Draft Environmental Assessment
for Sunset Road: I-10 to River Road

Pima County, Arizona

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Arizona Department of Transportation (ADOT) pursuant to 23 USC 327 and a Memorandum of Understanding dated April 16, 2019, and executed by the Federal Highway Administration and ADOT.
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for
Sunset Road: I-10 to River Road

Pima County

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March 2022

Approved by: Paul O’Brien, PE
Environmental Planning Administrator

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by ADOT pursuant to 23 USC 327 and a Memorandum of Understanding dated April 16, 2019, and executed by the FHWA and ADOT.

This Environmental Assessment has been prepared in accordance with provisions and requirements of 23 CFR 771 relating to the implementation of the National Environmental Policy Act of 1969 (42 USC 4332[2][c]).
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<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
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<tr>
<td>ADEQ</td>
<td>Arizona Department of Environmental Quality</td>
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<td>ADOT</td>
<td>Arizona Department of Transportation</td>
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<tr>
<td>AGFD</td>
<td>Arizona Game and Fish Department</td>
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<tr>
<td>ALRIS</td>
<td>Arizona Land Resource Information System</td>
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<tr>
<td>AM</td>
<td>morning</td>
</tr>
<tr>
<td>APE</td>
<td>area of potential effects</td>
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<tr>
<td>ASM</td>
<td>Arizona State Museum</td>
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<tr>
<td>AZPDES</td>
<td>Arizona Pollutant Discharge Elimination System</td>
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<tr>
<td>BE</td>
<td>Biological Evaluation</td>
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<tr>
<td>BG</td>
<td>block group</td>
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<tr>
<td>BMP</td>
<td>best management practice</td>
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<tr>
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<td>Clean Air Act</td>
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<tr>
<td>CB-2</td>
<td>General Business Zone</td>
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<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<tr>
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<td>Critical Landscape Connection</td>
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<tr>
<td>CLOMR</td>
<td>Conditional Letter of Map Revision</td>
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<tr>
<td>CO</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>Corps</td>
<td>US Army Corps of Engineers</td>
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<tr>
<td>CT</td>
<td>census tract</td>
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<tr>
<td>CWA</td>
<td>Clean Water Act</td>
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<tr>
<td>dB</td>
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<tr>
<td>dBA</td>
<td>noise levels in decibels measured with an A-weighted frequency</td>
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<tr>
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<td>FHWA</td>
<td>Federal Highway Administration</td>
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<tr>
<td>FONSI</td>
<td>Finding of No Significant Impact</td>
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<tr>
<td>FY</td>
<td>fiscal year</td>
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<tr>
<td>HHS</td>
<td>US Department of Health and Human Services</td>
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<tr>
<td>I-10</td>
<td>Interstate 10</td>
</tr>
<tr>
<td>ID</td>
<td>identification</td>
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<tr>
<td>IPaC</td>
<td>Information for Planning and Consultation</td>
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<tr>
<td>kV</td>
<td>kilovolt</td>
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<tr>
<td>LEP</td>
<td>limited English proficiency</td>
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<tr>
<td>Leq</td>
<td>10-minute interval equivalent noise level measurements</td>
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<tr>
<td>Lmax</td>
<td>maximum noise level</td>
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<tr>
<td>LOMR</td>
<td>Letter of Map Revision</td>
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<tr>
<td>LOS</td>
<td>Level of Service</td>
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<tr>
<td>MDP</td>
<td>Monitoring and Discovery Plan</td>
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Environmental Commitments

This document has been prepared to allow consideration of incorporating the project into a future Arizona Department of Transportation (ADOT) Interstate 10 project. Should this occur, the contractor would follow the federal laws and regulations, guidelines, and the ADOT standards and specifications listed below for all relevant environmental resources:

- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Uniform Relocation Act Amendments of 1987
- ADOT Right of Way Procedures Manual
- Title VI of the Civil Rights Act of 1964
- Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency
- Americans with Disabilities Act of 1990
- Pima County Public Involvement Plan
- ADOT Air Quality Guidebook for Transportation Conformity
- ADOT Temporary Traffic Control Design Guidelines
- ADOT Erosion and Pollution Control Manual for Highway Design and Construction
- ADOT Noise Abatement Requirements
- Pima County Noise Analysis and Mitigation Guidance for Major Roadway Projects, April 2008
- ADOT Standard Specifications for Road and Bridge Construction
- ADOT Traffic Guidelines and Processes
- SAF-6.01 Asbestos Management Policy
- ADOT Roadside Vegetation Management Guidelines
- 2010 Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways
Mitigation Measures

The following mitigation measures are not subject to change without prior written approval from ADOT. These mitigation measures would be updated as required in the final design stages of the project. The mitigation measures are included below with the understanding that ADOT will administer this project during construction. If this project is not administered by ADOT during construction, the included mitigation measures will need to be reanalyzed to determine whether (1) responsibilities need to be revised, (2) the revision triggers any change in technical analysis and/or regulation change, and (3) contacts need to be updated.

Pima County Department of Transportation Design Responsibilities

- During final design, the Pima County Department of Transportation would coordinate with emergency response and transit providers (Arizona Department of Public Safety, City of Tucson Police Department, Pima County Sheriff’s Department, City of Tucson Fire Department, Rural Metro Fire Department, Northwest Medical Center, and Sun Tran) and the Flowing Wells and Tucson unified school districts to accommodate emergency and transit needs in the Transportation Management Plan (page 41).

- During final design, the Pima County Department of Transportation would prepare a Conditional Letter of Map Revision and a Letter of Map Revision to document changes to the floodplain and floodway in accordance with Federal Emergency Management Agency requirements (page 70).

- During final design, the Pima County Department of Transportation would determine Clean Water Act Section 404, Section 401, and Section 408 permitting needs and would follow permitting requirements (page 73).

- No work would take place within Rillito Creek or Cañada del Oro Wash until Section 408 and Section 404/401 permits have been obtained (page 73).

Arizona Department of Transportation Roadside Development Section Responsibilities

- Protected native plants within the project limits would be impacted by this project; therefore, the Arizona Department of Transportation Roadside Development Section would determine whether Arizona Department of Agriculture notification is needed. If notification is needed, the Arizona Department of Transportation Roadside Development Section would send the notification at least 60 (sixty) calendar days prior to the start of construction (page 77).

- The Arizona Department of Transportation Roadside Development Section would provide special provisions for the control of noxious and invasive plant species during construction that may require treatment and control within the project limits (page 77).

Arizona Department of Transportation Southcentral District Responsibilities

- If active bird nests are identified within the project limits, construction activities would avoid disturbing any active nest. Avoidance areas, if necessary, would be marked in the field with temporary fencing or T-posts with flagging by the approved biologist. The Engineer would confer with the approved biologist to determine the appropriate avoidance strategies until the nestlings have fledged from the nest and the nest is no longer active (page 77).

- If any active bird nests cannot be avoided by vegetation clearing or construction activities, the Engineer would contact the Arizona Department of Transportation Environmental Planning biologist (602.341.9331) to evaluate the situation (page 77).
Contractor Responsibilities

- With the exception of temporary, short-term closures (less than three hours), the contractor would maintain driveway access to all businesses and residences throughout construction. If a property has multiple driveways, at least one would remain open at all times (page 41).

- The contractor would contact the Arizona Department of Transportation Environmental Planning Historic Preservation Team (480.341.3029) at least 10 (ten) business days prior to the start of ground-disturbing activities to arrange for qualified personnel to monitor and be present during construction (page 52).

- For milling activities, the roadway surface preceding the milling machine would be kept sufficiently wet so as to prevent the generation of any visible fugitive dust particles but not so wet as to cause excess runoff from the roadway surface onto the roadway shoulder (page 60).

- If clearing, grubbing, or tree/limb removal would occur between March 1 and August 31, the contractor would employ a qualified biologist to conduct a migratory bird nest search of all vegetation within 10 (ten) days prior to removal. Vegetation may be removed if it has been surveyed and no active bird nests are present. If active nests cannot be avoided, the contractor would notify the Engineer to evaluate the situation. During the nonbreeding season (September 1 to February 28), vegetation removal is not subject to this restriction (page 77).

- The contractor would develop a Noxious and Invasive Plant Species Treatment and Control Plan in accordance with the requirements in the contract documents. Plants to be controlled would include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The plan and associated treatments would include all areas within the project right-of-way and easements as shown on the project plans. The treatment and control plan would be submitted to the Engineer for the Arizona Department of Transportation Construction Professional Landscape Architect for review and approval prior to implementation by the contractor (page 78).

- Prior to the start of ground-disturbing activities and throughout the duration of construction and any landscape establishment period, the contractor would arrange for and perform the control of noxious and invasive species in the study area (page 78).

- To prevent the introduction of invasive species seeds, all earthmoving and hauling equipment would be washed prior to entering the construction site and the contractor would inspect all construction equipment and remove all attached debris, including plant parts, soil, and mud, prior to the equipment entering the construction site (page 78).

- To prevent invasive species seeds from leaving the site, the contractor would inspect all construction and hauling equipment and remove all debris, including plant parts, soil, and mud, prior to leaving the construction site (page 78).
I. Introduction

A. Explanation of an Environmental Assessment

This Environmental Assessment (EA) for the Sunset Road: I-10 to River Road project was prepared in accordance with the National Environmental Policy Act (NEPA), as amended (42 United States [US] Code [USC] 4321 et seq.) and Council on Environmental Quality (CEQ) regulations that implement NEPA (40 Code of Federal Regulations [CFR] 1500–1508).

23 USC 327 established a Surface Transportation Project Delivery Program that allows the Secretary of the US Department of Transportation (USDOT) to authorize states to assume the USDOT responsibility under NEPA. The Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) executed the NEPA Assignment Memorandum of Understanding on April 16, 2019. This allows ADOT to act as the lead federal agency on the project.

According to CEQ regulations (40 CFR 1508.9), the EA is to describe the need for a proposed project, alternatives for implementing or constructing a proposed project, and the environmental impacts of a proposed project and alternatives. The EA also provides a listing of agency and persons consulted. This document serves as a tool to identify potentially significant impacts on social, economic, and environmental resources and measures to avoid, minimize, and mitigate such impacts.

The proposed project, which would extend Sunset Road from Interstate 10 (I-10) to River Road, is the second phase of a two-phase plan to provide a connection between Silverbell Road and River Road. This action is to complete a transportation corridor to optimize traffic operations into the design year 2045.

Throughout this EA, the term “study area” includes what would be the ultimate improvement area and construction footprint and other areas potentially impacted by the project, such as those affected by drainage improvements, land acquisition, and construction staging and stockpiling. The term “project vicinity” is used to denote those lands immediately surrounding the study area and a more expansive landscape context. The term “project limits” is used to indicate the construction footprint. The names Rillito Creek and Rillito River are used interchangeably in many sources. Throughout this EA, Rillito Creek is used except when Rillito River is part of a proper name (e.g., Rillito River Park). For ease of discussion in this EA, Sunset Road is considered to run north–south and I-10 east–west.

B. Project Location

The proposed project involves existing and proposed segments of Sunset Road in the city of Tucson and unincorporated Pima County, Arizona (Figure 1). The existing segment of Sunset Road extends from the Santa Cruz River to the I-10 traffic interchange (TI); the proposed segment of Sunset Road would extend from the I-10 TI to River Road (Figure 2). The study area is comprised of two parts—one south of I-10 and one north of I-10. I-10 is excluded from the study area. The study area is approximately 60 acres.
Figure 1. Project location
Figure 2. Project vicinity
The project occurs within Township 13 South, Range 13 East, Sections 8, 17, and 18.

