mode of travel for socioeconomic reasons.

A prioritization model was developed to inform the intended implementation process. The prioritization tool was created to be dynamic and flexible by accommodating updates in the future as the recommendations are implemented and new needs arise. Through the application of quantitative and qualitative evaluation criteria, the results of the prioritized recommendations provide clear, pragmatic, and justifiable guidance on the order of which recommendations should be implemented.

During the creation of the prioritization model, five evaluation criteria were identified, and weights were assigned based on stakeholder inputs received. **Table 5-1** provides a description of each evaluation criteria and the corresponding weight.

Table 5-1: Evaluation Criteria & Weighting

Evaluation Criteria	Weight
Proximity & Connectivity: a project that fills a gap or connects to the network and is adjacent to key destinations.	20
Safety: a project that may improve the safety and potentially reduce pedestrian- or bicycle-related crashes	30
Comfort: a project creating a more comfortable experience for pedestrians and bicyclists by mitigating the negative effects of vehicular speed, traffic volume, and the number of potential conflicts.	20
Social Equity: a project providing access to or located within an underserved geography where bicycling, walking, and using transit may be the predominant mode of travel based on socioeconomic conditions.	15



Deliverability & Constructability: a project that is more likely to be implanted based on other factors such as roadway ownership, estimated cost, and previously recommended improvement from prior planning efforts.

15

The results of the prioritization process are not intended to preclude projects from receiving funding or from being incorporated into a new development or other roadway project. All recommended improvement projects have merit and should be implemented as timely and cost-effective opportunities arise regardless if they are initiated by Avondale or other government agency, a land owner or other entity.

Prioritization Sub-Criterion & Scoring

Four additional metrics (Sub-Criteria) were developed for each of previously mentioned evaluation criteria to score and rank the recommendations and projects. The evaluation criteria and sub-criteria resulted in an objective and equitable scoring system that measures each project. Both qualitative and quantitative metrics were used creating an intuitive and clear, data-driven format that meets the needs of the community and the objectives of this Plan.

The possible score for each sub-criterion is determined by the weight of the corresponding evaluation criterion. There are four sub-criteria with each evaluation criterion, and the possible scores of the metric are equal within the evaluation criteria. For example, if an evaluation criterion was assigned a weight of 20, each of the sub-criteria had a highest possible score of 5. Depending on the sub-criterion and the results of the evaluation, each sub-criterion scored a project under two or three scoring thresholds. The lowest possible score a project could receive for any sub-criterion is 1. And the sub-criterion with a three-tier scoring threshold used an intermediate score of half of the total possible points. Using the same example, if the total possible score for a sub-criterion is five, projects falling within the middle scoring threshold would receive 2.5 points.

Table 5-2 through Table 5-6 describe the project prioritization sub criteria scoring utilized. Ultimately, the sub criteria scores for each project are combined to generate an overall project score. A high priority project (a project with a higher overall score) provides the greatest benefit for the criteria identified. Avondale staff should regularly revisit the project list and reapply the prioritization methodology to help schedule short-term improvements.



Table 5-2: Proximity & Connectivity Evaluation/Scoring Framework

Proximity & Connectivity				
Fills a gap or connects to the network and adjacent to key destinations				
Weight	Sub-Criteria Description	Metric	Scoring Thresholds	
20	Project addresses infrastructure gaps or connects to the current system to create a continuous network.	Spatial overlay to determined connections to the existing/planned network.	5	Yes = 5
				No = 1
	Project connects people within City neighborhoods and/or across adjacent jurisdictions.	Spatial inventory of total connections.	5	7 to 12 = 5
				4 to 6 = 2.5
				0 to 3 = 1
	Project improves direct access to critical facilities such as schools and medical services.	Spatial inventory of the total number of critical facilities within 1/4 mile.	5	5 to 7 = 5
				2 to 4 = 2.5
				0 to 1 = 1
	Project improves access to transit stops and surrounding destinations.	Spatial inventory of bus stops located within 1/4 mile.	5	8 to 13 = 5
				2 to 7 = 2.5
				0 to 1 = 1

Table 5-3: Safety Evaluation/Scoring Framework

Safety				
May improve the safety and potentially reduce pedestrian- or bicycle-related crashes				
Weight	Sub-Criteria Description	Metric	Scoring Thresholds	
30	Project may address areas with a high number of pedestrian/bicycle related crashes.	Spatial inventory of pedestrian and or bicycle related crashes within 250 Ft.	7.5	7 to 17 = 7.5
				2 to 6 = 3.75
				0 to 1 = 1
	Project may address areas with a higher number of crashes resulting in serious injuries for bicyclists and pedestrians.	Spatial inventory of crashes within 250 ft that resulted in a bicyclist or pedestrian fatality or incapacitating injury.	7.5	2 to 3 = 7.5
				1 = 3.75
				0 = 1
	Project may address areas with a high number of all types of crashes.	Spatial inventory of all crash types and severity within 250 ft.	7.5	273 to 779 = 7.5
				80 to 272 = 3.75
				0 to 79 = 1
	Project has a high likelihood of reducing bicycle and pedestrian crashes.	The facility type has a positive Crash Reduction Factor (CRF) assigned by FHWA's Crash Modification Factors Clearinghouse.	7.5	Yes = 7.5
				No = 1



Table 5-4: Comfort Evaluation/Scoring Framework

Comfort				
Creates a more comfortable experience for pedestrians and bicyclists by mitigating the negative effects of vehicular speed, traffic volume, and the number of potential conflicts.				
Weight	Sub-Criteria Description	Metric	Scoring Thresholds	
20	Project provides increased comfort for bicyclists and pedestrians through new or improved infrastructure on roads with higher amount of traffic lanes.	Average number of vehicular traffic lanes adjacent to a project.	5	4.3 to 6 = 5
				2.1 to 4.2 = 2.5
				0 to 2 = 1
	Project provides increased comfort for bicyclists and pedestrians through new or improved infrastructure on roads with a higher posted speed limit.	Average speed limit on roads adjacent to a project.	5	31 to 50 = 5
				1 to 30 = 2.5
				0 = 1
	Project provides increased comfort for bicyclists and pedestrians through new or improved infrastructure on roads with a higher amounts of traffic volumes.	Average daily traffic volumes on roads adjacent to a project.	5	23,512 to 53,711 = 5
				9,859 to 23,511 = 2.5
				0 to 9,858 = 1
	Project provides increased comfort for bicyclists and pedestrians through new or improved infrastructure on roads with a higher frequency of conflict points (i.e. intersections, driveways, and railroad crossings).	Total number of potential conflict points within project limits.	5	9 to 19 = 5
				4 to 8 = 2.5
				0 to 3 = 1

Figure 5-1 shows examples of comfort for multimodal roadway users by facility type and condition.

Figure 5-1: Multimodal Roadway User Comfort Level Scale

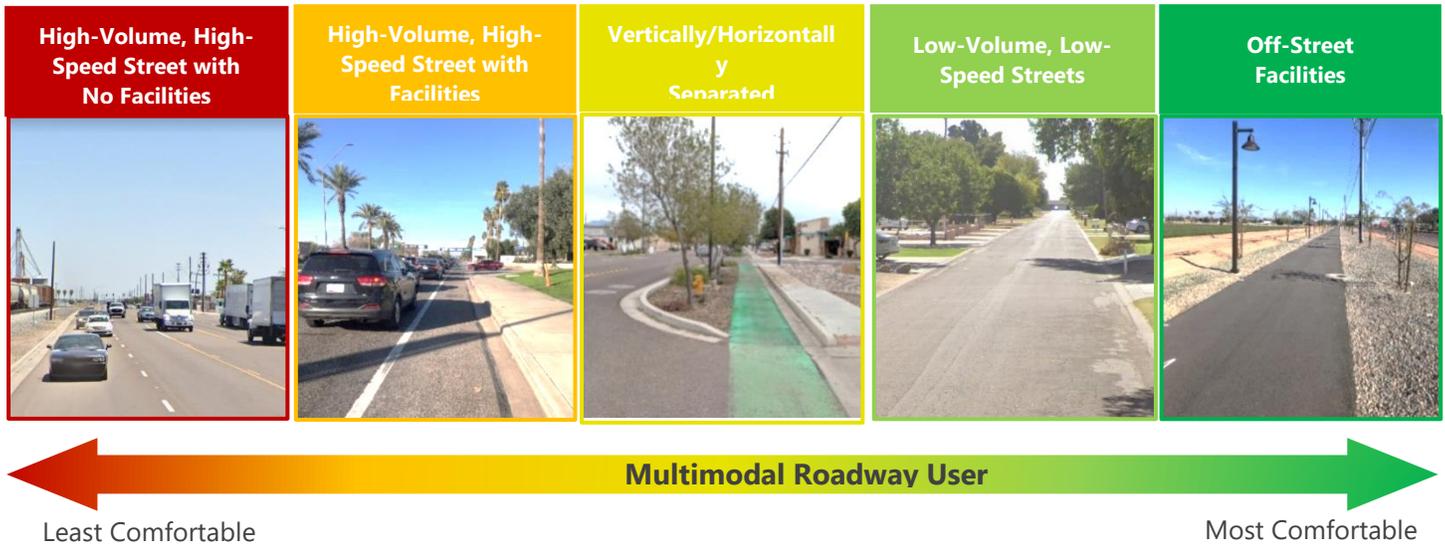


Table 5-5: Social Equity Evaluation/Scoring Framework

Social Equity				
<i>Provides access to underserved geography where bicycling, walking, and using transit may be the predominant mode of travel based on socioeconomic conditions.</i>				
Weight	Sub-Criteria Description	Metric	Scoring Thresholds	
15	Project serves an area with high number of low income and zero-car household populations.	Total number of people below the poverty level or without access to an automobile within 1/4 mile.	3.75	832 to 20,666 = 3.75
				307 to 831 = 1.875
				3 to 306 = 1
	Project serves an area with a high number of individuals with disabilities.	Total number of people with disabilities within 1/4 mile.	3.75	603 to 1,401 = 3.75
				235 to 602 = 1.875
				3 to 234 = 1
	Project serves an area with a disproportionate rate of vulnerable users (i.e. children, elderly, and minorities).	Total population of potential vulnerable roadway users within 1/4 mile.	3.75	5,607 to 9,613 = 3.75
				2294 to 5,606 = 1.875
18 to 2,293 = 1				
Project provides active transportation facilities in an area where residents more frequently commute by alternative modes of transportation.	The average percent of the population within 1/4 mile who commute to work by walking, biking, or taking public transportation.	3.75	6.68% to 21.66% = 3.75	
			2.27% to 6.67% = 1.875	
			0% to 2.26% = 1	

Table 5-6: Deliverability & Constructability Evaluation/Scoring Framework

Deliverability & Constructability				
Higher likelihood of implementation based on other factors such as roadway ownership, estimated cost, and previously recommended improvement from prior planning efforts.				
Weight	Sub-Criteria Description	Metric	Scoring Thresholds	
15	Project was previously recommended prior to this Plan.	Project is derived from a previous locally or regionally adopted plan or report - Yes or No.	3.75	Yes = 3.75
				No = 1
	Project cost estimate for construction.	The total planning-level cost estimate for construction relative to other projects.	3.75	\$3k to \$2.09M = 3.75
				\$2.09M to \$6.49M = 1.875
		\$6.49M to \$16.49M = 1		
	Projected maintenance cost.	Estimated level of ongoing maintenance based on the project type.	3.75	Low = 3.75
				Medium = 1.875
				High = 1
	Roadway ownership status.	Project is located on a roadway owned and maintained by the City.	3.75	Fully Owned = 3.75
				Partially Owned = 1.875
				No Owned = 1

Project Prioritization & Implementation

This section summarizes the project scores derived from the application of the evaluation criteria and the projects total score and rank. Refer to Appendix F for the full inventory of the results from the project prioritization model, which includes the detailed results of the inputs and outputs for each of the sub-criteria and the resulting score for each project. A total of 240 recommended active transportation projects were identified as part of this Plan. Each of the projects were scored through the previously mentioned evaluation criteria on a scale from 0 to 100. The highest ranked project received a score of 82 points while the lowest ranked project scored 35.63 points.

