



# Town of Camp Verde SMALL AREA TRANSPORTATION STUDY

Prepared For:  
The Town of Camp Verde and  
Arizona Department of Transportation



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Final Report



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# 1. INTRODUCTION

## PURPOSE OF THE STUDY

The Camp Verde Small Area Transportation Study (SATS) is a joint effort of the Town of Camp Verde and Arizona Department of Transportation (ADOT). The purpose of this study is to develop a multimodal transportation plan that outlines the Town’s transportation priority projects. The transportation plan will sketch out a path to help the Town achieve its vision and goals for a future transportation system in a manner that is closely aligned with the lifestyle and the values of the community.

## Vision & Goals

(Adopted from the 2005 Camp Verde General Plan)

### Vision

A variety of transportation and circulation systems will be provided within Camp Verde and the study area. In conjunction with the land use plan, these systems will be designed, constructed, and maintained in a manner that will provide convenient and safe travel for all modes of transportation.

### Goals

- Promote transportation systems that preserve and respect the rural lifestyle without sacrificing public safety or acceptable design guidelines.
- Provide access within the town and planning area to link parks and neighborhoods; providing for ease of movement and safety for alternate modes of transportation.
- Maintain Main Street in order to protect the rural, western and historic nature of the downtown area and Fort Verde State Historic Park.
- Coordinate with property owners, town officials, and appropriate agencies and owners to locate new transportation corridors within designated growth areas.
- Maintain and improve existing roads in a safe and cost-effective manner.

## STUDY AREA

Approximately 86 miles north of Phoenix, Camp Verde sits at the banks of the Verde River at an elevation of 3,147 feet in the Verde Valley region of Central Arizona. Established in 1865 as

the first military post in the area, Camp Verde is the earliest community in the Verde Valley, thus providing the Town with a long and rich history. The Town is bordered by Coconino National Forest to the east and Prescott National Forest to the west. In addition, the Yavapai-Apache Nation is located within the Town’s boundary.

Described as the gateway to the Verde Valley, Camp Verde is located at the junction of I-17 (principal route between Phoenix and Flagstaff) and SR 260 (scenic route to the Mogollon Rim in the eastern portion of the state), thus connecting visitors with the recreational and scenic activities of the Verde Valley region, Northern, and Eastern Arizona. In addition, visitors can visit local attractions in the Town such as Cliff Castle Casino or the Fort Verde State Historic Park.

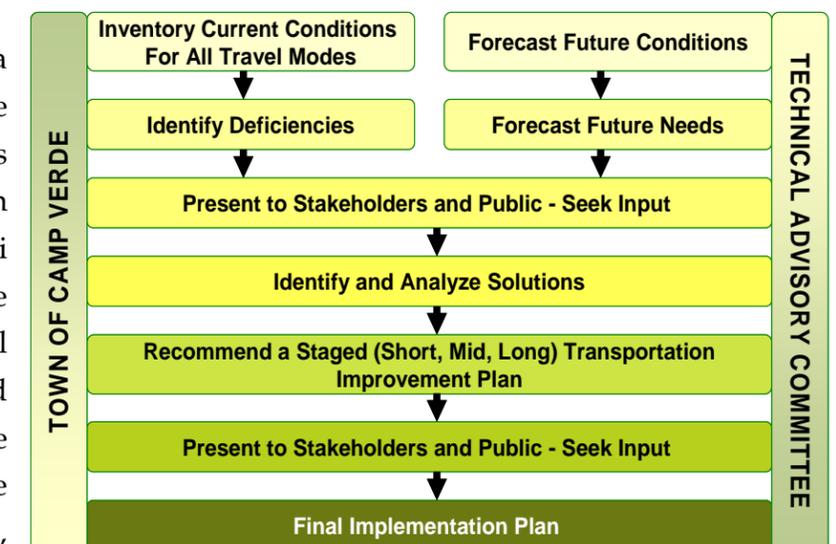
Over the last several years Camp Verde has experienced a steady growth, with the influx of new residents and seasonal visitors.

The study boundary is approximately 42 square miles in area and is shown in Figure 1.2. The study boundary is primarily comprised of the town limits, but the southwest boundary extends to include the potential Forest Service land exchange parcels.

## STUDY PROCESS

The study is guided by a Technical Advisory Committee (TAC) that includes representatives from the Town of Camp Verde, ADOT, Yavapai County, Yavapai-Apache Nation, North Arizona Council of Governments (NACOG), and the City of Cottonwood. The role of the TAC is to provide guidance, support, advice, suggestions, and recommendations, and to perform document reviews throughout the study process. The study process is illustrated in Figure 1.1.

FIGURE 1.1: STUDY PROCESS



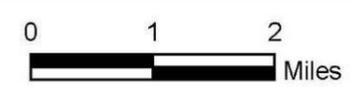
**Figure 1.2  
Regional Setting  
and Study Area**

**Town of Camp Verde  
Small Area Transportation Study**

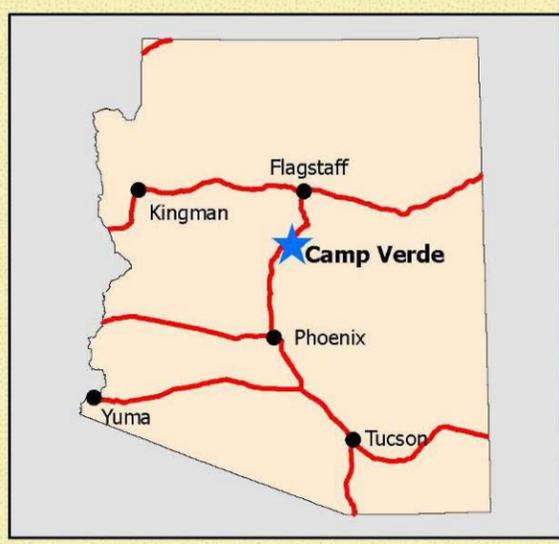
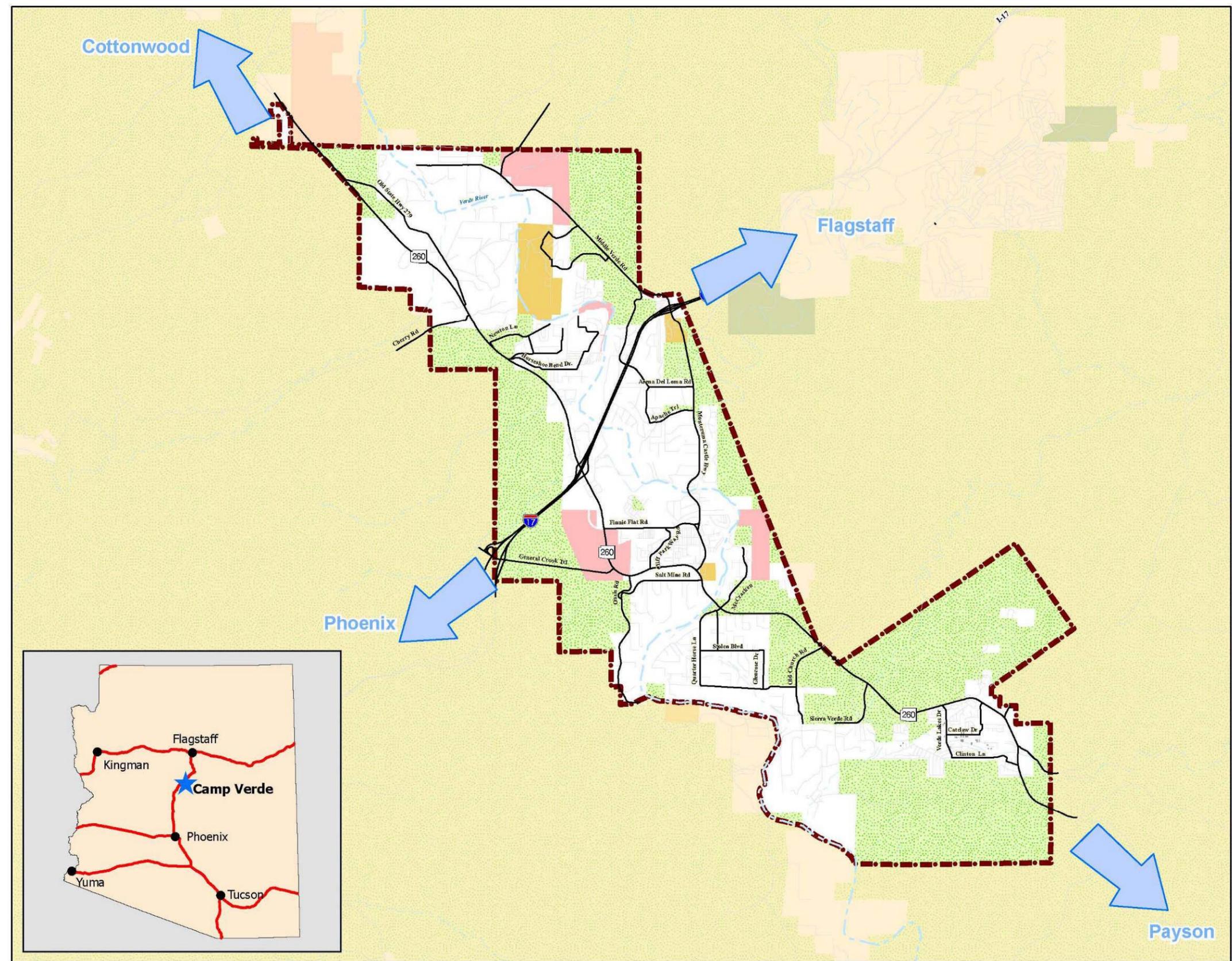
- Land Ownership**
-  Forest
  -  Indian Reservation
  -  National Parks
  -  Private
  -  State Trust
  -  Other
  -  Study Area Boundary

Date: 03.15.2008

Source: ADOT, ALRIS, Yavapai County GIS.



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## 2. EXISTING CONDITIONS

### REVIEW OF STUDIES, REPORTS, AND PLANS

At the onset of this study, transportation planning reports and plans pertinent to Camp Verde were collected and reviewed (See *Table 2.1: Previous Studies*). In 2004, the Town of Camp Verde completed the General Plan, which established the plan for future growth in the Town. The Transportation and Circulation element of the General Plan identifies specific transportation vision and goals in Camp Verde (See *Chapter 1*). Recently completed in 2009, the Verde Valley Multimodal Transportation Study established a vision for regional transportation in the region. To expand on these studies, the Camp Verde SATS specifically addresses the local transportation needs for the Town of Camp Verde.

**TABLE 2.1: PREVIOUS STUDIES**

Year	Study
2004	Camp Verde General Plan
2001	Camp Verde Transit Study
2006	The Verde Valley Regional Land Use Plan
2009	Verde Valley Multimodal Transportation Study
1999	Verde Valley Regional Transportation Study Update
2003	Yavapai County General Plan

### Programmed and Scoping Projects

Table 2.2 lists the programmed and scoping projects published by ADOT that are in the vicinity of the study area.

**TABLE 2.2: PROGRAMMED AND SCOPED PROJECTS**

Route	BMP	Length	Location- Type of Work Program	Fund	In Thousands						
					FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
<b>2006-2008 STIP</b>											
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A)- Construct New WB Roadway <i>State Highway Projects</i>	STP			\$4,100				
17	287.0		Verde River Bridge, SB #505- Deck rehab <i>State Funded Projects that Required Environmental Clearance</i>								
<b>2007-2011 STIP</b>											
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A) Construct New WB Roadway <i>Planned Advance Construction Project</i>	STP			\$5,250				
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A) Construct New WB Roadway <i>Advance Construction Projects to be Converted</i>	STP			\$5,250				
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A) Construct New WB Roadway <i>State Highway Projects</i>	STP			\$5,250				
17			Verde River Bridge, SB #505- Deck rehab <i>State Funded Projects that Required Environmental Clearance</i>								
<b>2006-2010 Five Year Transportation Facilities Construction Program</b>											
17	286.0	7	SB only- RR 4" TL, 3" PL & 2" AC & 1/2" FC <i>Fiscal Year 2008 Anticipated Pavement Preservation Projects</i>								
260	216.0	7	Cottonwood - Camp Verde- Camp Verde TI (Repayment) <i>Loan Repayment</i>		\$5						
17	287.0	2	Verde River Bridge, SB #505- Deck Rehabilitation <i>Five Year Transportation Facilities Construction Program</i>	STATE	\$2,531						
260	0.0	0	Fort Verde State Park- Design (Park road) <i>Five Year Transportation Facilities Construction Program</i>	STATE	\$135						
260	0.0	0	Fort Verde State Park- Construct (Park road) <i>Five Year Transportation Facilities Construction Program</i>	STATE		\$575					
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A) Construct New WB Roadway <i>Five Year Transportation Facilities Construction Program</i>	STP			\$4,100				
260	208.8		Cottonwood - Camp Verde- Design passing lane <i>Five Year Transportation Facilities Construction Program</i>	STATE		\$150					
260	214.0	10	Cottonwood - Camp Verde- Reconstruct roadway (IGA Repayment) <i>Five Year Transportation Facilities Construction Program</i>	STATE					\$11,000		
<b>2007-2011 Five Year Transportation Facilities Construction Program</b>											
17	286.0	7	General Crook Trail TI - McGuireville TI (SB)- RR 4" TL, 3" PL & 2" AC & 1/2" FC <i>Pavement Preservation Projects, Scoping Estimates Underway</i>								
260	0.0	0	Fort Verde State Park- Construct (Park road) <i>Five Year Transportation Facilities Construction Program</i>	STATE		\$625					
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A)- Construct New WB Roadway <i>Five Year Transportation Facilities Construction Program</i>	STP			\$5,250				
260	214.0	10	Cottonwood to Camp Verde- Reconstruct roadway (JPA payment) <i>Five Year Transportation Facilities Construction Program</i>	STATE					\$11,000		
260	214.0	10	Cottonwood to Camp Verde- Reconstruct roadway (JPA payment) <i>Five Year Transportation Facilities Construction Program</i>	STATE						\$11,200	
<b>2008-2012 Five Year Transportation Facilities Construction Program</b>											
17	286.0	7	General Crook Trail TI - McGuireville TI (SB)- RR 4" TL, 3" PL & 2" AC & 1/2" FC <i>Pavement Preservation Projects, Scoping Estimates Underway</i>								
260	208.6	5	Western Dr to Hayfield Draw WB (Segment 1A)- Construct New WB Roadway <i>Five Year Transportation Facilities Construction Program</i>				\$5,250				
260	214.0	10	Western Dr to Thousand Trails- Reconstruct roadway (JPA payment) <i>Five Year Transportation Facilities Construction Program</i>						\$11,000	\$11,200	\$2,800

Source: Intermodal Transportation Division, Arizona Department of Transportation

## EXISTING LAND USE AND SOCIOECONOMIC CONDITIONS

This section summarizes the current land ownership status, socioeconomic conditions, characteristics of physical and natural environments, environmental justice population review (Title VI), and cultural resources inventory for the entire study area.

### Land Ownership

The study area encompasses approximately 42 square miles. Roughly 49.4% of land in Camp Verde is privately owned, 32.2% is managed by the Coconino National Forest Service, 12.2% is managed by the Prescott National Forest Service, 3.9% is managed by Arizona State Trust Land, and 2.1% is owned by the Yavapai-Apache Nation. Figure 1.2 illustrates the land ownership status in the study area.

### Socioeconomic Conditions

Creating an inventory of the study area's socioeconomic characteristics and understanding this data is a critical element for any transportation planning study. Socioeconomic data is one of the primary inputs to the travel demand modeling process, which is used to forecast traffic volumes in the study area.

### Population and Housing Unit Growth Trends

According to the 2000 Census, the Town of Camp Verde had a population of 9,451 people. In 2007, the Arizona Department of Commerce estimated the Town's population at 11,519 people, which equates to a population growth rate of 3.13% per year. The Town's growth rate is lower than that of Yavapai County and the State of Arizona over the same period (See *Table 2.3: Population and Housing Unit Growth Trends*).

The Town has seen a housing unit increase of 2.25% per year since 2000. The 2000 Census recorded 3,969 housing units in Camp Verde and 2007 estimates show 4,594 housing units in the Town. In 2000, the average household size in Camp Verde was 2.38, which is slightly higher than State's average of 2.34.

**TABLE 2.3: POPULATION AND HOUSING UNIT GROWTH TRENDS**

Geographic Area	Population		Population Growth Rate	Housing Units		Housing Units Growth Rate
	2000	2007		2000	2007	
Town of Camp Verde	9,451	11,519	3.13%	3,969	4,594	2.25%
Yavapai County	167,517	223,934	4.81%	81,730	-	-
Arizona	5,130,632	6,500,194	3.81%	2,189,189	-	-

Source: US Census 2000, Arizona Department of Economic Security 2008.

### Employment Overview

Tourism and the Cliff Castle Casino are the primary drivers of the Town's economy. Camp Verde is partially dependent on the economy of the broader Verde Valley, as evident by the Town's employment data. Camp Verde has more employed residents than the total number of jobs available in Town, suggesting that a significant number of residents commute to nearby communities for work. Currently, the Town has approximately 3,154 jobs. Major employers in the study area include the Town and county government, the school district, and the Yavapai-Apache Nation. Table 2.4 lists the major employers and Table 2.5 lists the schools in the Town.

**TABLE 2.4: MAJOR EMPLOYERS**

Major Employer	Employees
Cliff Castle Casino & Lodge	500
Yavapai County Sheriff	271
Yavapai County Jail	200
Griffith Enterprises	90
Camp Verde Town Administration	73
Camp Verde Elementary School	70
Infinia	60
Goettl's High Desert Mechanic	51
Bashas'	50
Camp Verde High School	50
Rinker Materials Corp	50
Steve Coury Buick Pontiac, Inc	50

Source: InfoUSA 2008

**TABLE 2.5: TOWN OF CAMP VERDE SCHOOLS**

School Name	Students
Camp Verde Elementary School	616
Camp Verde High School	472
Camp Verde Middle School	371
American Heritage Academy	134
Chester Newton Charter and Montessori School	102
Camp Verde Head Start	74
Camp Verde United Christian School	70
Rimrock Public High School	51
PACE Preparatory Academy	47
South Verde Technology Magnet School	41
Sunnyside Charter and Montessori School	36
Montessori Children's House	16

As previously mentioned, socioeconomic data is one of the primary inputs for the travel demand model, which is used to estimate current traffic volumes and forecast future traffic volumes on roadways in the study area. Population, housing units, and various types of employment categories were inventoried for each Traffic Analysis Zone (TAZ) in the study area (See *Table 2.6 Socioeconomic Data Categories*). TAZs are geographic subdivisions of the study area bounded by roads, political boundaries, and natural or man-made geographical constraints (such as rivers, washes, etc.).

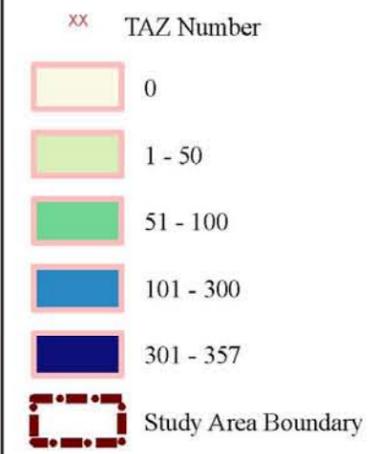
Communities within the Verde Valley region include Camp Verde, Cottonwood, Clarkdale, Cornville, Sedona, Oak Creek and Montezuma. There is significant amount of daily traffic interaction between these communities. To estimate realistic existing and future traffic volumes on the study area roadways, it is necessary to accurately capture the traffic interaction between the communities. For this reason, the Verde Valley Regional Travel Demand Model was used to forecast traffic volumes. In this model, the Town of Camp Verde accounted for a total of 56 TAZs. Figure 2.1 illustrates the occupied housing units by TAZ and Figure 2.2 illustrates the employment estimates at the TAZ level. Furthermore, Table 2.7 summarizes the population, housing units, and detailed employment for each TAZ in the study area.

**TABLE 2.6: SOCIOECONOMIC DATA CATEGORIES**

Socioeconomic Data Variable	Units
Population	Persons
Occupied Dwelling Units	Dwelling Units
Retail	Employees
Office	Employees
Service	Employees
Industrial	Employees
Public	Employees
Schools	Employees
College	Employees
Lodging	Employees
Casino	Employees

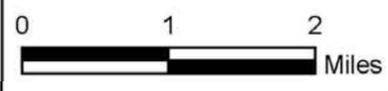
**Figure 2.1  
Occupied Dwelling Units  
By TAZ**

**Town of Camp Verde  
Small Area Transportation Study**



Date: 03.15.2008

Source: ADOT, Town of Camp Verde.



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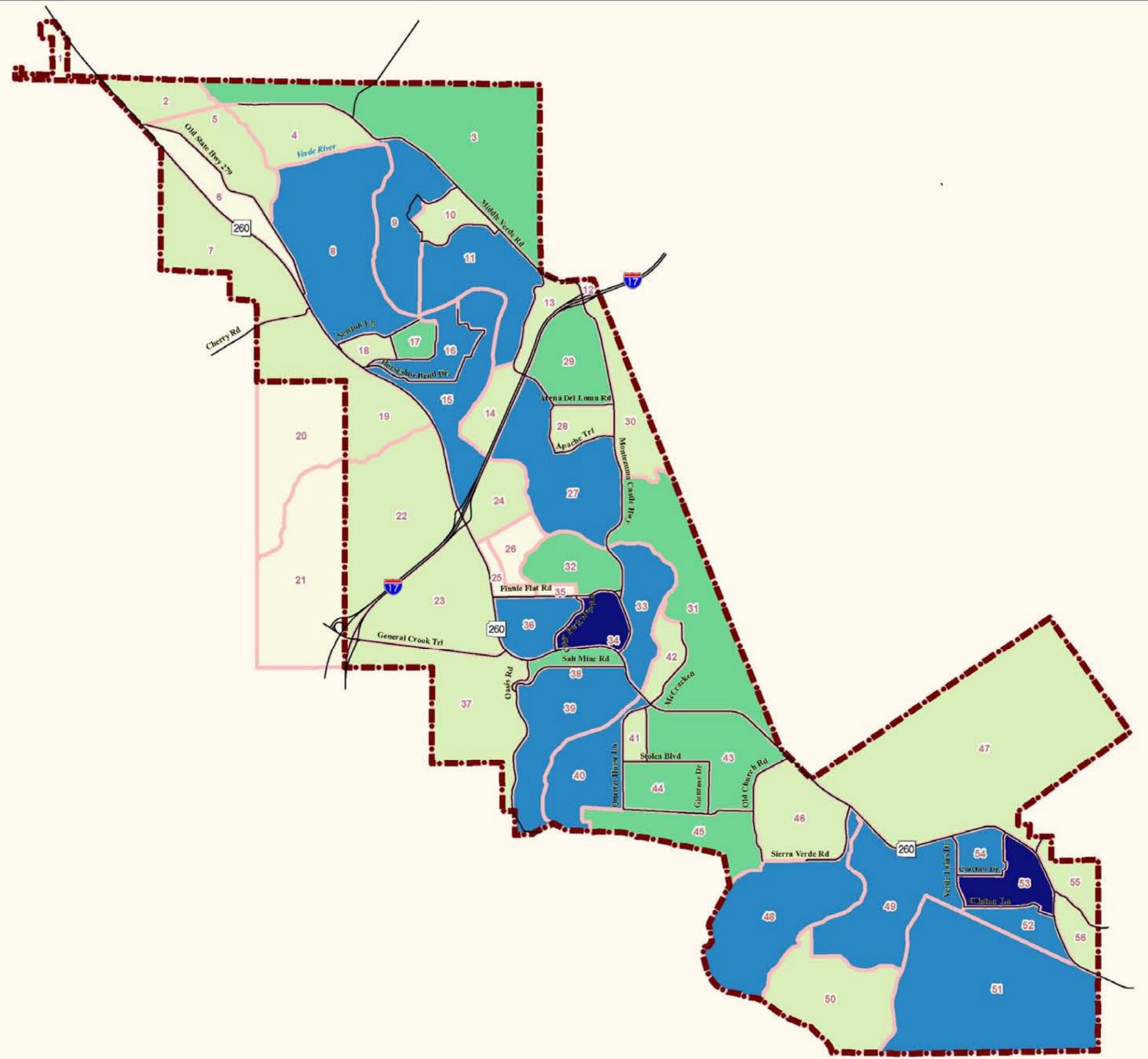




TABLE 2.7: EXISTING SOCIOECONOMIC DATA BY TAZ

TAZ	Population	Occupied Dwellings Units	Retail	Office	Service	Industrial	Public	School	College	Lodging	Casino	Total Employment
1	0	0	50	0	0	90	0	0	0	0	0	140
2	3	1	0	0	0	0	0	0	0	0	0	0
3	140	56	1	2	6	9	0	0	0	0	0	18
4	55	22	1	0	0	0	0	0	0	0	0	1
5	5	2	15	0	1	9	13	0	0	0	0	38
6	0	0	64	0	23	57	0	0	0	0	0	144
7	724	5	0	0	13	17	546	0	0	0	0	576
8	288	115	0	0	0	0	0	0	0	0	0	0
9	640	256	0	0	30	0	65	0	0	0	0	95
10	3	1	0	0	20	0	0	0	0	0	0	20
11	618	247	0	0	1	5	0	0	0	0	0	6
12	0	0	4	0	0	0	7	0	0	0	0	11
13	118	47	34	1	5	0	39	0	0	0	0	79
14	118	47	4	0	0	0	0	0	0	0	0	4
15	448	179	0	5	12	0	0	0	0	0	0	17
16	423	169	0	1	0	5	0	0	0	0	0	6
17	140	56	0	2	1	2	0	0	0	0	0	5
18	23	9	0	0	0	2	0	0	0	0	0	2
19	5	2	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	5	2	41	0	0	0	0	0	0	0	0	41
23	13	5	135	0	0	0	0	0	0	18	0	153
24	43	17	79	2	22	71	0	0	0	20	0	194
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	528	211	8	1	8	1	0	169	10	0	0	197
28	103	41	0	0	0	0	0	0	0	0	0	0
29	143	57	100	0	8	0	0	0	0	1	400	509
30	23	9	30	0	0	0	0	0	0	0	0	30
31	143	57	0	0	0	0	0	0	0	0	0	0
32	163	65	14	25	38	0	16	0	0	0	0	93
33	555	222	32	41	47	9	144	16	0	0	0	289
34	893	357	31	15	44	13	32	0	0	4	0	139

TAZ	Population	Occupied Dwellings Units	Retail	Office	Service	Industrial	Public	School	College	Lodging	Casino	Total Employment
35	0	0	105	6	23	0	0	0	0	0	0	134
36	630	252	8	7	0	0	0	0	0	2	0	17
37	8	3	0	0	0	3	0	0	0	0	0	3
38	228	91	3	0	0	0	0	0	0	0	0	3
39	295	118	0	3	66	0	0	0	0	0	0	69
40	318	127	0	0	6	0	0	0	0	0	0	6
41	70	28	1	0	0	0	0	0	0	0	0	1
42	18	7	0	0	0	0	0	0	0	0	0	0
43	188	75	16	7	26	24	4	0	0	0	0	77
44	225	90	0	0	7	7	0	0	0	0	0	14
45	153	61	0	0	0	0	0	0	0	0	0	0
46	33	13	0	0	0	0	0	0	0	0	0	0
47	80	32	0	0	0	0	0	0	0	0	0	0
48	378	151	0	0	3	0	0	0	0	0	0	3
49	403	161	0	0	4	0	0	0	0	0	0	4
50	105	42	0	0	0	0	0	0	0	0	0	0
51	350	140	0	0	2	0	0	0	0	0	0	2
52	265	106	0	0	0	3	0	0	0	0	0	3
53	813	325	0	0	0	0	0	0	0	0	0	0
54	443	177	0	0	0	3	0	0	0	0	0	3
55	8	3	0	0	0	0	0	0	0	0	0	0
56	35	14	0	0	2	0	0	0	0	6	0	8
	<b>11,409</b>	<b>4,273</b>	<b>776</b>	<b>118</b>	<b>418</b>	<b>330</b>	<b>866</b>	<b>185</b>	<b>10</b>	<b>51</b>	<b>400</b>	<b>3,154</b>

### Environmental Justice Review (Title VI)

This section presents information on specific population segments including minorities, age, sex, mobility-limited, and below poverty level. Title VI of the Civil Rights Act of 1964 and related statutes ensure that individuals are not discriminated against based on race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice dictates that any programs, policies, or activities to be implemented are not to have disproportionately high adverse human health and environmental effects on minority populations. Thus, in relation to this study, transportation improvements should not adversely impact such groups disproportionately. In addition to assuring that these policies are adhered to, a variety of possible alternatives should be developed and considered in order to make sure all groups are fairly represented in the amount and type of transportation services provided.

### Minority Population

According to the 2000 Census, the Town of Camp Verde has a 19.4% minority population, with Hispanic as the largest minority group accounting for 10.7% of the total population. The percentage of minorities in the study area is significantly lower than the State average but slightly higher than the Yavapai County average (see *Table 2.8: Minority, Elderly, Mobility Limited, and Poverty Population*). A detailed breakdown of the minority population in the Town of Camp Verde, Yavapai County, and the State of Arizona is presented in Figure 2.3. Figure 2.4 shows the concentration of the minority population in the study boundary.

### Population Age 65 and Older

An estimated 20.8% of the population in Camp Verde is age 65 and older, which is higher than both the State estimate of 13.0% but just slightly less than the Yavapai County estimate (see *Table 2.8: Minority, Elderly, Mobility Limited, and Poverty Population*). Figure 2.5 illustrates the concentration of population age 65 and older.

### Mobility Limited Population (Age 16-64)

The 2000 Census data shows that 18.5% of the total population in the Town is mobility limited, which is higher than both the state and county averages (see *Table 2.8: Minority, Elderly, Mobility Limited, and Poverty Population*). Figure 2.6 displays the concentration of mobility limited concentrations.

### Below Poverty Population

According to the 2000 Census, 16.4% of the population in the Town is below poverty, which is higher than the state and county estimates as shown Table 2.8. The visual illustration of the below poverty concentration is shown in Figure 2.7.

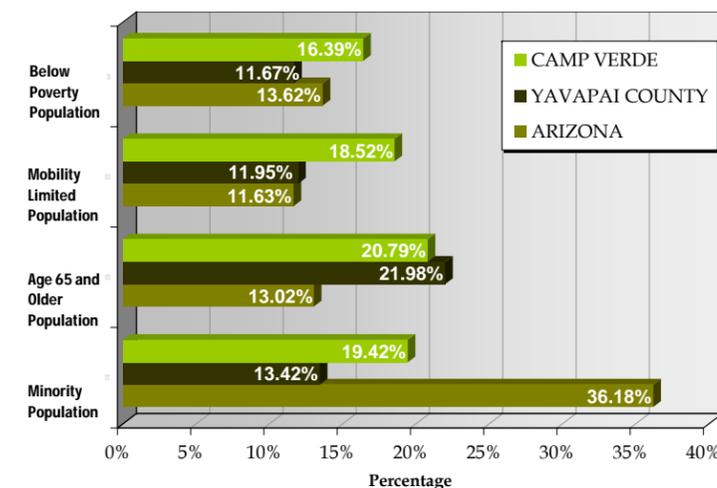
**TABLE 2.8: MINORITY, ELDERLY, MOBILITY LIMITED, AND POVERTY POPULATION**

	Town of Camp Verde		Yavapai County		Arizona	
	Population	% of Total Population	Population	% of Total Population	Population	% of Total Population
<b>Total Population</b>	<b>9,723</b>		<b>167,517</b>		<b>5,130,632</b>	
<b>Minority Population</b>	<b>1,888</b>	<b>19.42%</b>	<b>22,480</b>	<b>13.42%</b>	<b>1,856,374</b>	<b>36.18%</b>
-Hispanic	1,044	10.74%	16,376	9.78%	1,295,617	25.25%
-African American	25	0.26%	589	0.35%	149,941	2.92%
-Native American	647	6.65%	2,355	1.41%	233,370	4.55%
-Asian	21	0.22%	833	0.50%	89,315	1.74%
-Pacific Islander	13	0.13%	128	0.08%	5,639	0.11%
-Other Race	5	0.05%	89	0.05%	6,120	0.12%
-Two or More Race	133	1.37%	2,110	1.26%	76,372	1.49%
<b>Age 65 and Older Population</b>	<b>2,021</b>	<b>20.79%</b>	<b>36,816</b>	<b>21.98%</b>	<b>667,839</b>	<b>13.02%</b>
<b>Mobility Limited Population</b>	<b>1,801</b>	<b>18.52%</b>	<b>20,019</b>	<b>11.95%</b>	<b>596,787</b>	<b>11.63%</b>
<b>Below Poverty Population</b>	<b>1,594</b>	<b>16.39%</b>	<b>19,552</b>	<b>11.67%</b>	<b>698,669</b>	<b>13.62%</b>

Source: Census Bureau.

Note: Census Block Groups (\*) extend beyond the study area altering total population numbers.

