

Executive Summary

Sedona Area Transit Implementation Plan



Prepared for:



(This page intentionally left blank.)

Sedona Area Transit Implementation Plan

Executive Summary

Transit Needs Assessment

Prepared for:

City of Sedona
102 Roadrunner Drive
Sedona, AZ 86336

Prepared by:

LSC Transportation Consultants, Inc.
545 East Pikes Peak Avenue, Suite 210
Colorado Springs, CO 80903
(719) 633-2868

In association with:

Transit Marketing, LLC

LSC #184410

January 24, 2020

(This page intentionally left blank.)

CONTENTS

Chapter	Title	Page
Executive Summary		
	Planning Process	1
	Community Conditions	1
	Community Input	5
	Visitor Interviews	7
	Transit Service Criteria	8
	Service Options	9
	Oak Creek Canyon	9
	Sedona Area Options	9
	Governance Options	10
	Funding Options	10
	Recommended Implementation Plan	11

LIST OF TABLES

Table	Title	Page
K-1	Summary of Governance Models	10
M-1	Preliminary Recommended Service Plan	18-19
M-5	Sedona Transit Ten-Year Financial Plan (constant dollars)	20
M-6	Sedona Transit Ten-Year Financial Plan (3% Annual Inflation)	21

LIST OF FIGURES

Figure	Title	Page
C-1	Study Area	2
C-3	Population Density	3
C-11	Sedona Hotel Occupancy Rate	4
C-13	Visitor Age	4
C-15	Length of Visitor Trip	5
D-5	Who Should the Transit Service Primarily Serve	6
D-8	Most Important Benefit for the Transit System to Deliver	7
M-3	Sedona Fixed Routes with Demand-Response Service	12
M-5	Phase 1 Trailhead Shuttles	13
M-6	Phase 2 Trailhead Shuttles	14
M-7	Oak Creek Canyon Service	16
M-8	Direct Service to Slide Rock	17
M-9	Timeline of Implementation Steps	22

(This page intentionally left blank.)



The City of Sedona is moving forward to provide effective transit services across multiple jurisdictions, focusing primarily on the needs of visitors and residents within the greater Sedona area and Oak Creek Canyon. The goal is to design a transit system that will enhance visitor experiences while protecting the unique environment, and improve the mobility of visitors and locals alike by having a new transit system in operation. Reducing the number of vehicles on area roadways during the busiest tourist seasons when traffic delays can exceed one hour or more within Oak Creek Canyon is also a goal, as is reducing the number of vehicles seeking parking at specific trailheads and other locations where capacity to accommodate vehicles is lacking.

The intent of this study and implementation planning was to take what have been general concepts, created over many years of previous transit studies, to the point of actual implementation.

PLANNING PROCESS

Development of the implementation plan combined various approaches to complete a detailed technical assessment of service planning with significant community and visitor input. A planning Technical Advisory Committee was formed to review interim documents and to provide direction for development of the implementation plan. The technical analysis included a detailed evaluation of the need and potential demand for transit services in the communities of Sedona and the Village of Oak Creek (VOC), in Oak Creek Canyon (OCC), and to Slide Rock State Park. Transit market segments that were considered included residents, day visitors, and overnight visitors with the different transportation needs of each group considered for service planning.

Significant efforts were made to involve the community in the planning process. This included community open houses and a community-wide survey questionnaire. Results of visitor surveys were analyzed and interviews were conducted with visitors at local lodging establishments and trailheads. Meetings were held with key stakeholder groups including the lodging businesses and recreation businesses. Separate meetings were held with Traffic Matters to obtain input and feedback. A service options workshop was held which gave participants an opportunity to set priorities for service implementation.

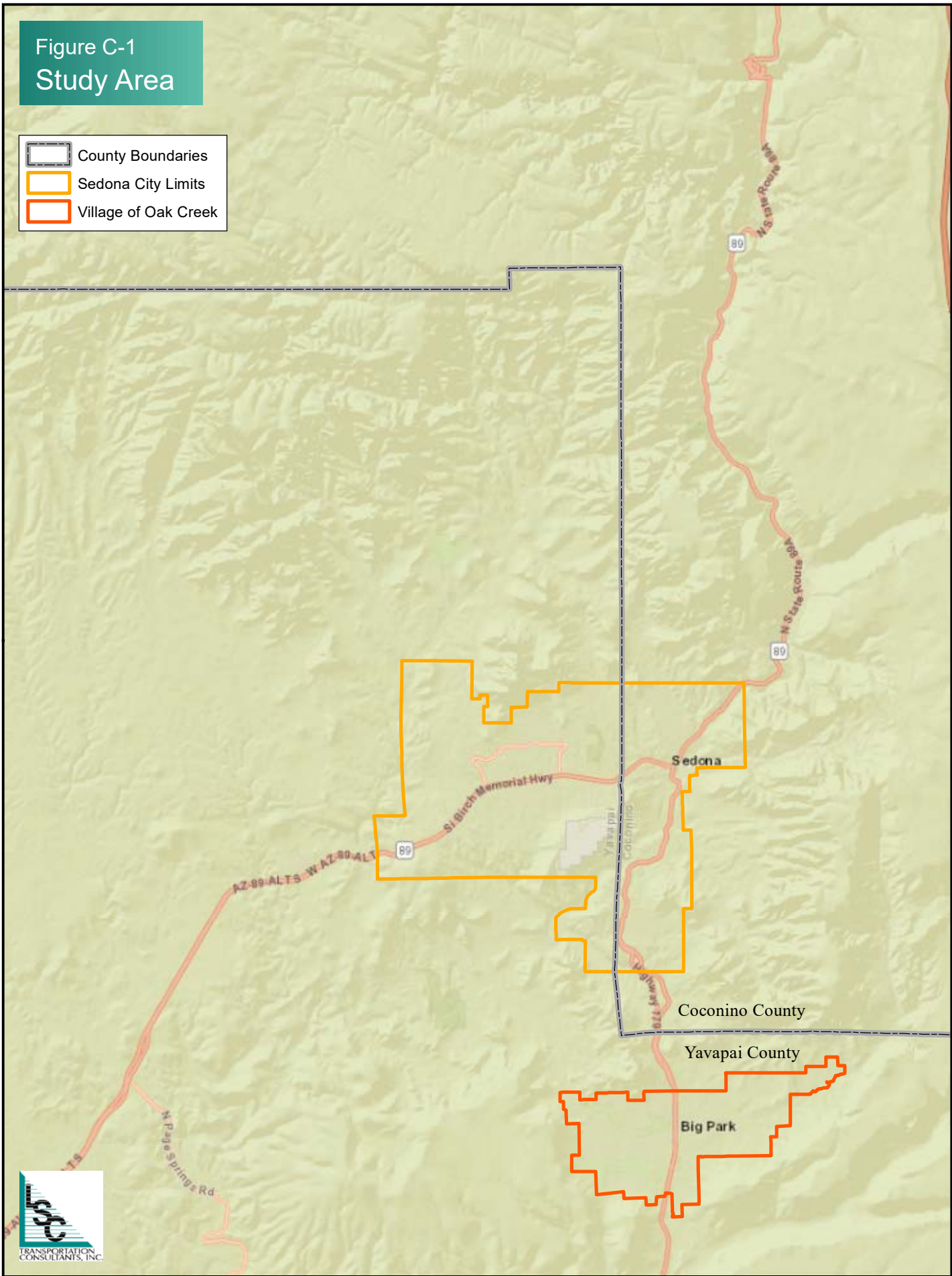
COMMUNITY CONDITIONS

The study area is shown in Figure C-1. Sedona is located in the Verde Valley region of Arizona and is located in Coconino and Yavapai counties. It is approximately 29 miles south of the City of Flagstaff, AZ. Oak Creek runs through town along State Highway 89 and there are many recreational activities available along the canyon to the north of Sedona as well as in the surrounding area.