Identified in the early stages of the Design Concept Report (DCR), the study area is the area where existing information and field data were collected to identify all known resources in the affected environment. The study area is primarily undeveloped. Mining operations, vacant land, the Union Pacific Railroad (UPRR) right-of-way (ROW), and Rillito Creek occupy a large percentage of the study area. A Pima County Natural Resources Parks and Recreation Department (PCNRPRD) maintenance yard, one residence, Rillito River Park, and The Chuck Huckelberry Loop Trail (The Loop) shared-use path are the exceptions.

The project vicinity is defined as the regional setting for the project. This includes the north end of the city of Tucson and unincorporated areas of Pima County. The Town of Marana is just north of the project vicinity. Notable features in the project vicinity include nearby mining and vacant lands, large residential areas northeast and southeast of the study area, several parks and segments of The Loop, the Santa Cruz River, I-10, and Silverbell Road.

C. Project Background and Overview

Sunset Road from the Santa Cruz River Bridge to the I-10 Eastbound Frontage Road (EBFR) is currently a three-lane urban collector roadway with two travel lanes, a two-way turning lane, and 6-foot-wide paved shoulders. The I-10 Sunset Road TI is between this Sunset Road segment and the proposed extension of Sunset Road north of I-10. At the EBFR, Sunset Road includes a through lane and a right-turn lane. Sunset Road currently crosses the I-10 EBFR and then passes under the I-10 mainline lanes, where a left-turn lane is accommodated. Sunset Road provides access to the EBFR, the Westbound Frontage Road (WBR), and the I-10 access ramps. Sunset Road currently terminates at the WBFR.

The I-10 mainline has three lanes in each direction. Eastbound and westbound overpasses create the grade separation over Sunset Road. The EBFR and WBFR are one-way roadways that provide access to ramps that connect to the I-10 mainline. The EBFR approach to Sunset Road includes three lanes—an exclusive left-turn lane, one through lane, and a shared through/right-turn lane. The WBFR approach to Sunset Road includes two lanes—a shared left-turn/through lane and a through lane. The lane widths are 12 feet and the shoulder widths are generally 8 feet. Both roadways have curb or curb and gutter. A temporary signal is installed at the intersection of Sunset Road and the EBFR. The intersection of Sunset Road with the WBFR is stop-controlled for the northbound and westbound approaches.

River Road is a four-lane, divided, curbed roadway classified as an urban principal arterial. Travel lanes are 12 feet wide, shoulders are 8 feet wide, and the median is 20 feet wide. Sidewalks are on each side of the roadway.

A short segment of Tres Nogales Road, a local street that provides access to residences and businesses, extends into the study area. Other notable linear features cross the proposed Sunset Road alignment from I-10 to River Road in the study area: the UPRR mainline and Rillito Creek.

Three segments of The Loop cross existing and proposed segments of Sunset Road: just south of the EBFR, along the north bank of Rillito Creek, and along the south bank of Rillito Creek. South of I-10, a segment of The Loop follows the east side of Sunset Road.
The Regional Transportation Authority (RTA) included the Sunset Road: Silverbell Road to River Road project in the Pima Association of Governments (PAG) RTA Plan (2006–2026). The project was divided into two segments: Silverbell Road to I-10 (Segment I) and I-10 to River Road (Segment II).

The construction of Sunset Road from Silverbell Road to River Road was also included in the RTA Transportation Plan approved by Pima County voters in 2006. Due to expected population and employment growth in the northwest Tucson region, the connection of Silverbell Road to I-10 and the extension to River Road were included in the RTA plan to provide needed access, improve regional connectivity, and support development in the area.

In 2014, the Pima County Department of Transportation (PCDOT) began preparation of a DCR and an Environmental Assessment and Mitigation Report for Sunset Road: Silverbell Road to I-10 (Segment I). The Sunset Road extension from Silverbell Road to I-10, with a bridge over the Santa Cruz River, was subsequently constructed in 2017.

The fiscal year (FY) 2020–2024 PAG Transportation Improvement Program (TIP) identifies Sunset Road: I-10 to River Road (Segment II) as TIP identification (ID) number (No.) 10.18. The design of Segment II is also listed in the ADOT FY 2019–2023 Statewide Transportation Improvement Program, identified as ADOT ID No. 101482.

Segment II, the extension of Sunset Road from the I-10 WBFR to River Road, is now being considered by PCDOT. PCDOT is currently preparing a DCR for Sunset Road: I-10 to River Road. In addition to extending Sunset Road from I-10 to River Road, this PCDOT project would address traffic capacity and transportation connectivity needs for the future year 2045, in support of population growth and planned development. Segment II is the subject of this EA.

Also of note, ADOT completed a DCR and EA/Finding of No Significant Impact (FONSI) in November 2012 for improvements on I-10 from the Ina Road TI to the Ruthrauff Road TI (010 PM 248 H7853 01C; NHPP-010-D[211]A). This I-10 project is expected to increase roadway capacity, improve operational efficiency, implement components of regional transportation plans, address existing roadway deficiencies by widening the freeway, construct auxiliary lanes, reconstruct TIs to bridge the crossroads over I-10 and the railroad track, and complete other improvements. The project begins 2,800 feet west of Ina Road at milepost (MP) 247.5 and extends 5.9 miles to MP 253.4, ending 2,600 feet east of Ruthrauff Road. The Sunset Road TI falls within the construction limits of the Ina Road to Ruthrauff Road project, which is shown in the ADOT 5-year construction program. ADOT anticipates beginning construction in FY 2022.

One component of ADOT’s I-10 Ina Road TI to Ruthrauff Road TI project is the planned reconstruction of the I-10 Sunset Road TI, which would invert the TI so that Sunset Road would bridge I-10. I-10 would pass under the new Sunset Road bridge. This change would require that the vertical profile of a segment of Sunset Road south of I-10 be raised as it approaches the TI to connect with the new bridge. ADOT’s I-10 Ina Road TI to Ruthrauff Road TI project is expected to include the following components at the Sunset Road TI: design and reconstruction of the TI, reconstruction of the EBFR and WBFR intersections, construction of a Sunset Road bridge over I-10, and reconstruction of the Sunset Road approach to the bridge. ADOT would also install traffic signals at the EBFR and WBFR intersections.

**Transportation Planning Efforts**

The first appearance of “Sunset Road Silverbell to I-10 to River Road” was in the 2040 Regional Transportation Plan “Mobility Matters” adopted in 2010. The project appeared as “candidate” in 2003.
in response to I-10 planning to relieve traffic pressure on the Orange Grove Road TI, one mile to the north. The *Pima County Economic Development Plan 2015 Through 2017* identified the Sunset Innovation Campus for vacant lands west of I-10. The west-side of the project would provide access to the planned campus.
II. Project Purpose and Need

This chapter was prepared in accordance with 23 CFR 450.212 (Transportation Planning Studies and Project Development), 23 CFR 771 (Environmental Impact and Related Procedures), FHWA guidance on elements of a purpose and need, and ADOT NEPA EA and Environmental Impact Statement (EIS) guidance (ADOT 2019). This section provides a baseline and the fundamental reasons for the development of alternatives that will help the study team evaluate and select a recommended alternative.

A. Need

This chapter identifies the underlying factors (or needs) that guide the project development goals (or purpose). These factors are used, in part, to compare the Build Alternatives with a No-Build Alternative, and to ultimately select a recommended alternative. The development of alternatives and analysis of potential impacts are guided by several key regulations and guidance documents:

- 23 USC 327 (Surface Transportation Project Delivery Program)
- 23 CFR 450.212 (Transportation Planning Studies and Project Development)
- 23 CFR 771 (Environmental Impact and Related Procedures)
- FHWA Technical Advisory T 6640.8A. Guidance for Preparing and Processing Environmental and Section 4(f) Documents (FHWA 1987)
- FHWA guidance: Environmental Review Toolkit: Elements of Purpose and Need (FHWA 2018)
- ADOT NEPA EA and EIS Guidance (ADOT 2019)

Traffic Capacity and Operation

In support of the DCR, an initial traffic analysis and a supplemental traffic analysis were undertaken for the proposed project to determine roadway and intersection capacity, lane configuration requirements, traffic control requirements, and multimodal needs on Sunset Road from the planned Sunset Innovation Campus to River Road (Kittelson & Associates 2020; Pima County 2020a). The project traffic analyses followed guidelines provided in the Pima County Roadway Design Manual, the 2016 Pima County Subdivision and Development Street Standards, the ADOT Traffic Guidelines and Processes, and the Transportation Access Management Guidelines for the City of Tucson, Arizona.

The three existing intersections in the study area were evaluated for the existing (2019) and future (2045) traffic conditions:

- Sunset Road/Silverbell Road
- Sunset Road/I-10 EBFR
- Sunset Road/I-10 WBFR

Five additional intersections are proposed in the study area in the future with construction of the Sunset Innovation Campus driveways and the proposed extension of Sunset Road to River Road. These five proposed intersections were included for evaluation of the future condition (2045):

- Sunset Road/Sunset Innovation Campus South Driveway
- Sunset Road/Sunset Innovation Campus Main Driveway
• I-10 EBFR/Sunset Innovation Campus West Driveway
• I-10 EBFR/Sunset Innovation Campus East Driveway
• Sunset Road/River Road

Intersection Level of Service (LOS) is measured by the average control delay in seconds per vehicle and is a performance measure used to evaluate intersection operations. Six LOS categories, ranging from LOS A to LOS F, have been defined to measure unsignalized and signalized operations. Intersections with LOS A experience a greater degree of mobility, while intersections with LOS F operate with congestion and experience extended vehicle queueing. Table 1 defines the LOS for stop-controlled and signalized intersections.

Table 1. Level of Service Thresholds for Stop-Controlled and Signalized Intersections

<table>
<thead>
<tr>
<th>Level of Service (LOS)</th>
<th>Stop-Controlled Intersection Control Delay (seconds/vehicle)</th>
<th>Signalized Intersection Control Delay (seconds/vehicle)</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>≤10</td>
<td>≤10</td>
<td>The intersection operates with free-flow conditions and experiences minimal control delay.</td>
</tr>
<tr>
<td>B</td>
<td>&gt;10–15</td>
<td>&gt;10–20</td>
<td>The intersection experiences insignificant control delay.</td>
</tr>
<tr>
<td>C</td>
<td>&gt;15–25</td>
<td>&gt;20–35</td>
<td>The intersection has stable operations, though individual cycle failures occur.</td>
</tr>
<tr>
<td>D</td>
<td>&gt;25–35</td>
<td>&gt;35–55</td>
<td>Small increases in flow affect the travel speed and increase the delay. Many vehicles stop. This is the limit of acceptable delay in an urban area.</td>
</tr>
<tr>
<td>E</td>
<td>&gt;35–50</td>
<td>&gt;55–80</td>
<td>There is significant control delay with poor progression, high volume-to-capacity ratios, etc.</td>
</tr>
<tr>
<td>F</td>
<td>&gt;50</td>
<td>&gt;80</td>
<td>The control delay at the intersection is unacceptable because it is over capacity. The volume-to-capacity ratio is greater than 1.0.</td>
</tr>
</tbody>
</table>

Source: Transportation Research Board 2016

Pima County and City of Tucson design requirements for intersections and roadway segments state that all intersections and through movements shall operate at LOS D or better, and no turning lane movement shall fall below LOS E. The City of Tucson Transportation Access Management Guidelines indicate that intersections should be designed to operate at LOS D or better.

