

Plan Summary Report Town Council 02-23-17

MASTER PLAN PURPOSE

The purpose of this Master Plan is to develop a long-range plan for the desired future condition of the Town's bicycle and pedestrian facilities. This Master Plan aims to create a bicycle and pedestrian system that is uniquely responsive to the varied people, landscape, and character of Paradise Valley.

MASTER PLAN PROCESS PHASES

The Town Council in May 2016 approved the hiring of a consultant to aid staff in preparing a bicycle and pedestrian master plan. A Technical Advisory Committee (TAC) reviewed material throughout the early phases of the process. The TAC included Planning Commissioner Mahrle, Jay Ozer of the Advisory Committee for Public Safety, and senior-level staff. Attached is a schedule of public involvement/meeting dates.

The process included examination of existing conditions, review of existing policy documents, and soliciting input from those that use the Town's right-of-ways to walk or bike. Being a policy document, the Planning Commission and Town Council will have opportunity to refine this Master Plan to ensure it best fits the Town's vision.

It should be noted that this Master Plan is not the final design for any particular bicycle and pedestrian facility. The final design and any specific project budgets of the entire bicycle and pedestrian system will occur over many years primarily via the Town's annual Capital Improvement Program process.

RELATIONSHIP TO THE GENERAL PLAN

Section 4.2, Non-Motorized Circulation, and Section 4.6, Maps and Standards, in the Mobility Element of the 2012 General Plan provide policy direction for the Town's bicycle and pedestrian facilities. The 2012 General Plan also includes an implementation measure to prepare a master plan. A Minor General Plan amendment will run concurrently or shortly after approval of this plan.

SUMMARY OF DIFFERENCES – ENHANCED COMPONENTS

The items below highlight the major differences and/or enhancements from the 2012 General Plan. Refer to the draft Master Plan and other sections in this report for more information.

- Add bicycle facilities to major arterials of Lincoln Drive and Tatum Boulevard
- Create a roadway cross-section similar to Doubletree Ranch Road for minor arterials, with further direction needed on McDonald Drive
- Add minor collector category requiring bike facilities
- Create an enhanced local cross-section on limited local streets requiring a pedestrian facility on one side of the street, with one design for bike lanes on an existing designated bike route
- Include a pedestrian route map
- Add wayfinding design guidelines, goals, and implementation strategies
- Expand upon existing goals, policies, and implementation measures from the 2012 General Plan

Plan Summary Report

Town Council 02-23-17

- Identify performance measures

ROUTES AND TYPICAL ROADWAY CROSS-SECTIONS

Section 4.6, Maps and Standards, in the 2012 General Plan identifies four roadway classifications. These classifications include Major Arterial, Minor Arterial, Collector, and Local streets. Section 4.6 also includes various cross-sections and a Non-Motorized Circulation Map that identifies the location of bike lanes and bike routes.

Below is a brief description of the proposed routes and cross-sections.

- Add bicycle facilities to Major Arterials. Only two Major Arterials exist in Town. These are Tatum Boulevard and Lincoln Drive. The typical right-of-way per the General Plan is 130-feet in width. However, the actual right-of-way varies between 80-feet and 120-feet in width. The typical pavement is 74-feet in width, including center turn lanes and landscaped medians. Bike lanes and sidewalks are optional. No bike lanes exist and there are many sidewalk gaps.

Bicycle facilities are proposed as these streets provide direct connections to several of the Special Use Permit properties and serve to complete loops in the bicycle and pedestrian system. Two main options are proposed. One option has five and one half-foot wide bike lanes in fully integrated concrete gutter pans with a two-foot wide striped buffer and six-foot wide sidewalks on both sides. This option is primarily considered for Lincoln Drive as this street includes many Special Use Permit properties. The other main option is to have no bike lanes. However, in this option, there would be a ten-foot-wide shared use path on one side of the street and a six-foot wide sidewalk on the other side of the street. This option is applicable to Tatum Boulevard (east side) or Lincoln Drive (south side). It may be more appropriate for Tatum Boulevard as there is limited right-of-way width, varying topography, and the City of Phoenix has no designated bicycle facilities for Tatum Boulevard.

