

Kolb Road: Sabino Canyon Road to Sunrise Drive

Environmental Assessment and Mitigation Report

Prepared for:

Pima County Department of Transportation
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Pima County Project No. 4KSCSD



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December 20, 2017

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- December 12, 2017, Open House Public Notice
- December 12, 2017, Open House Information Handout
- December 12, 2017, Open House Meeting Summary
- Board of Supervisors Notice of Public Hearing
- Community Advisory Committee Letter
- Sonoran Desert Tortoise Awareness Program Handout



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DOCUMENTS AVAILABLE ON PROJECT WEBSITE

<http://roadprojects.pima.gov>

(Select "Kolb Road - Sabino Canyon Road to Sunrise Drive")

Final Design Concept Report	Psomas	December 2017
Environmental Assessment and Mitigation Report	EcoPlan Associates, Inc.	December 2017
Traffic Engineering Report	Psomas	May 2017
Northeast Area Traffic Study	CEI, Inc.	February 2004
Lighting Report	Psomas	June 2017
Preliminary Initial Site Assessment	Ninyo and Moore, Inc.	February 2017
Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum	EcoPlan Associates, Inc.	March 2017
Biological Evaluation	EcoPlan Associates, Inc.	December 2017
Visual and Aesthetic Resource Analysis	McGann & Associates, Inc.	October 2017
Noise Report	Sound Solutions, LLC	August 2017



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ACRONYMS AND ABBREVIATIONS

ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
APE	area of potential effects
BE	Biological Evaluation
CAC	Community Advisory Committee
CGP	Construction General Permit
CMP	corrugated metal pipe
CNF	Coronado National Forest
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
dBA	A-weighted decibel
DCR	Design Concept Report
EAMR	Environmental Assessment and Mitigation Report
EPA	U.S. Environmental Protection Agency
ESR	Environmentally Sensitive Roadway
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
HOA	Homeowners Association
IPaC	Information for Planning and Conservation
LED	light-emitting diode
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MSCP	Multi-Species Conservation Plan
NRHP	National Register of Historic Places
PAG	Pima Association of Governments
PCDOT	Pima County Department of Transportation
PCRFCDD	Pima County Regional Flood Control District
PISA	Preliminary Initial Site Assessment
RCP	reinforced concrete pipe
RDM	Roadway Design Manual
REC	Recognized Environmental Concern
ROW	right-of-way
SGCN	Species of Greatest Conservation Need
SHPO	State Historic Preservation Office
STP	Surface Transportation Program
TIP	Transportation Improvement Program
USFWS	U.S. Fish and Wildlife Service
vpd	vehicles per day



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EXECUTIVE SUMMARY

Kolb Road: Sabino Canyon Road to Sunrise Drive (4KSCSD) Environmental Assessment and Mitigation Report

Project Location

The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area. The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The Coronado National Forest boundary is about 1.2 miles northeast of the project limits.

Project Limits

The general project limits extend along Kolb Road from Sabino Canyon Road to Sunrise Drive, a distance of about 1.9 miles. The south project limit ties into the widened Kolb Road/Sabino Canyon Road intersection project (4TSCKR, 2000), and the north end of the project ties into the Kolb Road/Sunrise Drive intersection improvement project (4SRCRA, 2009).

Project Scope

This project consists of widening approximately 1.9 miles of Kolb Road from an existing two-lane roadway to a three-lane roadway (one travel lane per direction and a two-way left-turn lane) between Sabino Canyon Road and Sunrise Drive, in compliance with the 1997 Bond program (DOT-32). Project funding for the project is identified in the Pima Association of Governments Transportation Improvement Program (TIP) Fiscal Year 2018–2022 under TIP ID No. 787.00. Funding sources include the Federal Highway Administration Surface Transportation Program (STP) (Federal No. STP-PPM-0[257]D) and Pima County bonds. Tucson Water is also expected to contribute to the project cost. The federal funding is administered through the Arizona Department of Transportation (TRACS No. 0000 PM PPM T0109 01C).

Funding Source	Funding
Federal (STP) Funds	\$ 8,500,000
Local Funds (Pima County Bonds) - Design	\$ 2,966,000
Local Funds (Pima County Bonds) - Construction	\$ 4,061,000
Tucson Water Contribution	\$ 500,000
Total	\$16,027,000

The overall project cost includes design, environmental clearance, right-of-way, utilities, and construction. Project construction is programmed to begin in fiscal year 2019.



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Project Purpose and Need

Regionally, Kolb Road is an urban arterial road that carries traffic from just south of Interstate 10 to the foothills subdivisions and resorts north of Sunrise Drive, a distance of about 16 miles. Approximately 1.5 miles north of the project limits, Kolb Road becomes Craycroft Road. A 2.2-mile segment of the Kolb Road alignment from the south project limit to Tanque Verde Road is named Sabino Canyon Road. In the project area, the road serves primarily residential land uses, with commercial development at the north end of the project. The Northeast Area Arterial Study identified the need for capacity and safety improvements.

Within the project limits, a length of 1.9 miles from Sabino Canyon Road to Sunrise Drive, Kolb Road has several operational deficiencies due to the lack of turning lanes for the many driveways and side streets along the roadway, no paved shoulders for motorist or bicycle use, and limited facilities (pathways or sidewalks) for pedestrians. One segment of Kolb Road, from Territory Drive to Sunrise Drive, experiences a higher than average crash rate due to shopping center access points.

The purpose of this project will be to improve operational conditions and safety through the additions of a center two-way left-turn lane for motorists, multi-use paved shoulders suitable for bicycle use, and sidewalk or pathways for pedestrian use. The project will also provide intersection improvements to enhance traffic operations at the intersections of Snyder Road, Territory Drive, and Sunrise Drive.

The new roadway will meet projected traffic demand and improve access, safety, and bicycle and pedestrian mobility.

Project Elements

The project will widen approximately 1.9 miles of Kolb Road between Sabino Canyon Road and Sunrise Drive. The major project elements include:

- Reconstructing the roadway to provide a three-lane (one 11-foot-wide through lane in each direction and a 12-foot-wide two-way left-turn lane) roadway with six-foot-wide multi-use paved shoulders suitable for bicycle use in each direction
- Adding retaining walls, as needed
- Replacing guardrails, as needed
- Constructing pedestrian facilities
- Constructing drainage improvements (including channels and culverts)
- Reconstructing the traffic signal at Kolb Road and Snyder Road
- Adding a roundabout at Kolb Road and Territory Drive
- Adding or improving street lighting (1) from Sunrise Drive to Territory Drive, (2) at the Kolb Road and Snyder Road intersection, and (3) at the Rural Metro Fire Station



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- Adding landscaping and irrigation
- Relocating utilities, as needed

In accordance with the Pima County Community Participation and Mitigation Ordinance (Pima County Code 10-560.010 et seq.), an Environmental Assessment and Mitigation Report (EAMR) is required for major transportation projects. This document complies with the ordinance and is consistent with EAMR guidance in the Pima County Roadway Design Manual.

Project Impacts and Recommended Mitigation

Reports, studies, and analyses used for the preparation of the EAMR are noted throughout the document, are included in the References section, and are posted on the project website.

Biological Resources - The proposed project will have temporary and permanent impacts on xeroriparian habitat, upland habitat, and native plants. Those impacts are moderate because much of the right-of-way is disturbed due to development and utility corridors. No sensitive habitat or wildlife connectivity issues are present. Impacts to xeroriparian habitat are associated with the multiple drainage crossings and are unavoidable. Mitigation measures for regulated riparian habitat under the Pima County Regional Flood Control District (PCRFC) riparian ordinance will be included.

Drainage and Clean Water Act - Multiple drainage structures will impact Waters of the United States. Coordination with the U.S. Army Corps of Engineers is ongoing. A non-notifying Clean Water Act (CWA) Section 404 Nationwide Permit 12 and Nationwide Permit 14 with conditional Section 401 Water Quality Certification are expected. A CWA Section 402 Stormwater Pollution Prevention Plan will be prepared by the Pima County Department of Transportation, and a Notice of Intent will be submitted to the Arizona Department of Environmental Quality.

Floodplains - The project will not result in impacts to the Federal Emergency Management Agency (FEMA) designated 100-year floodplains. No improvements will encroach on the Ventana Canyon Wash floodplain at the south end of the project. The drainage design will convey runoff from 100-year storms under Kolb Road, providing an all-weather roadway. The roadway and drainage structures are in compliance with FEMA and PCRFC requirements, and a Floodplain Use Permit will be obtained.

Air Quality - The project will only have temporary, short-term impacts on particulate matter (dust) during construction activities. Those impacts will be minimized by a Pima County Fugitive Dust Activity Permit and Pima County Department of Transportation standard specifications for dust control.

Noise - The noise analysis resulted in a determination that the project will not result in an exceedance of the Pima County Noise Abatement Criteria or the Arizona Department of Transportation Noise Abatement Requirements. No noise barriers are required on the project.



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Temporary impacts during construction are anticipated and will be limited through compliance with the Pima County Noise Ordinance (Pima County Code 9.30.070).

Utilities - The project will impact multiple utilities in the corridor, including gas, electric, communications, potable water, and wastewater. Throughout the design process, coordination with the utility companies has occurred to locate facilities, minimize impacts, and develop relocation schedules.

Pima County Wastewater facilities may be impacted by new drainage structures. If necessary, Pima County Reclaimed Water Reclamation Department lines will be relocated as a part of the roadway construction project. The Tucson Water lines will be impacted by the new drainage structures. Tucson Water lines will be relocated as part of the roadway construction project. The relocation of electric, gas, telephone, and cable lines will be performed prior to road construction by the utility companies.

There are no seasonal restrictions on the relocation of Tucson Electric Power or Southwest Gas facilities in the project area.

Hazardous Materials - No recognized environmental conditions (leaking underground storage tanks, landfills, or land uses associates with hazardous materials) have been identified within the project limits. Field sampling and laboratory testing of roadway paint striping and concrete headwalls determined that no asbestos-containing materials were present and that lead-based paint results were below the 0.5 percent U.S. Department of Housing and Urban Development/ U.S. Environmental Protection Agency action levels but above the U.S. Department of Labor Occupational Safety and Health Administration detection level.

Construction - Project construction is expected to begin with roadway construction in spring 2019 and last approximately 18 months. Utility relocation efforts are expected to occur prior to roadway construction. During construction, access to all residences, businesses, and the fire station will be maintained at all times, with the following exceptions:

- Temporary closures of asphalt residential driveways will not exceed four hours, with 24-hour notice of any such closure given to the property owner (*Note:* the Rural Metro fire station driveway width allows reconstruction to occur in halves, keeping a minimum of one-half open at all times).
- Temporary closures of concrete residential driveways will not exceed seven days for placement of concrete and cure time. The contractor will provide on-street parking for homeowners during this time period.

One lane of traffic in each direction on Kolb Road will be maintained. The reconstruction of the Kolb Road/Snyder Road intersection will require a short term (approximately two weeks) traffic detour on Snyder Road.

Historic/Cultural Resources - The project will not impact historic and cultural resources. No historic or cultural resources are present within the project limits.



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Visual Resources - Kolb Road is designated a Scenic Route in the Pima County Major Streets and Routes Plan. The roadway widening will moderately alter views from adjacent properties. The widened roadway will increase the paved area and require cut and fill slopes. Mature vegetation will be removed and, in areas, replaced with retaining walls or other structural elements. The general visual character of the area will not change, but the project area will be altered by the increased paving, exposed cut slopes, mature vegetation removal, and enlargement of drainage features. A Visual and Aesthetic Resource Analysis was prepared to document impacts and recommend mitigation, including landscaping, structural treatments, and public art.

Right-of-Way Acquisition/Displacement - No acquisition of residences or businesses will occur. Several temporary construction easements, slope easements, and drainage easements will be required to facilitate construction.

Access and Parking - Access will be maintained to all adjacent properties. No parking is currently available within the project limits. Minor traffic delays may occur on Kolb Road and Snyder Road; however, one lane of traffic in each direction is expected to remain open. A traffic control plan approved by the Pima County Department of Transportation Field Engineering Division will be implemented by the contractor.

Neighborhood Disruption - No social services are within the project limits other than Rural Metro Fire Station 73 at 4300 N. Kolb Road. Coordination with, and access to, the fire station will be maintained at all times. No impacts to neighborhoods are expected. Neighborhood access will be maintained throughout construction. Residents will be provided various traffic control communications through preconstruction meetings, direct mailings, media alerts, the project website, and signage. A short-term traffic detour will be required for the reconstruction of the Kolb Road/Snyder Road intersection.

Parks and Recreation - No parks and recreation facilities are within the project limits or the project vicinity. The nearest public recreation facility is the Sabino Canyon Visitor Center, approximately 1.2 miles to the northeast.

Under Pima County, Arizona, Code 10.56-070.B, an EAMR “shall identify adverse impacts of the proposed project and shall provide recommendations for mitigation measures which may be undertaken to minimize the adverse impacts.” Though some of the mitigation measures in this report are required to be in compliance with various guidelines or regulations, they are deemed “mitigation measures” in this document.



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Mitigation Measures

Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Removal of native plants (Section 6.1.1)	Protected native plants are to be preserved in place or mitigated in accordance with the Arizona Native Plant Law, the Environmentally Sensitive Roadway Design Guidelines, and the Pima County Regional Flood Control District Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines.	Arizona Department of Agriculture	Pima County Department of Transportation and contractor
Management of invasive plant species (Section 6.1.1)	Implement invasive species management measures as guided by Pima County specification 201-3.04, Noxious and Invasive Vegetation.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Impacts to nesting birds (Section 6.1.1)	The contractor shall plan to complete all vegetation-removal activities on the site from September 1 through February 28 to avoid harming any active bird nests.	U.S. Fish and Wildlife Service	Pima County Department of Transportation and contractor
Impacts to Waters of the United States (Section 6.1.2)	Pima County will conduct work under a Clean Water Act Section 404 Nationwide Permit 12 and Nationwide Permit 14 with Section 401 Water Quality Certification, and the contractor shall comply with the permit conditions.	U.S. Army Corps of Engineers	Pima County Department of Transportation and contractor
	<p>The required Section 402 mitigation measures will be determined during preparation of the Arizona Pollutant Discharge and Elimination System Permit application and Stormwater Pollution Prevention Plan.</p> <p>Pima County will prepare a Stormwater Pollution Prevention Plan, and the contractor will implement the Stormwater Pollution Prevention Plan.</p> <p>The Pima County Department of Transportation and the contractor will prepare and file separate Notices of Intent and Notices of Termination with the Arizona Department of Environmental Quality.</p>	Arizona Department of Environmental Quality, Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
Impacts to regulated riparian habitat (Section 6.1.2)	The Pima County Department of Transportation will provide on-site landscaping mitigation for impacts to regulated riparian habitat in accordance with the Pima County Regional Flood Control District floodplain and riparian ordinance.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor
Impacts to floodplains (Section 6.1.3)	A Floodplain Use Permit from the Pima County Regional Flood Control District will be required because more than 0.33 acre of riparian habitat will be impacted.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor



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Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Construction dust control (Sections 6.1.4 and 6.1.8)	Comply with all dust control measures identified in the Pima County Department of Transportation standard specifications for construction, the Stormwater Pollution Prevention Plan, and the Pima County Department of Environmental Quality Fugitive Dust Activity Permit.	Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
Utility service interruptions (Section 6.1.6)	Coordination and planning with the utility companies to determine any service interruptions, and notify customers 14 days in advance.	Multiple utilities	Utility or contractor
Maintenance of access (Sections 6.1.8 and 6.2.2)	Implementation of a traffic control plan and maintenance of access to residential subdivisions, commercial development, and Rural Metro.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Construction noise (Section 6.1.8)	Construction equipment noise minimized by use of properly muffled equipment, maintenance of equipment, and placement of equipment away from residential receivers. Compliance with Pima County noise ordinance (Pima County Code 9.30.070).	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Impacts to cultural resource sites (Section 6.1.9)	If previously unidentified cultural resources are encountered during construction, work at that location shall be halted immediately and the resources shall be secured and protected. The Arizona State Museum and the Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division shall be contacted immediately.	Arizona State Historic Preservation Office, Arizona State Museum Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division	Pima County Department of Transportation and contractor
Visual impacts due to road and drainage structure construction (Section 6.1.10)	Incorporate landscaping, reseeding, structural treatments, and public art, where practical.	Pima County Department of Transportation	Pima County Department of Transportation and contractor



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Potential Impacts	Mitigation	Agency Involvement	Responsible Parties
Potential presence of asbestos-containing material and lead-based paint (Section 6.1.7)	<p>If any hazardous materials are encountered during construction, work shall cease at the location and the Pima County Engineer shall be contacted to arrange for the proper assessment, treatment, and disposal of those materials.</p> <p>No asbestos was detected in paint striping or concrete structures. Lead-based paint was detected in yellow paint striping. The level was below action limits but above the U.S. Department of Labor Occupational Safety and Health Administration detection level. Therefore, the contractor is required to notify workers of the potential presence of lead.</p>	Pima County Department of Transportation	Pima County Department of Transportation and contractor

Agency Coordination

Agency coordination has occurred with the following agencies and will continue through design, permitting, and construction:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- Federal Emergency Management Agency
- Arizona Department of Environmental Quality
- Arizona Department of Transportation
- Arizona Game and Fish Department
- Arizona State Historic Preservation Office
- Pima County Department of Environmental Quality
- Pima County Office of Sustainability and Conservation
- Pima County Regional Flood Control District
- Pima Association of Governments

Public Participation

In general, the local public is familiar with the planned project because it was first proposed as part of the Pima County 1997 Bond Program (DOT-32). Earlier planning was directed toward a four-lane roadway section along Kolb Road. This concept required substantive new right-of-way and was not supported by the Community Advisory Committee (CAC) or area residents. In 2004, the Pima County Department of Transportation completed a review of overall traffic flows in the



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area (Northeast Area Arterial Study) and identified the currently proposed three-lane section concept, which keeps improvements within the existing right-of-way and easements. This concept meets transportation needs for the area.

The current Kolb Road project CAC is made up of 14 representatives from the project corridor, including one member from the original CAC in 2004. Regular meetings were held to present the project and seek guidance from the CAC (see CAC Meeting Minutes in Appendix).

January 31, 2017 - This initial meeting focused on introducing the engineering design team, providing a project overview, discussing roles and responsibilities, and selecting a chair, vice-chair, and art committee members. Nine CAC members attended.

March 29, 2017 - The second meeting provided a design status update and overall project schedule. Sidewalk/pedestrian alternatives to be evaluated were discussed. Twelve CAC members attended.

June 15, 2017 - The third meeting included an overview of the Design Concept Report (DCR) components and a presentation on the noise analysis process. Ten CAC members attended.

August 29, 2017 - This meeting provided the opportunity to comment on the Draft DCR, presented the results of the noise analysis, and provided an overview of the EAMR/DCR process. Eleven CAC members and about 15 members of the public attended.

November 8, 2017 - The focus of the fifth meeting was to review the draft EAMR. The project manager presented an overview of project status and an overview of the technical reports that compose the EAMR, including Biological Resources, Drainage/Floodplain (Clean Water Act permitting), Air Quality, Noise Analysis, Hazardous Materials, Historic and Cultural Resources, Visual Resources, and Neighborhood Impacts. The overview of the EAMR was in preparation for the CAC role to review the EAMR and provide comments through a letter to the Board of Supervisors. In addition, the project manager noted that updated traffic counts had been obtained that confirmed the values included in the Traffic Report.

December 12, 2017 – The final CAC meeting presented the Final DCR and EAMR to the committee. The project manager reviewed the changes made in the EAMR in response to comments provided following the November CAC meeting. There were brief discussions on landscaping, street lighting, and access at Territory Drive/Bashas shopping center. The CAC has been fully engaged in the process and is supportive of the project design concepts. Their letter of support is included in the Appendix.

A public open house meeting was held on December 12, 2017, at Ventana Vista Elementary School, 6085 N. Kolb Road. The meeting was advertised through public notices and direct mailings. A summary of the meeting is included in Chapter 8 Public Participation and in the Appendix. A second public open house will be scheduled in mid- to late 2018, prior to project construction, to present the roadway plans and the construction schedule.



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The Pima County Board of Supervisors will hold a public hearing on January 16, 2018 in the Board of Supervisors Hearing Room, Administration Building, 130 West Congress Street, Tucson, Arizona, at or after 9:00 A.M. to consider for approval the EAMR for Bond Project (DOT-32) Kolb Road Improvement Project.

A project website, <http://roadprojects.pima.gov>, is available for current project status and technical reports.



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1.0 BACKGROUND

1.1 PROJECT DESCRIPTION

Project Name - Kolb Road: Sabino Canyon Road to Sunrise Drive

Pima County Project No. - 4KSCSD

Project Location and Limits - The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area (Figures 1 and 2). The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The Coronado National Forest (CNF) boundary is about 1.2 miles northeast of the project limits.

In accordance with the Pima County Community Participation and Mitigation Ordinance (Pima County Code 10-560.010 et seq.), an Environmental Assessment and Mitigation Report (EAMR) is required for major transportation projects. This document complies with the ordinance requirements and is consistent with Pima County Department of Transportation (PCDOT) Pima County Roadway Design Manual (RDM) (PCDOT 2015) guidance for the preparation of a project EAMR.

The project originated in the 1997 Highway User Revenue Fund Bond program (DOT-32) as a widening to four lanes. Subsequent coordination with the community and a 2004 Pima County Department of Transportation Northeast Area Arterial Study (PCDOT 2004) included the currently proposed three-lane section concept. This concept keeps improvements within the existing right-of-way (ROW) and easements while meeting transportation needs for the area. Kolb Road (Sabino Canyon Road to Sunrise Drive) is identified in the Pima Association of Governments (PAG) Transportation Improvement Program (TIP) Fiscal Year 2018–2022 under TIP ID No. 787.00. The project is described as widening Kolb Road to three lanes for a distance of 2.1 miles. The actual length is 1.9 miles because the project will tie into previously widened intersections at Sabino Canyon Road and Sunrise Drive.

1.2 PROJECT COST AND FUNDING

Project funding identified in the PAG Program (TIP, Fiscal Year 2018–2022) is from the Federal Highway Administration (FHWA) Surface Transportation Program (STP) (Federal Project No. STP-PPM-0[257]D) and Pima County bonds (PAG 2017). Tucson Water is also expected to contribute to the project cost. The federal funding is administered through the Arizona Department of Transportation (ADOT) (TRACS No. 0000 PM PPM T0109 01C).