Existing Traffic Volumes and Operations

Turning-movement counts were collected by PCDOT on November 6, 2019, for two of the three existing intersections: I-10/Sunset Road TI EBFR and I-10/Sunset Road TI WBFR. Turning movement counts were not collected for the third existing intersection, Sunset Road/Silverbell Road, because it is outside the study area and was included in the traffic analysis for informational purposes only. The counts for the I-10/Sunset Road TI intersections were used to establish existing volumes and were collected in the morning (AM) and afternoon (PM) peak hours. Table 2 summarizes the results of existing estimated AM and PM peak hour traffic conditions for these two TI intersections, which are unsignalized and stop-controlled.
Table 2. Existing Levels of Service for the I-10 EBFR and I-10 WBFR

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Eastbound</th>
<th>Westbound</th>
<th>Northbound</th>
<th>Southbound</th>
<th>Overall Intersection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay (seconds/vehicle)</td>
<td>LOS</td>
<td>Delay (seconds/vehicle)</td>
<td>LOS</td>
<td>Delay (seconds/vehicle)</td>
</tr>
<tr>
<td>I-10 Eastbound Frontage Road at Sunset Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>38.7</td>
<td>E</td>
<td>–</td>
<td>–</td>
<td>22.7</td>
</tr>
<tr>
<td>PM</td>
<td>9.7</td>
<td>A</td>
<td>–</td>
<td>–</td>
<td>10.7</td>
</tr>
<tr>
<td>I-10 Westbound Frontage Road at Sunset Road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td>–</td>
<td>–</td>
<td>14.4</td>
<td>B</td>
<td>–</td>
</tr>
<tr>
<td>PM</td>
<td>–</td>
<td>–</td>
<td>21.6</td>
<td>C</td>
<td>–</td>
</tr>
</tbody>
</table>

*Two-way LOS based on critical movement

Under the existing condition, the Sunset Road/EBFR intersection operates at LOS D in the AM peak hours and LOS B in the PM peak hours. The Sunset Road/WBFR intersection operates at LOS B and LOS C in the AM and PM peak hour, respectively. The LOS results indicate that during the morning and afternoon peak hours, the I-10/Sunset Road TI currently operates at an acceptable level of service (D or better); however, the EBFR approach is operating close to capacity (LOS E) in the AM peak hour.

Under the existing condition (2019), the daily traffic volume on Sunset Road, between Silverbell Road and the EBFR, is 5,700 vehicles per day (vpd).

**Future Traffic Demand (2045)—Build Alternative**

The future conditions analysis identifies how the study area’s transportation system would operate in the year 2045 with the extension of Sunset Road from I-10 to River Road, with traffic generated by the proposed development within the area, and general growth in the region. A major component of projected future traffic would be generated from the Pima County Sunset Innovation Campus.

In 2012, Pima County acquired over 100 acres of property on the southwest corner of Sunset Road and the I-10 EBFR. The county plans to develop the first 42 acres of this land as an employment center, referred to as the Sunset Innovation Campus. The Sunset Innovation Campus is planned to be a new campus-style employment site with nearly 1 million square feet of office and technical research space. Access to the campus would be located off Sunset Road and the I-10 EBFR. Also proposed for the Sunset Innovation Campus are an amphitheater, a connection to The Loop, a park, and several parking structures. Figure 3 depicts the conceptual site plan developed for this future development.

The driveway layout on the conceptual plan has been superseded. The current access plans for the site show two driveways on Sunset Road, referred to as the south driveway and the main driveway, and two additional driveways on the I-10 EBFR. Construction of this development is expected to begin in 2022, with buildout completed by 2045. Pima County has longer-term development plans for the remaining 58 acres acquired, which are adjacent to the Sunset Innovation Campus. There are currently no plans to develop the property between I-10 and River Road. The Sunset Innovation Campus is discussed in more detail in Chapter VI, Section B.

Future traffic volume projections were developed for 2045 using the PAG regional travel demand model. PAG recently revised the socioeconomic data used in the model to reflect a reduction in expected regional population growth. Regional population estimates for 2045 were reduced from 1.5 million to 1.2 million residents in the greater Tucson area. The current PAG travel demand model accounts for the
proposed Sunset Innovation Campus development. The model is estimating that the development would generate some 14,000 vehicle trips per day by 2045.

In addition to the transportation projects included in the 2045 Regional Mobility and Accessibility Plan, the model assumed the following future roadway conditions in the area: I-10 is widened and improved as planned in the Ina Road TI to Ruthrauff Road TI project and the Sunset Road TI is inverted, Sunset Road is extended from Silverbell Road to River Road as a three-lane cross-section, I-10 has an eight-lane cross-section in the vicinity of the Sunset Road TI, and Silverbell Road has a four-lane cross-section.

Based on 2045 PAG projections, traffic demand on Sunset Road would increase to 16,000 vpd from Silverbell Road to the proposed Sunset Innovation Campus south driveway, 22,000 vpd from the Sunset Innovation Campus to I-10, and 18,000 vpd on the new connection that would be constructed between I-10 and River Road (Figure 4). Much of the future increase in traffic demand is driven by development of the planned Sunset Innovation Campus. To serve the 2045 projected demand, two lanes would be required on Sunset Road from Silverbell Road to the Sunset Innovation Campus, and four lanes would be required from the Sunset Innovation Campus to River Road.

The 2045 turning movement volumes for the weekday AM and PM peak hours were used to determine lane configuration at each existing and proposed intersection in the study area and the 2045 traffic LOS. Figure 5 identifies the estimated LOS for 2045 projections for each intersection turning movement under the Build Alternative, based on the proposed project’s lane configurations. The eight evaluated intersections are numbered on the map. Circles are used on the map to present AM and PM LOS (e.g., A [B]). The black letters refer to specific turning movements at the intersection; the bold orange letters refer to the averaged LOS for the intersection as a whole. Intersections that are stop-controlled (i.e., no traffic signal is proposed) do not have an averaged LOS.

A preliminary signal warrant analysis was conducted for two intersections to assess the need for a traffic signal for 2045 traffic conditions: Sunset Road/Sunset Innovation Campus main driveway and Sunset Road/River Road. The signal warrant analysis concluded that both of the intersections analyzed would need traffic signal control for 2045 traffic conditions. The traffic study recommended that a signal be installed at the Sunset Road/River Road intersection during construction of the Sunset Road extension and that the traffic signal for the Sunset Innovation Campus main driveway be installed subsequently, during construction of the campus.

**Future Traffic Demand (2045)—No-Build Alternative**

Traffic demand was also projected for 2045 without implementation of the proposed project—the No-Build Alternative. Under the No-Build Alternative, traffic projections on Sunset Road would range from 15,500 to 15,600 vpd between Silverbell Road and the main driveway to Sunset Innovation Campus, slightly lower than that projected with the Build Alternative. Projections for the No-Build estimate 22,000 vpd from the main driveway to I-10, the same as the Build Alternative, but only 12,200 vpd over I-10 compared with 22,000 for the Build Alternative (Figure 6). There would be no traffic for Sunset Road north of I-10 under the No-Build Alternative because Sunset Road would not be extended along this alignment.
Figure 3.  Sunset Innovation Campus Conceptual Site Plan
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Study Intersections:
1. Sunset Rd/Silverbell Rd
2. Sunset Rd/South Drv
3. Sunset Rd/Main Drw
4. Sunset Rd/EB Frontage Rd
5. Sunset Rd/WB Frontage Rd
6. EB Frontage Rd/West Drw
7. EB Frontage Rd/East Drw
8. Sunset Rd/River Rd

Black letters indicate AM (PM) LOS for individual turning movements
Orange letters provide AM (PM) LOS for the intersection as a whole, when appropriate

Figure 5. 2045 Build Alternative Level of Service projections for eight intersection locations
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Figure 6. 2045 No-Build Alternative daily traffic volume projections
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The 2045 weekday AM and PM peak hour volumes for the No-Build Alternative were used to calculate the anticipated LOS of intersection turning movements in the study area. The analysis was conducted assuming the existing lane configuration on Sunset Road.

This analysis assumed stop control for the main driveway to Sunset Innovation Campus. The most notable results of the 2045 No-Build analysis indicates that by 2045 the left-turn movement on Sunset Road at the Sunset Innovation Campus main driveway is expected to operate at LOS F in the AM peak hour. The left-turn movement on the driveway proposed for Sunset Innovation Campus is anticipated to operate at LOS F in the AM and PM peak hours, and the right-turn movement exiting this proposed driveway is anticipated to operate at LOS F in the PM peak hour.

**Figure 7. 2045 No-Build Alternative Level of Service projections for seven intersection locations**

With the No-Build Alternative, north–south trips that would have been accommodated on the extension of Sunset Road from I-10 to River Road would shift to El Camino del Cerro/Ruthrauff Road and Orange Grove Road, as shown in Table 3.
Table 3. 2045 Travel Demand on Nearby Parallel Roadways that Cross I-10 Under No-Build Alternative and the Build Alternative

<table>
<thead>
<tr>
<th>Roadway</th>
<th>No-Build Alternative Volume (vpd)</th>
<th>Build Alternative Volume (vpd)</th>
<th>Demand Difference with Sunset Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>El Camino del Cerro/Ruthrauff Road</td>
<td>50,200</td>
<td>46,000</td>
<td>4,200 (-8.3%)</td>
</tr>
<tr>
<td>Orange Grove Road</td>
<td>55,000</td>
<td>45,000</td>
<td>10,000 (-18.2%)</td>
</tr>
</tbody>
</table>

Source: Pima County 2020a

Based on the supplemental analysis conducted for the No-Build Alternative, the main intersection proposed for the Sunset Innovation Campus along Sunset Road is anticipated to have several movements operating at LOS F in the AM and PM peak hours in 2045. Consequently, additional roadway capacity would be needed on Sunset Road to accommodate the 2045 traffic demand on this roadway.

Transportation System Connectivity

The traffic engineering study completed for the I-10 Ina Road TI to Ruthrauff Road TI identified the Sunset Road connections from Silverbell Road to I-10 (Segment I) and from I-10 to River Road (Segment II) as important links to enhance system connectivity in the region and to provide additional access to the area west of the Santa Cruz River (ADOT 2010) (Figure 8). The reestablishment of Sunset Road from Silverbell Road to I-10, including the construction of a new bridge over the Santa Cruz River (Segment I) was subsequently completed in 2017. Sunset Road currently terminates at the I-10 WBFR; it has not been extended from I-10 to River Road (Segment II), restricting regional traffic connectivity. There is a distance of approximately 4 miles between the I-10/Ina Road TI and the I-10/Ruthrauff Road TI, which are the two interchanges in the area that provide full connectivity between the developed areas around Silverbell Road and River Road (north and south of I-10).

The referenced traffic engineering study predicted that the Sunset Road Segment I and Segment II connections would relieve congestion at the Orange Grove Road TI 8.3% and 18.2%, respectively (see Table 3). West of I-10, the distance between the existing Santa Cruz River crossings at El Camino del Cerro and Ina Road is four miles. Reestablishing the Sunset Road connection (Segment I) was predicted to eliminate this access gap for residents and emergency responders. A 2020 traffic engineering report completed for this project anticipates that the proposed Sunset Road/River Road intersection would operate at LOS D in the AM peak hours and LOS C in the PM peak hours in 2045 (Kittleson & Associates 2020).

