



CAG GREATER GILA COUNTY TRANSIT FEASIBILITY STUDY



**FEASIBILITY REVIEW
REPORT**

JANUARY 2018



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1. STUDY OVERVIEW

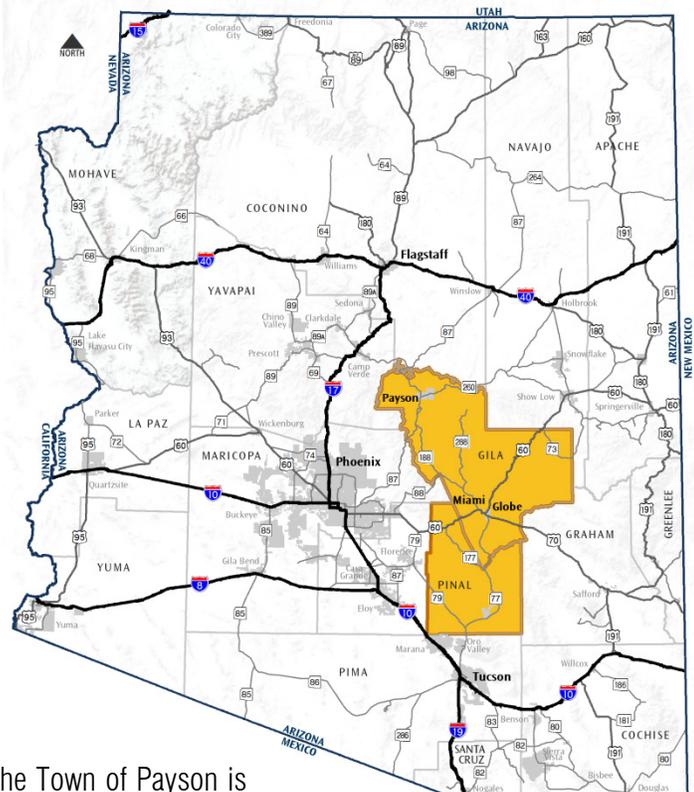
The Central Arizona Governments (CAG), established in 1975 by Executive Order 70-2, is one of Arizona’s six regional planning districts created to aid a more cohesive region of similar interests and enhance the lifestyles of its residents. CAG is tasked with providing effective regional planning services to Gila and Pinal Counties, the incorporated cities and towns within, as well as the Native American Tribe within the Region and therefore, the impacts of CAG policy and resources affect a wide variety of these communities. The CAG region encompasses unincorporated Gila County, San Carlos Apache Indian Community, White Mountain Apache Reservation, and numerous incorporated communities such as Payson, Globe, Miami, Hayden, Superior, and Winkelman.

The *Greater Gila County Transit Feasibility Study* was initiated by CAG to develop a cohesive vision and approach to improve the quality of life for greater Gila County area residents by providing transit services. The goal of this study is to determine the needs and feasibility of implementing transit services to allow residents to fulfill their daily commuting needs that includes medical, educational, shopping, recreational, and emergency travel commitments.

STUDY AREA

As illustrated in Figure 1.1, the *Greater Gila County Transit Feasibility Study* included a “Study Area” and a “Focus Area”. The Study Area included the CAG planning area of Gila County and the eastern portion of Pinal County. The Focus Area, however, only encompasses Gila County and the entities within. While this study will review conditions within the entire Study Area, detailed analysis and recommendations will only be made for the Focus Area.

In general, the Study Area is rural in nature and includes many residents that are elderly, low-income, and often do not have access to reliable vehicles to reach activity centers. To provide regional access, this study will also analyze connecting local communities to Maricopa County and Pinal County. A brief description of the communities within the overall Focus Area are as follows:



TOWN OF PAYSON

Referred to as “The Heart of Arizona”, the Town of Payson is located close to the geographic center of Arizona. Located at the base of the Mogollon Rim, the Town is a favorite recreational area due to its mild summers and scenic outdoor winter activities. Payson is one of the largest communities in the CAG region, with numerous medical facilities, shopping opportunities, and tourist facilities. Payson is also a popular second home destination for Phoenix metropolitan residents and for retirees.



TOWN OF STAR VALLEY

Incorporated in 2005, Star Valley is one of Arizona’s newest Towns. Located in northern Gila County along SR 260, the Town contains 36 square miles of land immediately east of Payson. Star Valley is a popular location for retirees as well as summer homes for Phoenix residents.



CITY OF GLOBE

Located in the heart of the Tonto National Forest and surrounded by mountain vistas, the city's colorful history is punctuated by mining discoveries. Known as the "Place of Metal" among local Native American communities, Globe was founded in 1875 as a silver and copper mining town. The opening of the Old Dominion Mine started the population boom and led to the growth of the community. Once a thriving mining town with a bustling Main Street, the flooding of the Old Dominion Copper Mine in the 1920s led to significant declines in population and reduced economic growth. Today the Town is the seat of government for Gila County and with a thriving tourism industry. Globe is conveniently located at the junction of four major highways including US 60, US 70, SR 188, and SR 77.



TOWN OF MIAMI

Originally established as a camp for a nearby copper mine, today Miami is a quiet town with antique stores that focus on the cultural, mining and ranching history of the area. Many of the buildings are listed in the National Register of Historic Places and are under renovation to help build tourism to the area. Located immediately west of Globe, the two communities are often referred to as Globe-Miami.



TOWN OF WINKELMAN

Winkelman is located at the border of Gila and Pinal counties and is the smallest incorporated town in Arizona. The history of Winkelman dates back to 1877 and 1878 when a large number of farmers migrated to the region. The community serves primarily as a service center and residential area for families of employees associated with mining and processing activities. The principal employer within the town is the Hayden-Winkelman School District.



TOWN OF HAYDEN

Founded in 1911, Hayden was a company town owned by the Kennecott Copper Corporation for employees working in operations and extraction of high-grade copper ore. Once a thriving area, Hayden's population has significantly decreased after the closing of the mine.



SAN CARLOS APACHE TRIBE

Encompassing over 1.8 million acres, the San Carlos Apache Indian Reservation was established by executive order on November 9, 1871. Located east of the Globe-Miami area, main communities in the reservation include San Carlos, Peridot, Cutter, and Bylas. The Tribe currently has one of the only transit services available in Gila County, San Carlos Apache Nnee Bich'o Nii Services, which provides services within the reservation and to the Globe-Miami and Safford area.



WHITE MOUNTAIN APACHE TRIBE

Located on the Apache, Gila and Navajo Counties, the White Mountain Apaches reside on 1.6 million acres at its ancestral homeland on the Fort Apache Indian Reservation. The Tribe has over 12,000 members located on nine major reservation communities. Whiteriver, the capital, is the largest community with over 2,500 residents.

UNINCORPORATED GILA COUNTY

Unincorporated Gila County is primarily comprised of the Tonto National Forest and the unincorporated communities of Pine, Strawberry, Tonto Basin, Young, and Roosevelt. There are a number of popular recreation areas, including Roosevelt Lake, Tonto National Monument, Tonto Natural Bridge State Park, and Fossil Creek, along with popular camping areas within the Tonto National Forest.

STUDY PURPOSE

The 2015 CAG Regional Transportation Plan identified the need to: 1) provide residents in Gila County with improved transit services and 2) to connect rural areas in the CAG region to Maricopa and Pinal counties. CAG initiated this transit study with the primary goal of improving the quality of life for greater Gila County area residents by providing transit services to fulfill their daily commuting needs and to provide transit services for residents to meet medical, educational, shopping, recreational, and emergency travel needs. The study evaluated the area’s current and future unmet transit needs and identified feasible transit options for underserved residents of the region; while keeping in mind the opportunities, constraints, and demand for public transportation within the Greater Gila County Area. Study objectives were:

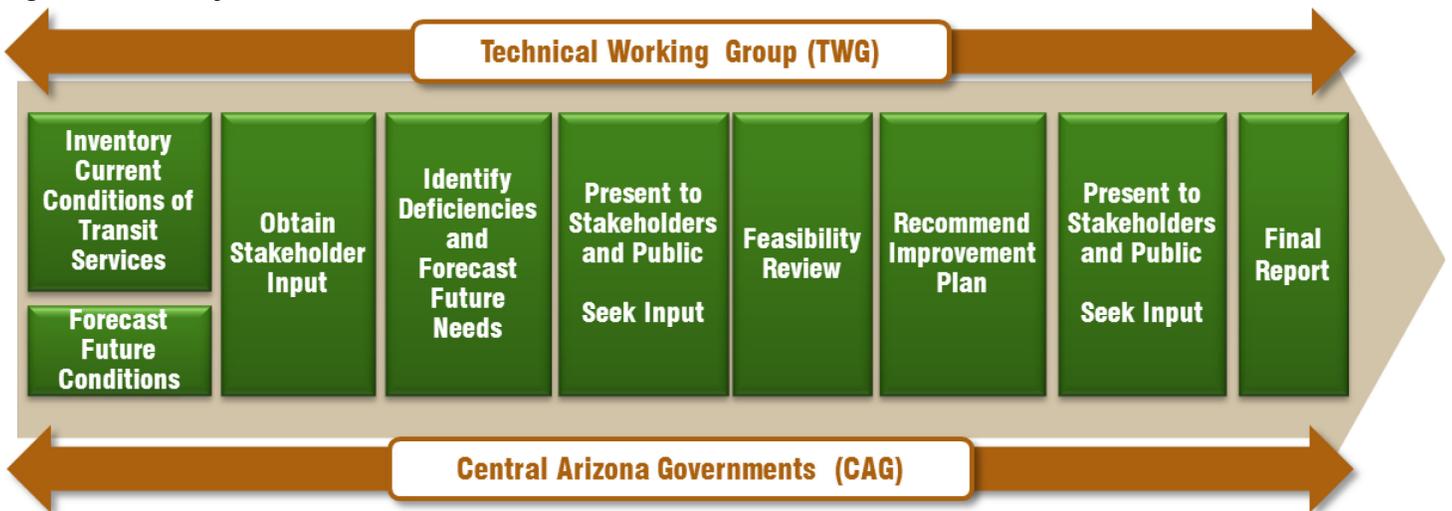
- Identify transit needs through data analysis, survey, and discussions with existing transit service providers and key stakeholders.
- Assess current transit services and routes to identify issues, needs, gaps, and opportunities in existing services.
- Create a functional and feasible public transportation improvement plan to serve and connect communities.

STUDY PROCESS

This study consisted of two separate phases - a feasibility review and implementation plan. The first phase, which this document covers, focused on conducting a feasibility review of the expansion and enhancement of existing services. The second phase of this project will include the development of a five-year implementation plan for implementing recommended enhancements. For this first phase of the study, six key stages were followed in order to ultimately develop a regionally cohesive improvement plan.

Figure 1.2 illustrates the process that was utilized for this study. This document focuses on a feasibility review to verify the need for transit service, and establish community support for transit services within the defined study area.

Figure 1.2: Study Process



TECHNICAL WORKING GROUP (TWG)

The study was guided by a Technical Working Group (TWG). The role of the TWG was to provide technical guidance, support, input, recommendations, and oversight; and champion the goals and objectives of the study process. This allowed the study team to collaborate with technical staff from various agencies throughout the study. TWG members included representatives from regional partners in transit related transportation activities including:

- Cobre Valley Community Transit
- Central Arizona Governments (CAG)
- Maricopa Association of Governments (MAG)
- Federal Transit Administration (FTA)
- Arizona Department of Transportation (ADOT)
- San Carlos Apache Tribe
- White Mountain Apache Tribe
- Gila County Public Works
- City of Globe
- Town of Miami
- Town of Payson
- Town of Hayden
- Town of Star Valley
- Town of Winkleman
- Rim Country Chamber of Commerce
- Globe Miami Chamber of Commerce
- Community Presbyterian Church
- Payson Senior Center

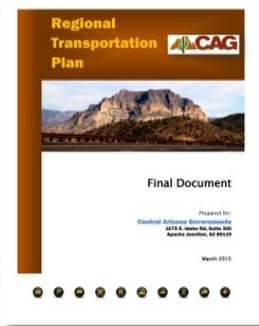
STAKEHOLDERS

To develop a thorough understanding of the issues, deficiencies, and needs of the existing transit system, the study team identified and interviewed a core group of stakeholders. The stakeholders included representatives from the TWG, Cobre Valley Community Transit, Nnee Bich'o Nii Transit, Mountain Valley Transit, White Mountain Apache Tribe, and other demand-response transit providers. The stakeholder group helped in developing an understanding of issues and perspectives related to regional transit coordination.

2. RELATED STUDIES, REPORTS, AND PLANS

This chapter presents a review of resources, plans, and programs relevant to the study. Review of completed and current planning efforts provides an insight into previously identified transit issues and potential transit opportunities.

CAG AREA STUDIES



2015 CAG Regional Transportation Plan (RTP)

CAG initiated this study to develop a Plan that resulted in transportation improvements. The issues and improvements in the Plan spanned Gila and Pinal counties with the goal of defining future transportation and its role in community growth. The Transit Element of the RTP indicates that population and employment growth will require appropriate transit services to support greater travel within intraregional corridors and increased commuting associated to neighboring Pima and Maricopa counties. Expectations for future transit service in the region included:

- Greater capacity and a dramatically higher frequency of transit service to accommodate travel demand
- More moderate transit service systems in the suburban and rural areas to ensure that full mobility and accessibility opportunities are available to the region's populace
- One or more stations in Pinal County associated with the proposed Tucson-Phoenix high-speed passenger rail project

As noted in the document, a key deficiency associated with transit services in the CAG region is the notable lack of general fixed-route public transportation for the region's residents and visitors, even in the larger communities such as Apache Junction, Casa Grande, Payson, and Maricopa. In addition, there are few transportation services connecting communities within the CAG region. Although specialized services accommodate seniors, persons with disabilities, and others with special needs, and provide reasonable coverage for many communities, there is a clear lack of public transportation options accessible to persons lacking their own means of transportation, (i.e., low-income and other persons affected by various socioeconomic constraints).

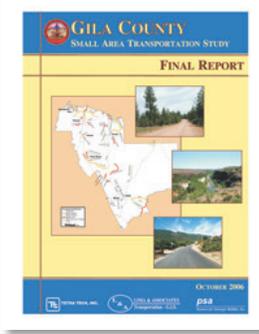


CAG and SCMPO Human Services Transportation Coordination Plan 2017 - 2019

This Plan was prepared jointly by CAG and the Sun Corridor Metropolitan Planning Organization (SCMPO) with the purpose of identifying transportation needs of individuals with disabilities, older adults, and people with low incomes residing in Gila and Pinal County and the SCMPO planning region. It is the culmination of an update, required every three years, and provides strategies to meet identified needs. Identified needs in Gila and Pinal Counties and SCMPO planning area included:

- Additional funding and other resources that would allow expansion or enhancement of services
- Additional public transit options or transportation services connected with community-oriented services, especially to critical destinations (i.e., shopping, jobs, medical appointments, etc.)
- Deviated-route services or on-demand services to improve local mobility needs
- A coordinated network of service providers to include –
 - Centralized maintenance services for fleets
 - Joint use or pooling/sharing of vehicles among providers
 - Centralized fueling for fleet vehicles
- Follow-up service in the afternoon, where current budgets only allow morning services
- General public transit service to augment demand responsive transportation capabilities
- Additional vehicles to reduce wait times

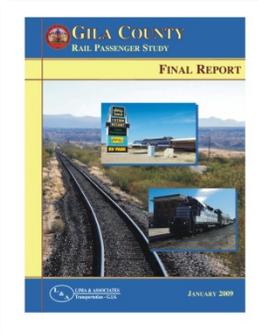
GILA COUNTY STUDIES



2006 Gila County Small Area Transportation Study

The purpose of the study was to develop a 20-year transportation plan and implementation program to guide Gila County in meeting transportation needs into the future. The study noted that alternative transportation modes within Gila County are very limited and opportunities for alternative modes are limited by the disconnected County Road System. Transit recommendations included:

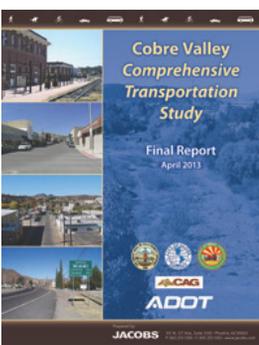
- Designate a County Transportation Coordinator and consider the establishment of a Countywide regional ride-sharing program
- Construct initial park-and-ride facilities for use by the car pools and van pools
- Monitor number of citizens requesting dial-a-ride and/or transit service both Countywide and in different areas of the County
- Conduct follow-up studies to address the following:
 - Feasibility and implementation of replacement for previous Greyhound service along the US 60/US 70 Corridor
 - Expansion of Cobre Valley Transit dial-a-ride service and addition of deviated fixed route service
 - Feasibility of future transit service between the Globe and Payson areas
 - Future update of the Payson Area Public Transit Study



2009 Gila County Rail Passenger Study

This study conducted a comprehensive review of the potential for a permanent passenger rail service in the Globe-Miami area, utilizing the existing Arizona Eastern Railway tracks. The study reviewed service between Globe, Apache Gold Casino, Miami, and to San Carlos. Upon completion of the study, the Copper Spike Excursion Train began operating rail service between the Apache Gold Casino Resort and downtown Globe. The rail service grew from a small rail car carrying a few hundred passengers to a statewide attraction with over 27,000 passengers a year. In August 2011, however, Iowa Pacific sold the Arizona Eastern Railway and service discontinued.

STUDIES FOR CITY/TOWN/TRIBAL GOVERNMENTS IN GILA COUNTY



2013 Cobre Valley Comprehensive Transportation Study

This study was a joint venture by the City of Globe, Town of Miami, Arizona Department of Transportation, Gila County, and CAG to develop a long-range multimodal plan for the Cobre Valley region. In conjunction with the study, a Cobre Valley Community Transit Study was conducted. The core recommendation from the study was the establishment of a deviated fixed route system with demand response support. The system would also interface with the San Carlos Transit system at designated transfer points. Additional recommendations included:

- Design and develop a new fixed route system, with demand response support, and a marketing strategy for the Cobre Valley Community Transit, as well as strengthen partnerships to support the system
- Re-establish commercial bus service between Cobre Valley, Phoenix, and Tucson
- Re-establish passenger rail or excursion rail between Miami, Globe, and Peridot



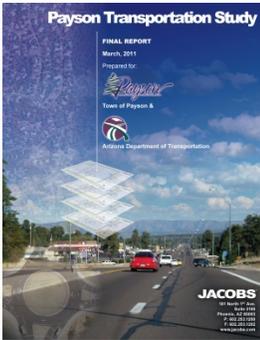
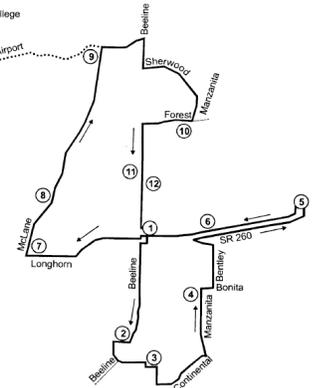
2004 Payson Area Transit Feasibility Study

The *Payson Area Transit Feasibility Study* evaluated the transit need and demand in the Payson area and developed recommended transit service scenarios and funding options. Key elements included:

- Deviated fixed route services is the preferred type of transit service, because a dial-a-ride and fixed-route service would be more costly to operate
- Two interconnected loop routes that intersect at the corner of SR 86 and SR 260, with transfers between routes at the Bashas' shopping center

Checkpoint Stops

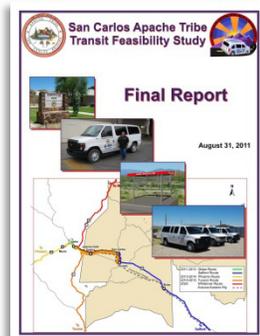
- (A) Airport (Shop and Storage)
- (1) Bashas'
- (2) Post Office
- (3) Medical Center
- (4) Bonita/Manzanita
- (5) Gila Community College
- (6) SR 260/Manzanita
- (7) Bashas' (A) Airport
- (7) McLane/Longhorn
- (8) Payson Library
- (9) McLane/Airport
- (A) Airport
- (9) McLane/Airport
- (10) Forest/Manzanita
- (11) Wal-Mart
- (12) Town Hall
- (1) Bashas'



2011 Payson Transportation Study

The principal focus of this study was to develop a long-range multimodal transportation plan for the Town to address growing demands placed on local roads as a result of significant population growth, economic development, and increased traffic volume. A key element of the plan was to examine the need for public transportation. Key recommendations included:

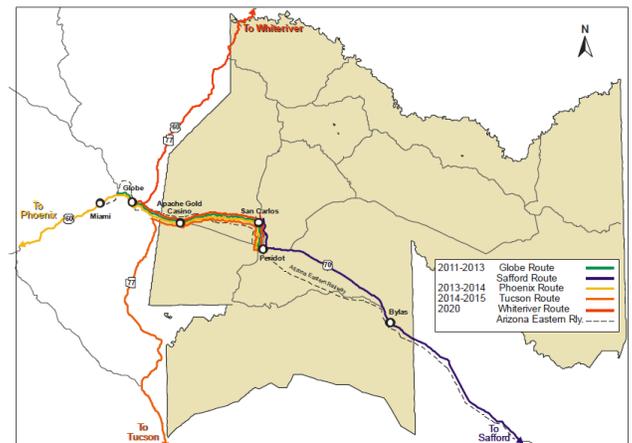
- Designate a town transit coordinator and organize a transit advisory committee
- Complete a Transit Implementation Study
- A Transportation Demand Management Program is needed to coordinate and provide public information on public programs that enable people to utilize transit
- Establish a Town Transit department and implement recommendations from transit study



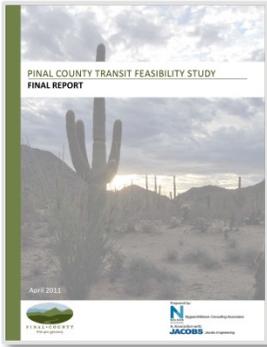
2011 San Carlos Apache Tribe Transit Feasibility Study

This study assessed the expansion and enhancement of the San Carlos Apache Transit Services operations and developed a five-year service expansion plan. Recommended routes included:

- Globe – 41 miles one-way; three roundtrips; Monday through Friday
- Safford – 69 miles one-way; three roundtrips; Monday through Friday
- Phoenix – 119 miles one-way; three roundtrips; two days a week; stops in Mesa, Superior and Apache Junction
- Tucson – 114 miles one-way; roundtrips; two days a week; stop in San Manuel
- Whiteriver – two roundtrips; stops in Globe, Whiteriver, Pinetop-Lakeside, and Show Low



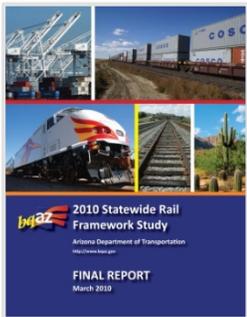
OTHER RELEVANT STUDIES



2011 Pinal County Transit Feasibility Study

In order to evaluate key growth impacts to transit and feasibility of transit throughout Pinal County, the agency conducted a study to identify steps to implement effective transit services. Based on the socioeconomic analysis, it was determined that the overall demand for transit service in the County was “low,” due to the scattered character of small population and employment concentrations across Pinal County. Potential transit improvements included:

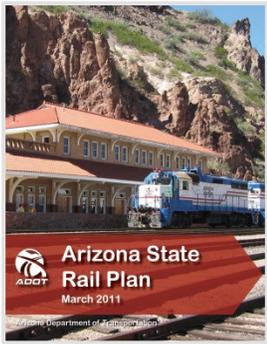
- Winkelman – Tucson: two days a week; stops in Winkelman (located within Gila County), San Manuel, Oracle, and Saddlebrooke
- Kearny – Apache Junction: two days a week; stops in Apache Junction, Superior, Florence Junction, and Kearny
- Potential Bus Rapid Transit (BRT) service to support commuter connections between Apache Junction and the METRO light rail line in Mesa



2010 Statewide Rail Framework Study

The *Statewide Rail Framework Study* aimed to identify rail transportation needs and recommendations for improvement. Recommendations included:

- Existing passenger rail service was limited to Amtrak and tourism railway services
- Passenger rail service is needed to meet future long-distance commute demand
- A potential Southwest Interstate High Speed Rail Corridor traverses Gila County



2011 Arizona State Rail Plan

The *Arizona State Rail Plan* expanded on the technical information presented in the *2010 Statewide Rail Framework Study*. The Rail Plan was a collection of multimodal transportation elements, which creates a vision for future rail in Arizona. Key elements included:

- Globe and a large portion of Gila County are within the potential Sunset Corridor
- Copper Basin Railway could be utilized for passenger service from Hayden
- Improvements to Arizona Eastern Railway are needed to enable rural passenger service from Safford to Globe



2008 Arizona Rural Transit Needs Study

Out of 11 “top candidate travel corridors” identified by the State-sponsored *Arizona Rural Transit Needs Study*, three travel corridors were located in the CAG region. These corridors are candidates for expanded intercity, commuter-oriented general public transportation service. Corridors within this study’s Influence Area include: Payson - Phoenix and Miami – Superior-Mesa. San Carlos Indian Reservation, Fort Apache Indian Reservation, and Payson were also identified as candidate locations for New Section 5311 Program Services.

3. STUDY AREA OVERVIEW

This chapter provides an overview of the study area, including major trip generators and current commuting habits within both the Study Area and the Focus Area.

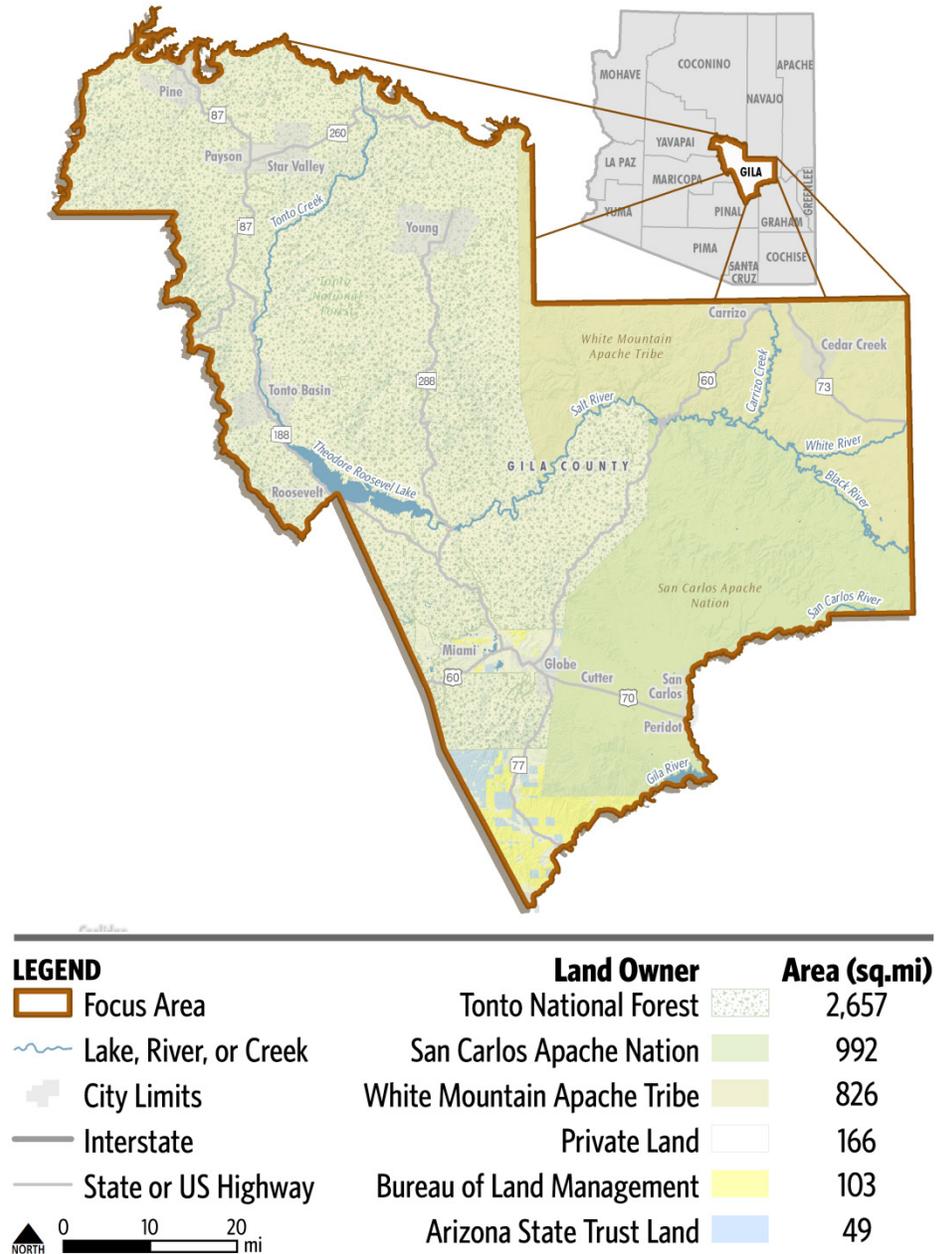
PHYSICAL SETTING AND ENVIRONMENTAL CONTEXT

Gila County is located in central Arizona east and northeast of the Phoenix metropolitan area. The County covers nearly 4,800 square miles with 55 percent of the land within the Tonto National Forest, 37 percent within the Fort Apache and San Carlos Apache reservations, and the rest owned by the Bureau of Land Management, State Lands, or privately owned (see Figure 3.1). With elevations ranging from 2,200 to 7,900 FT, Gila County's landscape ranges from desert (copper region) to mountainous terrain (timber region).

Due to the area's terrain and scenic nature, Gila County is a popular recreation area. Popular outdoor activity areas include Roosevelt Lake, Tonto National Monument, Tonto Natural Bridge State Park, and Fossil Creek, along with several popular camping areas within the Tonto National Forest. Gila County is also a popular summer retreat for Phoenix residents to escape the heat and partake in the area's wide range of boating, camping, hiking, and fishing recreational opportunities.

The transportation network can be categorized into two groups, local streets and highways. The major highways that are the lifeblood of the region's transportation network, and include US 60, US 70, SR 188, SR 87, and SR 260. The residential communities of Payson, Globe, Miami, San Carlos, and Peridot make up the majority of the population of the Focus Area.

