

Apache Junction Transit Feasibility Study Update

Executive Summary

June 2012

Prepared for the:
Arizona Department
of Transportation

ADOT



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EXECUTIVE SUMMARY

PURPOSE OF THE STUDY

As an edge city of the rapidly growing Phoenix metropolitan area, Apache Junction has been experiencing a rapid rate of population growth. Since incorporation, the City has also added tens of square miles to its jurisdiction through annexation. In addition, significant growth is anticipated in the Portalis area, located in the southern portion of the City, which could result in population growth, economic development, and increased traffic volumes. As the City grows, the City Council wishes to ensure that Apache Junction residents maintain a level of mobility consistent with preservation of the area's quality of life and economic potential.

The City, in cooperation with the Arizona Department of Transportation (ADOT) retained Jacobs Engineering Group, Inc., (Jacobs) to conduct the Apache Junction Comprehensive Transportation Study to develop a long-range multimodal transportation plan that will address the City's most critical current and future transportation needs. This Transit Feasibility Study, an update of a study conducted by Lima & Associates in 2005, is an element of the Apache Junction Comprehensive Transportation Study. The Transit Feasibility Study Update examined the various modes of public transportation that could be implemented both within Apache Junction and between Apache Junction and other areas. The study recommends levels of transit service to be implemented at the 60,000, 75,000, and 130,000 population thresholds used in the Comprehensive Transportation Study.

