



GO! Sedona Pathways Plan

for the Sedona Trails & Pathways System (ST&PS)



CITY OF SEDONA
2020

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THANK YOU!

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Members of City Council and the Planning and Zoning Commission

All of the individuals that provided input and attended meetings.

Everyone that walks, bikes, runs or rolls in Sedona!

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With over 300 days of sunny weather, Sedona sits at the base of towering red rock formations and is surrounded by public land with almost 300 miles of world-class trails. These ideal conditions make getting outside the reason people live in Sedona.

Incorporating in 1988, much of Sedona was developed without walking and biking facilities like sidewalks and paths. The 2014 voter-approved Community Plan sought to remedy this with the goal of creating a more walkable and bikeable community, which is closely tied to the goal of reducing traffic congestion.

The City's Transportation Master Plan (TMP) of 2018 identifies 12 strategies to reduce traffic congestion in Sedona, which is a top priority for City Council. Strategy 11 calls for bicycle and pedestrian improvements.

The Get Outside! Sedona Pathways Plan (GO Plan) is a blueprint for making Sedona a more walkable and bikeable community over the next 10 years. The plan identifies and prioritizes opportunities that were only touched on at a high level in the TMP. The GO Plan is a master plan driven by public input that takes it to the next level of detail by asking the community:

1. What walking and biking improvements do you want?
2. What are the priority projects over the next 10 years?

The GO Plan also introduces the "Sedona Trails and Pathways System", or ST&PS as a network of pathways that makes walking and biking a viable option for getting around the city. This plan uses

the term "pathways" to encompass all types of bicycle/pedestrian facilities. As each pathway is completed and marked with the ST&PS logo, you will see the system grow throughout the city, as a visible reminder that you too can "Get Outside!" and walk or bike Sedona.

With the implementation of this plan, there will no longer be a gap between Sedona's world-class trail system and how to safely get there on foot or bike. More than this though, Sedona will be a more connected community: neighborhoods to each other; residents and visitors to major destinations like schools, parks, shopping, and the National Forest; and people of all ages and abilities to everything Sedona has to offer.

Planning Process and Public Input

This plan is built upon public input and the recommendations of previous plans, such as the 1996 Trails and Urban Pathways Plan. The priorities of previous planning efforts are consistent with the feedback from 2019 and 2020 (a summary of those plans is on page 8). The recurring themes can be seen as further evidence of what the community considers the most important projects to tackle if Sedona is to be more walkable and bikeable.

The process for gathering public input for the GO Plan included:

- Work Group of citizens representing different areas of town
- Wikimapping, an on-line interactive website



where anyone could draw their ideas on a map of the city and comment on other posts. (Appendix C).

- Focus groups of interested individuals and organizations met to discuss priorities
- Public open house where attendees could review pathway recommendations and prioritize projects (Appendix B).

Organization of the Plan

At the heart of this plan is the Pathways Network, which is the vision for Sedona's bicycle/pedestrian transportation network over the next 10 years (see the maps on pages 12-14 and Appendix A).

The plan goes into more detail on specific aspects of the Pathways Network:

- Priority issues for West Sedona
- State Routes 89A and 179 (hereafter referred to as "89A" and "179")
- A city-wide bikeways network.

The Recommendations section also addresses:

- Trailhead System
- Amenities such as signs and bike parking
- Programs for education and encouragement

The Resources section includes:

- Examples of pathway designs
- Information on e-bikes
- Summary list of strategies and projects
- References and acronyms

GOALS

The development of this plan was guided by the following goals, which will also guide the implementation of the proposed projects and programs.

Safety

- Improve the safety of bicyclists and pedestrians
- Provide pathways that offer safer alternatives to 89A in West Sedona.

Connectivity & Mobility

- Reduce traffic by increasing the number of people walking and biking instead of driving.
- Connect community destinations with safe and convenient pathways so residents can walk or ride from home to:
 - Shopping centers and commercial areas
 - Schools and transit stops
 - City parks and National Forest system trails
- Improve connectivity with more continuous and direct pathways, especially for neighborhoods that are lacking in street connections.
- Provide an equitable distribution of trailhead parking throughout the city to reduce the impacts of parking on any one neighborhood.

Experience

- Encourage healthy and active lifestyles.
- Provide a system of pathways that serves people of all ages and abilities.
- Improve the experience and convenience of walking and biking in Sedona.
- Provide amenities and support facilities that improve the experience, such as signage, maps, and bike racks.
- Follow best practices and standards for facility design.

Education

- Encourage people to walk or bike instead of driving.
- Provide information and maps such as where to go, how to get there, and trail etiquette.
- Inform residents of the benefits of pathways, such as the potential for increased property values and environmental benefits.

Community Plan Vision

Sedona is a community that nurtures connections between people, encourages healthy and active lifestyles, and supports a diverse and prosperous economy, with priority given to the protection of the environment.

Note:

The goals to the left are also listed with the relevant Recommendations (in text boxes like this).

GO Sedona Vision:

Improve Safety ➤ Improve Experience ➤ Increase Walking/Biking ➤ Reduce Traffic

= Healthy, Happy and Active Sedona

BENEFITS

There are many benefits that come from a system of pathways for walking and biking in Sedona. Nearly everyone gains in some way or another: residents, families and kids, businesses, employers and employees, tourists, and the environment.

Transportation

- Improved safety for people walking and biking.
- An alternative to driving a car
- An option for those who cannot drive
- Less traffic on the roads because more people are walking/biking instead of driving
- Lower demand for parking if people walk/bike

Resident Quality of Life

- It's healthy - the exercise is good for health and wellness
- It's social - people are more likely to talk to each other on foot (or bike) than driving
- Offers small town character to be able to walk or bike to school, stores, movies, parks, or a friend's house, whether you are a kid or adult.
- It's fun!

Economy

- Walkability can increase property values
- Revenue from spending on goods and services like guided tours or bicycle rentals
- Jobs from sales, services, instructors, guides, or business managers
- Quality of life feature that attracts telecommuters and new businesses
- Cost savings for individuals that save on car expenses

Sustainability

- Improved air quality from reduced carbon emissions
- Building pathways is lower cost and takes less resources than building roads
- No need to buy gas to operate bicycles

Walkability and Property Values

"Trails, according to a National Association of Homebuilders study, are the number one amenity potential homeowners cite when they are looking at moving into a new community. Trails provide communities with a valuable amenity that translates into increased housing values, a positive impact on property values and enhanced tax revenue for municipalities.

-"Transit-Oriented Development to Trail-Oriented Development," National Association of Realtors

There are many studies and references that have found a positive correlation between walkability and property values. The book, "Walkable City Rules - 101 Steps to Making Better Places," by Jeff Speck cites several examples, including the following excerpts.

"As a typical example, homes in Denver's walkable neighborhoods sell at a 150% premium over those in drivable sprawl.

"In Charlotte, each Walk Score point (on a scale of 100) translates into about a \$2,000 increase in home value".

"In Indianapolis, proximity to bike paths was demonstrated to add an average of 11% to the value of a house; in Brooklyn, the number was 16%".

OPPORTUNITIES

What makes Sedona unique and why people choose to visit or move to Sedona are what make it an excellent place for walking and biking.

- The City's smaller size means shorter distances
- Most neighborhoods in Uptown and West Sedona are within a 10 minute walk to commercial areas (see Figure 1)
- Speed limits rarely exceed 35 mph
- Most neighborhood streets have a low volume of traffic
- The climate is dry and sunny
- The city is surrounded by an extensive National Forest trail system
- The scenery is outstanding, whether you are on a trail or city streets

Development in Sedona did not happen with walking and biking in mind. It developed as a rural community with incremental, unplanned growth before incorporation in 1988. Most neighborhoods have no sidewalks and for those that do, sidewalks are on only one side of the street. The main thoroughfares are 89A and 179, which are hard to avoid due to the lack of alternate routes or the need to cross them.

Overcoming these challenges will take a strategic approach. Efforts should focus on adding pathways where they are needed most. They should connect people to where they want to go, in as direct and continuous a route as possible.

Sedona's pathway system needs to appeal to everyone if we expect everyone to use it. It should be designed for all ages and abilities, taking into

consideration the quality of the experience. If people feel safe and enjoy it, they are far more likely to choose walking and biking over driving.

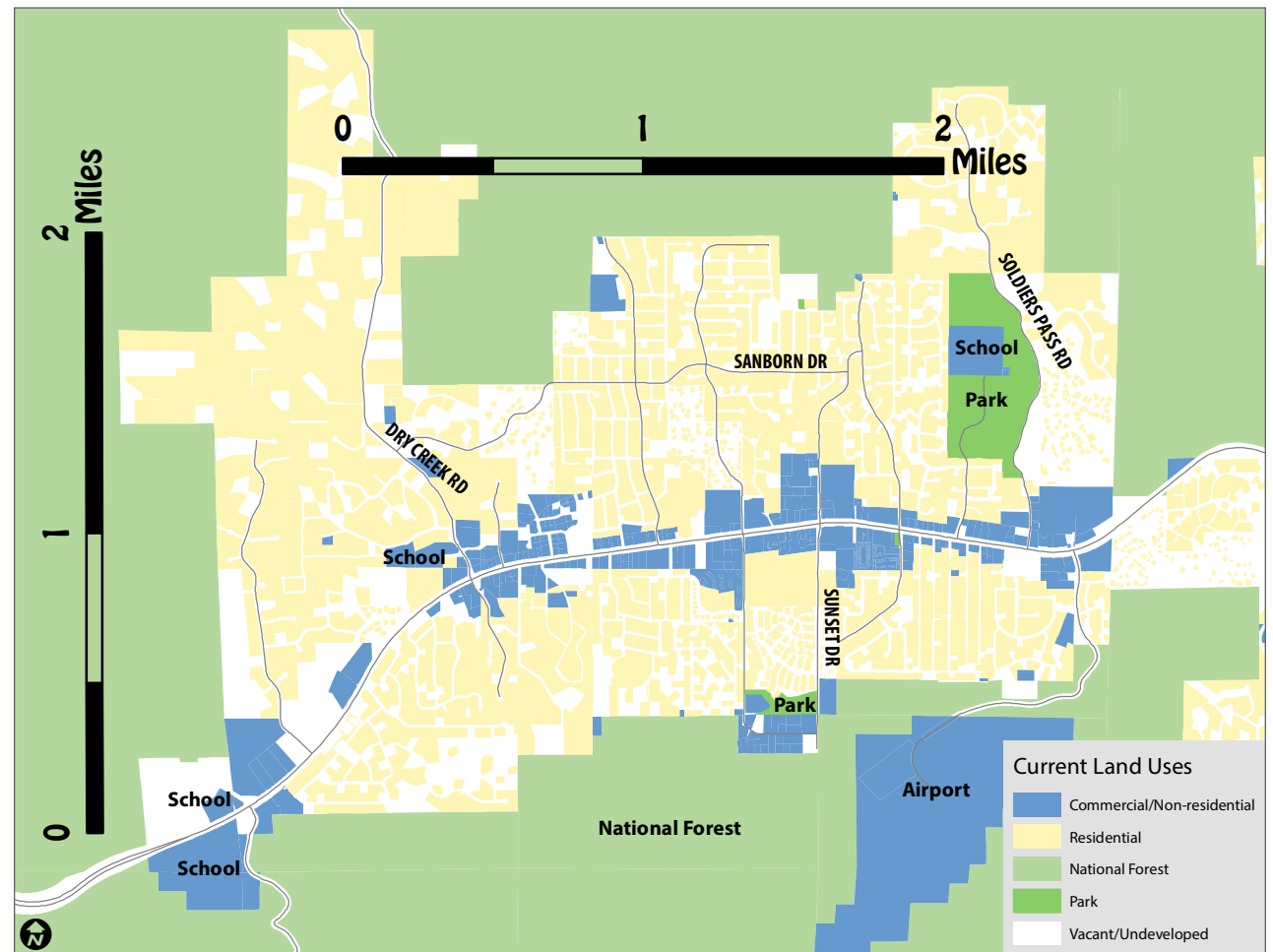


Figure 1. Walkable Distances in West Sedona
Nearly all residents in West Sedona are within a 20 minute walk, or 1 mile of the 89A commercial corridor.

PAST PLANS

Several plans and studies over the years have addressed the need for bicycle and pedestrian improvements in Sedona. This is the first plan that focuses solely on meeting the needs of people walking and biking in the city.

The planning process for the GO Plan reviewed these and other plans along with public input to identify potential pathways. The most relevant plans and their findings are summarized below. Copies of the plans can be found on the City website: www.sedonaaz.gov/GO.

Over a twenty-five-year span, these plans consistently identified the same top issues of concern, all of which are among the GO Plan recommendations:

- Alternatives to West 89A
- Dry Creek Road
- Access to Forest Service trails
- Connections between neighborhoods

2018 Transportation Master Plan (TMP)

This plan recommends a multi-modal approach to Sedona's traffic congestion, including street improvements, a transit system, and bicycle/pedestrian improvements. The public feedback for the GO Plan is consistent with the TMP recommendations: 1) connection between Uptown and West Sedona, 2) Dry Creek Road, 3) bicycle boulevards both north and south of West 89A, 4) sidewalk connections, and 5) safe crossings of West 89A.

2014 Sedona Community Plan

Walkability and improving traffic flow are two of the six vision themes from the Community Plan. The GO Plan also fulfills several action items listed in the Community Plan: complete a pedestrian and bicycle master plan, and trails plan.

2012 Sedona Parks and Recreation Master Plan

One of the top five capital priority recommendations of this plan was to "Develop improved trail/pathway connectivity in Sedona." The public outreach process also identified the need for alternatives to West 89A and improved access to Forest Service trailheads.