Funding Source	Funding
Federal (STP) Funds	\$ 8,500,000
Local Funds (Pima County Bonds) - Design	\$ 2,966,000
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Tucson Water Contribution	\$ 500,000
Total	\$16,027,000



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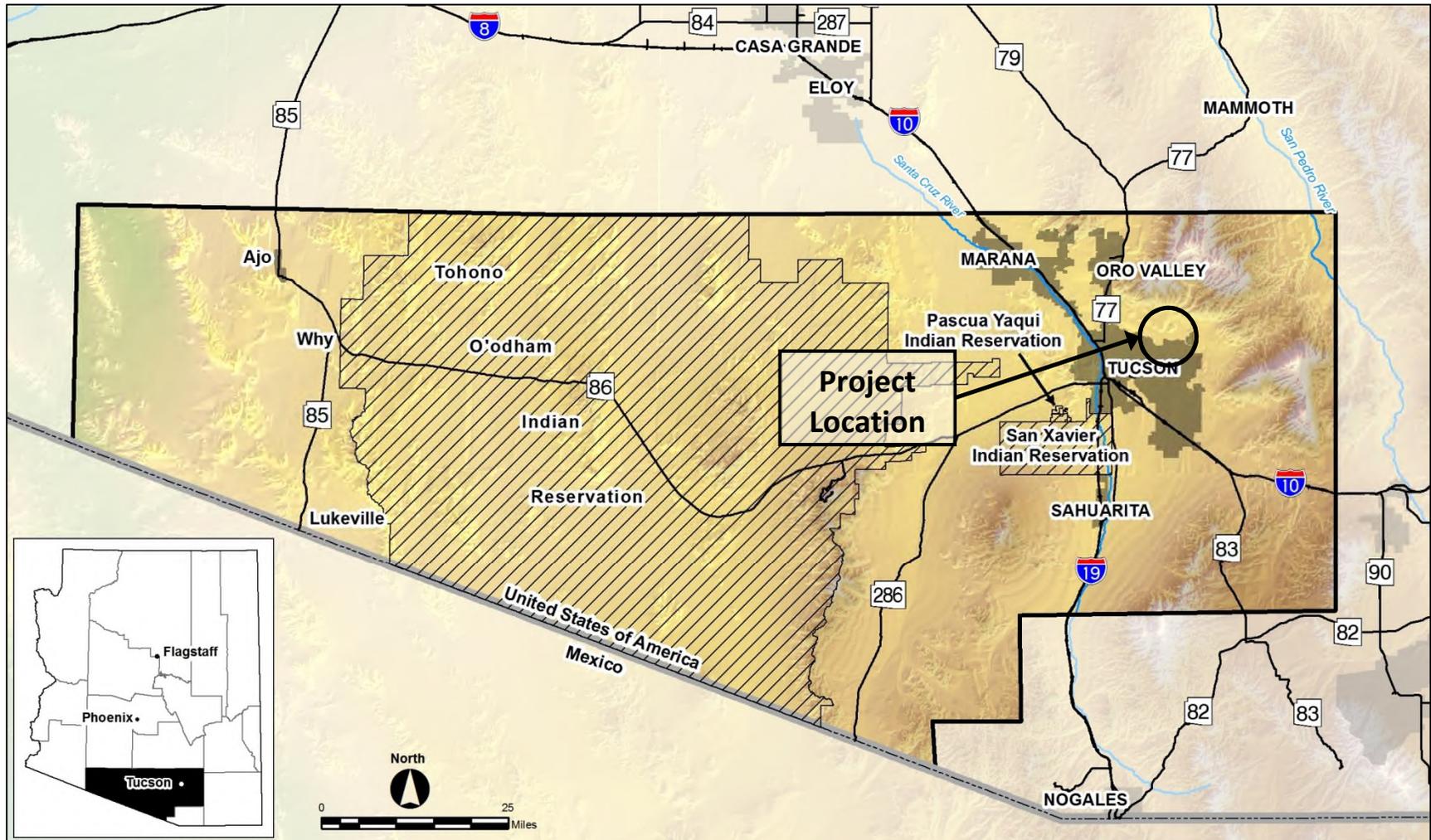


Figure 1. Project location



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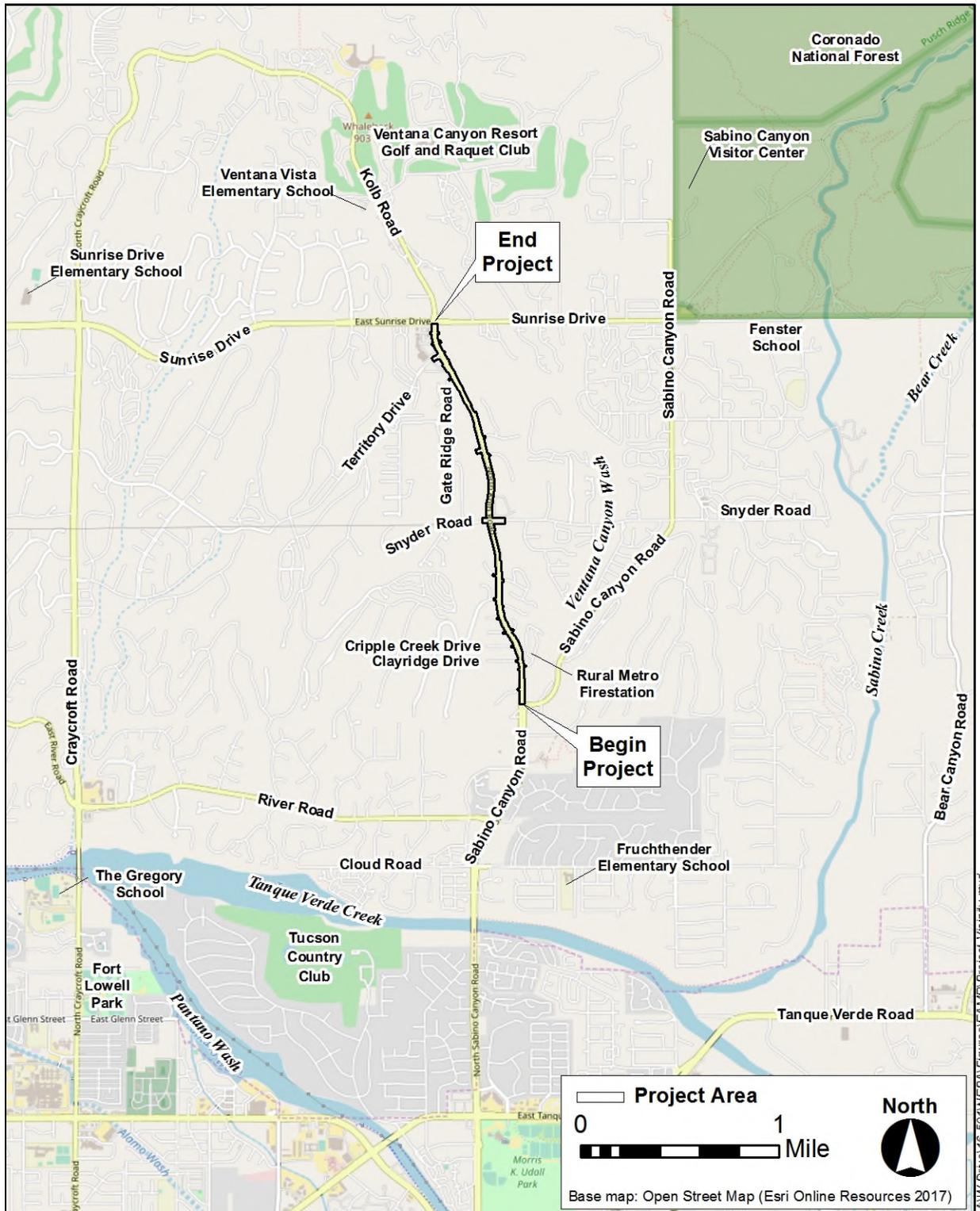


Figure 2. Project vicinity



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The overall project cost includes design, environmental clearance, ROW, utilities, and construction. Construction funding is available in fiscal year 2019. Estimated costs for the project are shown in Table 1.

Table 1. Project cost (based on preliminary design estimates)

Task	Cost
Right-of-way	\$290,000
Design	\$3,170,000
Construction	\$10,342,000
Construction engineering	\$1,750,000
Utility relocation/oversight	\$375,000
Artwork (1%)	\$100,000
Total	\$16,027,000

The utility relocation costs assume that half of the relocation costs are being paid by Tucson Water. The Pima County Regional Wastewater Reclamation Department reimburses the project the full costs of sewer facility adjustments. No costs are included for Tucson Electric Power or Southwest Gas relocations.

Artwork is estimated at 1 percent of the construction costs, and construction administration is assumed to be 15 percent of the construction costs. The costs for drainage easements and temporary construction easements are included in ROW costs.

1.3 DIRECTION BY BOARD OF SUPERVISORS

The project is part of an approved PAG TIP to be funded by the FHWA STP and Pima County Bonds. The Pima County Board of Supervisors approved entering into a contract for Roadway Planning and Design Engineering Services for Kolb Road: Sabino Canyon Road to Sunrise Drive on August 2, 2016, and issued a Notice to Proceed under Contract No. CT-TR-16*368 to Psomas.

1.4 PROJECT DESIGN PROCESS

The development of the proposed project is following Pima County RDM Chapter 3 and has included the following engineering design and environmental documents to date:

- State Historic Preservation Office Survey Report Summary Form, Kolb Road: Sabino Canyon Road to Sunrise Drive, Pima County, Arizona (EcoPlan Associates, Inc., February 2017)
- Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum (EcoPlan Associates, Inc., March 2017)
- Noise Review, Kolb Road, Sabino Canyon Road to Sunrise Drive (Sound Solutions, LLC, August 2017)
- Clean Water Act Section 404 Preliminary Jurisdictional Determination (EcoPlan Associates, Inc., October 2017)



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- Final Traffic Engineering Report, Kolb Road, Sabino Canyon Road to Sunrise Drive (Psomas, May 2017)
- Preliminary Initial Site Assessment, Kolb Road from the Intersection of Sunrise Drive South to Intersection of Sabino Canyon Road, Catalina Foothills, Pima County, Arizona (Ninyo and Moore, Inc., February 2017)
- Biological Evaluation, Valencia Road: Wade Road to Ajo Highway (EcoPlan Associates, Inc., December 2017)
- Visual and Aesthetic Resource Analysis, Kolb Road: Sabino Canyon Road to Sunrise Drive (McGann & Associates, Inc., October 2017)
- Environmentally Sensitive Roadway Vegetation Inventory and Relevé Analysis Report (McGann & Associates, Inc., September 2017)
- Final Drainage and Hydrology Report (Psomas, November 2017)
- Final Design Concept Report, Kolb Road: Sabino Canyon Road to Sunrise Drive (Psomas, December 2017)
- Geotechnical/Pavement Design Report (SCE, October 2017)
- Final Lighting Report, Kolb Road: Sabino Canyon Road to Sunrise Drive (Psomas, June 2017)
- Initial Roadway Design Plans (Psomas, August 2017)

The development of final plans will occur following approval of the Design Concept Report (DCR) and EAMR. Design is expected to be completed in August 2018, and construction is expected to begin in spring 2019, with completion in summer 2020.



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2.0 PROJECT PURPOSE AND NEED

The project purpose and need is defined by regional and site-specific issues. The discussion below identifies roadway needs and identifies the project objectives for solving or meeting those needs.

2.1 PROJECT NEED

Regionally, Kolb Road is an urban arterial road that carries traffic from just south of Interstate 10 to the foothills subdivisions and resorts north of Sunrise Drive, a distance of about 16 miles. Approximately 1.5 miles north of the project limits, Kolb Road becomes Craycroft Road. A 2.2-mile segment of the Kolb Road alignment from the south project limits to Tanque Verde Road is named Sabino Canyon Road. In the project area, the road serves primarily residential land uses, with commercial development at the north end of the project. The Northeast Area Arterial Study (PCDOT 2004) identified the need for capacity and safety improvements.

Within the project limits (1.9 miles from Sabino Canyon Road to Sunrise Drive), Kolb Road has several operational deficiencies due to the lack of turning lanes for the many driveways and side streets, limited paved shoulders for motorist or bicycle use, and limited facilities (pathways or sidewalks) for pedestrians. One segment of Kolb Road, from Territory Drive to Sunrise Drive, experiences a higher than average crash rate due to shopping center access points. The proposed project is needed to increase safety and improve multimodal connectivity to respond to these deficiencies along Kolb Road.

The project area is fully developed and consists primarily of privately owned single-family residential homes east and west of Kolb Road. Multifamily residential units are east of Kolb Road, north and south of Snyder Road and east of Kolb Road as it approaches Sunrise Drive. Businesses are also at the north end of the project as Kolb Road approaches Sunrise Drive. A fire station (Rural Metro Fire Station 73) is at the south end of the project, east of Kolb Road near Cripple Creek Drive. The numerous intersecting streets and residential and commercial driveways result in more than 50 access points directly to Kolb Road between Sunrise Drive and Sabino Canyon Road. The multiple turning locations and lack of turn lanes results in safety issues and delays.

Kolb Road currently carries approximately 11,750 vehicles per day (vpd) north of Snyder Road and approximately 12,600 vpd south of Snyder Road. Daily volumes on Snyder Road and Territory Drive are significantly lower. Under existing conditions, the signalized intersections at Sabino Canyon Road, Snyder Road, and Sunrise Drive are currently operating at Level of Service (LOS) C or better during the peak hour.



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In addition, all movements at all four study intersections are operating at LOS D or better in the morning peak hour and at LOS C or better in the afternoon peak hour. Most of the movements are operating at LOS B or better. Note that all roadway segments currently operate at LOS D or better (Psomas 2017a). LOS designations are as follows:

- *A* - Free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes.
- *B* - Reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted.
- *C* - Stable flow, at or near free flow. Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness.
- *D* - Approaching unstable flow. Speeds slightly decrease as traffic volume slightly increases. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease.
- *E* - Unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit.
- *F* - Forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity.

PAG maintains a travel demand model that estimates the future volumes for the Tucson metropolitan area. Current traffic numbers reflect 11,750 vpd on Kolb Road north of Snyder Road and 12,600 vpd south of Snyder Road. Though most of the area is already developed, it is reasonable to assume that residual development, combined with economic recovery and an improved roadway, will result in small increases in traffic volumes. Therefore, to be conservative and to provide a consistent estimate throughout the project area, an annual growth rate of 0.5 percent was used for this project. The resulting projected daily volumes indicate that Kolb Road is expected to carry approximately 14,200 vpd south of Snyder Road and approximately 13,200 vpd north of Snyder Road (Psomas 2017a). A two-lane roadway (one lane in each direction) is capable of reasonably handling those volumes.

Pedestrian or bicycle facilities are limited along Kolb Road within the project limits. Sidewalks (6 feet wide, paved) are only present at the commercial area approaching Sunrise Drive and at the intersection with Sabino Canyon Road. Useable paved shoulders (8 feet wide) are only present approaching the south end of the project, at the Sabino Canyon Road intersection. The remainder of the project has 1- to 2-foot-wide paved shoulders, and they are deteriorated in many locations. The limited dirt shoulders are rough and unstable due to slope and cross drainage. The roadway corridor is not conducive to bicycle or pedestrian use.

The crash history on Kolb Road between Sunrise Drive and Territory Drive notes 11 crashes from 2011 to 2016. Six of the crashes involved drivers exiting the shopping center on the west side of Kolb Road. At least four of the crashes involved drivers making a left turn out of the



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shopping center; one crash involved a right turn out of the shopping center, and the other is unclear from the data. Though this is a short segment, the crash rate is higher than Pima County's average rate.

2.2 PROJECT PURPOSE

The purpose of this project is to improve operational conditions and safety through the addition of a 12-foot-wide center two-way left-turn lane for motorists. The project will also improve safety and reduce delays by controlling access between Territory Drive and Sunrise Drive and providing a roundabout at the intersection of Territory Drive and Kolb Road. The project will also improve pedestrian mobility, with the addition of sidewalks or pathways and access ramps that meet Americans with Disabilities Act requirements, and bicycle mobility through the inclusion of multi-use paved shoulders suitable for bicycle use. These improvements and features are consistent with the Northeast Area Arterial Study.

The new roadway will meet projected traffic demand and improve access, safety, and bicycle/pedestrian mobility. This is supported by the funding partners, the FHWA and Pima County (PAG 2017). The project federal environmental clearance through ADOT and the FHWA is expected to occur in January 2018.



Kolb Road: Sabino Canyon Road to Sunrise Drive
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3.0 PROJECT SETTING

3.1 EXISTING CONDITIONS

The project area is in an unincorporated area of east Pima County in the northeast portion of the greater Tucson metropolitan area (see Figure 1). The project lies within portions of Sections 17, 18, 19, and 20 of Township 13 South, Range 15 East, on the Sabino Canyon (1996), Arizona, U.S. Geological Survey 7.5-minute quadrangle. Adjacent lands are privately held or are owned by Pima County. The County owns nine parcels adjacent to Kolb Road, totaling approximately 5.03 acres. The CNF boundary is about 1.2 miles northeast of the project limits.

3.1.1 Built Environment

The existing Kolb Road is generally an uncurbed two-lane paved roadway, with 12-foot-wide lanes and paved shoulders varying from 1 to 2 feet wide. The horizontal alignment of the roadway is curvilinear through rolling, hilly terrain. The vertical profile varies as the roadway climbs from Sabino Canyon Road at an elevation¹ of 2,560 feet to Sunrise Drive at 2,750 feet.

Segments of the roadway at the north and south ends have additional lanes at the intersections. The Kolb Road and Sabino Canyon Road intersection consists of two through lanes and a left-turn lane southbound and two through lanes and a U-turn lane northbound. Sabino Canyon Road has one right-turn lane northbound where Sabino Canyon Road forks away from Kolb Road. Westbound Sabino Canyon Road has two left-turn lanes and one right-turn lane.

North of the Kolb Road and Sabino Canyon Road intersection, Kolb Road transitions from four lanes to two lanes. One left-turn bay exists northbound onto Little Savannah Lane. The section of Kolb Road between Sabino Canyon Road and Snyder Road has no shoulder once the transition is complete. The existing intersection of Kolb Road and Snyder Road consists of one through lane northbound and southbound, and one combined through/turn lane eastbound and westbound. Left-turn lanes are also present northbound and southbound. The existing intersection of Kolb Road and Sunrise Drive consists of one through lane, a left-turn lane (double turn lanes for northbound traffic), one right-turn lane, and one bicycle lane in each of the four directions.

The posted speed limit is 35 miles per hour, and the roadway has a posted load limit to preclude trucks above 18,000 pounds. The load limit for the roadway will be retained.

Fifteen existing culverts are under Kolb Road, and six are under driveways or side streets. Existing culverts vary in size and material; however, the majority are composed of corrugated metal pipes (CMPs). Eleven of the culverts are inadequately sized to convey the 100-year storm event peak discharge under the roadway. Four at-grade crossings also exist within the project limits (Psomas 2017b).

¹ Elevations in this document are referenced to mean sea level.



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Kolb Road ROW varies but is generally 90 feet wide. The existing ROW along Snyder Road varies between 90 and 145 feet wide west of the intersection with Kolb Road and is 150 feet wide east of Kolb Road.

The land uses within the study area are primarily residential: single-family subdivisions, single-family homes on one- to five-acre lots, and multifamily buildings. Apartment complexes are at the southeast corner of the Sunrise Drive and Kolb Road intersection and east of Kolb Road at its intersection with Snyder Road. Vacant residential sites are sporadic along Kolb Road and in adjacent subdivisions.

Commercial land use occurs within the project limits. A Bashas' grocery store anchors a group of retail stores and restaurants on the southwest corner of the Kolb Road and Sunrise Drive intersection. A second group of retail stores is on the southeast corner of the same intersection. One four-acre commercial site west of Kolb Road and south of Territory Drive has been developed (restaurant and shops). Rural Metro Fire Station 73 is across from Cripple Creek Drive.

Existing utilities that can be found within the Kolb Road corridor include sanitary sewer, cable, gas, electric, telephone, water, fiber optic cable, and landscaping irrigation. Most utilities fall within the existing roadway ROW and therefore may fall beneath the proposed roadway. Utilities will be evaluated for conflicts during final design to determine whether relocations are necessary. Utility companies within the project limits are as follows:

- CenturyLink
- Comcast
- Cox Communications
- Level 3
- Pima County Regional Wastewater Reclamation Department
- Southwest Gas
- Tucson Electric Power
- Tucson Water

3.1.2 Natural Environment

The project area is in the north Sonoran Desert biotic region and the south portion of the Basin and Range physiographic province. Despite the scarce and unreliable precipitation and the high summer temperatures, this region supports a biologically diverse desert vegetative community indicative of the foothill paloverde (*Parkinsonia [Cercidium] microphylla*)–saguaro (*Carnegiea gigantea*)–dominated Arizona Upland subdivision of Sonoran desertscrub (EcoPlan 2017a). Undisturbed native vegetation representing this community adjacent to Kolb Road in the project area is rich and diverse.



Kolb Road: Sabino Canyon Road to Sunrise Drive *Environmental Assessment and Mitigation Report*



The project is within foothills descending the south limits of the Santa Catalina Mountains northeast of Tucson. Elevations range from 2,560 feet at Sabino Canyon Road to 2,750 feet at Sunrise Drive. The major drainage feature in the vicinity is Ventana Canyon Wash, an ephemeral drainage that roughly parallels the project limits to the east, crossing and paralleling Kolb Road and connecting with Tanque Verde Creek.

Twenty-four drainage structures, including the multiple box culvert structure over Ventana Canyon Wash, occur along Kolb Road and driveways or cross streets within the project limits. Stormwater runoff is handled by box culvert, pipe culverts, at-grade crossings, and adjacent drainage channels. However, stormwater flows overtop the roadway at several locations, resulting in debris, safety, and operational concerns. The Federal Emergency Management Agency (FEMA) has designated a 100-year floodplain (FEMA 2011) along Ventana Canyon Wash (Figure 3).



Kolb Road: Sabino Canyon Road to Sunrise Drive
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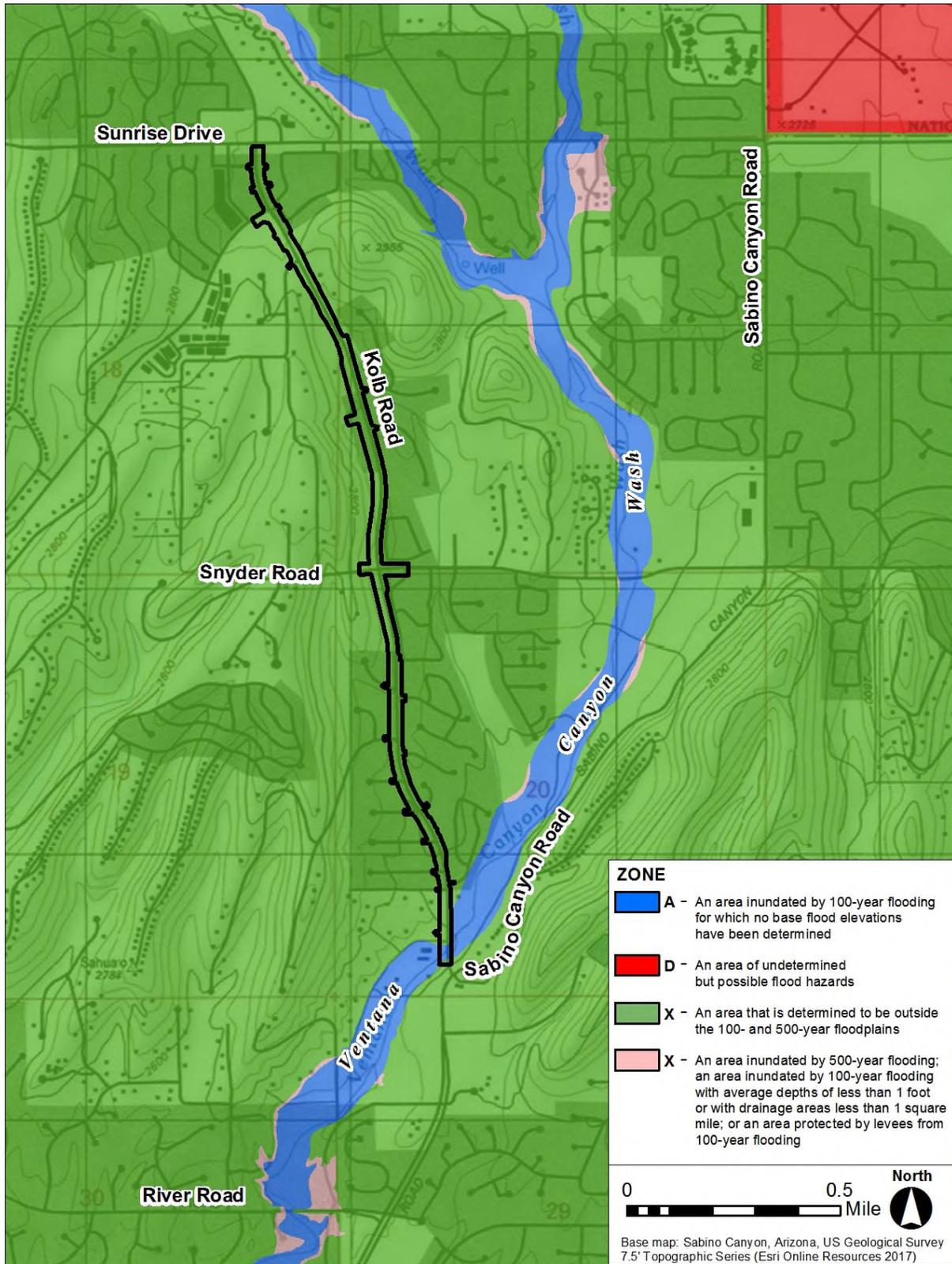


Figure 3. Federal Emergency Management Agency-designated floodplains



4.0 PROPOSED PROJECT

This section is a summary of the proposed project description in the Design Concept Report (DCR) (Psomias 2017c) and the engineering design and environmental documents noted in Section 1.4. For additional information, please refer to the documents on the project website: <http://roadprojects.pima.gov>.

4.1 ROADWAY SECTION

This project will widen approximately 1.9 miles of Kolb Road between Sabino Canyon Road and Sunrise Drive from the existing two lanes to three lanes and will include multi-use paved shoulders suitable for bicycle use, pedestrian facilities, drainage, and landscape features. The design year for this project is 2040. The design speed is 40 miles per hour; however, the posted speed limit will be 35 miles per hour. The project roadway section will include a three-lane roadway (one lane in each direction and a two-way left-turn lane). Dual left-turn lanes will be provided at the Kolb Road/Sunrise Drive intersection. Figures 4a and 4b show the proposed typical cross sections for the project.

