



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 yerbabuena*) - 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 yerbabuena*) 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



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 yerbabuena*) 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 PCRFCO 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,



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 PCRFCF. Floodplains are identified by FEMA Flood Insurance Rate Maps. The project area is also subject to requirements of the PCRFCF 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 PCRFCF 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.



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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 (Psonas 2017b).



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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-stripping 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



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

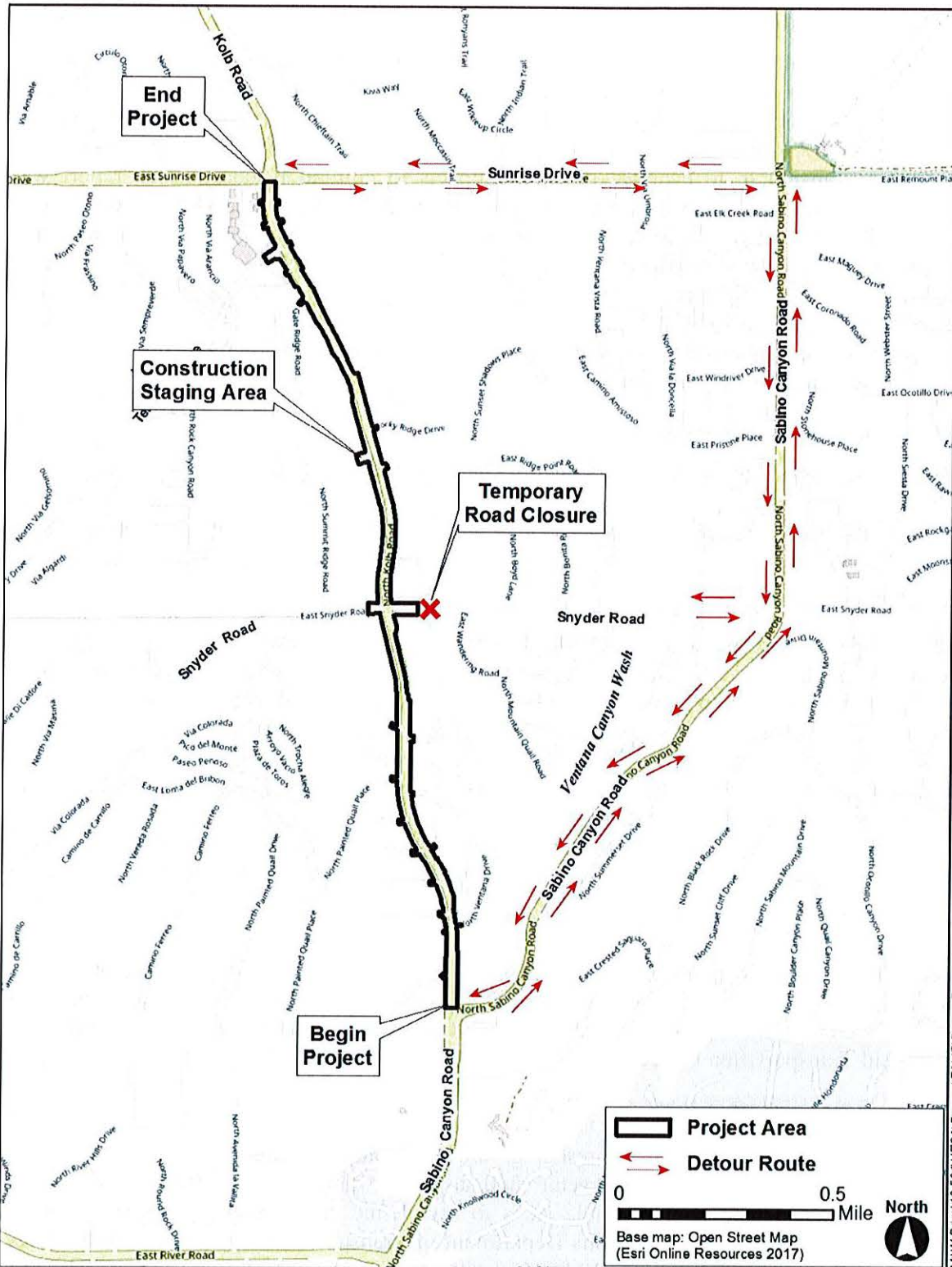


Figure 6. Detour route



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



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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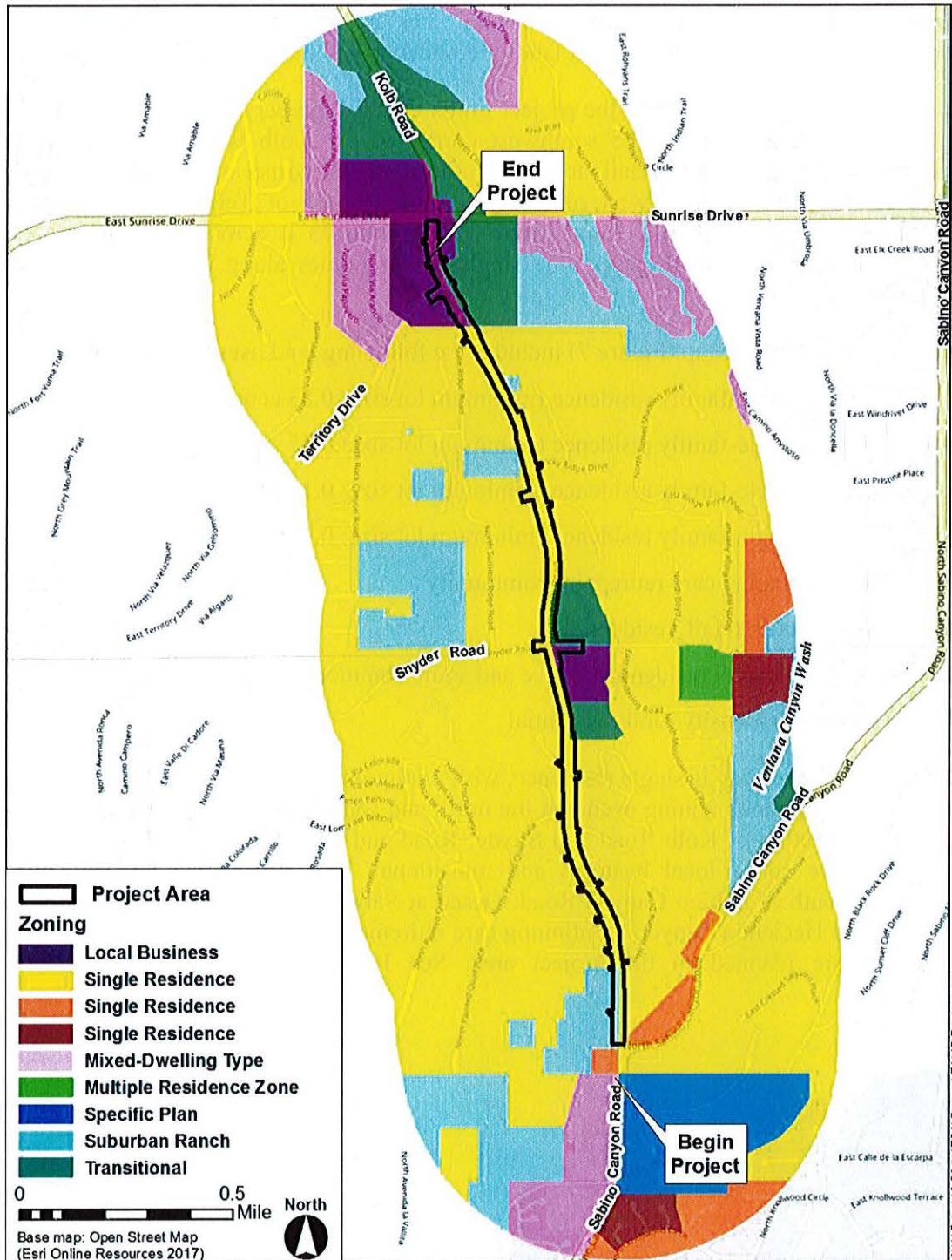