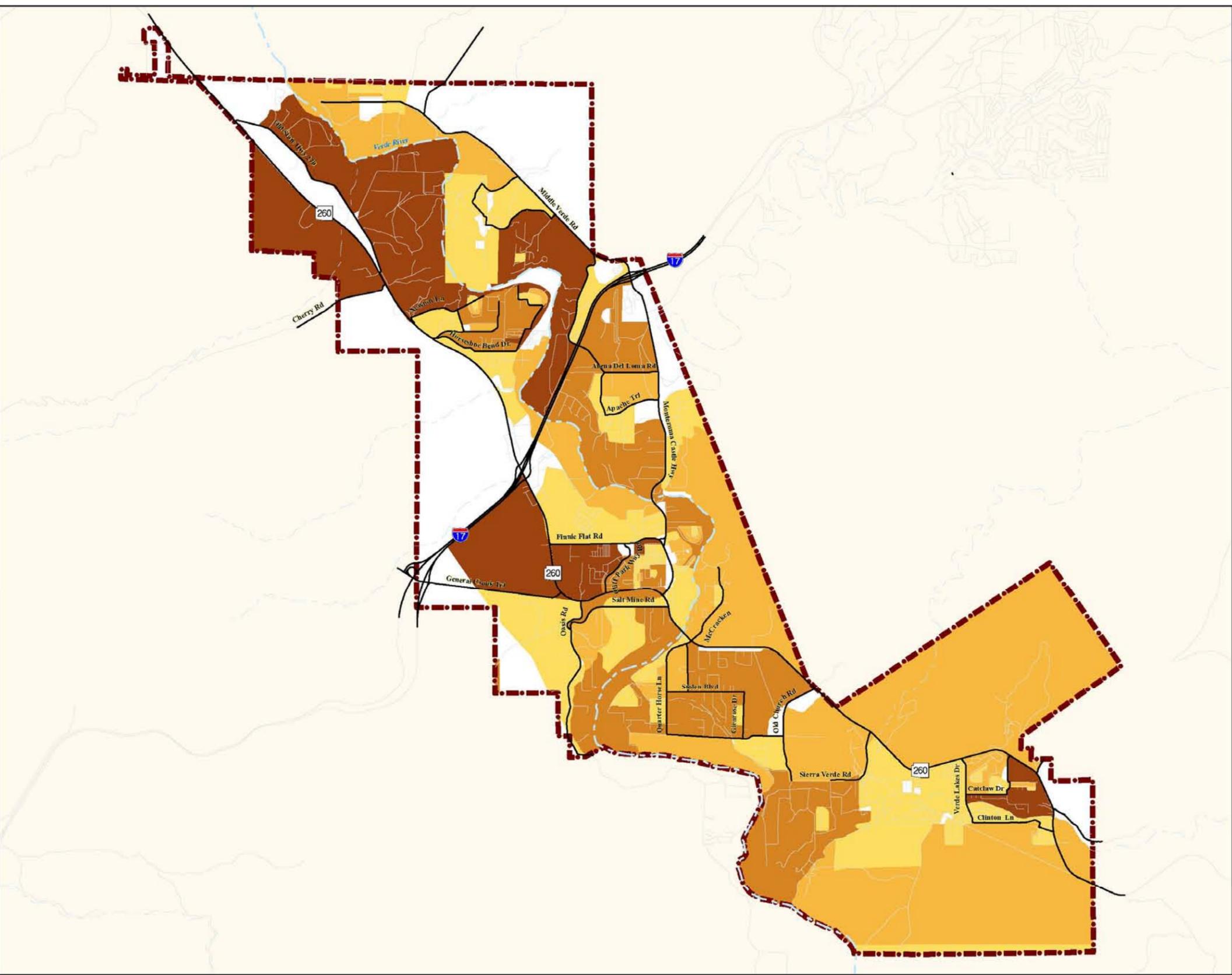
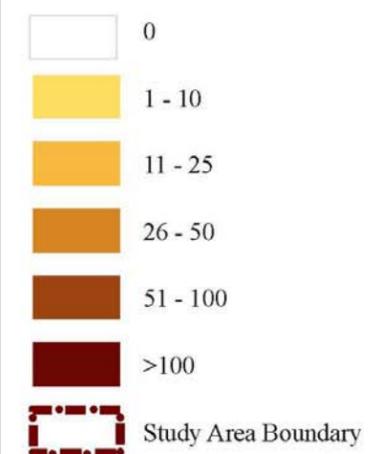
**FIGURE 2.3: MINORITY, ELDERLY, MOBILITY LIMITED, AND POVERTY POPULATION COMPARISON**





**Figure 2.5  
Age 65 and Over  
Population  
(Census Blocks)**

**Town of Camp Verde  
Small Area Transportation Study**



Date: 03.15.2008

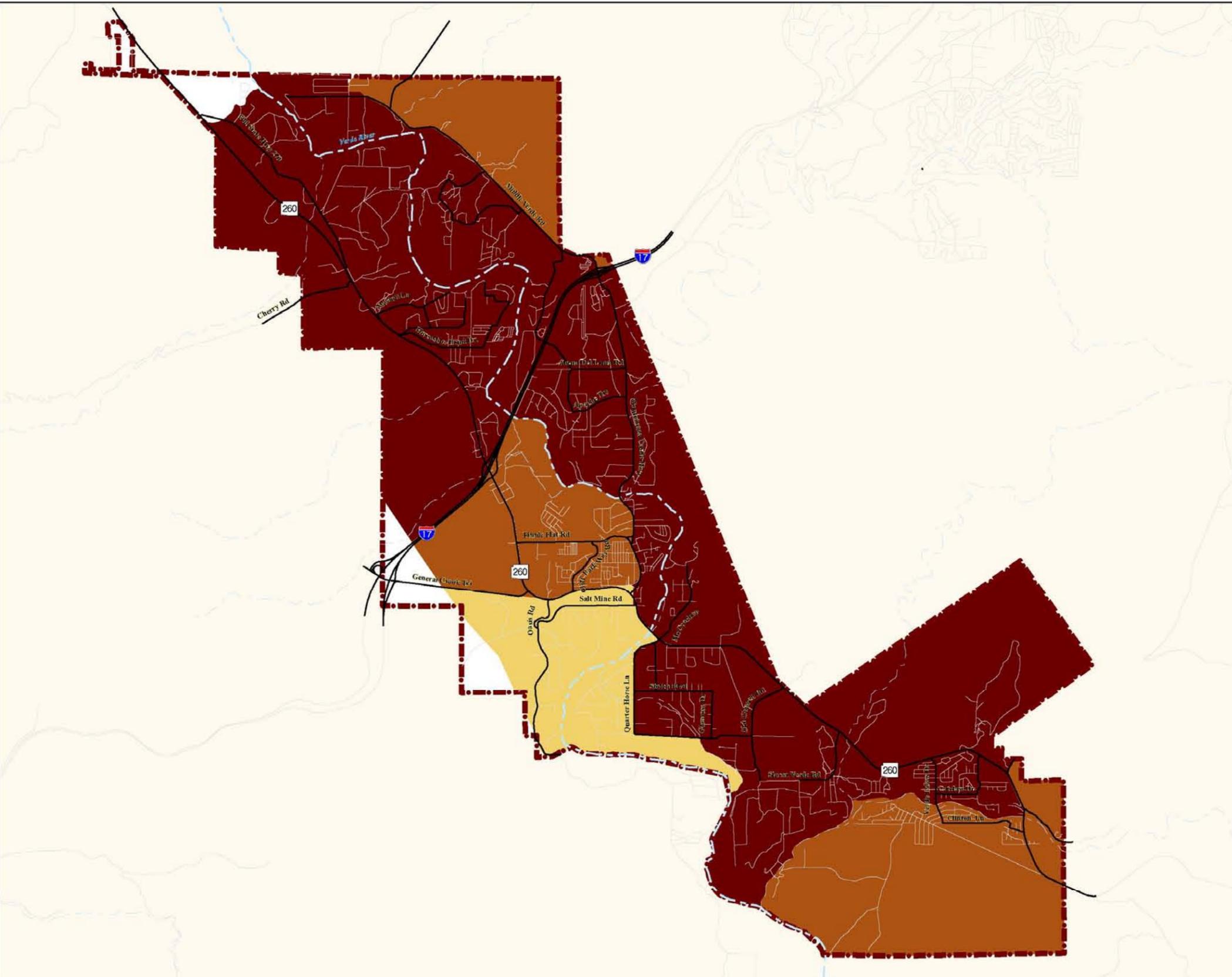
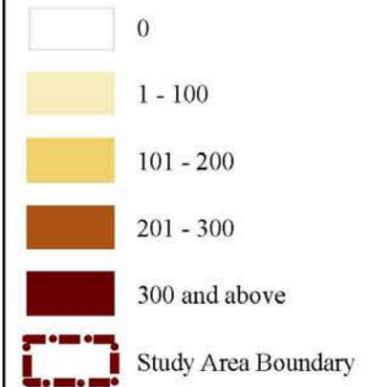
Source: Census 2000, ADOT, ALRIS, Yavapai County GIS.



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**Figure 2.6  
Mobility Limited  
Population  
(Census Block Groups)**

**Town of Camp Verde  
Small Area Transportation Study**



Date: 03.15.2008

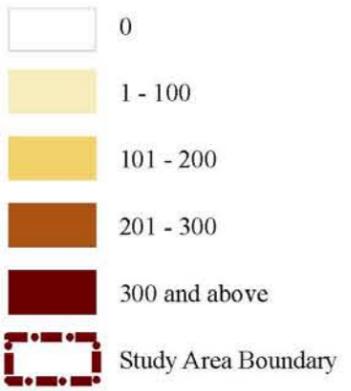
Sources: Census 2000, ADOT, ALRIS, Yavapai County GIS.



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**Figure 2.7  
Below Poverty  
Population  
(Census Block Groups)**

**Town of Camp Verde  
Small Area Transportation Study**



Date: 03.15.2008

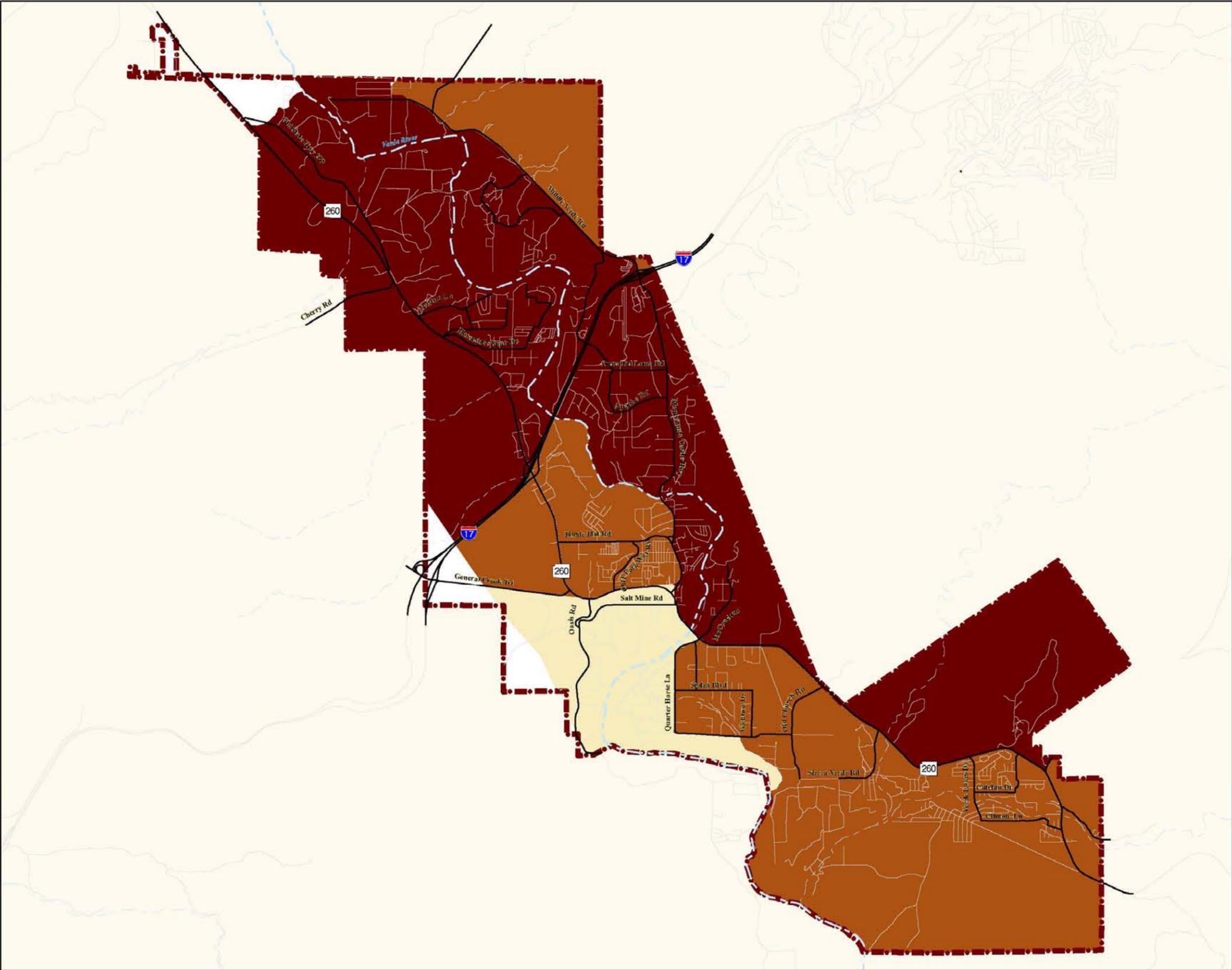
Sources: Census 2000, ADOT, ALRIS, Yavapai County GIS.



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**Environmental and Cultural Resources Overview**

Inventory of the physical, natural, and cultural environment is an important component of the transportation planning process. When environmental conditions and concerns are reviewed in the early stages of the transportation planning process, it often leads to better transportation solutions with smaller negative impacts on the natural environment.

**Environmental Overview**

The Town of Camp Verde is located at the foot of the Black Hills in the Verde Valley at an elevation of 3,147 feet. The Town is bordered by Prescott National Forest to the south and Coconino National Forest to the north.

*Vegetation:* Several varieties of vegetation exist in Camp Verde however the prominent vegetation type is Mixed Paloverde (see *Figure 2.8: Natural Environments*).

*Water Features:* Major hydrological features include the Verde River, Beaver Creek, and West Clear Creek. Verde River is a perennial stream that transverses north-south through the study area, it starts at Sullivan Lake (south of Paulden in Yavapai County) and flows south to the Salt River. Beaver Creek, West Clear Creek and smaller tributaries drain into the Verde River (see *Figure 2.8: Natural Environments*).

*Riparian Areas:* Portions of the Verde River, Beaver Creek, and West Clear Creek within the study area are designated as riparian areas (see *Figure 2.8: Natural Environments*).

**Areas of Environmental Concern**

*Underground Storage Tanks:* Within the Town of Camp Verde there are 29 underground storage tanks which require periodic monitoring (see *Figure 2.9: Environmental Concerns*).

*Impaired Streams:* Within the study area, segments of the Verde River have been identified by the Arizona Department of Environmental Quality (ADEQ) as impaired streams and require monitoring.

*Endangered Species:* The Arizona Game and Fish Department has identified several endangered species within the proximity of the study area as shown in Table 2.9

**TABLE 2.9: ENDANGERED SPECIES IN THE CAMP VERDE AREA**

Within the proximity of the study area, Arizona Game & Fish Department has identified the following endangered species and habitat	
<u>Animals</u>	<u>Plants</u>
Bald Eagle	Arizona Cliff Rose
Belted Kingfisher	Bigelow Onion
Camp Verde Cotton Rat	Heathleaf Wild-buckwheat
Common Black-Hawk	Heermann's Wild Buckwheat
Desert Sucker	Hualapai Milkwort
Gila Longfin Dace	Ringstem
Great Blue Heron	Ripley Wild-buckwheat
Maricopa Tiger Beetle	Small-flower Ratany
Northern Mexican Garter snake	Verde Valley Sage
Plains Harvest Mouse	Viviparous Foxtail Cactus
Roundtail Chub	
Sonora Sucker	
Southwestern Willow Flycatcher	
Speckled Dace	
Spikedace	
Western Yellow-billed Cuckoo	

*Source: Arizona Game & Fish Department*

**Figure 2.8  
Natural Environment  
Overview**

**Town of Camp Verde  
Small Area Transportation Study**

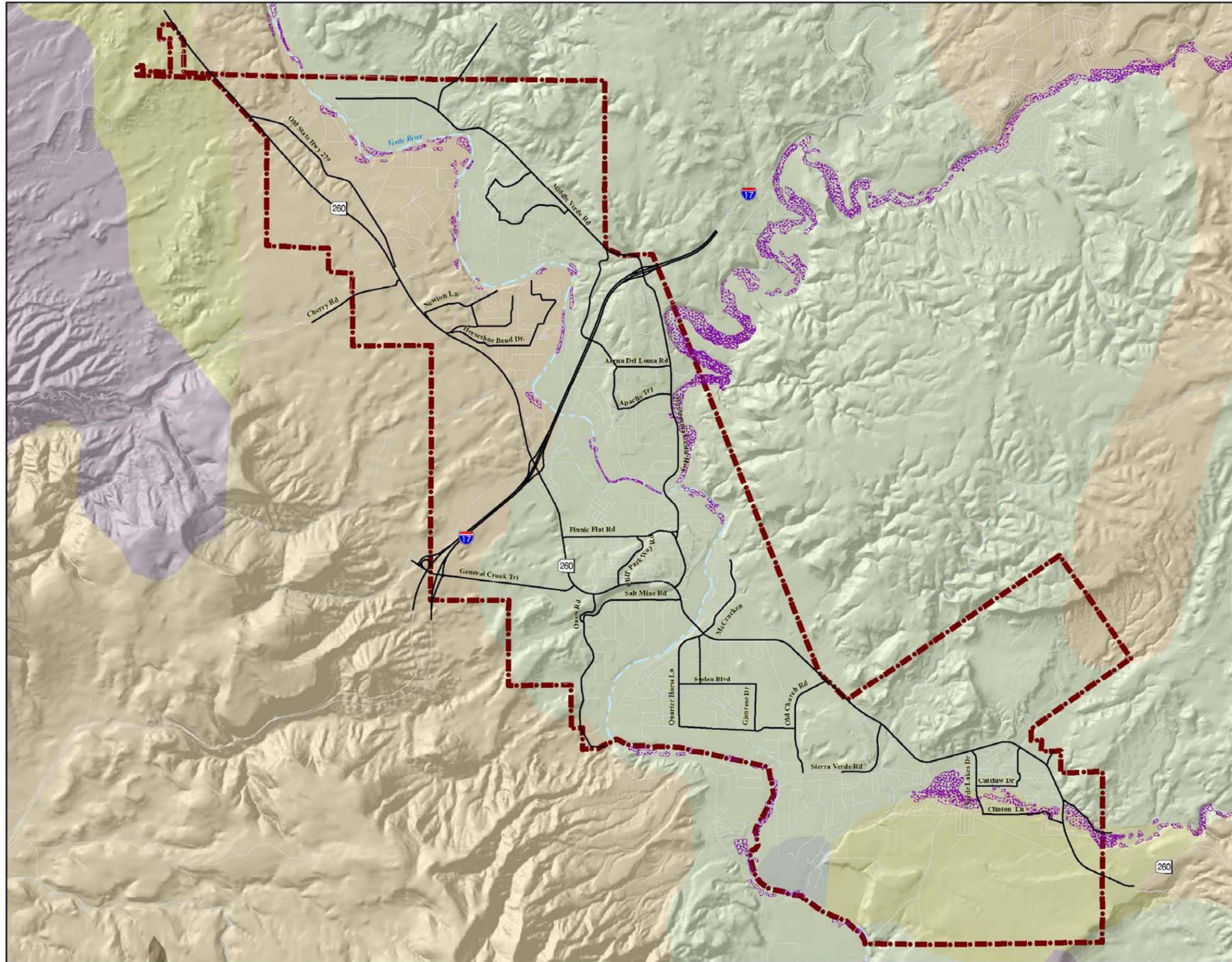
-  Riparian
-  Cottonwood
-  Desert Grassland
-  Interior Chaparral
-  Mixed Paloverde
-  Pinyon
-  Shrub - Grass
-  Study Area Boundary

Date: 03.15.2008

Source: ALRIS, ADOT, Yavapai County GIS.



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## TRANSPORTATION CONDITIONS

This section inventories the existing major transportation system and documents the status/condition of each transportation element. Included in the inventory are bridges, pavement condition, crashes, traffic conditions, roadway performance, and other modes of transportation in the study area.

### Existing Roadway System

#### Major Roadways

*Interstate 17* is an ADOT owned divided four-lane roadway that traverses north-south through the Town of Camp Verde for approximately five miles and primarily serves regional traffic between Phoenix, Flagstaff, and the Verde Valley Region.

*State Route 260* is an ADOT owned east-west highway that serves both local and regional traffic. Beginning in Cottonwood and ending in Eagar, SR 260 intersects I-17 in the central portion of Camp Verde. SR 260 is a two-lane arterial within the study area; however, from mileposts 218 to 223 SR 260 is four-lane roadway with a center left turn lane.

*Montezuma Castle Highway* is a north-south major collector that begins at I-17/Cliff Castle Casino and ends at Main Street. It is primarily used by local traffic and has one lane in each direction.

*Main Street* extends between Finnie Flat Road/Montezuma Castle Highway and SR 260. Multiple tourism related businesses and Town government offices are located along Main Street.

*Finnie Flat Road* connects Main Street and SR 260. It is predominantly a two lane road that serves local traffic. A small section of Finnie Flat Road, at SR 260, is a four lane road.

#### Roadway Functional Classification, Lanes and Posted Speed Limits

Functional Classification is the grouping of roads, streets, and highways in a hierarchy based on the type of service they provide. Streets and highways do not operate independently, they are part of an interconnected network and each one performs a service in moving traffic throughout the system. The Town of Camp Verde staff helped identify key roadways within the study area to be evaluated. A field review was conducted to inventory the roadway and

intersection lane configuration, speed limits, and road conditions. Table 2.10 lists the standards of roadway functional classification from the General Plan. Figure 2.10 displays the functional classification of these roads in the study area. Figure 2.11 displays the total number of lanes for each roadway and Figure 2.12 presents the corresponding posted speed limit.

**TABLE 2.10: ROADWAY FUNCTIONAL CLASSIFICATION DEFINITION**

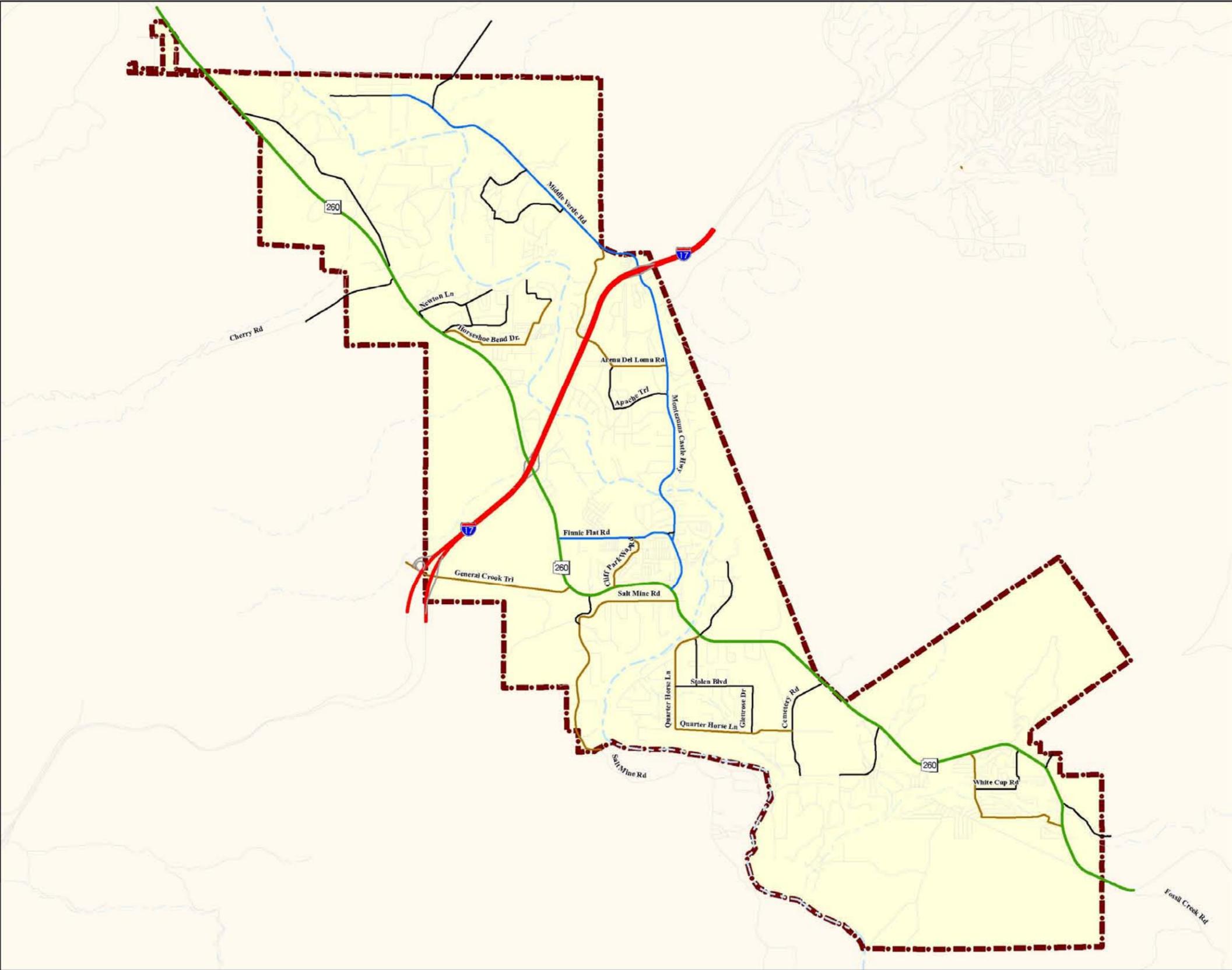
CLASSIFICATION	DESCRIPTION
<b>Major Arterial</b>	Defined as a street with access control, channelized intersections, restricted parking, and collects and distributes traffic to and from minor arterials.
<b>Minor Arterial</b>	Defined as a street with signals at important intersections, stops signs on the side streets, and collects and distributes traffic to and from collector streets.
<b>Collector</b>	Defined as a street that collects traffic from local streets and connects with minor and major arterials.

#### Pavement Type and Condition

Nearly all of the major roads in Camp Verde are paved; Figure 2.13 displays the current pavement condition in terms of very poor, poor, fair, good and very good. The pavement ratings for I-17 and SR 260 were provided by ADOT and the Town of Camp Verde provided the pavement conditions for other roads in the study area. More than 10% percent of the roadway network has a pavement serviceability rating of poor or worse; Quarterhorse Lane from Glenrose Drive to Quarterhorse Lane (north/south) is classified as very poor.

#### Bridge and Culverts

The Verde River transverses north-south through study area and has smaller tributaries that drain into it, resulting in several bridges and culverts throughout the Town of Camp Verde. Bridge condition data was provided by ADOT for bridges in the study area. Four bridges/culverts are in need of replacement or rehabilitation; one along SR 260/Cherry Creek and another along I-17/Gaddis Wash. The remaining two bridges/culverts in need of replacement or rehabilitation are along SR 260 south of Homestead Parkway. Figure 2.14 displays the bridge conditions.



**Figure 2.10**  
**Existing Roadway**  
**Functional Classification**

**Town of Camp Verde**  
**Small Area Transportation Study**

-  Interstate
-  Arterial
-  Major Collector
-  Minor Collector
-  Local
-  Ramps
-  Study Area Boundary

Date: 03.15.2008

Source: ALRIS, ADOT, Town of Camp Verde, Yavapai County GIS.

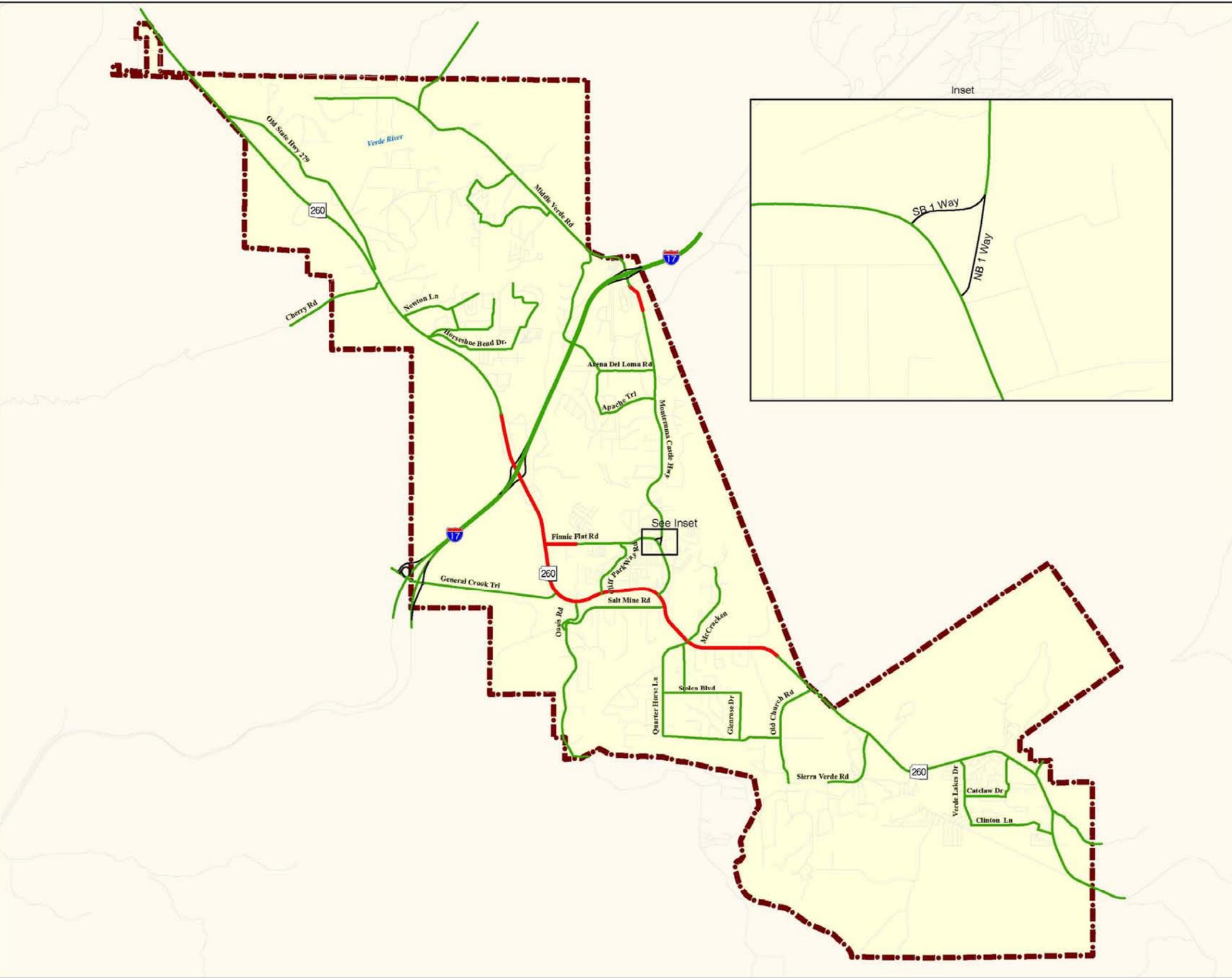


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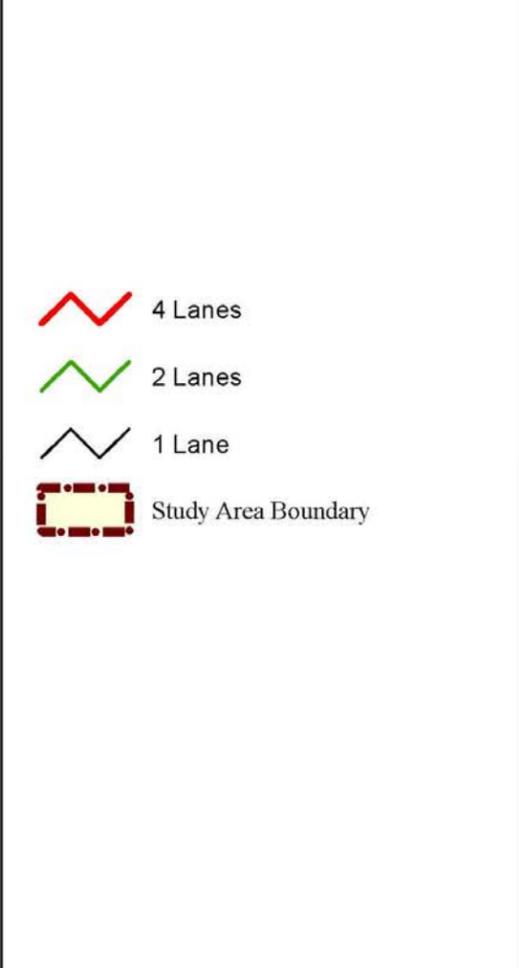
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**Figure 2.11**  
**Number of Lanes**