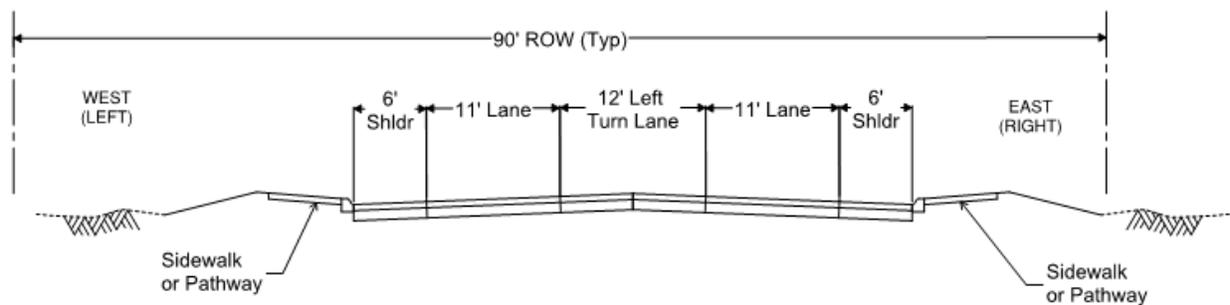


Figure 4a. Typical section with adjacent sidewalk or pathway, both sides

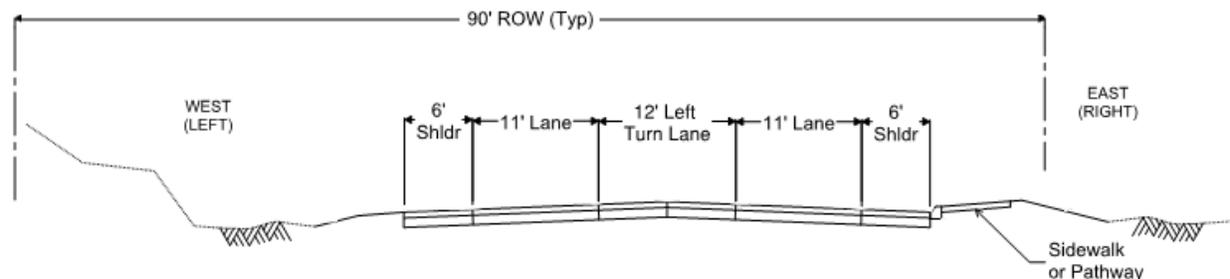


Figure 4b. Typical section with adjacent sidewalk or pathway, east side only

Project features will comply with the Americans with Disabilities Act and ensure that the project meets the guidelines set for accessibility include a pathway and sidewalk meeting the minimum width and maximum slope criteria. All culvert headwalls and end sections will be designed to comply with clear zone requirements. Metal handrail will be placed at warranted sidewalk locations adjacent to drainage facilities.



Kolb Road: Sabino Canyon Road to Sunrise Drive *Environmental Assessment and Mitigation Report*



The intersection of Kolb Road and Snyder Road will be modified to fit the new roadway geometry. Based on the projected volumes, a northbound right-turn lane is warranted at the Kolb Road and Snyder Road intersection. However, geometric and physical constraints prohibit the inclusion of a fully developed, standard right-turn lane. Traffic analyses show that the intersection will operate efficiently with or without the right-turn lane.

The crash rate is significantly (three times) higher at Kolb Road between Sunrise Drive and Territory Drive than the County's average rate. To provide better access management and help improve safety in the area, three alternatives were evaluated:

- Alternative 1 - Improve shoulders, add lighting, and clarify southbound shared right-turn/bicycle lane
- Alternative 2 - Restrict Bashas' shopping center driveway access to right-in, right-out only with a raised pork chop median
- Alternative 3 - Extend the median past the shopping center and add a roundabout at the Kolb Road and Territory Drive intersection

Alternative 3 was selected. The Alternative 3 improvements will occur between Territory Drive and Sunrise Drive to address safety issues at the shopping center. A roundabout intersection will be constructed at the intersection (Figure 5), and the following measures will be implemented:

- The shopping center driveway (west side) access will be restricted to right-in, right-out only, with a raised pork chop median to prohibit left-turn movements out of the driveway and eliminate the left-turn conflicts with northbound through traffic on Kolb Road. Drivers wishing to travel north will likely divert to Territory Drive; however, they can also access Sunrise Drive directly. The south driveway to the businesses on the east side of Kolb Road will operate with a right-in, right-out, left-out configuration.
- The median on Kolb Road will continue past the shopping center driveways with a one-lane roundabout constructed at the intersection of Kolb Road and Territory Drive.



Figure 5. Roundabout concept at Territory Drive (note that north is to the right)

Three existing traffic signals are within the project limits: at the intersections of Kolb Road and Sabino Canyon Road, Kolb Road and Snyder Road, and Kolb Road and Sunrise Drive. The signals at Sabino Canyon Road and Sunrise Drive will not be altered by the project. The signal at Kolb Road and Snyder Road will be modified to fit the proposed geometry and intersection improvements.

Some private properties that abut Kolb Road have privacy walls. The design of the roadway is such that the expansion of the pavement width will be to the west, which should minimize any impact to walls on private property. In addition, both the County and the contractor will be assessing the condition of all facilities within the construction limits (including these walls) prior to the start of construction and will monitor the facilities during construction.

From Sabino Canyon Road to Snyder Road and from Gate Ridge Road to Sunrise Drive, pedestrian facilities will be provided on both sides of Kolb Road by an attached sidewalk or pathway. The pathway on the west side of Kolb Road from Sabino Canyon Road to Snyder Road will be a decomposed granite pathway. From Gate Ridge Road to Snyder Road, pedestrian facilities will be provided only on the east side of Kolb Road by an attached sidewalk or pathway. Six-foot-wide shoulders suitable for bicycle use will be provided along Kolb Road.

Improvements to existing street lighting include replacing high-pressure sodium luminaires with light-emitting diode (LED) luminaires. All LED luminaires will be full cut-off, so there should be no “up lighting.” Shielding can be provided on a case-by-case basis, as necessary. The recommended lighting improvements are as follows:

- *Kolb Road from Sunrise Drive to Territory Drive* - New light poles with LED luminaires are proposed to be added to illuminate the roadway and proposed roundabout at the intersection of Kolb Road and Territory Drive.



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- *Kolb Road and Snyder Road Intersection* - Replace the existing high-pressure sodium luminaires on the signal poles with LED luminaires.
- *Kolb Road at the Rural Metro Fire Station* - Add LED luminaires on two light poles, one on each side of the fire station driveway or on two fire station flasher poles.

Existing guardrail within the project limits will be replaced with new guardrail where necessary, and the new guardrail will be designed and specified to meet the latest guidance and standards.

Driveways will be provided to properties that currently access Kolb Road. Several undeveloped properties also may require driveways at final design, depending on the status of their access.

4.2 DRAINAGE IMPROVEMENTS

Fifteen cross culverts convey stormwater runoff from west to east under Kolb Road. Another eight culverts are beneath driveways and cross streets and convey flows from north to south. The size of these crossings range from a single-barrel, 24-inch-diameter culvert to a three-barrel, 48-inch-diameter culvert and are made of a mix of CMP and reinforced concrete pipe (RCP). Eleven of the existing culverts, including cross culverts and driveway culverts, are inadequately sized to convey the 100-year storm event peak discharge without overtopping onto Kolb Road. Two at-grade crossings are along Kolb Road in addition to flows conveyed along the west shoulder of the roadway, breaking out across Kolb Road. Overtopping flows will either cross Kolb Road or flow along the roadway to the south. Proposed improvements will generally replace all CMPs with RCPs, upsize all culverts to provide 100-year capacity under the roadway and its driveways, and provide new crossings or roadside channels to convey flows to a nearby crossing where none currently exist.

At Snyder Road and Kolb Road, drainage will be captured at the proposed culvert inlet on the northwest corner of the intersection. Erosion control will be provided within the limits of the proposed Snyder Road reconstruction (approximately 60 feet from the west edge of the existing Kolb Road).

Ventana Canyon Wash is just south of the project limits and was recently upsized as part of the Sabino Canyon Road (4TSCKR) intersection improvements such that 100-year conveyance is provided beneath Kolb Road in the box culverts. No improvements are proposed to the Ventana Canyon Wash culvert crossing.



4.3 UTILITY AND IMPROVEMENTS

Numerous utilities run through the project corridor, including sanitary sewer, cable, gas, electric, telephone, water, fiber optic cable, and landscaping irrigation. Many utilities are within the existing roadway ROW and therefore may be beneath the proposed roadway. There are also utilities in existing easements east and west of the ROW that may be impacted by the roadway widening. Utilities will be evaluated for conflicts during design to determine if relocations are necessary.

Utilities present are noted below:

- CenturyLink
- Comcast
- Cox Communications
- Level 3
- Pima County Regional Wastewater Reclamation Department
- Southwest Gas (planned upgrades to system within project limits)
- Tucson Electric Power
- Tucson Water

4.4 RIGHT-OF-WAY

Kolb Road ROW varies in width but is generally 90 feet wide. An existing 35-foot-wide utility and setback easement is on the east and west sides of Kolb Road for the majority of the corridor south of Snyder Road. North of Snyder Road, there is an existing 35-foot-wide utility setback and slope easement on the east and west sides of Kolb Road for the majority of the corridor. North of Territory Drive, the ROW width is 150 feet. At the south end of the of the project, the Kolb Road ROW width is 150 feet, tapering to 90 feet wide near Clayridge Drive. The existing ROW along Snyder Road varies from 90 to 145 feet wide west of Kolb Road and is 150 feet wide east of Kolb Road. Pima County currently owns nine parcels adjacent to Kolb Road within the project limits, totaling approximately 5.03 acres. The County also has several slope and utility easements along Kolb Road. No additional ROW needs are anticipated, but small temporary construction easements or drainage easements may be required.

4.5 LANDSCAPING

This project will include the installation of landscaping improvements along the roadway shoulders to the ROW limit in accordance with the PCDOT Landscape and Irrigation Design Guidelines and the RDM. The placement of landscape improvements will consider the existing underground utilities in the project area and follow sight distance requirements. Where feasible, stormwater runoff will be captured to supplement irrigation, and landscaping may be more strategically located to aid in providing screening along the roadway. However, it should be noted that there may be some limitations due to space availability and the location of various slopes and drainage features along the project corridor.



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Landscaping will consist of species native to the Tucson Basin that are appropriate in the project's vegetative communities. Native plant species identified on-site during the plant inventory and Relevé process will be supplemented with additional species commonly occurring in the respective plant communities. The landscaping design will focus on sustainable objectives, using native species that will require minimal irrigation and maintenance, and water harvesting where possible. Plantings will be placed within the ROW to provide aesthetic qualities to the corridor. Significant quantities of cut slopes are anticipated on the west side of the roadway, and slope revegetation will be an important feature of the landscape strategy. The project team will coordinate efforts to employ proven slope revegetation strategies to ensure timely and aesthetically pleasing results.

The planting plans will be in accordance with Pima County Environmentally Sensitive Roadway (ESR) Design Guidelines. A short summary of ESR requirements and how they are addressed is noted as follows. Protected native trees within the ROW that will be impacted were inventoried by measuring caliper inches of the tree. These trees will be replanted using a coefficient to be determined when the engineering plans are further developed. The caliper inches for each species are totaled, and 125 percent of the caliper inches is replaced in the project area where it is technically possible to plant a tree. For example, if there are 100 caliper inches of foothills paloverde removed and 90 percent of the project area consists of paved areas, utility easements, and areas where safety would be compromised by tree planting, then 12.5 caliper inches of foothills paloverde would be replaced (125 percent of 10 inches = 12.5 inches). All saguaros impacted will be replaced at a 1:1 ratio, with a maximum 8-foot saguaro used for replacement. A more detailed description of the ESR process can be found here:

http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Transportation/Roadway%20Design/Roadway%20Design%20Manual/Appendix%204D%20-%20July%202022%202015.pdf.

Disturbed areas that will not be paved or otherwise stabilized will be reseeded with a seed mix of plants native to the project area at seasonally appropriate times.

4.6 PUBLIC ART

The County has selected a local artist (Robin Riley) to complete the public art component of this project. The design team and a Community Advisory Committee (CAC) will coordinate with the artist during the development of the project construction documents to incorporate the artwork into the plans.



5.0 ENVIRONMENTAL SCREENING

As required by the Pima County RDM, the environmental screening process for this project began at the onset of the engineering design process in August 2016. After field reviews and coordination with regulatory agencies, an Environmental Screening Questionnaire, Impact Summary Matrix, and Results Memorandum document was prepared to identify potential environmental impacts to resources (EcoPlan 2017b). The process considered construction activities and regulatory permitting issues and needs, including water resources, biological resources, cultural resources, air quality, noise, hazardous materials, and neighborhood/socioeconomic issues. The reports completed for these resource topics are available on the project website: <http://roadprojects.pima.gov>. The findings of the reports and analyses conducted during the environmental screening process have been carried forward into this EAMR, as appropriate. For each environmental aspect in the following section, existing conditions are described, potential impacts are identified, mitigation measures are recommended, and permits necessary for project construction are noted.



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6.0 ENVIRONMENTAL ASSESSMENT AND MITIGATION

6.1 NATURAL/PHYSICAL ENVIRONMENT

This section discusses and evaluates the full range of resources in the natural, social, and cultural environment in the project area. The evaluation of impacts is documented in the various technical reports referenced throughout the section. Under Pima County, Arizona, Code 10.56-070.B, an EAMR “shall identify adverse impacts of the proposed project and shall provide recommendations for mitigation measures which may be undertaken to minimize the adverse impacts.” Though some of the mitigation measures in this report are required to be in compliance with various guidelines or regulations, they are deemed “mitigation measures” in this document.

6.1.1 Biological Resources

A Biological Evaluation (BE), Relevé Survey, and Protected Native Plant Survey were prepared for the project area. These included plant and animal species surveys, review of the Arizona Game and Fish Department (AGFD) Arizona Environmental Online Review Tool (AGFD 2017), and review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) list of endangered, threatened, proposed, and candidate species for Pima County (USFWS 2017). The review included an evaluation of Arizona state sensitive species that are known to occur within 3 miles of the project limits and species protected under the Migratory Bird Treaty Act (MBTA). Due to federal funding and federal permitting requirements, the project biological clearance was processed through Section 7 of the Endangered Species Act. The analysis included those species on the Pima County Priority Vulnerable Species list as well as the Section 10 Habitat Conservation Plan, also known as the Multi-Species Conservation Plan (MSCP). The BE is available on the project website at <http://roadprojects.pima.gov>.

6.1.1.a Existing Conditions

The project is within mountain foothills descending the south limits of the Santa Catalina Mountains northeast of Tucson. Elevations² range between 2,750 feet on the north end at Sunrise Drive to 2,560 feet at Sabino Canyon Road. The major drainage feature in the vicinity is Ventana Canyon Wash, an ephemeral drainage that roughly parallels the project limits to the east, crossing and paralleling Kolb Road and connecting with Tanque Verde Creek.

Twenty-four drainage features, including Ventana Canyon Wash, cross or parallel Kolb Road within the project limits. Stormwater runoff is handled by a box culvert, pipe culverts, at-grade crossings, and adjacent drainage channels. However, stormwater flows overtop the roadway at several locations, resulting in debris and safety and operational concerns. FEMA has designated a 100-year floodplain along Ventana Canyon Wash (see Figure 3).

² Elevations in this document are referenced to mean sea level.



In general, the ROW is moderately disturbed, except at the north end of the project in the commercial area, where ROW has been highly disturbed. Vegetation along the roadway is generally healthy and diverse, with a mixture of mature trees, shrubs, and cacti.

6.1.1.b Vegetation and Invasive Species

The project area is in the north Sonoran Desert biotic region and the south portion of the Basin and Range physiographic province. Despite the scarce and unreliable precipitation and the high summer temperatures, this region supports a biologically diverse desert vegetative community indicative of the foothill paloverde (*Parkinsonia [Cercidium] microphylla*)–saguaro (*Carnegiea gigantea*)–dominated Arizona Upland subdivision of Sonoran desertscrub (EcoPlan 2017a). Undisturbed native vegetation representing this community adjacent to Kolb Road in the project area is rich and diverse.

Land adjacent to Kolb Road has been landscaped adjacent to businesses and residential properties. The Kolb Road ROW in general supports plants from the surrounding desertscrub community as well as desert species adapted to the colonization of disturbed terrain such as desertbroom (*Baccharis sarothroides*), desert marigold (*Baileya multiradiata*), skeletonweed (*Eriogonum deflexum*), desert senna (*Senna covesii*), and desert globemallow (*Sphaeralcea ambigua*), as well as scattered individuals of Mexican paloverde tree (*Parkinsonia [Cercidium] aculeata*). Common protected native plants under the Arizona Native Plant Law found within the project limits are listed in Table 2.

Table 2. Pima County protected native plants observed in the project area

Scientific Name	Common Name
<i>Carnegiea gigantea</i>	Saguaro
<i>Celtis ehrenbergiana (pallida)</i>	Desert hackberry
<i>Ferocactus wislizeni</i>	Fishhook barrel cactus
<i>Parkinsonia (Cercidium) florida</i>	Blue paloverde
<i>Parkinsonia (Cercidium) microphylla</i>	Foothill paloverde
<i>Prosopis velutina</i>	Velvet mesquite
<i>Senegalia (Acacia) greggii</i>	Catclaw acacia
<i>Vachellia (Acacia) constricta</i>	Whitethorn acacia

Introduced or invasive species are found throughout the project limits and include buffelgrass (*Pennisetum ciliare*), Bermudagrass (*Cynodon dactylon*), and saltcedar (*Tamarix ramosissima*) (EcoPlan 2017a).

6.1.1.c Sensitive Habitats and Connectivity

The Pima County Wildlife Connectivity Assessment: Detailed Linkages (AGFD 2012) does not identify any wildlife corridor or linkage within the project limits. The nearest linkage is the Santa Catalina/Rincon-Galiuro Linkage between the north side of the Santa Catalina Mountains and the San Pedro River Valley/Galiuro Mountains more than 15 miles northeast of Kolb Road. No critical habitats for protected species are in the project area.



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Ventana Canyon Wash and several unnamed tributaries in the project area are defined as an “Important Riparian Area” under the Pima County MSCP (Pima County 2011). Ventana Canyon Wash crosses Kolb Road at the south end of the project.

6.1.1.d Sensitive Species

The USFWS IPaC website was accessed on September 19, 2017, to obtain an official list of federally protected species with the potential to occur within the project limits (USFWS 2017). The list included four endangered, three threatened, and one proposed endangered species:

- California least tern (*Sterna antillarum browni*) - Endangered
- Mexican spotted owl (*Strix occidentalis lucida*) - Threatened
- Yellow-billed cuckoo (*Coccyzus americanus*) - Threatened
- Gila chub (*Gila intermedia*) - Endangered
- Jaguar (*Panthera onca*) - Endangered
- Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) - Endangered
- Northern Mexican gartersnake (*Thamnophis eques megalops*) - Threatened
- Sonoyta mud turtle (*Kinosternon sonoriense longifemorale*) - Proposed Endangered

The AGFD Arizona Environmental Online Review Tool was queried on September 25, 2017, and Sabra Tonn, AGFD Heritage Data Management System supervisor, was contacted on January 9, 2017, for the occurrences of special status species known to occur within 3 miles of the project vicinity. These lists were reviewed by a qualified biologist (Stephen Hale, EcoPlan Associates, Inc.) to determine which species may occur within the project limits.

State-listed species, referred to by the AGFD as Wildlife of Special Concern in Arizona, are defined as species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines.

The AGFD tool indicated that the endangered lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) and the Gila chub (*Gila intermedia*) and its designated critical habitat occur within 2 miles of the project limits. The tool also indicated that designated critical habitat for the threatened Mexican spotted owl extends to within 2 miles of the project limits. Furthermore, the following federal species of concern have been recorded in the project vicinity: cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*), Mexican long-tongued bat (*Choeronycteris mexicana*), big free-tailed bat (*Nyctinomops macrotis*), giant spotted whiptail (*Aspidoscelis stictogramma*), Sabino Canyon dancer (*Argia sabino*), Pima Indian mallow (*Abutilon parishii*), and Lemmon cloak fern (*Notholaena lemmonii*).

Numerous species listed as Arizona Species of Greatest Conservation Need (SGCN) have been recorded in the project vicinity. The list includes one bird species (cactus ferruginous pygmy-owl), seven bat species (lesser long-nosed bat, Mexican long-tongued bat, big free-tailed bat, Western red bat, Western yellow bat, pocketed free-tailed bat, and Brazilian free-tailed bat), and



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four reptile species (giant spotted whiptail lizard, desert box turtle, Sonoran Desert tortoise, and reticulate Gila monster).

6.1.1.e Potential Impacts

Vegetation and Invasive Species - The improvements to Kolb Road and related drainage and utility work will extend between approximately 5 feet and 45 feet (~30-foot average) from the west edge of the existing Kolb Road pavement to the proposed west edge of the pathway or the edge of the pavement, depending on location. Beyond this point, proposed cut and fill slopes will tie into the existing ground. The proposed disturbed area encompasses approximately 11–12 acres, some of which is previously disturbed and some of which consists of native vegetation.

The project includes mitigation consistent with the PCDOT Environmentally Sensitive Roadway (ESR) Design Guidelines (PCDOT 2015: Appendix D) and notification to the Arizona Department of Agriculture prior to construction for impacts to plants protected under the Arizona Native Plant Law. The number of native trees and protected plants to be disturbed cannot be determined currently because the project is still being designed (walls, slopes, and drainage features), which will finalize the area where plant disturbances will occur and identify required replacement based on available planting area. Native trees, protected plants, and other species will be replaced per Appendix D of the ESR Guidelines, which can be found at the following address:

http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Transportation/Roadway%20Design/Roadway%20Design%20Manual/Appendix%204D%20-%20July%202022%202015.pdf

In addition, the Pima County Regional Flood Control District (PCRFCDD) regulates impacts to riparian habitat and requires a Floodplain Use Permit for impacts to defined riparian areas greater than or equal to 0.33 acre. Within the project limits, two classifications of regulated riparian areas occur: Xeroriparian C and Important Riparian. Approximately 1.02 acres will be disturbed within regulated riparian areas. The landscaping/planting plans include replacement in plant density and composition consistent with ESR and Floodplain Use Permit guidelines.

Noxious or invasive plant species are present within the project limits. An invasive species management plan will be completed to address treatment of the project area for invasive species infestations in accordance with PCDOT Special Provision 201-3.04, Noxious and Invasive Vegetation.

Sensitive Habitats and Connectivity - No sensitive habitats or wildlife connectivity corridors are present within the project limits. Coordination with the AGFD resulted in recommendations for wildlife-friendly crossings at drainage structures. These recommendations have been considered during the drainage design process. The size of 11 of the 14 cross-drainage facilities will be increased to handle 100-year flood events. This may improve wildlife crossing opportunities at those locations. The AGFD offered no additional recommendations other than standard consideration for the control of exotic/invasive plant species.



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Sensitive Species - Seven of eight federally listed species were eliminated from further consideration because the project area is outside the known geographic or elevation range of these species or it does not contain suitable habitat (EcoPlan 2017a). The lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*) was evaluated to determine if construction impacts to saguaros in the project area would adversely affect this species. It was determined that the project would have no effect on the lesser long-nosed bat or its habitat (EcoPlan 2017a).

The evaluation for species identified as SGCN concluded that the project will have no impact on 12 of the species due to lack of habitat or the species temporal/transient foraging use in the area. Two species, the Sonoran Desert tortoise and the giant spotted whiptail lizard, may occur in the area and may be impacted, but the project is not likely to result in a trend toward federal listing or loss of viability. Mitigation measures regarding encountering and handling the desert tortoise will be implemented for the project.

The project will result in approximately 11–12 acres of ground disturbance and will remove native trees and shrubs; therefore, the project has the potential to impact nesting migratory birds and other wildlife. In compliance with the MBTA, vegetation removal should be timed to avoid the nesting season of March 1 through August 31 of each year. No impacts to any other threatened, endangered, proposed, or other sensitive species are anticipated.