Adjacent Planned Transportation Improvements

As previously described (Chapter I, Section C), ADOT has plans to construct improvements to I-10 from the Ina Road TI to the Ruthrauff Road TI. This project is expected to increase roadway capacity, improve operational efficiency, implement components of regional transportation plans, address existing roadway deficiencies by widening the freeway, construct auxiliary lanes, reconstruct TIs to bridge the crossroads over I-10 and the railroad track, and complete other improvements. One component of the ADOT project is the planned reconstruction of the I-10 Sunset Road TI, which would invert the TI so that Sunset Road would bridge I-10. The ADOT construction limits intersect the study area for Sunset Road: I-10 to River Road. This change would require that the vertical profile of a segment of Sunset Road south of I-10 be raised as it approaches the TI to connect with the new bridge. Therefore, design coordination between PCDOT and ADOT and plan consistency would be required.
Figure 8. Regional Transportation System
ADOT’s I-10 Ina Road TI to Ruthrauff Road TI project is expected to include the following components at the Sunset Road TI: design and reconstruction of the TI, reconstruction of the EBFR and WBFR intersections, construction of a Sunset Road bridge over I-10, and reconstruction of the Sunset Road approach to the bridge. ADOT would also install traffic signals at the EBFR and WBFR intersections. ADOT anticipates beginning construction in FY 2022.

The improvements to Sunset Road south of I-10 proposed by PCDOT (as part of the Sunset Road: I-10 to River Road project) would need to tie into the ADOT construction at the I-10 Sunset Road TI to maintain Sunset Road’s connection to the TI. The proposed Sunset Road extension from the I-10 WBFR to River Road would also need to tie into the new Sunset Road bridge structure at I-10 and construct a bridge over the UPRR.

**Need Summary**

The following bullets summarize the project needs:

- **Future Traffic Demand**—Additional roadway capacity would be needed on Sunset Road to accommodate the 2045 traffic demand on this roadway (Kittelson & Associates 2020).

- **Transportation System Connectivity**—Sunset Road currently terminates at the I-10 WBFR; there is north–south access over I-10 from Silverbell Road to River Road, restricting regional traffic connectivity.

- **Adjacent Planned Transportation Improvements**—The Sunset Road: I-10 to River Road project would need to tie into construction to be completed by ADOT on the I-10: Ina to Ruthrauff Widening Project, requiring design coordination and plan consistency between the two projects. In addition, PCDOT recognizes that there could be potential benefits to coordinating or combining the construction of the Ina to Ruthrauff project and the Sunset Road project.

**B. Purpose**

The project’s needs identified above would be met through the project purpose, which is described in the following bullets:

- Increasing the roadway and intersection capacity of Sunset Road and its existing and future intersections, including the new driveways planned for the Sunset Innovation Campus, to meet future year 2045 traffic demands with an acceptable LOS

- Enhancing regional transportation system connectivity and supporting planned development by extending Sunset Road to River Road, establishing a new direct, north–south connection over I-10 from Silverbell Road to River Road (two arterial roadways)

- Tying in Sunset Road: I-10 to River Road improvements north and south of I-10 to ADOT’s I-10, Sunset Road TI reconstruction

Due to expected population and employment growth in the northwest Tucson region, Sunset Road from Silverbell Road to I-10 and its extension to River Road were included in the RTA Transportation Plan approved in 2006 to provide needed access, improve regional connectivity, and support development in the area.
C. Conformance with Regulations, Land Use Plans, and Other Plans

The proposed project conforms to local, regional, state, ADOT, and federal plans that include the following:

Transportation Plans/Studies

- The PAG Regional Transportation Plan 2006–2026 approved by Pima County voters in 2006 included the extension of Sunset Road from Silverbell Road to River Road (Segments I and II). Due to the expected population and employment growth in the northwest Tucson region, the previously constructed extension of Silverbell Road to I-10 and the proposed extension of Sunset Road from I-10 to River Road were included in the RTA plan to provide needed access, improve regional mobility, and support development in the area (PAG 2006).

- The ADOT What Moves You Arizona, Long Range Transportation Plan 2016–2040 studied transportation needs to 2040, with a focus on relieving congestion and meeting population growth needs. The interstate corridors, including I-10, are key to those long-range improvement needs (ADOT 2018).

- PAG 2009 Regional Plan for Bicycling (PAG 2009)

- PAG 2014 Regional Pedestrian Plan (PAG 2014)

Statewide Transportation Program

The Arizona State Transportation Board–approved 2019–2023 Statewide TIP identifies the PAG funding for the design of Sunset Road: I-10 to River Road. The ADOT ID No. is 101482.

Land Use and Other Plans

The following plans are the tools to address future growth and identify transportation needs to support that future growth and employment for the surrounding region:

- Report on the Sub-Area Allocation Model Land Use Model and Scenario Results (PAG 2019)

- 2045 Regional Mobility and Accessibility Plan, May 2016 (PAG 2016)

- Comprehensive Plan Update, Pima Prosper, May 19, 2015 (Pima County 2015a)

- Pima County Streets and Routes Plan, August 2015 (Pima County 2015b)

- Pima Regional Trail System Master Plan, May 2012 (Pima County 2012)

- Pima Regional Trail System Master Plan Map, February 2015 (Pima County 2015c)

- Plan Tucson: City of Tucson General and Sustainability Plan 2013 (City of Tucson 2013)

- Pima County Economic Development Plan 2019–2021 (Pima County 2019)

- Sunset Professional Campus Conceptual Site Plan (Pima County 2016)
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III. Alternatives

CEQ regulations require that reasonable alternatives, including a No-Build Alternative, be presented as part of a NEPA action and evaluated. This chapter summarizes the development and evaluation of the range of reasonable and practicable alternatives that were studied for the proposed project to improve capacity and transportation system connectivity on Sunset Road. The consideration of alternatives leads to a solution that satisfies the project purpose and need, and protects, or avoids or minimizes effects on, environmental, economic, social, and community resources. The build alternatives should be reasonable and practicable.

The project planning, scoping, and NEPA process involves evaluation of reasonable and practicable alternatives for the proposed project and justifies the reasons for eliminating any alternatives from further consideration. The term “reasonable” means technically, environmentally, and economically feasible. “Practicable” means the ability to be undertaken or constructed.

The tools used to develop and screen alternatives included review of field surveys; preliminary design and engineering analyses; preliminary evaluation of environmental, socioeconomic, and cultural resources; and consideration of input from federal, state, and local government agencies, elected and public officials, interested stakeholders, and the general public.

A. Alternatives Considered

This EA addresses Segment II of the Sunset Road: Silverbell Road to River Road project. Construction of Segment I, which reestablished Sunset Road from Silverbell Road to I-10 and constructed a new bridge over the Santa Cruz River, was completed in 2017.

The following sections present the Build Alternative and the No-Build Alternative.

No-Build Alternative

The No-Build Alternative assumes that the lane configurations on Sunset Road south of I-10 would remain as they are currently, and there would be no extension of Sunset Road from the WBFR north to River Road. It is assumed, however, that the Sunset Innovation Campus entrances would be constructed in the future, as warranted, in association with campus development, regardless of whether the Build Alternative is implemented. The No-Build Alternative also assumes ADOT construction of the I-10 (Ina Road TI to Ruthrauff Road TI) widening project, which includes reconstructing Sunset TI.

Regular maintenance of the existing Sunset Road would continue. The No-Build Alternative serves as a baseline and provides a means to compare the impacts of the Build Alternative with the impacts of not undertaking the proposed project. Throughout the analysis of impacts, a comparison of the Build Alternative to the No-Build Alternative is made.

Build Alternative

At the DCR stage, one build alternative was carried forward. This alternative would extend Sunset Road from I-10 to River Road and implement traffic capacity and operational improvements on the existing segment of Sunset Road. It would satisfy the project purpose and need by adding roadway and intersection capacity improvements to the existing Sunset Road to meet 2045 traffic demands and providing a direct connection between I-10 and River Road to improve transportation system connectivity as well as tie the new Sunset to River Road extension to the I-10 Sunset TI.
The reconstructed and new roadways would generally include two travel lanes in each direction, a raised median of varying width, turn lanes where warranted, paved shoulders, curb and gutter, and sidewalk, as depicted in Figure 9. Intersections would be constructed south of I-10 at planned entrances to the future Sunset Innovation Campus and north of I-10 at the connection with River Road.

At I-10, ADOT has plans to widen the interstate from the Ina Road TI to the Ruthrauff Road TI (refer to Chapter I, Section C, of this EA for additional detail on this project). One component of this ADOT project is the reconstruction of the Sunset Road/I-10 TI, which would be inverted so that Sunset Road crosses over the I-10 mainline on a bridge and I-10 crosses under Sunset Road. This change would require reconstruction of the Sunset Road vertical profile, which would be raised as it approaches the TI to connect with the new bridge. The design and reconstruction of the EBFR and WBFR intersections, the Sunset Road bridge over I-10, and the raising of the vertical profile on the Sunset Road approach to the bridge would be part of ADOT’s Ina Road TI to Ruthrauff Road TI project and would be ADOT’s responsibility. ADOT would also install traffic signals at the EBFR and WBFR as part of its TI project.

For the extension of Sunset Road to River Road, the Build Alternative would connect to the inverted TI, extending Sunset Road over the UPRR on an overpass. A bridge would be constructed over Rillito Creek. The Sunset Road extension would terminate at River Road. River Road would need to be widened to the south to accommodate a new right-turn lane for the eastbound to southbound movement onto Sunset Road. On the westbound approach to the new intersection, the median would be modified to accommodate a new left-turn lane.

New street lighting would be installed along Sunset Road north and south of I-10. Street lighting and a traffic signal would be installed at the Sunset Road/River Road T-intersection.

North of the UPRR ROW, a new 20-foot-wide roadway would be constructed from Tres Nogales Road to just west of Sunset Road. The new road would be needed to provide access to the new PCNPRPD maintenance yard, which would be relocated as part of the Sunset Road extension. The yard would be relocated with the Build Alternative to make room for the construction of the Sunset Road extension north of I-10. The new location is not yet determined.

In addition to adding sidewalk, the Build Alternative would reconstruct existing or construct new segments of shared-use pathway to connect multimodal users to existing segments of The Loop system on both ends of the project and the El Corazon system at the south end of the study area. Americans with Americans Act (ADA)–compliant bicycle and pedestrian access ramps would be constructed to connect Sunset Road to the segment of The Loop that follows the southern embankment of Rillito Creek. In addition, the elevation of The Loop path that follows the north side of Rillito Creek would be modified to accommodate the new bridge.