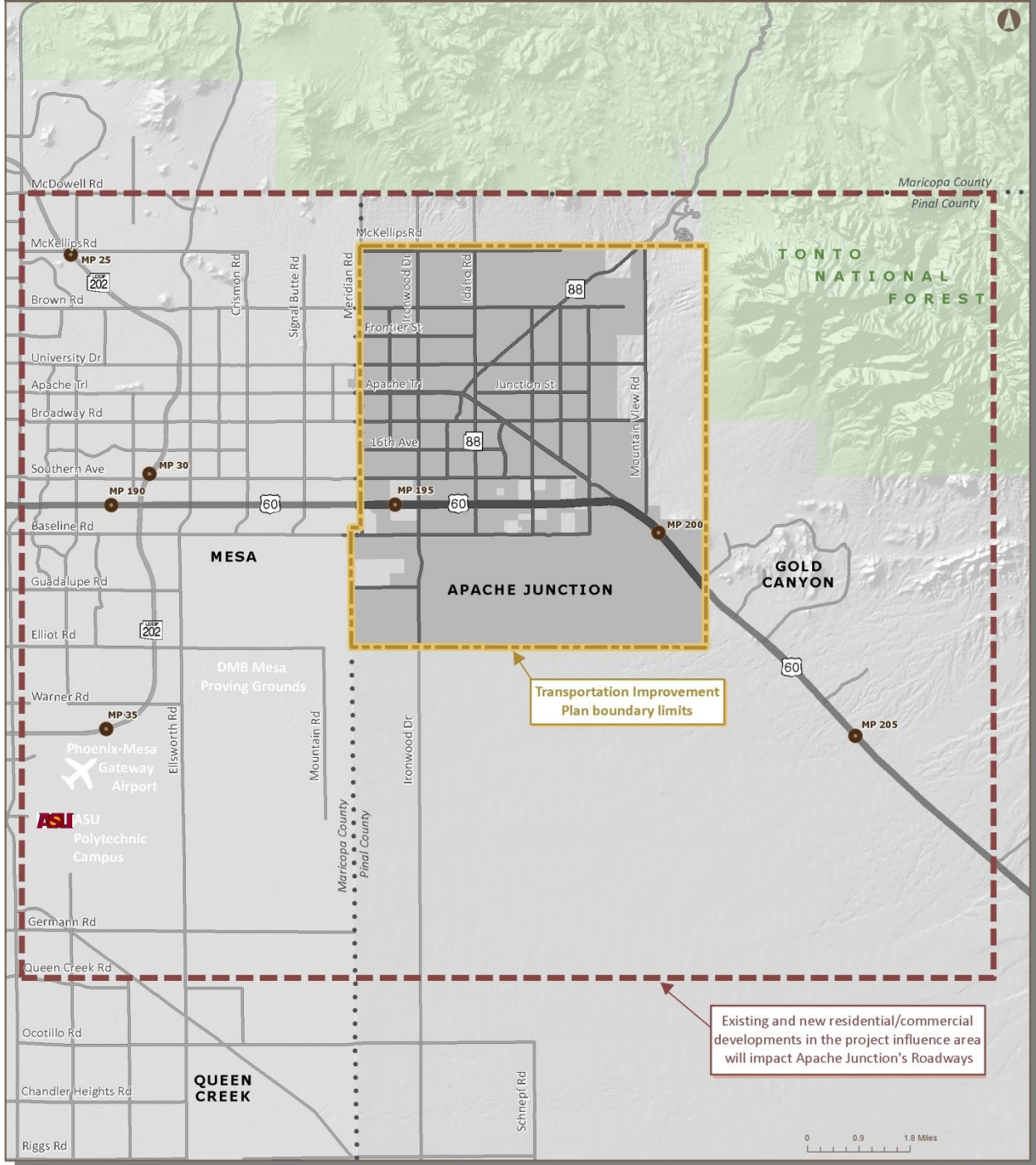
Study Area

Figure 1 shows the study area boundary along with the project influence area. The study area represents the Transportation Improvements Plan boundary limits while the project influence area represents a geographic area beyond the study boundary that directly affects the study area. The project influence area is needed to identify and accurately quantify the impact of traffic generated outside the study area within the City's transportation system.

When—or whether—to begin providing a particular mode of transit within a specific area or along a specific corridor depends upon a number of factors, including the residential density of the population in the area or corridor to be served, as well as both the density and absolute numbers of sub-populations likely to be transit dependent. These populations include persons who are too young to drive an automobile, have physical characteristics that limit their ability to drive, or who cannot afford to own and maintain a car. Of similar importance is the employment density, or number of jobs per square mile, in an area or along a corridor.



FIGURE 1: STUDY AREA AND PROJECT INFLUENCE AREA



Transportation Improvement Plan boundary limits

Existing and new residential/commercial developments in the project influence area will impact Apache Junction's Roadways

LEGEND

-  Study Area
-  Influence Area
-  City Limits
-  Study Roadways
-  Other Major Roadways
-  County Line

Data Sources: City of Apache Junction, ALRIS, ADOT



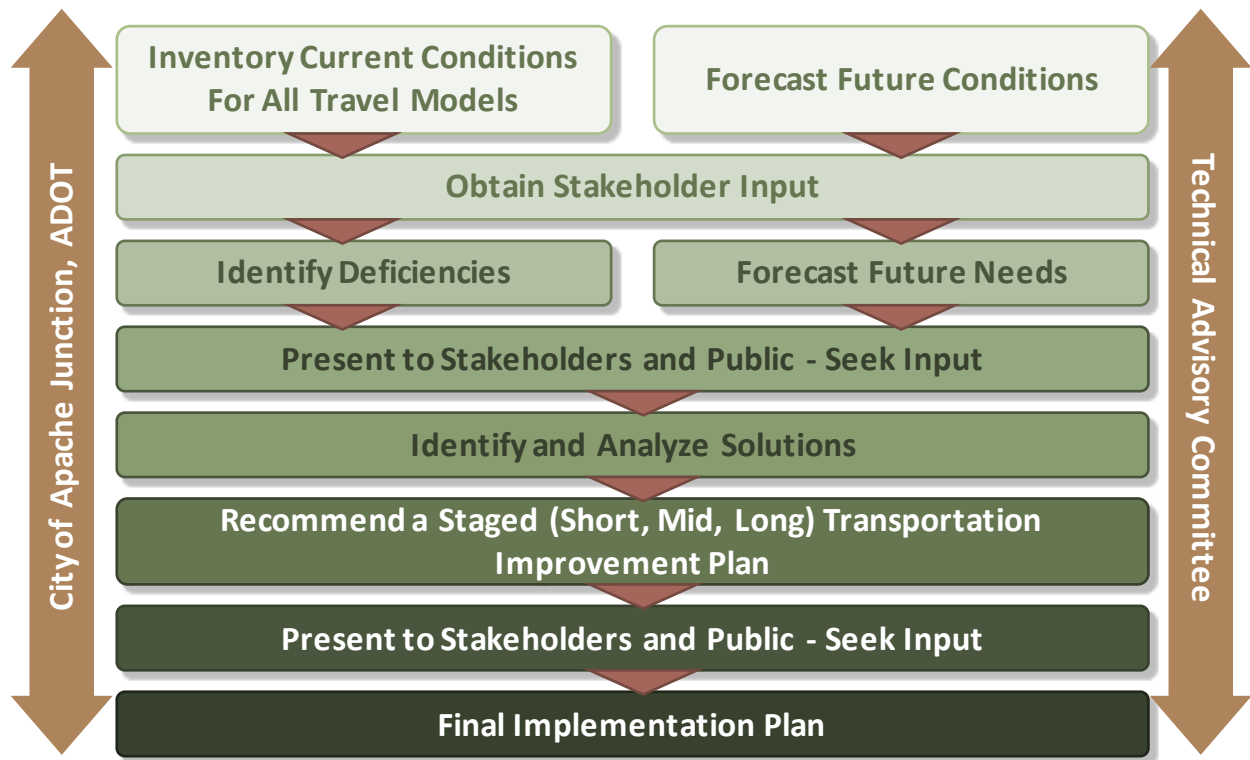
STUDY PROCESS

The study was guided by a Technical Advisory Committee (TAC) that included representatives from:

- ◆ City of Apache Junction
- ◆ ADOT
- ◆ Pinal County
- ◆ CAAG
- ◆ City of Mesa
- ◆ Arizona State Land Department (ASLD)
- ◆ Maricopa County Department of Transportation (MCDOT)
- ◆ Bureau of Land Management (BLM)
- ◆ Town of Queen Creek
- ◆ Maricopa County Flood Control District (MCFCD)

The role of the TAC was to provide guidance, support, advice, suggestions, and recommendations, and to perform document reviews throughout the study process. The First Public Open House was conducted in March 2011 to present existing and projected transportation conditions and issues. The second round of public input involved extensive outreach through online social media and a presentation was given to the City Council of recommended transportation improvements. The study process is illustrated in Figure 2

FIGURE 2: STUDY PROCESS



PREVIOUS STUDIES AND PLANS

The consultant reviewed the findings of the following pertinent studies that have taken place since the conduct of the 2005 Study:

- ◆ Pinal County Transit Feasibility Study, 2011
- ◆ Pinal County Small Area Transportation Study, Transit Element, 2006
- ◆ Pinal County Comprehensive Plan Update
- ◆ Statewide Transportation Planning Framework Study, 2010
- ◆ Valley Metro 2007 Origin And Destination Study
- ◆ Valley Metro Regional Paratransit Study
- ◆ Flagstaff Five Year Transit Plan, 2005
- ◆ Valley Metro Short Range Transit Program—FY 2009/10 – 2014/15

PEER COMMUNITIES

The consultant examined the transit characteristics of the following communities with population density levels similar to those of Apache Junction:

- ◆ Beloit, WI-IL
- ◆ Bettendorf, IA
- ◆ Danville, VA
- ◆ Grand Forks, ND
- ◆ Jackson, TN
- ◆ Logan, UT
- ◆ Longview, WA-OR
- ◆ Parkesburg, WV-OH
- ◆ Rome, GA
- ◆ San Luis Obispo, CA
- ◆ Wausau, WI

ESTIMATE OF TRANSIT DEMAND

Estimated **current unmet transit demand** exists in the Study Area for approximately 322,000 trips per year. The consultant developed this estimate using two widely accepted transit demand models and Year 2000 Census data. The models used were the Burkhardt and Millar Model and the SG & Associates Arkansas Model.

The 320,000 annual ridership would be attained by an ideal system, providing service within walking distance—or door-to-door for those requiring it—throughout the study area. However, these numbers estimate demand for local service within Apache Junction only. Regional or commuter ridership would be in addition to the 320,000 estimate.

The same two demand models were used to estimate **future annual transit demand** at the 60,000, 75,000, and 130,000 population levels of 445,103, 556,379, and 964,390 trips per year respectively.



FUTURE POPULATION AND EMPLOYMENT DENSITIES

Data developed by Jacobs for the Apache Junction Comprehensive Transportation Study was obtained and plotted to provide overall snapshots of the City demographics for the 60,000, 75,000, and 130,000 population levels. The plots were compared with current condition plots to assess anticipated growth patterns in population and employment at the three future population levels.

PUBLIC TRANSPORTATION SERVICE ALTERNATIVES

Two general forms of public transportation have been identified as being particularly suitable for meeting the local and regional needs of Apache Junction residents over the next twenty-five years: Transportation Demand Management (TDM) alternatives such as vanpools and carpools, and five types of transit service:

- ◆ Dial-A-Ride and Paratransit Service
- ◆ Deviated Fixed Route Service
- ◆ Fixed Route Service including local, express, and limited stop services
- ◆ Bus Rapid Transit
- ◆ Light Rail Transit

TRANSIT SERVICE THRESHOLD METHODOLOGY

Demographic thresholds for implementing different types of transit services in Apache Junction were developed. The threshold levels for the different types of transit service were calculated from data presented in the 2003 MAG High Capacity Transit Study.

TABLE 1: TRANSIT SERVICE DEMOGRAPHIC THRESHOLDS

Transit Service Type	Persons/Sq Mile*
Bus–minimum service	4,500
Bus–intermediate service	7,780
Bus–frequent service	16,670
Light rail	10,000
Rapid transit	13,300

Bus minimum service = 1/2 mi between routes, 20 buses/day

Bus intermediate service = 1/2 mi between routes, 40 buses/day

Bus frequent service = 1/2 mi between routes, 120 buses/day

Traditionally, transit thresholds are based on residential densities alone. However, the application of such thresholds to residential densities shown on a travel analysis zone (TAZ) level fails to consider the variations in density within the TAZ itself. To compensate for this observation, the consultant decided to apply the thresholds to the sum of the residential and



employment densities within a TAZ rather than to the residential densities alone. The thresholds in the above table were applied to TAZ array maps of the study area at the three population levels.