6.1.1.f Mitigation Measures

Pima County Responsibilities

- All disturbed soils not paved that will not be landscaped or otherwise permanently stabilized by construction will be seeded using species native to the project vicinity.
- If any active bird nests cannot be avoided by vegetation clearing or construction activities, the Engineer will contact the Pima County Department of Environmental Quality (karla.reeve-wise@pima.gov or 520.724.9201) to evaluate the situation.
- If encountered during project activities, Pima County will require the contractor and utilities to comply with Pima County Department of Transportation Special Provision 201-3.04, *Noxious and Invasive Vegetation*, which includes mechanical and chemical removal of invasive species prior to initiation of construction, timing of invasive species removal, disposal of invasive species, prevention of invasive species during the construction process, and control of invasive species after construction is complete.
- The Pima County Department of Environmental Quality will provide the Arizona Department of Transportation biologist (bioteam@azdot.gov) with any completed Arizona Department of Transportation Sonoran Desert Tortoise Observation forms within 48 (forty-eight) hours of receiving them from the contractor.
- Protected native plants within the project limits will be impacted by this project; therefore, the Pima County Department of Transportation will determine whether Arizona Department of Agriculture notification is needed. If notification is needed, the Pima County Department of Transportation will send the notification at least 60 (thirty) calendar days prior to the start of construction.



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- A landscape plan will identify protected native plants that are to be preserved in place or mitigated in accordance with the Arizona Native Plant Law, Environmentally Sensitive Roadway Design Guidelines, and the Pima County Regional Flood Control District, as applicable.
- Impacted areas along the right-of-way and construction staging areas will be revegetated in compliance with the Pima County Environmentally Sensitive Roadway Design Guidelines.

Contractor Responsibilities

- If vegetation clearing will occur during the migratory bird breeding season (March 1–August 31), the contractor shall avoid any active bird nests. If active nests cannot be avoided, the contractor shall notify the Engineer to evaluate the situation. During the nonbreeding season (September 1–February 28), vegetation removal is not subject to this restriction.
- The contractor and utilities shall identify and treat noxious and invasive species infestations consistent with Pima County Department of Transportation Special Provision 201-3.04, *Noxious and Invasive Vegetation*, which includes mechanical and chemical removal of invasive species prior to initiation of construction, timing of invasive species removal, disposal of invasive species, prevention of invasive species during the construction process, and control of invasive species after construction is complete.
- To prevent the introduction of invasive species seeds, the contractor shall inspect all earthmoving and hauling equipment at the storage facility. All vehicles and equipment shall be washed and free of all attached plant/vegetation and soil/mud debris prior to entering the construction site.
- To prevent invasive species seeds from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris prior to leaving the construction site.
- All disturbed soils not paved that will not be landscaped or otherwise permanently stabilized by construction shall be seeded using species native to the project vicinity.
- Removal and/or treatment of noxious or invasive species shall take place prior to the start of clearing and grubbing, in accordance with Section 201, *Clearing and Grubbing*, of the project Standard Specifications.
- Prior to construction activity, the contractor’s field personnel, including the project manager, assistant project manager, general superintendent, and project superintendent, shall review the attached Arizona Department of Transportation Environmental Planning “Sonoran Desert Tortoise Awareness Program Handout” revised March 2017, become familiar with the identification and avoidance of the Sonoran Desert tortoise, and follow the notification request, as applicable.
- If the contractor encounters any Sonoran Desert tortoise during construction, the Engineer will report all encountered tortoises (live, injured, or dead) to the Pima County Department of Environmental Quality (karla.reeve-wise@pima.gov or 520.724.9201) within 24 (twenty-four) hours of the encounter using the attached Arizona Department of Transportation Sonoran



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Desert Tortoise Observation Form. Photos should be taken of tortoises encountered and included in the report, if possible.

- If any Sonoran Desert tortoises are encountered during construction, the contractor shall adhere to the attached Arizona Game and Fish Department Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (revised September 22, 2014). If any tortoise is encountered during construction, the contractor shall notify the Engineer to report the encounter.

6.1.2 Drainage and Clean Water Act

This section identifies drainages present, potential impacts to those resources, and permitting needs under Clean Water Act (CWA) Sections 404 and 401, as regulated by the U.S. Army Corps of Engineers (Corps), and CWA Section 402, as regulated by the U.S. Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ). The Final Drainage Report is posted on the project website (<http://roadprojects.pima.gov>).

6.1.2.a Existing Conditions

Stormwater runoff generally originates along the hillsides west of Kolb Road and is conveyed as sheet flow down the slopes. Fifteen culverts cross under Kolb Road, and there are eight driveway/side street crossings. The flows are subject to breaking over the roadway and subsequently flow along the east side of the road to the south, ultimately discharging into Ventana Canyon Wash. Ventana Canyon Wash parallels the corridor east of Kolb Road, outside the defined project area, and passes under Kolb Road through an existing 14-barrel 10-foot by 7-foot reinforced concrete box culvert.

Existing cross culverts are primarily CMPs and are generally in good shape, free of debris, and do not have significant sediment deposition. A few crossings, however, are damaged or have had significant sediment deposition, limiting their capacity. Eleven of the existing culverts are unable to convey the 100-year design storm peak discharge beneath the road and will overtop, spilling across the roadway or resulting in flows along the roadway. Eroded slopes results in sediment deposition along the roadway, on private property, and within culverts. Homeowners experiencing erosion or depositions of sediment on their property perform their own maintenance and have provided rock riprap in an attempt to prevent further erosion and redirect flows away from their residences (Psomas 2017b).

The drainage design criteria for this project follow the standards outlined in the Pima County 2013 RDM, the Pima County Floodplain Ordinance, and PCRFCD Technical Policies. These guidance documents establish the hydrologic design frequency for cross-drainage structures to handle the 100-year storm event.

A Preliminary Jurisdictional Delineation was completed to determine the extent of potential jurisdictional Waters of the United States in the survey area. This was done in anticipation of the potential need to obtain a CWA Section 404 permit to construct drainage improvements and to enable project designers to avoid impacts to Waters of the United States to the maximum extent practicable. Ten drainage features were determined to be potential Waters of the United States,



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totaling 0.718 acre. Some of the characteristics used to indicate the presence of potential Waters of the United States included a clear bed and bank, changes in soil characteristics, exposed roots, and sediment deposition.

6.1.2.b Potential Impacts

The level of CWA Section 404 permitting will be determined based on the drainage design and extent of temporary and permanent impacts. Preliminary design indicates that the project will qualify under Nationwide Permit 12, Utility Line Activities, and Nationwide Permit 14, Linear Transportation Projects. Permanent impacts greater than 0.10 acre at individual washes trigger the need for a Preconstruction Notification. Permanent impacts less than 0.10 acre meet the criteria for non-notifying Permits 12 and 14, provided the proposed work meets all nationwide-specific, general, and regional terms and conditions. Preliminary design indicates that permanent impacts will be less than 0.10 acre at each potential Water of the United States.

Washes in the project area feature Important Riparian Areas and are protected under the Pima County Riparian Ordinance, as designated by the Pima County Board of Supervisors. Impacts to these areas require coordination with the PCRFCDD to obtain a Regional Floodplain Use Permit if impacts are equal to or greater than 0.33 acre. Mitigation for impacts to Regulated Riparian Habitat includes on-site mitigation included in the landscape plans and off-site mitigation in the form of an in-lieu fee.

Because more than 1 acre of land will be disturbed during project construction, a CWA Section 402 Arizona Pollutant Discharge Elimination System Permit will be required. A Notice of Intent and a Notice of Termination will be prepared and submitted to the ADEQ at the appropriate times. As required by the permit, a Stormwater Pollution Prevention Plan will be prepared.

6.1.2.c Mitigation Measures

Pima County Responsibilities

- Pima County will prepare, certify, and implement a Stormwater Pollution Prevention Plan, prepare and file a Notice of Intent and Notice of Termination, and provide appropriate notification to the designated municipal separate storm sewer system operator in accordance with Section 8.10, Erosion Control and Pollution Prevention, of the project Standard Specifications.
- The Pima County Department of Transportation will comply with all conditions of Nationwide Permit 12 and Nationwide Permit 14 as established by the U.S. Army Corps of Engineers.

Contractor Responsibilities

- The contractor shall amend, certify, and implement a Stormwater Pollution Prevention Plan, prepare and file a Notice of Intent and Notice of Termination, and provide appropriate notification to the designated municipal separate storm sewer system operator, and provide the Pima County Department of Transportation with the final Stormwater Pollution Prevention



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Plan and all applicable copies of record in accordance with Section 8.10, Erosion Control and Pollution Prevention, of the project Standard Specifications.

- The construction contractor shall comply with all conditions of Nationwide Permit 12 and Nationwide Permit 14 as established by the U.S. Army Corps of Engineers.

6.1.2.d *Permits*

Preliminary design indicates that the permanent impacts to Waters of the United States will be less than 0.10 acre, thus qualifying the project as non-notifying under CWA Nationwide Permit 12 and Nationwide Permit 14, provided the proposed work meets all of the nationwide-specific, general, and regional terms and conditions. Nationwide Permit 12 and Nationwide Permit 14 will provide conditional water quality certification for the jurisdictional washes in the project area in compliance with CWA Section 401.

A CWA Section 402 Arizona Pollutant Discharge Elimination System Authorization will be required. A Notice of Intent and a Notice of Termination will be prepared and submitted to the ADEQ. PCDOT and the contractor will file Notices of Intent with the ADEQ and receive authorizations for construction. As required by the permit, PCDOT will prepare a Stormwater Pollution Prevention Plan.

6.1.3 *Floodplains*

This section evaluates potential impacts to floodplains as defined by FEMA and the PCRFC. Floodplains are identified by FEMA Flood Insurance Rate Maps. The project area is also subject to requirements of the PCRFC floodplain and riparian ordinance. The following information is summarized from the Final Drainage Report, which is available on the project website: <http://roadprojects.pima.gov>.

6.1.3.a *Existing Conditions*

The majority of the study area is outside FEMA-designated flood zones. The only area within a FEMA-designated 100-year floodplain occurs along Ventana Canyon Wash at the south end of the project (Flood Insurance Rate Map 04019C1715L, June 16, 2011; see Figure 3). Regulated Riparian Habitat occurs adjacent to and crossing the project limits. An Important Riparian Area (Ventana Canyon Wash) crosses Kolb Road just north of the south project limit. Xeroriparian habitat crosses or parallels Kolb Road in several locations.

6.1.3.b *Potential Impacts*

The drainage design criteria for this project follow the standards outlined in the Pima County 2013 RDM, the Pima County Floodplain Ordinance, and PCRFC Technical Policies. These guidance documents establish the hydrologic design frequency for cross-drainage structures to handle the 100-year storm event. The proposed improvements will not impact the Ventana Canyon Wash floodplain and therefore will not require mapping revisions (Psomas 2017c).

Proposed improvements will generally replace all CMPs with RCPs and upsize them to provide 100-year conveyance capacity. Existing adequately sized concrete pipe may be extended. Culvert



improvements will be provided at 29 locations under proposed conditions. Proposed improvements include curb along both sides of the roadway for the majority of the project and will require scuppers, catch basins, and short storm drain systems to capture stormwater runoff and discharge it from the roadway to meet pavement drainage criteria. Impacts to Regulated Riparian Habitat due to drainage improvements are approximately 1.02 acres. No impacts occur within Important Riparian Habitat. The improved drainage features and roadway widening encroach on several xeroriparian locations.

6.1.3.c Mitigation Measures

- The Pima County Department of Transportation will provide on-site landscaping mitigation for impacts to Regulated Riparian Habitat in accordance with the Pima County Regional Flood Control District floodplain and riparian ordinance.

6.1.3.d Permits

A Floodplain Use Permit from the PCRFCDD will be required because impacts will exceed the 0.33-acre riparian habitat threshold.

6.1.4 Air Quality

This section evaluates potential impacts related to criteria pollutants, as established by the EPA, for National Ambient Air Quality Standards. The pollutants addressed by the standards are ground-level ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead.

6.1.4.a Existing Conditions

The project area is within the Tucson Maintenance Area for carbon monoxide and outside the limits of the Rillito Non-Attainment Area for particulate matter (dust). Metropolitan planning organizations are required by the Clean Air Act to ensure that all transportation projects are in conformity with the approved air quality State Implementation Plan. This project is in the PAG Fiscal Year 2017–2021 TIP, which was adopted by the PAG Regional Council on July 28, 2016. The project is listed under TIP ID No. 787.00. The TIP conforms to the State Implementation Plan and, therefore, the project is in conformity with air quality standards (PAG 2017).

6.1.4.b Potential Impacts

The proposed project will have temporary local impacts to particulate levels during construction. These impacts will be reduced by PCDOT standard specifications for dust suppression during construction. The project may improve long-term air quality by reducing future congestion and meeting future demands.

6.1.4.c Mitigation Measures

- The contractor shall comply with all local air quality and dust control rules, regulations, and ordinances that apply to any work performed pursuant to the contract.



6.1.4.d Permits

The contractor shall obtain a Fugitive Dust Activity Permit from the Pima County Department of Environmental Quality prior to any construction activities.

6.1.5 Noise

The analysis of, and mitigation for, project-related noise impacts are guided by the Pima County Noise Analysis and Mitigation Guidance for Major Roadway Projects, amended April 8, 2008 (PCDOT 2008). As a major roadway project, the Kolb Road widening project is subject to the guidance. Noise abatement is considered when projected future noise levels reach 66 dBA (dBA is the decibel level based on a 1-hour weighted average) or existing noise levels increase by 15 dBA or more in the design year.

6.1.5.a Existing Conditions

The adjacent land use is residential (sensitive noise receptor), commercial, or vacant. Approximately 60 single-family homes and three multifamily complexes are immediately adjacent to Kolb Road. A number of the residences have 5- to 6-foot-high privacy or screen walls between the property and the roadway, and are set back from the roadway by 60 to 150 feet. Several residences, however, have no wall and have direct driveway access off Kolb Road to the home. Noise measurements were taken at six locations along the corridor.

Existing noise levels at the receivers (outside use areas at the residences) varied from 46 dBA to 63 dBA across the project limits.

6.1.5.b Potential Impacts

A detailed noise analysis was conducted in July 2017 (Sound Solutions, LLC 2017) to measure existing noise levels and predict future (year 2040) levels based on the planned roadway design and future traffic growth. The results showed year 2040 noise levels ranging from 47 dBA to 64 dBA, which are below the Noise Abatement Criteria of 66 dBA. Sensitive receptors in the project area will not be impacted by the project due to (1) existing setbacks, (2) existing privacy walls, (3) low traffic volumes, (4) moderate traffic growth, and (5) low percentage of heavy trucks projected to use the roadway (1 percent). The Noise Review report is available at <http://roadprojects.pima.gov>.

6.1.5.c Mitigation Measures

No mitigation measures are required.

6.1.5.d Permits

No permits are required.



6.1.6 Utilities

This section identifies utilities present in the project area and describes potential impacts to those utilities. Additional information regarding utility coordination can be found in the DCR on the project website: <http://roadprojects.pima.gov>.

6.1.6.a Existing Conditions

The full range of utilities expected in an urbanized area are present along Kolb Road from Sabino Canyon Road to Sunrise Drive. Above-ground and below-ground utilities crossing Kolb Road or within the ROW include:

- CenturyLink
- Comcast
- Cox Communications
- Level 3
- Pima County Regional Wastewater Reclamation Department
- Southwest Gas
- Tucson Electric Power
- Tucson Water

Traffic signals are at Sunrise Drive, Snyder Road, and Sabino Canyon Road within the corridor. There is no street lighting along this segment of Kolb Road except for the safety lighting at the signalized intersections and at the unsignalized intersection with Territory Drive.

6.1.6.b Potential Impacts

Project construction will impact multiple utilities in the corridor, including gas, electric, communications, potable water, and wastewater. Utility facilities primarily run parallel to Kolb Road and along all major cross streets, with occasional crossings of Kolb Road generally at side streets. Throughout the design process, coordination with utility companies will occur to locate facilities, minimize impacts, and develop relocation schedules. Comcast has indicated no prior rights. The Pima County Regional Water Reclamation Department and Tucson Water do not have prior rights; however, they have separate agreements with Pima County for construction and design funding. Southwest Gas has indicated planned upgrades throughout the project limits and has provided prior rights information.

It is anticipated that utilities may need to be relocated as conflicts with drainage and roadway elements are assessed during project design. No seasonal constraints for utility relocations are anticipated at this time because Tucson Water, Tucson Electric Power, and Southwest Gas lines are smaller distribution lines within the project limits (Psomas 2017b).



6.1.6.c Mitigation Measures

- Customers shall be notified 7 (seven) days in advance of any planned utility service interruptions.

6.1.6.d Permits

Prior to utility relocations, those utilities within PCDOT ROW must obtain a Pima County ROW Use Permit.

6.1.7 Hazardous Materials

This section evaluates the project impacts relative to potential hazardous materials in the project area. A Preliminary Initial Site Assessment (PISA) was prepared to identify potential recognized environmental conditions in the project area and to identify properties needing additional evaluation (Ninyo and Moore, Inc. 2017a). The PISA included site reconnaissance, limited historical analysis, and federal and state environmental records review. The PISA is available on the project website: <http://roadprojects.pima.gov>.

6.1.7.a Existing Conditions

A records search of regulatory hazardous materials databases was conducted for the project area in February 2017, and a field review was conducted on February 14, 2017. The records search identified no Recognized Environmental Concerns (RECs) or indicators for RECs in the project corridor. No RECs, such as leaking underground storage tanks, landfills, or uses associated with hazardous waste products, were identified. The site reconnaissance revealed a project setting of Low-Risk based on existing land uses (residential, commercial, and vacant). Four pole-mounted transformers were noted; however, none were observed to be leaking. Often transformer coolant oils contain poly-chlorinated biphenyls, a suspected human carcinogen.

The project limits were tested for asbestos-containing materials and lead-based paint. Testing results showed no asbestos-containing materials present. Lead-based paint was detected in striping below regulatory action limits of 0.5 percent for U.S. Department of Housing and Urban Development/U.S. Environmental Protection Agency action levels but above the U.S. Department of Labor Occupational Safety and Health Administration detection level (Ninyo and Moore 2017b).

6.1.7.b Potential Impacts

Based on the findings of the PISA, project excavation and earthmoving activities are not likely to encounter hazardous materials. No evidence of regulated hazardous materials is present within the project limits, and the PISA concluded that there are no issues of concern and that no additional investigation is recommended. The presence of lead-based paint in yellow roadway paint striping above detection limits but below Environmental Protection Agency limits requires the construction contractor to notify workers. No additional mitigation is required.



6.1.7.c Mitigation Measures

- If suspected hazardous materials are encountered during construction, work shall cease at that location and the Engineer will be notified immediately to make arrangements for the proper treatment or disposal of those materials.
- Paint containing less than 0.5 percent lead was found in the yellow road-striping paint; therefore, the contractor shall notify its employees prior to any disturbance where lead is present in the paint below the 0.5 percent U.S. Department of Housing and Urban Development/U.S. Environmental Protection Agency action levels but above the U.S. Department of Labor Occupational Safety and Health Administration detection level. As part of the notification, the contractor shall make the U.S. Department of Labor Occupational Safety and Health Administration publication number 3142-12R 2004, Lead in Construction (<http://www.osha.gov/Publications/osha3142.pdf>), available to workers.
- Pima County will update the project Preliminary Initial Site Assessment 60 (sixty) calendar days prior to the construction bid date. The updated report will be submitted to the Arizona Department of Transportation (egreen@azdot.gov).

6.1.7.d Permits

No permits are required.

6.1.8 Construction

This section discusses impacts that may result from activities related to project construction, including traffic control, dust control, and construction noise. Construction activities include earthwork (excavation and filling), drainage structures, roadway paving, establishment and use of staging areas, and other actions related to road construction.

6.1.8.a Existing Conditions

The project will be built on the current roadway alignment and within the existing ROW. Because Kolb Road is the only arterial roadway serving much of the residential area and the Rural Metro Fire Station within the project limits, maintenance of access during construction is critical. There is no secondary access to the fire station and there are limited options for residents. Commercial development at the north end of the project is primarily accessed via Kolb Road, though secondary access is provided by Sunrise Drive and Territory Drive.

6.1.8.b Potential Impacts

Project construction is expected to begin in spring 2019, with utility relocations prior to roadway construction. Roadway construction is expected to last approximately 16–18 months. Access will be maintained to all residential properties throughout construction, and one lane of traffic in each direction will be maintained on Kolb Road. Due to the earthwork occurring at the Kolb Road/Snyder Road intersection, it is anticipated that the contractor will need to close the intersection to traffic east of Kolb Road. The closure is expected to be approximately two weeks in duration. A short-term detour route for Snyder Road traffic, shown in Figure 6, is anticipated. The detoured traffic is local traffic with destinations to residential properties along Snyder Road.



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A contractor staging area has been designated on the west side of Kolb Road approximately 1,900 feet north of Snyder Road, just south of Rocky Ridge Drive. This 0.44-acre parcel is owned by Pima County (Figure 6). The contractor will be required to stage equipment and materials within this parcel.

The detour routes on Sabino Canyon Road and Sunrise Drive are typical routes to Snyder Road and will result in out-of-direction travel of about 1 mile. In general, the roadway will be constructed one-half at a time, with temporary traffic control signs and pavement markings meeting Manual on Uniform Traffic Control Devices guidelines (Psomas 2017b).

Construction noise abatement will be implemented in accordance with the Pima County Ordinance for Construction of Buildings and Other Properties (Pima County Code 9.30.070). Dust control will be implemented in accordance with measures related to the Pima County Department of Environmental Quality Fugitive Dust Activity Permit (see Section 6.1.4.).

6.1.8.c *Mitigation Measures*

- A traffic control plan will be implemented by the contractor in conjunction with the Pima County Department of Transportation Field Engineering Division and guidelines specified in the Manual on Uniform Traffic Control Devices.
- Noise impacts from construction equipment shall be minimized by use of properly muffled equipment, maintenance of equipment, and placement of equipment away from residential receivers.
- The contractor shall comply with the Pima County noise ordinance (Pima County Code 9.30.070), which sets construction start and stop times to avoid nighttime noise disruptions. If nighttime work is required, the contractor shall obtain a permit from Pima County.

6.1.8.d *Permits*

The following permits will be required:

- Pima County Department of Environmental Quality Fugitive Dust Activity Permit
- PCDOT ROW permit for the contractor



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Figure 6. Detour route



6.1.9 Historic/Cultural Resources

The Historic and Cultural Resources assessment, including Class I (records review) and Class III (pedestrian survey) assessments, have been conducted through the Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division, ADOT, and the FHWA. A survey report covering the overall project limits (EcoPlan Associates, Inc. 2017c) was prepared in to evaluate potential impacts to cultural resources. The report was prepared in support of early geotechnical investigations for the project. The survey was conducted under Arizona Antiquities Act permit 2017-062b1. The purpose of the intensive pedestrian (Class III) cultural resources survey was to identify cultural resources within the area of potential effects (APE), assess the eligibility of identified resources for listing in the National Register of Historic Places (NRHP) in accordance with 36 Code of Federal Regulations 60.4, and make a recommendation concerning the potential effect of the proposed undertaking on resources listed in, or eligible for listing in, the NRHP.

6.1.9.a Existing Conditions

EcoPlan conducted a Class III cultural resources survey of the APE, which varied in width from 103 feet to 161 feet (32 m to 50 m). The APE also includes a 610-foot (185-m) segment of existing ROW for Snyder Road, and portions of existing ROW for cross street Territory Drive and all minor cross streets, temporary construction easements, slope easements, and drainage easements.

EcoPlan archaeologist Christopher D. Taylor conducted the survey on January 20, 2017. No cultural resources were encountered within the APE. Record searches showed that no cultural resources had been previously recorded in the project area. Searches of Pima County Assessor online records indicated that two parcels held buildings with construction dates prior to 1972. Structures at 4045 N. Sabino Canyon Road have a construction date of 1956, and 7225 E. Little Savannah Lane includes buildings with a construction date of 1941. Though these buildings are on parcels adjacent to the project area, the buildings themselves are outside the APE by at least 100 feet. Because of their distance from the APE, no project impacts are anticipated to these buildings. Therefore, these properties were not evaluated for their NRHP eligibility.

6.1.9.b Potential Impacts

The proposed project Section 106 of the National Historic Preservation Act consultation resulted in a finding of “no historic properties affected” pursuant to the FHWA/ADOT/Arizona State Historic Preservation Office (SHPO) Programmatic Agreement Regarding Implementation of Federal-Aid Transportation Projects in the State of Arizona (ADOT 2017).

6.1.9.c Mitigation Measures

- If previously unidentified cultural resources are encountered during activity related to the construction of the project, the contractor shall stop work immediately at that location, notify the Engineer, and take all reasonable steps to secure the preservation of those resources. The Engineer will contact the Arizona Department of Transportation Environmental Planning Historic Preservation Team (602.712.8636 or 602.712.7767) and the Pima County Historic



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Preservation Division (520.724.6405) immediately and make arrangements for the proper treatment of those resources.