The Build Alternative would necessitate installation of new and modifications to existing drainage facilities. It would directly impact a number of utility facilities in the study area, including communications, electric, natural gas, petroleum, irrigation, potable water, and sewer. The Build Alternative would include the installation of landscaping and an automated drip irrigation system, and would use passive water harvesting techniques, such as basins, berms, and check dams, where feasible to enhance vegetation establishment and allow for infiltration of stormwater.
Figure 9. Sunset Road typical section—Build Alternative

Cst CL = construction centerline, Exist. Grnd. = existing ground, R/W = right-of-way, Shld = shoulder, SW = sidewalk
The Build Alternative would include the following project components:

- Conducting geotechnical and utility potholing investigations
- Staging and stockpiling equipment and materials during construction Widening the Sunset Road south approach to I-10 to include two travel lanes in each direction, a raised median, paved shoulders, and sidewalk to tie into the Ina Road TI to Ruthrauff Road TI project construction limits
- Constructing intersections at the planned driveways for the future Sunset Innovation Campus
- Constructing a new urban four-lane roadway to extend Sunset Road from the I-10 WBFR to River Road, including two travel lanes in each direction, a raised median, paved shoulders/bicycle lanes, vertical curb, sidewalks, an overpass spanning the UPRR and the future alignment of the UPRR access road, and a bridge spanning Rillito Creek
- Constructing new segments of The Loop and modifying existing segments, as warranted
- Modifying the elevation of The Loop at Rillito Creek banks, as needed, to accommodate the new bridge
- Constructing a new concrete box culvert, parallel to the EBFR (south of the I-10 Sunset Underpass) to reconnect segments of The Loop and ensure an existing sanitary sewer line is accessible after construction of the raised Sunset Road
- Building ADA-compliant bicycle and pedestrian access ramps from the new Rillito Creek bridge and new Sunset Road/River Road intersection to The Loop
- Installing new traffic signals at the intersection of Sunset Road and River Road
- Constructing improvements to River Road to accommodate the new intersection with Sunset Road, such as new turning lanes
- Constructing maintenance access roads, as needed
- Constructing connections to adjacent parcels, as needed
- Installing lighting and landscaping, as needed
- Constructing drainage improvements, as needed
- Relocating existing and installing new utilities, and installing underground conduit for future utilities, as needed
- Relocating the PCNRPRD maintenance yard to an adjacent county-owned property
- Constructing new vehicular access from Tres Nogales Road to the relocated PCNRPRD maintenance yard

B. General Project Schedule

The DCR was submitted to PCDOT in September 2020. Approval of the EA is subject to a 30-day public review period, tentatively scheduled for April 2022. After satisfactory public review, the EA is anticipated for approval in early 2022. The current PAG 2020–2024 TIP shows funding for design of the current Sunset Road: I-10 to River Road project in 2020. Construction is anticipated to begin in October 2022.
Implementation Plan

ADOT is considering implementing this project in conjunction with the ADOT I-10 mainline widening construction project from Ina Road to Ruthrauff Road, which is currently planned to begin in FY 2022. This ADOT project includes reconstruction of the TI at Sunset Road. With the reconstructed TI, I-10 would to be lowered to pass under Sunset Road. This construction would require the temporary closure of Sunset Road south of I-10 while the mainline is lowered and the Sunset TI constructed to go over I-10.

This project would make improvements south of I-10 to the existing Sunset Road. In addition, north of I-10, Sunset Road would be extended from the WBFR to River Road, including a bridge over the UPRR. This work would be built on new ROW and could be constructed along with or separate from the ADOT I-10 widening project. Traffic control plans would be prepared and implemented to allow through traffic to continue along River Road throughout construction. Lane restrictions would be used as warranted.
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IV. Affected Environment, Environmental Consequences, and Mitigation/Commitments

This chapter of the EA discusses environmental resources that may be affected by the proposed project. The existing conditions for each resource, potential adverse impacts resulting from the Build Alternative and the No-Build Alternative, and potential mitigation measures to address adverse impacts are presented.

In this document, the term “study area” is used to reference what would be the ultimate improvement area and construction footprint, including other areas potentially impacted by the project, such as those affected by drainage improvements, land acquisition, and construction staging, stockpiling, dust, noise, and disruptions to transit access. Existing information and field data were collected for the study area to identify all known resources in the affected environment. The study area was defined early in the DCR effort. The limits of the study area are depicted in Figure 2.

A. Issues Eliminated from Detailed Study

Based on early coordination and a review of the study area, the proposed project would have no impact on Section 6(f) resources, wild and scenic rivers, sole source aquifers, national natural landmarks, wilderness areas, 303(d) impaired waters, outstanding waters, wells, and scenic roads and parkways because these resources do not exist in the study area or the proposed project has no potential to impact them.

There is prime and unique farmland in the study area; however, the project is within an urbanized area, as documented in the 2010 Census-Urbanized Area Reference Map: Tucson, Arizona (US Census Bureau 2012), and is, therefore, exempt from the Farmland Protection Policy Act.

B. Land Ownership, Jurisdiction, and Land Use

This section describes land ownership, jurisdiction, and land uses in the Sunset Road: I-10 to River Road study area. “Land ownership” identifies public and private ownership; “jurisdiction” implies the authority that regulates land uses; and “land use” describes the existing occupation or physical use of the land. Figure 10 depicts land jurisdiction in the study area and surrounding area.
Figure 10. Land jurisdiction
**Existing Conditions**

**Land Ownership/Jurisdiction**

The study area is within the jurisdiction of the City of Tucson and unincorporated Pima County (see Figure 10). Lands in the study area are owned by ADOT, Pima County, the UPRR, and private parties.

The town of Marana is 12 miles north. Saguaro National Park Tucson Mountain District (West), administered by the National Park Service, is 1.5 miles west. The nearest Native American community is the Pascua Yaqui Reservation, almost 10 miles south.

**Land Use**

The south end of the study area abuts the recently constructed Sunset Road bridge over the Santa Cruz River and extends northeast to the I-10 EBFR. In the study area south of I-10, mining operations occur west of Sunset Road, and the area east of Sunset Road is currently undeveloped. North of I-10, the study area crosses the UPRR mainline and Pima County–owned land. A PCNRPRD maintenance yard is currently located in this area (see Figure 2). Farther east, along Tres Nogales Road, five lots associated with the 26-lot Tres Nogales subdivision extend into the study area. One of these lots supports a single-family residence, one supports an abandoned house, and the other three are vacant/undeveloped. Just outside the study area, this subdivision supports a mix of residential and commercial uses, and some lots are vacant/undeveloped. The original houses of the Tres Nogales subdivision are historic in age. Refer to Chapter IV, Section E, for more information. Also see Figure 11, which depicts the boundaries of the subdivision set against the study area limits.

Rillito Creek crosses through the study area on the north end. Rillito River Park, a linear park, follows Rillito Creek in the study area. Segments of The Loop follow both sides of Rillito Creek. Just outside the study area are two other parks: Dan Felix Memorial Park east of River Road and Camino de la Tierra, and Pima Prickly Park northwest of River Road and Camino de la Tierra (see Figure 2). Also just outside the study area to the east are automotive (auto salvage) and construction (masonry) businesses.

Land use planning in the study area is directed by the City of Tucson for the areas in its jurisdiction and by Pima County for the unincorporated areas. The Plan Tucson: City of Tucson General and Sustainability Plan 2013 (City of Tucson 2013) and the Comprehensive Plan Update, Pima Prosper (Pima County 2015a) serve as the planning tools for growth and development in the study area and the surrounding region. These plans, the Arizona Land Resource Information System (ALRIS) (ALRIS 2014), and the Pima County–Pima Maps (Pima County 2020b) were used to determine existing land ownership, existing land use, and future land use within, and adjacent to, the corridor.

Zoning in the study area falls under the jurisdiction of the City of Tucson for the area within the city limits and under the jurisdiction of Pima County for unincorporated areas. The areas south of I-10 are zoned by the City of Tucson as Industrial (I-1) and General Business Zone (CB-2). The residential area off Tres Nogales Road is zoned by Pima County as Mixed Use (MU). North of I-10, land is zoned by the City of Tucson as Suburban Homestead (SH) and MU. No state or public lands occur adjacent to the study area. Figure 12 depicts Pima County and City of Tucson zoning data for the study area.
Future Development Plans

North of I-10, adjacent land uses, including residential land use east and north of the proposed Sunset Road alignment, are expected to remain the same. A notable portion of the study area north of I-10 falls within the 100-year floodplain or the UPRR ROW, limiting future development. South of I-10, however, lands adjacent to Sunset Road are expected to be developed as part of Pima County’s mid-term or long-term plans.

Several projects/developments have been conceived:

- The Sunset Innovation Campus—a 100-acre site at the southeast corner of I-10 and Sunset Road that would be targeted as a primary employment site for new, high-wage industries
- The Loop Shared-Use Path—new segments of path planned or under development in the study area
- Pima County Regional Park—the long-range plan for development of a regional park on county-owned sand and gravel mining areas south of I-10
Figure 12. Zoning
Environmental Impacts—Build Alternative

Land Ownership/Jurisdiction

New ROW and permanent easements would be needed to accommodate new facilities under the Build Alternative, which would constitute a change in land ownership. Much of the land needed for the Build Alternative is currently in Pima County ownership and would only need to be transferred from one department of the county to another (e.g., from PCNRPRD ownership to PCDOT ownership). A preliminary estimate of the Pima County–owned land to be transferred to PCDOT is 11.95 acres. Five lots on the north side of Tres Nogales Road would also need to be acquired. These are anticipated to be full takes. Two of these lots are owned by Pima County, and the associated acreage is included in the previous Pima County estimate. The other three lots are privately owned and total 0.8 acre. An easement would be needed from the UPRR (0.9 acre). No transfer of land ownership would be needed from ADOT. A preliminary list of parcels that would need to be acquired for the Build Alternative and an associated parcel map are included in Appendix A. Parcels and acreages needed for the Build Alternative would be refined as engineering design is advanced. The need for temporary construction easements or drainage easements is not known at this time but would be identified during final design activities. No changes in jurisdictional boundaries would occur as a result of the Build Alternative.

Existing Land Use

With the Build Alternative, existing transportation facilities would be widened and extended, expanding the acreage of designated transportation facilities in the study area. Much of the necessary land acquisition consists of vacant land and minor partial takes from larger parcels, which are not expected to alter existing or future land use.

Implementation of the Build Alternative would require the relocation of the PCNRPRD maintenance yard, which is located within the proposed roadway footprint. The maintenance yard would be relocated on adjacent Pima County land; the location is yet to be determined.

Five lots along Tres Nogales Road in the northwest corner of the Tres Nogales subdivision would need to be fully acquired or transferred for the proposed project. The three westernmost lots are vacant. As shown in Figure 11, two of these lots are owned by the PCNRPRD. Those two lots would be transferred to PCDOT ownership. One lot supports an occupied single-family residence whose resident(s) would be displaced and relocated as a result of the proposed project, and an abandoned house sits on the remaining lot (see Chapter IV, Section E). Acquisition of ROW and relocation assistance would be undertaken in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR 24).

South of I-10, roadway widening under the Build Alternative would displace an existing segment of The Loop along the east side of Sunset Road; however, this segment would be reconstructed with the proposed project on a shifted alignment. The Build Alternative would also construct a new segment of The Loop along the west side of Sunset Road south of I-10 consistent with Pima County plans for expansion of The Loop.

North of I-10 where a new bridge would be constructed over Rillito Creek, adjustments would be made in the existing trail’s vertical alignment to satisfy required clearances between the trail and the underside of the bridge structure. Paved shoulders and sidewalks would be incorporated on the new segment of Sunset Road, and new ADA-compliant ramps would be constructed to connect the bridge with Rillito River Park and associated segments of The Loop on the south side of Rillito Creek, enhancing...
bicycle and pedestrian connectivity. A new segment of trail would be constructed from River Road to The Loop along the north side of Rillito Creek in the vicinity of the new Sunset Road/River Road intersection (additional detail on trail and park-related impacts is provided in Section F of this chapter).