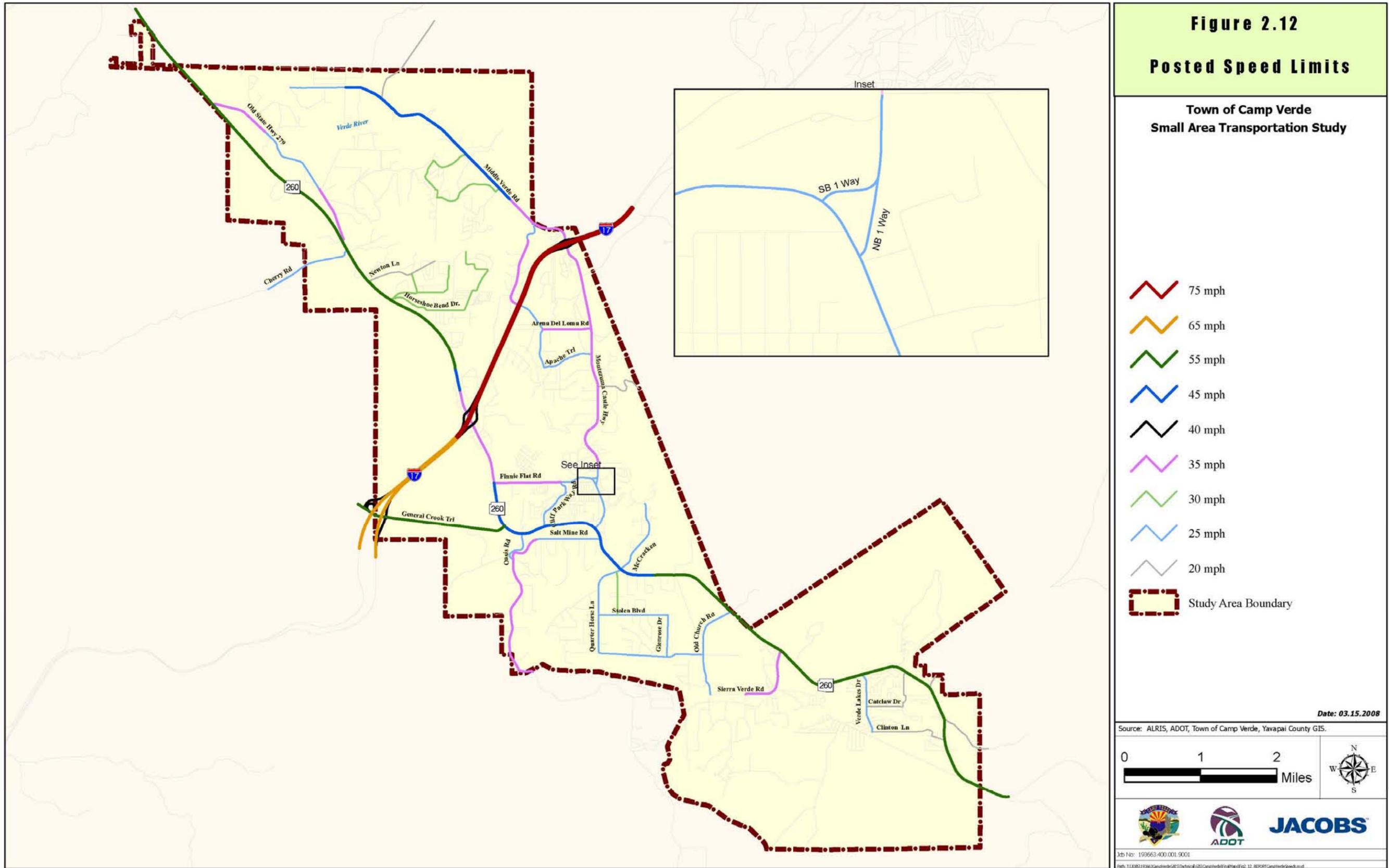
**Town of Camp Verde**  
**Small Area Transportation Study**

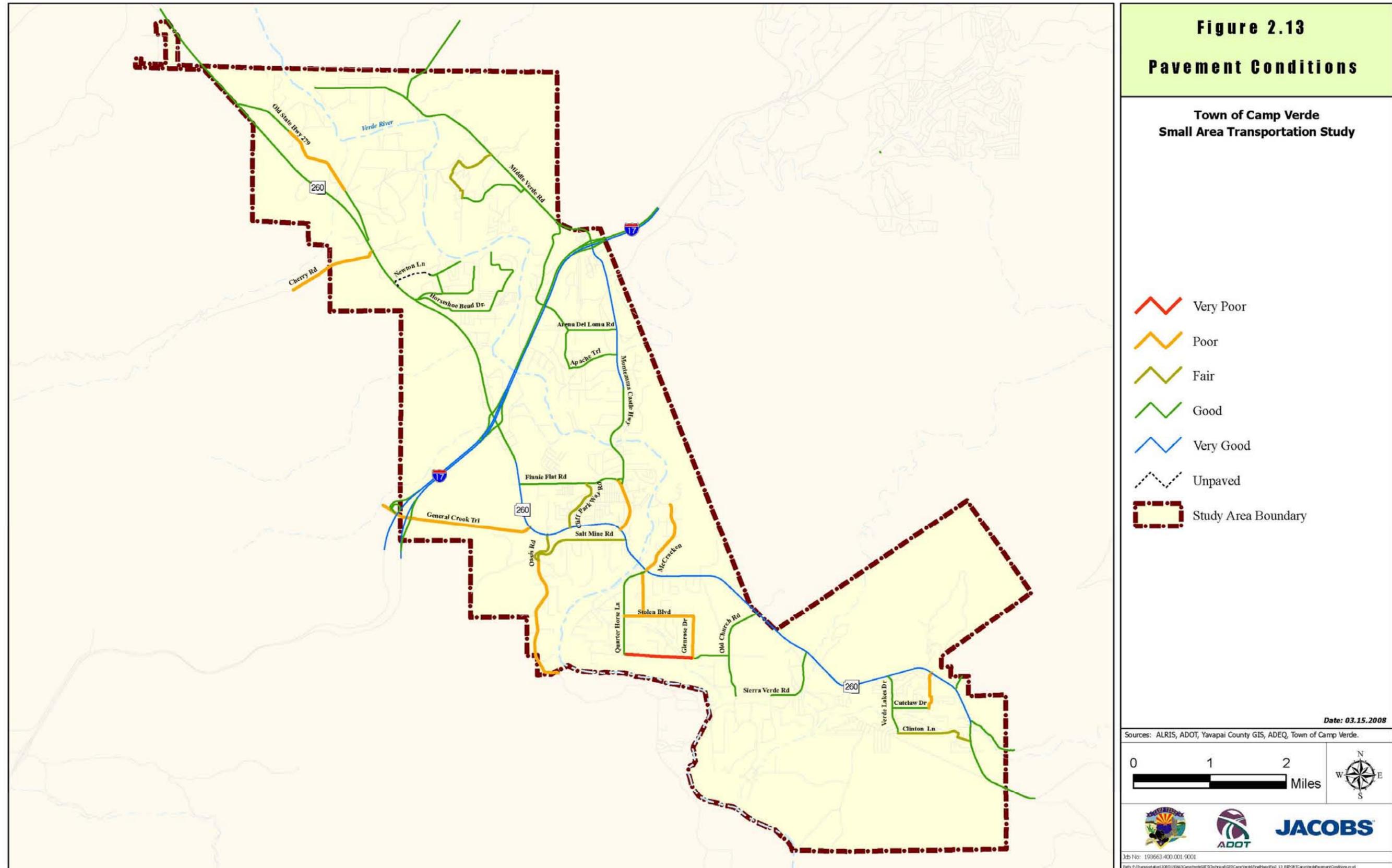


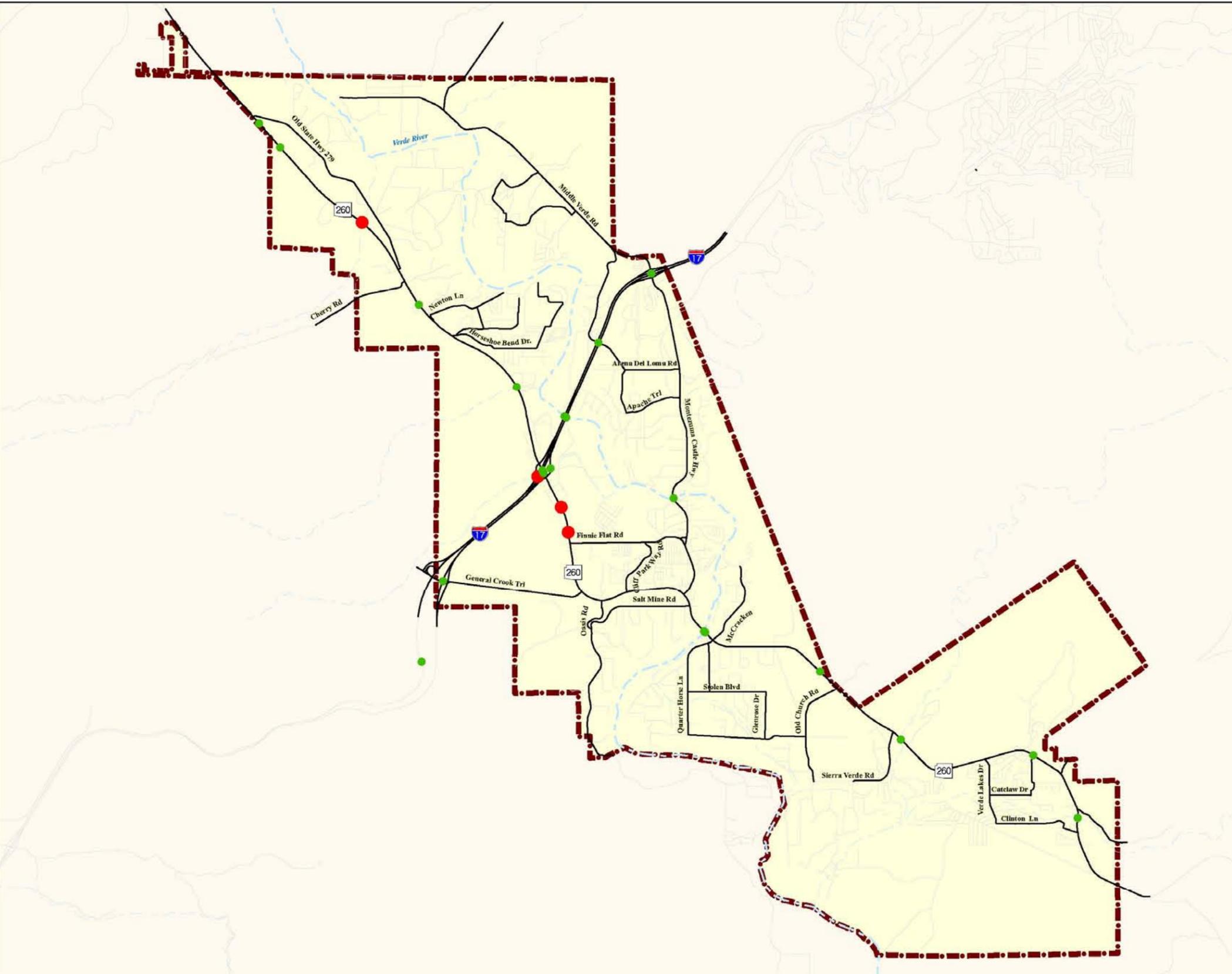
Date: 03.15.2008

Source: ADOT, Verde Valley Transportation Model Update 2007, ALRIS.



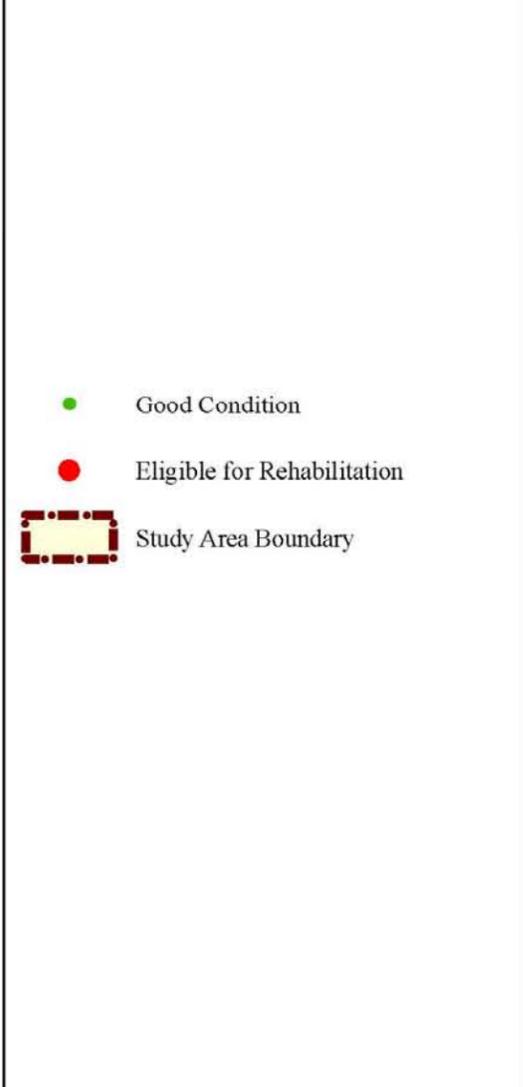






**Figure 2.14**  
**Bridge Conditions**

Town of Camp Verde  
Small Area Transportation Study



Date: 03.15.2008

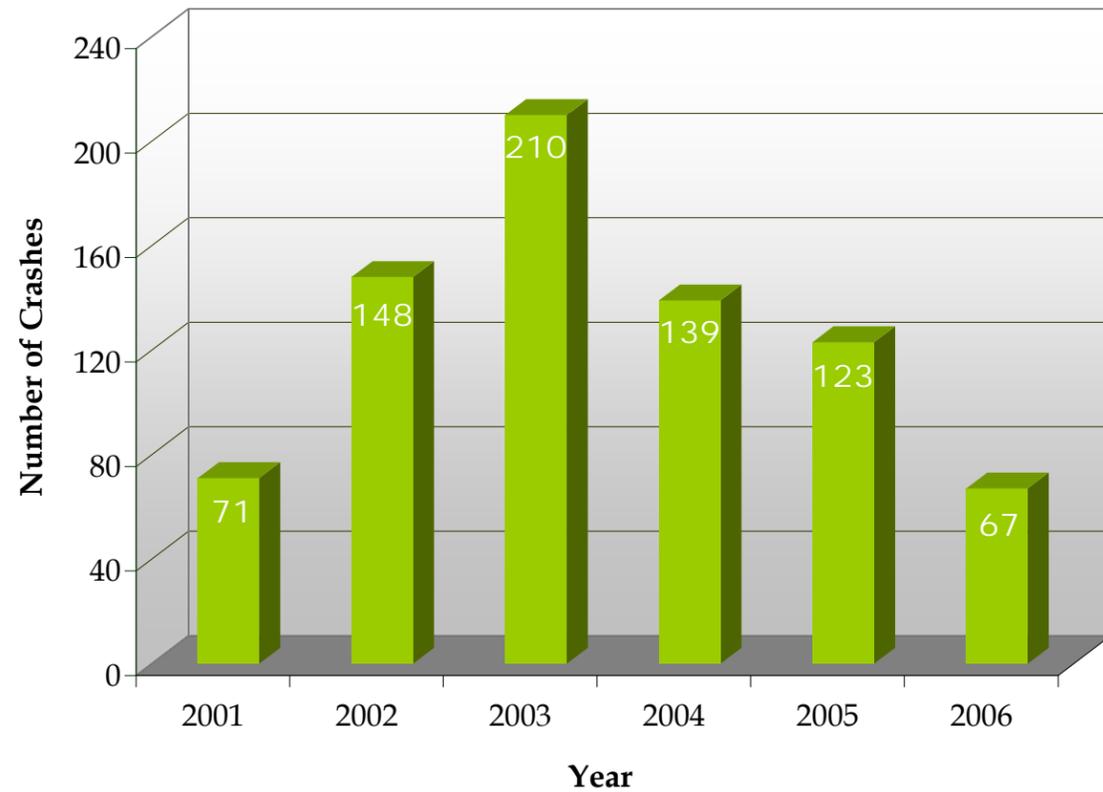
Source: ADOT, ALRIS, Yavapai County GIS, Town of Camp Verde.



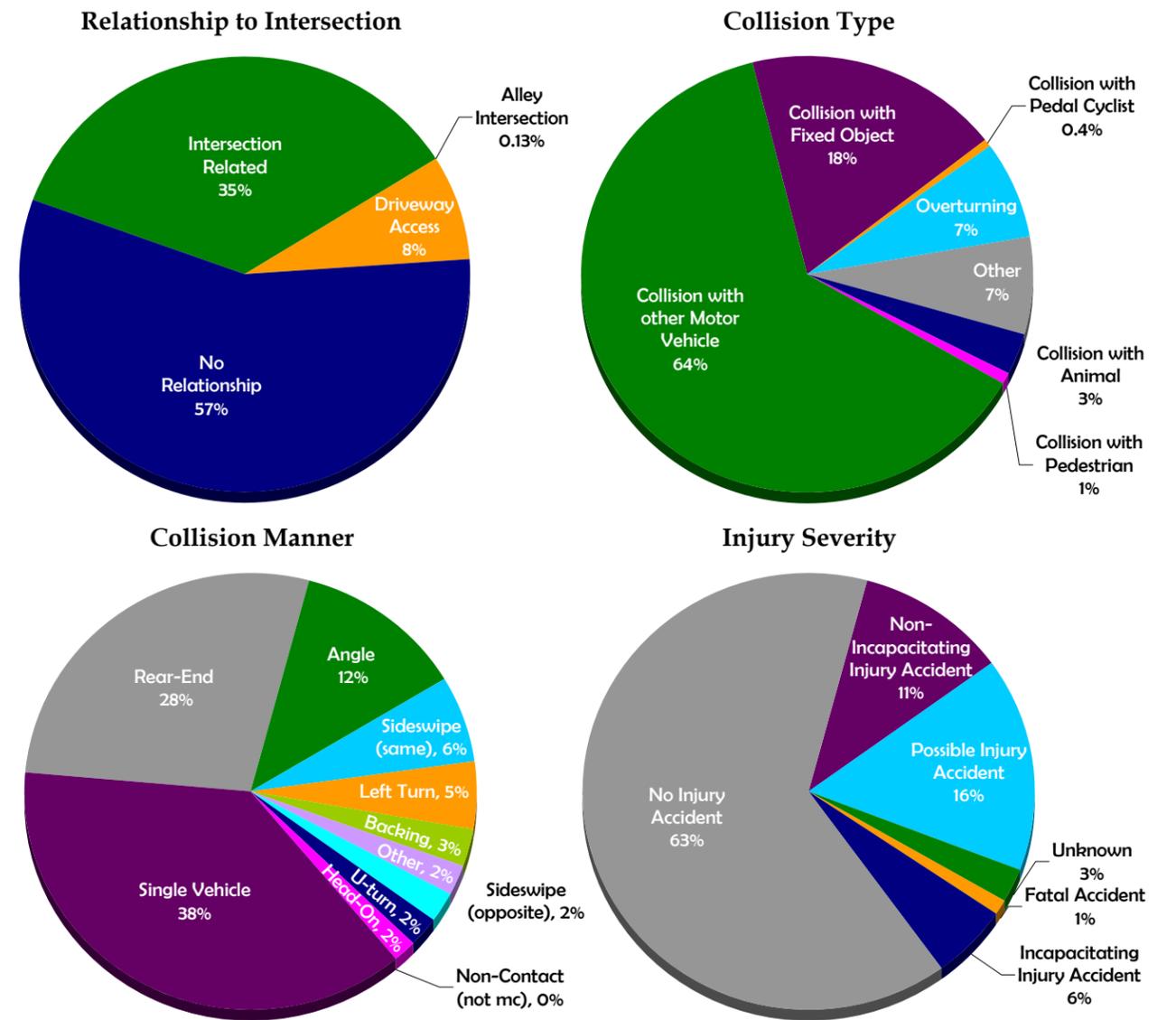
**Crash Data**

Crash analysis was conducted for major roadways in the study area to identify high accident locations, trends, patterns, and predominant crash reasons. All crashes in the area between August 2001 and July 2006 were obtained from ADOT’s Accident Location Identification Surveillance System (ALISS). A total of 758 crashes occurred in the five year period; Figure 2.15 shows the breakdown of crashes over the past five years. Of the total crashes, eight were fatalities; with three of those fatalities along I-17 and another three along SR 260 (see *Figure 2.18: Fatal Crashes*). Figure 2.16 shows a breakdown of crashes by intersection type, first harmful definition, collision manner, and injury severity. Figure 2.17 displays the location of crashes in the study area and Figure 2.18 presents the fatal crash locations. Table 2.11 displays the top seven violation types for the crashes in the study area.

**FIGURE 2.15: HISTORICAL CRASH SUMMARY**

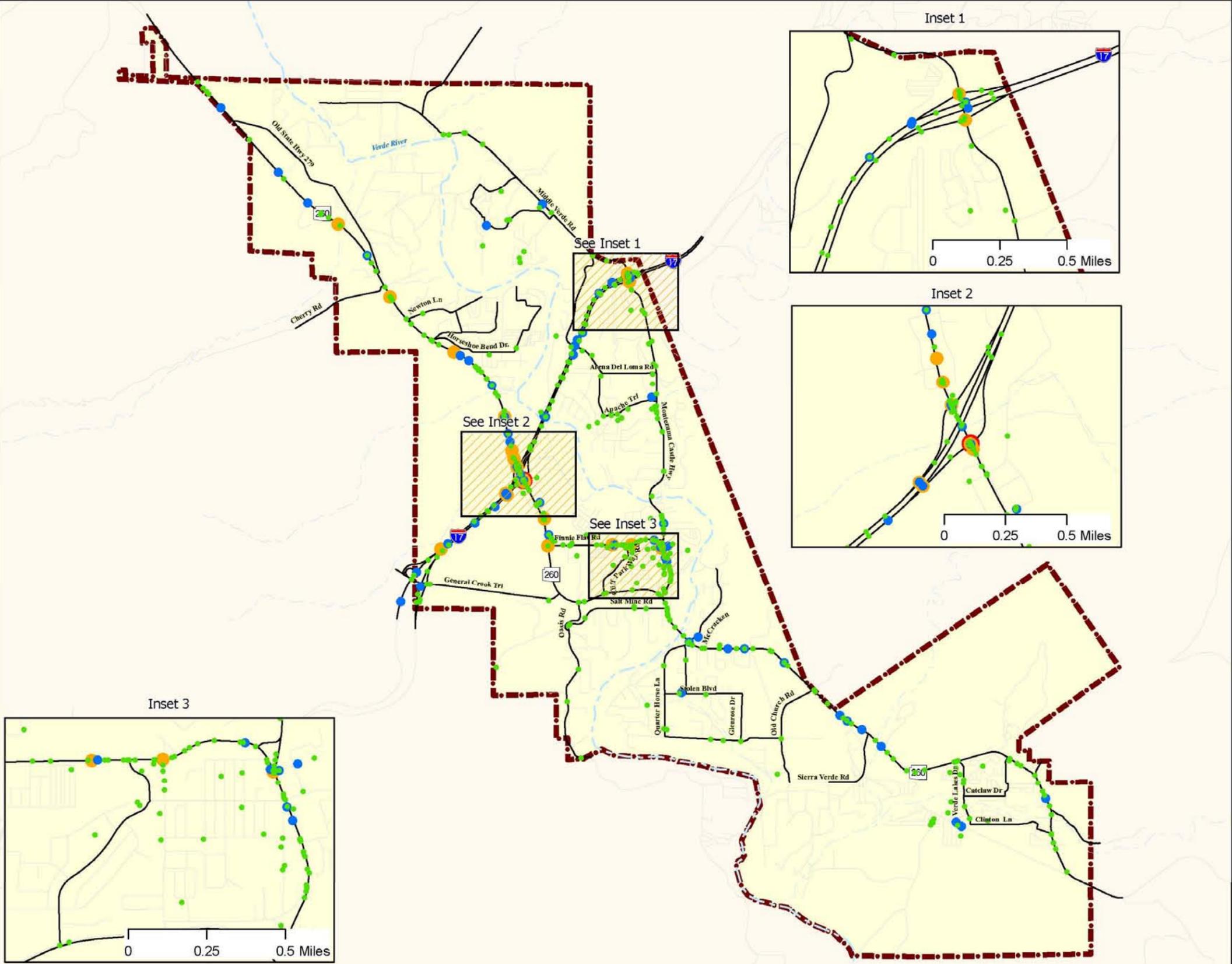


**FIGURE 2.16: CRASH SUMMARY**



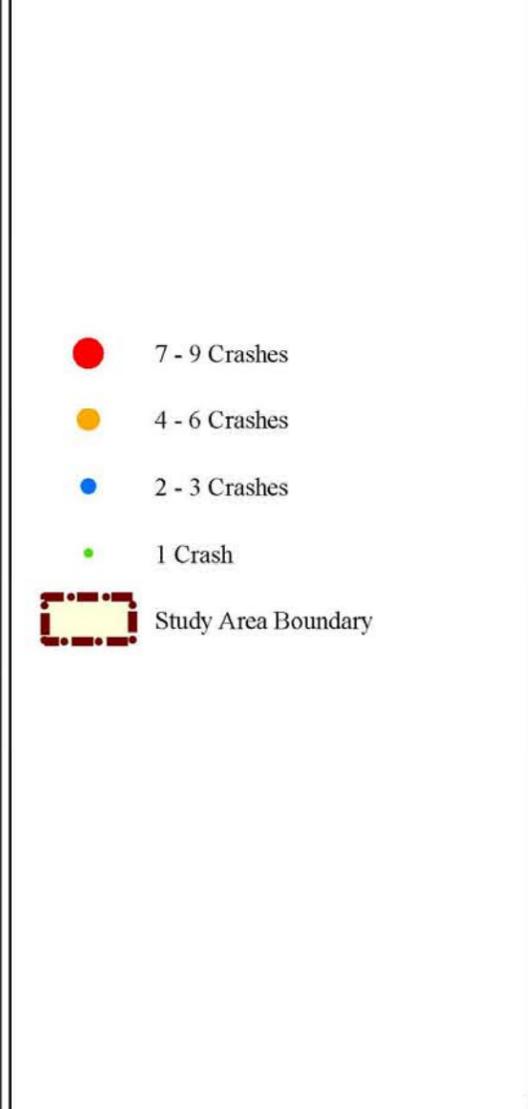
**TABLE 2.11: CRASHES - TOP SEVEN PREDOMINANT VIOLATION TYPES**

Violation Type	Crashes	Percentage
Speed Too Fast for Conditions	221	29.16%
Failed to Yield Right-Of-Way	116	15.30%
Inattention	107	14.12%
No Improper Driving	79	10.42%
Other	57	7.52%
Unknown	53	6.99%
Followed Too Closely	31	4.09%



**Figure 2.17**  
**Crash Locations**

Town of Camp Verde  
Small Area Transportation Study



Date: 03.15.2008

Sources: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.

0 1 2 Miles

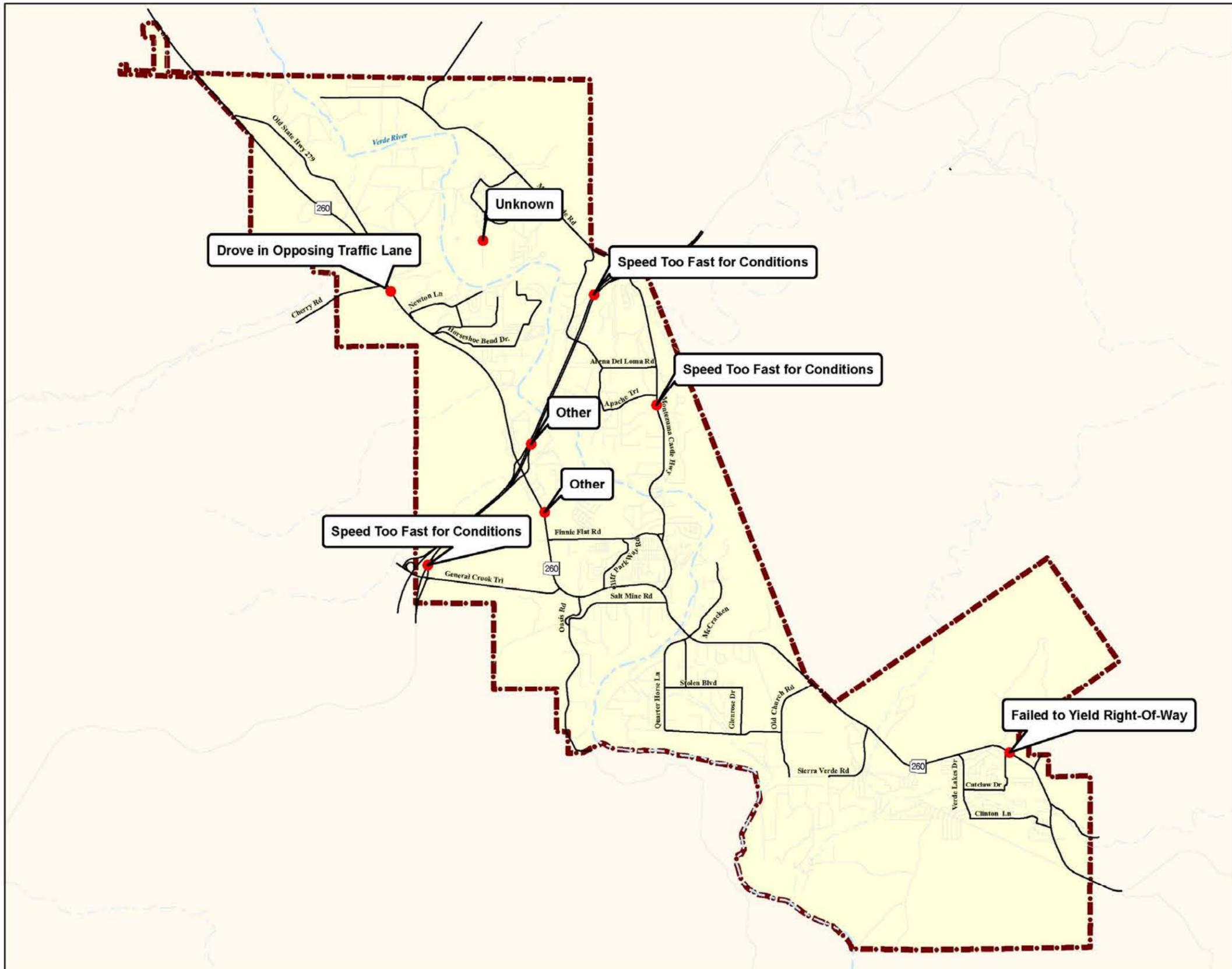
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**Figure 2.18**  
**Fatal Crashes**

**Town of Camp Verde  
Small Area Transportation Study**

- Fatal Crashes
- Study Area Boundary



Date: 03.15.2008

Source: ADOT, ALRIS, Town of Camp Verde, Yavapai County GIS.



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## Existing Roadway Traffic and Performance Conditions

### Current Traffic Counts

Traffic Counts were obtained at strategic locations throughout the study area (See *Figure 2.20 Current Traffic Counts*). I-17 carries the highest amount of traffic followed by SR 260 north of I-17. In addition to daily traffic counts, AM and PM peak hour turn movement traffic counts were taken at key intersections and are also displayed in Figure 2.20.

### Level of Service

Roadway performance is measured in terms of Level of Service (LOS). For a planning level analysis, the level of service is based on the range of the ratio of traffic volume on the road to the capacity of the road. The capacity of the road is a function of the number of lanes, functional classification, speed, and roadway geometrics. The Highway Capacity Manual states that the LOS of a road segment can range from LOS A to LOS F as defined below.

**LOS A:** Best, free flow operations (on uninterrupted flow facilities) and very low delay (on interrupted flow facilities). Freedom to select desired speeds and to maneuver within traffic is extremely high.

**LOS B:** Flow is stable, but presence of other users is noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within traffic.

**LOS C:** Flow is stable, but the operation of users is becoming affected by the presence of other users. Maneuvering within traffic requires substantial vigilance on the part of the user.

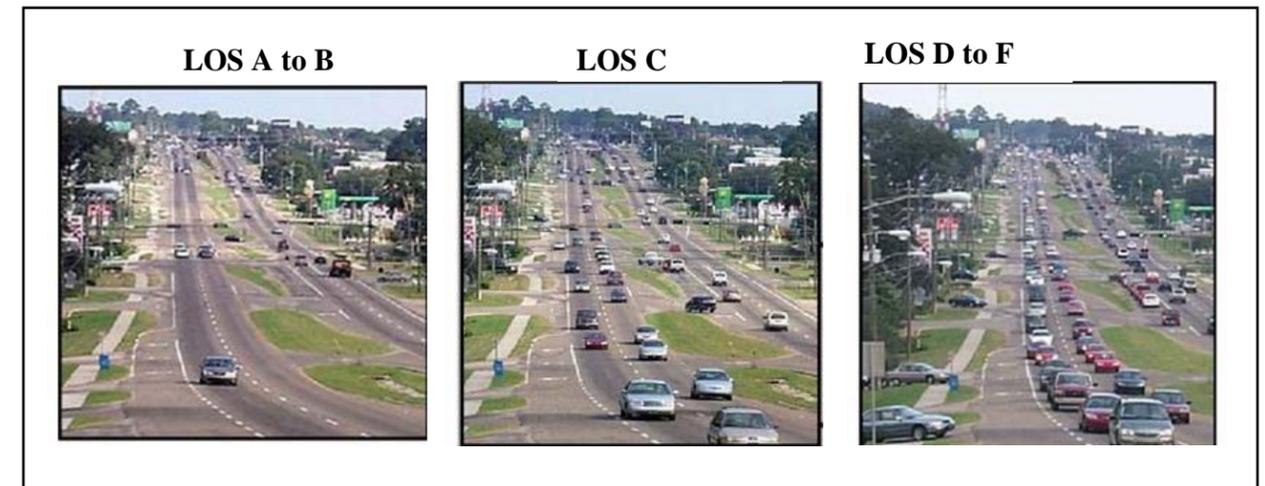
**LOS D:** High density but stable flow. Speed and freedom to maneuver are severely restricted. The driver is experiencing a generally poor level of comfort and convenience.