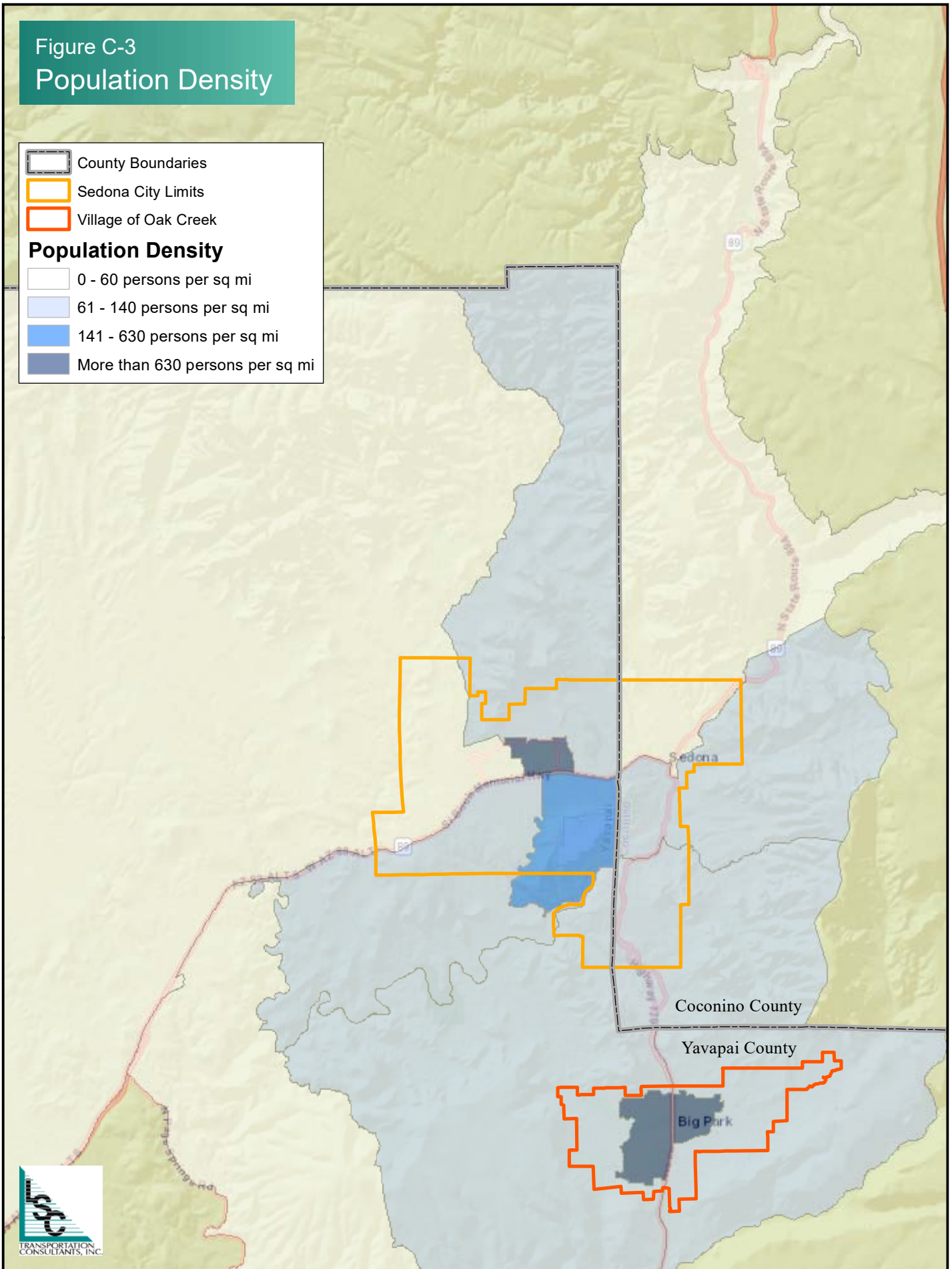
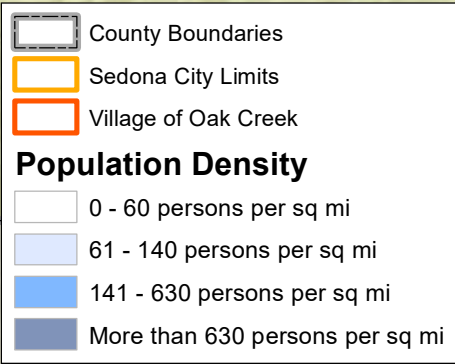
The total population of the study area is 18,572. The estimated 2018 population of Sedona is 12,557 with 2,044 being seasonal residents. The population density of the area is shown in Figure C-3.

Figure C-1
Study Area

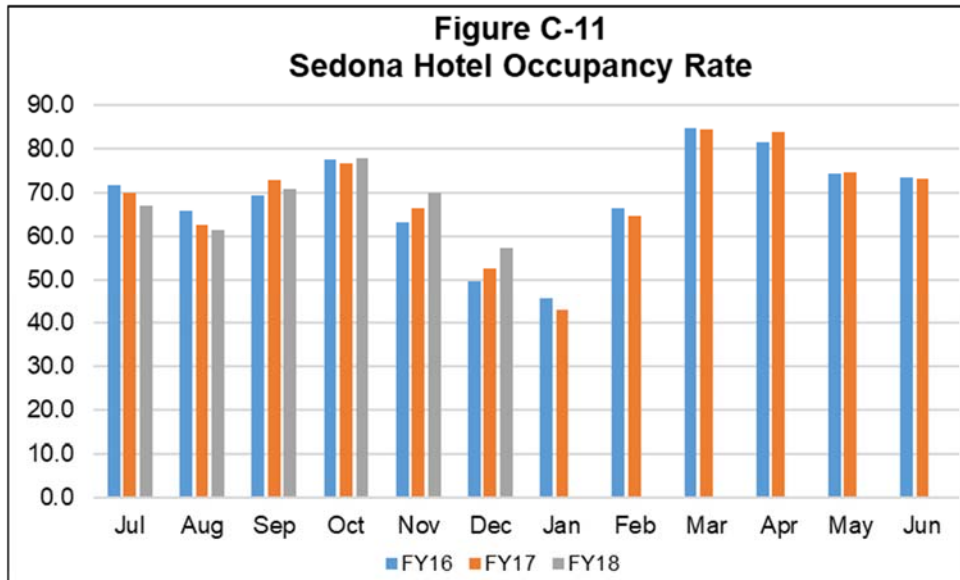
- County Boundaries
- Sedona City Limits
- Village of Oak Creek



**Figure C-3
Population Density**



The Sedona Chamber of Commerce and Tourism Bureau released an inventory of lodging accommodations in the Sedona area in May 2018. The inventory included a total of 3,976 hotel and timeshare rooms located in the area. Specifically, the inventory identified 1,605 hotel rooms within the City of Sedona (40 percent of all inventoried rooms), 867 hotel rooms outside the City of Sedona (22 percent of all inventoried rooms), 1,025 timeshare rooms within the City of Sedona (26 percent of all inventoried rooms), and 469 timeshare rooms outside the City of Sedona (12 percent of all inventoried rooms). Figure C-11 illustrates the average hotel occupancy rate in Sedona by month. Hotel occupancy in Sedona is lowest during the month of January (2016: 45.5 percent; 2017: 43.0 percent) and highest during the month of March (2016: 84.9 percent; 2017: 84.5 percent).



Overall, the median age of surveyed Sedona visitors has been increasing, from 56.5 years old in 2012 to 60.6 years old in 2017. Figure C-13 presents the age ranges of surveyed visitors between 2012 and 2017.

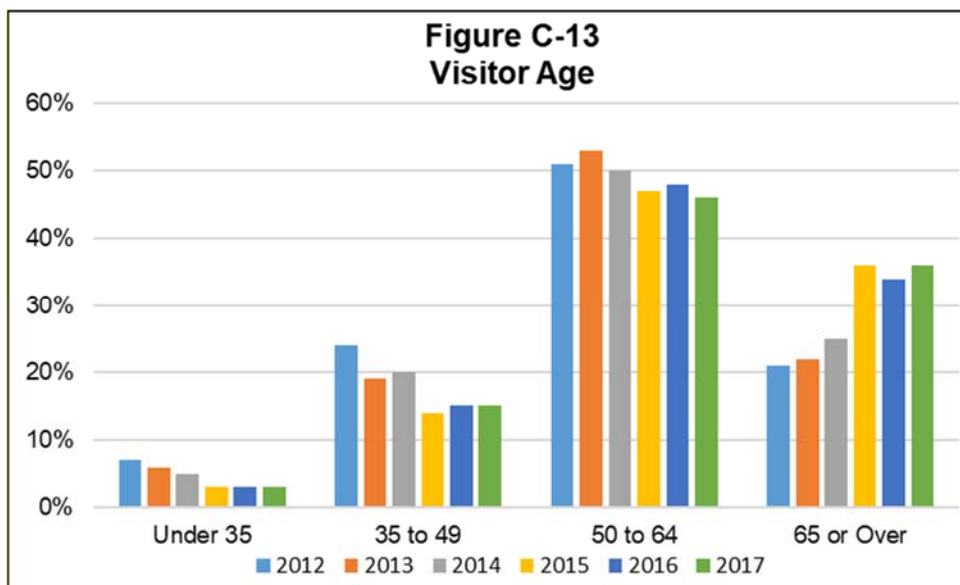
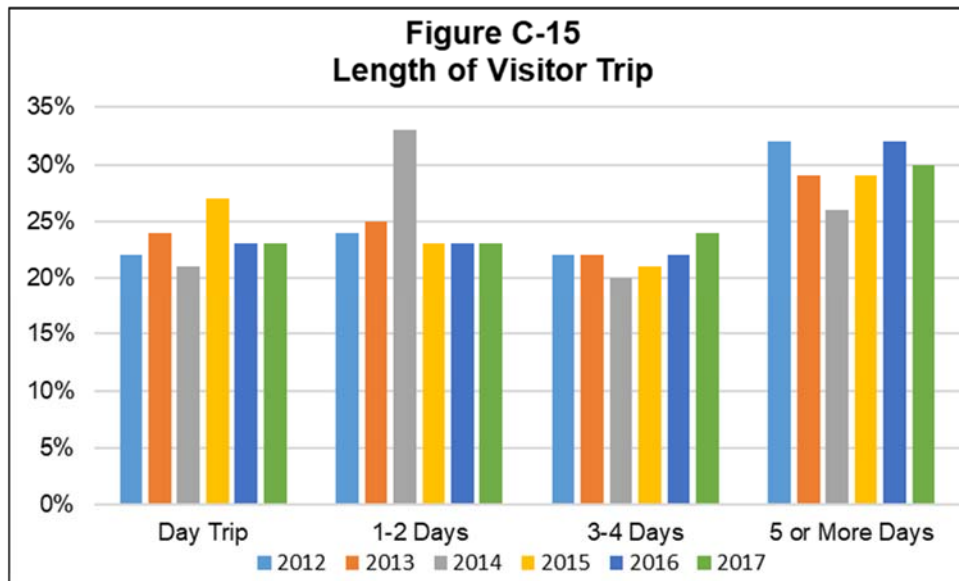


Figure C-15 illustrates the average trip length of surveyed Sedona visitors between 2012 and 2017. In 2017, approximately 30 percent of visitors spent five or more days in Sedona, followed by 24 percent of visitors who spent three to four days in Sedona, 23 percent of visitors who spent one to two days in Sedona, and 23 percent of visitors who made a daytrip to Sedona. Over 80 percent of the visitors arrive by either personal or rental automobile.



The majority of visitors are from out of state or international.