1996 Trails and Urban Pathways Plan

This plan was organized along the two components: trails and urban pathways. Nearly all of the trail and trailhead recommendations on public land were completed, including one of its major goals for National Forest trails to connect as a loop around the city. The urban pathways component was less successful with only about 1/3 of the recommendations completed. Most of those were associated with development such as sidewalks built with new subdivisions.



1994 Red Rock Pathways Plan

This was a regional plan that identified major corridors for recreation and transportation in and around Sedona. The "Red Rock Pathway" was the focal point of the plan, which was to be a thirty-mile loop connecting Sedona with the Village of Oak Creek and Red Rock State Park, mostly along roads and highways.

SURVEYS

Most Sedona residents think walkability and bikeability are important to Sedona's quality of life, as the following survey results show.

To gauge budget priorities, a 2020 survey of residents found that 68% of respondents were in support of allocating *additional* funding for walking and biking improvements (see Figure 2). When asked to rank three topics by priority, the results were 1) transit, 2) walking and biking improvements, and 3) housing.

In 2017 Sedona participated in a National Citizen Survey and the results are outlined in the Sedona Community Livability Report. As Figure 3 shows, residents were in favor of improving Sedona for walking and biking.

Also in 2017, the community survey for the TMP found that 59% of respondents were very likely or somewhat likely to support bicycle/pedestrian improvements. This was in the context of potential transportation improvements to address traffic congestion.

The 2012 Parks and Recreation Master Plan conducted a community survey that also showed strong support for bicycle and pedestrian improvements:

- Developing a creek access trail or park on Oak Creek (78%)
- Upgrading/expanding existing Forest Service trailheads (76%)
- Developing soft surface, natural, walking and biking trails, and paths (74%)
- Developing more walking/biking trails within the City (73%)

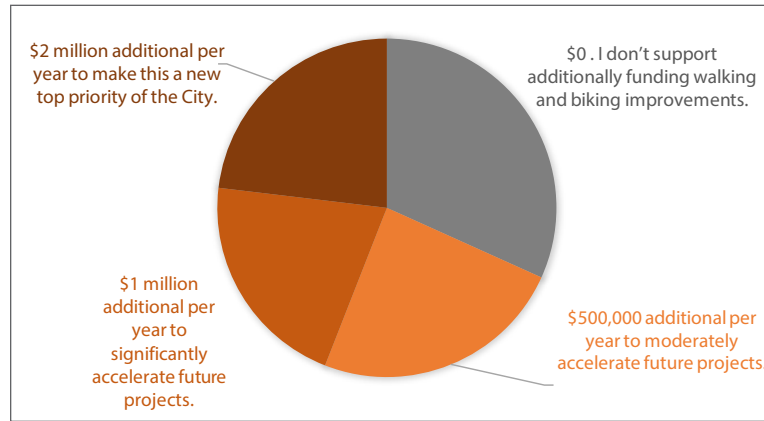


Figure 2. 2020 Citizen Budget Survey for Fiscal Year 2021. Response to question regarding "what level of funding do you support for walking and biking improvements in addition to what is already allocated?"

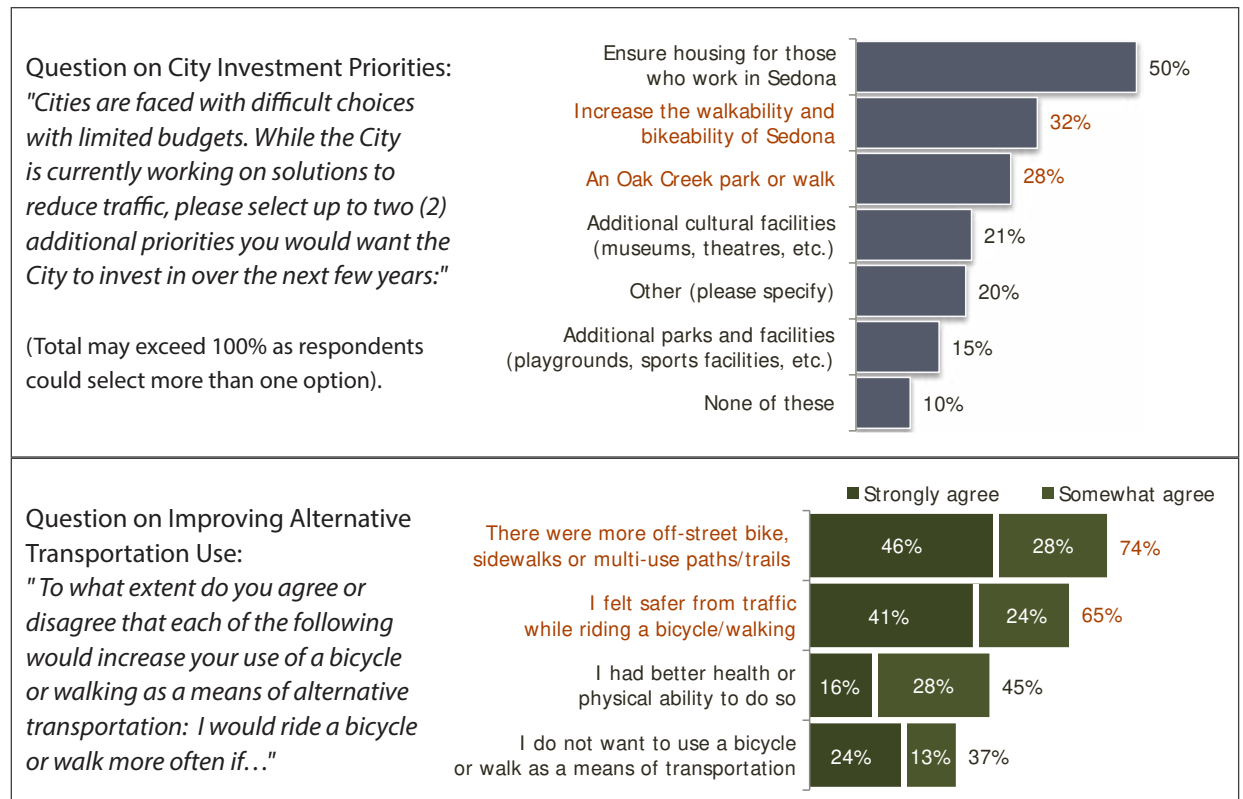


Figure 3. 2017 National Citizen Survey Results

PATHWAYS NETWORK

The Pathways Network shown on the following pages (Figures 4-6) is the community vision for a transportation system for walking and biking in Sedona. The network is expected to be a combination of sidewalks, shared-use paths, bike lanes, and bike routes. See Appendix A for a list of the proposed pathways shown on the maps.

How Pathways Were Selected

The Pathways Network is the outcome of a comprehensive process:

1. Identifying Routes
 - Public input from the interactive, on-line WikiMap program
 - Recommendations from previous plans
2. Evaluation of potential pathways
 - Input on preferences and priorities from focus groups, the Work Group, and a public open house
3. Selection of recommended pathways
 - Consideration of feedback, plan goals (see page 5), and feasibility of implementation

Implementation of the Pathways Network

Not all of the lines on the map will require costly construction, for example some bikeways can be delineated with signs. Few will require any land acquisition, as the majority of pathways are within the public right-of-way.

Some of the pathways will be City capital improvement projects, overseen by the City Public Works Department. Others could be built as part of a private development project, such as a housing subdivision or hotel. Pathways shown crossing private land will be pursued only with willing landowners.

Pathway Designs

The type of pathway is not specified on the maps. This will be determined on a case-by-case basis. The design will take into consideration a variety of factors, such as right-of-way or corridor width, and the volume of traffic (both vehicular and anticipated bicycle/pedestrian use). The following is a summary of the possible types of pathways. See "Pathway Designs" on page 29 for examples of each.

On-Street Pathways

- **Multi-modal:**
 - Complete Street
 - Designed for all modes (cars, bikes, pedestrians)
 - Shared-use Path
 - Scenic Pathway
 - Paved Shoulder
 - Slow Street/Bike Boulevard
 - Street shared by all
- **Mode specific:**
 - Bike Lane
 - Sidewalk

Off-Street Pathways

- Shared-Use Paths
- Trails

Goal

- Provide a system that serves people with a range of abilities, skills, and experience.
- Connect community destinations with safe and convenient routes so residents can walk or ride from home to:
 - Shopping centers and commercial areas
 - Schools and transit stops
 - City parks and National Forest system trails

High Priority Projects

The following is a summary of the high priority projects, which are discussed in more detail on the following pages.

- **Cooks Hill on 89A**

Cooks Hill is a vital link between West Sedona and the rest of the city. Quite a few comments were that unless improved, people would continue to avoid this critical connection.
- **Dry Creek Scenic Pathway**

Dry Creek was a favorite with the community as an important link to the National Forest trails northwest of the city, and for its potential to become a stand-alone recreational experience.
- **Red Rock Scenic Pathway Improvements**

The shared-use path along 179 is already in place. Signs and pavements markings would raise awareness of the path and improve the experience.
- **Alternate Pathways South of West 89A**

Many people do not feel safe or comfortable riding on 89A which can prevent some from riding their bike.

- Coffee Pot and Andante Sidewalks/Pathways
These busy streets link dense neighborhoods to the 89A commercial corridor yet have no sidewalks or bike lanes.
- West 89A Intersection Improvements
One of the challenges of biking in West Sedona is crossing 89A, even where there are stoplights.

Other priority projects that are already in design:

- Thunder Mountain-Sanborn
- Soldiers Pass Road
- Chapel Road

Scenic Pathways

Similar to America's Scenic Byway program, a new designation of "Scenic Pathways" is proposed. Two premier pathways with this designation will be distinguished from the others for their outstanding features and amenities:

- Red Rock Scenic Pathway (on 179)
- Dry Creek Scenic Pathway

The scenic pathways can be used for both transportation and recreation, as both paths link residential neighborhoods to commercial areas and to the National Forest. These will become destinations that highlight Sedona's exceptional scenic and recreational qualities. Additional amenities such as waystations and interpretive signs can add to the experience.

The Red Rock Scenic Pathway on 179 is already in place and is just in need of improvements and amenities such signs. The Dry Creek Scenic Pathway will begin in 2020 with construction at

the northernmost end, which is a partnership with the The Estates at North Slopes homeowners association.

Creekwalk

Oak Creek is a tremendous asset to the community, yet there is no public access within city limits. A proposed pathway along Oak Creek through the Uptown area has been a recommendation of every Sedona Community Plan since incorporation.

The challenges include: crossing multiple properties which requires the support of each landowner; existing development that in some cases is built to the edge of the creek; and the potential impacts to the sensitive riparian environment.

While the creekwalk has always had the support of Sedona residents, key property owners have yet to buy into the idea. However, as properties along the creek develop or redevelop, there may be opportunities that did not exist in the past. New developments, both residential and commercial, recognize that access to trails and open space is a sought-after amenity for potential customers.

Uptown Sedona

Uptown Sedona is essentially a pedestrian district, however one that is sorely lacking in sidewalks. The Pathways Network map shows where sidewalks are proposed. The Uptown Community Focus Area Plan will include more detailed information about pedestrian improvements.

WEST SEDONA PATHWAYS NETWORK

Notes on the legend:

- Planned pathways are underway or in design.
- Trailhead includes parking, whereas "Access" is walk/bike-in.
- Existing access may show as "Proposed" where there is a need to establish legal public access.
- The type of proposed pathway is to be determined.