Figure 3.1: Land Ownership



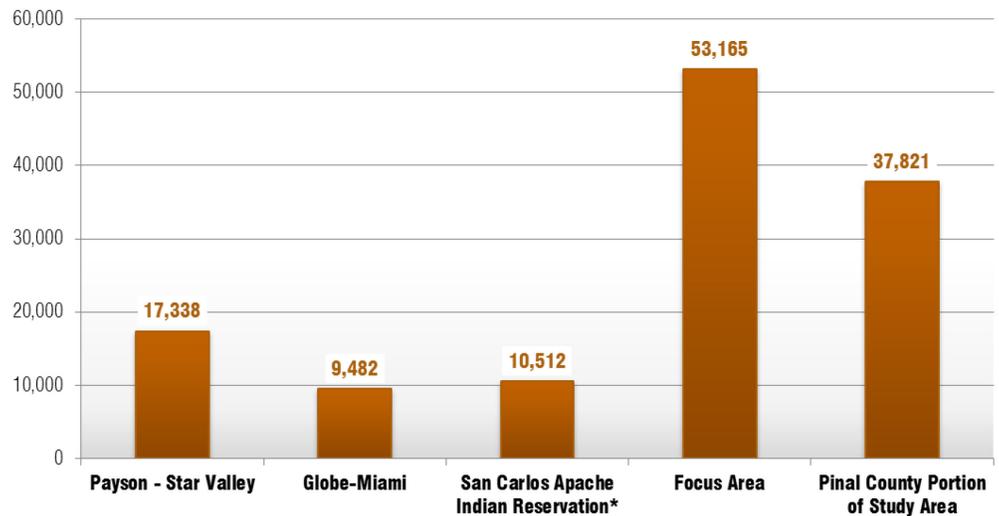
DEMOGRAPHICS

Assessing an area’s socioeconomic characteristics is a critical element for any transit feasibility study. Socioeconomic data is utilized to understand current and future transit demand within the Study Area. This section provides an analysis of the existing demographics for the Study Area and Focus Area. This information was used to identify areas with the greatest transit needs.

POPULATION AND DEMOGRAPHIC OVERVIEW

The decennial 2010 U.S. Census tabulates data into “urban” and “rural” areas. These provide certain federal and state agencies with a basis for implementing programs with urban and rural criteria for allocation of resources. “Urbanized Areas” consist of densely settled, contiguous territory containing 50,000 or more people. The 2010 Census estimated a total of 53,597 persons in the Focus Area, of which 58.9 percent of the population resides within an urbanized cluster area.

Figure 3.2: Population Overview



■ ACS '11-'15 Population Estimate

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

Since the 2010 Census, Gila County has experienced a slight decrease in population. The 2011–2015 American Community Survey (ACS) estimates Gila County’s population to be 53,165. As illustrated in the graphic above, the Payson–Star Valley area has the highest population within the Focus Area, with over 17,300 residents. Figure 3.2 and Table 3.1 provide an overview of population statistics for the Payson–Star Valley area, Globe–Miami area, the entirety of the San Carlos Apache Indian Reservation, and the Focus Area, and the entire Study Area. Figure 3.3 illustrates areas with higher population density within the Study Area and Focus Area.

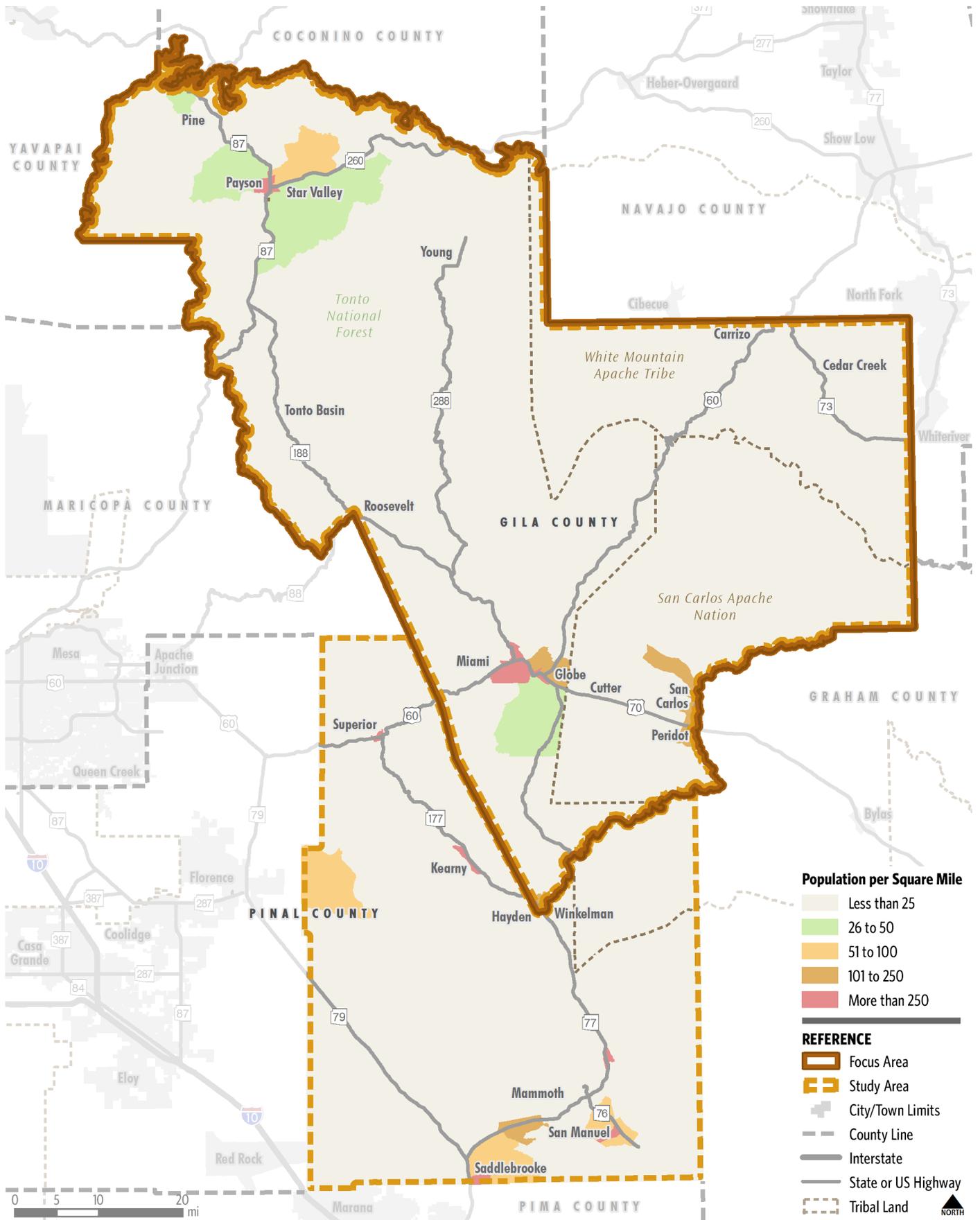
Table 3.1: Population Overview

	Payson - Star Valley	Globe-Miami	San Carlos Apache Indian Reservation *	Focus Area	Pinal County Portion of Study Area
Total Population	17,338	9,482	10,512	53,165	37,821
Total Housing Units	10,563	4,344	2,811	32,952	17,048
Occupied Housing Units	7,707	3,633	2,330	20,909	13,515

Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

Figure 3.3: Population Density



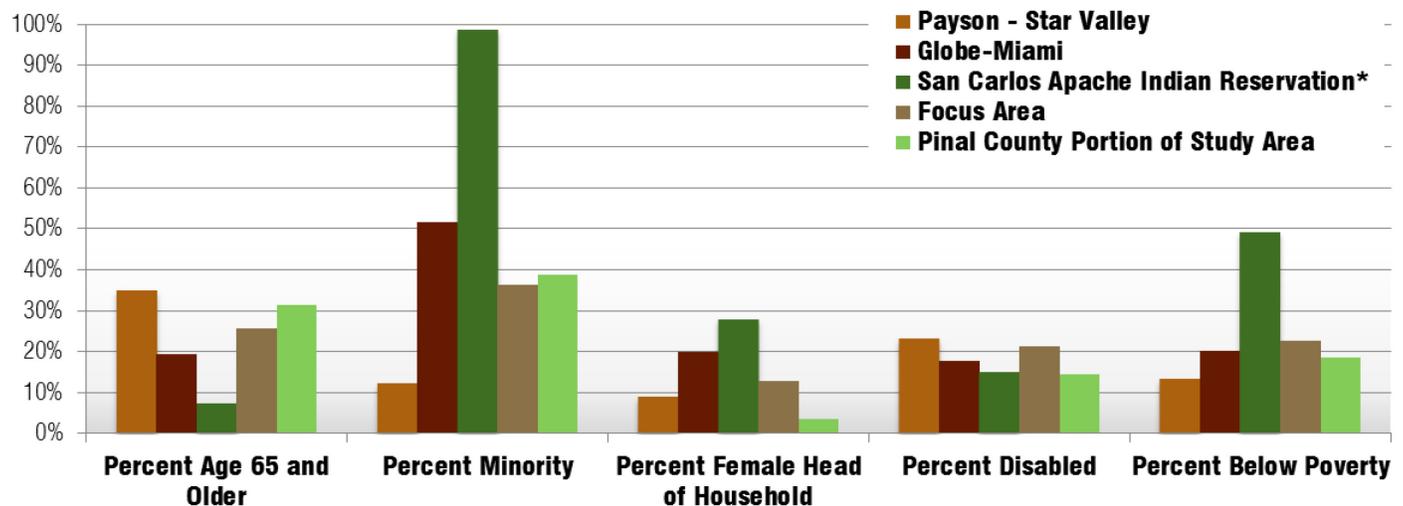
DISADVANTAGED POPULATION GROUPS

One of the goals of the *Greater Gila County Transit Feasibility Study* is to develop a connected transit network that provides access and serves users of all ages and abilities. Conducting an analysis of traditionally underserved populations can help identify locations that may have a high demand of transit transportation. Transit improvements in these areas can aid in alleviating wider social issues such as access to jobs, education, and healthcare.

Title VI of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. Executive Order 12898, Federal Actions to Address Environmental Justice in minority populations and low-income populations, dictates that programs, policies, and activities identify and address, as appropriate, disproportionately high adverse human health and environmental effects on minority and low-income populations. These same sensitive populations are also indicators of latent transit demand. Therefore, the study team examined concentrations of low-income, minority, and transportation disadvantaged populations to determine where latent transit demand may already be present.

Environmental Justice analyses have historically relied on decennial census data for identifying these protected populations; however, beginning with the 2010 Census, altered data gathering techniques eliminated the collection of income and disability status. As a supplement to the 2010 Census, the ACS samples approximately one percent of households across the country annually to determine social and economic trends. Figure 3.4 provides a graphical comparison of the protected populations, while Table 3.2 summarizes the percentage of protected populations in the study area.

Figure 3.4: Title VI and Environmental Justice Population Groups Comparison



Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

Table 3.2: Title VI and Environmental Justice Populations

	Payson-Star Valley	Globe-Miami	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Total Population	17,338	9,482	10,512	53,165	37,821
Percent Age 65 and Older	34.9%	19.4%	7.4%	25.6%	31.3%
Percent Minority	12.2%	51.6%	98.7%	36.3%	38.7%
Percent Female Head of Household with Children Under 18 and No Husband Present	8.9%	19.9%	27.9%	12.8%	3.3%
Percent Mobility Limited	23.1%	17.8%	15.0%	21.2%	14.4%
Percent Below Poverty	13.3%	20.1%	49.2%	22.7%	18.4%

Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

Population Below Poverty Level

Below poverty populations are individuals that live within a set of income thresholds established by the US Census Bureau, which vary by family size and composition. Low-income households may rely on active and public transportation more than the general population; therefore, recognition of this group's concentration centers is needed to determine transportation needs. Figure 3.5 illustrates areas with high percentages of person's living below the poverty level.

- The White Mountain Apache Tribe and the San Carlos Apache Tribe Indian Reservation have the highest percentages of persons residing below the poverty level in the study area
- Gila County has a higher percentage of persons residing below the poverty level than Pinal County

Population Age 65 or Older

Analyzing an area's age composition helps decision-makers understand the potential need for increased transit options. As people age, a person typically begins to drive less and requires alternative modes of transportation for medical appointments, shopping, and visiting family and friends. Figure 3.6 illustrates areas with high percentages of persons age 65 or older.

- Pine, Payson, Star Valley, Hayden, and Saddlebrook have high percentages of age 65 and older populations
- In some census block groups in Pine and Saddlebrook, 75 percent or more of the population is age 65 and older

Female Head of Households

Female head of households (female householders) are identified as females with no spouse present, regardless of whether any children younger than 18 years of age are present in the household. Female householders are especially sensitive in the framework of planning for public transit services. Traditionally, this protected population group is particularly vulnerable to poverty. Households that are poor generally have limited vehicle availability, spend a higher proportion of income on transportation expenses, and have a higher usage of public transportation or carpooling. Figure 3.7 illustrates areas with high percentages of households with female heads of houses.

- The White Mountain Apache Tribe and the San Carlos Apache Tribe Indian Reservation have the highest percentage of female-headed households in the study area.
- Payson and Globe also have areas with a high percentage of female-headed households

Minority Population

Minority population consists of individuals who are members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black or African American, Hispanic or Latino, other race, or two or more races. Figure 3.8 illustrates areas with high percentages of minority populations.

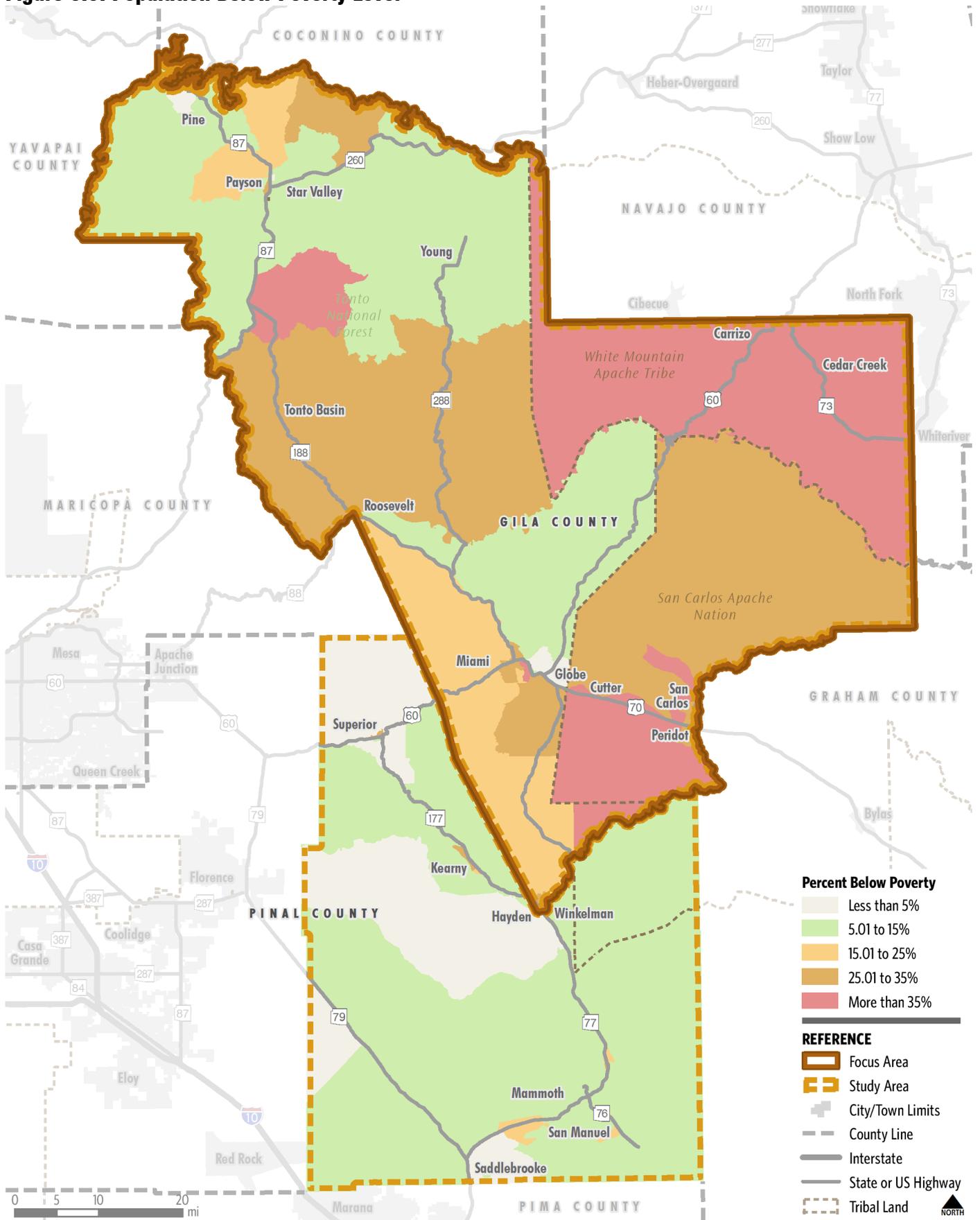
- The White Mountain Apache Tribe and the San Carlos Apache Tribe Indian Reservation have the highest percentage of minority population at nearly 99 percent.
- High densities of minority populations are located in Superior, San Manuel, Globe, and Mammoth

Persons with Disabilities

Disabled populations are civilian, noninstitutionalized persons who have disabilities (such as sensory, physical, self-care, and/or employment disabilities). This protected population group often has difficulty operating automobiles and may require access to public transportation. Figure 3.9 illustrates areas with high percentages of persons with a disability.

- High densities of mobility limited populations are located in Payson and Globe-Miami
- Payson has the highest number of persons with a mobility limitation

Figure 3.5: Population Below Poverty Level



- Percent Below Poverty**
- Less than 5%
 - 5.01 to 15%
 - 15.01 to 25%
 - 25.01 to 35%
 - More than 35%

- REFERENCE**
- Focus Area
 - Study Area
 - City/Town Limits
 - County Line
 - Interstate
 - State or US Highway
 - Tribal Land

Figure 3.6: Population Aged 65 Years or Older

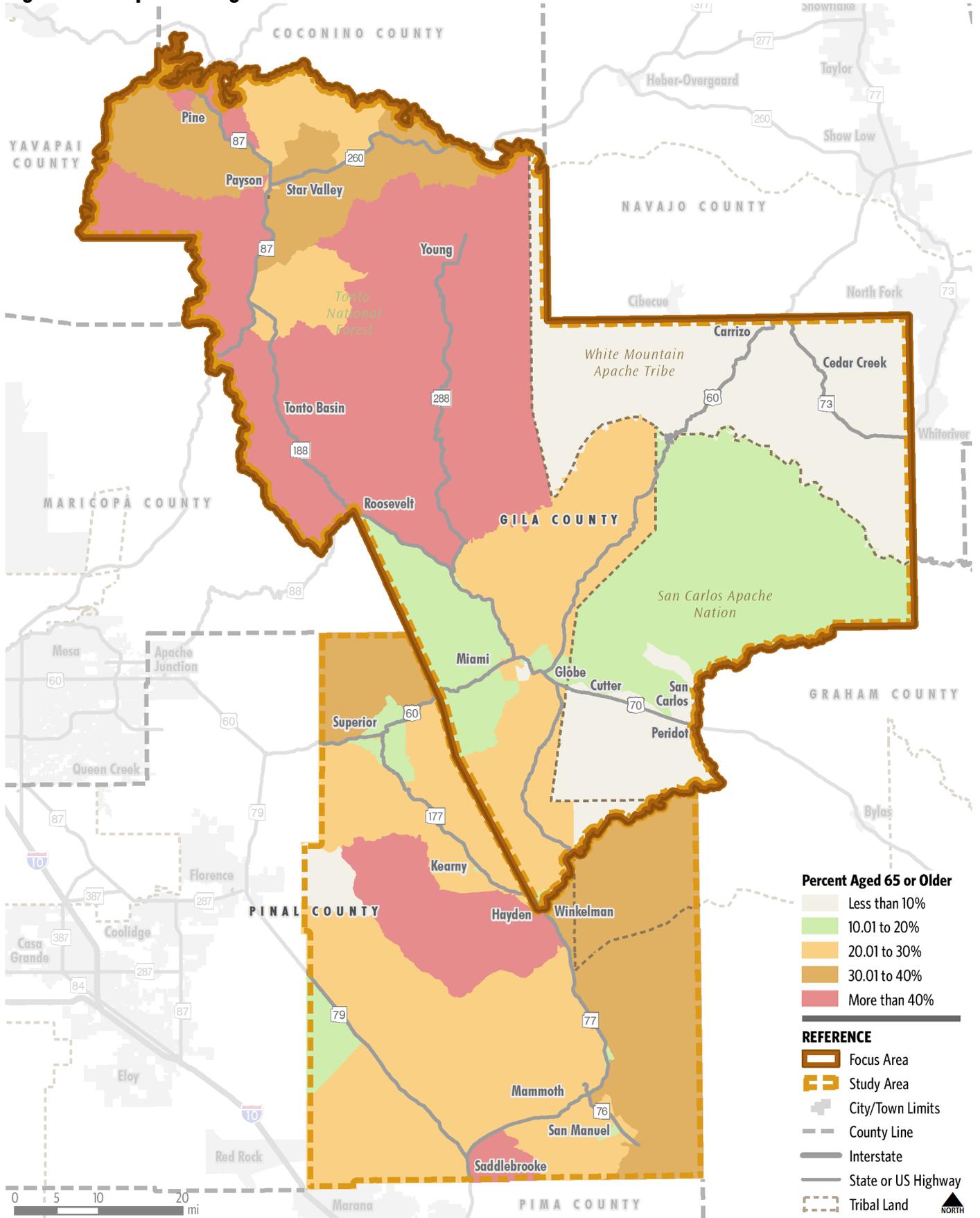


Figure 3.7: Female Headed Households

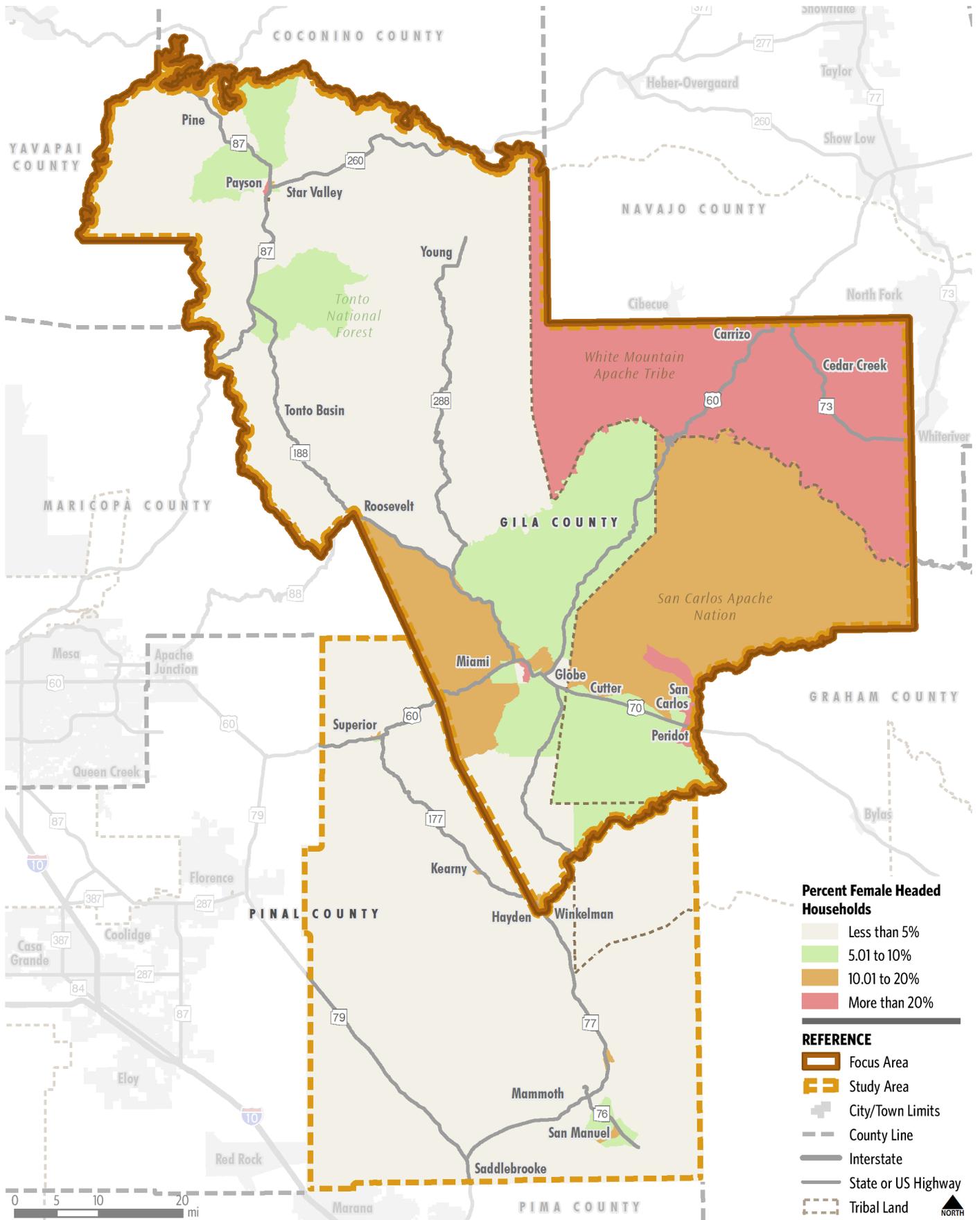


Figure 3.8: Minority Population

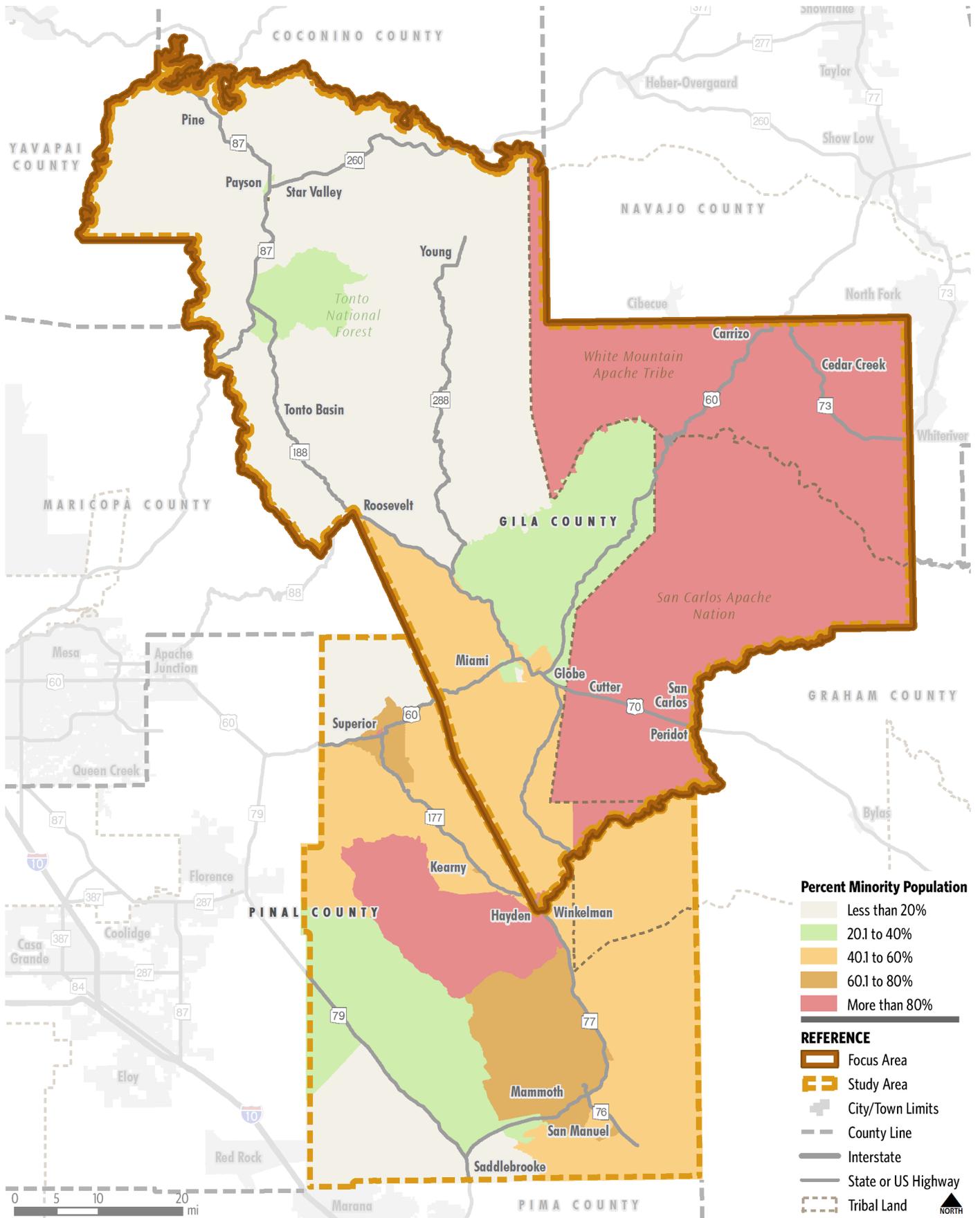
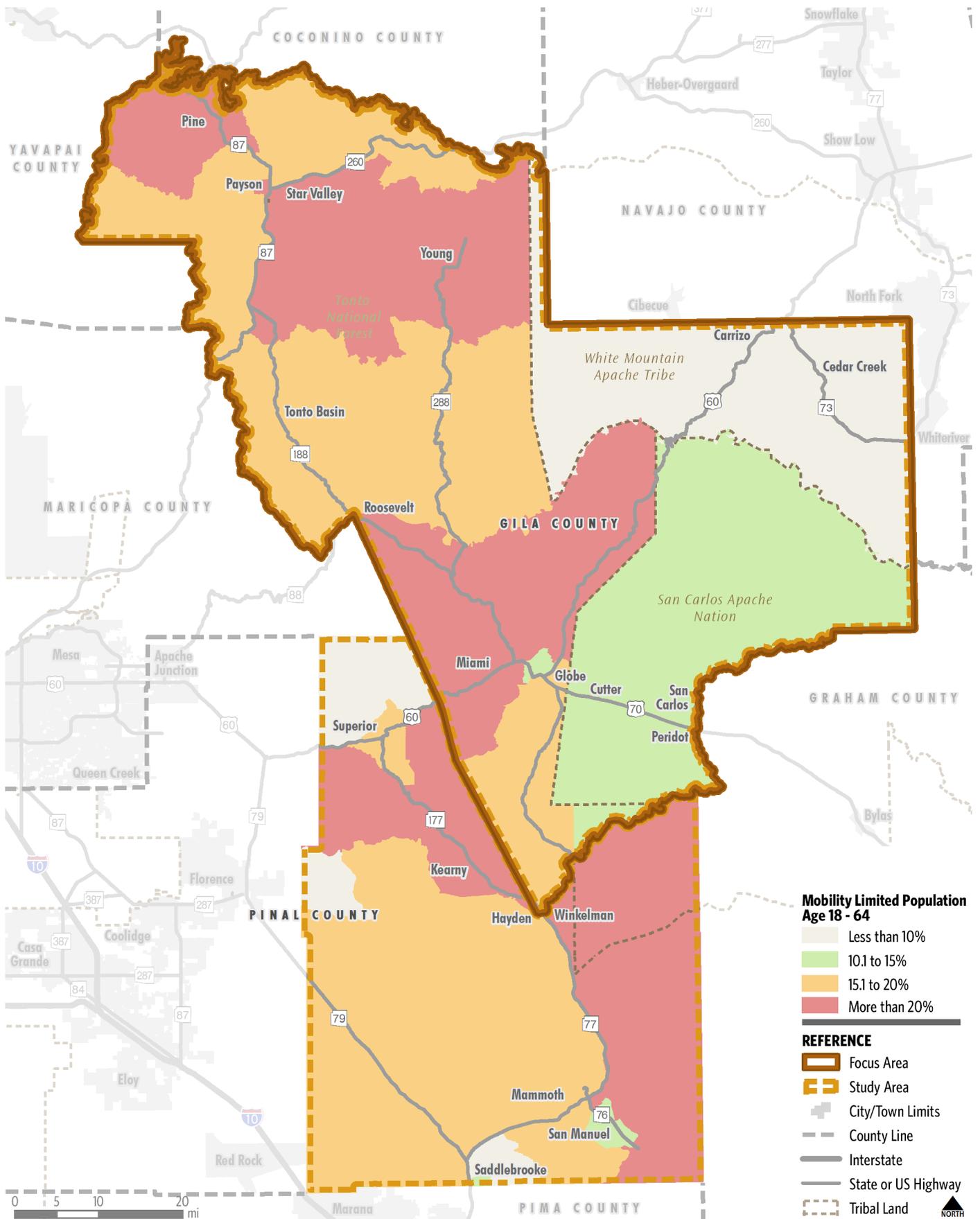


Figure 3.9: Mobility Limited Population



TRANSPORTATION GENERATORS

Transportation generators are locations within a community that act as generators of transportation trips and are frequent destinations within a community. Understanding these destinations is a critical step in the evaluation of existing services and determining future transit needs.