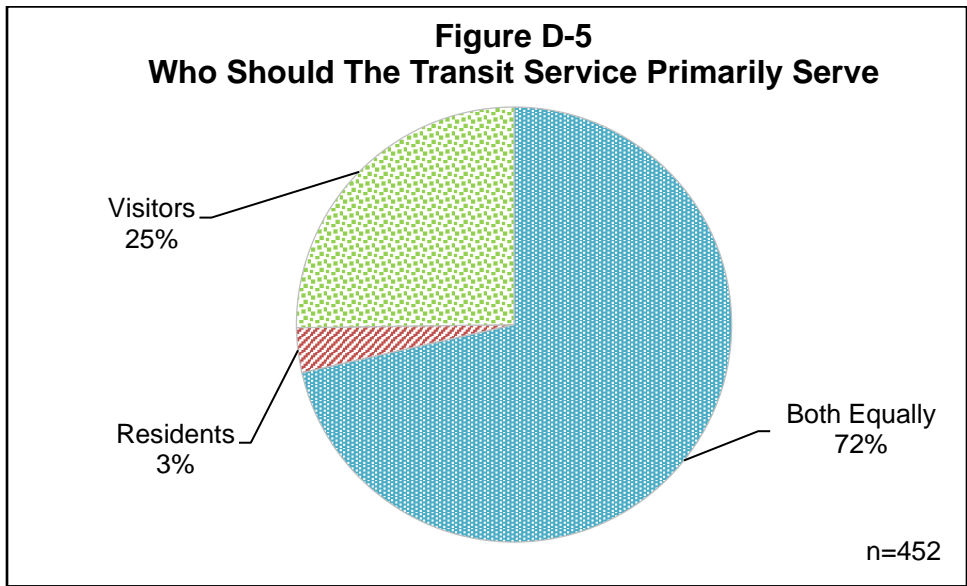
Visitation data were analyzed for the size of groups visiting, activities, and other characteristics of their visits.

COMMUNITY INPUT

Community input was sought through a variety of methods. A separate survey questionnaire was used for residents in the study area. The questionnaire was developed with input from City of Sedona staff and then distributed as widely as possible. The survey asked respondents to answer a series of questions about a new public transportation system serving the Sedona-Oak Creek Canyon area. The survey was available online for approximately one month (from August 27, 2018 through September 30, 2018) and a total of 469 responses were received. A short summary of key takeaways from the survey will be shared in this section and the detailed analysis is located in Appendix A.

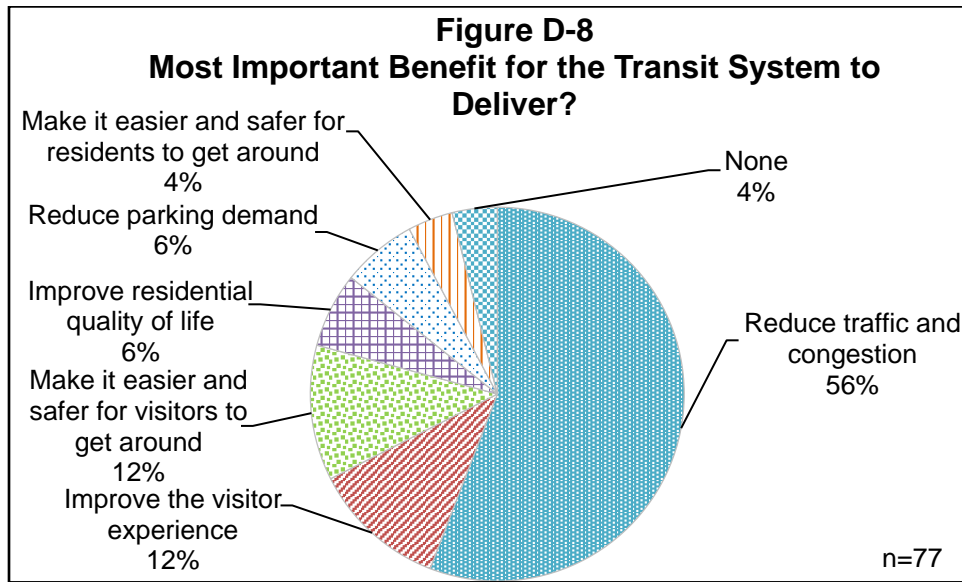
Key findings from the online resident survey include:

- The majority of respondents (60 percent) are full-time Sedona residents and have been for more than five years.
- The majority of respondents believe there is a need for a local public transportation within Sedona (80 percent), between Sedona and Oak Creek Canyon (74 percent), and between Sedona and the Village of Oak Creek (83 percent).
- As shown in Figure D-5, the majority of respondents (72 percent) believe the transit services primarily serve both residents and visitors equally.



A separate survey was conducted for businesses. Key findings from the online chamber business survey include:

- The majority of respondents (24 percent) indicated that they represent a business in the service industry, followed by other (22 percent), lodging (20 percent), and retail (15 percent).
- The majority of respondents (88 percent) indicated that a visitor-focused shuttle system is needed within the Sedona-Oak Creek Canyon area.
- The majority of respondents (69 percent) indicated that improved employee transportation is needed within the Sedona-Oak Creek Canyon area.
- Respondents indicated that it is most important for the transit service to provide trips between South 179, the Village of Oak Creek, and Sedona, including intermediate trailheads.
- As shown in Figure D-8, the majority of respondents (56 percent) indicated that reducing traffic and congestion is the most important benefit for the transit system to deliver.



Community meetings were held three times during the development of the implementation plan. The first was held to obtain input regarding public transportation needs and priorities. A service options workshop was held in January 2019 to obtain feedback regarding the various service options for the study area. The input was used to refine the service options and develop preliminary recommendations. The recommended service options were then presented at an open house in April 2019, as well as being posted on the City website with a comment form for community input.

VISITOR INTERVIEWS

Intercept interviews were conducted by consulting team members at a variety of locations within the Greater Sedona area throughout October 2018 including hotels, trailheads, and Tlaquepaque. These were qualitative conversations to explore visitor travel patterns and destinations, experiences with traffic and parking perceptions, the potential to use a shuttle system, and characteristics which would be required to make a shuttle an attractive transportation option. A total of 191 interviews were conducted.

Incentivized interviews were conducted with 50 visitors at pre-arranged hotels in Uptown, West Sedona, and the Village of Oak Creek.

- Arabella (9)
- Orchards (2)
- Sedona Rouge (8)
- Marriott Courtyard (13)
- Holiday Inn Express (12)
- Las Posadas (6)



Shorter, non-incentivized interviews were conducted with 141 visitors and residents at a variety of locations including:

- Tlaquepaque (22)
- Marriott Courtyard (4)
- Bell Rock Trailhead (34)

- Cathedral Rock Trailhead (22)
- West Fork Trailhead (22)
- Dry Creek Trailhead (37)

These shorter interviews were two to three minutes in length and were conducted as people were going hiking, biking, shopping, or dining out.

There was strong support among visitors for public transportation in the area. Most overnight visitors indicated an interest in using public transportation for at least some of their transportation within the area. Many day visitors also expressed an interest in public transportation. Many of the visitors to the Sedona area are familiar with other recreation and resort areas that have public transportation services and have an expectation that these services should be available.

TRANSIT SERVICE CRITERIA

Based on previous planning efforts, community input, and feedback from the Advisory Committee, the following are the service criteria used in evaluating transit service options.

- Service will increase mobility opportunities for those visiting, working, or living within the greater Sedona area.
 - Service must be frequent enough to be an attractive option.
 - Service must run late enough for visitors to be able to return to hotels after dining at local restaurants.
 - Service must connect lodging with major visitor destinations.
 - Local service will provide connectivity with regional commuter service.
- Service will provide connectivity between Oak Creek Canyon, Sedona, and the Village of Oak Creek.
 - Service types and levels will be appropriate for the demand between these locations.
 - Service will be adjusted to meet seasonal variations in demand.
- Service for Oak Creek Canyon and other trailheads will focus on congestion mitigation and reducing parking impacts.
 - Transit service should be integrated with intercept parking facilities.
 - The service must support USFS management policies on visitor capacity and use of Forest Service lands.
 - Service to Slide Rock State Park should enhance access to the park without adversely impacting the park visitor capacity.
- Service will be operated efficiently and effectively.
 - Performance measures will be established for efficiency of service operations.
 - Performance measures will be established for effectiveness of service delivery.
 - Policies which are needed to support successful implementation will be identified.

- Sustainable funding sources must be identified for implementation of transit service.
 - Multiple funding sources, including local government, private sector, state, and federal, should be identified for capital and operating costs to implement the service.
 - Service implementation may be phased, based on availability of funding.

SERVICE OPTIONS

Oak Creek Canyon

Service options for Oak Creek Canyon include direct, non-stop service to Slide Rock State Park and service with multiple stops in the Canyon at various trailheads, picnic areas, and campgrounds. Four locations for intercept parking were used to define the options. The first possible location for intercept parking was along SH 179 in the vicinity of the Village of Oak Creek and the Red Rock Ranger Station. A specific location has not been identified or evaluated, but will have to be addressed as part of the implementation if one of these options is selected. The second location for intercept parking is the municipal parking lot #5 in Uptown. The third location for an intercept parking lot is in West Sedona at or near Cultural Park. Finally, intercept parking at Oak Creek Vista was considered for an option to serve people coming to Oak Creek Canyon from the north.

Service to Slide Rock State Park has been evaluated with and without a reservations system for access to the park. With a reservations system, a limited number of people could reserve access to the park on specific days for vehicle entry. An additional number of reservations would be accepted for access by bus with parking at the intercept parking lot. The Park could control the number of people entering the park by the number of reservations that are accepted. This approach could be financially neutral by charging a premium for vehicular access and a per person charge for those parking at the intercept lot and using the bus.

Parking restrictions in Oak Creek Canyon have been used to compare service options for the canyon service. One option is to continue the current parking scenario with possible minor changes. The second option is to implement a more aggressive program of strict parking controls by eliminating roadside parking through barriers and enhanced enforcement. Strict parking controls would also require traveler information through the use of variable message signs and smart phone apps to alert travelers when parking is not available within the Canyon.

The nine options for Oak Creek Canyon were evaluated and compared using key performance criteria such as annual operating cost, passenger-trips per service-hour, and average cost per passenger-trip. The options were also compared to the service criteria. The evaluation was used to present preliminary recommendations to the community.