- If human remains, including human skeletal remains, cremations, and/or ceremonial objects and funerary objects or archaeological materials, are found during excavation or construction, ground-disturbing activities must cease in the immediate vicinity of the discovery. Arizona Revised Statutes 41-865 and 41-844 require that the Arizona State Museum be notified of the discovery (520.621.4795) so that cultural groups who claim cultural or religious affinity to them can make appropriate arrangements for the repatriation and reburial of the remains. The human remains will be removed from the site by a professional archaeologist pending consultation and review by the Arizona State Museum and the concerned cultural groups.

6.1.9.d *Permits*

No additional permits are required.

6.1.10 Visual Resources

This section describes the viewsheds in the project vicinity and analyzes impacts to viewers and viewsheds. The existing conditions and analysis are documented in the Visual and Aesthetic Resource Analysis (McGann & Associates, Inc. 2017b). For more information, please refer to the document on the project website: <http://roadprojects.pima.gov>.

6.1.10.a *Existing Conditions*

Kolb Road in the project area is designated as a Pima County scenic route. The visual and aesthetic resource evaluation process per the Pima County RDM was followed for the final DCR. In addition, due to federal funding, the FHWA Guidelines for the Visual Impact Assessment of Highway Projects procedures were incorporated.

Landform and topography are the dominant features of the visual character of this section of Kolb Road. The view to the Santa Catalina Mountains is focused and highlighted by the sharply rising slopes to the north. As Kolb Road climbs a saddle at Snyder Road, city views to the south are framed by the hills along Kolb Road. Slopes in the foreground and midground are somewhat broken by residential development and nonnative plants. Generally, the roadway user and adjacent residents have a high sensitivity to the corridor visual quality. The north end of the project is dominated by commercial development as well as areas near Snyder Road containing multifamily housing areas (apartments/condominiums).

Vegetation is diverse and moderately dense in the foreground and midground views. The natural appearance of the vegetation is broken by development landscaping with nonnative plants.

6.1.10.b *Potential Impacts*

The visual character of the project area will be altered by the increased paving, slope cuts/fills, guardrail, new light poles, and enlargement of drainage structures. The fresh slope cuts will be highly visible and will impact views from the road and from adjacent properties. Approximately 1,700 feet of guardrail will be highly visible by motorists. The light poles will add minor visual



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change because they will be located at existing signalized intersections except at the Rural Metro Fire Station. The light poles at the fire station introduce a new vertical structural element. The larger drainage structures will primarily be below the roadway; therefore, only the culvert end treatments will be visible to motorists and adjacent properties.

Design elements to reduce the visibility of slope cuts/fills include reseeding, landscaping, and other slope stabilizations techniques such as retaining walls and riprap. Guardrail applications will include “weathered” corten steel, which blends more naturally with area native soils and vegetation. Streetlight poles at the fire station will be located to limit views from adjacent residences but still provide the important roadway safety feature.

To moderate project impacts, a landscaping plan consistent with PCDOT ESR design guidelines will be incorporated. The plan features native plantings along roadside buffer areas using plant species typical of the surrounding biotic community. Plant density and spacing will emulate the natural surroundings as much as possible. Areas not landscaped will be stabilized with a native seed mix with rock mulch (matched to existing soil color) to blend with the existing landscape and reduce erosion in disturbed areas. Drainage structures’ color and materials will be designed to blend with the natural surroundings.

6.1.10.c *Mitigation Measures*

- The landscaping plans will incorporate vegetation and reseeding in disturbed areas. The plant selection will include native plants found in the surrounding project area, including riparian species at the drainage crossings.
- A public art component will be added to the project, capturing designs consistent with the natural character and history of the area.

6.1.10.d *Permits*

No permits are required.

6.2 NEIGHBORHOOD/SOCIAL ENVIRONMENT

This section discusses impacts to the built environment, including neighborhoods, commercial property, and social services, and consistency with local jurisdiction planning.

6.2.1 Right-of-Way Acquisition and Displacement

This section describes existing land use, zoning, and planning in the project vicinity, and identifies potential impacts resulting from ROW needs and construction impacts.

6.2.1.a *Existing Conditions*

The land uses within the study area are primarily residential: single-family subdivisions, single-family homes on one- to five-acre lots, and multifamily buildings. Apartment complexes are at the southeast corner of the Sunrise Drive and Kolb Road intersection and east of Kolb Road at its



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intersection with Snyder Road. Vacant residential sites are sporadic along Kolb Road and in adjacent subdivisions. Most of the vacant lands are undeveloped due to hillside or steep terrain.

Commercial land use occurs within the project limits. Bashas' grocery store anchors a group of retail stores and restaurants on the southwest corner of the Kolb Road and Sunrise Drive intersection. A second group of retail stores is on the southeast corner of the same intersection. One four-acre commercial site west of Kolb Road and south of Territory Drive has been developed (restaurant and shops). Rural Metro Fire Station 73 is across from Cripple Creek Drive. Pima County owns and leases nine single-family homes along Kolb Road within the project limits.

The Pima County Zoning Map (Figure 7) includes the following land uses and zoning codes:

- Single residence, single-family residence (minimum lot size: 0.83 acre)
- Single residence, single-family residence (minimum lot size: 0.37 acre)
- Single residence, single-family residence (minimum lot size: 0.19 acre)
- Single residence, single-family residence (minimum lot size: 0.17 acre)
- Specific plan, continuing care retirement community
- Local business, indoor retail, residential
- Transitional, high-density residential, office and some commercial uses
- Suburban ranch, low-density rural residential

Most of the existing zoning is single residence, with minimum lot sizes ranging from 0.17 acre to 0.83 acre. Suburban ranch zoning occurs at the north and south ends of the study area. The east side of the intersection of Kolb Road and Snyder Road and the intersection of Kolb Road and Sunrise Drive are zoned local business and transitional. Two residential developments are underway just south of Sabino Canyon Road: Deseo at Sabino Canyon (40 single-family home lots) and Tucson Hacienda Canyon (continuing care retirement community). No additional major developments are planned in the project area. See Figures 8a and 8b for locations of developments.



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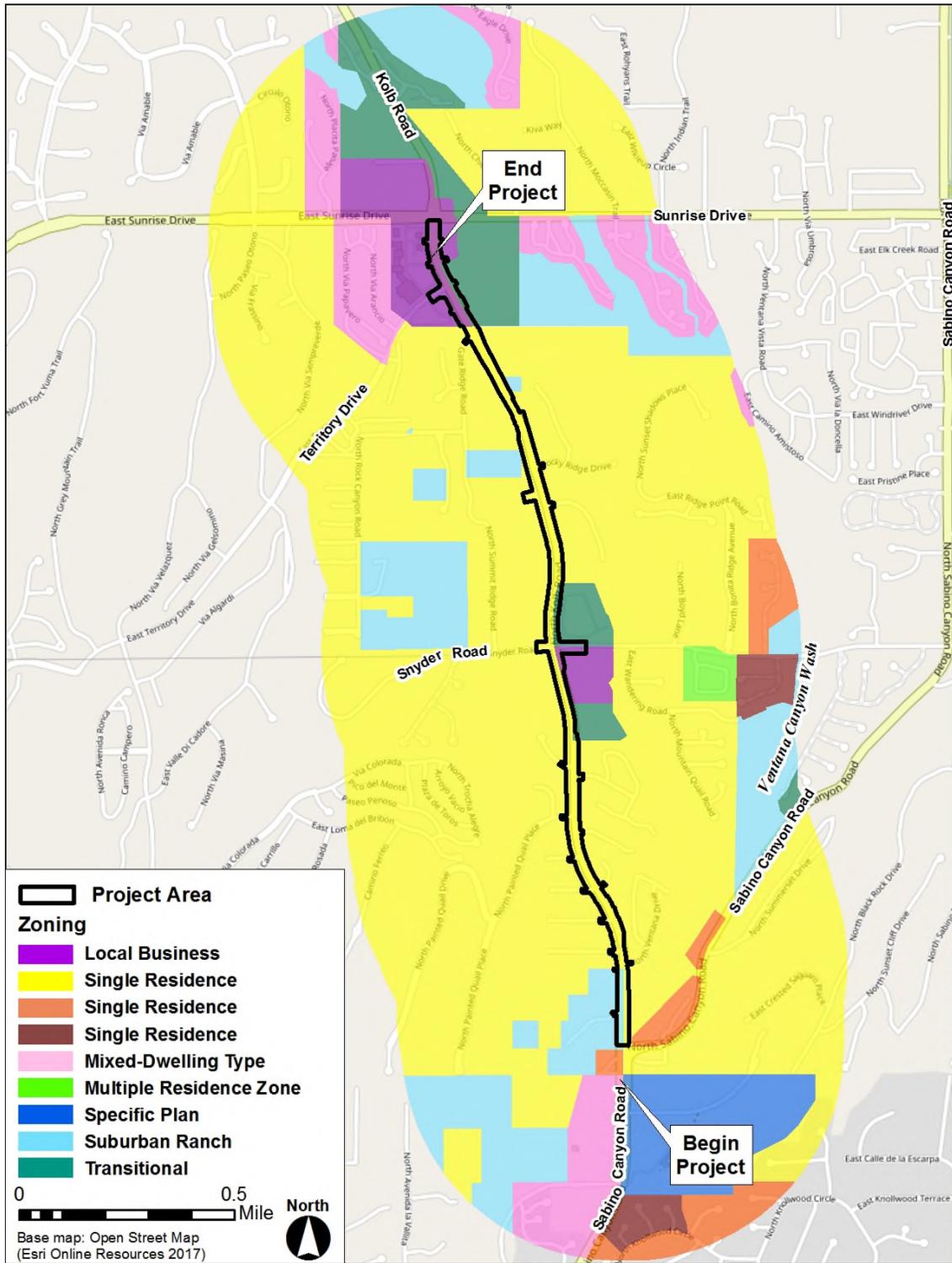


Figure 7. Zoning



Kolb Road: Sabino Canyon Road to Sunrise Drive Environmental Assessment and Mitigation Report

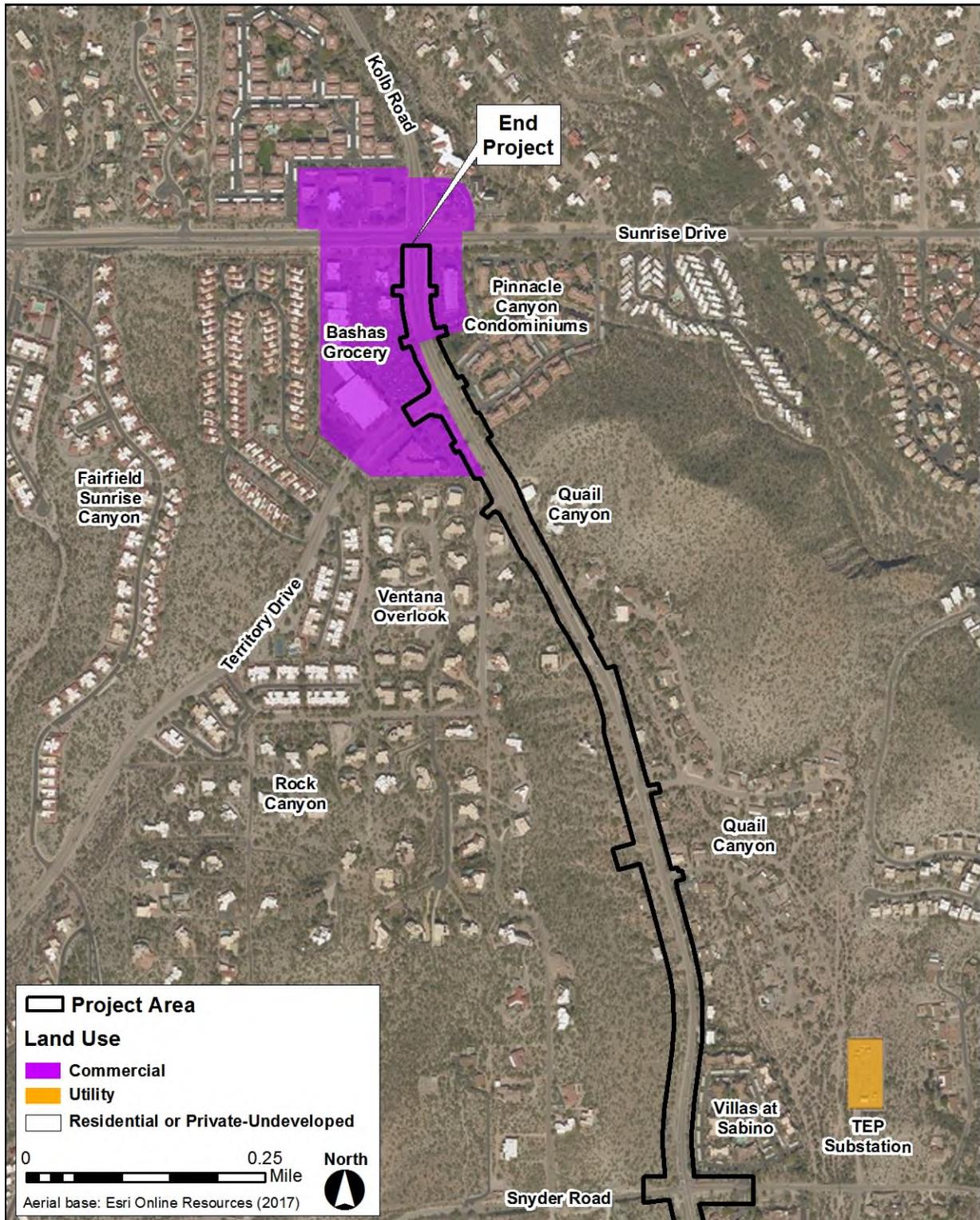


Figure 8a. Land use (north half of project)



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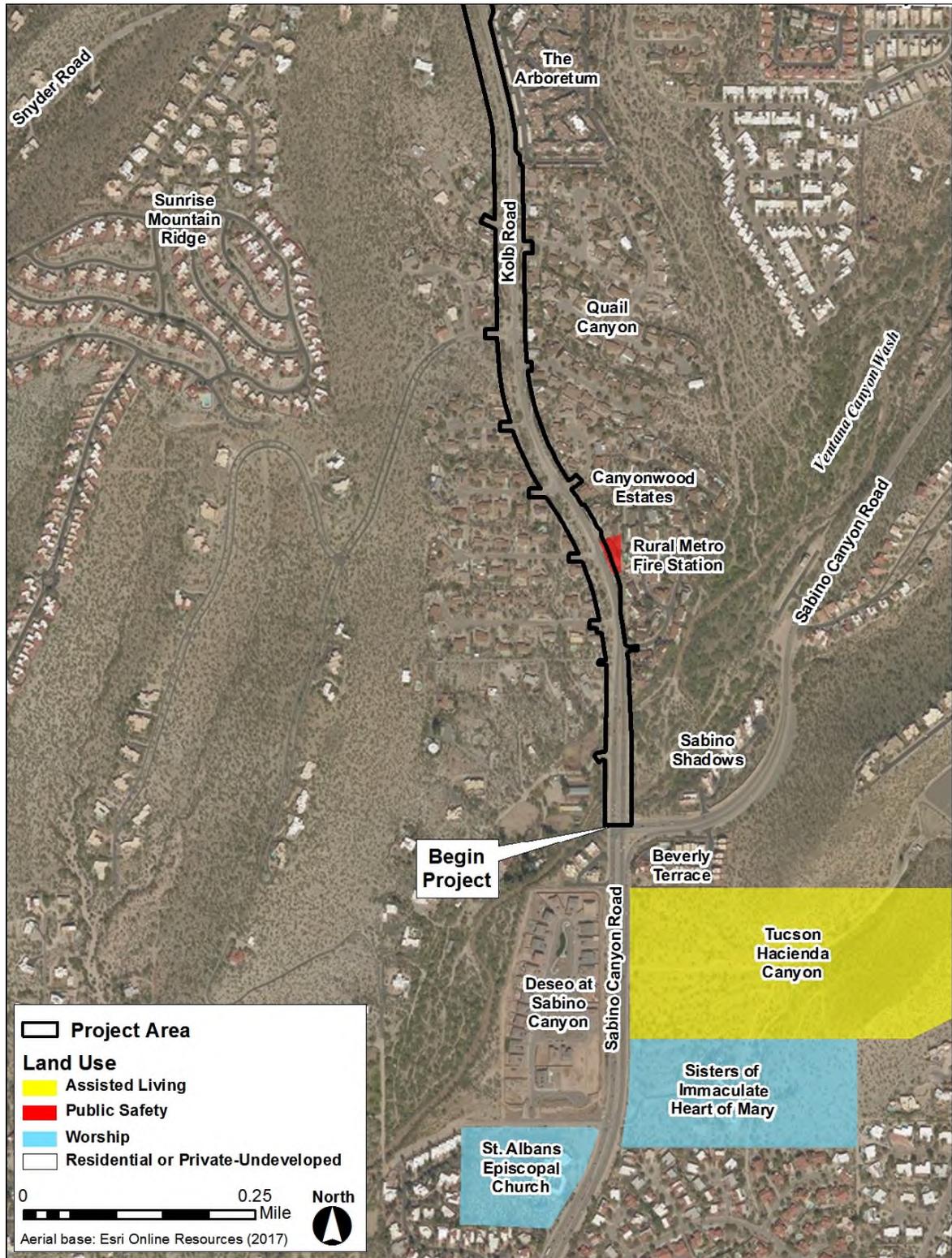


Figure 8b. Land use (south half of project)



6.2.1.b Potential Impacts

The project will not require any displacements of homes or businesses. No land use zoning changes are expected to occur as a result of the project. The roadway widening is envisioned to meet the future transportation needs of the current businesses, residents, and the ongoing new development south of Sabino Canyon Road. No new ROW is required; all improvements will be contained within existing ROW and easements. It is anticipated that Pima County will place the nine owned homes on the market after completion of the roadway project.

Minor temporary construction easements, slope easements, and utility and drainage easements are anticipated (Psomas 2017b).

6.2.1.c Mitigation Measures

None.

6.2.1.d Permits

None.

6.2.2 Temporary and Permanent Access and Parking Impacts

This section evaluates potential project impacts to property access during construction and on a permanent basis.

6.2.2.a Existing Conditions

Access to Kolb Road is controlled by Pima County permit. Numerous access points to existing parcels are within the project limits. Kolb Road between Sabino Canyon Road and Gate Ridge Road (just south of Territory Drive) almost exclusively serves residential properties. Driveways along this segment of Kolb Road provide access to those properties; many provide access to only one residence. Therefore, it is necessary to provide safe access throughout this segment, which will be accomplished with the addition of a two-way left-turn lane.

Access to commercial development south of Sunrise Drive is via multiple driveways off Kolb Road, direct access from Sunrise Drive, and off Territory Drive. Snyder Road provides access to the multifamily development east of Kolb Road. The Rural Metro Fire Station has direct driveway access onto Kolb Road.

No pedestrian or bicycle facilities are present. No parking facilities or on-street parking is present within the project limits.

6.2.2.b Potential Impacts

The project will not result in any permanent loss of access. All cross street, side street, and driveway connections will be maintained during and after construction. Adjustments to access turning movements will occur at Territory Drive with the inclusion of the roundabout intersection. As noted in Section 4.1, these changes result in right-in, right-out movements from the shopping center for improved motorist safety. Minor temporary access impacts may occur for



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short periods for user safety. During construction, access to all residences, businesses, and the fire station will be maintained at all times, with the following exceptions:

- Temporary closures of asphalt residential driveways will not exceed four hours, with 24-hour notice of any such closure given to the property owner (note: the Rural Metro fire station driveway width allows reconstruction to occur in halves, keeping a minimum of one-half open at all times).
- Temporary closures of concrete residential driveways will not exceed seven days for placement of concrete and cure time. The contractor will provide on-street parking for homeowners during this time period.

Temporary delays on Kolb Road and Snyder Road could be expected due to construction (reduced speeds) and lane shifts. No impacts to Sabino Canyon Road and Sunrise Drive are expected.

6.2.2.c *Mitigation Measures*

- A traffic control plan shall be implemented by the contractor (see Section 6.1.8).
- Pima County will communicate traffic control measures with the public, local officials, and the media prior to and during construction activities. Communication may include, but is not limited to, media alerts, direct mailings to property owners, information on changing message boards, emails, and paid newspaper notices.
- Access to adjacent businesses and residences will be maintained throughout construction.
- Pima County will provide a construction notice to residents and businesses in the general project area at least 7 (seven) days prior to construction.
- Pima County will notify the public, business owners, and schools of temporary access changes during construction at least 7 (seven) calendar days in advance of the change.
- The contractor, after coordination with the Pima County Department of Transportation, shall notify the public a minimum of 48 (forty-eight) hours in advance of any road closures.
- At least 7 (seven) calendar days prior to construction, the contractor shall place advance-warning signs at locations designated by Pima County to notify motorists, pedestrians, and bicyclists of construction-related delays.

6.2.2.d *Permits*

No permits are required.

6.2.3 *Neighborhood Disruption*

This section addresses potential impacts to neighborhoods in the project vicinity.



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6.2.3.a Existing Conditions

Multiple residential subdivisions are present along Kolb Road, including three multifamily complexes. The single-family residential developments (see Figures 8a and 8b) are represented by:

- Quail Canyon Homeowners Association (HOA) - east side of Kolb Road from south of Territory Drive to south of Snyder Road
- Ventana Overlook HOA - west of Kolb Road, south of Territory Drive to Rock Canyon Road
- Rock Canyon HOA - west of Kolb Road, south of Rock Canyon Road
- Canyonwood Estates HOA - east of Kolb Road, north of Sabino Canyon Road
- Sabino Shadows HOA - east of Kolb Road, north of Sabino Canyon Road
- Beverly Terrace HOA - east of Kolb Road south of Sabino Canyon Road

The multifamily complexes are:

- Pinnacle Canyon - east of Kolb Road off Territory Drive
- Villas at Sabino - northeast corner of Kolb Road and Snyder Road
- The Arboretum - southeast corner of Kolb Road and Snyder Road
- Tucson Hacienda Canyon (assisted living facility under construction) - just south of project limits, east of Sabino Canyon Road

No bicycle and pedestrian facilities other than the limited facilities at the north and south ends of the project exist along Kolb Road within the project limits. No schools, police, hospitals, libraries, or churches are in the project vicinity. The nearest law enforcement is the Rincon District Sheriff's Office at Tanque Verde Road and Catalina Highway (approximately 5 miles southeast), and the nearest hospital is 4 miles west (Tucson Medical Center). The nearest schools are St. Alban's Episcopal Church—Preschool and Kindergarten, which is approximately 0.4 mile south of the intersection of Kolb Road and Sabino Canyon Road; and Ventana Vista Elementary School is approximately 0.9 mile north of the intersection of Kolb Road and Sunrise Drive. Rural Metro Fire Station 73 is directly adjacent to Kolb Road, near the intersection of Cripple Creek Drive. Two places of worship are just south of the project limits: St. Alban's Episcopal Church and Sisters of Immaculate Heart of Mary Novitiate.

One public transit service route extends into the project limits. Sun Tran bus Route 105X, express service from Sunrise Drive to Downtown Tucson, has a stop at Sunrise Drive and Kolb Road.

6.2.3.b Potential Impacts

No impacts to neighborhoods or social services are expected other than typical construction-related traffic delays and noise. All neighborhoods will continue to have access during construction; however, for an approximate two-week period, a detour of about a mile is required for the Kolb Road/Snyder Road intersection reconstruction (see Section 6.1.8.b and Figure 6).



Close coordination with Rural Metro Fire Station No. 73 will occur during construction to ensure 24/7 access. Pima County will coordinate with emergency services prior to and during construction to provide traffic control measures. The project will provide a positive impact by adding bicycle and pedestrian facilities.

6.2.3.c Mitigation Measures

- Pima County will communicate traffic control measures with the public, local officials, and the media prior to and during construction activities. Communication may include, but is not limited to, media alerts, direct mailings to business and property owners, information on changing message boards, and paid newspaper notices.
- Access to adjacent businesses and residences will be maintained throughout construction.
- The contractor or Pima County Department of Transportation will contact local emergency services (hospital, fire, police) at least 7 (seven) calendar days in advance of Snyder Road closures so that they can arrange for alternative travel routes.
- Pima County will provide a construction notice to residents and businesses in the general project area at least 7 (seven) days prior to construction.
- Pima County will notify the public, business owners, and schools of temporary access changes during construction at least 7 (seven) calendar days in advance of the change.
- At least 7 (seven) calendar days prior to construction, the contractor shall place advance-warning signs at locations designated by Pima County to notify motorists, pedestrians, and bicyclists of construction-related delays.

