







# Transportation Action Plan

*City of Scottsdale's 10-Year Transportation Roadmap* 











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On April 5, 2022, the City Council item to request approval of the Transportation Action Plan was tabled until April 26, 2022. The information provided below lists additional changes made to the Transportation Action Plan to clarify City Council direction.

- 1) Modifications to the Street Element and Bikeway Element related to the 128<sup>th</sup> Street Alignment where it is bounded on both sides by the McDowell Sonoran Preserve
  - Page S-7 (Street Element): Add 128<sup>th</sup> Street 1320' north of Ranch Gate Road to the Jomax Road alignment to Table S-2 indicating revision from Minor Collector to Emergency Access Only. (Table revision)
  - Page S-8: Edit Figure S-2 (Functional Classification Map) to add an asterisk and note the section of 128<sup>th</sup> Street from 1320' north of Ranch Gate Road to the Jomax Road alignment is for Emergency Access Only. (Figure revision)
  - Page S-9: Clarify Table S-3 to indicate the segment of 128<sup>th</sup> Street from the Pinnacle Peak Road alignment to 1320' north of Ranch Gate Road (currently listed as Happy Valley Road alignment) will change from a Minor Collector to a Minor Collector with no center lane. (Table revision)
  - d. Page S-12: Edit Figure S-8 (Planned Right of Way Widths) to remove the portion of 128<sup>th</sup> Street that crosses the Preserve. (Figure revision)
  - e. Page B-6 (Bikeway Element): Edit Figure B-3 (Existing and Planned Shared Use Paths) to remove the planned path where 128<sup>th</sup> Street crosses the Preserve. (Figure revision)
  - f. Page B-9: Edit Figure B-5 (Changes to Future Path Network) to remove the planned path where 128<sup>th</sup> Street crosses the Preserve. (Figure revision)
- 2) Bicycle Element Goal
  - Page B-2: Revise the Goals section to divide Goal 3 into two separate goals. Goal 3 states,
    "Expand the network of on-street and off-street bike facilities to increase the amount of biking for all trip purposes." Goal 4 states, "Provide access to a shared use path within ½-mile of all residences, unless privately-owned property or natural terrain make it impractical."
- 3) White Pavement Usage
  - a. Page S-3: Revise Goal 5 to state, "Minimize heat island effects by reducing existing pavement where traffic demand is less than previously planned and experimenting with paving technologies, including consideration of cool (white) pavement, that support sustainability and/or reduce daytime heat absorption and nighttime heat radiation."
- 4) Bikeway system improvements resulting from travel lane reductions
  - a. Page B-3: Add a third paragraph to the On-Street Bikeways section that states, "Most bikeway system improvements resulting from travel lane reductions would occur through striping changes coordinated with the pavement surface treatment cycle, which follows a timeframe of approximately 7-10 years. Curb placements will not change, and right-of-way widths will not be reduced from those shown in Figure S-8, unless directed by the City Council. Notification to

neighborhoods of changes in travel lane configurations will occur through signage, electronic communications, and, where needed, through in-person meetings."

- 5) Mountain View Road 92<sup>nd</sup> Street to 96<sup>th</sup> Street
  - a. Page I-7 (Implementation Program): Edit the project description for the Mountain View Road 92<sup>nd</sup> to 96<sup>th</sup> project to state, "Provide creative solutions to improve traffic, pedestrian and bicycling mobility. Any addition of travel lanes would require reclassification of the roadway by City Council."
- 6) Bus Rapid Transit
  - Page T-11 (Transit Element): Edit 4<sup>th</sup> Bullet in Regional Connectivity section to state, "Evaluate the feasibility of and potentially implement an on-street BRT route on Scottsdale Road from the Thunderbird Park-and-Ride to Chandler. Use of dedicated lanes, while not anticipated, would be subject to review and approval by City Council."

# SCOTTSDALE TRANSPORTATION & STREETS IS ON THE MOVE...

Scottsdale's Transportation Action Plan (TAP) 2022 provides an overview of Scottsdale's current transportation infrastructure, as well as a roadmap for Scottsdale's transportation future. It includes the objectives, policies, values and guidelines to inform transportation decisions moving forward, along with a prioritized implementation plan to preserve and improve how we get around Scottsdale--whether by foot, bus, bike, vehicle, motorcycle, scooter, horse, or something yet to emerge--over the next 10 years.

Since Scottsdale drafted its first plan in 2008 and revised it in 2016, there have been significant shifts in community priorities, city leadership, traffic patterns,

#### HOW TO NAVIGATE THIS SITE

The plan is divided into transportation elements, which you can navigate to with the top menu. Also included in the menu are an implementation plan and a list of the figures included throughout the site.

Within each element section you'll find relevant goals, policies, performance measures, classifications, figures, and ongoing data collection.

technology and funding. More people, for example, are interested in bikeways, trails and other amenities that support non-motorized modes of transportation. Despite additional development over the last 20 years, travel demand has not grown as much as projected. And new technology, such as adaptive traffic signals and autonomous vehicles, is reducing congestion. Several projects that made sense in 2008 have become unnecessary, infeasible or unaffordable in 2022.

# ... from Master Plan to ACTION PLAN.

The first notable difference with the 2022 plan is renaming it an "Action" plan rather than a "Master" plan. While a new name may seem like an insignificant change, it reflects an important shift in priorities.

When the 2008 and 2016 master plans were written, Scottsdale still had many locations in need of additional infrastructure, including roads, traffic lanes, paths, trails, and transit routes. A "master" plan that attempted to envision all that could and should be built over the next 20 to 30 years made sense. Now, most of the improvements included in the first two plans have either already been built, will be completed in the next five years or are no longer practical or feasible. The concept of a "Master" plan has become too rigid, too prescriptive, and too impractical to keep up with changing understanding, priorities and technology.

# ... from planning more to PLANNING SMARTER.

The 2022 "Action" plan eliminates a one-size-fits-all approach, replacing it with smarter, more flexible policies and planning that enable adaptability to Scottsdale's character areas [link to section below], changing technology and opportunities to leverage funding and coordinate projects.

For example, the TAP 2022 no longer includes policy dictating access to a path within a half mile of every home. While that might make sense in the Scottsdale's more urban character area, it's impractical in a character area of planned communities that have walls blocking access to the paths.

A rigid implementation plan that stipulates use of a certain type of technology that may become outdated has been replaced with a plan that includes pilot programs to continually evaluate and consider emerging technology.

Finally, the more rigid approach of narrowly defining funding for projects has been replaced with an approach that encourages saving money and time through departmental, interdepartmental and inter-agency coordination.

# ...from building more to PRESERVING AND IMPROVING WHAT WE HAVE.

With less need to plan and build new infrastructure, the TAP 2022 also prioritizes preserving and improving what we already have. The plan includes renovating infrastructure to meet modern acceptable safety and comfort standards that may have changed from when infrastructure was first built, such as meeting modern Americans with Disabilities Act (ADA) standards, widening shared use paths and adding shade for pedestrian and bicyclists. The plan also focuses on closing gaps within the paths, trails, bikeways and transit systems and improving regional connectivity and includes maintenance plans for pavement, paths, trails, and streetlights to extend their life and reduce cost over time.

# ... from prioritizing cars to PRIORITIZING PEOPLE.

Over the past 14 years, the city has widened roads to accommodate more traffic and built out roads to new development. More recently, however, traffic growth has slowed, and more people are valuing open space over more development.

The TAP 2022 prioritizes safe and accessible travel for all transportation users and supports active transportation for a healthier, more active lifestyle. One of the most notable changes with the TAP 2022 is a reclassification of many of Scottsdale's streets to reflect reduced traffic volumes. While 5% of streets need additional capacity, many others have been reclassified to reduce the number of required lanes, enabling them to be transformed into "Complete Streets" that are safer and more comfortable for bicycles and pedestrians.

Ultimately, encouraging and providing better access to multimodal transportation is a "winwin" as it also reduces traffic congestion for drivers and improves air quality for all of us.

## TAP 2022 GOALS AND VALUES

The following goals and values guide the TAP 2022:

- 1) Prioritize people, safety and livability over motor vehicles and travel speed.
- 2) Improve accessibility for all types of transportation and transportation users.
- 3) Promote active and healthy living.
- 4) Support sustainability and cost savings by preserving and maintaining existing infrastructure.
- 5) Coordinate intradepartmental and interdepartmental projects and leverage funding to plan efficiently and economically.
- 6) Close system gaps and improve local and regional connectivity with path systems, trail corridors and transit routes.
- 7) Provide transportation options that support economic vitality.
- 8) Ensure flexibility that can respond to economic development, changing technology and shifting priorities.
- 9) Continually evaluate technology to innovate and implement safer, greener and more accessible transportation solutions.
- 10) Improve environmental sustainability with decisions, programs and policies that preserve open space, reduce traffic congestion and consume less non-renewable resources.

Additional goals specific to transportation elements are included in each section.

## COORDINATION WITH SCOTTSDALE'S GENERAL PLAN

The TAP 2022 goals and values align with those of the *Scottsdale General Plan 2035*, which aims for a city with Exceptional Experience, Outstanding Livability, Community Prosperity and Distinctive Character.

## TAP 2022 GUIDING POLICY

In each section are goals specific to the transportation system elements. Additionally, the following policy guides the TAP 2022 and the Transportation & Streets Department overall:

Transportation network shall maximize travel route choices, travel mode choices, and access and mobility for all ages and abilities.

# NOTABLE PLAN UPDATES

#### **Implementation Program**

Often there are more desired operational needs and projects than budgets and time allow. The following guidelines will be used to prioritize transportation investments:

- 1) Preserve, maintain and optimize existing infrastructure.
- 2) Meet Americans with Disabilities Act (ADA), air quality, water quality and other regulatory requirements.
- 3) Enhance safety and test new concepts and technology.
- 4) Provide transit service with minimum 30-minute frequency.
- 5) Develop capital projects with funding from outside sources.
- 6) Develop capital projects that are funded only by the City and prioritize non-motorized access.

#### **Performance Measures**

Specific Performance Measures to track progress have been added for each transportation element.

#### **Specific Plan Updates by Element**

Street

- Street reclassifications
- Updated street cross sections
- Right-of-way width map

#### Transit

- Service at 30-minute frequency or better
- Bus boardings per revenue mile
- Bus boardings per revenue hour
- On-time performance
- Connectivity to transportation network

#### Bikeway

• Identification of Neighborhood Bikeways

- Removal of infeasible and impractical projects
- Expansion of side path network
- Identification of system and regional connectivity gaps

#### Trail

- Identification of system and regional connectivity gaps
- Plan to improve connectivity to preserve
- Plan to improve trail connectivity in rural neighborhoods

#### Pedestrian

- Modify location of landscape trees to improve warm weather shade
- Adjust sidewalk widths in less densely developed or limited access areas
- Identification of priority areas for improved accessibility and enhanced crossings

## SUPPORTING COMMUNITY INPUT

The TAP 2022 attempts to facilitate community input into future transportation planning by providing a more accessible online reference that is easier to navigate and includes explanation and insight into transportation decisions and planning. The TAP 2022 is intended to serve not only transportation planners and engineers, but also Scottsdale citizens, business owners, and developers as future transportation decisions are made.

# STREET ELEMENT

## **INTRODUCTION**

The Street Element of the Transportation Action Plan includes information and guidance to provide an efficient and multi-modal street network for automobiles, trucks, transit, bicycles, pedestrians and in some corridors, equestrians. Different strategies, such as building or widening streets, reconfiguring existing streets and applying technology, are used to improve traffic flow.

The city's planned travel lane capacity for the arterial and collector street system (see below for street classifications) is largely complete. Out of 1,061 lane miles of classified streets, approximately 51 lane miles (5%) will be left to build after the Capital Improvement Plan spanning fiscal years 2021-22 through 2025-26 is completed (see Figure S-1). Ten of those lane miles are adjacent to neighboring jurisdictions that will likely help fund future construction, and 14 of the lane miles are expected to be built by future development.

A greater number of arterial and collector street system miles are missing "complete streets" components. Complete streets provide better accommodations for non-motorized uses and add safety features such as dedicated turn lanes and raised medians. Many street segments built more than twenty years ago also lack adequate sidewalks (typically six-feet minimum width), accessible corner ramps and bike lanes, components that are now standard with street design. In all, an estimated 78 miles (12%) of sidewalks and 132 miles (21%) of bike lanes are missing from arterial and collector streets where all travel lanes have already been constructed.

Over the years, some streets were built with too many lanes based on anticipated development patterns that ultimately did not occur. On other streets, creation of the McDowell Sonoran Preserve reduced capacity needs. In all, thirty-two lane miles can be converted to non-auto uses by restriping or narrowing the street. Narrowing the distance between the outside curbs will be considered when the remaining travel lanes will continue to operate at 75% or less of capacity (7,500-10,000 vehicles per lane per day, depending on number of lanes, land use and access conditions).

The Street Element supports creating a safe and efficient roadway system. As the street system continues to age, preventive maintenance and repair and/or replacement of pavement, concrete, traffic signals and streetlights will need to be prioritized.





## GOALS

- 1) Emphasize traffic safety, livable streets and multi-modal community access over rapid traffic throughput.
- 2) Develop and manage the street network in a manner that places reliance on maintaining existing infrastructure and improving the efficiency of the existing system before adding new roadway capacity.
- 3) Maintain and improve multi-modal circulation by narrowing roadways where appropriate; including alternative modes of transportation when widening roadways; using existing and future Intelligent Transportation Systems technology and access control to manage traffic flow; and identifying major and minor intersections for capacity and safety improvements.
- 4) Provide a framework for the development of a transportation system for Scottsdale that is based on the complete streets concept, where streets are designed and constructed in a manner that supports comfortable usage by all travel mode types.
- 5) Minimize heat island effects by reducing existing pavement where traffic demand is less than previously planned and experimenting with paving technologies, including consideration of cool (white) pavement, that support sustainability and/or reduce daytime heat absorption and nighttime heat radiation.