MAJOR EMPLOYERS

Mining, medical services, tourism, retail, and casinos are the primary drivers of the region’s economy. Based on readily available data from ReferenceUSA, there are approximately 24,790 employees within the Study Area. The top five employers in the region include:

- ASARCO - Hayden Operations Location: Mining, and smelting facilities employing about 1,200 people
- Freeport-McMoran Inc. - Mining company based in Phoenix which employs 638 in Miami
- BPH Copper Company - Employs 500 individuals within the study area for mining and related purposes
- Apache Gold Casino and Resort - Located 5 miles east of Globe and employs 400 people
- Apache Sky Casino – Located south of Winkelman and employs 400 individuals

MAJOR ACTIVITY CENTERS

Major activity centers are catalysts in creating trips within communities. Areas of higher numbers of activity centers tend to have more people attempting to commute to them; therefore, it is important to provide transportation options to and from these areas. Within the Focus Area there are a multitude of recreational destinations that would benefit from transit access including:

- Shopping centers
- Post offices
- Community parks
- Payson Rodeo Grounds
- Downtown districts
- Government buildings
- Boyce Thompson Arboretum
- Cobre Valley Center for the Arts
- Public libraries
- Apache Gold Casino/Resort
- Mazatzal Hotel & Casino
- Mazatzal Hotel & Casino

SCHOOLS

While this study does not focus on providing bus services for elementary, middle, and high school students, providing services for residents to access educational opportunities at colleges is a critical element. Gila Community College has two primary campuses in Globe and Payson and satellite facilities in Hayden, Roosevelt, Tonto Basin, Lower Miami, Pine, and Young. The Rim Country Educational Alliance has recently announced the desire to construct a four-year university in Payson.

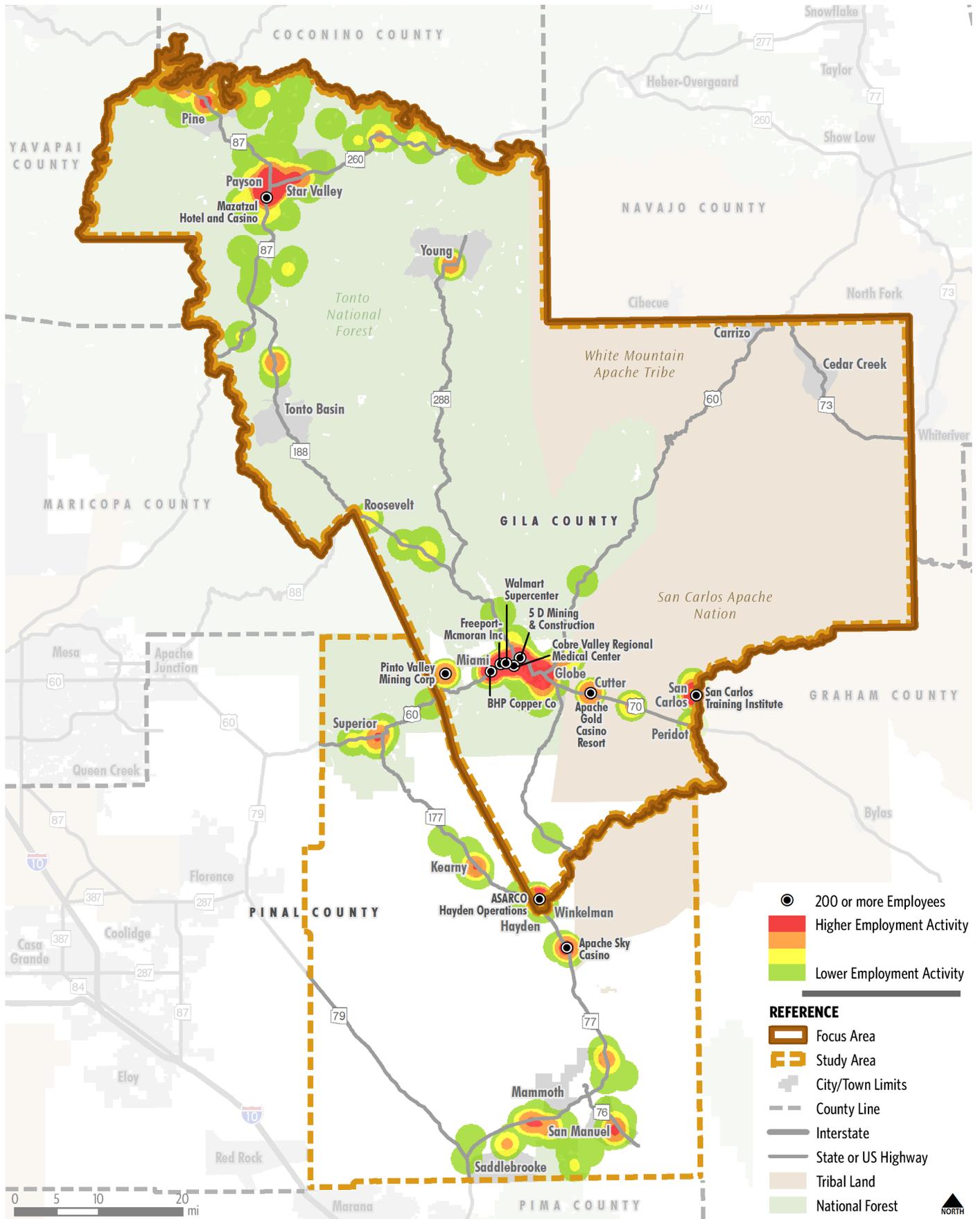
MEDICAL FACILITIES

Important medical facilities to note within the Focus Area and Study Area are listed below. In addition to these facilities, many residents travel to Maricopa County for medical appointments.

Table 3.3: Major Medical Facilities

Name	Name
Banner Medical Center (Payson)	Gila County Health Services (Payson and Globe)
Cobre Valley Regional Medical Center (Globe)	Canyonlands Healthcare (Globe)
Fresenius Dialysis Center (Globe)	Cobre Valley Regional Medical Center Clinic (Superior)
San Carlos Apache Healthcare (Peridot)	Cobre Valley Regional Medical Center Clinic (Kearny)

Figure 3.10: Major Trip Generators



CURRENT COMMUTE AND TRAVEL BEHAVIOR

Knowing where people take transit or utilize other modes of transportation can help develop effective transit improvements and programs that will better serve the residents and visitors of the Study Area and Focus Area. Utilizing 2011-2015 American Community Survey (ACS) data, employee commuting patterns and vehicle availability was identified. With great distances between activity centers, Gila County is primarily an automobile oriented area; however, many people do not have access to a vehicle or are unable to operate one.

MEANS OF TRANSPORTATION TO WORK

Table 3.4 summarizes the mode of transportation for workers age 16 and older to commute to work within the Focus Area. As presented in the table, the San Carlos Apache Tribe had the highest percentage of persons that carpool, walk, or take public transportation to work. As a whole, all areas within Gila County primarily drive alone to work.

Table 3.4: Means of Transportation to Work

	Payson-Star Valley	Globe-Miami	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Drove Alone	83%	76%	66%	78%	78%
Carpooled	9%	14%	15%	11%	11%
Public Transportation	0%	0%	2%	0%	1%
Biked or Walked	0%	5%	8%	3%	2%
Worked at Home	7%	2%	4%	5%	1%
Other	1%	3%	6%	2%	7%

Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

TRAVEL TIME TO WORK

According to the 2011-2015 ACS, the mean, one-way travel time for workers in Gila County is 21 minutes. For reference to Pinal County averages a 31.1-minute, one-way commute. As outlined in Table 3.5, 28 percent of employees in the Focus Area have a commute time of less than 10 minutes. The shorter the work commute, the less attractive public transportation is for choice riders. Traditional bus public transportation systems are unable to match the commute times associated with the personal vehicle. Interestingly, the majority of employees have a 10 to 19 minute commute time within the Focus Area. The Payson-Star Valley area has the highest mean travel time, indicating that numerous residents more than likely commute to Phoenix, Camp Verde, or Globe for work.

Table 3.5: Travel Time to Work

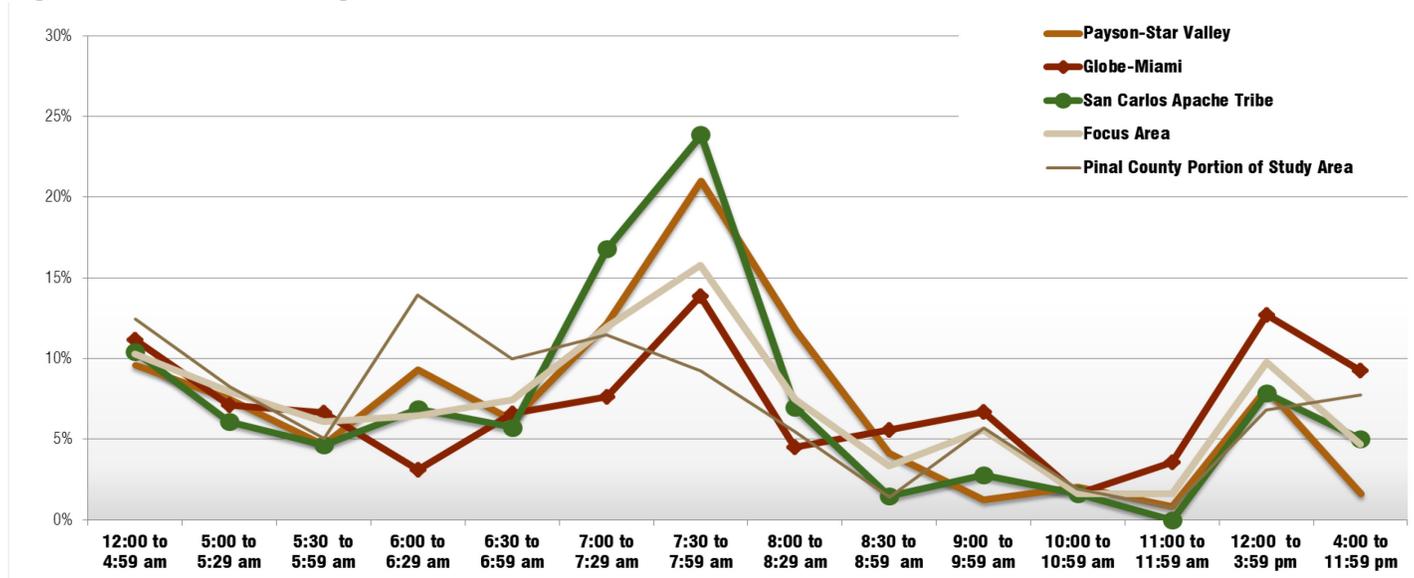
	Payson-Star Valley	Globe-Miami	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Less than 10 Minutes	40%	24%	30%	28%	19%
10 to 19 Minutes	32%	48%	32%	39%	19%
20 to 29 Minutes	3%	15%	15%	12%	14%
30 to 59 Minutes	6%	9%	19%	11%	34%
60 to 89 Minutes	6%	3%	2%	4%	12%
90 or More Minutes	13%	0%	3%	5%	4%

Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

Figure 3.11 illustrates the typical time employees leave for their commute to work in the Focus Area. As shown in the figure, Gila County employees typically leave their house between 7:00 am and 8:00 am. Due to the longer commute times, the Payson-Star Valley area has an additional spike in commute times between 6:00 am and 6:30 am.

Figure 3.11: Time Leaving Home for Work



Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

ACCESS TO VEHICLES

Vehicle availability may limit a person's ability to commute to work or get to an activity center. Depending on the number of people living in each household, a certain number of vehicles may not be able to provide everyone with a means of transportation. Table 3.6 outlines the total number of vehicles available per households in the Focus Area. According to the 2011-2015 ACS, 7.2 percent of households do not have any vehicles available, forcing residents to utilize alternative means of transportation. The San Carlos Apache Indian Reservation has the highest percentage of households without access to a vehicle (24.6 percent).

Table 3.6: Access to Vehicles

	Payson-Star Valley	Globe-Miami	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Total Households	7,707	3,633	2,330	20,909	13,515
Households With No Access to a Vehicle	6.6%	7.0%	24.6%	7.2%	4.3%

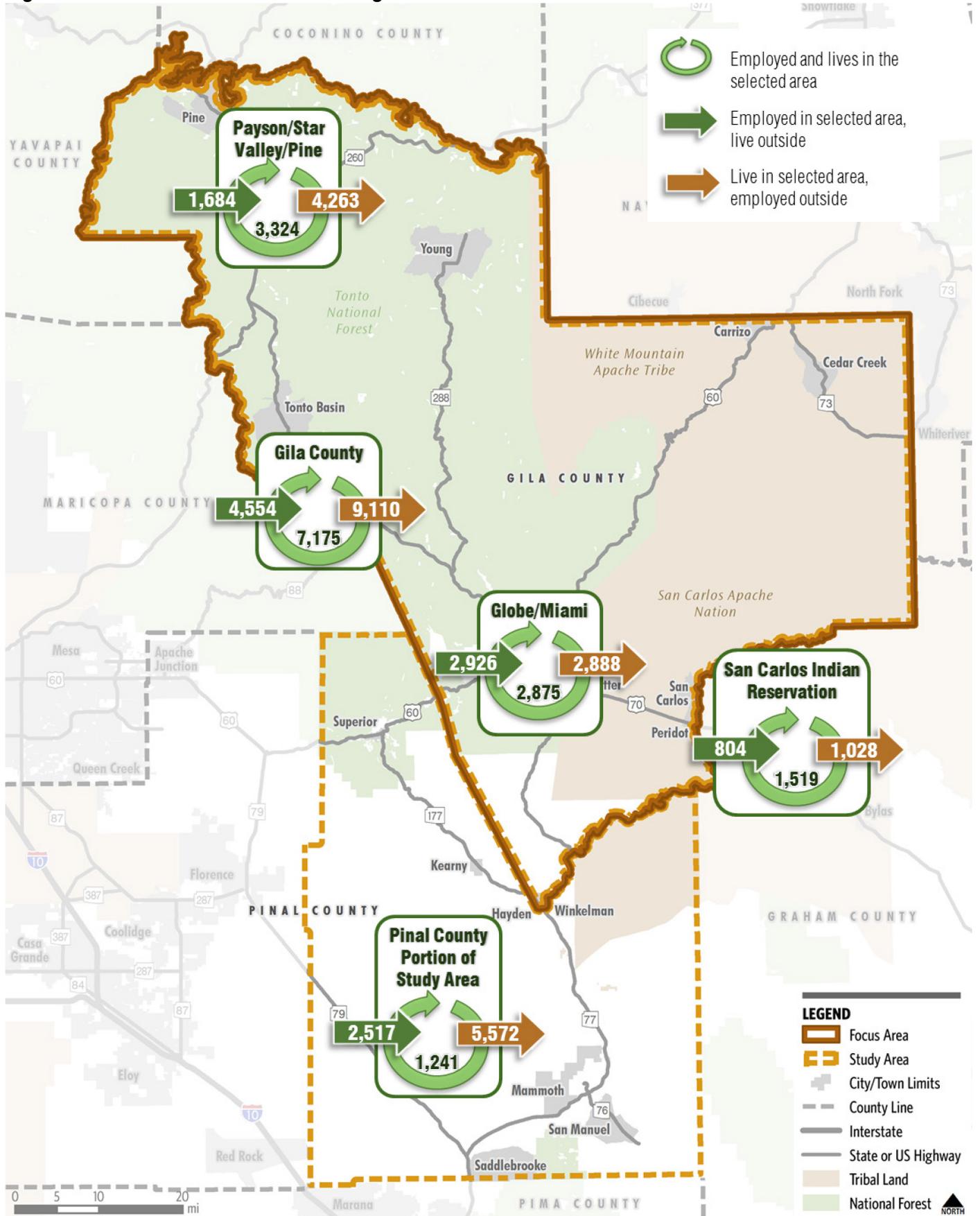
Source: American Community Survey 5-Year Data (2011-2015)

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

COMMUTING PATTERNS

Utilizing the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) OnTheMap application, commuting patterns can be identified. The portal is a nationwide database that reports where workers are employed and where they live. Figure 3.10 illustrates commuting patterns per the LEHD 2017 data. As the figure illustrates, a high percentage of Focus Area and Study Area's population reside within the area but are employed in other areas. This is particularly true for the Payson, Star Valley, and Pine areas with 56 percent of the population commuting outside the area for employment.

Figure 3.12: Inflow – Outflow Commuting Patterns



FUTURE CONDITIONS

Population projections are prepared for all counties in the state by the Arizona Office of Economic Opportunity. The offices' goal is to develop reliable, unbiased projections of population growth to serve as a single state repository for population references. Population projections for the Focus Area is summarized in Table 3.7 and illustrated in Figure 3.13.

Table 3.7: Population Projections

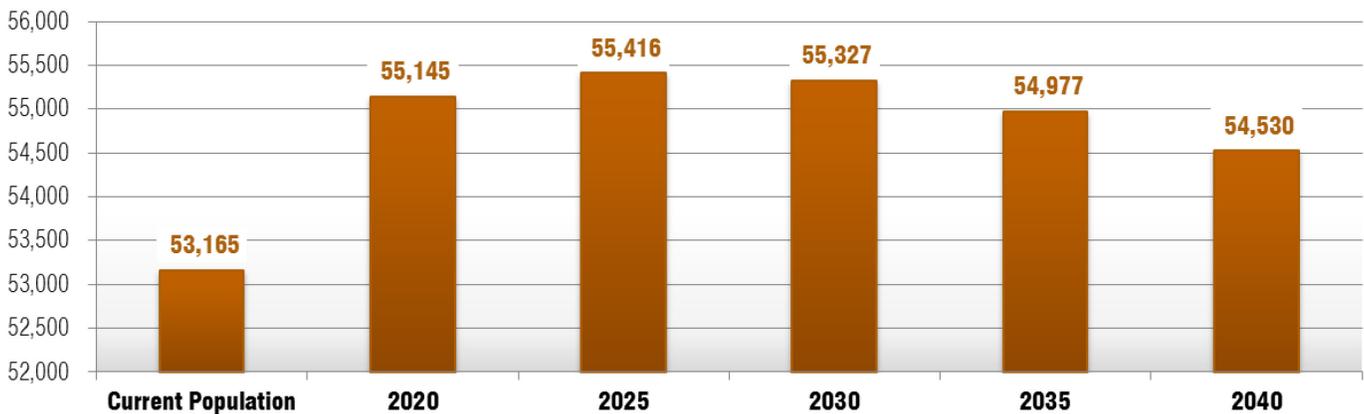
Area	Current Population	2020	2025	2030	2035	2040
Payson	15,248	16,539	16,859	16,988	17,049	17,095
Star Valley	2,090	1,828	1,828	1,828	1,828	1,828
Globe	7,430	7,506	7,625	7,667	7,585	7,485
Miami	2,052	2,343	2,330	2,310	2,284	2,252
Balance of Gila County	26,345	26,929	26,774	26,534	26,231	25,870
Focus Area Total	53,165	55,145	55,416	55,327	54,977	54,530

Source: Arizona Office of Economic Opportunity; current population from American Community Survey 5-Year Data (2011-2015)

Projections are unavailable the Pinal County only portion of the study area

**Balance of County includes portions of the San Carlos Indian Reservation and the Fort Apache Indian Reservation

Figure 3.13: Focus Area Population Projections



As illustrated in the previous table and figure, the Focus Area is expected to experience a modest growth rate until 2030. Payson is expected to have the highest increase in population with a 12.1 percent increase in population by 2040. In addition, Miami is projected to have a 9.8 percent increase in population by 2040. It appears that the geographic distribution of population as it currently stands will remain largely unchanged in the coming decades. From a transit planning perspective, this prediction provides a measure of stability and assurance as planned service will remain viable for years.

4. EXISTING TRANSIT SERVICES

This chapter reviews the public transportation services that are currently active within the Focus Area. Transit service options traditionally include:

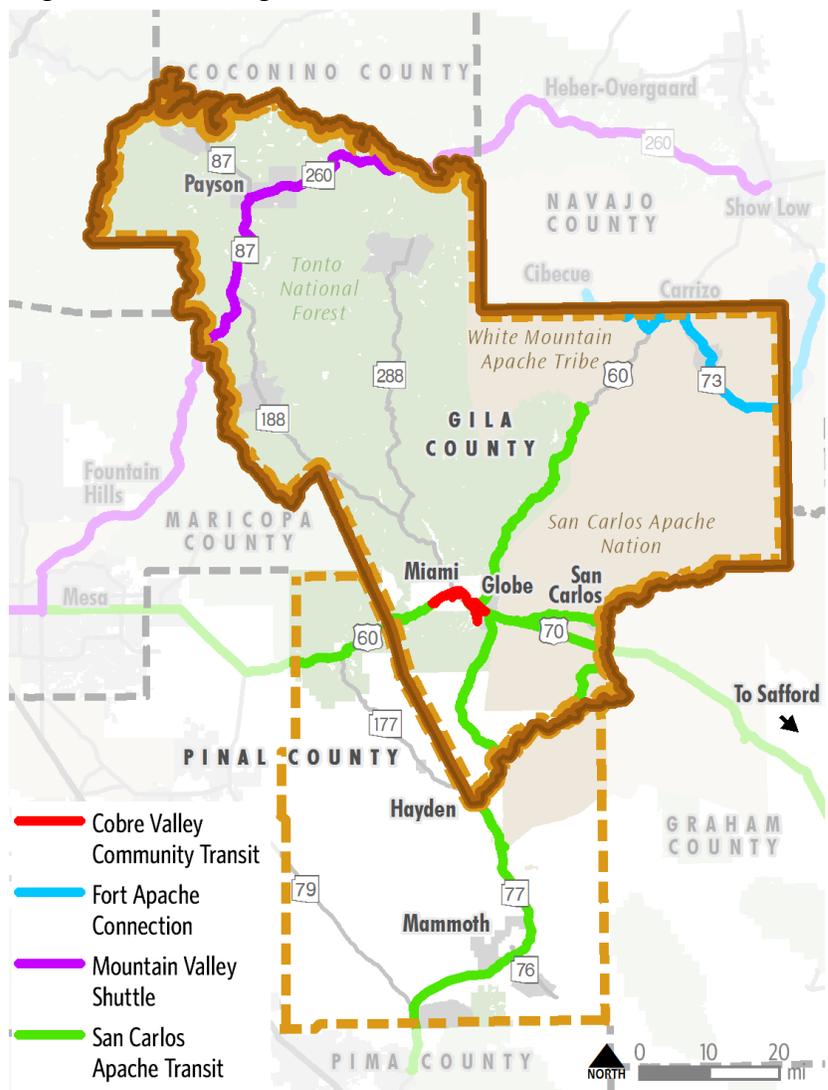
- **Fixed-Route Service:** Fixed-route bus services operate along a fixed route at set times and headways. Services typically operate with designated stops or as a flag stop service.
- **Deviated Fixed-Route Service:** A variation of a fixed-route serve, a deviated fixed-route service can deviate off the fixed route to provide curbside service when riders request the service from the driver when they board the bus. Deviated fixed-route services are considered “demand responsive” under ADA regulations.
- **Dial-a-Ride and Paratransit Service:** Dial-a-Ride and Paratransit services use a shared ride concept that mixes elements of traditional bus service with characteristics of a taxicab service. These services provide van or bus service from origin to destination for passengers who are prevented from using a fixed route bus system due to a disability or mobility limitation.
- **Vanpool:** A type of carpool utilizing a van that usually transports 6 to 15 passengers, typically for work trips.

Figure 4.1: Existing Transit Routes

Currently, there are four fixed-route transit providers within the Focus Area. Fixed-route transit services operate on a scheduled interval throughout the day and on specific days of the week. The four fixed-route transit service providers within the study are:

- Cobre Valley Community Transit
- White Mountain Apache Tribe - Fort Apache Connection
- Mountain Valley Shuttle
- San Carlos Apache Transit - Nnee Bich’o Nii.

Figure 4.1 illustrates the general routes of the fixed-route transit services. The following section provides greater detail of each of the current transit providers in the Focus Area.



COBRE VALLEY COMMUNITY TRANSIT

The Cobre Valley Community Transit (CVCT) system is a collaborative effort between the Town of Miami, the City of Globe, and Gila County to provide public transit services to major activity centers in the Globe-Miami area. CVCT operates a demand-response/curb-to-curb service and a deviated fixed bus. Major funding is provided through the Federal Transit Administration (FTA) Section 5311- Rural Areas program. CVCT's service includes:

- Two deviated fixed-route services routes with pre-determined bus stop locations (see Figure 4.2) - Red Route (Miami to Globe) and the Blue Route (Globe to Miami)
 - Hours are 6:30 am to 6:00 pm Monday through Friday
 - Fare is \$1 (per fare zone) and \$0.50 reduced fare for seniors, disabled and students. Children 12 and under ride free with an adult. Monthly passes are available for purchase from any driver or from the transit office for \$15.00 reduced or \$25.00 full fare
 - Major stops include the Globe Train Depot, Miami Library, Miami Senior Center, Wal-Mart, Cobre Valley Regional Medical Center, Fry's Grocery, Gila County Health Department, Globe Senior Center, and Gila Community College
- Demand Response service that allows a rider to make a reservation to be picked up at his or her desired location and taken to any destination within the designated service area
 - Operates Monday-Friday excluding federal holidays, between the hours of 6:15 am and 3 pm
 - Fare is \$1 (per fare zone) per one-way trip. Monthly passes are available for purchase from the demand response driver or the transit office for \$55.00 a month
 - Required to call at least 24 hours before or can make a reservation up to 7 days in advance

Figure 4.2: Cobre Valley Community Transit Routes and Stops

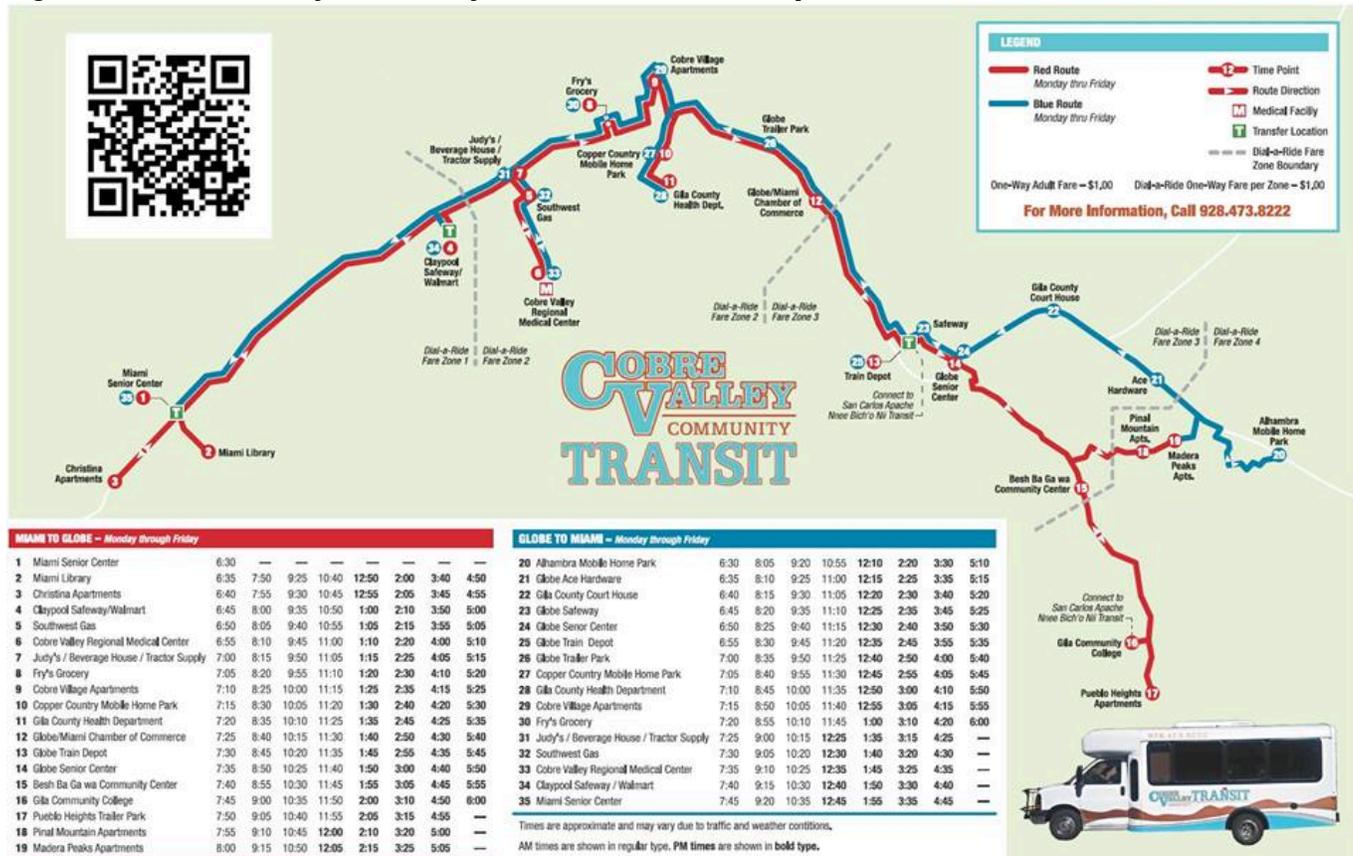


Table 4.1 outlines historical ridership data from the CVCT. Based on an assessment of historical data, key ridership information shows:

- Safeway/Walmart, the Globe Train Depot, and Fry’s grocery store bus stops have the highest annual number of boardings and alightings. Between January 2017 and July 2017, each of these stops have averaged over 134 boardings a month.
- The Southwest Gas has the lowest number of boardings and alightings (ranging from 45 to 63 boardings and 42 to 107 alightings a year since 2015). The Gila Pueblo Community College has a second lowest average number of boardings and alightings a year. The Globe/Miami Chamber of Commerce and Globe Ace Hardware also have a low ridership use.
- Stops in Miami (Miami Senior Center, Miami Library, and Christina Apartments), account for less than 20 percent of total ridership.
- Historically, the highest ridership numbers typically occur in February to March and July to October.