Pima County would relocate an existing PCNRPRD maintenance yard from its existing location to a new location on adjacent Pima County property. The Build Alternative would construct vehicular access to the new location.

Under the Build Alternative, Tres Nogales Road would not extend west into the study area (see Figure 11). A cul-de-sac would be constructed to allow vehicles traveling west to turn around when they reach the end of the road. Access to the remaining properties in the Tres Nogales subdivision would not be affected.

Other changes in access include the establishment of a new north–south connection between Silverbell Road and River Road, with access to and from I-10 from the north and south. North of I-10, the new Sunset Road bridges would result in grade-separated crossings of the UPRR mainline and Rillito Creek.

Future Land Use
The Build Alternative would support planned future land use in the study area and vicinity by addressing transportation connectivity limitations in the study area. The Build Alternative would also support future traffic demand in the study area by increasing roadway capacity and adding dedicated turn lanes and traffic control.

The future Sunset Innovation Campus, to be located at the southeast corner of the EBFR and Sunset Road, was considered in the development of the Build Alternative. This alternative would construct two new intersections at the future entrances to the Sunset Innovation Campus, which is projected to add 14,000 trips per day to the roadway system by 2045. The Build Alternative would install conduit to accommodate a traffic signal at the main entrance to the campus in the future, and the proposed design would accommodate the future addition of turn lanes at these two intersections.

The Build Alternative would be consistent with future plans for The Loop. Most notably, it would construct a new segment of trail along the west side of Sunset Road south of I-10, consistent with Pima County plans for expansion of The Loop. It would also preserve or, as needed, replace existing segments of The Loop (refer to Section F of this chapter for more detail) and add trail connections in strategic locations (e.g., between River Road and The Loop that follows the north side of Rillito Creek and between the new Sunset Road bridge and Rillito River Park/The Loop).

Environmental Impacts—No-Build Alternative
Under the No-Build Alternative, routine maintenance would be expected to continue for Sunset Road south of I-10. However, Sunset Road would not be extended north of I-10, no new north–south connection would be established, and no local roadway capacity improvements would be undertaken. For these reasons, the No-Build Alternative would not support projected traffic growth, including that expected to be generated by the future Sunset Innovation Campus.

Environmental Commitments and/or Mitigation Measures
PCDOT and the contractor would follow the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the Uniform Relocation Act Amendments of 1987, the ADOT Right of
The need for temporary construction easements or drainage easements would be identified, and impacts evaluated, during final design activities.

**Conclusion**

The Build Alternative would permanently acquire/transfer approximately 11.95 acres to transportation use and would require an easement from the UPRR of 0.9 acre. The majority of the acquired land is vacant or represents minor partial takes from larger parcels that are not expected to alter existing or future land use. The Tres Nogales subdivision is an exception. One occupied lot would be acquired and the residents of the one occupied house would be displaced and relocated. The proposed project is consistent with transportation planning by PAG and ADOT and is supported by Pima County and the City of Tucson as an important new north–south connection within the area.

The acquisition of land from private parties would remove taxable land from Pima County. This impact is considered minor because little of the land to be acquired is privately owned. In the long-term, the Build Alternative would improve travel in the study area and region and benefit future growth and development.

The No-Build Alternative would not result in changes to existing or future land use patterns or the acquisition of residences or businesses in the study area because no new ROW would be required. With the No-Build Alternative, development could slow substantially in the future as traffic volumes approach and/or exceed the maximum capacity of the local street system.

**C. Social and Economic Considerations**

Socioeconomics is a term that describes the economic and social characteristics of a specific population, such as income, education, demographics, and occupation. The socioeconomic analysis evaluates the social and economic impacts of the proposed project on the local and surrounding population. It examines how a proposed project could affect the area’s overall social and economic character, the well-being of current and future residents of the affected community, and the future cohesion of the community once the project has been implemented.

**Existing Conditions**

**Demographics**

Jurisdiction in the study area is split between unincorporated Pima County and the City of Tucson. The county had an estimated population of 1,039,073 in 2018, with 545,987 in Tucson (US Census Bureau 2018a). Pima County growth has been moderate since the 2000 Census, about 15% between 2000 and 2010. The growth in the city of Tucson has been 9% to 11% over the same period. Projections by PAG indicate population growth to 1,224,000 in the county and 610,950 in Tucson by 2045 (2045 Regional Mobility and Accessibility Plan Update, PAG, September 24, 2020). The study area is mostly undeveloped.

The study area includes five residential/mixed use lots along the north side of Tres Nogales Road in the Tres Nogales subdivision (see Figure 11). One of these lots supports an occupied residence. Employment in the study area is currently limited to mining operations southwest of the Sunset Road TI, the...
PCNRPRD maintenance yard south of Rillito Creek, the auto salvage business along Camino de la Tierra, and a few businesses that operate from residential lots in the Tres Nogales subdivision.

**Neighborhood Continuity**

Neighborhood continuity, as used in this EA, describes the continuous or cohesive extent of a residential neighborhood, large or small. Schools and local or neighborhood parks are examples of land uses often located within or adjacent to residential areas to serve the residential community. Larger roads, highways, and railroads are examples of features that serve as barriers to neighborhood continuity and can separate or isolate residences from their larger community.

Residential land use in the study area is associated with the 26-lot Tres Nogales subdivision, which is bounded by the UPRR on the west, Camino de la Tierra on the east, and Sunset Road on the south (parcels south of Sunset Road are not part of this subdivision), and is identified on Pima County maps as multi-use (Pima County 2020b). Five of these lots, located along the northwest edge of the subdivision, extend into the study area (see Figure 11). Of these five lots, one supports an occupied residence and another supports an abandoned house. The other three were previously purchased by the Pima County Flood Control District (PCFCD) to address flooding concerns in the area, and these lots are vacant/undeveloped. Roughly 30% of the lots in this subdivision are currently vacant/undeveloped. Some of the other lots are used for business purposes. No schools or parks are in the Tres Nogales subdivision, and the subdivision is physically separated from other residential developments. Jusnic Estates, another small subdivision, is southeast of the Tres Nogales subdivision east of Camino de la Tierra (see Figure 11).

**Emergency Services—Police, Fire, Ambulance, Hospital**

Emergency services, such as police, fire, and ambulance, serve the study area and vicinity; however, no police or fire stations are in the study area. The nearest law enforcement facility is 6 miles south (Tucson Police Department Miracle Mile station), and a fire station is a mile southwest (Northwest Fire District, El Camino del Cerro). The closest hospital is Northwest Medical Center, approximately 1.6 miles northeast of the study area at Orange Grove Road and La Cholla Boulevard.

**Social Services, Schools, Recreation**

The study area is mostly undeveloped, with few residents. Facilities offering social services, such as community centers, daycare facilities, and public health clinics, are not present in the study area. There are no schools in the study area. The closest schools are Laguna Elementary School, Flowing Wells Junior High School, and Sentinel Peak High School, all within 2 miles of the study area. Recreation facilities in the study area include Rillito River Park and segments of The Loop. Pima Prickly Park and Dan Felix Memorial Park are just outside the study area north of River Road.

The study area does not have Sun Tran bus service along Camino de la Tierra or River Road at the proposed Sunset Road connection. The two nearest Sun Tran bus routes are Route 412 at Shannon Road and River Road and Route 10 at Curtis Road and Davis Avenue. Sun Shuttle Dial-a-Ride offers service throughout the study area (Sun Tran 2020).

**Environmental Impacts—Build Alternative**

The proposed Sunset alignment would require the full acquisition of two lots along the north side and west end of Tres Nogales Road, which are part of the Tres Nogales subdivision (see Figure 11). Of the two parcels, only one has an occupied residential structure. The referenced house is on the north side of
Tres Nogales Road and is surrounded on both sides by vacant lots. The remaining lot supports an abandoned house. Three additional vacant/undeveloped lots located farther west on Tres Nogales Road are already owned by Pima County, and management would be transferred from the PCFCD to PCDOT. The acquisition of the occupied residence would decrease the number of residences within a small residential/mixed-use neighborhood that has a limited number of houses. Population decline is expected to be minor as a result of the Build Alternative.

The communities within the analysis area have received improvements by Pima County. The county has implemented flood control measures, including maintenance efforts to clean out Rillito Wash and to construct bank protection, which has benefitted the surrounding communities. Pima County has constructed nearby recreational amenities, including Rillito River Park, Prickly Park, and The Loop with grade-separated access over Camino de la Tierra for safety. PCDOT is scheduled to repave Tres Nogales Road and Sunset Road in 2022 as part of a countywide pavement preservation program. Pima County recently added shoulders, repaved Highway Drive, and implemented a traffic-calming project on Curtis Road, which provides direct access to the Tres Nogales subdivision and the surrounding area. The Sunset Road: I-10 to River Road project will provide improved access to and from I-10.

There would not be any acquisitions of businesses with the Build Alternative, and the project impacts would not adversely affect employment opportunities associated with any of the existing businesses. There are no neighborhood-oriented businesses (e.g., grocery store, laundromat, gas station, medical services, or general shopping) in the study area. The existing businesses, which are characterized as automotive (auto salvage), service (painting), or construction (masonry), are just outside the study area.

The Build Alternative would have a minor negative impact on neighborhood continuity associated with the Tres Nogales subdivision. The two affected lots and associated residence are on the edge of the subdivision. The acquisition of these two lots would not cut off residents from jobs, schools, medical care, grocery stores, public transit, and other essential resources and services, or divide the residential community. It would diminish the number of lots in the subdivision by roughly 20% and would eliminate one occupied residence. With one of the two lots vacant, the acquisition area reflects the past transitions in land use in the subdivision overall. The sense of neighborhood has likely shifted over the years from a fully occupied neighborhood to one with larger spaces and less density with more industrial and commercial uses. This shift does not necessarily represent a decline in neighborhood continuity. The Build Alternative would have a minor negative impact on neighborhood continuity by removing unoccupied spaces and replacing them with a transportation facility. Access to The Loop would be improved for the Tres Nogales subdivision, providing an enhanced recreational opportunity. No other neighborhoods would be impacted by the Build Alternative.

Access to schools and parks would not be altered by the Build Alternative; however, the proposed Sunset Road alignment would provide new access between River Road and I-10, facilitating improved transportation connectivity in the project vicinity.

In general, traffic congestion and delays would have a moderate short-term impact on travel through the study area during construction, impacting motorists, transit services, and emergency response providers. Access to schools, parks, emergency services, commercial properties, and neighborhoods would be maintained throughout construction. Following construction, all users would be expected to benefit from an improved transportation system that includes an additional connection between the east and west sides of I-10 and improved travel times. Coordination with emergency service providers would occur during final project design and construction.
Environmental Impacts—No-Build Alternative

Under the No-Build Alternative, Sunset Road would not be extended north of I-10, and no new ROW would be acquired in the study area; therefore, there would be no direct impacts to social services, emergency services, or employment.

Future growth in the project vicinity could be negatively affected due to the lack of adequate transportation infrastructure to support it. This is a potential indirect effect that is discussed more thoroughly in Section P, Secondary Impacts.