Sedona Area Options

Options included shuttles to several popular trailheads, fixed-route service from West Sedona and the Village of Oak Creek (VOC) to Uptown Sedona, a fixed-route service connector from a new transit hub located near Tlaquepaque, and demand response service in Sedona. Demand response service in Sedona has been evaluated as an entirely demand response transit system and as a demand response service that supplements core fixed-route transit service in Sedona.

The eight options for Sedona and the Village of Oak Creek were evaluated and compared using key performance criteria such as annual operating cost, passenger-trips per service-hour, and average cost per passenger-trip. The options were also compared to the service criteria. The evaluation was used to present preliminary recommendation to the community.

GOVERNANCE OPTIONS

An important consideration for implementation of community public transit service is the organizational and governance structure. LSC identified five basic options that could be used. Each has advantages and disadvantages. There are also limitations regarding the available funding sources which are described in Chapter B. Each of these are described in the following sections.

Each of the options have some advantages and disadvantages as summarized in Table K-1. While the RTA has the ability to serve multiple jurisdictions, the ability to serve multiple counties is low and is therefore rated as medium. The RTA could serve all of Yavapai County and could enter into a JPA to serve areas outside Yavapai County.

	City Operated	City Contractor	JPA	IGPTA	RTA
Legal Authority	Yes	Yes	Yes	Yes	Yes
Level of City Control	High	High	High	Medium	Low
Ability to Generate Revenue	High	High	High	High	Medium
Ease of Implementation	High	High	High	Medium	Low
Ability to Serve Multiple Jurisdictions	Medium	Medium	High	High	Medium

FUNDING OPTIONS

A summary of the primary funding options for public transportation service in the greater Sedona area is included in the transit implementation plan. This analysis is not exhaustive and other funding sources may be found, but these are the primary sources of sustainable community transit services in a community like Sedona. Funding sources include a variety of federal and local programs which may be used to fund public transportation.

The ability of each organizational structure to access funding sources is summarized in the following table. The City of Sedona has the broadest ability to access funding sources followed by the counties. The Intergovernmental Agency has limited ability to access funds and is dependent on the financial support of the participating governmental entities.

Summary of Access to Funding Sources				
	City of Sedona	Counties	IGRTA	RTA
Federal Transit Formula Funds	✓	✓	✓	✓
Federal Transit Discretionary Funds	✓	✓	✓	✓
Federal Lands Access Program	✓	✓	✓	✓
Sedona Transportation Tax	✓			
Lodging Tax	✓			
Parking Revenues	✓			
General Funds	✓	✓		
County Excise Tax		✓		✓
Fares	✓	✓	✓	✓

The recommended organizational structure for public transportation in the Sedona area is a system set up as part of city government with a contract operator. The city system gives the City of Sedona the greatest control over the service provided and the broadest ability to access funding. While there are advantages to a more regional focus through the RTA, the priorities will be very different in various areas of Yavapai and Coconino Counties. Distinct branding for the Sedona area service will be very important, as discussed in the marketing plan. Control over the branding and marketing would be better accomplished by a city system rather than a regional system. The type of service is likely to be very different in the Sedona area from the rest of either county. The importance of providing a zero-fare service in the Sedona area may not be understood and not seen as a priority as part of a regional service.

To provide service to VOC, OCC, and Slide Rock will require funding partnerships and operating agreements with Yavapai County, the U.S. Forest Service (USFS), and Arizona State Parks. Phase 1 would require agreements with the County and the USFS. Implementation of Phases 2 and 3 would require a more extensive agreement with the USFS and a comprehensive agreement with Slide Rock State Park.

As Yavapai County moves forward with the possibility of creating the RTA, Sedona should participate in the discussions to determine if the benefits outweigh the challenges of operating as part of a larger regional system.

RECOMMENDED IMPLEMENTATION PLAN

The recommended service is to be implemented in four phases. The first phase begins with core routes connecting West Sedona, VOC, and Uptown as shown in Figure M-3. Shuttle service to local trailheads in the Sedona area would be included as shown in Figure M-5. While these are the recommended trailheads to be included in the first phase of service, the actual trailheads will be determined through cooperative efforts with the U.S. Forest Service.

Phase 2 would add additional trailheads as shown in Figure M-6. Again, while these are the recommended trailheads to be added in Phase 2, final selection of the trailheads will be made through cooperation with the U.S. Forest Service.