Table 4.1: Cobre Valley Community Transit Ridership

Stop	2015		2016		Jan – June 2017**	
	On	Off	On	Off	On	Off
Miami Area Stops						
Miami Senior Center	1,180	828	788	617	371	238
Miami Library	294	266	330	360	294	192
Christina Apartments	860	652	897	618	410	396
Globe Area Stops						
Safeway/Walmart	1,788	1,807	1,582	1,664	936	971
Southwest Gas	45	86	63	107	44	42
Cobre Valley Regional Medical Center	595	517	590	504	288	244
Cobre Valley Plaza	322	184	188	170	114	87
Fry's Grocery	1,180	1,436	1,711	1,675	805	747
Cobre Village Apartments	211	232	446	423	160	192
Copper Country Mobile Home Park	105	336	288	561	116	225
Gila County Health Department	323	405	328	356	128	176
Globe/Miami Chamber of Commerce	205	299	125	271	73	112
Globe Train Depot	1,525	1,511	1,556	1,471	819	761
Globe Senior Center	372	286	517	542	194	335
Besh Ba Gowah Community Center	126	224	220	168	47	34
Gila Pueblo Community College	39	146	93	168	33	48
Pueblo Heights Trailer Park	278	189	272	192	140	72
Pinal Mountain Apartments	322	265	251	236	177	166
Madera Peaks Apartments	149	156	294	247	180	139
Alhambra Mobile Home Park	279	186	304	253	108	96
Globe Ace Hardware	79	243	189	433	72	151
Globe Court House	685	694	552	557	233	285
Globe Safeway	326	219	278	370	168	188
Globe Mobile Home Park	271	170	271	170	107	120
Miami Total	2,334	1,746	2,015	1,595	1,075	826
Globe Total	9,225	9,591	10,118	10,538	4,942	5,191
Rider Total	11,559	11,337	12,133	12,133	6,017	6,017
Total Dial-A-Ride	N/A	N/A	4,048	4,048	1,815	1,815
Total Revenue Miles	N/A	N/A	63,702		30,856	
Total Dead Miles	N/A	N/A	5,978		3,075	
Vehicle Hours	N/A	N/A	5,997		3,000	
Gallons Fuel	N/A	N/A	9,086		4,047	

Source: CVCT Ridership Data ** 2017 data only available for January 2017 to June 2017

SAN CARLOS APACHE TRANSIT - NNEE BICH'O NII

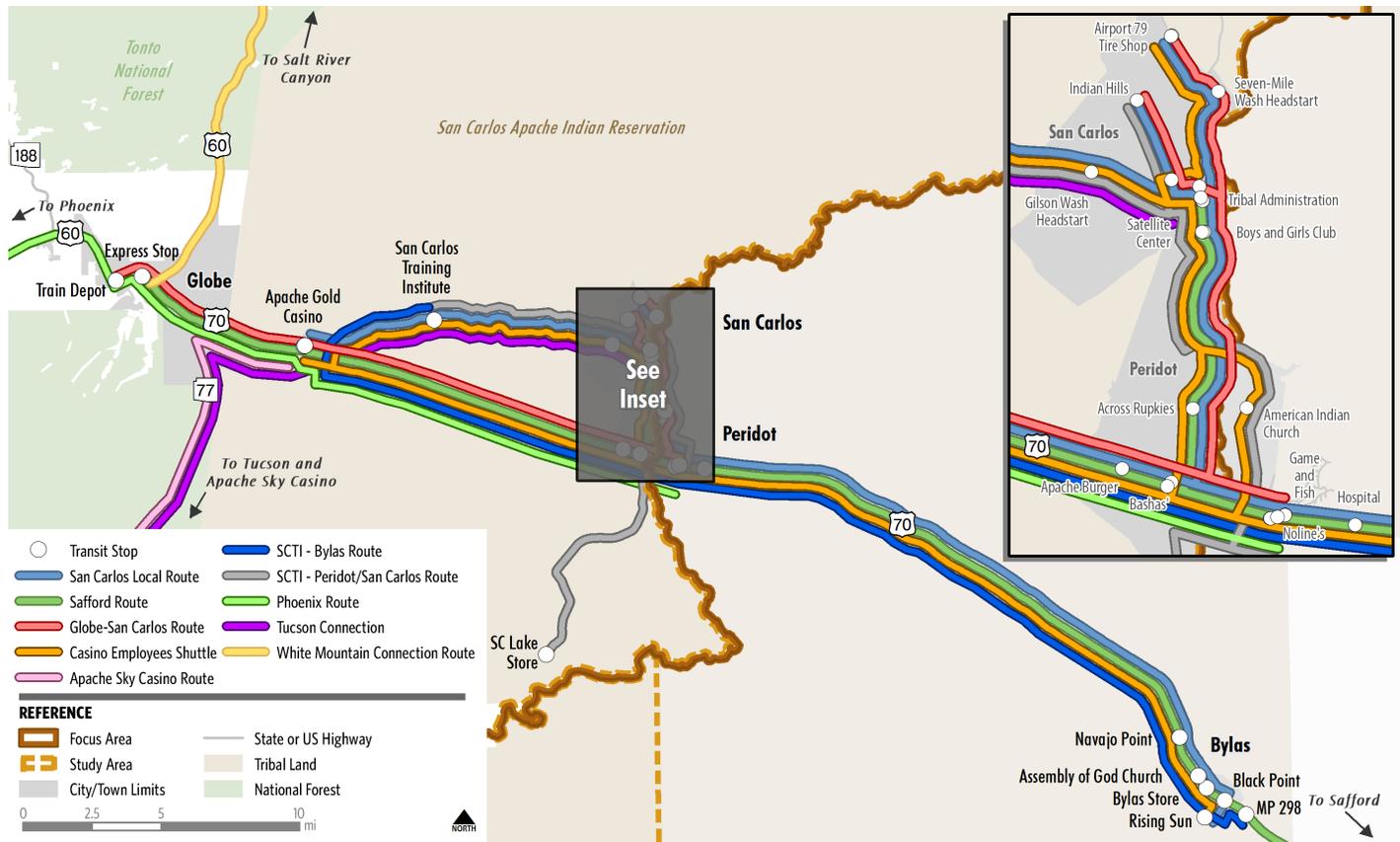
The San Carlos Apache Tribe established a Transportation Department in 2007 in response to mobility needs for individuals living within the San Carlos Apache Reservation. Nnee Bich'o Nii's services includes the operation of a Temporary Assistance for Needy Families (TANF) program and fixed-route transit service in effort to provide local citizens better access to services and employment. The TANF program assists individuals and families that include deprived dependent children and Apache Transit provides mobility through transit services on the reservation and on near-reservation areas. Service includes:



- Seven fixed-route services with pre-determined bus stop locations (see Figure 4.3):
 - **Globe - San Carlos Route:** fixed-route service operating Monday through Friday that connects Globe, San Carlos Apache Indian Reservation, and Safford.
 - **San Carlos - Peridot - Bylas Route:** local area shuttle with services Monday through Friday with the San Carlos Apache Indian Reservation.
 - **Safford - Globe Route:** fixed-route service operating Monday through Friday that connects Globe and the San Carlos Apache Indian Reservation. Route connects to the CVCT at the Globe Train Depot.
 - **Apache Gold Casino Employees Route:** van service for employees from areas throughout the San Carlos Apache Indian Reservation to the Apache Gold Casino.
 - **Apache Sky Casino Route:** van service for casino employees operating daily from Apache Gold Casino to Apache Sky Casino.
 - **San Carlos Training Institute Routes:** van service consisting of two routes; one from Bylas and one from Peridot/San Carlos both connecting to the San Carlos Training Institute.
 - **Phoenix Route:** shuttle service operating from San Carlos/Peridot to Phoenix on Mondays with return service from Phoenix on Fridays.
- Fares range from \$1 to \$5 depending on the distance traveled
- Major stops include the Apache Gold Casino, Globe Train Depot, Gila Community College, Nnee Bich'o Nii Office, and the Safford Walmart

Nnee Bich'o Nii has also expressed interest in developing routes to connect with the Fort Apache Connection near the Salt River Canyon and to the Tucson metropolitan area.

Figure 4.3: San Carlos Apache Transit Routes and Stops



Figures 4.4 through 4.10 illustrate the routes and schedules for Nnee Bich'o Nii.

Figure 4.4: Globe – San Carlos Route

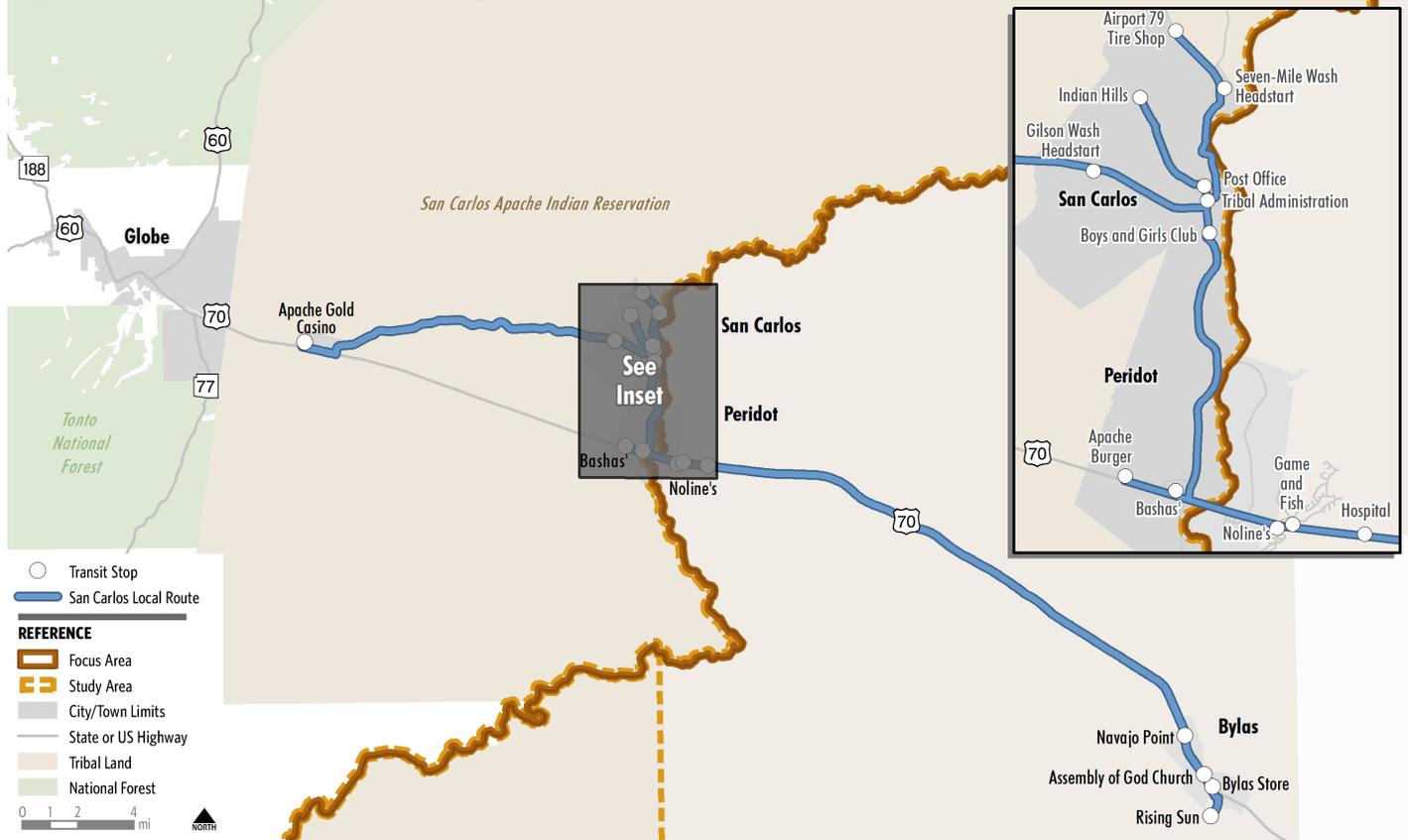


Stop Location	Pick-up Time
Noline's	6:40 AM
Blue Stone Road	6:50 AM
Tribal Administration	6:55 AM
Airport 79	7:00 AM
Indian Hills	7:10 AM
Apache Gold Casino	7:30 AM
Express Stop	7:45 AM
Train Depot	7:50 AM
Apache Gold Casino	8:00 AM

FEE SCHEDULE: All fees listed are one-way

San Carlos to Apache Casino \$1.50	San Carlos to Globe \$1.50
San Carlos to Safford \$3.50	Bylas to San Carlos \$1.50
Bylas to Safford \$2.50	Bylas to Apache Gold Casino \$3.00
Fort Thomas to Safford \$1.50	Within San Carlos Area \$1.00
Noline's to Fort Thomas \$2.00	Bylas to Fort Thomas \$1.00

Figure 4.5: San Carlos – Peridot - Bylas Route



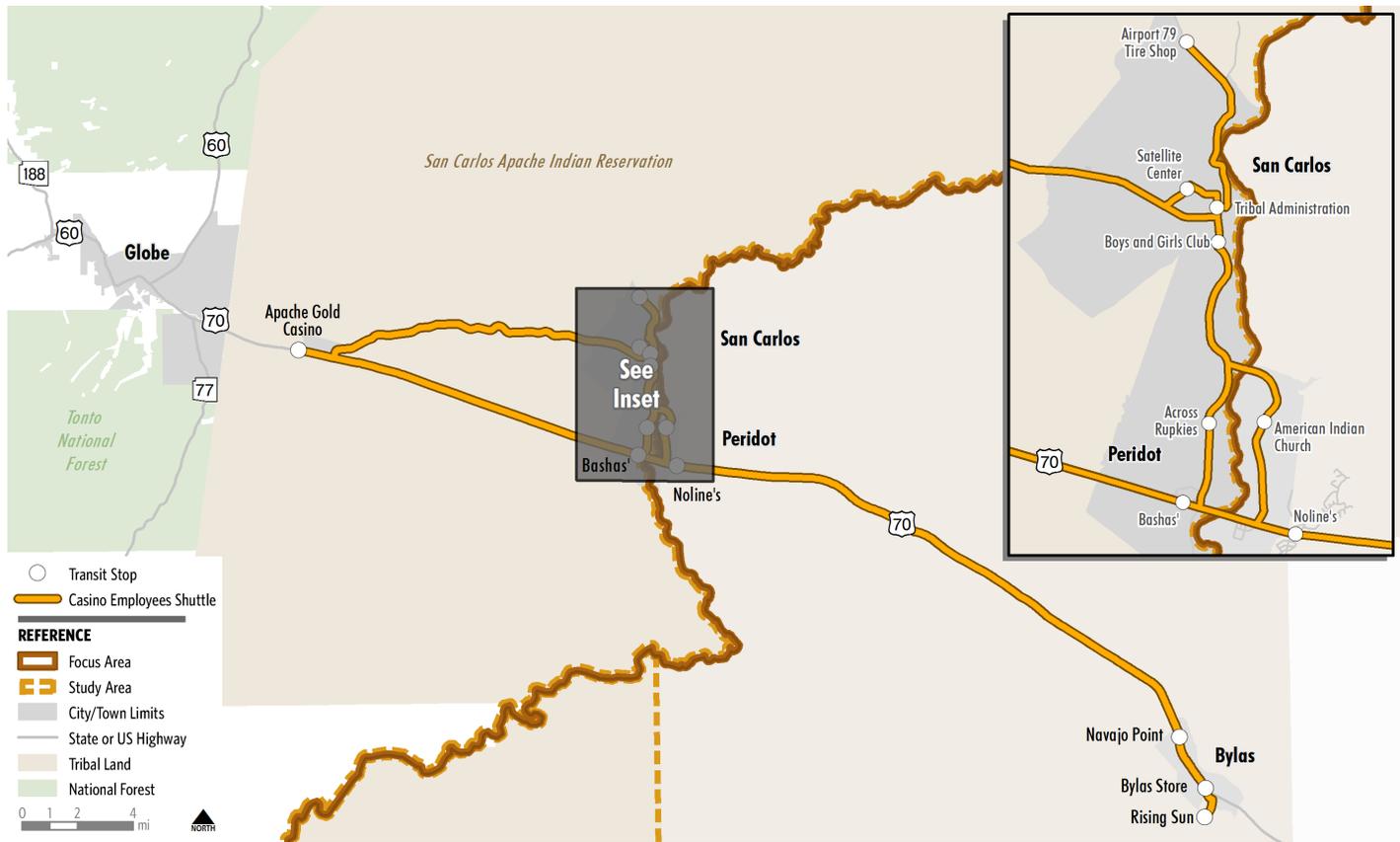
Stop Location	Pick-up Time				
Tribal Administration	5:50 AM	-	-	-	-
Indian Hills	5:55 AM	-	-	-	-
Boys and Girls Club	6:05 AM	-	-	-	-
Noline's	6:20 AM	9:40 AM	10:55 AM	1:40 PM	2:45 PM
Hospital	6:25 AM	-	-	-	-
Rising Sun	6:50 AM	-	-	-	-
Bylas Store	6:55 AM	-	-	-	-
Assembly of God Church	6:58 AM	-	-	-	-
Ready to Go (RTG)	7:00 AM	-	-	-	-
Hospital	7:25 AM	-	-	-	-
Game and Fish	7:28 AM	-	-	-	-
Noline's	7:30 AM	-	-	-	-
Bashas'	7:35 AM	9:45 AM	-	1:50 PM	-
San Carlos Post Office	7:50 AM	-	-	-	-
Gilson Wash Headstart	8:00 AM	-	-	-	-
Seven-Mile Wash Headstart	8:10 AM	-	-	-	-
Tribal Administration	8:25 AM	10:05 AM	11:10 AM	2:00 PM	3:00 PM
Hospital	8:40 AM	-	-	-	-
Transit Office	8:50 AM	-	-	-	-
Apache Burger	-	-	11:20 AM	-	-
Bashas'	-	-	11:23 AM	-	-
Noline's	-	-	11:25 AM	-	-
Hospital	-	-	11:30 AM	-	-
Indian Hills	-	-	-	2:05 PM	-
Airport 79 Tire Shop	-	-	-	2:15 PM	-
Apache Gold Casino	-	-	-	-	3:20 PM

Figure 4.6: Safford - Globe Route



Stop Location	Pick-up Time		
San Carlos Post Office	-	-	4:35 PM
San Carlos Administration	-	-	4:38 PM
Noline's	-	10:55 AM	4:45 PM
Hospital	6:50 AM	11:00 AM	4:55 PM
Navajo Point	7:10 AM	11:25 AM	5:15 PM
Assembly of God Church	7:15 AM	11:28 AM	5:18 PM
Bylas Store	7:20 AM	11:30 AM	5:20 PM
Fort Thomas High School	7:35 AM	-	-
Pima Post Office Parking Lot	As Requested	As Requested	-
EAC Parking Lot	7:55 AM	12:05 PM	-
Walmart	8:10 AM	12:20 PM	-
Walmart	8:15 AM	1:20 PM	-
Safford MVD	-	1:30 PM	-
EAC Parking Lot	8:30 AM	1:35 PM	-
Pima Post Office Parking Lot	As Requested	As Requested	-
Bylas Store	9:05 AM	2:10 PM	-
Assembly of God Church	9:07 AM	2:12 PM	-
Navajo Point	9:10 AM	2:15 PM	-
Hospital	9:33 AM	2:40 PM	-
Noline's	9:40 AM	2:45 PM	-
Bashas'	9:45 AM	2:55 PM	-
Apache Gold Casino	10:15 AM	3:10 PM	-
Globe Express Stop	10:20 AM	3:20 PM	-
Apache Gold Casino	10:35 AM	4:00 PM	-

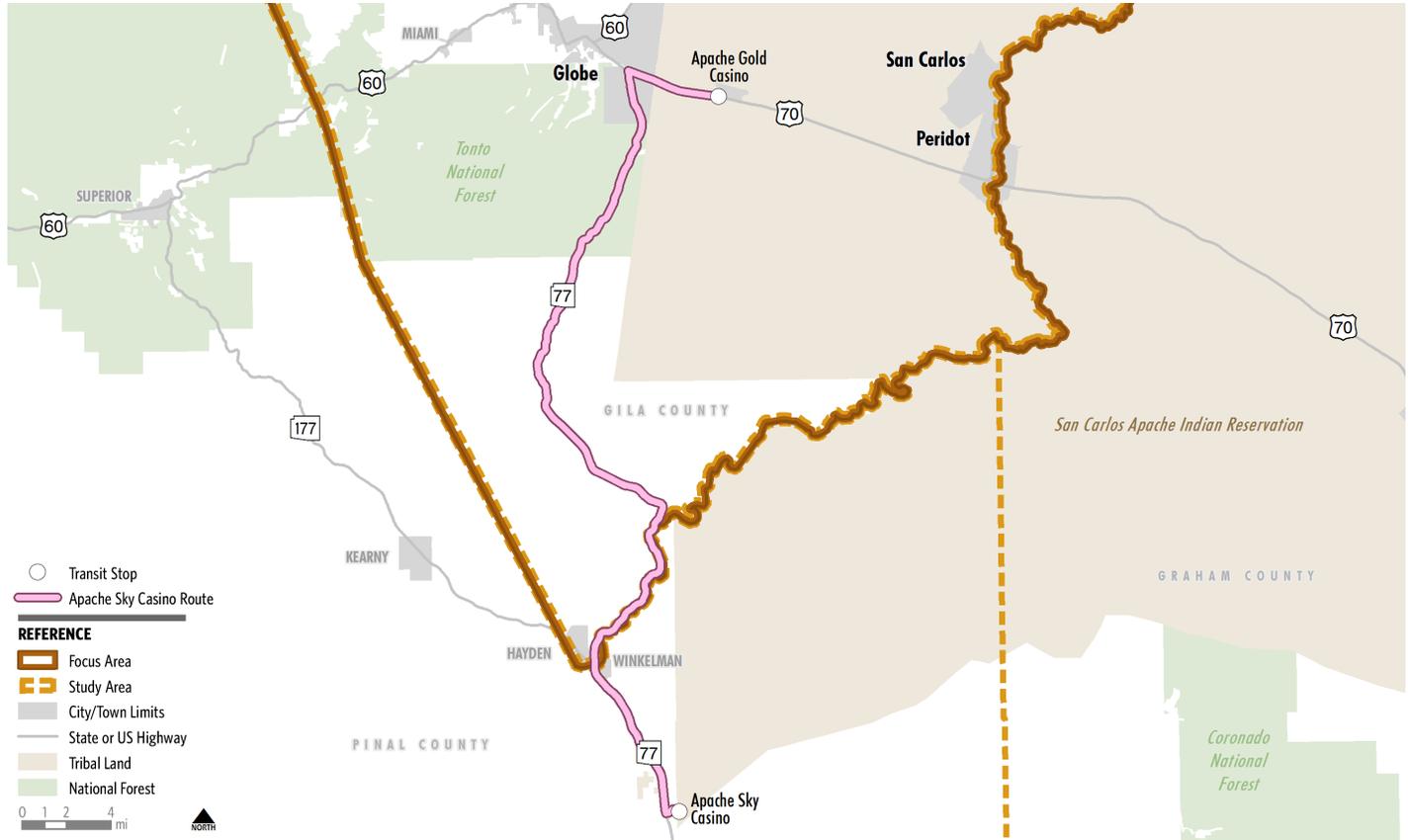
Figure 4.7: Apache Gold Casino Shuttle



Stop Location	1st Pick-up	2nd Pick-up	3rd Pick-up
Bylas Store	6:20 AM	2:20 PM	10:20 PM
Rising Sun	6:30 AM	2:30 PM	10:30 PM
Navajo Point	6:35 AM	-	-
Noline's	6:55 AM	2:55 PM	10:55 PM
Bashas'	7:00 AM	3:00 PM	11:00 PM
Blue Stone Rd	7:05 AM	3:05 PM	11:05 PM
Boys and Girls Club	7:10 AM	3:10 PM	11:10 PM
American Indian Church	7:15 AM	3:15 PM	11:15 PM
Airport 79	7:20 AM	3:20 PM	11:20 PM
Tribal Administration	7:25 AM	3:25 PM	11:25 PM
Satellite Center	7:30 AM	3:30 PM	11:30 PM
Apache Gold Casino	7:50 AM	3:50 PM	11:50 PM

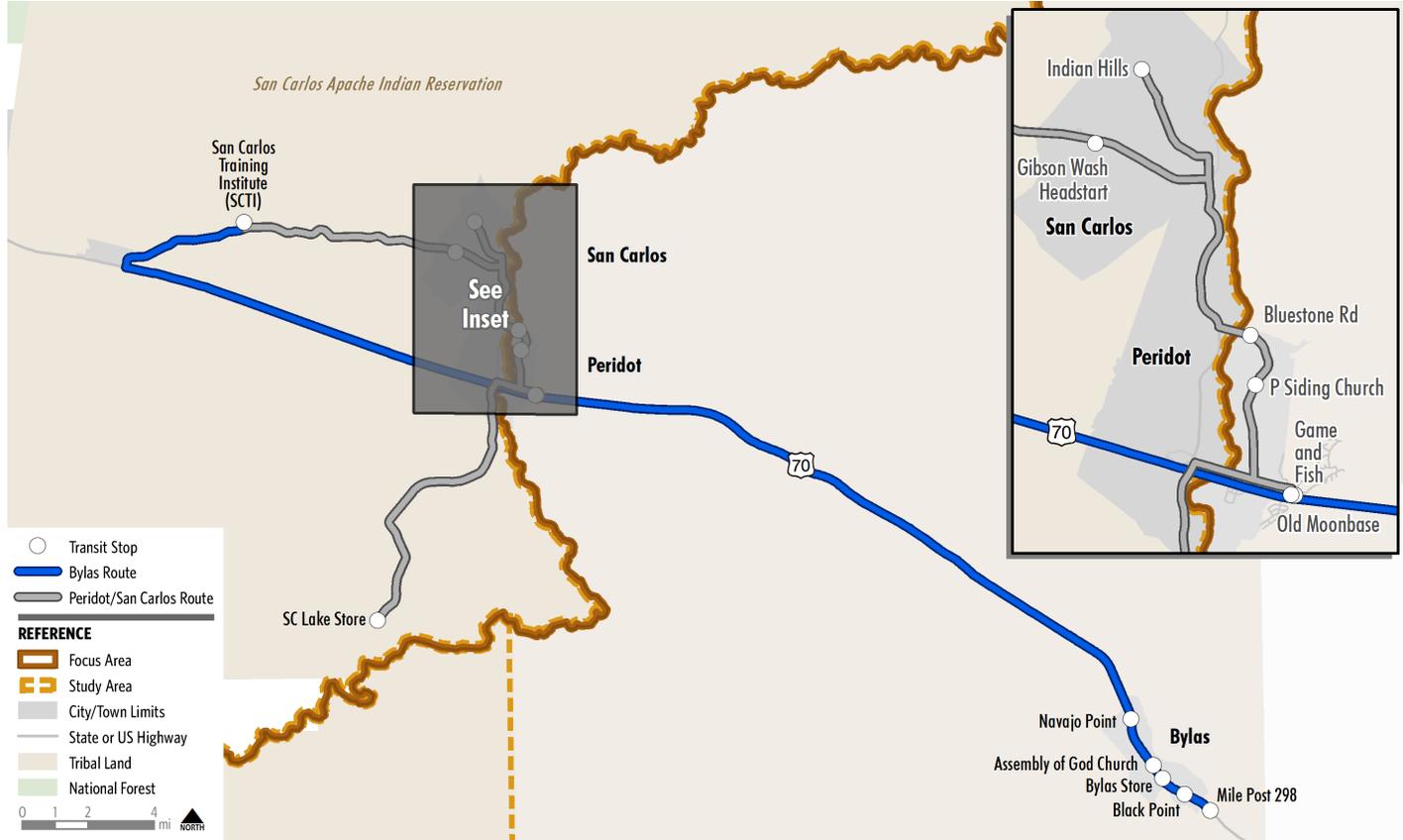
Stop Location	1st Departure/ Drop Off	2nd Departure/ Drop Off	3rd Departure/ Drop Off
Apache Gold Casino	8:35 AM	4:35 PM	12:35 AM
Satellite Center	8:55 AM	4:55 PM	12:55 AM
Tribal Administration	9:00 AM	5:00 PM	1:00 AM
American Indian Church	9:10 AM	5:10 PM	1:10 AM
Airport 79	9:15 AM	5:15 PM	1:15 AM
Boys and Girls Club	9:20 AM	5:20 PM	1:20 AM
Bashas'	9:30 AM	5:30 PM	1:30 AM
Noline's	9:30 AM	5:35 PM	1:35 AM
Rising Sun	10:00 AM	6:00 PM	2:00 AM
Bylas Store	10:10 AM	6:10 PM	2:10 AM