**LOS E:** Flow is at or near capacity. All speeds are reduced to a low, but relatively uniform value. Freedom to maneuver within traffic is extremely difficult. Comfort and convenience levels are extremely poor.

**LOS F:** Worse, facility has failed, or a breakdown has occurred.

For rural communities, LOS A and B correspond to no congestion, LOS C represents moderate congestion, and LOS D, E, and F indicate severe congestion (See *Figure 2.19: Illustration of LOS A Through F*).

FIGURE 2.19: ILLUSTRATION OF LOS A THROUGH LOS F



### Current Roadway Level of Service

Figure 2.21 illustrates the current LOS for roadways within the Town of Camp Verde.

Following roadways operate at LOS C:

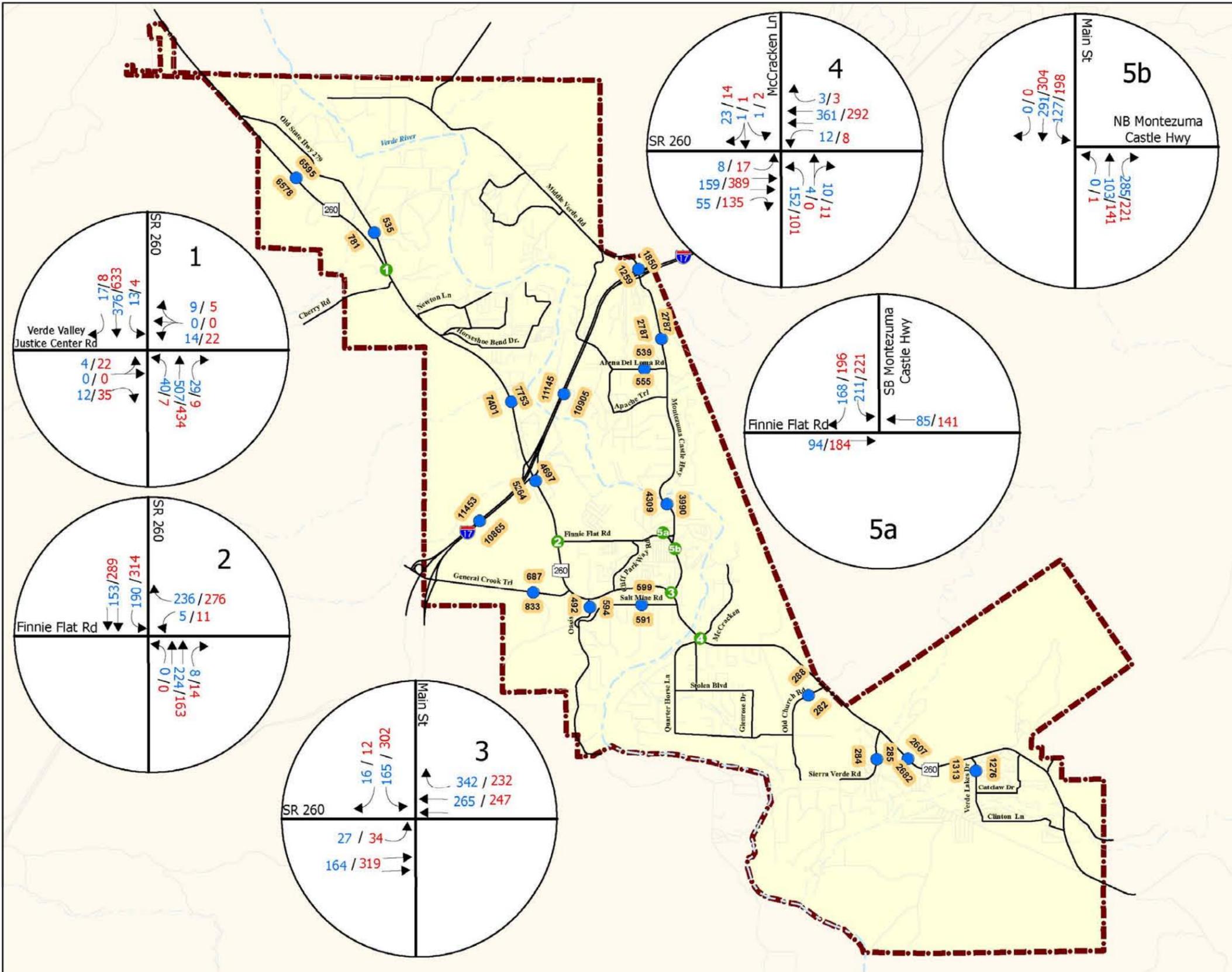
- Montezuma Castle Highway
- Finnie Flat Road
- Main Street
- SR 260 North of I-17

Other roads operate at LOS B or better.

### Current Intersection Level of Service

The current intersection LOS and the LOS for each turn movement for each leg/approach of the intersections were determined and are displayed in Figure 2.21.

- Main Street/Finnie Flat Road/Montezuma Castle Highway intersection operates at LOS F.
- SR 260/Verde Valley Justice Center Road intersection operates at LOS C during the AM peak and LOS D during the PM peak.



**Figure 2.20**  
**Current Traffic Counts**

**Town of Camp Verde**  
**Small Area Transportation Study**

- XX/XX = AM/PM Traffic Counts
- XXXX = Traffic Counts
- 24-Hr Counts
- ▭ Study Area Boundary



Date: 03.15.2008

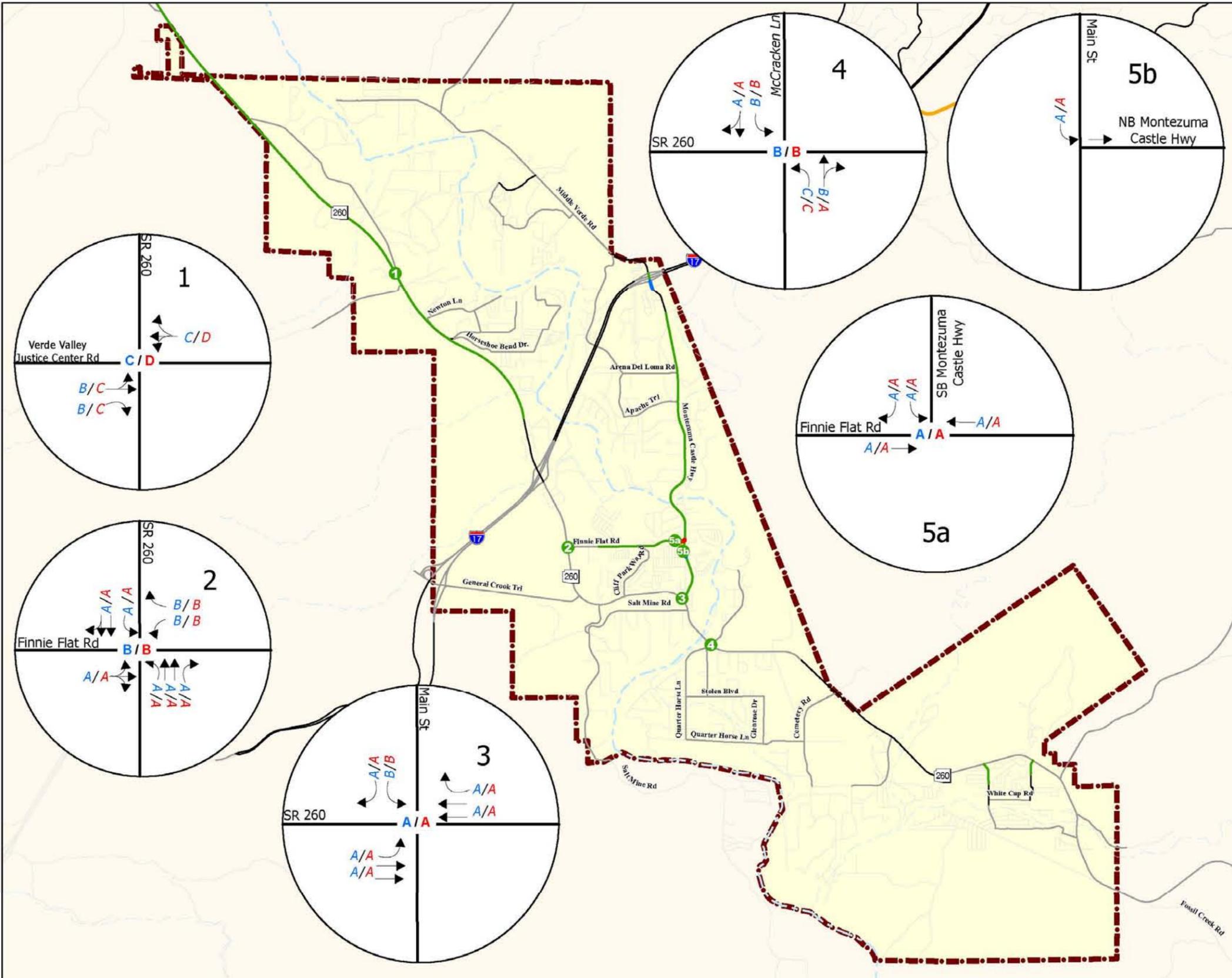
Source: ADOT, ALRIS, Town of Camp Verde, Yavapai County GIS.



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**Figure 2.21**  
**Existing Roadway**  
**Level of Service**

**Town of Camp Verde**  
**Small Area Transportation Study**



- X/X AM / PM Approach LOS
- X/X AM / PM Intersection LOS
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Study Area Boundary

Date: 04.07.2008

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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### Existing Transit Services

In 2001, a long term resident of the Camp Verde area named William Ellison made an entrepreneurial effort to bring public transit to Camp Verde. Using both private and public funds, he operated a 57-mile, 3-leg route on a once-every-two-hours frequency, Monday through Friday, and called it Verde Public Transit. Unfortunately, due to a lack of continued funding, the operation lasted only about four and one-half weeks from January 22 through February 20. During the short operation, the Verde Public Transit carried approximately 451 passengers using a deviated fixed route system. Later that year, the Town of Camp Verde commissioned a Camp Verde Transit Study (CVTS) that investigated the impacts of the service and presented statistics provided by Ellison. As a result of the positive impacts found in the temporary transit service, the study strongly recommended the reinstatement of the Verde Public Transit service. Since the closure of Verde Public Transit, no other local or regional transit has been established to serve residents of Camp Verde. Furthermore, neither taxi nor airport shuttle services operate locally in Camp Verde. However, residents of Camp Verde may call for taxi or airport shuttle services that operate from the neighboring cities of Cottonwood and Prescott.

The nearest public transit service is located about 17 miles away in the neighboring City of Cottonwood, called the Cottonwood Area Transit System (CATS). CATS has both a fixed route service and a supplemental dial-a-ride service serving several areas, including Cottonwood, Clarkdale, Verde Village and Bridgeport but not the Town of Camp Verde. It is funded through Section 5311 federal grants, local government support, passenger fares, and the in-kind support of volunteer drivers.

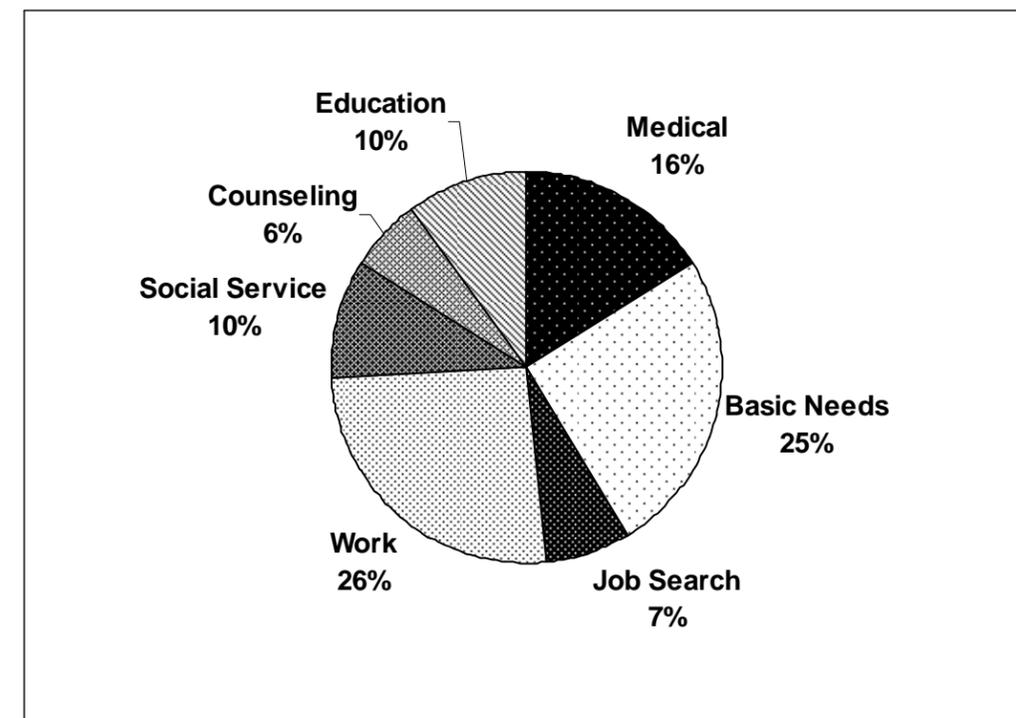
### Voucher Transit System (VTS)

In lieu of a real transit system, qualifying Camp Verde residents have access to a Voucher Transit System (VTS), whereby the Northern Arizona Council of Governments (NACOG) contracts with two taxi companies to provide scheduled and approved trips at minimal cost to the rider. To qualify, a Camp Verde resident must be age 55 or older, a youth between the ages of 16-21, be disabled and receiving disability payments, or living in a household with income less than 150 percent of the federal poverty guidelines. Residents must first be certified for eligibility before trips can be taken. The two contractors currently hired by NACOG are CJ's Need a Lift, located in Cottonwood, and Red Rock Taxi, located in Prescott.

Once qualified, clients are provided with monthly vouchers worth a maximum of \$80 in taxi services. This monthly \$80 voucher does not go very far, as a typical ride to see a doctor in Cottonwood would cost \$40 one-way to travel from Camp Verde to Cottonwood by cab, and another \$40 to return. NACOG stipulates that VTS dollars are only to be used for trips with the following purpose: medical, basic necessities, work, counseling, social service agencies, or education. Certain trips such as shopping are restricted to Camp Verde only. To make a voucher transit trip, clients must call one of the vendors to schedule a ride, pay a \$2-cash co-payment to the driver, and use the transit voucher dollars to pay for the remaining cost. Vendors have the right to refuse transportation services to clients.

From July 2006 to June 2007, a total of 2,962 transit voucher trips were provided to 296 people. This is an average of 247 trips provided and 25 patrons per month. The pie chart in Figure 2.22 shows that most of the trips taken are for very basic purposes including going to work, buying basic needs, or looking for a job. Transportation for these needs is not available for residents by any other program and is an essential part of the Camp Verde economy.

FIGURE 2.22: VTS RIDE REQUEST BY PURPOSE FY 06-07



NACOG administers the VTS program for Camp Verde as well as three other major areas including Chino Valley, Prescott Valley and Prescott. Each of these areas pay NACOG for the

actual cost of the voucher dollars redeemed by their respective residents plus a 15% administrative fee. For the first six months in 2009, Camp Verde is expected to budget about \$9,660 to provide 28 clients with \$80 worth of vouchers per month, assuming clients will redeem about 75% of their vouchers. Camp Verde has allocated about 15% of their Local Transportation Assistance II (LTAF II) Fund to pay for VTS. LTAF II funds are distributed by the Arizona Department of Transportation and are funded through Arizona Lottery Powerball ticket sales, which can fluctuate from year to year. In 2005, the Town had approximately \$41,700 remaining in LTAF II money for transit and used about \$6,300 for VTS services for that year.

#### ***Client Oriented Transportation Services***

While there are no public transportation services available locally to the general public, several private non-profit agencies, mostly funded through Section 5310 federal grants and other programs, offer client-orientated transportation services limited to the elderly or persons with disabilities. The CVTS reported on two of the most active providers, including the Verde Valley Caregivers Coalition (VoCap) which provides rides throughout the Verde Valley. About thirty trips per week are provided by the VoCap, mostly within the County but trips can be taken as far as Phoenix and Flagstaff. The other private non-profit transportation service is the Yavapai County Department of Medical Assisted-Long Term Care Division, which provides non-emergency medical transportation services under the Arizona Long Term Care System (ALTCS). Almost half of the clients reside in nursing care and other institutional facilities with the remaining half in home and community based residents.

Another client oriented transportation provider is the Verde Valley Veterans Van service, which was founded to ensure that veterans in the community have adequate transportation to and from medically scheduled appointments. In addition, they also provide service to the elderly, disabled and youth programs who are not necessarily veterans. The Verde Valley Van Service is operated by a team of 17 volunteers and receives \$2,500 in donations from the Town's LTAF II grant money to subsidize maintenance and administrative costs.

#### ***Intercity Public Transportation***

For intercity travel, Amtrak operates a Thruway Motorcoach Service that makes a stop in Camp Verde. The Camp Verde bus station connects Phoenix and Flagstaff and serves the neighboring communities of Sedona, Prescott and Cottonwood. It is located at 365 North Goswick, in front of a Burger King Restaurant, near the intersection of Interstate 17 and State

Route 260. This is a curbside bus station with no shelter and no services. Customers order tickets online or through the telephone.

Unfortunately, Greyhound has a bus route connecting Phoenix and Flagstaff that passes through Camp Verde, but provides no service to Camp Verde. The closest Greyhound station is located about 55 miles away in Flagstaff.

Alternative regional transportation providers are tour companies. Cliff Castle Casino located in Camp Verde has been operating minibuses to promote patronage to their casino by picking up passengers from Sedona and as far away as Phoenix. Nava-Hopi is a tour company providing several daily trips linking Camp Verde with Phoenix and Flagstaff. Many Sedona based tour companies offer coach, jeep, and van tours to regional scenic areas including scenic spots in Camp Verde. In addition, most airport shuttles, operating frequent service from Sedona to Phoenix Sky Harbor International Airport, will make intermediate stops at Cottonwood and Camp Verde.

#### **Evaluation of Deficiencies and Needs**

##### ***Potential Transit Dependent Population***

An area's potential transit dependent population generally includes persons 65 years of age and older, persons with a mobility limitation, and persons considered below the poverty level. Table 2.12 shows a side by side comparison of Camp Verde's demographic statistics with state and national statistics as reported by the 2000 Census. The comparison shows that Camp Verde has a disproportionately larger share of all three population subsets than most areas in the nation. On the state level, Camp Verde has a similar proportion of elderly (65 years of age and older) and significantly higher proportions of below poverty and disabled individuals (under 65 years of age).

As an area's population grows, so does the population of potential transit dependent persons. Table 2.13 shows how the population in Camp Verde has been increasing steadily for several decades. Figures from the 2000 Census indicate that the Town has grown more than 54 percent since 1990 to 9,450 inhabitants. The local perception is that significant growth has occurred in the Verde Lakes area. The size of the labor force has also been growing steadily while unemployment has been simultaneously decreasing. Although the rate of growth has declined quite a bit, significant growth is still expected in the area, and transportation resources have yet to meet past and present growth.

**TABLE 2.12: TRANSIT DEPENDENT SUBSETS IN CAMP VERDE**

Population	2000	Percent of Total		
	Census	Camp Verde	Arizona	US
Entire Population	9,451			
Elderly (Over 65)	1,938	20.5 %	23.0 %	12.4 %
Below Poverty (Under 65)	1,594	17.0 %	15.0 %	12.4 %
Disabled (Under 65)	2,423	26.0 %	10.0 %	19.3 %

Sources: Arizona Department of Economic Security, 2005 and U.S. Census, 2000.

**TABLE 2.13: POPULATION AND EMPLOYMENT GROWTH IN CAMP VERDE**

Year	Population	% Growth Population	Employment	% Growth Employment
1980	3,824	-	417	-
1990	6,243	63%	2,158	418%
2000	9,450	51%	3,194	48%
2007	11,409	21%	3,154	-1%
2011	13,251	16%	4,394	39%
2016	15,138	14%	5,497	25%
2026	18,288	21%	6,876	25%

Sources: US Census, 1980, 1990, and 2000.

**Current Unmet Needs**

The current needs of transit-dependent persons in Camp Verde are similar to those of any small community without access to local or regional transit service. Public transportation services are needed to access employment, goods and services, and other local and regional attractions. A limited variety of goods and services are available locally within Camp Verde. Most of these goods and services can be found at the activity centers near the downtown area or in a developing “corridor” along Montezuma Castle Highway. For example, Camp Verde has few local doctors and dentists and the closest hospital, eye doctors, and specialists are in other Verde Valley communities. Transit-dependent persons needing goods or services not found in Camp Verde must rely on relatives or friends with automobiles for assistance.

In addition, the Verde Valley region is a major regional tourist attraction; Camp Verde has five regional attractions that draws in well over half a million visitors per year. These regional attractions generate employment for the local population which can be served by transit. An

extensive list of notable local attractions, tourist destinations, and significant employment centers in Camp Verde can be found in the CVTS.

As stated in the Existing Conditions section of this report, Camp Verde has a number of facilities that cater to the senior population. Currently, there are three senior residential complexes and three senior centers located in Camp Verde. These facilities may or may not provide transportation resources to its members.

**Transit Demand Analysis**

Two previous studies, the CVTS and the Arizona Rural Transit Needs Study (RTNS), indicated that the Camp Verde area has significant potential for the demand of both local public transportation within Camp Verde and for regional public transportation that has service connections to the neighboring areas of Cottonwood, Prescott, and Sedona.

The CVTS used three different methods to forecast transit demand while the RTNS used an entirely different method than those used by the CVTS. The forecasts provided in Table 2.14 applies the four methods used by these studies to the 2000 Census data and the most recently available travel demand modeling forecast data. This side by side comparison of all four methods indicates that there may be a possible transit demand range of anywhere between 38,000 to 112,000 transit trips annually if transit service was available today.

**TABLE 2.14: COMPARISON OF CURRENT TRANSIT DEMAND**

Estimation Method	1990	2000	2000	2007
	Census	Estimated	Census	Estimated
CVTS Method 1	33,182	50,105	51,534	62,211
CVTS Method 2	17,193	25,962	93,348	112,687
Average CVTS Models 1 & 2	25,188	38,034	72,441	87,449
E & D Method	19,131	28,888	31,496	38,021
APTNA Method			56,715	68,465

Sources: Camp Verde Transit Study (CVTS), 2001 and Arizona Rural Transit Needs Study (RTNS), 2008

### 3. FUTURE CONDITIONS

Projecting future socioeconomic conditions helps anticipate changes in future travel demand and to envision potential solutions. Development of rational projections for population, housing units, and employment by horizon year is vital in forecasting realistic traffic volumes.

#### SOCIOECONOMIC CONDITIONS

##### Population and Housing Units

Since 2000, the Town of Camp Verde has seen a population growth of 3.13% per year. The Arizona Department of Commerce estimates that Camp Verde will reach a population of 13,251 people by 2011, 15,138 people by 2016, and 18,288 people by 2026. These estimates were used in this study.

Arizona Department of Commerce does not forecast housing unit estimates. For this study, it is assumed that the current *population to Occupied Housing Unit* ratio of 2.62 for Camp Verde will continue for future horizon years. Camp Verde will have approximately 5,009 housing units by 2011, 5,764 housing units by 2016, and 7,024 housing units by 2026.

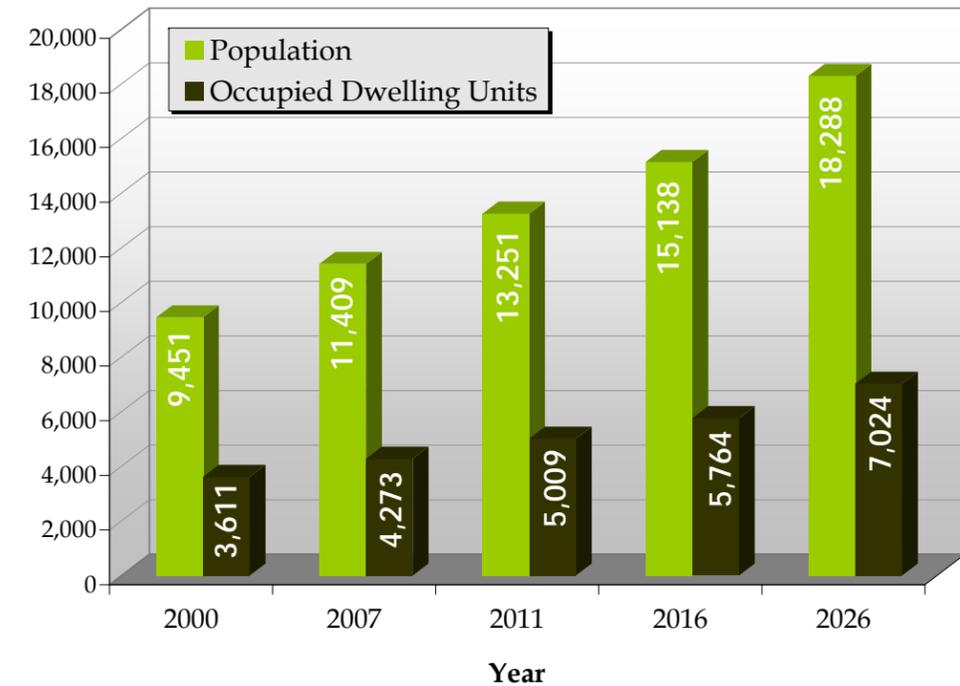
The Town of Camp Verde staff helped identify planned residential developments and potential areas for future development for each horizon year. The Yavapai-Apache Nation also provided information about future residential development on the Indian Reservation. Figure 3.2 displays the future growth areas in the Town of Camp Verde.

Table 3.1 shows a tabular summary of the historical and projected population along with the number of occupied dwelling units in the Town. Figure 3.1 graphically displays the population and housing unit growth trends. Figures 3.3 - 3.5 display the occupied housing unit by TAZ for each horizon year.

**TABLE 3.1: HISTORICAL AND PROJECTED POPULATION AND OCCUPIED HOUSING UNITS, 2000- 2026**

	Y2000	Y2007	Y2011	Y2016	Y2026
Population	9,451	11,409	13,251	15,138	18,288
Occupied Housing Units	3,611	4,273	5,009	5,764	7,024
Population/Occupied Housing Unit Ratio	2.62	2.67	2.65	2.63	2.60

**FIGURE 3.1: HISTORICAL AND PROJECTED POPULATION AND OCCUPIED HOUSING UNITS, 2000- 2026**



##### Employment

The Town’s current employment is estimated to be 3,154, a 28% *employee to population* ratio. The Town of Camp Verde staff and the Yavapai-Apache Nation helped identify potential employment growth areas in the Town of Camp Verde. In addition, the General Plan provided guidance on the future location of the new employment growth areas.

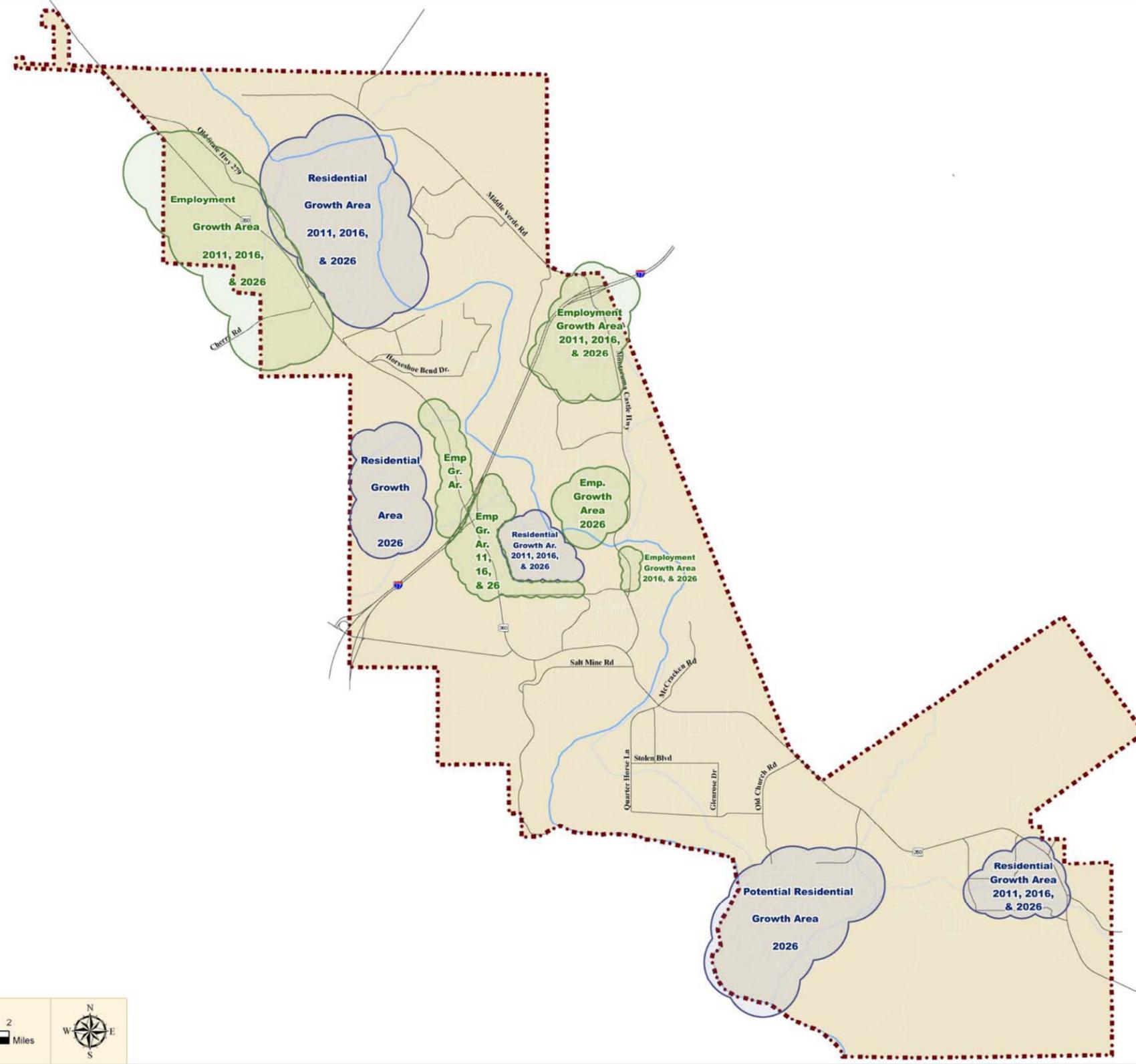
With employment growth areas identified, it is estimated that the Town will have 4,394 jobs by 2011, 5,497 jobs by 2016, and 6,876 jobs by 2026.

Table 3.2 shows a tabular summary of projected employment for the Town. Figure 3.6 - 3.8 display the total employment by TAZ for each horizon year.

**TABLE 3.2: PROJECTED EMPLOYMENT, 2007 - 2026**

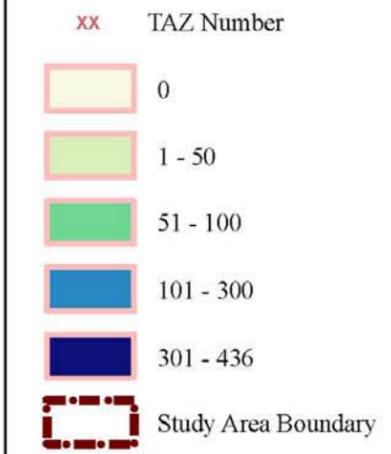
	Y2007	Y2011	Y2016	Y2026
Population	11,409	13,251	15,138	18,288
Total Employment	3,154	4,394	5,497	6,876
Employment/Population Ratio	0.28	0.33	0.36	0.38

# Figure 3.2 Future Growth Areas



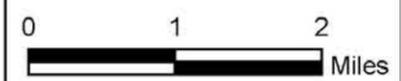
**Figure 3.3  
Year 2011  
Occupied Dwelling Units  
By TAZ**

**Town of Camp Verde  
Small Area Transportation Study**

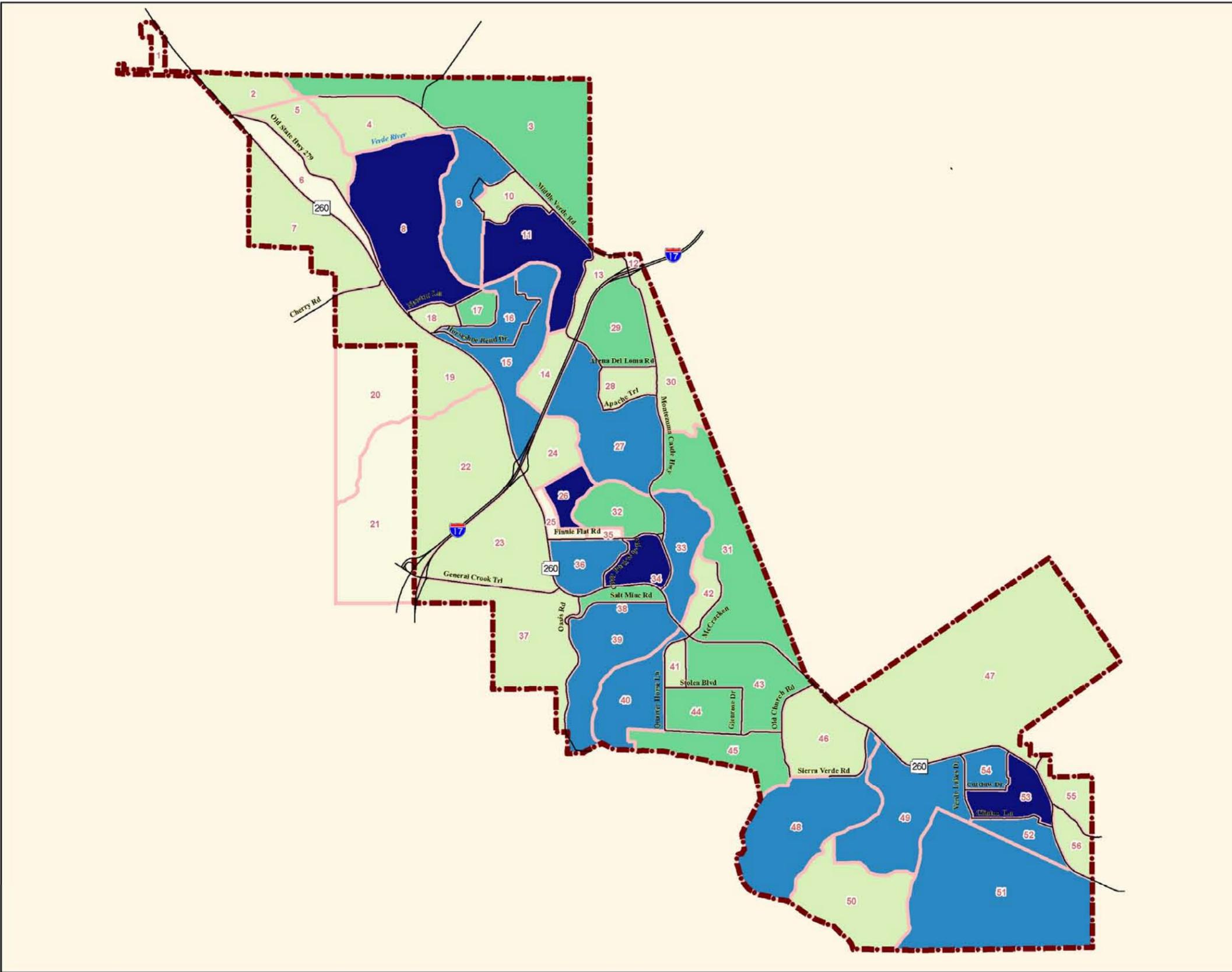


Date: 03.15.2008

Source: ADOT, Town of Camp Verde.