**Figure M-3
 Sedona Fixed Routes
 with Demand-Response Service**

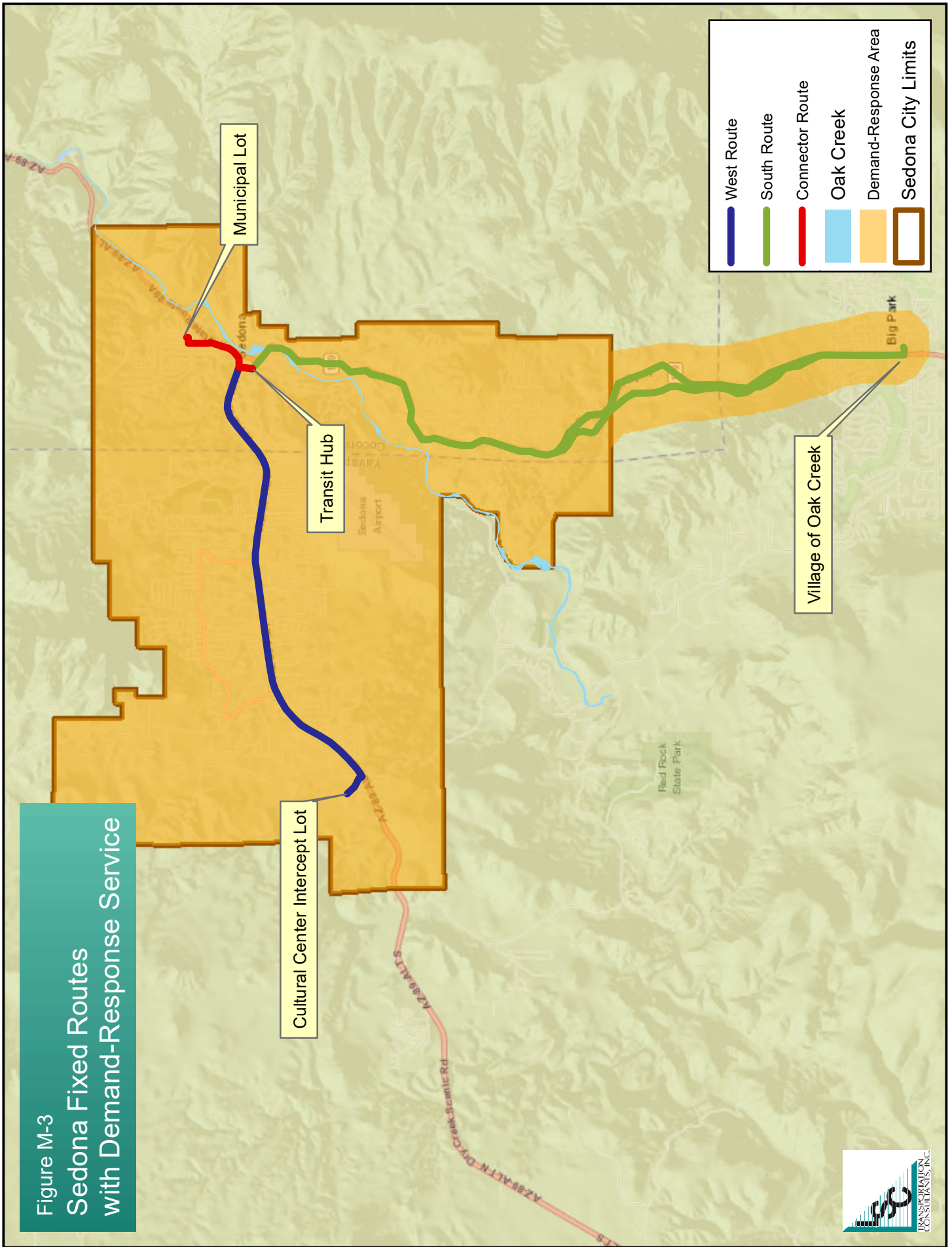
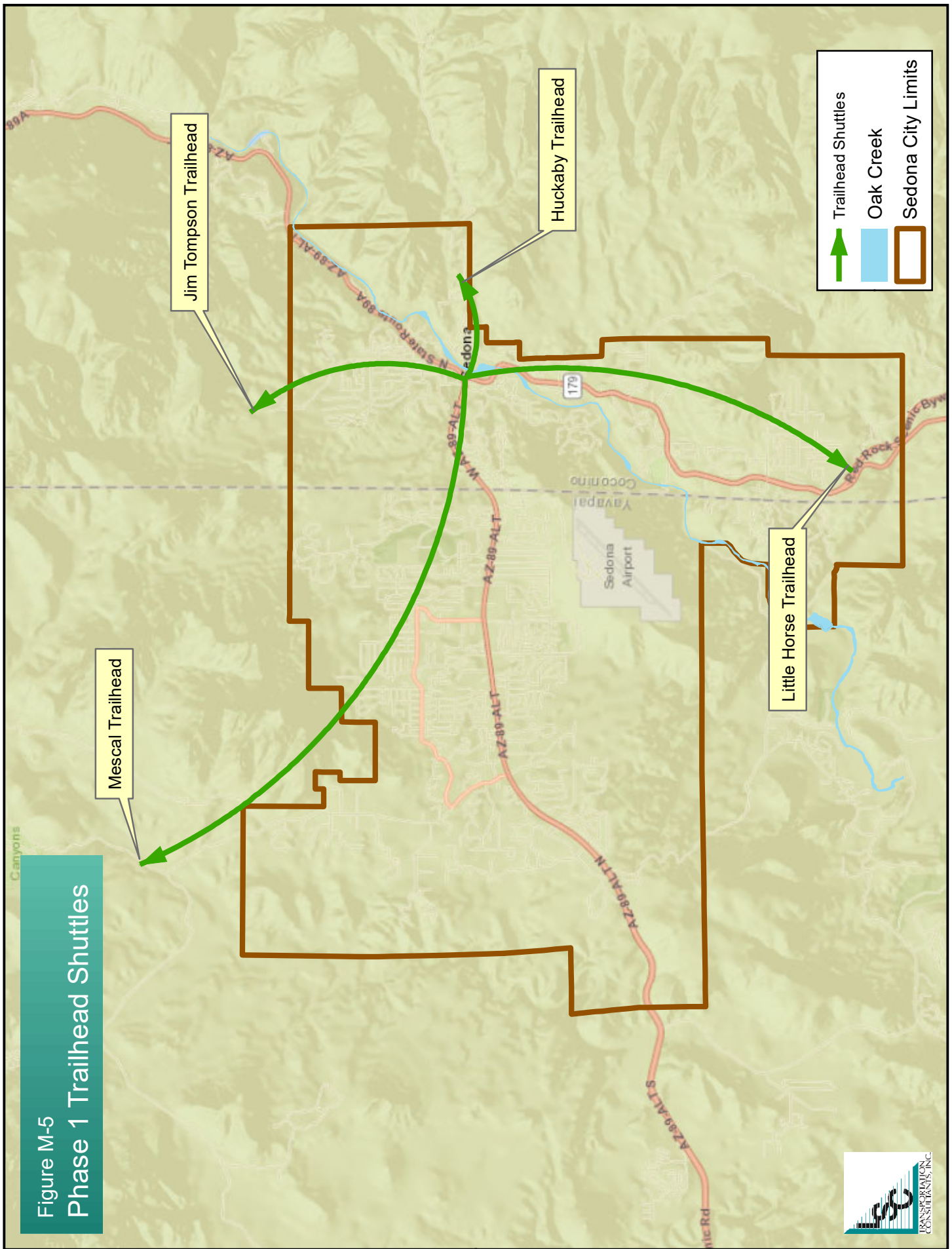
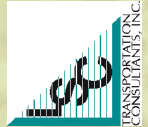
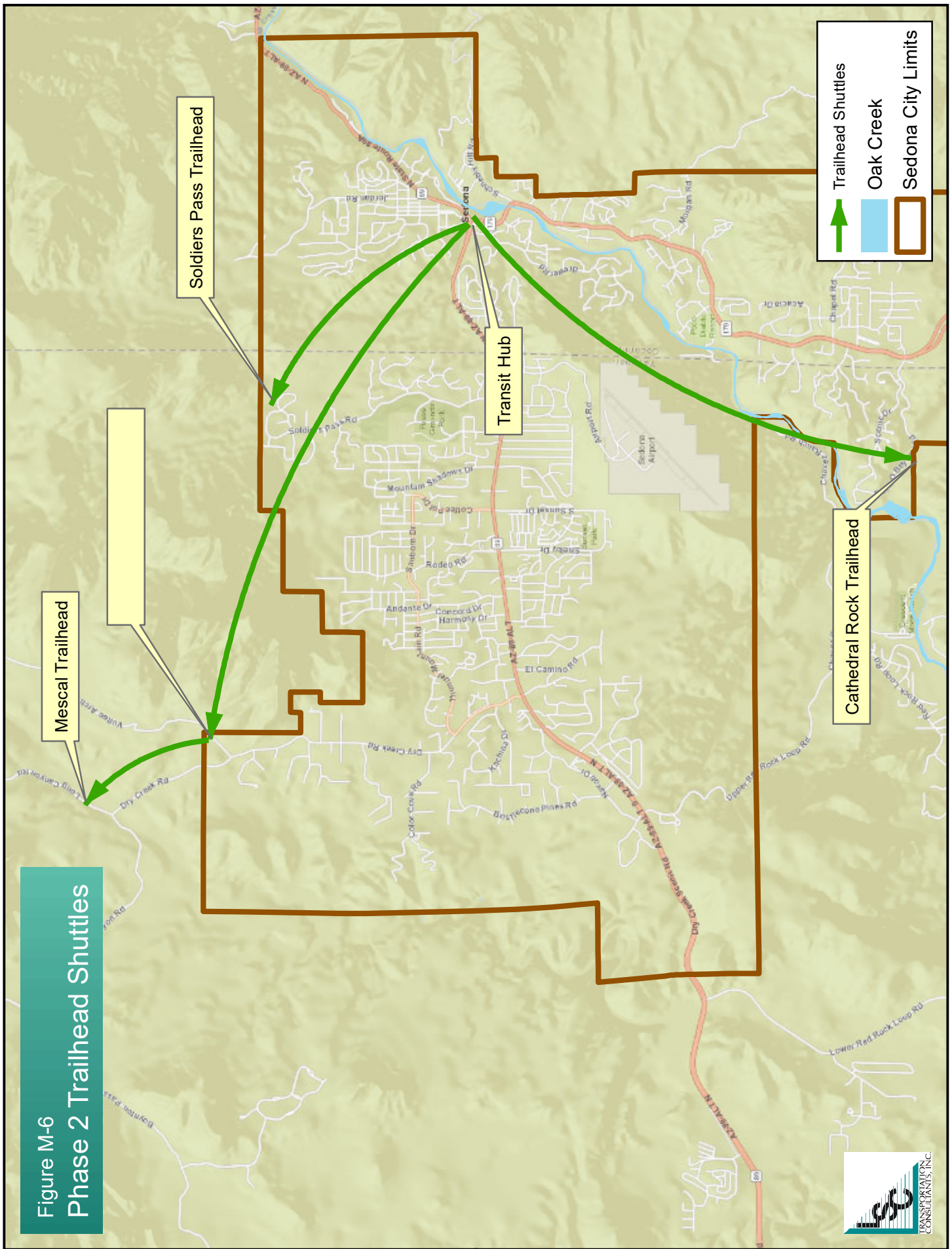


Figure M-5
Phase 1 Trailhead Shuttles



**Figure M-6
Phase 2 Trailhead Shuttles**



Phase 3 will add service to destinations in OCC as shown in Figure M-7 and Phase 4 will add express service from an intercept parking lot near VOC to Slide Rock State Park as shown in Figure M-8.

Facilities and infrastructure will be required to support the new transit service. Facilities include a new transit hub and an operations and maintenance facility. Some bus stop improvements will also be needed along the proposed routes. Recommendations are provided for vehicles for each phase of the service plan with the vehicles selected to match the specific services to be provided.

Characteristics of the service plan are summarized in Table M-1, with phases one, two, three, and four detailed by type of service – core routes, demand response, trailhead services, and Slide Rock shuttles. The cost estimates for the service are based on current operating costs of Cottonwood Transit with an increase in wage rates and benefits of 20 percent. These costs include all direct operating costs (e.g., wages and fuel), maintenance costs, and administrative costs. Implementation of transit service in the Sedona area will depend on roadway infrastructure improvements. The TMP recommendations at the “Y” include a right-turn bypass lane from SR 89A to SR 179, a right-turn bypass lane from northbound SR 179 to SR 89A, and two southbound lanes from Uptown approaching the “Y”. The TMP included extension of a second lane on SR 179 through the Schnebly Hill roundabout in each direction.

As a result of the modeling effort, the recommended improvements to support transit service and for access to a new transit hub include:

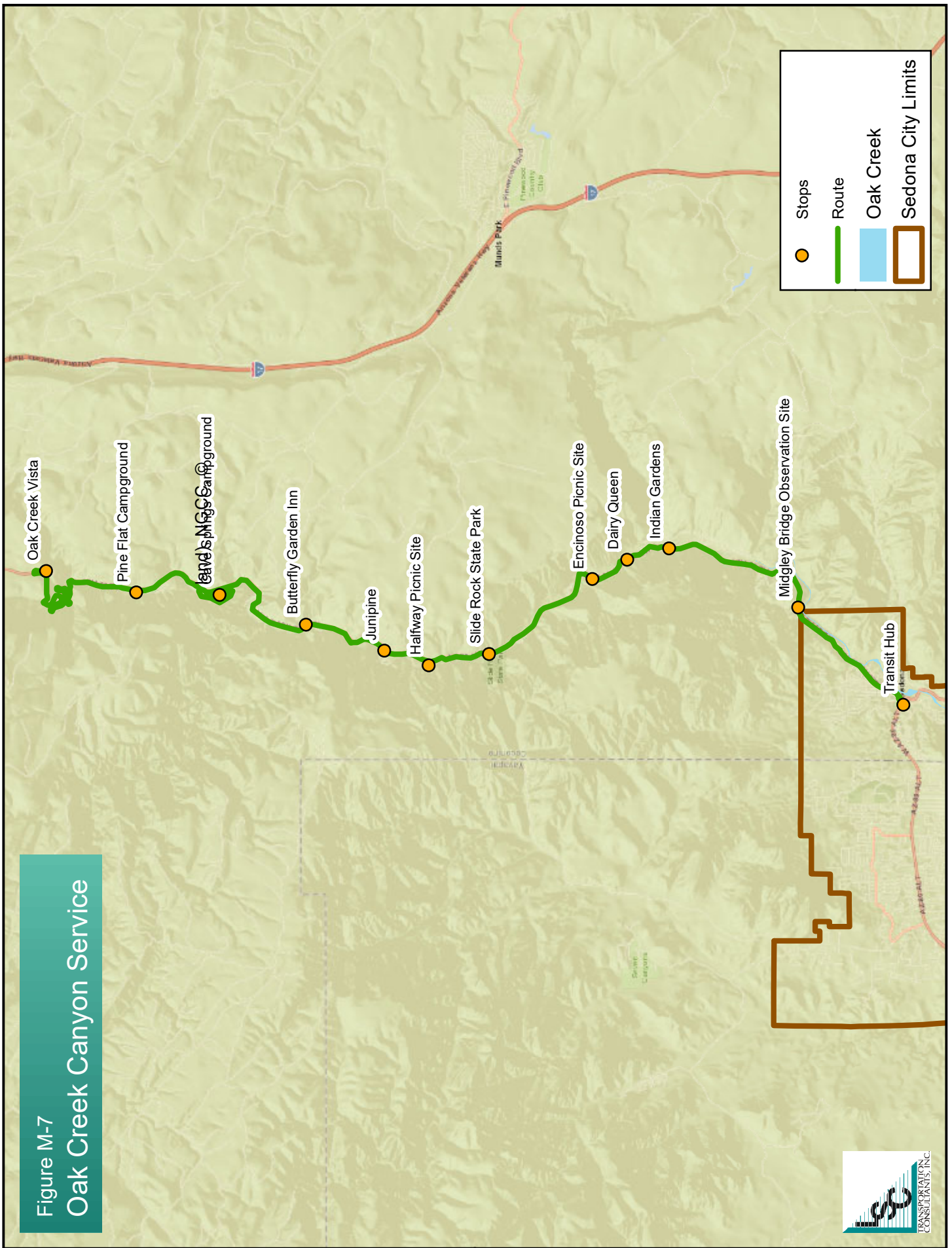
- Two lanes approaching the “Y” from Uptown (currently in progress)
- The right-turn bypass lane from SR 89A to southbound SR 179 at the “Y”
- The right-turn bypass lane from northbound SR 179 to 89A at the “Y”
- Elimination of the at-grade pedestrian crossing at Tlaquepaque
- Reconfiguration of lanes on SR 89A from Airport Road to Ranger or Brewer to allow for a bus bypass lane
- Extension of Ranger Road to SR 89A or improvements to Brewer Road to provide access to the transit hub
- Intersection improvements at Ranger Road and Brewer Road
- Intersection improvements at Ranger Road and SR 179 including bus priority for left turns from SR 179 to Ranger Road