The projects identified in this Plan can each be considered segments of the full proposed network. Creating the vision for the proposed full network is a multi-year process; implementation of the full proposed network will be phased over the next 20 years and beyond, with the goal of more than doubling the miles of improved and interconnected on-street and off-street routes within the network over the next 20+ years. All 240 projects have been prioritized and divided into three different implementation timeframes based on the results of the evaluation criteria and project ranking. The three implementation timeframes include:

- Short-Term: 0-5 Years
- Mid-Term: 5-20 Years
- Long-Term 20+ Years



Projects considered high priority within the short-term period are proposed to be developed within the first five years after Plan adoption. It is highly recommended that at least eight projects be completed each year to meet this goal. Projects in the mid-term of the network development will build upon the connected network built within 20 years, while the projects within the long-term will further enhance the network towards complete beyond 20 years.

Planning-level Cost Estimates

The planning-level cost estimates generated as part of this Plan are presented in 2021 dollars. Site specific details of each project, such as utility impacts, detailed constructability issues, and environmental investigations, were not intended to be investigated under the scope of work for this Plan, but will be further evaluated in any future engineering design process. Unit costs

Table 5-7: Planning-level Cost Estimate Unit Costs

Facility Type	Cost	Unit
Bike lanes (both sides)	\$350,000	Per mile
New off-street paved path	2,000,000	Per mile
HAWK Crossing	\$180,000.00	Per crossing
Sidewalks (include C/G)	\$71	Per linear foot
Local road	\$3,200,000.00	Per mile
Bicycle wayfinding sign	\$1,685	Per sign
Design factor	10%	-
Contingency factor	30%	-

were developed here to reflect average conditions in the region. Improvements on some corridors are likely to be more expensive than estimated, while others are likely to be less expensive than estimated. That is to say, costs included herein will fluctuate when further defined in future engineering design processes but are of value here as a broad measure of anticipated project costs for comparative purposes in this Plan. The cost estimates do not include any potential right-of-way acquisition, also to be determined on individual projects' right-of-way needs during the future engineering design process as projects become implemented. However, the cost estimates are intended to include both design and contingency factors.

Cost estimates were determined using a four-step process, as follows:

1. Project identification;
2. Determine facility type of each project;
3. Identify unit costs for each accommodation type; and
4. Calculate cost estimate for each project as the product of the length and the unit cost.

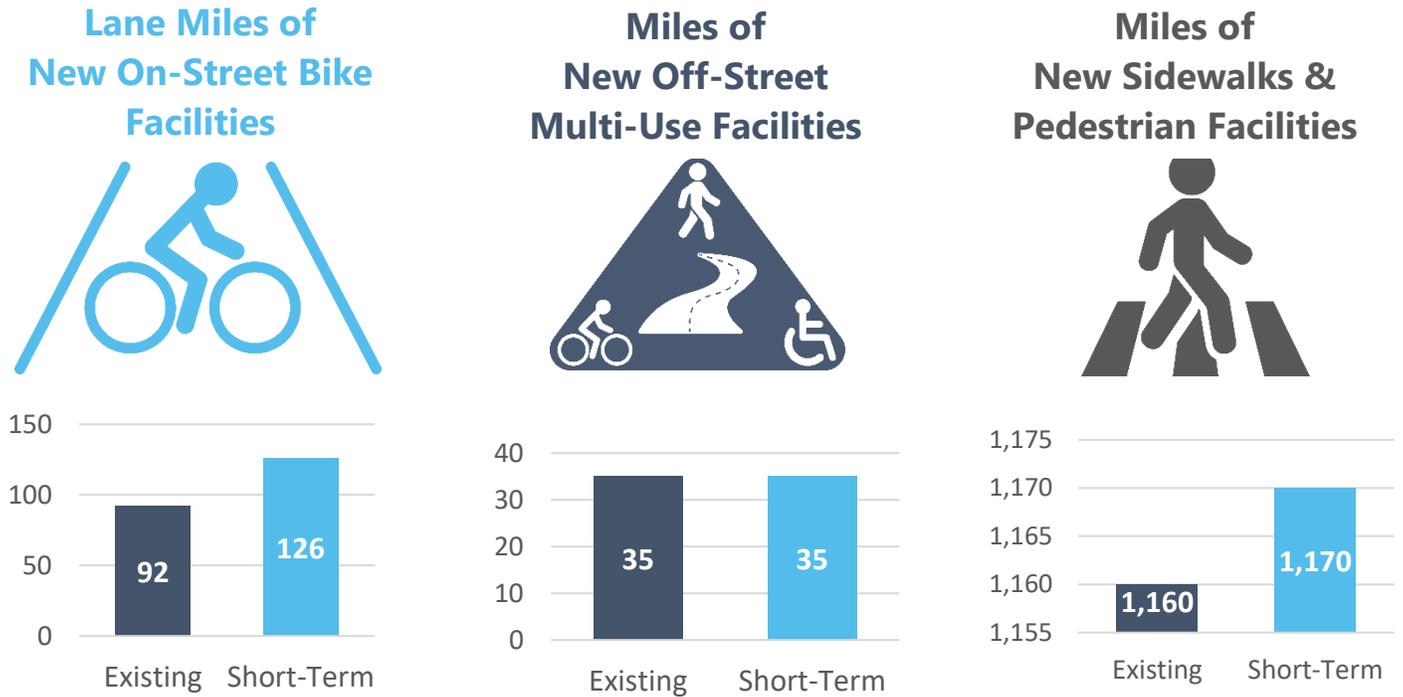
Short-Term Projects

Based on the results of the project prioritization process, a total of 40 projects are identified as a short-term priority. The short-term recommended projects include a variety of project facility types; however, this set of projects primarily includes the installation of new bike lanes to fill an existing gap in the on-street network (19 of the 40 projects). Other projects include bicycle signage, wayfinding signage and applications, and sidewalk infill projects.

The short-term priority projects are estimated to cost approximately \$16.2 million to collectively implement. These projects would result in roughly 34 lane-miles of new on-street bike facilities, 10 miles of new sidewalks, a roadway improvement project, and a series of directional and wayfinding signage originally recommended by the Avondale Wayfinding Plan. **Figure 5-2** illustrates the impact of the short-term projects on the active transportation network by showing the increase of miles of new on-street bike, off-street multi-use, and pedestrian facilities.

Refer to **Figure 5-3** for a map of all 40 short-term projects and **Table 5-8** for a complete inventory of recommended short-term projects, which includes the project ID, location, cost estimate, and evaluation criteria and project prioritization results.

Figure 5-2: Short-Term Projects Infographic



Planning-Level
Cost Estimate of
Short-Term
Projects

\$16.2
Million

Figure 5-3: Map of Short-Term Projects (0-5 years)

