

ENTERING
Colorado River
Indian Reservation

Final Report

MPD 035-013

2014 Strategic Long-Range Transportation Plan *for the Colorado River Indian Tribes*

Prepared by:



Kimley-Horn
and Associates, Inc.

APRIL 2014 | PREPARED FOR:
COLORADO RIVER INDIAN TRIBES



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APRIL 2014

RESOLUTION
COLORADO RIVER TRIBAL COUNCIL

A Resolution to Adopt the 2014 Colorado River Indian Tribes Long Range Transportation Planning Report and adopt it as the Tribe's current Long Range Transportation Plan

Be it resolved by the Tribal Council of the Colorado River Indian Tribes, in *special* meeting assembled on April 3, 2014

WHEREAS, the Colorado River Indian Tribes (Tribe) is a federally recognized Indian Tribe duly organized with a governing body known as the Tribal Council, according to provisions contained in the Indian Reorganization Act of June 18, 1934; and

WHEREAS, The Colorado River Indian Tribes was awarded funding from the Planning Assistance for Rural Area's (PARA) Grant through the Arizona Department of Transportation (ADOT) and selected Kimley-Horn and Associates Inc., to write the 2014 Colorado River Indian Tribes Long Range Transportation Plan under the supervision of the CRIT Planning Department and ADOT and the Technical Advisory Committee that was formed that identified road improvement and maintenance projects to meet tribal transportation needs; and

WHEREAS, the improvement, safety and maintenance projects identified in this 2014 Transportation Planning Report have been reviewed by the Bureau of Indian Affairs, Western Regional Office, Division of Transportation (BIAWRODOT) staff and changes and additions suggested made by BIAWRODOT have been incorporated into the Report; and

WHEREAS, there is a need to identify current tribal road safety, construction and maintenance priorities, incorporate the functional classifications contained in 25 CFR 170 and in ADOT regulations, and road inventory update changes included in the 2014 Report, and adopts the study as the tribe's current (2014) Long Range Transportation Plan as a means of reaffirming the Tribe's transportation needs and supporting changes to the Tribal Transportation Program (TTP) inventory, to implement projects to meet those needs; and

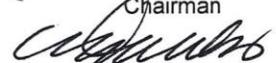
The foregoing resolution was on April 3, 2014 duly approved by a vote of 5 for, 0 against and 0 abstaining, by the Tribal Council of the Colorado River Indian Tribes, pursuant to authority vested in it by Sections 1., Article VI of the Constitution and By laws of the Tribes, ratified by the Tribes on March 1, 1975 and approved by the Secretary of the Interior on May 29, 1975, pursuant to Section 16 of the Act of June 18, 1934, (46 Stat. 984). This resolution is effective as of the date of its adoption.

COLORADO RIVER TRIBAL COUNCIL

By



Chairman



Secretary Acting

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APRIL 3, 2014
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NOW, THEREFORE BE IT RESOLVED that the Tribal Council of the Colorado River Indian Tribes hereby approves the April 2014 Colorado River Indian Tribes Long Range Transportation Planning Report to incorporate the Functional Classifications contained in 25 CFR 170 and adopts this document as their current (2014) Long Range Transportation Plan; and

BE IT FURTHER RESOLVED that the Tribal Council of the Colorado River Indian Tribes hereby authorizes the BIA — Western Regional Office, Division of Transportation, to take the necessary action to implement projects based on the Tribe's current road construction and maintenance priorities.

BE IT FINALLY RESOLVED that the Tribal Council Chairman and Secretary or their designated representatives, are authorized to execute any and all documents necessary to implement this action.

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1. Introduction

1.1 STUDY PURPOSE

This study will prepare an updated Tribal Long Range Transportation Plan (LRTP) and a strategic plan for improvements over five-, 10-, and 20-year periods, incorporating both roadway and multimodal needs. Some key focus areas of the LRTP are road maintenance and safety programs, as well as improvement plans for bicycle, pedestrian, and transit systems. The LRTP also identifies updates to the Tribal Transportation Inventory and functional classification systems will assist in expanding the level and types of funding available for transportation projects.

1.2 STUDY OBJECTIVES

The objective of this study is the development of a Strategic LRTP with strong road maintenance, safety, transit, multimodal, and corridor operations elements resulting in a program of transportation projects for five-, 10-, and 20-year planning horizons.

1.3 STUDY AREA

The Colorado River Indian Tribes (CRIT) Reservation spans the Colorado River and has land in Arizona (La Paz County) and California (San Bernardino and Riverside Counties). It includes almost 300,000 acres of land.

The CRIT Reservation was established March 3, 1865 for the “Indians of said river and its tributaries.” The Indigenous people were the agricultural Mohaves and the Chemehuevis. In 1945, a portion of the reservation was reserved for colonization by Indians of other tribes, specifically the Hopis and Navajos.



Entry Monument at the Tribal Headquarters of the Colorado River Indian Tribes

The Reservation area is shown in **Figure 1 – Study Area Map**. It should be noted that although I-10 and other state routes are within the reservation area, the focus of the study is on tribal and Bureau of Indian Affairs (BIA) routes.

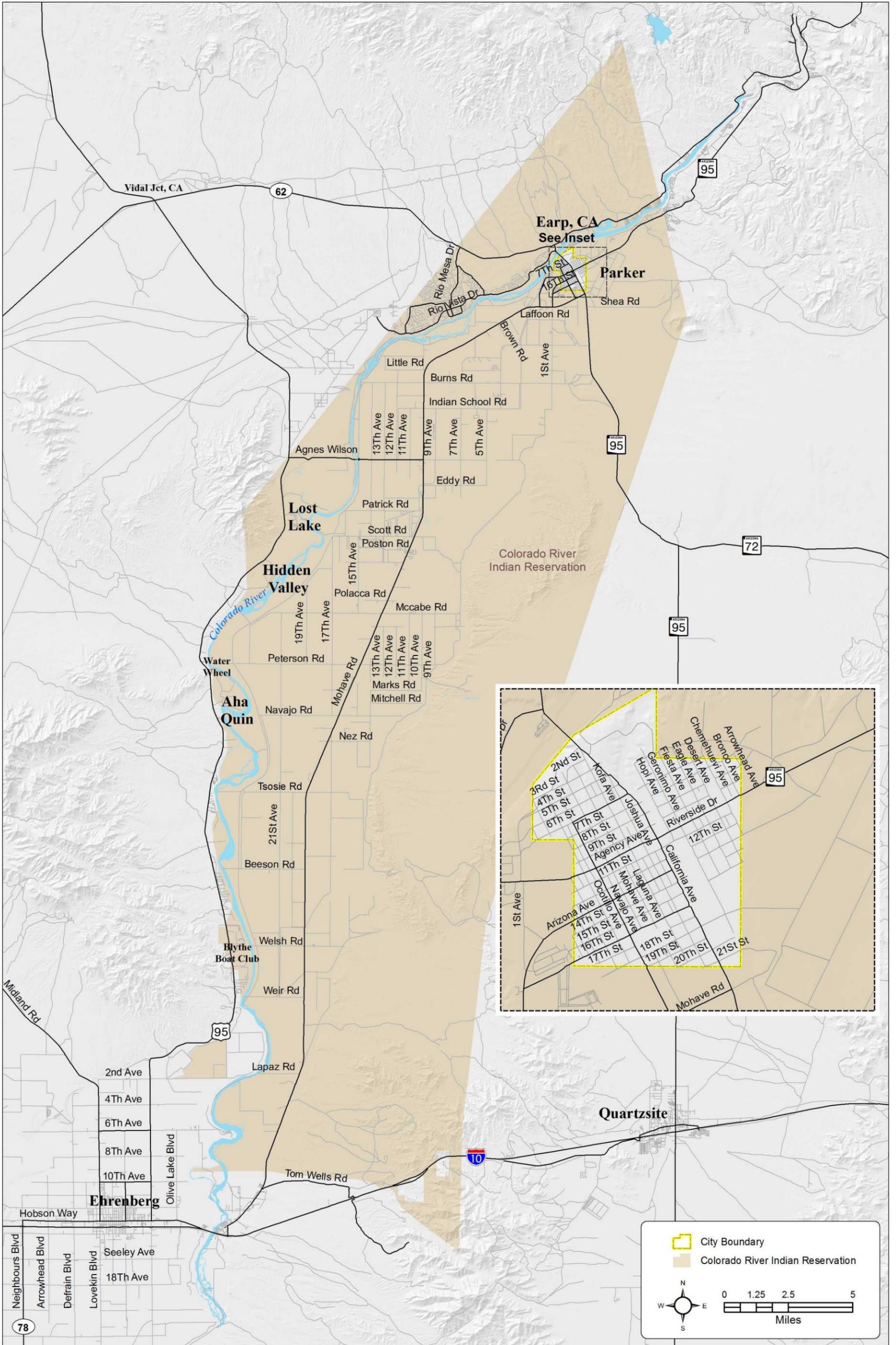


Figure 1 – Study Area Map

1.4 PROJECT MANAGEMENT TEAM AND TECHNICAL ADVISORY COMMITTEE

A core Project Management Team (PMT) provides project direction and input to the study. The PMT includes representatives of the Colorado River Indian Tribes, the Arizona Department of Transportation (ADOT) Multimodal Planning Division, ADOT Communications Office, and Kimley-Horn staff. Meetings are held once monthly. Meeting topics include reviewing and discussing progress, findings, and recommendations of the study. Meeting summaries are provided on the project website www.azdot.gov/critpara

In addition to the PMT, a broader-based Technical Advisory Committee (TAC) was established. The role of the TAC is to provide input on technical issues related to the study and to review and comment on study deliverables. Meeting summaries for TAC meetings are also provided on the project website above. TAC membership is shown in the text box at right.

1.5 STAKEHOLDERS

Stakeholders identified during the course of the study include representatives from the police and fire departments, school district transportation staff, and others. Because of their knowledge of transportation needs and the road system, stakeholders provide a unique perspective on transportation needs. Input from stakeholders was obtained through informal discussions and through formal interview surveys.

Further information on the formal interviews/surveys is provided in **Section 3.3 - Summary of Stakeholder Interviews and Surveys.**

Technical Advisory Committee Representation

- **Colorado River Indian Tribes**
 - Tribal Council
 - Police Department
 - Planning Department
 - Head Start
 - Museum
 - Environmental Protection Office
 - Behavioral Health and Social Services
 - Health Services
- **Arizona Department of Transportation**
 - Multimodal Planning Division – Planning, Transit, Environmental, and Aeronautics
 - Yuma District
 - Communications
- **California Department of Transportation – District 8**
- **Town of Parker Public Works Department**
- **La Paz County**
 - Public Works Department
 - Transit
- **Parker Unified School District**
- **Western Arizona Council of Governments**
- **Indian Health Service**
- **Bureau of Indian Affairs**
 - Colorado River Agency
 - Western Region
 - Irrigation District
- **Federal Highway Administration**

2. Project Area Description

This chapter provides information on land use, and demographic and socioeconomic characteristics of the Colorado River Indian Tribes (CRIT or Tribes) Reservation.

2.1 OVERVIEW

The CRIT Reservation is located in western Arizona at Parker, 189 miles from Phoenix. The Reservation spans the Colorado River and includes land in Arizona (La Paz County) and California (San Bernardino and Riverside counties). A brief overview of the history of the Reservation is provided below, as referenced and excerpted from the Tribes website (http://www.crit-nsn.gov/crit_contents/about/).

The CRIT Reservation was created in 1865 by the Federal Government for “Indians of the Colorado River and its tributaries,” originally for the Mohave and Chemehuevi, who had inhabited the area for centuries. People of the Hopi and Navajo Tribes were relocated to the reservation in later years.



The Colorado River is a central feature of the Reservation

The primary community in the CRIT Reservation is Parker, Arizona, which is located on a combination of Tribal land, leased land that is owned by CRIT and land owned by non-Native Americans. There are other, smaller communities on the reservation, including Poston, Earp, and Big River.¹

The Reservation is composed of approximately 297,089 acres and is the home of four Tribes: the Mohave, Chemehuevi, Hopi, and Navajo with a current Tribal enrollment of approximately 4,070 members.

The CRIT's economy is centered around agriculture, recreation, as well as government and light industry. The fertile river bottom lands and available water allows the production of agricultural and produce such as cotton, alfalfa, wheat, feed grains, lettuce, and melons. Approximately 84,500 acres are now under cultivation and another 50,000 acres are available for development. The Tribes have senior water rights to 717,000 acre feet of the Colorado River, which is almost one-third of the allotment for the state of Arizona.²

In recent years the Tribes have diversified to include a Tribal hardware store, shopping malls that include a Walmart, as well as sand and gravel operations and the Avi Suquilla Airport. Since opening the BlueWater Resort and Casino, emphasis has turned toward tourism and recreational activities on the river. CRIT is the largest employer in La Paz County, Arizona, directly and indirectly providing many jobs in the region.³

¹ http://www.crit-nsn.gov/crit_contents/about/, referenced 6/12/13.

² Source: InterTribal Council of Arizona, http://itcaonline.com/?page_id=1152, referenced 6/20/13.

³

2.2 CURRENT LAND USES

This section describes existing land uses within the Reservation area. Land uses are described in the following areas:

- Institutional and public service
- Agricultural
- Residential
- Commercial and industrial
- Recreational

An Activity Centers map (**Figure 2**) shows the location of many of the land uses mentioned in this section.

2.2.1 INSTITUTIONAL AND PUBLIC SERVICE

Tribal government offices are located primarily within the CRIT Tribal Headquarters, located on Mohave Road at 2nd Avenue. In addition to Tribal Council Chambers and administrative offices, this area also contains the CRIT Library (first tribally funded library in the U.S.), Tribal Court, Juvenile Detention Center, Irataba Hall (gymnasium), and Tribal Automotive Center.



CRIT Tribal Headquarters Complex

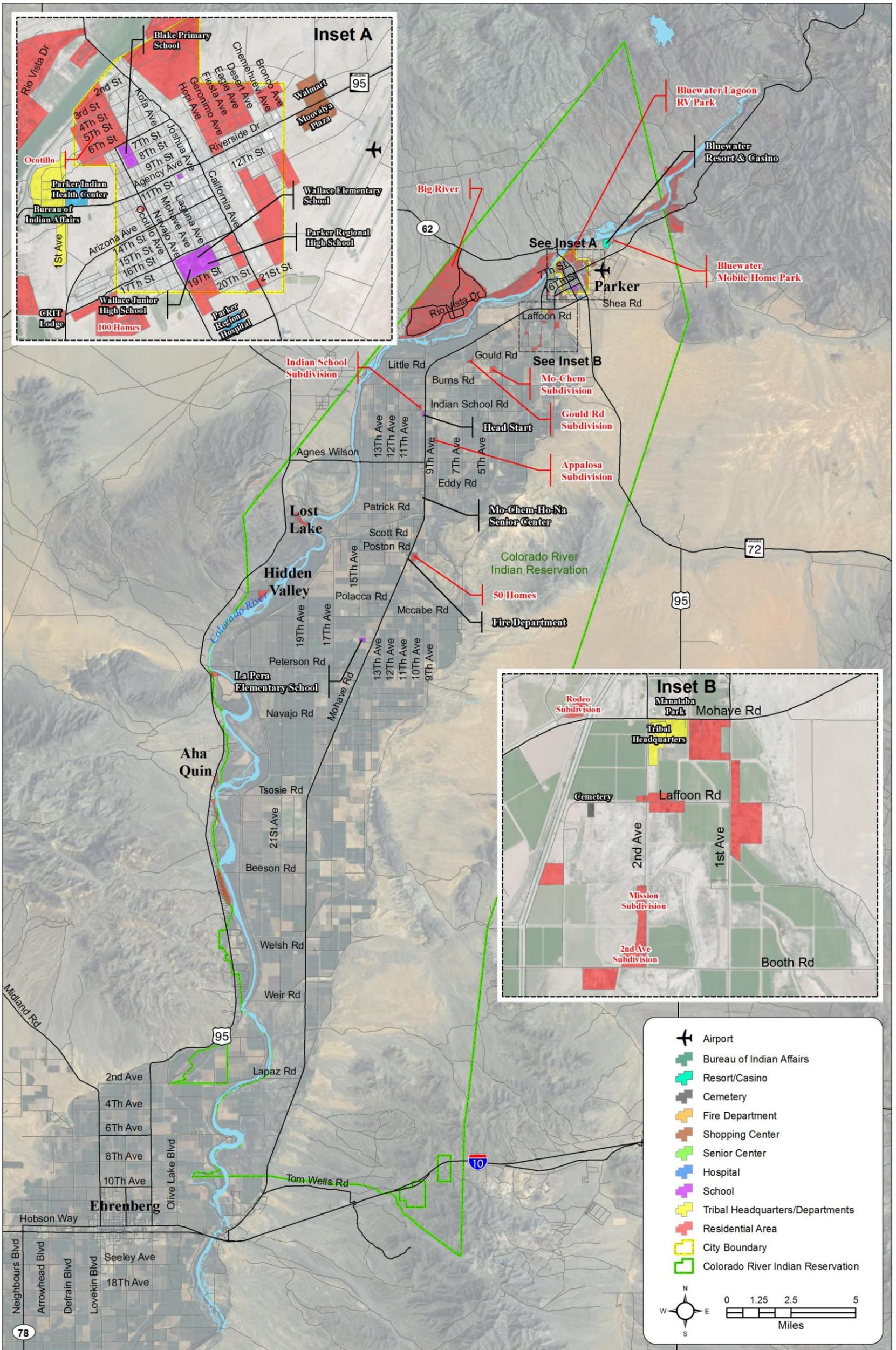


Figure 2 – Activity Centers

Tribal Offices and other Public Services near the 1st Avenue / Agency Avenue Area

The area around First Avenue and Agency Avenue is a center of Tribal, medical and Bureau of Indian Affairs offices. Northeast of the intersection, there are a number of Tribal Departments and Offices, including the Education Department, Community Health Resources, the Diabetes Prevention Administration Offices, and Social Service and Child Protection. This area is shown below.



Tribal Offices/Public Services near 1st Avenue and Agency Road

Schools

Schools in the area include:

Name	Address
Parker High School	1600 South Kofa
Wallace Junior High School	1320 18th Street
La Pera Elementary School	19121 Tahbo Road
Blake Primary School	701 South Navajo
Wallace Elementary School	1201 16 th Street
Colorado River Indian Tribes Head Start	18026 Mohave Road

Hospitals and Health-Related Services

Hospitals and health-related services include:

Name	Address
Parker Indian Health Center	12033 West Agency Avenue
La Paz County Regional Health Center	1200 Mohave Road
Community Health	12201 B Roosevelt Street

Community Facilities

Community facilities include:

Name	Address
Colorado River Indian Tribes Museum	1007 Arizona Avenue
Colorado River Indian Tribes Library	26600 Mohave Road
Mo-Chem-Ho-Na Senior Center	21074 Mohave Road
Colorado River Indian Tribes Social Services	12302 Kennedy Drive

2.2.2 AGRICULTURAL

Most of the Reservation’s land is devoted to agricultural uses, primarily farming. The primary crops on the Reservation are hay, cotton, wheat, corn and feed grains.

2.2.3 RESIDENTIAL

Some of the key residential areas on the Reservation include:

- Mo-Chem Subdivision – This subdivision is located between Little Road and Burns Road
- 100 Homes Subdivision – This subdivision is located on 16th Street, south of Parker
- 50 Homes Subdivision – This subdivision is located off Mohave Road in Poston, 20 miles south of Parker
- Gould Road Subdivision – Located on Gould Road, east of 8th Avenue
- Mission Subdivision – Located on 2nd Avenue, between Booth Road and Laffoon Road
- 2nd Avenue Subdivision – Located on 2nd Avenue, north of Booth Road
- Indian School Subdivision – Located on Indian School Road, west of Mohave Road
- Appaloosa Subdivision – Located on the west side of 9th Avenue, north of Agnes Wilson Road
- CRIT Lodge Housing for the Elderly – Located at 126th Street/Arizona Avenue
- 1st Avenue Subdivision – Located on 1st Avenue near Laffoon Road
- Date Farms Subdivision – Located east of 2nd Avenue on the south side of Date Farm Road
- Rodeo Subdivision – Located between Mojave Road and 3rd Avenue



Agricultural vehicles are a frequent sight on Mohave Road

There are also housing developments located along the Colorado River. The largest of these recreational-residential developments is the Big River Development, located west of Parker in California. In 2029, the leasing agreement for the Big River ends and the property will revert to the CRIT Reservation. Currently, these roads are maintained by San Bernardino County.

There are a number of residential/recreational vehicle (RV) resort areas that cater to seasonal visitors because of their close access to the Colorado River, which are located in California via US 95. These are:

- Aha Quin River Resort
- Water Wheel Resort
- Glades Hidden Valley
- Lost Lake Resort



2.2.4 COMMERCIAL AND INDUSTRIAL DEVELOPMENT

Commercial development is mainly concentrated in the Town of Parker. Commercial development consists of a variety of small retail businesses, motels, service stations, automobile dealerships, hardware and building supply stores, real estate offices, and restaurants. Major commercial developments include:

- Moovalya Plaza on SR 95 at Airport Drive includes a supermarket, pharmacy, fast food restaurants, and other commercial businesses.
- A Walmart Supercenter is located opposite the Moovalya Plaza, on the north side of SR 95.
- BlueWater Resort and Casino, located just east of the Walmart site, on the Colorado River, is the Tribes' 20,000-square-foot gaming facility which includes a restaurant, movie theater, 200-room hotel, Riverfront Cantina, amphitheater, and marina.
- Several agriculture-related commercial enterprises are located along Mohave Road south of Parker, near Poston. A larger enterprise is CRIT Farms, located near the intersection of 15th Avenue and West McCabe Road. CRIT Farms was established in 1973 as the Tribal farming entity. It manages over 15,000 acres of alfalfa, cotton, durum wheat, and many other crops.⁴ Woody's II Convenience Market is also located at the Intersection of Mohave Road and Poston Road.
- Colorado River Building Materials is a tribally owned enterprise in Parker that provides hardware and building needs.
- The "Parker Strip" located between the town of Parker and Parker Dam includes mostly recreational and tourism related development.
- CRIT Sand and Gravel – CRIT operates a sand and gravel operation near the Colorado River.



⁴ http://www.crit-nsn.gov/crit_contents/business/, referenced 7/28/13

- CRIT Utilities – Provides the people of CRIT with utility services, including waste disposal, water, and sewer service.

2.2.5 RECREATIONAL AND TOURISM

Tourism is one of the important economic drivers for the CRIT. Key tourism and recreational destinations include:

The Colorado River is the Reservation’s greatest recreational and most scenic attraction. Lake Moovalya and Lake Havasu are formed behind Headgate and Parker Dams. Facilities for swimmers, boaters and water skiers may be found along the 90 miles of shoreline.

The Ahakhav Preserve is located near the Tribal Administration Complex on Rodeo Drive, off Mohave Road. The Preserve consists of about 250 acres of aquatic habitat, a landscaped picnic area, and a spur trail planted with native mesquite, cottonwood, and willow. The picnic area is equipped with barbeque grills and picnic tables. The Preserve is great for environmental and nature study programs for youth and adults, wildlife observations, canoeing, hiking, swimming, and camping.

Manataba Park is located near the intersection of Mohave Road and 2nd Avenue. It includes softball and baseball facilities, playground, and a fairground.

The BlueWater Resort and Casino opened in June 1999. It is located at 11300 Resort Drive, accessible via SR 95 at BlueWater Drive. In addition to casino play, there are two restaurants and a 200-room hotel, as well as an indoor water park. Live entertainment is provided at the outdoor amphitheater. The facility has a 164-slip private marina. Miniature golf is available along with an exercise center and various retail shops. The resort and casino also feature a Conference Center. A four-screen theater is also located at the resort.

Blythe Intaglios – The Blythe Intaglios are a group of gigantic earth figures found on the ground just west of Highway 95 near the Colorado River, approximately 15 miles north of Blythe, California. They were created by scraping away layers of darker rocks or pebbles to reveal a stratum of lighter soil. They are visible from the air, and the age of the figures is unknown. They are on the National Register of Historic Places.



Source: Bureau of Land Management

Blythe Intaglios

CRIT Museum – The CRIT Museum provides a comprehensive history of the CRIT and focuses on tribal heritage and traditions.

Poston Monument – This Memorial Monument located on Mohave Road marks the site of the Poston War Relocation Center where 17,867 persons of Japanese ancestry, the majority of whom were United States citizens, were interned during World War II from May 1942 to November 1945.

2.3 FUTURE LAND USE

Based on discussions with the Tribal Planner, future land use developments are planned as described in **Table 1**.

Table 1 – Planned Developments

Development Name/Type	Location	Type of Planned Development	Time frame		
			Short Term (0- 5 Years)	Mid-Term (5-10 years)	Long-Term (20 Years or more)
Western Boundary Master Plan	Primarily south of Agnes Wilson Road, between the Colorado River and US 95 in California	To be determined			X
Proposed fuel station	Airport Road / SR 95 - northeast corner	Gas station/convenience store	X		
Proposed fuel station	BlueWater Drive / SR 95	Gas station/convenience store	X		
Proposed fuel station	SR 95/Shea Rd –NW corner	Gas station/convenience store	X		
Shea Road residential and commercial development	North and south of Shea Road	Residential and commercial development			X
BlueWater Resort Area Development Plan	East and west of BlueWater Casino and Resort	18-hole golf course, 500 homesites, townhomes, deli restaurant, and park			X
Medical office development	South of Indian Health Center, south of Agency Road and east of 1 st Avenue	Medical offices		X	
Airport commercial development	Avi Suquilla Airport	To be determined - based on final Airport Master Plan Update	X	X	X
New Head Start school	Northwest corner of Mohave Road and Navajo Avenue - south of Parker High School	Relocated from current location on Mohave Road near Indian School Road		X	
Planned housing	South of Desert Sun subdivision- north of Mohave Road and east of 1st Avenue	Residential- 23-lot subdivision (CRIT Villas)		X	
Fire station	West side of 1 st Avenue, north of CRIT Lodge	New fire station	X		
Future residential development	South of Mohave Road, on both sides of SR95	Residential - number of parcels undetermined			X
Future residential development	Adjacent to La Paz Regional Hospital on Mohave Road	Residential - number of parcels undetermined		X	

2.4 DEMOGRAPHICS AND SOCIOECONOMIC DATA

2.4.1 POPULATION AND GROWTH

The 2010 population for the CRIT Reservation was 8,764 persons. Population growth showed a small decline between 2000 and 2010, at a rate of approximately -0.49% per year. La Paz County showed relatively flat growth, growing approximately 0.39% per year. The state as a whole grew approximately 2.2 percent per year between 2000 and 2010. These data are shown in **Table 2**.

Table 2 – Population Data

Year	CRIT Reservation (Arizona and California)	La Paz County, Arizona	State of Arizona
2000	9,201	19,715	5,130,632
2010	8764	20,489	6,392,017
Average Annual Growth Rate	-0.49%	0.39%	2.22%

Source: 2010 U.S. Census SF1 2000 and 2010

The Tribes have an enrolled membership of 4,070 members⁵ Tribal enrollment population is generally higher than reservation population, indicating that some tribal members live off their tribe’s reservation.

2.4.2 TITLE VI AND ENVIRONMENTAL JUSTICE

Title VI of the Civil Rights Act of 1964 and related statutes ensure that individuals are not subjected to discrimination on the basis of race, color, national origin, age, sex, or disability. In February 1994, President Clinton signed Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The purpose of the order was to focus attention on the “environmental and human health conditions in minority communities and low income communities with the goal of achieving environmental justice.” The Order does not supersede existing laws or regulations; rather, it requires consideration and inclusion of these targeted populations as mandated in previous legislation including:

- Title VI of the Civil Rights Act of 1964;
- National Environmental Policy Act of 1969 (NEPA);
- Section 309 of the Clean Air Act; and
- Freedom of Information Act.

The U.S. Department of Transportation issued its final order to implement the provisions of Executive Order 12898 on April 15, 1997. This final order requires that information be obtained concerning the race, color, or national origin, and income level of populations served or affected by proposed programs, policies, and activities. It further requires that steps be taken to avoid disproportionately high and

⁵ Source: <http://www.crit-nsn.gov/critenrollment/>

adverse impacts on these populations. One of the first steps in ensuring environmental justice is the identification of those populations specifically targeted by the Order—minority and low-income populations. According to the 2010 Census, the racial composition of CRIT is predominantly white (38%), Hispanic or Latino (35%), and American Indian (24%), as shown in **Table 3**.

Table 3 – Racial Demographic Percentages

Race Category	Colorado River Indian Tribes		La Paz County	
	Number	Percent	Number	Percent
Total Population	8,764	100%	20,489	100%
White	3,298	38%	12,854	63%
Minority Populations				
Black or African American	62	1%	115	1%
American Indian or Alaska Native	2,070	24%	2,201	11%
Asian	33	0.38%	90	0.44%
Native Hawaiian and Other Pacific Islander	3	0.03%	5	0.02%
Some Other Race	1	0.01%	11	0.05%
Two or More Races	265	3%	407	2%
Hispanic population (of any race)	3,032	35%	4,806	23%

Source: 2010 Census Summary File 1, Hispanic or Latino, and Not Hispanic or Latino by Race (P9), Colorado River Indian Reservation, AZ-CA

Table 4 – Disadvantaged Populations

Area	Total Population	Total Minority Population (from Table 2)		Age 60 and Older		Total Households	Female Householder	
		Number	Percent	Number	Percent		Number	Percent
Colorado River Indian Tribe	8,764	5,466	62%	2,022	23%	3,207	1,388	43%
La Paz County	20,489	7,635	37%	8,516	42%	9,198	3,135	34%

Source: Source: 2010 Census Summary File 1, Hispanic or Latino, and Not Hispanic or Latino by Race (P9), Colorado River Indian Reservation, AZ-CA

As **Table 3 and Table 4** indicate, the Title VI populations present in the CRIT are comparable to those in La Paz County, with the exception of minority populations. The percent of total minority population is nearly double that found in La Paz County. The CRIT 2014 Strategic Long Range Transportation Plan is a long-range multimodal planning study that addresses the transportation needs in the study area for the near-term, mid-term, and long-term transportation planning horizons. The recommended

improvements are expected to improve the overall transportation system of the study area and benefit the study area as a whole. More detailed analysis will be needed for individual design projects that are federally-funded to ensure that there are no disproportionately high and adverse impacts to disadvantaged populations. More information on the transportation plan recommendations and their implications on Title VI and Environmental Justice are provided in **Chapter 10**.

2.5 CURRENT ENVIRONMENTAL CONDITIONS

2.5.1 INTRODUCTION

This section provides a brief overview of environmental conditions in the study area.

Environmental conditions should be considered in the development of transportation alternatives.

2.5.2 TOPOGRAPHY AND SOILS

The study area lies in the Basin and Range Province along the Colorado River between approximately 260 feet to 2,400 feet above mean sea level. Despite this range of elevations, the area can generally be described as flat with small mountain ranges near the periphery. The Colorado River generally delineates the western boundary of the study area providing approximately 90 miles of shoreline.

2.5.3 VISUAL RESOURCES

There is a strong need to maintain and / or enhance the visual beauty of the valley, which enhances the river recreation, tourism, and other outdoor recreation which is a significant staple of the economy of the area. The Colorado River is located in a visually beautiful area (viewshed) that attracts tourism and should be protected. The evening view shed is an important consideration here because the ambient light is low and tourists, hunter, campers and others have the opportunity to view the stars and the night skies. The visual setting of the study area is dominated by the Colorado River, and depending on the specific location, views include the Town of Parker, community of Poston, agricultural fields, undeveloped flat to rolling terrain, and small mountain ranges.

Background views are dominated by distant mountain ranges. These include 'Avii Kur'utat (Whipple Mountain), 'Avii Vatay (Riverside Mountain), 'Avii 'A 'iis (Screwbean Mountain), and 'Avii Suukwily (Black Mountain).

2.5.4 AIR QUALITY

The federal Clean Air Act (CAA) requires that impacts to air quality be analyzed and addressed in the preparation of environmental documents for federally funded projects. Pursuant to the CAA, the Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six air pollutants:



- Carbon monoxide (CO);
- Lead (Pb);
- Nitrogen dioxide (NO₂);
- Ozone (O₃);
- Particulate matter (PM) for both PM₁₀ and PM_{2.5}; and
- Sulfur dioxide (SO₂).

The Arizona (La Paz County), the Colorado River Indian Reservation is designated as non-classified. In California, San Bernardino County is listed as a Moderate Non-attainment Area for PM-10 and Riverside County is listed as Serious Non-attainment Area per United States Environmental Protection Agency (USEPA) mapping dated 7/13/2013. It should be noted that at the south end of the Reservation, I-10 is a significant contributor to air pollution, especially during the summer months when the prevailing wind is from the south.

Construction of transportation projects could result in temporary negative air quality impacts due to construction-related traffic delays and from construction vehicles. However, this would be a localized condition that would cease when construction is complete.

2.5.5 NOISE IMPACTS

For federally funded projects, a qualitative or quantitative noise analysis would need to be conducted for the proposed transportation improvements to determine the nature and extent of noise impacts.

2.5.6 WATER QUALITY

Sections 404 and 401 of the Clean Water Act

The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredge and/or fill material into waters of the U.S. (Waters) under Section 404 of the Clean Water Act (CWA) (33 U.S.C. §1251 et seq. (1972)). Any activity that will discharge dredge or fill material into jurisdictional waters, including wetlands, will require a CWA Section 404 Permit [Nationwide Permit (NWP), Individual Permit (IP), etc.]. These activities include, but are not limited to, the installation of riprap, channel maintenance activities, bank protection, new bridges or extensions of bridges, corrugated metal pipes, and box culverts.

A preliminary desktop evaluation for the presence of potential jurisdictional Waters was conducted in the study area through a review of U.S. Geological Survey topographical maps. The following named rivers/washes/channels are included in the project area: Bouse Wash, Colorado River, Goodman Slough, Goodman Wash, Kaiser Wash, La Paz Wash, Main Canal, Main Drain, Osborne Wash, Seventy Wash, Twelvemile Slough, and Tyson Wash. Numerous unnamed features are also located within the project area and could potentially be considered Waters.

An evaluation to determine boundaries of Waters should be conducted during the design phase of the project through a Preliminary Jurisdictional Determination (PJD) or an Approved Jurisdictional Determination (AJD) to aid in avoiding and minimizing impacts to the regulated areas. A PJD is a non-binding delineation that is typically pursued in the planning and design phases of a project. An AJD is a delineation that is binding for five years that requires more data and processing time through the Corps. After the delineation is complete, the project should be designed to avoid and minimize impacts to Waters. If there are unavoidable impacts to Waters, a Section 404 permit will then be required along

with compensatory mitigation activities for the proposed impacts to Waters. Water quality certifications under Section 401 of the Clean Water Act would be required from the Environmental Protection Agency.

National Pollutant Discharge Elimination System/Stormwater Pollution Prevention Plan

The National Pollutant Discharge Elimination System (NPDES) is a national permit program under Section 402 of the CWA that regulates discharges of pollutants from point sources into Waters, including sediment and pollutants that can be generated during ground-disturbing activities and transported by stormwater runoff. NPDES permitting on the Colorado River Indian Reservation is conducted through USEPA Region 9.

Floodplains

Federal Emergency Management Agency (FEMA)-issued maps are available for the study area. Approximately 36% of the study area has been designated “Zone D.” FEMA defines Zone D as “areas with possible but undetermined flood hazards” where no flood hazard analysis has been conducted. Approximately 50% of the study area has been designated “Zone X.” FEMA defines Zone X as an “area of minimal flood hazard” and is usually considered to be above the 500-year flood level. The remaining approximate 14% of the study area has been designated either “Zone A” or “Zone AE.” Both zones are considered to be within the 100-year floodplain. Base flood elevations have been determined for Zone AE. The 100-year floodplain occurs mainly along the Colorado River and encompasses some tributaries where a flood hazard analysis has been conducted in the southern portion of the study area.

2.5.7 BIOLOGICAL RESOURCES

Biological Community

According to the Biotic Communities, Southwestern United States and Northwestern Mexico, the project area is within the Lower Colorado River subdivision of the Sonoran Desertscrub biotic community. This is the largest and most arid subdivision of the Sonoran Desert, and is dominated by two series—creosotebush-white bursage series and saltbush series. Characteristic plants include creosote (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), saltbush (*Atriplex canescens*), and vegetation along washes including blue paloverde (*Parkinsonia florida*), ironwood (*Olneya tesota*), velvet mesquite (*Prosopis velutina*), and catclaw acacia (*Acacia greggii*). Also commonly found in the subdivision are several types of cholla and other cacti. Riparian vegetation associated with this area of the Colorado River typically includes cottonwood (*Populus fremontii*), willow (*Salix gooddingii*), honey mesquite (*Prosopis glandulosa*), screwbean mesquite (*Prosopis pubescens*), salt cedar (*Tamarix* sp.), and marsh species.

Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) threatened, endangered, proposed, and candidate species list for La Paz County, Arizona (dated February 5, 2013) was reviewed by a qualified biologist to determine species that may occur in the project vicinity based on readily available information. Species and habitat requirements are summarized in **Appendix A, under separate cover**.

Riparian and Aquatic Habitat

Riparian and aquatic habitats are sensitive to the extent that they provide habitat variety of species. Riparian and aquatic habitats are associated with the Colorado River within the study area; therefore, impacts to these biological resources should be avoided and/or minimized to the extent practicable.

National Parks, Recreation Areas, Wilderness Areas, and Other Special Status Lands

Poston Elementary School, Unit 1, Japanese Relocation Center was named a National Historic Landmark (NHL) on October 16, 2012. NHLs are properties recognized by the Secretary of the Interior as possessing extraordinary national significance. The Ahakhav Tribal Preserve was established in 1995 by CRIT to protect fish, wildlife, and plants along the river. The 18,790-acre Gibraltar Mountain Wilderness is about 10 miles northeast of Parker, Arizona, in La Paz County.

Section 4(f) Properties (parks, recreation areas, refuges)

Section 4(f) of the U.S. Department of Transportation Act of 1966 states that the Federal Highway Administration (FHWA) "...may approve a transportation program or project...requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if...there is no prudent and feasible alternative to using that land; and...the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use" (49 U.S.C. 303[c]).

Because CRIT may use federal transportation funds for future transportation improvements, the presence of Section 4(f) resources were evaluated. Recreational properties include:

- Manataba Park
- Ahakhav Preserve
- Poston Monument
- La Pera Elementary School recreation fields

2.5.8 CULTURAL RESOURCES

Cultural resources reflect the heritage of local communities, states, and nations. As transportation projects are developed care must be taken to assure that cultural resources on Tribal lands are protected. Legal requirements from the Native American Graves Protection and Repatriation Act (NAGPRA), Archaeological Resources Protection Act (ARPA), and the National Historic Preservation Act (NHPA) must be adhered to and the appropriate consultation process used. The Colorado River Indian Tribes Museum should be consulted and has more information about the cultural resources and history of the Mohave, Chemehuevi, Hopi, and Navajo Tribes.

3. Transportation and Roadway Assessment

This chapter presents data on current and future transportation conditions to identify needs of the transportation system.

3.1 SUMMARY OF COMPLETED PLANS AND STUDIES

Several plans and studies that address transportation issues were reviewed as part of this study. The documents are listed in **Table 5**.

Table 5 – Related Studies and Plans

<u>Report Name</u>	<u>Author</u>	<u>Date</u>
ADOT 2014-2018 Five-Year Transportation Facilities Construction Program	Arizona Department of Transportation	June, 2013
Arizona State Rail Plan	Arizona Department of Transportation	2010
Arizona Strategic Highway Safety Plan	Arizona Department of Transportation	2007
Avi Suquilla Airport Master Plan Update	Morrison-Maierle, Inc.	2013
Building a Foundation for Motor Vehicle Crash Injury Reduction on the Colorado River Indian Tribes Reservation	Lt. Sarah-Jean Snyder, Environmental Health Officer, Colorado River Service Unit, Indian Health Service	May, 2010
Colorado River Indian Tribes Road Safety Assessment	Arizona Department of Transportation	April, 2013
Demographic Analysis of the Colorado River Indian Tribes Using 2010 Census and 2010 American Community Survey Estimates	Arizona Rural Policy Institute Center for Business Outreach, W.A. Franke College of Business, Northern Arizona University	Undated
Draft Transportation Plan for the Colorado River Indian Tribes	THK Associates	June 3, 2008
Multimodal Freight Analysis Study	unknown	Undated
Route Concept Report – State Route 62	California Department of Transportation – District 8	January 2002
Route Concept Report – US Route 95	California Department of Transportation – District 8	November 1999
Planning Grant Application for Public Transit on Indian Reservations Program- 2012 Tribal Transportation Grant Program	Colorado River Indian Tribes	October 2012
Tribal Summit Progress Report for the Arizona Tribal Nations and Governor Napolitano	State of Arizona	March 13, 2008
La Paz County Transportation Planning Study	Lima and Associates	2010
Arizona State Airport System Plan	Arizona Department of Transportation	2008
ADOT Long Range Transportation Plan	Arizona Department of Transportation	2011
ADOT Bicycle and Pedestrian Plan	Arizona Department of Transportation	2013

3.2 PLANNED AND PROGRAMMED TRANSPORTATION PROJECTS

Planned and programmed projects on the CRIT Reservation and in the neighboring areas are:

Western Arizona Council of Governments Transportation Improvement Program (TIP)

The Western Arizona Council of Governments (WACOG) Transportation Program includes the development of a Four-Year Local Transportation Improvement Program (TIP), which allocates federal funds for local street and road projects. The TIP is updated with amendments several times a year, and a new TIP is developed annually for the following year. The WACOG region is apportioned approximately \$1.3 million of federal Surface Transportation funds to help La Paz and Mohave counties, and their communities with local roadway projects. WACOG is also apportioned \$600,000 in Highway Safety Improvement Program (HSIP) funds annually.

Projects on the TIP must be fiscally constrained to the apportionment or allocation of funding, such as Surface Transportation Program (STP) and HSIP funds. All other TIP project funds are grant funded, and therefore constrained by the grant award. The 2013-2017 Draft TIP includes the projects shown in **Table 6**.

CRIT Tribal Transportation Improvement Program

Projects listed on the Tribal Transportation Improvement Program are summarized on **Table 7** on the next page. Key projects including improvement projects on 1st Avenue, Indian School Road, 9th Avenue, 11th Avenue and Burns Road. The Tribal TIP is also planned to include a bridge replacement project on Bridge H008 over the Tyson Wash, once funding has been confirmed.

Table 6 – WACOG 2013 – 2017 Transportation Improvement Program

Project Sponsor	Project Name	Project Location	Length	Type of Work	Functional classification	Funding	Federal Funds	Local Match	Total Cost
Town of Parker	West California Avenue SUP	Colorado River to 2nd Street	1,600 Feet	Design	Rural Major Collector	Transportation Enhancement – Round 16	\$22,572	\$1,364	\$23,936
Town of Parker	West California Avenue SUP	Colorado River to 2nd Street	1,600 Feet	Construction	Rural Major Collector	Transportation Enhancement – Round 16	\$242,934	\$14,684	\$257,618
Town of Parker	Sign Replacement and Striping	Town Wide				HSIP funding-obligated in 2010	\$25,000		\$25,000

Source: WACOG, WACOG TIP and Amendments (referenced 2013-2017 TIP Amendment 5 Draft

Table 7 – Tribal Transportation Improvement Program Projects

			Cost (\$)					
	Location	Description	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total Cost
CRIR 10(1) Phase 2 Burns Road	Route 10, section 80, MP 8.4-9.3	New construction - Grade, drain, and pave 1.1 miles of new road to extend Route 10 to SR 95 and construct turn lanes at SR 95.	0	85,000		0	0	85,000
CRIR 3(4) 1st Avenue	Route 3, sections 20 and 30, milepost 1-4.6	Reconstruct four miles of Route 3 (1 st Avenue) from Route 10 (Burns Road) to Route 41(Arizona Avenue). Include curb and gutter and sidewalks. Project includes 0.5 miles of	883,787	551,117	941,696	941,696	0	3,318,296

			Cost (\$)					
	Location	Description	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total Cost
		turn lane at the intersection of 1 st Avenue/Mohave Road.						
CRIR 14(1) Indian School Road	Route 14, section 20, milepost 0.5-1.0	Develop plans, specifications and estimates to reconstruct 0.5 miles of deteriorated paved road on Indian School Road from 11 th Avenue to Mohave Road. Project to be combined with project CRIR 15 (1) and constructed as CRIR Consolidated No 28.	0	33,089	0	0	0	33,089
CRIR 213 (1) 9 th Avenue*	Route 213, section 10 and 20, milepost 0-3.4	Reconstruct Route 213 from IR 1 (Mohave Road) to IR 14 (Indian School Road)	0	190,400	0	0	0	190,400
CRIR 15(1) 11 th Avenue	Route 15, section 65, milepost 8.2 to 10.2	Develop plans, specifications and estimates to reconstruct 2.0 miles of deteriorated paved road on 11 th Avenue from Route 18 (Agnes Wilson Road) to Route 15 (Indian School Road). Project to be combined with project CRIR 14 (1) and constructed as CRIR Consolidated No 28.	57,909	82,090	0	0	0	139,999

Source: Indian Reservation Roads Program, CSTIP Report, August 23, 2013

- Note- This project is pending a \$1.3M addition to the budget for this project.

ADOT 2014-2018 Five-Year Transportation Facilities Construction Program

The following projects, shown in **Table 8**, are listed in the *ADOT 2014-2018 Five Year Transportation Facilities Construction Program*.

Table 8 – ADOT 2014-2018 Five-Year Transportation Facilities Construction Program Projects

Route	Project name	Project Location	Type of Work	Year(s) Programmed	Funding	Cost(\$M)
I-10	Ehrenberg Port of Entry	MP 3	Reconstruct port of entry and ITS improvements	FY 2014	NH	8.0
SR 95	SR 95 at Mohave Road	MP 142.90	Roundabout Construction	FY 2014	HSIP	1.5
SR 95	SR 95 at Cienega Springs Road	MP148	Install SB left turn lane	FY 2016	HSIP	1.8
Avi Suquilla Airport	Runways – Erosion Control	Airport	Runway improvements – erosion control, easterly drainage ditches	FY 2014	Federal and Tribal	0.43
Avi Suquilla Airport	Runways – Erosion Control	Airport	Runway improvements – erosion control, westerly drainage ditches	FY 2015	Federal and Tribal	0.45
Avi Suquilla Airport	Taxiways	Airport	Completion of parallel taxiway	FY 2015	Federal and Tribal	2.1
Avi Suquilla Airport	Expand apron capacity	Airport	Expand apron capacity	FY 2016	Federal and Tribal	3.15
Avi Suquilla Airport	Ground transportation	Airport	Pave perimeter road	FY 2017	Federal and Tribal	1.6
Avi Suquilla Airport	Rehabilitate apron	Airport	Pavement preservation – GA apron	FY 2017	Federal and Tribal	0.3
Avi Suquilla Airport	Taxiways	Airport	Extend taxiway	FY 2018	Federal and Tribal	0.64

Source: ADOT 2014-2018 Five Year Transportation Facilities Construction Program

Southern California Association of Governments Final Transportation Improvement Program, FY 2012/13 – 2017/18

The Southern California Association of Governments is a Metropolitan Planning Organization (MPO) encompassing six counties, six county transportation commissions, 190 cities, and the region’s Native American Tribes, assisting with regional transportation and land use planning.

There were no projects listed as part of the Final Transportation Improvement Program on SR 62 or US 95 in the vicinity of the CRIT Reservation.

San Bernardino Associated Governments (SANBAG) Measure I – 2010-2040 10-Year Delivery Plan

SANBAG published a 2010-2040 10-Year Delivery Plan, based on funding from a half-cent sales tax measure through 2040. The only project related to the study area was listed as SR 62 Rehabilitation, various locations in unincorporated areas in San Bernardino County. This is listed as a project that would be developed on a pay-as-you go basis. This means that the project would be implemented when funds are available.

Projects that were previously funded in the area include included:

- Improvements to Rio Mesa Drive, 2001-03 (\$89,931)
- Resurfacing of Parker Dam Road, 2006-07 (\$61,091)

3.3 SUMMARY OF STAKEHOLDER INTERVIEWS AND SURVEYS

Stakeholders from the community were interviewed to solicit their input and feedback on transportation needs, and to learn more about their area of expertise. Stakeholders included representatives from:

- Colorado River Indian Tribes Police Department
- Colorado River Indian Tribes Fire Department
- Colorado River Indian Tribes Education Department
- Colorado River Indian Tribes Housing Improvement Department
- Colorado River Indian Tribes Housing Department
- Head Start
- Mo-Chem-Ho-Na Senior Center
- Avi Suquilla Airport Manager
- Parker Unified School District Bus Barn Manager
- La Paz Transit
- Bureau of Indian Affairs Colorado River Agency Maintenance Department
- Tribal Council Members

CRIT Environmental Planning Office Staff also submitted survey forms, which were included in the development of transportation needs.

Transportation issues that were raised by stakeholders are summarized in **Table 9**.

Table 9 – Summary of Stakeholder Comments

Comment Category	Location or Comment Summary	From
Intersection traffic control needs	Agnes Wilson Rd/Mohave Road needs improved traffic control-people do not stop.	CRIT Fire Dept., Mo-Chem-Ho-Na Senior Center
	Burns Road/SR 95	
	Mohave Road/Poston Road needs a traffic signal. The clearance is too low for the flasher that is there now.	CRIT Fire Dept
Streets that need paving improvements	1st Avenue, between Mohave Road and south of Booth Road	Parker Unified School District
	4 th Avenue, between Nez Road and Navajo Road	Parker Unified School District
	5 th Avenue, between Agnes Wilson Road and Indian School Road	Head Start, Parker Unified School District, Mo-Chem-Ho-Na Senior Center
	6 th Avenue, between Indian School Road and Burns Road	CRIT Fire Dept., CRIT Senior Center, CRIT Police Dept.
	7 th Avenue, between Agnes Wilson Road and Indian School Road	CRIT Fire Dept., Head Start
	9 th Avenue, between Agnes Wilson Road and Indian School Road	CRIT Fire Dept., Head Start, Parker Unified School District, CRIT Senior Center, Police Department, BIA Maintenance
	11 th Avenue, between Agnes Wilson Road and Indian School Road	CRIT Fire Dept., Head Start, Parker Unified School District , BIA Maintenance
	11 th Avenue, between Peterson Road and McCabe Road	Head Start
	11 th Avenue, between Mark Road and Peterson Road	Parker Unified School District
	14th Avenue, Burns Road to Patrick Road	CRIT Housing Improvement Dept.
	14 th Avenue, between Nez Road and Navajo Road	Parker Unified School District,
	14 th Avenue, Burns Road to Patrick Road	CRIT Housing Improvement Dept.
	Indian School Road, between 11 th Avenue and Mohave Road	CRIT Fire Dept., Head Start , CRIT Police Dept. , BIA Maintenance
	Indian School Road, between Mohave Road and 4 th Avenue	Head Start, CRIT Police Dept., BIA Maintenance, CRIT Housing Improvement Dept.
	Agnes Wilson Rd, east of Mojave Rd	CRIT Housing Improvement Dept.
	Booth Road- east of First Avenue	CRIT Housing Improvement Dept.
	Burns Road, between 4 th Avenue and 1 st Avenue	CRIT Fire Dept.
Burns Road, between 10 th Avenue and 4 th Avenue	CRIT Housing Improvement Dept.	
Eddy Rd	CRIT Housing Improvement Dept.	
Welsh Road, between Levy Road and Mohave Road	CRIT Fire Dept.	

Comment Category	Location or Comment Summary	From
	Marks Road, between 14 th Avenue and 10 th Avenue	CRIT Senior Center
	Mohave Road, south Reservation boundary to Tyson Wash	CRIT Police Dept., BIA Maintenance
	Peterson Road, between Mohave Road and 10 th Avenue	Head Start, Parker Unified School District , BIA Maintenance
	Navajo Road, between Mohave Road and 4 th Avenue	Parker Unified School District, Mo-Chem-Ho-Na Senior Center,
	Nelson Rd	CRIT Housing Improvement Dept.
	Nez Road, Between Mohave Road and 14 th Avenue	Parker Unified School District
	McCabe Road, in the area of 15 th Avenue.	CRIT Police Dept., CRIT Housing Improvement Dept.
	Mitchell Road, 14th Avenue to approximately 10 th Avenue	CRIT Housing Improvement Dept.
	Poston Road	CRIT Fire Dept.
	Agnes Wilson Road	CRIT Fire Dept.
Streets that are too narrow	6 th Avenue, between Burns Road and Indian School Road.	CRIT Fire Dept.
	1 st Avenue, between Mohave Road and Burns Road.	CRIT Fire Dept.
Canal/bridge improvement needs	East end of Hopi Road- there have been two fatalities with persons running into the canal	CRIT Fire Dept.
	Burns Road – two canal crossings with no guard rails between 12 th Avenue and 14 th Avenue	Head Start
	Little Road – two canal crossings with no guardrails between	Head Start
	Agnes Wilson Road, east of Mohave Road- there is a bridge that is too narrow	Head Start
	Agnes Wilson Bridge gets lots of heavy truck traffic. There are stress cracks on the piers. The concrete is chipping out on the south side of the bridge. There is a need for a redesign of the lighting system on the bridge.	BIA Maintenance
Pedestrian needs	Path and pedestrian crossing needed on Indian School Road, between 11 th Avenue and 9 th Avenue.	Head Start
	Sidewalks to link the Reservation area to the sidewalk system in the Town of Parker, particularly to schools. Pedestrian crossings are also needed on Riverside Drive	CRIT Education Dept., CRIT Housing Dept.
	Sidewalks need between Mo-Chem to Tribal Headquarters, and from Tribal Offices to Indian Health Services and 100 Homes. Also, on 1st Avenue/Mohave, from offices to 100 Homes- 16th Street. Most densely populated areas are subdivisions of Mo-Chem, 50 Homes, and 100 Homes.	CRIT Police Dept.

Comment Category	Location or Comment Summary	From
Access	Head Start needs a turn lane into their facility.	Head Start
Emergency access	Head Start does not have emergency access- they are landlocked with canals, etc.	Head Start
Signage (General)	More signage is needed on secondary roads	CRIT Police Dept.
	Seat Belt Usage signs are planned to be ordered	CRIT Police Dept.
	More speed limit signs are needed on Mohave Road	CRIT Police Dept.
Speed control	Solar speed monitors are needed on Mohave Road, by Tribal Headquarters, near La Pera Elementary School, near Head Start	CRIT Police Dept. , Head Start
	Seat Belt Signs are needed on Mohave Road	CRIT Police Dept.
	There are too many speeders on Mohave Road	CRIT Police Dept., Tribal Council Members
Transit	Transit Service is needed on the Reservation	Head Start, Mo-Chem-Ho-Na Senior Center, Tribal Council members, CRIT Fire Dept.,
	Transit would be useful for people that work at the BlueWater Casino- from Poston to Parker is a 13-mile trip. Stop locations could be Poston, Peterson, Nez Roads.	CRIT Fire Dept.
	With respect to transit, they would use it to travel from Poston to Parker. If it directly served homes, they would use it. CHR is a good service, but they provide trips just to a doctor or the hospital.	CRIT Fire Dept.
	A gap in transportation services is the lack of transportation options to Phoenix, since there is no Greyhound service in Parker.	La Paz Transit
	He said if transit service was implemented the airport may be a user, especially if it ties into the casino.	Avi Suquilla Airport Manager
	Solar-powered bus shelters if transit is implemented.	Parker Unified School District Transportation
Airport needs	Key airport needs include: <ul style="list-style-type: none"> • No fire hydrants; • Parking lot floods and four buildings have mold damage and cannot be used; • Need for high speed internet; and • Improve the access road paving. • Need for a nine-passenger van to serve airport visitors 	Avi Suquilla Airport Manager

Comment Category	Location or Comment Summary	From
Street lighting needs	<ul style="list-style-type: none"> • Agnes Wilson Road • Burns Road • Patrick Road • Poston Road • McCabe Road • Peterson Road • Indian School Road 	BIA
Other needs	<p>Parking lot and access road paving needs:</p> <ul style="list-style-type: none"> • Paving the parking lot of the Mo-Chem-Ho-Na Senior Center. • Road to the BIA Electrical office that runs next to the Indian Hospital and their parking lot. • For all the businesses on 1st Avenue in town. • Tribal office parking lot and all the Tribal Headquarters parking lots. • Food distribution center road and parking lot. • Education Facility parking lot. • Social Services parking lot. • Poston Fire Station parking lot. • Ahakhav Preserve and their parking lot. 	<p>Tribal Planner , CRIT Fire Dept., Mo-Chem-Ho-Na Senior Center</p>
	Pullouts for school buses are needed.	Head Start, Senior Center, CRIT Fire Dept.
	Need for replacement vehicles for Head Start, Community Health Resources, and Fire Department	Head Start , CRIT Fire Dept., Community Health Resources Dept.
	Need for improved access at Head Start - they are landlocked.	Head Start
	Need for new vehicles as the existing vehicles age for the Senior Center.	Mo-Chem-Ho-Na Senior Center
	Need for additional Road Closed signs, cones, and traffic control devices	BIA Maintenance
	<p>Need for additional road maintenance equipment including:</p> <ul style="list-style-type: none"> • A small grinding machine (“zipper”) to recycle materials. • Milling machine to put down materials with oil • Striping machine 	BIA Maintenance
	On Mohave Rd, the curve north of Little Rd needs improvement.	CRIT Housing Improvement Dept.
	2nd Avenue, the curve area needs improved signing.	CRIT Housing Improvement Dept.
	The dirt road to Kudu Farms needs to be paved.	CRIT Housing Improvement Dept.

3.4 STREET INVENTORY – TRIBAL TRANSPORTATION INVENTORY

The Tribal Transportation Program (TTP) Program addresses transportation needs of tribes by providing funds for planning, designing, construction, and maintenance activities. The program is jointly administered by the FHWA's Federal Lands Highway Office and the BIA in accordance with an interagency agreement. Roads are placed on the Tribal Transportation Inventory in order to designate routes available for funds.

Tribal transportation facility – A public highway, road, bridge, trail, or transit system that is located on or provides access to tribal land and appears on the National Tribal Transportation Inventory

The Tribal Transportation Inventory or Road Inventory Field Data System (RIFDS) includes information such as route number, location, length, width, surface type and needs, pavement ratings, class of road, adequacy of design standard, construction needs, and maintenance needs.

3.5 FUNCTIONAL CLASSIFICATION

3.5.1 TRIBAL TRANSPORTATION INVENTORY FUNCTIONAL CLASSIFICATIONS

Functional classification is the grouping of highways, roads and streets by the character of the service they provide. One functional class differs from another according to the degree of access and mobility. Collector and local streets provide land access, carry local traffic to the neighborhoods, and distribute traffic to the arterials. Arterial streets provide mobility over long distances with minimal access to adjoining properties.

Functional classification is used in planning and design, and to allocate federal funding.

There are currently eight (8) BIA roadway functional classifications in the Tribal Transportation Program Inventory, which are summarized in **Table 10**. Presently, there is no direct correlation between BIA functional classifications and FHWA functional classifications, which are used to determine if a road is eligible for federal highway funding through other transportation agencies. As a result, one of the objectives of this study is to review current BIA functionally classified tribal roadways on the reservation to determine if there are BIA Class 2, 4 and 5 roadways that met the criteria to be assigned FHWA functional classifications, and added to the State's functional classification for FHWA approval. Tribal roads within the study area that have existing BIA Class 2, 4 and 5 designations are summarized in **Table 11** along with the classification description. A few of the tribal roads on the reservation have already been assigned FHWA functional classifications and are discussed in **Section 3.5.2**.

Table 10 - BIA Functional Classifications

Class	Description
1	Major arterial roads providing an integrated network with characteristics for serving traffic between large population centers, generally without stub connections and having average daily traffic volumes of 10 000 vehicles per day or more with more than two lanes of traffic
2	Rural minor arterial roads providing an integrated network having the characteristics for serving traffic between large population centers, generally without stub connections. May also link smaller towns and communities to major resort areas that attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement. Generally provide for at least inter-county or interstate service and are spaced at intervals consistent with population density. This class of road will have less than 10,000 vehicles per day.
3	Streets that are located within communities serving residential areas.
4	Rural major collector road is collector to rural local roads.
5	Rural local road that is either a section line and/or stub type roads, make connections within the grid of the IRR system. This class of road may serve areas around villages, into farming areas, to schools, tourist attractions, or various small enterprises. Also included are roads and motorized trails for administration of forests, grazing, mining, oil, recreation, or other use purposes.
6	City minor arterial streets that are located within communities, and serve as access to major arterials.
7	City collector streets that are located within communities and serve as collectors to the city local streets.
8	This class encompasses all non-road projects such as paths, trails, walkways, or other designated types of routes for public use by foot traffic, bicycles, trail bikes, snowmobiles, all-terrain vehicles, or other uses to provide for the general access of non-vehicular traffic.

Table 11 – Tribal Transportation Inventory BIA Road Classes

Class	Description	Study Area Roads with this Class in the Tribal Transportation Inventory
Class 2	Rural Minor Arterial roads providing an integrated network having the characteristics for serving traffic between large population centers, generally without stub connections. May also link smaller towns and communities to major resort areas that attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement. Generally provide for at least inter-county or inter-state service and are spaced at intervals consistent with population density. This class of road will have less than 10,000 vehicles per day.	Mohave Road
Class 4	Rural major collector road is collector to rural local roads.	1 st Avenue, Burns Road, Indian School Road, Agnes Wilson Road (US 95 to Mohave Road), Scott Road, Navajo Road, 4 th Avenue
Class 5	Rural local road that is either a section line and/or stub type road that makes connections within the grid of the IRR system. This class of road may serve areas around villages, into farming areas, to schools, tourist attractions, or various small enterprises. Also included are roads and motorized trails for administration of forests, grazing, mining, oil, recreation, or other use purposes.	The majority of tribal roads in the Inventory are classified as Class 5

3.5.2 FHWA FUNCTIONAL CLASSIFICATIONS

Data from functional classification maps approved by the FHWA is shown in **Figure 4**. Federally functionally classified roads are:

- Mohave Road – Rural Major Collector
- Agnes Wilson Road (BIA 18) – Rural Major Collector
- SR 95 – Rural Principal Other

An objective of the study is to update functional classification of roads.

It is the desire of the CRIT to update functional classification of roads and also to determine what roads can be added to the system of federally functionally classified routes.

Mohave Road is functionally classified as rural minor arterial road in the Tribal Transportation Inventory and is federally functionally classified as a rural major collector road by FHWA. Roads that could potentially meet the criteria for a functional classification upgrade are discussed in **Chapter 8**.

3.6 TRAFFIC VOLUMES AND LEVELS OF SERVICE

3.6.1 CURRENT TRAFFIC VOLUMES

Traffic volume information serves to indicate how close to capacity roadway segments or intersections may be. Available traffic volume data was reviewed from the Tribal Transportation Inventory and the project team worked with the Tribal Planner to identify road segments that required updated traffic counts. Traffic counts were collected in July 2013 and were used to update the Tribal Transportation Inventory and in support of functional classification change requests. **Table 12** summarizes traffic volume data on study area roads.

Traffic counts were conducted in July 2013 at 25 road segments and four intersection locations. For comparison purposes, previous traffic count volumes are also shown, where available. In a number of cases, interestingly, traffic volumes decreased between 2002 and 2013. The highest traffic volume available from the Wednesday, Thursday, and Saturday traffic counts are shown.

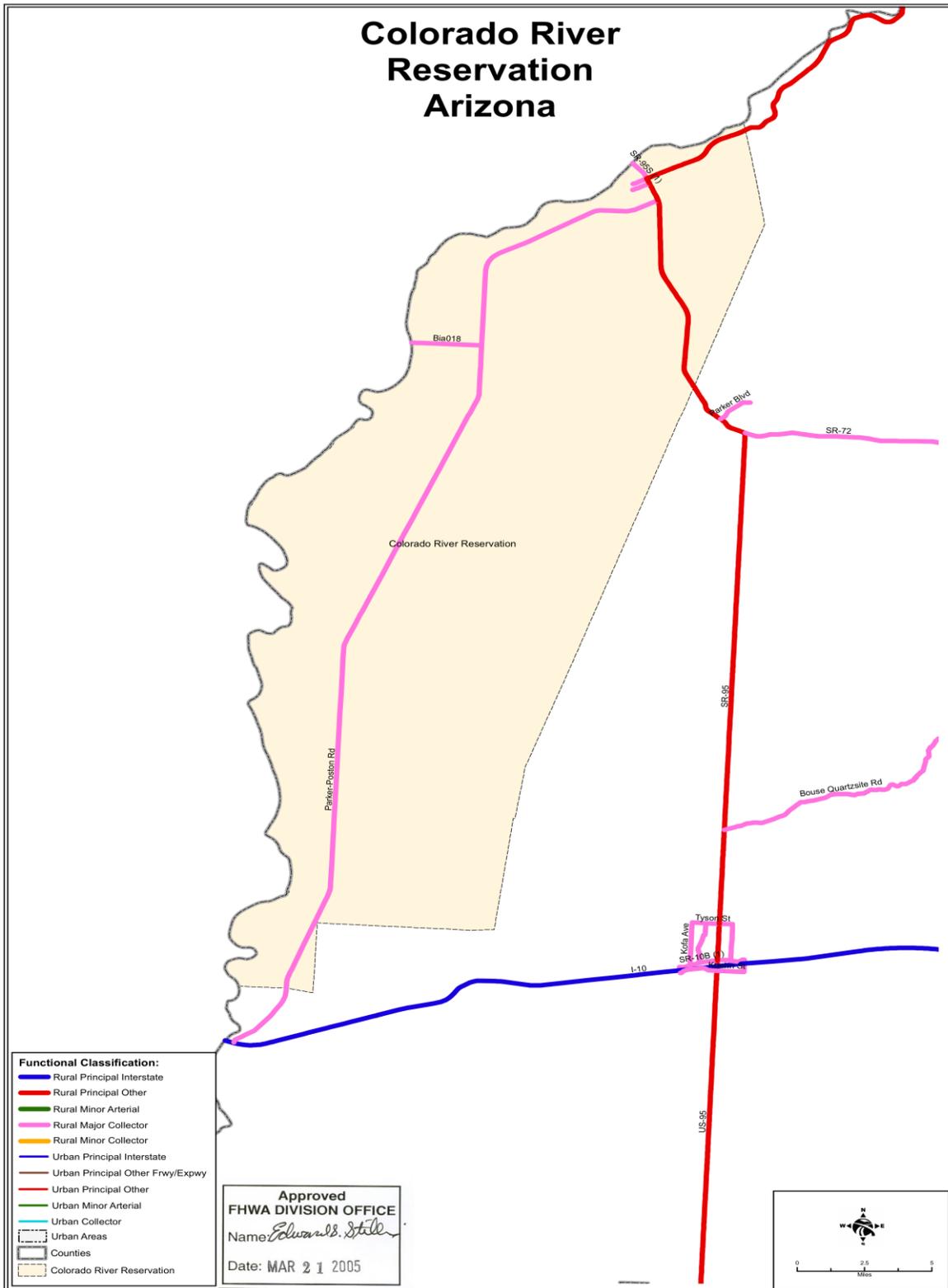
Current average daily traffic count data was obtained from ADOT and Caltrans on state routes in both Arizona and California. Traffic volumes on state routes are:

- California SR 62, at junction US 95 – 1,400 vehicles per day (2012)
- California SR 62, at Arizona State Line – 5,700 vehicles per day (2012)
- US 95, at junction SR 62 – 1,450 vehicles per day (2012)
- Arizona SR 95 at BlueWater Resort Road – 6,700 vehicles per day (2009)
- I-10, California State Line to Exit 1: Ehrenberg – Parker Highway – 25,000 vehicles per day (2009)

3.6.2 FUTURE TRAFFIC VOLUMES

Future traffic volumes for the five-, 10-, and 20-year planning periods were developed by reviewing compound annual growth rates from the following sources:

- Compound annual growth rates of the population of the CRIT from 2000 to 2010, using U.S. Census figures (-0.49%).
- Compound annual growth rates for La Paz County using population projections from the Arizona Department of Administration Office of Population Statistics (shown in **Table 13**).



Note: This figure does not reflect the current CRIT Reservation boundaries

Figure 3 – Federal Highway Administration Functional Classifications

Table 12 – Traffic Volumes on Tribal Roads

BIA Route Number	BIA IRR Section Number	Road Name	Average Annual Daily Traffic Volumes (AADT), vehicles per day				
			2002	2013	2018	2023	2033
1	70	Mohave Road, north of Navajo Road	2004	1330	1398	1469	1623
1	70	Mohave Road, west of 1 st Avenue	3898	3209	3373	3545	3916
2	10	Laffoon Road, west of 2 nd Avenue	----	148	155	163	180
2	10	Laffoon Road, east of 2 nd Avenue	----	141	148	156	172
5	20	2nd Ave, Gould Rd, Agency Rd (Agency Road, west of 1st Avenue)	2741	2548	2678	2814	3109
10	35	Burns Road, east of Mohave Road	356	177	186	195	215
10	30	Burns Road, west of Mohave Road	-----	409	430	452	499
11	45	7th Avenue, North of Agnes Wilson Road	99	125	132	138	153
14	30	Indian School Road, east of 9 th Avenue	292	147	154	162	179
18	30	Agnes Wilson, west of Mohave Road	459	553	581	611	675
18	40	Agnes Wilson, east of 9 th Avenue	248	120	126	132	146
20	10	Eddy Road, east of Mohave Road	160*	1129	1186	1247	1377
22	20	Patrick Road, west of Mohave Road	-----	154	162	170	188
24	40	Scott Road, west of 11 th Avenue	170	141	148	156	172
30	30	McCabe Road, west of 15 th Avenue	-----	323	340	357	394
34	70	Peterson Road, east of 10th Avenue	155*	60	63	66	73

Source: 2013 traffic counts, except where noted. Future traffic volumes based on calculations by Kimley-Horn and Associates

BIA Route Number	BIA IRR Section Number	Road Name	Average Annual Daily Traffic Volumes (AADT), vehicles per day				
			2002	2013	2018	2023	2033
38	45	Navajo Road, east of Mohave Road	91	114	120	126	140
40	20	Nez Road, east of Mohave Road	215	395	415	436	482
41	10	Arizona Avenue, east of 1st Avenue	1795	1431	1504	1580	1746
45	10	Airport Road, south of Riverside Drive	740	52	54	57	63
105	70	Blue Water Drive north of Riverside Drive	-----	3614	3799	3992	4410
113	20	10th Avenue, South of McCabe Road	-----	87	91	96	106
117	70	14th Avenue, south of Burns	117	137	144	151	167

* 2004 count

Table 13 – La Paz County Growth Projections

Year	La Paz County Population Projection	Compound Annual Growth Rate
2013	20,919	N/A
2018	21,387	0.44% (from 2013 to 2018)
2023	21,952	0.52% (from 2018 to 2023)
2033	22,886	0.42% (from 2023 to 2033)

Source: Arizona Department of Commerce La Paz County Population Projections: 2012 to 2050, Medium Series

Although the population growth in the area appears to be relatively flat, it appeared to be appropriate and conservative to use a compound annual growth rate of 1 percent per year, because there is growth in traffic from tourism, which varies throughout the year. This compound growth rate was applied to traffic volumes on study area roadways for the year 2018, 2023, and 2033. The future traffic volumes are shown in **Table 12**.

3.6.3 LEVELS OF SERVICE

Roadway traffic operations are defined and categorized by the amount of delay experienced by an average driver. The operations are categorized by a grading system called level of service (LOS), which has a letter designation ranging from A (no delay) to F (severe congestion). The LOS definitions for each letter designation are given in **Table 14** and are based on LOS definitions provided in the Highway Capacity Manual 2010 (HCM).

For a planning level analysis, the LOS is determined based on the ratio of traffic volume on the roadway to the capacity of the roadway. Daily volume thresholds for the LOS letter designations have been developed for the functionally classified study area roadways and are shown in **Table 15**. Roadway segments below the maximum daily volume threshold for LOS C likely do not currently need additional through capacity while roadway segments above the minimum daily volume threshold for LOS E likely do currently need additional through capacity. For roadway segments between the daily volume thresholds for LOS D, more detailed analysis should be conducted to evaluate roadway geometry, traffic control conditions, and number and spacing of driveways to determine if additional through capacity is needed.

Based on the daily volume thresholds in **Table 15** and the daily volumes in **Table 12**, all study area roadway segments for which current traffic volume data was available provide LOS C or better, and are not projected to experience capacity deficiencies within the next 20 years. Three segments should be monitored as new development is constructed. These segments, listed in **Table 16**, may approach volume thresholds for LOS D within the next 20 years. Major new developments should be evaluated to determine specific access and circulation impacts to the roadways.