Figure 4.8: Apache Sky Casino Route



Stop Location	1st Run	2nd Run	3rd Run
Depart Apache Gold	7:00 AM	3:00 PM	11:00 PM
Arrive Apache Sky	8:00 AM	4:00 PM	12:00 PM
Depart Apache Sky	8:30 AM	4:30 PM	12:30 PM
Arrival Apache Gold	9:30 AM	5:30 PM	1:30 AM

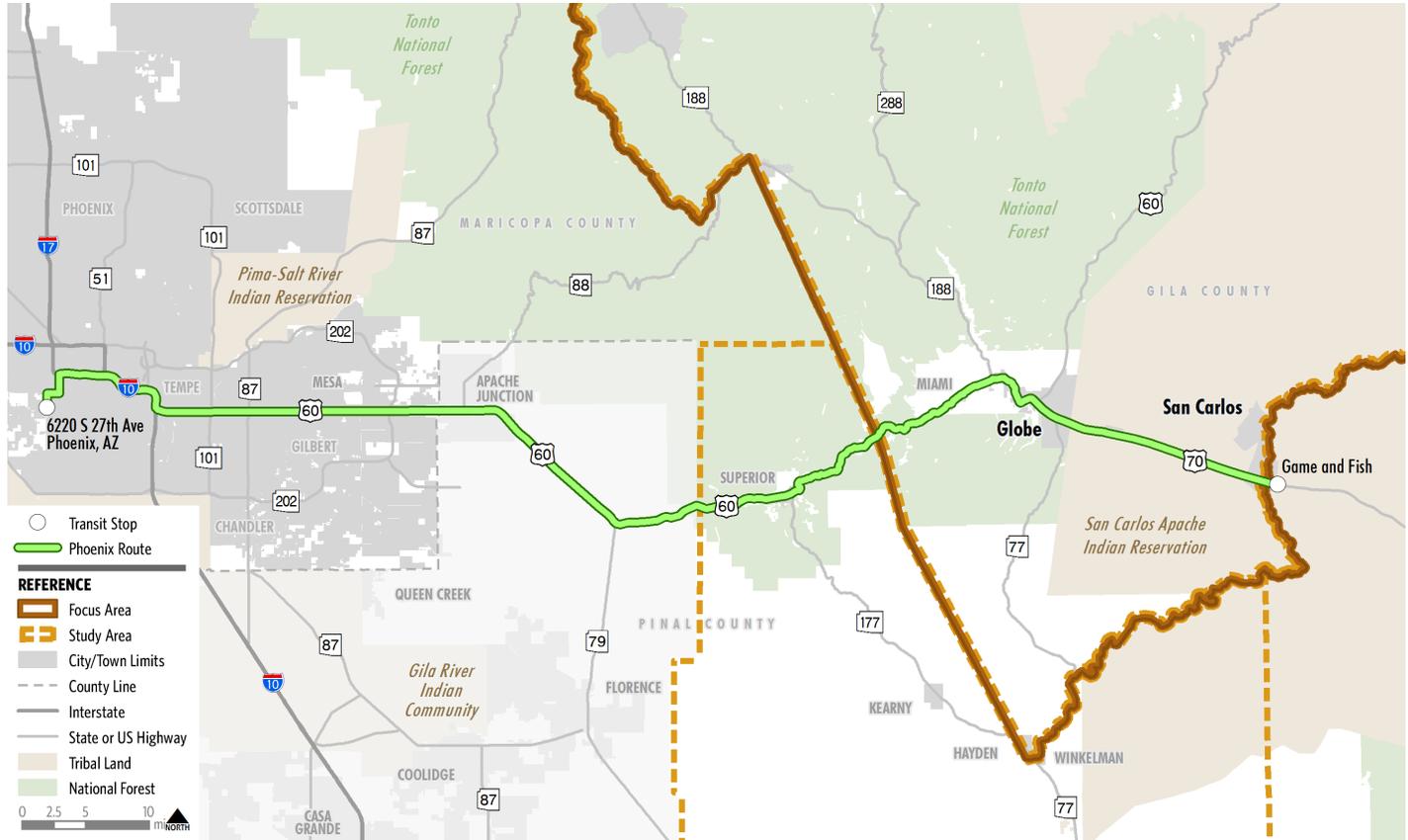
Figure 4.9: San Carlos Training Institute Routes



Bylas Route	
Stop Location	Pick-up Time
Mile Post 298	6:10 AM
Black Point	6:15 AM
Bylas Store	6:20 AM
Assembly of God	6:25 AM
Navajo Point RTG	6:30 AM

Peridot/San Carlos Route	
Stop Location	Pick-up Time
SC Lake Store	5:55 AM
Old Moonbase	6:15 AM
Game and Fish	6:17 AM
P. Siding Church	6:20 AM
Bluestone Rd	6:25 AM
Gilson Wash	6:30 AM
Indian Hills	6:40 AM

Figure 4.10: Phoenix Route



Mondays	
Location	Time
Depart from Game and Fish	6:00 AM
Arrive at 6220 S 27th Ave Phoenix, AZ	8:45 AM
Fridays	
Location	Time
Leave Base	3:00 PM
Pick up at 6220 S 27th Ave Phoenix, AZ	5:45 PM
Arrive back to Game and Fish	7:45 PM

MOUNTAIN VALLEY SHUTTLE

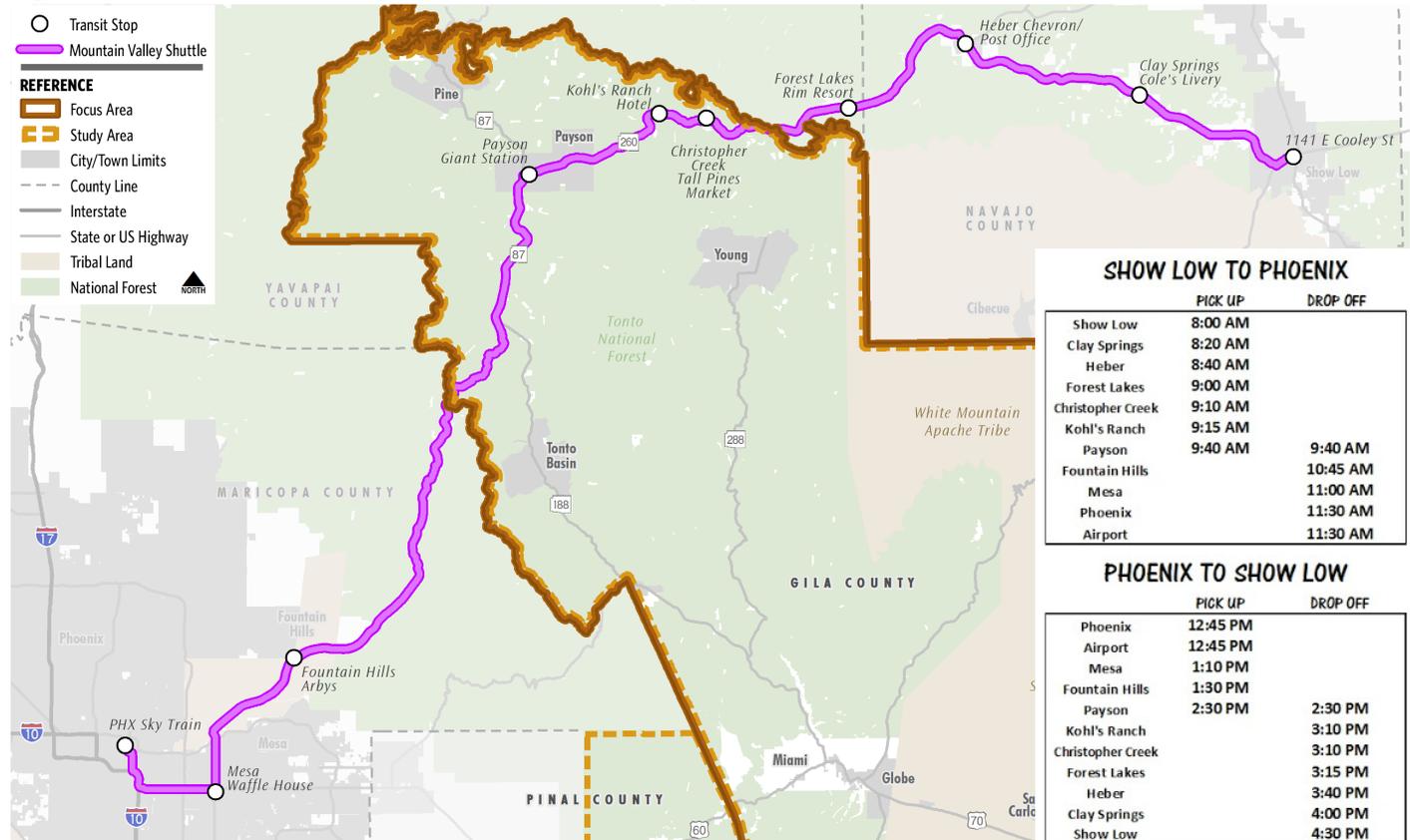
Mountain Valley Shuttle (MVS) provides van transportation services from communities within the White Mountains area to the Phoenix metropolitan area. MVS's service includes:

- Single, daily roundtrip fixed-route van service from Show Low to Phoenix Sky Harbor Airport (See Figure 4.11).
 - Hours are 8:00 am to 4:30 pm Monday through Friday
 - Stops include: Show Low, Clay Springs, Heber, Forest Lakes, Kohl's Ranch, Payson, Fountain Hills, Mesa, and Phoenix Sky Harbor Airport
 - Fares are based on distance traveled and range from \$20 to \$60. There is a \$5 discount for military, veterans, and seniors over the age of 62.
 - Reservations are recommended and maximum vehicle capacity is 13 passengers.



PASSENGER PRICES											
	SL	CS	HB	FL	CC	KR	PA	FH	MS	PHX	AP
Show Low		20	30	30	35	35	40	60	60	60	60
Clay Springs	20		25	30	35	35	40	60	60	60	60
Heber	30	25		25	30	30	35	55	55	55	55
Forest Lakes	30	30	25		20	20	30	55	55	55	55
Christopher Creek	35	35	30	20		20	25	50	50	50	50
Kohl's Ranch	35	35	30	30	20		25	40	50	50	50
Payson	40	40	35	30	25	25		40	40	40	40
Fountain Hills	60	60	55	55	50	40	40		30	30	30
Mesa	60	60	55	55	50	50	40	30		20	20
Phoenix	60	60	55	55	50	50	40	30	20		
Airport Stop	60	60	55	55	50	50	40	30	20		

Figure 4.11: Mountain Valley Shuttle Route and Stops



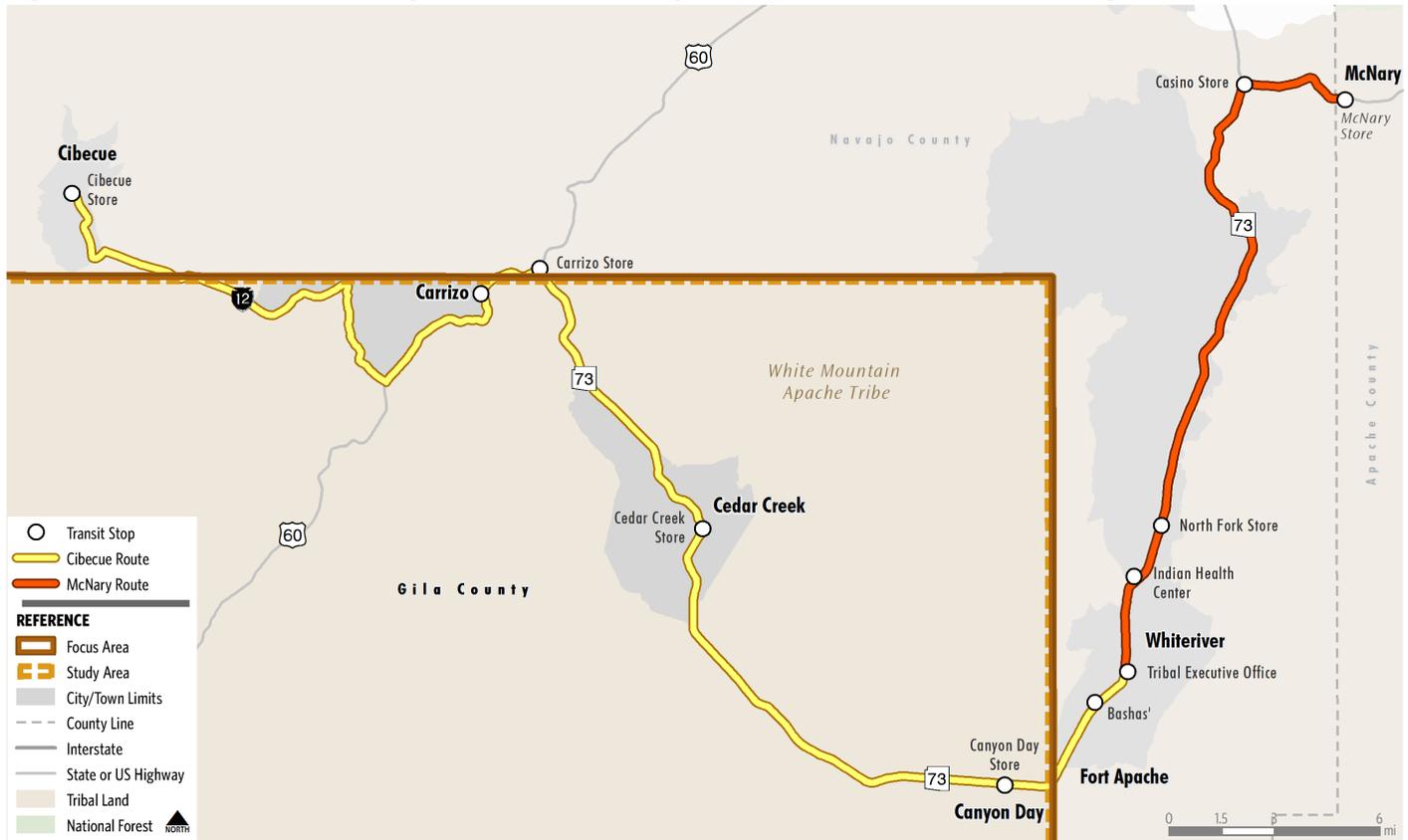
WHITE MOUNTAIN APACHE TRIBE - FORT APACHE CONNECTION TRANSIT (FACT)

The Fort Apache Connection Transit (FACT), operated by the White Mountain Apache Tribe, began public transportation services in June 2017. The system currently connects with the Four Seasons Connection in Hon-Dah and plans to connect with the San Carlos Apache Tribe Nnee Bich'o Nii Department in the near future. Over the next several years, the service plans to add more routes to expand its geographic coverage, and to provide transit options for the weekend. Service includes:



- FACT operates Monday through Friday from 7:20 am to 3:15 pm and has fixed-route services routes, each with 12 designated stops (see Figure 4.12)
 - Route 1 (Whiteriver to Cibecue): stops include Cedar Creek and Carrizo
 - Route 1 (Whiteriver to McNary): stops include the Indian Health Center, and Hon-dah Store
- Prominent stops include Bashas', Tribal Executive Building, Cibecue Store, Indian Health Services building, Hon-dah Store, and the McNary Store
- Fares are \$0.50 cents per stop, with a 50% discount for individuals older than 60
- Daily, weekly, and monthly passes are offered to provide savings for frequent users

Figure 4.12: White Mountain Apache Tribe - Fort Apache Connection Route and Stops

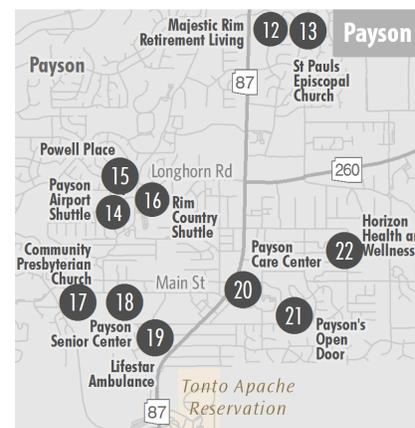
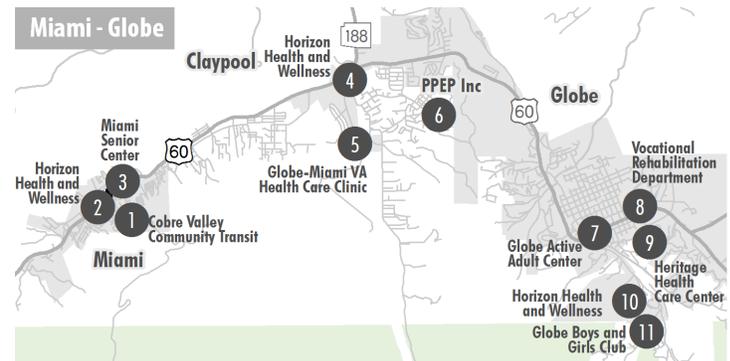
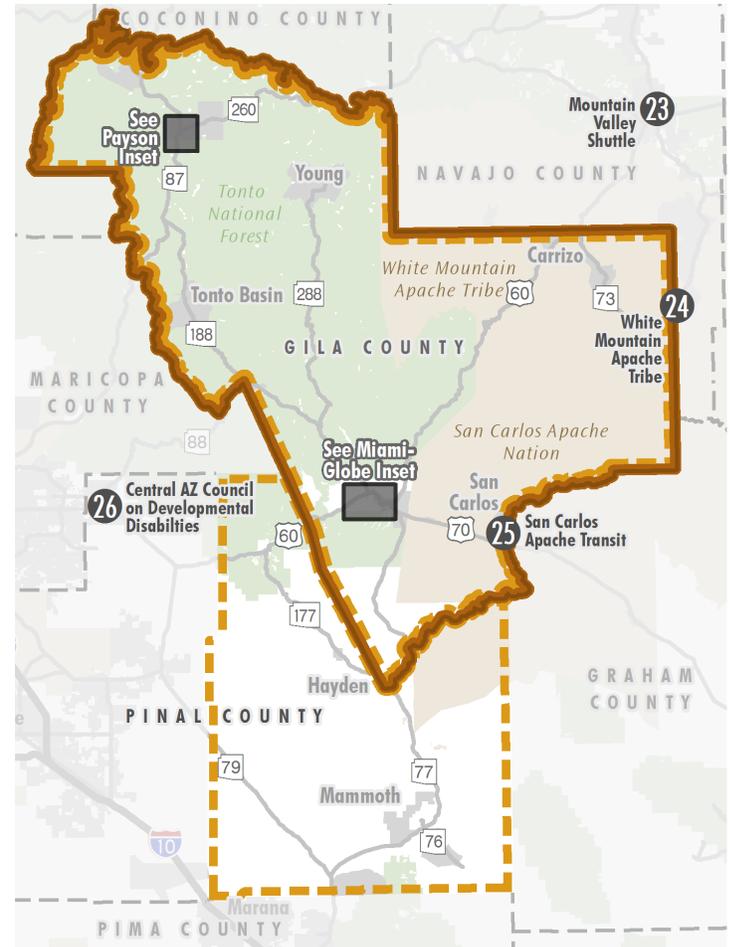


OTHER TRANSPORTATION SERVICES

In addition to the fixed-route transit providers previously discussed, there are several specialized transportation providers in the Study Area. These transit providers offer demand services for users based on need by responding to transportation requests by phone or web-interface. Transportation providers within the Study Area include:

- 1 Cobre Valley Community Transit
- 2 Horizon Health and Wellness (Miami)
- 3 Miami Senior Center
- 4 Horizon Health and Wellness (Globe)
- 5 Globe-Miami VA Health Care Clinic
- 6 PPEP, Inc.
- 7 Globe Active Adult Center
- 8 Vocational Rehabilitation Department
- 9 Heritage Health Care Center
- 10 Horizon Health and Wellness (Globe)
- 11 Globe Boys and Girls Club
- 12 Majestic Rim Retirement Living
- 13 St. Paul's Episcopal Church
- 14 Payson Airport Shuttle
- 15 Powell Place
- 16 Rim Country Shuttle
- 17 Community Presbyterian Church
- 18 Payson Senior Center
- 19 Lifestar Ambulance
- 20 Payson Care Center
- 21 Payson's Open Door
- 22 Horizon Health and Wellness (Payson)
- 23 Mountain Valley Shuttle
- 24 White Mountain Apache Tribe
- 25 San Carlos Apache Transit
- 26 Central AZ Council on Developmental Disabilities
- NA Pinal-Gila Council on Developmental Disabilities
- NA Horizon Health and Wellness (Casa Grande)
- NA Phoenix VA Transportation Department
- NA Pinal County "On-The-Go-Express"

Figure 4.12: Service Provider Locations



Transportation Provider

REFERENCE

- Focus Area
 - Study Area
 - City Limits
 - County Line
 - Interstate
 - State or US Highway
 - Tribal Land
 - National Forest
 - NORTH
- 0 5 10 20 mi

5. TRANSIT PROVIDERS' SURVEY RESULTS

Stakeholders within the CAG study limits included a variety of fixed and non-fixed transportation service providers. Since these organizations are the core of transit for the communities, it was important to assess their existing conditions and needs. This allowed the study to be cognizant of potential opportunities or limitations of the transit providers for the feasibility of future transit. Responses received during the interview process were utilized to inform decisions during the improvements development phase of the study. Key information includes:

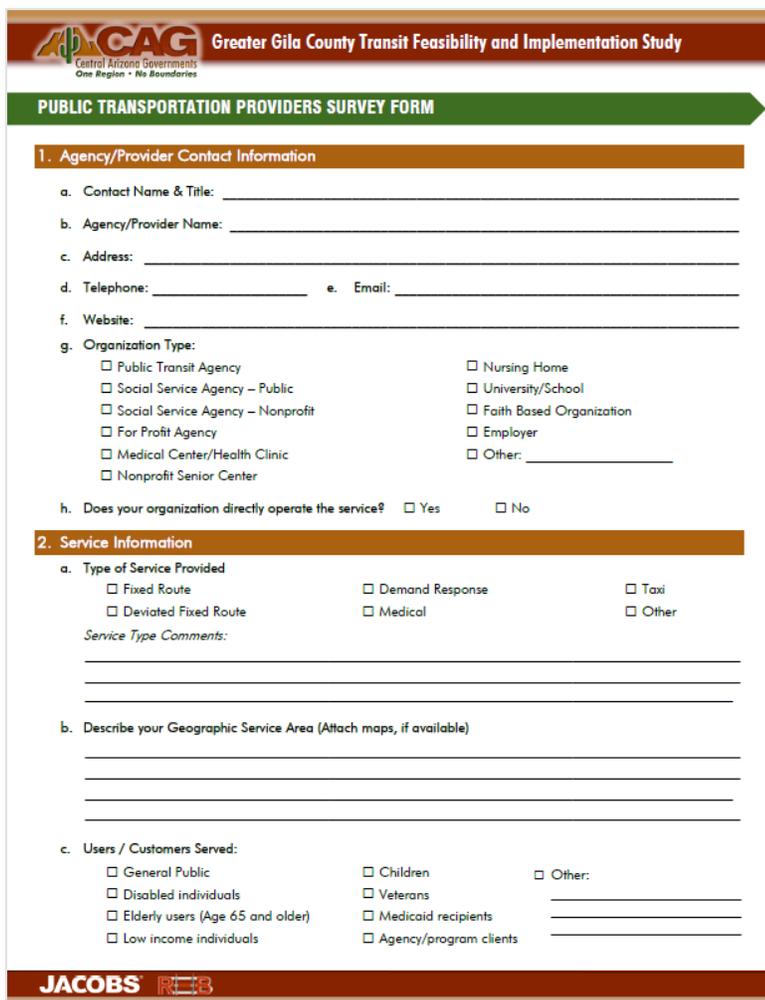
- Half of the existing services require an advanced reservation and half are social service agencies
- The most popular use of the service was for medical transport, while commuting for employment was the least popular
- Most providers rely heavily on federal funding such as Medicaid and FTA Section 5310 and 5311 funding
- Many providers noted that if more funding were available they would expand their service offerings

SURVEY PROCESS

Telephone survey interviews were conducted in order to obtain valuable information from the stakeholder group. Figure 5.1 illustrates the service providers interviewed and includes:

- Cobre Valley Community Transit (CVCT)
- San Carlos Apache Transit Nnee Bich'o Nii
- Mountain Valley Shuttle (MVS)
- White Mountain Apache Tribe
- Central Arizona Council on Developmental Disabilities
- Community Presbyterian Church
- Globe Active Adult Center
- Globe Boys and Girls Club
- Greyhound Lines | First America
- Horizon Health and Wellness
- Lifestar Ambulance
- Miami Senior Center
- Payson Airport Shuttle
- Payson Care Center
- Payson Senior Center
- Phoenix VA Transportation Department
- Pinal-Gila Council for Senior Citizens

The survey instrument (shown on the right) collected information on the types of services provided, fleet information funding and revenue sources, issues and needs, and future service plans. The following sections provides a summary of results from the interviews.



Greater Gila County Transit Feasibility and Implementation Study

PUBLIC TRANSPORTATION PROVIDERS SURVEY FORM

1. Agency/Provider Contact Information

a. Contact Name & Title: _____

b. Agency/Provider Name: _____

c. Address: _____

d. Telephone: _____ e. Email: _____

f. Website: _____

g. Organization Type:

Public Transit Agency Nursing Home

Social Service Agency – Public University/School

Social Service Agency – Nonprofit Faith Based Organization

For Profit Agency Employer

Medical Center/Health Clinic Other: _____

Nonprofit Senior Center

h. Does your organization directly operate the service? Yes No

2. Service Information

a. Type of Service Provided

Fixed Route Demand Response Taxi

Deviated Fixed Route Medical Other

Service Type Comments: _____

b. Describe your Geographic Service Area (Attach maps, if available)

c. Users / Customers Served:

General Public Children Other: _____

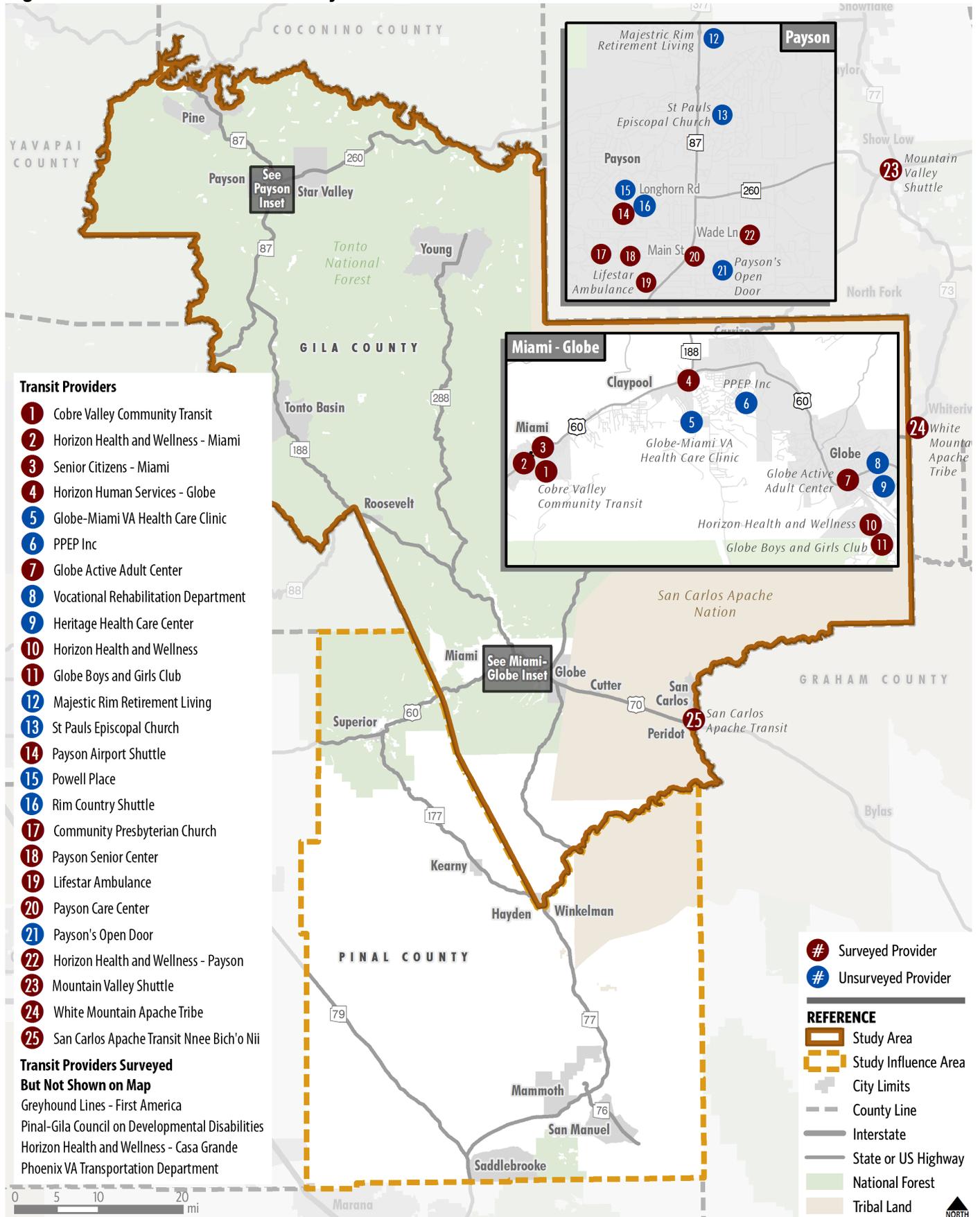
Disabled individuals Veterans _____

Elderly users (Age 65 and older) Medicaid recipients _____

Low income individuals Agency/program clients _____

JACOBS **REB**

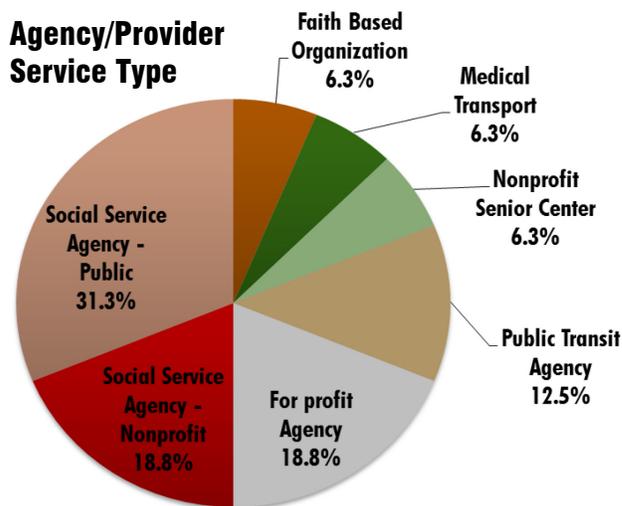
Figure 5.1: Service Providers Surveyed



AGENCY/SERVICE PROVIDER TYPE

As illustrated in the graphic on the right:

- Half of the stakeholders interviewed are social service agencies, with them primarily being public agencies
- Nearly 20 percent of those surveyed are for-profit and 12 percent are public agencies
- Only one faith based organization, medical transport, and nonprofit senior center completed the survey

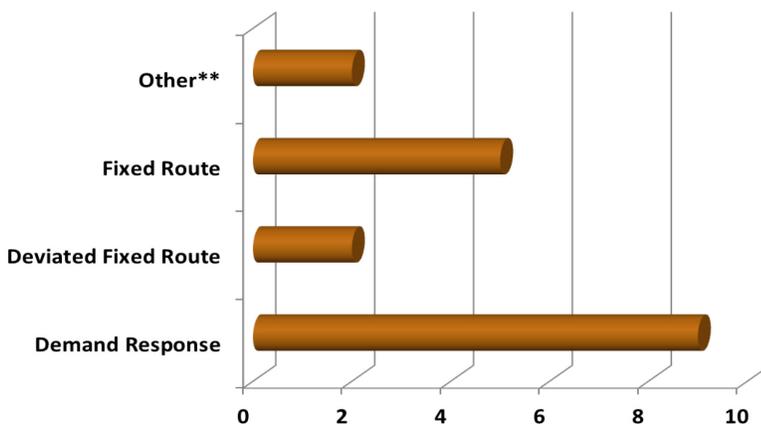


EXISTING SERVICE INFORMATION

TYPE OF SERVICES PROVIDED

Based on survey responses, many providers offer multiple services. For instance, the CVCT provides a deviated fixed-route service and a demand response service. Additional key findings include:

- Boys and Girls Club vehicle is used to pick-up student participants after school and take to Club and also to take participants home. Vehicle is also used for field trips
- Horizon Health and Wellness takes enrollees to activities



SERVICE AREA AND MAJOR PROVIDERS

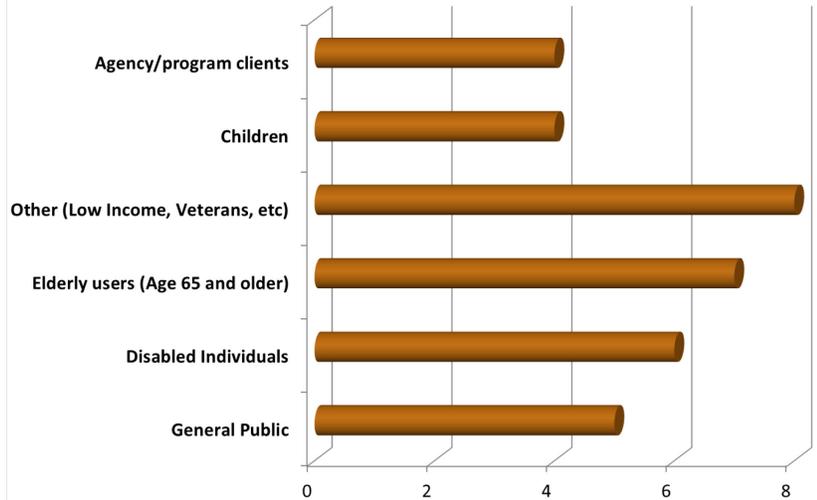
Service areas of the providers surveyed include:

Globe – Miami Area	Payson Area	San Carlos – Peridot	Cibecue – Whiteriver	Regional	Statewide
Cobre Valley Community Transit	Community Presbyterian Church	San Carlos Apache Transit	Fort Apache Connection (White Mountain Apache Tribe)	Mountain Valley Shuttle Payson Airport Shuttle	Horizon Health and Wellness
San Carlos Apache Transit	Payson Senior Center			Phoenix Veterans Affairs (VA) Transportation Department	Greyhound
Globe Boys and Girls Club	Lifestar Ambulance			Central Arizona Council on Developmental Disabilities	
Globe Active Adult Center	Payson Care Center			Pinal – Gila Council for Senior Centers	
Miami Senior Center					

TYPE OF CUSTOMERS SERVED

Based on survey responses, providers typically serve a multitude of customers. Key findings include:

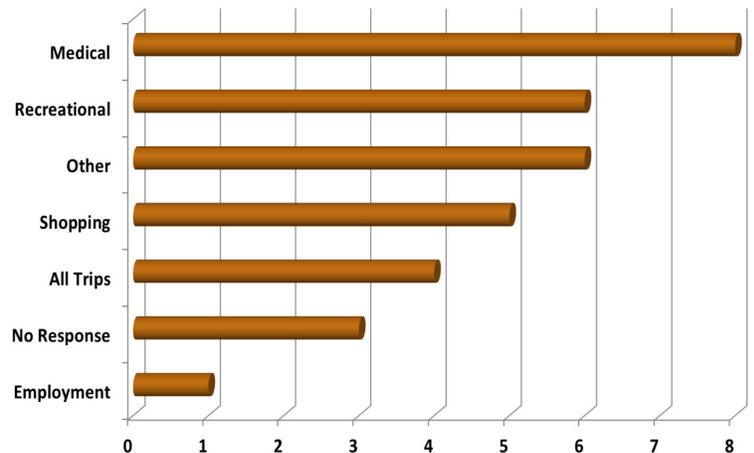
- 24 percent indicated that they provide service to low-income and veterans
- 21 percent provide service for elderly population groups and 18 percent provide service to persons with a disability
- 4 agencies provide service to children
- Several respondents commented that their vans do not have wheelchair access. For instance, Horizon Health and Wellness commented that out of 20 vehicles, only three are equipped with wheelchair lifts



TYPE OF TRIPS SERVED

Based on survey responses, providers typically serve multiple trips. Key findings include:

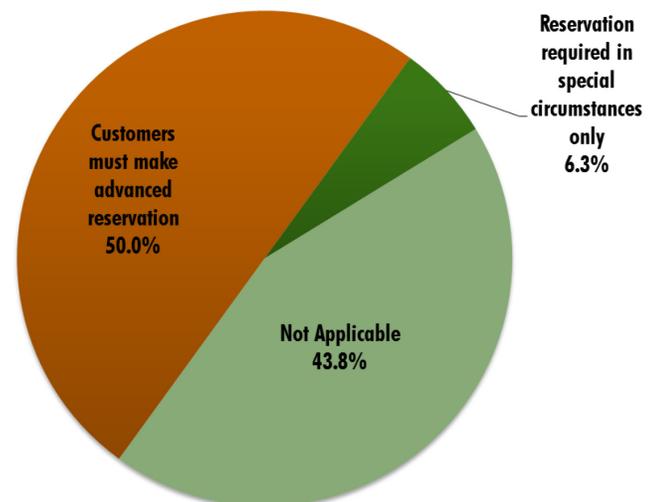
- Other trip locations served include airports, schools, church, daycare, and prisoner transport
- San Carlos Nnee Bich'o Nii operates special trips to Wal-Mart, the State Fair in Phoenix, and seasonal acorn picking
- The Fort Apache Transit Connection schedule is designed for commuting to and from work



RESERVATION REQUIREMENTS

Based on survey responses, advance reservation is required for demand response service:

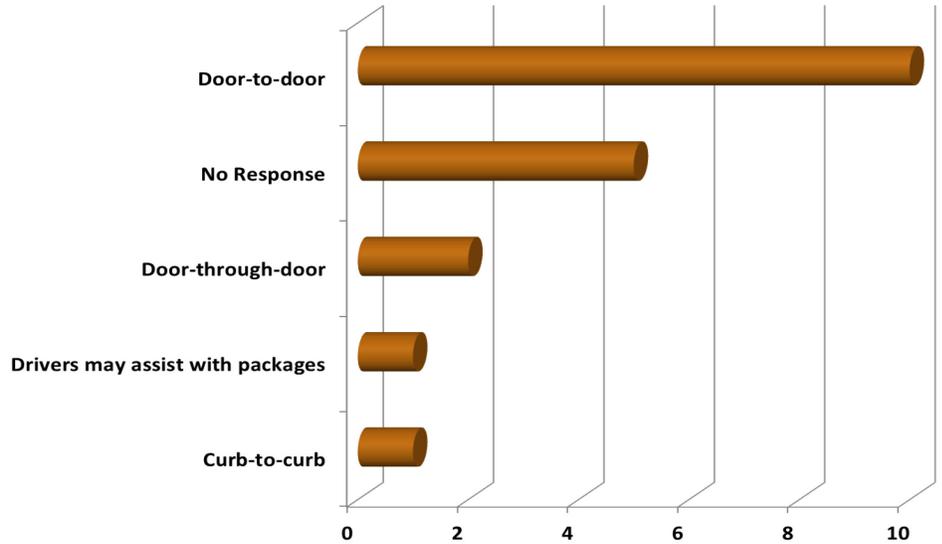
- All reservations can be made by phone
- Majority are able to fulfill all trip requests received
- Payson Senior Center – refers riders to local taxi service for unfulfilled requests



LEVEL OF SERVICE PROVIDED

Based on survey responses, service providers provide the following level of service:

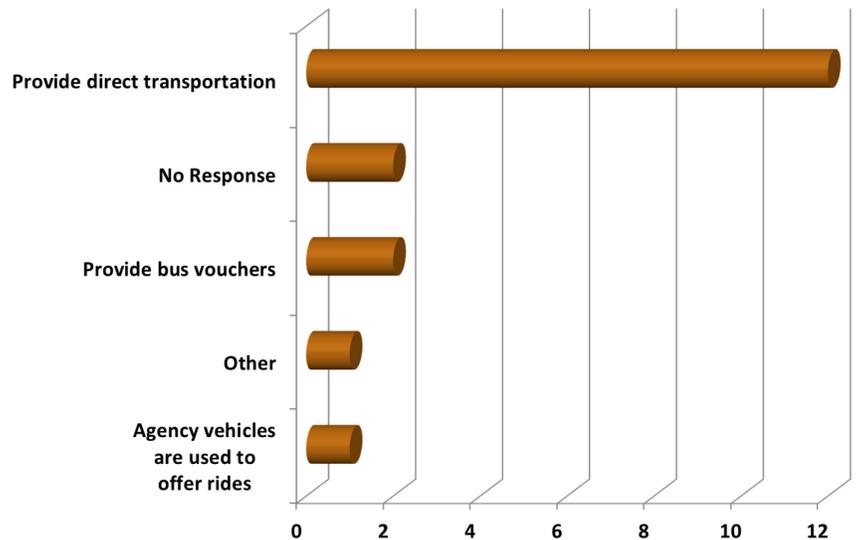
- 53 percent provide door-to-door service
- CVCT drivers can assist riders with packages, as needed
- Most common destinations include employment centers, medical, church, general shopping, schools, and to the airport



TRANSPORTATION ASSISTANCE

Based on survey responses, service providers provide the following assistance programs:

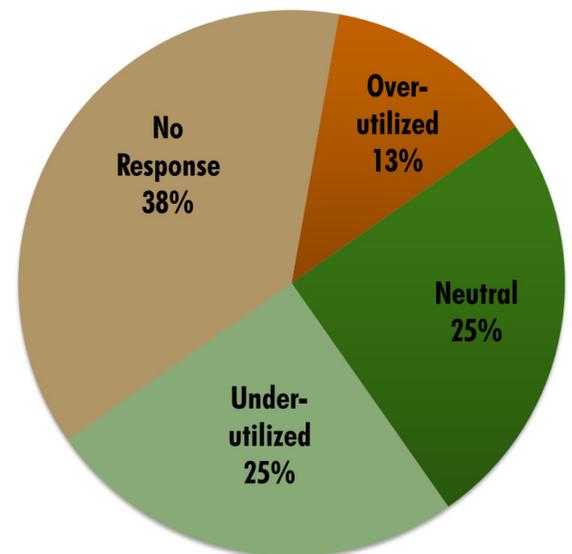
- 67 percent provide direct transportation services
- CVCT and San Carlos Nnee Bich'o Nii provide bus vouchers
- Mountain Valley Shuttle provides freight service and assists charities such as St. Vicente de Paul and the Salvation Army



SERVICE UTILIZATION

Based on survey responses, service providers stated they feel is largely under-utilized or they are neutral on the current utilization of their service:

- The Globe Boys and Girls Club stated they have too many users for the number of vehicles available
- Reasons primarily cited for under-utilization included:
 - CVCT stated that “Cobre Valley” is also the name for the hospital medical transportation service
 - Mountain Valley Shuttle stated they need marketing assistance
 - Payson Airport Shuttle stated that many trips are made with just one or two passengers



SERVICE ROUTES AND SCHEDULES

Based on survey responses, the following are service routes and schedule characteristics:

- Service Routes and Schedules:
 - Average time service begins: between 6:00am to 8:00am
 - Average time service ends: between 3:00pm to 4:30pm
 - Average frequency: approximately 30 trips per day
- Times and Days of the Week
 - Most services provide on-demand transportation for the majority of the day and week
- Reservations
 - Calls to reserve transportation should be made between 48 hours and 12 hours for most services

RIDERSHIP

Based on survey responses, transit providers have the following annual ridership details:

- Annual ridership ranges between 500 to 33,000
- Globe Boys and Girls Club: 45 riders per day during the school year and 63 riders per day in the summer
- Community Presbyterian: 8-10 students a day
- Globe Active Adult Center: 255 trips per month on average
- Payson Senior Center: Was 9,000, due to cutbacks now 7,000
- Pinal-Gila Council for Senior Citizens: 32,292 trips per year (496 individuals)
- Central Arizona Council and Horizon Human Services: Over 1,000 wheelchair trips a year

FLEET INFORMATION

Table 5.1 outlines fleet information provided by service providers surveyed.

- The largest fleet is the San Carlos Nnee Bich'o Nii with 22 vehicles
- Vans are the most common vehicle type
- Total fleet vehicles:
 - Van – 35
 - Sedan – 13
 - Bus – 11
 - Ambulance – 7
 - Minivan - 6
- 46 percent of vehicles are more than 5 years old
- 55 percent of vehicles are in a good condition

Table 5.1: Fleet Information

Agency	Vehicle Type	Total Number of	Wheelchair Accessible	Vehicle Age				Vehicle Condition		
				< 1 year	2-3 years	3-5 years	> 5 years	Very Good	Good	Poor
Globe Boys and Girls Club	Van	1	0	0	0	0	1	1	0	0
Central Arizona Council	Van	1	1	0	0	0	1	1	0	0
Central Arizona Council	Minivan	1	0	1	0	0	0	1	0	0
Community Presbyterian	Bus	2	1	0	0	0	2	0	2	0
Globe Active Adult Center	Van	2	2					2	0	0
Horizon Health and Wellness	Van	8	3	2	2	2	2	4	3	1
Horizon Health and Wellness	Minivan	4	0	1	5	1	0	1	2	1
Horizon Health and Wellness	Sedan	8	0	1	4	3	0	1	7	0
Lifestar Ambulance	Sedan	1	0	0	0	0	1	1	0	0
Lifestar Ambulance	Ambulance	7	0	5	0	0	2	2	7	0
Payson Airport Shuttle	Van	1	0	0	0	0	1	1	0	0
Payson Airport Shuttle	Sedan	2	0	0	0	0	2	1	1	0
Payson Care Center	Bus	1	1	0	0	0	1	0	1	0
Payson Care Center	Van	1	1	0	0	0	1	0	1	0
San Carlos Apache Nnee Bich'o Nee	Van	16	0	2	0	0	14			
San Carlos Apache Nnee Bich'o Nee	Bus	4	0	0	2	2	0			
San Carlos Apache Nnee Bich'o Nee	Sedan	2	0	0	0	0	2			
Payson Senior Center	Bus	2	2	0	1	0	1	1	1	0
Payson Senior Center	Van	1	0	0	0	0	1	1	0	0
Payson Senior Center	Minivan	1	1	0	0	1	0	1	0	0
Phoenix VA Transportation Department	Van	2	2					0	2	0
White Mountain Apache Tribe	Bus	2	2	2	0	0	0	2	0	0
Mountain Valley Shuttle	Van	2	0	0	1	0	1	0	1	0

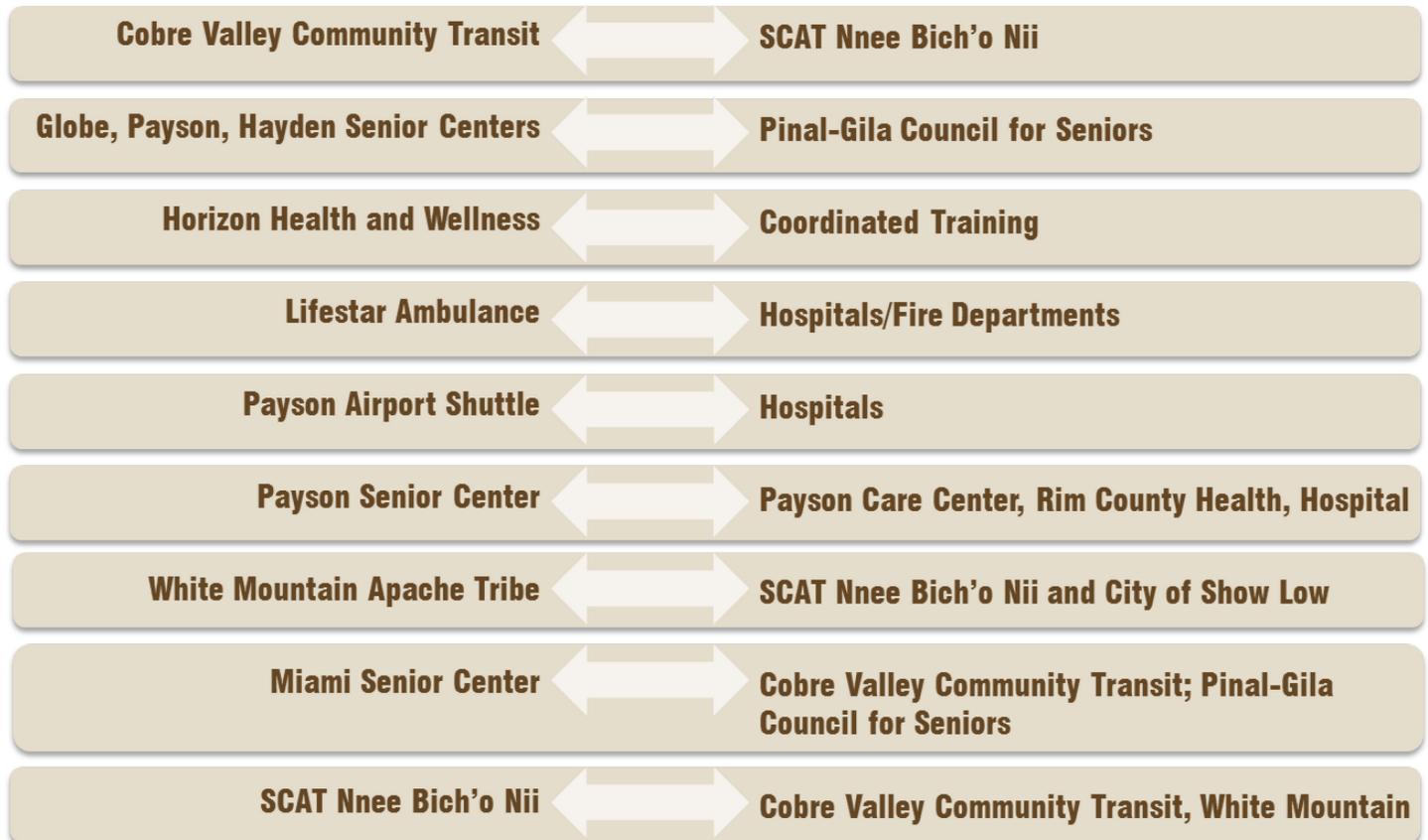
FUNDING AND REVENUE SOURCES

Based on survey responses, transit providers cited the following funding and revenue source:

- The most commonly received funding sources are City of Globe, Town of Miami, FTA Section 5311 (via ADOT), and Gila County
- Fare practices vary greatly between agencies.
 - Globe Boys and Girls Club: \$25 Annual Membership , \$25 fee
 - CVCT: \$1 regular fare per zone; \$0.50 reduced fare
 - Mountain Valley Shuttle: varies between \$20 to \$60 depending on trip length
 - Globe Active Adult Center: suggested donation of \$0.50, but is usually not collected
 - Payson Airport Shuttle: \$70 per person one way, upcharge for early morning and late-night pickups
 - Payson Senior Center: suggested donation of \$5 for roundtrip

SERVICE COORDINATION

Based on survey responses, the following service providers coordinate services:



UNMET NEEDS AND FUTURE PLANS

UNMET NEEDS

- Cobre Valley Community Transit:
 - Shelters at key stops
 - More stops in Claypool and need stops at Taco Bell, AM/PM, close to hotels; serve high school
 - Restructure of fares and schedule, including weekend service
 - Need standardized fair break-points
- Mountain Valley Shuttle:
 - Need more business
 - Would like to better maintain vans
- San Carlos Apache Nnee Bich'o Nii:
 - Regional dispatch center
 - Explore feasibility of Gila Transit Authority
- Community Presbyterian: public transit in Payson
- Payson Senior Center:
 - Service to Pine, Strawberry, Mesa de Caballo, Young
 - Service to transport medical patients seeking treatment
- White Mountain Apache Tribe: transportation division headquarters at Whiteriver airport
- Pinal-Gila Council for Senior Citizens: connecting services to/from fixed route pick-up stops
- Central Arizona Council: have to take vehicles to Arizona Bus Sales for wheelchair lift maintenance
- Globe Active Adult Center: need service to take persons to doctor appointments, shopping, etc.

FUTURE PLANS

- 56 percent of surveyed providers have plans for expansion
- Globe Boys and Girls Club : applied for a grant to Freeport-McMoran for an additional van
- Cobre Valley Community Transit:
 - Construct a new transit center at senior center in Miami
 - Remove Southwest Gas bus stop
- San Carlos Apache Nnee Bich'o Nii:
 - Provide service to Tucson
 - Implement "Copper Corridor" service (Globe - Winkleman - Superior - Miami - Globe)
- Payson Airport Shuttle: exploring airport shuttle service from the Globe-Miami area
- Phoenix VA Transportation Department: reviewing options for service to San Carlos and White Mountain Tribal areas
- White Mountain Apache Tribe:
 - Provide a seasonal connection with San Carlos Apache Nnee Bich'o Nii service
 - Expand service to five western communities
 - Implement Cibicue - Show Low service via US 60

6. TRANSIT NEEDS AND DEMAND

To better understand the demand and need for transit services in the study area, three separate methods were utilized:

- Transit needs and demands estimated utilizing transit industry standard developed by the Transit Cooperative Research Program (TCRP)
- Propensity model that illustrates areas with a high potential for transit demand
- Public needs assessment

This chapter presents the findings of these methods.

TCRP TRANSIT NEEDS AND DEMAND

Transit needs and demands were estimated using the *TCRP Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation*. Methods developed by the TCRP are designed to help determine the need for public transit service, as well as the annual ridership (i.e. demand) that a transit service may carry. The method estimates study area transit needs in two ways:

- The number of people in study area likely to need passenger transportation, and
- The number of trips that would be made by those persons if they had minimal limitations on their personal mobility

Not all unmet need will be provided by public passenger transportation services. Persons lacking a personal vehicle or the ability to drive often receive rides from friends, relatives, social-service agencies, as well as from public services.

PEOPLE LIKELY TO NEED PASSENGER TRANSPORTATION

In rural areas, the total number of people in need for transit service is the sum of persons living in households with incomes below the poverty level and the number of persons residing in households with no access to a vehicle. Table 6.1 provides an estimate for the total number of persons with transit needs. As shown in the Table, the Focus Area and the San Carlos Apache Indian Reservation have a high need for public transportation.



Table 6.1: Estimate of Persons with Transportation Needs

TCRP Report 161 Variable	Globe-Miami	Payson-Star Valley	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Persons residing in households with income below the poverty level	1,828	2,270	5,125	11,839	3,833
Persons residing in households owning no automobile	462	928	1,466	2,994	629
Total persons in need of passenger transportation service	2,290	3,198	6,591	14,833	4,462

Source: American Community Survey Tables B17001 and B08201, 2011-2015 5-Year Estimates Transit Cooperative Research (TCR) Program Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

NUMBER OF PERSON TRIPS

A second measure of transit need, expressed in daily one-way person trips, is the estimation of the total number of daily trips not taken by households with zero vehicle availability compared to households with access to a vehicle. This procedure uses a factor called the mobility gap. The mobility gap is based on the 2009 National Household Travel Survey and represents the total number of trips not taken because a person has no access to a vehicle. In Arizona, the mobility gap is 0.80.

$$\text{Number of Households having No Car} \times \text{Mobility Gap (0.80)} = \text{Need (one-way trips per day)}$$

Table 6.2 outlines the total number of daily one-way trips and annual one-way transit trips based on the above formula. As illustrated in the Table, the Focus Area as a whole has a high transit need, with a calculated 1,206 daily one-way trips. Payson and the San Carlos Apache Tribe also have a high estimated transit need.

Table 6.2: Estimate of Person Trips

TCRP Report 161 Variable	Globe-Miami	Payson-Star Valley	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Total households without access to vehicle	254	507	574	1,507	472
Arizona trips per capita On transit	0.80				
Total Transit Need					
Daily one-way transit trips	203	406	459	1,206	378
Annual one-way transit trips	60,960	121,680	137,760	361,680	113,280

Source: American Community Survey Tables B17001 and B08201, 2011-2015 5-Year Estimates Transit Cooperative Research (TCR) Program Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

TRANSIT DEMAND

The TCRP states that the estimate of need illustrated above is typically greater than the actual number of trips actually observed on rural passenger transportation system. According to the TCRP, testing found that, at best, only 20 percent of mobility gap trip-based needs were met through rural transit agencies. Much of the remaining trip-based mobility gap is likely filled by friends and relatives driving residents of non-car-owning households. Transit demand is the estimation of the number of trips likely to be made over a given period. Based the 2009 Rural National Transit Database, TCRP Report 161 developed the following equation to estimate transit demand in rural areas:

$$\left(\text{Population Age 60 and Older} \times 2.20 \text{ Factor} \right) + \left(\text{Mobility Limited Population Age 18 to 64} \times 5.21 \text{ Factor} \right) + \left(\text{Residents of Households having No Vehicle} \times 1.52 \text{ Factor} \right)$$

Table 6.3 provides an estimate for transit demand in the study area. As shown in the table, the Focus Area, the Pinal County portion of the Study Area, and the Payson-Star Valley area have the highest demand for transit.

Table 6.3: Estimate of Transit Demand

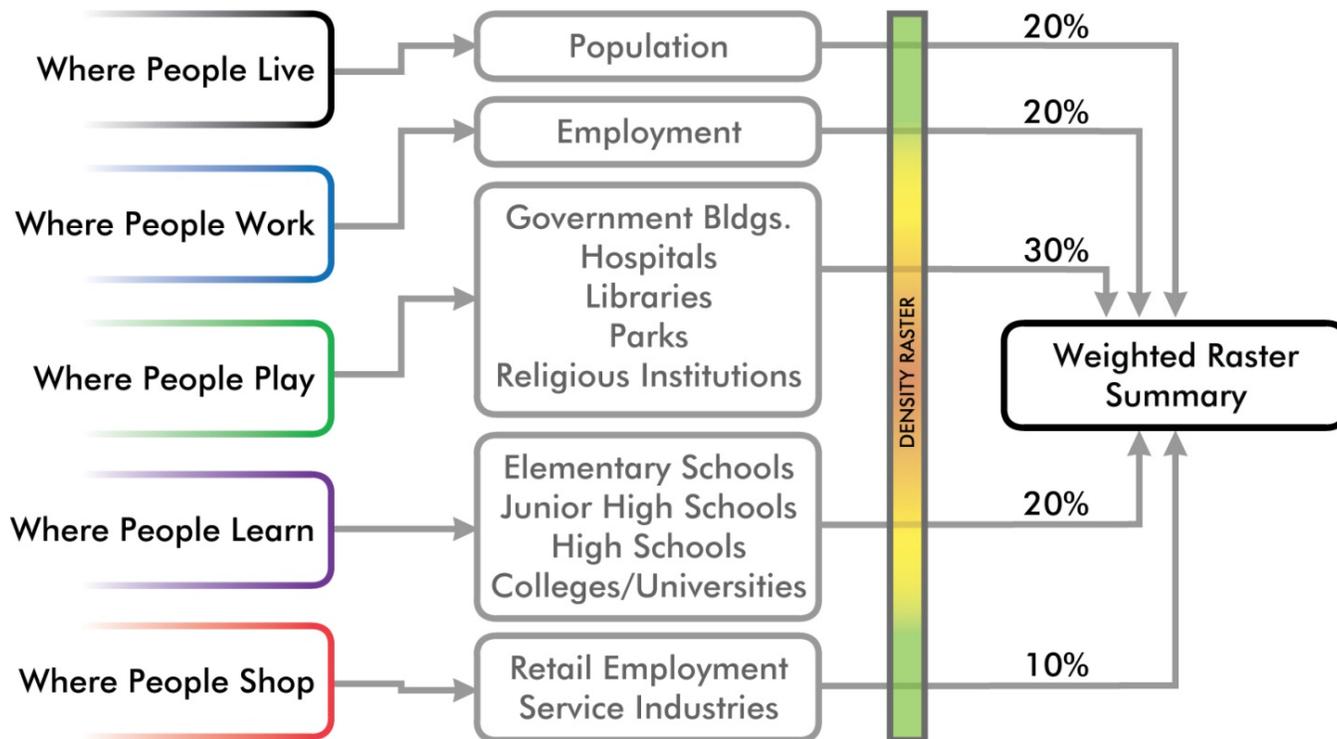
TCRP Report 161 Variable	Globe-Miami	Payson-Star Valley	San Carlos Apache Indian Reservation*	Focus Area	Pinal County Portion of Study Area
Population age 60 and older	2,362	7,671	1,042	17,627	16,883
Mobility limited population age 18 to 64	150	589	208	1,586	5,446
Residents of households having no vehicle	462	928	1,466	2,994	629
Non-program related passenger transportation demand	6,680	21,355	5,604	51,593	66,472

Source: American Community Survey Tables B01001, B17001 and B08201, 2011-2015 5--Year Estimates Transit Cooperative Research (TCR) Program Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation

*San Carlos Apache Indian Reservation population includes the entirety of the San Carlos Apache Indian Reservation

TRANSIT DEMAND MODEL

The basis for any transit demand analysis begins with identifying areas with high residential and employment densities. Beyond those basic trip generators, a range of trip attractions (such as school, library, recreation center, employment centers, etc.) must also be incorporated into the analysis. To assess non-motorized demand, a GIS-based model was utilized to generate a model of the demand of these trip generators and attractors. As illustrated below, trip attractors and generators were identified and categorized into where people **Live, Work, Play, Learn, or Shop**. Based on the cumulative scoring, areas with high current and potential transit need can be identified.