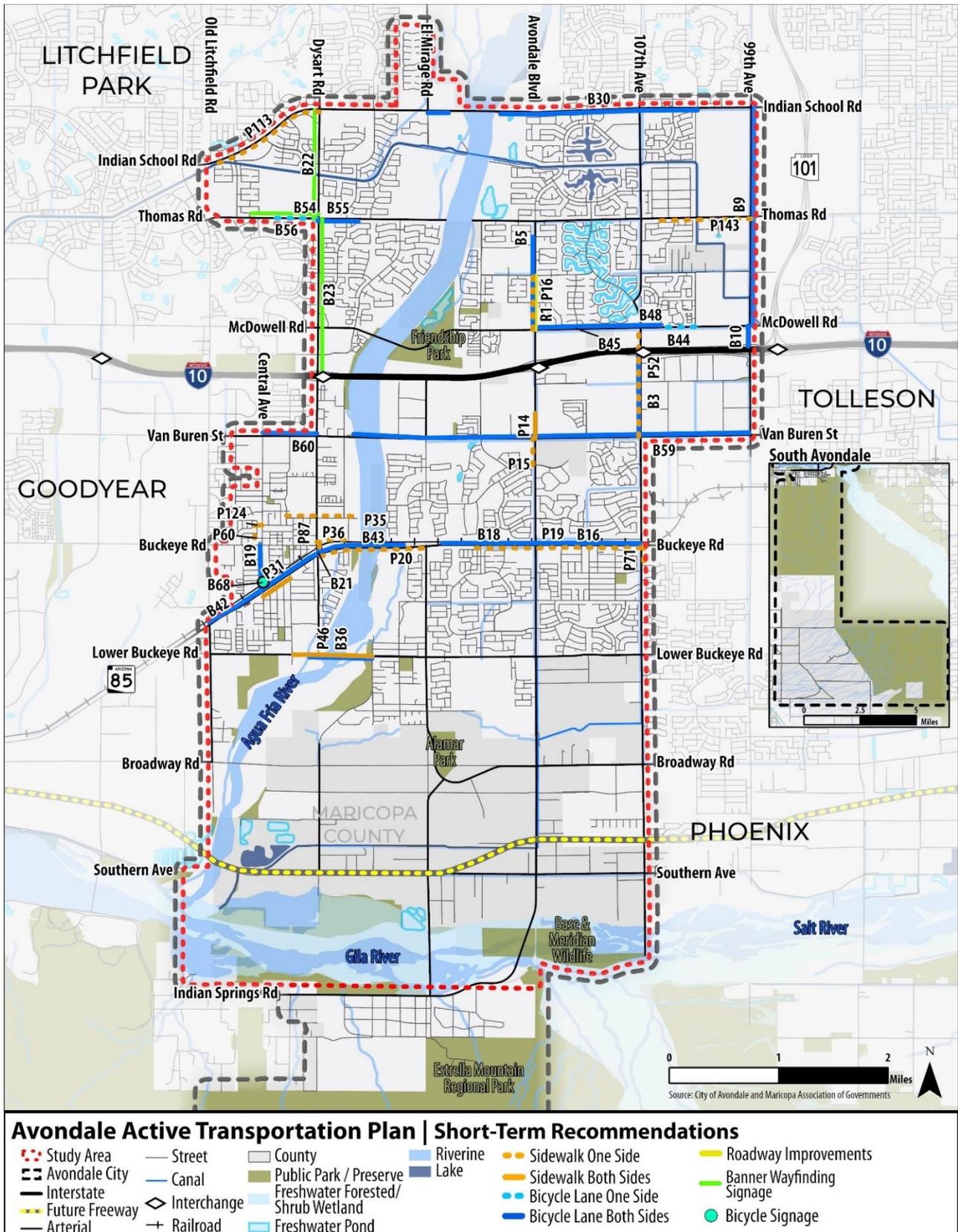


Table 5-8: Short-Term Projects Inventory

ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
B23	Dysart Rd	Banner Wayfinding Signage	1.39	Thomas Rd to I-10	\$53,000	12	30	17.5	7.5	15	82.00	1
B30	Indian School Rd	Bicycle Lane Both Sides	1.99	El Mirage Rd to 103rd Ave	\$1,092,000	20	23.5	15	6.625	10.375	75.50	2
B22	Dysart Rd	Banner Wayfinding Signage	1.00	Indian School Rd to Thomas Rd	\$53,000	11	26.25	15	6.625	15	73.88	3
B43	Main St/Buckeye Rd	Bicycle Lane Both Sides	1.69	Hummingbird 2 MPH to 1000 ft West El Mirage Rd	\$924,000	13.5	19.75	15	13.125	11.25	72.63	4
B60	Van Buren St	Bicycle Lane Both Sides	0.49	Central Ave to Dysart Rd	\$271,000	12	30	12.5	7.5	10.375	72.38	5
B16	Buckeye Rd	Bicycle Lane Both Sides	0.96	Avondale Blvd to 107th Ave	\$526,000	13.5	18.75	12.5	10.375	13.125	68.25	6
P19	Buckeye Rd	Sidewalk One Side	1.53	119th Ln to 107th Ave	\$894,000	13.5	18.75	12.5	10.375	10.375	65.50	7
P124	W Madden Dr	Sidewalk Both Sides	0.05	1st Ave to Central Ave	\$57,000	12.5	19.75	5.5	15	12.25	65.00	8
B21	Dysart Rd	Bicycle Lane Both Sides	0.11	Western Ave to Buckeye Rd	\$59,000	9.5	18.75	8.5	15	13.125	64.88	9
B59	Van Buren St	Bicycle Lane Both Sides	3.62	Agua Fria River West to 99th Ave	\$1,981,000	17.5	16	13.5	7.5	10.375	64.88	10
B19	Central Ave	Bicycle Lane Both Sides	0.42	Western Ave to Main St	\$232,000	15	10.5	11	15	13.125	64.63	11
P87	S 8th St	Sidewalk One Side	0.10	Western Ave to Buckeye Rd	\$60,000	9.5	18.75	8.5	15	12.25	64.00	12
B10	99th Ave	Bicycle Lane Both Sides	0.19	McDowell Rd to I-10	\$102,000	9.5	18.75	16	6.625	13.125	64.00	13
P113	W Indian School Rd	Sidewalk One Side	1.13	Litchfield Park to Dysart Rd	\$663,000	11	22.5	12.5	5.75	12.25	64.00	14
P52	N 107th Ave	Sidewalk One Side	1.00	McDowell Rd to Van Buren St	\$586,000	12.5	19.75	12.5	6.625	12.25	63.63	15
B5	115th Ave	Bicycle Lane Both Sides	0.84	Roanoke Dr to McDowell Rd	\$460,000	15	18.75	11	7.5	10.375	62.63	16
B9	99th Ave	Bicycle Lane Both Sides	2.00	Indian School Rd to McDowell Rd	\$1,095,000	9.5	22.5	12.5	6.625	11.25	62.38	17
B54	Thomas Rd	Bicycle Lane One Side	0.38	Estrella Mountain CC to Dysart Rd	\$104,000	15	16	11	6.625	13.125	61.75	18
P46	Lower Buckeye Rd	Sidewalk Both Sides	0.72	4th St to 127th Ave	\$845,000	13.5	19.75	9.5	6.625	12.25	61.63	19
B44	McDowell Rd	Bicycle Lane One Side	0.31	Harbor Shores Blvd to 103rd Ave	\$85,000	9.5	16	16	6.625	13.125	61.25	20
B56	Thomas Rd	Banner Wayfinding Signage	0.62	136th Ave to Dysart Rd	\$53,000	11	16	12.5	6.625	15	61.13	21
P16	Avondale Blvd	Sidewalk One Side	0.49	Encanto Blvd to McDowell Rd	\$290,000	12.5	18.75	9.5	7.5	12.25	60.50	22
B36	Lower Buckeye Rd	Bicycle Lane Both Sides	0.57	Agua Fria River West to Agua Fria River East	\$314,000	13.5	19.75	9.5	6.625	10.375	59.75	23
B45	McDowell Rd	Bicycle Lane Both Sides	0.48	Avondale Blvd to 515 ft East 112th Ave	\$264,000	9.5	13.25	16	7.5	13.125	59.38	24
R1	Avondale Blvd	Roadway Improvements	0.49	Encanto Blvd to McDowell Rd	\$875,000	11	18.75	9.5	7.5	12.25	59.00	25
B55	Thomas Rd	Bicycle Lane Both Sides	0.37	Dysart Rd to 560 ft East Santa Fe Trl	\$204,000	12.5	18.75	8	6.625	13.125	59.00	26
B48	McDowell Rd	Bicycle Lane Both Sides	0.67	112th Ave to Harbor Shores Blvd	\$367,000	12.5	13.25	16	6.625	10.375	58.75	27
P31	E Brooke Pl	Sidewalk Both Sides	0.30	Central Ave to 4th St	\$348,000	11	13.25	7	15	12.25	58.50	28
P143	W Thomas Rd	Sidewalk One Side	0.91	106th Ave to 99th Ave	\$533,000	12	13.25	13.5	7.5	12.25	58.50	29
P20	Buckeye Rd	Sidewalk One Side	0.97	Dysart Rd to El Mirage Rd	\$569,000	12	16	12.5	7.5	10.375	58.38	30
P60	N 1st Ave	Sidewalk One Side	0.12	Madden Drive to Hill Drive	\$69,000	15	10.5	5.5	15	12.25	58.25	31
B68	Central Ave	Bicycle Signage	0	Central Ave and Main St SB	\$3,000	8	10.5	9.5	15	15	58.00	32
P35	E Riley Dr	Sidewalk One Side	0.65	4th St to 420 ft East Eliseo C Felix Jr Way	\$380,000	11	19.75	7	7.5	12.25	57.50	33
P71	S 107th	Sidewalk One Side	0.15	350 north Buckeye Rd to 2nd St	\$88,000	11	10.5	11	12.25	12.25	57.00	34
B18	Buckeye Rd	Bicycle Lane Both Sides	0.86	121st Ln to Avondale Blvd	\$468,000	13.5	16	11	8.5	7.625	56.63	35
B3	107th Ave	Bicycle Lane Both Sides	0.81	I-10 to Van Buren St	\$443,000	11	16	12.5	6.625	10.375	56.50	36
P36	E Western Ave	Sidewalk One Side	0.29	Dysart Rd to Eliseo C Felix Jr Way	\$172,000	9.5	16	5.5	13.125	12.25	56.38	37
B42	Main St	Bicycle Lane Both Sides	0.28	Litchfield Rd to Hummingbird 2 MPH	\$152,000	8	10.5	9.5	15	13.125	56.13	38



ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
P14	Avondale Blvd	Sidewalk Both Sides	0.23	City Center Dr to Van Buren St	\$269,000	8	13.25	16	6.625	12.25	56.13	39
P15	Avondale Blvd	Sidewalk One Side	0.24	Van Buren St to Coldwater Springs Blvd	\$143,000	8	13.25	16	6.625	12.25	56.13	40



Mid-Term Projects

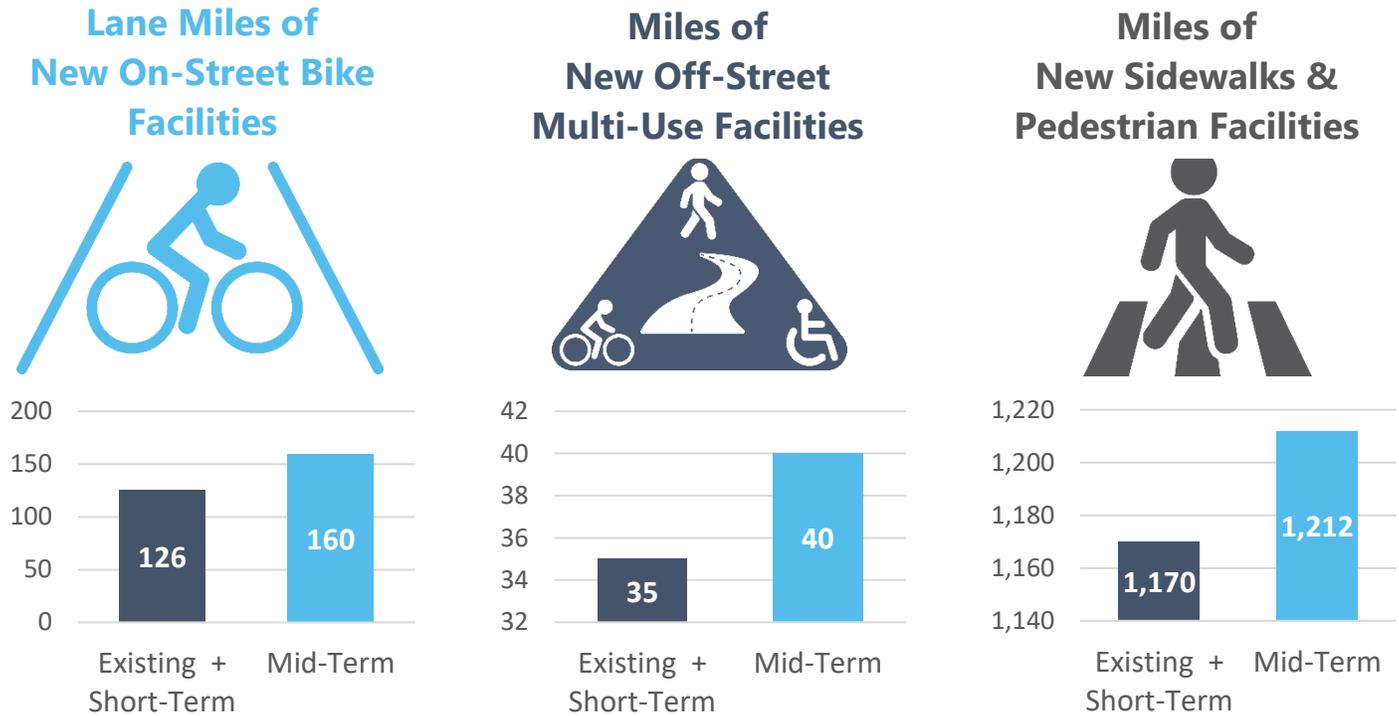
There are 104 projects (beginning with the 41st ranked project) that are recommended to be implemented within the mid-term or intermediate planning horizon – 5 to 20 years. The mid-term recommended projects include a variety of project facility types; however, this set of projects primarily includes the installation of new sidewalks to fill an existing gap (66 of the 104 projects). The mid-term projects also include 25 on-street bike facility projects, two off-street multi-use facility projects, and one mid-block crossing.

The mid-term projects are collectively estimated to cost approximately \$50.5 million to implement, which would result in roughly 19 lane-miles of new on-street bike facilities, 42 miles of new sidewalks, and five miles of new multi-use paths.

Figure 5-4 illustrates the impact of the mid-term projects (including the short-term projects) on the active transportation network by showcasing the increase of miles of new on-street bike, off-street multi-use, and pedestrian facilities.

Refer to **Figure 5-5** for a map of all 104 mid-term projects and **Table 5-9** for a complete inventory of mid-term projects, which includes the project ID, location, cost estimate, and evaluation criteria and project prioritization results.

Figure 5-4: Mid-Term Projects Infographic



Planning-Level
Cost Estimate of
Mid-Term
Projects

\$50.5
Million

Figure 5-5: Map of Mid-Term Projects (5-20 years)