Table 14 – Level of Service Definitions

Level of Service	Definition
A	Primarily free-flow operation; virtually no delay.
B	Reasonably unimpeded operation; the presence of other users in the traffic stream begins to be noticeable.
C	Stable operation; marks the beginning of the range in which the operation of individual users becomes significantly affected by others.
D	Somewhat stable operation; represents operating conditions near capacity. Small increases in flow may cause substantial increases in delay and decreases in travel speed.
E	Unstable operation and significant delay; represents operating at or almost at capacity level. All speeds are reduced to a low but relatively uniform value.
F	Severe congestion; represents operating conditions over capacity and extremely low travel speed.

Source: Highway Capacity Manual (2010)

Table 15 – Level of Service Daily Volume Thresholds

Functional Classification	Under Capacity (LOS A–C)	Near Capacity (LOS D)	At Capacity (LOS E)	Over Capacity (LOS F)
Rural Minor Arterial	< 9,800	9,800 – 11,700	11,700 – 13,000	> 13,000
Rural Minor Collector	< 5,500	5,500 – 6,700	6,700 – 7,400	> 7,400

Source: Highway Capacity Manual (2010) and CYMPO Regional Transportation Plan

Table 16 – Traffic Volumes on Tribal Roads that May Exceed Roadway Capacity within 20-year Planning Horizon

BIA Route Number	BIA IRR Section Number	Road Name	Average Annual Daily Traffic Volumes (AADT), vehicles per day				
			2002	2013	2018	2023	2033
1	70	Mohave Road, west of 1 st Avenue	3898	3209	3373	3545	3916
5	20	2nd Ave, Gould Rd, Agency Rd (Agency Road, west of 1st Avenue)	2741	2548	2678	2814	3109
105	70	Blue Water Drive north of Riverside Drive	----	3614	3799	3992	4410

3.6.4 TRAFFIC IMPACTS OF FUTURE DEVELOPMENT

Anticipated developments are summarized in **Table 17**. A preliminary assessment was made regarding the potential impact of the development on the adjacent transportation system. In many cases, a preliminary assessment was not feasible because of limited available information about the development. As each development is planned and designed, a traffic impact analysis, consistent with ADOT Guidelines, should be conducted. The traffic impact analysis will review specific access and circulation impacts of the development on the adjacent and nearby roadway network.

Table 17 – Planned Development and Anticipated Traffic Impact

Development Name/Type	Location	Type of Planned Development	Potential traffic impacts	Time frame		
				Short Term (0- 5 Years)	Mid-Term (5-10 years)	Long-Term (20 Years or more)
Western Boundary Master Plan	Primarily south of Agnes Wilson Road, between the Colorado River and US 95 in California	To be determined	Requires more information regarding number of units			X
Proposed Fuel Station	Airport Road / SR 95 - northeast corner	Gas station/convenience store	No significant impact to roadway capacity needs – will require site specific traffic impact analysis per ADOT requirements	X		
Proposed Fuel Station	BlueWater Drive / SR 95	Gas station /convenience store	No significant impact to roadway capacity needs – will require site specific traffic impact analysis per ADOT requirements	X		
Proposed Fuel Station	SR 95/ Shea Rd – NW corner	Gas station/convenience store	No significant impact to roadway capacity needs – will require site specific traffic impact analysis per ADOT requirements	X		
Shea Road residential and commercial development	North and south of Shea Road	Residential and commercial development	Requires more information regarding number of units			X
BlueWater Resort Area Development Plan	East and west of BlueWater Casino and Resort	18-hole golf course, 500 home sites, townhomes, deli restaurant and park	Could potentially add 3,000 to 5,000 trips per day to adjacent roadway network; detailed traffic impact analysis required.			X
Medical Office development	South of Indian Health Center, south of Agency Road and east of 1 st Avenue		Requires more information		X	

Development Name/Type	Location	Type of Planned Development	Potential traffic impacts	Time frame		
				Short Term (0- 5 Years)	Mid-Term (5-10 years)	Long-Term (20 Years or more)
Airport Commercial Development	Avi Suquilla Airport	To be determined - based on final Airport Master Plan Update	Requires more information	X	X	X
New Head Start School	Northwest corner of Mohave Road and Navajo Avenue- south of Parker High School	Relocated from current location on Mohave Road near Indian School Road	Site specific access and circulation issues need to be evaluated during project development		X	
Planned housing	South of Desert Sun subdivision- north of Mohave Road and east of 1st Avenue	Residential- 23 – lot subdivision (CRIT Villas)	May potentially add 200 to 300 trips to the adjacent roadway network; not anticipated to significantly impact transportation system.		X	
New Fire Station	West side of 1 st Ave., north of CRIT Lodge		Site specific access and circulation issues need to be evaluated during project development	X		
Future residential development	South of Mohave Road, on both sides of SR95	Residential- number of parcels undetermined	Requires more information			X
Future residential development	Adjacent to La Paz Regional Hospital on Mohave Road	Residential- number of parcels undetermined	Requires more information		X	

3.7 MOTOR VEHICLE CRASHES

3.7.1 CRASH DATA SUMMARY

Crash data was compiled from a variety of sources, including previous studies, the Colorado River Indian Tribes Police Department, The Arizona Department of Transportation and the California Department of Transportation. A summary of crash data and trends on key locations with crash histories is provided in **Table 18**.

Table 18 - 2004-2012 Crash Data Summary for Key Roads and Intersection

2004-2012 Crash Data Summary Characteristics for Key Roads and Intersections with Crash History				
Crash Location	# of Crashes	Fatalities	Injuries	Summary of Crash Characteristics
Burns Rd between 1st & 4th Ave	7	0	8	5 single vehicle, 5 run-off-road, 3 canal, 1 rear-end, 2 animal
4th Ave & Booth Rd	15	0	8	13 single vehicle, 9 run-off-road, 4 ditch, 2 rear-end, 3 curve-related, 4 hit fixed object, 4 roll over, 1 animal
Mohave Rd & Patrick Rd	9	1	7	7 single vehicle, 1 ATV, 1 farm vehicle 7 run-off-road, 4 canal, 2 collision w/other vehicle, 3 hit fixed object, 3 roll over
Burns Rd between 12th & 14th Ave	2	3	1	2 single vehicle, 1 backed into canal, 1 roll over
California Ave & Agency/Riverside Dr	37	1	8	1 single vehicle, 1 motor vehicle/pedestrian, 1 motor vehicle/bicycle, 34 collisions w/other motor vehicle (Most crashes involved turning or rear end collisions). The total number of crashes at this intersection is understated.
4th Ave & Little Rd	8	1	5	2 single motor vehicle, 1 rear end, 1 ditch, 2 canal, 1 rollover
1st Ave & 16th St	5	1	7	3 single vehicle, 1 ATV, 1 motor vehicle/bicycle, 2 run-off-road, 1 rollover, a1 hit fixed object, 1 angle collision,
Highway 95/RSD & Airport Rd	20	0	7	2 single vehicle, 1P/U/motor cycle, turning, rear end, backing and head-on collisions, 1run-off-road, 1 rollover.
Mohave Rd & Poston Rd	18	0	6	11 single vehicle, 2 farm vehicle, 7run-off-road, 2 rollover, 5 hit fixed object, 1 animal
18th St & California Ave	8	0	9	1 single vehicle, 2 failures to head stop sign. 2 illegal lane changes, 2 left turn collisions, 1 backing collision. 1 run-off-road
2nd Ave & Mohave Rd	30	0	3	15 single vehicle, 1 vehicle/motorcycle collision, 1 canal, mostly parking lot crashes including several involving backing, 1 failure to stop, 1 failure to yield, 1 ran-off-road and hit fixed object, 1 left turn, 2 angle, 2 rear end, 2 head-on crashes

2004-2012 Crash Data Summary Characteristics for Key Roads and Intersections with Crash History				
Crash Location	# of Crashes	Fatalities	Injuries	Summary of Crash Characteristics
Mohave Road & Agnes Wilson Road	12	0	10	2 single vehicle, 1 head-on, 3 left turn, 2 rear end crash 1 cross centerline, 2 run-off-road, 1 roll over, 1 animal
Scott Road & Mohave Road	2	1	1	1 single vehicle, 1 ran-off-road, 1 rear end
12th Avenue & Agnes Wilson Road	1	1	0	1 single vehicle, 1 ran-off-road, 1 roll over
Indian School Road & Mohave Road	4	0	0	2 single vehicle, 2 left turn crash including 1 bus, 2 ran-off-road, 1 roll over, 1 hit fixed object
Mohave Road Mileposts 0-9	2	0	1	1 single vehicle, 1U-turn angle crash, 1 run-off-road
Mohave Road Mileposts 36-39	19	1	5	5 single vehicle, 1 vehicle/pedestrian, 1 ATV,3 rear end, 2 backing, 1 sideswipe, 3 angle crash, 2 canal, 4 run-off-road, 2 rollover, 1 hit fixed object, 1 hit parked car
2nd Avenue and Agency Road	3	0	0	3 single vehicle, 3 ran-off-road, 3 hit fixed object
Rio Vista Road	3	1	3	2 single vehicle, 1 vehicle/pedestrian, 1 ran-off-road, 1 rollover
Riverside Drive & Wal-Mart/Moovalya Plaza/McDonalds	128	2	16	31 single vehicle, 3 vehicle/pedestrian; backing, angle, sideswipe, left turn, head-on, hit parked vehicle, rear end, failed to yield, hit fixed object crashes . Fatal due to heart failure. 3 run-off--road, 2 rollover
Hopi Road & 11th Avenue Main Canal	1	1	0	1 single vehicle, 1 ran-off-road
Resort Drive & Blue Water Casino	85	1	13	23 single vehicle, 2 vehicle/pedestrian crashes, 1auto/motorcycle crash, left and right turns, backing, rear end, hit parked vehicle crashes, 5 run-off-road, 2 rollover,
Other Canal Crashes	26	2	5	25 single vehicle, 1 2-vehicle crash on canal bank,7 vehicles found in canal, 3 rollover, 1animal avoidance, 1 roadway failure

Sources: Colorado River Indian Tribes Police Department and Arizona Department of Transportation

Review of "Colorado River Indian Tribes Road Safety Assessment"

The "Colorado River Indian Tribes Road Safety Assessment" (April, 2013, prepared by the Arizona Road Safety Assessment Program, Arizona Department of Transportation), was prepared at the request of the CRIT. It addressed four roads and ten locations shown in **Table 19**. A summary of the identified needs and countermeasures for consideration are summarized in **Table 20**. The Colorado River Indian Tribes Road Safety Assessment Report is provided in **Appendix B**.

Table 19 - Roads and Locations addressed in Colorado River Indian Tribes Road Safety Assessment

Road	Location
Mohave Road	Mileposts 0 - 9
	Patrick Road Intersection
	Poston Road Intersection
	Agnes Wilson Road Intersection
Burns Road	Mileposts 36 - 39
	1st Avenue to 4th Avenue
4th Avenue	12th Avenue to 14th Avenue
	Indian School Road
2nd Avenue	Booth Road
	Agency Road

Source: Colorado River Indian Tribes Road Safety Assessment" (April, 2013)

A total of 79 crashes at the RSA locations were found in the ADOT Safety Data Mart (formerly ALISS) for the years 2000 to 2012 and were analyzed for severity, crash type, light conditions, fatal crash type, fatal crash location, and crashes by year. In addition, education, enforcement and medical services were discussed.

Table 20 – Road Safety Assessment Findings

Potential Safety Issue	Description	Countermeasures For Consideration
Education, Enforcement, and EMS	<p>Traffic safety issues cannot be solved with engineering solutions alone, which is why the RSA team addresses the “4 Es” of safety: engineering, education, enforcement, and EMS.</p>	<ul style="list-style-type: none"> • Require Tribal employees to use seatbelts when in a tribal vehicle • Enact a primary seat belt law and consider stronger child passenger safety laws (at minimum, CRIT should align their child passenger safety ordinance to mirror Arizona’s statute ARS 28-907). • Advocate to the town of Parker that adding 24/7 fire department coverage is a necessary public safety benefit; at minimum, CRIT should conduct a cost benefit analysis to determine the costs of providing fire department coverage to the Town of Parker. • Use only the contracted air ambulance provider (Native Air) and if a situation arises when the non-contracted air ambulance (Care Flight) must be used, the providers should document why this decision was made. The documentation will allow Indian Health Service to assess the provided contracted services. • Conduct quarterly meetings of the multiple law enforcement agencies serving the community to discuss mutual issues. • Continue with the child passenger safety efforts of the TIPCAP and CDC funded motor vehicle projects, and consider addressing adolescent traffic safety using the Battle of the Belt.
Pavement Markings	<ul style="list-style-type: none"> • Centerline and edgeline markings are faded or non-existent on many of the roads in the study area, including: <ul style="list-style-type: none"> ○ Mohave Road between mileposts 0 and 9 ○ Burns Road ○ Booth Road ○ 4th Avenue ○ Indian School Road • There are also missing raised pavement markers (RPMs) on some segments of road. Lack of pavement markings can contribute to lane departure crashes. 	<ul style="list-style-type: none"> • Install 6-inch wide centerline and edge line markings with centerline raised pavement markers (RPMs) on the southern section of Mohave Road (milepost 0 to 9), Burns Road, Booth Road, 4th Avenue, and Indian School Road. • If centerline and edge line markings can’t be installed, consider installing centerline RPMs at canal crossings and through curves.
Signing	<ul style="list-style-type: none"> • Most advance street name signs on Mohave Road are faded and difficult to read. 	<ul style="list-style-type: none"> • Upgrade advance street name signs to Manual on Uniform Traffic Control Devices (MUTCD) standards.

Potential Safety Issue	Description	Countermeasures For Consideration
Stop Lines	<ul style="list-style-type: none"> Most stop lines are faded and located too far back from the intersection, limiting sight distance for motorists on the side road. For example, the stop line for the Tsose Road westbound approach to Mohave Road is located 42 feet from the intersection; combined with an embankment, this creates a sight obstruction for motorists entering the intersection from the stop line. 	<ul style="list-style-type: none"> Refresh and relocate stop lines closer to the intersection (the MUTCD allows stop lines to be located within four feet of the intersecting through lane).
Pedestrians and Bicyclists	<ul style="list-style-type: none"> There are very few accommodations for pedestrians and bicyclists: no trails, sidewalks, or bike lanes. 	<ul style="list-style-type: none"> Construct sidewalks/trails and install lighting along 1st Avenue from Mohave Road to Hospital, along Mohave Road from 1st to 2nd Avenues, and from the Mochem housing near Booth Road and 4th Avenue to the tribal offices on 2nd Avenue. Coordinate with BIA Irrigation Branch to provide walking and biking facilities along the canals.
Burns Road from 1st to 4th Avenue	<ul style="list-style-type: none"> Other than the bridge barrier and railing, there is nothing to keep vehicles that run off the road while approaching the canal crossing from plunging into the canal. The drainage ditch on the south side of Burns Road just east of 4th Avenue is in the recovery area and near an unpaved travel area. 	<ul style="list-style-type: none"> Install barrier extending from the bridge to along the side of the canal approximately 30 feet; if this can't be done, install object markers along the side of the canal. Install delineators to delineate the drainage ditch just east of 4th Avenue.
Burns Road from 12th to 14th Avenue	<ul style="list-style-type: none"> As with the canal crossing east of 4th Avenue, there is nothing to keep vehicles that run off the road while approaching the canal crossings east of 13th and 14th Avenues from plunging into the canal. There are inadequate post connections at the 12th Avenue bridge guardrail: bolts are loose and pulling away from the concrete The object markers along the north side of the headwall east of 13th Avenue are in the wrong location; according to the MUTCD, the edge of the object marker that is closest to the road user shall be installed in line with the closest edge of the obstruction. The westbound direction of Burns Road has a Narrow Bridge sign for the 12th Avenue bridge, but there is no sign for the eastbound direction. 	<ul style="list-style-type: none"> At the canal crossings east of 13th and 14th Avenues install curved W-Beam guardrail extending from the crossing to approximately 30 feet along the side of the canal; if this cannot be done, install object markers along the side of the canal. Repair post connections at the 12th Avenue bridge. Relocate object markers at the headwall east of 13th Avenue. Install Narrow Bridge sign for westbound direction at 12th Avenue bridge.

Potential Safety Issue	Description	Countermeasures For Consideration
2nd Avenue at Agency Road	<ul style="list-style-type: none"> 2nd Avenue becomes Agency Road north of Mohave Road in a horizontal curve. The Tribal planner indicated that some motorists enter this curve at excessive speeds. The northbound approach to the curve has transverse rumble strips to encourage motorists to slow down before entering the curve. The southbound approach has a curve warning sign. Guardrail and chevrons have been installed along the curve; however, it appears that the guardrail and chevrons do not extend to the end of the curve on the south side. 	<ul style="list-style-type: none"> Extend the guardrail through the curve at the bottom of the hill. Install additional chevron(s) through the curve at the bottom of the hill. Install transverse rumble strips at the top of the hill where guardrail starts. Install northbound curve warning sign with appropriate advisory speed plaque, and add advisory speed plaque to southbound curve sign. Add reflective tabs to top of guardrail posts.
4th Avenue at Indian School Road	<ul style="list-style-type: none"> This intersection is actually a sharp horizontal curve with stop signs. Field observations showed that many drivers do not stop at the unwarranted stop signs. Wooden barricades within the clear zone on the south side of the curve are not breakaway. Graffiti-covered large arrow signs and stop sign are difficult to see. The irrigation ditch is 6 feet from the edge of the road along the turning radius. 	<ul style="list-style-type: none"> Remove stop signs, stop ahead signs, stop lines, and wooden barricades. Install turn warning signs with appropriate advisory speed plaques. Replace and relocate large arrow signs so they are in line with approaching traffic. Install centerline markings and RPMs and edge lines through curve. Install transverse rumble strips on the curve approaches.
4th Avenue at Booth Road	<ul style="list-style-type: none"> 4th Avenue becomes Booth Road in a horizontal curve. Transverse rumble strips have been installed on the curve approaches. There are multiple unpaved accesses within the curve that lead to the canal roads. A concrete barrier has been placed across one of the accesses apparently to prevent vehicles from entering; however, vehicles can maneuver around the barrier due to its location and gain access to the canal road. Chevrons on the east side do not extend to the end of the curve. Chevron spacing through the curve is approximately 200 feet. The MUTCD recommends chevron spacing of 120 feet for curve speeds of 35 to 45 mph. 	<ul style="list-style-type: none"> Relocate access road barrier closer to 4th Avenue to prohibit entrance. Reduce chevron spacing to 120 feet and extend chevrons through the curve east along Booth Road. Limit number of accesses to the canal roads in this curve.
Mohave Road Southern Section (Mileposts 0 to 9)	<ul style="list-style-type: none"> The pavement markings on the southern section of Mohave Road (mileposts 0 to 9) are faded or non-existent and the pavement is aged. The Welcome sign at milepost 0 is faded and may not command driver attention. Gateway signing can have a traffic calming influence on motorists entering a community. 	<ul style="list-style-type: none"> Rehabilitate the pavement with a chip seal treatment. Install centerline markings and RPMs and edgeline markings to provide 11-foot lanes and 4 foot shoulders. Install centerline and edgeline rumble strips. Install a new "Welcome to CRIT" monument sign at milepost 0.

Potential Safety Issue	Description	Countermeasures For Consideration
Mohave Road at Poston Road	<ul style="list-style-type: none"> This location has turning movements and pedestrian activity due to Woody's convenience store, post office, residences, and the Poston Memorial Monument that are in the immediate vicinity. The intersection has uncontrolled access on all 4 quadrants. Large trucks parking at Woody's create a sight obstruction. Even though there are some street lights in the area, the intersection is not well-lit at night. 	<ul style="list-style-type: none"> Install pedestrian crossing warning signs on the Mohave Road approaches. Refresh pavement markings (turn lanes, edgelines, centerlines). Construct sidewalks/curb and gutter along the intersection legs. Upgrade street lighting.
Mohave Road at Patrick Road	<ul style="list-style-type: none"> It is difficult to see the Patrick Road intersection from the northbound approach due to the canal crossing and guardrail. The guardrail on the east side of the crossing has been damaged. The curb in front of the guardrail reduces crashworthiness of the guardrail. There is no barrier to keep vehicles that run off the road from striking the concrete structure or falling into the canal. Chevron spacing in the curve is approximately 250 feet; the MUTCD recommends 160 foot spacing for curve speeds of 50 to 60 mph. 	<ul style="list-style-type: none"> Extend guardrail on northbound approach to prevent errant vehicles from striking the concrete structure. Extend guardrail on southbound approach and relocate Patrick Road approach approximately 150 feet north. Repair damaged guardrail and posts. Block out guardrail to position the guardrail face flush with the curb. Reduce chevron spacing to 160 feet by installing additional chevrons. Install reflective tabs on guardrail posts.
Mohave Road at Agnes Wilson Road	<ul style="list-style-type: none"> The team observed higher speeds (55 mph speed limit), higher volumes, and more numerous turning movements at this intersection than at other intersections on Mohave Road. Commercial activity at the intersection includes the truck scales, which creates a high amount of large truck activity. The left-turn lanes on Mohave Road are approximately 180 feet long (including taper and storage length), which is too short for the current operating speeds. The turn lane pavement markings are faded. There are two closely spaced intersection warning signs (both directions between Agnes Wilson Road and Patrick Road) for Eddy Road and 9th Avenue. 	<ul style="list-style-type: none"> Reduce the speed limit to 35 mph. If the speed limit is not reduced, increase the length of the left-turn lanes. Refresh intersection pavement markings. Replace intersection warning signs for Eddy Road and 9th Avenue with Double Side Road intersection warning signs.
Mohave Road at the Head Start School	<ul style="list-style-type: none"> The speed limit at the Head Start School is 45 mph; however, a spot speed check conducted by the RSA team showed many vehicles traveling at speeds of 55 to 60 mph in front of the school. Even though there is a no passing zone at the school, the RSA team vehicle was passed (while traveling at the speed limit). There is no defined access at the school, leading to vehicles pulling on and off of Mohave Road at multiple locations. Vehicles pulling onto the shoulder at the mailboxes just north of the school (southwest corner of Mohave Road/Indian School Road intersection) lead to shoulder erosion and create a potential hazard for motorists along Mohave Road. 	<ul style="list-style-type: none"> Create a reduced speed school zone and install solar powered "35 MPH When Flashing" signs. Implement photo enforcement for speeding. Relocate mailboxes to a cluster mailbox approximately 100 feet west of Mohave Road on the north side of Indian School Road. Designate a defined school entrance on Indian School Road, and close the undefined access along Mohave Road (with curb and gutter, vegetation, etc.).

Potential Safety Issue	Description	Countermeasures For Consideration
Mohave Road at 2nd Avenue	<ul style="list-style-type: none"> • Tribal offices are located at this intersection, and the rodeo grounds and a park are nearby, leading to numerous turning movements and pedestrian activity. • The intersection is dark at night due to lack of street lighting. • The speed limit decreases from 55 to 35 mph for the northbound approach and from 45 to 35 mph for the southbound approach; the Tribe noted that excessive speeds are an issue at this location. • The flashing beacon is 14.5 feet above the road surface; the MUTCD states that the bottom of the signal housing shall be at least 15 feet above the pavement. This beacon has been struck by large vehicles in the past. 	<ul style="list-style-type: none"> • Install a 45 mph speed zone between the 55 and 35 mph speed zones for the northbound approach (install 45 mph sign south of Rodeo Road). • Install solar-powered speed feedback signs on the approaches to 2nd Avenue. Elevate the flashing beacon; remove beacon if it can't be elevated. Install street lighting. • Install pedestrian crossing warning signs on Mohave Road. • Refresh intersection pavement markings. • Install guide signing for Tribal Government Complex. • Conduct pedestrian crossing evaluation to determine if a mid-block pedestrian crossing treatment is warranted.
Mohave Road at 1st Avenue	<ul style="list-style-type: none"> • There are no turn lanes on Mohave Road at 1st Avenue; the Tribe indicated that there are frequent turning movements at this intersection. The intersection is at the bottom of a downgrade and just beyond a horizontal curve for westbound traffic. • The westbound Mohave Road speed limit changes from 45 to 35 mph on the downgrade and in the horizontal curve. • There are redundant Speed Reduced Ahead and 35 mph Speed Zone signs for westbound Mohave Road east and west of 1st Avenue. 	<ul style="list-style-type: none"> • Conduct a turn lane analysis, and if needed, construct turn lanes on Mohave Road at 1st Avenue. • Relocate the 35 mph Speed Zone sign and Speed Reduced Ahead sign for westbound Mohave Road to a location east of the horizontal curve and downgrade. • Remove the Speed Reduced Ahead sign west of 1st Avenue.

3.7.2 ROAD SPECIFIC MOTOR VEHICLE CRASHES

Using crash data from 2004 through 2012, **Table 21** shows the total number of crashes occurring over that nine year period for several high volume or other important roads. Crashes at the canals, Casino Drive and Moovalya Plaza areas are also shown. The number of crashes, combined with high crash location information provided in previous tables, provides an indication regarding roads that might be considered for further crash studies.

Table 21 - Total Number of Crashes 2004-2012 for Roads on CRIT or with Significance to CRIT

Road	# of Crashes	Road	# of Crashes	Road	# of Crashes
1st Ave	36	Airport Dr	3	Joshua Ave	10
2nd Ave	39	Arizona Ave	12	Kofa Ave	10
4th Ave	34	Blue Water Dr	41	Little Rd	5
7th Ave	6	Casino Dr	3	McCabe Rd	7
9th Ave	4	Resort Dr	70	Mohave Rd	149
10th Ave	4	Booth Rd	9	Moovalya Pl	62
12th Ave	2	Burns Rd	7	Navajo Ave	8
14th Ave	7	Calif. Ave	61	Patrick Rd	2
15th St	13	Riverside Dr	130	Peterson Rd	5
16th St	21	Hwy 95	65	Poston Rd	5
18th St	9	Canal	15	Shea Rd	3
Agency Rd	31	Main Canal	17		
Agnes Wilson	3	Indian School	3		

Sources: Indian Health Service and CRIT Police Department

3.7.3 CALIFORNIA CRASHES

The California Department of Transportation provided the data provided in **Table 22** for motor vehicle crashes on US 95 from its intersection with Interstate 10 in Blythe to SR 62 at Vidal Junction and on SR 62 from Vidal Junction to the Colorado River Bridge at Parker. The data span the 10-year period from 2002 through 2011. Most of these sections of highway are not within the CRIT Reservation, but are utilized by tribal members living in California. It should be noted that about 45 percent of the crashes

on these roads involve fatalities or injuries. Many of the crashes in and near tribal lands involved vehicles overturning or sideswiping.

Table 22 - Summary of Motor Vehicle Crash Data on US 95 and SR 62 on and Near the Colorado River Indian Tribes Reservation (Years 2002-2011)

Road and Section	Total # of Crashes	# of Fatal Crashes	# of Injury Crashes	# of PDO*	Total Fatalities	Total Injuries
US 95 Riverside Co. PM 0-36.2	213	7	86	120	10	131
US 95 San Bernardino Co. PM 0-9.7 (Vidal Junction)	22	0	13	9	0	14
SR 62 PM 126.8 (Vidal Jct.) - 142.7 (Colorado River Bridge)	98	5	39	54	6	67
Totals	333	12	138	183	16	212

Source: California Department of Transportation

*property damage only

3.7.4 RECOMMENDATIONS FROM CRASH ANALYSIS

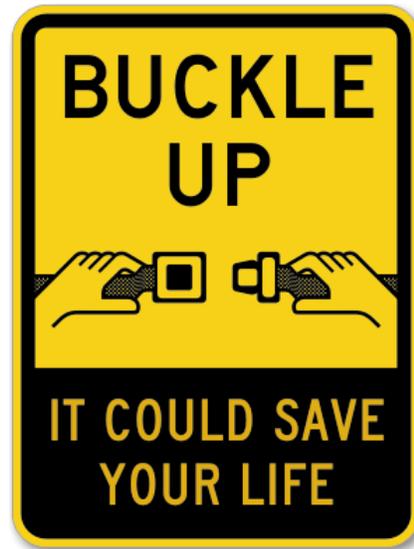
1. SR 95, including the California Avenue and Riverside Drive segments, and Mohave Road have the highest number of crashes on any roads on or impacting the CRIT Reservation. The development of corridor studies should be considered for the full length these roads to identify needed safety improvements and other operational improvements for these important roads.
2. There are high numbers of crashes involving canals and in and adjacent to the Blue Water Casino and the Moovalya Plaza. Consider conducting Road Safety Assessments at these locations to identify strategies to reduce the number and severity of crashes at these locations.
3. CRIT should consider implementing the recommendations of the Colorado River Indian Tribes Road Safety Assessment conducted by ADOT.
4. Consider full road length Road Safety Assessments for some of the other roads, such as 1st Avenue, 2nd Avenue, 4th Avenue and Agency Road that have high crash rates.
5. CRIT should enter in discussions with Caltrans to determine ways to reduce the percentage of fatal and injury crashes on US 95 and SR 62.

3.7.5 SAFETY – FOCUSED EDUCATION EFFORTS

Improved traffic safety education, by incorporating safety into school curriculum at all levels of school, was identified through discussions with stakeholders and the Tribal Planner. Age appropriate programs can be developed for all age groups, for example:

Pre-school and elementary school topics:

- Seat belt use
- Pedestrian and bicycle safety
 - How to cross the street safely – stop, look, and listen
 - Basic bike and helmet fitting – especially important for parents
 - How to position yourself properly on the road – the three positions
 - How to let drivers know your intentions – be predictable
 - How to safely negotiate turns and intersections – hand signals, signs, traffic awareness
 - The basics of traffic law – right-of-way and rules of the road
 - Skills practice – Three to six adult-led hours on a bike; one hour walking in a neighborhood
- School bus safety
- Unsafe rides



Middle School and High School topics:

Upper grades could focus on more driver-oriented messages, such as:

- “No texting and driving”
- “Don’t Drink and Drive”
- “Buckle Up - it could save your life”



3.8 PAVEMENT ASSESSMENT

A roadway pavement condition inventory was conducted via visual windshield surveys in July 2013 for the approximately 132 miles of paved roadway segments maintained by CRIT.

The roadway network was evaluated following the general guidelines outlined in BIA Form 5808, "Pavement Rating." Generally speaking, as the procedure outlines, it is a modified version of the industry standard for visual evaluation techniques outlined in ASTM D6433-11 "Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys." The ASTM procedure provides a systematic method for identifying the current pavement condition of asphalt paved roadways by identifying a total of 19 asphalt-surfaced roadway distresses that are recorded based on type, severity, and quantity. However, in the case of BIA's procedure outlined in Form 5808 the distress types are limited to 10 critical distress types including longitudinal and transverse cracking, block cracking, alligator cracking, roughness, rutting, corrugations, raveling, bleeding, patching, and other. Additionally, instead of determining a condition index value using industry software, the BIA procedure uses deduct values based on the percent area, <33%, 34-65%, and >66%, of the observed distresses as well as the typical severity levels identified as slight, moderate, and severe. At the time of the field investigation, the determination of the deduct values based on the BIA procedure to determine the overall condition value, identified as a value between 0-100, was unclear. The project team developed a user specific pavement rating system using many elements of the BIA procedure although the determination of the overall condition index was unclear. Primary factors used in the development of the rating system include type of pavement distress present and general site conditions.

Based on the type of distress, percent area of distress, and typical severity of distresses that were observed, an overall pavement rating was developed between 0 and 5 that was given to each paved roadway segment that was inventoried. Descriptions of the rating system levels are described below:

- **Excellent (5)** – The roadway segment is exhibiting minimal visual signs of deterioration and no maintenance is currently required.
- **Good (4)** – The roadway segment is exhibiting minor signs of deterioration, including age- or climate-related distresses, and no structural deterioration is visually evident. The distresses observed are primarily limited to low-severity levels (L&T cracks less than ¼ inches in width) although isolated areas of medium-severity may be present. The roadway segment could benefit from minimal maintenance activities including crack sealing or patching for isolated areas of deterioration.
- **Fair (3)** – The roadway segment is exhibiting a moderate amount of deterioration including both age- or climate-related distresses as well as structural deterioration. Generally, the distresses present are low- to medium-severity levels. The rideability is likely deteriorated and there are often isolated areas of high-severity pavement deterioration and poor site conditions. The roadway segment would benefit from aggressive maintenance activities including crack sealing and patching.
- **Poor (2)** – The roadway segment is exhibiting a significant amount of deterioration including both age- or climate-related distresses as well as structural deterioration. The evidence of structural deterioration (e.g., alligator cracking and rutting) is more evident. The distresses

observed are likely present at all severity levels with areas of high-severity distress more frequently present. General site conditions are more significantly deteriorated and are likely attributing to the level of deterioration being exhibited. The roadway segment would benefit from surface rehabilitation and overall general site improvements.

- **Very Poor (1)** – The roadway segment is exhibiting a significant amount of deterioration, including both age- or climate-related distresses as well as more significant levels of structural deterioration. Typical distress levels observed are medium-severity to high-severity. The roadway surface is failing and rideability is poor. General site conditions are significantly deteriorated and likely attributing to the level of deterioration being exhibited. Although useable, the roadway segment should be considered for surface reconstruction along with improvement to general site conditions.
- **Failed (0)** – The roadway segment is exhibiting a significant amount of deterioration, including both age- or climate-related distresses as well as significant structural deterioration. The primary distresses observed are structural-related distresses or significant levels of high-severity block cracking. Typical distress levels observed are medium-severity to high-severity. General site conditions are significantly deteriorated and likely attributing to the level of deterioration being exhibited. Although useable, the roadway segment is considered failed and should be considered for surface reconstruction along with improvement to general site conditions.

Although a rating system of 0-5 was used for this evaluation, the data collected could be used to determine the overall pavement rating based on a 0-100 scale if desired.

The pavement condition ratings for the inventoried roadway segments are shown in **Figure 4**. More detailed information on pavement conditions is provided in **Appendix C, under separate cover**. Overall, most of the roadways maintained by CRIT are in Poor to Fair condition with the most common distresses observed being L&T cracking, block cracking, alligator cracking, roughness, and raveling. The roadway segments rated as Very Poor or Failed generally exhibit a significant amount of structural deterioration—specifically alligator cracking. The roadway segments rated as Very Poor or Failed are located throughout the study area, and are shown in red and orange in **Figure 4**. Specific roadways of immediate concern include 1st Avenue, Indian School, 11th Avenue, portions of Navajo Road, and portions of 6th Avenue as well as other road segments shown in **Figure 4**. There are a number of other roadways segments which are also exhibiting significant signs of deterioration and are in need of rehabilitation as well.