## POLICIES

- 1) Complete Streets: Provide sufficient right-of-way and design, operate, and maintain Scottsdale's streets to promote safe and convenient access and travel for users of all types: pedestrians; mobility-assisted; bicyclists; transit vehicles and riders; equestrians; cars; and trucks. Provide facilities and amenities that are recognized as contributing to complete streets, including roadway and pedestrian-level street lighting; pedestrian and bicycle safety improvements; access improvements in accordance with ADA; transit facilities accommodation, including but not limited to pedestrian access improvement to transit stops; street trees and landscaping; and street furnishings that are sensitive to the local context.
- 2) Traffic Safety: Collect, analyze and report on traffic collision data on a regular basis and develop remediation measures to address high frequency and high volume collision locations.
- Roundabouts: Roundabouts shall be the first consideration for all intersections of one- or two-lane-per-direction streets that require all-way stop control. Traffic signals should only be installed or remain if a traffic or budget analysis justifies their advantage.
- Roadway Restriping: Improve on-street bicycle accommodation and bicycling and pedestrian comfort through striping changes that consider historic and forecasted motor vehicle traffic, center turn lane requirements, existing pavement width and existing lane

widths. This restriping protocol will typically be applied when roadways are being treated through standard pavement preservation applications and will incorporate buffered bike lanes where feasible.

- 5) Neighborhood Traffic Management: Protect Scottsdale's residential neighborhoods from excessive vehicle travel speeds and cut-through traffic.
- 6) Truck Routes: All planned four lane or larger streets are considered truck routes, unless noted as an exception. Neighborhood/local system routes will not be considered for truck route designations.
- 7) Intelligent Transportation Systems (ITS): Support the ITS strategic plan to coordinate signals; integrate freeway and arterial operations; improve traffic progression; reduce incident clearance times; and enhance special event traffic management. Also recognize the need to balance traffic flow with improved pedestrian, bicycle and transit flow on some corridors.
- 8) Access Management: Define acceptable levels of access for each roadway classification to preserve its function, including criteria for the spacing of signalized and unsignalized access points. Apply and enforce appropriate geometric design criteria and traffic engineering analysis to each allowable access point. Specific access management criteria shall be included in the City's *Design Standards & Policies Manual* (DS&PM), which is updated on a regular basis and approved by the city's Design Review Board.
- 9) Roadway Character Types: Identify roadway corridors as either urban, suburban or rural. Urban street areas are located in Old Town Scottsdale, where pedestrian activity is likely to be the highest and alternative modes of transportation are more likely. Suburban street areas often have separation between residential and commercial or employment uses. Generally, the suburban designation is for roadways south of Pinnacle Peak Road. Rural street areas are desert or low-density land use areas where commercial and employment activities are more limited, and equestrian activity is greater. Generally, roadways north of Pinnacle Peak Road are identified as rural.
- 10) Roadway Noise Abatement: Roadway noise levels considered for mitigation shall be consistent with the Arizona Department of Transportation's 2017 Noise Abatement Requirements. The ADOT standards are required by Federal law (Code of Federal Regulations 23 CFR 772) to match the Federal Highway Administration's noise standards. These standards consider noise abatement when there is an increase of 15 decibels (dBA) in the model-predicted roadway noise levels over existing noise. levels occurs and/or the predicted noise level is at or above 67 dBA.

## STREET SYSTEM/FUNCTIONAL CLASSIFICATION

The street system consists of a hierarchy from local streets (smallest capacity) to collector streets to arterial streets (largest capacity). These functional classes establish a common understanding of the use of the street and its character, regulate access from adjacent properties and determine how the costs of new street construction are shared between the city and surrounding properties. Location within areas of the city designated as Environmentally Sensitive Lands (ESL) is also a factor in street classifications.

Over the years, the three functional classes have evolved into a set of 20 sub-classifications as shown in Table S-1. Only the arterial and collector categories are identified on published maps. The character designations (rural, suburban and urban) are determined during the design review process. Location within areas of the city designated as Environmentally Sensitive Lands (ESL) is also a factor in roadway classifications.

Functional Classification Categories				
Street Type	Character			
Major Arterial	a) rural			
	b) suburban			
	c) urban			
Minor Arterial	a) rural/ESL			
	b) suburban			
	c) urban			
Major Collector	a) rural/ESL			
	b) suburban			
	c) urban			
Minor Collector	a) rural/ESL with trails			
	b) rural/ESL			
	c) suburban			
	d) urban			
Local Collector	a) rural/ESL with trails			
	b) rural/ESL			
	c) suburban			
Local Residential	a) rural/ESL with trails			
	b) rural/ESL			
	c) suburban			
Local commercial/industrial				

Table S-1

#### Major and Minor Arterials

Arterial streets have raised medians, provide regional continuity and provide for long-distance traffic movements. Coordinating regional networks maintains continuous and useful links between Scottsdale and its neighbors. Major arterials stress traffic movement while minimizing local access. Minor arterials also stress traffic movement, but moderate access is provided to adjacent land uses. Access is controlled primarily through the raised medians, as well as by the spacing and location of driveways and intersections. Arterial streets generally serve higher traffic volumes (20,000–55,000 average daily trips [ADT]) than collector streets.

#### Major and Minor Collectors

Collector streets provide for shorter distance traffic movements and connect arterial and local streets. Collectors serve medium traffic volumes (5,000–32,000 ADT) and balance prioritizing access to adjacent commercial and residential land uses and travel efficiency.

#### Local Collector, Residential and Commercial/Industrial Streets

Local streets provide direct access to adjacent land uses, provide access to the collector street system and accommodate lower traffic volumes (usually less than 5,000 ADT) and travel speeds. Traffic calming can be considered on local streets.

#### Street Classification Map

Figure S-2 presents the recommended functional classification system for all arterial and collector streets in the city. Arterials and collectors are also designated as either major or minor. Minor collectors are further designated as having a center turn lane or not. The number of lanes ranges from two on a minor collector to six on a major arterial.

Table S-2 lists changes to street classifications and Table S-3 lists minor collector segments that would not require a center turn lane.

Table	S-2
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			2016	2022
Street	From	То	Classification	Classification
				Minor
64th Street	Jomax Road	Dynamite Boulevard	Major Collector	Collector
		Frank Lloyd Wright		Minor
92nd Street	Raintree Drive	Boulevard	Major Collector	Collector
				Minor
96th Street	Via Linda	Shea Boulevard	Major Collector	Collector
	Frank Lloyd Wright	Frank Lloyd Wright		Minor
100th Street Loop	Boulevard	Boulevard	Major Collector	Collector
	1,320' north of Ranch		Minor Collector	Emergency
128th Street	Gate Road	Jomax Road Alignment	(no center Lane)	Access only
				Minor
130th/132nd Street	Shea Boulevard	Via Linda	Major Collector	Collector
		McDowell Mountain		Minor
Bell Road	Thompson Peak Parkway	Ranch Road	Minor Arterial	Collector
				Minor
Hayden Road	McKellips Road	Indian School Road	Major Arterial	Arterial
				Minor
Drinkwater Boulevard	Scottsdale Road	Scottsdale Road	Couplet	Arterial
				Minor
Goldwater Boulevard	Scottsdale Road	Scottsdale Road	Couplet	Arterial
				Minor
Legend Trail Parkway	Pima Road	Stagecoach Pass	Major Collector	Collector
				Minor
McCormick Parkway	Scottsdale Road	Hayden Road	Major Collector	Collector
McDowell Mountain				Minor
Ranch Road	105th Street	Bell Road/108th Street	Minor Arterial	Collector
				Minor
Osborn Road	68th Street	Scottsdale Road	Major Collector	Collector
		Frank Lloyd Wright		Minor
Raintree Drive	Thompson Peak Parkway	Boulevard	Major Collector	Collector
		Frank Lloyd Wright		Minor
Redfield Road	Raintree Drive	Boulevard	Major Collector	Collector
		Frank Lloyd Wright		Minor
Thunderbird Road	89th Street	Boulevard	Major Collector	Collector
				Minor
Westland Drive	Scottsdale Road	Hayden Road	Minor Arterial	Collector



Table S-3

Street	From	То
68th Street	Camelback Road	Chaparral Road
78th Street	Jackrabbit Road	McDonald Drive
78th Street	Mountain View Road	Shea Boulevard
84th Street	Shea Boulevard	Thunderbird Road
90th Street	Cactus Road	Thunderbird Road
92nd Street	Sweetwater Avenue	Thunderbird Road
100th Street	Cactus Road	Camino del Santo
104th Street	Shea Boulevard	Sweetwater Avenue
108th Street	Via Linda	Cactus Road
110th Street	Mountain View Road	Cholla Street
110th Street/Altadena	Cholla Street	Frank Lloyd Wright Boulevard
124th Street	Mountain View Road	Shea Boulevard
128th Street	Pinnacle Peak Road alignment	1,320' North of Ranch Gate Rd.
128th Street	Jomax Road alignment	Dynamite Boulevard
130th Street	Southern terminus	Shea Boulevard
136th Street	Dynamite Boulevard	Lone Mountain Road
Camelback Road	82nd Street	Granite Reef Road
Chaparral Road	66th Street	Scottsdale Road
Dove Valley Road	60th Street	64th Street
Eastwood Lane/Via de Ventura	Scottsdale Road	Doubletree Ranch Road
Granite Reef Road	Thomas Road	Osborn Road
Granite Reef Road	McDonald Drive	Arizona Canal
Grayhawk Drive	Scottsdale Road	Hayden Road
Jackrabbit Road	Quail Place	Scottsdale Road
Jackrabbit Road	Miller Road	Hayden Road
Miller Road	Chaparral Road	Jackrabbitt Road
Miller Road	Shea Boulevard	Cactus Road
Mountain View Road	117th Way	124th Street
Oak Street	56th Street	64th Street
Oak Street	68th Street	Miller Road
Oak Street/Murray Lane	Miller Road	Granite Reef Road
Osborn Road	64th Street	68th Street
Osborn Road	Hayden Road	Granite Reef Road
Paradise Lane	98th Street	Thompson Peak Parkway
Pinnacle Peak Road	92nd/93rd Street	Via Ventosa
Raintree Drive	Frank Lloyd Wright Boulevard	100th Street
Ranch Gate Road	118th Street	128th Street
Roosevelt Street	Scottsdale Road	Hayden Road
Roosevelt Street	Granite Reef Road	Latham Street

Sweetwater Avenue	Scottsdale Road	Hayden Road
Sweetwater Avenue	90th Street	Frank Lloyd Wright Boulevard
Thunderbird Road	Hayden Road	84th Street
Via Linda	Via de Ventura	Loop 101 underpass

Figures S-3 through S-7 are graphical representations of the typical cross section for each street type.

Figure S-3: Generalized Street Cross-section – Major Arterial



Figure S-4: Generalized Street Cross-section – Minor Arterial



Figure S-5: Generalized Street Cross-section – Major Collector





Figure S-6: Generalized Street Cross-section – Minor Collector

Figure S-7: Generalized Street Cross-section – Minor Collector With No Center Lane



For all street classifications, the travel lane and bike lane dimensions, sidewalk widths, sidewalk attachment to/detachment from the curb and placement of sidewalks with respect to shade trees are determined on a street segment basis. The type of curb, including vertical, rolled, or ribbon, is also determined on a street segment basis. (Additional information for these details is provided in the DS&PM). Character-based street classifications exist for each type of street--rural, suburban or urban. (For more information on street types, please see descriptions above and the DS&PM)

## **RIGHT-OF-WAY**

Typical right-of-way requirements are provided in the DS&PM cross section examples. However, many street segments have had varying classifications over time. As a result, Figure S-8 is provided to identify the recommended right-of-way dedication widths for all streets classified as minor collector and larger on the Street Classification Map. The recommended widths are intended to provide a consistent outside edge of right-of-way that matches previous dedications and acquisitions, as well as to maintain consistency with the city's *Scenic Corridor Design Guidelines* (2003). These dimensions are stated for the street segments only. At intersections, a larger dimension may be necessary to accommodate turning lanes.



## **PERFORMANCE MEASURES**

- 1) Reduce citywide intersection and roadway segment collision rates, based on six-year moving averages.
- 2) Maintain existing streets to a citywide "Very Good" pavement condition index (70-85).
- 3) Maintain vehicular level of service (LOS) D or better at most signalized intersections, except in designated activity cores or urban roadway corridors where walkability, transit access, and aesthetic or right-of-way considerations are overriding.
- 4) Use Maricopa Association of Governments data to monitor average roadway travel times and assess the feasibility of mitigation strategies when a trip takes 30% longer in peak travel times than during non-peak times.
- 5) Target average daily traffic volumes on collector streets 7,500-9,000 vehicles per lane per day using 2040 forecasted volumes.
- 6) Target average daily traffic volumes on arterial streets to no more than 8,500-10,000 vehicles per lane per day using 2040 forecasted volumes.
- 7) Maintain a positive (excellent/good) rating of 70 percent or better in the National Community Survey for "Ease of Travel by Car."

# PUBLIC TRANSIT ELEMENT

## INTRODUCTION

Public transit is a key component of the city's transportation network and a critical mobility alternative for Scottsdale residents, visitors and workers. The Public Transit Element of the Scottsdale Transportation Action Plan (TAP) provides guidance on maintaining a viable transit system and expanding service to meet the needs of the community and region. This guidance aligns with the Connectivity section of the 2035 Scottsdale General Plan.