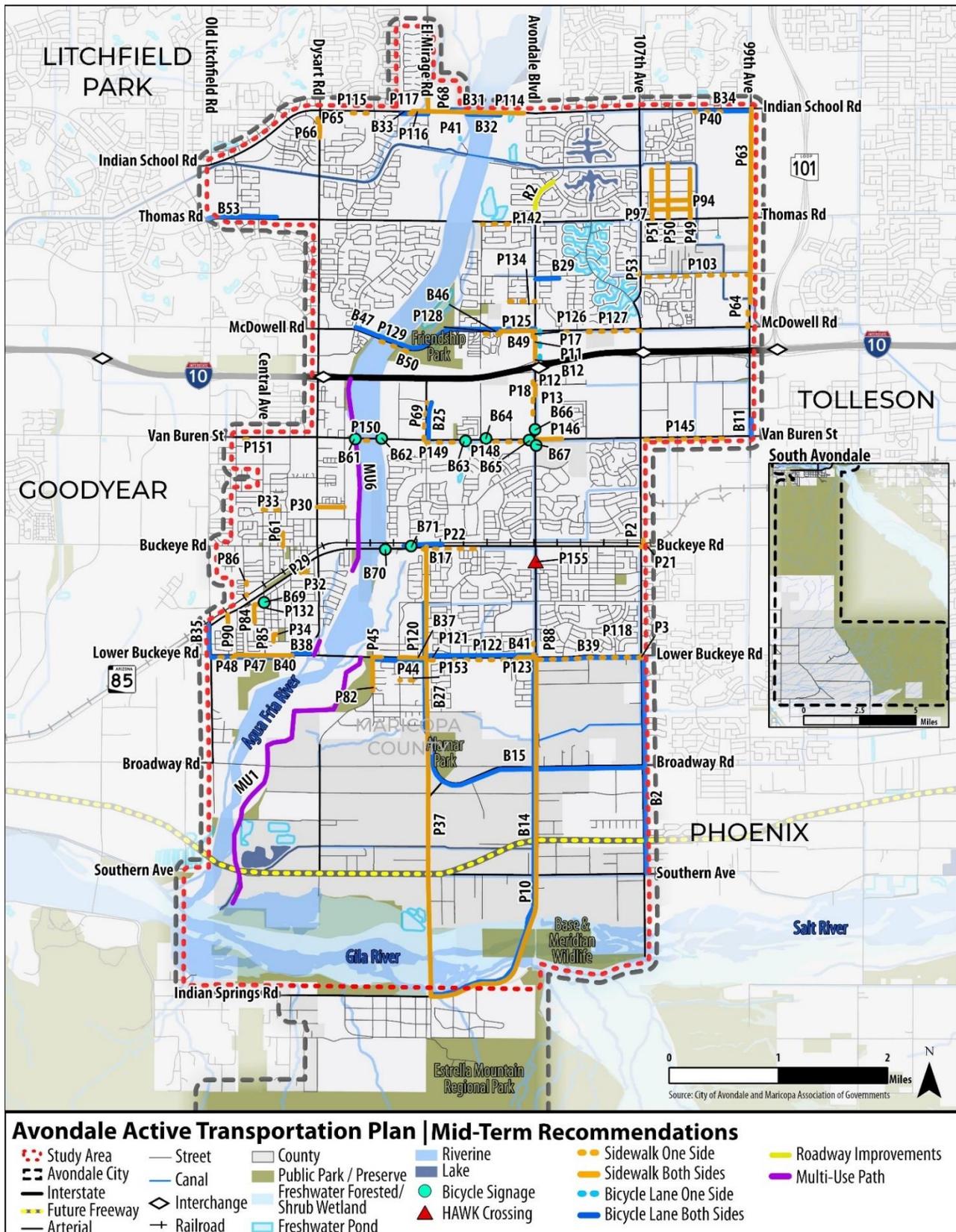


Table 5-9: Mid-Term Projects Inventory

ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
P61	N 3rd St	Sidewalk Both Sides	0.13	Kinderman Dr to Hill Dr	\$148,000	12.5	10.5	5.5	15	12.25	55.75	41
P126	W McDowell Rd	Sidewalk One Side	0.08	113th Dr to 113th Ave	\$47,000	9.5	10.5	16	7.5	12.25	55.75	42
B47	McDowell Rd	Bicycle Ln Both Sides	0.20	Rancho Santa Fe to Agua Fria River	\$107,000	11	10.5	13.5	7.5	13.125	55.63	43
P127	W McDowell Rd	Sidewalk One Side	0.50	415 ft East 112th Ave to 107th Ave	\$295,000	12.5	13.25	11	6.625	12.25	55.63	44
P21	Buckeye Rd	Sidewalk Both Sides	0.06	107th Ave to 320 ft East 107th	\$71,000	9.5	10.5	11	12.25	12.25	55.50	45
P64	N 99th Ave	Sidewalk One Side	0.22	Palm Ln to McDowell Rd	\$131,000	9.5	18.75	11	6.625	9.5	55.38	46
P12	Avondale Blvd	Sidewalk One Side	0.10	I-10 to Roosevelt St	\$60,000	8	13.25	16	5.75	12.25	55.25	47
B61	Van Buren St	Bicycle Signage	0	Van Buren St and Agua Fria River EB	\$3,000	11	10.5	11	7.5	15	55.00	48
B11	99th Ave	Bicycle Ln Both Sides	0.16	820 ft North Van Buren St to Van Buren St	\$85,000	11	10.5	16	4	13.125	54.63	49
P29	E Agua Fria Ln	Sidewalk One Side	0.08	Corral St to Dead End	\$47,000	11	10.5	5.5	15	12.25	54.25	50
P32	E Corral St	Sidewalk One Side	0.10	Corral St to 7th St	\$61,000	11	10.5	5.5	15	12.25	54.25	51
P2	107th Ave	Sidewalk One Side	0.07	350 ft north Buckeye Rd to Buckeye Rd	\$39,000	9.5	10.5	9.5	12.25	12.25	54.00	52
P155	Avondale Blvd	HAWK Crossing	0	Avondale and Littleton Elementary	\$282,000	7	10.5	11	10.375	15	53.88	53
B14	Avondale Blvd	Bicycle Ln Both Sides	3.74	Lower Buckeye Rd to Southern Ave	\$2,046,000	11	16	13.5	4.875	8.5	53.88	54
P10	Avondale Blvd	Sidewalk Both Sides	3.73	Lower Buckeye Rd to El Mirage Rd	\$4,379,000	11	16	13.5	4.875	8.5	53.88	55
P125	W McDowell Rd	Sidewalk Both Sides	0.32	117th Ave to Avondale Blvd	\$375,000	9.5	13.25	11	7.5	12.25	53.50	56
P129	W McDowell Rd	Sidewalk One Side	0.34	Agua Fria River West to Agua Fria River East	\$200,000	9.5	10.5	13.5	7.5	12.25	53.25	57
B41	Lower Buckeye Rd	Bicycle Ln Both Sides	1.01	El Mirage Rd to Avondale Blvd	\$551,000	13.5	13.25	11	4.875	10.375	53.00	58
B53	Thomas Rd	Bicycle Ln Both Sides	0.63	Litchfield Rd to Estrella Mountain CC	\$345,000	11	10.5	12.5	5.75	13.125	52.88	59
P84	S 1st Ave	Sidewalk Both Sides	0.16	Overlin Ln to Whyman Ave	\$189,000	9.5	10.5	5.5	15	12.25	52.75	60
P65	N Dysart Rd	Sidewalk One Side	0.10	Indian School Rd to 500 ft south of Dysart Rd	\$58,000	8	13.25	13.5	5.75	12.25	52.75	61
B63	Van Buren St	Bicycle Signage	0	Van Buren St and 120th Ave EB	\$3,000	9.5	10.5	11	6.625	15	52.63	62
B64	Van Buren St	Bicycle Signage	0	Van Buren St and 120th Ave WB	\$3,000	9.5	10.5	11	6.625	15	52.63	63
B39	Lower Buckeye Rd	Bicycle Ln Both Sides	0.97	Avondale Blvd to 107th Ave	\$530,000	11	13.25	9.5	5.75	13.125	52.63	64
P148	W Van Buren St	Sidewalk One Side	0.50	119th Ave to Avondale Blvd	\$294,000	9.5	13.25	11	6.625	12.25	52.63	65
P149	W Van Buren St	Sidewalk One Side	0.25	Fairway Dr to 120th Ln	\$147,000	9.5	13.25	11	6.625	12.25	52.63	66
P13	Avondale Blvd	Sidewalk One Side	0.17	515 ft south Roosevelt St to City Center Dr	\$103,000	8	10.5	16	5.75	12.25	52.50	67
P18	Avondale Blvd	Sidewalk Both Sides	0.10	Roosevelt St to 515 ft south Roosevelt St	\$115,000	8	10.5	16	5.75	12.25	52.50	68
P150	W Van Buren St	Sidewalk One Side	0.27	Agua Fria River West to Agua Fria River East	\$161,000	11	10.5	11	7.5	12.25	52.25	69
B66	Avondale Blvd	Bicycle Signage	0	Avondale Blvd and Van Buren St SB	\$3,000	4	10.5	16	6.625	15	52.13	70
B67	Avondale Blvd	Bicycle Signage	0	Avondale Blvd and Van Buren St NB	\$3,000	4	10.5	16	6.625	15	52.13	71
P37	S el Mirage Rd	Sidewalk Both Sides	4.12	Buckeye Rd to Indian Springs Rd	\$4,836,000	13.5	13.25	12	4.875	8.5	52.13	72
B62	Van Buren St	Bicycle Signage	0	Van Buren St and Agua Fria River WB	\$3,000	8	10.5	11	7.5	15	52.00	73
P118	W Lower Buckeye Rd	Sidewalk One Side	0.97	Avondale Blvd to 107th Ave	\$567,000	11	13.25	9.5	5.75	12.25	51.75	74
B49	McDowell Rd	Bicycle Ln Both Sides	0.31	117th Ave to Avondale Blvd	\$172,000	9.5	13.25	11	7.5	10.375	51.63	75
P40	Indian School Rd	Sidewalk One Side	0.24	100th Ave to 103rd Ave	\$142,000	9.5	10.5	13.5	5.75	12.25	51.50	76
P41	Indian School Rd	Sidewalk Both Sides	0.07	El Mirage Rd to El Mirage Rd to East .07 miles	\$86,000	11	10.5	11	6.625	12.25	51.38	77
B50	McDowell Rd	Bicycle Ln Both Sides	1.04	Agua Fria River West to 119th Ave	\$567,000	9.5	10.5	13.5	7.5	10.375	51.38	78
P117	W Indian School Rd	Sidewalk Both Sides	0.14	745 ft West El Mirage Rd to El Mirage Rd	\$166,000	11	10.5	11	6.625	12.25	51.38	79
P86	S 3rd Ave	Sidewalk One Side	0.13	Rhodes Ave to Dead End	\$75,000	8	10.5	5.5	15	12.25	51.25	80
P90	S Greenleaf Ln	Sidewalk Both Sides	0.08	Main St to Dead End	\$94,000	8	10.5	5.5	15	12.25	51.25	81
P132	W Overlin Ln	Sidewalk Both Sides	0.09	1st Ave to Central Ave	\$106,000	8	10.5	5.5	15	12.25	51.25	82



ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
B27	El Mirage Rd	Bicycle Ln Both Sides	1.65	Durango St to Broadway Rd	\$906,000	13.5	10.5	12	4.875	10.375	51.25	83
B65	Van Buren St	Bicycle Signage	0	Van Buren St and Avondale Blvd EB	\$3,000	8	10.5	11	6.625	15	51.13	84
B12	Avondale Blvd	Bicycle Ln One Side	0.28	McDowell Rd to I-10	\$76,000	9.5	13.25	9.5	5.75	13.125	51.13	85
P146	W Van Buren St	Sidewalk Both Sides	0.24	Avondale Blvd to 1/4 mile west 111th Ave	\$285,000	9.5	13.25	9.5	6.625	12.25	51.13	86
B46	McDowell Rd	Bicycle Ln Both Sides	0.19	119th Ave to 117th Ave	\$103,000	9.5	10.5	11	6.625	13.125	50.75	87
P63	N 99th Ave	Sidewalk Both Sides	1.78	Indian School Rd to Palm Ln	\$2,086,000	9.5	13.25	11	6.625	10.375	50.75	88
P151	W Van Buren St	Sidewalk One Side	0.10	137th Ave to 535 ft east of 137th Ave	\$60,000	11	10.5	9.5	7.5	12.25	50.75	89
P121	W Lower Buckeye Rd	Sidewalk One Side	0.07	El Mirage Rd to 460 ft East El Mirage Rd	\$40,000	11	10.5	12	4.875	12.25	50.63	90
B35	Litchfield Rd	Bicycle Ln Both Sides	0.28	Main St to Lower Buckeye Rd	\$151,000	8	10.5	9.5	9.375	13.125	50.50	91
P11	Avondale Blvd	Sidewalk Both Sides	0.22	290 ft south McDowell Rd to I-10	\$254,000	9.5	13.25	9.5	5.75	12.25	50.25	92
MU1	Agua Fria River East	Multi-Use Path	2.97	Lower Buckeye Rd to Gila River	\$9,298,000	9.5	19.75	4	6.625	10.375	50.25	93
B69	Central Ave	Bicycle Signage	0	Central Ave and Harrison Dr NB	\$3,000	4	10.5	5.5	15	15	50.00	94
P66	N Dysart Rd	Sidewalk Both Sides	0.15	500 ft south of Dysart Rd to Fairmount Ave	\$172,000	8	10.5	13.5	5.75	12.25	50.00	95
P22	Buckeye Rd North	Sidewalk One Side	0.47	West of El Mirage Rd to West of 119th Ave	\$278,000	9.5	10.5	11	6.625	12.25	49.88	96
B71	Buckeye Rd	Bicycle Signage	0	Buckeye Rd and Agua Fria River WB	\$3,000	9.5	10.5	11	6.625	12.25	49.88	97
P53	N 107th Ave	Sidewalk One Side	0.10	320 ft North Encanto Blvd to Encanto Blvd	\$60,000	11	10.5	9.5	6.625	12.25	49.88	98
P116	W Indian School Rd	Sidewalk One Side	0.11	125th Dr to 745 ft West El Mirage Rd	\$63,000	9.5	10.5	11	6.625	12.25	49.88	99
P128	W McDowell Rd	Sidewalk One Side	0.18	119th Ave to 117th Ave	\$106,000	9.5	10.5	11	6.625	12.25	49.88	100
MU6	Agua Fria River West	Multi-Use Path	1.92	I-10 to Lower Buckeye Rd	\$6,001,000	15	10.5	5.5	7.5	11.25	49.75	101
P48	Lower Buckeye Rd	Sidewalk One Side	0.21	Litchfield Rd to 300 ft East of 5th Ave	\$125,000	9.5	10.5	8	9.375	12.25	49.63	102
B33	Indian School Rd	Bicycle Ln Both Sides	0.25	124th Ave to El Mirage Rd	\$136,000	11	10.5	11	6.625	10.375	49.50	103
B70	Buckeye Rd	Bicycle Signage	0	Buckeye Rd and Agua Fria River EB	\$3,000	8	10.5	11	7.5	12.25	49.25	104
P33	E Ludlow Dr	Sidewalk One Side	0.17	Central Ave to 3rd St	\$98,000	13.5	10.5	5.5	7.5	12.25	49.25	105
P3	107th Ave	Sidewalk Both Sides	0.02	Lower Buckeye Rd to 125 ft south Lower Buckeye Rd	\$28,000	8	10.5	8	10.375	12.25	49.13	106
P44	Lower Buckeye Rd	Sidewalk Both Sides	0.03	125th Ave to 125th Ave East .01 miles	\$39,000	13.5	10.5	8	4.875	12.25	49.13	107
B32	Indian School Rd	Bicycle Ln Both Sides	0.31	Agua Fria River West to Agua Fria River East	\$167,000	8	10.5	13.5	6.625	10.375	49.00	108
P115	W Indian School Rd	Sidewalk One Side	0.29	700 ft east Dysart Rd to 320 ft east Santa Fe Trl	\$170,000	9.5	10.5	11	5.75	12.25	49.00	109
B37	Lower Buckeye Rd	Bicycle Ln Both Sides	0.49	127th Ave to El Mirage Rd	\$270,000	13.5	10.5	9.5	4.875	10.375	48.75	110
P34	E Park Dr	Sidewalk Both Sides	0.05	1st St to 2nd St	\$53,000	11	10.5	5.5	9.375	12.25	48.63	111
P85	S 1st St	Sidewalk Both Sides	0.06	Park Dr to Elm Ln	\$74,000	11	10.5	5.5	9.375	12.25	48.63	112
P47	Lower Buckeye Rd	Sidewalk Both Sides	0.52	300 ft East of 5th Ave to 4th St	\$615,000	11	10.5	8	6.625	12.25	48.38	113
P68	N El Mirage Rd	Sidewalk Both Sides	0.16	825 ft north Indian School Rd to Indian School Rd	\$183,000	11	10.5	8	6.625	12.25	48.38	114
P51	N 106th Ave	Sidewalk Both Sides	0.46	Mulberry Dr to Thomas Rd	\$538,000	11	10.5	7	7.5	12.25	48.25	115
B2	107th Ave	Bicycle Ln Both Sides	1.99	Lower Buckeye Rd to Southern Ave	\$1,090,000	9.5	10.5	12	5.75	10.375	48.13	116
B17	Buckeye Rd	Bicycle Ln Both Sides	0.35	1000 ft West El Mirage Rd to 760 ft East El Mirage Rd	\$192,000	9.5	10.5	11	6.625	10.375	48.00	117
B31	Indian School Rd	Bicycle Ln Both Sides	0.17	1000 ft East El Mirage Rd to Agua Fria River Bridge	\$92,000	9.5	10.5	11	6.625	10.375	48.00	118
B38	Lower Buckeye Rd	Bicycle Ln Both Sides	0.16	4th St to Agua Fria River West	\$85,000	11	10.5	9.5	6.625	10.375	48.00	119
B40	Lower Buckeye Rd	Bicycle Ln Both Sides	0.75	Litchfield Rd to 4th St	\$409,000	11	10.5	9.5	6.625	10.375	48.00	120
P134	W Palm Ln	Sidewalk One Side	0.25	116th Ln to Avondale Blvd	\$145,000	9.5	16	5.5	7.5	9.5	48.00	121
B25	El Mirage Rd	Bicycle Ln Both Sides	0.36	Garfield St to Van Buren St	\$195,000	9.5	13.25	5.5	6.625	13.125	48.00	122
R2	Garden Lakes Parkway	Improvements Phase 1	0.44	Thomas Rd to Lakeshore Dr	\$900,000	8	13.25	7	7.5	12.25	48.00	123
P30	E Brinker Dr	Sidewalk Both Sides	0.25	Dysart Rd to Eliseo C. Felix Jr Way	\$292,000	12	10.5	5.5	7.5	12.25	47.75	124
P17	Avondale Blvd	Sidewalk One Side	0.06	McDowell Rd to 290 ft south McDowell Rd	\$32,000	9.5	10.5	9.5	5.75	12.25	47.50	125



ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
P88	S Avondale Blvd	Sidewalk One Side	0.13	Rio Vista Ln to Lower Buckeye Rd	\$76,000	9.5	10.5	9.5	5.75	12.25	47.50	126
P122	W Lower Buckeye Rd	Sidewalk One Side	0.59	121st Dr to 116th Ave	\$345,000	9.5	10.5	9.5	5.75	12.25	47.50	127
P123	W Lower Buckeye Rd	Sidewalk Both Sides	0.17	116th Ave to Avondale Blvd	\$194,000	9.5	10.5	9.5	5.75	12.25	47.50	128
P103	W Encanto Blvd	Sidewalk One Side	1.01	107th Ave to 99th Ave	\$595,000	11	10.5	7	6.625	12.25	47.38	129
B15	Broadway Rd	Bicycle Ln Both Sides	1.85	El Mirage Rd to 107th Ave	\$1,013,000	9.5	13.25	12	4	8.5	47.25	130
P145	W Van Buren St	Sidewalk One Side	0.75	107th Ave to 101st Ave	\$442,000	9.5	10.5	11	4	12.25	47.25	131
P114	W Indian School Rd	Sidewalk Both Sides	0.81	380 ft East El Mirage Rd to Copenhagen Dr	\$947,000	9.5	10.5	11	6.625	9.5	47.13	132
P69	N El Mirage Rd	Sidewalk One Side	0.34	Garfield St to Van Buren St	\$201,000	9.5	13.25	5.5	6.625	12.25	47.13	133
B34	Indian School Rd	Bicycle Ln Both Sides	0.50	103rd Ave to 99th Ave	\$271,000	9.5	10.5	13.5	5.75	7.625	46.88	134
P142	W Thomas Rd	Sidewalk One Side	0.24	119th Ave to 116th Ave	\$141,000	9.5	10.5	8	6.625	12.25	46.88	135
P49	N 103rd Ave	Sidewalk Both Sides	0.46	Mulberry Dr to Thomas Rd	\$535,000	9.5	10.5	7	7.5	12.25	46.75	136
P50	N 105th Ave	Sidewalk Both Sides	0.50	Mulberry Dr to Thomas Rd	\$590,000	9.5	10.5	7	7.5	12.25	46.75	137
P94	W Avalon Dr	Sidewalk Both Sides	0.35	106th Ave to 103rd Ave	\$412,000	11	10.5	5.5	7.5	12.25	46.75	138
P97	W Catalina Dr	Sidewalk Both Sides	0.35	106th Ave to 103rd Ave	\$411,000	11	10.5	5.5	7.5	12.25	46.75	139
P45	Lower Buckeye Rd	Sidewalk Both Sides	0.08	127th Ave to 127th Ave East .07 miles	\$98,000	11	10.5	8	4.875	12.25	46.63	140
P82	S 127th Ave	Sidewalk Both Sides	0.31	Lower Buckeye Rd to Superior Ave	\$363,000	9.5	10.5	9.5	4.875	12.25	46.63	141
P153	W Whyman St	Sidewalk One Side	0.12	125th Ave to 124th Ave	\$72,000	13.5	10.5	5.5	4.875	12.25	46.63	142
B29	Encanto Blvd	Bicycle Ln Both Sides	0.22	115th Ave to 112th Ln	\$119,000	13.5	10.5	5.5	6.625	10.375	46.50	143
P120	W Lower Buckeye Rd	Sidewalk Both Sides	0.21	175 ft East 125th Ave to El Mirage Rd	\$249,000	13.5	10.5	8	4.875	9.5	46.38	144



Long-Term Projects

There are 96 projects that are recommended to be implemented within the long-term planning horizon – after 20 years and beyond. The long-term recommended projects include a variety of project facility types; however, this set of projects primarily includes (72 of the 96 projects) the installation of new sidewalks to fill an existing gap. The long-term project set also includes 13 on-street bike facility projects, nine off-street multi-use facility projects, one wayfinding project, and one roadway extension project.

The long-term projects are estimated to cost approximately \$86.6 million to implement, which would result in roughly 23 lane-miles of new on-street bike facilities, 41 miles of new sidewalks, 18 miles of off-street multi-use/trail facilities, two miles wayfinding applications, and one roadway extension project.

Figure 5-6 illustrates the impact of the long-term projects (plus the short- and mid-term projects) on the active transportation network by showcasing the increase of miles of new on-street bike, off-street multi-use, and pedestrian facilities.

Refer to **Figure 5-7** for a map of all 96 long-term projects and **Table 5-10** for a complete inventory of long-term projects, which includes the project ID, location, cost estimate, and evaluation criteria and project prioritization results.

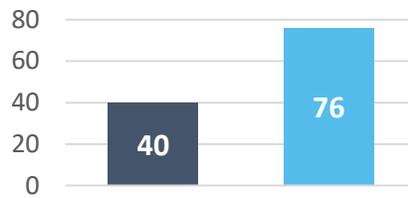
Figure 5-6: Long-Term Projects Infographic

Lane Miles of New On-Street Bike Facilities



Existing + Short-Term + Mid-Term Long-Term

Miles of New Off-Street Multi-Use Facilities



Existing + Short-Term + Mid-Term Long-Term

Miles of New Sidewalks & Pedestrian Facilities



Existing + Short-Term + Mid-Term Long-Term

**Planning-Level
Cost Estimate of
Long-Term
Projects**

**\$86.6
Million**

Figure 5-7: Map of Long-Term Projects (20+ years)