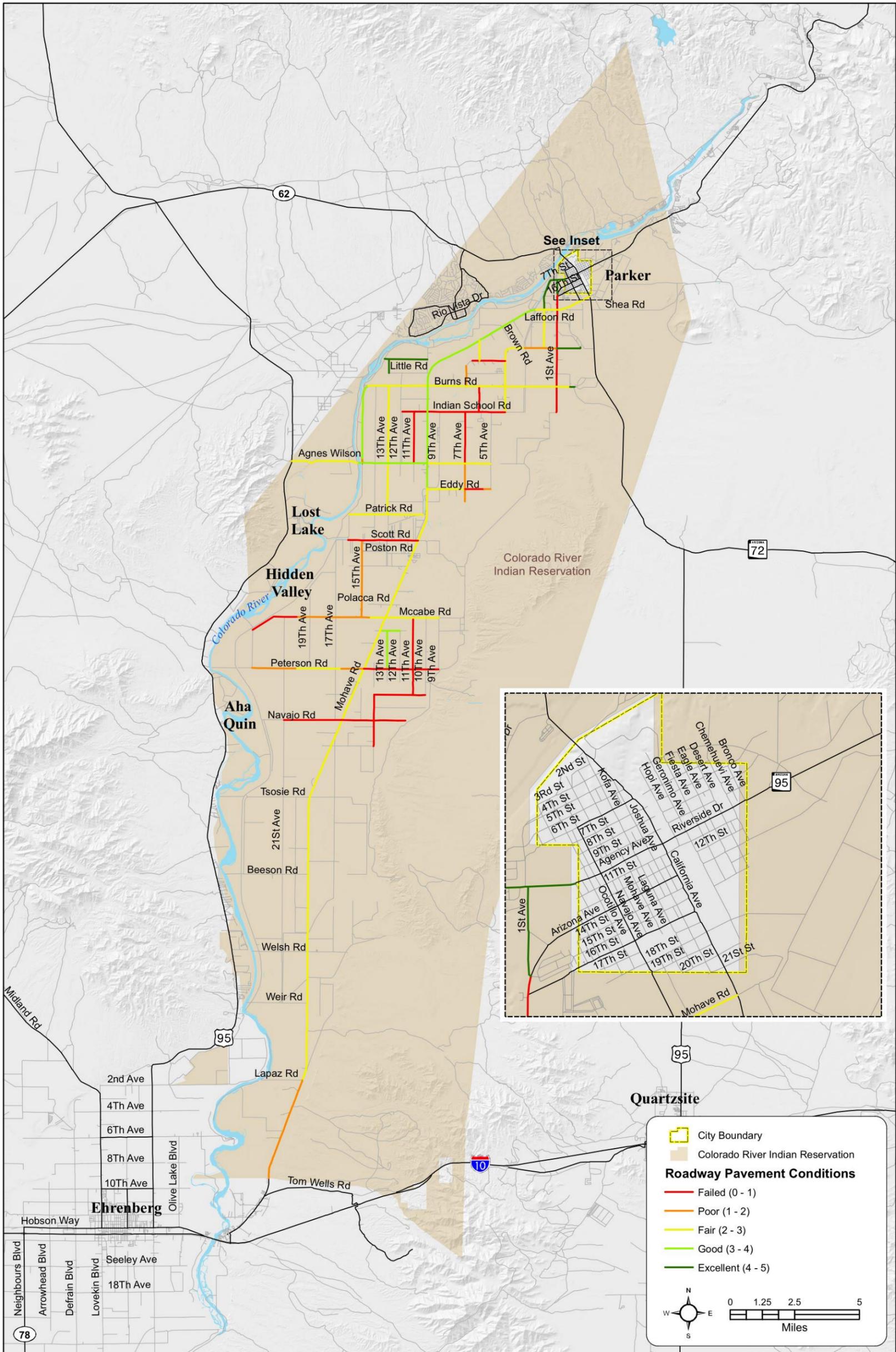


Figure 4 – Pavement Conditions

3.9 ROAD CONDITION ASSESSMENT

A road condition assessment was conducted in coordination with the pavement assessment. The road condition assessment involved observing and recording road conditions such as:

- Whether speed limit signs were in place
- Presence or absence of shoulders
- Presence/condition of lane markings (e.g. were they faded or hard to see)
- Whether there were sight distance issues observed
- Street lighting
- Whether culvert or canal crossing treatments were required
- Whether there was traffic control devices along the route (e.g. stop signs, yield signs, flashers, or other types of traffic control)
- Whether pedestrians were observed
- Whether bicyclists were observed

This section discusses road conditions with respect to signing, striping, traffic control, and other transportation-related road conditions that were observed during the field review, or raised through stakeholder interviews, or survey comments. **Appendix D, under separate cover** summarizes the road conditions observed during the field review. It should be noted that a general need is roadside vegetation control, which can reduce the available road width, and has the potential to increase run off the road crashes.

3.10 BRIDGES

Bridges on the Tribal Transportation Inventory are inspected every two years. This database is an important tool in identifying those existing bridges that have the highest need for repair and/or replacement. A sufficiency rating is assigned to each bridge (greater than 20 feet), which is inventoried. All of the ratings came from the 2012 Bridge Inspection (SI&A) Reports, with the exception of Agnes Wilson Bridge Number H042, which was inspected in 2011.

Table 23 summarizes the bridges that are located on study area roads and their sufficiency rating. The sufficiency rating (SR) is a numerical rating of a bridge based on its structural adequacy and safety, essentiality for public use, and its serviceability and functional obsolescence. It is a rating tool developed by the FHWA for prioritizing bridges for funding. The SR of a bridge varies from 0 (very poor) to 100 (very good). Bridges with an SR of 80 or less will be eligible for rehabilitation, and bridges with an SR less than 50 will be eligible for replacement or rehabilitation.

There are five bridges with a Sufficiency Rating less than 50 and 19 bridges with a Sufficiency Rating of 80 or less. A bridge is designated as “deficient” if it is either structurally deficient or functionally obsolete. Structurally Deficient (SD) means a bridge become structurally deficient when it reaches the set threshold of one of six criteria from the FHWA national bridge Inventory. There are 12 bridges designated as structurally deficient on the Inventory, which are indicated by the shading on **Table 23**.

Table 23 – Bridge Condition Summary, Colorado River Indian Tribes Reservation

Street Name	BIA Route Number	Bridge Length (Feet)	Section Number	Bridge Number	2012 Sufficiency Rating	SD=Structurally Deficient ND=Not Deficient FO=Functionally Obsolete
Mohave Road	1	94	30	H008	73.3	SD
Mohave Road	1	60	50	H007	77.5	ND
Mohave Road	1	43	80	H006	80.2	ND
Mohave Road	1	76	100	H005	65.8	ND
Mohave Road	1	76	130	H004	46.5	SD
Mohave Road	1	76	150	H003	77.9	ND
Booth Road	4	68	20	H043	96.8	ND
Burns Road	10	60	20	H011	84.0	ND
Burns Road	10	68	40	H044	97.8	ND
7 th Avenue	11	100	23	046H	Proposed	
Agnes Wilson Road	18	560	20	H042	92.9	ND *
17 th Avenue	21	76	40	H026	68.0	SD
17 th Avenue	21	75	60	H025	82.3	ND
Scott Road	24	24	25	H045	No report	
23 rd Avenue	27	60	40	H022	94.0	ND
McCabe Road	30	68	20	H020	77.8	ND
McCabe Road	30	91	40	H021	56.8	SD
Peterson Road	34	60	20	H023	83.0	ND
Peterson Road	34	76	60	H024	25.9	SD
Navajo Road	38	60	20	H027	60.0	SD
Navajo Road	38	60	50	H039	67.9	ND
Rodeo Road	39	68	20	H041	98.0	ND
Tsosie Road	44	60	10	H029	81.0	ND
Tsosie Road	44	91	30	H030	47.8	SD
Beeson Road	50	60	30	H031	71.5	ND
Beeson Road	50	76	50	H032	49.8	SD
Welsh Road	56	76	30	H033	54.0	SD
Welsh Road	56	76	50	H034	59.5	SD
Weir Road	60	60	20	H035	58.5	SD
Weir Road	60	80	40	H036	47.0	SD
14th Avenue	117	60	30	H040	71.5	ND
Kennedy Road	501	92	30	H051	96.0	ND

*Note-This bridge was inspected in 2011

Source: Bureau of Indian Affairs

Note: Shading indicates structurally deficient bridges

3.11 TRANSIT

One key goal of the CRIT is to develop a transit system for the reservation area. A Technical Memorandum was prepared to provide information on existing transit services, socioeconomic information, input from surveys, and other information to identify the need for transit and the type of transit service that might best serve the reservation area. This Memorandum is provided in **Appendix E, under separate cover**. Transit needs and demands were estimated using procedures described in Transit Cooperative Research (TCR) Program Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook.

Transit need is estimated according to (1) the number of people likely to need passenger transportation and (2) the need for trips based on the mobility gap. The mobility gap is the total number of trips not taken because members of zero vehicle households do not have the ease of mobility available to members of households with ready access to a car. These estimates were computed as described in the following sections. It should be noted that these data are based on information from the 2008-2012 American Community Survey. The population and number of households from this Survey do not match the 2010 Census data.

Number of People Likely to Need Passenger Transportation

The total number of people estimated to need transportation service is the sum of persons living in households with income below the poverty level and persons living in households without an automobile. For the Colorado River Indian Tribes Reservation area this estimate is approximately 3,100 persons who are in need of passenger transportation services, as shown in **Table 24**.

Table 24 - Estimate of Persons with Transportation Needs

	Number of Persons
Number of Households without access to a vehicle	349
Persons residing in households with income below the poverty level	2238
Persons residing in households owning no automobile	880
Persons in Need of Passenger Transportation Services	3,118 (rounded to 3,100 persons)

Sources: American Community Survey Tables B17001 and B08201, 2008 - 2012 5-Year Estimates

Need for Trips Based on Mobility Gap

The need for trips is estimated using a factor called the mobility gap. The mobility gap was estimated by the TCR Report 161 to be 0.8 for Arizona. The need for trips is estimated using the formula:

$$\text{Need (one-way trips per day)} = \text{Number of households having no car} \times \text{mobility gap}$$

Using this formula, the need in trips is estimated to be approximately 280 one-way passenger trips per day. On an annual basis, this is approximately 83,800 one-way passenger trips per year. TCR Report 161 noted that this estimate is typically high, because the need for trips can sometimes be met by friends or

relatives. In the testing of these methodologies with a number of rural transit agencies, it was found that at best, only about 20 % of the mobility gap trip-based need was met. This would indicate a need closer to 16,760 one-way trips annually if the 20 % figure is assumed.

Transit Demand

Demand for non-programmed general public transportation services was estimated based on a formula in TCR Report 161:

$$\text{Demand (trips per year)} = (2.2 \times \text{population age 60+}) + (5.21 \times \text{mobility limited population age 18-64}) + (1.52 \times \text{residents of household having no car})$$

For the Colorado River Indian Tribes, the data on disability is not available from the U.S. Census. Using available data, the demand for trips is shown in **Table 25**, and is estimated to be 6,567 or approximately 6,600 annual one way passenger trips.

Table 25 - Transit Demand

Criteria	Number of Persons	Factor	Trips Per Year
Age 60+	2377	2.2	5,229
Mobility Limited	Data not available	5.21	----
Residents of households with no car	880	1.52	1338
Estimated demand			6,567 (25 passengers per weekday)

3.11.1 FINDINGS OF NEED AND TYPE OF TRANSIT SERVICE RECOMMENDED

In recent years the Colorado River Indian Tribes community has communicated via surveys and public input their desire and need for transit services in the community. This clearly demonstrated demand for transit on the Colorado River Indian Tribes Reservation area warrants a preliminary or pilot transit service in the community. The analysis conducted using the analysis procedures of *Transit Cooperative Research (TCR) Program Report 161 – Method for Forecasting Demand and Quantifying Need for Rural Passenger Transportation: Final Workbook* also indicated a need for transit services. Stakeholder interviews with local transportation providers also reiterated need for additional transit services.

Based on the information in the section above, and comments from Tribal Planners, a need has been defined for the following:

1. A phased implementation of a fixed route system.
 - a. Focused on the Tribal community near the Parker area.
 - b. Point to point fixed route to outlying concentrations of tribal activity.
2. Phased implementation of demand-responsive service for rural communities.
 - a. Prioritization by tribal leaders of rural focus areas.
 - b. Reservation-wide services.

3.12 BICYCLE FACILITIES

Bicycle and pedestrian facilities are an important part of the multimodal transportation network in that they provide various options for travel (which is especially critical for travelers who cannot drive). Currently, there are very few bicycle facilities within the reservation area.

Elements that make up bicycle networks can include designated bike routes, striped bike lanes, paved shoulders along roadways, wide curb lanes, multi-use paths, and sidewalks.

Per the AASHTO Guide for the Development of Bicycle Facilities (2012), paved shoulders provide adequate bicycle facilities on rural highways (speed limits 45 to 55 mph) that connect town centers and other major attractors. Shoulder width should be a minimum of four feet on uncurbed sections with no vertical obstructions immediately adjacent to the roadway. Shoulder width of five feet is recommended from the face of guardrail, curb, or other roadside barrier to provide additional operating width. Additional shoulder width is desirable on roadways with higher vehicle speeds, or if use by heavy vehicles, recreational vehicles, or buses is considerable. In constrained locations, where pavement width is limited, a paved shoulder may be considered on uphill sections.

A review of the Tribal Transportation Inventory indicates that only a few state routes have shoulder of five feet or more:

- California SR 62 – From Vidal Junction east 8.4 miles, the shoulder width is 5 feet.
- State Route 95 – Eight feet through the Town of Parker (southern town limits to Riverside Drive/SR 95 North, shoulder width varies elsewhere).

Road segments that have a shoulder width of four feet include:

- Mohave Road – Milepost 0-8. Further north, Mohave Road generally has a shoulder width of three feet.
- Patrick Road, between 14th Avenue and Mohave Road – Patrick Road serves primarily agricultural areas, however.
- SR 95 – Shoulder width of four feet between the East Reservation Boundary and the southern Town of Parker limits.

Comments from the survey that was distributed as part of this study indicated the following needs with respect to bicycles:

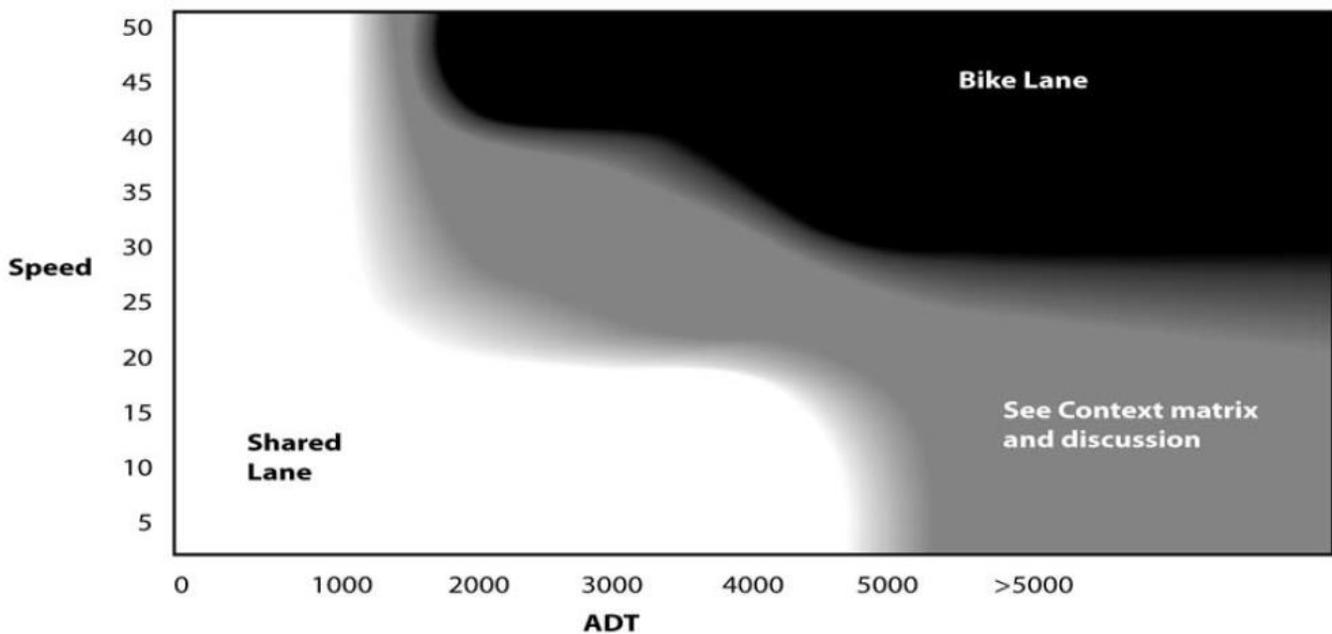
- Bike paths or trails, possibly with a map and tour information.
- Safer bicycle access to the BlueWater Casino and Resort and to shopping centers.
- Provide bicycle lanes on main road like California Avenue and also at Riverside.
- Provide wider shoulders and marked bike lanes.
- Hold a bike safety program with free helmet and pads, and mandatory training for kids and parents before you get it free.
- There are more sidewalks to ride on, with being able to ride from street to street with curbing.

Suggestions for specific locations included:

- Mohave Road south to Poston Road
- Desert area near Mo-Chem neighborhood.
- Bicycle path from Parker to Indian Health Center

The Oregon Department of Transportation publishes a matrix (**Figure 5**) to help determine what types of roadways should include bicycle lanes or striped paved shoulders. The matrix shows that roadways with less than 1,000 vehicles per day typically do not require bicycle lanes/striped paved shoulder. The matrix also shows that roads with traffic volumes that exceed 5,000 vehicles generally should be considered for bicycle lanes/striped paved shoulders.

Although no tribal roads currently meet those criteria, in the future BlueWater Drive and 2nd Avenue are anticipated to grow to that level of traffic. These roads also reflected some comments on bike paths that were mentioned in the surveys, particularly with respect to providing bike lanes or paths from the casino to shopping and neighborhood areas.



Source: Oregon Department of Transportation

Figure 5 – Bike Lane Decision Matrix

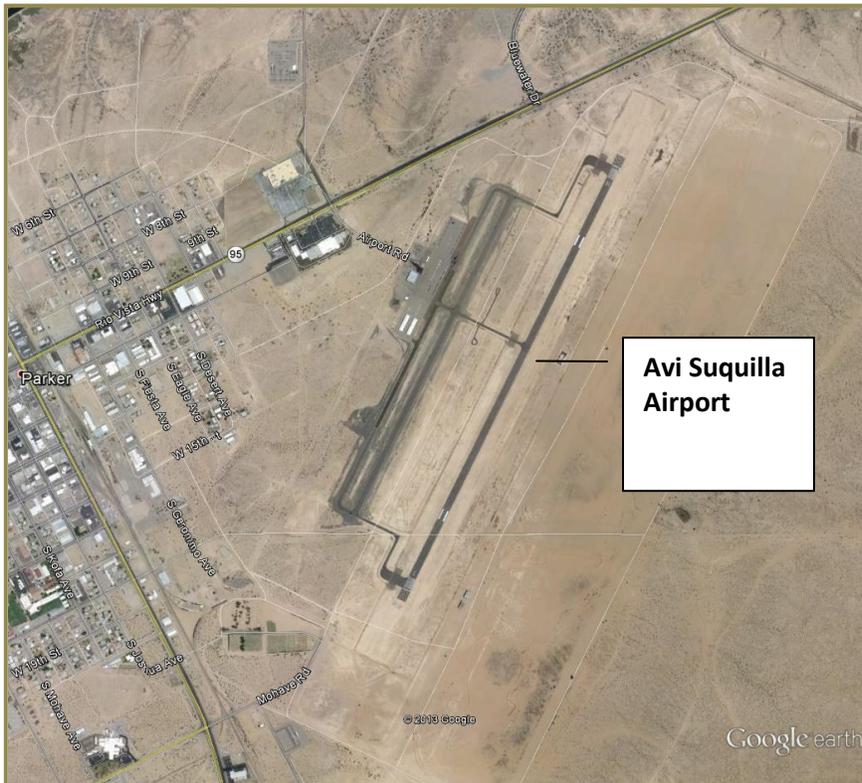
3.13 SIDEWALKS, CROSSINGS, AND PATHS

Sidewalks and paths are limited on the Colorado River Indian Tribes Reservation. An overriding need expressed was the need for linkages between residential areas and activity centers such as the Tribal Headquarters, health care facilities and schools, and other activity centers. Providing sidewalks to link to the sidewalk system within the Town of Parker was expressed as another important need.

Providing sidewalk connections to activity centers was an important need.

3.14 AIRPORTS

Avi Suquilla Airport is a public use airport located approximately one mile east of downtown Parker, Arizona. It is owned and operated by CRIT. The Avi Suquilla Airport is an enterprise department of the tribal government.



Airside facilities consist of runways, taxiways, and apron areas along with associated markings, lighting systems, and instrumentation. The existing runway configuration consists of one active runway, Runway 1-19. It is 6,250 feet long and 100 feet wide. There are also two taxiways aligned with Runway 1-19 and several connecting taxiways.

Landside facilities include the GA terminal building/pilots' lounge, automobile parking, and vehicle access as well as general aviation (GA), airport support, and non-aviation

related commercial and industrial tenants. Access to the terminal is provided from Airport Road, approximately one-quarter mile long, connects Riverside Drive with the GA terminal parking lot. The Draft Airport Master Plan Update states that the Airport Road is in poor condition. Signage to the airport from Riverside Drive is limited to a single 24 x 24 way finding sign. A small visitors parking area is located north of the GA terminal. Spaces are unmarked; however it is estimated that there are spaces for approximately 15 vehicles. At the present time, rainfall run off from a portion of the apron and public parking lot floods the terminal and main hangar buildings.

The airport also has two lots which it leases for vehicle storage—one is an unfenced, covered parking lot for short-term vehicle storage and an unpaved, fenced parking lot for long-term vehicle storage. It is estimated that the long-term lot has spaces for 60 to 70 vehicles and the short-term lot has spaces for eight vehicles.⁶ There are currently three hangar buildings on the airport, including two units which each contain 10 units and one large hangar known as the CRIT hangar that currently stores four aircraft.

CRIT Air, owned by CRIT, is the Airport's sole fixed base operator. CRIT Air offers fueling, hangar storage, and tie downs storage, and has personnel available daily. Limited maintenance services are available through a part-time on-call contractor.

There are two above ground tanks—one 12,000-gallon jet fuel tank and one 12,000-gallon avgas tank. The Airport does not have the ability to provide fueling for larger capacity jet aircraft.

Airport activity, according to the Master Plan Update, is heavily oriented towards weekend travel, starting as early as Thursday and extending to Monday. During the week, much of the activity is due to Medi-vac flights and corporate flights. Total based aircraft at the airport is 35 aircraft in 2012, according to airport records reported in the Draft Airport Master Plan Update.

3.14.1 AIRPORT MASTER PLAN UPDATE RECOMMENDATIONS

Key recommendations from the Airport Master Plan Update are summarized in **Table 26**. Projects related to the road system serving the airport include:

- Construct an all-weather perimeter road around the Airport.
- Provide signage upgrades and improve aircraft storage area.

3.14.2 AIRPORT FUNDING

Airport improvements can be funded through federal monies distributed through the Federal Aviation Administration, local funds, and recently through the State's Transportation Aviation Fund Program. Senate Bill 1317, which allows tribally-owned airports to participate in the state's Department of Transportation's Aviation Fund program, was signed into law by Governor Jan Brewer on June 20, 2013. The purpose of the fund is to allow competitive grants for infrastructure and improvements to public airports in Arizona. The fund is financed by aviation fuel and aircraft registration fees imposed upon pilots in Arizona. The bill amended the Arizona Revised Statutes 28-8202, to include tribal governments to participate in the program. Annually, the Arizona Aviation Fund allows airports to compete for 10% of the fund which hovered around \$20 million, which means each individual airport could compete for up to \$2 million, according to Corinne Nystrom, president of the Arizona Aviation Association. Aviation fuel and aircraft registration fees imposed upon pilots who register their aircraft in Arizona are the sources of funding.⁷ Pilots on the reservation have been contributing to the fund every year, but the original legislation did not include American Indian-owned airports in the language.

⁶ Morrison, Marierle, Avi Suquilla Airport, Master Plan Update, June 2013, page I-21,

⁷ "Proposed State Legislation would Allow Arizona Tribes to Compete for Airport Funding", Native News Network, April 4, 2013, accessed 6/12/2013.

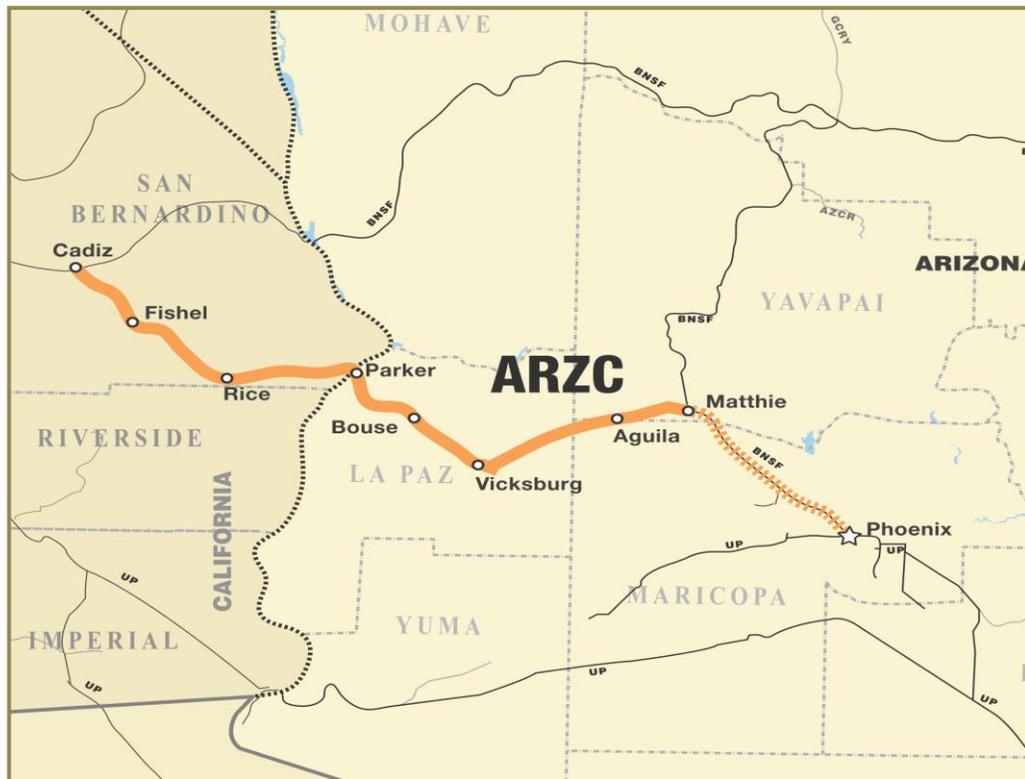
Table 26 – Avi Suquilla Airport Capital Improvement Plan

Time Frame	Project Description
Short Term	Airfield Pavement Preservation
	Runway 1-19 Easterly Erosion Control
	Drainage Improvements/Fire Water Line
	Construct parallel Taxiway C
	Runway 1-19 Westerly Erosion Control
	Eastern Apron Expansion – Phase 1
	Signage Upgrades and Develop Aircraft Storage Area
	Runway 1-19, Taxiway A and Taxiway B Crack seal
	GA Apron Pavement Preservation
	Construct Perimeter Road
Intermediate Term	Eastern Apron Expansion – Phase 2
	Runway 1-19 Overlay
	Transient Apron Overlay
	Northern Apron Expansion- Phase 1
	Taxiway C Crack Seal
	Taxiways A and B Overlay
	Northern Apron Expansion- Phase 2
	Terminal, ARFF Building, Hangar and Parking Lot Construction
	Crack Seal – Runway 1-19, Taxiways A and B, Apron and Perimeter Road
	Seal Coat-Taxiway C and North Apron Expansion
Long Term	Southern Apron Expansion- Phase 1
	Southern Apron Expansion- Phase 2
	Seal Coat - Runway 1-19, Taxiways A and B, Apron and Perimeter Road
	Crack Seal- Taxiway C and North Apron Expansion
	Acquire Land for Southern Runway Extension
	Runway 1-19 Southern Extension
	Crack Seal- Runway 1-19, Taxiways A and B, Apron and Perimeter Road
	Seal Coat - Taxiway C and North Apron Expansion
	Acquire Land for Northern Runway Extension
	Runway 1-19 Northern Extension
	Seal Coat - Runway 1-19, Taxiways A and B, Apron and Perimeter Road
	Crack Seal- Taxiway C and North Apron Expansion
Acquire land east of existing property line for future development	

Source: Avi Suquilla Airport Master Plan Update, June 2013

3.15 RAIL TRANSPORTATION

The Arizona & California Railroad is a short line railroad which runs a 190-mile route between Mathie, Arizona (five miles northwest of Wickenburg on the Burlington Northern Santa Fe (BNSF) Phoenix Subdivision) and Cadiz, California. This route is shown in **Figure 6**. Operating up to five trains per day, this railroad is primarily a carrier of BNSF bridge traffic between Mathie and Cadiz, according to the *Arizona State Rail Plan (2011)*. This line is now part of Rail America.



Source: Genesee and Wyoming, Inc. http://www.gwrr.com/operations/railroads/north_america/arizona_california_railroad.be, accessed 7/8/13

Figure 6 – Map of Arizona & California Railroad Line

Public railroad crossings, type of traffic control at each crossing, and daily number of trains are summarized in **Table 27**. A review of rail safety statistics from the Federal Railroad Administration⁸ indicated that between Fiscal Year 2004 and 2013, there were three total accidents/incidents involving rail in La Paz County, involving one fatality and two non-fatal injuries.

Table 27 – Railroad Crossings

Crossing#	Railroad	Type of Crossing	Street	Traffic Control Devices at the Crossing	Advance Warning Signs?	Pavement Markings?	Number of Daily Trains
025928D	ARZC	At Grade	Mohave Road	2 cross bucks	Yes	No	2
025929K	ARZC	At Grade	SR 95	2 cross bucks	No	No	2
025931L	ARZC	At Grade	18th St.	2 cross bucks	Yes	No	2
025933A	ARZC	At Grade	11th St.	2 cross bucks	Yes	No	2
025934G	ARZC	At Grade	SR 95/Riverside Drive	2 cross bucks	Yes	Yes- stop lines and RR x-ing symbols	4
914399C	ARZC	At Grade	Central Avenue	2 cross bucks	Yes	Yes- stop lines and RR x-ing symbols	5

Source: Federal Railroad Administration, Office of Safety Analysis, <http://safetydata.fra.dot.gov/OfficeofSafety/PublicSite/Crossing/XingLocResults.aspx?state=04&countycity=012&railroad=&reportinglevel=ALL&radionm=County&street=&xingtype=3&xingstatus=1&xingpos=1>, accessed 8/1/13

3.16 TRUCKED FREIGHT

The Colorado River Indian Reservation is a located in the midst of trucking network comprising SR 62 and 95 in California, and US 95, SR 72, and I-10 and in Arizona. Information from the Tribal Planner indicated that CRIT is going to begin Commercial Enforcement Program that is going to target trucking traffic and begin enforcing restrictions on overweight and illegal trucking through the Reservation.

⁸ Federal Railroad Administration, Office of Safety Analysis, <http://safetydata.fra.dot.gov/officeofsafety/publicsite/Query/tenyrFiscal2a.aspx>, accessed 7/31/13

4. Transportation Needs

This chapter provides an overview of multi-modal transportation needs. The needs analysis was developed through a process which considered:

- Stakeholder, Technical Advisory Committee, and general public input
- Traffic analysis
- Crash data assessment
- Field review of road conditions and pavement conditions
- 2013 CRIT Road Safety Assessment (RSA) findings

4.1 ROADWAY NEEDS

Key roadway related needs include:

- Repaving existing paved roads – a field assessment of road conditions was conducted in July 2013 to assess pavement conditions on key roads in the CRIT community. These data were used to develop paving needs.
- Paving gravel/unpaved roads – needs were identified based on input from the CRIT Tribal Planner and stakeholders.
- Traffic control - needs were identified through findings of the 2013 CRIT Road Safety Assessment and discussions with the CRIT Police Department and BIA Maintenance staff.
- Culvert/canal crossings and bridge improvement needs – needs were identified based on field reviews, BIA bridge ratings, and the 2013 CRIT Road Safety Assessment findings.
- Intersection improvements – Needs were identified through stakeholder interviews, 2013 CRIT Road Safety Assessment findings, and crash analysis.
- Safety projects - identified through visual inspection, stakeholder input, and input from the CRIT Tribal Planner.
 - Safety–focused education campaign
 - Future CRIT Road Safety Assessment (RSA) locations
 - Crash reporting procedures
 - Signing and striping projects
 - Canal safety improvements
 - Street lighting

Roadway needs are summarized graphically in **Figure 7**. Intersection improvement needs are summarized in **Figure 8**.

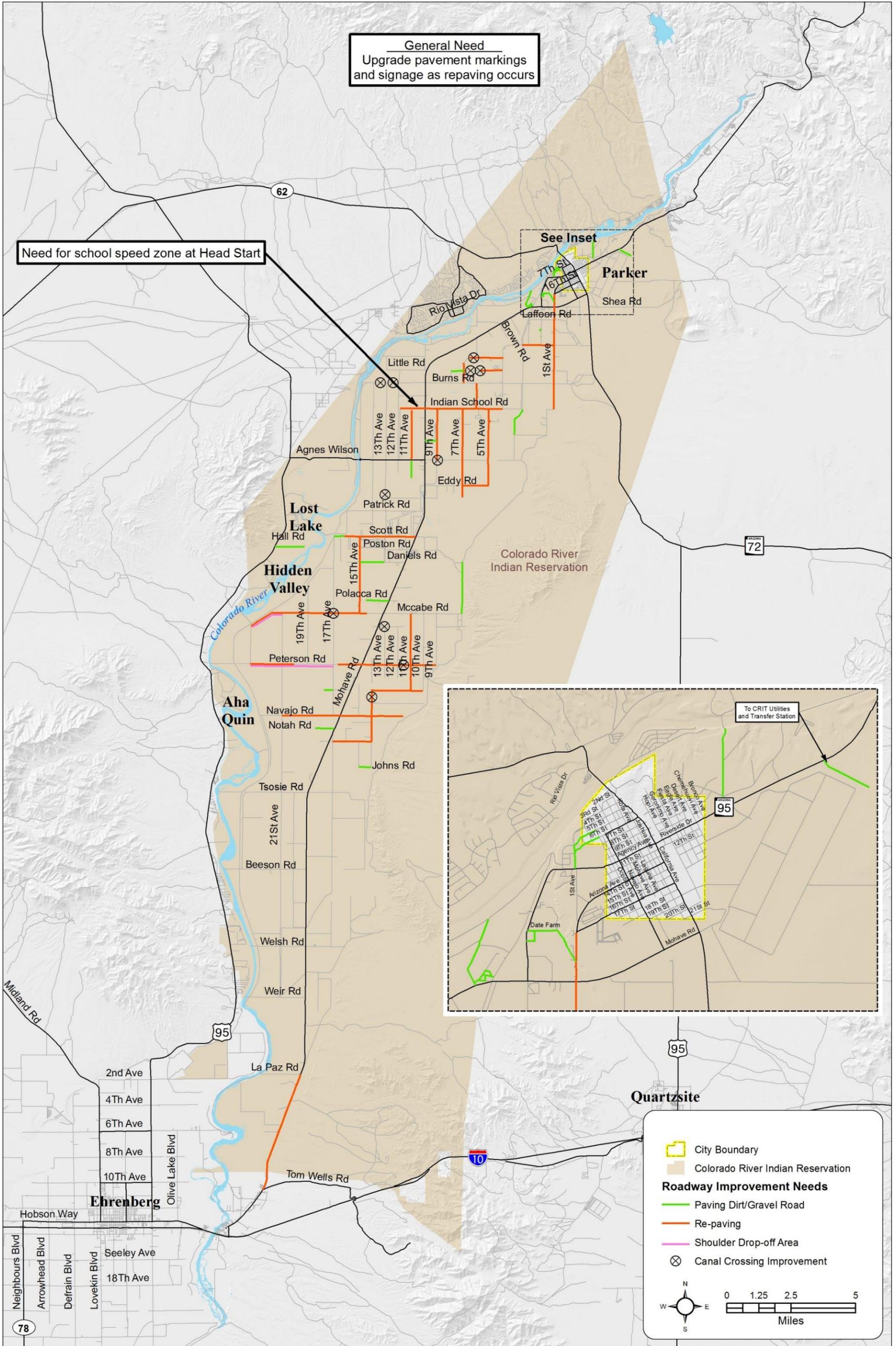


Figure 7 – Road Improvement Needs

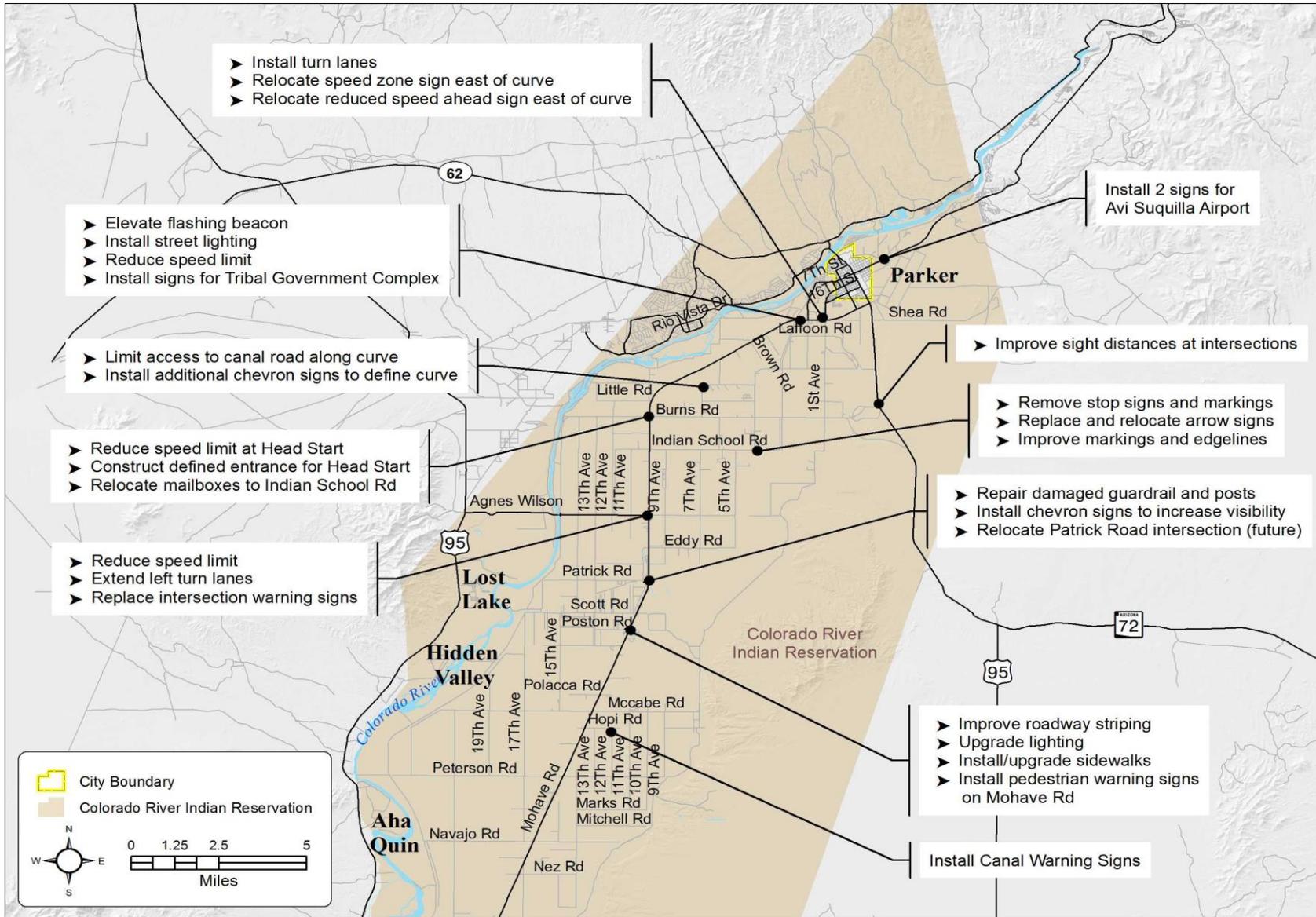


Figure 8 – Intersection Improvement Needs

4.2 PEDESTRIAN NEEDS

Sidewalks and paths are limited on the CRIT Reservation. Sidewalks provide many benefits including safety, mobility, and healthier communities. Sidewalks encourage walking, which is an excellent moderate exercise. Sidewalks also increase safety for pedestrians – according to a Federal Highway Administration report, roadways without sidewalks are more than twice as likely to have pedestrian crashes as sites with sidewalks on both sides of the street⁹

Pedestrian needs are shown graphically in **Figure 9** and include:

Sidewalk Needs - Developing a system of sidewalk connections to and from homes to activity centers such as the Tribal Headquarters, health care facilities, and schools were important considerations in developing projects. Providing connections to link to the sidewalk system within the Town of Parker to Tribal roads was another consideration.