There is no proposed change to the roadways having two vehicular travel lanes in each direction, a center turn lane, and landscaped medians. Direction is sought to refine these cross-sections and consider alternatives. The bike lane option for Lincoln Drive would require new curbs and gutters. The shared use path option for Lincoln Drive requires no changes to the curbs and gutters.

- Create a cross-section similar to Doubletree Ranch Road on Minor Arterials. Doubletree Ranch Road, Mockingbird Lane/Invergordon Road north of Lincoln Drive, Invergordon Road south of Lincoln Drive, and McDonald Drive are Minor Arterials. The typical right-of-way per the General Plan is either 66-feet in width if there are no medians and 80-feet in width with medians. The actual right-of-way in most places meets the General Plan width noted above. The typical pavement is 34-feet in width on streets with no medians and 46-feet in width on streets with medians. Sidewalks are optional. The 2012 General Plan bike route map proposes bike lanes for all of the Town's Minor Arterial streets. To date, bike

Plan Summary Report

Town Council 02-23-17

lanes exist on all except for McDonald Drive and Mockingbird Lane south of Northern Avenue. The current Capital Improvement Program includes bike lanes for the rest of Mockingbird Lane. The proposed cross-section is similar to the existing cross-section of Doubletree Ranch Road. The differences from that cross-section include the addition of a two-foot wide bike lane buffer and the pedestrian facility on one side could be a shoulder trail instead of a sidewalk.

- Consider alternatives for McDonald Drive. McDonald Drive is a designated Minor Arterial with proposed bike lanes in the 2012 General Plan. Based on the varied resident input on the best way to address bicyclists and pedestrians on this street, two draft cross-sections are proposed. Direction is sought to discuss a cross-section(s) that will best fit this street, noting that segments of this street may warrant different solutions.

Both concepts retain two non-motorized travel lanes. One option adds pavement markings called 'sharrows' that indicate the roadway is shared between bicyclists and motorized vehicles. Sharrows would be located at Invergordon Road, 56th Street, near the entrance to Echo Canyon Trailhead and at Tatum Boulevard. Vertical bike route signs would be optional. The center turn lane and medians are retained. The second option removes the center turn lane, retains the landscape medians, and adds four-foot wide bike lanes. A two-foot wide buffer would be present everywhere except at medians. Minor curb and gutter modifications would be required only at curbed medians. Both concepts propose making the speed limit consistently 25 mph.

- Require bike lanes/pedestrian routes on Collectors, add Minor Collector category. The 2012 General Plan only includes a collector street category. These streets are:
 - Segments of Mountain View Road
 - 52nd Street north of Mockingbird Lane
 - Mockingbird Lane between Tatum Boulevard and Invergordon Road alignment
 - Cheney Drive and Indian Bend Road east of Mockingbird Lane
 - 56th Street between Lincoln Drive and McDonald Drive
 - 56th Street south of Doubletree Ranch Road
 - Jackrabbit Road east of 64th Street/Invergordon Road
 - Chaparral Road
 - 68th Street between Jackrabbit Road and Chaparral Road
 - Stanford Drive
 - Palo Cristi Road
 - Portion of 40th Street

The typical right-of-way per the General Plan is 60-feet in width. The actual right-of-way width is wider at 70-feet and 80 feet in most instances, except for Jackrabbit Road and Palo Cristi Drive where the right-of-way width is less than

Plan Summary Report

Town Council 02-23-17

60-foot width in many places. The typical pavement width is 34-feet in width. Bike lanes are optional on most designated collectors based on the Non-Motorized Circulation Map in the General Plan. Bike lanes presently exist or are in the Capital Improvement Program for many collector streets. The key collector streets without bike lanes presently include segments along Mountain View Road, 56th Street, and Jackrabbit Road. Similarly, most of the collectors already have sidewalk on at least one side of the street. The key exception is Jackrabbit Road with no pedestrian route on either street side.