Figure 7. Zoning



Kolb Road: Sabino Canyon Road to Sunrise Drive
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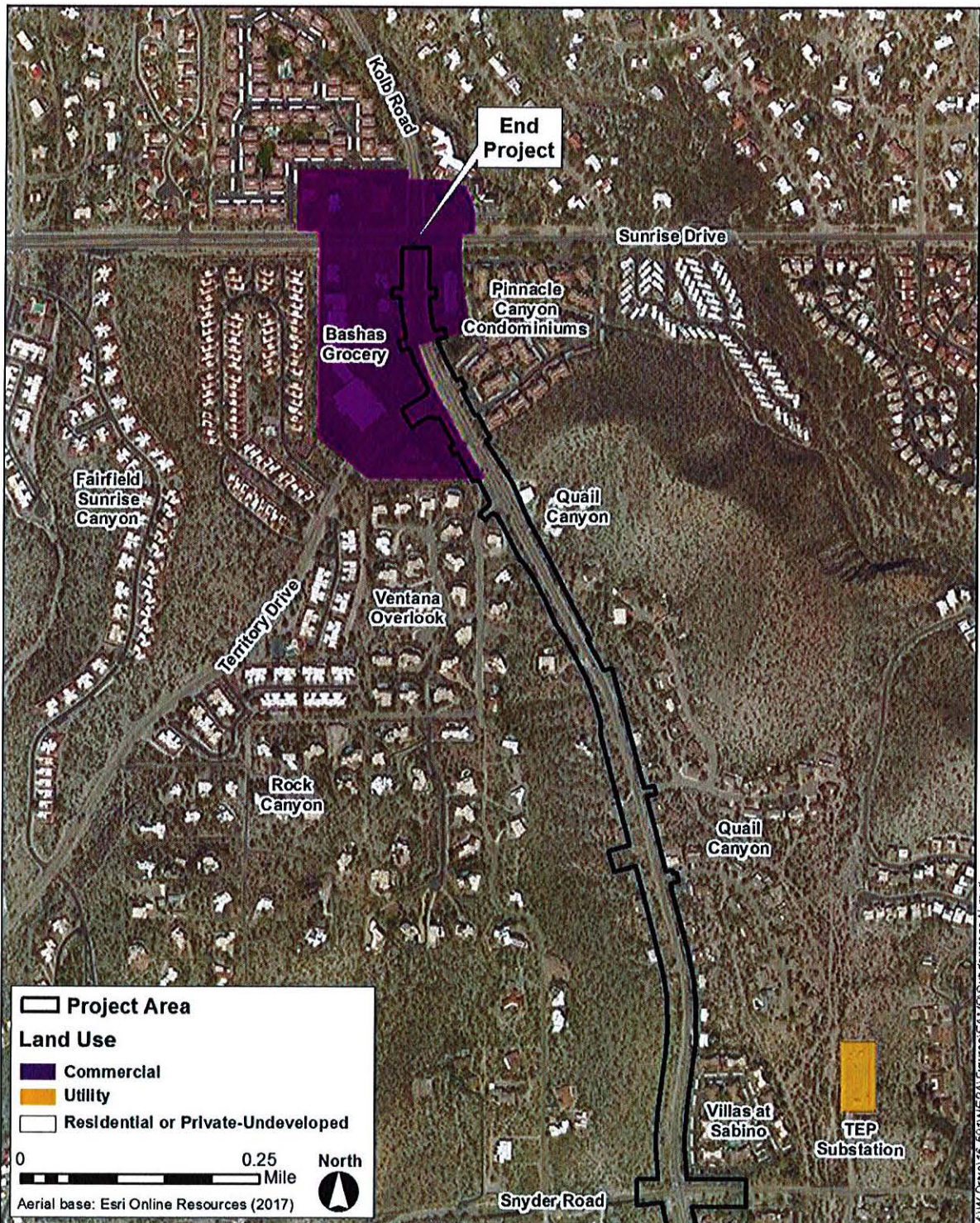


