

3.7 TRANSIT AND PASSENGER RAIL NEEDS

This section documents public transit and passenger rail needs as identified through the ADOT Rural Transit Needs Study, Responses to Executive Order 2007-02, recent SATS and local or regional transit studies, the Framework Transit Propensity Analysis, and input from stakeholders and community workshops.

Table 3.4, located at the end of this section, contains a detailed list of transit and passenger rail needs.

Existing and Committed Transit System

Existing and committed transit and rail passenger services were identified from the *FY 2007 Section 5311 Rural Public Transportation Program Annual Report*, the *Gila County Small Area Transportation Study*, and the *Pinal County Small Area Transportation Study*.

Local transit services currently operating in the study area include the Cobre Valley Community Transit Program in the Miami area and the Cotton Express in Coolidge. Cobre Valley Community Transit program operates a demand responsive, curb-to-curb service in Miami, Globe, and surrounding areas of unincorporated Gila County. The Cotton Express deviated route bus system operates in Coolidge. Existing intercity transit services include Greyhound Bus (several daily trips on I-10 between Phoenix and Tucson) and Amtrak (three weekly round trips between Los Angeles and Chicago/New Orleans, with a stop at Maricopa in Pinal County).

Short- and long-range transit improvements identified in SATS are primarily transit and rail studies. A project to repair or rebuild (freight) railroad crossings in Claypool, between Miami and Globe, was also recommended.

Rural Transit Needs Study and Responses to Executive Order 2007-02

In January 2007, Governor Napolitano issued Executive Order 2007-02, "Expanding Arizona's Transportation Options." Recognizing that the state's transportation infrastructure was failing to keep pace with the fastest population growth in the nation, the Governor directed ADOT "to provide, within the next 90 days, a detailed list of options for mass transit, commuter rail and/or light rail to serve and connect as efficiently as possible those Arizona communities for which such options would be cost-effective. The report should include preliminary estimates of the cost of each option; an assessment of whether and how the private sector could be encouraged to offer or assist with each option and to the extent public money is required, recommendations regarding how to finance each option."

The ADOT Public Transportation Division (ADOT-PTD) responded to Executive Order 2007-02 by reviewing existing reports and forming an Executive Order Working Group, consisting of representatives of COGs, MPOs, and transit agencies/providers throughout the state. An extensive outreach effort included meetings with stakeholders, interviews, and a tribal forum. ADOT-PTD encouraged public input through eight public meetings and an on-line Rural Transit Needs Survey. In addition, ADOT-PTD prepared a series of "control sheets" that describe proposed programs and projects from COGs, MPOs, transit agencies, and ADOT-PTD staff. The

documented transit needs in response to Executive Order 2007-02 are summarized in Table 3.4, along with other transit and rail needs identified for this study.

The *Arizona Rural Transit Needs Study* was completed in March 2008. Key findings from this study were:

- New Section 5311 (Rural Public Transportation Program) program services were recommended in Pinal County (Casa Grande, Eloy, Maricopa, Florence, Oracle, San Manuel), Gila County (Payson), the Gila River Indian Community (in Maricopa and Pinal counties), the White Mountain Apache Tribe (in Apache, Gila, and Navajo counties), and the San Carlos Apache Tribe (in Gila, Graham, and Pinal counties).
- Expanded 5311 services were recommended for Cotton Express in Coolidge (Pinal County).
- The highest-potential corridor locations in the Central region for new Section 5311 intercity transit services (to connect rural communities with each other or with urbanized areas) are located in Pinal County (Casa Grande-Arizona City-Eloy-Coolidge), Pinal-Maricopa Counties (Coolidge/Florence-Phoenix, Maricopa-Tempe), and Gila-Maricopa Counties (Miami-Superior-East Mesa, Payson-East Mesa). Weekday transit service between Maricopa and Phoenix and between Maricopa and Tempe was recently implemented.

Recent SATS and Local or Regional Transit Studies

Two rail studies were recommended by the *Gila County Small Area Transportation Study*. One is a study of a permanent rail service between Miami, Globe and the Apache Gold Casino (referred to as the Copper Spike Rail study). The Arizona Eastern Railroad has since initiated limited seasonal service between Globe and the casino. The other study was to develop recommendations regarding rail crossing improvements in the Claypool area.