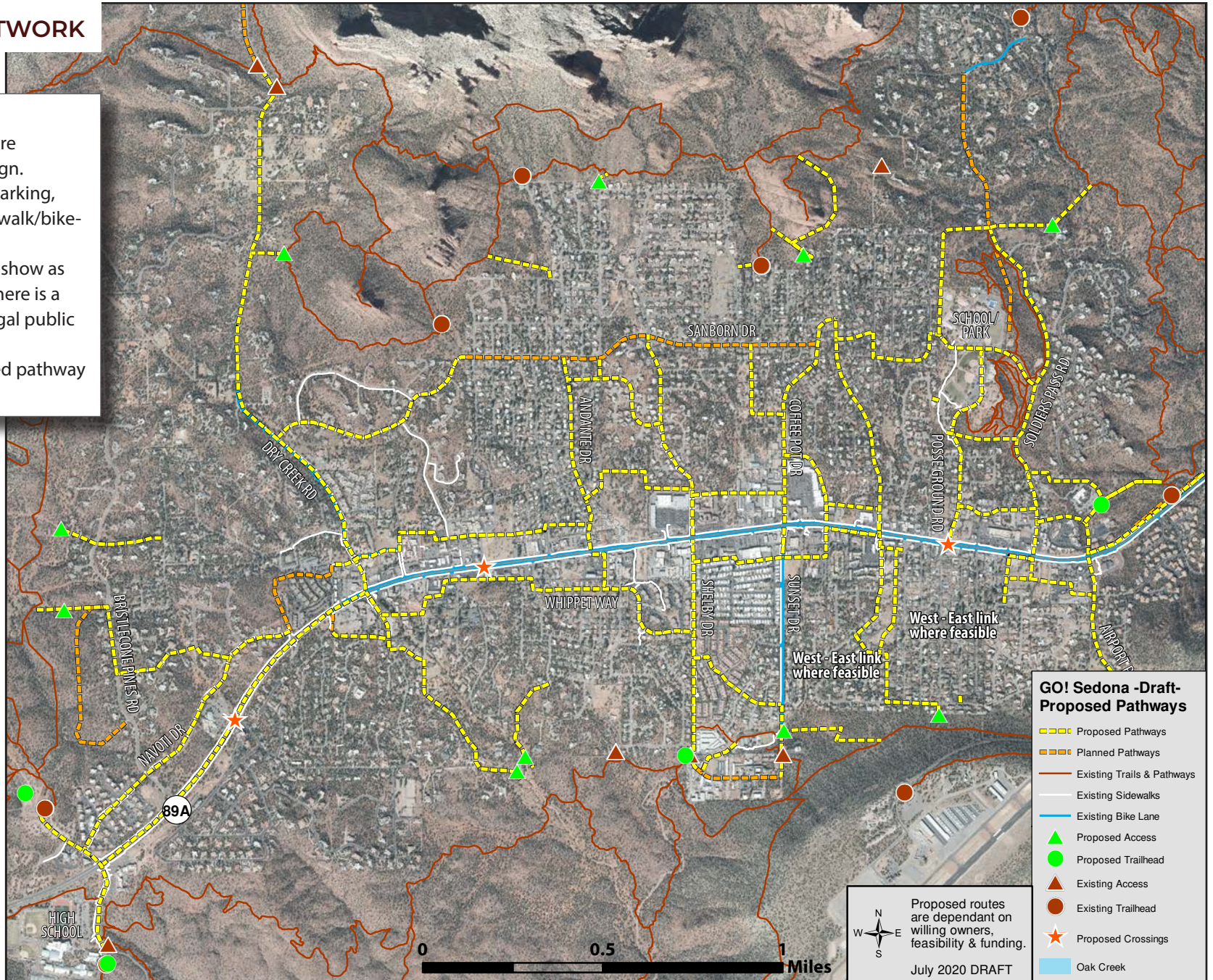


Figure 4. West Sedona Proposed Pathway Network

**UPTOWN AREA
PATHWAYS NETWORK**

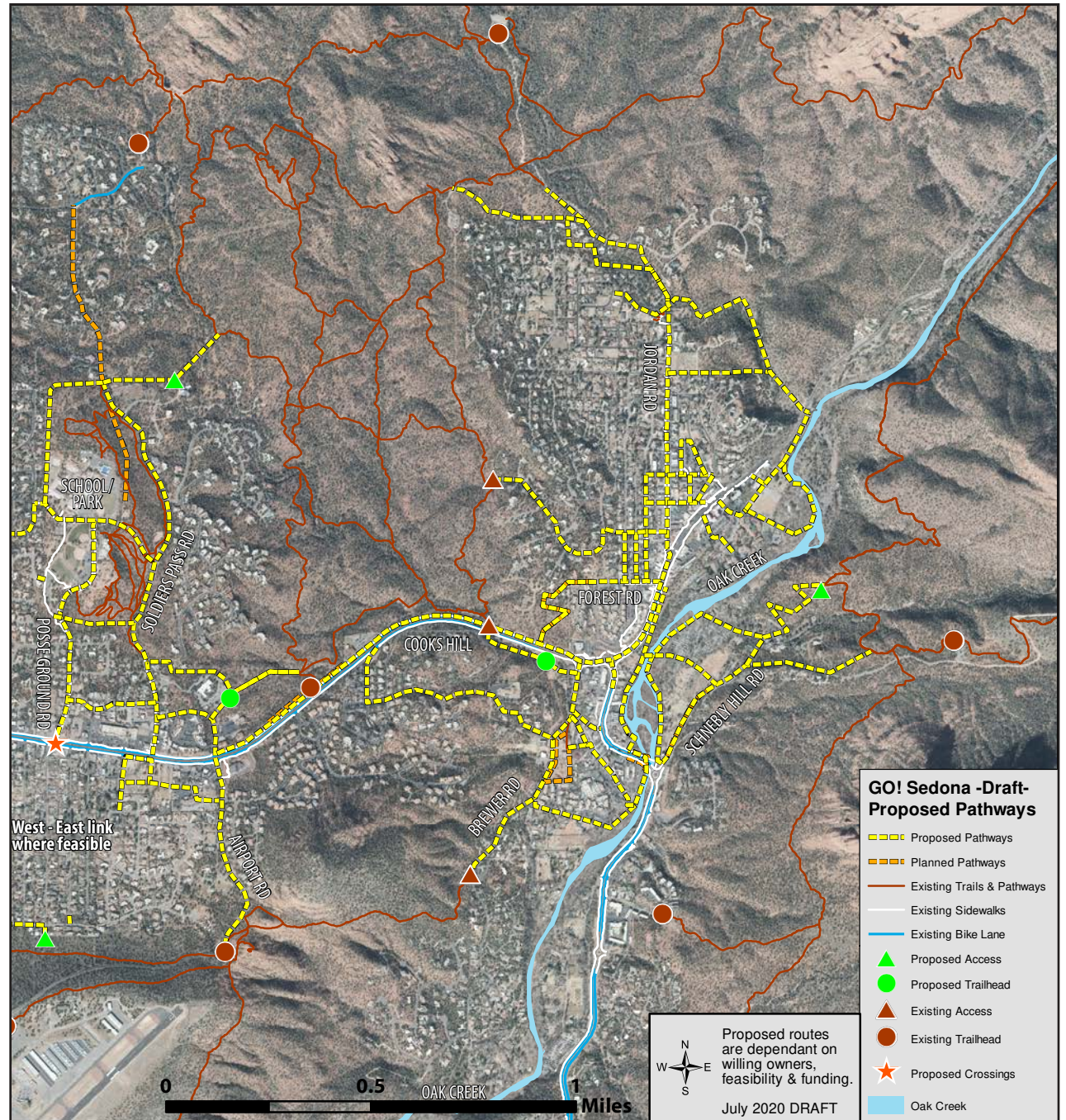


Figure 5. Uptown Area Proposed Pathway Network

CHAPEL AREA PATHWAYS NETWORK

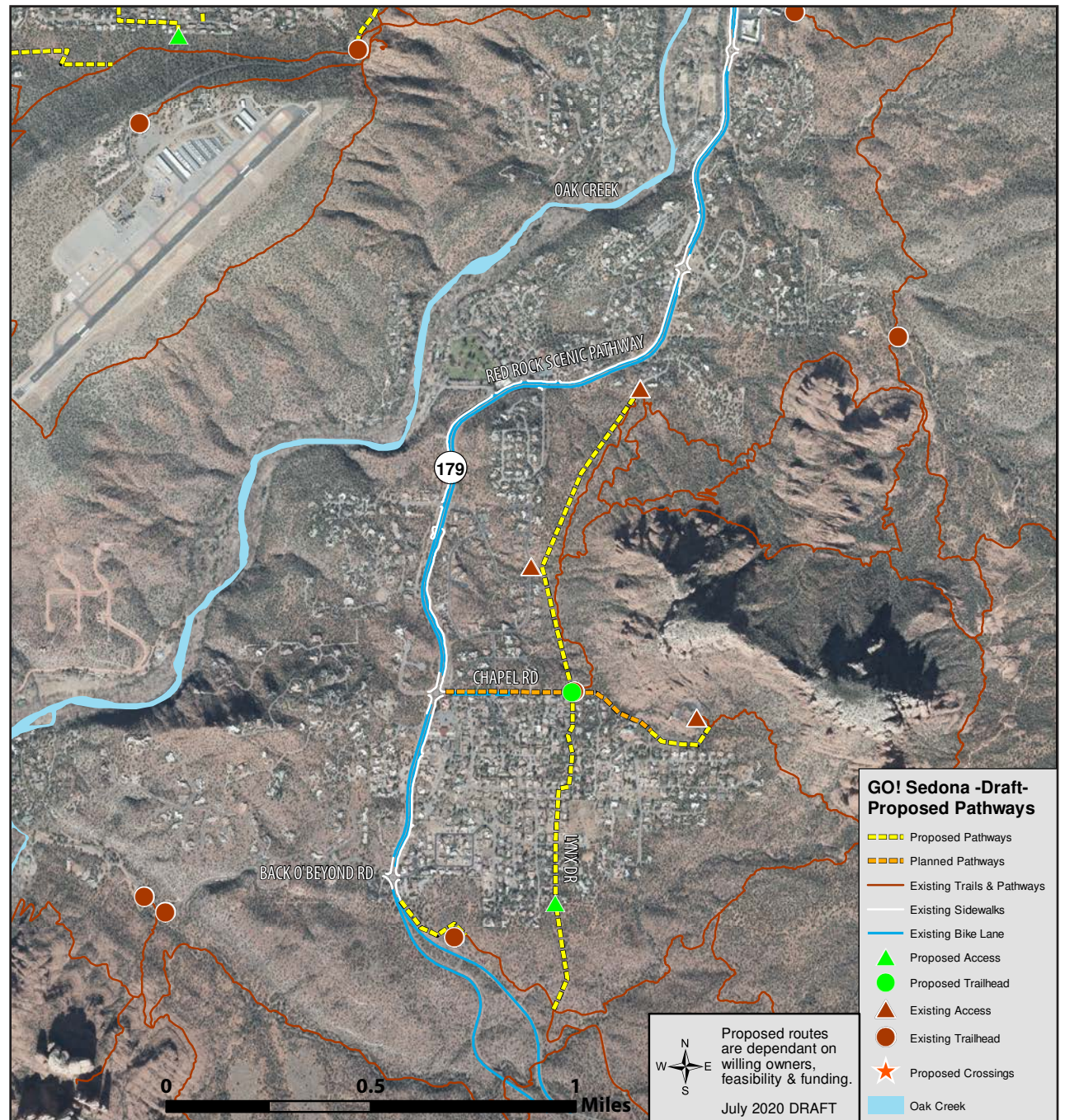


Figure 6. Chapel Area Proposed Pathway Network

WEST SEDONA CONNECTIVITY

A 2016 survey for the TMP included a question on mobility issues in West Sedona. From a list of issues, people were asked to identify 'problems' which were described as: "This is NOT OK. I support spending City funding to prevent this situation from happening in the future." The top two problem areas in West Sedona were:

- 1) pedestrian and bicyclist safety, and
- 2) the lack of neighborhood connections.

The following strategies are intended to address these two issues.

Strategies

1. Create connected pathways throughout West Sedona to enable safe, off-highway pathways for walking and biking.

West Sedona's early development pattern was all oriented to 89A. Commercial businesses had highway frontage and subdivisions were reached from 89A. Street connections were simply to 89A and within a neighborhood. The problem we are left with today is that there are areas with few, if any connections across neighborhoods. Why that matters for walking and biking is that it forces people to 89A. More than likely, if you want to go east or west your journey will look more like a horseshoe than a straight line. From a walking or biking perspective, there are two issues with that, 1) a trip can take longer than a more direct route, and 2) it is hard to avoid using 89A, the most congested road in West Sedona.

2. High Priority Sidewalks: Coffee Pot and Andante

The housing developments of early Sedona also did not have sidewalks. The City's Land Development Code has evolved over time from no

sidewalks required, to a sidewalk on one side, to today's requirement of sidewalks on both sides of the street in new subdivisions.

Coffee Pot and Andante Drives were singled out by the community as high priorities for sidewalks. As collector streets for multiple neighborhoods they have a relatively high volume of traffic. Providing a pathway can improve safety and also result in more people feeling comfortable enough to start walking or biking.

Goals

- Connect community destinations with safe and convenient routes so residents can walk or ride from home to:
 - Shopping centers and commercial areas
 - Schools and transit stops
 - City parks and National Forest system trails
- Improve the experience and convenience of walking and biking in Sedona.