Pedestrian Crosswalks and Crossing Devices – Additional crossing opportunities on Riverside Drive (specifically at Eagle Avenue and Chemehuevi Avenue) and on California Avenue at 12th Street are needed. It should be noted that these are not Tribal roads, and are needs for consideration by the Town of Parker.

A finding of a CRIT RSA conducted in early 2013 was that pedestrian crossing warning signs are needed on Mohave Road at the approach to Poston Road. In addition, the RSA recommended new pavement markings, sidewalks, curb and gutter along the intersection legs, and upgraded street lighting.

Multiuse Paths - Trails are a need on the Reservation.

4.3 AVIATION ACCESS NEEDS

The following transportation needs related to airport access were identified in the Avi Suquilla Airport Master Plan Update (2013) and discussions with the Avi Suquilla Airport Manager:

- Drainage improvements and fire-water line construction, and repaving on Airport Road.
- Additional airport identification signage.
- All-weather perimeter road around the airport.
- Signage upgrades and improvements to aircraft storage area.
- Parking lot construction.
- Paving improvements to runways, apron areas, perimeter road over time.
- Van to serve airport passengers, or coordination with a future transit system, perhaps on a demand-responsive basis.

⁹ FHWA Investigation of Exposure-Based Pedestrian Accident Areas: Crosswalks, Sidewalks, Local Streets, and Major Arterials. Publication No. FHWA/RD87-038, FHWA, Washington, D.C., 1987.

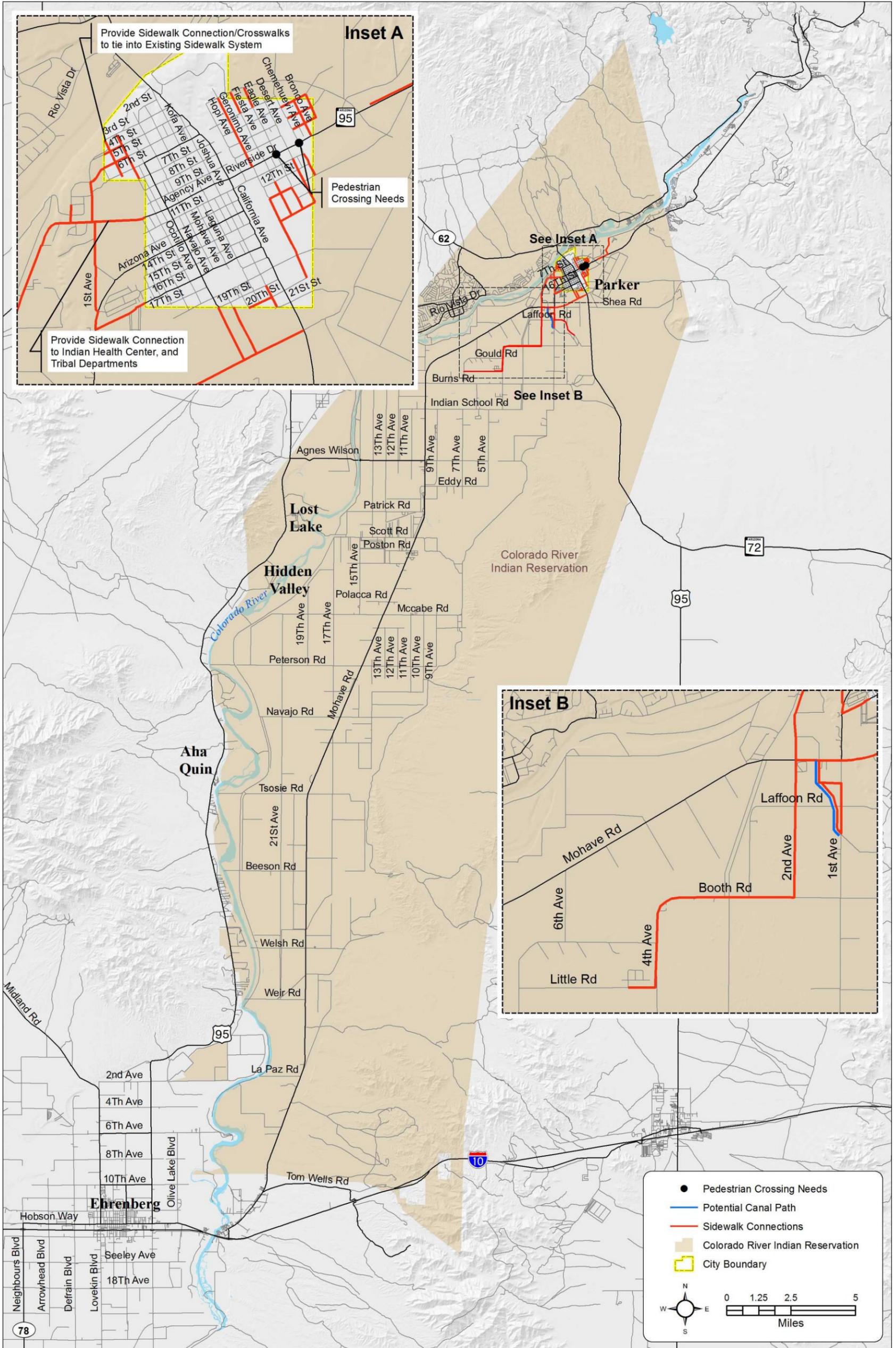


Figure 9 – Pedestrian Improvement Needs

4.4 TRANSIT NEEDS

Transit needs identified were:

1. A phased implementation of a fixed route transit system.
 - a. Focused on the Tribal community near the Parker area.
 - b. Point to point fixed route to outlying concentrations of tribal activity.
- Phased implementation of demand-responsive service for rural communities.
- a. Prioritization of rural focus areas by tribal leaders.
 - b. Reservation-wide services.

Under a separate Federal Transit Administration Section 5311(c) Tribal Transit Planning Grant, an implementation plan for a start-up transit system will be developed.

4.5 OTHER TRANSPORTATION RELATED NEEDS

Other transportation-related needs that were identified include:

- Tribal Transportation Inventory Updates
- Functional Classification Updates
- Parking lot paving needs for community facilities, such as:
 - Poston Fire Station parking lot
 - Mo-Chem-Ho-Na Senior Center
 - Ahakhav Preserve parking areas
- Tribal-related businesses and department office parking lots
- Roadside vegetation control

5. Recommended Projects

Transportation projects have been developed to address the Colorado River Indian Tribes transportation needs. Projects are grouped by type of improvement and are discussed below. The projects are in the following categories:

- Pedestrian facility Improvements
- Intersection Improvement Projects
- Safety Projects
- Pavement Maintenance and Rehabilitation Projects
- Transit Projects
- Aviation Projects
- Bridge Improvement Projects
- Paving Dirt or Gravel Road Projects
- Other Transportation Projects



Mohave Road and 2nd Avenue Intersection

5.1 PEDESTRIAN FACILITY RECOMMENDATIONS

Pedestrian improvements are important to improve the livability of a community and connect neighborhoods with activity centers such as schools, employment and shopping destinations. Proposed pedestrian improvements are shown graphically in **Figure 10** and in **Table 28**.

The sidewalk projects assume five foot sidewalks on both sides of the street. The sidewalk projects are grouped into areas for programming purposes. A number of the roads recommended for sidewalk improvements are recommended to be added to the Tribal Transportation Inventory, particularly those that are located within the Parker Town limits.

In order to address the need for additional pedestrian crossings in the Town of Parker, it is recommended that the CRIT work with the Town of Parker to evaluate the need for, and implement pedestrian hybrid beacon (PHB) crossings at key locations at Riverside Drive/ Eagle Avenue, River Drive/Chemuehuevi Avenue, and California Avenue/ 12th Street. Also known as a HAWK beacon (**H**igh-Intensity **A**ctivated cross**W**alk beacon), a pedestrian hybrid beacon is a traffic signal used to stop road traffic and allow pedestrians to cross safely. The purpose of a pedestrian hybrid beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Research has shown motorists' compliance with the pedestrian hybrid beacon is much higher than with traditional pedestrian crossings.



A pedestrian hybrid beacon helps persons to cross busy streets

Source: Rhode Island Department of Transportation

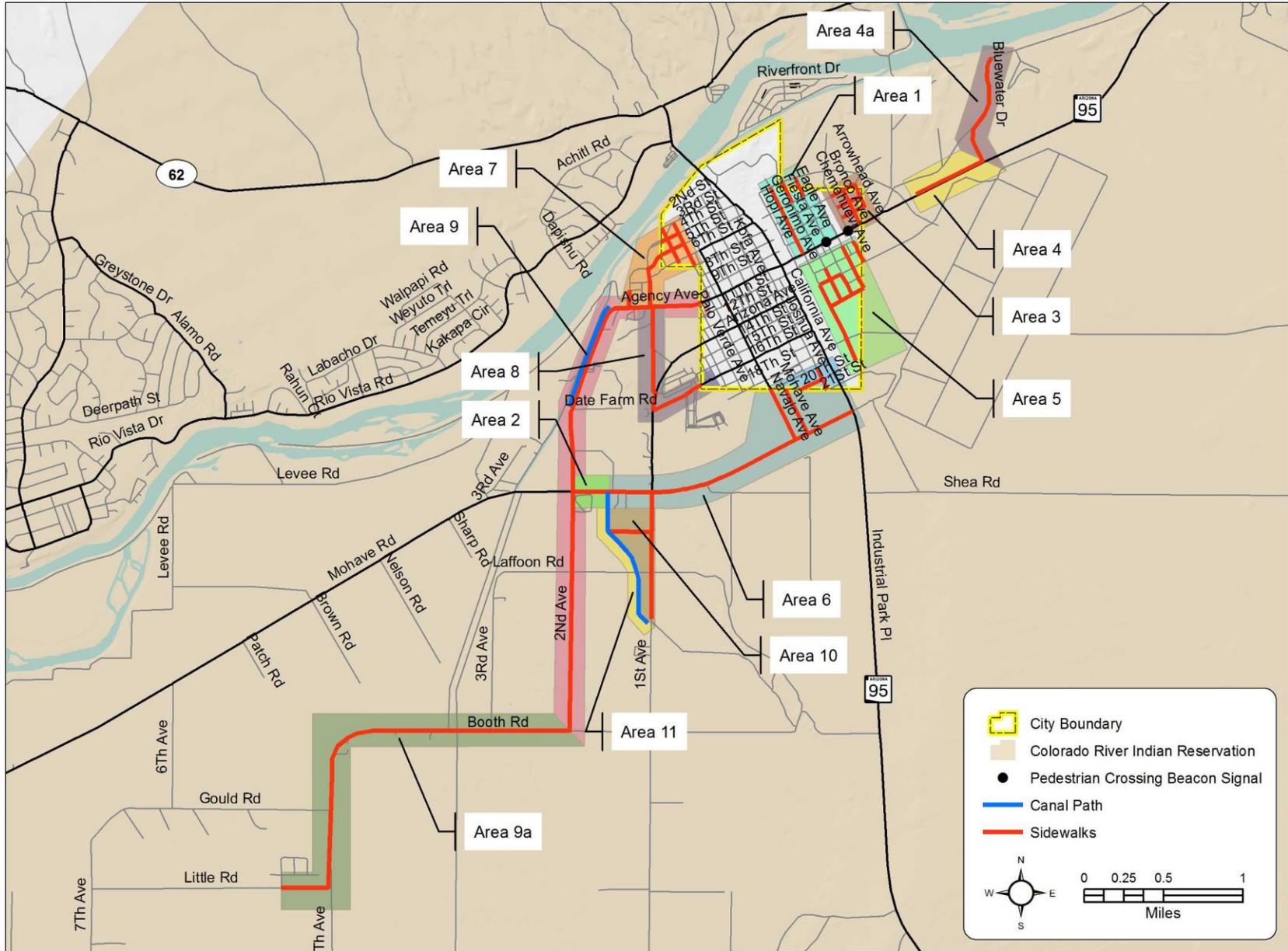


Figure 10 – Recommended Pedestrian Projects

Table 28 – Proposed Pedestrian Improvements

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
1	Geronimo Ave	6th Street	SR 95	0.29	Not classified	Paved road	Sidewalks	187,000	Connects approx. 15 homes and 3 businesses to sidewalk system on Rio Vista Hwy (SR 95)
	Fiesta Ave	6th Street	North end	0.07	Not classified	Paved road	Sidewalks		Connects 2 homes on Fiesta to existing sidewalk network
	Eagle Ave	6th Street	North end	0.07	Not classified	Paved road	Sidewalks		Connects 3 homes on Eagle to existing sidewalk network
2	Mohave Rd (Rte 1)	2nd Ave	0.4 miles east of 2nd Ave	0.4	2	Paved road	Sidewalks	174,000	Tribal Headquarters
3	7th Street	Chemehuevi	East end	0.14	Not classified	Paved road	Sidewalks	322,000	Connects approximately 20 homes to Western Park, SR 95, and other sidewalks
	8th Street	Chemehuevi	East end	0.14	Not classified	Paved road	Sidewalks		Connects approximately 20 homes to Western Park, SR 95, and other sidewalks

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
	9th Street	Chemehuevi	East end	0.11	Not classified	Paved road	Sidewalks		Connects approximately 20 homes to Western Park, SR95, and other sidewalks
	unnamed road	8th Street	9th Street	0.07	Not classified	Paved road	Sidewalks		Connects approximately 20 homes to Western Park, SR95, and other sidewalks
	unnamed road	7th Street	8th Street	0.07	Not classified	Paved road	Sidewalks		Connects approximately 20 homes to Western Park, SR95, and other sidewalks
	Bronco Ave	7th Street	SR 95	0.21	Not classified	Paved road	Sidewalks		Connects approximately homes to Western Park, SR95, and other sidewalk network

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
4	Riverside Drive (Rte95)	SR 95 /.1 mi east of Airport Drive	BlueWater Drive	0.48	2	Paved road	Sidewalks	209,000	Extends existing sidewalk connection from commercial area (Wal-Mart/Moovalya Plaza) to cross street of BlueWater Drive. This would be an ADOT project
4A	BlueWater Drive (Rte 105)	SR 95	BlueWater Park	0.71	5	Paved road	Sidewalks	309,000	Provides a sidewalk connection along BlueWater Drive to the casino and Colorado River waterfront
5	Chem-huevi Ave	11th Street	Arizona Ave	0.15	Not classified	Paved road	Sidewalks	767,000	Connects approximately 11 homes to businesses and other sidewalk networks
	Desert Ave	11th Street	W 15th St	0.30	Not classified	Paved road	Sidewalks		Residences (approximately 14), church, businesses
	Eagle Ave	Arizona Ave	15th St	0.15	Not classified	Paved road	Sidewalks		Connects approximately 9 homes to businesses and other sidewalk networks

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
	Fiesta Ave	12th	15th St	0.23	Not classified	Paved road	Sidewalks		This area appears to be commercial use or vacant
	Geronimo Ave	21st Street	Arizona Ave	0.54	Not classified	Paved road	Sidewalks		This section of Geronimo has primarily businesses and Arizona Western College Parker Learning Center.
	Arizona Ave	Geronimo Ave	Eagle Ave	0.16	Not classified	Paved road	Sidewalks		Connects homes to businesses and other sidewalk networks
	15th Street	Geronimo Ave	Desert Ave	0.23	Not classified	Paved road	Sidewalks		Connects homes to businesses and other sidewalk networks
6	Joshua Ave	19th St	21st St	0.15	Not classified	Paved road	Sidewalks	1,054,000	Connects homes to existing sidewalk network which leads to the park, hospital, and tribal offices
	20th St	Laguna Ave	Joshua Ave	0.16	Not classified	Paved road	Sidewalks		Connects homes to existing sidewalk network which leads to the park, hospital, and tribal offices

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
	Mohave Ave	19th St	Mohave Rd	0.33	Not classified	Paved road	Sidewalks		Connects homes to hospital
	Navajo Ave	19th St	Mohave Rd	0.33	Not classified	Paved road	Sidewalks		Connects homes to park and hospital
	Mohave Rd	SR 95	0.4 mi east of 2 nd Ave	1.85	2	Paved road	Sidewalk		Hospital, tribal headquarters
7	unnamed road	Agency Ave	Palo Verde	0.42	Not classified	Paved road	Sidewalks	353,000	Connects approximately 25 homes to tribal offices and Indian Health Center
	Palo Verde Ave	6th St	North End	0.21	Not classified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center
	Quartz Ave	6th St	W 5th St	0.08	Not classified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
	Roosevelt St	Agency Ave	Grant St	0.1	Not classified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center
8	1st Ave (Rte 3)	Agency Ave	16th Street	0.66	5	Paved road	Sidewalks	436,000	links homes to multiple health and social service related offices
	16 th St (Rte 47)	1st Ave	0.06 miles west of Reata Ave	0.34	5	Paved road	Sidewalks		Extends existing sidewalk system from schools to multiple subdivisions- many children walk on this route. Serves 100 homes neighborhood (99 homes plus 1 office) and approximately 23 homes in Desert Sun subdivision.

Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
9	Agency Ave/2nd Ave (Rte5)	Palo Verde Ave	Booth Rd	3.25	5	Paved road	Sidewalks	1,416,000	Connects homes in agricultural area to sidewalk network, medical center, hospital, and tribal offices
9A	Booth Rd (Rte 4)/4th Ave	2nd Avenue	Little Road	2.4	5	Paved road	Sidewalks	1,206,000	Connects homes in agricultural area to sidewalk network, medical center, hospital, and tribal offices
	Little Road (Rte8)	West End	4th Ave	0.37	5	Paved road	Sidewalks		Provides a sidewalk to the Mo-Chem neighborhood- approximately 50 homes
10	Unnamed	1 st Ave	Canal path	0.25	Not classified	Unpaved road	Sidewalks	462,000	Sidewalk link between residential areas and Tribal Headquarters
	1st Ave (Rte3)	Mohave Road	canal crossing	0.81	5	Paved road	Sidewalks		residential areas and Tribal Headquarters

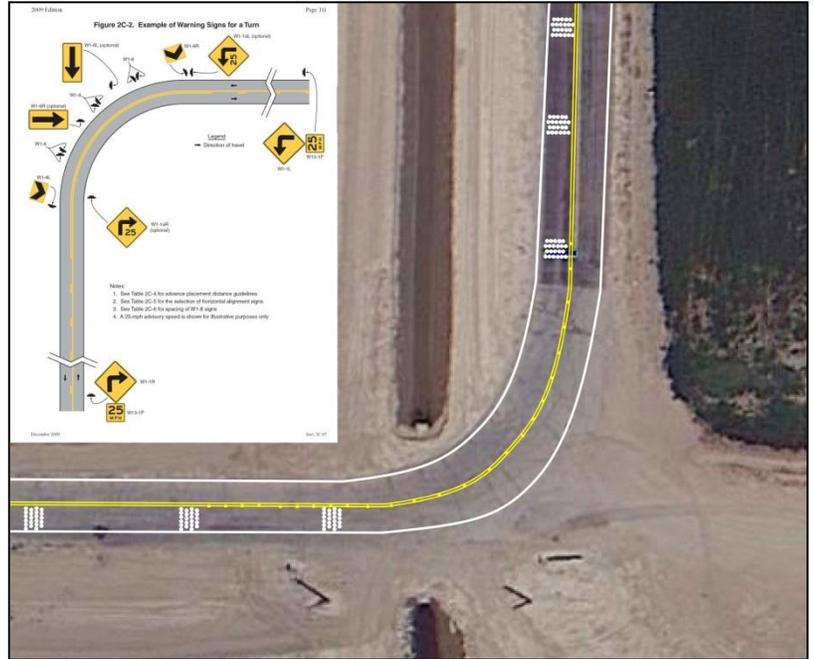
Area	Street Name	From	To	Project Length (miles)	BIA Road Functional Classification *	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
11	Unnamed Road	Mohave Rd	1st Avenue	0.36	Not classified	Paved road	path	157,000	Provides a path through neighborhood areas
N/A	Riverside Drive (SH95-Section 860) at Eagle Avenue	pedestrian beacon signal	N/A	N/A	2	Paved road	pedestrian beacon signal	80,000	Downtown Parker (Note: this would be an ADOT project)
N/A	Riverside Drive (SH95-Section 860) at Chemehuevi Avenue	pedestrian beacon signal	N/A	N/A	2	Paved road	pedestrian beacon signal	80,000	Downtown Parker (Note: this would be an ADOT project)
N/A	California Avenue (SH95-Section 830) at 12th Street	pedestrian beacon signal	N/A	N/A	2	Paved road	pedestrian beacon signal	80,000	Downtown Parker (Note: this would be an ADOT project)

*Functional Class: 2= Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

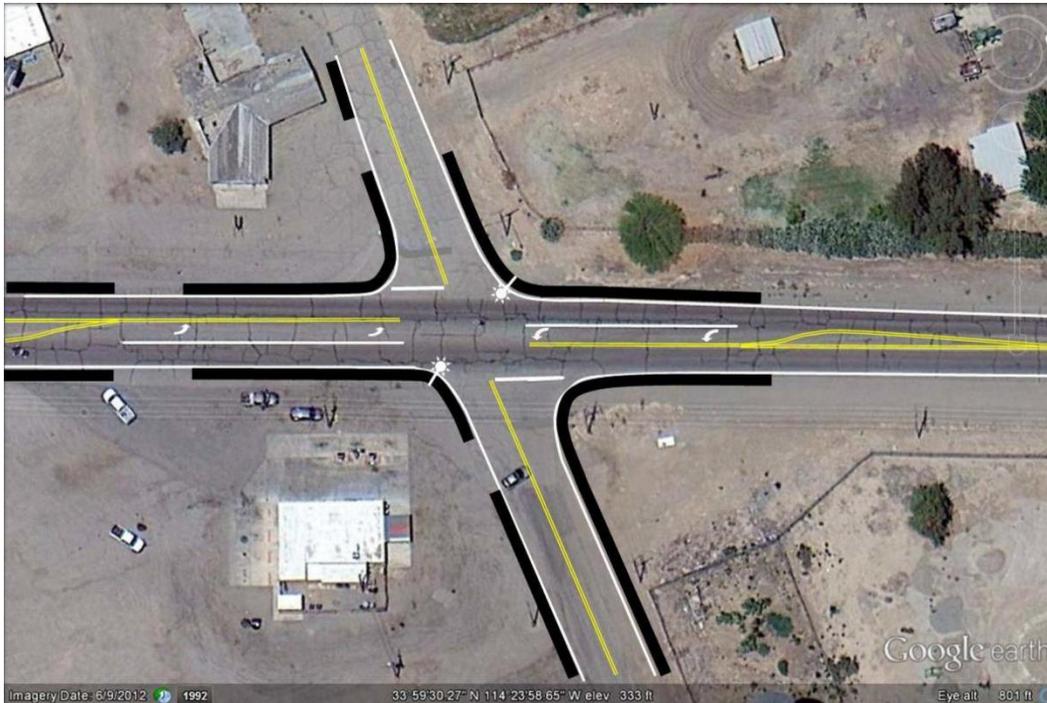
** Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

5.2 INTERSECTION IMPROVEMENT PROJECTS

Intersection improvement projects were identified based on input from CRIT staff, stakeholders, analysis of crash data, and from the findings of the 2013 CRIT Road Safety Assessment (RSA). These projects are shown graphically on **Figure 11** and summarized in **Table 29**. The Road Safety Assessment (RSA) conducted in 2013 provided schematic drawings of recommended improvements at a number of locations. The RSA is provided for reference in **Appendix B**.



Improvements proposed for 4th Avenue /Booth Road Intersection



Improvements proposed for Mohave Road/Poston Road Intersection

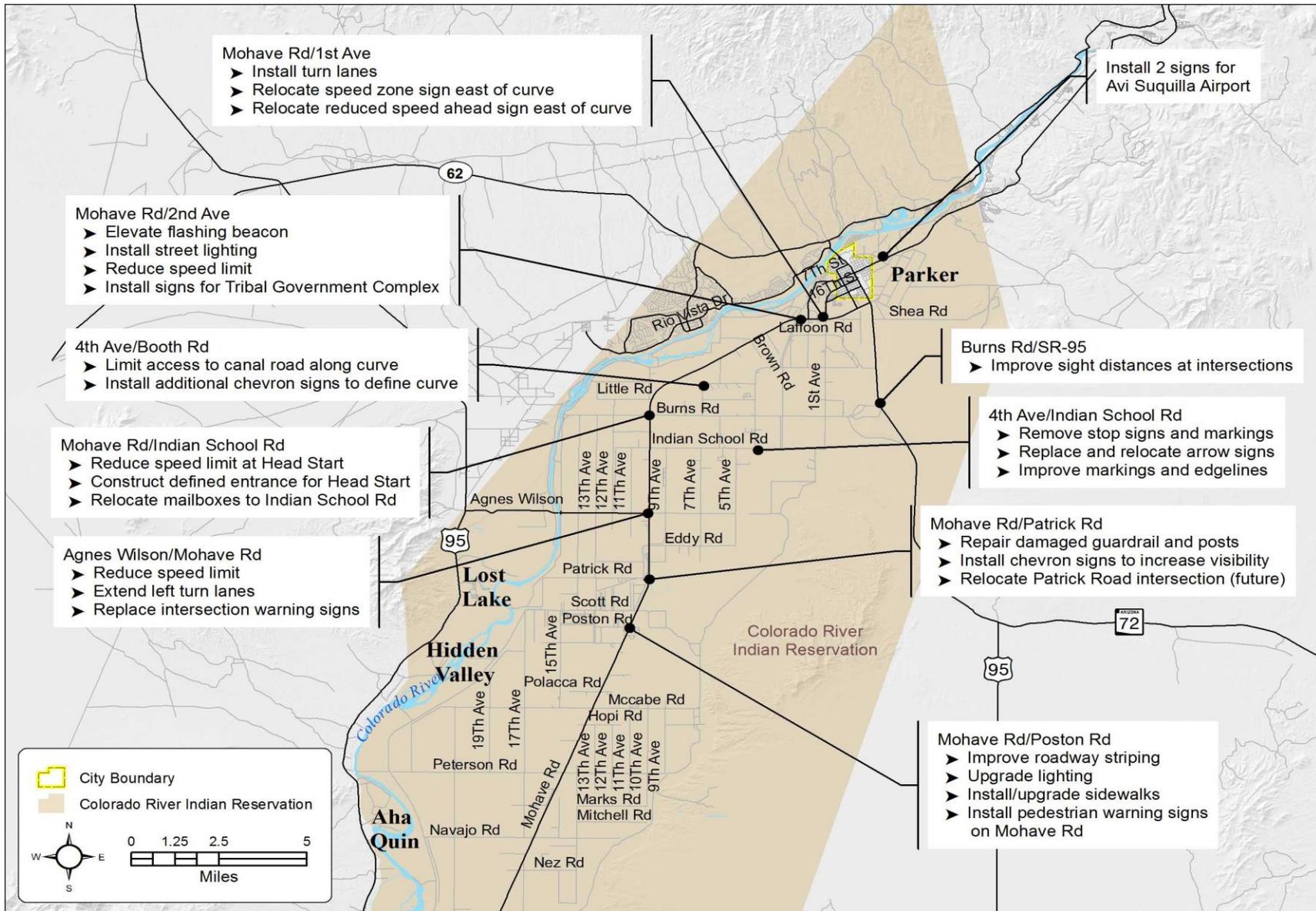


Figure 11 – Proposed Intersection Projects

Table 29 – Proposed Intersection Improvement Projects

Street Name / BIA Route Number	Cross Street	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1)	1st Ave	N/A	2	Needs identified to install turn lanes, relocating speed zone sign east of curve, relocating reduced speed ahead sign east of curve	Construction of safety improvements	103,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	2nd Ave	N/A	2	Needs identified to elevate flashing beacon, install street lighting, reduce speed limit, install signs for Tribal Headquarters	Construction of safety improvements	121,000	Commercial, residential, government and agricultural land uses.
Booth Rd (Rte 4)	4th Ave	N/A	5	Needs identified to limiting access to canal road along curve, Install additional chevron signs to define curve	Construction of safety improvements	12,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Indian School Rd	N/A	2	Needs identified to reduce speed limit at Head Start, construct defined entrance for Head Start, Relocate mailboxes to Indian School Rd	Construction of safety improvements	12,000	Head Start School, residences
Mohave Road (Rte 1)	Agnes Wilson Rd	N/A	2	Needs identified to reduce speed limit, extend left turn lanes, replace intersection warning signs	Construction of safety improvements	79,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Poston Rd	N/A	2	Needs identified to improve roadway striping, upgrade lighting, install/upgrade sidewalks, install pedestrian warning signs on Mohave Rd	Construction of safety improvements	256,000	Commercial developments

Street Name / BIA Route Number	Cross Street	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1)	Patrick Rd	N/A	2	Needs identified to repair damaged guardrail and posts, install chevron signs to increase visibility.	Construction of safety improvements	27,000	Commercial, residential, government and agricultural land uses.
Indian School Rd (Rte 14)	4th Ave	N/A	4	Needs identified to remove stop signs and markings, replace and relocate arrow signs, improve markings and edgelines	Construction of safety improvements	18,000	
Burns Rd (Rte 10)	SR 95	N/A	4	This project is currently programmed in the Tribal TIP and the scope is to extend Burns Rd and construct turn lanes at SR 95**	Construction of safety improvements	85,000	
Airport Road (Rte 45)		N/A	5	Limited signage to direct travelers to the Airport	Informational signage	5,000	Avi Suquilla Airport

*Functional Class: 2= Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

**Note: Burns Rd (Rte 10) cost estimate is from CRIT Tribal TIP

***Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

5.3 SAFETY PROJECTS

There are a number of areas that require on-going efforts to promote safety. These projects are summarized as follows:

1. Safety focused education campaign
2. Future CRIT Road Safety Assessment locations
3. Improved crash reporting procedures
4. Signing and striping projects
5. Other safety projects

5.3.1 SAFETY FOCUSED EDUCATION CAMPAIGN

A safety-focused educational campaign would incorporate safety into school curriculum at all levels of education. Elements of this project would be to develop age appropriate traffic safety education programs and then disseminate the materials and provide teacher training about the materials. Another focus area recommended is to try to procure funding for the successful Tribal Motor Vehicle Injury Prevention program, which is funded by the Center for Disease Control to the CRIT Police Department. This innovative program, which ends in September, 2014, includes focus on increasing adult seat belt use and reduction of adult Driving under the Influence (DUI) through a number of strategies, including events, media spots, videos and Public Service Announcements.

5.3.2 FUTURE ROAD SAFETY ASSESSMENT LOCATIONS

It is also recommended that further evaluation of high crash locations be conducted. Road Safety Assessments (RSAs) may be considered at the following locations:

- Mohave Road (MP 10-35)
- SR 95/ Moovalya Shopping Center
- California Avenue/Agency Road

5.3.3 CRASH REPORTING PROCEDURES

The Colorado River Indian Tribes Police Department has undertaken an extensive process to convert crash records to match the data field and requirements of the ADOT crash reporting format. This effort is important to help identify crash patterns and should be continued in the future.

5.3.4 SIGNING AND STRIPING PROJECTS

The proposed transportation plan includes a general project for signing and striping projects, because generally these improvements must be done on an as-needed basis. Key priorities are:

Speed control - An issue that was raised during stakeholder interviews was the need for additional speed limit signing and speed control on Mohave Road. The Bureau of Indian Affairs Road Maintenance Manual states that the posted speed limit will be established after an engineering and traffic investigation has been made in accordance with established traffic engineering practices. It also states that the BIA shall install and replace signs in accordance with the current edition of the Manual of Uniform Traffic Control Devices (MUTCD). Although the MUTCD does not have guidelines for speed limit sign spacing, a January 2009 recommendation from the National Committee on Uniform Traffic Control

Devices, Regulatory Warning Signs Technical Advisory Committee indicated the following minimum spacing of reminder signs:



Solar Speed monitors can improve compliance with speed limits

- Rural roads 55 mph and higher- approximately every 10 miles
- Rural roads 45 and 50 mph- approximately every 2 miles.

Speed reminders such as solar speed signs can be used to remind drivers of their speed.

Striping – A key priority is provision of upgraded striping on Mohave Road, which is the highest volume road on the reservation. Improvements would include centerline and edge striping, and potentially installation of raised pavement markers, as the road is the main thoroughfare through the community. Rumble strips on shoulders can also potentially improve safety by alerting drivers that they are crossing into the shoulder area.

Replacement signing – Providing replacement signing is on-going process. Signing needs observed during the RSA field review were:

- Booth Road, 1st Avenue to .8 miles east of 1st Avenue- bent sign needs replacement
- 2nd Avenue, Mohave Road to Booth Road – bent “Reduced Speed Ahead” sign needs replacement.
- 11th Avenue, Mark Road to Peterson Avenue – stop sign needs replacement
- 15th Avenue, Agnes Wilson Road to Burns Road – chevrons have graffiti markings
- Patrick Road/16th Avenue - Need street name sign for 16th Avenue
- Marks Road/11th Avenue - Yield Sign needs to be replaced or removed
- Replacement of advance street name signs, which was noted on Mohave Road during the 2013 CRIT Road Safety Assessment.
- Improved signage at a number of culvert and canal crossings.

Safety-related signing – Examples of safety related signs are those that remind drivers to use their seatbelts, not to text while driving, and not to drink and drive.

A sign inventory is a requirement for obtaining Highway Safety Improvement Program funds for signing projects, and would be valuable to determine specific sign replacement needs.