The *Pinal County Small Area Transportation Study* recommends the establishment of a community ridesharing program, which encourages the formation of carpools and vanpools for commuters. Another recommendation is for a regional transit connector service among Pinal County communities and between the Phoenix and Tucson areas.

The *Gila County Small Area Transportation Study* recommends a regional bus service study for the US 60/US 70 corridor. A study to evaluate service expansion for the Cobre Valley Community Transit service, also known as the Miami Dial-A-Ride service, is also recommended.

Transit Propensity Analysis

The ADOT Framework Management Team completed a Transit Propensity Analysis especially for the statewide frameworks. Transit propensity is a measure of potential demand for transit service based on key socioeconomic variables. The recently completed Arizona Rural Transit Needs Study used the Arkansas Public Transportation Needs Assessment method to represent the demand for transit service. The ADOT project team used a similar approach, employing methodology from the national Transit Cooperative Research Program (TCRP).

A key purpose of transit propensity analysis is to identify needs for local transit service. At the framework planning level, it can be used as a guide to establish corridors linking areas with high transit needs.

The ADOT project team prepared year 2030 and 2050 transit propensity analyses for each State Transportation Analysis Zone using the population projections developed previously. The TCRP transit propensity analysis method uses nine variables:

- 1) Population density;
- 2) Percent of population with mobility limitations;
- 3) Percent of population with employment disability;
- 4) Percent of population that is not "White, Non-Hispanic";
- 5) Percent of population that is female;
- 6) Percent of households with income under \$20,000;
- 7) Percent of occupied housing units without an auto available;
- 8) Percent of workforce age 30 or younger; and
- 9) Percent of workforce age 65 or older.

These variables represent attributes that national studies identify as having a relationship to transit patronage. Research that supports the methodology includes:

- TCRP Report 28: Transit Markets of the Future
- TCRP Report 3: Workbook for Estimating Demand for Rural Passenger Transportation
- TCRP Report 27: Building Transit Ridership

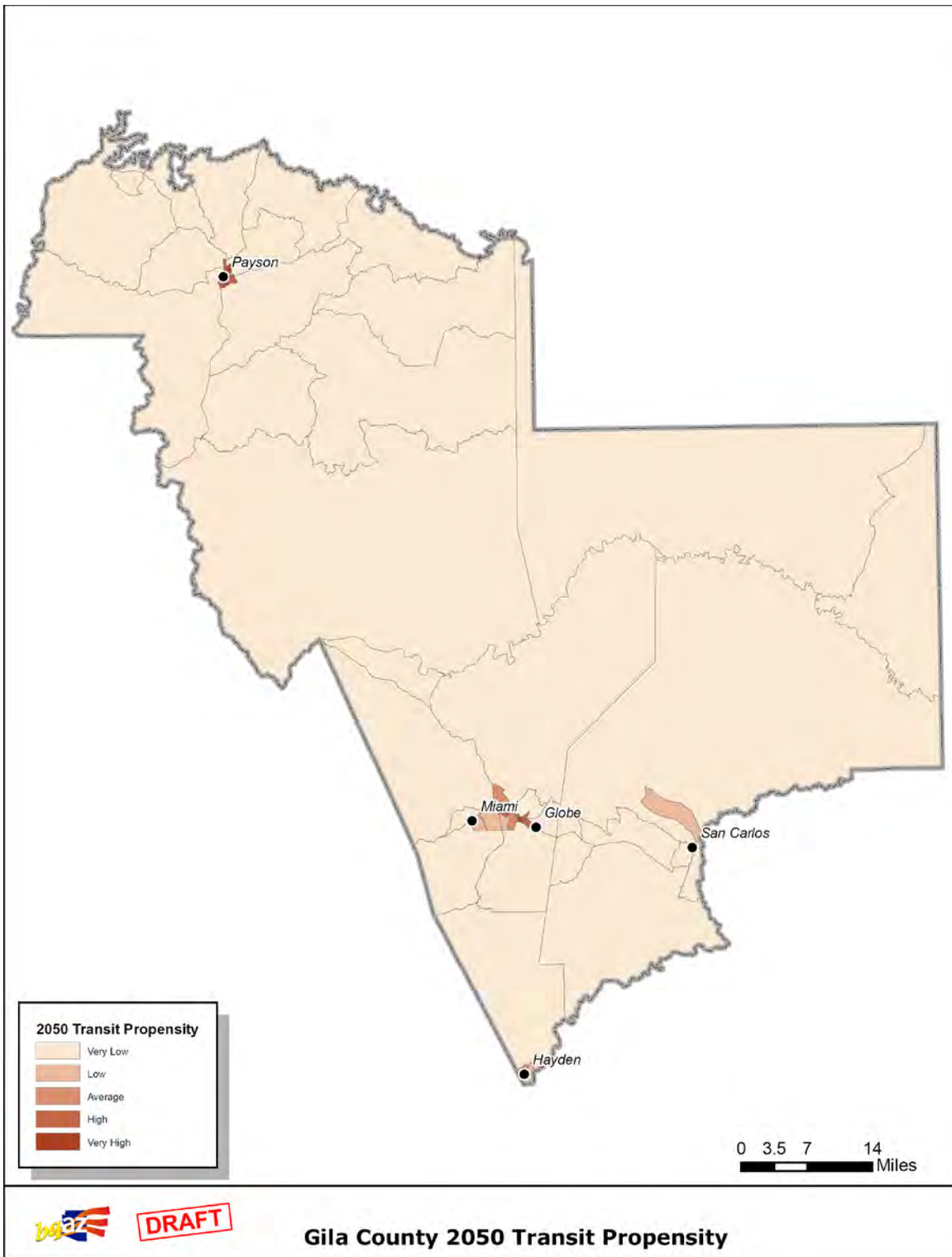
The project team obtained data for these nine variables by block group for each county in the central, eastern, northern and western regions of the state. These variables were expanded based on the 2030 and 2050 population projections. The project team assigned a weight to each variable, based primarily on findings in TCRP Report 28.