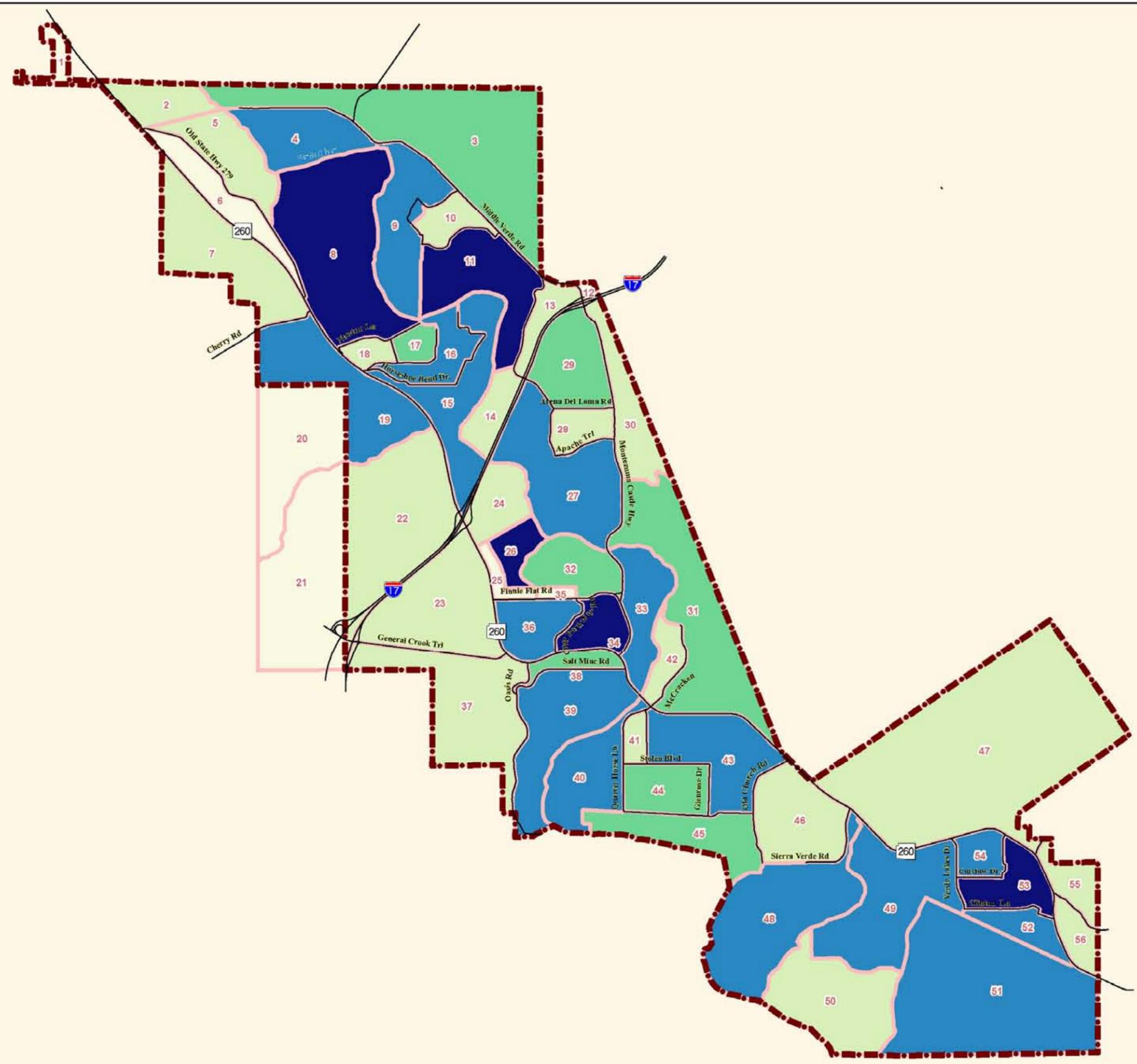


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**Figure 3.4**  
**Year 2016**  
**Occupied Dwelling Units**  
**By TAZ**

Town of Camp Verde  
 Small Area Transportation Study



xx TAZ Number

- 0
- 1 - 50
- 51 - 100
- 101 - 300
- 301 - 636

Study Area Boundary

Date: 03.15.2008

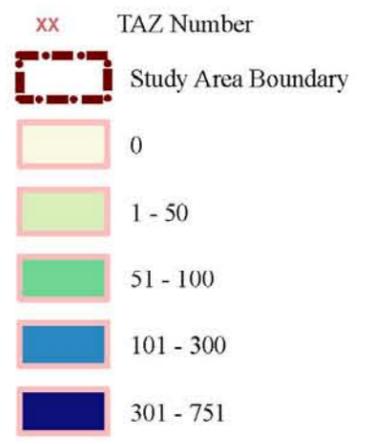
Source: ADOT, Town of Camp Verde.

0 1 2 Miles

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**Figure 3.5**  
**Year 2026**  
**Occupied Dwelling Units**  
**By TAZ**

**Town of Camp Verde**  
**Small Area Transportation Study**

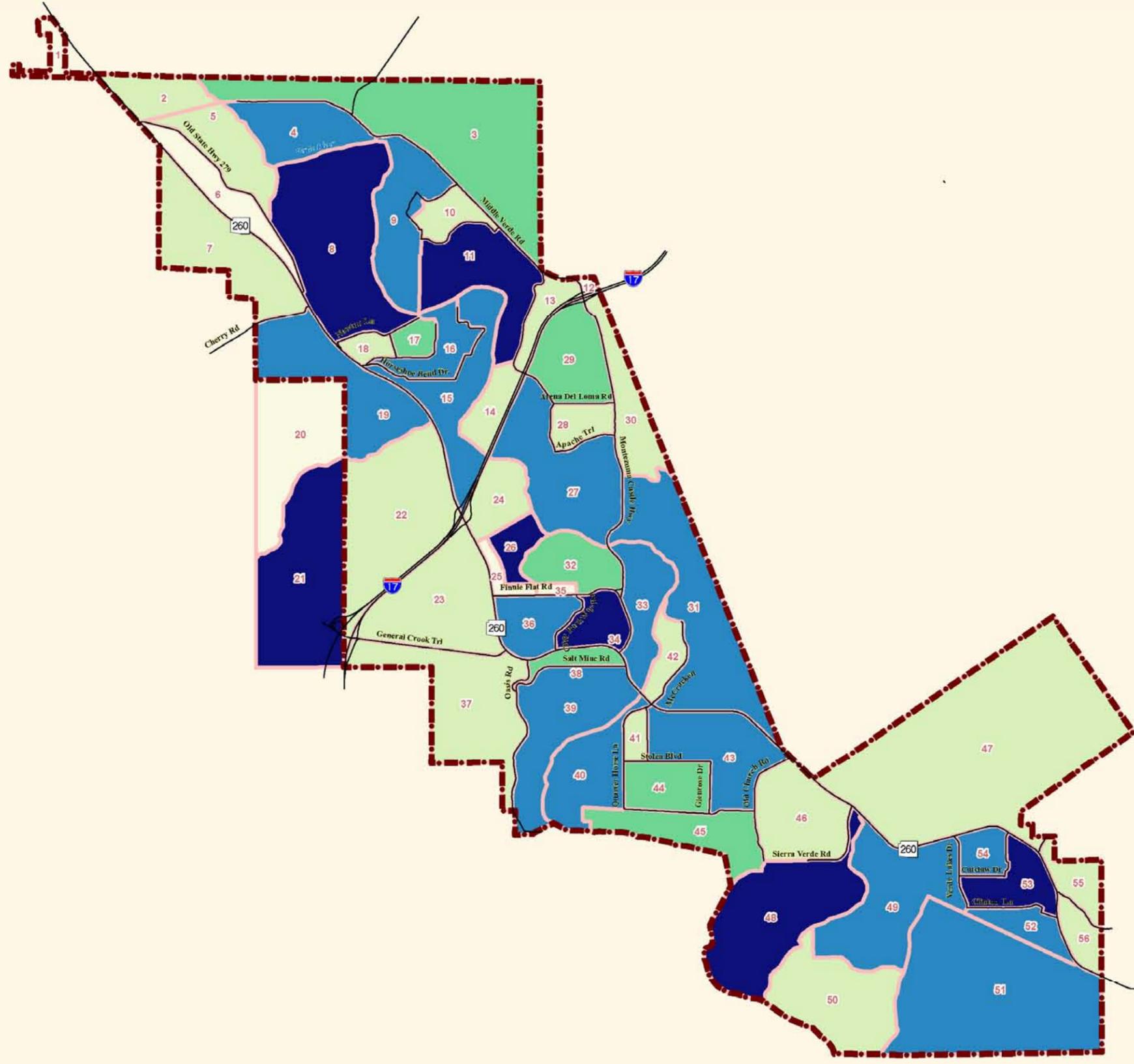


Date: 03.15.2008

Source: ADOT, Town of Camp Verde.

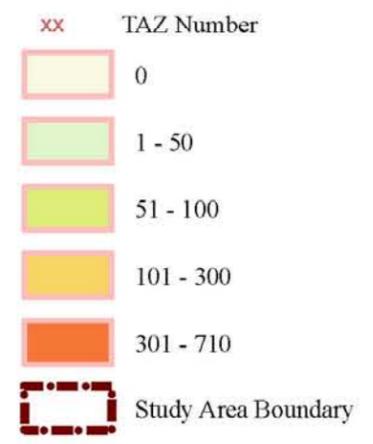
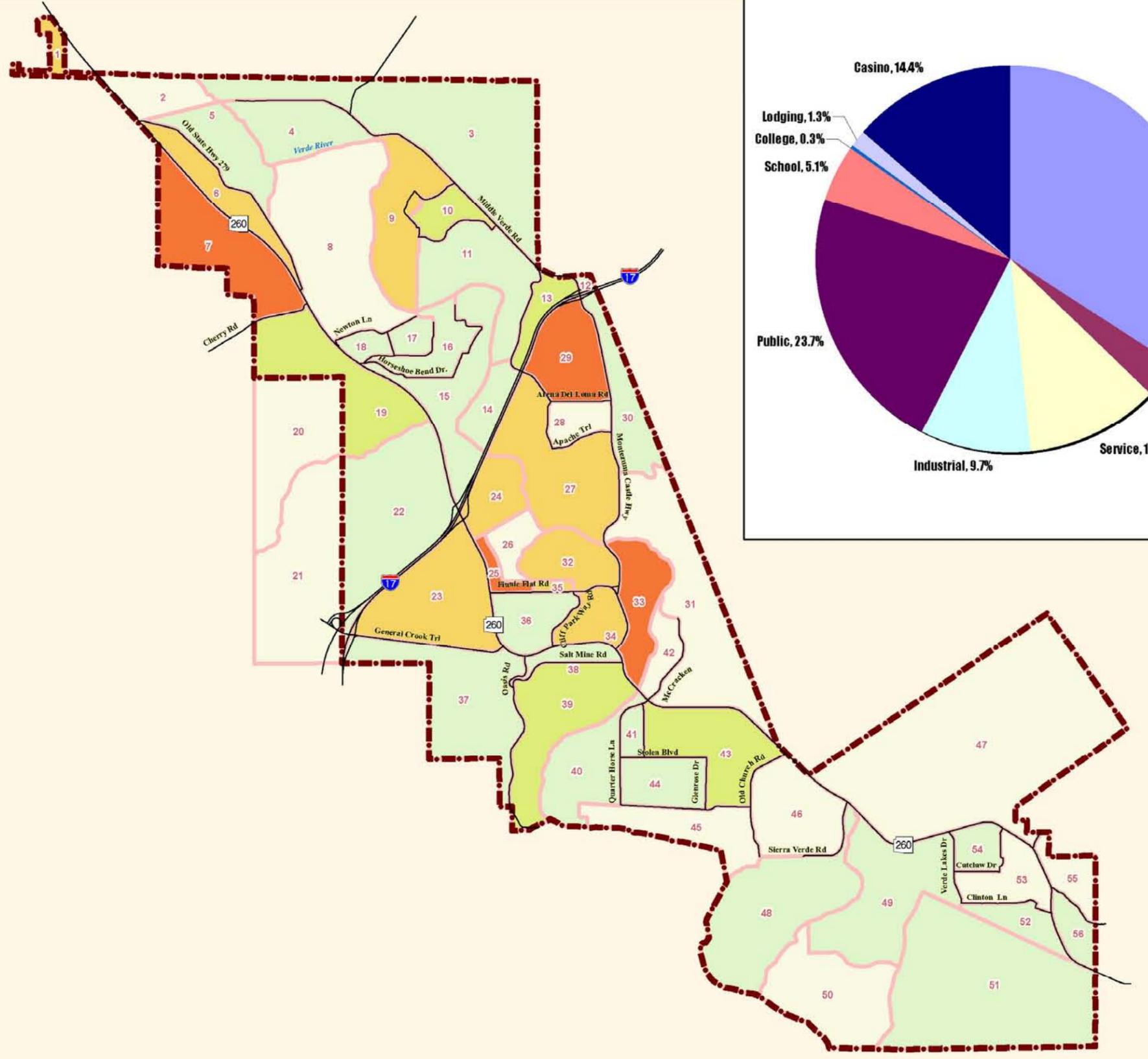
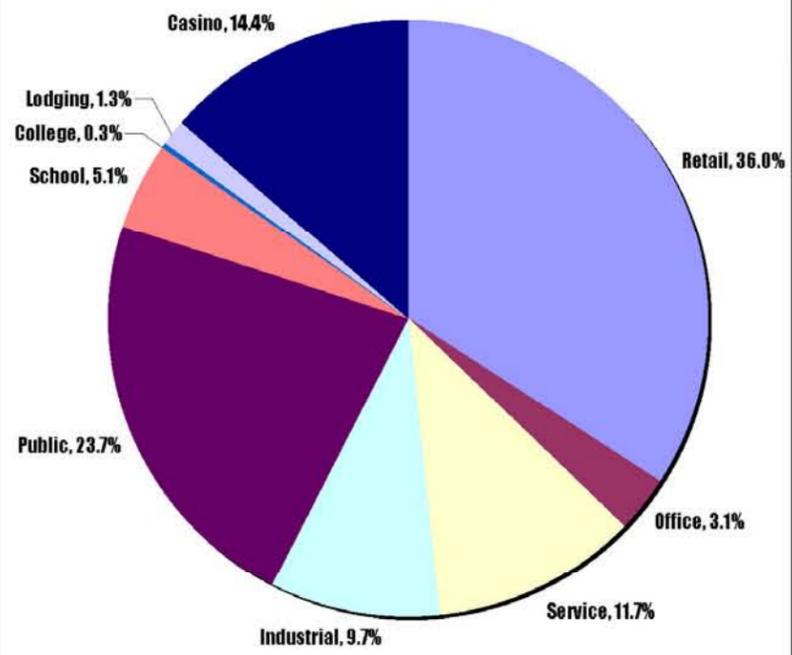


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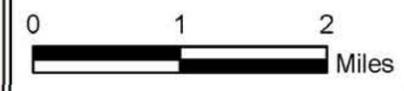
**Figure 3.6**  
**Year 2011**  
**Total Employment**  
**By TAZ**

**Town of Camp Verde**  
**Small Area Transportation Study**



Date: 03.15.2008

Source: ADOT, Town of Camp Verde.

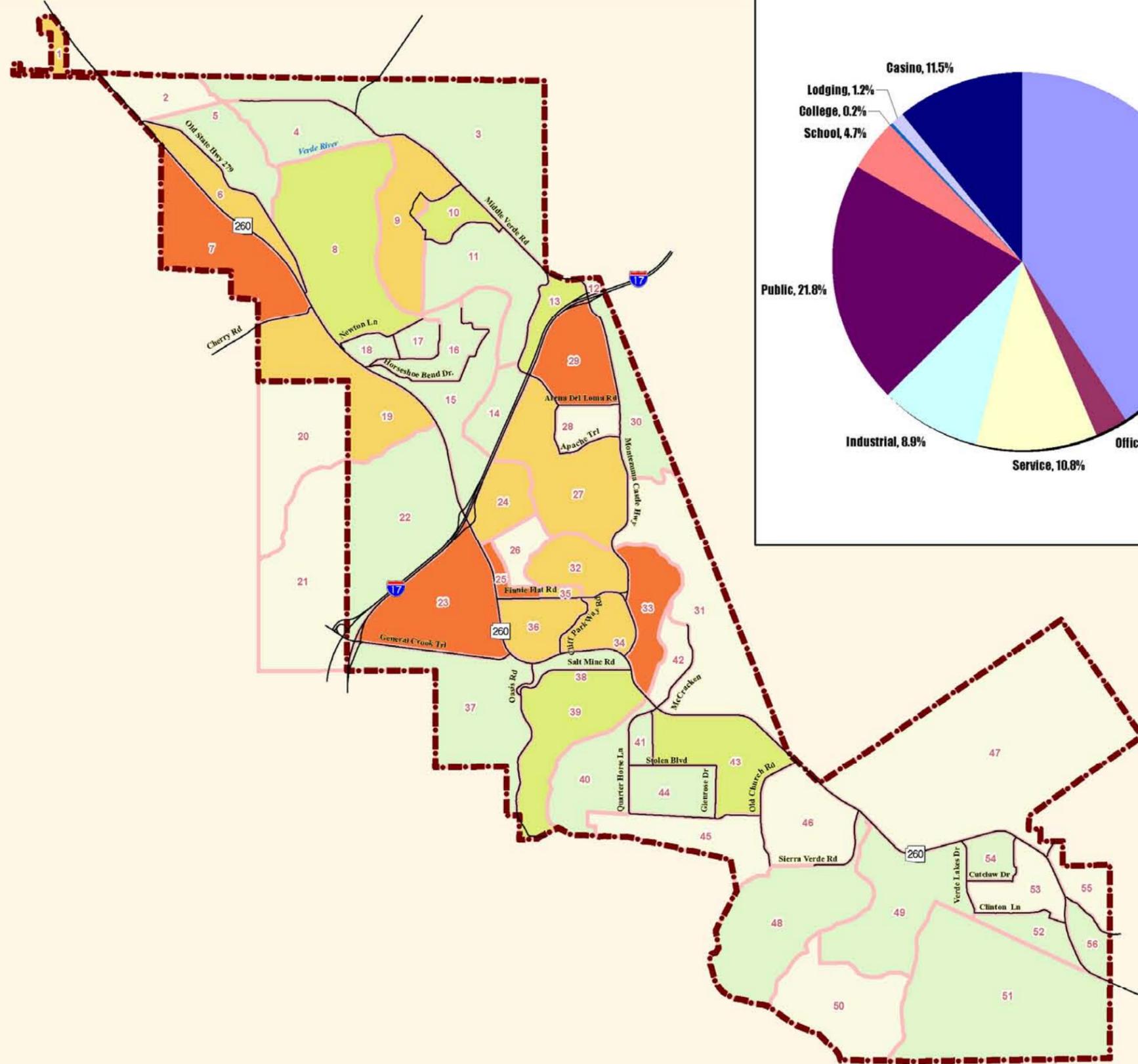
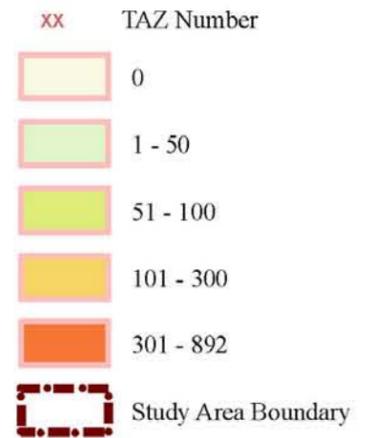
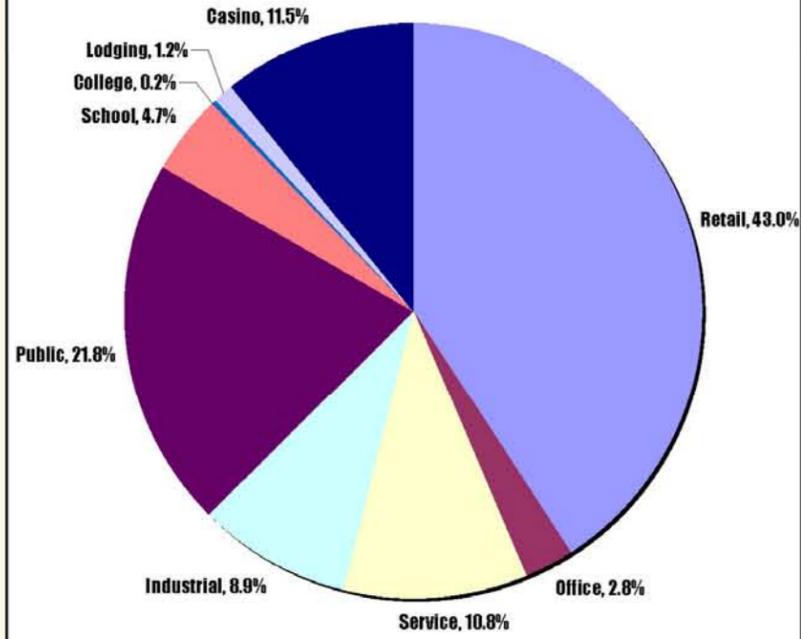


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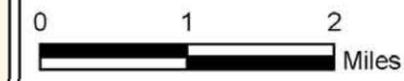
**Figure 3.7  
Year 2016  
Total Employment  
By TAZ**

**Town of Camp Verde  
Small Area Transportation Study**



Date: 03.15.2008

Source: ADOT, Town of Camp Verde.

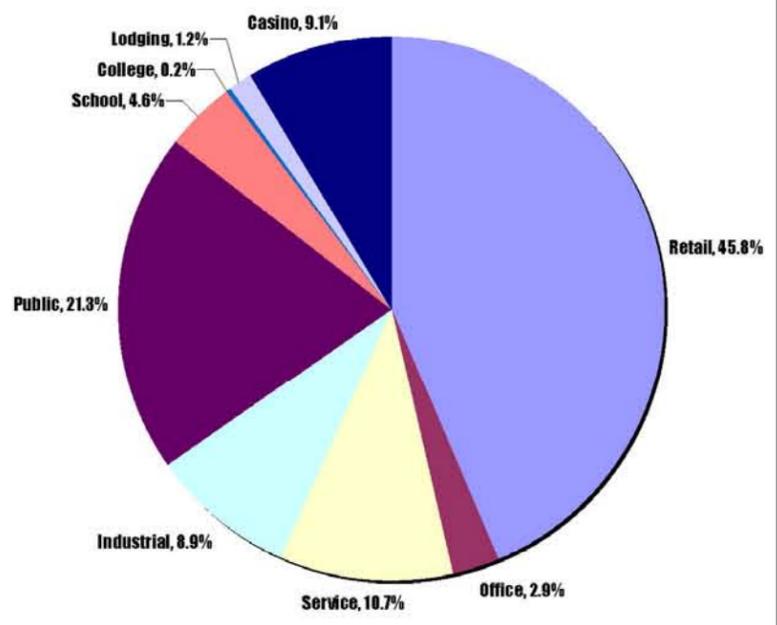


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**Figure 3.8  
Year 2026  
Total Employment  
By TAZ**

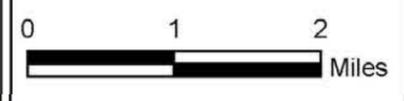
**Town of Camp Verde  
Small Area Transportation Study**



- XX TAZ Number
- 0
- 1 - 50
- 51 - 100
- 101 - 300
- 301 - 1061
- Study Area Boundary

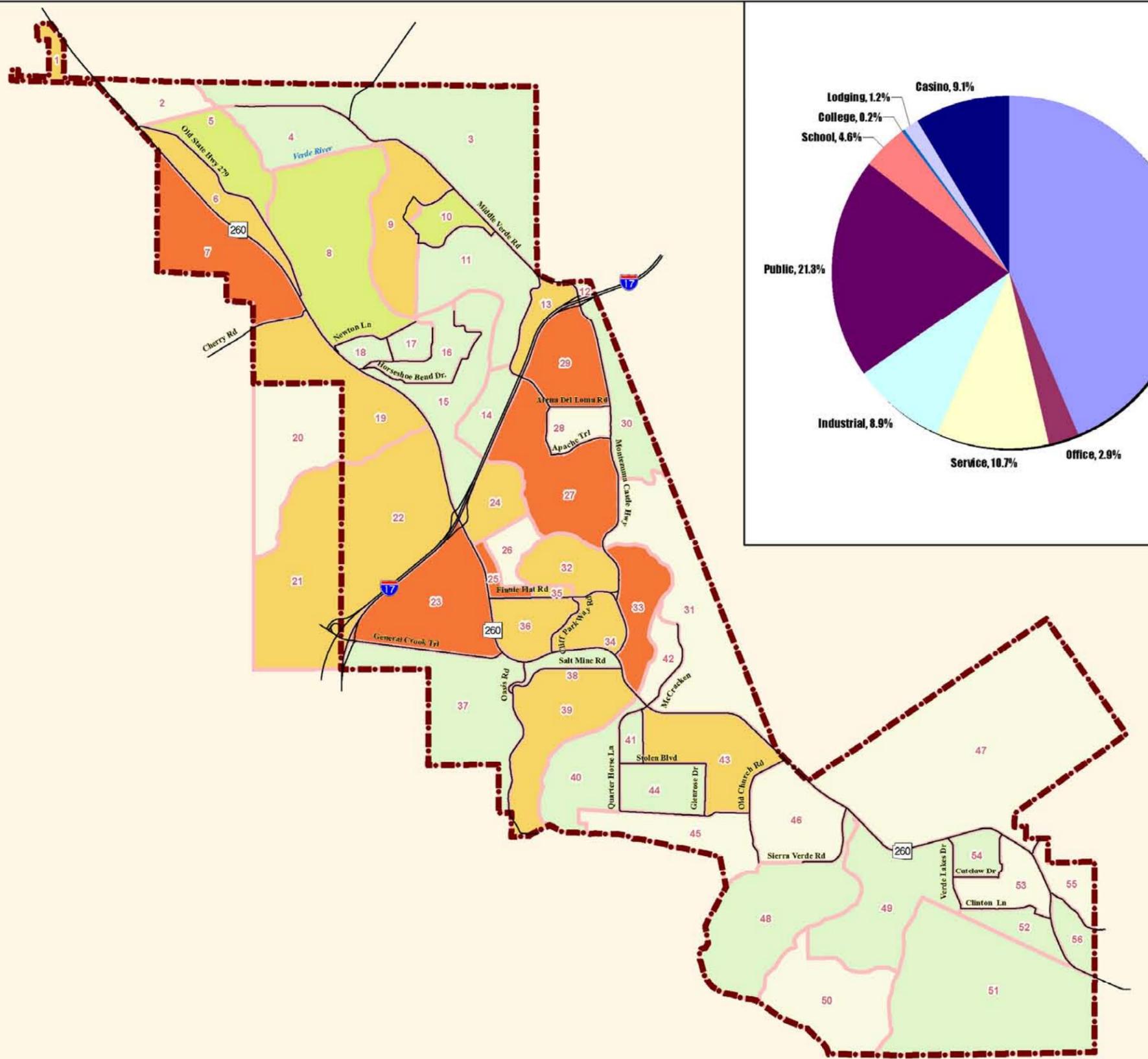
Date: 03.15.2008

Source: ADOT, Town of Camp Verde.



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## FUTURE TRANSPORTATION CONDITIONS

The primary purpose of forecasting future traffic volumes is to estimate the additional travel demand added to existing roadways (with no improvements) if population and employment growth occurred as previously discussed in the socioeconomic conditions section of this report. This analysis is used to forecast congestion levels on existing roadways based on projected population and employment growth. In addition, this analysis provides valuable insight into potential transportation solutions. As previously discussed, the Verde Valley Regional Travel Demand Model was used for traffic forecasting purposes.

Similar to existing traffic analysis, the degree of future traffic congestion is expressed in terms of Level of Service (LOS). LOS values range from LOS A to LOS F, with LOS A representing excellent traffic flow conditions in which vehicles experience minimal delays, and LOS F represents failure conditions where vehicles experience long delays. LOS A and B represent no congestion, LOS C represents moderate congestion, and LOS D, E, and F represent severe congestion.

### Projected 2011 No-Build Traffic Conditions

Figure 3.9 displays the roadway LOS and projected 2011 traffic volumes on the current roadway network with projected 2011 socioeconomic conditions. No future roadway improvements were assumed for this scenario. Under these circumstances, the following is a summary of congestion levels:

#### *Severe Congestion*

- Small section of Montezuma Castle Highway near Cliff Castle Casino, north of Finnie Flat Road, and south of Apache Trail.
- Portions of SR 260 north of I-17.
- Montezuma Castle Highway/Main Street/Finnie Flat Road intersection.

#### *Medium Congestion*

- Portions of SR 260 north of I-17.
- Finnie Flat Road, Main Street.
- Remaining portions of Montezuma Castle Highway.
- Small section of Verde Lakes Drive.

### Projected 2015 No-Build Traffic Conditions

Figure 3.10 displays the roadway LOS and projected 2016 traffic volumes on the current roadway network with projected 2016 socioeconomic conditions. No future roadway improvements were assumed for this scenario. Under these circumstances, the following is a summary of congestion levels:

#### *Severe Congestion*

- Entire section of SR 260 north of I17.
- Small section of Montezuma Castle Highway near Cliff Castle Casino, north of Finnie Flat Road, and south of Apache Trail.
- Finnie Flat Road to the west of Cliffs Parkway.
- Montezuma Castle Highway /Main Street/Finnie Flat Road intersection.

#### *Medium Congestion*

- Finnie Flat Road to the east of Cliffs Parkway
- Remaining portions of Montezuma Castle Highway.
- Small section of Verde Lakes Drive.
- Main Street.

### Projected 2026 No-Build Traffic Conditions

Figure 3.11 displays the roadway LOS and projected 2026 traffic volumes on the current roadway network with projected 2026 socioeconomic conditions. No future roadway improvements were assumed for this scenario. Under these circumstances, the following is a summary of congestion levels:

#### *Severe Congestion*

- Entire section of SR 260 north of I17.
- Montezuma Castle Highway, Main Street, Finnie Flat Road to west of Cliffs Parkway.
- Montezuma Castle Highway /Main Street/Finnie Flat Road intersection.