Public transit service coincides with Scottsdale's unique character areas, each with varying needs and lifestyles. It also serves visitors from all over the world, along with a large seasonal population. An effective transit service must provide transportation choices for those who elect to use transit, as well as those who are dependent on it by integrating future technology and micro-mobility solutions. Ultimately, transit planning aims to enhance connectivity to schools and inter-jurisdictional coordination; provide accessible mobility choices; reduce congestion and pollution; and improve quality of life.

A robust transit system does not stop at city boundaries but makes strong connections to the regional system. Routes should effectively serve major employment hubs, activity centers, local businesses and schools throughout Scottsdale and provide transfers to other routes that link to various parts of the Valley. Convenient and safe access to transit supports employees who work within and outside of Scottsdale, along with students, from elementary to college age.

The future for Scottsdale transit hinges on the ability to leverage and build on the existing bus system and improve connectivity to the rest of the region through cost-effective and datadriven solutions. Transit changes go through a regional public involvement process twice a year, and proposed modifications are based on public input, ridership, public requests, survey data and funding. Continuing to build strong partnerships with neighboring communities, such as Phoenix and Tempe, and Valley Metro, the regional transit agency, is very important for ensuring a successful transit system in Scottsdale.

Continued funding for Scottsdale public transit also relies on people choosing to use it. To ensure transit service is attractive and competitive with other forms of transportation, it must be frequent, fast and convenient. In addition, the vehicles and bus facilities must be clean, reliable and comfortable.

Scottsdale Transportation and Streets developed a series of transit improvement strategies to be phased in over the next five to ten years. Planned improvements closely align with the 2035 General Plan and are consistent with the Scottsdale City Council's objective of "Advancing Transportation."

## GOALS

- Build a viable, cost effective, reliable public transportation alternative for all income levels and lifestyles and that coincides with Scottsdale's unique character areas, each with varying needs. Effective transit service provides citizens, visitors, a seasonal population and special events with transportation choices.
- 2) Develop routes that effectively serve major employment, commercial and retail uses; community and senior centers; schools; and other activity centers throughout Scottsdale, and that connect to the regional system.
- 3) Focus service on the transit-dependent population, as well as those who choose public transit for their transportation.
- 4) Continually monitor and improve paratransit programs as boundaries change with transit improvements.
- 5) Implement service and amenities to make the system more convenient to use and sustainable over time. Special consideration will be given to emerging technologies and infrastructure that improve service, mitigate the extreme heat and help reduce emissions.
- 6) Ensure that all transit assets, including the bus fleet, bus stops and park-and-ride facilities, are in a state of good repair.
- 7) Link the city's extensive active transportation network for pedestrians and cyclists directly to the public transit system.
- 8) Improve connections to the region's expanding High-Capacity Transit system (Light Rail, Streetcar, and Bus Rapid Transit) and provide convenient transfers to fixed service routes that link to other parts of the Valley.
- 9) Build upon the goals in the 2035 General Plan and the overall goal of Scottsdale City Council to "Advance Transportation." Provide transit investments that can be implemented with sustainable funding.
- 10) Maximize use of existing transit facilities (transit centers, park-and-rides, bus stops) to strengthen connections to local, fixed route, express and other potential transit modes and provide needed amenities and parking for those utilizing the transit system.
- 11) Explore micro transit options.

## POLICIES

- 1) Service standards for Scottsdale's local bus routes ensure a 30-minute minimum frequency of service.
- 2) The standard for local bus stops is placement at 1/4-mile intervals.

- 3) To comply with National Transit Database reporting requirements, financial and system information will be reconciled quarterly.
- 4) Gather key transit system data by using Automated Passenger Counters and Clever Devices to analyze, measure and ensure the success of the system.
- 5) Review bus route performance at the segment level to evaluate and implement necessary changes to ensure successful routes and passenger connections within the transit system.

## **CURRENT TRANSIT SYSTEM**

Existing transit service in Scottsdale is characterized by regional fixed route buses operating on the arterial and collector street grid system, express bus service, the trolley system and paratransit. (See Figure T-1.) Scottsdale currently has nine fixed routes, one express route and four trolley routes.

It is important to note that Trolley is the brand name for Scottsdale's owned and operated bus service, which differs from fixed routes by providing direct routes (without transfers) to

selected activity centers in Scottsdale. Trolley routes also deliver better connectivity between neighborhoods, commercial corridors and the regional system. The Scottsdale Trolley is a free service funded by the 0.2% Scottsdale Transportation Sales Tax. Scottsdale also receives preventative maintenance funds from the Federal Transit Administration (FTA), Arizona Lottery Funds and other federal grants to offset a portion of trolley operating expenses. In addition, all trolley buses are purchased with FTA grant funds, which typically have a 15% to 20% local match requirement. There are currently 21 buses in the city's trolley fleet.



Trolley utilizing roundabout at Mustang Transit Center

Scottsdale has intergovernmental agreements (IGAs) with Valley Metro and the city of Phoenix to operate fixed route service, the most common form of transit service in the region. Fixed routes, where the Regional Fare Policy applies, are primarily funded with the Proposition 400 Regional Sales Tax and are paid for per mile. It uses standard size transit vehicles (usually 40-foot buses) and is generally characterized by buses operating along the major arterial grid network. The vehicles make frequent stops, and passengers may need to make transfers to reach their destinations. Route 72 on Scottsdale Road is an example of fixed route bus service.

Almost all fixed bus routes in Scottsdale connect to other jurisdictions, and the service is contracted to an outside provider. Most transit service is focused south of Frank Lloyd Wright Boulevard, where the highest population, land use densities and need are located.

Express buses operate as commuter service during peak hours and usually connect outlying areas with major activity centers. The routes, with limited a.m. and p.m. trips, typically serve park-and-ride lots or transit centers and may parallel fixed route service with fewer stops. Route 510, which travels between Scottsdale's Mustang Transit Center and downtown Phoenix, is an example of express bus service. Scottsdale is proposing to expand the express bus system by providing a convenient link to and use of the freeway system, the Mustang Transit Center and the Thunderbird Park-and-Ride.

East Valley Dial-a-Ride is a federally mandated demand-responsive paratransit service that does not follow a fixed route. Paratransit provides flexible-schedule, on-demand transportation for those unable to access traditional fixed route service, such as seniors and passengers with disabilities. The Americans with Disabilities Act (ADA) requires that complementary paratransit service be provided in all areas within 3/4 mile of fixed route bus service (See Figure T-2). Currently Scottsdale does not have any bus service north of Frank Lloyd Wright Boulevard and residents there fall outside the required paratransit service boundary. To help residents who are outside of the mandated service area, the city participates in the RideChoice program through Valley Metro.

Scottsdale also provides Cab Connection, an alternative program to Dial-A-Ride. Cab Connection offers more flexibility than Dial-a-Ride and operates at less cost to the city using a voucher system. All users must be Scottsdale residents and have a disability, be on dialysis or be age 65 or older. Extended service hours are usually provided for individuals who qualify under ADA.



Figure T-1

Figure T-2



## FACILITIES

Existing transit facilities in Scottdale range from on-street passenger facilities, such as bus stops, to large facilities, such as park-and-rides and transit centers. Currently, Scottsdale has 524 active bus stop locations for all transit routes that are continually assessed for appropriate amenities, accessibility, and safety, including more lighting opportunities. To date, 250 of those locations have a bench or seating, 163 have transit shelters and 237 provide shade. Scottsdale

uses a standard bus shelter kit that includes a bus shelter, seating, a trash receptacle, a bicycle rack and signs. Other amenities, including vertical shade elements for early morning and late afternoon users, should also be considered as technology and funding become available. The following criteria are used for deciding bus shelter locations:

- Bus frequency
- Highest ridership locations, often at the one-mile arterial intersections
- Bus operational requirements
- Pedestrian safety
- Passenger comfort
- Right-of-way availability



Scottsdale standard bus shelter and associated amenities

Bus stops are planned at ¼-mile intervals on all fixed bus routes and wider spacing for limited-stop/express bus Sco

routes. Overall, standard bus stop spacing makes the

system more user friendly, as riders know where to expect stops and the city can market or "brand" service along a route.

Currently there are two transit passenger facilities located in Scottsdale. The Thunderbird Parkand-Ride, located adjacent to the Airpark at the southeast corner of Thunderbird and Scottsdale roads, provides 450 parking spaces for transit users who wish to make system connections and leave their vehicle at a secure facility. Planned improvements aim to increase use of the facility by providing access from additional routes. The Mustang Transit Center, located on 90<sup>th</sup> Street between Shea Boulevard and Mountain View Road outside the Mustang Library, provides amenities for end-of-line users or those making transit connections to other parts of the system. In addition to the two transit facilities, informal park-and-ride agreements have been established for shared parking arrangements at lots throughout Scottsdale.

## PLANNED IMPROVEMENTS

Through the planning process, the following phased transit improvement strategies (See Figures T-3 and T-4) were developed in addition to the goals and policies. These strategies will help prioritize capital projects and system operational improvements. Consistent with the overall TAP emphasis, the strategies 1) emphasize refining the existing transportation system over adding new infrastructure and 2) emphasize livable streets/community over rapid traffic throughput.

#### Bus stops

- Improve the bus stop cleaning, refurbishment and prioritization process.
- Expand and improve lighting opportunities at bus stops.
- Improve ADA accessibility at bus stops in conjunction with the city's ADA Transition Plan.
- Increase shade at bus stops and modify structures to address solutions for full-day coverage.

#### Service

- Work in tandem with Complete Streets efforts to accommodate all users of the street and make strong ties to the active transportation network.
- Coordinate layover locations on a continual basis to ensure drivers have amenities.
- Modify end-of-line turnarounds as needed to ensure connections are made with productive mileage.
- Provide connectivity between the MLHD and 68CM trolley routes on Camelback Road.
- Implement an express route connecting the Thunderbird Park-and-Ride and Mustang Transit Center to downtown Phoenix using Loop 101 and 202.
- Expand the use of the Thunderbird Park-and-Ride and the Mustang Transit Center.
- Expand service to McDowell Mountain Aquatic Center and Arabian Library.
- Provide special event service for major venues, such as the Waste Management Open and WestWorld events.

#### Data

- Improve the process and accuracy of reporting revenue miles and costs to the National Transit Database to ensure city compliance to receive federal funding.
- Develop a Transit Asset Management Plan.
- Use Automated Passenger Counter data to evaluate routes at the segment level.

Figure T-3



T-9

Figure T-4



T-10

#### Information

- Market transit services to city staff and the general public through press releases, social media, internal publications and the city website and news feed.
- Provide travel training for potential new rider groups.
- Consider rebranding "Scottsdale Trolley" through a public input process.

#### Emerging Technology

- Develop an electric bus fleet.
- Improve Transit Signal Priority.
- Expand the use of Clever Devices for increasing system data requirements and communication needs.

#### Regional Connectivity

- Based on ridership, funding and public comments, improve service frequency on Phoenix and East Valley routes connecting to Scottsdale.
- Expand connectivity to regional Light Rail and Tempe Streetcar with Trolley and fixed route service.
- Connect to on-street Bus Rapid Transit (BRT) routes from Phoenix.
- Evaluate the feasibility of and potentially implement an on-street BRT route on Scottsdale Road from the Thunderbird Park-and-Ride to Chandler. Use of dedicated lanes, while not anticipated, would be subject to review and approval by City Council.



## **PERFORMANCE MEASURES**

Service performance measures provide the framework for evaluating our transit service both within and in and out of Scottsdale. Scottsdale evaluates local and regional service using three performance areas: ridership, productivity and quality of service. Performance measures help define the specific modal service levels (frequency), service design (routing) and standards for modifying service and can include existing and future regional fixed routes, trolley service, circulator service, express service, Bus Rapid Transit and paratransit. Performance measures provide a toolbox for determining productivity and managing transit service throughout the system.

The following series of performance measures will help evaluate the success of our existing transit system and future improvements.

- 1) *Bus boardings per revenue mile* is the number of passengers collected during one mile of scheduled revenue service (productivity).
- 2) *Bus boardings per revenue hour* is the number of passengers collected during one revenue hour of scheduled revenue service (productivity).
- 3) *On-time Performance* analyzes whether trips are arriving at time points early, late or on time and determines service reliability for customers (productivity).
- 4) *Connectivity to transportation network* evaluates the system on a quarterly basis to ensure convenient ties within the city transportation network and to the regional transit system (connectivity).
- 5) *Missed trips due to operational failures* determines maintenance quality and loss in revenue due to operational interruptions (reliability).
- 6) Rating of bus or transit service on the National Community Survey evaluates public opinion of the system. The city will aim for a positive rating of 60% or better (quality of service).

# **BIKEWAY ELEMENT**

## **INTRODUCTION**

The Bikeway Element of the Transportation Action Plan (TAP) serves to expand and enhance Scottsdale's on-street and paved path network to provide safe and inviting access for pedestrians, bicyclists and other non-motorized users to travel to destinations in Scottsdale and neighboring communities.

The City of Scottsdale currently maintains a robust network of on-street and off-street bike facilities, including bike lanes, bike routes, shared use paths and paved roadway shoulders (see Figure B-1).





Scottsdale's street system provides the most direct access to nearly all destinations in the city for active transportation users via bike lanes and bike routes. These bike lanes and bike routes allow users direct access to the off-street shared use path network. City's design guidelines for arterial and collector streets are found in the *Design Standards and Policies Manual* (DS&PM). These facilities include bike lanes, sidewalks, and trails and are typically included with new construction and major reconstruction projects. New or modified bike lanes can also be installed when streets are restriped with pavement management projects.

The off-street network consists of paved shared use paths and unpaved shared use trails. Trails are discussed in the Trail Element of this TAP. All shared use paths and side-paths (adjacent to streets) are open to all non-motorized users. Shared use paths represent an important component of the overall bike network. They provide opportunities to ride for users who may not be comfortable riding in the roadway, such as casual cyclists, children, families and older adults.