5.3.5 OTHER SAFETY PROJECTS

Canal safety improvements

There were a number of culvert and canal crossings that need improvements such as object markers, warning signs for narrow crossings, and in some cases, headwalls and possibly guardrails. The areas these canals or culverts are located are:

- Burns Road, 15th Avenue to 12th Avenue
- 7th Avenue, Agnes Wilson Road to Indian School Road
- 13th Avenue, Peterson Road to Hopi Road, and Patrick Road to Burns Road
- Agnes Wilson Road, Mohave Road to 7th Avenue
- Scott Road, Bridge 045 to Mohave Road
- McCabe Road, 23rd Avenue to Bridge H020
- Peterson Road, Mohave Road to 9th Avenue
- 6th Avenue, Gould Road to Mohave Road
- 14th Avenue, Bridge 040 to Marks Road
- Mohave Road- entire length should be evaluated for potential guardrails at canal crossings

Street lighting

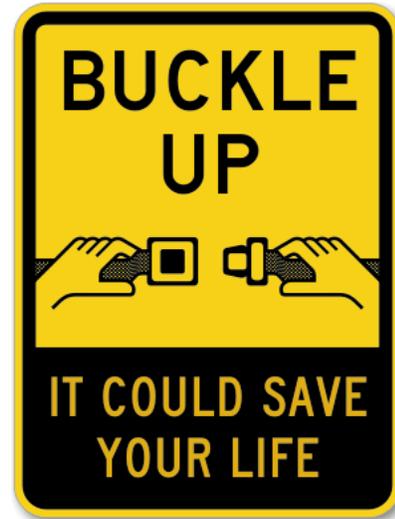
Street lighting needs were identified at the following locations during the RSA:

- Mohave Road/Poston Road
- Mohave Road /2nd Avenue
- 1st Avenue from Mohave Road to the Hospital, along Mohave Road from 1st to 2nd Avenue, and from Mochem housing near Booth Road and 4th Avenue to the Tribal offices on 2nd Avenue

Tribal safety laws

Other safety projects include promoting the passage of two tribal laws:

1. **A primary seat belt law** - Primary seat belt laws allow law enforcement officers to ticket a driver or passenger for not wearing a seat belt, without any other traffic offense taking place. Other tribal nations, such as the Navajo Nation, have shown dramatic increases in seat belt usage and reduction in injuries and fatalities in motor vehicle crashes with such a law.
2. **A law lowering the definition of Driving under the Influence (DUI) to blood alcohol content (BAC) of 0.08 from the current BAC of 0.10.** Blood alcohol content is the concentration of alcohol in blood.



This change would make the laws regarding DUI on the Colorado River Indian Tribes Reservation consistent with laws for the State of Arizona.

5.4 PAVEMENT MAINTENANCE AND RECONSTRUCTION PROJECTS

Road maintenance and reconstruction projects were a key focus of the development of the transportation plan. These projects provide road users with improved comfort, speed, and safety; and lower vehicle operating costs.

Two types of recommended activities, preventive maintenance and reconstruction, will provide the Colorado River Indian Tribes with the framework and general guidelines to follow when making decisions regarding the maintenance of pavement infrastructure.

Pavement maintenance and reconstruction project locations are shown in **Figure 12** and in **Table 30**.

5.4.1 RECOMMENDED RECONSTRUCTION PROJECTS

Recommended reconstruction projects were based on the findings of a field review that assessed pavement conditions on approximately 132 miles of roads, and input from stakeholders and the general public. The reconstruction projects assume a full-depth removal of the existing pavement including base course, scarifying and recompacting the existing subgrade (if weak it may need to be stabilized with lime or other treatments), and construction of a typical section which is 6" of aggregate base course and 4" of asphalt pavement. The pavement reconstruction projects assume that the pavement will be widened to meet BIA standards. This assumes the following roadway and shoulder widths by BIA functional class:

BIA Class	Roadway Width (feet)	Shoulder Width (feet)
Class 4-Rural Major Collector	32	4
Class 5 – Rural Local Roads	28	2

The widening of Class 4 roads will also provide a shoulder that can be used as a bicycle lane. Class 4 functionally classified roads are 1st Avenue, Indian School Road, McCabe Road, Navajo Road, Peterson Road, and Scott Road.

5.4.2 PREVENTIVE MAINTENANCE RECOMMENDATIONS

Preventive maintenance activities that should be considered by the Colorado River Indian Tribes include, but are not limited to, crack sealing, patching, and surface treatments. Surface treatments, such as chip seals, are typically applied on an interval basis and each treatment results in an increase in life of the pavement section. Specific type of treatment would typically be determined at a time closer to application based on existing conditions. Recommendations for preventive maintenance projects are summarized in **Table 31**.

Surface treatments such as chip seals are used primarily to slow the rate of deterioration and extend the life of the pavement. These treatments are most cost-effective when applied to a pavement section that is not significantly deteriorated and is mainly exhibiting climate-related distresses such as longitudinal cracking or weathering and raveling.

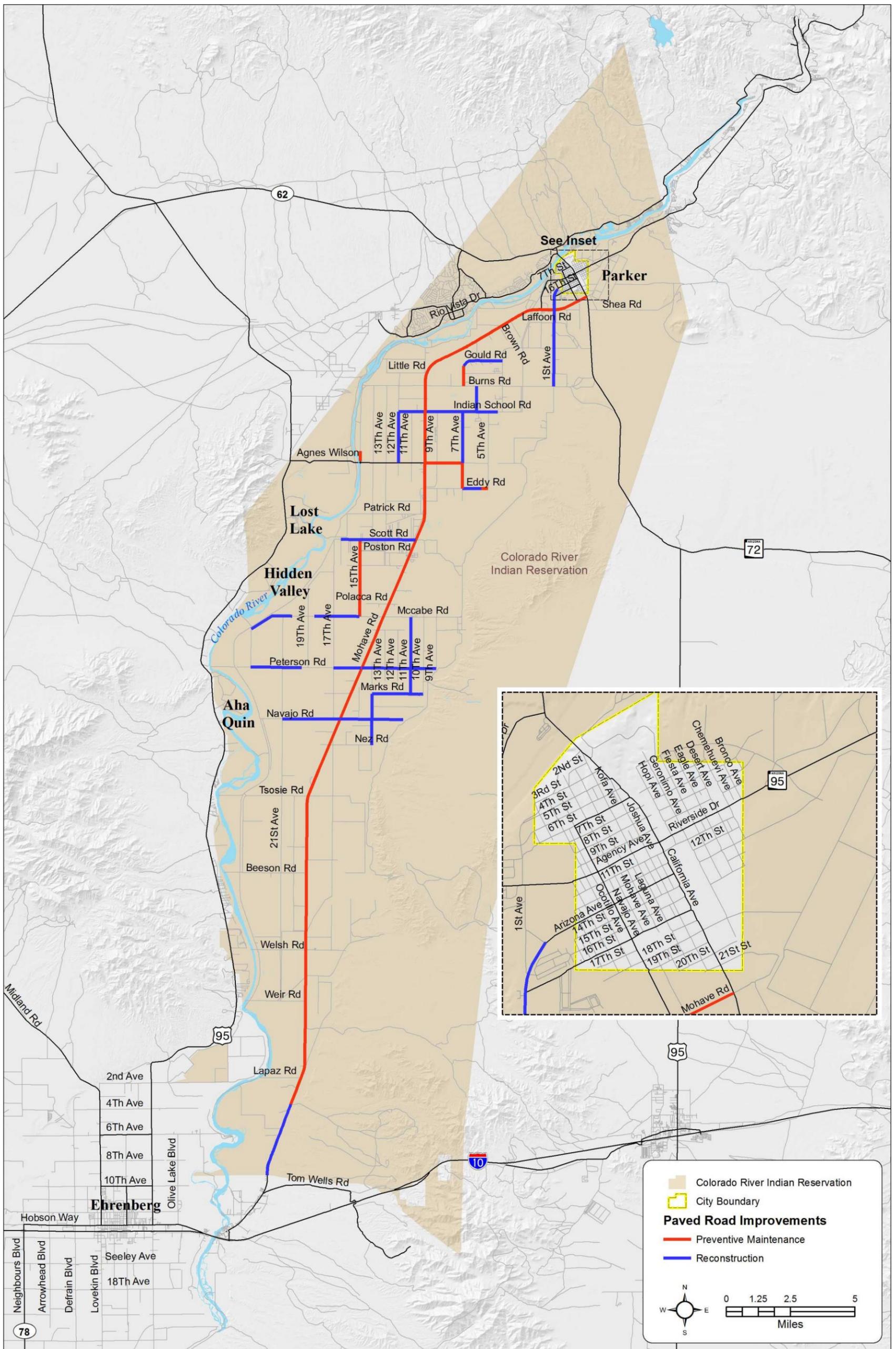


Figure 12 – Reconstruction and Preventive Maintenance Projects

Table 30 – Recommended Reconstruction Projects

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
11th Ave (Rte 15)	Agnes Wilson Rd	Indian School Rd	2.00	5	Paved road	Reconstruction	1,182,000	Agricultural, residential
11th Ave (Rte 15)	Mark Rd	Peterson Ave	1.00	5	Paved road	Reconstruction	591,000	Agricultural, residential
11th Ave (Rte15)	Peterson Ave	McCabe Rd	2.00	5	Paved road	Reconstruction	1,183,000	Agricultural, residential
14th Ave (Rte 117)	Bridge H040	Mark Rd	1.30	5	Paved road	Reconstruction	769,000	Agricultural, residential
14th Ave (Rte 117)	Nez Rd	Bridge H040	0.80	5	Paved road	Reconstruction	473,000	Agricultural, residential
1st Ave (Rte 3)	Burns Rd	Mohave Rd	3.00	4	Paved road	Reconstruction	2,028,000	Agricultural, residential
6th Ave (Rte 99)	Indian School Rd	Burns Rd	1.00	5	Paved road	Reconstruction	591,000	Agricultural, residential
Eddy Rd (Rte 20)	7th Ave	canal crossing	0.80	5	Paved road	Reconstruction	473,000	Agricultural, residential
Indian School Rd (Rte 14)	11th Ave	Mohave Rd	0.50	4	Paved road	Reconstruction	338,000	Residential, agricultural, and Head Start School

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
Indian School Rd (Rte 14)	Mohave Rd	4th Ave	3.00	4	Paved road	Reconstruction	2,028,000	Residential , agricultural, and Head Start School
Mark Rd (Rte 36)	0.3 miles west of 10th Ave	10th Ave	0.30	5	Paved road	Reconstruction	177,000	Agricultural, residential
McCabe Rd (Rte 30)	23rd Ave	Bridge H020	1.90	4	Paved road	Reconstruction	1,284,000	Agricultural, residential
Mohave Rd (Rte 1)	South CRIT reservation boundary	2.8 miles north of south boundary	2.80	2	Paved road	Reconstruction	2,128,000	Agricultural, residential
Navajo Rd (Rte 38)	0.3 miles west of rd end	east end of Navajo Rd	0.30	4	Paved road	Reconstruction	203,000	Agricultural, residential
Navajo Rd (Rte 38)	21st Ave	Mohave Rd	2.20	4	Paved road	Reconstruction	1,487,000	Agricultural, residential
Navajo Rd (Rte 38)	Bridge H039	0.3 miles west of road end	1.20	4	Paved road	Reconstruction	811,000	Agricultural, residential
Navajo Rd (Rte 38)	Mohave Rd	Bridge H039	1.00	4	Paved road	Reconstruction	676,000	Agricultural, residential
Peterson Rd (Rte 34)	Mohave Rd	9th Ave	2.90	4	Paved road	Reconstruction	1,960,000	Agricultural, residential

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
1st Ave (Rte 3)	Mohave Rd	W. Arizona Ave	0.60	4	Paved road	Reconstruction	406,000	Agricultural, residential
7th Ave (Rte 11)	Agnes Wilson Rd	Indian School Rd	2.00	5	Paved road	Reconstruction	1,183,000	Agricultural, residential
Gould Rd (Rte 6)	7th Ave	4th Ave	1.60	5	Paved road	Reconstruction	946,000	Agricultural, residential
Mark Rd (Rte 36)	14th Ave	0.3 miles west of 10th Ave	1.70	5	Paved road	Reconstruction	1,005,000	Agricultural, residential
Scott Rd (Rte 24)	16th Ave	Bridge H045	0.10	4	Paved road	Reconstruction	68,000	Agricultural, residential
Scott Rd (Rte 24)	Bridge H045	Mohave Rd	2.70	4	Paved road	Reconstruction	1,825,000	Agricultural, residential
Booth Rd (Rte 4)	Bridge H043	1st Ave	1.20	5	Paved road	Reconstruction	710,000	Agricultural, residential
McCabe Rd (Rte 30)	Bridge H020	Bridge H021	2.80	4	Paved road	Reconstruction	1,892,000	Agricultural, residential
Peterson Rd (Rte 34)	23rd Ave	canal west of 17th Ave	1.80	4	Paved road	Reconstruction	1,217,000	Agricultural, residential
Peterson Rd (Rte 34)	Bridge H024	Mohave Rd	0.90	4	Paved road	Reconstruction	608,000	Agricultural, residential

Table 31 – Recommended Preventive Maintenance Projects

Street Name	From	To	Length (miles)	BIA Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1)	2.8 miles north of reservation boundary, south of La Paz Road	Bridge H008 - north of Weir Road (Tyson Wash Bridge)	5.20	2	Paved road	Road maintenance	824,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Agnes Wilson Road	Bridge H004	3.30	2	Paved road	Road maintenance	502,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H003	SR 95	2.20	2	Paved road	Road maintenance	335,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H004	Bridge H003	5.00	2	Paved road	Road maintenance	760,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H006	Bridge H005	1.00	2	Paved road	Road maintenance	152,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H008 (Tyson Wash Bridge)	Canal Bridge H007	1.80	2	Paved road	Road maintenance	274,000	Commercial, residential, government and agricultural land uses.

Street Name	From	To	Length (miles)	BIA Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1)	Canal Bridge H007	Just south of Beeson Road	2.00	2	Paved road	Road maintenance	304,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Eddy Road	Agnes Wilson Road	1.00	2	Paved road	Road maintenance	152,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Just south of Beeson Road	Peterson Road	7.70	2	Paved road	Road maintenance	1,171,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Peterson Road	Bridge H006 (Patrick Road is just immediately north of the bridge)	7.40	2	Paved road	Road maintenance	1,125,000	Commercial, residential, government and agricultural land uses.
Eddy Road (Rte 20)	canal crossing	5th Avenue	0.10	5	Paved road	Road maintenance	10,000	Agricultural, residential
15th Avenue (Rte 19)	Agnes Wilson Road	0.1 mi north of Agnes Wilson Road	0.10	5	Paved road	Road maintenance	15,000	Agricultural, residential
15th Avenue (Rte 19)	McCabe Road	Scott Road	3.00	5	Paved road	Road maintenance	456,000	Agricultural, residential
7th Avenue (Rte 11)	Burns Road	Gould Road	0.80	5	Paved road	Road maintenance	122,000	Agricultural, residential

Street Name	From	To	Length (miles)	BIA Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)	Existing and/or Proposed Development Served by Road
7th Avenue (Rte 11)	Eddy Road	Agnes Wilson Road	1.00	5	Paved road	Road maintenance	139,000	Agricultural, residential
Agnes Wilson Road (Rte 18)	Mohave Road	7th Avenue	1.50	4	Paved road	Road maintenance	228,000	Agricultural, residential

*Functional Class: 2= Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

** Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

5.5 TRANSIT PROJECTS

The development of a transit system is an important need for the Colorado River Indian Tribe. The need for transit service was demonstrated based on the findings of two surveys, and analysis using the procedures in Transit Cooperative Research Program Report 161 – Methods for Forecasting Demand and Quantifying the Need for Rural Passenger Transportation: Final Workbook. Origins and destinations for the transit system have been identified through public input, surveys, and a review of land uses. These analyses are provided in a Transit Technical Memorandum in **Appendix E, under separate cover**.

Work is currently underway under a separate Federal Transit Administration contract to develop a detailed implementation plan for the transit system, with recommended routes and anticipated operating costs and revenues.

5.6 AVIATION PROJECTS

Aviation projects were developed as part of the Avi Suquilla Airport Master Plan Update completed in 2013. The Airport Capital Improvement Plan from the Airport Master Plan Update is shown in **Table 32**. Maps of the proposed improvements are shown in **Appendix F, under separate cover**. Projects related to the road system serving the airport include:

- Construct an all-weather perimeter road around the Airport.
- Provide signage upgrades and improve aircraft storage area.
- Drainage improvements and fire water line on Airport Road, including re-paving
- Parking lot construction as part of the terminal, ARFF Building, hangar and parking lot Construction project
- Paving improvements to runways, apron areas, perimeter road over time

As the perimeter road is developed, consideration should be given to adding it to the Tribal Transportation Inventory. It should be noted that the criteria for the short term, medium term and long term projects in the Airport Master Plan Update are based on activity milestones for each planning horizon; those are certain levels of based aircraft and annual operations. For this reason, these projects are prioritized separately from other transportation projects.

Other recommended projects are funding for a van to serve airport passengers, or coordination with a future transit system, perhaps on a demand-responsive basis.

Table 32 – Avi Suquilla Airport Capital Improvement Plan

Time Frame	Project Description	Estimated Total Cost (\$)*
Short Term	Airfield Pavement Preservation	800,000
	Runway 1-19 Easterly Erosion Control	562,000
	Drainage Improvements/Fire Water Line	2,150,000
	Construct parallel Taxiway C	2,100,000
	Runway 1-19 Westerly Erosion Control	562,000
	Eastern Apron Expansion – Phase 1	2,471,000
	Signage Upgrades and Develop Aircraft Storage Area	54,000
	Runway 1-19, Taxiway A and Taxiway B Crack seal	411,000
	GA Apron Pavement Preservation	518,000
	Construct Perimeter Road	1,725,000
Intermediate Term	Eastern Apron Expansion – Phase 2	1,364,000
	Runway 1-19 Overlay	1,764,000
	Transient Apron Overlay	520,000
	Northern Apron Expansion- Phase 1	1,821,000
	Taxiway C Crack Seal	49,000
	Taxiways A and B Overlay	1,676,000
	Northern Apron Expansion- Phase 2	900,000
	Terminal, ARFF Building, Hangar and Parking Lot Construction	3,290,000
	Crack Seal – Runway 1-19, Taxiways A and B, Apron and Perimeter Road	377,000
	Seal Coat-Taxiway C and North Apron Expansion	224,000
Long Term	Southern Apron Expansion- Phase 1	1,500,000
	Southern Apron Expansion- Phase 2	1,714,000
	Seal Coat - Runway 1-19, Taxiways A and B, Apron and Perimeter Road	1,351,000
	Crack Seal - Taxiway C and North Apron Expansion	56,000
	Acquire Land for Southern Runway Extension	875,000

Time Frame	Project Description	Estimated Total Cost (\$)*
	Runway 1-19 Southern Extension	1,734,000
	Crack Seal- Runway 1-19, Taxiways A and B, Apron and Perimeter Road	377,000
	Seal Coat - Taxiway C and North Apron Expansion	224,000
	Acquire Land for Northern Runway Extension	625,000
	Runway 1-19 Northern Extension	1,848,000
	Seal Coat - Runway 1-19, Taxiways A and B, Apron and Perimeter Road	1,351,000
	Crack Seal- Taxiway C and North Apron Expansion	56,000
	Acquire land east of existing property line for future development	2,200,000

Source: Avi Suquilla Airport Master Plan Update, June 2013

* Costs were excerpted from Ava Suquilla Airport Master Plan Update, June 2013

5.7 BRIDGE IMPROVEMENT PROJECTS

Bridge projects were developed based on input from the Bureau of Indian Affairs (BIA) Western Regional Office (WRO). Information on project descriptions, project length, and project costs were obtained from the *Indian Reservation Road Program Bridge Management System Structural Inventory and Appraisal Sheets*. Bridges are inspected every two years and are assigned a numerical sufficiency rating. The sufficiency rating (SR) is a numerical rating of a bridge based on its structural adequacy and safety, essentiality for public use, and its serviceability and functional obsolescence for the width, approach roadway, and traffic capacity. It is a rating tool developed by the FHWA for prioritizing bridges for funding. The SR of a bridge varies from 0 (very poor) to 100 (very good). Bridges with an SR of 80 or less are eligible for rehabilitation, and bridges with an SR less than 50 are eligible for replacement or rehabilitation. Twelve bridges have sufficiency ratings below 80, indicating the need to rehabilitate or replace them. Proposed bridge projects are shown graphically on **Figure 13**, and are summarized in **Table 33**.

A key bridge improvement project is replacement of the bridge on Mohave Road (Rte 1) at Tyson Wash. Tyson Wash is one of the larger washes that enter the Colorado River. For this reason, and because it crosses Mohave Road, the major roadway through the CRIT Reservation, this bridge improvement is a priority. Based on correspondence with the BIA, Plans, Specification and Estimates (PS&E) documents have been prepared and submitted to FHWA for the replacement of Mojave Road Bridge H008 over Tyson Wash, using BIA - Tribal Bridge Program (TBP) funds at an estimated cost of \$9,465,000. Construction funding has not yet been approved / received for this bridge replacement project due to the reduction of BIA bridge replacement funding from \$13 million under Safety-LU, to \$9 million under MAP-21. BIA is working with FHWA to have TBP funding set aside for this project over the next three years, so construction can begin in FY 2016. This project is shown as a short range project in this plan.

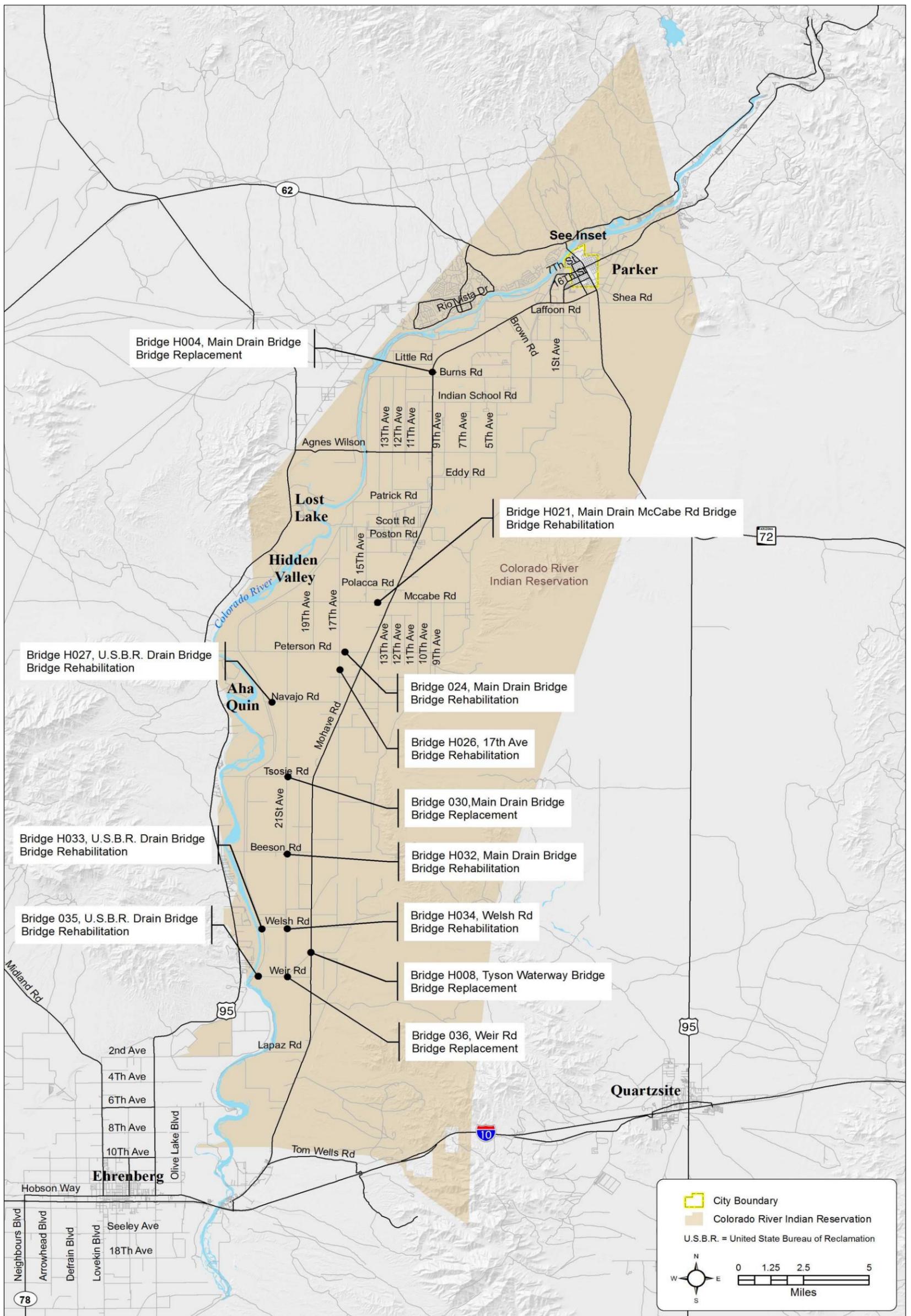


Figure 13 – Proposed Bridge Projects

Table 33 – Proposed Bridge Replacement or Rehabilitation Projects

Street Name / BIA Route Number	Location - Bridge Number	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions – Bridge Sufficiency Rating	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1) at Tyson Wash	H008	0.093	2	Sufficiency rating - 73.3	Bridge Replacement	9,465,000**	serves multiple land uses
Mohave Road (Rte 1)	H004	0.014	2	Sufficiency rating - 46.5	Bridge Replacement	120,000	serves multiple land uses
17th Avenue (Rte 21)	H026	0.014	4	Sufficiency rating - 68.0	Bridge Rehabilitation	79,000	Agricultural
McCabe Road (Rte 30)	H021	0.017	4	Sufficiency rating - 56.8	Bridge Rehabilitation	74,000	Agricultural
Peterson Road (Rte 34)	H024	0.014	4	Sufficiency rating - 25.9	Bridge Rehabilitation	82,000	Agricultural
Navajo Road (Rte 38)	H027	0.011	4	Sufficiency rating - 60.0	Bridge Rehabilitation	56,000	Agricultural
Tsosie Road (Rte 44)	H030	0.017	4	Sufficiency rating - 47.8	Bridge Replacement	89,000	Agricultural
Beeson Road (Rte 50)	H032	0.015	5	Sufficiency rating - 49.8	Bridge Rehabilitation	40,000	Agricultural
Welsh Road (Rte 56)	H033	0.014	5	Sufficiency rating – 54.0	Bridge Rehabilitation	167,000	Agricultural

Street Name / BIA Route Number	Location - Bridge Number	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions – Bridge Sufficiency Rating	Proposed Improvement	Total Cost (\$)**	Existing and/or Proposed Development Served by Road
Welsh Road (Rte 56)	H034	0.014	5	Sufficiency rating – 59.5	Bridge Rehabilitation	115,000	Agricultural
Weir Road (Rte 60)	H035	0.011	5	Sufficiency rating – 58.5	Bridge Rehabilitation	98,000	Agricultural
Weir Road (Rte 60)	H036	0.019	5	Sufficiency rating – 47.0	Bridge Replacement	600,000	Agricultural

* Functional Class: 2= Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

**Per 10/9/13 e-mail from Bob Maxwell, BIA-WRO Regional Roads Planner, they are working with FHWA to have Tribal Bridge Program funds set aside for this project over the next three years, so construction can begin in FY 2016

***Project costs were developed by the Bureau of Indian Affairs.

5.8 PAVING DIRT OR GRAVEL ROAD PROJECTS

Providing a paved road surface results in a number of benefits, including reduced levels of dust, reduced vehicle maintenance costs, and improved safety. **Figure 14** summarizes recommended paving projects on dirt or gravel roads. The cost estimates for these projects assume that the roads will be paved with asphalt to cover a 24 foot width, which is the Bureau of Indian Affairs (BIA) minimum subdivision street width for an uncurbed local street and accommodates one travel lane in each direction. The project locations are summarized in **Table 34**.

Some of these roads are not currently on the Tribal Transportation Inventory and it is recommended that they be added to the Tribal Transportation Inventory and functionally classified. Additions to the Tribal Transportation Inventory are discussed in **Chapter 8**. BIA route numbers are noted for roads that are part of the Tribal Transportation Inventory.



Gravel road on the Colorado River Indian Tribes Reservation

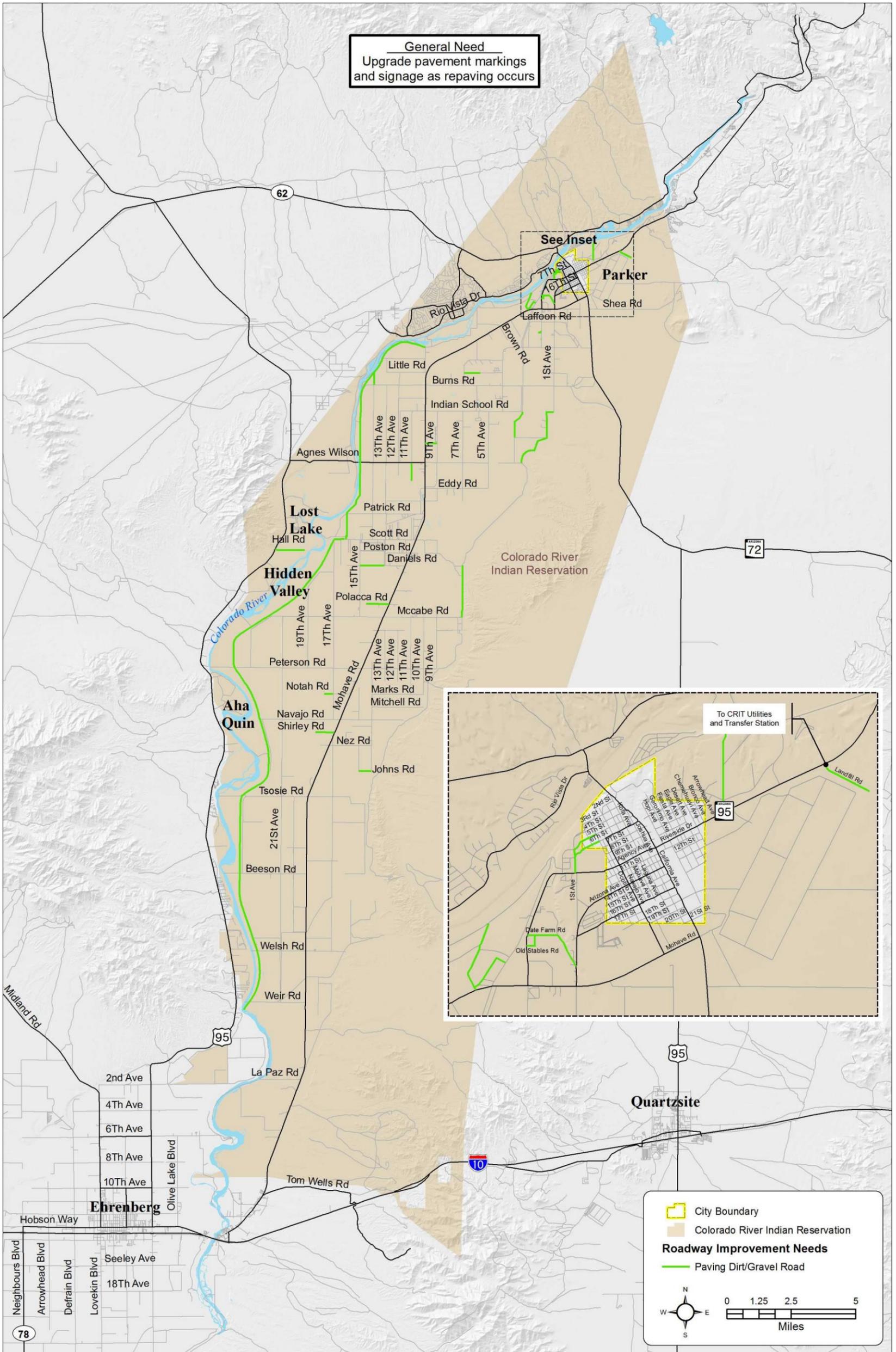


Figure 14 – Locations for Paving Projects

Table 34 – Proposed Paving Projects on Dirt or Gravel Roads

Road Name / Route Number	From	To	Length (miles)	Existing Roadway or Site Conditions	BIA Road Functional Classification*	Total Project Cost (\$) **	Existing or Proposed Development served by Road
5th Street	Quartz Ave	Roosevelt St	0.23	Unpaved	Not classified	175,000	Provides neighborhood access to Agency Rd
6th Street	Quartz Ave	Roosevelt St	0.17	Unpaved	Not classified	129,000	Provides neighborhood access to Agency Rd
11th Avenue (Rte 15)	Agnes Wilson Rd	south end of road	0.5	Unpaved	5	379,000	Provides neighborhood access (two homes)
14th Avenue (Rte 117)	Burns Rd	Levee Rd	0.5	Unpaved	5	379,000	Extends 14th Ave to end
14th Avenue (Rte 117)	Patrick Road	White Road	0.5	Unpaved	5	379,000	Extends 14th Ave to Levee Rd (Serves two homes/farms)
15th Avenue (Rte 19)	Agnes Wilson Rd	canal north of Scott Rd	3.32	Unpaved	5	2,511,000	Provides better access to agricultural area
7th Ave (Rte 11)	McCabe Rd	Scott Rd	3.00	Unpaved	5	2,270,000	Provides recreational access and access to gravel pit.
Daniels Rd (Rte 260)	Mohave Rd	Canal	0.66	Unpaved	5	500,000	Serves agricultural area, adjacent to canal
Date Farm (Rte 303)	2nd Ave	First Ave	0.68	Unpaved	3	515,000	Residential access
Hall Rd	US 95	east end of road	1.15	Unpaved	Not classified	870,000	Provides better access to the Colorado River - on the California side of the Reservation
Johns Rd (Rte 42)	15th Ave	14th Ave	0.49	Unpaved	5	371,000	Serves residences and needed for emergency access
Levee Rd	Dam	Scott Road	21.2	Unpaved	Not classified	16,037,000	Provides access to east side of Colorado River

Road Name / Route Number	From	To	Length (miles)	Existing Roadway or Site Conditions	BIA Road Functional Classification*	Total Project Cost (\$) **	Existing or Proposed Development served by Road
Levee Rd	15th Ave	End of Unpaved portion of Levee Road	7.71	Unpaved	Not classified	5,833,000	Provides access to east side of Colorado River
Levee Rd	unnamed road	Bridge at canal/end of unpaved portion	1.21	Unpaved	Not classified	915,000	Provides access to east side of Colorado River
Little Rd (Rte 8)	7th Ave	Mo Chem	1.00	Unpaved	5	757,000	Serves Mo-Chem neighborhood - approximately 50 homes
Mitchell Rd (Rte 360)	13 th Ave	Canal	0.76	Unpaved	5	575,000	Extends paved portion of Mitchell Rd to canal
Notah Rd (Rte 340)	Canal	17th Ave	0.41	Unpaved	5	311,000	Serves 1 home
Polacca Rd (Rte 280)	0.39 miles west of Mohave Rd	Mohave Rd	0.39	Unpaved	5	296,000	Serves three homes and agricultural areas
3rd Avenue (Rte 55)	Rd to Ahakhav Tribal Preserve	unnamed canal path	0.54	Unpaved	5	408,956	Serves Rodeo Subdivision area - approximately 9 homes
Scott Rd (Rte 24)	Levee Rd	16th Ave	0.48	Unpaved	4	364,000	Extends the paved portion of Scott Road to Levee Road

Road Name / Route Number	From	To	Length (miles)	Existing Roadway or Site Conditions	BIA Road Functional Classification*	Total Project Cost (\$) **	Existing or Proposed Development served by Road
Shirley Rd (Rte 380)	Canal	Mohave Rd	0.79	Unpaved	5	598,000	Serves three homes
Mission Subdivision Street	2 nd Avenue	West end of road	0.1	Unpaved	Not classified	76,504	Serves Mission Subdivision - approximately 6 homes
Appaloosa subdivision streets	Unnamed roads	N/A	0.6	Unpaved	Not classified	454,000	Serves Appaloosa Subdivision - approximately 30 homes
Landfill Rd	US 95	Landfill	1.66	Unpaved	Not classified	1,256,000	serves Landfill
Kudo Farms Rd	1st Avenue	Kudo Farms	2.53	Unpaved	Not classified	1,914,000	Serves Farm and an undetermined number of homes
Service Rd	Walmart	BlueWater Resort and Casino	0.84	Unpaved	Not classified	636,000	Provides alternative access between Wal-Mart and BlueWater Resort area
Landfill Rd to CRIT Utilities and Transfer Station	SR 95	Utilities and Transfer Station	0.55	Unpaved	Not classified	417,000	Provides better access to Utilities and Transfer station
Old Stables Rd	Date Farm Rd	2nd Ave	0.16	Unpaved	Not classified	122,000	Provides access to neighborhood area- approximately 9 homes

*Functional Class: 2= Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

** Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

5.9 OTHER TRANSPORTATION PROJECTS

Other transportation projects were identified during the course of the project, which included:

- Paving needs for parking areas for community facilities;
- Equipment needs for the Police and Fire Departments, including items for temporary traffic control, such as variable message signs; and
- Maintenance equipment needs.