6.2.3.d Permits

No permits are required.

6.2.4 Parks and Recreation Areas

This section identifies public park and recreation facilities in the project vicinity.

6.2.4.a Existing Conditions

No parks and recreation facilities are within the project limits or the project vicinity. The nearest public recreation facility is the Sabino Canyon Visitor Center approximately 1.2 miles to the northeast. Morris K. Udall Park (City of Tucson facility) is 2 miles south of the project limits. Planned facilities are discussed in Section 6.2.5.d.

6.2.4.b Potential Impacts

No impacts to parks or recreation facilities will occur during construction.

6.2.4.c Mitigation Measures

No mitigation measures are required.



6.2.4.d Permits

No permits are required.

6.2.5 Consistency with Other Plans

This section evaluates the project's consistency with applicable Pima County and other jurisdictions' transportation and land use planning.

6.2.5.a Consistency with the Regional Transportation Plan

As noted earlier, this project is listed in the PAG Regional Transportation Plan under TIP, Fiscal Year 2018–2022, TIP ID No. 787.00.

6.2.5.b Consistency with the Pima County Roadway Design Manual and Environmentally Sensitive Roadway Design Guidelines

All engineering design activities, environmental analyses and documentation, and mitigation measures have been prepared in accordance with Pima County guidelines and standards as identified in the Pima County RDM (PCDOT 2015). Because Kolb Road has been identified as an Environmentally Sensitive Roadway, engineering and environmental tasks have complied with Pima County Environmentally Sensitive Roadway Design Guidelines.

6.2.5.c Consistency with the Pima County Comprehensive Plan and Subsequent Updates

The Pima County Comprehensive Plan Update, Regional Plan Policies (2001) was updated June 2012 (Pima County 2012) and again in May 2015, titled Pima Prospers 2015 (Pima County 2015). The document can be viewed at http://webcms.pima.gov/government/pima_prospers/. The project fully complies with goals and visions of the plan policies.

Transportation Element

The project is consistent with all plan policies, including alternative modes (bicycle/pedestrian facilities), is to be built in an environmentally sensitive manner, conforms to Pima County Roads and Street Standards, and is consistent with street capacity needs adopted in the Major Streets and Routes Plan of Pima County. The project is consistent with the Regional Bikeway Plan.

Environmental Element

The project considers impacts related to the Sonoran Desert Conservation Plan and Conservation Lands System (Pima County 2011). Project impacts on the Important Riparian Areas are minimized by design and construction mitigation measures. The project complies with the CWA and the Pima County floodplain and erosion hazard management ordinance.



6.2.5.d Consistency with Pima County Regional Trails System Master Plan 2010

The Pima County Regional Trails System Master Plan 2010 (revised February 2015) prepared by City of Tucson Parks and Recreation and Pima County Natural Resources Parks and Recreation identifies three potential future greenways or trails within a quarter-mile of the project limits (Pima County 2010). The planned locations (Figure 9) are as follows:

- Sabino Canyon Road Greenway (G042) would parallel Sabino Canyon Road east of the Kolb Road project. The project does not connect to, or impact, Sabino Canyon Road.
- Snyder Road Alignment Trail (ST234) is planned paralleling Snyder Road within roadway ROW. Should Snyder Road be improved in the future, planning for ROW to accommodate the trail would need to occur. The Kolb Road project would not preclude a future trail along Snyder Road.
- Ventana Canyon Wash Trail (ST047) is planned along the banks of the wash from the Coronado National Forest Boundary to Tanque Verde Creek. This is within the project limits; however, the project does not impact the existing culvert crossing.

None of the trails or greenway are currently designed or programmed for construction, and no time frame is available. The Kolb Road project will not preclude construction of these recreational features in the future.

6.2.5.e Permits

No permits are required.



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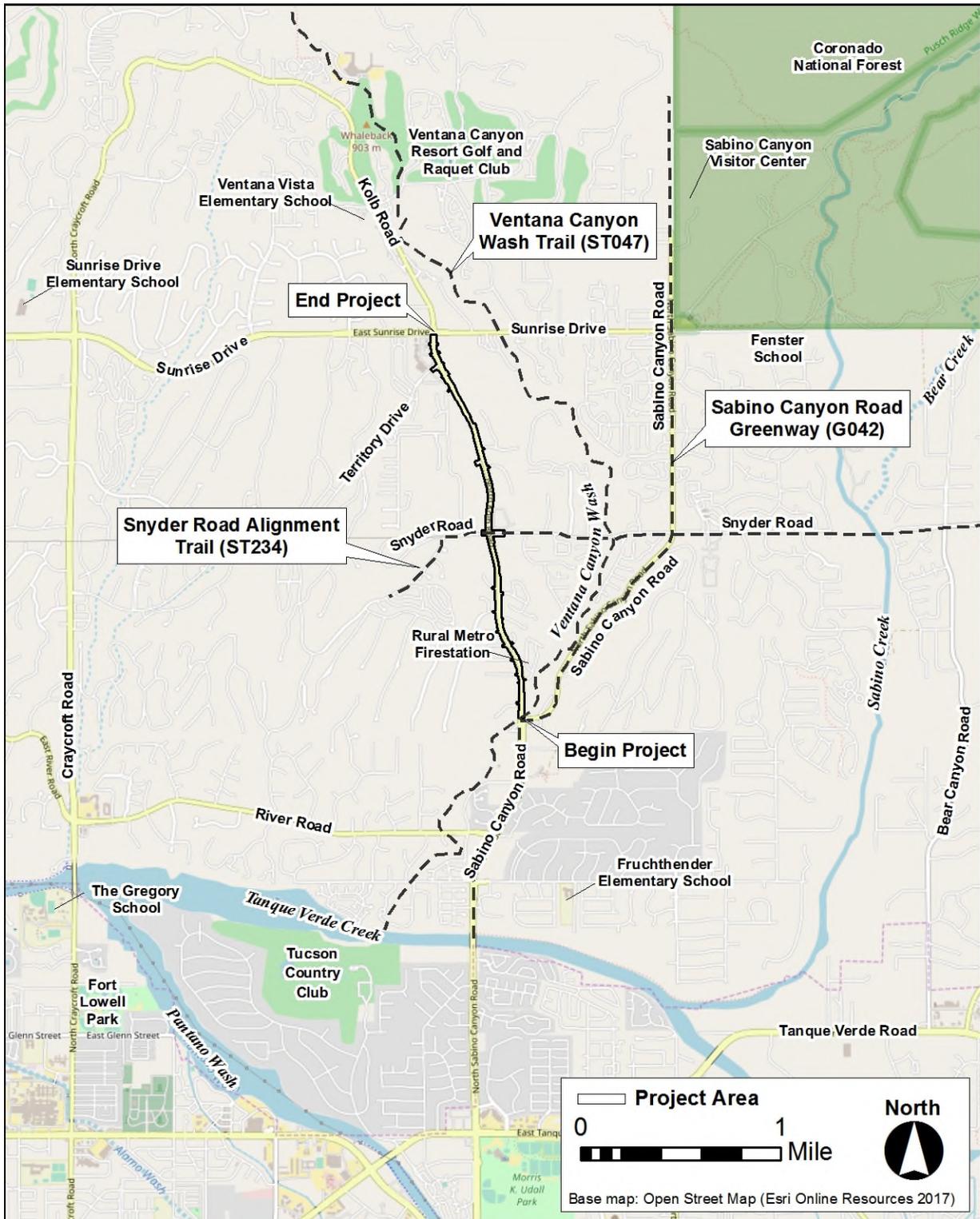


Figure 9. Potential greenways or trails within a quarter-mile of the project limits



7.0 AGENCY COORDINATION

This section describes the agency coordination that has occurred and the continuing actions needed.

7.1 FEDERAL AGENCY COORDINATION

- *U.S. Army Corps of Engineers* - The Corps attended the December 1, 2016, environmental coordination meeting and participated in a field review for the Preliminary Jurisdictional Delineation on December 12, 2017. Continued coordination will occur throughout the CWA permitting process, as needed.
- *U.S. Fish and Wildlife Service* - The USFWS was invited to attend the December 1, 2016, environmental coordination meeting but could not attend. Through the preparation of the BE, the USFWS IPaC was accessed to identify potential impacts to endangered species. The IPaC was completed September 26, 2017.
- *Federal Highway Administration* - The FHWA, as a project funding partner, has issued environmental clearance through the National Environmental Policy Act process. The Categorical Exclusion document approval by ADOT is expected in January 2018. Coordination with the FHWA is handled through ADOT.

7.2 STATE AGENCY COORDINATION

- *Arizona Department of Transportation* - Pima County has coordinated with ADOT throughout the design and environmental process. ADOT attended the December 1, 2016, environmental coordination meeting and has participated in most monthly progress meetings. Continued coordination with ADOT has occurred through its review of various technical documents, including the geotechnical environmental clearance, the cultural resources survey report, the BE, the PISA, and the Environmental Commitments Memorandum.
- *Arizona Game and Fish Department* - The AGFD was invited to attend the December 1, 2016, environmental coordination meeting but could not attend. Through the preparation of the BE, the Arizona Environmental Online Review Tool Report was accessed September 25, 2017, to identify potential impacts to protected species. The AGFD response to the project scoping letter is included in the BE on the project website.
- *State Historic Preservation Office* - Coordination with SHPO as part of Section 106 consultation occurred through ADOT/FHWA and Pima County. The project Cultural Resources Short Form Report in support of Geotechnical Environmental Clearance was approved April 10, 2017. Overall project clearance was received September 11, 2017.

7.3 COUNTY AGENCY COORDINATION

- *Pima County Regional Flood Control District* - PCDOT and the PCRFCDD have worked together to develop the project design and coordinate drainage/floodplain issues and solutions. PCRFCDD (Ann Moynihan) participated in the environmental coordination meeting, and coordination will continue through design and Floodplain Use Permit preparation.



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- *Pima County Office of Sustainability and Conservation* - The Cultural Resources and Historic Preservation Division has provided the project support for cultural resources documentation, survey, and consultation. The division attended the environmental coordination meeting (Roger Anyon) and has assisted in coordination with ADOT counterparts.
- *Pima County Department of Environmental Quality* - Representatives from the Pima County Department of Environmental Quality (Karla Reeve-Wise and Kimberly Baeza) have provided environmental oversight, project scoping letters, and review of technical documents and the EAMR process throughout the project. They participated in the environmental coordination meeting and will remain engaged in the project through construction. Continued coordination will occur during construction through the Fugitive Dust Activity Permit.

7.4 LOCAL GOVERNMENTS COORDINATION

- *Pima Association of Governments* - Project funding needs and scheduling have been coordinated on multiple occasions and will continue throughout project implementation.

7.5 CONTINUING COORDINATION

As project development continues, additional coordination will occur with the agencies noted in this section and with additional agencies: the ADEQ (CWA Section 401 and 402 permitting) and the Arizona Department of Agriculture (Native Plant Salvage).



8.0 PUBLIC PARTICIPATION

This section includes a summary of the public participation held as a component of the project development.

8.1 PUBLIC PARTICIPATION PLAN

Pima County prepared a public participation plan to outline the project goals for public involvement through formation of a CAC, conducting public information meetings, and creation of a project website. The project website, <http://roadprojects.pima.gov>, is available for current project status and technical reports. The plan includes activities to notify the media, property owners, and emergency services throughout project development and construction.

8.2 PUBLIC MEETINGS

A public open house meeting was held on December 12, 2017, at Ventana Vista Elementary School, 6085 N. Kolb Road. The meeting was advertised through public notices and direct mailings. At that meeting, the project DCR and the EAMR were presented, and public comments were solicited. The primary issues noted and discussed were: construction schedule, operation of the roundabout at Territory Drive, access to Bashas shopping center, noise impacts, bike/pedestrian facilities, and traffic control during construction. The public notice, information handout,, and meeting summary are in the Appendix. A second public open house will be scheduled in mid- to late 2018 prior to project construction to present the roadway plans and construction schedule.

8.3 COMMUNITY ADVISORY COMMITTEE

The project planning process includes the selection of a CAC, as specified in PCDOT Community Participation and Mitigation Ordinance 2006-31. The CAC consists of 14 members who represent the surrounding residential community and businesses and have an interest in the project. The CAC's responsibilities include reviewing various planning documents and providing feedback on alternative roadway designs. The CAC meets at regular intervals with Pima County staff members and consultants to be briefed on the project status, design, and environmental analysis process. Meeting summaries are included in the Appendix.

Kickoff Meeting - January 21, 2017

The first meeting introduced the Pima County design team to the CAC and was attended by nine CAC members and several members of the general public. The CAC members were presented with a notebook containing the CAC guidance (Pima County Ordinance 10.56.110), project maps, a project overview, and a schedule of activities. The PCDOT project manager (Paul Bennett) provided an overview of the CAC role and the project development process, including key technical documents: the DCR and the EAMR.



Alternatives Design Meeting - March 29, 2017

The second CAC meeting was attended by 12 CAC members and several members of the general public. This meeting focused on the design status, alternatives for roadway and pedestrian facilities, and concept for a roundabout at Territory Drive. The CAC was generally in agreement with the roundabout and recognized the improved intersection safety provided by that design.

DCR and Noise Analysis Meeting - June 15, 2017

The third CAC meeting was attended by 10 CAC members and about 20 members of the general public. The primary focus of this meeting was a presentation on the noise analysis process. The presentation was made by an acoustical engineer (Bill Holliday, P.E., Sound Solutions Inc.). The process of collecting existing noise level data, model verification, future noise predictions, and mitigation options were discussed and generated considerable interest. The project manager discussed key elements of the DCR, including roadway design, drainage, traffic, pedestrian movements, intersection/signalization, and landscaping. The draft DCR was provided to the CAC for review.

DCR, Noise Analysis, and EAMR Meeting - August 29, 2017

The fourth meeting held on August 29, 2017 was attended by 11 CAC members and about 25 members of the general public. The presentations followed up on the noise analysis results, review comments on the DCR, and introduced the process and components of the EAMR. The CAC review role and responsibility with respect to commenting on and approving the EAMR through a letter to the Pima County Board of Supervisors was discussed.

EAMR Meeting - November 8, 2017

The fifth meeting presented the Draft EAMR to the CAC for review. A staff presentation covered the main elements of the document and mitigation measures to be incorporated into the construction activities. The process for the CAC members to provide comments and their role to prepare a letter to the Pima County Board of Supervisors with a recommendation of approval or modifications was discussed.

DCR and EAMR Meeting – December 12, 2017

The sixth CAC meeting presented the final DCR and EAMR to the committee. The project manager reviewed items revised in the EAMR to address comments provide by the CAC and reviewed updates in the DCR. The CAC requested follow-up at an appropriate future date to review landscaping plans when available. This was agreed to by PCDOT. The CAC distributed their letter of project support for members' signatures (see letter in Appendix).



9.0 CONCLUSIONS AND RECOMMENDATIONS

This section (Table 3) summarizes potential project impacts to resources and proposed mitigation.

Table 3. Summary of potential impacts and proposed mitigation

Potential Impacts	Mitigation	Agency Involvement	Responsible Party
Removal of native plants (Section 6.1.1)	Protected native plants are to be preserved in place or mitigated in accordance with the Arizona Native Plant Law, the Environmentally Sensitive Roadway Design Guidelines, and the Pima County Regional Flood Control District Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines.	Arizona Department of Agriculture	Pima County Department of Transportation and contractor
Management of invasive plant species (Section 6.1.1)	Implement invasive species management measures as guided by Pima County specification 201-3.04, Noxious and Invasive Vegetation.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Impact to nesting birds (Section 6.1.1)	All active bird nests will be avoided during vegetation clearing and construction activities.	U.S. Fish and Wildlife Service	Pima County Department of Transportation and contractor
Impacts on sensitive species (Section 6.1.1)	Any Sonoran desert tortoise encountered will be subject to handling guidelines and reporting requirements to Pima County and ADOT	Arizona Department of Transportation	Pima County Department of Transportation and contractor
Impacts to Waters of the United States (Section 6.1.2)	Pima County will conduct work under Clean Water Act Section 404 Nationwide Permit 12 and Nationwide Permit 14 with Section 401 Water Quality Certification, and the contractor shall comply with the permit conditions.	U.S. Army Corps of Engineers	Pima County Department of Transportation and contractor
	The required Section 402 mitigation measures will be determined during preparation of the Arizona Pollutant Discharge and Elimination System permit application and Stormwater Pollution Prevention Plan.	Arizona Department of Environmental Quality, Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
	Pima County will prepare a Stormwater Pollution Prevention Plan, and the contractor will implement the Stormwater Pollution Prevention Plan.		
	The Pima County Department of Transportation and the contractor will prepare and file separate Notices of Intent and Notices of Termination with the Arizona Department of Environmental Quality.		



Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report



Potential Impacts	Mitigation	Agency Involvement	Responsible Party
Regulated riparian habitat impacts (Section 6.1.2)	The Pima County Department of Transportation will provide on-site landscaping mitigation for impacts to regulated riparian habitat in accordance with the Pima County Regional Flood Control District floodplain and riparian ordinance.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor
Impacts to floodplains (Section 6.1.3)	A Floodplain Use Permit from the Pima County Regional Flood Control District will be required because more than 0.33 acre of riparian habitat will be impacted.	Pima County Regional Flood Control District	Pima County Department of Transportation and contractor
Construction dust control (Sections 6.1.4 and 6.1.8)	Comply with all dust control measures identified in the Pima County Department of Transportation standard specifications for construction, the Stormwater Pollution Prevention Plan, and the Pima County Department of Environmental Quality Fugitive Dust Activity Permit.	Pima County Department of Environmental Quality	Pima County Department of Transportation and contractor
Utility service interruptions (Section 6.1.6)	Coordination and planning with the utility companies to determine any service interruptions and notification of customers 14 days in advance.	Multiple utilities	Utility or contractor
Maintenance of access (Sections 6.1.8 and 6.2.2)	Implementation of a traffic control plan and maintenance of access to residential subdivisions, businesses, and Rural Metro Fire Station 73.	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Construction noise (Section 6.1.8)	Construction equipment noise minimized by use of properly muffled equipment, maintenance of equipment, and placement of equipment away from residential receivers. Compliance with Pima County noise ordinance (Pima County Code 9.30.070).	Pima County Department of Transportation	Pima County Department of Transportation and contractor
Cultural resource site impacts (Section 6.1.9)	If previously unidentified cultural resources are encountered during construction, work at that location shall be halted immediately and the resources shall be secured and protected. The Arizona State Museum and the Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division shall be contacted immediately.	Arizona State Historic Preservation Office, Arizona State Museum Pima County Office of Sustainability and Conservation Cultural Resources and Historic Preservation Division	Pima County Department of Transportation and contractor
Visual impacts due to road and drainage structure construction (Section 6.1.10)	Incorporate landscaping, reseeding, structural treatments, and public art, where practical.	Pima County Department of Transportation	Pima County Department of Transportation and contractor



Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report



Potential Impacts	Mitigation	Agency Involvement	Responsible Party
<p>Potential presence of asbestos-containing material and lead-based paint (Section 6.1.7)</p>	<p>If any hazardous materials are encountered during construction, work shall cease at the location and the Pima County Engineer shall be contacted to arrange for the proper assessment, treatment, and disposal of those materials.</p> <p>No asbestos was detected in paint striping or concrete structures. Lead-based paint was detected in yellow paint striping. The level was below action limits but above the U.S. Department of Labor Occupational Safety and Health Administration detection level. Therefore, the contractor is required to notify workers of the potential presence of lead.</p>	<p>Pima County Department of Transportation</p>	<p>Pima County Department of Transportation and contractor</p>



Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report



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Kolb Road: Sabino Canyon Road to Sunrise Drive
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Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report



Appendix



Kolb Road: Sabino Canyon Road to Sunrise Drive
Environmental Assessment and Mitigation Report



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**Kolb Road:
Sabino Canyon to
Sunrise Drive
Community Advisory Committee Meeting
Tuesday, January 31, 2017**

6:00 p.m. to 7:00 p.m.

Meeting Minutes

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Rick Ellis, Carol Brichta, and Susan Vos. Other introductions followed including project design consultants from PSOMAS: Kevin Thornton and Matt Ashby. The members of the Community Advisory Committee (CAC) in attendance introduced themselves, along with the area along Kolb Road they were representing. A table of CAC members is below, along with those that during the meeting volunteered to be Chair and Vice-Chair of the Committee, along with three members who volunteered to be on the artist selection panel.

Name	Email	Area Represented	Other	January 31 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Also to serve on Art Committee	X
Marjorie Blaine	spikeb62@msn.com	Just off of Kolb	Agreed to serve as Vice Chair	X
Thomas Helfrich	tdh1252@gmail.com	Rainbow Canyon		X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		X
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		X
Mary Veres	mary@veresnet.org	Quail Canyon	Agreed to serve as Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Lives on Kolb Road	Also to serve on Art Committee	X
Michael Bowman	michaleb@ranchosahuarita.com	Rancho Sahuarita		X
Julie Arter	runnerjca@comcast.net	Lives along Kolb	Also to serve on Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		
Brian Gross	Brianegross@earthlink.net	Canyon Wood Est.		

II. CAC BACKGROUND/RESPONSIBILITIES

Paul described the origin of the CAC, commented that a copy of the Community Participation and Mitigation Ordinance was included in each member's workbook, and highlighted some of the key responsibilities that the committee has been asked to fulfill. These include:

- Represent the community as a whole by sharing and communicating the information to homeowners to express their views early enough in the study process to influence the course of studies and the action taken.
- Ask questions and provide input to the design team with respect to key concerns regarding the project.
- Review and provide input on the roadway alignment alternatives generated by the design team.
- Review and comment on the project's Design Concept Report (DCR) including the project plans.
- Review and comment on the Environmental Assessment and Mitigation Report (EAMR), including the review of environmental, neighborhood, business, alternative modes, and cost factors.

Examples of what the DCR and EAMR reports would look like and what type of contents they would have were shared with members of the CAC.

Other studies and reports associated with this project, once finalized will be posted on the Project's web site. <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=255052> These include the following:

- Traffic Study (including review of lane drop/merge for north bound Kolb Road just north of Sabino Canyon)
- Lighting Study
- Noise Study (Note: many questions were raised and asked regarding noise).
- Various Environmental Studies (Cultural, Biological, PISA).
- Plant Inventory Survey
- Drainage Report
- Geotechnical Report

III. PROJECT OVERVIEW

Paul noted that there are many existing houses on the east side of Kolb. To eliminate and minimize impacts to these houses, the project will focus on developing the roadway improvements and extra roadway "width" (i.e., the extra spaced need for the 6' paved shoulders and the 12' TWLTL) by expanding the road to the west.

The project will start several hundred feet north of Sabino Canyon Road and end several hundred feet south of Sunrise Drive. The project improvements are intended to include:

- A 6' paved shoulder and an 11' travel lane for both the northbound and southbound directions. A shared 12' center left-turn lane that is also sometimes referred to as a two-way left turn lane (TWLTL). (The intent is to provide for left turns into the various residences along Kolb Road without having to stop traffic.)
- A Pedestrian facility such as an asphalt or concrete path. Where feasible, the path will be offset from the edge of the new roadway. From initial design efforts, the path location will likely be on the west side of the road.
- Generally, the roadway will be uncurbed; however, some sections of raised curb may be necessary such as at key drainage locations, the intersection at Snyder road, and when design constraints dictate that the pedestrian path should be placed immediately adjacent to the paved shoulder.
- Drainage improvements such as replacement of existing undersized or degraded cross drainage culverts, roadside ditches and potentially some isolated sections of roadway storm sewer systems, looking to maintain existing drainage patterns as best as possible.

The project's construction component is funded with federal funds, which would become available in the Fall of 2018 (Oct 2018), with anticipated construction to start early 2019 and last between 15 and 18 months.

There will be a public art component within the project, which is expected to be approximately \$100K. Three members of the CAC will participate on the artist selection committee.

IV. FUTURE MEETINGS (Initial Tentative Schedule)

A tentative schedule for upcoming meetings was discussed, with the potential for the next meeting, based on the timing of the development of project plans and other materials, to occur over the next several months.

August 2017 – CAC & Review of DCR

October 2017 – CAC & EAMR BACKGROUND

December 2017– CAC – FINALIZE EAMR - PUBLIC OPEN HOUSE

February 2018 – BOS MEETING – APPROVE EAMR

- Note that based on additional discussions with the CAC and public during this meeting, that the schedule will be adjusted with an additional meeting in the June/July timeframe to allow for additional project review by the CAC and public.