While not an essential improvement, extension of two lanes through the Schnebly Hill roundabout in both directions would improve traffic flow and support bus access to and from the transit hub.

Table M-5 presents a ten-year transit financial plan in constant dollars, while Table M-6 presents the plan with the assumption of an annual three percent inflation rate every year from year one.

The financial plan is comprehensive and includes all costs detailed by route or type of improvement – assumptions are noted about revenue sources. Capital costs for vehicles to operate the core routes are based on battery electric buses. Use of diesel or compressed natural gas buses would have significantly higher capital costs..

Figure M-7
Oak Creek Canyon Service



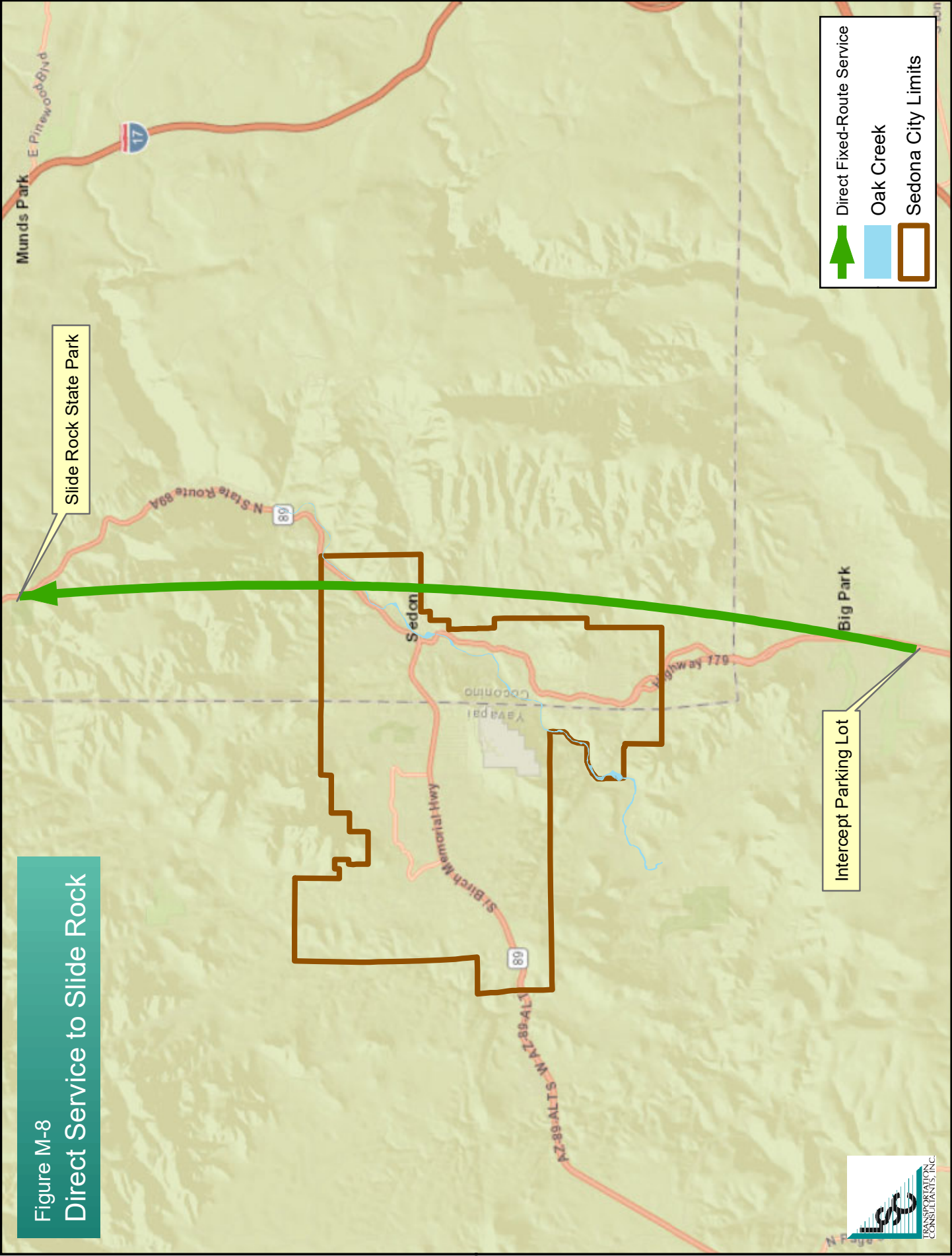


Figure M-8
Direct Service to Slide Rock

Table M-1
Preliminary Recommended Service Plan

Service Description	# of Vehicles Required	Total Daily		Total Annual		Annual Operating Days	Annual Ridership	Annual Operating Cost	Passengers per Hour	Cost per Passenger
		Revenue - Miles	Revenue - Hours	Revenue - Miles	Revenue - Hours					
PHASE 1										
CORE ROUTES										
Fixed-route service from West Sedona to the Transit Hub										
Peak Season (March - October): Daily service with frequency every 30 minutes between 6-10am, every 15 minutes between 10am-8pm, every 30 minutes between 8-11pm. Roundtrip run time of 45 minutes. Total of 54 trips per day.	3	464	41	113,004	9,855	243	516,000	\$727,000	52.4	\$1.41
Off-Peak Season (November - February): Daily service with frequency every 30 minutes. Roundtrip run time of 30 minutes. Total of 34 trips per day.	1	292	17	35,575	2,068	122	84,000	\$156,000	40.6	\$1.86
TOTAL:	3	757	58	148,579	11,923	365	600,000	\$883,000	50.3	\$1.47
Fixed-route service between VOC (in-town) and the Transit Hub										
Peak Season (March - October): Daily service with frequency every 30 minutes between 6-10am, every 15 minutes between 10am-8pm, every 30 minutes between 8-11pm. Roundtrip run time of 60 minutes. Total of 54 trips per day.	4	767	54	186,588	13,140	243	218,000	\$980,000	16.6	\$4.50
Off-Peak Season (November - February): Daily service with frequency every 30 minutes. Roundtrip run time of 45 minutes. Total of 34 trips per day.	2	483	34	58,741	4,137	122	73,000	\$309,000	17.6	\$4.23
TOTAL:	4	1,250	88	245,329	17,277	365	291,000	\$1,289,000	16.8	\$4.43
Fixed-route service between Uptown Sedona and the Transit Hub										
Peak Season (March - October): Daily service with frequency every 30 minutes between 6-10am, every 15 minutes between 10am-8pm, every 30 minutes between 8-11pm. Roundtrip run time of 45 minutes. Total of 54 trips per day.	3	76	41	18,396	9,855	243	462,000	\$700,000	46.9	\$1.52
Off-Peak Season (November - February): Daily service with frequency every 30 minutes. Roundtrip run time of 30 minutes. Total of 34 trips per day.	1	48	17	5,791	2,068	122	102,000	\$147,000	49.3	\$1.44
TOTAL:	3	123	58	24,187	11,923	365	564,000	\$847,000	47.3	\$1.50
DEMAND RESPONSE										
ADA Demand Response Service in Sedona and VOC										
Daily service between 6am-11pm.	2	219	22	80,045	8,004	365	15,000	\$512,000	1.9	\$34.13
TRAILHEAD SERVICES										
Shuttle from Transit Hub to Jim Thompson/Jordan Rd. Trailhead										
Peak Season (March - October): Daily service with 14 trips per day. Roundtrip run time of 30 min.	1	92	12	22,387	2,798	243	67,000	\$204,000	23.9	\$3.04
Off-Peak Season (November - February): Weekend service with 14 trips per day. Roundtrip run time of 30 min.	1	92	12	3,128	391	34	9,000	\$28,000	23.0	\$3.11
TOTAL:	1	184	23	25,515	3,189	277	76,000	\$232,000	23.8	\$3.05
Shuttle from Transit Hub to Little Horse Trailhead										
Peak Season (March - October): Daily service with six trips per day. Roundtrip run time of 45 min.	1	96	9	23,360	2,190	243	35,000	\$161,000	16.0	\$4.60
Off-Peak Season (November - February): Weekend service with six trips per day. Roundtrip run time of 45 min.	1	96	9	3,264	306	34	5,000	\$23,000	16.3	\$4.60
TOTAL:	1	192	18	26,624	2,496	277	40,000	\$184,000	16.0	\$4.60
Shuttle from Transit Hub to Huckaby Trailhead										
Peak Season (March - October): Daily service with 22 trips per day. Roundtrip run time of 30 min.	1	66	11	16,060	2,677	243	64,000	\$193,000	23.9	\$3.02
Off-Peak Season (November - February): Weekend service with 22 trips per day. Roundtrip run time of 30 min.	1	66	11	2,244	374	34	9,000	\$27,000	24.1	\$3.00
TOTAL:	1	132	22	18,304	3,051	277	73,000	\$220,000	23.9	\$3.01
Shuttle from Transit Hub to Mescal Trailhead										
Peak Season (March - October): Daily service with 22 trips per day. Roundtrip run time of 30 min.	1	273	11	66,381	2,677	243	64,000	\$208,000	23.9	\$3.25
Off-Peak Season (November - February): Weekend service with 22 trips per day. Roundtrip run time of 30 min.	1	273	11	9,275	374	34	9,000	\$29,000	24.1	\$3.22
TOTAL:	1	546	22	75,657	3,051	277	73,000	\$237,000	23.9	\$3.25
PHASE 1 TOTAL:	16	3,403	310	644,239	60,914	365	1,732,000	\$4,404,000	28.4	\$2.54