The plan proposes to reclassify 52nd Street north of Mountain View Road from a local street to a Major Collector street. The homes on the east side of this street are in the City of Phoenix. Bike lane striping, limited bike route signs and traffic calming chicanes already exist. Phoenix includes an underground tunnel connection near 52nd Street and Shea Boulevard.

The plan proposes to reclassify Monte Vista Road between Jackrabbit Road and Chaparral Road to an Enhanced Local street. The proposed cross section provides bike lanes on both sides of the street and a decomposed granite shoulder trail on at least one side of the street. Monte Vista Road has right-of-way, but the existing pavement is skewed to the east side along most property lines.

The split of the Collector street classification into a Major Collector and a Minor Collector roadway cross-section seeks to better reflect actual roadway environments. The Major Collector cross-section makes a six-foot wide sidewalk required on one side of the street, requires a decomposed granite trail or sidewalk on the other side of the street, and requires four-foot wide bike lanes with a two-foot wide buffer on both sides of the street. Most of the collector streets fall into the Major Collector classification. Jackrabbit Road, Stanford Drive, and Palo Cristi Road become Minor Collectors. The primary difference from the Major Collector is that the pedestrian route on both sides of the street can be either a decomposed trail or sidewalk.

- Create an Enhanced Local Cross-Section. Local streets make up the majority of the Town's roads. The Non-Motorized Circulation Map in the 2012 General Plan designates certain local roadways for signed bike routes. This includes Camelback Manor Drive between McDonald Drive and Lincoln Drive and Desert Fairways north of Lincoln Drive along with other segments of roadway north to Mockingbird Lane. The typical right-of-way per the General Plan is 50-feet in width. The typical pavement width varies between 18-feet in width to 26-feet in width. Bike lanes are not provided and only one of the three existing cross-sections has optional sidewalk on one side of the street.

The proposed Master Plan seeks to remove Camelback Manor Drive as a bike route. This change is supported by the majority of residents on that street. This street has 20-foot wide pavement, lots less than one-acre, many roadway turns,

Plan Summary Report

Town Council 02-23-17

considerable topography, and other roadway connections from McDonald Drive to Lincoln Drive.

The Enhanced Local cross section seeks to distinguish local streets that currently are designated as a bike route, or experience heavy bicycle use, or provide an alternative to riding on collector and arterial streets. Three cross-sections are proposed.

- Cross-Section A requires four-foot wide bike lanes with a two-foot wide buffer on both sides of the street. It requires a pedestrian facility on at least one side of the street. This cross-section only applies to the existing bike route on Desert Fairways/ Shadow Mountain Road out to Tatum Boulevard. Presently much of this roadway segment is striped with a center lane and a striped shoulder.
 - Cross-Section B is the primary design. It requires a four-foot wide decomposed granite trail or six-foot wide sidewalk on one side. Depending on the neighborhood character, options could exist for a pedestrian facility on the other side of the street and signage only at major intersections and obstructed sight lines. It has no pavement markings.
 - Cross-Section C generally applies to the Golf Drive connection between Northern Avenue and Doubletree Ranch Road. It is essentially Cross-Section B, except it uses a four-foot wide walkable paved shoulder on both sides of the street created by a two-foot buffer of painted stripes, exposed aggregate or other decorative material.
- Identify Off-Street Corridors. A map along with cross-section is added to address off-street corridors such as the Berneil Ditch already being maintained by the Town.

GOALS AND POLICIES

Section 4.2, Non-Motorized Circulation, in the 2012 General Plan includes three goals and related policies. The existing goals for the overall non-motorized circulation system, pedestrian system, and bicycle system remain in the proposed Master Plan. These goals include some new policies and policies that have been moved and/or revised. Added policies address the provision of transfer points in non-motorized routes connecting to other modes of travel like seasonal trolley stops. It includes added policies for pedestrian facilities such as low impact approaches in using unpaved trails, low maintenance design, and on-site connectivity to entrances of public or semi-public buildings. It includes added policies for bicycle facilities such as bicycle-friendly streetscapes related to bicycle signals.