TRANSIT SERVICE CONCEPTS

The consultant developed a phased transit service scenario for Apache Junction. The following factors were considered when suggesting the transit elements to be contained in the different population horizon phases.

- ◆ Demographic thresholds and forecasted demand levels
- ◆ Transit-specific goals contained in the Circulation Element of the Apache Junction General Plan, together with transit-related goals conveyed to the consultant by the City
- ◆ Best practices of peer city operations
- ◆ Recommendations of the Pinal County Transit Study
- ◆ Phasing of transit improvements in adjacent areas of Maricopa County, as programmed by that County's RTP

Near-Term (Fiscal 2013) Recommendations

Until Apache Junction attains the desired population threshold and/or until sufficient funding is available to implement a more comprehensive system, transportation demand management techniques such as the carpool and vanpool concepts could address the needs of the three groups of riders: Transit-Dependent Persons without access to automobiles; Choice Riders who, if provided with feasible options, would choose transit for some of their trips; and Persons With Special Needs who are unable to drive, but must make periodic trips for medical reasons.

The City could designate a Transportation Coordinator, who would be a paid member of the City staff, and should consider appointing a volunteer Transit Advisory Committee to assist the City in identifying the desirable attributes of the coordinator position and to work with the coordinator after his or her selection. The Transit Advisory Committee could act as a liaison for transit issues between the City and the business community, with respect to transit issues, and could also provide input for equipment selection, route selections and additions, and transit center concept and site selection.

ShareTheRide.com is a free on-line ride-sharing program operated by Valley Metro. By means of ShareTheRide.com, persons seeking transportation options may find "matches" for carpooling or even for setting up a vanpool. Pinal County has established a free carpool



matching service at carpoolworld.com that could be used by those commuters to Pinal County destinations. Persons register to participate in both ShareTheRide.com and the Pinal County system and are matched with those having the closest origins, destinations, and commute days and times.

Six or more persons traveling to or from the same destination in Maricopa County may participate in Valley Metro’s vanpool program. Those interested in learning more should call Valley Metro at 602.262.RIDE (7433) to request a vanpool application or visit their web site at www.valleymetro.org/vanpool.

Other near-term strategies could include expanding the existing RIDE Choice or Coupons for Cabs programs. Currently, an applicant for either of these must be a permanent resident of the City of Apache Junction and either age 60 and over, or an adult between the ages of 18 and 59 with a disability certification and no longer driving. These programs could be restructured so that part-time residents, such as winter visitors, adults without disabilities, or young persons accompanied by adults, could participate. Those not meeting the original criteria could pay higher rates for the coupon books.

Short-Term (Population Level 1 – 60K) Transit Recommendations

The logical “starter” services to implement are a local circulator serving the area of the City having the highest combined residential and employment density, together with regional commuter services connecting the Study Area with Valley Metro and, hence, with the remainder of the Phoenix metropolitan area. If the East Valley Connector is implemented as an extension of—or initially as a connection to—the Valley Metro “Link” bus rapid transit (BRT) service as recommended by the Pinal County Transit Study, it could continue east on Main Street/Apache Trail into downtown Apache Junction. If the connector is established as a “Rapid” commuter bus operation, it would be more likely to follow US 60 west, emulating existing freeway-based “Rapid” services.

Figure 3 presents an overview of the service concept including alternate routes for the regional service, including park-and-ride lots, color-coded to the routing of the regional service that would make use of them. Figure 4 illustrates the potential Core Area Circulator route. Table 2 provides the map key for Figure 4.



FIGURE 3: SERVICE CONCEPT FOR SHORT-TERM (POPULATION LEVEL 1 – 60K)