## GOALS

- Build bike facilities that form a continuous network with seamless connections to public transit, schools, neighborhoods, community destinations and the regional bike network. Special consideration will be given to emerging concepts and infrastructure that increase the comfort and confidence level of all riders.
- 2) Implement education, encouragement and data collection programs to increase bike usage and improve bike safety.
- 3) Expand the network of on-street and off-street bike facilities to increase the amount of biking for all trip purposes.
- 4) Provide access to a shared use path within ½-mile of all residences, unless privatelyowned property or natural terrain make it impractical.
- 5) Maintain and enhance the current bike transportation network to meet current design standards.
- 6) Achieve a Platinum-level Bicycle Friendly Community certification from the League of American Bicyclists (LAB).

## POLICIES

- Construction Priorities: Completion and renovation of the three primary shared use paths (Arizona Canal/Cross Cut Canal, Central Arizona Project Canal and Indian Bend Wash), followed by other paths that improve regional connectivity, will be prioritized for use of capital improvement funds and grant requests. Side paths next to streets should be incorporated into improvement plans for collector and arterial streets.
- 2) Roadway Restriping: Improve on-street bike accommodation and bicyclist and pedestrian comfort through striping changes that consider historic and forecasted motor vehicle traffic, center turn lane requirements, existing pavement width and existing lane widths. This restriping protocol will typically be applied when roadways are being treated through standard pavement preservation applications and will incorporate buffered bike lanes where feasible.

- 3) Neighborhood Bikeways: Develop Neighborhood Bikeways on low-volume, low-speed roadways to be used by a wide range of bicyclist abilities. Improvement options should consider traffic calming and enhanced roadway crossings.
- 4) Wayfinding: Implement a cohesive wayfinding system directing people to and along shared use paths and Neighborhood Bikeways and to community destinations.
- 5) Intelligent Transportation Systems (ITS): Identify and test solutions that balance traffic flow with improved bicycle mobility in key corridors.
- 6) Education and data collection: Promote bicycling's benefits for health, recreation, transportation and tourism. Evaluate bicycle usage counts on the network to establish trends and prioritize outreach and improvements.
- 7) Safety and Enforcement: Inform the public (motorists, bicyclists and pedestrians) about bicycle, vehicle and pedestrian operation on streets and paths. Work with public safety staff to improve enforcement of traffic laws related to biking. Collect, analyze and report on bicycle collision data on a regular basis and develop remediation measures to address high-frequency and high-volume collision locations. Support Safe Routes to School programs. Support the use of grade separated crossings at barriers such as freeways and arterial roadways and along large drainageways.

## **ON-STREET BIKEWAYS**

The on-street bike system will continue to expand and improve as new roadway segments of minor collector size or larger are constructed. New construction will follow the standard cross sections already in place or identified for revision through the TAP, and as mentioned above, potential new bike lane restriping efforts will be coordinated with the city's pavement management program.

As noted in the Street Element, minor collectors that do not require a center turn lane will also be a focus area for adding improved bike lanes, typically with painted buffers. Constructed bike lane buffers will also be assessed based on applicability, safety, cost and maintenance issues.

Most bikeway system improvements resulting from travel lane reductions would occur through striping changes coordinated with the pavement surface treatment cycle, which follows a timeframe of approximately 7-10 years. Curb placements will not change, and right-of-way widths will not be reduced from those shown in Figure S-8, unless directed by the City Council. Notification to neighborhoods of changes in travel lane configurations will occur through signage, electronic communications, and, where needed, through in-person meetings.
### **NEW DESIGNATION – NEIGHBORHOOD BIKEWAYS**

Neighborhood Bikeways are typically found on streets with traffic volumes of under 2,000 vehicles per day (vpd) and residential speeds (25 miles per hour or less) and often contain connections that can only be made by bike or as a pedestrian. They are typically found on the ¼-mile street network through neighborhoods but feature destinations such as parks, schools, libraries, community centers, religious centers, and medical facilities. They also connect to the rest of the bikeway network. Compared to bike lanes along busier streets, neighborhood bikeways are low-stress and accommodate a wider range of users. They typically have shared lane markings (sharrows) or bike lanes, depending on traffic volumes, and can include signage, traffic calming and enhanced crossings at major streets (see Table B-1 and Figure B-2).

Street	From	То	Mileage
70th Street	Continental Drive	2nd Street	2.4
	(potential extension)		0.4
74th Street	McKellips Road	Thomas Road	2.0
	(potential extension)		0.5
84th Street	Shea Boulevard	Thunderbird Road	2.5
86th Street	Camelback Road	Lincoln Drive	2.0
	(potential extension)		0.5
Arabian Trail	Via Linda	Mountain View Road (east)	2.5
90th Street	Shea Boulevard	Redfield	2.4
104th Street	Shea Boulevard	Sweetwater	1.5
	Mountain View		
110th Street	Road	Frank Lloyd Wright	1.5
Jackrabbit	Scottsdale Road	87th Terrace	2.0
Cholla	89th Street	Via Linda	2.8
Sweetwater	84th Street	Frank Lloyd Wright	2.6
2nd Street	Indian Bend Wash	Crosscut Canal	1.6
Glenrosa Street/5th Avenue	Indian Bend Wash	Arizona Canal	1.4
Chaparral Road/Rancho Vista Drive	64th Street	Arizona Canal	1.2
70th Street/Marshall Way	Osborn Road	Camelback Road	1.1
75th Street	2nd Street	Camelback Road	0.9
		Total	31.8

#### Table B-1: Scottsdale Neighborhood Bikeways



Figure B-2: Neighborhood Bikeways

# SHARED USE PATHS

The existing and planned shared use path network is shown in Figure B-3. These paths link to the on-street network while providing connectivity to a wider range of bicyclists. They also feature grade-separated crossings in many locations.





Segments are prioritized for construction based on three criteria: the potential demand in the vicinity of the corridor, the existing bicycling conditions on parallel roadways and the potential for connections to the city's existing bicycle network. The availability of grant funding is also considered.

Three primary shared use paths serve as the spine and main linkages throughout Scottsdale: the Indian Bend Wash (IBW) Path, the Crosscut Canal Path/Arizona Canal Path and the Central Arizona Project (CAP) Canal Path. Each provides local and regional connectivity and is a high priority for implementation. More details on the three primary paths are provided below and shown in Figure B-4:

- Indian Bend Wash (IBW) Path The IBW path runs north/south and links to the city of Tempe and the town of Carefree. Approximately 15 miles of path exist from McKellips Road to the WestWorld area, which is the approximate center point of the IBW Path. The northern section is approximately 13 miles long, of which 3.5 miles is constructed between Trailside View and Pinnacle Peak Road, while the rest is planned.
- Crosscut Canal Path/Arizona Canal Path The 1.8-mile Crosscut Canal Path connects to a path in Tempe and to the 5.8-mile Arizona Canal Path, which connects to Phoenix and the Salt River Pima Maricopa Indian Community. Both canals are paved throughout Scottsdale.
- Central Arizona Project (CAP) Canal Path As part of a regional planned path, Scottsdale's 9.2-mile planned path runs along the south side of the CAP Canal, primarily along adjacent developed land. Approximately 2.2-miles of the path are complete east of Loop 101 along the Frank Lloyd Wright Boulevard corridor. This path connects to city of Phoenix and the Salt River Pima-Maricopa Indian Community.

Changes to the future non-primary path network are broken into three categories: additions to the planned system, additions to the existing path system and deletions from the planned path system. These changes represent a net change of 12 additional path miles. These changes are shown in Figure B-5.



Figure B-4: Primary Shared Use Path Map



Figure B-5: Changes To Future Path Network

### **PERFORMANCE MEASURES**

- 1) Reduce citywide per capita bicycle collision occurrences, based on six-year moving average data.
- 2) Maintain a positive (excellent/good) rating of 70% or better in the National Community Survey for "Ease of Travel by Bicycle."
- 3) Percentage of residences within ½-mile network distance to a shared use path.
- 4) Mileage of completed shared use paths.
- 5) Mileage of arterial and collector roadways with bike lanes.
- 6) Mileage of completed Neighborhood Bikeways.
- 7) Number of annual bicyclist boardings on transit routes.
- 8) Annual counts from permanent counters, mobile counters, and third party vendors.

# **TRAIL ELEMENT**

## INTRODUCTION

Scottsdale's goal is to develop and maintain a citywide interconnecting network of trails to provide valuable recreation and transportation opportunities for residents and visitors. Trails function as transportation links between schools, residential areas, parks, places of employment, shopping areas and other areas of interest. Trails also provide hikers, walkers, joggers, equestrians, mountain bicyclists and people with disabilities opportunities to improve health and fitness, spend time with family and friends, enjoy the natural environment and escape the stress of everyday life. Trails are an integral part of Scottsdale's transportation infrastructure and a fundamental component to an enhanced quality of life for the community.

Scottsdale has been preparing plans and building public trails for the last five decades. In 2004, after an extensive public involvement process, the *Scottsdale Trails Master Plan: On the Right Trail* was officially adopted by City Council. In 2007, the Transportation Department assumed responsibility for public trails outside Scottsdale's McDowell Sonoran Preserve and kept the commitment to include trails within an element of the first Transportation Master Plan update which occurred in 2016. This 2021 Transportation Action Plan Trail Element is a culmination of the past planning efforts and aligned with approved policies, network planning and design standards.

Today Scottsdale has 150 miles of trails that are woven throughout neighborhoods within the city. This transportation action plan documents 140 miles of planned trails that will complete the buildout of the network over future years (see Figure TR-1)



#### Figure TR-1: Miles of Existing and Planned Trails Outside of McDowell Sonoran Preserve

## GOALS

- 1) Develop an effective and connected multi-modal transportation system with the integration of trails.
- 2) Actively work with neighborhoods, neighborhood associations and adjacent jurisdictions to coordinate all planned and existing links to the trail network.
- 3) Provide improved trail connectivity within neighborhoods and access to schools and parks.
- 4) Maintain Scottsdale's high aesthetic values and environmental standards when planning and constructing trails.
- 5) Educate the public about easements and maintenance responsibilities associated with the trail network.

### POLICIES

- 1) Trail access: Purchase public access if necessary, align trails where there is available access, and avoid condemnation when possible.
- 2) Trail obstruction: Coordinate with landowners regarding obstruction removal and require trail realignment by landowner if necessary.
- 3) New trails crossing undeveloped land: Identify existing rights of way along parcel boundaries to build temporary trail if necessary and require developers to dedicate a public nonmotorized access easement and build trail if applicable.
- 4) Trail Easement Abandonment: Trail easement abandonment requests will require a Trail Impact Analysis.

### TRAIL CLASSIFICATIONS & STANDARDS

Trail widths vary depending on the purpose and environment. A trail could follow a major roadway, weave through a neighborhood or traverse rugged terrain. Therefore, trail classifications and standards were established to assist in providing the right trail for the right place.

Scottsdale has four types of trails: primary trails, secondary trails, neighborhood trails and minimally improved/rugged trails. Each classification has unique standards that align the trail with its environment. For all trail classifications, motorized vehicles are only permitted for maintenance and emergency purposes and where trail widths allow.

#### **Primary Trails**

Primary Trails provide both transportation and recreation links between residential areas, schools, businesses, parks, places of employment and other areas of significant community activity. Primary Trails are used by hikers, equestrians and bicyclists and typically have the most use of the trail types. The trail surface may be comprised of either native soil or decomposed granite. Urban Trails have the greatest width of all trail classifications and therefore accommodate leisurely side-by-side travel and easy passing for multiple user types. These trails are typically located within areas of relatively level topography.

### Secondary Trails

Secondary Trails provide alternative transportation and recreation links through areas such as desert washes, scenic corridors, vista corridors and other desert open space areas. Secondary Trails are also used by hikers, equestrians and bicyclists, but typically experience a lower level of use than Primary Trails. Secondary Trails are narrower than Primary Trails and occasionally users must travel single file. Secondary Trails are typically located within areas of level to moderate topography.

### **Neighborhood Local Trails**

Neighborhood Local Trails provide access in and around neighborhood areas and provide connections to Primary and Secondary Trails. Neighborhood Local Trails typically act as "feeder" trails to the regional trail network and may provide close-to-home recreational opportunities. Hikers, equestrians and bicyclists also use Neighborhood Local Trails, and in more rural areas, they sometimes serve as "sidewalks."

### Minimally Improved/Rugged Trails

Minimally Improved/Rugged Trails are built as far away from traffic as possible and designed for equestrians, hikers, runners and mountain bikers. Minimally Improved/Rugged Trails are constructed in areas where other disability-accessible trail options are available or where the construction of an accessible trail will alter substantially the character of the surrounding area, impact culturally significant areas or be difficult to construct because of the terrain, such as in washes.

Trail standards such as slope, width and vegetation clearance are associated with each trail classification. These standards can be found in the Scottsdale *Design Standards & Policies Manual* (2018).

# TRAIL CORRIDORS & REGIONAL CONNECTIVITY

Scottsdale has a robust trail system throughout the city with 220 miles of trails in Scottsdale's McDowell Sonoran Preserve and 150 miles of trails in the neighborhood trail system.

Main trail corridors, including the Arizona Canal, Crosscut Canal, Central Arizona Project Aqueduct and Arizona Public Service (APS) Powerline, provide gateways to the regional trail system. An extensive regional trail system, including the Sun Circle Trail and Maricopa Trail, winds through Scottsdale and aligns with existing trails located along the main trail corridors, the Indian Bend Wash Path System and Scottsdale's neighborhood trail system (see Figure TR-2).