Propensity is calculated as an index that shows the relative propensity of one block group to the county as a whole. Ridership estimates can be considered as the "demand" for transit services. Variables used to estimate ridership are the same as the variables used for propensity.

Figure 3-6 and Figure 3-7 illustrate 2050 transit propensity estimates by county in the region. Figure 3-8 shows the 2030 transit propensity map for Pinal County, for comparison purposes. (Gila County has no major changes in transit propensity forecast from 2030 to 2050.)

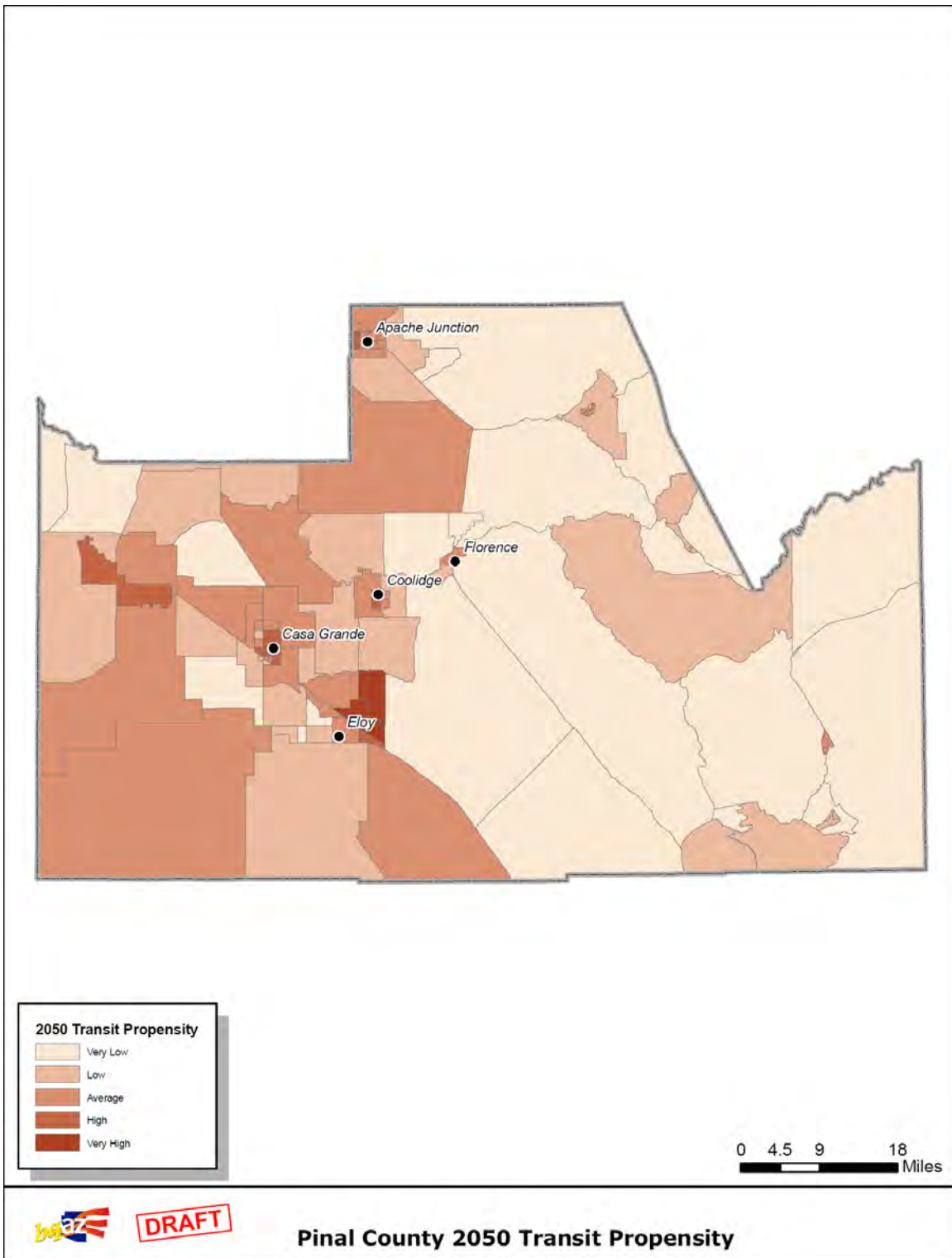
The 2050 transit propensity analysis showed an "average" to "low" transit propensity in the Globe/Miami area. The transit propensity in remaining portions of Gila County is "very low." In eastern Pinal County, the 2030 and 2050 transit propensity is "very low," while in western Pinal County it ranges from "low" to "high," except in the Eloy area, which has a "very high" transit propensity.

Figure 3-6 Transit Propensity, Year 2050, Gila County



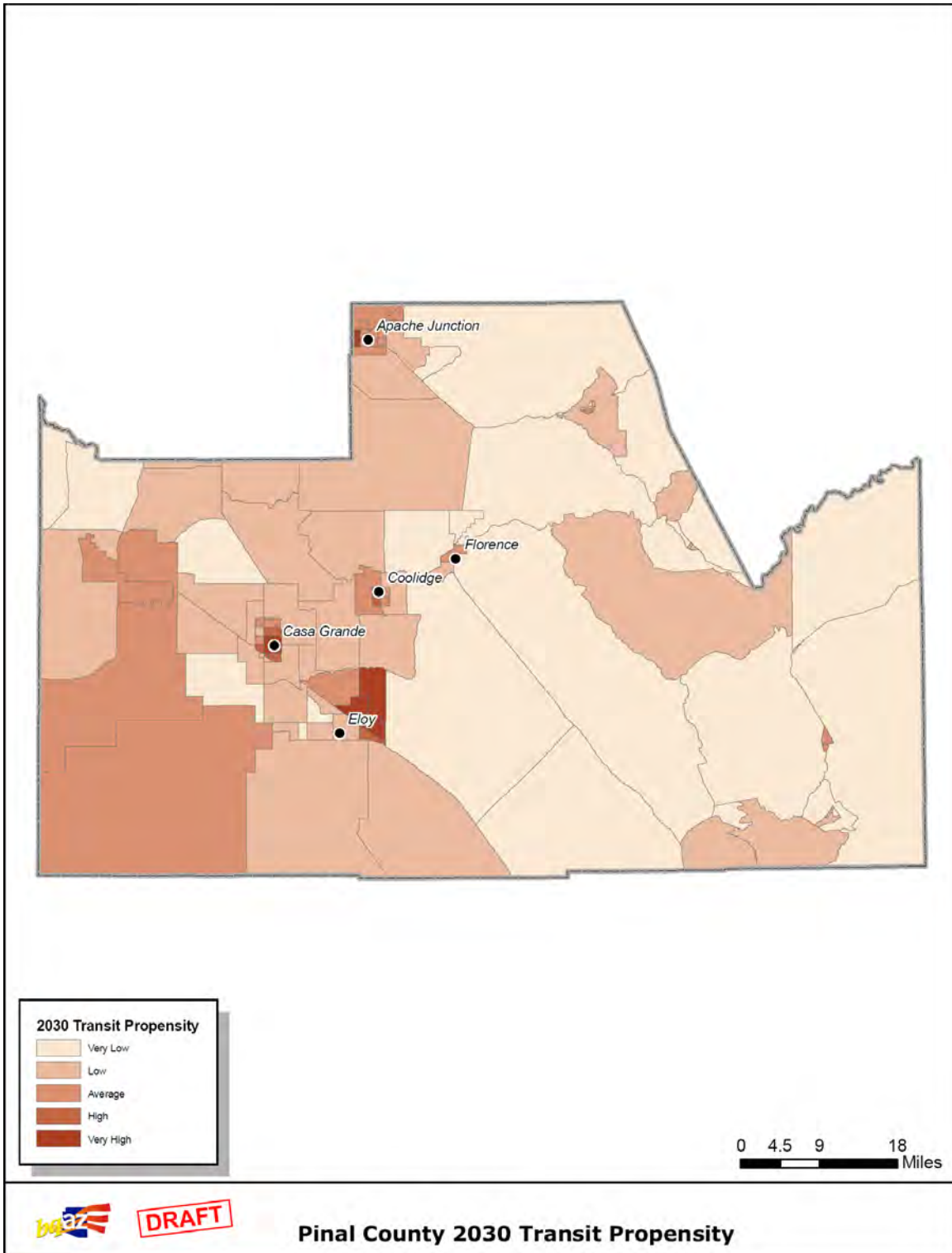
Source: HDR, Inc.