Table M-1 Recommended Service Plan (continued)												
Service Description	# of Vehicles Required	Total Daily			Total Annual			Annual Operating Days	Annual Ridership	Annual Operating Cost	Passengers per Hour	Cost per Passenger
		Revenue Miles	Revenue Hours	Revenue Miles	Revenue Hours	Revenue Miles	Revenue Hours					
PHASE 2												
TRAILHEAD SERVICES												
Shuttle from Transit Hub to Cathedral Rock Trailhead												
Peak Season (March - October): Daily service with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 30 min. Total of 23 trips per day.	1	184	12	44,773	2,798	243	97,000	\$210,000	34.7	\$2.16		
Off-Peak Season (November - February): Weekend service only with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 30 min. Total of 23 trips per day.	1	184	12	6,256	391	34	7,000	\$29,000	17.9	\$4.14		
TOTAL:	1	368	23	51,029	3,189	277	104,000	\$239,000	32.6	\$2.30		
Shuttle from Transit Hub to Soldiers Pass Trailhead												
Peak Season (March - October): Daily service with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 30 min. Total of 23 trips per day.	1	133	12	32,461	2,798	243	97,000	\$207,000	34.7	\$2.13		
Off-Peak Season (November - February): Weekend service only with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 30 min. Total of 23 trips per day.	1	133	12	4,536	391	34	7,000	\$29,000	17.9	\$4.14		
TOTAL:	1	267	23	36,996	3,189	277	104,000	\$236,000	32.6	\$2.27		
Shuttle from Transit Hub to Dry Creek Vista and Mescal Trailheads												
Peak Season (March - October): Daily service with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 45 min. Total of 23 trips per day.	2	311	12	75,555	2,798	243	146,000	\$219,000	52.2	\$1.50		
Off-Peak Season (November - February): Weekend service only with frequency every 30 minutes between 7am-6pm. Roundtrip run time of 45 min. Total of 23 trips per day.	2	311	12	10,557	391	34	10,000	\$31,000	25.6	\$3.10		
TOTAL:	2	621	23	86,112	3,189	277	156,000	\$250,000	48.9	\$1.60		
PHASE 2 TOTAL:	4	1,256	69	174,138	9,568	365	364,000	\$725,000	38.0	\$1.95		
PHASE 3												
OCC SERVICE												
Shuttle from an intercept parking lot on 179 (potentially at the ranger station) to OCC trailheads (Cave Springs Campground, Banjo Bill, Slide Rock) as far as Oak Creek Vista												
Peak Season (March - October): Daily service with frequency every 30 minutes. The first shuttle departs at 7am and the last shuttle departs at 6pm. Roundtrip run time of 150 min. (2.5 hr.). Total of 23 trips per day.	5	1,185	58	288,228	13,992	243	170,000	\$1,070,000	12.2	\$6.29		
Off-Peak Season (November - February): Weekend service only with frequency every 30 minutes. The first shuttle departs at 7am and the last shuttle departs at 6pm. Roundtrip run time of 120 min. (2 hr.). Total of 23 trips per day.	5	1,185	46	40,273	1,564	34	17,000	\$122,000	10.9	\$7.18		
PHASE 3 TOTAL:	5	2,369	104	328,501	15,556	277	187,000	\$1,192,000	12.0	\$6.37		
PHASE 4												
Slide Rock Express Shuttles												
Slide Rock Express Shuttle: VOC - Slide Rock State Park (with a reservation system)												
Peak Season (Memorial Day - Labor Day): Daily service with 53 trips per day. Roundtrip run time of 90 minutes.	10	1,696	80	178,080	8,348	105	368,000	\$640,000	44.1	\$1.74		
PHASE 4 TOTAL:	10	1,696	80	178,080	8,348	105	368,000	\$640,000	44.1	\$1.74		

Source: LSC, 2019.





Table M-5 Sedona Transit Ten-Year Financial Plan (Constant dollars)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
EXPENSES										
Operation										
Pre-startup administrative costs (staff, OH, misc.)*	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000	\$168,000
Environmental Analysis and approvals	\$100,000	\$300,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Phase 1										
Fixed Route from West Sedona to Transit Hub			\$883,000	\$883,000	\$883,000	\$883,000	\$883,000	\$883,000	\$883,000	\$883,000
Fixed Route from VOC to Transit Hub			\$1,289,000	\$1,289,000	\$1,289,000	\$1,289,000	\$1,289,000	\$1,289,000	\$1,289,000	\$1,289,000
Fixed Route between Uptown and Transit Hub			\$847,000	\$847,000	\$847,000	\$847,000	\$847,000	\$847,000	\$847,000	\$847,000
Complementary ADA Paratransit			\$512,000	\$512,000	\$512,000	\$512,000	\$512,000	\$512,000	\$512,000	\$512,000
Initial Trailhead Shuttles			\$636,000	\$636,000	\$636,000	\$636,000	\$636,000	\$636,000	\$636,000	\$636,000
Phase 2										
Additional Trailhead Shuttles				\$725,000	\$725,000	\$725,000	\$725,000	\$725,000	\$725,000	\$725,000
Phase 3										
OCC Route				\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000	\$1,192,000
Phase 4										
Slide Rock Shuttle				\$640,000	\$640,000	\$640,000	\$640,000	\$640,000	\$640,000	\$640,000
Operation Subtotal	\$268,000	\$468,000	\$268,000	\$4,167,000	\$4,167,000	\$4,892,000	\$6,084,000	\$6,084,000	\$6,724,000	\$6,724,000
Capital										
Phase 1										
Battery electric buses for core routes (15 buses)			\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000	\$7,500,000
Vehicles for paratransit			\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Vehicles for trailhead routes			\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000
Operations & maintenance facility		\$2,000,000	\$10,000,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000	\$2,800,000
Transit hub		\$100,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000
Transit technology			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Bus stop improvements (VOC/179 only)			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Phase 2										
Vehicles for trailhead routes				\$170,000	\$170,000	\$170,000	\$170,000	\$170,000	\$170,000	\$170,000
Phase 3										
Vehicles for OCC route				\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
VOC intercept parking lot				\$3,200,000	\$3,200,000	\$3,200,000	\$3,200,000	\$3,200,000	\$3,200,000	\$3,200,000
Oak Creek Vista parking lot improvements				\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Phase 4										
Vehicles for Slide Rock route				\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
VOC intercept parking lot				\$3,900,000	\$3,900,000	\$3,900,000	\$3,900,000	\$3,900,000	\$3,900,000	\$3,900,000
Capital Subtotal	\$200,000	\$2,100,000	\$18,875,000	\$12,270,000	\$300,000	\$3,470,000	\$7,200,000	\$15,984,000	\$15,984,000	\$15,984,000
TOTAL EXPENSES	\$468,000	\$2,568,000	\$19,143,000	\$16,437,000	\$4,467,000	\$8,362,000	\$13,284,000	\$15,984,000	\$15,984,000	\$15,984,000
REVENUES										
Operation										
FTA 5311 Operational Grant Funding*			\$775,000	\$775,000	\$775,000	\$775,000	\$775,000	\$775,000	\$775,000	\$775,000
Federal Land Access Program (FLAP)**			\$386,313	\$386,313	\$386,313	\$386,313	\$386,313	\$386,313	\$386,313	\$386,313
Yavapai County (apportioned VOC route = 1/3 of route miles)			\$2,627,687	\$2,627,687	\$2,627,687	\$2,627,687	\$2,627,687	\$2,627,687	\$2,627,687	\$2,627,687
Cocconino County (apportioned VOC route = 2/3 of route miles)			\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
City of Sedona (inclusive of all possible taxation sources)		\$468,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000
Partner Participation			\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Advertising			\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Passenger Fares**			\$318,000	\$318,000	\$318,000	\$318,000	\$318,000	\$318,000	\$318,000	\$318,000
Operation Subtotal	\$268,000	\$468,000	\$268,000	\$4,167,000	\$4,167,000	\$4,892,000	\$6,084,000	\$6,084,000	\$6,724,000	\$6,724,000
Capital										
FTA/ADOT 5311 Capital Grant Funding***			\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000
FTA 5339 Capital Grant Funding***		\$1,050,000	\$5,740,000	\$2,436,000	\$130,000	\$1,586,000	\$2,400,000	\$2,400,000	\$2,400,000	\$2,400,000
FTA 5339c Low or No Emissions Vehicles			\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000
Cocconino County				\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Yavapai County				\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000
Sedona Local Funds and Match		\$100,000	\$6,850,000	\$3,489,000	\$80,000	\$434,000	\$1,700,000	\$1,700,000	\$1,700,000	\$1,700,000
Federal Land Access Program (100% of Oak Creek Vista prkg)				\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
AZ State Parks (100% of Slide Rock buses and intercept lot)				\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000	\$1,100,000
Capital Subtotal	\$200,000	\$2,100,000	\$18,875,000	\$12,270,000	\$300,000	\$3,470,000	\$7,200,000	\$15,984,000	\$15,984,000	\$15,984,000
TOTAL REVENUES	\$468,000	\$2,568,000	\$19,143,000	\$16,437,000	\$4,467,000	\$8,362,000	\$13,284,000	\$15,984,000	\$15,984,000	\$15,984,000

* After Year 3, administrative costs are included in route operation costs.
 ** Due to competitive Arizona 5311 funding, only 10% federal share was estimated for core Sedona-VOC route operations only.
 *** Assume FLAP would fund 20% of OCC operating costs
 **** Assume 5311 would pay 80% of transit technology and VOC/179 bus stop improvements
 ***** Assume 5339 would pay 80% of all vehicle costs, 50% of ops/maint facility, 50% of transit hub, and 50% of OCC route intercept lot in VOC
 Note: Capital costs do not include property acquisition, site improvements, or roadway infrastructure.
 Source: LSC, 2019.