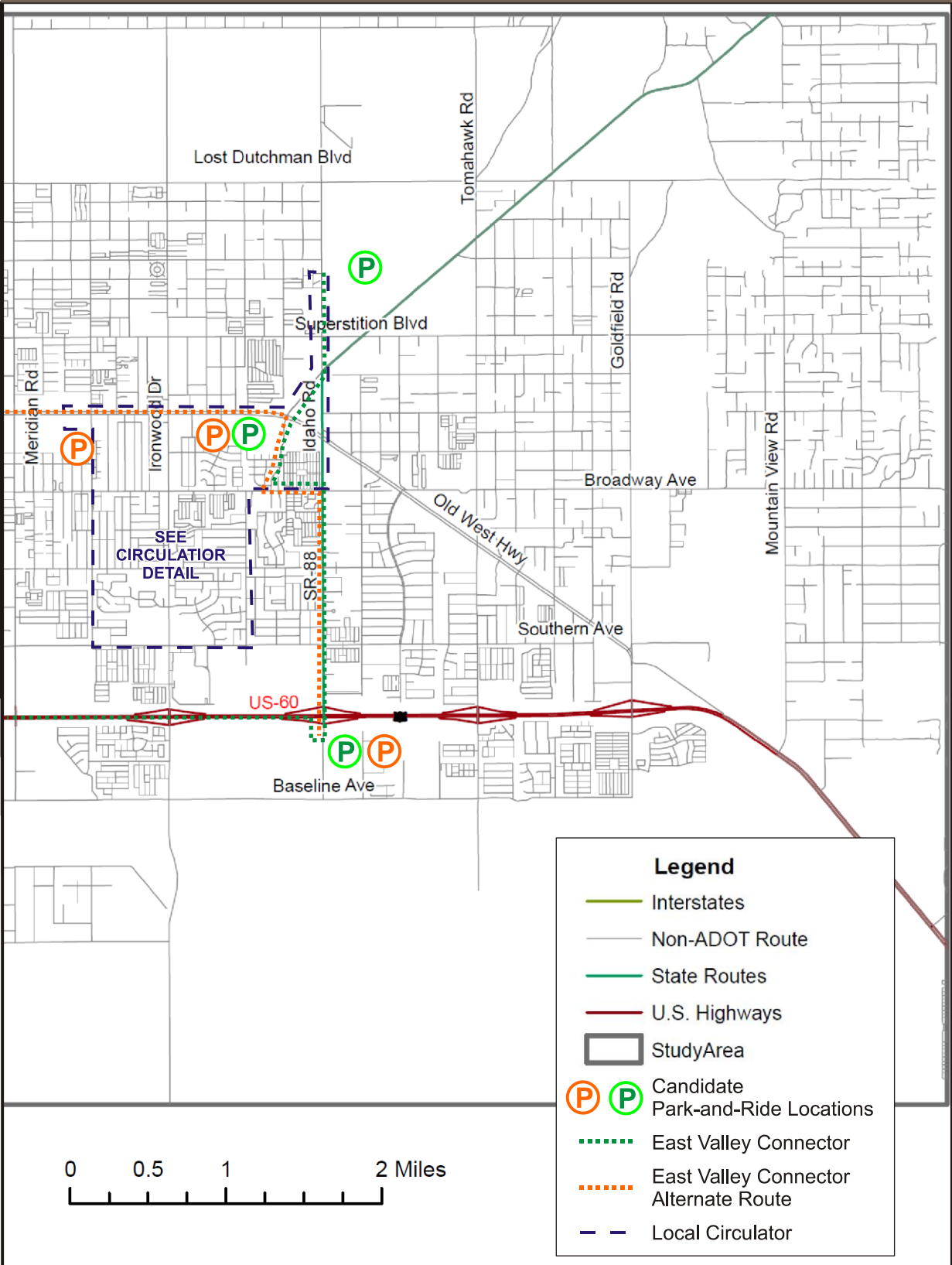


FIGURE 4: CORE AREA CIRCULATOR DETAIL FOR SHORT-TERM (POPULATION LEVEL 1 - 60K)