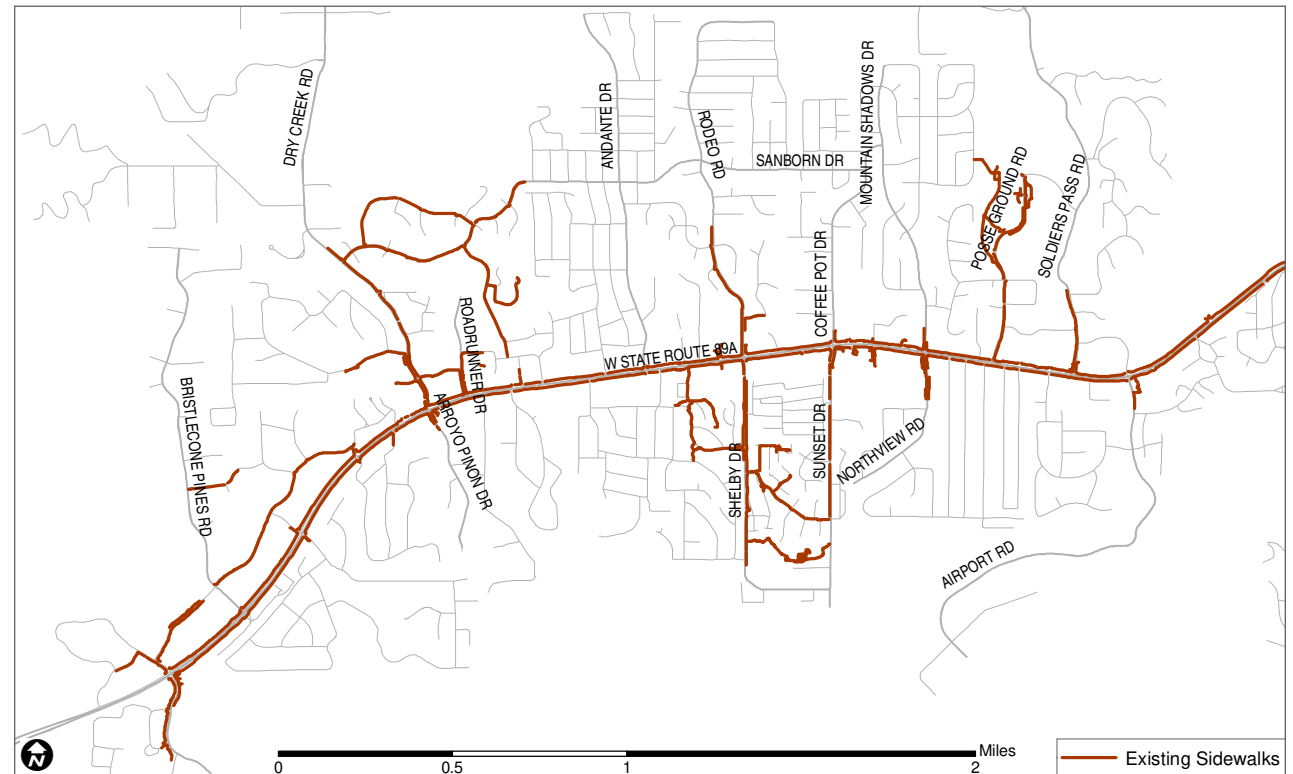


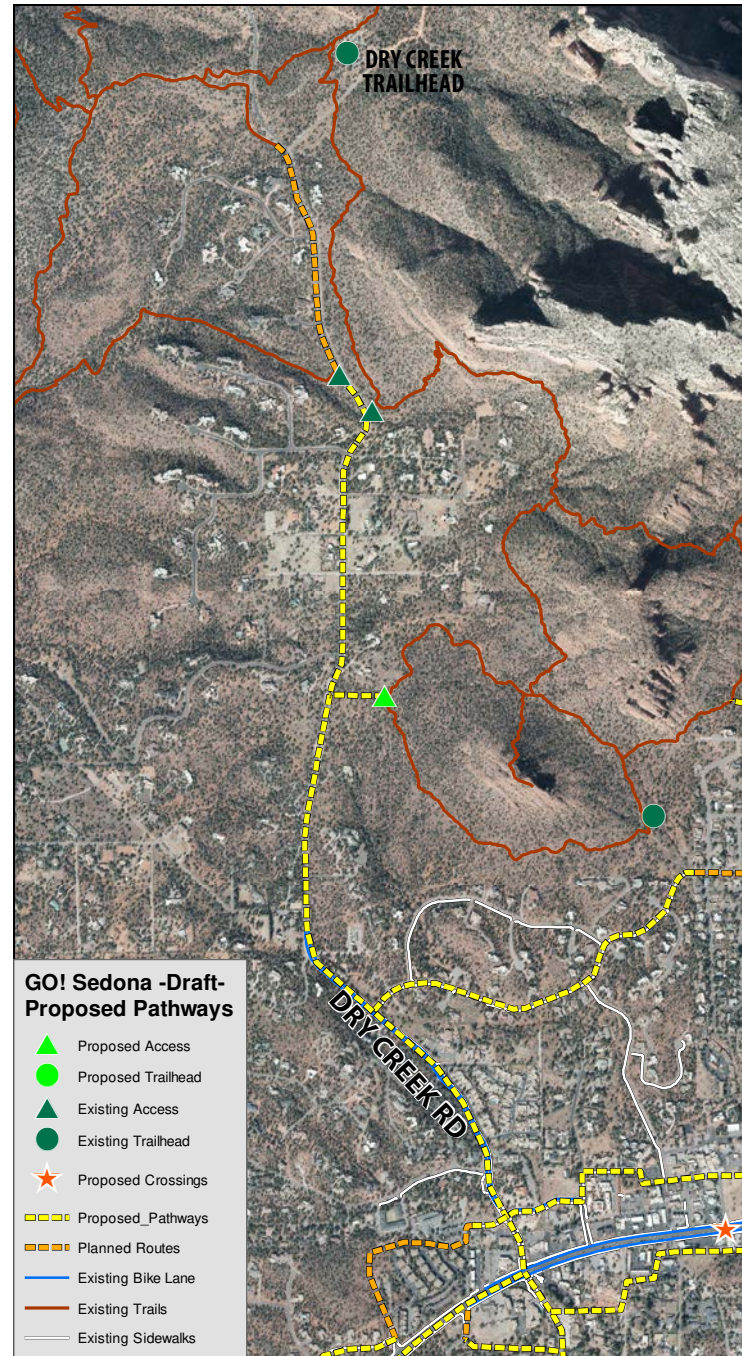
Figure 7. Existing sidewalks

WEST SEDONA CONNECTIVITY, PAGE 2

3. Build the Dry Creek Scenic Pathway, a shared-use path on Dry Creek Road from 89A to the city limits.

Dry Creek Road has consistently been mentioned as a top issue during the public outreach for this plan. It was also in the previous plans, which called for either widened shoulders and striped bike lanes (1994), bike lanes and sidewalks (1996), or wide paved shoulders (2018). What is different about the GO Plan strategy is the idea for it to be a recreational asset itself. It would still serve the purpose of a safer route to get to and from destinations. As a shared-use pathway it would be wide enough for people of all ages and abilities to walk or bike. The Scenic Pathway designation will establish it as a destination experience that has additional amenities from other pathways.

Figure 8. Dry Creek Road Corridor



WEST SEDONA CONNECTIVITY, PAGE 3

89A in West Sedona

“The absence of an alternate east-west route forces bicyclists and pedestrians to use Highway 89A as the main route for travel through West Sedona. Many conflicts occur between bicyclists, pedestrians, and motorists along the highway right-of-way. In order to avoid the dangers of riding on the highway, many bicyclists ride on the narrow sidewalks intended for the exclusive use of pedestrians. Increasing highway traffic, the number of driveways along the roadway, and the need for frequent left-turn movements by motorists add to the tensions between motorists, pedestrians, and bicyclists.”

This quote is from the 1996 Trails and Urban Pathways Plan, yet it could have been written today. The 2019-2020 community feedback mirrored this sentiment, in addition to pointing out that 89A was a significant obstacle to making Sedona more walkable and bikeable. The experienced cyclist may feel comfortable riding on or across the highway, but a less experienced rider will not and this may be the reason they decide not to bike.

The data shows that these are valid concerns. West 89A is where most of the crashes that involve a bicyclist or a pedestrian happen, especially at major intersections. See Figure 9 for the general location of crashes from 2014-2019.

Suggestions for improving 89A have included creating a protected bike lane or widening the sidewalks for use by bicycles and pedestrians. To add to the complications with what to do is how to do it. Any changes must be done with ADOT

as the authorizing partner, as the West Sedona portion of 89A is ADOT right of way.

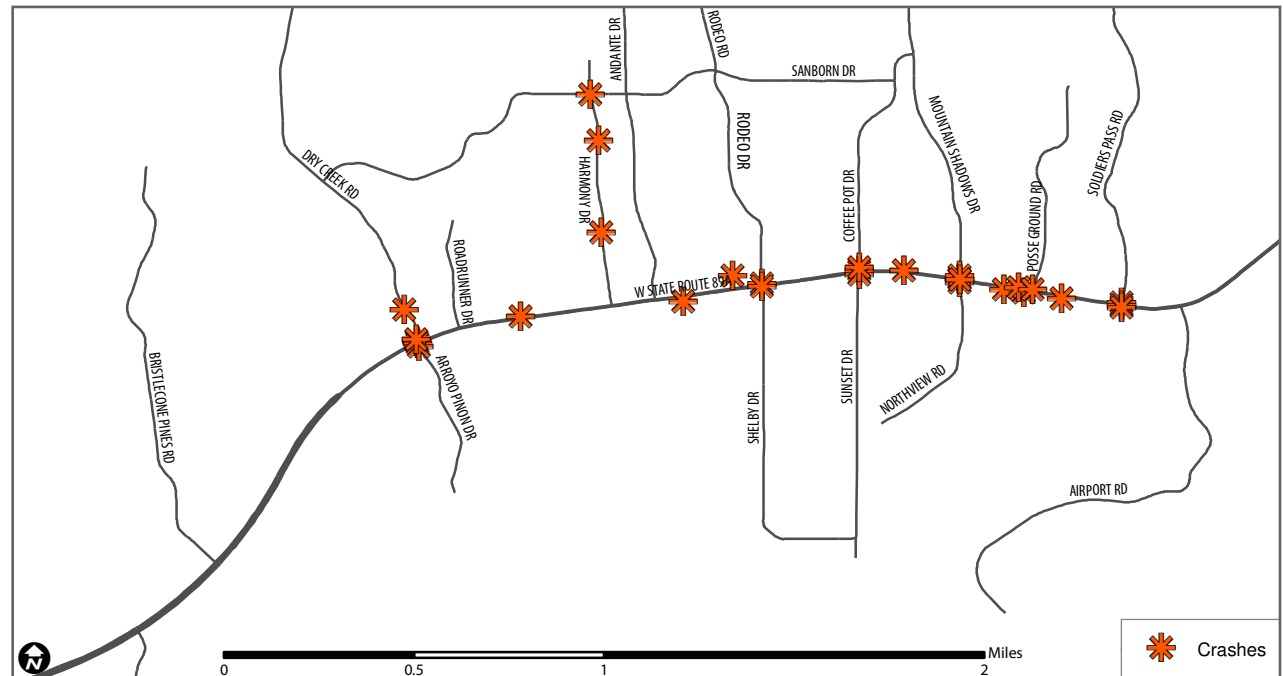
4. Reduce the number of driveways on West 89A.

The biggest hazard to people walking or biking on 89A are all of the driveways that intersect with the bike lane and sidewalk. People walking, biking, or driving all need to be wary of each other at every driveway, and there are far more driveways than necessary. Many businesses have multiple driveways and few are shared with adjacent businesses. Driveways can be consolidated through redevelopment, however that occurs sporadically with short segments at a time. Every effort should be made to reduce the number of driveways by consolidating and eliminating redundant or unnecessary driveways.

Goals

- Improve safety for people walking or biking
- Provide routes that offer safer alternatives to 89A in West Sedona.

Figure 9. Vehicle crashes with pedestrians or bicycles in West Sedona, 2014-2019



WEST SEDONA CONNECTIVITY, PAGE 4

Crossing 89A

"Intersections are the place where the most vehicle-bike conflicts occur. In 2017, 43% of urban bicyclist fatalities occurred at intersections. On many streets, large turn radii and wide lanes encourage drivers to make sweeping, fast turns. These design decisions increase exposure and risk for people walking and biking, reduce the safety and comfort of the bike network, and discourage cycling. As cities work to make streets safer and more welcoming for bicyclists of all ages and abilities, intersection design is key".

-National Association of City Transportation Officials (NACTO)

Given these findings and the fact that in Sedona most crashes are at intersections on 89A, there needs to be a focus on improving how people safely cross the highway. There are two issues that need to be addressed: 1) existing signalized intersections (where there are stoplights), and 2) additional designated crossings designed for people walking or biking.

5. Improve bicycle and pedestrian safety at major 89A intersections, for people walking or biking along the highway, and for those crossing 89A from neighborhood streets.

Crossing 89A should be safer at signalized intersections, however they present additional challenges for people on bikes. Leading up to an intersection with 89A, the City streets have no bike lanes so bikes must merge into traffic. Another challenge is not being able to trigger a signal without being on the sidewalk. To avoid these problems, some bicyclists would rather take their

chances and cross the highway elsewhere. There are numerous best practices for design features to alleviate these concerns and make intersections easier and safer for people.

6. Posse Grounds at 89A is a high priority for a new, dedicated bicycle/pedestrian crossing.

The 2016 Transportation Master Plan recommends additional, mid-block crossings of 89A that are dedicated, signalized crossings for bicycles and pedestrians. To provide safe access to the West Sedona School and Posse Grounds Park, a new

crossing at 89A and Posse Ground Road is the highest priority. Another crossing is recommended at Southwest Drive. See page 33 for an example.