V. QUESTIONS & DISCUSSION DURING MEETING

Many questions were asked during the meeting, by CAC members and members of the at-large audience. These have been summarized below.

QUESTION: Are any CAC member's residents of houses that are located directly on Kolb Road within the project limits?

ANSWER: *One of the CAC members (Michael Bowman) lives directly on Kolb Road. The membership of the committee is intended to garner a representative sample of community members from communities along both sides of Kolb between Sabino Canyon and Sunrise Drive.*

QUESTION: There are existing signs in the corridor indicating restricted large truck load limits. Will the County keep these in place after the project is constructed?

ANSWER: *The County will review this as part of the overall project review.*

QUESTION: Multiple members of the at-large audience asked questions related to roadway noise and if the project would construct sound abatement walls.

ANSWER: *There will be a noise study conducted and a noise report would be prepared. The report will determine if noise walls are warranted, feasible (can be constructed) and reasonable (cost effective). If these criteria are met, then the directly affected properties would vote if they want a wall constructed or not (majority rules).*

QUESTION: The original Kolb Road project was 4-lanes, why is this not being considered and pursued, and the follow up question of - Will the County share and provide the traffic report that supports this change?

ANSWER: *Based on a traffic analysis of the northeast foothill area, a 4-lane roadway along Kolb is not required. The basis for this is because most of the land in the immediate vicinity of the project has either been fully "built-out" or nearly so. The regional traffic study of the area predicted that a total of 10-lanes were needed to effectively move vehicles into and out of the foothills. Based on the improvements to Craycroft Road (4-lanes) and Swan Road (4-lanes), Kolb Road could remain a 2-lane section. However, because of the location of multiple residences along the corridor, it would also benefit from having a dedicated center turn lane (TWLTL) along with paved shoulders for bicyclists. A copy of this report will be included on the project site web page.*

QUESTION: A member of the at-large audience that lives directly on Kolb asked if the existing guardrail would remain.

ANSWER: *In areas where there is guardrail today, the project will likely need to replace the guardrail to bring it into compliance with current guidelines and standards. The need for and locations of guardrails will be reviewed as part of the overall project review.*

QUESTION: The CAC members and the at-large attendees were asked if they had a preference on the style of guardrail to be considered for the project. Do people prefer galvanized or Cor-Ten guardrail?

ANSWER: *Collectively the group preferred the Cor-ten guardrail, which is the type/style of guardrail used on Sunrise Drive between Craycroft Road and Kolb Road.*

QUESTION: Will the project improvements impact the existing CenturyLink facilities found on the southwest corner of the Kolb/Snyder intersection?

ANSWER: *The project designers are aware of these facilities, and would look to avoid impacting these facilities because it would be expensive to relocate them and these costs would likely be paid for by the project.*

QUESTION: There used to be existing signs that mentioned Kolb Road and a “Ventana Scenic Corridor”. How can I get more information about these signs?

ANSWER: *It was suggested to contact Pima County Development Services.*

QUESTION: A CAC member noted that the next meeting for the CAC was not until August. Should the CAC meet more frequently?

ANSWER: *It was noted that meetings could be more frequently, and that the one tentatively for August would likely be shifted into June or July as more progress is made on the initial design and the environmental studies and reports started to provide information/feedback.*

Contact Information:

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**Kolb Road:
Sabino Canyon to
Sunrise Drive
Community Advisory Committee Meeting
Wednesday, March 29, 2017**

6:00 p.m. to 7:00 p.m.

Meeting Minutes

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Rick Ellis, Beth Abramovitz, Carol Brichta, and Shara Canez. Other introductions followed including project design consultants from PSOMAS: Kevin Thornton, Alejandro Angel, and Matt Ashby. The members of the Community Advisory Committee (CAC) in attendance introduced themselves, along with the area along Kolb Road they were representing. A table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC, and their attendance.

Name	Email	Area Represented	Other	March 29 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	
Marjorie Blaine	spikeb62@msn.com		Vice Chair	X
Thomas Helfrich	tjh1252@gmail.com			X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		X
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		X
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		X
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	X
Michael Bowman	michaleb@ranchosahuarita.com	Rancho Sahuarita		
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		X
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Briangross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

II. PROJECT PRESENTATION

Paul reviewed the topics to be discussed and ground rules to be followed for meeting, (CAC questions and input, followed by audience questions and input). The meeting's purpose was to provide an update on the status of the project, a review and discussion of alignment possibilities based on comments from the January 31st meeting, and review traffic concerns that had been identified within the northern most segment of the project.

Project Status – Project efforts continue, with the next field activities to be that of Geotechnical Analysis, which will involve drilling along the roadway at several locations to obtain soil samples. There should not be any significant traffic impacts from these efforts and the work should occur in May/June, once approvals have been received from ADOT.

Roadway Configuration/Sidewalk Alternatives – Based on prior meeting comments additional review of the sidewalk location was made. Kevin Thornton of PSOMAS presented two potential alternatives for sidewalk/pedestrian pathway locations along Kolb.

The first was to provide a sidewalk on the west side only from Sabino Canyon to Sunrise Drive as was discussed at the prior meeting. While this would provide continuity for pedestrians along the corridor, it would not provide connectivity to the east side residents and could be problematic, requiring additional retaining walls, steeper driveways, drainage issues, and concerns at the Snyder intersection.

Kevin then commented that another possibility was reviewed, placing sidewalks on both sides. However, this possibility would further increase overall project costs, so a review of a mixture of these two suggestions was made.

The second alternative was then presented, that being more of a hybrid between the first and second possibility. This would provide a sidewalk on the east side from Sabino Canyon to Sunrise Drive, there would be a sidewalk on the west side from Gate Ridge Road to Sunrise Drive, and some type of pathway on the west side – running between Sabino Canyon and Snyder. This suggestion garnered support based on costs, drainage, continuity and Snyder tie-in concerns. Three comments were made relative to this alternative – could the path between Sabino and Snyder be 1 - separated from the roadway and 2 - possibly asphalt. There was also a concern with pedestrians crossing from east to west at the north end of the project.

The design team will review the second alternative and also provide cross sections at various locations along Kolb for the CAC to review.

Roadway Traffic Concerns – The next portion of the meeting was led by Alejandro Angel of PSOMAS, with the focus being on traffic volumes and safety. He reviewed the daily volume counts for the Sabino Canyon to Snyder segment and the Snyder Road to Sunrise Drive segment. Additionally, he provided the crash data (type and frequency) for both of these segments of roadway.

At the northern end of the project (Territory Drive to Sunrise Drive), there have been a higher than average number of accidents that have occurred at the mid-block exit (between Territory Drive and Sunrise Drive) onto Kolb. Alejandro reviewed the traffic volumes and the potential solutions that could be made to address this safety issue, along with projected outcomes based on each of the potential solutions.

The first alternative would be to widen shoulders and install additional lighting. This effort is predicted to provide some improvement in overall crash rate.

A second alternative would build upon the first and extend the median and limit the turning movements from the mid-block exit to only allow for right turns (southbound). Again this effort is predicted to provide some improvements in overall crash rate, but would also increase delays for those exiting Territory Drive to turn northbound onto Kolb Road.

A third alternative was then presented that would further extend the median to Territory Drive, and for that intersection a single lane roundabout would be installed (instead of a signal since the intersection is too close to the Sunrise Drive intersection, which is already signalized). This configuration would provide improvements in overall crash rate and minimize the delays at the Kolb Road and Territory Drive intersection. Additionally, based on the design of the roundabout, pedestrian crossings would be easier to complete (crossing only one lane at a time), and the roundabout could fit into the existing right of way.

There was significant discussion regarding the third alternative and the potential for this to also provide speed reduction as Kolb Road approaches Territory Drive and the higher density shopping area. When the CAC was asked if they would support this as an alternative, many of the CAC members raised their hands and voiced their support of the concept and commented that people will need some education regarding how to negotiate the roundabout, but that it should work well. They also suggested advance signs to let people know of the upcoming roundabout.

Another traffic issue of concern is with the northbound merge lanes, just to the north of the Sabino Canyon intersection. The design team is aware of this concern and will have recommendations regarding possible solutions as the project design moves forward.

A copy of the meeting presentation has also been posted on the project website <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=255052>.

III. NEXT STEPS

The next meeting will be scheduled towards the end of May that will allow for a discussion and review of the noise modeling, along with a review the materials that are used in developing the DCR.

IV. PROJECT SCHEDULE

The project is still scheduled to have design completed late summer 2018, start construction spring 2019, and be completed summer 2020.

V. PUBLIC ART

It was announced that the Art Selection Committee members would be seeing an email containing submittal evaluations that need to be reviewed and that a time for an in-person follow up discussion of these evaluations would be scheduled in April.

VI. FUTURE MEETINGS

A tentative schedule for upcoming meetings is listed below, based on discussions with the CAC and the timing of the development of various project materials.

May 2017 - CAC - Basics associated with Design Concept Report (DCR) & Noise Study
July 2017 – CAC for Final DCR/Noise Study and Environmental Assessment and Mitigation Report (EAMR) Basics
September/October 2017 – CAC & EAMR BACKGROUND
November/December 2017– CAC – FINALIZE EAMR - PUBLIC OPEN HOUSE
February 2018 – BOS MEETING – APPROVE EAMR

VII. QUESTIONS & DISCUSSION DURING MEETING

Other questions were asked during the meeting by CAC members and members of the at-large audience. These have been summarized below.

QUESTION: What are the differences with Snyder between the two options discussed?

ANSWER: *There are not differences, as the suggestion is to eliminate the cross walk along the west and north sides of the Kolb/Snyder intersection to aid in the vertical curve and roadway tie in for the west leg of Snyder.*

QUESTION: Are there any private property acquisitions for either of the two options?

ANSWER: *None are anticipated.*

QUESTION: Where would the sidewalk on the east side be in relationship to the existing edge of pavement?

ANSWER: *It appears that the east side sidewalk would be within approximately 1' – 3' of the east edge of pavement.*

QUESTION: There is a concern with both water and the dirt/rock debris that both crosses and is found on the roadway during and after storm events. How will this be handled?

ANSWER: *The design of the roadway will address the need for appropriate drainage, curbing, and swales (where there is no curbing) to address the concerns with the water, dirt and rock materials washing onto the roadway during storm events.*

QUESTION: How and when will the noise issues associated with the roadway be addressed?

ANSWER: *With an alignment identified from this meeting, the next steps will be to model the roadway (horizontally/vertically) and to start the noise analysis process. At the next meeting we will review this process.*

QUESTION: There was a concern about the hill to the south of the proposed roundabout and being able to stop if traffic is backed up. How might this concern be handled?

ANSWER: *There will be an analysis of the sight distance for northbound traffic to determine if adjustments in the hill/slope as Kolb Road approaches Territory need to be made.*

QUESTION: There was a question about the bike lane configuration and the proposed roundabout.

ANSWER: *The project designers are aware of this potential concern and will look to provide design that allows for bicycles to either travel thru the roundabout adjacent to the flow of traffic or via the pedestrian facilities.*

QUESTION: Will a proposed roundabout slow down traffic at Gate Ridge Road?

ANSWER: *It is anticipated that the roundabout would not create issues that impact Gate Ridge Road.*

QUESTION: Is the Design Team working with the Fire Station?

ANSWER: *Yes, we will be working with the Fire Station personnel. Two representatives of the station were in attendance at the meeting.*

QUESTION: How will wildlife be treated?

ANSWER: *Wildlife and other environmental factors/issues will be reviewed, addressed and commented on as part of the Environmental Assessment and Mitigation Report, which will be assembled over the next few months as the project continues thru its design process.*

QUESTION: Can we get a copy of the noise study from the Sabino Canyon Road/Kolb Road Intersection (south end of this project)?

ANSWER: *We will see if we can identify and provide a copy of the report associated with Sabino Canyon Road/Kolb Road Intersection project from 1998.*

QUESTION: Why are we doing the project?

ANSWER: *While the project is not increasing capacity, it will improve traffic safety, road/pavement enhancement, pedestrian/bicycle connectivity, and drainage improvements.*

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**Kolb Road:
Sabino Canyon to
Sunrise Drive
Community Advisory Committee Meeting
Thursday, June 15, 2017**

6:00 p.m. to 7:30 p.m.

Meeting Minutes

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Rick Ellis, Kathryn Skinner, and Carol Brichta. Other introductions followed including project design consultants from PSOMAS: Kevin Thornton, Matt Ashby, along with Bill Holliday (Sound Solutions). The members of the Community Advisory Committee (CAC) in attendance introduced themselves. A table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC, and their attendance.

Name	Email	Area Represented	Other	June 15 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	X
Marjorie Blaine	spikeb62@msn.com		Vice Chair	
Thomas Helfrich	tjh1252@gmail.com			X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		X
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	
Michael Bowman	Mijabow@gmail.com	Kolb		X
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		X
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Brianegross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

II. PROJECT PRESENTATION

Paul reviewed the topics to be discussed and ground rules to be followed for the meeting, (CAC questions and input, followed by audience questions and input). The meeting's purpose was to provide an update on the status of the project, a review and discussion of the process for evaluating noise/sound along the corridor, and to review the material that will be included in the Design Concept Report.

Project Status – Project efforts continue, with completion of field efforts associated with Geotechnical Analysis (drilling along the roadway at several locations to obtain soil samples). The two project concept documents [Project Assessment (PA) for ADOT/FHWA and Design Concept Report (DCR) – Pima County] have been developed and are currently being reviewed. It is anticipated comments should be received from ADOT regarding the PA in the next few weeks. The internal review of the DCR is expected to be completed by the end of June, at which time the draft document will be circulated amongst the CAC members, and it will be placed on the project website for review.

Noise Study Process – Bill Holliday presented background and process information relative the Noise Study to be conducted for the project. He reviewed the approach for the Noise Study, which uses the FHWA Traffic Noise Model (2.5), and involves the creation and then the calibration of a noise model that is based on the existing roadway conditions and adjacent topography. The model then looks at the future roadway configuration and adjacent topography; and takes into account vehicle speeds, traffic volumes, vehicle mix, elevations, ground types, receiver elevations, and existing barriers. Once the model is built and verified, it is used as a predictor of future noise levels. These predicted future noise levels are then reviewed to determine if any criteria for additional investigation will be met. The County's criteria that triggers further investigation include noise levels reaching 66 dBA or higher, or result in a 15 dBA increase between existing and future noise levels. Should either of these two situations occur, noise mitigation will be reviewed. The mitigation will need to be deemed reasonable and feasible for it to be further pursued. Bill identified that for the mitigation to meet the reasonable and feasible threshold, it will need to achieve at least a 5 dBA reduction at the noise sensitive receiver, the barrier must benefit two or more adjacent receivers, and the cost of the barrier must be \$35,000 or less per benefited receiver. Additionally, a majority of the property owners must approve the barrier and be less than 10 feet in height. It was also noted that the mitigation is only for the first floor. A roll plot map was also provided to the group, which indicated where measurement and predictor points would occur along the roadway. Bill took questions throughout his presentation, with these listed in the Questions and Discussion section that follows.

Design Concept Report – The next portion of the meeting was led by Paul Bennett with the focus of the discussion on what will be contained in the DCR. A copy of the Draft DCR was circulated for the CAC. The presentation then reviewed the types of information that is included in the DCR. This information includes narrative comments regarding the Project; the Project Area; Traffic and Accident Data; Design Standards; Major Design Features; Social, Economic, and Environmental Considerations; Public Involvement; Agency Coordination; Alternatives; Cost Estimates; Project Budget; Delivery Method; and Recommendations/Conclusions.

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Thursday, June 15, 2017

A copy of the meeting presentations have also been posted on the project website <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=255052>.

At the end of the meeting the audience indicated their appreciativeness of the information being shared and their appreciation for those on the CAC for their time and effort.

III. NEXT STEPS

The next meeting will be scheduled in August to allow for a discussion and review of the results from the Noise modeling, a review the DCR, and a potential review of the basic items that will be in the Environmental Assessment and Mitigation Report (EAMR), time permitting.

IV. PROJECT SCHEDULE

The project is still scheduled to have design completed late summer 2018, start construction spring 2019, and be completed summer 2020.

V. PUBLIC ART

It was announced that the Art Selection Committee had selected Robin Riley (Tucson) as the project artist. She will be asked to attend the Public Open House in November.

VI. FUTURE MEETINGS

A tentative schedule for upcoming meetings is listed below, based on discussions with the CAC and the timing of the development of various project materials.

August 2017 – CAC and Review DCR/Noise Study and Environmental Assessment and Mitigation Report (EAMR) Basics (time permitting)
September/October 2017 – CAC & EAMR BACKGROUND
November 2017– CAC – FINALIZE EAMR - PUBLIC OPEN HOUSE
December 2017 – BOS MEETING – APPROVE EAMR

VII. QUESTIONS & DISCUSSION DURING MEETING

Questions that were asked during the meeting by CAC members and members of the at-large audience are summarized below.

QUESTION: Is there any consideration for quality of roadway or degradation relative to the noise model?

ANSWER: *No*

QUESTION: Will rubberized asphalt be included in the noise model?

ANSWER: *No. This would only come into play if mitigation is needed, but rubberized asphalt is not recognized as mitigation feature for Federal Projects.*

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Thursday, June 15, 2017

QUESTION: Does noise model account for steep slope or wall and reflective properties?
ANSWER: *Yes, but it depends upon the slope or wall conditions.*

QUESTION: Will the proposed improvements get added to the noise model?
ANSWER: *Yes, the design of the roadway will be incorporated into the noise model.*

QUESTION: How do traffic projections get done?
ANSWER: *A traffic count was taken along Kolb Road in October 2016 and a review was made of the PAG traffic projections for the roadway to determine future volumes.*

QUESTION: There is a concern about the Immaculate Heart Development Report and its forecasted 2040 volumes. How is this concern being handled?
ANSWER: *The Project Team is in the process of tracking down the report and will then review to determine appropriateness of numbers and address discrepancy.*

QUESTION: There was a concern that the new Sabino Canyon extension has impacted traffic flow on this section of Kolb.
ANSWER: *The projected traffic counts from PAG included the extension. An additional traffic count will be taken along Kolb Road in October 2017 to further verify the volumes.*

QUESTION: Will the load limit remain for Kolb Road?
ANSWER: *Not sure. Additional review is needed to determine the basis of why the load limit was established and if it will remain or be lifted.*

QUESTION: Is the 66 dBA the maximum or average?
ANSWER: *Average.*

QUESTION: Where is the noise measured?
ANSWER: *At the worst case receiver locations.*

QUESTION: Will there be an impact on the noise based on vegetation, or time of year (winter vs. summer)?
ANSWER: *Temperature is included. Ground cover is also an input into the model as a parameter.*

QUESTION: There is somewhat of a natural amphitheater around Snyder, with noise reverberations. How will the noise model handle this?
ANSWER: *The model can be adjusted for reflected noise.*

QUESTION: Why is road being improved?
ANSWER: *While the project is not increasing capacity, it will improve traffic safety, road/pavement enhancement, pedestrian/bicycle connectivity, and drainage improvements.*

QUESTION: Will there be right turn lanes and special access if barriers are added for access to the homes along Kolb?

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Thursday, June 15, 2017

ANSWER: *There is a paved shoulder for turning into homes along Kolb. However, it should also be noted that the walls have to be for and function as a noise abatement feature, as Federal funding will not pay for screen walls. The walls are not considered a crash barrier.*

QUESTION: When will noise field measurement be done?
ANSWER: *Within the next month.*

QUESTION: Will the data be fudged/adjusted?
ANSWER: *We are using industry standard software.*

QUESTION: What is the timing of the Draft and Final DCR?
ANSWER: *The Draft DCR will be out for comment at the end of June. The intent is to have the CAC review during July and provide feedback before, and also at the August CAC meeting. The Final DCR is anticipated to be complete later this fall. Note that we are also looking to hold a Public Open House in November to review the plans.*

QUESTION: What are the design concerns/exceptions of the project?
ANSWER: *The project will have a design exception created by the steep grade of Snyder (19% west, 13% east) which is unavoidable.*

QUESTION: Will there be plant salvage along the project?
ANSWER: *Plants along the corridor will be salvaged as appropriate (including Saguaros). Once County has completed salvage efforts, other non-profit entities (e.g. - Tucson Succulent Society) may then salvage thru corridor.*

QUESTION: Has there been coordination with Sun Tran?
ANSWER: *Not yet, but Bea Paulus (Sun Tran Representative) will be contacted regarding Route 105X which circles around the Basha's shopping center.*

QUESTION: Has the determination of a sidewalk vs. a path on the west side been decided?
ANSWER: *No. This is still open for discussion. This had been updated in the PA to reflect a sidewalk or pathway to maintain that possible option. It is also stated as a sidewalk or pathway in the current DCR.*

QUESTION: Will there be continuous lighting along Kolb?
ANSWER: *No Lighting will be at key locations, the commercial segment at the north end of the project, Snyder Road, and potentially at the Fire Station.*

QUESTION: Are there any plans to improve River Road?
ANSWER: *Only as a long range goal at this time.*

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**Kolb Road:
Sabino Canyon to Sunrise Drive
Community Advisory Committee Meeting
Tuesday, August 29, 2017**

**6:00 p.m. to 7:30 p.m.
Meeting Minutes**

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Carol Brichta. Other introductions followed including project design consultants from PSOMAS: Kevin Thornton, Matt Ashby, Elizabeth Barnes, along with Bill Holliday (Sound Solutions). The members of the Community Advisory Committee (CAC) in attendance introduced themselves. A table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC, and their attendance.

Name	Email	Area Represented	Other	August 29 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	X
Marjorie Blaine	spikeb62@msn.com		Vice Chair	X
Thomas Helfrich	tjh1252@gmail.com			X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		X
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	
Michael Bowman	Mijabow@gmail.com	Kolb		X
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		X
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Briangross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

II. PROJECT PRESENTATION

Paul reviewed the topics to be discussed for the meeting, with the purpose to provide an update on the status of the project, a review and discussion of any comments on the Draft Design Concept Report, the results of the Noise Study conducted along the corridor, and the material that will be included in the Environmental Assessment and Mitigation Report (EAMR).

Project Status – Project efforts continue. The Project Assessment (PA) has been accepted by ADOT/FHWA. The Draft Design Concept Report (DCR) for Pima County was distributed to CAC members for comments and will be discussed later as part of the meeting. The second set of design plans used to develop final plans is being finished (four stages). The noise study, which will also be reviewed as part of the meeting has been completed. The EAMR is currently under development, with a review of the types of information contained within this report to be covered as the third major topic of this meeting.

Design Concept Report – The next portion of the meeting focused on feedback regarding information contained in the DCR as a copy of the Draft DCR had been previously provided to all members of the CAC. Comments regarding issues relative to the DCR are incorporated in the Questions and Discussion section that follows.

Noise Study Process & Results – Bill Holliday presented background and process information relative the Noise Study conducted for the project. He again reviewed the approach for the Noise Study, which uses the FHWA Traffic Noise Model (2.5), and involves the creation and then the calibration of a noise model that is based on the existing roadway conditions and adjacent topography. The model then looks at the future roadway configuration and adjacent topography; and takes into account vehicle speeds, traffic volumes, vehicle mix, elevations, ground types, receiver elevations, weather conditions, and existing barriers. The model is built, verified, and then used as a predictor of future noise levels. These predicted future noise levels are then reviewed to determine if any criteria for additional investigation will be met. ADOT criteria that triggers further investigation include noise levels reaching 66 dBA or higher, or result in a 15 dBA increase between existing and future noise levels, which is the same as County's. Should either of these two situations occur, noise mitigation will be reviewed. The mitigation will need to be deemed reasonable and feasible for it to be further pursued. Bill identified that for the mitigation to meet the reasonable and feasible threshold, it will need to achieve at least a 5 dBA reduction at the noise sensitive receiver, the barrier must benefit two or more adjacent receivers, and the cost of the barrier must be \$49,000 or less per benefited receiver. Additionally, a majority of the property owners must approve the barrier and be less than 24 feet in height. It was also noted that the mitigation is only for the first floor.

Results of the Noise Study indicated a slight increase in traffic volume and corresponding slight increase in noise between existing and future (2040). Measurements were taken at roadside locations next to properties during peak traffic hours. The measurements were not taken at prediction locations. The highest predicted noise level was 64 dBA, which isn't high enough to consider mitigation. The presentation contained a graphic of where measurement and predictor points were along the roadway. Bill took questions throughout his presentation, with these listed in the Questions and Discussion section that follows.