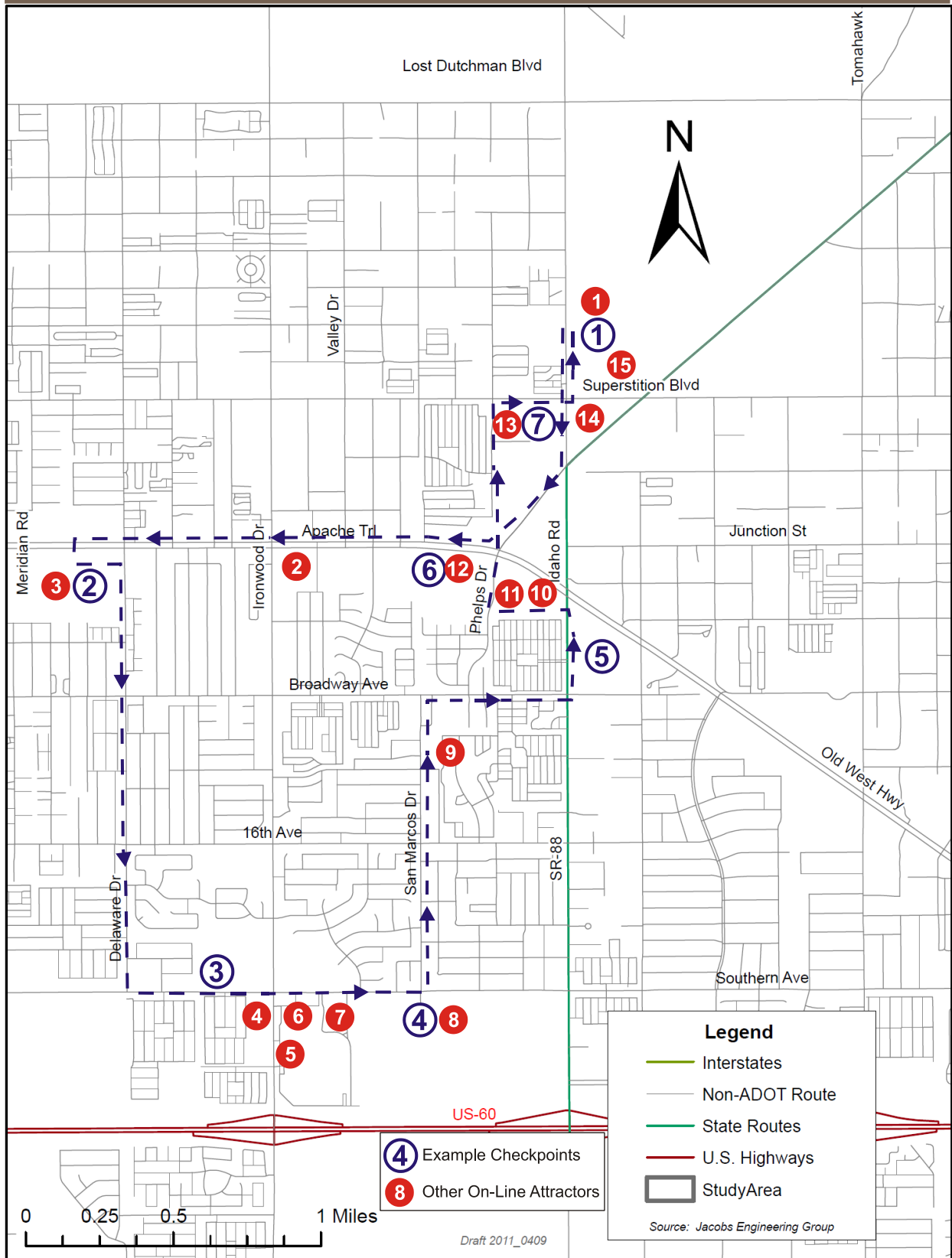


TABLE 2: CIRCULATOR CHECKPOINTS AND ATTRACTORS

Stop Locations	1	Multi-Generational Center
	2	Wal-Mart
	3	Apache Junction Medical Plaza
	4	Cactus Canyon Jr. High
	5	Central Arizona College
	6	Chamber of Commerce
	7	Post Office
Other Circulator Route Landmarks	1	Public Library
	2	Food City
	3	Safeway
	4	Walgreens
	5	Apache Junction High School
	6	Performing Arts Center
	7	Superstition Shadows Aquatic Center
	8	Desert Shadows Middle School
	9	Avalon Elementary School
	10	Fry's
	11	Wells Fargo Bank
	12	CVS Pharmacy
	13	Social Security Administration
	14	ADOT DMV
	15	City Hall/Municipal Court

Mid-Term (Population Level 2 – 75K) Transit Recommendations

- ◆ Add three additional routes to the local circulator and establish a transit hub near the Chamber of Commerce. Figure 5 presents an overview of the recommended transit system for the mid-term phase as the study area reaches *Population Level 2 (75K)*. The three additional routes include:
 - Route 2 - Idaho Road/Baseline Avenue Route
 - Route 3 – Ironwood Drive:
 - Route 4 – Meridian Drive:

Long-Term (Population Level 3 – 130K) Transit Recommendations

- ◆ Add additional connection to the East Valley Connector (see Figure 6)
- ◆ Restructuring Route 4- Meridian Drive to include service to Baseline Avenue
- ◆ Add two additional routes to the local transit system
 - Route 5 – Idaho Road/Southern Avenue:
 - Route 6 – Tomahawk Road:



FIGURE 5: SERVICE CONCEPT FOR MID-TERM (POPULATION LEVEL 2 – 75K)