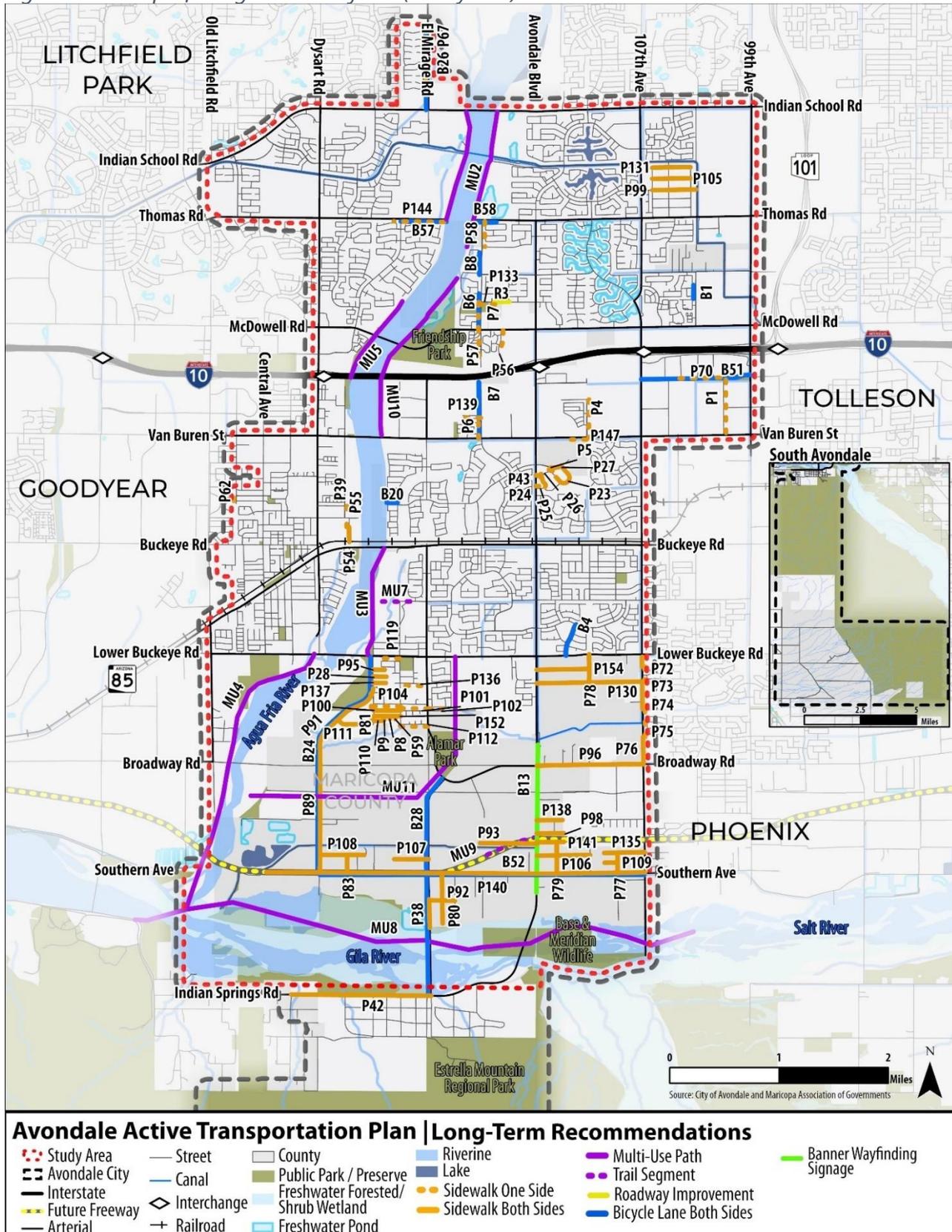


Table 5-10: Long-Term Projects Inventory

ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
B1	103rd Ave	Bicycle Ln Both Sides	0.13	Zinc Apartment Parcel	\$69,000	8	10.5	8	6.625	13.125	46.25	145
P105	W Flower St	Sidewalk Both Sides	0.35	106th Ave to 103rd Ave	\$413,000	11	10.5	5.5	6.625	12.25	45.88	146
P131	W Mulberry St	Sidewalk Both Sides	0.35	106th Ave to 103rd Ave	\$412,000	11	10.5	5.5	6.625	12.25	45.88	147
P147	W Van Buren St	Sidewalk One Side	0.22	1/4 mile west 111th Ave to 111th Ave	\$130,000	9.5	10.5	9.5	4	12.25	45.75	148
MU3	Agua Fria River East	Multi-Use Path	1.01	Buckeye Rd to Lower Buckeye Rd	\$3,161,000	12	10.5	4	7.5	11.25	45.25	149
P39	Elisio Felix Jr Way	Sidewalk One Side	0.11	Brinker Dr to Riley Dr	\$63,000	9.5	10.5	5.5	7.5	12.25	45.25	150
P62	N 4th Ave	Sidewalk One Side	0.10	Loma Linda Blvd to Brinker Dr	\$58,000	9.5	10.5	5.5	7.5	12.25	45.25	151
P99	W Earl Dr	Sidewalk Both Sides	0.40	106th Ave to 103rd Ave	\$468,000	9.5	10.5	5.5	7.5	12.25	45.25	152
P91	S Vermeersch Rd	Sidewalk Both Sides	0.67	Superior Ave to 1.5 miles south Superior Ave	\$785,000	9.5	10.5	8	4.875	12.25	45.13	153
P96	W Broadway Rd	Sidewalk Both Sides	0.98	Avondale Blvd to 107th Ave	\$1,146,000	9.5	13.25	8	4	10.375	45.13	154
P67	N El Mirage Rd	Sidewalk One Side	0.58	825 ft north Indian School Rd to city limits	\$340,000	9.5	10.5	8	6.625	10.375	45.00	155
B58	Thomas Rd	Bicycle Ln Both Sides	0.21	Agua Fria River East to 118th Dr	\$117,000	9.5	10.5	8	6.625	10.375	45.00	156
B20	Coldwater Springs Blvd	Bicycle Ln Both Sides	0.10	126th Ave to 125th Ave	\$55,000	8	10.5	5.5	7.5	13.125	44.63	157
B26	El Mirage Rd	Bicycle Ln Both Sides	0.74	Highland Ave to Indian School	\$405,000	11	10.5	8	6.625	8.5	44.63	158
P144	W Thomas Rd	Sidewalk One Side	0.46	350 ft West Rancho Santa Fe Blvd to Agua Fria River West	\$270,000	8	10.5	8	5.75	12.25	44.50	159
MU7	Durango St	Trail Segment	0.32	125th Ave to Agua Fria Trail	\$1,015,000	5.5	10.5	4	11.25	13.125	44.38	160
P6	119th Ave	Sidewalk One Side	0.21	Roosevelt St to Van Buren St	\$123,000	9.5	10.5	5.5	6.625	12.25	44.38	161
P7	119th Ave	Sidewalk One Side	0.26	Palm Ln to McDowell Rd	\$150,000	9.5	10.5	5.5	6.625	12.25	44.38	162
MU2	Agua Fria River East	Multi-Use Path	2.07	Indian School Rd to McDowell Rd	\$6,490,000	12	10.5	4	6.625	11.25	44.38	163
P23	Civic Center Dr	Sidewalk Both Sides	0.31	400 ft southeast 114th Ave to Coldwater Springs Blvd	\$362,000	9.5	10.5	5.5	6.625	12.25	44.38	164
P24	Civic Center Dr	Sidewalk One Side	0.09	Avondale Blvd to Madison St	\$54,000	9.5	10.5	5.5	6.625	12.25	44.38	165
P56	N 117th Ave	Sidewalk One Side	0.22	McDowell Rd to 1/4 mile south McDowell Rd	\$131,000	9.5	10.5	5.5	6.625	12.25	44.38	166
P57	N 119th Ave	Sidewalk One Side	0.24	McDowell Rd to Roosevelt Ave	\$143,000	9.5	10.5	5.5	6.625	12.25	44.38	167
P139	W Roosevelt St	Sidewalk One Side	0.16	120 Dr to 119th Ave	\$96,000	9.5	10.5	5.5	6.625	12.25	44.38	168
MU5	Agua Fria River West	Multi-Use Path	1.87	Indian School Rd to I-10	\$5,837,000	9.5	10.5	5.5	7.5	11.25	44.25	169
P1	101st Ave	Sidewalk One Side	0.50	Roosevelt St to Van Buren St	\$295,000	9.5	10.5	8	4	12.25	44.25	170
P70	Roosevelt St	Sidewalk One Side	0.40	103rd Ave to 101st Ave	\$237,000	8	10.5	9.5	4	12.25	44.25	171
P28	County Line Rd	Sidewalk Both Sides	0.12	127th Ave to Dead End	\$143,000	11	10.5	5.5	4.875	12.25	44.13	172
P95	W Bohne St	Sidewalk Both Sides	0.11	127th Ave to Dead End	\$125,000	11	10.5	5.5	4.875	12.25	44.13	173
B4	112th Ln	Bicycle Ln Both Sides	0.32	Whyman Ave to Lower Buckeye Rd	\$173,000	9.5	10.5	7	6.625	10.375	44.00	174
B6	119th Ave	Bicycle Ln Both Sides	0.33	Monte Vista Rd to McDowell Rd	\$178,000	9.5	10.5	7	6.625	10.375	44.00	175
P119	W Lower Buckeye Rd	Sidewalk One Side	0.16	126th Ave to 125th Ave	\$94,000	11	10.5	8	4.875	9.5	43.88	176
P54	N 10th St	Sidewalk Both Sides	0.14	435 ft south Riley Dr to Western Ave	\$161,000	8	10.5	5.5	7.5	12.25	43.75	177
P55	N 10th St	Sidewalk One Side	0.08	Riley Dr to 435 ft south Riley Dr	\$49,000	8	10.5	5.5	7.5	12.25	43.75	178
P81	S 127th Ave	Sidewalk One Side	0.28	Vermeersch Rd to Illini St	\$167,000	9.5	10.5	7	4	12.25	43.25	179
P101	W Elwood St	Sidewalk One Side	0.25	125th Ave to El Mirage Rd	\$149,000	9.5	10.5	7	4	12.25	43.25	180
P5	114th Ave	Sidewalk One Side	0.04	Coldwater Springs Blvd to Civic Center Dr	\$25,000	8	10.5	5.5	6.625	12.25	42.88	181
P25	Civic Center Dr	Sidewalk Both Sides	0.09	Madison St to Jefferson St	\$109,000	8	10.5	5.5	6.625	12.25	42.88	182
P26	Civic Center Dr	Sidewalk One Side	0.17	Jefferson St to 400 ft southeast 114th Ave	\$100,000	8	10.5	5.5	6.625	12.25	42.88	183
P27	Coldwater Springs Blvd	Sidewalk Both Sides	0.10	114th Ave to Civic Center Dr	\$121,000	8	10.5	5.5	6.625	12.25	42.88	184
B24	Dysart/Vermeersch Rd	Bicycle Ln Both Sides	2.19	Lower Buckeye Rd to Southern Ave	\$1,198,000	9.5	10.5	9.5	4.875	8.5	42.88	185
P43	Jefferson St	Sidewalk One Side	0.06	Avondale Blvd to Civic Center Dr	\$34,000	8	10.5	5.5	6.625	12.25	42.88	186



ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
P58	N 119th Ave	Sidewalk One Side	0.24	Thomas Rd to Virginia Ave	\$143,000	8	10.5	5.5	6.625	12.25	42.88	187
P42	Indian Springs Rd	Sidewalk Both Sides	1.28	133rd Ave to El Mirage Rd	\$1,502,000	8	10.5	8	4	12.25	42.75	188
B13	Avondale Blvd	Banner Wayfinding Signage	1.35	Broadway Rd to Southern Ave	\$53,000	4	10.5	11	4	13.125	42.63	189
B57	Thomas Rd	Bicycle Ln Both Sides	0.42	Rancho Santa Fe Blvd to Agua Fria River West	\$229,000	8	10.5	8	5.75	10.375	42.63	190
P136	W Pioneer St	Sidewalk One Side	0.19	125th Ave to 330 ft east 124th Ave	\$113,000	9.5	10.5	5.5	4.875	12.25	42.63	191
P137	W Pioneer St	Sidewalk Both Sides	0.12	127th Ave to Dead End	\$135,000	9.5	10.5	5.5	4.875	12.25	42.63	192
B7	119th Ave	Bicycle Ln Both Sides	0.51	I-10 to Van Buren St	\$277,000	9.5	10.5	5.5	6.625	10.375	42.50	193
MU4	Agua Fria River West	Multi-Use Path	2.81	Lower Buckeye Rd to Gila River	\$8,778,000	11	10.5	4	6.625	10.375	42.50	194
B51	Roosevelt St	Bicycle Ln Both Sides	1.00	107th Ave to 99th Ave	\$549,000	8	10.5	9.5	4	10.375	42.38	195
P154	W Winslow Ave	Sidewalk Both Sides	0.48	Avondale Blvd to 111th Ave	\$565,000	11	10.5	5.5	5.75	9.5	42.25	196
B52	Southern Ave	Bicycle Ln Both Sides	2.97	Dysart Rd to 107th Ave	\$1,625,000	8	10.5	12	4	7.625	42.13	197
P140	W Southern Ave	Sidewalk Both Sides	3.47	Buckeye Canal to 107th Ave	\$4,065,000	8	10.5	12	4	7.625	42.13	198
P72	S 107th Ave	Sidewalk Both Sides	0.09	125 ft south Lower Buckeye Rd to 600 ft south	\$103,000	8	10.5	8	5.75	9.5	41.75	199
P73	S 107th Ave	Sidewalk One Side	0.14	600 ft south Lower Buckeye Rd to Miami Ave	\$81,000	8	10.5	8	5.75	9.5	41.75	200
P74	S 107th Ave	Sidewalk Both Sides	0.25	Miami Ave to 1/4 Mile south Miami Ave	\$295,000	8	10.5	8	5.75	9.5	41.75	201
P4	111th Ave	Sidewalk One Side	0.34	Roosevelt St to Van Buren St	\$201,000	9.5	10.5	5.5	4	12.25	41.75	202
P152	W Warner St	Sidewalk Both Sides	0.24	127th Ave to 125th Ave	\$286,000	8	10.5	7	4	12.25	41.75	203
MU10	Agua Fria River	Multi-Use Path	0.88	McDowell Rd to Van Buren St	\$2,761,000	8	10.5	4	7.5	11.25	41.25	204
R3	Palm Ln	Roadd Extension	0.14	116th Ave to 118th Ave	\$691,000	9.5	10.5	4	6.625	10.375	41.00	205
P133	W Palm Ln	Sidewalk One Side	0.12	119th Ave to 650 ft East 119th Ave	\$73,000	8	10.5	5.5	6.625	10.375	41.00	206
P112	W Illini St	Sidewalk One Side	0.25	125th Ave to El Mirage Rd	\$144,000	9.5	10.5	7	4	9.5	40.50	207
B28	El Mirage Rd	Bicycle Ln Both Sides	2.02	Broadway Rd to Indian Springs Rd	\$1,108,000	8	10.5	9.5	4	8.5	40.50	208
P8	126th Ave	Sidewalk Both Sides	0.03	Warner St to Dead End	\$33,000	8	10.5	5.5	4	12.25	40.25	209
P9	126th Dr	Sidewalk Both Sides	0.04	Warner St to Illini St	\$42,000	8	10.5	5.5	4	12.25	40.25	210
P59	N 125th Dr	Sidewalk Both Sides	0.03	Warner St to Dead End	\$32,000	8	10.5	5.5	4	12.25	40.25	211
P100	W Elwood St	Sidewalk Both Sides	0.24	127th Ave to 125th Ave	\$286,000	8	10.5	5.5	4	12.25	40.25	212
P104	W Florence St	Sidewalk One Side	0.25	127th Ave to 125th Ave	\$144,000	8	10.5	5.5	4	12.25	40.25	213
P110	W Illini St	Sidewalk Both Sides	0.09	127th Ave to 126th Dr	\$111,000	8	10.5	5.5	4	12.25	40.25	214
P111	W Illini St	Sidewalk Both Sides	0.19	Vermeersch Rd to Dead End	\$225,000	8	10.5	5.5	4	12.25	40.25	215
B8	119th Ave	Bicycle Ln Both Sides	0.20	Thomas Rd to Encanto Blvd	\$112,000	8	10.5	5.5	5.75	10.375	40.13	216
P38	El Mirage Rd	Sidewalk Both Sides	0.26	Alta Vista Rd to Gila River	\$305,000	8	10.5	8	4	9.5	40.00	217
P75	S 107th Ave	Sidewalk One Side	0.26	1/4 Mile south Miami Ave to Jones Ave	\$150,000	8	10.5	8	4	9.5	40.00	218
P76	S 107th Ave	Sidewalk Both Sides	0.25	Jones Ave to Broadway Rd	\$294,000	8	10.5	8	4	9.5	40.00	219
P89	S Dysart Rd	Sidewalk Both Sides	1.24	1.5 miles south of Superior St to Southern Ave	\$1,458,000	8	10.5	8	4	9.5	40.00	220
P78	S 111th Ave	Sidewalk Both Sides	0.26	Lower Buckeye Rd to Miami Ave	\$303,000	8	10.5	5.5	5.75	9.5	39.25	221
P130	W Miami Ave	Sidewalk Both Sides	0.97	Avondale Blvd to 107th Ave	\$1,134,000	8	10.5	5.5	5.75	9.5	39.25	222
P102	W Elwood St	Sidewalk One Side	0.13	El Mirage Rd to 122nd Ave	\$74,000	9.5	10.5	5.5	4	9.5	39.00	223
P77	S 109th Ave	Sidewalk Both Sides	0.19	Pecan Rd to Southern Ave	\$222,000	8	10.5	5.5	4	9.5	37.50	224
P79	S 114th Ave	Sidewalk Both Sides	0.29	Sunland Ave to Southern Ave	\$340,000	8	10.5	5.5	4	9.5	37.50	225
P80	S 122nd Ave	Sidewalk Both Sides	0.45	Southern Ave to Gila River	\$531,000	8	10.5	5.5	4	9.5	37.50	226
P83	S 129th Ave	Sidewalk Both Sides	0.16	Hidalgo Ave to Southern Ave	\$190,000	8	10.5	5.5	4	9.5	37.50	227
P92	W Alta Vista Rd	Sidewalk Both Sides	0.24	El Mirage Rd to 121st Ave	\$281,000	8	10.5	5.5	4	9.5	37.50	228
P93	W Atlanta Ave	Sidewalk Both Sides	0.52	1/2 Mile west Avondale Blvd to Avondale Blvd	\$609,000	8	10.5	5.5	4	9.5	37.50	229



ID	Location	Facility Type	Miles	Project Limits	Cost Estimate	Evaluation Criteria Results					Prioritization	
						Proximity & Connectivity	Safety	Comfort	Social Equity	Deliverability & Constructability	Score	Rank
P98	W Chambers Ave	Sidewalk Both Sides	0.25	Avondale Blvd to 350 ft east 114th Ave	\$291,000	8	10.5	5.5	4	9.5	37.50	230
P106	W Hidalgo Ave	Sidewalk Both Sides	0.49	Avondale Blvd to 111th Ave	\$573,000	8	10.5	5.5	4	9.5	37.50	231
P107	W Hidalgo Ave	Sidewalk Both Sides	0.31	1/4 mile El Mirage Rd to El Mirage Rd	\$369,000	8	10.5	5.5	4	9.5	37.50	232
P108	W Hidalgo Ave	Sidewalk Both Sides	0.40	Dysart Rd to 830 ft east of 129th Ave	\$475,000	8	10.5	5.5	4	9.5	37.50	233
P109	W Hidalgo Ave	Sidewalk Both Sides	0.12	630 ft west of 109th Ave to 109th Ave	\$140,000	8	10.5	5.5	4	9.5	37.50	234
P135	W Pecan Rd	Sidewalk Both Sides	0.37	625 ft west 109th Ave to 107th Ave	\$436,000	8	10.5	5.5	4	9.5	37.50	235
P138	W Roeser Rd	Sidewalk Both Sides	0.24	Avondale Blvd to 350 ft east 114th Ave	\$277,000	8	10.5	5.5	4	9.5	37.50	236
P141	W Sunland Ave	Sidewalk Both Sides	0.25	Avondale Blvd to 350 ft east 114th Ave	\$291,000	8	10.5	5.5	4	9.5	37.50	237
MU11	Transmission Lines	Multi-Use Path	2.95	Lower Buckeye to Broadway / Agua Fria River	\$9,227,000	9.5	10.5	5.5	4	7.625	37.13	238
MU8	Gila River	Multi-Use Path	5.27	143rd Ave to East of 107 Ave	\$16,489,000	8	10.5	4	4	10.375	36.88	239
MU9	SR-30	Trail Segment	0.57	119th Ave to Avondale Blvd	\$1,770,000	4	10.5	4	4	13.125	35.63	240



FUNDING OPPORTUNITIES

Funding for proposed active transportation projects is a key obstacle to their implementation. Mobility improvements and active transportation projects are funded from a variety of sources. The available funding comes from an array of local, state, and federal sources, with federal transportation programs being a common source of funding for bicycle and pedestrian improvements.

The potential funding source is dependent on the type of project or program. Several factors such as the project's location, type, and target user can impact the decision of which funding source or sources to pursue. Project phases can also be funded separately using different sources. For example, funding opportunities exist for design phases and construction. The adjacent table shows common funding sources for active transportation projects and programs.

Several funding resources need to be allocated through various entities and programs. The prioritization of projects helps determine which projects should be funded in the short-term. Some of the potential funding sources for the recommended projects are listed below:

- City General Funds
- Capital Improvement Program Revenue Sources
- Private Funding/Development/Public Private Partnerships
- MAG Funding Opportunities
- Federal Land Access Program - National Parks Service
- Federal Transit Administration Grant Programs
- U.S. Department of Transportation (USDOT) Grant Programs

To make the Plan a reality, local officials will need to move quickly to get projects on the ground. Greater reliance on phased or "rapid implementation" approaches using less expensive materials can be effective and efficient and provide for a more adaptable transportation network. This approach will not only bring substantial transportation benefits sooner, but it will also allow for flexibility as transportation patterns continue to shift over the next 20 years and beyond.

Priority projects that can be easily completed should be programmed into the City's Capital Improvement Program (CIP). The project recommendations included in this Plan should be reviewed when developing the CIP.

Potential Funding Strategies & Policy Considerations

The Active Transportation Plan supports a variety of strategies and actions to effectively fund and implement the recommended projects and programs.

- Establish dedicated budget funds/dedicated funding source for active transportation projects.
- Consider creating developer incentives to encourage developers to provide Complete Streets.

- Secure private funding and consider public-private partnerships.
- Utilize MAG planning process, Transportation Improvement Program (TIP), and Design Assistance to program funds.
- Pursue state and federal grants.
- Establish annual funding targets.
- Market the Plan (i.e. Foldout map with advertisement space).
- Continue to coordinate with school districts to create and implement Safe Routes to School plans.
- Set aside dedicated funding annually for proper maintenance of bike facilities and sidewalks.
- Set aside dedicated funding annually specifically for ADA and accessibility related projects.

Investment in the region’s active transportation system will require the use of a multitude of funding strategies to help achieve this Plan’s vision and meet the mobility needs of the community. It is essential to consider all funding options, including bonds, reallocation of existing sales tax revenues, reallocation of general fund budget, grants, improvement districts, and the creation of new revenue sources.

Potential Funding Sources

The appropriate funding opportunity for each unique project in this Plan can be identified quickly using **Table 5-11**. Detailed descriptions of each funding source can be found in the following sub-sections.

Table 5-11: Potential Funding Sources Matrix

Funding Source	Design/Build	Planning	Programming
Local			
City General Funds	✓	✓	✓
City Capital Improvement Program	✓		✓
MAG Safe Routes to School		✓	✓
MAG Transportation Improvement Program	✓	✓	✓
MAG Design Assistance Program	✓		
State			
AZ Governor’s Office of Highway Safety			✓
Arizona State Parks and Trails	✓	✓	✓
Federal			
Federal Highway Administration	✓	✓	✓
Federal Transit Administration	✓	✓	✓
National Parks Service	✓	✓	
Land and Water Conservation Fund	✓	✓	
USDOT Safe Streets and Roads for All (SS4A) Action Plan Grants		✓	✓



USDOT Safe Streets and Roads for All (SS4A) Implementation Grants	✓	✓	✓
USDOT Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants	✓	✓	✓
Other			
American Association of Retired Persons	✓		
Active Living Research		✓	✓
Trust for Public Land		✓	
People for Bikes	✓		
Rails to Trails Conservancy	✓		

Local Funding Sources

The following are potential funding strategies and sources at the local level.

City of Avondale Funding Mechanisms

The City of Avondale can include a variety of items in their active transportation project funding toolbox. The City can program projects through their recurring CIP process. The City can also utilize Development Impact Fees, sell path and trail naming rights, utilize severance fees from the various operations surrounding the Agua Fria and Gila Rivers, sell Bonds, and seek funds from the General Fund when available. School Zone speeding fines can also be allocated to the construction and maintenance of paths and trails. There are opportunities for fundraising and campaign drives, trail sponsorship funds, corporate donations, and the use of volunteers to save money.

MAG Safe Routes to School Funds

Each year MAG budgets approximately \$400,000 for non-infrastructure projects related to Safe Routes to School. In fall of 2017, a call for applications occurred and 39 projects were awarded. While much of the money has been allocated, there is two million dollars remaining for projects through fiscal year 2022, specifically for Priority 2-SRTS Support Activities.