Utilizing the methodology above, areas with higher and lower densities of activity centers, points of interest, population, and employment can easily be identified. Figures 6.1 through 6.5 illustrate the locations of the various points in the Live, Work, Play, Learn, Shop model and the relative density of each category. Figure 6.6 presents the cumulative scoring over the Transit Demand Model. As illustrated in the figure, areas with high potential demand for transit service includes:

- Globe – Miami Area
- Payson – Pine - Star Valley area
- San Carlos – Peridot area
- Superior – Kearny – Hayden in Pinal County
- Southern Pinal County

Figure 6.1: Where People Live in the Study Area

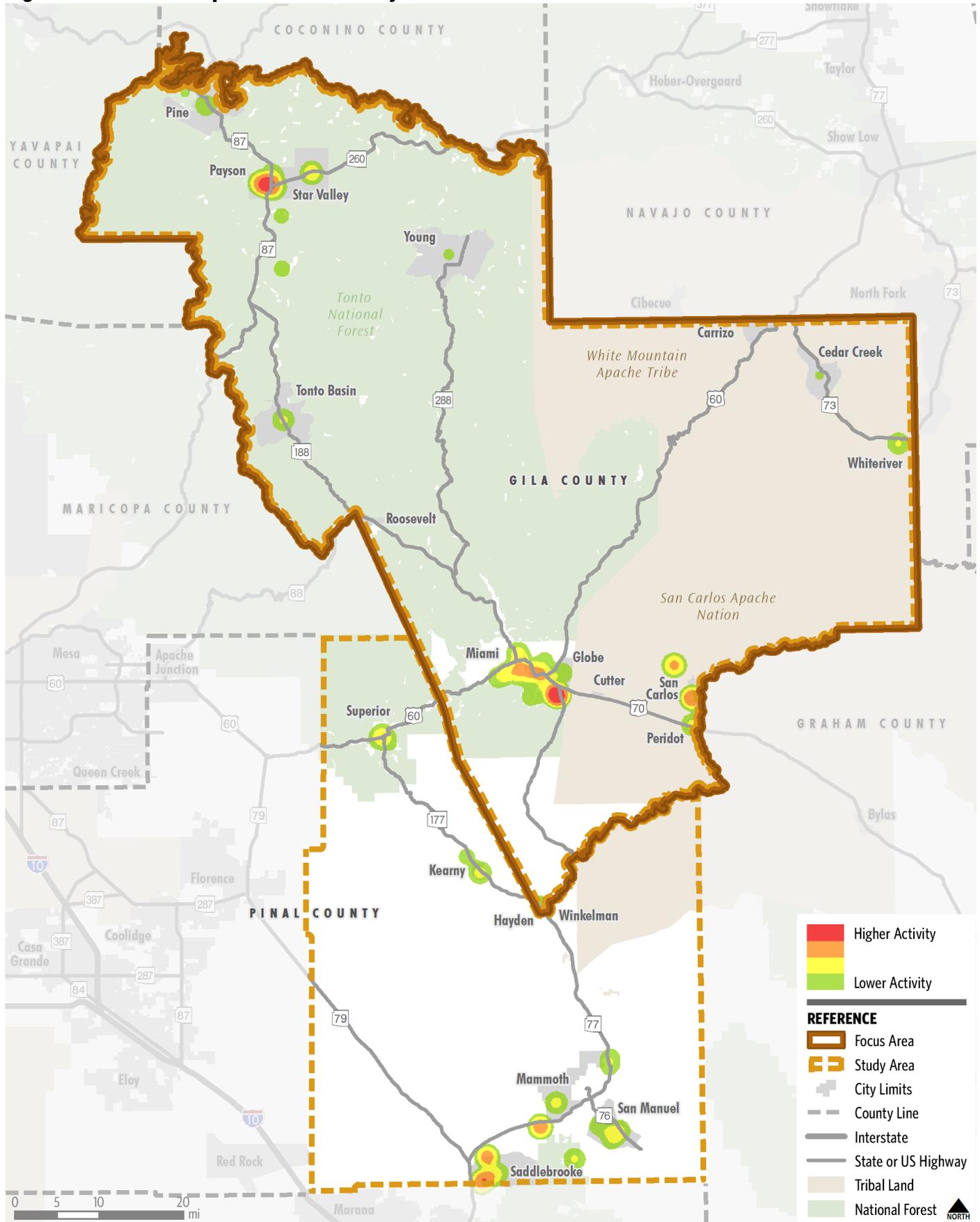


Figure 6.2: Where People Work in the Study Area

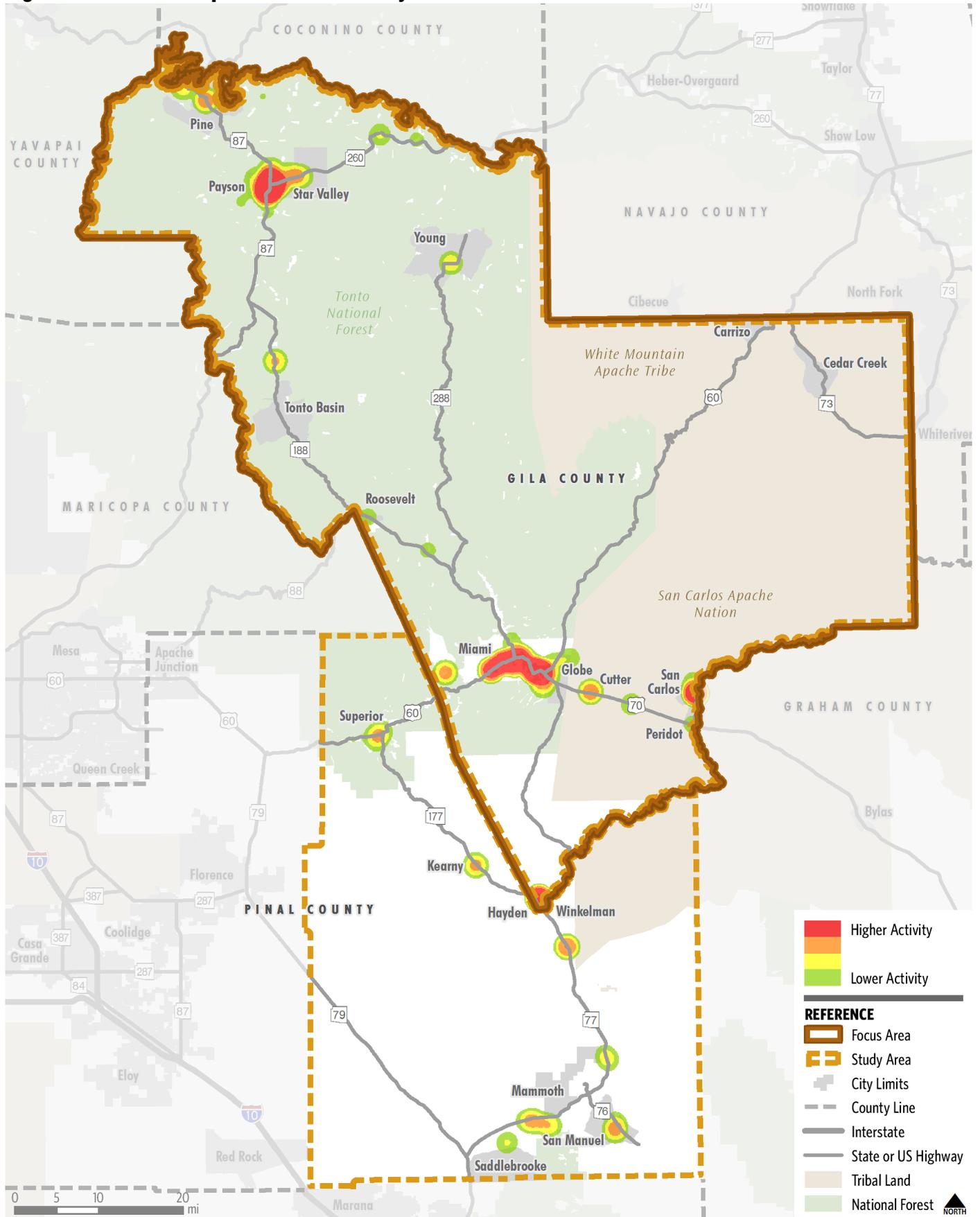


Figure 6.3: Where People Play in the Study Area

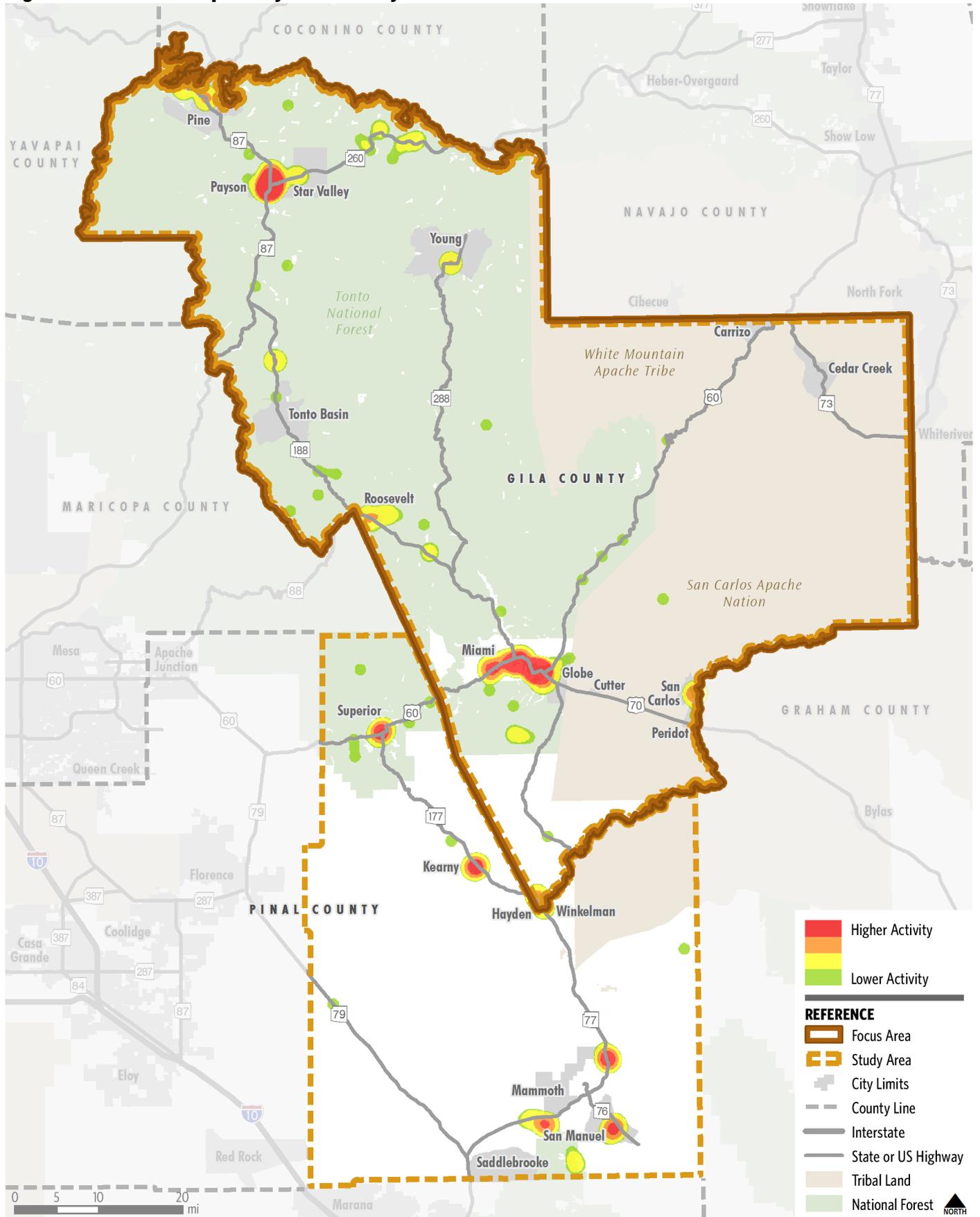


Figure 6.4: Where People Learn in the Study Area

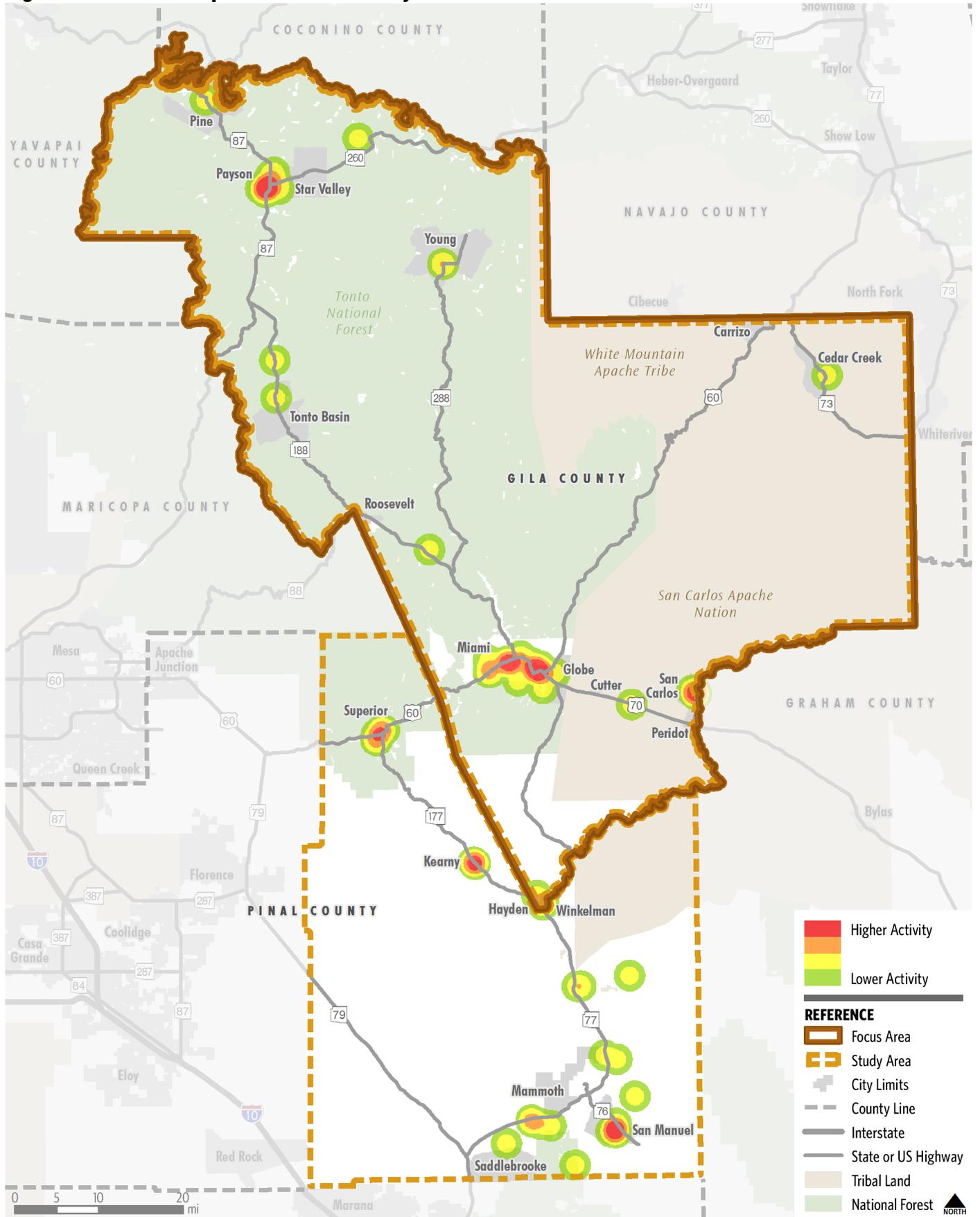
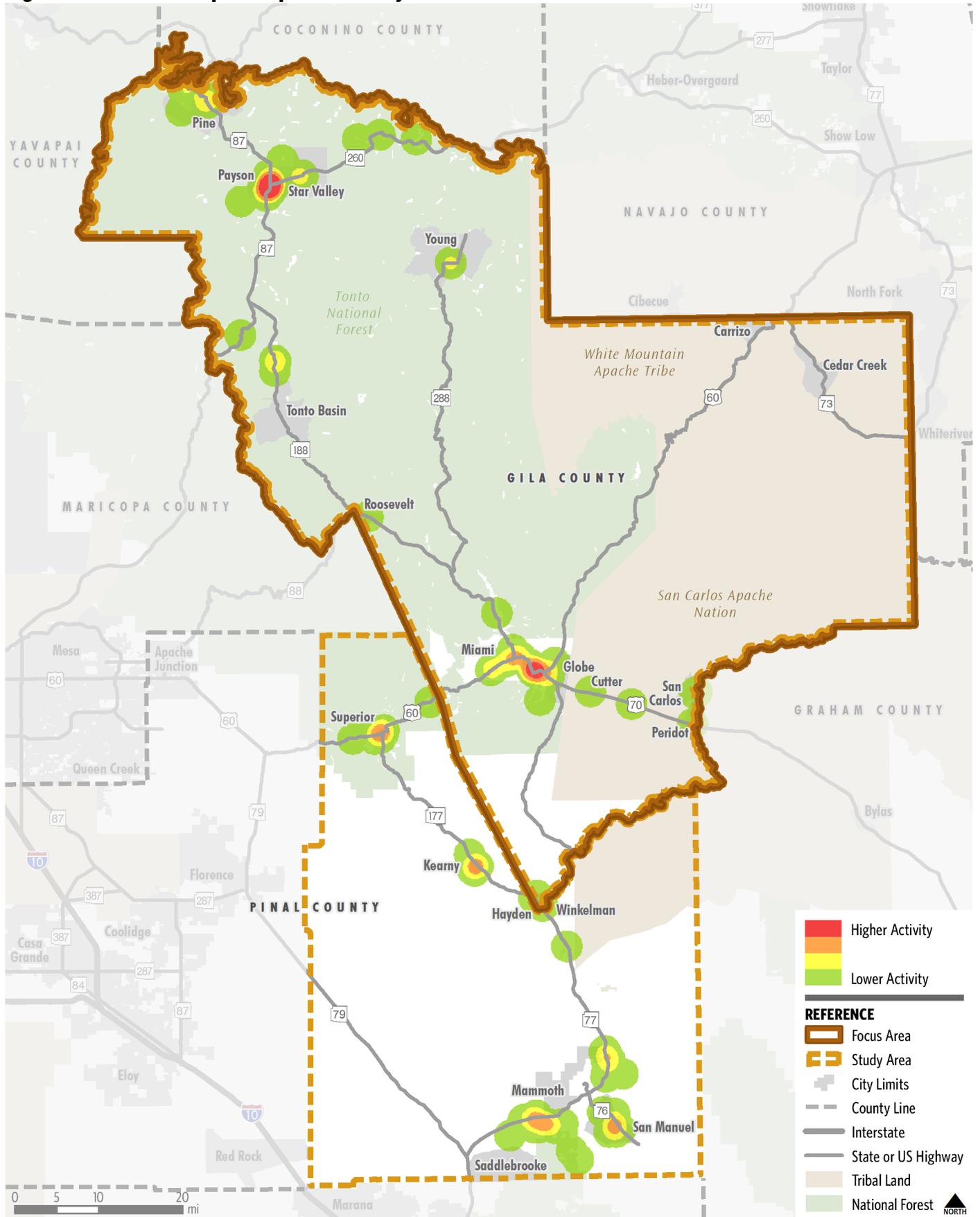


Figure 6.5: Where People Shop in the Study Area



PUBLIC NEEDS ASSESSMENT

In addition to speaking with stakeholders and data analysis, a community survey was also conducted to gather information on the public attitudes towards public transportation and how residents are traveling in/out of Gila County. The goal of the survey was to obtain public input on:

- What types of transportation residents are most commonly using
- Where and how many times a week are residents traveling for work, shopping, medical, school, or other reasons
- What limits residents from getting to where they want/need to go
- How residents feel about public transit and if it were available what reasons would they use them
- What types of services residents would like to see in Gila County

A copy of the survey is provided in Appendix A.

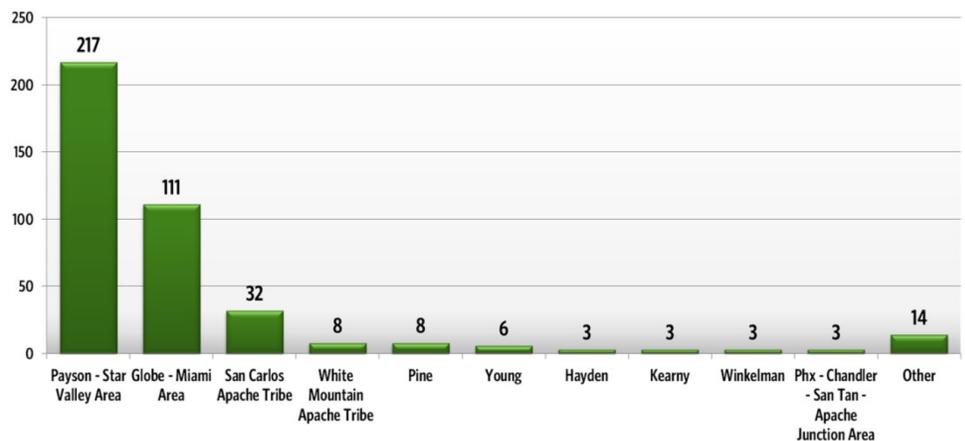
SURVEY PROCESS

The survey was administrated during the months of September and October 2017. Both a hardcopy and electronic, online survey were developed. With the assistance of CAG staff, study team members, members of the TWG, and community organizations, flyers and hardcopy surveys were distributed at major activity centers throughout Gila County. The vast majority of responses, however, came through efforts initiated by members of the TWG, who posted the survey link on their social media pages and outreach with local schools and public agencies. The online and hardcopy survey was also available in Spanish. Survey respondents were also entered into a drawing for one of two \$50 VISA gift cards. In total, a total of 408 surveys were completed. Results presented henceforth represent the results of the 408 surveys received and may not represent a complete picture of the needs of residents in the Focus Area.

CHARACTERISTICS OF SURVEY RESPONDENTS

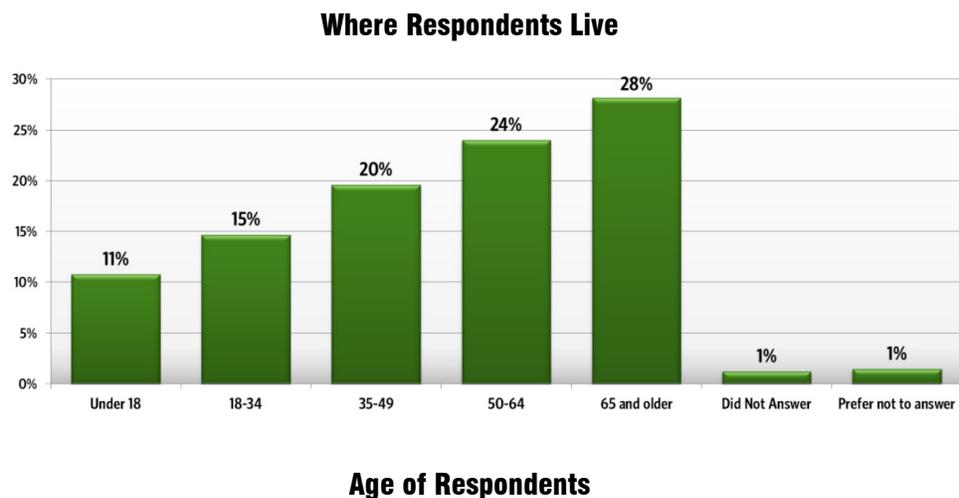
Where Respondent Live

- 53 percent reside in the Payson – Star Valley Area
- 27 percent reside in the Globe – Miami Area



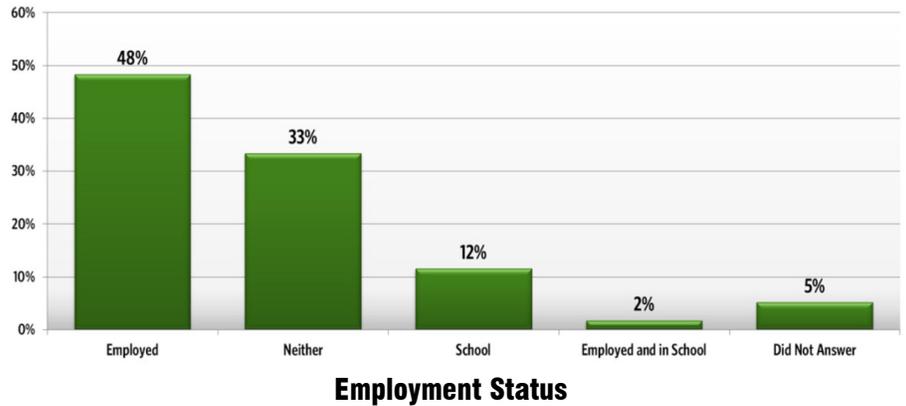
Age of Respondents

- Under 18 years of age: 11 percent of respondents
- Ages 18 to 49: 35 percent of respondents
- 52 percent or respondents are 50 years of age or older
- 75 percent of Payson-Star Valley area respondents are 65 years of age or older
- 36 percent of Globe-Miami area respondents are under the age of 18



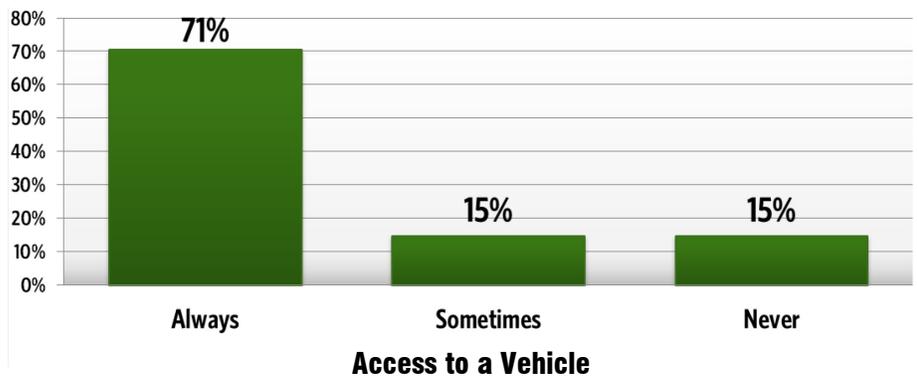
Employment Status

- 27.5 percent of Payson-Star Valley respondents are not employed
- Place of Work:
 - 56.7 percent in Payson-Star Valley
 - 16.3 percent in Globe-Miami area
 - 11.2 percent in San Carlos Apache Indian Reservation
- Students – 83 percent attend school in Globe



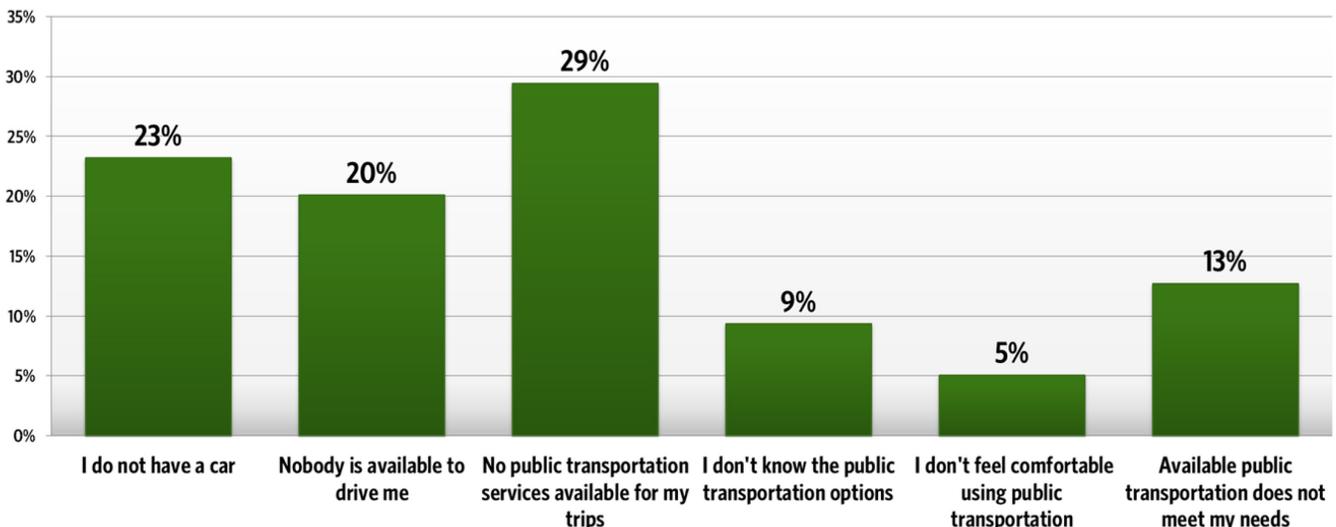
Access to a Vehicle

- 53 percent of Globe-Miami respondents have no access to a vehicle
- 69 percent of San Carlos Apache Tribe respondents have no access to a vehicle
- 88 percent of those that never or sometimes have access to a car stated they would use public transportation if it were available



Travel Limitations

- 53 percent of respondents commented that there is no public transportation available for their trips
- 43 percent of Payson-Star Valley respondents commented that there is no public transportation available
- 13 percent commented that current public transportation options do not meet their needs



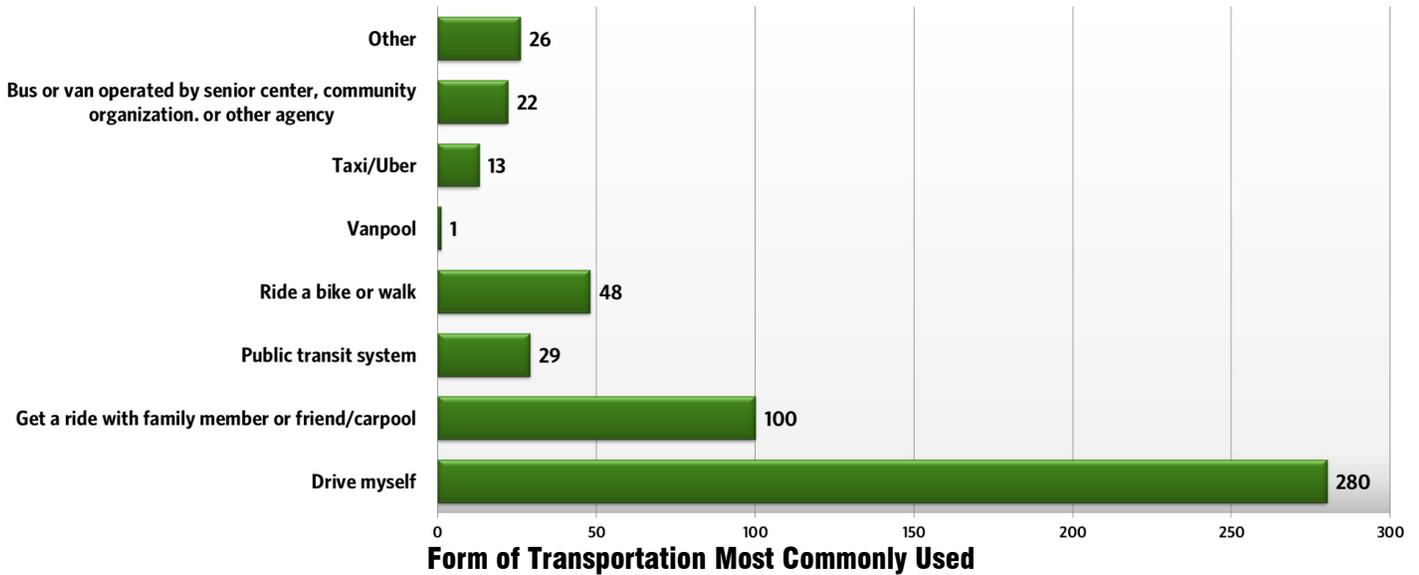
What Keeps Respondents From Where They Need To Go

RESPONDENTS TRAVEL BEHAVIORS

The survey included questions regarding existing commute and travel patterns of respondents to aid in identifying gaps in current services.