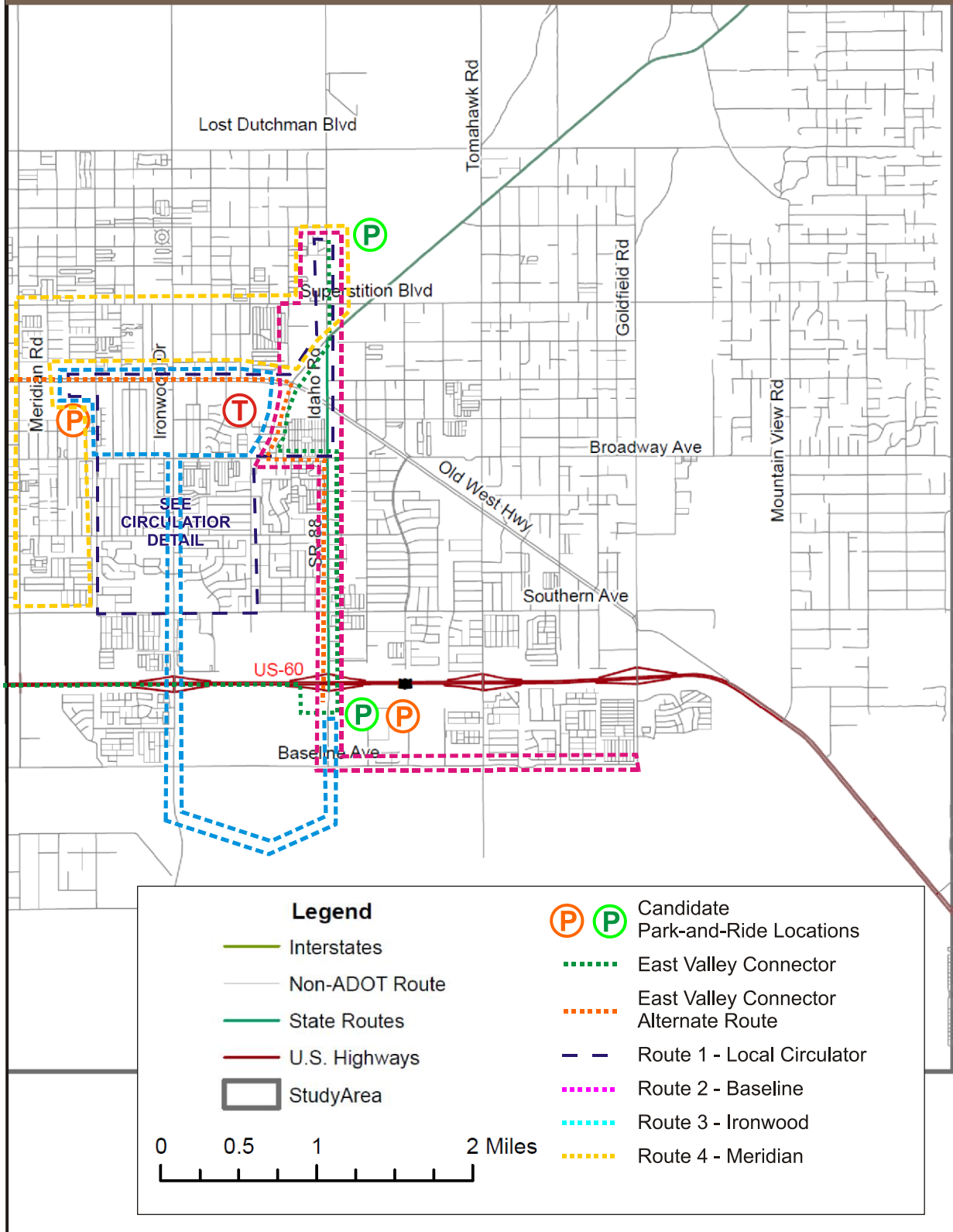
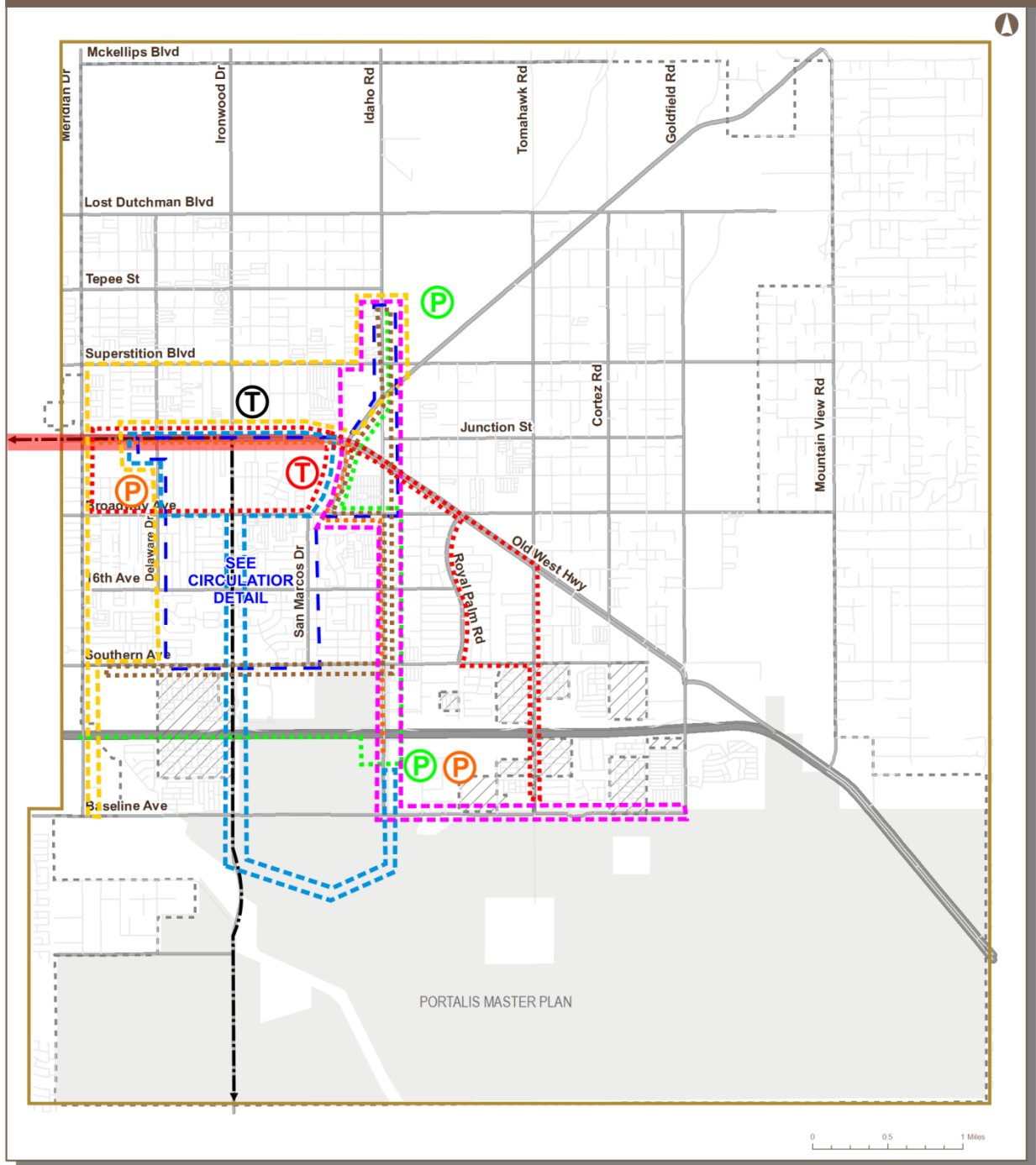