MAG TIP Modal Applications (Transportation Alternatives)

Bicycle-Pedestrian non-infrastructure Safe Routes to School projects and bicycle and pedestrian infrastructure projects are both eligible for Federal Highway Administration funds allocated via MAG via the following programs: Congestion Mitigation and Air Quality Improvement Program (CMAQ-2.5), Congestion Mitigation and Air Quality Improvement Program (CMAQ), Transportation Alternatives (Infrastructure and Non-infrastructure) (TA-MAG), and Surface Transportation Block Grant Program (STBGPMAG). Total funding available as of September 2017 was estimated at \$42.8 million.

MAG Design Assistance Program

The MAG Design Assistance Program was created to assist communities by funding infrastructure projects related to bike, pedestrian, and shared-use facilities such as multi-use paths. A request for projects for Design Assistance funding is released by MAG in May each year. Types of projects that are eligible for Design Assistance funding include: projects that facilitate safe crossings and access to bike/pedestrian facilities, bike and pedestrian access to transit, and bike and pedestrian facility construction and improvements (sidewalk improvements, bike lanes and shoulders, safety improvements, and signing, marking and wayfinding). Applicants interested in using design assistance funds must create preliminary scoping documents for each project.

State Funding Sources

The following are potential funding strategies and sources at the state level.

Arizona State Parks and Trails (ASPT)

Motorized and Non-Motorized Grant Program funds can be allocated for trail development and maintenance (equestrian, pedestrian, and bicycling uses included ADA access needs), off-road vehicle trails and law enforcement of OHVs, and trail education and safety programs and materials. There is an additional OHV Supplemental Program which can be utilized for repairs to OHV trails due to weather and/ or vandalism, constructing and maintaining trails, and law enforcement. ASPT provides Safety and Environmental Education (SEE) funds for trail programs and educational aspects of projects.

Arizona Governor's Office of Highway Safety (GOHS)

The Arizona Governor's Office of Highway Safety places a special emphasis on projects that enforce pedestrian and bicycle safety laws, as well as school-based education programs. Their funding can be applied to supporting "Bicycle Safety Month" and "Back to School Safety Month" efforts, bicycle helmet distribution programs (specifically to low-income areas), the coordination of "Safety Fairs", comprehensive school-based pedestrian and bicycle safety education outreach, and the CARE fair (Children's Assistance and Resource Event) which distributes bicycle helmets to children and provides safety education. AGOHS grant funding is based on the Federal fiscal year calendar (October 1 - September 30). Grants for the 2020 Federal fiscal year are awarded for a one-year period. Applying for a GOHS grant begins with submission of a proposal and signed cover letter. Grant applications are available for download in PDF format on the GOHS website beginning January 21, 2019.

Federal Funding Sources

The following are potential funding strategies and sources at the federal level.

The Federal Highway Administration (FHWA)

There are multiple funding sources available for bike and pedestrian projects through the FHWA. Funding programs include: The Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Surface Transportation Block Grant Program (STBG), Highway Safety Improvement Program (HSIP), National Highway

Performance Program (NHPP), Federal Lands Access Programs (FLAP), the Surface Transportation Block Grant Program (FAST Act), and Transportation Alternatives (TA). Each program has different requirements to receive funding. For example:

- CMAQ funds must be used for projects that benefit air quality.
- HSIP projects must be consistent with the State Strategic Highway Safety Plan and address a highway safety problem.
- NHPP-funded projects or activities must be associated with an NHS facility.
- FLAP funds could be used for bicycle and pedestrian accommodations on, adjacent to, or within Federal lands.
- TAP funds can be used for capital costs related to bike share, educational programs, lighting and environmental resiliency for bike and pedestrian facilities, project planning, and land acquisition for bike and pedestrian facilities.
- FAST Act funds can be used for recreational trails and pedestrian and bicycle projects, safe routes to school projects, bridge and tunnel projects, as well as improvements to roadways from the minor collector functional classification to the principal arterial.
- Recreational Trails Program (RTP) funds can be applied using a “user pay/benefit” model that uses a small portion of fuel sales tax from non-highway trail users (OHVs) to build trails (motorized trails, and non-motorized multi-use trails).

The Federal Transit Administration (FTA)

FTA funding may also be utilized for bike and pedestrian improvements adjacent to transit projects through the Capital Investment Grant Program (Section 5309), the associated transit improvements component of the Rural Area Formula Program Grants (Section 5311), and the Enhanced Mobility for Seniors and Individuals with Disabilities (Section 5310). Transit funds may be used to improve bicycle lanes and sidewalks if they provide direct access to transit and Section 5310 funds can be used to construct accessible connections to a bus stop, as well as signage and wayfinding.

The National Park Service (NPS)

NPS offers community assistance through the Rivers, Trails, and Conservation Assistance Program (RTCA). RTCA funds can be used to create recreation opportunities, preserve and improve access to rivers, and design parks and trails. This program has a rotating deadline of June 30th.

Land & Water Conservation Fund (LWCF)

This funding source can be used to construct trail projects as well as recreation (including playgrounds) and conservation projects. It can be utilized for land acquisition, the protection of fish and wildlife habitat and preserving public access for recreation uses.

Safe Streets and Roads for All (SS4A) Action Plan Grants

SS4A Action Plan Grants provide competitive discretionary funding to develop, complete, or supplement a comprehensive safety action plan. Action Plan Grants may also fund supplemental Action Plan activities. The goal of an Action Plan is to develop a holistic, well-defined strategy to prevent roadway fatalities in a locality, tribe, or region.

The competitive grant solicitation process is initiated by the USDOT on an annual-basis through issuance of a Notice of Funding Opportunity. Eligible jurisdictions must submit a grant application and compete for an award of funding. Action Plan grants award amounts are based on estimated costs, with an expected minimum of \$200,000 for all applicants, and an expected maximum of \$1,000,000 for a political subdivision of a State.

Successful Action Plan grant applications and strategies include leadership commitment and safety goal setting, identification of a committee, task force, implementation group, or similar body charged with overseeing plan development, analysis of historical safety trends and existing conditions, robust engagement with the public and relevant stakeholders, including the private sector and community groups, and plan development using inclusive and representative processes geared towards underserved communities.

Safe Streets and Roads for All (SS4A) Implementation Grants

SS4A Implementation Grants fund capital projects and strategies identified in an Action Plan that address roadway safety problems. Implementation Grants may also fund associated planning and design and supplemental action plan activities in support of an existing Action Plan. Applicants must have an existing Action Plan to apply for Implementation Grants or have an existing plan that is substantially similar and meets the eligibility requirements of an Action Plan as defined in the SS4A Program Notice of Funding Opportunity.

The competitive grant solicitation process is initiated by the USDOT on an annual-basis through issuance of a Notice of Funding Opportunity. Eligible jurisdictions must submit a grant application and compete for an award of funding. For Implementation Grants, the USDOT expects the minimum award will be \$5,000,000 and the maximum award will be \$30,000,000 for political subdivisions of a State.

Typical successful Implementation Grant applications and projects consider promoting improved safety, employing low-cost, high-impact strategies that can improve safety over a wide geographic area, ensuring equitable investment in the safety needs of underserved communities, incorporation of evidence-based projects and strategies, and aligning with the USDOT's mission and priorities such as equity, climate and sustainability, quality job creation, and economic strength and global competitiveness.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants

RAISE Grants provide competitive discretionary funding of planning and capital investments in surface transportation that will have a significant local or regional impact by improving safety, economic strength and global competitiveness, equity, and mitigating climate change and promoting sustainability consistent with the USDOT's strategic goals.

Eligible projects are surface transportation capital projects that are highway, bridge, or other road projects, public transportation projects, passenger and freight rail projects, port infrastructure investments, surface transportation components of an airport project, intermodal projects, projects to replace or rehabilitate a culvert or prevent stormwater runoff, projects investing in surface transportation located on tribal land, and any other transportation infrastructure projects that the Secretary considers to be necessary to advance the goals of the program.

Planning activities are also eligible and include multidisciplinary projects or regional planning, such as development of master plans, comprehensive plans, integrated land use and transportation plans, or corridor plans, planning activities related to the development of a multimodal freight corridor, including those that seek to reduce conflicts with residential areas and with passenger and non-motorized traffic, development of port and regional port planning grants, risk assessments to identify vulnerabilities and address the transportation system's ability to withstand probable occurrence or recurrence of an emergency or major disaster.

USDOT seeks to fund projects that, to the extent possible, target at least 40 percent of resources and benefits towards low-income communities, disadvantaged communities, communities underserved by affordable transportation, or overburdened communities. The competitive grant solicitation process is initiated by the USDOT on an annual-basis through issuance of a Notice of Funding Opportunity. The minimum Capital Grant award is \$5 million in urban areas and \$1 million in rural areas, and the maximum amount that can be requested is \$45 million. Planning Grants do not have a minimum request threshold and must not exceed \$45 million.

Other Funding Sources

The following are other potential funding strategies and sources.

American Association of Retired Persons (AARP)

AARP provides funding to communities through their competitive Annual Community Challenge. The goal of the challenge is to make immediate improvements for long-term progress helping residents of all ages improve their quality of life. The "quick-action" solutions can include transportation and public spaces improvements.

Active Living Research (ALR)

Grants can be procured through ALR for various types of projects benefiting human activity, environmental improvements, researching health needs, and more.

The Trust for Public Land

Previously known as The Conservation Campaign, The Trust for Public Land's Action Fund can be used to assist in land conservation efforts and the creation of public parks. They offer legal assistance with ballot measures and provide legislative advocacy.

People for Bikes

The People for Bikes Community Grant Program awards funding to projects that advance bicycling such as trails and paths (including rail trails and mountain bike trails), and bike and BMX parks. They have an alternating grant schedule, with odd years supporting bike park and pump track projects only.

Rails To Trails Conservancy (RTC)

The Rails to Trails Conservancy offers an annual competitive grant program titled the Doppelt Family Trail Development Fund. Funds can be used to build to improve multi-use trails.

ACTIVE TRANSPORTATION PLAN MAINTENANCE & UPDATING

As illustrated in **Figure 5-8**, there are multiple key ingredients for plan execution - It is essential the implementation of this Plan to be an ongoing, community-oriented effort. Implementing the Plan will require a collaborative and coordinated effort with community leaders, residents, stakeholders, and partner entities.

Effective and ongoing outreach and community engagement is vital to the ATP’s success. Involving the public in the Plan’s implementation can play a key role in ensuring successful outcomes.

Thus, it is necessary to continually engage stakeholders and the public throughout the Plan’s implementation phase through various channels such as neighborhood workshops, online tools, and events. Furthermore, additional partners should be pursued and engaged during the implementation phase. This Plan shall remain a top priority for residents and stakeholders.

Making the Plan accessible using an interactive online platform will help enable implementation. This also ensures the public’s continued involvement in the Plan’s implementation and future update process.

Figure 5-8: Recipe of Key Elements for ATP Implementation



Strategies to Facilitate Implementation

The following set of strategies will help effectively implement this Plan:

- Referencing of ATP on staff communications to City Council, Technical and Policy Committees, and Planning Commission when applicable.
- Produce an Annual Strategic Report.
- Develop and monitor performance measures.
- Publish yearly list of projects on a website.
- Continued engagement on social media; engagement at neighborhood level.
- Ensuring future plans, development applications, and code changes are aligned with the Plan.
- Initiate pilot projects and tactical urbanism, where applicable.
- Create ATP Facility Selection Guide.
- Refer to the ATP priorities when developing the CIP.

Lastly, the implementation strategies should also be revisited regularly as part of the Plan’s evaluation and update process. It is recommended that the Plan be revisited every 3 to 5 years to determine if an update is warranted.

Appendix A – Literature Review of Existing Plans, Studies & Relevant Information

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Appendix B – Crash Data

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Appendix C – Detailed Pedestrian & Bicycle Count Data

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Appendix D – Public Involvement Plan

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Appendix E – Public Survey Results

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Appendix F – Detailed Project Prioritization Results

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