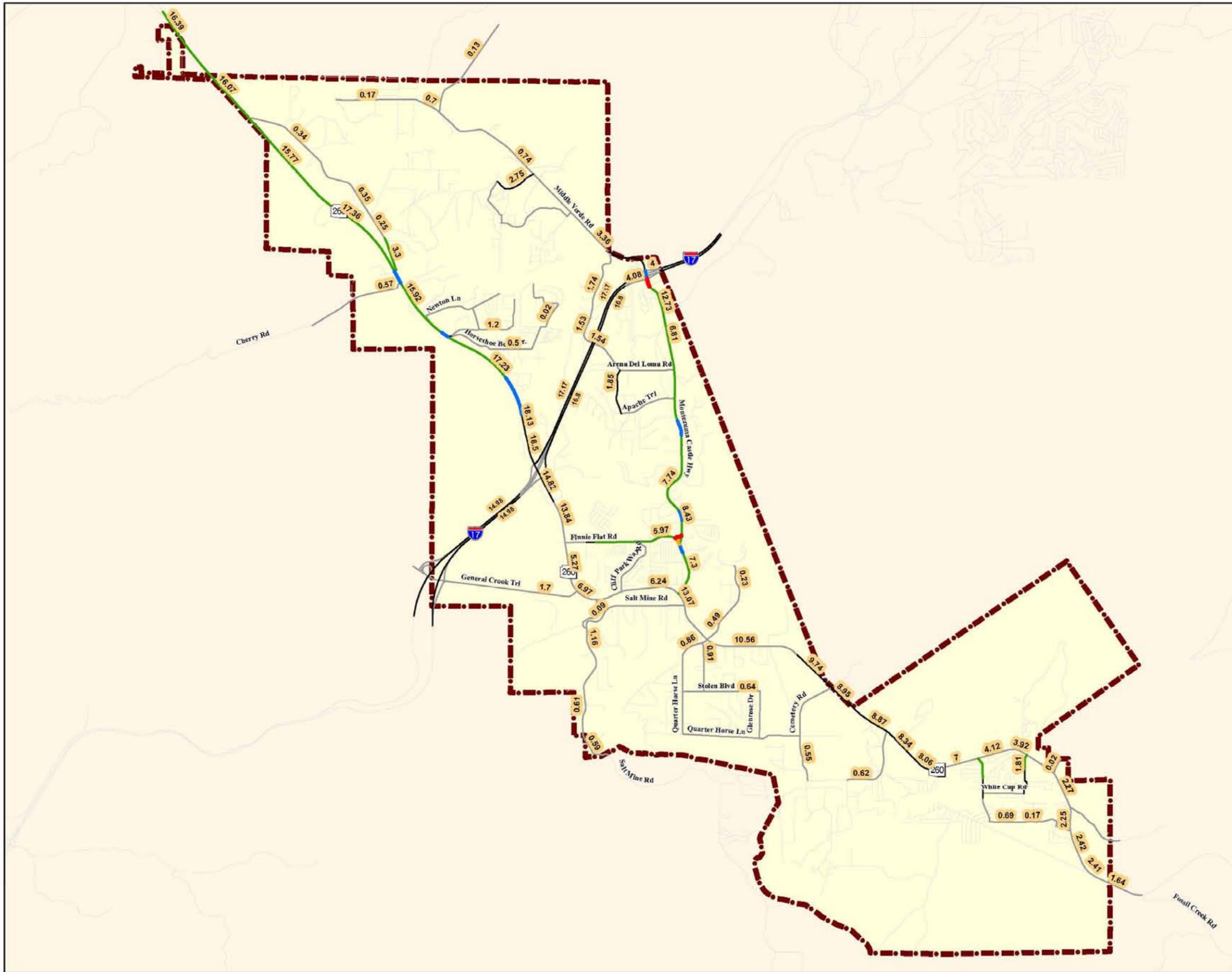
#### *Medium Congestion*

- Finnie Flat Road to the east of Cliffs Parkway
- I 17
- Small section of Verde Lakes Drive.
- SR 260 between Old Church Road and Verde Lakes Drive.
- Portion of Middle Verde Road immediately north of I-17 interchange.

**Figure 3.9**  
**Year 2011 No Build**  
**Level of Service and**  
**Daily Traffic Volumes**

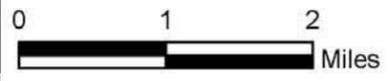
**Town of Camp Verde**  
**Small Area Transportation Study**

- XX.XX Daily Traffic Volumes in 1000's
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Study Area Boundary



Date: 05.04.2009

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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## 4. EVALUATION OF TRANSPORTATION IMPROVEMENTS

### TRANSPORTATION ISSUES

Based on inventory and analysis of existing and future conditions, transportation system deficiencies and issues were identified for the study area. These issues and deficiencies form the basis for the next phase of the study - the development of the long range transportation plan.

Table 4.1 is a list of deficiencies and issues based on the existing and future conditions analysis. Figure 4.1 displays the major transportation issues in the study area.

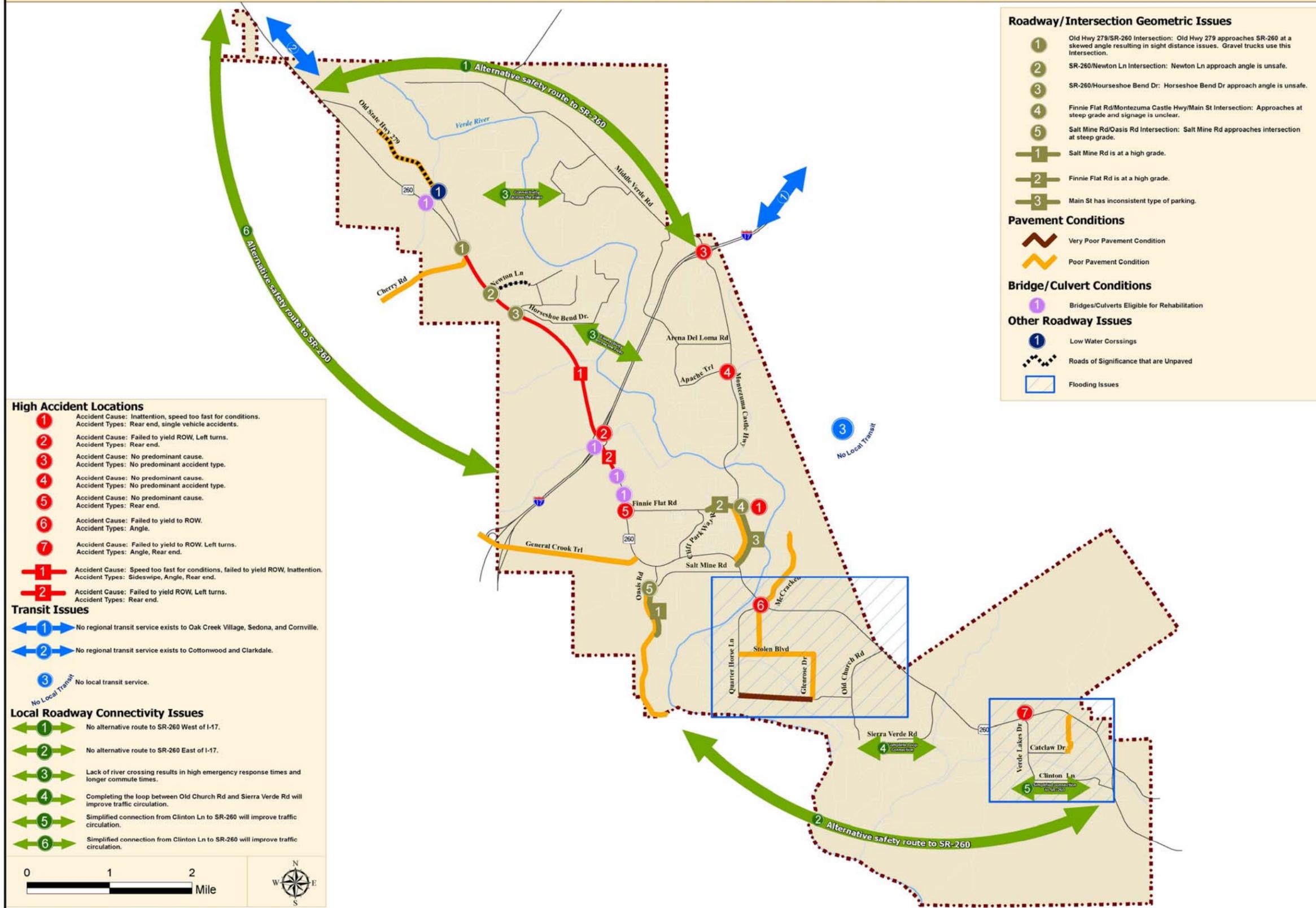
**TABLE 4.1: TRANSPORTATION ISSUES**

Issue Type	Location	From	To	Description
<b>Safety - Crashes</b>	SR 260	Cherry Rd	I-17	Number of crashes - high
	SR 260	I-17	Homestead Pkwy	Number of crashes - high
	Finnie Flat Rd/Main St & Montezuma Castle Highway			Number of crashes - high
	SR 260 at I-17			Number of crashes - high
	Montezuma Castle Highway/Middle Verd Rd at I-17			Number of crashes - high
	Montezuma Castle Highway at Apache Trl			Number of crashes - high
	SR 260 at Finnie Flat Rd			Number of crashes - high
	SR 260 at McCracken Rd/Quarterhorse Ln			Number of crashes - high
	Sr 260 at Verde Lakes Rd			Number of crashes - high
<b>Safety - Roadway/Intersection Geometric</b>	Salt Mine Rd			Steep grade
	Finnie Flat Rd	Cliff Pkwy	MCH	Steep grade
	Main St	MCH	SR 260	Inconsistent type of Parking
	SR 260 at Old Hwy 279			Skewed intersection & limited sight distance
	SR 260 at Newton Ln			Skewed intersection-unsafe access
	SR 260 at Horseshoe Bend Dr			Skewed intersection-unsafe access
<b>Bridge/Culvert Condition</b>	Finnie Flat Rd/Main St at Montezuma Castle Hwy			Steep grade and unclear signage
	Salt Mine Rd at Oasis Rd			Intersection at steep grade
	I-17 southbound at Gaddis Wash			Bridge eligible for replacement
	SR 260 at MP 215			Bridge eligible for replacement
<b>Congestion - Year 2007</b>	SR 260 at north of MP 219			Bridge eligible for replacement
	SR 260 at south of MP 219			Bridge eligible for rehabilitation
	Montezuma Castle Highway SB leg	MCH	Finnie Flat Rd	Severe congestion
	Montezuma Castle Highway	Main St	Montezuma Castle Rd	Moderate congestion
<b>Congestion - Year 2011</b>	Montezuma Castle Highway	Cliff Castle Casino	I-17	Moderate congestion
	Finnie Flat Rd	.1 mi east of Groseta Dr	MCH SB	Moderate congestion
	Finnie Flat Rd/Main St	MCH SB	MCH NB	Severe congestion
	Main St	MCH NB	SR 260	Moderate congestion
	SR 260	MP 218	Study Area Boundary	Moderate congestion
	Verde Lake Dr	SR 260	Cactus Blossom Rd	Moderate congestion
	Aspen Way	SR 260	Hilltop Dr	Moderate congestion
	Old State Highway 279	SR 260	4 mi east of SR 260	Moderate congestion
	Montezuma Castle Highway SB leg	MCH	Finnie Flat Rd	Severe congestion
	Montezuma Castle Highway	Main St	Cliff Castle Casino	Moderate congestion
	Montezuma Castle Highway	Cliff Castle Casino	I-17	Severe to Moderate congestion
<b>Congestion - Year 2015</b>	Finnie Flat Rd	.1 mi east of Groseta Dr	MCH SB	Moderate congestion
	Finnie Flat Rd/Main St	MCH SB	MCH NB	Severe congestion
	Main St	MCH NB	SR 260	Moderate congestion
	SR 260	MP 218	Study Area Boundary	Severe to Moderate congestion
	Verde Lake Dr	SR 260	Cactus Blossom Rd	Moderate congestion
	Aspen Way	SR 260	Hilltop Dr	Moderate congestion
	Old State Highway 279	SR 260	4 mi east of SR 260	Moderate congestion

**TABLE 4.1: TRANSPORTATION ISSUES (CONTINUED)**

ISSUE TYPE	LOCATION	FROM	TO	DESCRIPTION	
<b>Congestion - Year 2026</b>	Montezuma Castle Highway SB leg	MCH	Finnie Flat Rd	Severe congestion	
	Montezuma Castle Highway	Main St	Cliff Castle Casino	Severe to Moderate congestion	
	Montezuma Castle Highway	Cliff Castle Casino	I-17	Severe congestion	
	Finnie Flat Rd	.1 mi east of Groseta Dr	MCH SB	Moderate congestion	
	Finnie Flat Rd/Main St	MCH SB	Lane St	Severe congestion	
	Main St	Lane St	SR 260	Severe to Moderate congestion	
	SR 260	MP 218	Study Area Boundary	Severe congestion	
	SR 260	MP 218	Homestead Pkwy	Moderate congestion	
	SR 260	MP 223	Sierra Verde Rd	Moderate congestion	
	Verde Lake Dr	SR 260	Cactus Blossom Rd	Moderate congestion	
	Aspen Way	SR 260	Hilltop Dr	Moderate congestion	
	Old State Highway 279	SR 260	4 mi east of SR 260	Moderate congestion	
	Middle Verde Rd	I-17	Reservation Loop Rd	Moderate congestion	
	Reservation Loop Rd	Beauty St	Middle Verde Rd	Moderate congestion	
	I-17	General Crook Trl	Montezuma Castle Rd	Moderate congestion	
	<b>Pavement Condition</b>	Quarterhorse Ln	Quarterhorse Ln	Glenrose Dr	Very poor - poor pavement condition
		Aspen Way/White Cap Dr	Catclaw	SR 260	Poor pavement condition
Cherry Rd		SR 260	Study Area Boundary	Poor pavement condition	
Finnie Flat Rd/Main St		MCH	SR 260	Poor pavement condition	
General Crook Trl		I-17	SR 260	Poor pavement condition	
Glenrose Dr		Stolen Blvd	Quarterhorse Ln	Poor pavement condition	
McCracken		SR 260	End of Road	Poor pavement condition	
Murdock		SR 260	Stolen Blvd	Poor pavement condition	
Old State Highway 279		.8 mile		Poor pavement condition	
Salt Mine Rd		Oasis Rd	Study Area Boundary	Poor pavement condition	
Stolen Blvd		Quarterhorse Ln	Glenrose Dr	Poor pavement condition	
Old State Highway 279		Aultman Pkwy	Cloverleaf Ranch Rd	Unpaved Road	
<b>Access Management</b>		Systemwide			Develop access management standards
	Systemwide			Improve regionwide and internal transit facilities	
<b>Transit</b>	Systemwide			Improve drainage along major roads, address low water crossings, review feasibility of more bridge/culvert crossings	
	Systemwide			Low water crossing	
	Systemwide			Flooding Issues	
<b>Drainage</b>	Systemwide			Flooding Issues	
	Systemwide			Develop pedestrian, bicycle, and trails plan	
<b>Pedestrian, Bicycle, Trails</b>	Systemwide			Improve regional connectivity	
	Systemwide			Develop emergency evacuation route plan	
<b>Emergency Evacuation Routes</b>	Systemwide			Develop emergency evacuation route plan	
	Systemwide			Develop emergency evacuation route plan	
<b>Local Roads Circulation</b>	Middle Verde Rd	I-17	SR 260	Alternative safety route	
	SR 260	I-17	SR 260 (east)	Alternative safety route	
	Sierra Verde Rd	Sierra Verde Rd	Old Church Rd	Complete Sierra Verde Rd	
	Clinton Ln	Verde Lakes Dr	SR 260	Simplified connection to SR 260	
	SR 260	SR 260 (west)	I-17	Alternative safety route	
	Systemwide			Lack of River Crossing	

# Figure 4.1 Transportation Issues



## Camp Verde Small Area Transportation Study



## EVALUATION CRITERIA

Transportation system deficiency analysis and input from the public, various stakeholders, and Technical Advisory Committee (TAC) resulted in a comprehensive list of potential transportation improvement options. These options were carefully evaluated using both quantitative and qualitative criteria to identify projects/improvements that best serve the needs of the Town of Camp Verde. Table 4.2 summarizes the criteria used in evaluating potential transportation improvement options.

**TABLE 4.2: TRANSPORTATION IMPROVEMENTS EVALUATION CRITERIA**

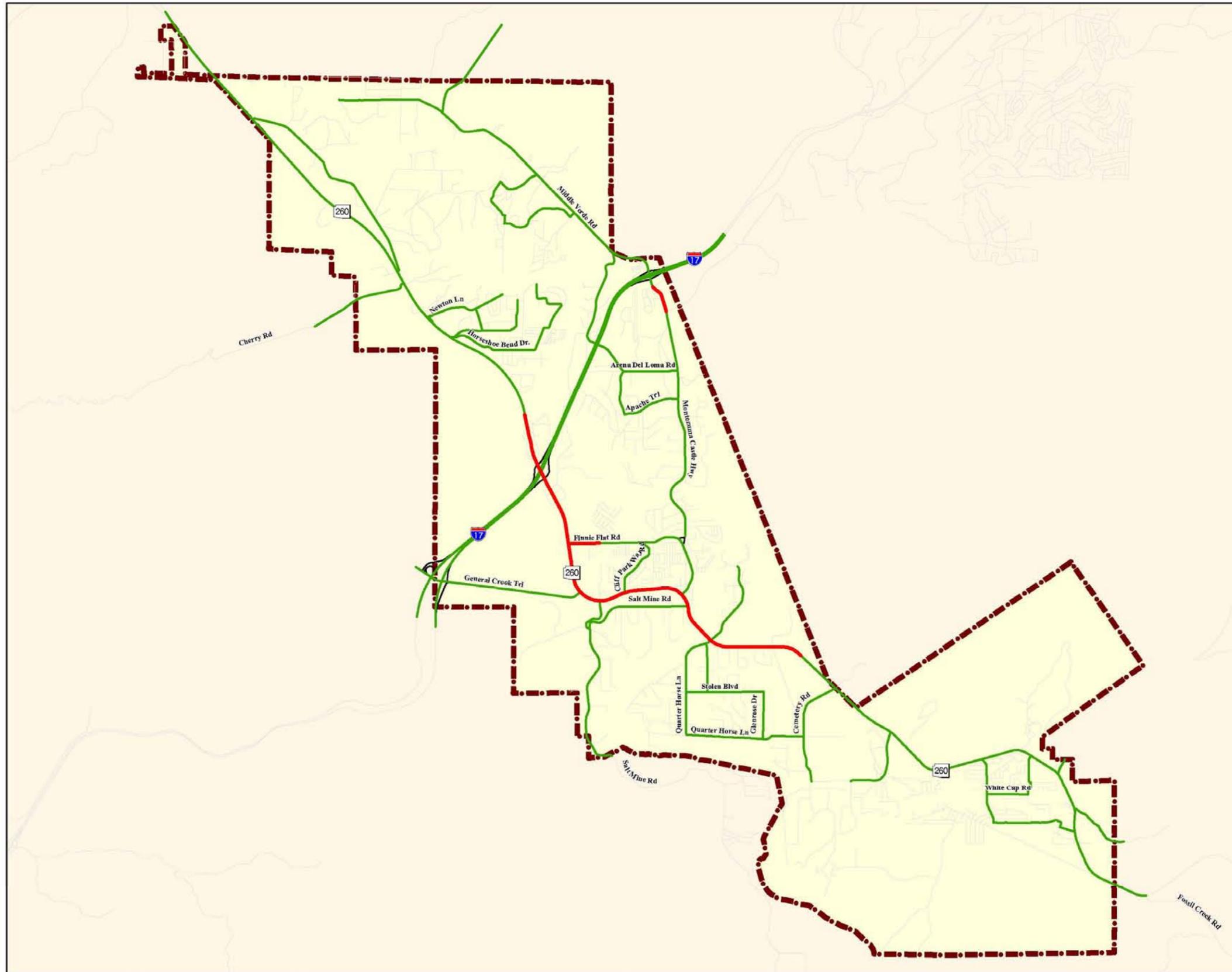
Evaluation Criteria	Objectives
Safety and Security	Reduce vehicle, pedestrian, bicycle collisions. Enhance alternate emergency routes. Reduce emergency response times.
Congestion/Level of Service	Reduce congestion, bottlenecks and travel times for all modes.
Mobility and Access	Improve linkages between transportation modes. Facilitate efficient internal traffic circulation options within the study area. Maintain travel reliability.
Economic Development Opportunity	Promote transportation choices that support economic growth.
Environmental Impacts	Protect and enhance natural, historical, and cultural environment by minimizing potential adverse impacts associated with transportation system development.
Infrastructure Preservation/Maintenance	Preserve and maintain existing transportation infrastructure.
Cost Efficiency and Implementation Feasibility	Minimize capital cost of transportation facilities, including preservation of ROW.
Regional Connectivity	Enhance connectivity between the study area and near by communities.
Transportation choices	Promote transportation choices such as pedestrian, bicycle ways, multi-use paths, and transit.

## ROADWAY IMPROVEMENTS

Roadway improvement options for short-term (years 2009-2011), mid-term (years 2012-2016), and long-term (years 2016-2026) time periods were evaluated using the criteria listed in Table 4.2. Roadway improvement projects were grouped into two categories, a) capacity related improvement projects, b) other roadway improvement projects (non-capacity related). Capacity related improvement projects include widening existing roadways, constructing new roadways, and paving existing dirt roads. Roadway capacity improvement options were primarily evaluated using the Verde Valley Regional TransCAD Travel Demand Model. Non-capacity related improvement projects address safety concerns, intersection improvements, and long-term planning studies.

### Short-Term Roadway Capacity Improvements (2009 - 2011)

A review of short-term Transportation Improvement Plans (TIP) for Camp Verde, ADOT, NACOG, and Yavapai County revealed that no major capacity improvement projects were scheduled to be implemented within in the Town limits before 2011. In addition, the results of the 2011 no-build traffic analysis scenario, discussed in Chapter 3, did not show the need for any additional capacity; therefore, there is no need to analyze any type of capacity improvement projects for this phase. Figure 4.2 displays the number of lanes and Figure 4.3 displays the Year 2011 traffic volumes and Level of Service (LOS) for roadways in the study area. Primary focus for this phase is on non-capacity improvements and is discussed later in this chapter.



**Figure 4.2**  
**Year 2011 No Build**  
**Number of Lanes**

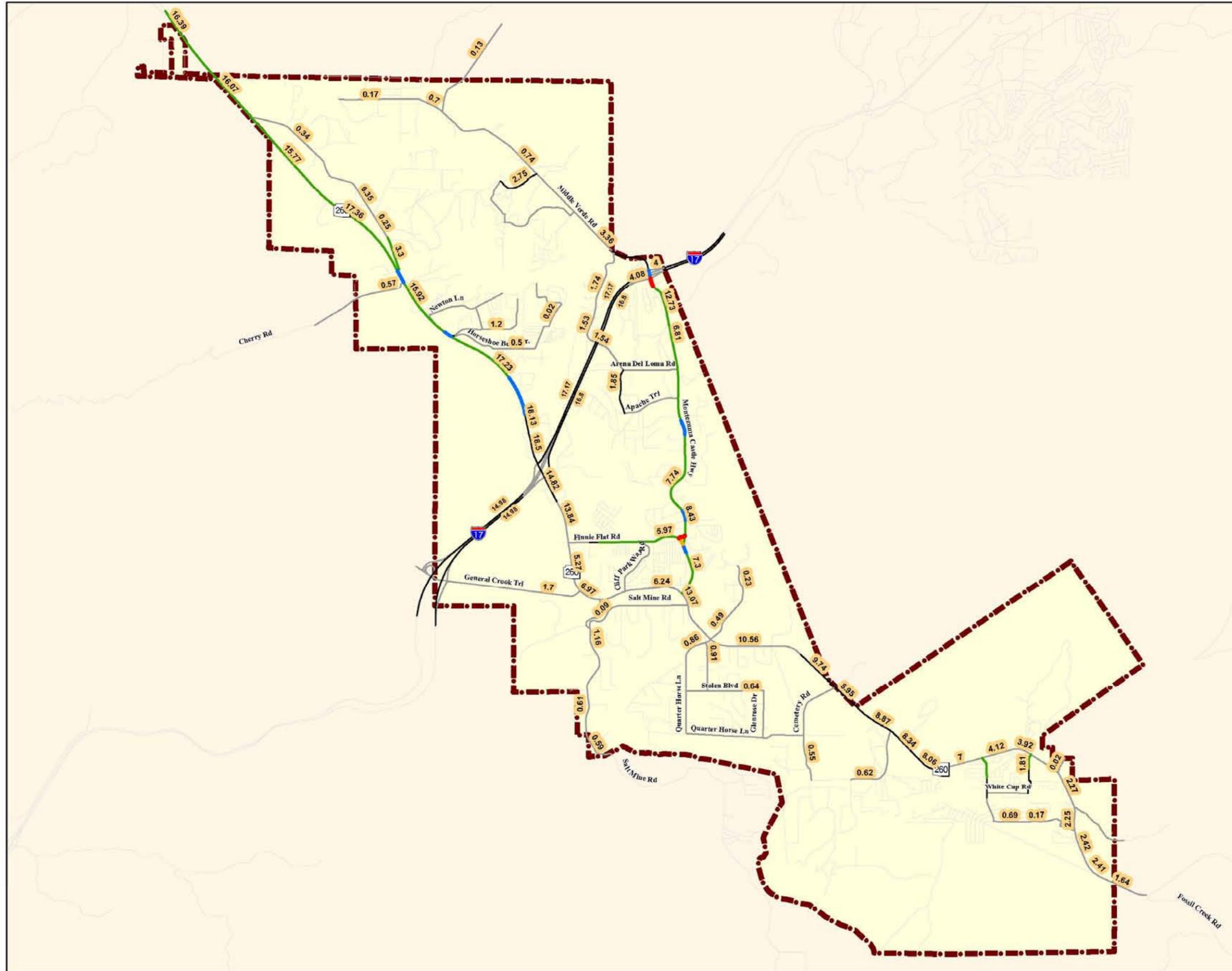
-  4 Lanes
-  2 Lanes
-  1 Lane
-  Study Area Boundary

Date: 09.10.2009

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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**Figure 4.3**  
**Year 2011 No Build**  
**Level of Service and**  
**Daily Traffic Volumes**

**Town of Camp Verde**  
**Small Area Transportation Study**

XX.XX Daily Traffic Volumes in 1000's

LOS A  
 LOS B  
 LOS C  
 LOS D  
 LOS E  
 LOS F  
 Study Area Boundary

Date: 05.04.2009

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.

0 1 2 Miles

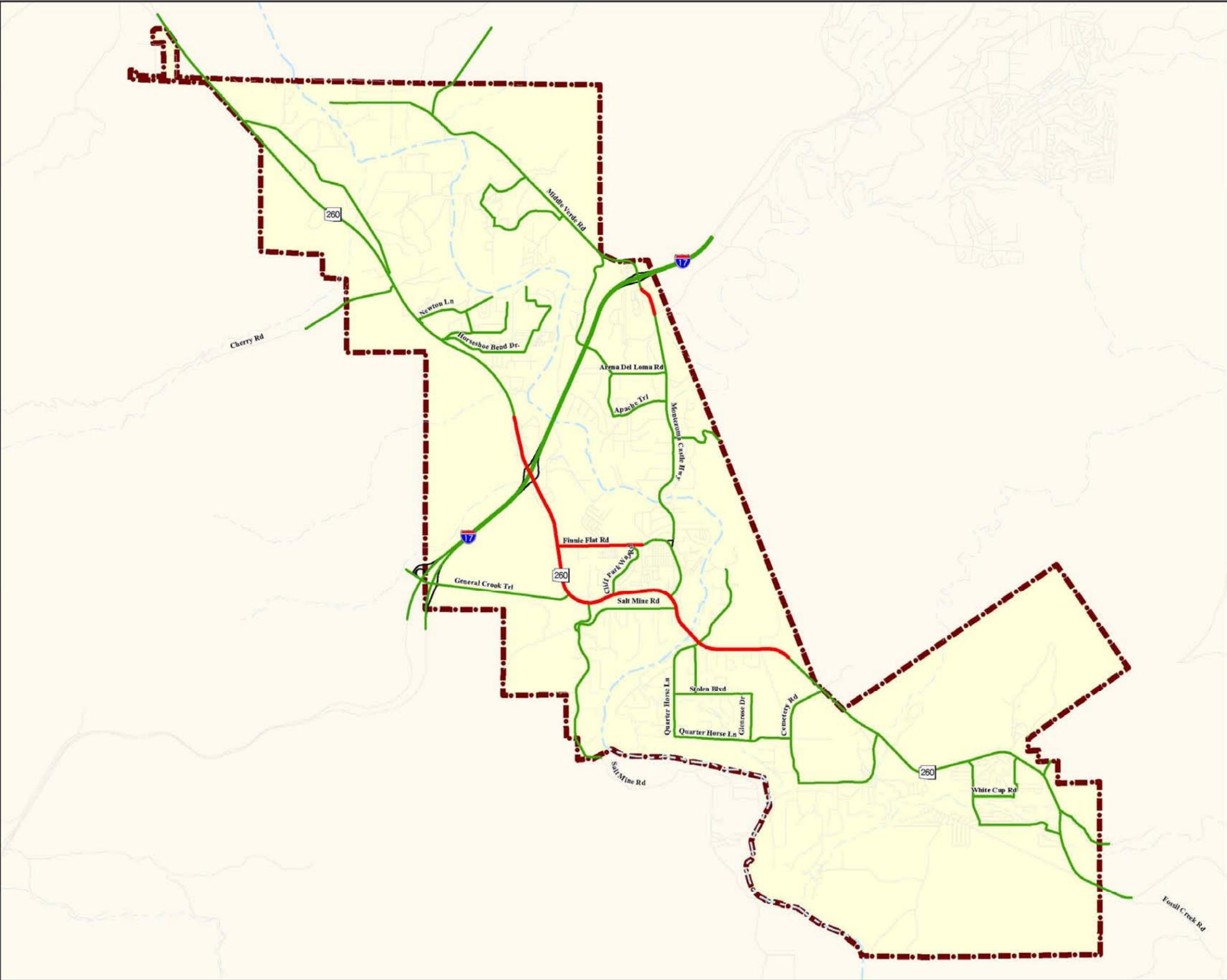
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### **Mid-Term Roadway Capacity Improvements (2012 - 2016)**

Transportation Improvement Plans for Camp Verde, ADOT, NACOG, and Yavapai County were reviewed to identify capacity improvement projects scheduled for implementation within the Town within this phase. These improvement projects, combined with the 2016 no-build traffic volume forecast analysis, helped identify potential capacity improvement projects to meet the traffic demand until the year 2016. Below is a list of capacity projects that were analyzed for the mid-term phase.

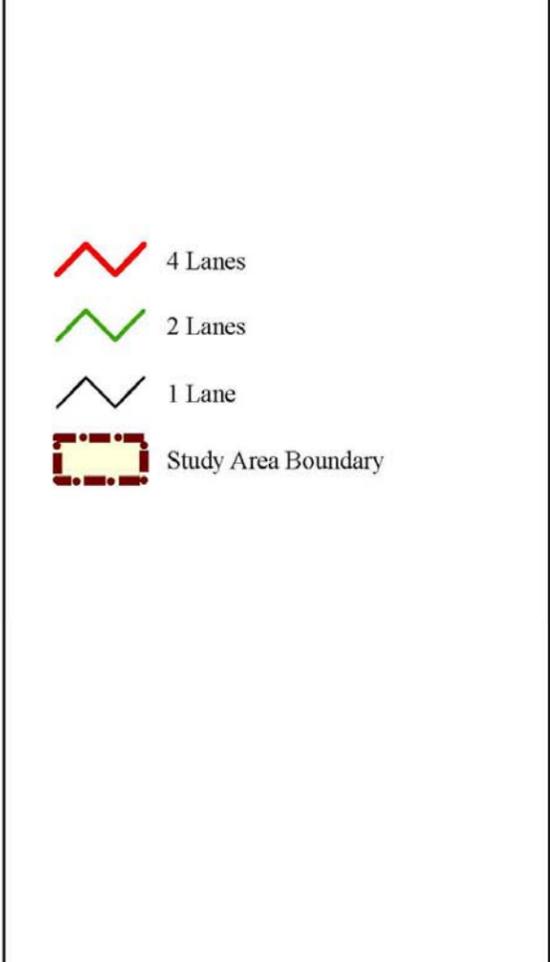
- Widening to 4 lanes
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
- Center Turn Lane
  - Montezuma Castle Highway: Finnie Flat Road to Apache Trail.
- New roads (one lane each direction)
  - Sierra Verde Road: Extend Sierra Verde Road to Old Church Road.

Figure 4.4 displays the number of lanes and Figure 4.5 displays the Year 2016 traffic volumes and Level of Service (LOS) for roadways in the study area. As evident in the figures, SR 260 north of I-17 experiences severe congestion during this phase. However, widening of SR 260 before the end of this phase is not feasible due to lack of funding and construction time constraints; therefore, the widening project is analyzed in the long-term phase.