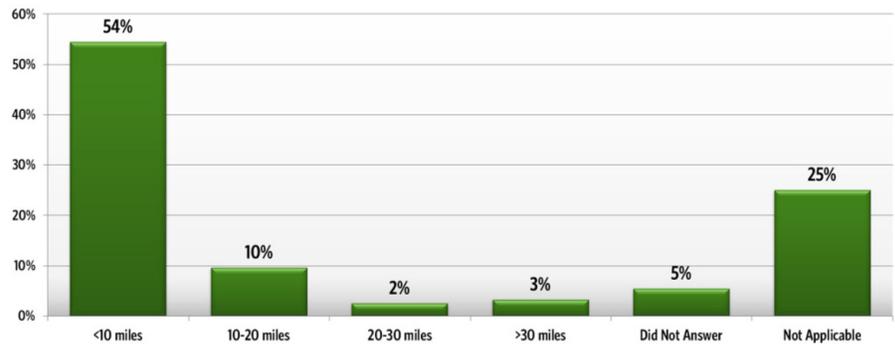
Form of Transportation Commonly Used

- 62 percent of public transit riders reside in Globe-Miami
- 46 percent respondents that cited “get a ride or carpool” as their main form of transportation reside in Globe-Miami
- 84 percent of Payson-Star Valley residents drive themselves



Distance Traveled for Work or School

Over 54 percent of respondents stated they travel less than 10 miles for work. As outlined in Chapter 3, the US Census shows an average commute time of 21 minutes in Gila County.



Distance Traveled For Work or School

Frequent Origins and Desintations

The survey also included a question that asked respondents to indicate which towns they travel to for what reasons, giving them the choice of employment, shopping, medical appointment, entertainment/visiting friends/family, and school/college. Findings from this question are illustrated in Figure 6.7. As show in the figure:

- Trips within Payson and Star Valley are the most common trips, with a total of 1,653 trips
- Respondents cited Payson, Globe, and the Phoenix metropolitan area as important destinations for shopping, visiting friends/family, and medical purposes
- There is a large number of trips occurring between Globe-Miami area and the San Carlos – Peridot area

Figure 6.7: Frequent Origins and Destinations

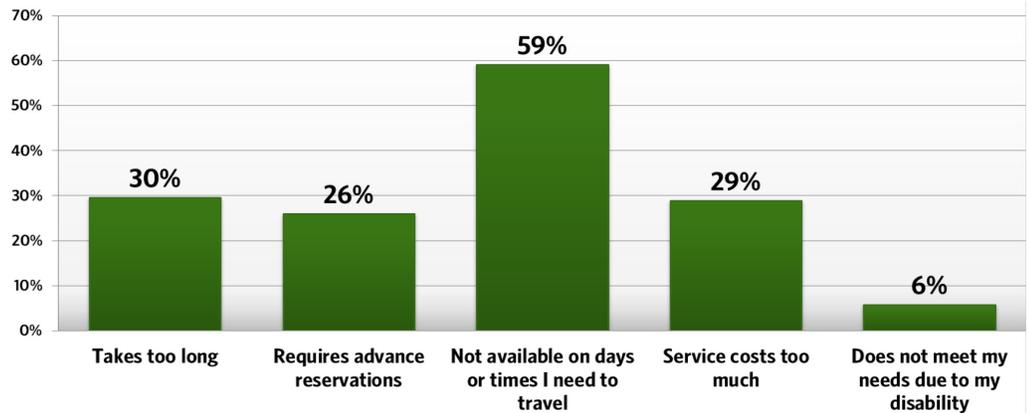


PUBLIC TRANSPORTATION ATTITUDES

The survey included a question that encouraged respondents to report their attitudes towards existing public transportation.

Current Public Transportation

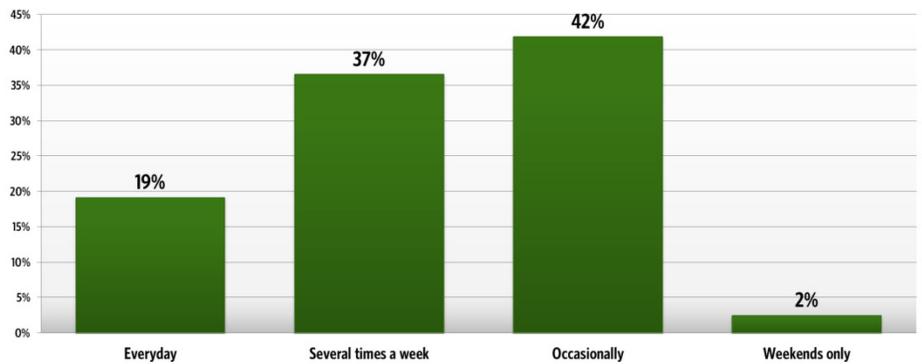
- 60 percent of respondents commented that public transportation is not available on the days or times they need to travel
- 30 percent commented that existing services take too long



Travel Limitations of Current Public Transportation

Potential Public Transportation Use

- 72 percent of respondents stated that would utilize public transportation if it were available
- 62 percent of Payson – Star Valley area residents stated they would utilize public transportation if it were available



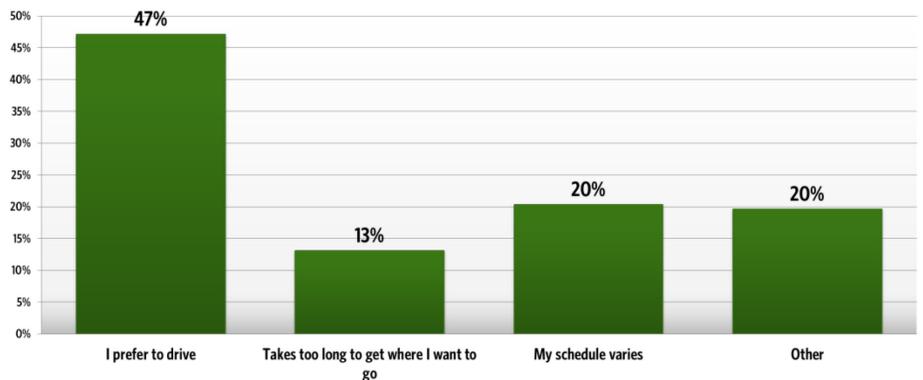
If Public Transportation Were Available – How Often It Would Be Utilized

If Public Transportation Were Available – How Often It Would be Utilized

42 percent of respondents stated that would utilize public transportation occasionally, while 37 percent stated they would utilize it several times a week

Reason for Not Wanting to Utilize Public Transportation

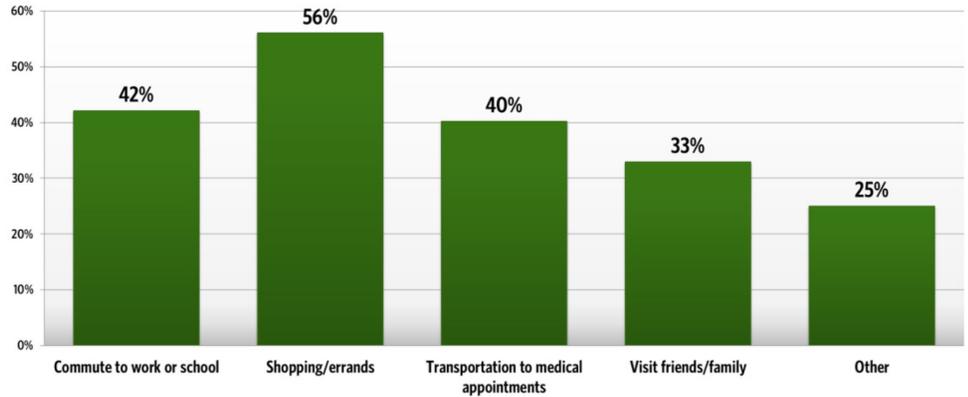
47 percent of those that stated they would not utilize public transportation if it were available cited the preference for driving over using public transportation



Reason for Not Wanting to Utilize Public Transportation

Public Transportation Trip Purpose

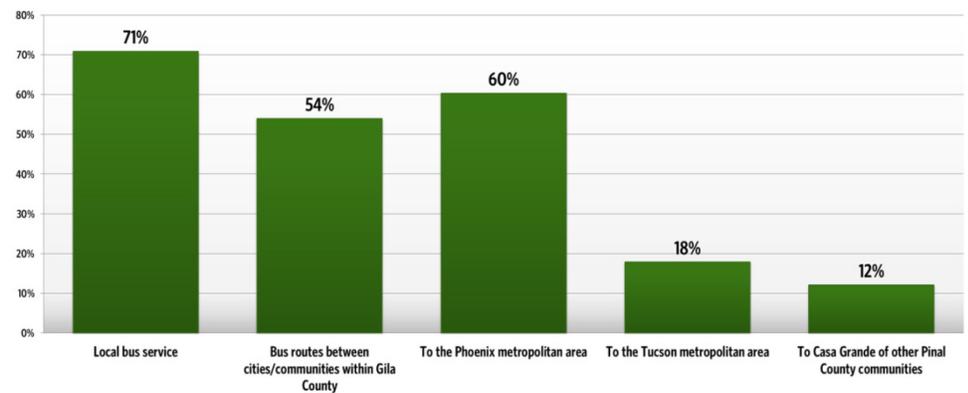
- 56 percent of respondents stated they would utilize public transportation for shopping/errands
- 27 percent of Payson-Star Valley area residents that commented they would utilize public transportation for medical appointments and picking-up medical prescriptions



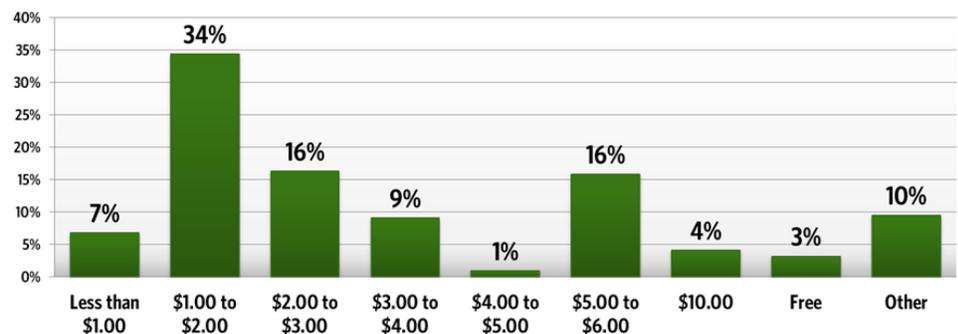
Likely Usage of Public Transportation

Public Transportation Options in Gila County

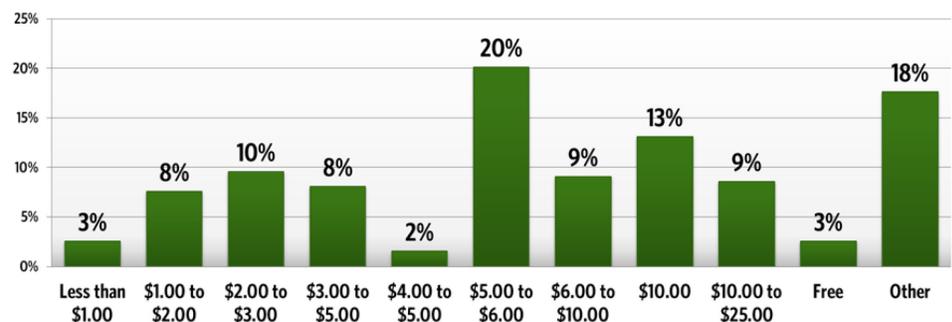
- Respondents primarily cited fixed-route service with published departure/arrival times and fixed bus routes the type of service best suited for Gila County
- 71 percent commented that local bus service appealed to them the most, while 60 percent cited transit service to the Phoenix metropolitan area
- If public transit was available, the following destinations were recommended:
 - Payson to Globe – 37 respondents
 - Payson to Pine – 22 respondents
 - Payson to Star Valley – 14 respondents
 - Globe to Miami – 11 respondents
- For one-way trips within a community, the majority of respondents commented they would pay between \$1.00 to \$3.00 for each trip
- For one-way trips between communities, the majority of respondents commented they would pay between \$5.00 to \$10.00 for each trip



Most Appealing Transit Service Options



One-Way Trip Price – Within a Community



One-Way Trip Price – Between Communities

7. DRAFT TRANSIT PLAN

In general, transit is cost-effective when large volumes of transit riders can be transported for short to moderate distances. Gila County; however, has a small population base, spread out over a large area with long trip distances. These challenges make it harder to provide effective transit service that covers the entire County. Despite these challenges, San Carlos Apache Transit (Nnee Bich'o Nii transit services) and the Cobre Valley Community Transit (CVCT), the two main transit providers in Gila County, have been operating a successful service and serving their respective community members.

This chapter discusses the challenges and opportunities for transit in Gila County and presents a list of potential transit improvement recommendations. Final transit improvements approved/recommended by the Technical Working Group will then be carried forward into the Implementation Plan for further evaluation.

CHALLENGES AND OPPORTUNITIES

Findings collected through existing conditions analysis, review of previous studies, and public and stakeholder outreach efforts suggest that there are both challenges and opportunities associated with expanding public transit services in Gila County. The following summarizes the challenges and opportunities Gila County faces in relation to public transportation.

CHALLENGES

- Population, activity center, and employment density in Gila County is fairly low; however, there are key areas that could support fixed-route transit service, including Payson-Star Valley, Globe-Miami, and San Carlos-Peridot areas.
- Gila County is an automobile-oriented area, with long-distance commute times, limited pedestrian infrastructure in densely populated areas, and long walking distances off main roads.
- Geography: long distances between the residential, employment and service centers; significant walking distances off main roads; and difficult weather.
- Lack of education and marketing creates an information gap – particularly in the Globe-Miami area.
- Previous transit studies conducted within Payson have recommended some type of transit services; however, none have been realized through investment by the Town leadership to date.

OPPORTUNITIES

- The popularity of the Mountain Valley Shuttle service from Show Low to Payson and the City of Phoenix illustrates the public interest in regional public transportation services. Long-distance regional travel's target market would primarily include residents looking for transportation to medical services and to regional travel facilities (i.e., Mesa Gateway Airport, Phoenix Sky Harbor Airport, Valley Metro light rail, etc.).
- Initial public outreach suggests that a large portion of resident's in the Payson-Star Valley-Pine area are highly interested in public transportation. Population characteristics of these areas are also largely comprised of traditionally transit dependent population groups.
- San Carlos Apache Transit, CVCT, and the White Mountain Apache Tribe have begun to develop partnerships, which could be leveraged to coordinate service routes to apply for funding.
- The majority of Gila County residents responding to the public outreach survey expressed an interest in developing public transportation. Survey respondents felt public transportation could be most valuable if it was oriented towards meeting the needs of the most vulnerable (older adults and people with low incomes) population groups and employment related transportation.

DRAFT TRANSIT IMPROVEMENT RECOMMENDATIONS

In addition to the challenges and opportunities discussed above, the following are some of the factors considered in developing the recommendations.

- Existing available transit options and their current usage
- Current demographic patterns in the region and in each of the major communities
- Potential ridership estimates
- Public feedback from survey
- Feedback from current providers in the area
- Stakeholder input
- Innovative ways to improve services

Recommendations are summarized for each of the major communities of Globe-Miami, San Carlos Apache Tribe, Payson-Star Valley, and at the countywide level.

PAYSON-STAR VALLEY AREA

The Payson-Star Valley area is the largest populated area in the County, but the area currently does not have any public transportation service. Transit demand estimates, propensity model results, and public/stakeholder feedback discussed in previous chapters; however, illustrates that there is a fair amount of unmet transit need in the area that is capable of supporting some form of transit service. Public transit is typically designed to serve one or more of the following three populations:

Transit User Type	Transit Supporting Factors
<p>Transit-Dependent Persons are those without access to automobiles. These include persons who due to age or physical limitations are unable to drive and persons who cannot afford to own and operate an automobile.</p>	<p>Payson-Star Valley area population:</p> <ul style="list-style-type: none"> • 35 percent elderly population (highest in the County) • 13 percent of population is below poverty • 9 percent female head of household with children under 18 and no husband present
<p>Choice Riders are individuals who own or have access to automobile transportation but who, if provided with feasible options, would choose transit for some of their trips for reasons of economy or convenience.</p>	<ul style="list-style-type: none"> • 62 percent of survey respondents in Payson-Star Valley stated that they would use public transportation if it were available
<p>Persons With Special Needs comprise, in effect, a subset of the transit dependent population. These are persons who are not only unable to drive, but who also must make periodic trips for medical reasons.</p>	<ul style="list-style-type: none"> • 27 percent of survey respondents in Payson-Star Valley area commented that they would utilize public transportation for medical appointments and picking-up prescriptions • 23 percent of population in Payson-Star Valley is mobility limited

Source: American Community Survey 5-Year Data (2011-2015)

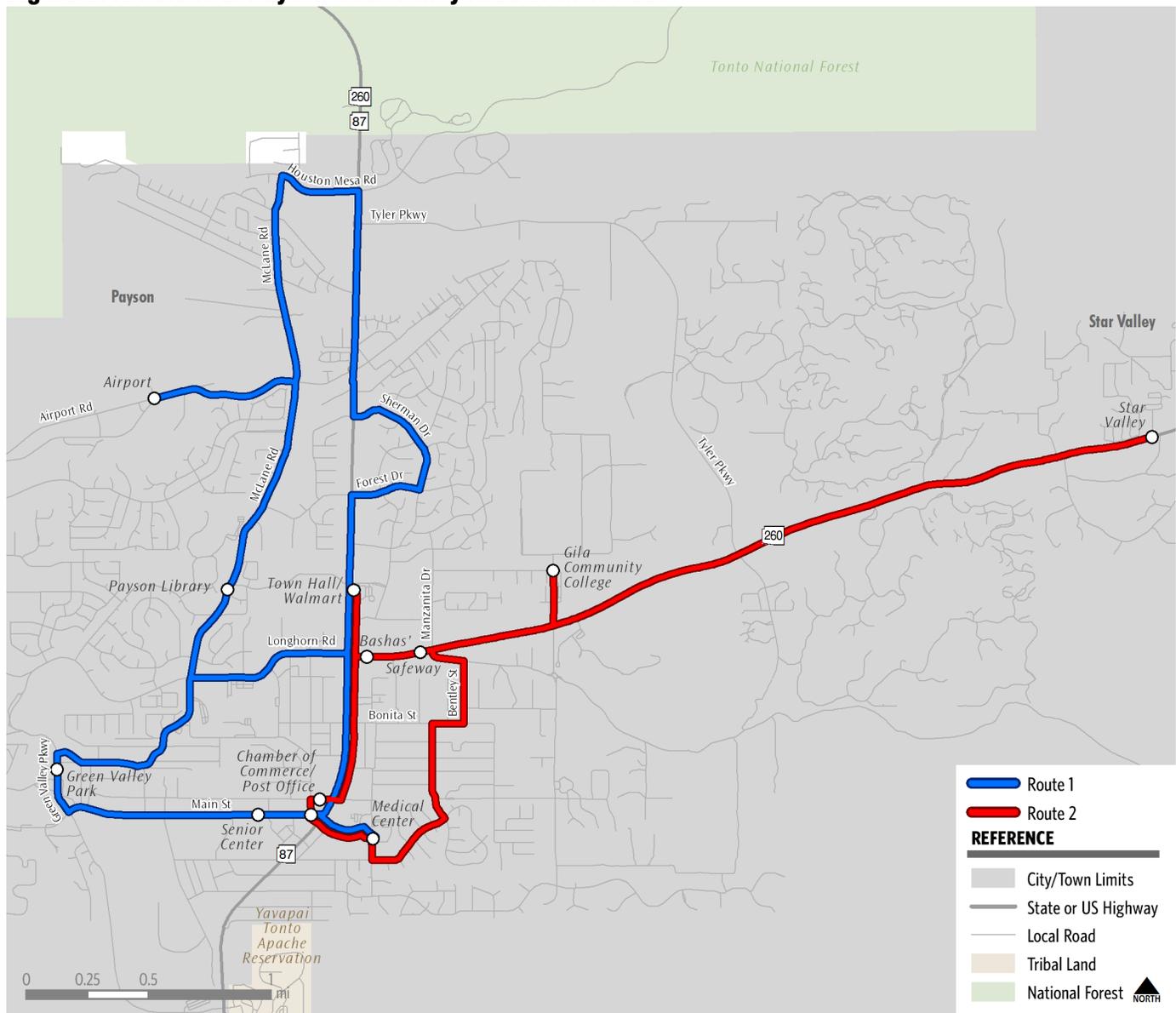
Based on review of population and employment densities, location of major activity center locations and transportation demand within the Payson-Star Valley area, the development of a transit system owned and operated by the Town of Payson, in conjunction the Town of Star Valley, is recommended. The service area would include the Town limits of Payson and Star Valley and would implement two deviated fixed-route service routes.

Figure 7.1 illustrates a concept sketch of a recommended fixed-routes to assist stakeholders and the public in visualizing what local transit service might look like in the Payson-Star Valley area. A detailed service plan, including specific bus routing, schedule, and bus stop locations will be developed as part of the Implementation Plan.

The recommended transit system includes the following service features:

- **Two deviated fixed-route service routes:**
 - **Route 1** is a loop route of approximately 9.4 miles. This primary purpose of this route is to provide access to key activity centers in the Payson area. Key activity centers could include Bashas, Green Valley Park, Payson Senior Center, Payson Medical Center, Post Office, Walmart, Airport, and the Library.
 - **Route 2** serves as a connection between Payson and Star Valley while still providing access to some of the major destinations in Payson including the Post Office, Medical Center, Bashas, Safeway, Gila Community College, and Walmart.
 - Deviations may be made to pick-up/drop-off persons meeting ADA and/or other established criteria.
- **Demand-response service with the following options:**
 - **Short-term:** Payson Senior Center, Payson Care Center, Horizon Human Services, Community Presbyterian Church and other non-profit entities would continue to provide transportation services for the most vulnerable population groups especially for medical and shopping needs.
 - **Long-term:** Payson-Star Valley transit system would establish a dial-a-ride service.

Figure 7.1: Potential Payson-Star Valley Area Transit Route



GLOBE-MIAMI AREA

CVCT is the primary provider in the Globe-Miami area. CVCT is a collaborative effort between the Town of Miami, the City of Globe, and Gila County. CVCT operates two deviated fixed-route service routes and a demand-response service. This service is fairly well utilized by area residents but has the potential to attract more riders. The following improvements are recommended to improve service and efficiency.

- **Changes to Existing Service:**
 - Expand the existing service route to include a larger portion of Miami. Expanding CVCT's existing service to the Bullion Plaza would provide increased access to key activity centers in Miami.
 - Evaluate the removal of low ridership bus stops, where an additional stop is located within a short walking distance. As part of the Implementation Plan, review detailed ridership data and evaluate the stops that can be eliminated to improve travel times and service frequency. Consolidating the stops can reduce delay and provide fast service for residents. Stops at the Southwest Gas office and Safeway are potential candidates based on preliminary review.
 - During the Implementation Plan phase of this study, evaluate the current fare system utilized.
 - Current fare prices for both fixed-route and demand-response services are low compared to peer agencies.
 - Develop a new fare zone structure for dial-a-ride service.
 - Lack of proper enforcement of reduced fare options for certain population groups have been identified as a concern by CVCT staff.
 - Install shelters with benches and with ADA access at least at key stops.
 - Install proper signage at each stop.
- **Develop a marketing and advertising plan of service to area residents.** One of the most common barriers for public transportation is the lack of publicity or ease of access to service information. During the public outreach phase, many respondents commented that they were unaware of available transit services in the area. Marketing recommendations include:
 - Establish strong online identity:
 - Create and maintain a dedicated website to disseminate up-to-date service information.
 - Expand outreach using social media sites.
 - Publish transit routes and schedules on Google Transit.
 - Develop partnerships with local college, schools, big box stores, grocery stores, major employers, post office, and hospitals.
 - Conduct outreach using traditional local media (newspapers and radio) and at community events.
- Collaborate with other transit providers such as San Carlos Apache Transit, White Mountain Apache Transit, and other non-profit agencies to facilitate connections.

SAN CARLOS APACHE TRANSIT

San Carlos Apache Transit is a well-run transit system with four fixed-routes. Ridership levels are high and area residents are well aware of the service routes and stops. SCAT routes also provide easy access to nearby large communities including Safford and Globe-Miami area. The following are recommendations specific to the SCAT service.

- Establish a regional dispatch center
- Publish transit routes and schedules on Google Transit
- Partner with and coordinate service schedules and transfer locations with other transit providers such as CVCT, White Mountain Apache Transit, and other non-profit agencies
- Evaluate the feasibility of a seasonal connection to White Mountain Apache Tribe communities
- Assess the need and feasibility of a deviated fixed-route connection from Oro Valley to the Apache Sky Casino, with stops in towns along SR 77
- Explore the need and feasibility of a deviated fixed-route connection to the Payson-Star Valley area

COUNTYWIDE/REGIONAL

The region has very limited regional connection options:

- Payson-Star Valley area residents can travel to the Phoenix metropolitan area using Mountain Valley Shuttle.
- Greyhound provides regional connections to the Phoenix metropolitan area and any destination on the Greyhound service route, with stops in Miami, Superior, and Blyas.
- Connections between Payson-Star Valley, Globe-Miami, and San Carlos-Peridot areas are very limited.
- In addition, smaller communities such as Hayden, Kearny, and Winkelman have fewer options to travel to Phoenix, Payson, and Globe.

Furthermore, the County is currently served by three public transit agencies and over 20 non-profit/private transit providers. These services are fragmented, scattered, and uncoordinated. Improving coordination between providers and pooling resources could result in greater coverage to the area users, more service frequency, service reliability, improved ridership, and lower operating costs. To provide these necessary regional connections, the development of a regional system is recommended in one of two ways:

- **Option 1:** Establishing a CAG region-wide public transit agency similar to the recently adopted Pinal Regional Transportation Authority (RTA). In this scenario, CAG or a similar agency would manage and operate transit services as one entity.
- **Option 2:** Establishing a central contact (agency or person) to coordinate all transit services (public and private) in Gila County. In this scenario, each individual provider/operator will operate independently but will closely coordinate services and operations with the central contact.

Responsibilities of the transit agency or central contact could include:

- Create a Technical Working Group consisting of all the providers and conduct quarterly coordination meetings
- Develop a comprehensive list of providers in the region
- Develop an electronic database of service routes and schedules. Publish countywide services on Google Transit to easily disseminate route and schedule information to users
- Identify and resolve any service overlaps and redundancies by coordinating with appropriate providers
- Identify areas where resources can be pooled
- Establish a countywide ride-sharing program
- Assist with obtaining funding
- Assist with marketing and administration services
- Create and manage a pool of volunteers that could help multiple providers

NEXT STEPS

Based on review and final recommendations of the Technical Working Group, the study team will start development of the Implementation Plan that will include detailed service plan - specific routes/schedules/stop locations, marketing plan, financial feasibility, and funding options.