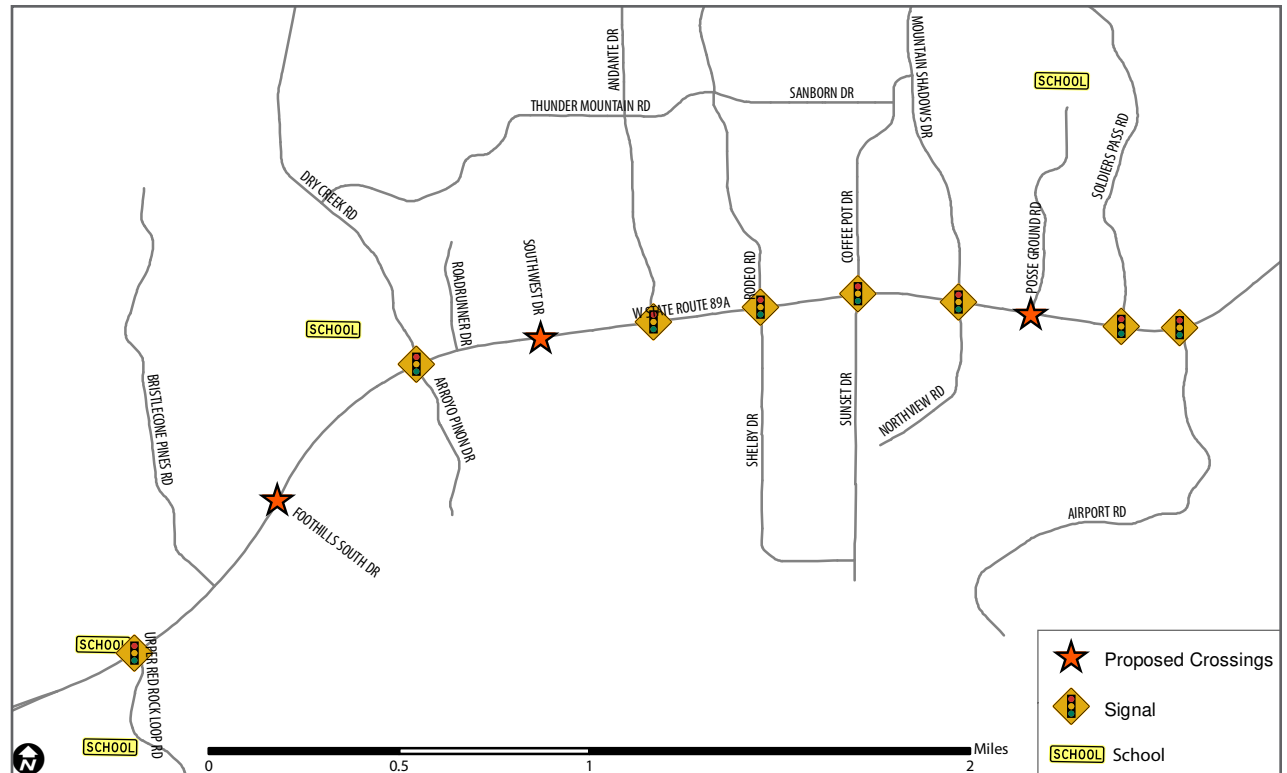


Figure 10. Proposed and Existing Signalized Crossings of West 89A

STATE ROUTE 179

Strategies

7. Designate the 179 path as the "Red Rock Scenic Pathway" with enhanced signage, striping, and amenities.

Where the State Route 179 "Scenic Byway" ends near the City limits is where the paved path begins. When you are driving it may look like a sidewalk, when in fact it is a shared use path that is 10' wide (in most locations) and open to both pedestrians and bicyclists. This is Sedona's longest paved pathway at 3 miles, which provides a biking experience other than a bike lane or mountain bike trail.

Surprisingly, the path does not see as many bicyclists as you might expect for a scenic route in a busy tourist destination. This could change with minor improvements that will make it a better and safer experience, such as signage and pavement markings. See "Amenities" on page 24 for examples of other potential improvements.



8. Improve the safety and experience of roundabouts for people walking or biking.

There are no bike lanes through the Sedona roundabouts. Most people, whether driving or on a bike don't know what is expected. The theory is that the speed of cars in a roundabout is slow enough for a bicyclist to safely use the full lane and ride through a roundabout with the cars. Where there is a shared use path, such as 179, then the bicyclist can ride on the pathway, and if there is a sidewalk (narrower than a pathway), the bicyclist can dismount and walk on the sidewalk.

Education for bicyclists on what their options are at a roundabout could help improve the comfort level for the less experienced bicyclist to make their way through a roundabout. There is a video about bicycle safety in Sedona on the Visit Sedona website: <https://visitsedona.com/trip-planning/frequently-asked-questions/>.

9. Work with ADOT to add safety features that alert motorists when they stray into the 179 bike lane.

The suggestion is for bike-friendly, textured rumble strips. This request has been submitted to ADOT by the local bicycling group.

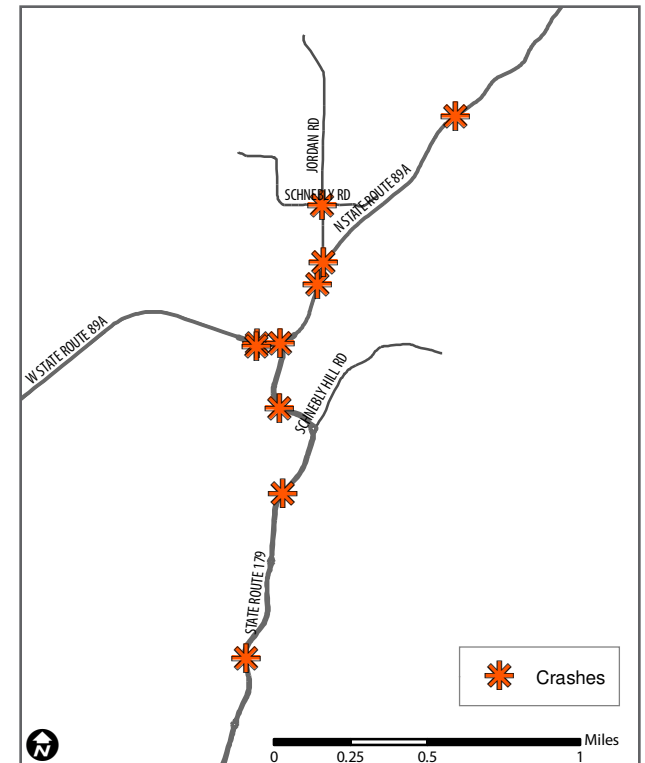


Figure 11. Vehicle crashes with pedestrians or bicycles in Uptown or on 179, 2014-2019

BIKEWAYS

If more people are to ride their bikes, Sedona needs a connected network of routes where bicyclist and pedestrian safety is the highest priority. This can be done with signage, traffic calming features, separated pathways, additional maintenance, and new connections.

Strategies

10. Develop a network of bikeways that makes traveling by bike a viable option for people of all ages and abilities.

Figure 13 on the following page shows the proposed network of *primary* bikeways in West Sedona. These routes were selected based on public input and were evaluated for feasibility, safety, experience, continuity, and linking destinations. To make it viable for getting around town on bike in West Sedona, there needs to be a grid-like network of routes that serves all neighborhoods. In Uptown, Jordan will serve as the primary north/south route, and along the 179 corridor, the Red Rock Scenic Pathway on 179 will be the focus.

11. Develop Cooks Hill into a safe and scenic experience by transforming the north sidewalk into a protected, shared use path.

Public feedback consistently mentioned Cooks Hill as one of the highest priorities for improving biking conditions in Sedona. It was described by some as an unpleasant experience to be avoided, and a "barrier" between West Sedona and the rest of the city. It is a long, curving hill that has a higher speed limit (40 mph) than other streets in Sedona.

After exploring multiple suggestions north and south of the highway, no other options were

considered feasible except to work within the existing right of way. The preferred approach is to widen the north sidewalk into a two-way shared use path with a buffer from the roadway. The increased width would allow for pedestrians and bicycles to travel in both directions. The outstanding scenic views are an added bonus that might just encourage people to walk or bike instead of driving.

This will require a partnership between the City, ADOT, and possibly the adjacent Coconino National Forest. This is within ADOT's jurisdiction, so the concept and design will need to be supported and authorized by ADOT.

12. Develop alternatives to 89A that are continuous and connected neighborhood routes.

People would like to be able to bike or walk to destinations in West Sedona without using the highway. Identifying potential pathways where there are no street connections has been the most challenging issue for this planning process.

The two priority areas due to the lack of continuous street connections are both south of the highway:

- Arroyo Piñon Dr to Thunderbird Dr, and
- Sunset Dr to Willow Way.

Routes between Sunset Dr. and Willow Way are not drawn on the map as there may be several options. The specific alignment for these and other areas without street connections will need to be determined in partnership with willing landowners.

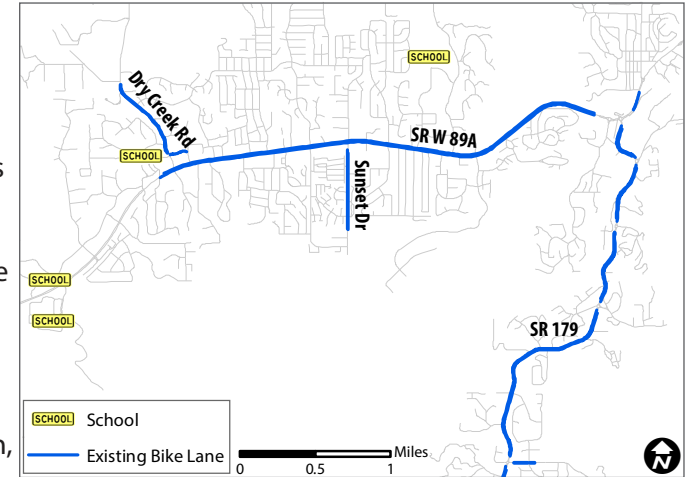


Figure 12. Existing Bike Lanes

13. Implement traffic calming and safety measures on designated bike routes.

Some routes may be considered 'bike boulevards', or 'slow streets' where bicyclists and cars share the road. Traffic calming features are added to improve the safety for people biking, and may include a combination of signage, pavement markings, and other design features (see page 29 for examples).

14. Streets with designated bike routes have a higher level of maintenance to ensure a safe biking experience.

People on bikes need a clear, unobstructed path just as cars do. Obstacles and hazards for someone on a bike are a little different than for cars. The maintenance considerations for bike routes are providing a clear path along both sides of the roadway. Otherwise common occurrences are when a bicyclist has to swerve into the center of the road to avoid potholes along the edge of the road, or tree branches at eye level.

PRIMARY BIKEWAY NETWORK

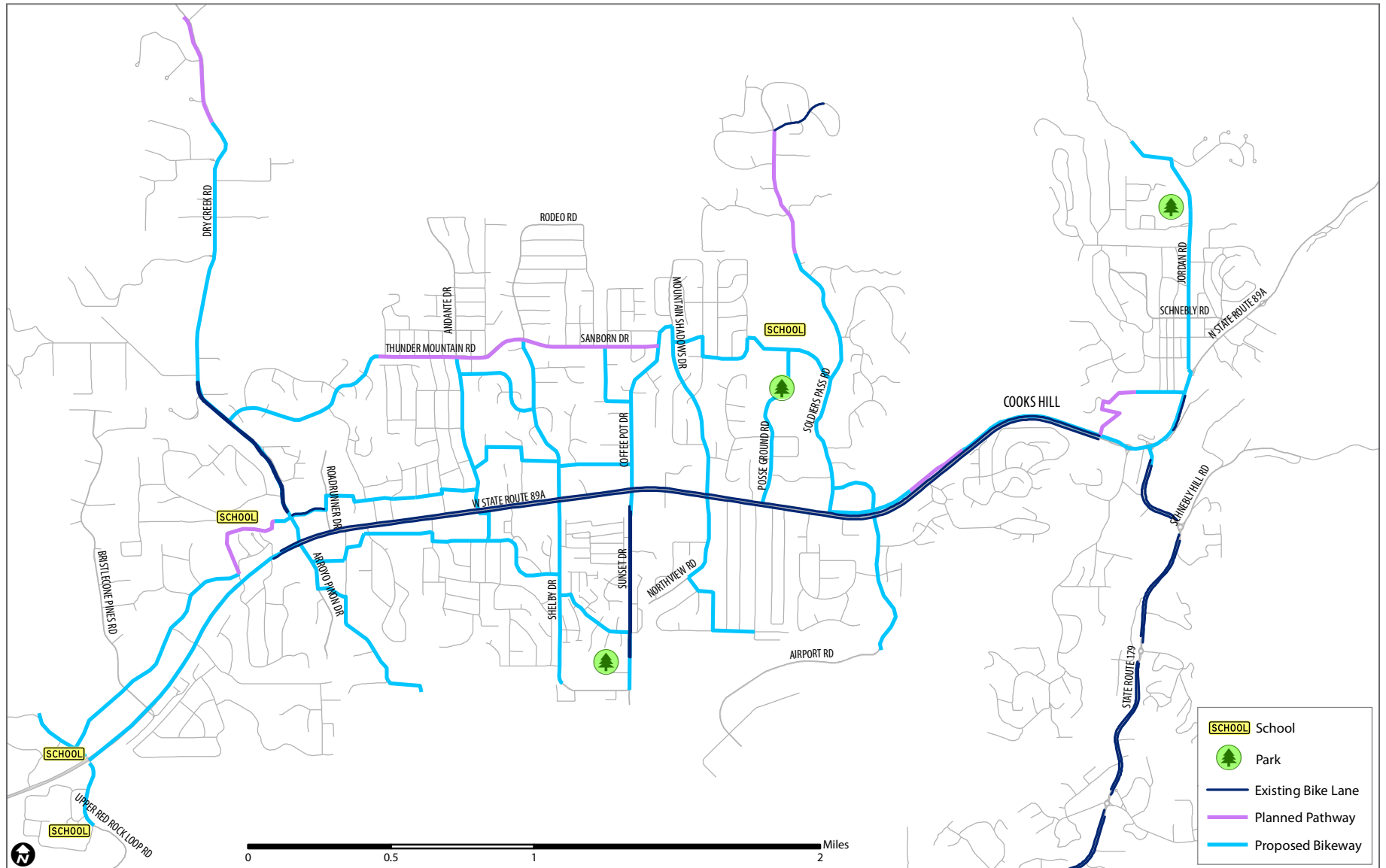


Figure 13. Proposed Primary Bikeway Network

This map highlights the primary bike routes that would make up the bicycle transportation network. Additional secondary connections are shown on page 12-14, the Pathways Network Maps.

TRAILHEAD SYSTEM

Sedona is surrounded by National Forest, and the trail system is a major destination for both residents and tourists. The more people that walk or ride to the trails means less cars on the road and parked at trailheads.

As Sedona grows and tourism increases, trailhead parking lots are overflowing and some trail access has been lost to development. Without a better distribution of larger trailheads and access points throughout the city, there will continue to be trailheads that are over capacity.

Partnerships between the City and the Coconino National Forest will be required to implement the following strategies. In some cases private landowners or organizations may need to be involved, and some strategies may be incorporated into development projects.