**Figure 4.4**  
**Year 2016**  
**Number of Lanes**

**Town of Camp Verde**  
**Small Area Transportation Study**



Date: 09.10.2009

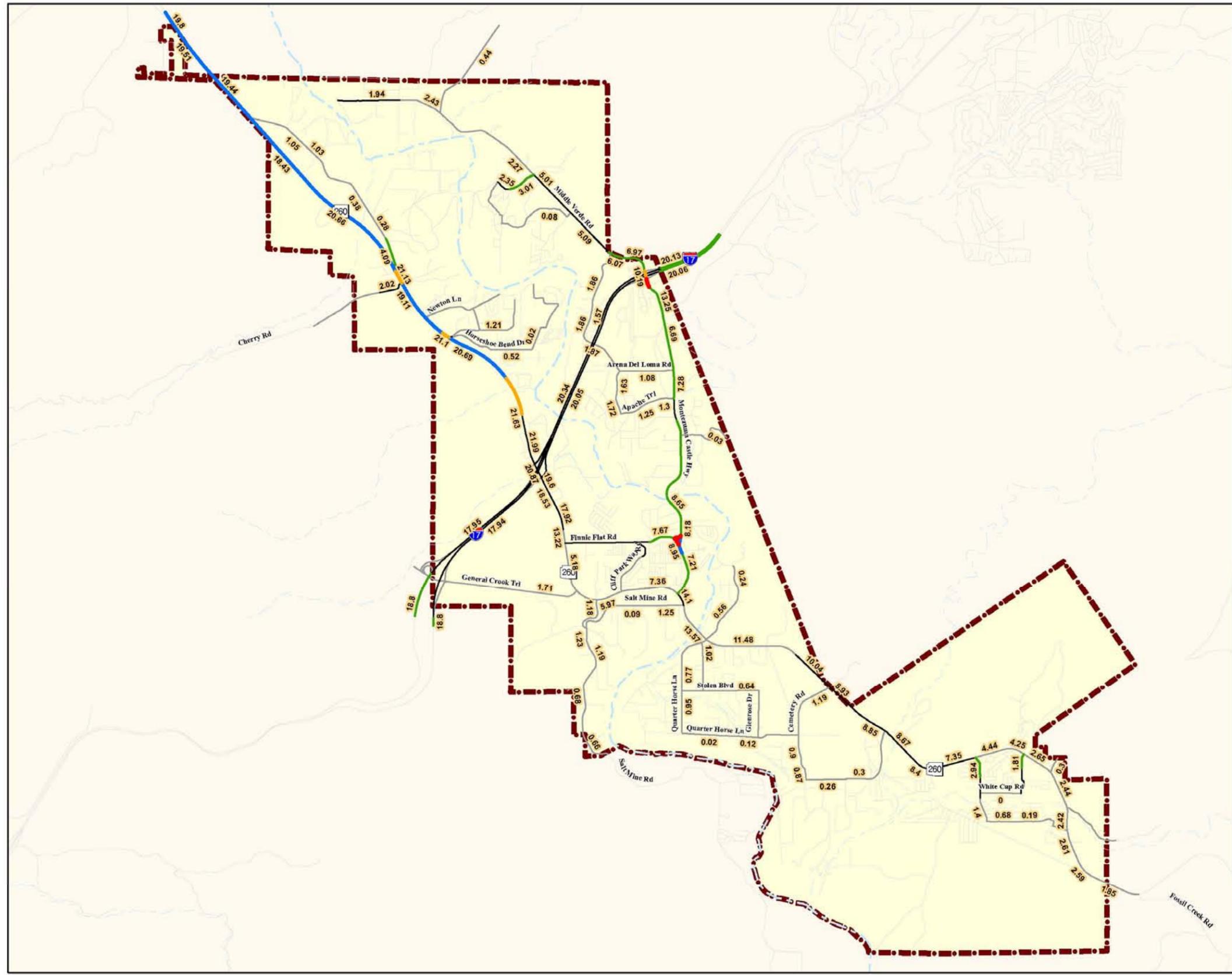
Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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**Figure 4.5**  
**Year 2016**  
**Level of Service and**  
**Daily Traffic Volumes**

Town of Camp Verde  
 Small Area Transportation Study



- XX.XX Daily Traffic Volumes in 1000's
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Study Area Boundary

Date: 05.04.2009

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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### Long-Term Roadway Capacity Improvements (2016 – 2026)

To address long-term future travel demand in the study area, several capacity improvement alternatives were grouped into scenarios and tested for efficiency, feasibility, and performance. The following roadway capacity improvement project scenarios were tested for the study area.

#### Alternative 1

To address capacity issues identified in the mid-term roadway capacity scenario, internal traffic circulation issues, alternate emergency route options; and additional transportation solutions were grouped into Alternative 1 and Alternative 2 scenarios. Alternative 1 incorporated all projects included in the mid-term roadway capacity scenario, in addition to the following projects:

- Widening to 6 lanes
  - I-17: General Crook Trail to Montezuma Castle Highway.
- Widening to 4 lanes
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
  - SR 260: I-17 to Thousand Trail Road.
  - SR 260: I-17 to west of MP 223.
  - Montezuma Castle Highway: Apache Trail to I-17.
- Center Turn Lane
  - Montezuma Castle Highway: Finnie Flat Road to SR 260.
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
- New two lane roads/connections
  - Middle Verde Road: North end of Middle Verde Road to proposed Beaverhead Road extension.
  - Beaverhead Road: West end of Beaverhead Road to SR 260.
  - Cherry Road: East end of Cherry Road at SR 260 to Reservation Loop Road.
  - Sierra Verde Road: Sierra Verde Road to Salt Mine Road.
  - Sierra Verde Road: Sierra Verde Road to Old Church Road.

- Lazar Road: Clinton Road to Sierra Verde Road.
- 7th Street: Finnie Flat Road to Holloman Street.
- Holloman Street: 7th St to Main Street.

Figure 4.6 depicts the number of lanes and Figure 4.7 displays the traffic volumes and Level of Service (LOS) for roadways in the study area for the Alternative 1 scenario.

#### Alternative 2

The purpose of Alternative 2 was to test the option of adding the SR 260 by-pass road from General Crook Trail/I-17 interchange to SR 260. This scenario included conditions from the mid-term roadway capacity analysis, internal traffic circulation issues, and alternate emergency route options. Alternative 2 includes all projects from the mid-term analysis and the following:

- Widening to 6 lanes
  - I-17: General Crook Trail to Montezuma Castle Highway.
- Widening to 4 lanes
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
  - SR 260: I-17 to Thousand Trail Road.
  - SR 260: I-17 to west of MP 223.
  - Montezuma Castle Highway: Apache Trail to I-17.
- Center Turn Lane
  - Montezuma Castle Highway: Finnie Flat Road to Apache Trail.
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
- New two lane roads/connections
  - SR 260 By-pass: I-17 to SR 260 (northbound).
  - Middle Verde Road: North end of Middle Verde Road to proposed Beaverhead Road extension.
  - Beaverhead Road: West end of Beaverhead Road to SR 260.
  - Cherry Road: East end of Cherry Road at SR 260 to Reservation Loop Road.

- Sierra Verde Road: Sierra Verde Road to Salt Mine Road.
- Sierra Verde Road: Sierra Verde Road to Old Church Road.
- Lazar Road: Clinton Road to Sierra Verde Road.
- 7th Street: Finnie Flat Road to Holloman Street.
- Holloman Street: 7th Street to Main Street.

Figure 4.8 displays the number of lanes for this scenario including the new roadways. Figure 4.9 displays the resulting traffic volumes and roadway LOS in the year 2026. As shown in Figure 4.9, I-17 operates at LOS B with traffic volumes ranging from 20,000 to 26,000. SR 260 north of I-17 carries roughly between 10,000 to 14,000 vehicles per day, in comparison SR 260 by-pass has a traffic volume of 14,000. The Beaverhead Road and Cherry Road extensions carry approximately the same amount of traffic as the previous alternative. Main Street, from Montezuma Castle Highway to Holloman Street, still operates at LOS D with traffic volumes roughly 7,000. Furthermore, the northbound and southbound legs of Montezuma Castle Highway, at Finnie Flat Road/Main Street, operates at the same LOS as the previous alternative.

#### Preferred Scenario

Transportation capacity improvement options from the mid-term analysis, Alternative 1, and Alternative 2 were reviewed to select the capacity projects that met the year 2026 traffic demand and provided internal traffic circulation, regional connectivity, and are feasible projects. Below is the list of capacity projects analyzed in this scenario.

- Widening to 6 lanes
  - I-17: General Crook Trail to Montezuma Castle Highway.
- Widening to 4 lanes
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
  - SR 260: I-17 to Thousand Trail Road.
  - SR 260: I-17 to west of MP 223.
  - Montezuma Castle Highway: Apache Trail to I-17.

- Center Turn Lane
  - Montezuma Castle Highway: Finnie Flat Road to SR 260.
  - Finnie Flat Road: SR 260 to 7<sup>th</sup> Street.
- New two lane roads/connections
  - Middle Verde Road: North end of Middle Verde Road to proposed Beaverhead Road extension.
  - Beaverhead Road: West end of Beaverhead Road to SR 260.
  - Cherry Road: East end of Cherry Road at SR 260 to Reservation Loop Road.
  - Quarter Horse Lane: Quarter Horse Lane (north-south) to Salt Mine Road.
  - Lazar Road: Clinton Road to Sierra Verde Road.
  - Sierra Verde Road: Sierra Verde Road to Old Church Road.
  - 7th Street: Finnie Flat Road to SR 260.
  - Holloman Street: 7th Street to Main Street.

Figure 4.10 displays the number of lanes, and approximate locations of new roads for the preferred scenario. Figure 4.11 displays the traffic volumes and roadway LOS. As evident in Figure 4.11, I-17 operates at the same condition as Alternative 1 and 2. SR 260 north of I-17 carries roughly between 23,000 to 25,000 vehicles per day, with the Beaverhead Road and Cherry Road extensions carrying less than 5,000 each. Main Street, from Montezuma Castle Highway to SR 260, operates at LOS D and worse with traffic volumes ranging from 7,000 to 9,000. Furthermore, the northbound and southbound legs of Montezuma Castle Highway at Finnie Flat Road/Main Street operates at same LOS as the previous alternatives.



**Figure 4.7**  
**Year 2026 Alternative 1**  
**Level of Service and**  
**Daily Traffic Volumes**

**Town of Camp Verde**  
**Small Area Transportation Study**

- XX.XX Daily Traffic Volumes in 1000's
- LOS A
- LOS B
- LOS C
- LOS D
- LOS E
- LOS F
- Study Area Boundary

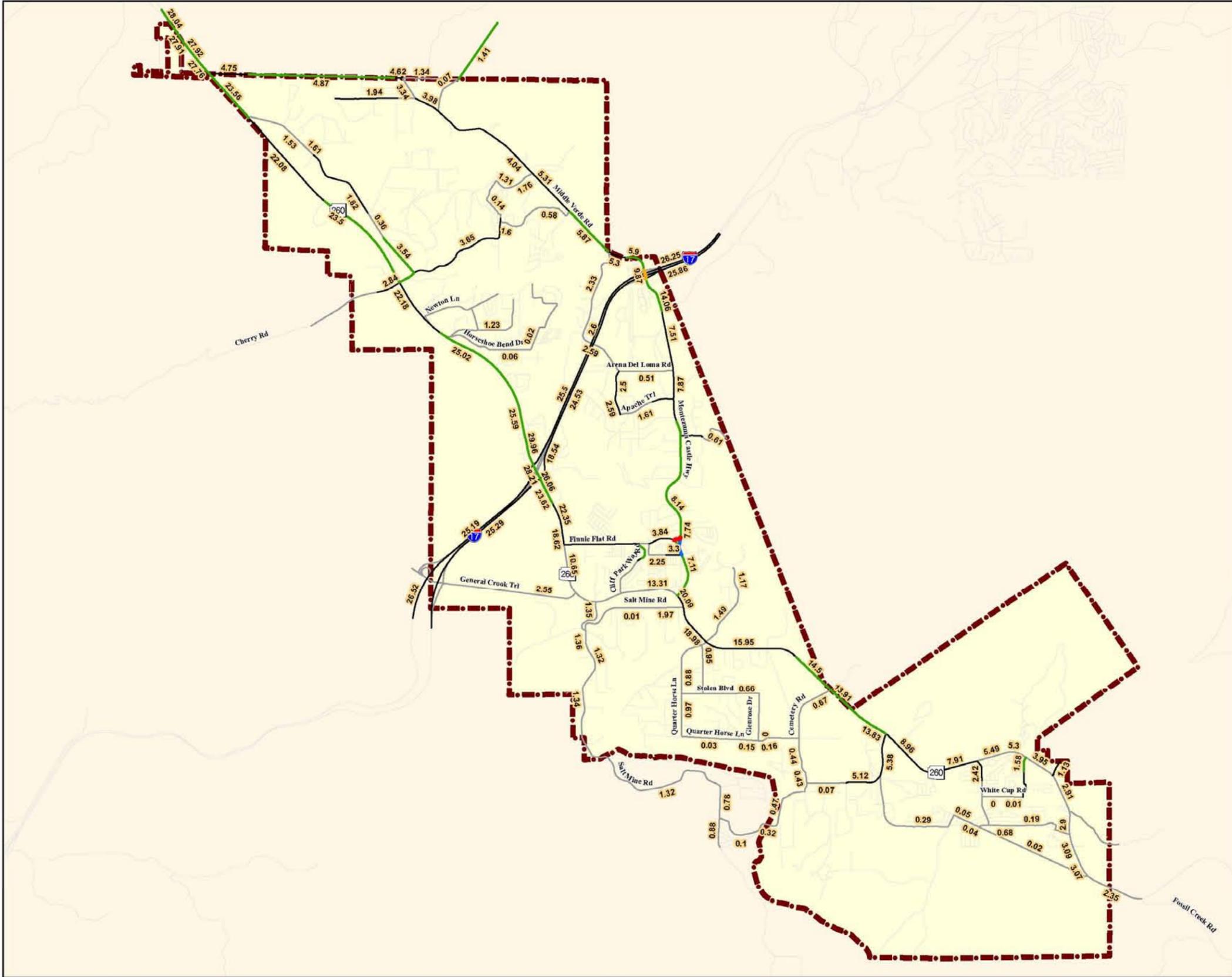
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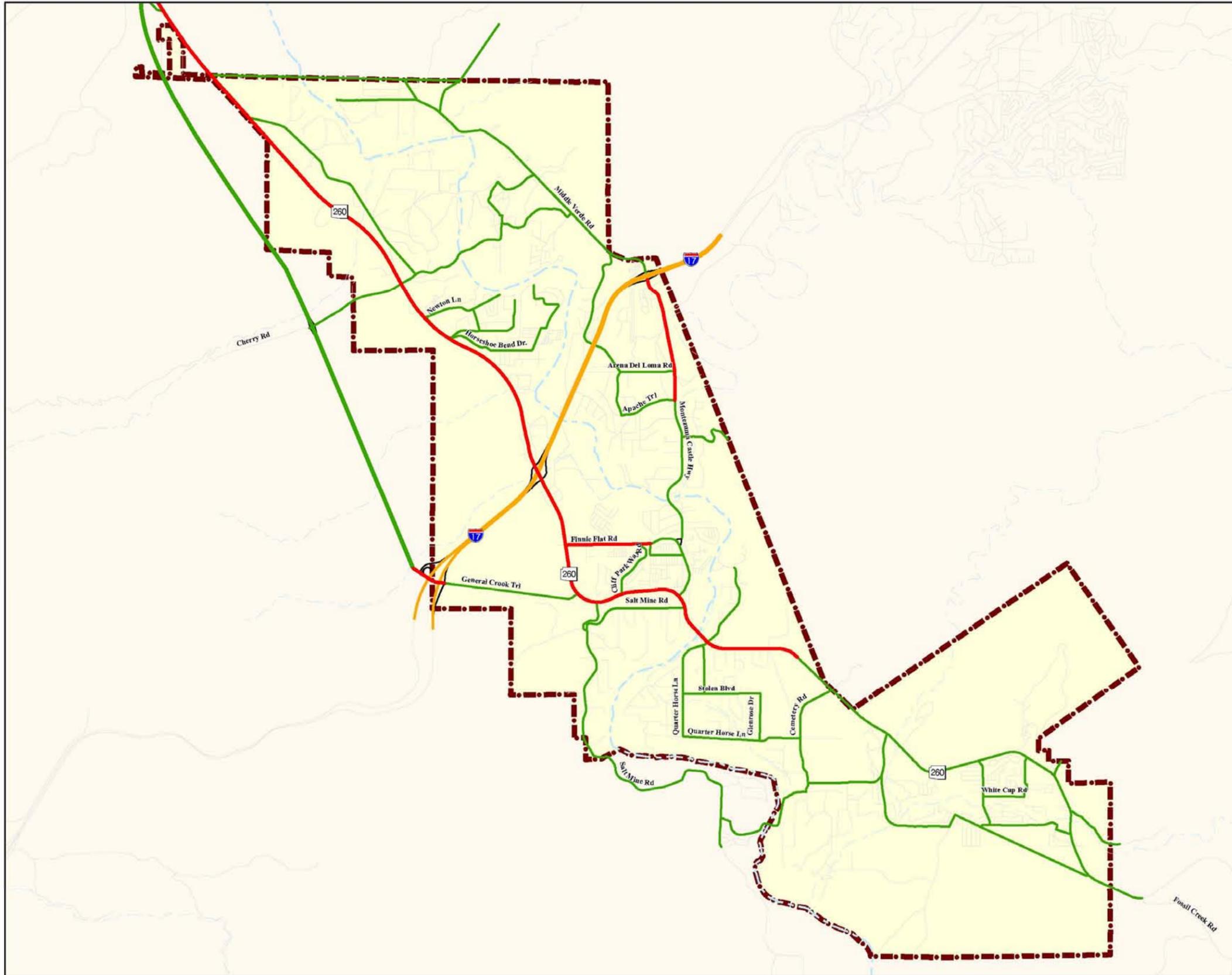
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**Figure 4.8**  
**Year 2026 Alternative 2**  
**Number of Lanes**

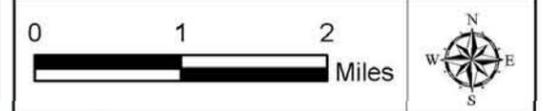
**Town of Camp Verde**  
**Small Area Transportation Study**

-  4 Lanes
-  3 Lanes
-  2 Lanes
-  1 Lane
-  Study Area Boundary



Date: 09.10.2009

Source: ALRIS, ADOT, Yavapai County GIS, Town of Camp Verde.



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### Other Roadway Improvements

Input from the public, stakeholders, and the TAC was used in conjunction with existing and future conditions deficiency analysis to identify non-capacity roadway improvements. These include projects to address safety concerns, long-term planning studies, and intersection improvements. Table 4.3 is a list of short-term improvements, Table 4.4 is a list of mid-term improvements and Table 4.5 is a list of long-term improvements.

**TABLE 4.3: SHORT-TERM (2009 - 2011) - OTHER ROADWAY IMPROVEMENTS**

Project Type	Location	Description
Intersection Improvements	Cherry Rd/SR 260/Old Hwy 279	Install traffic signal at intersection
	I-17/SR 260	Review and add/re-locate sign boards showing directions to Camp Verde business districts
	Main St/Montezuma Castle Hwy/Finnie Flat Rd	Review signal phasing, turn lanes, approach speeds, and intersection lighting. Improve signage in the vicinity of the intersection  Initiate study to evaluate alternate traffic control options including roundabouts
	SR 260/McCracken Ln	Conduct signal warrant study and install traffic signal at intersection
	Sr 260/Verde Lakes Dr	Improve sight distance at intersection
Pavement Preservation	General Crook Trl: I-17 to SR 260	Pavement Preservation
	Salt Mine Rd: South of Oasis Rd	Pavement Preservation
	McCracken Ln: East of SR 260	Pavement Preservation
	Main St: Finnie Flat Rd to SR 260	Pavement Preservation
	Stolen Blvd: Quarter Horse Ln to Glenrose Dr	Pavement Preservation
	Murdock Rd: Quarter Horse Ln to Stolen Blvd	Pavement Preservation
	Glenrose Dr: Stolen Blvd to Quarter Horse Ln	Pavement Preservation
	Quarter Horse Ln: West of Glenrose Dr	Pavement Preservation
	Aspen Way: Catclaw Dr to SR 260	Pavement Preservation
Cherry Rd: West of SR 260	Pavement Preservation	
Other	SR 260: Thousand Trl to I-17	Implement spot safety improvements: Intersection improvements at Cherry Rd, Horseshoe Bend Dr, Dickison Circle Passing lane in the vicinity of Old Hwy 279 (north end) and SR 260
	Cliffs Pkwy: Finnie Flat Rd to SR 260	Implement traffic calming measures Add 3 way stop sign at Cliffs Pkwy and Azure Dr intersection
	Clinton Ln: Verde Lakes Dr to SR 260	Add sign boards along Clinton Ln showing directions to SR 260
Transit	Entire System	Designate a City Transit Coordinator
	Entire System	Create a Transit Advisory Committee consisting of key Town staff, members from the business community, local transit and transportation agencies.
	Entire System	Seek new sources of funding

**TABLE 4.4.: MID-TERM (2011 - 2016) - OTHER ROADWAY IMPROVEMENTS**

Project Type	Location	Description
Intersection Improvements	SR 260/Horseshoe Bend Dr	Conduct signal warrant study and install traffic signal at intersection
	Cliff Pkwy/Finnie Flat Rd	Drainage improvements
	Main St/Montezuma Castle Hwy/Finnie Flat Rd	Implement recommendations from alternate traffic control study
Other	Old Hwy 279: Entire Section	Mitigate low water crossing Pave roadway
	SR 260: I-17 to Homestead Pkwy	Potential business access improvements as future development occurs
	General Crook Trl: I-17 to SR 260	Upgrade to major collector when future development occurs (80 ft minimum right-of-way)
	Black Bridge	Rehabilitation
Transit	Entire System	Develop transit demand management program
	Entire System	Partner with CATS and Greyhound
	Entire System	Initiate comprehensive transit needs study

**TABLE 4.5: LONG-TERM (2016 - 2026) - OTHER ROADWAY IMPROVEMENTS**

Project Type	Location	Description
Other	7th St: Finnie Flat Rd to SR 260	Upgrade to collector
	Holloman St: 7th St to Main St	Upgrade to collector
Safety	Middle Verde Rd: SR 260 to I-17	Develop as alternate safety/emergency route
	Montezuma Castle Hwy: I-17 to Finnie Flat Rd	Develop as alternate safety/emergency route
	7th St: Finnie Flat Rd to SR 260	Develop as alternate safety/emergency route
	Holloman St: 7th St to Main St	Develop as alternate safety/emergency route
	Quarter Horse Ln (east-west): Old Church Rd to S	Develop as alternate safety/emergency route
	Quarter Horse Ln (north-south): Quarter Horse Ln	Develop as alternate safety/emergency route
	General Crook Trl: I-17 to SR 260	Develop as alternate safety/emergency route
	Oasis Rd/Salt Mine Rd: SR 260 to Sierra Verde Rd	Develop as alternate safety/emergency route
	Sierra Verde Rd: SR 260 to Quarter Horse Ln	Develop as alternate safety/emergency route
	Clinton Ln: SR 260 to Verde Lakes Dr	Develop as alternate safety/emergency route
	Lazar Rd: SR 260 to Sierra Verde Dr	Develop as alternate safety/emergency route
Transit	Entire System	Implement transit oriented development policies
	Entire System	Develop a Camp Verde Transit Center including a Park & Ride lot
	Entire System	Implement recommendations from transit needs study

## TRANSIT RECOMMENDATIONS

For future transit demand forecasts, analysis was conducted using the Arkansas Public Transportation Needs Assessment (APTNA) method, which was the only method used by Arizona Rural Transit Needs Study (RTNS) for several reasons that are noted in the RTNS Final Report. In addition, the APTNA method was also chosen for this analysis due to its relative ease when comparing results to those presented in the RTNS Final Report. The APTNA method projects transit demand using the following trip rates (i.e., one-way passenger trips per year):

- Elderly persons age 60 and over: 6.79
- Persons with disabilities under age 60: 4.49
- Persons living in poverty under age 60: 20.50

Table 4.6 shows the published transit demand projections from the RTNS Final Report and the calculated transit demand (after applying the APTNA method to future demographic projections as forecasted by the travel demand model).

**TABLE 4.6: ESTIMATED ANNUAL TRANSIT DEMAND FROM 2005 TO 2026**  
**ANNUAL TRANSIT DEMAND (APTNA METHOD)**

Year	Annual Transit Demand (APTNA Method)	
	Reported by RTNS	Calculated Using Model Forecast
2005	45,500	
2007		57,023
2011		66,229
2016	65,600	75,660
2026		91,404

Source: Arizona Rural Transit Needs Study (RTNS), 2008.

In discussing potential current and future transit demand forecast, there are two caveats to note. To begin, the potential transit demand forecast can not be expected to represent actual expected ridership. Furthermore, there are many different methods available for transit demand forecasting and no one method can truly claim accuracy as each has its own errors. However, forecasts with these methods can be relied upon since passenger revenues make up

a small part of a transit system's total budget (10-25 percent), making the cost of an error in demand estimates even smaller. Most large errors in estimating passenger revenue have a relatively small impact on overall finances. If ridership is underestimated, additional resources may be acquired to respond to demand. Thus, the impact of the degree of uncertainty is low enough that the projections presented in this report can be relied upon to show a substantial need for local and regional transit service in Camp Verde.

### Recommendations

Two previous studies, CVTS and RTNS, provided findings and recommendations that if pursued would have provided a viable transit system for Camp Verde. However, several key attempts to reinstate fixed route transit have not been successfully implemented.

The CVTS report clearly summarized the major transit needs of Camp Verde; many these identified needs remain valid since very few of the recommendations in that report were successfully implemented. The RTNS report confirms the findings of both the CVTS and this study. Furthermore, the RTNS cited Camp Verde as a top priority for New Section 5311 Service. Key findings and public transportation needs identified in CVTS include:

#### *Key Findings Stated in CVTS:*

- The Camp Verde area contains widely scattered residential areas. However, most commercial areas and other activity centers are concentrated along several arterial corridors.
- A higher than average percentage of Camp Verde's population consists of groups, such as the elderly and people with mobility limitations, who are more likely to be transit dependent.
- Projected population growth is expected to increase population density, as well as the numbers of transit-dependent individuals.

#### *Public Transportation Needs Identified in CVTS:*

- An intercity service that links the population centers of Cottonwood/Clarkdale, Sedona, and Camp Verde. This could serve many intercity commuters, as well as transit-dependent persons who need to reach medical appointments and other specialized services.
- A regional ridesharing or vanpool program for commuters between the Cottonwood, Camp Verde, and Sedona areas.

The sections below describe the recommended actions needed in order to meet the public transportation needs of Camp Verde and outlines the actions by realistic completion timeframes.

***Near-Term Actions by 2011***

Camp Verde should take the following near-term steps with a tentative goal of completion by 2011 in order to immediately improve opportunities for residents to use public transportation services.

*Organize a Transportation Advisory Committee*

The town should consider appointing a volunteer Transportation Advisory Committee to assist the town in identifying and responding to Camp Verde’s transportation-related issues and concerns. The Transportation Advisory Committee, which could be a subcommittee of the Town Council, could act as a liaison for transit issues between the town and the business community, and could also provide input for future transit actions such as partnering with Cottonwood Area Transit System (CATS), developing routes, and selecting park-and-ride lots.

One of most crucial roles for the Transportation Advisory Committee would be to work closely with the State and NACOG to advise them of needed investments and to provide appropriate feedback. In addition, the committee should monitor the State’s implementation of the RTNS Recommendations and use of LTAF II funding.

*Designate a City Transportation Coordinator*

The consultant recommends that the town hire or designate a city transportation coordinator to develop a rideshare program and to serve as a clearinghouse for local and regional public transportation information. For example, the coordinator can track changes in area demographics and employment, record the number of citizens requesting dial-a-ride and/or voucher transit service, and track the number of commuters traveling outside the area. The coordinator can then use this information to keep regional special needs transit operators up to date on the town’s rapidly changing demographics so operators can make informed decisions about beginning or increasing service to the area. The Transportation Advisory Committee could assist the town in identifying the desirable attributes of the coordinator position and to work with the coordinator after his or her selection.

*Seek for New Sources of Funding*

Seek new funding for a new public transit operation or the expansion of CATS into Camp Verde. For example, the Town can seek Section 5317 funding, the New Freedom program. The New Freedom program funding can support operations and capital funding for disabled veterans in rural Arizona to travel to large or small urban areas for healthcare needs. The New Freedom program may also contribute to disabled transportation services that are beyond the service boundaries currently provided by the Section 5311 program for rural public transportation services.

***Mid-Term Actions (2016)***

In the mid-term period, Camp Verde should take the following steps with a tentative goal of completion by 2016.

*Develop a Transportation Demand Management Program*

Developing a Transportation Demand Management Program is probably the most efficient and inexpensive way to address Camp Verde’s demand for transportation access to employment and also to promote further economic growth. Transportation Demand

Management consists of a wide range of programs and services that enable people to get around without driving alone. Included are alternative transportation modes such as carpooling, vanpooling, transit, bicycling, walking, and programs that alleviate traffic and parking problems such as telecommuting, variable work hours, and parking management.

One way the town can jump start this program is to partner with NACOG to establish a community ridesharing program that includes vanpools and carpools that serve the region. With minimal startup and operational costs, organized ridesharing can address the needs of those traveling long distances to work on a regular basis. Enlisting the support of major employers, by offering economic incentives to employers and employees, would further create a mutual benefit for the community and the businesses. As vanpool ridership between Camp Verde and various destinations increases, some vanpools could evolve into a commuter bus service. Concurrent with the implementation of ridesharing programs, the town should construct initial park-and-ride facilities for use by carpools and vanpools.

#### *Partner with CATS and Greyhound*

Due to the relative proximity of Camp Verde to Cottonwood (distance of approximately 12 miles), the Verde Valley Multimodal Transportation study made a recommendation that serving the Camp Verde area could be a natural extension of CATS and would help expand and leverage existing Section 5311 funding. The RTNS made the same recommendation to expand CATS to service Camp Verde, but also made a recommendation to add a Greyhound stop in Camp Verde to provide intercity service to/from both Phoenix and Flagstaff.

#### ***Long-Term Actions (2026)***

In the long term, Camp Verde should take the following steps with a tentative goal of completion by 2026.

#### *Implement Transit Oriented Development Policies*

Camp Verde has widely scattered residential areas with commercial areas and activity centers concentrated along several arterial corridors. Due to this design, the town has an opportunity to encourage transit-oriented designs in new residential developments or to develop commercial corridors, by means of zoning overlays and other methods.

For example, the Town of Oro Valley, north of Tucson, requires that at least half the parking spaces in a commercial development be located on the side of or in back of the buildings. This requirement reduces the distance that a transit rider must walk across a parking area. In addition, new residential developments could be required to adhere to a grid of local and collector streets, with fewer cul-de-sacs, internal loop roads, and other non-contiguous roadways.

Mixed-use development—buildings two or more stories in height with commercial space on the ground floor and residential space above—could be permitted or encouraged in commercial corridors. Such actions increase future transit ridership, improve transit operating economics, and thus make the provision of transit service more politically and economically feasible.

#### *Develop a Camp Verde Transit Center including a Park and Ride Lot*

Camp Verde should examine the concept of developing a regional transit center with a regional park-and-ride lot near the Interstate 17/State Route 260 interchange. The transit center would be used as a major hub for express bus and shuttle operators, a park-and-ride lot for ride sharing, and a local bus system if established. The center could include a kiosk or a booth to sell tickets and to provide new and existing riders with up-to-date information about available transportation services.

## **NON-MOTORIZED MODES RECOMMENDATIONS**

Non-motorized modes utilized in Camp Verde include bicycle and pedestrian travel.

### **Pedestrian and Bicycle Trail**

The Town has limited bike lanes and/or pedestrian facilities; however, small portions of Cliffs Parkway, Main Street, and SR 260 have sidewalks. These sidewalks are located in the more populated areas of town. The majority of the area's trails, per the General Plan, are Non-Dedicated Trails. In addition, several unimproved pathways were noted within the study area. Additional walkways should be constructed as roadway improvements are implemented. Sidewalks are especially scarce in housing areas. It is recommended that the Town's Transportation Planning and Housing staff coordinate efforts to assure that sidewalk facilities are included in future housing projects. The following recommendations are made to address pedestrian and bicycle facilities:

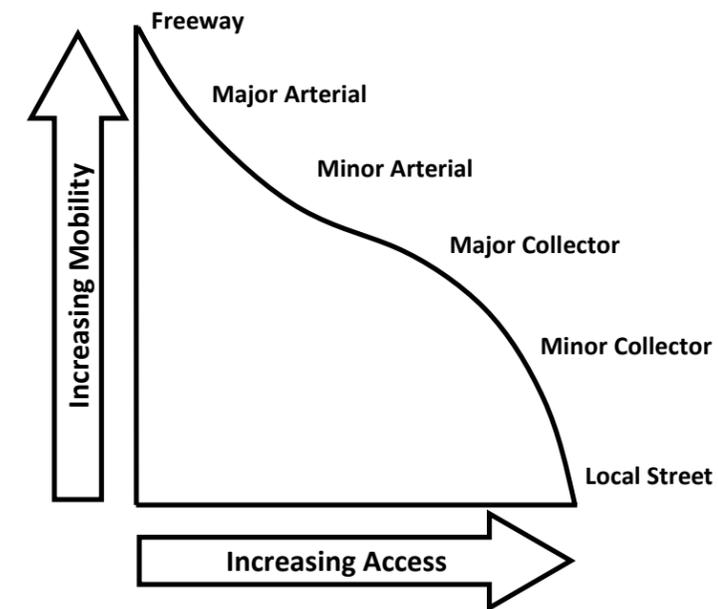
- Short-Term
  - Develop a list of high priority pedestrian and bicycle projects.
  - Develop requests for ADOT enhancement funding opportunities.
- Long-Term
  - Develop a long-term pedestrian circulation plan
  - Develop a long-range bicycle trail plan

### **ACCESS MANAGEMENT**

This section provides an overview of recommended access management practices for the management of vehicular access to all roadways. Access management enhances the flow of traffic on a corridor or roadway system by improving safety, capacity, and speed. Effective access management programs control the number of driveways and vehicular curb cuts, remove slower turning vehicles, and reduce the number of vehicular conflict points. It is important to implement these controls without overly restricting reasonable access to property.