Figure TR-2: Scottsdale Existing Trail System

### TRAIL PRIORITIZATION

Neighborhood trails are constructed using a yearly capital project. The first priorities for trail construction are the completion of planned connections to the Scottsdale's McDowell Sonoran Preserve at designated access points approved by the McDowell Sonoran Preserve Commission and planned Neighborhood Trails in rural areas that do not have sidewalks.

Specific trail segments and improvements are further prioritized by the following criteria:

- Corrects safety issue on an existing trail or with a new trail
- Completes a gap or unfinished project resulting in a significant, usable and continuous trail
- Completes the final unfinished segment in an existing trail
- Connects a trail to another trail
- Improves access to a neighborhood, community, Preserve or regional trail destination
- Constructs a trail which meets the desired design guidelines without special conditions that would increase the construction costs
- Builds a trail in an area with high potential use due to the surrounding character area and/or land uses

### ADJUSTMENTS TO PLANNED NETWORK

During the development of the Transportation Action Plan, the planned trail system was reviewed to identify segments that:

- Lack connectivity,
- Are prone to network redundancy,
- Are infeasible to construct due to terrain and/or lack sufficient public rights-of-way or easements.

In this effort, 48 miles of trails were removed from the planned network of 188 miles, leaving 140 miles of planned trails. Any existing public easements in the removed segments will be retained.

Additionally, the Transportation Action Plan prioritizes completing the remaining connections to Scottsdale's McDowell Sonoran Preserve at designated access points approved by the McDowell Sonoran Preserve Commission and filling in gaps within the neighborhood trail systems.

Scottsdale will continue to add to the robust network of trails available to residents and visitors. Most importantly, Scottsdale will continue to conduct inventories of the existing neighborhood trail system and make improvements to trails in need of repair. Scottsdale will also continue to educate residents and homeowner associations on their responsibility to maintain trails adjacent to their homes and communities. Figures TR-3 through TR-5 provide the locations of the planned trail segments removed from the network. Figure TR-6 depicts the planned trail network outside of the Scottsdale's McDowell Sonoran Preserve including network adjustments.



Figure TR-3: Central Area – Planned Trail Segments Removed from Network

Figure TR-4: Northern Area A – Planned Trail Segments Removed from Network





Figure TR-5: Northern Area B – Planned Trail Segments Removed from Network



Figure TR-6: Scottsdale Planned Trail System

# **PERFORMANCE MEASURES**

- 1) Mileage of completed trails per year
- 2) Mileage of rehabilitated trails per year
- 3) Percent of planned trail network constructed per year
- 4) Percent of population within ¼ mile network distance to trail

# PEDESTRIAN ELEMENT

## INTRODUCTION

Scottsdale's sidewalks and enhanced crossings provide a network for people walking, skating and using personal assistive mobility devices. The Pedestrian Element will assess priorities to make Scottsdale more walkable and provide safe, convenient, barrier-free pedestrian ways and facilities that promote walking short distances. For example, shade along sidewalks and bus stops can make walking and transit use much more comfortable.

Specific sidewalk standards are found in the *Design Standards and Policies Manual* (DS&PM) Street Geometrics and Public Pedestrian Facilities sections. The TAP Streets Element provides cross sections by functional classification with guidance similar to that in the DS&PM. The cross sections outline sidewalk placement, which vary by functional classification and character areas.

One significant change to the pedestrian element in the 2021 TAP is a new policy to locate shade trees on the west side of north/south streets and on the north side of east/west streets on the side of the sidewalk, opposite the street. Previously shade trees were placed between the sidewalk and the street. The new orientation provides the most shade for pedestrians during the hottest months of the year.

# GOALS

- 1) Build and maintain pedestrian facilities that form a continuous and interconnected network with seamless connections to public transit, schools, neighborhoods and community destinations.
- 2) Provide pedestrian amenities, promote land uses and encourage private efforts that enhance public spaces, neighborhoods, commercial and employment areas.
- 3) Implement education, encouragement and data collection programs to increase walking and reduce the number and severity of pedestrian crashes.
- 4) Create and improve pedestrian access between neighborhoods and to transit routes.
- 5) Maintain and enhance the current pedestrian network to meet current design standards.
- 6) Provide pedestrian/cycling enhanced crossings where appropriate.

### POLICIES

Construction Priorities: Prioritize use of capital improvement funds to complete projects that address accessibility concerns, network gaps, school and/or transit access and reductions in neighborhood barriers.

- 1) Roadside Landscaping: Orient shade tree placement to maximize shade on the sidewalk during the summer months (west of west-side sidewalk on north/south roads, north of north-side sidewalk on east/west roads).
- 2) Roadway Restriping: Improve pedestrian comfort through striping changes that provide greater separation from vehicles though the installation of new bike lanes, wider bike lanes or buffered bike lanes.
- 3) Neighborhood Barriers: Reduce the length of continuous perimeter walls to encourage pedestrian connectivity to collector and arterial streets and shared use paths and transit connections.
- 4) Enhanced Pedestrian Crossings: Develop and use the *Guidelines to Identify Pedestrian Crossing Treatments* to support grade separations, pedestrian signals and other crossing enhancements.
- 5) Intelligent Transportation Systems (ITS): Identify and test solutions that balance traffic flow with improved pedestrian mobility in key corridors.
- 6) Safety: Work with public safety staff to improve enforcement of traffic laws related to pedestrians. Collect, analyze and report on pedestrian collision data on a regular basis and develop remediation measures to address high-frequency and high-volume collision locations. Support Safe Routes to School programs.

# SIDEWALK CROSS SECTIONS

Trees are located on the west or north side of the sidewalk to provide maximum shade during hotter times of the year. In previous plans, trees were located between the sidewalk and the curb on both sides of the street. Lower growing landscaping will typically remain in a 3- to 4-foot buffer between the sidewalk and curb. Figure P-1 shows the current cross section and location of trees, while Figure P-2 shows the proposed change in location of trees and shade. Figure P-3 shows the new orientation of shade trees on streets. Cross sections did not change on the south side and east side of streets in relation to the placement of trees and continue to place a landscape buffer between the sidewalk and curb.



#### Figure P-1: Existing Cross Section



Figure P-2: Cross Section with Proposed Tree Position Change

Figure P-3: Example of Proposed Cross Section



In areas where sidewalks are less likely to experience high volumes of pedestrians due to lower density and/or subdivision access restrictions, one side of four-lane and six-lane streets has a narrower sidewalk of six feet, while maintaining an eight-foot-wide sidewalk on the other side. The wider sidewalk also serves as a side path for bicyclists. Some roads are planned to have a 10-foot multi-use path in place of a sidewalk to provide regional non-motorized connections to the city of Phoenix.

# ACCESSIBILITY

The 2021 draft Scottsdale Americans with Disability Act (ADA) Self-Evaluation and Transition Plan Update prioritizes areas for improvements for pedestrians along streets and transit routes (shown in Figure P-4). Additional ADA improvements will continue to be installed with new streetscape, pavement maintenance, and developer-driven projects.



**Figure P-4: Priority Areas** 

# **ENHANCED CROSSINGS**

Trends show that we are more active than previous generations. With the movement towards livable communities, walking and biking are becoming more attractive to enhance the quality of life. Enhanced crossings are integral in accomplishing connectivity and safety and promote the health, livability and equity of a community. There are two main categories of enhanced crossings: grade separated and at-grade crossings. Criteria such as sight distance, proximity to intersections, traffic volumes, roadway cross section and nonmotorized volumes are used to determine what type of crossing is appropriate at a given location.

Enhanced bicycle, pedestrian and equestrian crossings provide safer connectivity at various locations including intersections, physical barriers and high nonmotorized activity areas. Enhanced crossings also provide regional connectivity, transit access and ADA accessibility. Types of enhanced crossings include bridges, tunnels, pedestrian refuge islands, raised pedestrian crossings, high intensity activated crosswalks (HAWKs) and rectangular rapid flashing beacons. Currently, there are 219 enhanced crossings in Scottsdale ranging from raised pedestrian crosswalks to tunnels and bridges.

As shown in Figure P-5, enhanced crossings are more prevalent in central and southern Scottsdale due to the context of the built environment. Central and southern Scottsdale has an urban and dense environment compared to northern Scottsdale, which has a suburban and low-density environment. A myriad of opportunities remain in central and southern Scottsdale to integrate enhanced crossings. A pedestrian refuge is the most commonly implemented enhanced crossing in Scottsdale because it serves neighborhoods and is cost-effective.



Figure P-5: Scottsdale Enhanced Crossings

# **GRADE-SEPARATED CROSSINGS**

A grade-separated crossing is a bridge, underpass or tunnel that allows nonmotorized traffic to avoid any interaction at street crossings, intersections or a physical barrier. Grade separated crossings are encouraged where paths and trails intersect major streets or canals. Examples of grade-separated crossings are shown in Figure P-6.



**Figure P-6: Grade Separated Crossings** 

Bridge

Underpass

Tunnel

Grade-separated crossings should be required with new construction where major roadways cross a trail or path. Design of new drainage culverts should accommodate a path and trail and consider the needs of bicyclists, pedestrians and equestrians.

# **AT-GRADE CROSSINGS**

Where grade-separated crossings are not viable or necessary, at-grade crossings can be used. In many locations and for many reasons, grade separation and/or signalization may not be feasible or warranted. Several specific treatments can be incorporated at designated crossings that give path and trail users a greater sense of security, comfort and convenience.

#### Signalized At-grade Crossings

In the absence of a grade-separated crossing, a signalized crossing should be considered if warranted, according to the Manual on Uniform Traffic Control Devices (MUTCD). Examples of signalized crossings include a Rectangular Rapid Flashing Beacon or High Intensity Activated Crosswalk (HAWK) (see Figure P-7).

#### **Unsignalized At-Grade Crossings**

Unsignalized at-grade crossings are considerably less costly than grade-separated crossings. Streets with many lanes, higher traffic speeds and higher traffic volumes would better accommodate bicyclists and pedestrians with the use of a greater number of design treatments such as a Raised Pedestrian or Pedestrian Refuge (see Figure P-8).

#### **Figure P-7: Signalized Enhanced Crossings**



**Rectangular Rapid Flashing Beacon** 

HAWK

#### Figure P-8: Unsignalized At-Grade Crossings



**Raised Pedestrian** 

### FUTURE ENHANCED CROSSINGS

Scottsdale recently developed *Guidelines to Identify Pedestrian Crossing Treatments* to assist in determining what type of crossing is appropriate for an identified location. The document incorporates recommendations from state and federal transportation agencies, provides a standardized process to evaluate new crossing locations and provides criteria and considerations for establishing a new enhanced crossing.

In addition to using established guidelines for the installation of new enhanced crossings, Scottdale continues to be proactive in the planning and future capital programming of three identified locations that are critical for regional connectivity. These locations are a bridge over the Loop 101 along the Central Arizona Project Canal, an underpass at Bell Road within the Reata Wash to provide connectivity between WestWorld and Scottsdale's McDowell Sonoran Preserve and an underpass at Loop 101 at the Mayo Boulevard alignment (see Figure P-9). Priority corridors for future grade separations are Scottsdale Road, Pima Road, Frank Lloyd Wright Boulevard and Shea Boulevard.



**Figure P-9: Future Enhanced Crossings** 

# **PERFORMANCE MEASURES**

- 1) Reduce citywide per capita pedestrian collision occurrences, based on six-year moving average data.
- 2) Complete pedestrian improvements identified as Priority Areas in the ADA Self-Evaluation and Transition Plan Update within five years.
- 3) Maintain a positive (excellent/good) rating of 80 percent or better in the National Community Survey for "Ease of Walking."
- 4) Percentage of arterial and collector roadway miles with sidewalks that meet current design standards.
- 5) Percentage of population within ¼ mile network walking distance to a collector or arterial street.

# **IMPLEMENTATION PROGRAM**

### INTRODUCTION

There will always be a finite level of resources available to meet current and future transportation system needs. Therefore, a program to prioritize new transportation infrastructure projects, programs and services must also consider the requirements necessary to preserve, maintain and operate/optimize the existing transportation system. Goal 2 in the Street Element of this Transportation Action Plan (TAP) provides a good example of this concept:

"Develop and manage the street network in a manner that places reliance on maintaining existing infrastructure and improving the efficiency of the existing system before adding new roadway capacity."

The major recurring revenue sources available for transportation are the city's annual share of the State Highway User Revenue Fund (HURF) at \$17.9 million in 2020-21, which is primarily generated through per gallon taxes on fuel and the 0.2% Transportation privilege (sales) tax at \$23.6 million in 2020-21. HURF revenue is shared with cities based on population. When looking at new 2020 census data, HURF revenue is forecast to drop by approximately \$1.1 million per year, versus pre-census 5-year estimates, and will be less in 2025-2026 than was collected in 2020-21. The forecasted 0.2% sales tax revenue is expected to average 3% growth annually through 2025-26.

Both revenue sources have restrictions on their use. HURF expenditures must be tied to the operation, maintenance and improvement of the street system, including traffic signals. However, HURF revenues provide less than 80% of the city's actual costs to preserve, maintain and operate the street system. Up to one-half of the 0.2% sales tax can be used for planning and operations-related transportation costs. The remaining half of the 0.2% sales tax is programmed for capital improvements.

A much smaller recurring revenue source is the state's Local Transportation Assistance Fund (LTAF), which is also shared based on population. Annual LTAF revenue totals approximately \$650,000 per year, less than 2% of the total generated by HURF and the 0.2% Transportation sales tax. LTAF can only be used for transit-related expenses.

Other revenue sources are reliant on voter-approved sales tax extensions, competitive grants and federal funding levels. These include the city's 0.1% temporary Transportation sales tax (expires 1/31/29) at \$12.4 million in 2020-21. Proposition 400 regional transportation sales tax (expires 12/31/25) will provide a total of \$240.4 million and federal one-time grants and federal transit preventative maintenance grants will provide of total of \$30.7 million through 2025-26.