Environmental Commitments and/or Mitigation Measures


Pima County Department of Transportation Design Responsibility

- During final design, the Pima County Department of Transportation would coordinate with emergency response and transit providers (Arizona Department of Public Safety, City of Tucson Police Department, Pima County Sheriff’s Department, City of Tucson Fire Department, Rural Metro Fire Department, Northwest Medical Center, and Sun Tran) and the Flowing Wells and Tucson unified school districts to accommodate emergency and transit needs in the Transportation Management Plan.

Contractor Responsibility

- With the exception of temporary, short-term closures (less than three hours), the contractor would maintain driveway access to all businesses and residences throughout construction. If a property has multiple driveways, at least one would remain open at all times.

Conclusion

Social and economic impacts under the Build Alternative are expected to be minor to moderate. Two residential lots (one with an occupied residence and one with an abandoned house) would need to be acquired. The occupied residence would be displaced as a result of the project, and the resident(s) would need to be relocated, resulting in a significant impact to that household. The lot acquisition and residential relocation would be on the edge of the residential neighborhood and would not divide the remaining neighborhood. No negative impacts to schools or parks are anticipated.

The Build Alternative would provide another way to safely cross the Rillito River, the UPRR, I-10, and the Santa Cruz River from the east side of I-10, tying together the east and west sides of these physical barriers. In addition, the Build Alternative would improve the Tres Nogales subdivision connections to The Loop, which operates for recreation and commuter use, including the construction of an all-weather crossing with the Rillito River bridge. Long-term changes in access and circulation would be moderate and beneficial.
D. Title VI and Environmental Justice

Under Title VI of the Civil Rights Act of 1964 (Title VI), recipients of federal funding, such as ADOT, are required to ensure that individuals and groups are not excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity on the grounds of race, color, or national origin.

The ADA stipulates that people with disabilities be involved in developing and improving public services. In highway planning, collaboration with persons with disabilities is essential for developing access points beyond those that are required. All events held for programs or projects with federal-aid funds and open to the public must be made accessible to everyone, including persons with disabilities. Special efforts are required to comply with the statutory requirements of the Moving Ahead for Progress in the 21st Century Act and the ADA.

Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency (LEP), requires recipients of federal financial assistance to provide language services (oral or written) to ensure meaningful access for any language, upon request. Identification of LEP persons is required for the purpose of devising appropriate strategies for meaningful public involvement and ensuring access pursuant to this executive order. LEP persons are individuals over five years of age who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English.

Executive Order 12898 on environmental justice requires “the fair treatment and meaningful involvement of all people, particularly minority and low-income populations, in the environmental decision-making process.” All ADOT projects that include federal funding follow the NEPA process, which aids in environmental decision-making.

USDOT Order 5610.2(a) and FHWA Order 6640.23A require compliance with Executive Order 12898. This includes the full and fair participation by all potentially affected communities in the transportation decision-making process.

In the context of environmental justice, an adverse effect is a significant individual or cumulative human health or environmental effect (e.g., the displacement of a household structure or business, disruptions to transit access, excessive dust in areas where people are likely to work or recreate). A disproportionately high and adverse effect on minority and low-income populations is an adverse effect that:

- Is predominately borne by a minority population and/or a low-income population, or
- Would be suffered by the minority populations and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the nonminority population and/or non-low-income population.

Existing Conditions

For this Title VI and environmental justice evaluation, specific demographic characteristics were collected for those populations that could potentially be directly or indirectly affected by the project. From US Census Bureau maps, four census tracts (CTs) were identified in the project corridor: CT 44.18, CT 45.06, CT 46.10, and CT 46.13. Within the four CTs, five block groups (BGs) were identified: CT 44.18 BG 1, CT 45.06 BG 2, CT 46.10 BG 3, and CT 46.13 BG 3. These four BGs are referred to as the “selected
population” in this analysis. Figure 13 depicts the boundaries of these BGs within the CTs: the CT limits extend well beyond the study area boundary.

![Figure 13. Census tracts in the study area](image)

Though all of the CTs in the study area have residential populations, only CT 45.06 has a residential population in the study area. In addition, CT 45.06 is the primary CT that includes businesses; the other CTs that overlap the study area are primarily residential, but the residential areas do not occur within the study area. CT 45.06 generally covers the area between I-10 and Rillito Creek and extends east to El Camino del Cerro and La Cholla Boulevard (see Figure 13). The residential population in this CT is east of the study area, except for the residential lots in the study area along the north side of Tres Nogales Road. Because this CT is the only one with residential units or residential land use in the study area, it is featured in the results text that follows. Data for all CTs are provided in the results tables.

For the identification of minority populations, a no-threshold analysis was conducted. The no-threshold analysis attempts to identify all minority populations regardless of population size. For this analysis, the total number of minority individuals and the percent minority for each BG was determined, and then the existence of a minority population was identified for each BG.

The following demographics were collected from each BG: race/ethnicity, low income, and LEP. The racial minority was described as residents who identify themselves as any race other than White: Black, Hispanic or Latino, Asian American, American Indian and Alaska Native, Native Hawaiian or other Pacific Islander, some other race, and two or more races. Total minority is composed of all people who consider themselves Non-White racially plus those who consider themselves White racially and Hispanic or Latino. A low-income population is defined as a population whose median household income is at or below the US Department of Health and Human Services (HHS) poverty guidelines for a family of four.
An LEP language group is one that constitutes 5% or 1,000 individuals, whichever is less, of the population of persons eligible to be served or likely to be affected or encountered. ADOT undertook the USDOT LEP four-factor analysis to identify language groups per county protected under its 2021 Limited English Proficiency Plan. As part of this process, ADOT identified the following language groups for Pima County: Spanish or Spanish Creole, Chinese, Vietnamese, and Arabic. The LEP Safe Harbor Threshold provision stipulates that ADOT must provide translation of vital documents in written format for all LEP groups that meet the threshold (5% of the population or 1,000 persons, whichever is less). This Safe Harbor provision applies to the translation of written documents only.

Data used in the analysis for all populations were taken from the US Census Bureau American Community Survey Five-Year Estimates from the 2014–2018 five-year running average (US Census Bureau 2018b). BG data provide the most accurate information about a population; therefore, this evaluation relies on BG data when it is available; otherwise, CT-level data are used.

**Title VI and Executive Order 13166 (National Origin, Limited English Proficiency)**

For Title VI, demographics were collected related to minority populations for the selected. Data on the following categories of race and Hispanic or Latino origin were collected from the census:

- Black (a person having origins in any of the black racial groups of Africa)
- Hispanic or Latino (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race)
- Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, and the Indian subcontinent)
- American Indian and Alaskan Native (a person having origins in any of the original people of North America, South America, including Central America, and who maintains cultural identification through tribal affiliation or community recognition)
- Native Hawaiian or Other Pacific Islander (people having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands)

Table 4 reports the racial and ethnic composition of the study area. There are racial minorities and people of Hispanic or Latino origin residing in each of the four BGs in the study area.
Table 4. 2014–2018 Racial and Ethnic Demographics

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<th>Category</th>
<th>CT 44.18, BG 1</th>
<th>CT 45.06, BG 2</th>
<th>CT 46.10, BG 3</th>
<th>CT 46.13, BG 3</th>
<th>Tucson, Arizona</th>
<th>Pima County</th>
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<tbody>
<tr>
<td>Total population</td>
<td>2,821</td>
<td>1,667</td>
<td>2,065</td>
<td>1,365</td>
<td>539,216</td>
<td>1,019,722</td>
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<td></td>
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<td>#</td>
<td>2,487</td>
<td>1,314</td>
<td>1,651</td>
<td>954</td>
<td>390,567</td>
<td>777,452</td>
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<tr>
<td>%</td>
<td>88.2</td>
<td>78.8</td>
<td>80</td>
<td>69.9</td>
<td>72.4</td>
<td>76.2</td>
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<td>29</td>
<td>0</td>
<td>82</td>
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<tr>
<td>%</td>
<td>1</td>
<td>0</td>
<td>4.0</td>
<td>0</td>
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</tr>
<tr>
<td>Asian American</td>
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<td>77</td>
<td>40</td>
<td>16</td>
<td>0</td>
<td>17,392</td>
</tr>
<tr>
<td>%</td>
<td>2.7</td>
<td>2.4</td>
<td>0.8</td>
<td>0</td>
<td>3.2</td>
<td>2.9</td>
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<td>American Indian and Alaskan Native</td>
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<td>67</td>
<td>7</td>
<td>22</td>
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<td>%</td>
<td>2.4</td>
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<td>1.1</td>
<td>0</td>
<td>3.5</td>
<td>3.1</td>
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<td>Native Hawaiian or other Pacific Islander</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>1,042</td>
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<td>0</td>
<td>0</td>
<td>0.8</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
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<td>513</td>
<td>1,169</td>
<td>589</td>
<td>872</td>
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<tr>
<td>%</td>
<td>18.2</td>
<td>70.1</td>
<td>28.5</td>
<td>63.9</td>
<td>43.2</td>
<td>37.0</td>
</tr>
</tbody>
</table>

Source: US Census Bureau 2018b
# = number, % = percentage, CT = census tract, BG = block group
* In addition to race, residents were asked to categorize themselves by one of two ethnicities: Hispanic or Latino and Not Hispanic or Latino.

“Hispanic or Latino by Origin” is derived from the total population, not as a separate race.

Title VI and Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, prohibit recipients of federal financial assistance from discrimination based on national origin and the ability to speak English as a primary language. In accordance with Title VI and Executive Order 13166, the number of individuals who are not proficient in the English language was collected from the US Census Bureau American Community Survey for 2014–2018 for each of the selected populations associated with this project (US Census Bureau 2018b). Table 5 identifies the number of individuals for each CT who do not speak English as their primary language and speak English less than very well. The languages spoken by this population are also noted. The number of individuals in CT 45.06 who speak English less than very well is 958, or 19.5% of the total population in this CT. Populations that predominately speak Spanish within CT 45.06 and 46.13 are protected under the Safe Harbor Threshold. Vietnamese and Chinese, also languages groups protected under ADOT’s Safe Harbor Threshold, only represent 1% or less of the CT populations.
In addition to race, the Census also asks residents to identify whether they consider themselves of Hispanic or Latino origin. Total minorities, as used in this evaluation, are composed of racial minorities plus those of Hispanic or Latino origin who are not already counted in the racial minority category.

Table 6 summarizes total racial minorities, total residents of Hispanic or Latino origin, and total minorities for the selected populations. Census data indicate that racial minorities and persons of Hispanic or Latino origin live in the four BGs. In CT 45.06 BG 2, total minorities represent 72.9% of the BG’s population.