Strategies

15. Enhance access points and trailheads with improved signage, amenities, and maintenance.

16. Improve and expand existing trailheads where feasible and appropriate.

- a) Jordan/Jim Thompson Trailhead, utilize northern, gated parking area
- b) Schuerman Trailhead, possible expansion and/or partner with Red Rock High School
- c) Sombart Trailhead off of 179

17. Develop new trailheads to distribute and accommodate parking.

Most trailheads are over capacity, creating neighborhood impacts as cars spill out onto City streets. Redirecting people to other underutilized

trailheads doesn't help as most are not large enough to handle the amount of parking needed.

- a) Western Gateway/Girdner Trailhead, develop an expanded, hub trailhead with full amenities ahead of future development of adjacent private land.
- b) South Shelby or Sunset Drive, work with future development and/or acquire land for parking
- c) St John Vianney Church/North Airport Rd, partner with church for shared parking
- d) Southwest of Brewer Rd/89A roundabout, work with future development for parking and ADOT for use of the "Twin Tubes" underpass
- e) Mystic TH, partner with the National Forest to construct a new, larger parking lot on Chapel Road
- f) Mescal TH at Long Canyon Rd, while not within City limits, it would alleviate some of the Dry Creek Road parking congestion

18. Provide transit or shuttle services to trailheads.

Neighborhood Trail Access

The following quote, from the 1994 Red Rock Pathways Plan is still applicable today:

"Neighborhood connections are important components to the Urban Trails concept... for local pedestrian and biking use only; no parking will be provided other than potential bike racks for street bikes. In some cases, easements will need to be acquired to insure [sic] that forest access is not lost as more neighborhoods become built out".

19. Authorize and improve selected neighborhood social trails.

Social trails are user-created trails not authorized by the Forest Service, thus they are not named, signed, or maintained. Neighbors use them to get to the Forest from home. In many cases there is public access up to the Forest boundary, such as a road, and a social trail from there. These social trails, with Forest Service approvals could be improved. No parking is proposed at these locations.

- a) Bristlecone Pines Rd neighborhood to Western Gateway trail system, several options: Hillside Vista, Dove Wing, or Plumage
- b) Sunshine Lane to Andante Trail
- c) Stations West Dr to Sugarloaf trails
- d) El Camino Rd (City owned lot) to Old Post Trail
- e) Lynx Drive to Little Horse Trail

20. Secure permanent access for selected social trails that cross private land.

Without securing legal access, trails crossing private land can be closed at any time by the landowner. This is especially true of vacant lots that get developed. No parking is proposed at these locations.

- a) Panorama Blvd to Airport Trail
- b) Sunset Park east to Airport Trail
- c) Posse Grounds Park/Soldiers Pass Road to Grand Central Trail, private or State Trust Land
- d) Dry Creek Rd to Chimney Rock Trail, several potential locations

21. Manage trail access parking on neighborhood streets where needed.

TRAILHEADS

Goal

- Provide an equitable distribution of trailhead parking throughout the city to reduce impacts of parking to any one neighborhood.

Notes on the legend:

- Trailhead is a parking lot at the starting point of a trail
- Trail Access is walk/bike-in access without a parking lot.
- Existing access may show as "Proposed" where there is a need to establish legal public access.

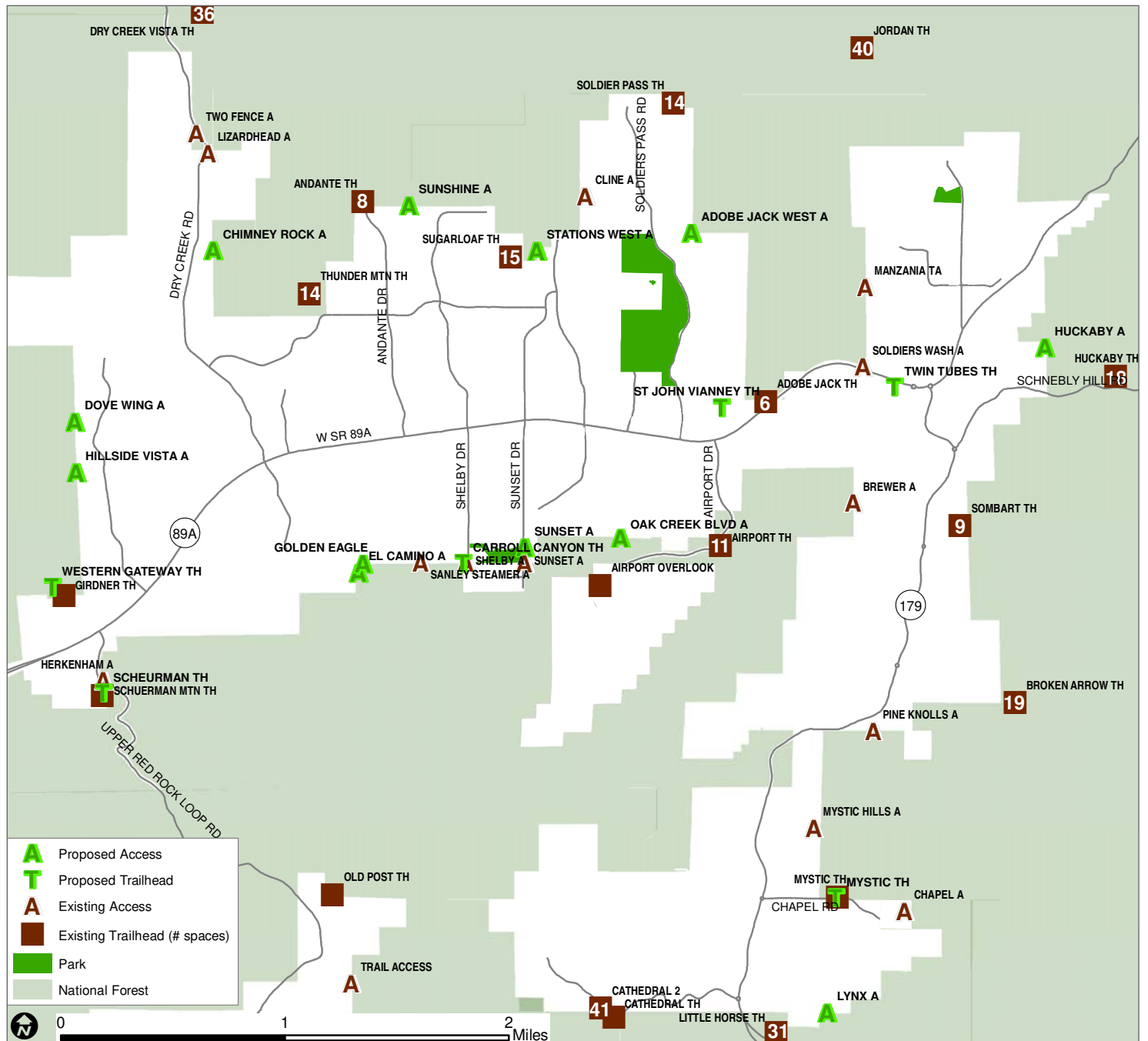


Figure 14. Proposed Trailheads and Trail Access Points

AMENITIES

If the goal is to get more people walking and biking, it needs to be a good experience from beginning to end. Clearly marked paths will lead the way with a place to park your bike once you arrive. On the way, you may need to check the map or rest in the shade. It is the details like this that can make or break an experience.

Wayfinding

Strategies

22. Mark and sign all pathways with the ST&PS wayfinding designs.

Wayfinding refers to providing guidance and direction with a standardized set of designs in a variety of ways, such as signs, trail markers, and pavement markings. ST&PS will be a branded system with a standard logo and designs that will be easy for people to identify no matter what type of pathway they are on – see Figure 15. Signs along on-street pathways will not only benefit the user, but also make motorists aware that they may encounter people walking and biking.

Waystations

23. Establish waystations that feature amenities such as benches and a map kiosk.

Similar to scenic overlooks or rest stops, the ST&PS network may have stops along various pathways that are like waystations for people walking or biking. A shade structure or trees could provide shade, with benches and a kiosk of maps and other information. It could also feature public art or bike repair stations. They could be located at pathway junctions, existing parks, transit stops, significant intersections, or at scenic viewpoints.

Bike Parking

24. Ensure that all major destinations have a sufficient number of quality bike racks in easy to find locations.

The City's Land Development Code requires development projects (nonresidential and multifamily) to provide bicycle parking (LDC § 5.5.D), however more bike racks are needed at already established destinations. A 2019 inventory of bicycle racks at major destinations in Sedona found that bike racks were hard to find, in poor condition, of an inferior design, or nonexistent. Some places with bike racks did not have enough considering the size of the area and number of visitors.

Goals

- Provide amenities and support facilities that improve the experience, such as signage, maps, and bike racks.
- Provide information and maps such as where to go, how to get there, and trail etiquette.



Figure 15. Wayfinding Designs for the Sedona Trails & Urban Pathways System (ST&PS)

PROGRAMS

The League of American Bicyclist's Bicycle Friendly programs have identified the essential elements to make a place great for bicycling. They are known as the six "E's":

- Engineering/design
- Evaluation/planning
- Education
- Encouragement
- Enforcement
- Equity

While the program's original focus was on biking, these programs are also applicable to walking. The first two on the list are addressed elsewhere in this plan. The remaining elements are closely intertwined and are captured in the following list of strategies.

In order to succeed, most of these strategies will require partnerships among various organizations, some of whom may host or sponsor the event with others in a supporting role. The partners can include agencies (City, counties, Forest Service, State Parks), non-profit organizations, and businesses.

Strategies

25. Develop a program of educational information.

The messaging should include the GO Sedona Vision, and how each issue is tied to the other: improving safety leads to an improved experience, which can lead to an increased number of people walking and biking, which leads to reduced traffic, all of which result in a healthy, happy and active Sedona.

A variety of methods should be used to reach audiences that include people who walk and bike as well as motorists, employers/employees and visitors. Information can be conveyed through websites, maps, kiosks, signs, and marketing campaigns. Messaging examples include the following:

- Educate and inform motorists about the values of walking and biking, and provide reminders and tips for safely sharing the road.
- Encourage more people to participate and provide information on where to go and how to get there (maps).
- Provide information about bicycling regulations, etiquette, and skills.
- Communicate the benefits for residents and the community as a whole

26. Offer a variety of activities and programs that educate and encourage bicyclists and pedestrians.

- Bike to Work Week activities
- Safe Routes to School programs
- Workshops and trainings

One example of an activity that would encourage people to start walking or biking are group walks or bike rides that introduce people to where they can go, and safety tips so that people will be more comfortable going out on their own.

To address the 6th E: "Equity, Diversity, and Inclusion," programs should cater to people of all ages and abilities.

Goals

- Encourage people to walk or bike instead of driving.
- Reduce traffic by increasing the number of people walking and biking instead of driving.
- Encourage healthy and active lifestyles.

27. Work with festival and event organizers to ensure that events provide opportunities for people to walk, bike, or use transit to get to and from the event.

This will require education, promotion, and incentives like discounts on entry fees or food and drink tokens if you walk or ride to the event. To accommodate people biking to an event, the facility will also need bike racks and/or services like bike valets.

28. Enlist the lodging industry in helping visitors to 'park once' and walk or bike during their stay.

Work with hotels, resorts, and vacation rentals to encourage visitors to walk and bike by providing information about where to go and how to get there, as well as complementary bicycles.

Some hotels already provide bicycles for guests, and in some areas of Sedona where the hills might be challenging, they may want to consider offering e-bikes.

29. Encourage bike friendly businesses.

Work with businesses to provide incentives for

PROGRAM STRATEGIES, PAGE 2

employees that walk/bike/ride to work. Businesses should also provide the support to do so, from bike racks to showers.

30. Integrate transit with bicycle/pedestrian planning and infrastructure.

The pathway network should be closely integrated with the Verde Lynx and the expanded transit system being proposed by the City. Currently the Verde Lynx has routes on 89A and 179, which both have sidewalks. Ensure that there is safe pedestrian access for people walking to and from bus stops. Bicycle access should also be considered, for example buses are equipped to hold bicycles and should continue to do so. Consider enhanced bus stop features such as shaded benches, bike racks, and maps.

31. Monitor pathways with help from users reporting hazards or maintenance needs.

To maintain a safe pathways network, users can help by reporting hazardous conditions or maintenance needs. This may just be a matter of letting people know about the "Report It" system available as an app or on the City website: www.sedonaaz.gov/reportit.

32. Investigate methods for collecting more detailed information about crashes that involve pedestrians or bicyclists.

These details will be useful in identifying problem issues and locations, and monitoring trends over time. The data can also inform decisions on project priorities and potential programs.

33. To serve as an example of alternative transportation, provide e-bikes for City employees, including Police Department officers.

This is not only a more sustainable approach to transportation, but also serves as a model to encourage others to do the same. Officers on bikes can also interact with people more directly for education and enforcement.

34. Establish bike share program guidelines as needed.

Share programs are commercial enterprises that rent "shared mobility devices" such as bicycles and scooters. Some companies have designated locations where the bikes are stored, others are dockless, where the devices can be left anywhere and are tracked electronically.

The operation of these type of businesses come with a variety of challenges, which have led some cities to develop regulations specific to these businesses. In Sedona, some vendors have cited the lack of safe facilities as a deterrent to operating, and as of 2019 there are no shared bike or scooter vendors in Sedona. If this appears to be changing, guidelines should be developed to address the management and operations of shared mobility devices. For example, requiring designated docking stations.

IMPLEMENTATION

The GO Plan recommendations and strategies will be accomplished through a variety of methods. This is a City of Sedona plan, however not all of the projects and programs will be led or funded by the City.

The following are the most common implementation methods.