The proposed Master Plan includes three new goals. These goals are operations and management, traffic calming, and wayfinding. Several existing policies move to the operations and management goal. Added policies under operations and management relate to education, enforcement, promotion and publicity, internal processing, and resort coordination. The existing policies for speed management and roundabouts move to the traffic calming goal. Added policies are improving intersection techniques to

Plan Summary Report Town Council 02-23-17

improve safety and visibility and narrowing travel lanes when appropriate. The Master Plan adds several policies on wayfinding. These include safe facilities through making routes more visible, community character by incorporating materials already established in Town, scheduled maintenance, aesthetics, minimizing quantities of signage, use of technology, and a graphic hierarchy based upon street classification. Direction is sought to evaluate these goals and policies, particularly added policies. A track change document is attached to this report that compares the proposed Master Plan to the goals and policies in the 2012 General Plan.

WAYFINDING-SIGNAGE

Wayfinding for bicycle and pedestrian facility identification is generally not covered in the 2012 General Plan. The signage that does exist in Town follows the standard Manual on Uniform Traffic Control Devices. This includes the bike symbol pavement markings on bike route signs.

A certain level of signage is necessary to provide warning of hazards like blind curves, to provide markers for persons by guiding them along the desired routes, and to inform about proper etiquette. There were a few take-a-ways from the public outreach for this plan. These take-a-ways include installation of the minimal amount of signage necessary, a preference for ground-level signs compared to vertical signs, a general dislike of large pavement markings, and the use of technology instead of signs where possible.

The proposed Master Plan provides sign guidelines. Regarding materials and colors, it looks to the Town entry monuments and interpretive signage along 56th Street between McDonald Drive and Lincoln Drive. Six types of signs are identified. These include orientation signs that generally provide information on rules, route identification signs, guide signs to destinations, pavement markings to reinforce direction and branding, wayside signs that may be interpretive in nature, and warning signs. Each sign type includes a purpose, information, and placement criteria. As signage is a visible component of the non-motorized system, policy direction from the Planning Commission and Town Council is essential.

There are guidelines on using technology for wayfinding. These guidelines are general in nature. The consultant's scope of work does not include development of any technological application.

IMPLEMENTATION TOOLS - ACTION

The proposed Master Plan includes an illustrative list of possible projects based on the input received. The plan also includes a method to prioritize projects using weighted criteria. A generalized probable cost per mile is also provided. Actual project selection would occur as part of a separate process, such as the Capital Improvement Program.

The draft plan includes 18 implementation measures for action. It identifies three time periods to complete the action from 2017 to 2029. Many of these measures will also be ongoing actions. The 2012 General Plan has nine implementation measures related to

Plan Summary Report

Town Council 02-23-17

the bicycle or pedestrian system. Seven of these existing measures remain in the draft plan. The implementation measure related to this Master Plan is in process. A track change document is attached to this report that compares the proposed Master Plan to the implementation measures in the 2012 General Plan.

There are 11 new implementation measures. These new measures are outlined below:

- Complete high-priority projects
- Develop education and enforcement programs
- Complete wayfinding design plan with a professional designer
- Prioritize installation of appropriate signage
- Develop wayfinding technology
- Coordinate with local resorts on routes for guests and shared parking
- Designate a staff person to sit on the MAG bicycle and pedestrian committee
- Implement internal staff policies to better coordinate biking/walking in town
- Institute a pavement reduction plan to lessen maintenance costs/provide pedestrian space
- Review Town regulations/policies to ensure they provide continuous pedestrian route to public/semi-public building main entrances
- Develop budgets to maintain/improve bike-pedestrian system

As a means to evaluate the Master Plan, there are six categories of performance measures. These categories are adherence to accessibility laws, adherence to traffic laws, maintenance, total miles/number of bicycle and pedestrian facilities completed, bicycle and pedestrian counts, and number of crashes.

TIMING OF MASTER PLAN ADOPTION

It is anticipated that the Planning Commission will require a few study sessions to review this draft Master Plan. The official citizen review meeting of this Master Plan is tentatively set for the Planning Commission meeting of March 21, 2017. The tentative meeting for Planning Commission's recommendation to Town Council is tentatively set for April 18, 2017. The goal is to have Town Council approval of this Master Plan and the associated Minor General Plan amendment no later than June 2017.