Figure 3-7 Transit Propensity, Year 2050, Pinal County



Source: HDR, Inc.

Figure 3-8 Transit Propensity, Year 2030, Pinal County



Source: HDR, Inc.

Input from Stakeholders and Community Workshops

Community Workshops – April and November 2008

The study team for the Central Framework held an initial round of community workshops in Florence and Globe on March 26th and 27th. Participants in both community workshops mentioned the desire for local and regional bus systems as well as regional/commuter rail and light rail systems. A second round of community workshops was held in Globe and Coolidge on November 12th and 13th, 2008. Comments on rail and transit service needs in the Central region included:

- Rail service is needed to the Apache Junction area. An intercity rail service should be developed to provide service to and from the Phoenix metropolitan area.
- Higher housing densities are needed to support mass transit and passenger rail service. In order for transit to work, nodes of density will be required.
- By 2050, more alternatives will be needed for mass transportation. Roadway connections between Arizona cities need to be balanced by mass transit, which should be a major part of the transportation plan. In rural areas, transit will likely consist of bus services. Rail connections may make sense for areas like Globe in the long term.
- Transit is needed regardless of the recommended scenario.

Focus Group and Stakeholder Meetings

Many participants expressed a need for more transit service. Some specific needs were:

- Provision of transit service locally and regionally, as well as a desire to creatively approach these challenges (example: Globe established dial-a-ride service using other agencies' vans during off-peak hours).
- Recognition that transit needs in Gila County are different from those in Pinal County. For example, Globe once relied on Greyhound to carry transit-dependent residents to Phoenix, primarily for medical trips.
- A transit system can be designed to connect to shopping destinations.
- Short-term transit improvements should be addressed.
- It would be helpful to loosen restrictions on vans purchased for social service agencies.
- Apache Junction envisions bus rapid transit that would connect to light rail or commuter rail.
- The town of Miami would like to participate with ADOT in a feasibility study of a new fixed-route service.
- The city of Globe supports a transit service between Globe and Phoenix.
- Roadway improvements should be coordinated with transit improvements: e.g., the design and construction of the North-South Freeway corridor should preserve right-of-way for future transit/commuter rail.
- A number of services (medical, grocery, etc.) are available in Kearny, but they remain inaccessible to many residents of Hayden because of a lack of transit service in the area.
- Pinal County has discussed the feasibility of implementing a transit corridor along Hunt Highway. Right-of-way constraints are challenging in this corridor.
- Public transportation is needed on tribal lands.
- Regional transit is needed in the I-10 corridor.