- Incorporate with other City projects
 - Road improvements
 - Stormwater improvements
 - Maintenance
 - Future transit program
- City Capital Improvement Program
 - SIM transportation projects
- Private Development Projects
 - Commercial or mixed-use development or redevelopment
 - New residential subdivisions
- Partnerships
 - Any combination of public agencies, developers, businesses, and community organizations

Sedona In Motion (SIM) is the implementation program for the Transportation Master Plan, and the GO Plan is a component of Strategy 11 which calls for bicycle/pedestrian improvements. As of early 2020, the following SIM bicycle/pedestrian projects were in design.

- Dry Creek shared use path (The Estates at North Slopes section)
- Thunder Mt-Sanborn stormwater improvements with shared use path

- Soldiers Pass shared use path and Posse Ground Park trailhead parking

This is a 10-year plan, however it is not expected that the entire plan can be accomplished in the next 10 years. Rather, the plan should be revisited and updated in 10 years as circumstances and priorities may have changed.

Funding

SIM transportation projects are being funded by a temporary half-cent sales tax, and bicycle/pedestrian improvements are eligible for this funding.

Grants are another potential source of funding, and may be from agencies (state and federal), or non-profit organizations. Most programs are very competitive and have limitations on the type of eligible projects. Rather than list all of the possible sources of grant funding here, please refer to resources such as ADOT's bicycle/pedestrian plans, and Arizona State Parks grant programs (See Resources, page 39).

Measuring Success

To monitor the success of this plan, progress should be evaluated with a system for tracking data on an annual basis. Staff and an advisory group can develop an evaluation plan and decide on the key indicators, and how the data will be collected.

Potential Indicators:

- Projects
 - Number of new improvements or projects
 - Number of bike racks
 - Miles of new sidewalks, trails, and pathways
- New programs
 - Number of activities and events
 - Amount of people participating
 - Number of groups or businesses participating
- Community events with walk/bike provisions
 - Number of event attendees that walk/bike
- Reduction in accidents involving pedestrians or bicyclists
 - Reduction in total number of accidents
 - Reduction in severity of accidents
 - Zero crashes at locations where improvements were made
- Citizen surveys to gauge satisfaction and support

IMPLEMENTATION STRATEGIES

These strategies will bring this plan to reality and put Sedona on the path towards a more walkable and bikeable community.

Strategies

35. Establish a City Bicycle/Pedestrian Program.

The City has never had a dedicated program or staff focused on bicycle/pedestrian issues, which will be essential to making substantial progress on implementing this plan. Below are the suggested elements of a program, and common for cities where walking and biking are a top priority.

a. Establish a City bicycle/pedestrian staff team.

Establish a City staff work group to improve communication, planning, design, and construction of projects and programs. The group should meet at least quarterly with representatives from Public Works, Community Development, Parks and Recreation, and other interested departments. Members of the group can contribute their unique expertise and provide support for each step of a project or program's implementation.

b. Create a City bicycle/pedestrian coordinator position.

A coordinator would be dedicated to ensuring that all strategies are pursued, from programs and policies to physical improvements. The position would coordinate with various City departments and serve as a liaison with residents, agencies, community organizations, the advisory group, and businesses. Depending on funding, the coordinator could become the duties of an existing staff

position, a new staff position, volunteer, or combination.

c. Establish a bicycle/pedestrian advisory group.

A designated group of citizens can monitor the implementation of this plan and serve in an advisory role for the City. Member would also serve as community liaisons and advocates.

d. Develop an Annual Work Program.

The staff team and advisory group should develop an annual program of work that will address both the project and program strategies outlined in this plan. This should include an evaluation of key indicators to monitor progress.

36. Adopt a Complete Streets philosophy.

All projects shall be designed, built, and maintained to safely accommodate all users including bicycles and pedestrians.

Pathway projects shall include appropriate signage, wayfinding, and amenities. Once completed, maps and signage will be updated to reflect the new pathway.

Other, non-transportation projects, such as stormwater projects will consider incorporating bicycle/pedestrian features where appropriate and feasible.

37. Work towards a "Vision Zero" goal.

Vision Zero is a global initiative to "eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for

all". Actions specifically target traffic safety, which will take a coordinated effort of the City Police and other departments, and state and county agencies. More info at: www.visionzeronetwork.org.

38. Create pedestrian friendly streetscapes.

Streetscapes are street frontages, especially in commercial corridors. Quality streetscapes make walking a more pleasant experience that encourages more people to walk. The streetscape should be more than just a sidewalk. 89A in particular can be enhanced with pedestrian amenities, especially landscape buffers from the street. This can be done with new construction or redevelopment.

39. Development and design review.

Land use development projects are evaluated according to Land Development Code requirements, which do address bicycle and pedestrian circulation and amenities. Projects should go beyond the requirements and incorporate bicycle/pedestrian needs into all aspects of design. If necessary, the Land Development Code should be updated to reflect additional requirements.

40. Use pilot projects to demonstrate proposed improvements.

Consider easy and inexpensive projects as examples that show people what it will look like and how it will function. These demonstration projects can be tested and refined into permanent solutions. Examples are pavement markings, striping, and traffic calming features.

PATHWAY DESIGNS

The GO Plan does not specify the type of design for each proposed pathway. The following images and descriptions will provide a general idea of the various options. This is not a comprehensive list and does not have details such as design specifications.

City staff will determine the type of pathway based on factors such as the right-of-way or corridor width. For City streets, the right-of-way is the land within the City's jurisdiction and typically extends beyond the asphalt. A pathway could also be within an easement that allows for public access on private land. The next step in design is that the City will enlist professional consultants familiar with best practices to develop the design specifications appropriate to the project.

Pathways will either be on-street, meaning within the right-of-way and parallel to the street, or off-street such as through a park or open space. Who is using the path can also influence design, which is either multi-modal, open to all user groups (walkers and bicyclists) or mode-specific such as pedestrian only. The following are examples of the different type of designs that could make up Sedona's system of pathways.

MULTI-MODAL ON-STREET PATHWAYS

Complete Streets



Description:

Streets designed for all users (motorists, pedestrians, and bicyclists) with specific elements for each, such as sidewalks and bike lanes.

Design:

Typically an asphalt bike lane and concrete sidewalk on both sides of the street.

Example:

Portions of West 89A

Shared-Use Paths



Description:

Two-way path parallel to the road and separated from vehicular traffic. The separation could be a curb or landscape buffer.

Design:

Typically 8' to 10' wide. Width depends on volume of bike/ped traffic, availability of right-of-way, topography, etc.

Paved or gravel surface

Example:

SR 179 Pathway

ON-STREET BICYCLE FACILITIES

ON-STREET PEDESTRIAN FACILITIES

Paved Shoulder



Description:
Striped shoulder on low traffic streets where right-of-way is not wide enough for other multi-modal improvements.

Design:
Variable widths

Example:
Sunset Drive, east side shoulder

Variations:
An advisory shoulder features a dashed line on both sides of a narrow roadway that allows for vehicles to pass each other using the shoulder; for streets with low volumes of traffic.

Bike Lanes



Description:
Striped shoulder on roadway

Design:
Minimum width is 5', desirable width is 6' or at least 4' from the edge of a concrete gutter.

Example:
State Route 179

Variations:
Protected bike lanes have a physical barrier between the bike lane and the driving lane. Buffered bike lanes have a marked buffer area - as in the photo above. Striped bike shoulders are narrower than a true bike lane (less than 5'). Example: West 89A

Above photo by Robin Straughen, BikePortland.org

Sidewalks



Description:
Adjacent to roadway, separated by a curb or landscaped buffer; or a paved walkway within a development such as a shopping center.

Design:
Width: 5' to 10', dependent on volume of use, availability of right-of-way, etc. Paved surface, "Sedona Red" concrete

Example:
Thunder Mountain Rd. pictured above

Elements of a Slow Street/Bicycle Boulevard

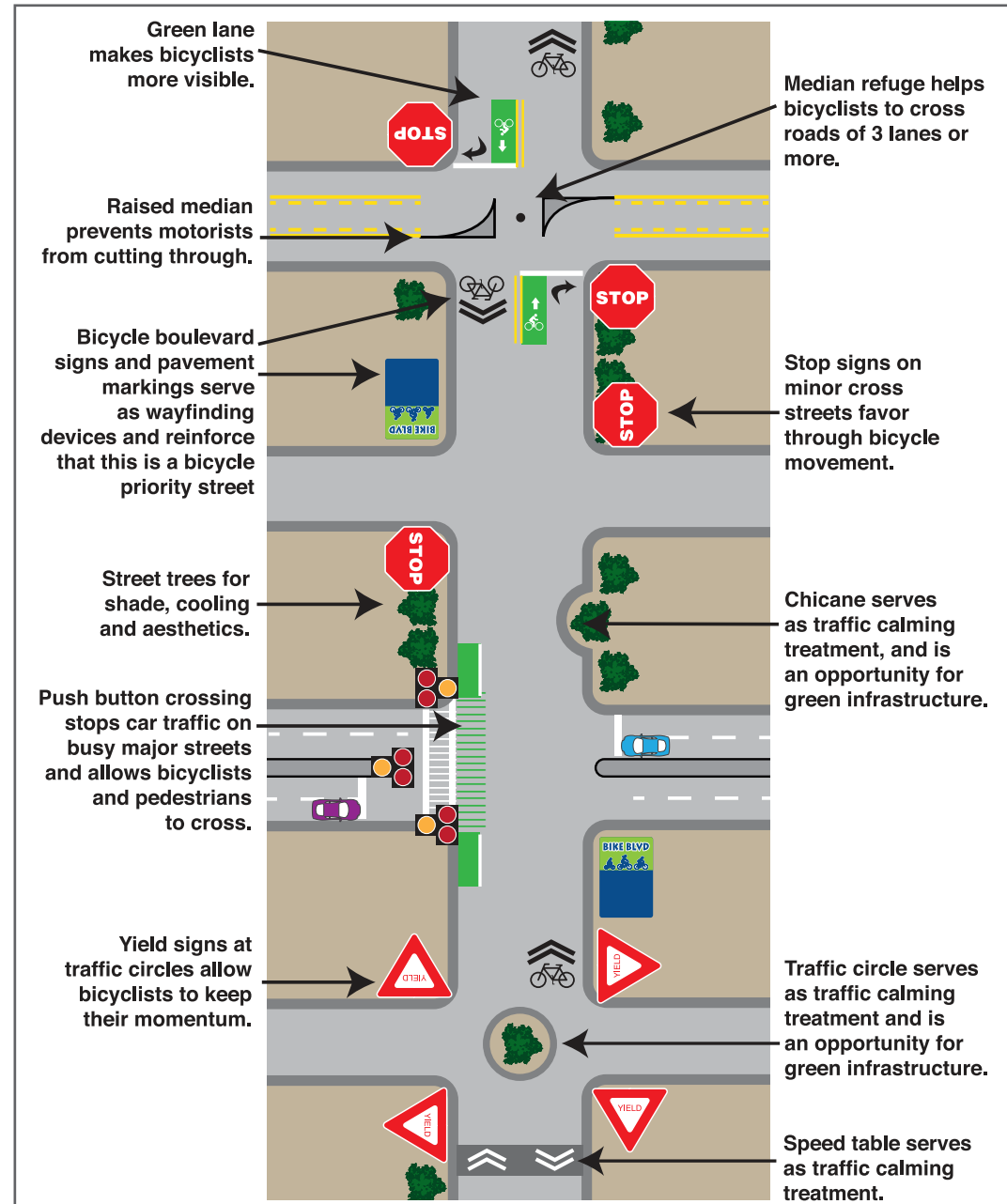
Slow Streets/Bicycle Boulevard



Description:
 Designated streets that are shared by all users (cars and people on foot or bike) and modified for the safety of bicyclists and pedestrians. Typically a low volume street with traffic calming features that keep vehicles speeds low.

Design:
 Existing streets, see examples to the right of potential elements of a slow street/bicycle boulevard.

Figure 16. Elements of a Slow Street/Bicycle Boulevard "Typical Bicycle Boulevard in Tucson," courtesy of City of Tucson, <https://www.tucsonaz.gov/projects/bicycle-boulevards>



MULTI-MODAL OFF-STREET FACILITIES

These examples are typically in parks, open space areas or the National Forest. The terms trail and path are often interchangeable. An "urban trail" is sometimes used to describe a wide shared use path as opposed to a "singletrack trail" which is what most of the Coconino National Forest trails are. There is an extensive network of singletrack trails on the National Forest, but very few improved shared-use paths in or around Sedona.

Shared-Use Paths



Description:

Two-way graded path for use by pedestrians and bicycles, in this example it is not associated with a roadway.

Design:

Typically 8' to 10' wide. Width depends on volume of bike/ped traffic, topography, corridor width, etc.
Paved or gravel surface

Example:

Sunrise Trail in Posse Grounds Park (parallel to Soldiers Pass Rd), pictured above
Shelby Rd to Sunset Park Path (paved)
Sunset Park Path (gravel)

Trails



Description:

Natural surface paths typically in open space, parks, or National Forest and usually built with hand tools.