FIGURE 6: SERVICE CONCEPT FOR LONG-TERM (POPULATION LEVEL 3 – 130K)



LEGEND			
Freeway	City Boundary	Transit Center	<i>Data Sources: City of Apache Junction, ALRIS, ADOT, ATIS</i>
Study Roadway	County Islands	Transit Center recommended by Pinal County Study	
Local Roadway	Study Area	Candidate Park-and-Ride Locations	Route 1 - Local Circulator
High Capacity Corridor (Also recommended by Pinal County Study)		East Valley Connector	Route 2 - Baseline
San Tan - Apache Junction - Phoenix Express Bus Route		East Valley Connector	Route 3 - Ironwood
			Route 4 - Meridian
			Route 5 - Idaho/Southern



Regional Options

- ◆ Extending service to newer areas, including but not limited to:
 - Deviated fixed route service or dial-a-ride service can be extended east on US 60 toward Gold Canyon
 - Peak period only “commuter bus” service can be extended to outlying areas while the core of the city receives service throughout the day
 - Park-and-ride lots at the extents of fixed-route or high-capacity lines, can be complemented by dial-a-ride service into the newer neighborhoods to bring mobility-limited persons within reach of the other services
- ◆ Provide rural transit services from the downtown Transit Hub to communities east of Apache Junction, communities in eastern Pinal County, and new developments in the Superstition Vistas area.
- ◆ Market park and ride facilities located either downtown or on Idaho Road to motorists and carpools to utilize public transit to Mesa, Tempe, or Phoenix.

SOURCES OF FUNDING

Potential sources of funding for the proposed improvements include:

- ◆ Section 5307: Urbanized Area Formula Grants
- ◆ Section 5309: Capital Investment Grants and Loans
- ◆ Section 5316: Job Access & Reverse Commute
- ◆ Farebox Revenues
- ◆ Advertising and “In Kind” Revenues
- ◆ Local Taxes or Bonds

Implementation Actions

The following action items are recommended for the City of Apache Junction to pursue transit service development:

- ◆ Present the Transit Plan to the City Council for approval and adoption.
- ◆ Appoint a Public Transportation Advisory Board and designate a Public Transportation Coordinator.
- ◆ Preserve Future Transit Rights-of-Way.
- ◆ Coordinate with ADOT to initiate a Transit Implementation Plan.
- ◆ Facilitate Public Participation in one or more Ride-Sharing Programs.



- ◆ Study Expansion of Existing RIDE Choice and Coupons for Cabs Programs to serve a broader cross-section of Apache Junction residents.
- ◆ Inventory Study Area-Based Public Transportation Resources.
- ◆ Promote alternative modes of transportation through improved developer collaboration.
- ◆ Offer opportunities for public involvement throughout the plan implementation process.
- ◆ Monitor progress on the transit plan on a quarterly basis.
- ◆ Update the transit plan on a five year cycle.