Figure 8a. Land use (north half of project)



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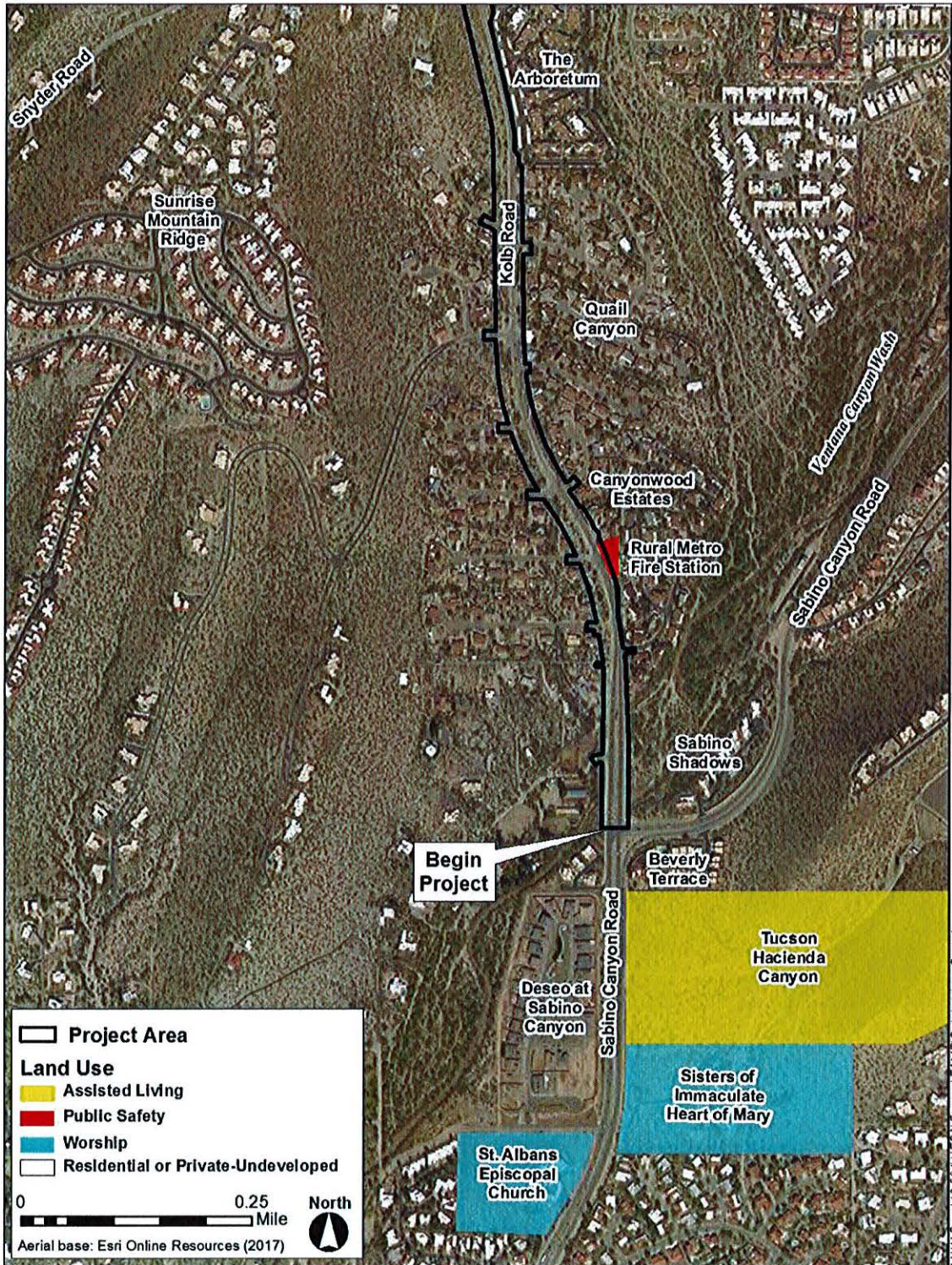


Figure 8b. Land use (south half of project)



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.