Rail

- Transporting light freight on light rail should be considered to generate revenue.
- Remove at-grade rail crossings and avoid new ones. The Union Pacific does not want additional at-grade crossings.
- Expand the rail system to the mines. Passenger rail between Globe, Miami, and Apache Gold Casino would be primarily a tourist attraction.
- A rail line could serve latent transit demand previously served by Greyhound between Globe and Safford.
- Double-tracking and more sidings (a short stretch of railroad track used to store rolling stock or enable trains on the same line to pass) of the Union Pacific Railroad are needed to foster economic development in the region and improve rail access to industrial areas.
- Marana and Eloy support passenger rail between Tucson and Phoenix.
- The Queen Creek Town Council is very supportive of commuter rail.

Regional Technical Advisory Team

The RTAT supported the development of multimodal alternatives, including buses and bus rapid transit.

Common Interest Group Workshops

Transit

- There is a need for good transit service at destinations once you have arrived via commuter rail.
- Transit needs to tie into airports.
- There needs to be access to transit stops in tribal areas.
- Bus rapid transit along I-10 to Casa Grande is needed.
- Provide good transit connections at destinations/activity centers.
- The connection between Phoenix and Tucson needs good transit on both ends.
- Some rural areas are using school buses and community vehicles to provide senior citizens with transit options.
- Transit through the GRIC to Casa Grande is needed.
- Expand bus services beyond community boundaries.

Rail

- Need for infrastructure to support rail at destinations.
- Need for rail transportation to and from major airports.
- Need to address environmental impacts, such as noise, of at-grade rail crossings.
- Passenger rail needs were mentioned along SR 87, along SR 347, and in the Coolidge area.

Summary

Provision of transit service locally and regionally was a key need expressed by stakeholders. Specific needs were identified for bus rapid transit in Apache Junction (connecting to light rail or commuter rail), and in the I-10 corridor. Stakeholders mentioned needs for regional transit services between Tucson and Phoenix, the GRIC and Casa Grande, Kearny and Hayden, and Globe and Phoenix. Local transit service in Miami and within the Indian communities was also identified as a need.

Stakeholders in a number of communities mentioned a need for passenger rail to the Apache Junction area, and intercity rail service to and from the Phoenix area.

Stakeholders also mentioned a need for rail services to and from Globe (potential services mentioned were Globe to Phoenix, Globe to Safford, and Globe to Miami and the Apache Gold Casino). Table 3.4 summarizes identified transit and rail passenger needs.

Table 3.4 Transit and Passenger Rail Needs

Location	Summary of Need or Deficiency	When Needed	Source
Pinal County	Connecting communities bus transit program	2015-2030	Investment strategy
	Enhancing public transportation programs	2015-2030	Investment strategy
	Transit serving elderly, persons with disabilities and tribal populations in rural areas	2015-2030	Investment strategy
	Statewide vanpool and rideshare programs	2015-2030	Investment strategy
	Transit/rail planning, marketing and other related programs	2015-2030	Investment strategy
	High speed urban-urban rail connections/commuter rail in urban corridors	2015-2030	Investment strategy
Gila County	Connecting communities bus transit program	2015-2030	Investment strategy
	Enhancing public transportation programs	2015-2030	Investment strategy
	Transit serving elderly, persons with disabilities and tribal populations in rural areas	2015-2030	Investment strategy
	Statewide vanpool and rideshare programs	2015-2030	Investment strategy
	Transit/rail planning, marketing and other related programs	2015-2030	Investment strategy
Tohono O’odham Nation	Public transportation in Tohono O’odham Nation	Before 2015	Rural Needs study
	Tribal general public support	Before 2015	Executive Order responses
	Section 5310 elderly and disabled program funding	Before 2015	Executive Order responses
Gila River Indian Community	Tribal general public support	Before 2015	Executive Order responses
	Section 5310 elderly and disabled program funding	Before 2015	Executive Order responses
Phoenix-Tucson	Passenger rail service	2015-2030	Transit propensity analysis
Casa Grande to industrial park	Improved rail access to industrial areas	Unspecified	Community and stakeholders

Table 3.4 Transit and Passenger Rail Needs (continued)