6. Project Prioritization and Plan of Improvements

The transportation improvement projects that were identified in **Chapter 5** will address critical needs through 2030 and beyond. These projects were further prioritized into the following categories:

Short-range projects (FY 2018-2022) – In general, short-range projects are those needed to address current needs and deficiencies, for which funding can reasonably be identified. Short range projects also include currently programmed projects in the 2012 Tribal Transportation Improvement Plan (TTIP).

Mid-range projects (FY 2023-2027) – These are higher cost projects that have higher priorities due to safety or connectivity. Mid-range projects also include projects that can be linked to projects currently programmed or planned in the mid-range time frame.

Long-range projects (2028-2038 and beyond) – These are higher cost projects that may need additional lead time to obtain funding, or can be linked to long-range projects currently planned.

Project phasing was accomplished through a process summarized as follows:

- Projects were divided into broad categories and planning level costs were developed.
- Paving projects and safety-related projects were given higher priority.
- Anticipated project benefits were identified, such as benefits to development and land uses.
- For resurfacing and preventive maintenance projects, pavement assessment scores and BIA functional class were reviewed.

The top projects in each category were assigned to short, mid- or long range programs. The prioritization was reviewed at a workshop with CRIT and ADOT staff in November 2013.

Aviation projects are summarized separately on page 97, and have implementation periods that are based on meeting activity milestones rather than specific years.

6.1 PROJECT PRIORITIZATION – SHORT-RANGE PROJECTS

Short range transportation projects are those identified for implementation in the time frame 2018-2022. It would succeed the current Tribal Transportation Improvement Program, which runs from 2013-2017. Should additional funding be available in the current Tribal Transportation Improvement Plan, some of these projects could potentially be implemented sooner.

It should be noted that the Bridge Replacement project on Mohave Road at Tyson Wash (Bridge H008) is shown in the short range program, although funds may become available to construct this bridge sooner.

The total estimated cost of the short range program is \$16.625M, which is divided into the following project categories:

<u>Project Type</u>	<u>Cost (\$)</u>
Resurfacing projects	4,241,000
Preventive maintenance projects	1,323,000
Bridge replacement or rehabilitation projects	9,547,000
Intersection Projects	274,000
Paving Dirt and Gravel road projects	454,000
Pedestrian projects	436,000
Other Projects	350,000
<u>Total</u>	<u>16,625,000</u>

Funding assumptions for the short range program are as follows:

<u>Funding Source</u>	<u>Estimated funding for 5-year period (\$)</u>
BIA Construction funds (through Tribal Transportation Program Formula)	5,200,000
BIA Bridge Program	9,465,000
Tribal Transportation Safety Program	150,000
Highway Safety Improvement Program	1,000,000
Other sources of funds (Surface Transportation Program, Tribal funds, other non-tribal sources)	810,000
<u>Total</u>	<u>16,625,000</u>

It should be noted that funding assumptions are estimates and can vary from year to year. Funding program sources are described in **Chapter 7**.

Table 35 summarizes the short-range projects. Projects on specific roads, intersections, or bridges are shown graphically in **Figure 15**. **Figure 15** also shows projects that are currently programmed in the Tribal Transportation Improvement Program (FY 2013-2017).

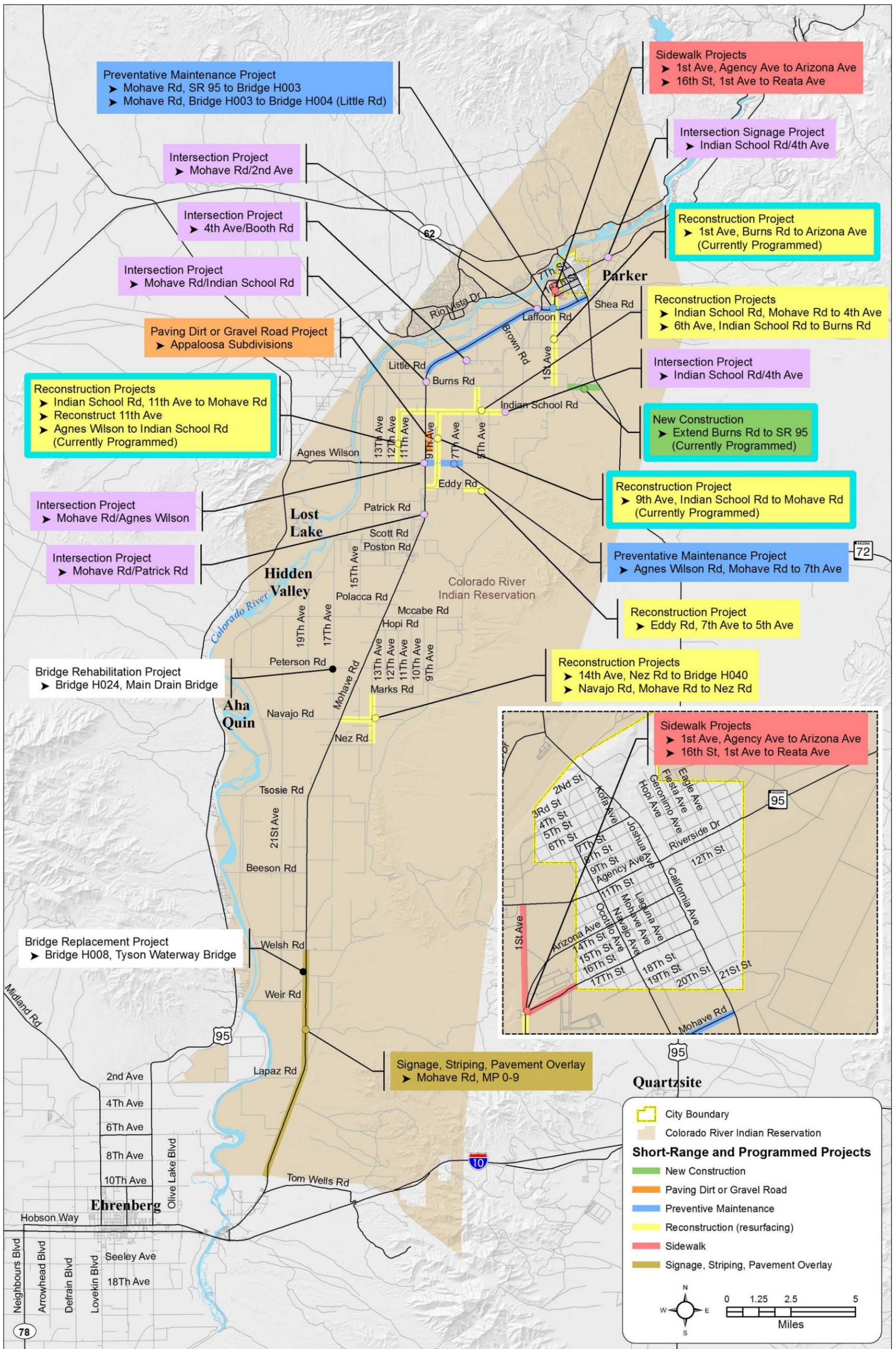


Figure 15 – Short-Range Projects

Table 35 – Short-Range Projects

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
Resurfacing Projects								
14th Ave (Rte 117)	Nez Rd	Bridge H040	0.80	5	Paved road	Reconstruction	473,000	Agricultural, residential
6th Ave (Rte 99)	Indian School Rd	Burns Rd	1.00	5	Paved road	Reconstruction	591,000	Agricultural, residential
Eddy Rd (Rte 20)	7th Ave	canal crossing	0.80	5	Paved road	Reconstruction	473,000	Agricultural, residential
Indian School Rd (Rte 14)	Mohave Rd	4th Ave	3.00	4	Paved road	Reconstruction	2,028,000	Residential, agricultural, and Head Start School
Navajo Rd (Rte 38)	Mohave Rd	Bridge H039	1.00	4	Paved road	Reconstruction	676,000	Agricultural, residential
Preventive Maintenance Projects								
Mohave Road (Rte 1)	Bridge H003	SR 95	2.20	2	Paved road	Road maintenance	335,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H004	Bridge H003	5.00	2	Paved road	Road maintenance	760,000	Commercial, residential, government and agricultural land uses.

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)***	Existing and/or Proposed Development Served by Road
Agnes Wilson Road (Rte 18)	Mohave Road	7th Avenue	1.50	5	Paved road	Road maintenance	228,000	Agricultural, residential
Bridge Replacement or Rehabilitation								
Mohave Road (Rte 1) at Tyson Wash	H008	N/A	0.093	2	Bridge Sufficiency rating - 73.3	Bridge Replacement	9,465,000**	serves multiple land uses
Peterson Road (Rte 34)	H024	N/A	0.014	4	Bridge Sufficiency rating - 25.9	Bridge Rehabilitation	82,000	Agricultural
Intersection Projects								
Mohave Road (Rte 1)	2nd Ave	N/A	N/A	2	Needs identified to elevate flashing beacon, install street lighting, reduce speed limit, install signs for Tribal Headquarters	Construction of safety improvements	121,000	Commercial, residential, government and agricultural land uses.

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)***	Existing and/or Proposed Development Served by Road
Booth Rd (Rte 4)	4th Ave	N/A	N/A	5	Needs identified to limiting access to canal road along curve, Install additional chevron signs to define curve	Construction of safety improvements	12,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Indian School Rd	N/A	N/A	2	Needs identified to reduce speed limit at Head Start, construct defined entrance for Head Start, Relocate mailboxes to Indian School Rd	Construction of safety improvements	12,000	Head Start School, residences
Mohave Road (Rte 1)	Agnes Wilson Rd	N/A	N/A	2	Needs identified to reduce speed limit, extend left turn lanes, replace intersection warning signs	Construction of safety improvements	79,000	Commercial, residential, government and agricultural land uses.

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
Mohave Road (Rte 1)	Patrick Rd	N/A	N/A	2	Needs identified to repair damaged guardrail and posts, install chevron signs to increase visibility.	Construction of safety improvements	27,000	Commercial, residential, government and agricultural land uses.
Indian School Rd (Rte 14)	4th Ave	N/A	N/A	4	Needs identified to remove stop signs and markings, replace and relocate arrow signs, improve markings and edgelines	Construction of safety improvements	18,000	
State Route 95 (Rte 95)	Airport Road	N/A	N/A	2	Paved Road	Informational signage	5,000	Avi Suquilla Airport
Paving Dirt and Gravel Roads projects								
Appaloosa subdivision streets	Unnamed community roads that connect to 9th Ave	N/A	0.6	Unclassified	Unpaved roads	Paving	454,000	Serves Appaloosa Subdivision - approximately 30 homes

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)***	Existing and/or Proposed Development Served by Road
Pedestrian Projects								
1st Ave (Rte 3)	Agency Ave	16th Street	0.66	4	Paved road	Sidewalks	436,000	Office, business, residential land uses
16th Street	1st Ave	0.06 miles west of Reata Ave	0.34	Unclassified	Paved road	Sidewalks		residences
Other Transportation Projects								
Sign Replacement Program	Various locations	N/A	N/A	N/A	Various	Signing	50,000	Various
Educational programs	N/A	N/A	N/A	N/A	N/A	Safety education	50,000	Applies Reservation-wide
Street lighting projects	Various locations	N/A	N/A	N/A	To be determined	Street lighting	50,000	This is a lump sum that would be used to improve street lighting on an as-needed basis
Canal crossing improvements	Various locations	N/A	N/A	N/A	To be determined	Safety improvements	50,000	This is a lump sum that would be used to improve safety at canal crossings on an as-needed basis

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification*	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)**	Existing and/or Proposed Development Served by Road
Parking lot repaving for public facilities	Various locations	N/A	N/A	N/A	To be determined	Paving	25,000	This is a lump sum that would be used to address public facility paving needs.
Maintenance equipment	Specific equipment to be determined	N/A	N/A	N/A	N/A	Maintenance	50,000	This is to reserve funds to purchase maintenance equipment
Temporary traffic control equipment – portable variable message signs	N/A	N/A	N/A	N/A	N/A	Traffic control	25,000	To be used at various locations
Speed control – solar speed monitors (2)	Mohave Road –specific locations to be determined	N/A	N/A	2	This would fund solar speed monitors on Mohave Road	Safety	50,000	Speed control – solar speed monitors (2)
Total, Short range projects							\$16,625,000	

*Functional Class: 2=Rural minor arterial road; 4=Rural major collector road; 5=Rural local road

**Note: This bridge is planned to be constructed starting in FY 2016

*** Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

6.2 PROJECT PHASING – MID-RANGE PROJECTS

Mid-range projects are summarized in **Table 36**, and are shown in **Figure 16**. Mid-range projects are those that may be implemented in the time from FY 2023-2027. These projects would need committed funds in order to be built.

Mid-range projects total **\$7,717,000**. The program comprises the following project types:

<u>Project Type</u>	<u>Cost (\$)</u>
Resurfacing projects	3,447,000
Preventive maintenance projects	1,371,000
Bridge replacement or rehabilitation projects	1,438,000
Intersection Projects	256,000
Paving Dirt and Gravel road projects	546,000
Pedestrian projects	309,000
Other Projects	350,000
<u>Total</u>	<u>7,717,000</u>

Funding assumptions for the mid -range program are as follows:

<u>Funding Source</u>	<u>Estimated funding for 5-year period (\$)</u>
BIA Construction funds (through Tribal Transportation Program Formula)	5,200,000
BIA Bridge Program	150,000
Tribal Transportation Safety Program	150,000
Highway Safety Improvement Program	1,000,000
Other sources of funds (Surface Transportation Program, Tribal funds, other non-tribal sources)	1,217,000
<u>Total</u>	<u>7,717,000</u>

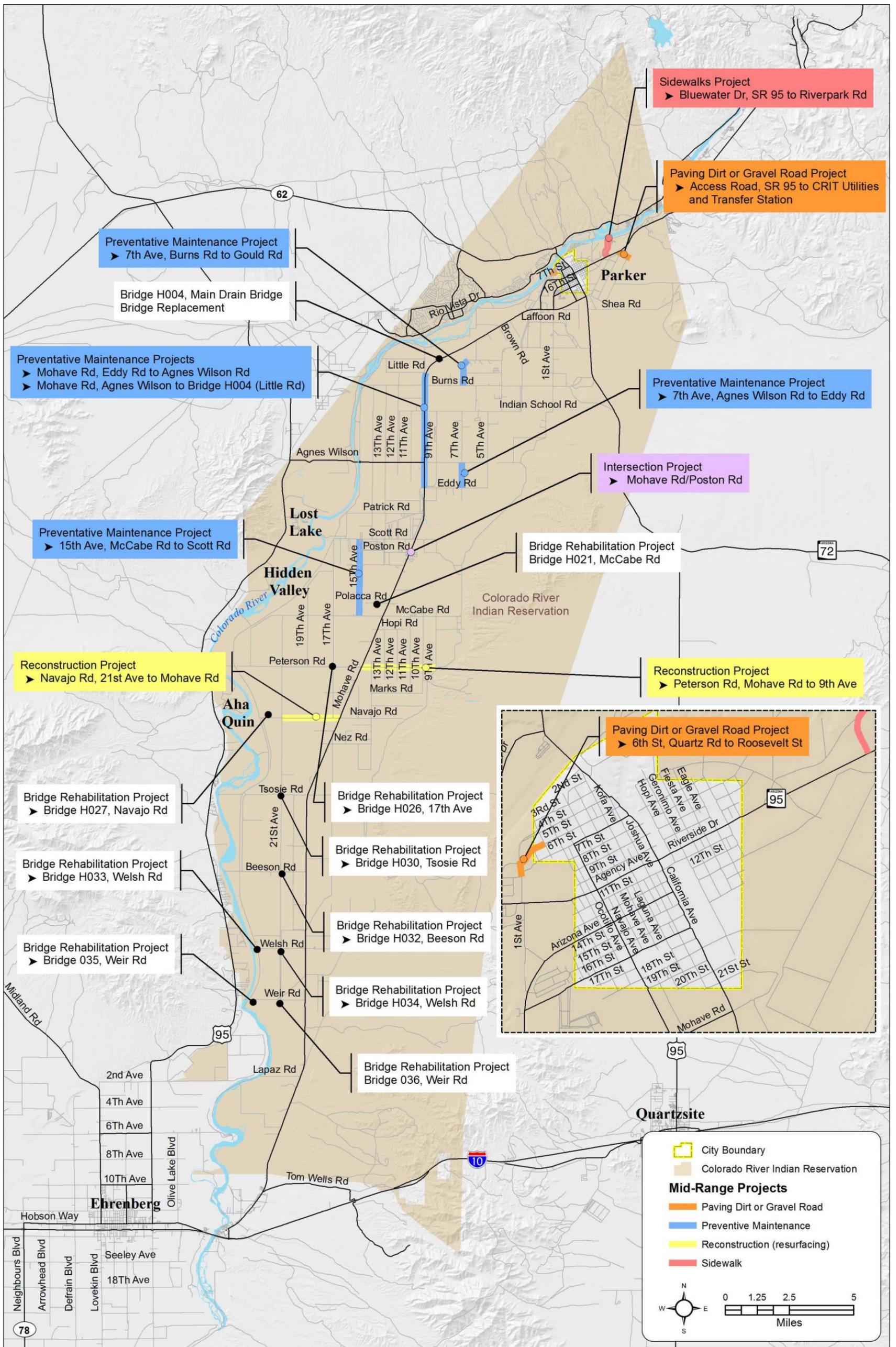


Figure 16 – Mid-Range Projects

Table 36 – Mid-Range Projects

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and/or Proposed Development Served by Road
Resurfacing Projects								
Peterson Rd (Rte 34)	Mohave Rd	9th Ave	2.90	4	Paved road	Reconstruction	1,960,000	Agricultural, residential
Navajo Rd (Rte 38)	21st Ave	Mohave Rd	2.20	4	Paved road	Reconstruction	1,487,000	Agricultural, residential
Preventive Maintenance Projects								
Mohave Road (Rte 1)	Agnes Wilson Road	Bridge H004	3.30	2	Paved road	Road maintenance	502,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Eddy Road	Agnes Wilson Road	1.00	2	Paved road	Road maintenance	152,000	Commercial, residential, government and agricultural land uses.
7th Avenue (Rte 11)	Burns Road	Gould Road	0.80	5	Paved road	Road maintenance	122,000	Agricultural, residential
7th Avenue (Rte 11)	Eddy Road	Agnes Wilson Road	1.00	5	Paved road	Road maintenance	139,000	Agricultural, residential

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and/or Proposed Development Served by Road
15th Avenue (Rte 19)	McCabe Road	Scott Road	3.00	5	Paved road	Road maintenance	456,000	Agricultural, residential
Bridge Rehabilitation or Replacement Projects								
Mohave Road (Rte 1) Bridge Number H004	Bridge number H004		0.014	2	Sufficiency rating - 46.5	Bridge Replacement	120,000	serves multiple land uses
17 th Avenue (Rte 21) Bridge Number H026			0.014	4	Sufficiency rating - 68.0	Bridge Rehabilitation	79,000	Agricultural
McCabe Road (Rte 30) Bridge Number H021	N/A	N/A	0.017	4	Sufficiency rating - 56.8	Bridge Rehabilitation	74,000	Agricultural
Navajo Road (Rte 38) Bridge Number H027	N/A	N/A	0.011	4	Sufficiency rating - 60.0	Bridge Rehabilitation	56,000	Agricultural
Tsosie Road (Rte 44) Bridge H030	N/A	N/A	0.017	4	Sufficiency rating - 47.8	Bridge Replacement	89,000	Agricultural
Beeson Road (Rte 50) Bridge H032	N/A	N/A	0.015	5	Sufficiency rating - 49.8	Bridge Rehabilitation	40,000	Agricultural
Welsh Road (Rte 56) Bridge Number H033	N/A	N/A	0.014	5	Sufficiency rating - 54.0	Bridge Rehabilitation	167,000	Agricultural

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and/or Proposed Development Served by Road
Welsh Road (Rte 56) Bridge Number H034	N/A	N/A	0.014	5	Sufficiency rating – 59.5	Bridge Rehabilitation	115,000	Agricultural
Weir Road (Rte 60) Bridge Number H035	N/A	N/A	0.011	5	Sufficiency rating – 58.5	Bridge Rehabilitation	98,000	Agricultural
Weir Road (Rte 60) Bridge Number H036	N/A	N/A	0.019	5	Sufficiency rating – 47.0	Bridge Replacement	600,000	Agricultural
Intersection Projects								
Mohave Road (Rte 1)	Poston Rd	N/A	N/A	2	Needs identified to improve roadway striping, upgrade lighting, install/upgrade sidewalks, install pedestrian warning signs on Mohave Rd	Construction of safety improvements	256,000	Commercial developments
Paving Dirt and Gravel Roads projects								
6th Street	Quartz Ave	Roosevelt St	0.17	Unclassified	Unpaved	Not classified	129,000	Residences, offices

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and/or Proposed Development Served by Road
Unnamed road to CRIT Utilities and Transfer Station	SR 95	Utilities and Transfer Station	0.16	Unclassified	Unpaved	Not classified	417,000	CRIT Utilities and Transfer Station
Pedestrian Projects								
BlueWater Drive (Rte 105)	SR 95	BlueWater Park	0.71	5		Sidewalks	309,000	Provides a sidewalk connection along BlueWater Drive to the BlueWater Resort and Casino and Colorado River waterfront
Other Transportation Projects								
Sign replacement Program	Various locations	N/A	N/A	N/A	Various	Signing	50,000	Various
Educational programs	N/A	N/A	N/A	N/A	N/A	Safety education	50,000	Applies Reservation-wide
Street lighting projects	Various locations	N/A	N/A	N/A	To be determined	Street lighting	50,000	This is a lump sum that would be used to improve street lighting on an as-needed basis
Canal crossing improvements	Various locations	N/A	N/A	N/A	To be determined	Safety improvements	50,000	This is a lump sum that would be used to improve safety at canal crossings on an as-needed basis

Street Name / BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and/or Proposed Development Served by Road
Parking lot repaving for public facilities	Various locations	N/A	N/A	N/A	To be determined	Paving	25,000	This is a lump sum that would be used to address public facility paving needs.
Maintenance equipment	Specific equipment to be determined	N/A	N/A	N/A	N/A	Maintenance	100,000	This is to reserve funds to purchase maintenance equipment
Temporary traffic control equipment – portable variable message signs	N/A	N/A	N/A	N/A	N/A	Traffic control	25,000	To be used at various locations
Total, Mid-range projects							7,717,000	

* Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

6.3 PROJECT PHASING – LONG-RANGE PROJECTS

Long-range projects are those that are recommended for implementation in the ten year period from 2028-2038 and beyond. Additional funding sources for these projects will need to be identified. These projects are summarized in **Table 37**. They are shown graphically in **Figure 17**.

These projects total \$70.56M. It assumes the following project breakdown:

<u>Project Type</u>	<u>Cost (\$)</u>
Resurfacing projects	20,554,000
Preventive maintenance projects	3,875,000
Paving dirt and gravel road projects	38,448,460
Pedestrian projects	6,983,000
Other Projects	700,000
<u>Total</u>	<u>70,560,000</u>

Estimated funding sources for the 10-year long range program are estimated to be:

<u>Funding Source</u>	<u>Estimated funding for 10-year period (\$)</u>
BIA Construction funds (through Tribal Transportation Program Formula)	10,400,000
Tribal Transportation Safety Program	300,000
Tribal Bridge Program	300,000
Highway Safety Improvement Program	2,000,000
Surface Transportation Program (excluding state highways, but including bridges and Transportation Alternatives Programs)	4,000,000
State Highway Fund(SR 72 and 95)	2,000,000
Tribal funds	1,000,000
Other non-tribal sources(e.g. Town of Parker and other public and private sources)	400,000
Total, estimated funding	20,400,000

Based on the limited availability of funding, a number of projects, particularly some of the larger paving projects for dirt and gravel roads, such as paving Levee Road, and some of the higher cost pedestrian projects would likely shift to a beyond 20 year time frame.

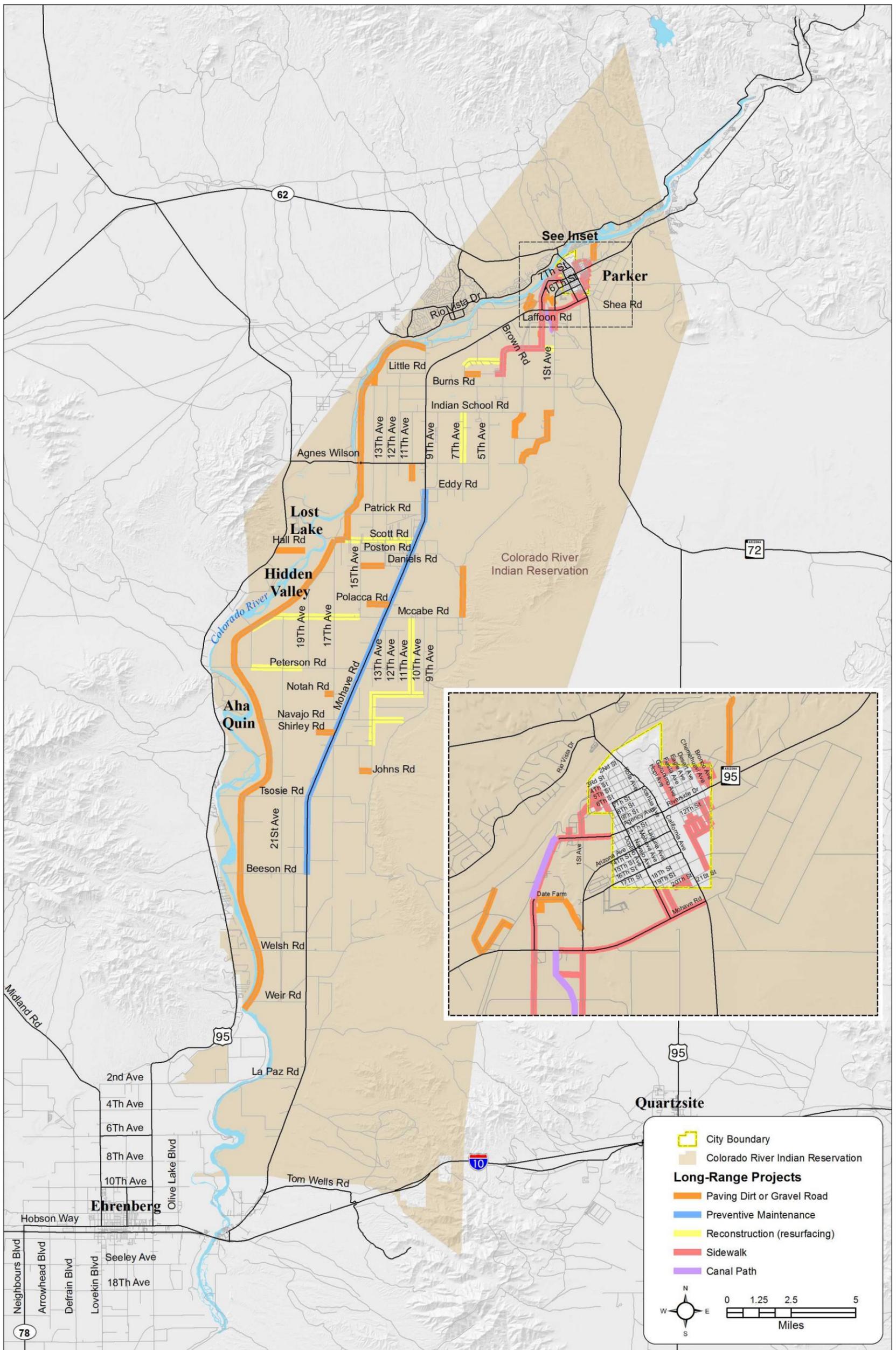


Figure 17 – Long-Term Projects

Table 37 – Long-Range Projects

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Reconstruction Projects								
11th Ave (Rte 15)	Agnes Wilson Rd	Indian School Rd	2.00	5	Paved road	Reconstruction	1,182,000	Agricultural, residential
11th Ave (Rte 15)	Mark Rd	Peterson Ave	1.00	5	Paved road	Reconstruction	591,000	Agricultural, residential
11th Ave (Rte15)	Peterson Ave	McCabe Rd	2.00	5	Paved road	Reconstruction	1,183,000	Agricultural, residential
14th Ave (Rte 117)	Bridge H040	Mark Rd	1.30	5	Paved road	Reconstruction	769,000	Agricultural, residential
1st Ave (Rte 3)	Burns Rd	Mohave Rd	3.00	4	Paved road	Reconstruction	2,028,000	Agricultural, residential
Indian School Rd (Rte 14)	11th Ave	Mohave Rd	0.50	4	Paved road	Reconstruction	338,000	Residential , agricultural, and Head Start School
Mark Rd (Rte 36)	0.3 miles west of 10th Ave	10th Ave	0.30	5	Paved road	Reconstruction	177,000	Agricultural, residential
McCabe Rd (Rte 30)	23rd Ave	Bridge H020	1.90	4	Paved road	Reconstruction	1,284,000	Agricultural, residential

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Mohave Rd (Rte 1)	South CRIT reservation boundary	2.8 miles north of south boundary	2.80	2	Paved road	Reconstruction	2,128,000	Agricultural, residential
Navajo Rd (Rte 38)	0.3 miles west of rd end	east end of Navajo Rd	0.30	4	Paved road	Reconstruction	203,000	Agricultural, residential
Navajo Rd (Rte 38)	Bridge H039	0.3 miles west of road end	1.20	4	Paved road	Reconstruction	811,000	Agricultural, residential
1st Ave (Rte 3)	Mohave Rd	W. Arizona Ave	0.60	4	Paved road	Reconstruction	406,000	Agricultural, residential
7th Ave (Rte 11)	Agnes Wilson Rd	Indian School Rd	2.00	5	Paved road	Reconstruction	1,183,000	Agricultural, residential
Gould Rd (Rte 6)	7th Ave	4th Ave	1.60	5	Paved road	Reconstruction	946,000	Agricultural, residential
Mark Rd (Rte 36)	14th Ave	0.3 miles west of 10th Ave	1.70	5	Paved road	Reconstruction	1,005,000	Agricultural, residential
Scott Rd (Rte 24)	16th Ave	Bridge H045	0.10	4	Paved road	Reconstruction	68,000	Agricultural, residential
Scott Rd (Rte 24)	Bridge H045	Mohave Rd	2.70	4	Paved road	Reconstruction	1,825,000	Agricultural, residential
Booth Rd (Rte 4)	Bridge H043	1st Ave	1.20	5	Paved road	Reconstruction	710,000	Agricultural, residential

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
McCabe Rd (Rte 30)	Bridge H020	Bridge H021	2.80	4	Paved road	Reconstruction	1,892,000	Agricultural, residential
Peterson Rd (Rte 34)	23rd Ave	canal west of 17th Ave	1.80	4	Paved road	Reconstruction	1,217,000	Agricultural, residential
Peterson Rd (Rte 34)	Bridge H024	Mohave Rd	0.90	4	Paved road	Reconstruction	608,000	Agricultural, residential
Preventive Maintenance								
Mohave Road (Rte 1)	2.8 miles north of reservation boundary, south of La Paz Road	Bridge H008 - north of Weir Road (Tyson Wash Bridge)	5.20	2	Paved road	Road maintenance	824,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H006	Bridge H005	1.00	2	Paved road	Road maintenance	152,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Bridge H008 (Tyson Wash Bridge)	Canal Bridge H007	1.80	2	Paved road	Road maintenance	274,000	Commercial, residential, government and agricultural land uses.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Mohave Road (Rte 1)	Canal Bridge H007	Just south of Beeson Road	2.00	2	Paved road	Road maintenance	304,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Just south of Beeson Road	Peterson Road	7.70	2	Paved road	Road maintenance	1,171,000	Commercial, residential, government and agricultural land uses.
Mohave Road (Rte 1)	Peterson Road	Bridge H006 (Patrick Road is just immediately north of the bridge)	7.40	2	Paved road	Road maintenance	1,125,000	Commercial, residential, government and agricultural land uses.
Eddy Road (Rte 20)	Canal crossing	5th Avenue	0.10	5	Paved road	Road maintenance	10,000	Agricultural, residential
15th Avenue (Rte 19)	Agnes Wilson Road	0.1 mi north of Agnes Wilson Road	0.10	5	Paved road	Road maintenance	15,000	Agricultural, residential
Paving dirt or gravel roads								
5th Street	Quartz Ave	Roosevelt St	0.23	Unclassified	Unpaved	Paving construction	175,000	Provides neighborhood access to Agency Rd

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
11th Avenue (Rte 15)	Agnes Wilson Rd	South end of road	0.5	5	Unpaved	Paving construction	379,000	Provides neighborhood access (two homes)
14th Avenue (Rte 117)	Burns Road	Levee Rd	0.5	5	Unpaved	Paving construction	379,000	Extends 14th Ave to end
14th Avenue (Rte 117)	Patrick Road	White Road	0.5	5	Unpaved	Paving construction	379,000	Extends 14th Ave to Levee Rd (Serves two homes/farms)
15th Avenue (Rte 19)	Agnes Wilson Rd	Canal north of Scott Rd	3.32	5	Unpaved	Paving construction	2,511,000	Provides better access to agricultural area
7th Ave (Rte 11)	McCabe Rd	Scott Rd	3.00	5	Unpaved	Paving construction	2,270,000	Provides recreational access and access to gravel pit.
Daniels Rd (Rte 260)	Mohave Rd	Canal	0.66	5	Unpaved	Paving construction	500,000	Serves agricultural area, adjacent to canal
Date Farm (Rte 303)	2nd Ave	First Ave	0.68	3	Unpaved	Paving construction	515,000	Residential access

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Hall Rd	US 95	East end of road	1.15	Unclassified	Unpaved	Paving construction	870,000	Provides better access to the Colorado River - on the California Side
Johns Rd (Rte 42)	15th Ave	14th Ave	0.49	5	Unpaved	Paving construction	371,000	Serves residences and needed for emergency access
Levee Rd	Dam/start of 29	Scott Road/End of 29	21.2	Unclassified	Unpaved	Paving construction	16,037,000	Provides access to east side of Colorado River
Levee Rd	15th Ave/19	End of Unpaved portion of Levee Road	7.71	Unclassified	Unpaved	Paving construction	5,833,000	Provides access to east side of Colorado River
Levee Rd	Unnamed road	Bridge at canal/end of unpaved portion	1.21	Unclassified	Unpaved	Paving construction	915,000	Provides access to east side of Colorado River
Little Rd (Rte 8)	7th Ave	Mo Chem	1.00	5	Unpaved	Paving construction	757,000	Serves Mo-Chem neighborhood - approximately 50 homes
Mitchell Rd (Rte 360)	Unnamed road	Canal	0.76	5	Unpaved	Paving construction	575,000	Extends paved portion of Mitchell Rd to canal

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Notah Rd (Rte 340)	Canal	17th Ave	0.41	5	Unpaved	Paving construction	311,000	Serves 1 home
Polacca Rd (Rte 280)	0.39 miles west of Mohave Rd	Mohave Rd	0.39	5	Unpaved	Paving construction	296,000	Serves three homes and agricultural areas
3rd Avenue (Rte 55)	Rd to Ahakhav Tribal Preserve	unnamed canal path	0.54	5	Unpaved	Paving construction	408,956	Serves Rodeo Subdivision area-approximately 9 homes
Scott Rd (Rte 24)	Levee Rd	16th Ave	0.48	4	Unpaved	Paving construction	364,000	Extends the paved portion of Scott Road to Levee Road
Shirley Rd (Rte 380)	Canal	Mohave Rd	0.79	5	Unpaved	Paving construction	598,000	Serves three homes
Mission Subdivision Streets			0.1	Unclassified	Unpaved	Paving construction	76,504	Serves Mission Subdivision-approximately 6 homes
Landfill Rd	US 95	Landfill	1.66	Unclassified	Unpaved	Paving construction	1,256,000	Serves landfill
Kudo Farms Rd	1st Avenue	Kudo Farms	2.53	Unclassified	Unpaved	Paving construction	1,914,000	Serves Farm and an undetermined number of homes