EXISTING CONDITIONS

The consultant did a variety of research and field work to best understand the current conditions related to the bicycle and pedestrian facilities. This information will all be located within a final appendix at the end of the project.

Some take-a-ways from this research include the following:

- Within town boundaries over the last six-year data set, there were 16 total reported collisions involving motor vehicles and bicycles. Two of these collisions involved pedestrians. That averaged three bicycle incidents a year and one pedestrian incident every three years. Most of the incidents occurred east of Invergordon Road, either along Mockingbird Lane, Hummingbird Lane, or McDonald Drive.

Plan Summary Report

Town Council 02-23-17

- Many of the bike lanes proposed in the 2012 General Plan exist. The exceptions include McDonald Drive from 40th Street to Scottsdale Road, Indian Bend Road from Mockingbird Lane to Scottsdale Road, 56th Street between Doubletree Ranch Road and Mockingbird Lane, and 32nd Street. The 32nd Street right-of-way is within the City of Phoenix.
- Limited signage has been installed on the designated bike routes as proposed in the 2012 General Plan. Particularly, the Shadow Mountain Road/54th Street connection to Mockingbird Lane west of Mummy Mountain and Jackrabbit Road east of Invergordon Road.
- None of the typical Town roadway cross-sections require sidewalks. However, most of the streets in Town that are classified above a local road have sidewalks on at least one if not both sides of the street. Sidewalk gaps on these street classifications include Lincoln Drive and Tatum Boulevard, with a current project to complete sidewalks the full length of Lincoln Drive. Also, Jackrabbit Road east of Invergordon Road lacks sidewalks.
- A three-hour count of bicyclists and pedestrians was done in October 2016 in seven locations. The locations included intersections along Lincoln Drive, Mockingbird Lane, McDonald Drive and Palo Cristi Road. The counts ranged from 48 to 239 bicyclists and 33 to 166 pedestrians. These counts document the heavy bicyclist use of Mockingbird Lane and Doubletree Ranch Road, along with a heavy pedestrian use of McDonald Drive near the Echo Canyon trailhead.
- Linkages to the City of Scottsdale occurs at most of the major west-east streets along the Town's eastern border that allow residents access to the regional bike-trail networks of the Arizona Canal and Indian Bend Wash system parallel to Hayden Road. Scottsdale is focusing priorities to improve bike connections along Shea Boulevard and the Arizona Canal trail system.
- Limited bicycle connections exist into the City of Phoenix, with existing connections located on north-south streets. This includes 52nd Street with an underground tunnel connection at Shea Boulevard, 56th Street north of Shea Boulevard, and 40th Street that connects to the Town's bike lanes on Stanford Drive. Phoenix has no plans for bike lane connections on Tatum Boulevard and Lincoln Drive.
- Significant trailhead destinations exist within Phoenix at the border of Paradise Valley including Camelback Mountain/Echo Canyon, Camelback Mountain/Cholla, 32nd Street at Lincoln Drive and the Christiansen/Trail 100 at Tatum Boulevard and Tomahawk Trail. Public comment expressed a high interest in making connections to these destinations.

PUBLIC INPUT

The public input process included thirteen separate events that are in addition to Planning Commission and Town Council meetings. These events included seven events geared to present information and solicit resident input through group activities. In total, excluding staff/consultants, 95 persons attended these seven events. Two other events were done in conjunction with two Town events, the car show and the safety fair. At least 60 people came through the booth at the car show and 45 persons at the safety fair. There were three online surveys done. In total, 383 persons took the surveys, of

**Plan Summary Report
Town Council 02-23-17**

which 286 persons reside in zip code 85253. The consultant interviewed six and received one completed questionnaire from local resort concierges. Attached is a summary of the public input. Detailed input is available on the Town website.

NOTICING

As outlined in the Public Engagement Plan for this project, the noticing method was the Town website, MySidewalk, CodeRED, sewer billing when available, Paradise Valley Independent, Town Reporter, and direct e-mail to those interested. The direct e-mail list goes to 200 persons.