Environmental Assessment & Mitigation Report – The next portion of the meeting was led by Paul Bennett with the focus of the presentation on what will be contained in the EAMR. The information includes the identification of any impacts associated with the project on the local biology, drainage/floodplain, air quality, noise, hazardous materials, historic and cultural resources, visual resources, or neighborhoods. The project EAMR will include narrative addressing each of these in detail, and is to be provided to the Committee at their October meeting.

A copy of the meeting presentations and Noise Report have been posted on the project website <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=255052>.

III. NEXT STEPS

The next meeting will be scheduled for the later part of October to allow for a review and discussion of the EAMR.

IV. PROJECT SCHEDULE

The project is still scheduled to have design completed late summer 2018, start construction spring 2019, and be completed summer 2020.

V. PUBLIC ART

The Art Selection Committee has selected Robin Riley (Tucson) as the project artist. Her contract is currently being processed. She will be asked to attend the October CAC meeting and Public Open House in November.

VI. FUTURE MEETINGS

A tentative schedule for upcoming meetings is listed below, based on discussions with the CAC and the timing of the development of various project materials.

October 2017 – CAC & EAMR BACKGROUND

November/December 2017– CAC – FINALIZE EAMR - PUBLIC OPEN HOUSE

January 2018 – BOS MEETING – APPROVE EAMR

VII. QUESTIONS & DISCUSSION DURING MEETING

Questions that were asked during the meeting by CAC members and members of the at-large audience are summarized below.

Questions/Discussion DCR

Will LED lighting be reviewed for Dark Sky concerns?

Yes and will also look at adding shielding as appropriate

Needed at fire station, Snyder and commercial area from Gate Ridge to Sunrise

How will the merge at Ventana Drive associated with the ending of bike lane ends and right turn be handled?

Issue with slowing down to turn and lots of speeding traffic

High speeds at the merge are partially a result of older standards (much wider roadway)

6' bike lane will be continued entire corridor – at this location it may be protected or striped (design team is aware of this issue).

Also reviewing configuration of right turn lane at Ventana Drive

Is there a need for a sidewalk/pathway on west side (Sabino Canyon to Snyder), as some residents don't want sidewalk as there is a concern it is more intrusive because the road is already moving over to the west side?

Concern that there is no median refuge and cannot cross safely

Preference was that if there were to be a pedestrian pathway, a soft path (DG) would be more preferred than a sidewalk – CAC agreed this is what would be best

Why isn't roadway centerline centered between R/W?

The roadway footprint is constrained by the 90' R/W

The existing roadway is located within the east portion of the ROW

There are more impacts west of the roadway, including slopes and drainage issues

Questions/Discussion Noise Report

Why are measurement values higher than prediction values?

Measurements were taken at road, so more noise

Barriers also make a difference in the prediction

A doubling of the distance from the sound, results in a drop by 3 dBA

Will rubberized asphalt be used?

Will use terminal blend because it holds up better – some rubber, but less than rubberized

Some noise reduction, but no studies proving this – cannot be quantified

FHWA hasn't approved rubberized as a noise mitigation option

Were noise measurements done by homes along the road?

Measurements were taken along roadway to verify that the model is working

South of Snyder, east side – yes measurements were done by these homes

Will the information be available on website?

Meeting notes, slides and noise study will be available this week on website

What is the basis of the noise thresholds?

Federal (FHWA) guidance defines as approaching 67 dBA

ADOT and Pima County have adopted 66 dBA as approaching 67 dBA

Most recent ADOT noise abatement requirements: May 2017

What is the status of the load restriction along Kolb Road?

Removing the load restrictions will not be pursued

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Tuesday, August 29, 2017

What was and the basis for the traffic counts and growth rate?

Regional traffic model (Pima Association of Governments) growth rates:

Sabino Canyon to Snyder: 0.3%

Snyder to Sunrise: -0.3%

Traffic Report assumed 0.5% (conservative)

Traffic report is using traffic counts from October 2016 as the existing basis

Traffic counts will be taken again in October/November to verify the assumptions in the traffic report

Why does it appear that the 2006 volumes in the traffic report, Figure 5 were higher than future numbers?

Parallel road into area (Craycroft) had not been widened and improved

Recession also resulted in less traffic

Where were measurements taken to verify model

Measurements were taken along roadway to verify that the model is working and locations are shown in the noise study

General Discussion

Utilities Relocations

Southwest Gas may be upgrading their facilities along corridor prior to construction.

Tucson Water may upgrade some of their facilities as part of the project.

Design will stay away from CenturyLink facilities at the SW corner of Kolb/Snyder

Hazardous materials (old tanks – none found) Asbestos/lead in striping - awaiting results

Contact Information:

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**Kolb Road:
Sabino Canyon to Sunrise Drive
Community Advisory Committee Meeting
Wednesday, November 8, 2017**

**6:00 p.m. to 7:30 p.m.
Meeting Minutes**

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Rick Ellis and Carol Brichta. Other introductions followed including project design consultants from PSOMAS: Kevin Thornton, Matt Ashby, along with Mike Dawson and Maria Altemus from EcoPlan. The members of the Community Advisory Committee (CAC) in attendance introduced themselves. A table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC, and their attendance.

Name	Email	Area Represented	Other	November 8, 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	
Marjorie Blaine	spikeb62@msn.com	Ventana Overlook	Vice Chair	X
Thomas Helfrich	tjh1252@gmail.com			
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		X
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	
Michael Bowman	Mijabow@gmail.com	Kolb Road		
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		X
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Briangross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

II. PROJECT STATUS & CAC INVOLVEMENT

Paul reviewed the topics to be discussed for the meeting, with the purpose to provide an update on the status of the project, a review and discussion of any comments on the material included in the *Draft* Environmental Assessment and Mitigation Report (EAMR), along with the role of the CAC regarding the EAMR. Paul also commented that updated traffic counts had been taken earlier in the week, and had values very similar to those measured in preparation of the project Traffic Report.

III. *Draft* ENVIRONMENTAL ASSESSMENT & MITIGATION REPORT

The next portion of the meeting was led by Paul Bennett with the focus of the presentation on the specific contents of the *Draft* EAMR. Comments regarding issues/concerns brought up during the meeting are incorporated in the Questions and Discussion section that follows. Additionally, CAC members were asked to forward any other comments they may have regarding the document by November 20th such that they could be addressed and included in an updated EAMR.

A copy of the meeting presentations and *Draft* EAMR Report have been posted on the project website <http://webcms.pima.gov/cms/One.aspx?portalId=169&pageId=255052>.

The next meeting will be scheduled for December 12, 2017 5:30 p.m. to allow for a finalization of CAC letter associated with the EAMR. After the CAC meeting, a Public Open House (6:30 p.m. – 7:30 p.m.) will be held to provide the community with information regarding the project.

IV. PROJECT SCHEDULE

The project is still scheduled to have design completed late summer 2018, start construction spring 2019, and be completed summer 2020.

V. ART SELECTION/PRESENTATION

The Project Artist - Robin Riley (Tucson) was introduced to the CAC and provided several slides of some of her past work and asked for input/suggestions from the committee.

VI. FUTURE MEETINGS

A schedule for upcoming meetings is listed below, based on discussions with the CAC.

December 12, 2017– CAC – FINALIZE EAMR - PUBLIC OPEN HOUSE
January 2018 – BOS MEETING – APPROVE EAMR

VII. QUESTIONS & DISCUSSION DURING MEETING

Questions that were asked during the meeting by CAC members and members of the at-large audience are summarized below.

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Wednesday, November 8, 2017

How will pedestrians be able to travel along Kolb, north of Snyder?

North of Snyder, the sidewalk will only be located on the east side of the roadway, which will require that they cross at the signal at Snyder.

How will bicycles be able to use the roundabout at Territory?

Bicycles will either be able to use the travel lane thru the roundabout, or use access ramp curb cut-outs to exit from and then back onto the paved shoulder, north and south of the roundabout.

The Draft EAMR needs to clarify the number of drainage crossings.

Document will be updated/clarified for these

Additional information/descriptions regarding the USACOE 404 permit and Table 2 should be included in the Draft EAMR.

Document will be updated/clarified for these. However, it should also be noted that the EAMR document is based on Pima County's process vs. the ADOT/FHWA process

Is there an increase in the flow amounts that will be conveyed as part of the stormwater crossings?

No. Stormwater flows should continue to be consistent with current flows.

Can something be done relative to the debris running onto Kolb from the driveway of the fire station?

The Design Team will need to investigate the issue.

Will the CAC get to review landscape plans?

The landscape plans will not be completed until after all roadway geometry and features (e.g. walls) are defined and designed. At that time the CAC will be provided with plans for comment.

Will utilities be shut down as part of the project?

Utilities will need to coordinate their respective work efforts with their customers based on the amount and timing of work to be performed within the corridor. Tucson Water relocations will be part of the roadway project, with prior notice of customers being incorporated into those efforts.

Where will there be parking for construction vehicles?

The County currently owns several homes along Kolb. There is also one vacant lot, which has been identified to be the "Contractors staging area" for the project.

What happens to subdivision landscaping?

Subdivision landscaping should be on private property, with the intent that the project would not disturb those areas. If there is landscaping located within the public right of way, further review and discussions will need to occur based on the design and the location/impact of the landscaping

Was the Noise Report for the project immediately to the south of this project located?

The Noise Report was not found.

Kolb Road: Sabino Canyon to Sunrise Drive Community Advisory Committee Meeting
Wednesday, November 8, 2017

What was the amount of the art budget?
\$92,000

Has anyone counted the saguaros?

A review of the native plants along the project has occurred. It appears that only a couple of Saguaro's may be impacted by the project. The County will look to salvage native plants within the corridor where feasible, and then replant them as part of the landscaping effort.

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Pima County Department of Transportation
(520) 724-6442
E-mail: Carol.Brichta@pima.gov



**Kolb Road:
Sabino Canyon to Sunrise Drive
Community Advisory Committee Meeting
Tuesday, December 12, 2017**

**5:30 p.m. to 6:00 p.m.
Meeting Minutes**

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the other staff from PCDOT including: Carol Brichta. Other introductions followed including project design consultants from PSOMAS: Alejandro Angel, Kevin Thornton, Matt Ashby, Elizabeth Barnes; along with Mike Dawson and Maria Altemus from EcoPlan; Scott Martinez with McGann, and the Project Artist Robin Riley. The members of the Community Advisory Committee (CAC) in attendance introduced themselves. A table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC, and their attendance.

Name	Email	Area Represented	Other	December 12, 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	
Marjorie Blaine	spikeb62@msn.com	Ventana Overlook	Vice Chair	X
Thomas Helfrich	tjh1252@gmail.com			X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	X
Michael Bowman	Mijabow@gmail.com	Kolb Road		
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Briangross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

II. PROJECT STATUS & ENVIRONMENTAL ASSESSMENT & MITIGATION REPORT

Paul reviewed the current status of the project, and asked if there were any additional questions or clarifications needed relative to the *Draft* Environmental Assessment and Mitigation Report (EAMR). There was some general discussion regarding the updates that had been made to the EAMR and then the CAC Chair, Mary Veres circulated the CAC letter of support for signatures of those in attendance.

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November 17, 2017

SUBJECT: Open House notice for Kolb Road: Sabino Canyon Road to Sunrise Drive

Dear Neighbor,

The Pima County Department of Transportation (PCDOT) would like to invite you to attend an open house meeting for:

**Kolb Road: Sabino Canyon Road to Sunrise Drive
6:30 to 7:30 pm, Tuesday, December 12, 2017
Ventana Vista Elementary School, 6085 N. Kolb Road**

This project will include the following improvements: Widening the existing roadway from two-lane to three-lane roadway with multi-use paved shoulders suitable for bicycle use, sidewalk/pathway, drainage and landscaping. The median treatment will be a two-way left turn lane.

Representatives from the project teams will be available to answer questions and address comments regarding these projects. Maps and project information will be on display.

For more information about the project, visit www.roadprojects.pima.gov. Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Carol Brichta with PCDOT Community Relations at 520-724-6442 by Monday, December 4, 2017 to make appropriate arrangements. All meetings sites are accessible.

Para informaci3n en espa1ol, contacte a Annabelle Valenzuela al 520-724-6410.

Ana M. Olivares, P.E., Director



Kolb Road: Sabino Canyon Road to Sunrise Drive

Overview:

Pima County Department of Transportation will be making improvements to Kolb Road Sabino Canyon Road to Sunrise Drive in order to improve safety, reduce congestion, improve operations and increase mobility. This project is funded in part through the 1997 Bond Program.

Proposed Improvements consist of the following:

- Widening the roadway from 2-lanes to 3-lanes
- Multi-use paved shoulders
- Sidewalks/Pathways
- Drainage improvements throughout the corridor
- Landscaping throughout the corridor utilizing native plants
- Public Art along the project corridor

Current Schedule:

- Finalize Design - Fall 2018
- Utility Relocations - 2018
- ADOT/FHWA Approval - Late 2018
- Construction Advertisement/Award* - Spring 2019
- Construction Timeline: Spring 2019 - Summer 2020

*Pending Utility Relocation Efforts

Contact Information:

Paul Bennett, P.E., Project Manager
Pima County Department of Transportation
(520) 724-6410
E-mail: Paul.Bennett@pima.gov

Carol Brichta, Program Coordinator
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For more information on the project, please visit www.pima.gov/transportation

P S O M A S



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**Kolb Road:
Sabino Canyon to Sunrise Drive
Public Open House
Tuesday, December 12, 2017
6:30 p.m. to 7:30 p.m.
Meeting Summary**

I. INTRODUCTIONS

Paul Bennett welcomed everyone to the meeting and introduced himself as the project manager from Pima County Transportation Department (PCDOT) for the Kolb Road project. Paul introduced the members of the CAC in attendance (a table of CAC members is below, with their contact information, area represented, other specific activities associated with the CAC), and staff from PCDOT including: Carol Brichta. Other introductions followed including project design consultants from PSOMAS: Alejandro Angel, Kevin Thornton, Matt Ashby, Elizabeth Barnes; along with Mike Dawson and Maria Altemus from EcoPlan; Scott Martinez with McGann, and the Project Artist Robin Riley. The members of the Community Advisory Committee (CAC) in attendance introduced themselves.

Name	Email	Area Represented	Other	December 12, 2017
Pamela Schuster	psshuster7283@gmail.com	Quail Canyon	Art Committee	
Marjorie Blaine	spikeb62@msn.com	Ventana Overlook	Vice Chair	X
Thomas Helfrich	tjh1252@gmail.com			X
Ken Gerhart	Kgerhart5@q.com	Summit Ridge		
Thomas Trimmer	tdtrimmer@gmail.com	Sunrise Presidio		
Gerald W. Meyer	gwmeyer1@comcast.net	Villa At Sabino Canyon		
Mary Veres	mary@veresnet.org	Quail Canyon	Chair	X
Jerry DeGrazia	jdegrazia@comcast.net	Kolb Road	Art Committee	X
Michael Bowman	Mijabow@gmail.com	Kolb Road		
Julie Arter	runnerjca@comcast.net	Kolb Road	Art Committee	X
Diane Sayre	desayre@aol.com	Quail Canyon		
Bill Yohey	Yohbi99@outlook.com	Pinnacle Canyon Condo		X
Brian Gross	Briangross@earthlink.net	Canyon Wood Est.		X
David Burrows	DavidBurrows.L&S@gmail.com	Kolb Road		X

Kolb Road: Sabino Canyon to Sunrise Drive - Public Open House Meeting
Tuesday, December 12, 2017

Paul reviewed the topics to be discussed for the meeting, with the purpose to provide an the public with a general update of the project: including location, overall scope, typical roadway cross sections, configuration of the Territory and Kolb Road intersection (including review of crash data), project schedule, the location of project documents (County website), and answer general questions prior to transitioning to an Open House format where the public could review project plans and ask more specific questions of the various project team members in attendance. Alejandro Angel with PSOMAS reviewed the concerns and crash history of the corridor and the issues associated with the commercial area at the north end of the project. Robin Riley, the project artist provided some concept ideas to the community and asked for comments.

General questions that were raised beyond the information presented included the status of noise walls for the project, which was reviewed and communicated that they were not warranted to be installed (not sufficient traffic flow to trigger barrier walls), and a question regarding the traffic flow thru the commercial shopping area, which will be impacted by the roundabout installation at Territory and Kolb Road (which was driven by the crash history along Kolb Road between Territory and Sunrise Drive).

Contact Information:

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NOTICE OF PUBLIC HEARING
THE PIMA COUNTY DEPARTMENT OF TRANSPORTATION
KOLB ROAD IMPROVEMENTS

NOTICE IS HEREBY GIVEN that the Pima County Board of Supervisors will hold a public hearing on January 16, 2018 in the Board of Supervisors Hearing Room, Administration Building, 130 West Congress Street, Tucson, Arizona, AT OR AFTER 9:00 A.M. to consider for approval the Environmental Assessment and Mitigation Report (EAMR) for Bond Project (DOT-32) Kolb Road Improvement Project. The project involves the widening of Kolb Road, from Sabino Canyon Road to Sunrise Drive, to three travel lanes and a multi-use paved shoulders suitable for bicycle use, pathways/sidewalks, drainage, and landscaping. The median treatment will be a two-way left turn lane. A copy of the Environmental Assessment and Mitigation Report is available for viewing at the Tucson-Pima Main Library at 101 N. Stone Avenue and the Dusenberry-River Library at 5605 E. River Road or on the project website at www.roadprojects.pima.gov. If you have any questions about this public hearing, please contact the Department of Transportation at 724-6410.

Individuals with disabilities who require accommodations, including auxiliary aids or services, for effective participation and communication in the meeting, may call the Department of Transportation in Tucson at (520)-724-6410, ten working days in advance of the meeting to make appropriate arrangements. All meeting sites are accessible.

December 12, 2017

Paul Bennett, P.E., Project Manager
Pima County Department of Transportation
201 N. Stone Avenue, 4th Floor
Tucson, Arizona 85701

RE: Kolb Road Environmental Assessment and Mitigation Report (EAMR)

Dear Mr. Bennett,

The members of the Citizens Advisory Committee (CAC) for the Kolb Road – Sabino Canyon to Sunrise Drive Project have reviewed the Draft Environmental Assessment and Mitigation Report as presented by PSOMAS. The Draft EAMR, dated October 20, 2017, was presented to the Committee on October 17, 2017 and again on November 8, 2017. Revision requests were brought forth by the CAC and sufficiently reflected in an updated Draft EAMR presented December 12, 2017.

In general, the CAC accepts the findings and looks forward to the construction of the roadway improvements as presented. The Committee also believes that the project will be of benefit to the area and will significantly improve automobile, pedestrian and bicycle safety, and improve the drainage issues and overall quality of life.

The CAC thanks the Project Team for their work and for the opportunity to participate and comment.

Respectfully submitted,


Mary Veres, Chairperson


Marjorie Blaine, Vice-Chair


Julie Arter

Michael Bowman


Jerry DeGrazia

Ken Gerhart


Brian Gross

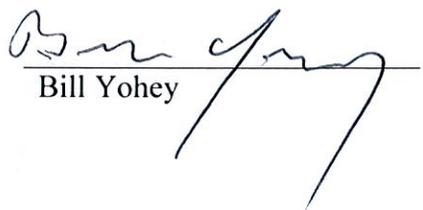

Thomas Helfrich

Gerald W. Meyer

Diane Sayre

Pamela Schuster

Thomas Trimmer


Bill Yohey


David R. Burrows


William Lardner

Why does ADOT protect tortoises?

ADOT, along with the Arizona Game and Fish Department (AGFD) and several federal agencies, are signatory members of a Candidate Conservation Agreement (CCA) for the Sonoran Desert Tortoise (SDT). The CCA was developed to help preclude the listing of SDT under the Endangered Species Act. It is a cooperative effort to provide effective conservation for the SDT in Arizona. Under the agreement, ADOT has committed to enact avoidance, minimization, and mitigation measures for projects occurring within and adjacent to suitable habitat for SDT. This includes surveying proactively for tortoise habitat ahead of projects, collecting information on sightings, and training staff and contractors on methods to protect the tortoise during construction and maintenance work.

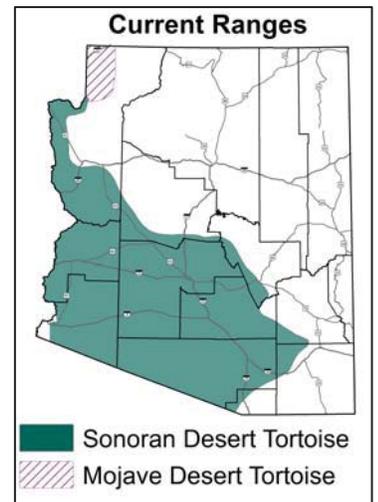


Legal Status

The SDT is protected under a CCA as described above. At the state level, wildlife are protected from collection and sale under Title 17 (ARS 17-309). AGFD classifies the SDT as a Tier 1A Species of Greatest Conservation Need and SDT are specifically restricted from collection under the AGFD Commission Rule R12-4-406.

Where are they found?

Two separate and distinct populations of desert tortoise occur in Arizona. The Mojave Desert Tortoise occurs west and north of the Colorado River within open, flat expanses of desert. The Sonoran Desert Tortoise occurs primarily in rocky and boulder strewn mountains and hills east of the Colorado River throughout western and central Arizona.



This handout applies ONLY to the Sonoran Desert Tortoise. Separate guidelines/measures are required for the Mojave Desert Tortoise due to its listing as Threatened under the Endangered Species Act.



THE GOAL IS TO AVOID NEGATIVE ENCOUNTERS!

How?

1. ALWAYS check under your vehicle and construction equipment **before** operating.
2. Drive slowly, especially on unpaved roads or off-road.
3. Cover any holes/pits/trenches at the end of each construction day.

If you encounter a tortoise:

1. Stop work immediately and turn off all equipment.
2. Notify your superintendent and the Resident Engineer.
3. Is the tortoise in imminent danger?
 - **No:** Stay back at least 10 feet from the animal. Allow the animal to leave. PLEASE BE PATIENT!
 - If the animal is located within your work area and is not leaving in a timely manner, then move your operation to a different location at least 1,000 feet away.
 - **Yes:** Move it out the way by following the attached AGFD "*Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects*" dated September 22, 2014.
 - Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim.
 - Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade.
 - Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises.
 - Tortoises must not be moved if the ambient air temperature exceeds 40°C (105°F) unless an alternate burrow is available or the tortoise is in imminent danger.
 - A tortoise may be moved up to one-half mile, but no further than necessary from its original location.



---If you don't know or are unsure of what to do, ASK!---

4. Fill out the attached ADOT Sonoran Desert Tortoise Observation Form and submit to the ADOT Biology Team (bioteam@azdot.gov) within 24 hours of any encounter. Photograph the animal if possible.

If you encounter a **sick, dying, injured, or dead tortoise** or if the ambient air temperature exceeds 105° F, please contact Joshua Fife (602.622.9622) immediately with the location of the animal. These animals will be collected either by trained ADOT personnel or by AGFD.

If you observe poaching, collecting, selling, or any other illegal activities, contact AGFD's OPERATION GAME THIEF at **1-800-352-0700**, 24 hours a day or on the internet at <http://www.azgfd.gov/ogt.shtml>

Additional information for SDT life history and habitat requirements is available at:

Arizona Game and Fish Department:
<https://www.azgfd.com/wildlife/nongamemanagement/tortoise/>
US Fish and Wildlife Service:
https://www.fws.gov/southwest/es/arizona/Sonoran_Tort.htm



GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES
ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised September 22, 2014

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

The Sonoran desert tortoise occurs south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 40°Celsius (105°Fahrenheit) unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to one-half mile, but no further than necessary from its original location. If a release site or alternate burrow is unavailable within this distance, and ambient air temperature exceeds 40°Celsius (105°Fahrenheit), contact the Department for guidance. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, may be placed in the Department's tortoise adoption program. *Managers of projects likely to affect desert tortoises should obtain a [scientific collecting license](#) from the Department to facilitate handling or temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- Use the Department's [Environmental On-Line Review Tool Department](#) during the planning stages of any project that may affect desert tortoise habitat.
- Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.
- Take is prohibited by state law.
- These guidelines do not apply to Mojave desert tortoises (north and west of the Colorado River). Mojave desert tortoises are listed as threatened under the Endangered Species Act, administered by the U.S. Fish and Wildlife Service.
- These guidelines are subject to revision at the discretion of the Department.



Date of Observation

Time

Observed By

Location- Route

Location- Milepost

ADOT District

Description of Encounter

Photo(s)

GPS (if available)

Email completed form to:
ADOT Biology Team
bioteam@azdot.gov