# **EXISTING TRANSPORTATION SYSTEM (2021)**

Pavement/Striping/Signage/Concrete The city maintains 207 million square feet (3,380 lane miles) of street and alley pavement. The street system also includes striping and signage that must be maintained and renovated/replaced on an ongoing basis. Sidewalk maintenance issues are funded out of the pavement-related operating budget, while new ramps that meet Americans with Disabilities Act (ADA) requirements are funded from the pavement overlay capital program.



### Intelligent Transportation/Traffic Signals/Streetlights

Many intersections in Scottsdale are fully signalized, and a large portion of these are connected to the city's Intelligent Transportation System (ITS). In addition, most streets in areas not covered by Natural Area Open Space development requirements, generally south of the Thompson Peak Parkway east/west alignment, have a street lighting system. The city is responsible for operation and maintenance of 318 traffic signals, 175 ITS cameras and 8,966 Streetlights.

### Grading & Drainage/Bridges & Culverts/Sweeping/Dust Control

Due to the city's topography, drainage management is another critical requirement within the transportation system. The city is responsible for 232 bridges and large culverts that are part of the Arizona Department of Transportation's Bridge Inspection Program. The city also maintains 95 washes and drainage channels comprising 160 acres and including 9000 grates, catch basins, handrails and guardrails.

To address airborne particulates, a major concern in the Phoenix region, and stormwater quality, the city operates a program that sweeps major streets twice per month, the Old Town/Entertainment District five times per week, residential streets once per month and shared use paths (57 miles) twice per month. The city also provides additional sweeping service and maintenance when requested. Over 20,000 miles of sweeping occurs annually. The city also has a comprehensive dust control program on unpaved roads and shoulders that includes dust palliative roads (29 miles), shoulders (76 miles), alleys (95 miles) and lots. Maintenance grading is also required on 8 miles of roads and 28 miles of shoulders that do not have dust palliative treatment due to lower traffic volumes.

#### Medians and Right of Way

The city is responsible for 27 million square feet (620 acres) of median and back of curb (right of way) landscaping, which is part of the city's standard cross section requirements for roadway projects. Medians are typically 16-24' wide, depending on the street classification, and the landscaping often includes irrigation systems that also require maintenance. In some master planned communities, the homeowner's association takes on primary responsibility for maintaining median and right of way landscaping.

#### Transit

The city owns and maintains a fleet of twenty-one buses for use on trolley routes. The city also maintains 593 bus stops, 197 of which include bus shelters. The buses, which cost more than \$500,000 each, have been purchased with a combination of federal grants and regional Proposition 400 funding and therefore have not impacted the city's transportation budget. If no replacement for Proposition 400 is enacted, however, the city will likely be responsible for at least 20% of bus purchase costs beginning in 2026. Additionally, bus routes in Scottsdale and associated paratransit service, which receive approximately \$12 million in regional funding per year from Proposition 400, would not be available beginning in 2026.

#### Paths and Trails

Maintenance or sweeping costs for Scottsdale's 129 miles of concrete shared use paths, including side paths in roadway corridors, are absorbed in operating budgets discussed previously. The city does not program dedicated funds for maintaining its 150 miles of trails, the majority of which are the responsibility of adjacent property owners or homeowner associations.

### TRANSPORTATION INVESTMENT PRIORITIES

The following list of ranked priorities will be used to guide transportation system investments:

- 1) Preserve/Maintain/Optimize existing infrastructure.
- 2) Meet Americans with Disabilities Act, Air Quality, Water Quality and other regulatory requirements.
- 3) Enhance safety and test new concepts/technology.
- 4) Provide transit service with minimum 30-minute frequency.
- 5) Develop capital projects with funding from outside sources.
- 6) Develop capital projects that are funded only by the city and prioritize non-motorized access.

The following factors, in addition to cost, will guide transportation investment in specific Capital Improvement Plan (CIP) projects and programs:

• Condition and maintenance cost of existing assets

- Safety and/or regulatory compliance requirements
- Citizen input
- Expected usage levels (current and projected)
- Connection to regional networks
- Completion of a network gap
- Coordination with new development
- Connection to transit service
- Recommendation in a regional plan
- Expansion of non-auto options

# CAPITAL IMPROVEMENT PLAN (CIP) – POTENTIAL PROJECT AND PROGRAM LIST

Taking into consideration the investment priorities and project review factors described in the previous section, the table below provides the recommended list of potential CIP projects. Projects that are currently included in the draft Proposition 400 Extension regional plan (as of July 2022) are highlighted in green. The projects included in the CIP list all remain subject to the city's annual budget development and prioritization process. Projects with authorized funding will continue to follow the public review process that occurs during design and prior to construction.

Category	Project/Program Name	Description
New Roadway Capacity	Legacy Boulevard Bridge	Construct the second bridge and approaches on Legacy Boulevard over the Reata Pass Wash. The bridge is approximately 250' long x 40' to accommodate 2 travel lanes, bike lane and sidewalk.
	Dynamite Boulevard - 56th to Pima	Construct a complete street from 56th Street to Pima Road (4 miles). Depending on volume forecasts, the project will be widened to either 3 or 5 lanes. A 5-lane roadway is more likely east of Scottsdale Road. Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lanes, 6-8' sidewalk on one side, 8-10' side path and 6-8' trail. The project crosses the Rawhide Wash (100-year discharge of 9,000 cfs) approximately 1/2 mile west of Pima Road. A bridge span of approximately 300' is anticipated. Additional turn bay capacity and signal modifications are planned at Scottsdale Road and Pima Road. A new major intersection at the Hayden Road alignment is also planned.
	Pinnacle Peak Road - Scottsdale Road to Pima Road	Construct a 4-lane complete street between Scottsdale and Pima roads (2 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, an 8-10' side path and 6-8' multi-use trail. Additional turn bay capacity and signal modifications at key intersections may be required. Right-of-way acquisition will be necessary in some locations.
	Miller Road - Princess Drive to Legacy Boulevard	Construct a 4-lane complete street between Princess Drive and Legacy Boulevard (1 mile). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median and 8' sidewalks. The project will cross the Loop 101 using the new underpass completed in 2021. The majority of this project is expected to be constructed by private development.

Scottsdale Road - Loop 101 to Jomax Road	Construct a 4- to 6-lane complete street (4.7 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' shared use path and 6-8' trail. A new bridge, using Scottsdale and Proposition 400 ALCP funds, has already been constructed over the Rawhide Wash (100-year discharge of 9,000 cfs) approximately 1,200' south of Pinnacle Peak Road.
Happy Valley Road - Scottsdale Road to Pima Road	Construct a 4-lane complete street between Scottsdale and Pima roads (2 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' shared use path and 6-8' trail. The project crosses the Rawhide Wash (100-year discharge of 9,000 cfs) approximately 250' west of existing Hayden Road. A bridge span of approximately 300' is anticipated. Additional turn bay capacity and signal modifications are planned at Scottsdale Road and Pima Road. A new major intersection at the Miller Road alignment is also planned.
Jomax Road - 56th Street to 94th Street	Construct a new 3-lane complete street between 56th and 94th streets (4.5 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, a 10' shared use path and 6-8' multi- use trail. Traffic signals and additional turn bay capacity at Hayden Road may also be included. Right-of-way acquisition will be necessary in some locations.
Lone Mountain Road - 68th Street to Pima	Construct a new 3-lane complete street between 68th Street and Pima Road (2.5 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' multi-use trail. Right of way acquisition may be required in some locations.

56th Street - Jomax to Dynamite	Construct a new 5-lane collector complete street between Jomax Road and Dynamite Boulevard (1 mile). Other project elements will include 5- 6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' multi-use trail. Traffic signals and additional turn bay capacity at Jomax Road and Dynamite Boulevard may also be included, and a roundabout is planned at the Pinnacle Vista Drive intersection. Right-of- way acquisition will be necessary in some locations.
Mountain View Road - 92nd to 96th	Provide creative solutions to improve traffic, pedestrian, and bicycling mobility. Any addition of travel lanes would require reclassification of the roadway by City Council.
Shea Boulevard/Loop 101 Bypass	Construct roundabouts at up to three locations to facilitate travel on the Mountain View Road corridor between Loop 101 and 96th Street as an east/west alternative to Shea Boulevard, which is at or over capacity in this area. The intersections include Mt. View/90th, Mt. View/92nd, and Mt. View/96th.
Hayden Road - Jomax to Dynamite	Construct a new 3-lane complete street between Jomax Road and Dynamite Boulevard (1 mile). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' multi-use trail. Traffic signals and additional turn bay capacity at Jomax Road and Dynamite Boulevard may also be included. Right-of-way acquisition will be necessary in some locations. The majority of this project is expected to be constructed by private development.
North Old Town Intersection Improvements	Add capacity and improve vehicular and pedestrian safety at up to eight intersections in the vicinity of Scottsdale Fashion Square and the Scottsdale Waterfront high activity areas. The intersections are Scottsdale/Camelback, Scottsdale/Fashion Square, Scottsdale/Highland, Scottsdale/Rancho Vista, Scottsdale/Chaparral, Goldwater/Highland, Goldwater/Camelback and Camelback/Marshall Way. A roundabout is planned at the Goldwater/Highland location.

Alma School Road - Happy Valley to Dynamite Stagecoach Pass Road - Pima	Complete the missing 1/2-mile gap in the minor arterial roadway near Jomax Road, realign and improve the Alma School Parkway and Jomax Road intersection to a roundabout, add 8-10' shared use path and 6'-8' shared use trail on west side, add missing sections of 6' sidewalk on east side and improve roadside and cross drainage. Widen Stagecoach Pass Road for 1.1 miles to accommodate bike lanes,
to 97th	construct a 6' sidewalk on the north side and improve cross drainage. The majority of this project is expected to be constructed by private development.
Scottsdale Road Intersection Improvements - Mountain View to Greenway	Construct additional turn lane capacity and/or pedestrian crossing improvements at up to 11 signalized intersections and new right turn bays at up to 15 locations. Major intersections include Shea Boulevard, Cactus Road, Thunderbird Road and Greenway Parkway.
Dixileta Drive - 66th Street to Pima	Construct a new 3-lane complete street between 66th Street Road and Pima Road (2.75 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' multi-use trail. Right-of-way acquisition may be required in some locations.
Rio Verde Drive - 118th to 144th	Construct a 4-lane complete street between 118th and 144th streets (3.25 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' trail on north side. A wildlife underpass or overpass may be installed in the vicinity of the 124th Street alignment. A roundabout or traffic signal may be installed at 136th Street.
136th Street - Rio Verde to Lone Mountain	Construct a new 3-lane complete street between Rio Verde Drive and Lone Mountain Road (2 miles). Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane, 6-8' sidewalk or trail on the east side. Right of way acquisition will be required in some locations.

Transit	Scottsdale Road BRT - Roosevelt Street to Camelback Road	Design and construct infrastructure and operate a bus rapid transit system on Scottsdale Road that would connect to Tempe and Chandler. The project is proposed in the new Regional Transportation Plan that is being prepared by MAG.
Complete Street Renovations	Hayden Road Complete Street - McKellips Road to Indian School Road	Reconfigure the existing 6-lane Hayden Road between McKellips Road and Indian School Road as a 4-lane complete street with additional intersection turn lane capacity, increased access management (raised medians), on-street bike lanes and accessible 8' minimum width sidewalks.
	Via Linda Active Transportation Corridor	Reconfigure the Via Linda corridor between 90th Street and Frank Lloyd Wright Boulevard (3.7 miles) to meet arterial complete street standards. Improvements include continuous sidewalks that meet current arterial standards for setback from curb (other than near transit stops), accessibility and freedom from obstructions. The project will also create continuous 4-6' bike lanes through modifications to existing curbs and/or median edges. 1/4-mile pedestrian crossings will also be considered. An existing pedestrian overpass near the 102nd Street alignment that was constructed over 30 years ago may also need modifications by the time this project is scheduled. The city operates local bus service, with approximately ¼-mile stop spacing, on the entire project length.
	Scottsdale Road Active Transportation Corridor - Highland to Frank Lloyd Wright	Reconfigure the Scottsdale Road corridor between Highland Avenue and Frank Lloyd Wright Boulevard to meet arterial complete street standards. Improvements include continuous sidewalks that meet current arterial standards for width (8' minimum), accessibility and freedom from obstructions. The project will also create continuous 5-6' bike lanes. Three miles of frontage in this regional corridor is in Paradise Valley and 2.8 miles of frontage is in Phoenix.