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Service Rd	Walmart	BlueWater Resort and Casino	0.84	Unclassified	Unpaved	Paving construction	636,000	Provides alternative access between Wal-Mart and BlueWater Resort area
Unnamed Rd	Date Farm Rd	2nd Ave	0.16	Unclassified	Unpaved	Paving construction	122,000	Provides access to neighborhood area- approximately 9 homes
Sidewalk Projects								
Geronimo Ave	6th Street	SR 95	0.29	Unclassified	Paved road	Sidewalk construction	187,000	Connects approximately 15 homes and 3 businesses to sidewalk system on Rio Vista Hwy (SR 95). Part of Sidewalk Area 1.
Fiesta Ave	6th Street	North end	0.07	Unclassified	Paved road	Sidewalk construction		Connects 2 homes on Fiesta to existing sidewalk network. Part of Sidewalk Area 1.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Eagle Ave	6th Street	North end	0.07	Unclassified	Paved road	Sidewalk construction		Connects 3 homes on Eagle to existing sidewalk network Part of Sidewalk Area 1.
Mohave Rd (Rte 1)	2nd Ave	0.4 miles east of 2nd Ave	0.4	2	Paved road	Sidewalk construction	174,000	Tribal Headquarters. This is called Sidewalk Area 2.
7th Street	Chemehuevi Ave	East end	0.14	Unclassified	Paved road	Sidewalk construction	322,000	Connects approximately 20 homes to Western Park, SR 95, and other sidewalks. Part of Sidewalk Area 3.
8th Street	Chemehuevi Ave	East end	0.14	Unclassified	Paved road	Sidewalk construction		Connects approximately 20 homes to Western Park, SR 95, and other sidewalks. Part of Sidewalk Area 3.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
9th Street	Chemehuevi Ave	East end	0.11	Unclassified	Paved road	Sidewalk construction		Connects approximately 20 homes to Western Park, SR95, and other sidewalks. Part of Sidewalk Area 3.
Unnamed road	8th Street	9th Street	0.07	Unclassified	Paved road	Sidewalk construction		Connects approximately 20 homes to Western Park, SR95, and other sidewalks. Part of Sidewalk Area 3.
Unnamed road	7th Street	8th Street	0.07	Unclassified	Paved road	Sidewalk construction		Connects approximately 20 homes to Western Park, SR95, and other sidewalks. Part of Sidewalk Area 3.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Bronco Ave	7th Street	SR 95	0.21	Unclassified	Paved road	Sidewalk construction		Connects approximately homes to Western Park, SR95, and other sidewalk network. Part of Sidewalk Area 3
SR 95 (Rio Vista Hwy) (Rte95)	SR 95 /.1 mi east of Airport Drive	BlueWater Drive	0.48	2	Paved road	Sidewalk construction	209,000	Extends existing sidewalk connection from commercial area (Wal-Mart/Moovalya Plaza) to cross street of BlueWater Drive. This is called Sidewalk Area 4. ADOT Project.
Chemehuevi Ave	11th Street	Arizona Ave	0.15	Unclassified	Paved road	Sidewalks	767,000	Connects approximately 11 homes to businesses and other sidewalk networks. Part of sidewalk Area 5.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Desert Ave	11th Street	W 15th St	0.30	Unclassified	Paved road	Sidewalks		Serves approximately 14 homes, a church, and businesses. Part of sidewalk Area 5.
Eagle Ave	Arizona Ave	W 15th St	0.15	Unclassified	Paved road	Sidewalks		Connects approximately 9 homes to businesses and other sidewalk networks. Part of sidewalk Area 5.
Fiesta Ave	12th	15th St	0.23	Unclassified	Paved road	Sidewalks		This area appears to be commercial use area and provides sidewalk system continuity. Part of sidewalk Area 5.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Geronimo Ave	21st Street	Arizona Ave	0.54	Unclassified	Paved road	Sidewalks		This section of Geronimo has primarily businesses and Arizona Western College Parker Learning Center. Part of sidewalk Area 5.
Arizona Ave	Geronimo Ave	Eagle Ave	0.16	Unclassified	Paved road	Sidewalks		Connects homes to businesses and other sidewalk networks. Part of sidewalk Area 5.
15th Street	Geronimo Ave	Desert Ave	0.23	Unclassified	Paved road	Sidewalks		Connects homes to businesses and other sidewalk networks. Part of sidewalk Area 5.
Joshua Ave	19th St	21st St	0.15	Unclassified	Paved road	Sidewalks	1,054,000	Connects homes to existing sidewalk network which leads to the park, hospital, and tribal Headquarters. Part of Sidewalk Area 6.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
20th St	Laguna Ave	Joshua Ave	0.16	Unclassified	Paved road	Sidewalks		Connects homes to existing sidewalk network which leads to the park, hospital, and tribal offices. Part of Sidewalk Area 6.
Mohave Ave	19th St	Mohave Rd	0.33	Unclassified	Paved road	Sidewalks		Connects homes to hospital. Part of Sidewalk Area 6.
Navajo Rd	19th St	Mohave Rd	0.33	Unclassified	Paved road	Sidewalks		Connects homes to park and hospital. Part of Sidewalk Area 6.
Mohave Rd (Rte 1)	SR 95	0.4 mi east of 2 nd Avenue	1.85	2	Paved road	Sidewalks		Connects hospital to Tribal Headquarters
Unnamed road	Agency Ave	Palo Verde	0.42	Unclassified	Paved road	Sidewalks	353,000	Connects approximately 25 homes to tribal offices and Indian Health Center. Part of sidewalk area 7.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Palo Verde Ave	6th St	North End	0.21	Unclassified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center. Part of sidewalk area 7.
Quartz Ave	6th St	W 5th St	0.08	Unclassified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center. Part of sidewalk area 7.
Roosevelt St	Agency Ave	Grant St	0.1	Unclassified	Paved road	Sidewalks		Connects approximately 25 homes to tribal offices and Indian Health Center. Part of sidewalk area 7.
1st Ave (Rte3)	Agency Ave	W 16th Street	0.66	4	Paved Road	Sidewalks	436,000	links homes to multiple health and social service related offices

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
16 th St (Rte 47)	1st Ave	0.06 miles west of Reata Ave	0.34	5	Paved Road	Sidewalks		Extends existing sidewalk system from schools to multiple subdivisions-many children walk on this route. Serves 100 homes neighborhood (99 homes plus 1 office) and approximately 23 homes in Desert Sun subdivision.
Agency Ave/2nd Ave (Rte5)	Palo Verde Ave	Booth Rd	3.25	5	Paved Road	Sidewalks	1,416,000	Connects homes in agricultural area to sidewalk network, medical center, hospital, and tribal offices. Sidewalk area 9.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Booth Rd (Rte4)/4th Ave (Rte77)	2nd Avenue	Little Road	2.4	5	Paved Road	Sidewalks	1,206,000	Connects homes in agricultural area to sidewalk network, medical center, hospital, and tribal offices. Part of Sidewalk area 9A.
Little Road (Rte 8)	West End	4th Ave	0.37	5	Paved Road	Sidewalks		Provides a sidewalk to the Mo-Chem neighborhood-approximately 50 homes. Part of Sidewalk area 9A.
Unnamed road	1 st Avenue	Canal path	0.25	Unclassified	Paved road	Sidewalks	462,000	Sidewalk link between residential areas and Tribal Headquarters. Part of Sidewalk area 10.
1st Ave (Rte 3)	Mohave Rd	Canal crossing	0.81	5	Paved road	Sidewalks		Residential areas and Tribal Headquarters. Part of Sidewalk area 10.

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Unnamed Road	Mohave Rd	1st Avenue	0.36	Unclassified	Unpaved road	Path	157,000	Provides a path through neighborhood areas.
Riverside Drive (SH 95-Section 860) at Eagle Avenue	pedestrian beacon signal	N/A	N/A	2	Intersection	pedestrian beacon signal	80,000	Safety project
Riverside Drive (SH 95-Section 860) at Chemehuevi Avenue	pedestrian beacon signal	N/A	N/A	2	Intersection	pedestrian beacon signal	80,000	Safety project
California Avenue (SH 95-Section 830) at 12th Street	pedestrian beacon signal	N/A	N/A	2	Intersection	pedestrian beacon signal	80,000	Safety project
Other Transportation Projects								
Sign replacement Program	Various locations	N/A	N/A	N/A	Various	Signing	100,000	Various
Educational programs	N/A	N/A	N/A	N/A	N/A	Safety education	100,000	Applies Reservation-wide

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Street lighting projects	Various locations	N/A	N/A	N/A	To be determined	Street lighting	100,000	This is a lump sum that would be used to improve street lighting on an as-needed basis
Canal crossing improvements	Various locations	N/A	N/A	N/A	To be determined	Safety improvements	100,000	This is a lump sum that would be used to improve safety at canal crossings on an as-needed basis
Parking lot repaving for public facilities	Various locations	N/A	N/A	N/A	To be determined	Paving	50,000	This is a lump sum that would be used to address public facility paving needs.
Maintenance equipment	Specific equipment to be determined	N/A	N/A	N/A	N/A	Maintenance	200,000	This is to reserve funds to purchase maintenance equipment

Street Name/BIA Route Number	From	To	Project Length (miles)	BIA Road Functional Classification	Existing Roadway or Site Conditions	Proposed Improvement	Total Project Cost (\$)*	Existing and /or Proposed Development Served by Road
Temporary traffic control equipment – portable variable message signs	N/A	N/A	N/A	N/A	N/A	Traffic control	50,000	To be used at various locations
Total, Long range projects							\$70,560,460	

* Estimated costs are expressed in 2013 dollars and are general planning estimates. Actual costs for projects could vary at the time of implementation; therefore, when appropriate a detailed analysis should be performed on a case-by-case basis to determine actual project costs. The planning estimates include estimates for materials, and labor for design and construction. The cost estimates do not include right-of-way costs.

7. Funding Sources for Transportation Projects

This chapter describes funding resources that are potentially available for the projects identified in the previous chapters. Financing a transportation program requires utilization of a variety of funding sources and strategies.

The purpose of this chapter is to provide a brief description of some of the major available funding sources and financing options and to identify principal contacts for additional information regarding the funding sources and requirements.

In July, 2012, P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law. The *Tribal Transportation Program* under MAP-21 provides \$450 million annually for projects that improve access to and within Tribal lands. This program generally continues the previous Indian Reservation Roads (IRR) Program, while adding new set asides for tribal bridge projects (in lieu of the existing Indian Reservation Road Bridge program) and tribal safety projects. The Program was established to provide for construction of public roads and bridges under Bureau of Indian Affairs (BIA) administration. The purpose of the program is to provide safe and adequate transportation facilities including public road access to and within Indian reservations, Indian trust land, or Native American communities. The Tribal Transportation Roads Inventory by definition includes BIA, state, Colorado River Indian Tribes, and other local government public roads located within or providing access to an Indian reservation.

The Tribal Transportation Program continues to provide set asides for program management and oversight and tribal transportation planning. A new statutory formula for distributing funds among tribes, based on tribal population, road mileage, and average funding under SAFETEA-LU, plus an equity provision, is to be phased in over a 4 year period.

MAP-21 also authorizes the *Tribal High Priority Projects Program*, a discretionary program modeled on an earlier program that was funded by set aside from the Indian Reservation Roads Program. MAP-21 provides \$30 million per year from the General Fund (subject to appropriation) for this new program.

The funding sources are described for the following types of projects:

- Roadway (Table 38)
- Safety (Table 39)
- Bicycle, Pedestrian and Equestrian (Table 40)
- Transit (Table 41)
- Aviation (Table 42)

Table 38 – Road Project Funding Sources

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Tribal Transportation Program	BIA-DOT Western Regional Office	The Tribal Transportation Program provides \$450 million annually for projects that improve access to and within Tribal lands. This program generally continues the existing Indian Reservation Roads program, while adding new set asides for tribal bridge projects (in lieu of the existing Indian Reservation Road Bridge program) and tribal safety projects. It continues to provide set asides for program management and oversight and tribal transportation planning. A new statutory formula for distributing funds among tribes, based on tribal population, road mileage, and average funding under SAFETEA-LU, plus an equity provision, is to be phased in over a 4 year period.	Varies for each tribe based on population and mileage.	Funds are allocated to BIA Regional Office on a formula basis	TTIP has to be submitted to FHWA by Aug	Bob Maxwell, Regional Roads Planner BIA Western Regional Office BIA Division of Transportation 400 N. 5th Street Two Arizona Center, 12th Floor Phoenix, AZ 85004 Phone: (602) 379-6782 Fax: (602) 379-3837 Email: Bob.Maxwell@bia.gov
Tribal High Priority Projects Program	BIA-DOT Western Regional Office	This program is for Tribes that receive insufficient funding to carry out their highest priority project.	Maximum \$1M per project	Application-based		Bob Maxwell, Regional Roads Planner BIA Western Regional Office BIA Division of Transportation 400 N. 5th Street Two Arizona Center, 12th Floor Phoenix, AZ 85004 Phone: (602) 379-6782 Fax: (602) 379-3837 Email: Bob.Maxwell@bia.gov

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Tribal Transportation Planning	BIAWRO	Tribal transportation planning.	2% of construction funding	Funds are allocated directly to Tribe based on a formula, and distributed on a project by project basis.	N/A	Bob Maxwell, Regional Roads Planner BIA Western Regional Office BIA Division of Transportation 400 N. 5th Street Two Arizona Center, 12th Floor Phoenix, AZ 85004 Phone: (602) 379-6782 Fax: (602) 379-3837 Email: Bob.Maxwell@bia.gov
National Bridge and Tunnel Inventory		Tribal bridges will need to be inspected, classified, and inventoried. <ul style="list-style-type: none"> ▪ Bridges will be classified according to serviceability, safety, and essentiality for public use; and ▪ Based on the classification, each bridge will be given a risk-based priority for systematic preventive maintenance, replacement or rehabilitation. 	To be determined	To be determined	To be determined	Bob Maxwell, Regional Roads Planner BIA Western Regional Office BIA Division of Transportation 400 N. 5th Street Two Arizona Center, 12th Floor Phoenix, AZ 85004 Phone: (602) 379-6782 Fax: (602) 379-3837 Email: Bob.Maxwell@bia.gov
Surface Transportation Program (STP)	ADOT	Construction, transit, safety, Intelligent transportation systems, management systems, environmental, transportation planning and enhancement on roads with functional classifications of urban collector, major rural collector or higher.	Varies by year	Project is scoped and request for funding submitted to WACOG. Project is funded if it is added to RTIP and STIP.		Brian Babiars Western Arizona Council of Governments 208 N. 4th Street Kingman, AZ 86401 Phone: (928) 782-1886 Email: brianb@WACOG.com

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Planning Assistance for Rural Areas (PARA) Program	ADOT	Small area transportation studies to develop short, medium and long range transportation plans.	Up to \$250,000 per study depending on the project area and scope of work.	Competitive applications for planning projects are submitted to ADOT Multimodal Planning Division (MPD) on an annual basis.	Applications for planning projects are submitted to ADOT on an annual basis in March.	http://mpd.azdot.gov/planning/CurrentStudies/PARASTudies Justin Feek, Senior Transportation Planner ADOT PARA Program Manager Phone: (602)712.6196 jfeek@azdot.gov
Indian Community Development Block Grant Program	US Dept. of Housing and Urban Development	Infrastructure construction, e.g., roads, water and sewer facilities; and, single or multipurpose community buildings. Also for housing and economic development projects. There are also Imminent Threat Grants to provide solutions to a problem of an urgent nature	Nationally , single purpose grants were \$60M, Imminent threat grants up to \$3.9M	Single-purpose grants are competitively awarded- must primarily benefit low or moderate income persons	Mid-June annually	Southwest Office of Native American Programs Phoenix Office One North Central Avenue, Suite 600 Phoenix, AZ, 85004-2361 Phone: (602) 379-7200 Brian Babiars Western Arizona Council of Governments 208 N. 4th Street Kingman, AZ 86401 (928) 782-1886 Office Email: brianb@WACOG.com

Table 39 – Funding for Safety Projects

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Alcohol Impaired Driving	NHTSA & GOHS	Costs for high visibility enforcement; Costs of training and equipment for law enforcement, Costs of advertising and educational campaigns that publicize checkpoints, increase law enforcement efforts and target impaired drivers under 34 years of age, Costs of vehicle or license plate impoundment.	\$129 million per year nationally	GOHS submits application for funding. Tribes should work with GOHS for use of funds.		http://www.azgohs.gov/ Director Alberto Gutier Governor’s Office of Highway Safety 3030 North Central Avenue, #1550 Phoenix, AZ 85012 Phone: 602-255-3216 Office
Highway Safety Improvement Program (HSIP)	ADOT and WACOG	Elimination of safety hazards on any public road, public surface transportation facility; any publicly owned bicycle or pedestrian pathway or trail; or any traffic calming measure.	To be determined	Project is scoped and request for funding submitted to WACOG. HSIP Local Government Coordinator provides assistance to local agencies throughout the process of identifying and developing the projects.	May 1st	http://www.azdot.gov/business/engineering-and-construction/traffic/traffic-safety/arizona-highway-safety-improvement-program Mona Aglan-Swick HSIP Manager ADOT Statewide HSIP Program Phone: (602) 712-7374 Email: maglan@azdot.gov Brian Babiars Western Arizona Council of Governments 208 N. 4th Street Kingman, AZ 86401 (928) 782-1886 Office Email: brianb@WACOG.com

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Tribal Safety Program	BIA	Funds to be provided based on identification and analysis of highway Safety issues and opportunities on tribal lands	Approx. \$9 million/year nationally	To be determined, new program under MAP-21	To be determined, new program under MAP-21	Bob Maxwell, Regional Roads Planner BIA Western Regional Office BIA Division of Transportation 400 N. 5th Street Two Arizona Center, 12th Floor Phoenix, AZ 85004 Phone: (602) 379-6782 Fax: (602) 379-3837 Email: Bob.Maxwell@bia.gov
State & Community Highway Safety Grant Program	NHTSA & GOHS	Alcohol counter measures, Occupant protection, Police traffic services (primarily enforcement), Emergency medical services, Traffic records, Motorcycle safety, Pedestrian and bicycle safety, Roadway safety, Speed control, school bus safety, training, and accident reconstruction.	Approx. \$2.5 million/year for Arizona	Competitive proposals submitted to the GOHS	Competitive proposals submitted to the GOHS during April and May	http://www.azgohs.gov/ Director Alberto Gutier Governor's Office of Highway Safety 3030 North Central Avenue #1550 Phoenix, Arizona. 85012
Injury Prevention Program	IHS	Develop, implement, and evaluate proven or promising injury prevention intervention programs. Projects include, but are not limited to, programs designed to reduce alcohol-related injuries, e.g. supporting initiatives to reduce drinking and driving. Other projects include seat belt promotion campaigns, pedestrian safety, child passenger safety,	\$75,000 maximum per project	Work with IHS Office to obtain project funding.	N/A	http://www.ihs.gov/InjuryPrevention/

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Road Safety Assessment	ADOT Traffic Safety Section	The RSA program will conduct Road Safety Assessments on state, local and tribal road facilities. An RSA is defined as a formal examination of user safety of a future or existing roadway by an independent multidisciplinary audit team, which includes qualified experienced members.	Technical assistance, no actual award of funds	Submit application	Ongoing	Richard Weeks, P.E. Road Safety Assessment Program Manager 1615 West Jackson St., Mail Drop 065R Phoenix, AZ 85007-3217 Phone: 602-712-4382 Fax: 602-712-3243 Email: rweeks@azdot.gov

Another reference source for funding programs that address tribal traffic safety issues is the Tribal Traffic Safety Funding Guide which was developed through the Arizona Transportation Research Center - Research Program. The guide summarizes the various transportation safety programs and can be obtained through the ATRC website at:

http://www.aztribaltransportation.com/aztt/ATSPT/PDF/SPR_592_BTTSC_FundingGuide.pdf

Table 40 – Funding for Pedestrian, Bicycle, and Equestrian Projects

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
<p>Transportation Alternatives Program</p>	<p>ADOT and WACOG</p>	<p>Under MAP-21 provisions, the Safe Routes to School (SRTS), Transportation Enhancement (TE) and Recreational Trails will be funded under this program.</p>	<p>To be determined</p>	<p>To be determined</p>	<p>September of each year</p>	<p>Patrick Stone TE Section Manager Arizona Department of Transportation 1615 W. Jackson Street, MD EM10 Phoenix, AZ 85226 Phone: 602-712-4428 Email: pstone@azdot.gov</p> <p>Kristin Myers Arizona Department of Transportation Local Public Agency Section Safe Routes to School Program 1615 W. Jackson St., Mail Drop EM11 Phoenix, AZ 85007 Phone: (602) 712-6166 Email: KMyers@azdot.gov</p> <p>Brian Babiars Western Arizona Council of Governments 208 N. 4th Street Kingman, AZ 86401 (928) 782-1886 Office Email: brianb@WACOG.com</p>

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Southwest Conservation Corps	Southwest Conservation Corps	Although not a funding source, this non-profit organization engages and trains youth and completes conservation projects for the public benefit	N/A	Contact Southwest Conservation Corps to partner on a project	N/A	Ancestral Lands Acoma, NM (505) 552-4074 Four Corners 701 Camino del Rio Suite 101 Durango, CO 81301 (970) 259-8607

Table 41 – Transit Funding Programs

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Section 5310, Enhanced Mobility of Seniors and Individuals with Disabilities Transit Program	ADOT	The Section 5310 Program has been renamed under the new federal surface transportation legislation (MAP-21) to be the “Enhanced Mobility of Seniors and Individuals with Disabilities” Program. Section 5310 funding is allocated among three area population ranges – rural (less than 50,000), small urbanized (50,000 to 200,000) and large urbanized (over 200,000). Tribes must compete with other governments for Section 5310 funding.	Unknown, previously was approximately 3.9 million statewide	Application-based process.	Regional application workshops – (by webinar) Applications due Feb/March 2012	http://www.azdot.gov/planning/TransitProgramsandGrants/enhanced-mobility-of-seniors-and-individuals-with-disabilitites Dan Harrigan, ADOT Coordinated Mobility Program Manager at (602) Phone: 712-8232 DHarrigan@azdot.gov

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
<p>Section 5311, Rural Public Transportation Program and Section 5311(c) – Public Transportation on Indian Reservations (Tribal Transit Program)</p>	<p>ADOT</p>	<p>The Section 5311 Program has been renamed under MAP-21 to be the “Formula Grants for Rural Areas Programs. There is a tribal set-a-side of \$30 million nationally, but tribes would also likely be eligible the portion of funding going to the state.</p>	<p>Dependent on various factors</p>	<p>Application based program.</p>	<p>December</p>	<p>http://www.azdot.gov/planning/TransitProgramsandGrants/5311-rural-public-transportation-program Nicole Patrick ADOT Transit Programs Phone: (928) 783-8911 email: NPatrick@azdot.gov Federal Transit Administration – tribal transit information: http://www.fta.dot.gov/grants/13094_3553.html Lorna Wilson, Office of Program Management, Phone: (202) 366–0893, email: Lorna.wilson@dot.gov or Elan Flippin, Office of Program Management, Phone: (202) 366–3800 email: elan.flippen@dot.gov</p>

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Rural Transit Assistance Program	ADOT	This is a free training, technical assistance, and outreach program funded by the Federal Transit Administration	N/A	Each Section 5311 grantee agency has an ongoing training program. Regularly offered training may include Passenger Service & Safety, CPR, Basic First Aid, Defensive Driving.	N/A	Sara Allred Rural Transit Assistance Program ADOT Multimodal Planning Division 206 S 17th Ave MD 340B Phoenix, AZ 85007 Phone: 602-712-4498 Email: sallred@azdot.gov
Section 5304 – Statewide Transportation Planning Program	ADOT	Section 5304 funds are apportioned to the states for use in rural transit planning and research. Other eligible uses, at the state's discretion, include statewide planning and technical assistance activities.	The Federal Transit Administration appropriated \$328,654 to ADOT in FY2007.	Application-based program. Applicants must provide a minimum 20% match. A limit of \$30,000 is available per project.	N/A	Sara Allred 5304 Program ADOT Multimodal Planning Division 206 S 17th Ave MD 340B Phoenix, AZ 85007 Phone: 602-712-4498 Email: sallred@azdot.gov

Table 42 - Aviation Funding Sources

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Airport Improvement Fund	Federal Aviation Administration	Eligible projects such as airfield, Apron, terminal and access roads can receive up to 90 percent federal participation.	Varies - funds are distributed each year by the FAA under authorization from Congress	Application-based program. Applicants must provide a minimum match.	December 31st annually	Mark Sedarous Federal Aviation Administration Phone: 602-379-3031 mark.sedarous@faa.gov
FAA Facilities and Equipment Program	Federal Aviation Administration	This program provides funding for installation and maintenance of various navigational aids and equipment of the national airspace system.	Varies - funds are distributed each year by the FAA under authorization from Congress	Application-based program. Applicants must provide a minimum match.		Mark Sedarous Federal Aviation Administration Phone: 602-379-3031 mark.sedarous@faa.gov
State Aid to Airports	Arizona Department of Transportation	Airports can receive state-funded grants that require a small percentage of matching funds, or, they can receive grants from the FAA.	Aviation Fund	Airport Capital Improvement Program prioritizes requested projects.	Annually (approx. November 1 st)	Scott Driver, Airport Grant Manager ADOT MPD - Aeronautics Group 206 S. 17th Avenue Mail Drop 426M Phoenix, Arizona 85007 Phone: 602-712-8386 SDriver@azdot.gov

8. Other Recommendations

8.1 RECOMMENDATIONS FOR UPDATES TO TRIBAL TRANSPORTATION INVENTORY

The Tribal Transportation Facility Inventory is the new name (under MAP-21) for the Indian Reservation Roads Inventory. The inventory is used to determine relative transportation needs among Indian tribes, serving as a basis for allocation of funds. The inventory includes, at a minimum, facilities that are eligible for assistance under the TTP that a Tribe has requested, including facilities that:

- were included in the BIA system inventory prior to October 1, 2004;
- are owned by an Indian tribal government;
- are owned by the BIA;
- were constructed or reconstructed with funds from the Highway Trust Fund under the IRR program since 1983;
- are public roads or bridges within the exterior boundary of Indian reservations, Alaska Native villages, and other recognized Indian communities (including communities in former Indian reservations in the State of Oklahoma) in which the majority of residents are American Indians or Alaska Natives;
- are public roads within or providing access to an Indian reservation or Indian trust land or restricted Indian land that is not subject to fee title alienation without the approval of the Federal Government, or Indian or Alaska Native villages, groups, or communities in which Indians and Alaska Natives reside, whom the Secretary of the Interior has determined are eligible for services generally available to Indians under Federal laws specifically applicable to Indians; or
- are primary access routes proposed by tribal governments, including roads between villages, roads to landfills, roads to drinking water sources, roads to natural resources identified for economic development, and roads that provide access to intermodal terminals, such as airports, harbors, or boat landings.

8.1.1 ROUTES TO BE ADDED TO THE TRIBAL TRANSPORTATION INVENTORY

Roads to be added to the Tribal Transportation Inventory are listed in **Appendix G** and shown graphically in **Figure 18**. There are a total of approximately 164.6 miles of roads proposed to be added to the Inventory. An overview of the roads to be added to the Inventory are:

- Big River: Community Roads
- Blue Water Lagoon Roads
- Tribal Roads within the Parker town limits
- Levee Road
- Lazy D subdivision streets
- Water Wheel Community streets
- Flamingo Road
- Aha Quin Resort Roads
- Shea Road
- El Paseo Lane

8.2 RECOMMENDATIONS FOR FUNCTIONAL CLASSIFICATION UPDATES

Potential federal functional classification changes are summarized in **Table 43**. It is the Colorado River Indian Tribe's desire to update functional classification of roads and also to determine what roads can be added to the system of federally functionally classified routes.

Table 43 – Potential Federal Functional Classification Changes

Road name	Current Federal Functional Classification	Proposed Change	Justification	2013 Traffic Volume (Vehicles per day)
Mohave Road, SR 95 to south Reservation boundary	Rural major collector	Rural minor arterial	<ul style="list-style-type: none"> This roadway serves as link between Ehrenberg and Parker It serves trips between Arizona and California It forms the backbone of the road system for the Colorado River Indian Tribes Reservation It provides relatively high travel speeds There are few interruptions to through traffic 	3,200
Agnes Wilson Road, Mohave Road to US 95	Rural major collector	Rural minor arterial	<ul style="list-style-type: none"> It serves trips between Arizona and California It forms an east-west backbone of the road system for the Colorado River Indian Tribes Reservation. It links US 95 in California to Mohave Road. There are few interruptions to through traffic. 	550
Peterson Road, 9 th Avenue to 23 rd Avenue	Unclassified	Minor collector	<ul style="list-style-type: none"> Peterson Road is a continuous east-west route that extends from 9th Avenue to 23rd Avenue Peterson Road collects traffic from local roads, including 9th, 10th, 11th, 12th, 13th, 14th, 17th, 19th, 21st, and 23rd Avenues. 	N/A

Road name	Current Federal Functional Classification	Proposed Change	Justification	2013 Traffic Volume (Vehicles per day)
Burns Road, 15 th Avenue to 1 st Avenue	Unclassified	Major collector	<ul style="list-style-type: none"> • Burns Road is a major east –west road through the reservation. It extends from 15th Avenue to SR 95. Although the connection to SR 95 is not a good connection, in the future, if improved it has the potential to attract traffic • Burns Road collects traffic from numerous roads in the area, including 1st, 4th, 6th, 7th,8th, 12th, 13th,14th,and 15th Avenues. It also intersects Mohave Road, a major north-south roadway on the Reservation • It is classified as a major collector road by the BIA. 	430

9. Public Involvement

9.1 PUBLIC OPEN HOUSE 1

A public open house was held at the BlueWater Resort Conference Center in Parker, Arizona on Thursday, September 19, 2013 from 6-8 p.m. The open house was scheduled to coincide with the CRIT monthly Community Awareness Night event to boost attendance. Community members were able to review display boards explaining the study, ask questions, and provide their input on transportation issues and needs in the community.

A survey was provided for members to complete at the open house. Over 30 members of the community signed in at the open house though total attendance was closer to 50-75 people.

A key objective of the open house was to obtain information on where people live and where they travel to in order to help design a future transit system. This was accomplished by providing a board where persons could place a colored dot where they live, and another color dot to show where they travel to.

The following locations were identified as origins and destinations on the display board.

Origins

Parker Area

- 15th Street, near Ocotillo Avenue
- Reata Avenue, north of 15th Street (2 responses)
- 16th Street, near Ocotillo Avenue
- Middle Street (100 Homes) (3 responses)
- Mohave Road, near Navajo Avenue

Between Parker and Poston

- Laffoon Road, near 3rd Avenue
- 2nd Avenue, north of Booth Road
- 3rd Avenue, north of Booth Road
- Little Road (Mo-Chem neighborhood) (2 responses)
- 9th Avenue, north of Agnes Wilson Road
- 7th Avenue, south of Agnes Wilson Road
- Scott Road, west of Mohave Road



South of Poston

- McCabe Road, east of Mohave Road
- 10th Avenue, north of Peterson Road
- Mitchell Road, east of 14th Avenue
- Navajo Road, east of 21st Avenue

Destinations

- Parker Area
- Moovalya Plaza (3 responses)
- Wal-Mart
- BlueWater Casino (2 responses)
- Blake Elementary School
- Parker Indian Medical Center (2 responses)
- Wallace Junior High School
- Parker High School (2 responses)
- Tribal Headquarters
- La Paz County offices
- Pop Harvey Park (2 responses)
- DES and Food Bank (2 responses)
- Arizona Western College
- Poston Area and south of Poston
- La Pera Elementary School (3 responses)
- Woody's II Convenience Market

Public Involvement Summary Report 1, which provides more details about Open House 1, is provided in **Appendix H**.

9.2 PUBLIC OPEN HOUSE 2

Public Open House 2 was held on February 13, 2014 at the BlueWater Resort and Casino in Parker, Arizona. Similarly to Open House 1, this open house was scheduled to coincide with a Community Awareness Night to boost attendance. Community members that attended the open house were able to review display boards explaining the study recommendations, to ask questions and to provide their feedback on transportation issues and needs in the community. A general comment form was also provided for members to complete at the open house. In total, 13 members of the community signed in at the open house. Public involvement Summary Report 2 is provided in **Appendix H**.

The following comments were returned via the comment form.

- Marking and striping existing roads
- Maintenance and upkeep of paved and gravel roads
- Knowledge of upcoming jobs and contacts

Verbal comments that were received by the Colorado River Indian Tribes Planner were:

- There was a concern about project prioritization. Roads need to be fixed first, before sidewalk improvements.
- The transit system should be equipped with a lift that can accommodate scooters.

- There needs to be coordination on transit with the Bonnie Baker service in Big River.
- The potholes on 14th Avenue need to be fixed
- There was a comment that at the Walmart driveway, the curb is the same color as the pavement, and it is hard to distinguish the driveway, especially at night.
- Construct sidewalks on 16th Street to the 1st Street subdivision. There is also a need for lighting in this area.

10. Title VI and Environmental Justice Potential Impacts

Since the Colorado River Indian Tribes 2014 Strategic Long Range Transportation Plan coverage area is totally situated within the Colorado River Indian Tribes Reservation, all areas have high percentages of impacted populations. It is anticipated that a number of the transportation improvement projects recommended through this plan may differentially affect those populations. During the planning process, consideration was given to the Title VI and Environmental Justice factors to ensure that impacted populations were included in the plan’s public participation process.

Several public involvement efforts were conducted to reach minority and low-income populations when conducting the two public involvement meetings held during the planning process. As recommended projects are implemented additional effort will need to be conducted in order to detail activities that can avoid, minimize or mitigate the impacts. This is in addition to ensuring that the impacted population groups are provided the opportunity to participate in future project-specific public input processes.

Table 44 below summarizes the overall long-range transportation improvements by category and possible adverse impacts and benefits of each type of recommendation.

Table 44 - 2014 Strategic Long Range Transportation Plan Project Categories and Potential Impacts

Project Type	Project Description	Impacted Populations(s)	Potential Disproportionate Impacts(s)	Considerations(s) Dictating Recommended Actions Over Alternative Actions
Pedestrian facility Improvements	New sidewalks, trails, and pedestrian crossing improvements.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during construction.	Improved pedestrian safety and more travel choices.
Intersection Improvement Projects	Types of improvements include signing, striping, traffic control, guardrail upgrades, access control, etc.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during construction.	Improved safety.
Safety Projects	Projects include: <ul style="list-style-type: none"> • Safety focused education campaign • Future CRIT Road Safety Assessment locations. • Improved crash reporting procedures. • Signing and striping projects. • Other safety projects, such as canal improvements. 	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Signing and striping projects may have Temporary constraint to street accessibility during construction.	Improved safety.

Project Type	Project Description	Impacted Populations(s)	Potential Disproportionate Impacts(s)	Considerations(s) Dictating Recommended Actions Over Alternative Actions
Pavement Maintenance and Rehabilitation Projects	Reconstruction and pavement maintenance improvements.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during construction.	Reduced impacts to vehicles, trucks, and school buses because of road condition.
Transit Projects	Implement a transit system to serve the Reservation area.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Construction of bus shelters and bus stops may have a temporary impact on street accessibility.	Provides more travel opportunities, especially to persons that do not have access to a vehicle or cannot drive.
Aviation Projects	Projects include improvements to roads serving airport, airport building improvements, runway improvements, and new perimeter road.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during road construction.	Provides more opportunities for airport development.
Bridge Improvement Projects	Bridge rehabilitation and replacement projects.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during bridge construction. Detour routes may be needed depending on the level of construction.	Improved safety at bridge crossings.
Paving Dirt or Gravel Road Projects	Paving dirt or gravel roads.	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	Temporary constraint to street accessibility during paving.	Improved air quality due to reduction of dust and Reduced impacts to vehicles, trucks, and school buses because of road condition.
Other Transportation Projects	Projects include: <ul style="list-style-type: none"> • Paving needs for parking areas for community facilities; • Equipment needs for the Police and Fire Departments, including items for temporary traffic control, such as variable message signs; and • Maintenance equipment needs. 	Minority and low-income including: <ul style="list-style-type: none"> • Tribal Members • Local Residents • Area Visitors 	The paving projects may temporarily limit access to parking areas.	The projects will improve accessibility to community facilities, increase options for traffic control, and provide for more efficient maintenance operations.