Design:

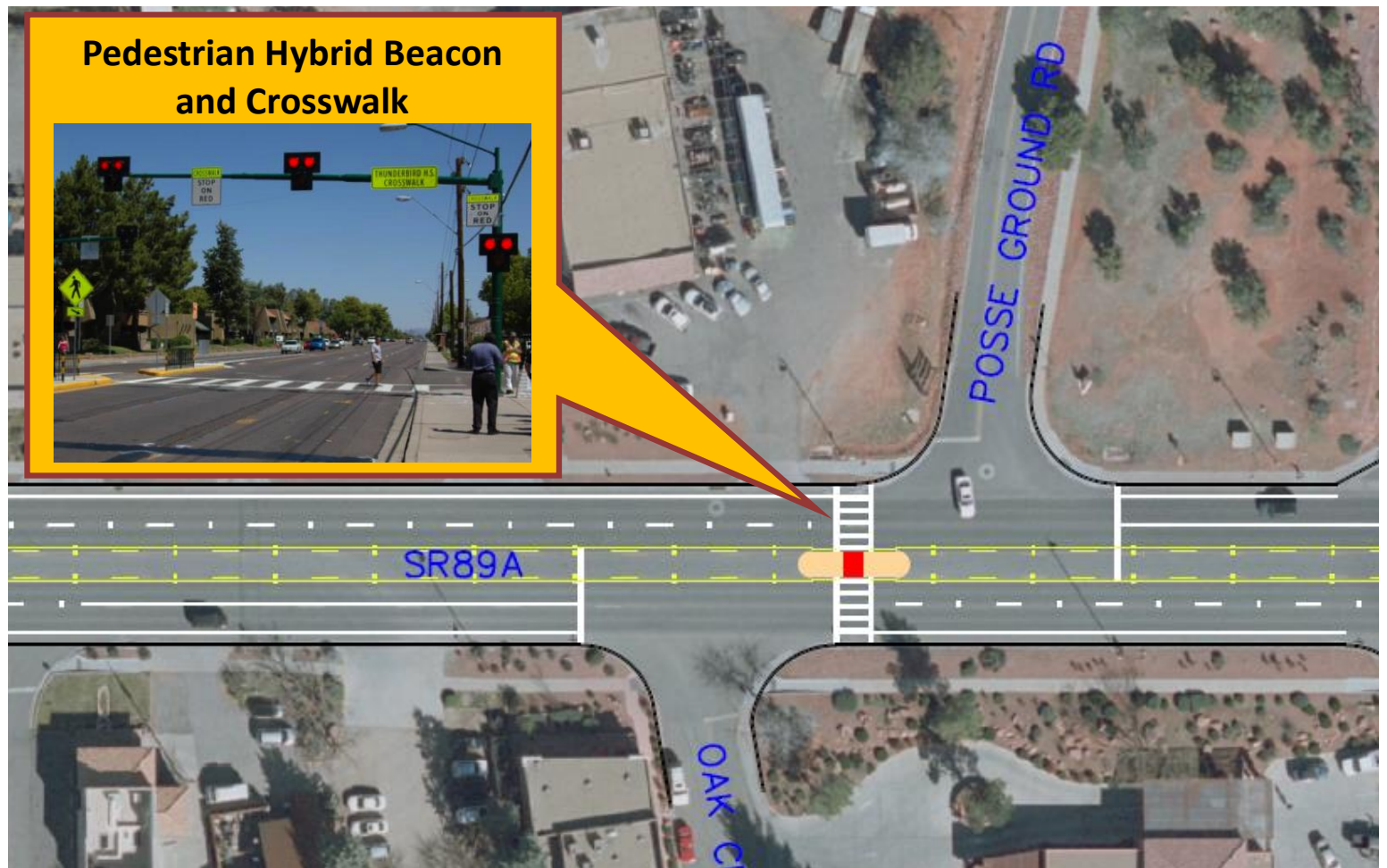
Typical width is 24" ("singletrack")
Width can vary by design or from use
Natural surface

Example:

Coconino National Forest Trails
Carruth Trail in Posse Grounds Park

Enhanced Crossings

The GO Plan (page 18) and the Transportation Master Plan recommends mid-block, signalized crossings on 89A. Below is an image from the TMP of a pedestrian hybrid beacon and crosswalk. There are variations that also accommodate bicyclists. Another example shown in the TMP is a two-stage pedestrian crosswalk with a median at Southwest Dr.



ELECTRIC BIKES

Electric bikes (e-bikes) are opportunities to get more people to ride bikes instead of driving, and less cars on the road means less traffic congestion. E-bikes are becoming more prolific as they grow in popularity, and this planning process found that there is a lot of interest, curiosity, and concerns about them.

What is an e-bike?

An electric assist bicycle is much like a standard bicycle with the addition of a battery powered motor of less than 750 w.

What are the benefits of e-bikes?

Surveys and studies have found that e-bikes get more people to ride bikes, and those with e-bikes will ride more often. Why?

- It is easier to go longer distances
- It is easier to ride up hills
- It is fun!

Are e-bikes safe?

Studies have found that the use of e-bikes* is very similar to regular bikes with similar safety and compliance behavior, and speeds that are similar or even less than regular bikes on pathways, flat, or downhill segments. E-bike riders do go faster than regular bikes on roads, but not significantly. This could be explained as the difference between recreational use on pathways versus commuters on roads.

*Class 1 and 2 bikes with a max assisted speed of 20 mph.

What are the different types of e-bikes?

The most common is a Class 1. The key differences are underlined below.

Class 1

Equipped with an electric motor that provides assistance only when the rider is pedaling, and ceases to provide assistance when it reaches 20 mph.

Class 2

Equipped with an electric motor that can propel the bike by a throttle, and ceases to provide assistance when it reaches 20 mph.

Class 3

Equipped with an electric motor that provides assistance only when the rider is pedaling, and ceases to provide assistance when it reaches 28 mph.

Where can you ride an e-bike?

In Arizona, Class 1 and 2 e-bikes may be used in bike lanes and on shared/multi-use paths where other bikes are permitted (ARS §28-819).

There are also electric mountain bikes (eMTBs), however they are *not* permitted on the National Forest non-motorized trail system in and around Sedona. They are permitted in the Posse Grounds Bike Skills Park.

More information, including a list of research studies can be found at:
<https://peopleforbikes.org/our-work/e-bikes/>



E-bikes have a battery and motor that can be integrated into the bike frame.

STRATEGIES AND PROJECTS

| Recommended Strategies | |
|--|------|
| Strategy | Page |
| West Sedona Connectivity | |
| 1. Create connected pathways throughout West Sedona to enable safe, off-highway pathways for walking and biking. | 15 |
| 2. High Priority Sidewalks: Coffee Pot and Andante | 15 |
| 3. Build the Dry Creek Scenic Pathway, a shared-use path on Dry Creek Road from 89A to the city limits. | 16 |
| 4. Reduce the number of driveways on West 89A. | 17 |
| 5. Improve bicycle and pedestrian safety at major 89A intersections, for people walking or biking along the highway, and for those crossing 89A from neighborhood streets. | 18 |
| 6. Posse Grounds at 89A is a high priority for a new, dedicated bicycle/pedestrian crossing. | 18 |
| State Route 179 | |
| 7. Designate the 179 path as the "Red Rock Scenic Pathway" with enhanced signage, striping, and amenities that encourage more people use this pathway. | 19 |
| 8. Improve the safety and experience of roundabouts for people walking or biking. | 19 |
| 9. Work with ADOT to add safety features that alert motorists when they stray into the 179 bike lane. | 19 |
| Bikeways | |
| 10. Develop a network of bikeways that makes traveling by bike a viable option for people of all ages and abilities. | 20 |
| 11. Develop Cooks Hill into a safe and scenic experience by transforming the north sidewalk into a protected, shared use path. | 20 |
| 12. Develop alternatives to 89A that are continuous and connected neighborhood routes. | 20 |
| 13. Implement traffic calming and safety measures on designated bike routes. | 20 |
| 14. Streets with designated bike routes should have a higher level of maintenance to ensure a safe biking experience. | 20 |
| Trailheads | |
| 15. Enhance access points and trailheads with improved signage, amenities, and maintenance. | 22 |
| 16. Improve and expand existing trailheads where feasible and appropriate. | 22 |
| 17. Develop new trailheads to distribute and accommodate parking. | 22 |
| 18. Provide transit or shuttle services to trailheads. | 22 |

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|--|----|
| 19. Authorize and improve selected neighborhood social trails. | 22 |
| 20. Secure permanent access for selected social trails that cross private land. | 22 |
| 21. Manage trail access parking on neighborhood streets where needed. | 22 |
| Amenities | |
| 22. Mark and sign all pathways with the ST&PS wayfinding designs. | 24 |
| 23. Establish waystations that feature amenities such as benches and a map kiosk. | 24 |
| 24. Ensure that all major destinations have a sufficient number of quality bike racks in easy to find locations. | 24 |
| Programs | |
| 25. Develop a program of educational information. | 25 |
| 26. Offer a variety of activities and programs that educate and encourage bicyclists and pedestrians. | 25 |
| 27. Work with festival and event organizers to ensure that events provide opportunities for people to walk, bike, or use transit to get to and from the event. | 25 |
| 28. Enlist the lodging industry in helping visitors to 'park once' and walk or drive instead of driving. | 25 |
| 29. Encourage bike friendly businesses. | 25 |
| 30. Integrate transit with bicycle/pedestrian planning and infrastructure. | 26 |
| 31. Monitor pathways with help from users reporting hazards or maintenance needs. | 26 |
| 32. Investigate methods for collecting more detailed information about crashes that involve pedestrians or bicyclists. | 26 |
| 33. To serve as an example of alternative transportation, provide e-bikes for City employees, including Police Department officers. | 26 |
| 34. Establish bike share program guidelines as needed. | 26 |
| Implementation | |
| 35. Establish a City bicycle/pedestrian program. | 27 |
| 36. Adopt a Complete Streets philosophy. | 27 |
| 37. Work towards a Vision Zero goal. | 27 |
| 38. Create pedestrian friendly streetscapes. | 27 |
| 39. Development design and review. | 27 |
| 40. Use pilot projects to demonstrate proposed improvements. | 27 |

| Strategy # | Recommended Strategy | Page # |
|--|---|--------|
| High Priority Projects | | |
| 11 | Cooks Hill West 89A pathway | 20 |
| 3 | Dry Creek Scenic Pathway | 16 |
| 12 | Alternate pathways south of West 89A | 20 |
| 5 | West 89A intersection safety improvements | 18 |
| 2 | Coffee Pot and Andante sidewalks/pathways | 15 |
| 7 | 179 Red Rock Scenic Pathway improvements | 19 |
| Partnership Projects | | |
| Coconino National Forest | | |
| 15 | Trailhead enhancements | 22 |
| 16 | Expand and improve trailheads | 22 |
| 17 | New trailheads | 22 |
| 18 | Trailhead shuttles | 22 |
| 19 | Neighborhood social trail designation | 22 |
| Arizona Department of Transportation (ADOT) | | |
| 5 | West 89A intersection safety improvements | 18 |
| 6 | Posse Grounds at 89A is a high priority for a new, dedicated bicycle/pedestrian crossing. | 18 |
| 7 | 179 Red Rock Scenic Pathway improvements | 19 |
| 8 | Roundabout safety improvements | 19 |
| 9 | 179 bike lane safety improvements | 19 |
| 11 | Cooks Hill West 89A pathway | 20 |

Planned Pathway Projects

The following projects were in design as of Spring 2020.

| <i>Project</i> | <i>Location</i> | <i>Type</i> |
|--|---|--|
| West Sedona | | |
| Dry Creek Scenic Pathway | Vultee Arch Rd - Two Fences trailhead; The Estates at North Slopes segment | shared-use path, gravel |
| Navoti-Library Path | Navoti/Calle del Sol - White Bear Rd/Dry Creek Rd | shared-use path, paved |
| Thunder Mountain-Sanborn Path | Rhapsody Dr - Coffee Pot Rd | shared-use path, paved, stormwater project |
| Soldiers Pass Road Path <i>and</i> Posse Grounds Park parking lot | Posse Ground Park - Shadow Rock Dr | shared-use path, paved |
| Pinon Drive | 89A - Cedar Ln | sidewalk |
| Uptown-Chapel Area | | |
| Chapel Road Path | 179 - Fox Rd | shared-use path, paved |
| Red Rock Scenic Pathway wayfinding | Schnebly Hill roundabout - Indian Cliffs Rd | signs |
| Tlaquepaque 179 underpass | 179, west bank of Oak Creek | shared-use path, paved |
| Forest Road extension | Forest Rd (end of pavement) - W 89A | shared-use path, paved |

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National Association of Realtors. "Transit-Oriented Development to Trail-Oriented Development." (2016). <https://www.nar.realtor/blogs/spaces-to-places/transit-oriented-development-to-trail-oriented-development>.

Red Rock Pathways, A Planning Map for Bicycling and Hiking in the Sedona Area. Prepared by Design Group, 1994.

Resources

ADOT Bicycle and Pedestrian Program: www.azbikeped@azdot.gov

Arizona State Parks, Grant Programs: <https://azstateparks.com/grants/>

City of Sedona, GO Sedona Bike/Walk Planning: www.sedonaaz.gov/go

Coconino National Forest: coconinonationalforest.us

League of American Bicyclists: www.bikeleague.org

People for Bikes: www.peopleforbikes.org

Vision Zero: www.visionzeronetWORK.org

Acronyms

89A State Route 89A

179 State Route 179

ADOT Arizona Department of Transportation

APS Arizona Public Service

ARS Arizona Revised Statutes

ASLD Arizona State Land Department

CFA Community Focus Area

CIP Capital Improvement Program

FHWA Federal Highways Administration

NEPA National Environmental Policy Act

SR State Route

ST&PS Sedona Trails and Pathways System

SUP Shared Use Path

TH Trailhead

TMP Transportation Master Plan

USFS United States Forest Service

A. LIST OF PROPOSED PATHWAYS

B. PUBLIC OPEN HOUSE RESULTS

C. WIKIMAP PUBLIC COMMENTS