Table M-6 Sedona Transit Ten-Year Financial Plan (3% annual inflation)										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
EXPENSES										
Operation	\$188,000	\$173,040	\$178,231	\$983,824	\$1,023,639	\$1,054,348	\$1,085,979	\$1,118,568	\$1,152,115	
Pre-startup administrative costs (staff, OH, misc.)*	\$100,000	\$300,000	\$100,000	\$1,450,781	\$1,494,304	\$1,539,133	\$1,585,307	\$1,632,867	\$1,681,853	
Environmental Analysis and approvals				\$925,540	\$981,905	\$1,041,703	\$1,072,954	\$1,105,143	\$1,137,262	
Phase 1				\$559,476	\$593,548	\$611,355	\$629,695	\$648,586	\$668,044	
Fixed Route from West Sedona to Transit Hub				\$694,878	\$723,298	\$737,417	\$762,200	\$785,666	\$805,666	
Fixed Route from VOC to Transit Hub				\$1,408,525	\$1,454,304	\$1,501,362	\$1,549,717	\$1,599,417	\$1,650,561	
Fixed Route between Uplown and Transit Hub				\$925,540	\$981,905	\$1,041,703	\$1,072,954	\$1,105,143	\$1,137,262	
Complementary ADA Paratransit				\$559,476	\$593,548	\$611,355	\$629,695	\$648,586	\$668,044	
Initial Trailhead Shuttles				\$694,874	\$737,298	\$759,417	\$782,200	\$805,666	\$829,636	
Phase 2				\$840,474	\$865,688	\$891,659	\$918,408	\$945,961	\$974,331	
Additional Trailhead Shuttles				\$840,474	\$865,688	\$891,659	\$918,408	\$945,961	\$974,331	
Phase 3				\$1,423,310	\$1,466,010	\$1,509,990	\$1,555,290	\$1,602,990	\$1,652,115	
OCC Route				\$1,423,310	\$1,466,010	\$1,509,990	\$1,555,290	\$1,602,990	\$1,652,115	
Phase 4				\$4,553,393	\$4,689,995	\$4,822,681	\$4,961,791	\$5,103,534	\$5,250,098	
Slide Rock Shuttle				\$4,553,393	\$4,689,995	\$4,822,681	\$4,961,791	\$5,103,534	\$5,250,098	
Operation Subtotal	\$288,000	\$473,040	\$278,231	\$4,553,393	\$4,689,995	\$4,822,681	\$4,961,791	\$5,103,534	\$5,250,098	
Capital										
Phase 1				\$8,441,316	\$112,551	\$119,077	\$126,816	\$134,761	\$142,911	
Battery electric buses for core routes (15 buses)				\$8,441,316	\$112,551	\$119,077	\$126,816	\$134,761	\$142,911	
Vehicles for paratransit				\$109,273	\$112,551	\$119,077	\$126,816	\$134,761	\$142,911	
Vehicles for trailhead routes				\$212,180	\$223,855	\$231,855	\$240,226	\$249,000	\$258,188	
Operations & maintenance facility				\$3,059,636	\$3,169,636	\$3,284,636	\$3,404,636	\$3,529,636	\$3,659,636	
Transit hub				\$1,060,900	\$1,097,273	\$1,134,646	\$1,172,019	\$1,210,392	\$1,248,765	
Transit technology				\$26,523	\$27,523	\$28,523	\$29,523	\$30,523	\$31,523	
Bus stop improvements (VOC/179 only)				\$53,045	\$56,275	\$59,505	\$62,735	\$66,000	\$69,315	
Phase 2										
Vehicles for trailhead routes				\$112,551	\$112,551	\$112,551	\$112,551	\$112,551	\$112,551	
Vehicles for OCC route				\$1,738,911	\$1,738,911	\$1,738,911	\$1,738,911	\$1,738,911	\$1,738,911	
VOC intercept parking lot				\$579,637	\$579,637	\$579,637	\$579,637	\$579,637	\$579,637	
Oak Creek Vista parking lot improvements				\$231,855	\$231,855	\$231,855	\$231,855	\$231,855	\$231,855	
Phase 3										
Vehicles for Slide Rock route				\$1,159,274	\$1,159,274	\$1,159,274	\$1,159,274	\$1,159,274	\$1,159,274	
VOC intercept parking lot				\$597,026	\$597,026	\$597,026	\$597,026	\$597,026	\$597,026	
Phase 4										
Capital Subtotal	\$200,000	\$2,163,000	\$20,266,373	\$13,653,624	\$337,653	\$8,597,177	\$12,175,751	\$16,861,325	\$22,652,115	
TOTAL EXPENSES	\$488,000	\$2,636,040	\$20,544,604	\$18,207,017	\$5,027,648	\$15,419,858	\$17,137,542	\$18,964,859	\$20,902,213	
REVENUES										
Operation										
FTA 5311 Operational Grant Funding**				\$775,000	\$775,000	\$775,000	\$775,000	\$775,000	\$775,000	
Federal Land Access Program (FLAP)**				\$422,135	\$434,799	\$447,843	\$461,278	\$475,117	\$489,370	
Yavapai County (apportioned VOC route = 1/3 of route miles)				\$2,958,771	\$3,062,284	\$3,166,338	\$3,270,851	\$3,375,364	\$3,480,877	
Cocino County (apportioned OCC ROUTE = 2/3 of route miles)				\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
City of Sedona (inclusive of all possible taxation sources)				\$347,487	\$357,912	\$368,337	\$378,762	\$389,187	\$399,612	
Partner Participation				\$278,231	\$278,231	\$278,231	\$278,231	\$278,231	\$278,231	
Advertising				\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	
Passenger Fares**				\$4,553,393	\$4,689,995	\$4,822,681	\$4,961,791	\$5,103,534	\$5,250,098	
Operation Subtotal	\$288,000	\$473,040	\$278,231	\$4,553,393	\$4,689,995	\$4,822,681	\$4,961,791	\$5,103,534	\$5,250,098	
Capital										
FTA/ADOT 5311 Capital Grant Funding***				\$63,654	\$63,654	\$63,654	\$63,654	\$63,654	\$63,654	
FTA 5339 Capital Grant Funding***				\$6,092,112	\$6,092,112	\$6,092,112	\$6,092,112	\$6,092,112	\$6,092,112	
FTA 5339c Low or No Emissions Vehicles				\$6,556,362	\$6,556,362	\$6,556,362	\$6,556,362	\$6,556,362	\$6,556,362	
Cocino County				\$245,864	\$245,864	\$245,864	\$245,864	\$245,864	\$245,864	
Yavapai County				\$7,308,381	\$7,308,381	\$7,308,381	\$7,308,381	\$7,308,381	\$7,308,381	
Sedona Local Funds and Match				\$90,041	\$90,041	\$90,041	\$90,041	\$90,041	\$90,041	
Federal Land Access Program (100% of Oak Creek Vista prkg)				\$56,275	\$56,275	\$56,275	\$56,275	\$56,275	\$56,275	
AZ State Parks (100% of Slide Rock buses and intercept lot)				\$13,653,624	\$13,653,624	\$13,653,624	\$13,653,624	\$13,653,624	\$13,653,624	
Capital Subtotal	\$200,000	\$2,163,000	\$20,266,373	\$13,653,624	\$337,653	\$8,597,177	\$12,175,751	\$16,861,325	\$22,652,115	
TOTAL REVENUES	\$488,000	\$2,636,040	\$20,544,604	\$18,207,017	\$5,027,648	\$15,419,858	\$17,137,542	\$18,964,859	\$20,902,213	

* After Year 3, administrative costs are included in route operation costs.
 ** Due to competitive Arizona 5311 funding, only 10% federal share was estimated for core Sedona-VOC route operations only.
 *** Assume FLAP would fund 20% of OCC operating costs
 **** Facebook recovery of 50% of Trailhead shuttles, 80% of OCC route, and 100% of Slide Rock route
 ***** Assume 5311 would pay 80% of transit technology and VOC/179 bus stop improvements
 ***** Assume 5339 would pay 80% of all vehicle costs, 50% of ops/maint facility, 50% of transit hub, and 50% of OCC route intercept lot in VOC
 Note: Capital costs do not include property acquisition, site improvements, or roadway infrastructure.
 Source: L.S.C. 2019.

The timeline for implementation is shown in Figure M-9 and requires multiple years of planning before any service starts due to the significant time and process required to apply for and receive funding. Initial decisions will be required to determine the governance structure and funding partnerships. Development of facilities is a multi-year process including facility programming, site selection, environmental approvals, funding, and construction. Vehicle purchase typically requires multiple years from selection of a vehicle type, preparing specification, purchasing, and construction of the vehicle. Service in OCC will require funding agreements with the USFS and State Parks, approval of stop locations, and development of the remote parking lots.

Throughout this implementation process there will be continuous, ongoing service refinement, continuation of previous years' services, performance monitoring, and adjustments to the service plan as needed.