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).



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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.



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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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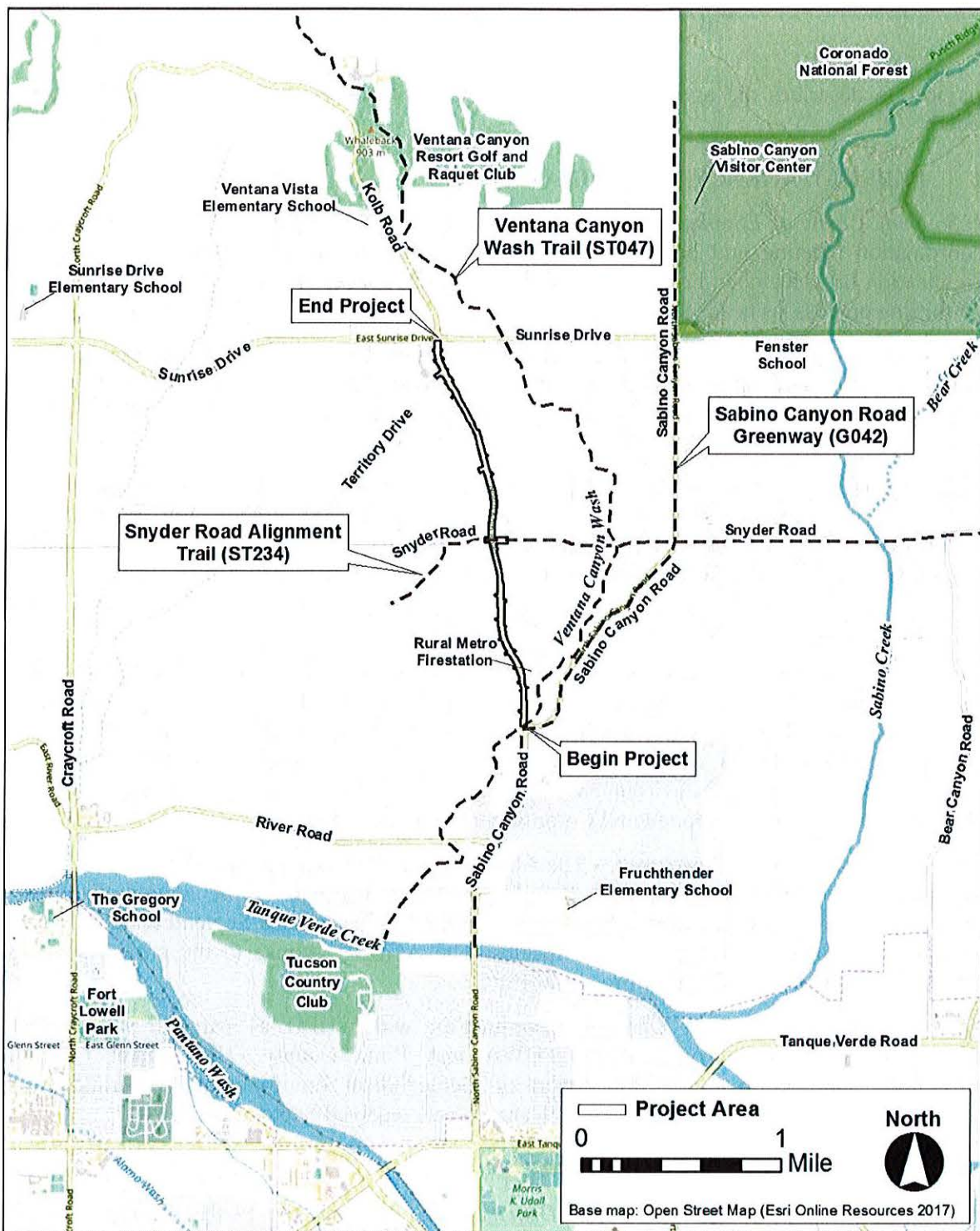


Figure 9. Potential greenways or trails within a quarter-mile of the project limits



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.		



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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



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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>



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