Controlling access improves mobility and is linked to the function of a particular roadway. Low volume, low speed facilities (such as local roads) serve to provide direct and frequent access to properties. Roadways with higher speeds and higher traffic volumes serve to provide mobility and restrict direct access to adjacent land uses, such as freeways, which are completely access controlled. The amount of appropriate access is related to the level of mobility and specific function of a road as illustrated in Figure 4.12.

**FIGURE 4.12: ACCESS VS MOBILITY**



The challenge of managing access is establishing a program of legal, administrative, and technical strategies with the appropriate balance between private property access rights and the need to control access to serve public need. Ideally, these strategies will be implemented through planning practices, rules, engineering standards, and procedures resulting in access decisions that successfully, fairly and consistently, determine access management for each unique situation.

### **Benefits of Access Management**

Improved traffic flow is one of the many benefits of applying access management techniques. Roadways utilizing access management techniques are likely to be safer and provide for better circulation while improving travel times. These techniques include increasing driveway spacing, utilizing turning lanes, grade-separating intersections, and installing medians.

The frequency of intersections greatly influences the capacity and function of roadways. Roadways with more access points and intersections have more opportunities for conflicts, and significant friction to through traffic, which contributes to congestion and crashes.

Applying access management techniques can enhance the livability of a community. Access management has been shown to reduce crashes while also improving pedestrian/bicycle safety. The mobility benefits to a community include increases in roadway capacity and reductions in travel time. The economic benefits of access management include reserving market area for businesses, improving customer safety and convenience, more efficient freight movement, and a positive effect on property values.

Communities that have implemented access management have more area for landscaping, while preserving community/scenic character and promoting more efficient land and site design. Additionally, access management can reduced emissions and fuel consumption due to improved traffic progression and can help avoid substandard access to lot splits.

### **Current Access Management Conditions**

The Town of Camp Verde does not currently have an access management policy in place. The data analysis showed that crashes located along Finnie Flat Road/Main Street, in the central portion of Town, were related to ingress/egress movements; thus demonstrating the need to implement access management techniques.

### **Recommendations**

ADOT is working to develop Memorandums of Understanding (MOU's) with local governments as part of the statewide implementation of the Access Management Program. Once the MOU is enacted it is recommended that access management strategies be implemented, such as closing access points, development of joint access, and the construction of frontage road systems.

Other policy recommendations are:

- Encourage the Town to develop an Access Management Program. This program should comprehensively categorize the roadway system by access management categories, provide specific guidelines for each category, and define the design criteria for each category.
- Implement an Access Management Ordinance that provides the specific guidance for access to land uses.

Significant development is expected to occur along SR 260 north of I-17. The Town of Camp Verde should work with ADOT in developing an access management plan for this corridor.

## 5. MULTIMODAL TRANSPORTATION PLAN

This section presents the Multimodal Transportation Plan for the Town of Camp Verde for the short-term, mid-term and the long-term phases. This transportation plan is the result of the deficiency analysis from Working Paper 1, first Public Open House input, and the evaluation of potential transportation solutions discussed in Chapter 4. It is a multimodal plan that includes roadway, transit, pedestrian, and bicycle improvements.

### SHORT-TERM TRANSPORTATION RECOMMENDATIONS

Short-term phase projects are recommended to be completed within the timeframe of 2009 to 2011. Table 5.1 lists the transportation recommendations for this phase. The table identifies the project type, location, description, agency responsibility, and estimated construction costs for each project. Estimated costs for each project are in 2009 dollars and are generic estimates. Actual costs for projects could vary at the time of implementation; therefore, detailed analysis should be performed on a case by case basis to estimate actual costs. Figure 5.1 is a graphical representation of the short-term transportation recommendations for the Town of Camp Verde.

### MID-TERM TRANSPORTATION RECOMMENDATIONS

Mid-term phase projects are recommended to be completed within the timeframe of 2011 to 2016. Table 5.2 lists the transportation recommendations for this phase. The table identifies the project type, location, description, agency responsibility, and estimated construction costs for each project. Estimated costs for each project are in 2009 dollars and are generic estimates. Actual costs for projects could vary at the time of implementation; therefore, detailed analysis should be performed on a case by case basis to estimate actual costs. Figure 5.2 is a graphical representation of the mid-term transportation recommendations for the Town.

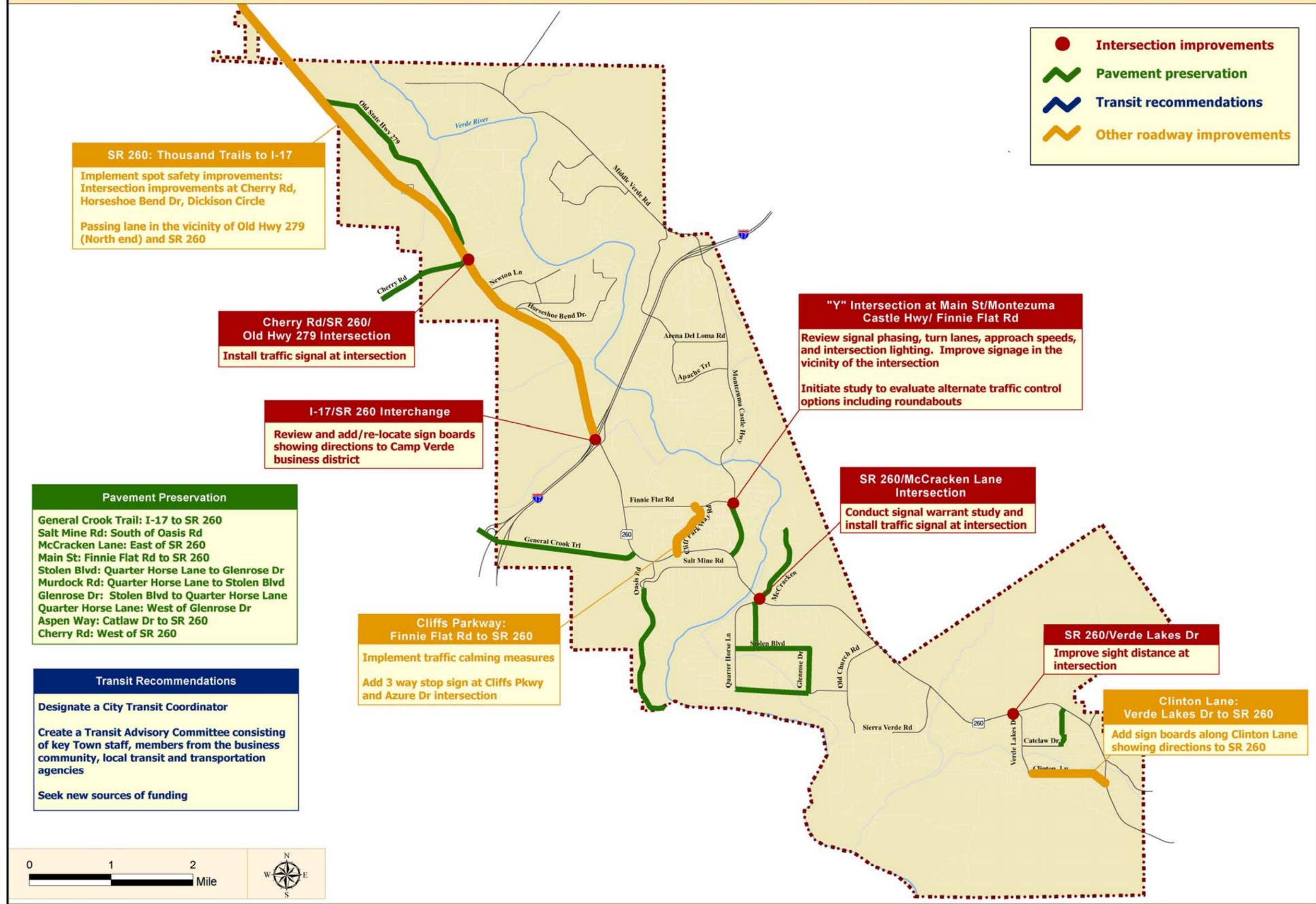
### LONG-TERM TRANSPORTATION RECOMMENDATIONS

Long-term phase projects are recommended to be completed within the timeframe of 2016 to 2026. Table 5.3 lists the transportation recommendations for this phase. The table identifies the project type, location, description, agency responsibility, and estimated construction costs (in 2009 dollars) for each project. Actual costs for projects could vary at the time of implementation; therefore, detailed analysis should be performed on a case by case basis to estimate actual costs. Figure 5.3 is a graphical representation of the long-term transportation recommendations for the Town.

**TABLE 5.1: SHORT-TERM (2009 - 2011) TRANSPORTATION RECOMMENDATIONS**

Project Type	Location	Description	Agency	Estimated Cost
Intersection Improvements	Cherry Road/SR 260/Old Hwy 279	Install traffic signal at intersection ( Project already in progress)	Town of Camp Verde	N/A
	I-17/SR 260	Review and add/re-locate sign boards showing directions to Camp Verde business districts	ADOT	\$20,000
	Main Street/Montezuma Castle Highway/Finnie Flat Road	Review signal phasing, turn lanes, approach speeds, and intersection lighting. Improve signage in the vicinity of the intersection	Town of Camp Verde	\$20,000
		Initiate study to evaluate alternate traffic control options including roundabouts	Town of Camp Verde	\$35,000
	SR 260/McCracken Lane	Conduct signal warrant study and install traffic signal at intersection	ADOT/Town of Camp Verde	\$365,000
	SR 260/Verde Lakes Drive	Improve sight distance at intersection	ADOT/Town of Camp Verde	\$50,000
Pavement Preservation	General Crook Trail: I-17 to SR 260	Pavement Preservation	Town of Camp Verde	\$2,196,500
	Salt Mine Road: South of Oasis Road	Pavement Preservation	Town of Camp Verde	\$2,012,500
	McCracken Lane: East of SR 260	Pavement Preservation	Town of Camp Verde	\$1,173,002
	Main Street: Finnie Flat Road to SR 260	Pavement Preservation	Town of Camp Verde	\$736,003
	Stolen Boulevard: Quarter Horse Lane to Glenrose Drive	Pavement Preservation	Town of Camp Verde	\$1,046,505
	Murdock Road: Quarter Horse Lane to Stolen Boulevard	Pavement Preservation	Town of Camp Verde	\$655,505
	Glenrose Drive: Stolen Boulevard to Quarter Horse Lane	Pavement Preservation	Town of Camp Verde	\$632,506
	Quarter Horse Lane: West of Glenrose Drive	Pavement Preservation	Town of Camp Verde	\$1,023,511
	Aspen Way: Catclaw Drive to SR 260	Pavement Preservation	Town of Camp Verde	\$563,507
Cherry Road: West of SR 260	Pavement Preservation	Town of Camp Verde	\$1,357,019	
Other	SR 260: Thousand Trail to I-17	Implement spot safety improvements: Intersection improvements at Cherry Road, Horseshoe Bend Drive, Dickison Circle (Project already in progress)	ADOT	N/A
	SR 260: Thousand Trail to I-17	Passing lane in the vicinity of Old Hwy 279 (north end) and SR 260	ADOT	\$2,600,000
	Cliffs Parkway: Finnie Flat Road to SR 260	Implement traffic calming measures Add 3 way stop sign at Cliffs Parkway and Azure Drive intersection	Town of Camp Verde	\$40,000
	Clinton Lane: Verde Lakes Drive to SR 260	Add sign boards along Clinton Lane showing directions to SR 260	Town of Camp Verde	\$20,000
Transit	Entire System	Designate a City Transit Coordinator	Town of Camp Verde	N/A
	Entire System	Create a Transit Advisory Committee consisting of key Town staff, members from the business community, local transit and transportation agencies.	Town of Camp Verde	N/A
	Entire System	Seek new sources of funding	Town of Camp Verde	N/A

# Figure 5.1 Short-Term (2009-2011) Transportation Recommendations



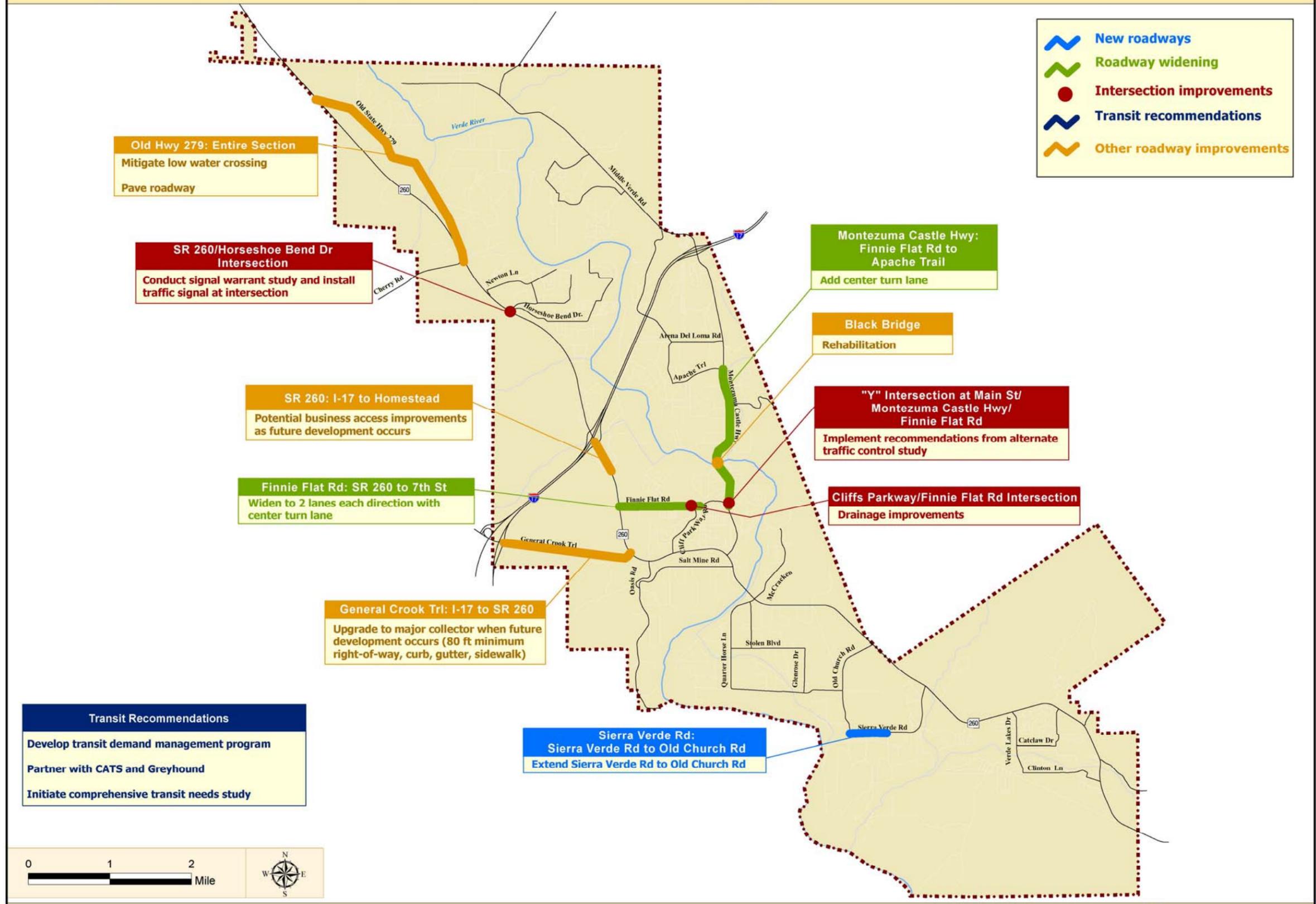
## Camp Verde Transportation Planning Study



**TABLE 5.2: MID-TERM (2011 - 2016) TRANSPORTATION RECOMMENDATIONS**

Project Type	Location	Description	Agency	Estimated Cost
New Roadway	Sierra Verde Road: Sierra Verde Road to Old Church Road	Extend Sierra Verde Road to Old Church Road	Town of Camp Verde	\$354,200
Roadway Widening	Finnie Flat Road: SR 260 to 7th Street	Widen to 2 lanes each direction with center turn lane	Town of Camp Verde	\$2,574,000
	Montezuma Castle Highway: Finnie Flat Road to Apache Trail	Add center tune lane	Town of Camp Verde	\$2,249,000
Intersection Improvements	SR 260/Horseshoe Bend Drive	Conduct signal warrant study and install traffic signal at intersection	ADOT/Town of Camp Verde	\$365,000
	Cliff Parkway/Finnie Flat Road	Drainage improvements	Town of Camp Verde	\$50,000
	Main Street/Montezuma Castle Highway/Finnie Flat Road	Implement recommendations from alternate traffic control study	Town of Camp Verde	N/A
Other	Old Hwy 279: Entire Section	Mitigate low water crossing Pave roadway	Town of Camp Verde	\$1,989,500
	SR 260: I-17 to Homestead Parkway	Potential business access improvements as future development occurs	ADOT	
	General Crook Trail: I-17 to SR 260	Upgrade to major collector when future development occurs (80 ft minimum right-of-way)	Town of Camp Verde	\$2,196,500
	Black Bridge	Rehabilitation	Town of Camp Verde	\$250,000
Transit	Entire System	Develop transit demand management program	Town of Camp Verde	N/A
	Entire System	Partner with CATS and Greyhound	Town of Camp Verde	N/A
	Entire System	Initiate comprehensive transit needs study	Town of Camp Verde	N/A

# Figure 5.2 Mid-Term (2011-2016) Transportation Recommendations



## Camp Verde Transportation Planning Study



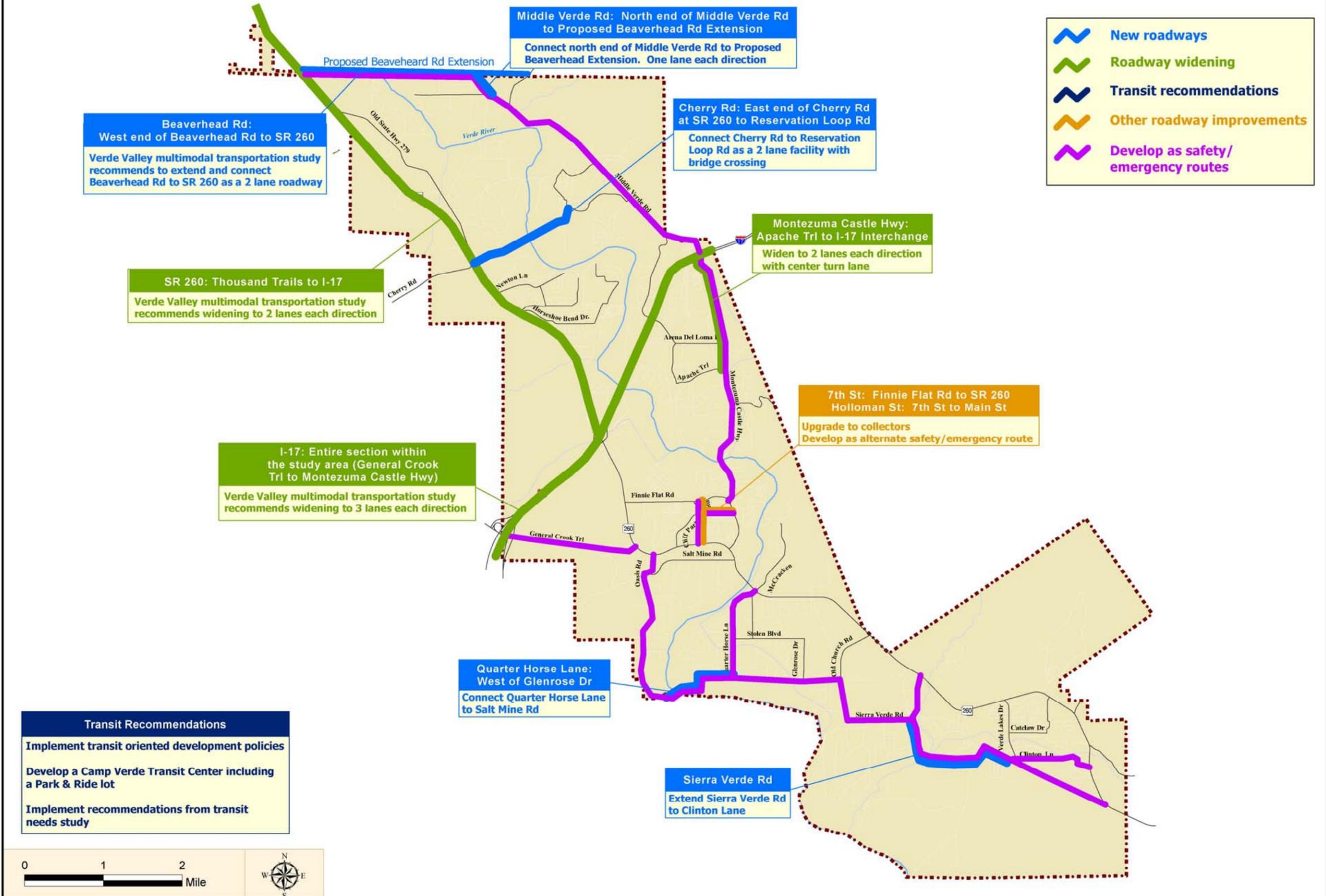
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**TABLE 5.3: LONG-TERM (2016 - 2026) TRANSPORTATION RECOMMENDATIONS**

Project Type	Location	Description	Agency	Estimated Cost
New Roadway	Middle Verde Road: North end of Middle Verde Road to Proposed Beaverhead Rd Extension	Connect north end of Middle Verde Road to Proposed Beaverhead Road Extension. One lane each direction.	Town of Camp Verde	\$754,000
	Beaverhead Road : West end of Beaverhead Road to SR 260	Verde Valley Multimodal Transportation Study recommends extending and connecting Beaverhead Road to SR 260 as a 2 lane roadway.	Yavapai County	\$14,918,000*
	Cherry Road : East end of Cherry Road at SR 260 to Reservation Loop Road	Connect Cherry Road to Reservation Loop Road as a 2-lane facility with bridge crossing.	Town of Camp Verde	\$8,426,000
	Quarter Horse Lane: West of Glenrose Driver	Connect Quarter Horse Lane to Salt Mine Road	Town of Camp Verde	\$2,834,000
	Sierra Verde Road	Extend Sierra Verde Road to Clinton Lane	Town of Camp Verde	\$4,524,000
Roadway Widening	SR 260: Thousand Trail to I-17	Verde Valley Multimodal Transportation Study recommends widening to 2 lanes each direction	ADOT	\$43,022,000*
	Montezuma Castle Highway: Apache Trail to I-17 Interchange	Widen to 2 lanes each direction with center turn lane	Town of Camp Verde	\$5,772,000
	I-17: Entire section within the study area (General Crook Trail to Montezuma Castle Highway)	Verde Valley Multimodal Transportation Study recommends widening to 3 lanes each direction	ADOT	\$138,423,000*
Other	7th Street: Finnie Flat Road to SR 260	Upgrade to collector	Town of Camp Verde	\$621,000
	Holloman Street: 7th Street to Main Street	Upgrade to collector	Town of Camp Verde	\$437,000
	West of SR 260: I-17 to Study Boundary	Develop local/backage roads as development occurs along SR 260	Town of Camp Verde	N/A
Safety	Middle Verde Road: SR 260 to I-17	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Montezuma Castle Highway: I-17 to Finnie Flat Road	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	7th Street: Finnie Flat Road to SR 260	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Holloman Street: 7th Street to Main Street	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Quarter Horse Lane (east-west): Old Church Road to Salt Mine Road	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Quarter Horse Lane (north-south): Quarter Horse Lane (east-west) to SR 260	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	General Crook Trail: I-17 to SR 260	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Oasis Rd/Salt Mine Road : SR 260 to Sierra Verde Road connection	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Sierra Verde Road : SR 260 to Quarter Horse Lane	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
	Clinton Lane: SR 260 to Verde Lakes Drive	Designate as alternate safety/emergency route	Town of Camp Verde	N/A
Lazar Road : SR 260 to Sierra Verde Drive	Designate as alternate safety/emergency route	Town of Camp Verde	N/A	
Transit	Entire System	Implement transit oriented development policies	Town of Camp Verde	N/A
	Entire System	Develop a Camp Verde Transit Center including a Park & Ride lot	Town of Camp Verde	N/A
	Entire System	Implement recommendations from transit needs study	Town of Camp Verde	N/A

\* Source: 2009 Verde Valley Multimodal Transportation Study

# Figure 5.3 Long-Term (2016-2026) Transportation Recommendations



## Camp Verde Transportation Planning Study



## TITLE VI AND ENVIRONMENTAL JUSTICE POPULATION IMPLICATIONS

In accordance to federal requirements, this study identified Title VI and Environmental Justice populations within the study area. Chapter 2 discussed in great detail the location of minority and below poverty populations throughout the study area. Proposed transportation improvement projects recommended by this study may impact these populations differently than other residents. A preliminary review of the study's recommended projects indicates that some projects could potentially have negative effects on some population groups based on the final location of each project. However, the benefits of these projects significantly outweigh the negative impacts, as shown in Table 5.4.

Furthermore, consideration was also given to the Title VI and Environmental Justice populations to ensure that impacted populations were included in the study public participation process. Public involvement efforts were conducted to reach minority and low-income populations when conducting this study's two public involvement meetings.

Table 5.4 lists the recommended projects that may cause adverse human health and environmental effects, both social and economic, on minority and low income populations. As these recommended projects are implemented, additional effort will need to be to avoid, minimize, or mitigate the impacts. Furthermore, continued public participation with the impacted population groups is necessary to ensure minimum affects by proposed transportation improvements.

**TABLE 5.4: TITLE VI AND ENVIRONMENTAL JUSTICE POPULATION IMPLICATIONS**

Project Type	Timeframe	Project Description	Impacted Population	Potential Disproportionate and/or Adverse Impact(s)	Consideration(s) that dictated this recommendation over alternative actions
Roadway extension	Mid-Term	Extend Sierra Verde Road to Old Church Road	Local residents	<ul style="list-style-type: none"> <li>Increased vehicular traffic</li> <li>In vicinity of Clear Creek Church (Historic Building)</li> <li>Cemetery also in proximity of area</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> <li>Improve regional connectivity</li> </ul>
Roadway widening	Mid-Term	Widen Finnie Flat Road to 5 lanes from SR 260 to 7th Street.	Local residents	<ul style="list-style-type: none"> <li>Temporary constraint to roadway</li> <li>Increase vehicle traffic</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> </ul>
Roadway extension	Long-Term	Extend Middle Verde Road from north end of Middle Verde Road to Proposed Beaverhead Road Extension, 1 lane each direction.	Local residents	<ul style="list-style-type: none"> <li>Increase vehicular traffic</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> <li>Improve regional connectivity</li> <li>Improve emergency response time</li> </ul>
Roadway extension	Long-Term	Construct Beaverhead Road from west end of Beaverhead Road to SR 260, 1 lane each direction.	Local residents	<ul style="list-style-type: none"> <li>Increase vehicular traffic</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> <li>Improve regional connectivity</li> <li>Improve emergency response time</li> </ul>
New roadway	Long-Term	Construct Cherry Road from east end of Cherry Road at SR 260 to Reservation Loop Road	Tribal members and local residents	<ul style="list-style-type: none"> <li>Increase vehicular traffic</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> <li>Improve regional connectivity</li> <li>Improve emergency response time</li> </ul>
Roadway widening	Long-Term	Widen Montezuma Castle Highway: Apache Trail to I-17 Interchange to 4 lanes.	Tribal members and local residents	<ul style="list-style-type: none"> <li>Increase vehicular traffic</li> </ul>	<ul style="list-style-type: none"> <li>Relieve congestion</li> <li>Improve access management on roadway</li> </ul>

## 6. TRANSPORTATION PLAN IMPLEMENTATION

This section presents potential funding sources for implementing the multimodal transportation plan. Strategies to assist in implementing the transportation plan are also presented.

### FUNDING SOURCES

Funding is vital to ensure successful implementation of transportation projects. This section will detail the potential revenue sources of future projects for the Town of Camp Verde.

#### LOCAL

*Development Impact Fees* can be established for transportation projects through impact fees or development requirements on targeted projects or areas. The amount of the assessment needs to be in direct proportion to the magnitude of the need created by the project. If they don't already exist, the Town of Camp Verde should work towards establishing a standard for development fees. Developer Agreements can also be used as a tool to collect revenue for capturing the off-site impacts on the community.

*Sales Tax* for transportation improvements is another viable funding source. A number of jurisdictions throughout Arizona have successfully implemented Sales Tax specifically for transportation. This tax should be regional in nature and could be used for both motorized and non-motorized improvements.

*Developer Exactions* require developers to construct off-site facilities necessary to serve their development. For example, improvements to roadways and intersections can be exacted from developers. This method is often used with developer impact fees.

*Improvement or Road Districts* can be established in designated areas under Arizona Revised Statutes Title 48. These types of districts can be used to undertake a variety of improvements, including roadway widening and paving, but come with certain restrictions on the creation and implementation of a district. The improvement costs are shared on a fair and equitable basis, and are usually supported by residents and property owners within the district.

#### STATE

*Highway User Revenue Fund (HURF)* is derived from fuel taxes, motor carrier fees, vehicle license tax, registration fees and other miscellaneous fees and is the funding source for most local projects. HURF funds are intended for highway construction, improvements, and other related expenses. In 2008, \$900,000 of the HURF funds was allocated to the Town of Camp Verde.

*Vehicle License Tax (VLT)* is based on the assessed value of a vehicle and is paid yearly. The revenue from this tax is distributed to local jurisdictions via the HURF. Arizona charges a Vehicle License Tax (VLT) in lieu of a personal property tax on vehicles. The VLT is based on an assessed value of 60% of the manufacturer's base retail price reduced by 16.25% for each year since the vehicle was first registered in Arizona.

*Local Transportation Assistance Fund (LTAF) and LTAF II* are distributed to local jurisdictions, based on population, for use on transit and transportation purposes. LTAF (II) was intended to augment LTAF (I) with a maximum of \$18 million statewide from the Vehicle License Tax (VLT) and excess Powerball monies.

#### FEDERAL

*Surface Transportation Program (STP)* are federal funds used for a variety of roadway improvements and operations. Specifically, the Metropolitan Planning Program (MPP) provides financial assistance, through the State, to MPOs to support the costs of preparing long-range transportation plans and financially feasible transit improvement projects. MPP assistance should be used to conduct balanced and comprehensive intermodal transportation planning and technical studies for the movement of people and goods in the metropolitan area. STP funds are disbursed through NACOG.

*Transportation Enhancement* funds provide funding for bicycle, pedestrian, historic, and beautification projects. The program was developed to enhance surface transportation activities by developing projects that go beyond what transportation departments typically do. All projects must be surface transportation related. Eligibility requirements are screened through the program application process and validated by ADOT staff and the Transportation Enhancement Review Committee (TERC). Applications are considered yearly under this program through NACOG.

*Federal Lands Highway Program (FLHP)* provides funding for a consolidated program of transportation improvements that are not a state or local responsibility. Funds can be used for recreational related travel. Funds are accessed in conjunction with the applicable state agency (ADOT in this case), with project selection made by the FHWA Administrator.

*Transit Funds - Section 5310, 5311* provide funding for local transit. The 5310 program funds transit programs for elderly and disabled while the 5311 program funds local transit systems in non-urbanized areas. Applications for funds are generally made available in January through ADOT.

*Statewide Local Governments Economic Stimulus Program* is the ADOT program to expedite the delivery of transportation projects as part of the American Recovery and Reinvestment Act (ARRA).

*Highway Expansion and Extension Loan Program (HELP)* provides loans and financial assistance for highway programs in Arizona and is often used to help accelerate projects. Eligible projects are highway projects meeting the following requirements:

- The project must be on the Federal Aid System, National Highway System, State Highway System, or be designated as a state route
- The project must be included in the State Highway Construction Program, State Transportation Improvement Plan or NACOGs Transportation Improvement Plan for the Town.

The minimum HELP award is \$250,000 and the applications for funds are generally made available twice a year through ADOT.

*Economic Strength Project (ESP) Grants* provide funding to communities for highway or road projects to assist businesses in creating or retaining jobs and in making capital investments. Eligible projects include new road construction, upgrading of existing roads, access management techniques, reconstruction, and paving. A 10% match would be required by the jurisdiction or through business assistance. Notification of available funds occurs in January and July.

#### **YAVAPAI COUNTY**

Yavapai County's Regional Road Construction Program (RRCP) is a county funding source for transportation projects that have a clear regional benefit. These funds are available for construction and/or reconstruction needs for major and minor arterials and major collectors.

#### **OTHER REVENUE-GENERATING RESOURCES FOR TRANSPORTATION**

Parking revenue implemented through parking meters or restrictions could provide an important income-generating opportunity from collections and permit violations (after payment of maintenance, enforcement, and administration costs) that could be devoted to transportation investments.

#### **IMPLEMENTATION GUIDELINES**

The Town of Camp Verde can utilize the following implementation strategies as guidelines to accomplish the multimodal transportation plan developed in Chapter 5.

- Present transportation plan to the Town Council for approval.
- Program short-term, mid-term, and long-term phases into the Town's Capital Improvement program.
- Establish a transit department.
- Enhance communications, cooperation, and collaboration with ADOT, Yavapai County, NACOG, and other local jurisdictions. Work in partnership with each agency to address transportation needs and implement the LRTP.
- Apply for funding sources to match each project in the transportation plan.
- Incorporate opportunities for public involvement throughout the plan implementation process.
- Promote Town-Private partnerships where appropriate.
- Monitor transportation plan progress on a quarterly basis.
- Update the transportation plan on a five year cycle.