	92nd/94th Street Active Transportation Corridor	Reconfigure the 92nd/94th Street corridor between Shea Boulevard and Thunderbird Road (2.2 miles) to meet arterial complete street standards. Improvements include continuous sidewalks that meet current arterial standards for setback from curb (other than near transit stops), accessibility and freedom from obstructions. The project will also create continuous 4-6' bike lanes through modifications to existing curbs and/or median edges. Intersection improvements at Cactus Road and 1/4-mile pedestrian crossings will also be considered. The city operates local bus service, with approximately ¼-mile stop spacing, on the entire project length.
-	Scottsdale Road Active Transportation Corridor - McKellips to Roosevelt	Reconfigure the Scottsdale Road corridor between McKellips Road and Roosevelt Street to meet arterial complete street standards. Improvements include continuous sidewalks that meet current arterial standards for setback from curb (other than near transit stops), accessibility and freedom from obstructions. The project will also create continuous 5-6' bike lanes. The western frontage in this regional corridor is in Tempe.
-	Miller Road Active Transportation Corridor - Marigold Lane to Jackrabbit Road	Reconfigure the Miller Road corridor between Marigold Lane and Jackrabbit Road to provide sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. Pedestrian crossing treatments may also be necessary at several ¼-mile locations. The majority of this 5-mile corridor has been in its current configuration for more than 40 years. For 3 miles, Miller Road is used for local bus service that connects to 3 east/west regional bus routes.
	68th Street Active Transportation Corridor	Reconfigure the 68th Street corridor between Continental Drive and Jackrabbit Road (4 miles) to provide sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. The section north of Chaparral Road will require widening to provide space for bike lanes. Pedestrian crossing treatments may also be necessary at several ¼-mile locations. The southern 2.5 miles of the project corridor is used as a local bus route. The corridor also connects to regional bus routes at four east/west streets and to Tempe's local circulator at Continental Drive. Approximately 0.8 miles of frontage on the northern end of the project corridor are in Paradise Valley.
Oak Street Active Transportation Corridor - 56th Street to Pima Road	Reconfigure the Oak Street corridor between 56th Street and Pima Road to provide sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. Pedestrian crossing treatments may also be necessary at several ¼-mile locations. The majority of this 4-mile corridor has been in its current configuration for more than 40 years. Oak Street has 1 mile of transit service and intersects with two regional bus routes and 2 local routes.	
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Downtown Couplet Active Transportation Improvements	Provide continuous 6-8' sidewalks and bike lanes on the City's 3-mile downtown couplet roadway. The project will include reducing the roadways (Goldwater Boulevard and Drinkwater Boulevard) to 2 lanes in each direction and adjusting median and curb locations to allow for bike lanes and sidewalks in both directions. An improved crossing treatment will be necessary on Drinkwater Boulevard north of Earll Drive	
Roosevelt Street/Continental Drive Active Transportation Corridor	Reconfigure the Roosevelt Street/Continental Drive corridor between 66th Street and Latham Street (3 miles) to provide bike lanes or shared lanes and sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. Pedestrian crossing treatments may also be necessary at several ¼-mile locations, as well as at Scottsdale Road and Hayden Road. Single lane roundabouts may be considered at the 68th Street, Miller Road and Granite Reef Road intersections. Two miles of the corridor are on local bus routes operated by Scottsdale and/or Tempe. It also intersects with two regional bus routes. The southern frontage west of Scottsdale Road (0.75 miles) is in Tempe.	
Granite Reef Road Active Transportation Corridor	Reconfigure the Granite Reef Road corridor between Roosevelt Street and Lincoln Drive to provide sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. Pedestrian crossing treatments may also be necessary at several 1/4 mile locations. Granite Reef Road between Roosevelt Street and Camelback Road (3 miles) has been designated by MAG as an Active Transportation Grid Tier 1 and Tier 2 corridor. One mile of the corridor has transit service, and the entire corridor intersects 3 east/west bus routes.	

	Chaparral Road Active Transportation Corridor	Reconfigure and realign Chaparral Road between 66th Street and 69th Place (0.5 miles) to provide two 11' travel lanes, 5' buffered bike lanes and setback sidewalks that meet current standards for width (6' minimum), accessibility and freedom from obstructions. Single lane roundabouts may be constructed at the 66th Street and 68th Street intersections.
	Westland Road - Hayden to Pima	Widen/reconstruct/realign Westland Road between Hayden and Pima roads (1 mile) as a 3-lane complete street. Other project elements will include 5-6' bike lanes, curb/gutter, catch basins, storm drains/culverts, center turn lane/raised median, 6-8' sidewalk on one side, 8-10' side path and 6-8' multi-use trail. A roundabout will be considered at the Westland/Hayden intersection. Right-of-way acquisition will be necessary in some locations.
	Cactus Road Active Transportation Corridor - 60th to Loop 101	Modify curb lanes as necessary to allow for 5' bike lanes, construct approximately 1.5 miles of missing sidewalk (6-8') and reconstruct approximately 4 miles of sidewalk that is too narrow and sits mostly back of curb. An 8' side path exists on the north side from Scottsdale Road to 84th Street. Frontage on the north side of the road between 60th Street and Scottsdale Road is in Phoenix.
Shared Use Paths	Indian Bend Wash Shared Use Path Expansion - McKellips Road to Shea Boulevard	Redesign and widening/reconstruction of the Indian Bend Wash shared use path system between McKellips Road and Shea Boulevard (approximately 10 miles). The improvements will meet current design standards for width, slope and accessibility that were not in place when most of the pathway was built in the 1970s and 1980s. Impacts to the usability of the path due to adjacent irrigation and ponded stormwater will be addressed and a new bridge will be required at the Osborn Road crossing. Improved accommodations for cyclists at the two remaining signalized roadway crossings, Indian Bend Road and McCormick Parkway are also needed. Phase I is funded in the FY 22-26 CIP.
	Pima Shared Use Path - Roosevelt to McDowell	Reconstruct and widen approximately 0.7 miles of existing 8' path that is in poor repair. The new width will be 10'. It is expected that the path will continue south when the Salt River Pima-Maricopa Indian Community extends Pima Road to the Curry Road alignment.

CAP Path and Trail	Complete the CAP Trail shared-use path between Scottsdale Road and 124th Street. The project will include an 8-10' concrete path and grade- separated crossings at Thompson Peak Parkway, Via Linda and Shea Boulevard. Approximately 2.3 miles of the 8.3-mile corridor have been constructed by the city or adjacent landowners. The 3 grade separated crossings will pass under existing bridges. A separate proposal for a Loop 101 overpass bridge has also been developed.
WestWorld Area Path and Trail Connections	Construct approximately 5.5 miles of 10' shared use path and 6-8' trail that link the upper Indian Bend Wash Path System to the McDowell Mountain Preserve, the north Pima Road Path and Thompson Peak Park. Grade-separated crossings will connect to existing drainage structures at Thompson Peak Parkway and Bell Road and to buried tunnels at Pima Road and Hayden Road.
Shea Boulevard Shared Use Path - 142nd Street to Eagle Mountain Parkway	Construct a 10' wide shared use concrete path, handrail, and new guardrail along curb on the south side of Shea Boulevard from the existing section of shared use path at 142nd Street east to Eagle Mountain Parkway in Fountain Hills. Partnership with Fountain Hills is required.
Shea Boulevard Shared Use Path Gap Connections	Complete approximately 4.6 miles of 8-10' shared use path gaps along the south side of Shea Boulevard between 64th Street and 142nd Street. Approximately 4.4 miles of 8' shared use path separated from back of curb has been constructed over the past several decades by adjacent development and/or the city. There is not sufficient space on street to add bike lanes by narrowing travel lanes.
CAP/Loop 101 Bike and Pedestrian Bridge	A concept for the Loop 101 overpass bridge was developed using a MAG design assistance grant in 2014. This structure, including approaches, is approximately 2000 feet long and is separate from the CAP Path & Trail project.
Bicycle/Pedestrian Bridge at Loop 101 and Union Hills	Construct a new bicycle/pedestrian bridge across the Loop 101 on the former Union Hills Road alignment and approximately 0.6 miles of 10' shared use path from Loop 101 to Pima Road. An underpass at Pima Road to connect to the Indian Bend Wash Path extension may also be constructed.

	Indian Bend Wash Northwest Branch - Scottsdale Road to Indian Bend Road	Construct a new 10' shared use path connecting Scottsdale's Indian Bend Wash Path to an existing bridge where Scottsdale Road crosses the northwest branch of Indian Bend Wash (approximately 1.1 miles). This connection is part of a proposed Regional Conduit identified in MAG's 2020 Active Transportation Plan.
Street Reconfigurations and Enhanced Pedestrian/Bicycle Crossings	Pedestrian/Bicycle Crossing Enhancements	Improve the ability for pedestrians and bicyclists to safely cross busy streets. Improvements may include hybrid pedestrian beacons, rectangular rapid flash beacons, pedestrian refuges, pedestrian median barriers, crosswalk treatments, sidewalk gap removals and improved lighting or other approved technologies.
	Buffered Bike Lanes (Striping)	Repurpose underutilized curb lanes and/or unnecessary two-way center turn lanes by striping buffered bike lanes
	Neighborhood Greenways (Bicycle Boulevards)	Design and construct improvements to support Neighborhood Bikeways. Typical features of these corridors include restriping, traffic calming, wayfinding signage and enhanced crossings of major roadways.
	Grade Separated Pedestrian/Bicycle Crossings	Install new grade separated crossings for pedestrians and cyclists across major streets with strong active transportation use. The new connections would support connections from paths to parks/schools/employment across arterial roadways. Targeted corridors would include Scottsdale Road, Hayden Road and Shea Boulevard.
	Separated Bike Lanes	Repurpose underutilized curb lanes and/or unnecessary two-way center turn lanes by constructing physical buffers for bike lanes or constructing new side paths.
	Roadway Right Sizing	Repurpose underutilized curb lanes and/or unnecessary two-way center turn lanes by narrowing roadway footprints (moving curbs).

Preservation/Maintenance/ Optimization	Pavement Management	Complete ongoing street and alley pavement overlays and all associated improvements, which may include milling and surface treatments on the existing roadway; traffic control; new pavement thickness; water valve and manhole lowering and raising; signal detection upgrades from loops to video; Americans with Disabilities Act (ADA) upgrades for concrete ramps and signal push buttons; concrete repairs to curbs and sidewalks; new striping plans; new thermoplastic striping; and new signage for bike lanes and sidewalks.
	ADA Improvements	Scottsdale has developed an ADA Transition plan for improved pedestrian accessibility through the provision of improved sidewalk ramps, improved transit stops, modifications to driveway cross slopes and the elimination of sidewalk gaps. Improvements to corner ramps are also federally required for pavement overlay projects.
	Signal System and ITS Replacements and Upgrades	Scottsdale currently operates 318 traffic signals and 175 ITS cameras, all with limited lifespans for equipment and structures. Intelligent Transportation System (ITS) communications equipment and traffic control room requirements must also be upgraded over time. In addition, changes in technology, design standards and citizen expectations (including bicycle detection and emergency vehicle preemption) can affect how the signal system is managed and maintained.
	Streetlight Replacement and Maintenance	Scottsdale is responsible for close to 9,000 streetlights, all with limited lifespans for equipment and structures.
	Traffic Signals	Install new signals that have met warrants or perform major signal renovations at up to four intersections per year.
	Intersection and Roadway Corridor Safety Improvements	Scottsdale prepares a citywide collision report every two years, and the data is used to prioritize locations to conduct roadway safety assessments. The assessments often identify long-term capital improvement recommendations. Only a small number of these intersection improvements qualify for federal grants.
	Transit Stop Improvements	Construct new or renovate existing transit shelters and bus stop pads and furnishings. There are currently close to 600 bus stops in the city, of which 197 have shelters.

Sidewalks	Install missing gaps and/or renovate short segments in the sidewalk system. Particular focus is given to locations near schools and/or along transit routes.
Bikeways	Install missing gaps and/or renovate short segments in the shared use path network. Install, update or renovate path or bike-lane striping.
Trails	Construct new trails or install missing gaps in the trail network. Update or renovate existing trail surfaces and signage.
Neighborhood Traffic Management	The city works with neighborhoods to remediate traffic speed and cut- through concerns using an adopted policy.
LED Conversion for Streetlights	Complete a citywide conversion of nearly 10,000 high pressure sodium streetlights to energy efficient LED lights. The project will also evaluate smart lighting management systems to provide insights into power usage and remote diagnostic and dimming capabilities.

## LIST OF ABBREVIATIONS AND ACRONYMS

ADA - American with Disabilities Act ADOT - Arizona Department of Transportation **ADT - Average Daily Traffic APS - Arizona Public Service** SRTS - Safe Routes to School **BRT - Bus Rapid Transit** CAP - Central Arizona Project CFR - Code of Federal Regulations CIP - Capital Improvement Program dBA - Decibels DRB - Design Review Board ESL - Environmentally Sensitive Land HAWK - High Intensity Activated Crosswalk HURF - Highway User Revenue Fund IGA - Intergovernmental Agreement **ITS - Intelligent Transportation System** LAB - League of American Bicyclists LTAF - Local Transportation Assistance Fund MAG - Maricopa Association of Governments MUTCD - Manual on Uniform Traffic Control Devices NAOS - Natural Area Open Space NTD - National Transit Database SRPMIC - Salt River Pima-Maricopa Indian Community

## LIST OF TERMS AND DEFINITIONS

Access Management	Droactive management of vehicular access points to
Access Management	Proactive management of vehicular access points to
Active Transportation	land parcels adjacent to all manner of roadways. Any self-propelled, human-powered mode of transportation,
Active transportation	such as walking, skateboarding or bicycling.
Activity Center	Area where there is a concentration of commercial,
Activity center	retail, office and other land uses.
ADA Transition Plan	A plan that includes an entity's programs, services, activities,
	facilities, current policies, practices and procedures as required
	by the American with Disabilities Act.
Americans with Disabilities Act	Federal civil rights law passed in 1990. The law prohibits
	discrimination against people with disabilities and requires
	public entities and public accommodations to provide
	accessible accommodations for people with disabilities.
Arabian Library	City of Scottsdale Library.
Arizona Canal	A water conveyance canal included in the Salt River Project
	water system.
At-grade Crossing	A crossing that where a shared use path or trail crosses a
	Roadway on the same level.
Automated Passenger Counters	An electronic device available for installation on transit
	vehicles including buses and rail vehicles which accurately
	records boarding and alighting data.
Bicycle Friendly Community	A city recognized by the League of American Bicyclists as a
	community providing safe accommodation and facilities for
	bicyclists and encouraging residents to bike for transportation
	and recreation.
Bike Lane	An integral section of a roadway that is marked for exclusive
Dila Davita	bicycle use and is always one-way.
Bike Route	A shared street, bike lane or shared use path in any
	combination that is designated by signing or placement
Buffered Bike Lane	on a map. A conventional bicycle lane paired with a designated buffer
Builereu bike Laile	space separating the bicycle lane from the adjacent motor
	vehicle travel lane and/or parking lane.
Bus Rapid Transit	A bus-based public transport system designed to have
	better capacity and higher average travel speed than a
	conventional bus system.
Cab Connection	A taxi voucher program for Scottsdale residents who are age
	65 or older or have a certified disability. The program provides
	a transportation alternative that is within the control of the
	participant, is flexible and is relatively affordable.
Capital Improvement Plan	A plan that authorizes and provides the basis for control of
	expenditures for the acquisition of significant city assets and
	construction of all capital facilities.
Central Arizona Project Aqueduct	A 336-mile diversion canal in Arizona that diverts water from
	the Colorado River into central and southern Arizona.