Location	Summary of Need or Deficiency	When Needed	Source
Pinal County	Transit loop system that connects cities within the county	Unspecified	Community and stakeholders
Kearny to Hayden	Transit service (buses, dial-a-ride)	Unspecified	Community and stakeholders
Queen Creek	A new transit route with shorter headways and distance	Unspecified	Community and stakeholders
Apache Junction	Potential bus rapid transit that would connect to light rail/commuter rail	Unspecified	Community and stakeholders
North-South Corridor	Preservation of right-of-way for a future transit/commuter rail corridor	Unspecified	Community and stakeholders
Globe to Apache Junction	A connector service to provide access to areas with transit service	Unspecified	Community and stakeholders
SR 77, Tucson to Oro Valley	Bus rapid transit or commuter rail corridor	Unspecified	Community and stakeholders
US 60/US 70 corridor	Regional bus service study for US 60/US 70 corridor	Before 2015	The Gila County Small Area Transportation study
Miami	A study to evaluate service expansion for Cobre Valley Community Transit	Before 2015	Gila County Small Area Transportation study
Claypool	Study regarding rail crossing improvements in the Claypool area.	Before 2015	Gila County Small Area Transportation study
Pinal County	Community ridesharing program	2015-2030	Pinal County Small Area Transportation Study
Pinal County/Phoenix-Tucson areas	Regional transit connector service among Pinal County communities and between the Phoenix and Tucson areas	2015-2030	Pinal County Small Area Transportation study
Statewide	Arizona statewide vanpool program	Before 2015	Executive Order responses
ADOT Globe, Phoenix and Prescott districts	Potential connectors – Section 5311 enhanced rural transit	Before 2015	Executive Order responses
	Section 5311 rural transit program recipients	Before 2015	Executive Order responses
	Section 5310 elderly and disabled program funding	Before 2015	Executive Order responses
	Statewide rideshare program	Before 2015	Executive Order responses

Table 3.4 Transit and Passenger Rail Needs (continued)

Location	Summary of Need or Deficiency	When Needed	Source
ADOT Globe, Phoenix and Prescott districts (continued)	Rural media package	Before 2015	Executive Order responses
	Statewide planning rural bus service	Before 2015	Executive Order responses
	Amtrak–ADOT partnership program	Before 2015	Executive Order responses
ADOT Globe and Tucson districts	Right-of-way purchase, inactive and abandoned railroad lines	Before 2015	Executive Order responses
ADOT Globe and Phoenix districts	Graham/Greenlee/Gila/Pinal counties rural bus service	Before 2015	Executive Order responses

Sources: Statewide Transportation Investment Strategy, June 19, 2008, Critical Needs Definition, Gila County Small Area Transportation Study, Pinal County Small Area Transportation Study, Stakeholder and Public Involvement comments

3.8 CONCEPTUAL OVERVIEW OF LONG-RANGE SCENARIOS

Approach

In the fall of 2008, the Statewide Framework study team identified three scenarios for the long-term evolution of Arizona and its transportation system. The scenarios were further developed after thirteen community workshops held in November 2008 throughout the four Arizona regions (Central, Eastern, Northern and Western) that collectively encompass the entire state except Maricopa County, Pima County and western Pinal County. Each scenario reflects a different transportation future for Arizona. The following characteristics apply to all three scenarios:

- All look ahead to 2050 and beyond.
- All assume that the future of transportation will be substantially different from present conditions.
- All are multimodal, incorporating both roadways and public transportation.
- They include the principal locally controlled transportation facilities and services, as well as those for which ADOT is responsible.
- Each has its own set of proposed improvement projects and programs within each region.
- Each Regional Consultant team identified the improvements for all scenarios within its framework region.
- Each regional team made extensive use of community input—especially from the stakeholder interviews and the two sets of public workshops held in 2008—to select the proposed improvements.
- In each region, some projects are common to two or more scenarios, while others are unique to one scenario.
- Proposed projects in each regional scenario include selected improvements from the Statewide Transportation Investment Strategy developed for ADOT and the Governor’s Office in 2008.
- All scenarios involve phased implementation of the transportation improvements over several decades.
- To show a seamless transportation system, the statewide management consultant and the four regional consultants coordinated the elements of each scenario across regional boundaries.