Clever Device	A device that provides computer aided dispatch, automatic vehicle location, real-time passenger Information and
	automatic vehicle management for transit vehicles.
Commuter	A person who travels some distance to work on a regular basis.
Complete Street	A street designed and operated to enable safe and
	comfortable access for all users: motorists, pedestrians,
	bicyclists, and transit.
Crosscut Canal	A water conveyance canal included in the Salt River Project
	water System.
Dial-a-Ride	A transport system that complements the existing transit
	system by providing transportation to people who are
	unable to utilize local bus service due to a disability.
Employment Hub	A high concentration of traded-sector jobs and employers
	Within an urban area.
Express Route Service	A type of fixed route transit that typically picks up
	passengers from park-and-ride lots in suburban areas
	and takes them to a central urban location.
Federal Transit Administration	A federal agency that provides financial and technical
	assistance to local public transit systems, including buses,
	subways, light rail, commuter rail, trollies and ferries.
Fixed Route	Transit services provided on a repetitive, fixed schedule
	along a specific route with vehicles stopping to pick up
	and deliver passengers to specific locations, each fixed route
	trip serves the same origins and destinations, such as
	rail and bus.
Freeway	A facility designed to safely handle very large volumes of
	through traffic. Direct access is limited to widely spaced
	interchanges.
Grade Separated Crossing	A structure built to provide a pedestrian or bicyclist way
	across high-speed, high-volume roadways by means of
	either an overpass (bridge) or underpass (tunnel).
Grid System	Roadways that are parallel lines and another set of the
	same lines perpendicular to them used for motor
	vehicles and transit.
High Capacity Transit	Transit technology that operates on separate right-of-way
	and functions to move large numbers of passengers at
	high speeds, e.g., busway, light rail, commuter rail, etc.
High Intensity Activated Crosswalk	A traffic control device used to stop road traffic and allow
	pedestrians and bicyclists to cross safely.
Highway User Revenue Fund	A fund that contains revenues collected from gasoline and
	use-fuel taxes, motor-carrier taxes, vehicle-license taxes,
	motor vehicle registration fees and other miscellaneous
Indian Dand Wash Dath Gustan	fees in the state of Arizona.
Indian Bend Wash Path System	An existing and planned shared use path corridor that
	stretches from the Scottsdale/Tempe border on the south to
	the Scottsdale/Carefree border on the north. Portions of the
	corridor traverse flood control facilities designed for
	recreational uses.

Intelligent Transportation System	The control and information systems that use integrated communications and data processing technologies for the purposes of improving the mobility of people and goods and increasing safety, reducing traffic congestion and managing incidents effectively.
Intergovernmental Agreement	Any agreement that involves or is made between two or more governments in cooperation to address issues of mutual concern.
Inter-jurisdictional Coordination	An effort to bring all parties together to discuss issues, examine solutions, resolve problems and improve regional connectivity.
League of American Bicyclists	A membership organization that promotes cycling for fun, fitness and transportation through advocacy and education.
Light Rail Transit	A light capacity transit mode utilizing predominately semi-exclusive right-of-way and electronically propelled rail vehicles capable of multiple unit operation.
Local Residential	A street that provides direct access to adjacent land uses, provide access to the collector street system and accommodate lower traffic volumes (usually less than 5,000 ADT) and travel speeds.
Local Route	A transit route comprised within the Scottdale Trolley System.
Local Transportation Assistance Fund	A fund used to provide assistance to local communities for general transportation purposes statewide.
Loop 101	A freeway contained within the Arizona Department of Transportation regional freeway system.
Major Arterial	A roadway street with raised medians providing regional continuity and carries large volumes of traffic between areas of the city and through the city. Typical cross-section are six lanes contained within 150 feet of right of way.
Major Collector	A roadway street providing traffic movement between arterial and local streets, with some direct access to abutting commercial and multi-family land uses. Center left- turn lanes are provided to allow for greater access. Typical cross-section is four lanes contained within 100-feet of right of way.
Mandated Service Area	The area required to provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed transit route. The corridor shall include an area with a three-fourths of a mile radius at the ends of each fixed route.
Maricopa Trail	An unpaved trail contained within Maricopa County regional trail system.
McDowell Sonoran Preserve	The Scottsdale McDowell Sonoran Preserve is a large, Permanently protected, sustainable desert habitat that includes an interconnected network of non-motorized, multi-use trails (hike/bike/horse) accessed from multiple trailhead locations.

Minor Arterial	A roadway street with raised medians providing regional continuity and carries large volumes of traffic between areas of the city and through the city. Typical cross-section are four lanes contained within 110 feet of right of way.
Minor Collector	A roadway street providing traffic movement between arterial and local streets, with some direct access to abutting commercial and multi-family land uses. Center left- turn lanes are often provided to allow for greater access. Typical cross-section is two lanes contained within 80-feet of right of way.
MLHD Trolley, 68CM Trolley	Miller Road and Hayden Road, 68 <sup>th</sup> Street and Hayden Road routes served by Scottsdale Trolley.
Multimodal System	Having or using a variety of transportation modes.
Mustanger Transit Center	A transit facility located at 90th Street and Cochise Drive in Scottsdale, Arizona that includes bus bays with enhanced access for flexible routing options, transit shelters that provide bicycle parking, trash receptacles; enhanced shade and seating options and public art.
National Community Survey	A benchmarking survey providing a comprehensive and accurate picture of livability and resident perspectives about local government services, policies and management.
National Transit Database	Primary source for information and statistics on the transit systems in the United States.
Natural Area Open Space	A percentage of property required by the city of Scottsdale to be preserved to protect environmental features, including vegetation, washes, mountain ridges and peaks from inappropriate development.
Neighborhood Bikeway	A bicycle facility typically found on streets with traffic volumes of under 2,000 vehicles per day (vpd) and residential speeds (25 miles per hour or less) which often contains connections that can only be made by bike or as a pedestrian.
Neighborhood Circulator	A short-distance, circular, fixed-route transit mode that takes riders around a specific area with major destinations.
Neighborhood Traffic Management	The assessment of traffic issues in local neighborhoods to address speed and other traffic conditions.
Neighborhood Trail	A trail that provides access in and around neighborhood areas and provides connections to Primary and Secondary Trails.
Nonmotorized	Not equipped with a motor.
Old Town Scottsdale	An area formerly known as Downtown Scottsdale located in the heart of the city of Scottsdale.
On-Street Network	Facilities located on the street, anywhere on or along the curb of streets.
Paratransit	Transportation for people with disabilities who are unable to use the regular, fixed route transit service that serves their region.

Park-n-Ride	Parking lots with public transport connections that allow commuters and other people heading to city centers to leave their vehicles and transfer to a bus, rail system (rapid transit, light rail, or commuter rail), or carpool for the remainder of the journey.
Paved Path Network	A network made up of paved shared use paths with a minimum width of eight feet.
Paved Roadway Shoulder	An area paved adjacent to the striped edge line of a roadway.
Pavement Condition Index	A score given to a section of pavement on a roadway with a range from 0–100. A score of 85-100 represents a road in excellent condition.
Pedestrian Refuge	A crossing that includes raised median islands that provide a location for pedestrians to safely wait for a gap in the traffic so they can finish crossing the road.
Performance Measure	A regular measurement of outcomes and results, which generates reliable data on the effectiveness and efficiency of programs.
Preventive Maintenance	All the activities, supplies, materials, labor, services, and associated costs required to preserve or extend the functionality and serviceability of a transit asset in a cost-effective manner.
Primary Trail	A trail that provides both transportation and recreation links between residential areas, schools, businesses, parks, places of employment and other areas of significant community activity.
Proposition 400	A half-cent sales tax extension approved by Maricopa County, Arizona voters that went into affect January 1, 2006, for transportation improvements in the Maricopa County region.
Public Transit	A system of transport for passengers by group travel systems available for use by the general public.
Raised Pedestrian Crossing	A crosswalk with ramped speed tables spanning the entire width of the roadway, often placed at midblock crossing locations.
Rectangular Rapid Flashing Beacon	A crossing with pedestrian-actuated conspicuity enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks.
Regional Fare Policy	A policy set by Valley Metro Regional Transportation Authority for the fixed route and light rail systems.
Regional Sales Tax	A tax collected at the point of sale within a specified region such as a county.
Restriping	To change the lane markings or other markings on a road or another paved path.
RideChoice Program	Transportation for ADA paratransit certified people with disabilities and seniors aged 65 and above who reside in participating communities.

Right-of-way	The area allowing the right to make an access corridor, usually
0 /	to and from another piece of land.
Roadway Cross Section	The view obtained in a section between the right-of-way
	lines cut perpendicular to the direction of travel along
	the road. It includes features on the traveled portion of the road used by vehicular traffic as well as
	access for non-vehicular traffic.
Roundabout	A circular traffic control device used in place of a traffic signal
	or multi-way stop.
Route 510	Valley Metro express transit route which travels between
	Scottsdale's Mustang Transit Center and downtown Phoenix.
Route 72	Valley Metro regional transit route serving Scottsdale Road
	with end points at Thompson Peak Parkway and Chandler
Duggod Troil	Fashion Square. A trail built as far away from traffic as possible and
Rugged Trail	designed for equestrians, hikers, runners and mountain
	bikers.
Safe Routes to School	A federal program enabling and encouraging children,
	including those with disabilities, to walk and bicycle to school.
Salt River Pima-Maricopa Indian Community	A sovereign tribe located in the metropolitan Phoenix area.
Scottsdale Airpark	One of the largest employment centers in the state of
	Arizona. Anchored by the Scottsdale Airport, the
	Scottsdale Airpark encompasses an 8.6 square mile
	area with over 2,900 businesses employing more
Scottsdale General Plan 2035	than 51,000 people. An adopted plan that guides the physical development of
	Scottsdale, Arizona for a twenty-year timeframe.
Scottsdale Trolley System	A public transit system managed and operated by the city of
	Scottsdale, Arizona.
Secondary Trail	A trail that provides alternative transportation and
	recreation links through areas such as desert washes,
	scenic corridors, vista corridors and other desert open
Shared Use Path	space areas. A paved pathway set aside for the exclusive use of
	active transportation travel that is intended for
	two-way movement separated from roadway infrastructure.
Side Path	An eight-foot or ten-foot-wide sidewalk that is separated
	from the back of curb in most cases and/or is adjacent
	to a bike lane.
Sidewalk	A paved path for pedestrians at the side of a road.
Standard Size Transit Vehicle	A transit vehicle averaging a length of 39 feet with a
Sun Circle Trail	seating capacity of 29.
	An unpaved trail contained within the Maricopa County regional trail system.
Tempe Streetcar	A modern streetcar system located in Tempe, Arizona.
Thunderbird Park-n-Ride	A transit facility located at Scottdale Road and
	Thunderbird Road served by regional transit routes.

Traffic Signal	A signaling device positioned at road intersections, pedestrian crossings, and other locations to control
Trail	flows of traffic. An unpaved, natural soil area with a minimum width of four feet to allow the movement of pedestrians, equestrians and bicyclists.
Trail Easement	The area the allows a use on a specific piece of land.
Transit Asset Management Plan	A plan that uses the condition of assets to guide the optimal prioritization of funding at transit properties in order to keep transit networks in a State of Good Repair.
Transit Center	A transit facility providing a connection point where multiple buses are able to stop simultaneously to allow cross-route transfers between other buses or, where an LRT station exists, a transfer to an LRT vehicle.
Transit Dependent Population	Populations that rely on public transportation for transportation and have limited or no access to a private automobile.
Transit Frequency	The amount of time it takes between transit vehicle arrivals at a specific stop location.
Transit Modes	Transit buses, vans, light rail, and other vehicles that operate on a predetermined route according to a predetermined schedule.
Transit Signal Priority	The utilization of existing vehicle location and wireless communication technologies to advance or extend the green light of a traffic signal for a transit vehicle.
Transportation Action Plan	A multimodal plan to guide transportation improvements in the city of Scottsdale for a five to ten-year time frame.
Transportation Sales Tax	A tax collected at the point of sale by a public entity for transportation improvements.
Truck Route	Four-lane or larger streets identified for regular through passage of trucks over 10,000 lbs. Intermittent pick-up and delivery of materials and merchandise may occur on all streets.
Turnaround	A location permitting the turning around of a vehicle.
Valley Metro	The Regional Public Transportation Authority located in Maricopa County, Arizona.
Vehicles Per Day	Vehicles traveling past a specific location in a 24-hour period, typically stated as an annualized average to account for seasonal variations.
Voucher System	A system that sets up procedures to safely verify, approve, record, and issue vouchers for public transportation.
Waste Management Open	A professional golf tournament on the PGA Tour, held in late January/early February at the Tournament Players Club in Scottsdale, Arizona.
Wayfinding	Signage to assist pedestrians and bicyclists to reach destinations and identify routes.
WestWorld	A premier, nationally recognized, user-friendly equestrian center and special events facility serving the city of Scottsdale community and visitors.