Table 6. 2014–2018 Total Racial Minority, Total Hispanic or Latino Origin, and Total Racial and Hispanic or Latino Minority

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Population</th>
<th>Total Racial Minority&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Total Hispanic or Latino Origin&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Total Minority (Racial and Hispanic or Latino Origin)&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>CT 44.18, BG 1</td>
<td>2,821</td>
<td>334</td>
<td>11.8</td>
<td>513</td>
</tr>
<tr>
<td>CT 45.06, BG 2</td>
<td>1,667</td>
<td>353</td>
<td>21.2</td>
<td>1,169</td>
</tr>
<tr>
<td>CT 46.10, BG 3</td>
<td>2,065</td>
<td>414</td>
<td>20.0</td>
<td>589</td>
</tr>
<tr>
<td>CT 46.13, BG 3</td>
<td>1,365</td>
<td>411</td>
<td>30.1</td>
<td>872</td>
</tr>
<tr>
<td>City of Tucson</td>
<td>539,216</td>
<td>148,649</td>
<td>27.6</td>
<td>233,209</td>
</tr>
<tr>
<td>Pima County</td>
<td>1,019,722</td>
<td>242,270</td>
<td>23.8</td>
<td>376,826</td>
</tr>
</tbody>
</table>

Source: US Census Bureau 2018b

CT = census tract, # = number, % = percentage

<sup>a</sup> Percentage of residents who identify themselves as any race other than White: Black, Hispanic or Latino, Asian American, American Indian and Alaska Native, Native Hawaiian or other Pacific Islander, some other race, and two or more races

<sup>b</sup> In addition to race, residents were asked to categorize themselves by one of two ethnicities: Hispanic or Latino and Not Hispanic or Latino

For more detailed information, Appendix B: Tables B-1, B-2, and B-3 provide additional detail on the socioeconomic data collected for the population of each CT and BG, where applicable, including a breakdown by race and the total number of residents who identify themselves as of Hispanic or Latino origin, regardless of their race.
Environmental Justice (Low Income)

Low income was also considered for the environmental justice analysis. Low income is defined as a household whose income is at or below the HHS poverty guidelines for a family of four. The 2018 low-income level was defined at $25,100. Census data indicate that the 2018 median household income per BG was as follows:

- CT 44.18, BG 1 = $112,639
- CT 45.06, BG 2 = $27,955
- CT 46.10, BG 3 = $75,000
- CT 46.13, BG 3 = $46,004

Table 7 provides the percentages of low-income residents for each respective population. Census data indicate that there are residents living below the HHS low-income guideline within the four BGs (Census 2018b). The percentage of the population living below the HHS low-income guideline is 36.7% in CT 45.06 BG 2.

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Population in Study Area</th>
<th>Total Population Below Low-Income 2018 Guideline*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT 44.18, BG 1</td>
<td>2,786</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.7%</td>
</tr>
<tr>
<td>CT 45.06, BG 2</td>
<td>1,656</td>
<td>608</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36.7%</td>
</tr>
<tr>
<td>CT 46.10, BG 3</td>
<td>2,046</td>
<td>163</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.0%</td>
</tr>
<tr>
<td>CT 46.13, BG 3</td>
<td>1,365</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.9%</td>
</tr>
<tr>
<td>City of Tucson</td>
<td>514,359</td>
<td>120,264</td>
</tr>
<tr>
<td></td>
<td></td>
<td>23.4%</td>
</tr>
<tr>
<td>Pima County</td>
<td>991,092</td>
<td>176,222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.8%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau 2018b  
# = number, % = percentage, BG = block group, CT = census tract  
* HHS low-income guideline for 2018 = $25,100

Environmental Impacts—Build Alternative

As previously noted, census data indicate that minority (47%), low-income populations (13%), and LEP persons (9%) are present in the study area (Census 2018b). Translation services would be made available to anyone who requires them for all vital documents and any public engagements activities, per the Pima County Public Involvement Plan, Safe Harbor Threshold, and Executive Order 13166. The Build Alternative would require parcel acquisition for ROW needs; however, all feasible measures would be taken to minimize parcel acquisitions. The Build Alternative would have a minor adverse effect on protected populations but would not have disproportionately high and adverse human health and environmental effects on protected populations because project impacts would affect all people living in the study area. The Build Alternative would not impact members of the Pascua Yaqui Tribe or the Tohono O’odham Nation communities.

Environmental Impacts—No-Build Alternative

As noted with the Build Alternative, racial minorities and persons of Hispanic or Latino origin and persons of low income live in the four BGs; therefore, protected populations occur in the study area.
Because there would be no construction or land acquisition associated with the No-Build Alternative, there would be no disproportionately high and adverse human health and environmental effects on protected minority and low-income populations.

**Environmental Commitments and/or Mitigation Measures**

PCDOT and the contractor would follow the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, the Uniform Relocation Act Amendments of 1987, the ADOT Right of Way Procedures Manual, Title VI of the Civil Rights Act of 1964, and the ADOT Public Involvement Plan.

**Conclusion**

Minority persons of low-income populations, as well as LEP persons, live in the four CTs in the study area. In accordance with the provisions of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and FHWA Order 6640.23, the No-Build Alternative would not cause disproportionately high and adverse effects on protected populations. Likewise, the Build Alternative would not cause disproportionately high and adverse effects on protected populations but would have a minor adverse effect on protected populations.

**E. Cultural Resources**

The proposed project would be a federal action and, as such, constitutes a federal undertaking requiring compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended and recodified (54 USC § 300101 et seq.). Section 106 of the NHPA requires federal agencies to take into account the effects of their activities and programs on cultural resources determined eligible for inclusion in the National Register of Historic Places (NRHP) (historic properties). Regulations for Protection of Historic Properties (36 CFR 800), which implement Section 106, were most recently amended in 2004.

Historic context, historic significance, and historic integrity are the three interrelated concepts on which NRHP eligibility is based. “Historic,” in this sense, applies to both prehistoric and historic-period cultural resources. The significance of a cultural resource (historic property) depends on its association with an important historic context and its retention of enough integrity to convey its significance. Historic contexts are defined as the “patterns, themes, or trends in history by which a specific occurrence or property is understood and its meaning (and ultimately its significance) within history is made clear” (NRHP 1998:7).
For a historic property to be listed in the NRHP, it is typically at least 50 years old and must meet at least one of four eligibility criteria:

A. Associated with events that have made a significant contribution to the broad pattern of our history
B. Associated with the lives of persons significant in our past
C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction
D. Yielded, or may be likely to yield, information important to prehistory or history

The NRHP guidelines also identify seven aspects of integrity. All historic properties must have the ability to communicate historical significance and meet at least one aspect of the historic integrity requirements: location, design, setting, materials, workmanship, feeling, and/or association.

Existing Conditions

The area of potential effects (APE) is defined as the geographic area where an undertaking may directly or indirectly alter the character or use of historic properties. The APE for the project has been defined to consist of two segments, discussed herein as Eastern and Western, relative to I-10. In general terms, the Western segment begins at the Santa Cruz River and extends northeast along Sunset Road, ending at ADOT’s eastbound I-10 ROW line. The Eastern segment begins at the eastern edge of UPRR’s ROW line and extends to the northeast, crossing the UPRR ROW and Rillito River, and ending at River Road. The Eastern segment also includes a portion of River Road (ca. 1,740 feet) and an area between River Road and I-10, just west of the Sunset Road alignment.

The APE has been thoroughly investigated. Previous archaeological research was compiled for the study area and a surrounding half-mile radius compiled from AZSITE and additional sources, including the ADOT Historic Preservation Team Portal and records held at the Arizona State Museum (ASM) Archaeological Records Office.

The archaeological records collected for the project identified 64 previous projects and 20 previously recorded archaeological sites within a half-mile radius of the study area (Table 8). Two of these sites, AZ AA:12:11(ASM) and AZ AA:12:788(ASM) (apparently now consolidated by the ASM Archaeological Records Office under the number AZ AA:12:788[ASM]) are south of I-10 within the current study area. These two sites were recorded during cultural resource surveys in 2012 and 2013 and were extensively investigated and excavated with the previously completed Sunset Road: Silverbell Road to I-10 (Segment I) project.

Two historic-age features have also been recorded in the file search radius: the Saguaro–Tucson 115-kilovolt (kV) transmission line west of the Santa Cruz River and a building foundation of indeterminate, presumed historic, age. The Saguaro–Tucson 115-kV transmission line is considered an in-use historic-age structure. Other in-use historic structures, such as the Southern Pacific (now Union Pacific) Railroad grade, are within the search radius but have not been locally recorded as sites. The Arizona State Historic Preservation Office (SHPO) determined the railroad eligible for listing in the NRHP in 2003 (Steely and Levstik 2007). Many parts of the alignment and facilities have been altered considerably over years of active use; therefore, individual segments may or may not contribute to the eligibility of the site.
### Table 8.  Previously Recorded Sites Within a Half-Mile of the Study Area

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Site Type/Research</th>
<th>Cultural/Temporal Affiliation</th>
<th>NRHP Eligibility</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ AA:12:10(ASM)</td>
<td>Sunset Mesa Ruin; Basilio Cuevas Homestead—data recovery</td>
<td>Hohokam/Ceramic period; Euro-American/Historic period</td>
<td>Determined eligible</td>
<td>Ciolek-Torrello et al. (1999)</td>
</tr>
<tr>
<td>AZ AA:12:11(ASM)</td>
<td>Habitation site—data recovery</td>
<td>Hohokam/Ceramic period; Euro-American/Historic period</td>
<td>Determined eligible</td>
<td>Griset et al. (2015); Griset et al. (2018)</td>
</tr>
<tr>
<td>AZ AA:12:17(ASM)</td>
<td>Artifact scatter—may no longer exist</td>
<td>Hohokam/Ceramic period</td>
<td>Unevaluated</td>
<td>Milliken and Boley (2012)</td>
</tr>
<tr>
<td>AZ AA:12:21(ASM)</td>
<td>Artifact scatter—site destroyed by gravel extraction</td>
<td>Hohokam/Ceramic period</td>
<td>Considered eligible (recorder)</td>
<td>Ciolek-Torrello and Homburg (1990)</td>
</tr>
<tr>
<td>AZ AA:12:22(ASM)</td>
<td>Artifact scatter; ranch</td>
<td>Hohokam/Ceramic period; Euro-American/Historic period</td>
<td>Unevaluated</td>
<td>Mitalsky (1938)</td>
</tr>
<tr>
<td>AZ AA:12:23(ASM)</td>
<td>Artifact scatter</td>
<td>Hohokam/Ceramic period</td>
<td>Unevaluated</td>
<td>Slawson (2013)</td>
</tr>
<tr>
<td>AZ AA:12:24(ASM)</td>
<td>Artifact scatter—may no longer exist</td>
<td>Hohokam/Ceramic period</td>
<td>Unevaluated</td>
<td>Terzis (1996)</td>
</tr>
<tr>
<td>AZ AA:12:689(ASM)</td>
<td>Artifact scatter</td>
<td>Hohokam/Ceramic period</td>
<td>Determined ineligible</td>
<td>Ciolek-Torrello and Homburg (1990); Harry and Ciolek-Torrello (1992)</td>
</tr>
<tr>
<td>AZ AA:12:690(ASM)</td>
<td>Artifact scatter—may no longer exist</td>
<td>Hohokam/Ceramic period</td>
<td>Determined ineligible</td>
<td>Ciolek-Torrello and Homburg (1990); Harry and Ciolek-Torrello (1992); Terzis (1996)</td>
</tr>
<tr>
<td>AZ AA:12:691(ASM)</td>
<td>Farmstead</td>
<td>Hohokam/Ceramic period</td>
<td>Unevaluated</td>
<td>Wegener and Huber (2002)</td>
</tr>
<tr>
<td>AZ AA:12:692(ASM)</td>
<td>Artifact scatter</td>
<td>Hohokam/Ceramic period</td>
<td>Determined ineligible</td>
<td>Ciolek-Torrello and Homburg (1990); Harry and Ciolek-Torrello (1992)</td>
</tr>
<tr>
<td>AZ AA:12:788(ASM)</td>
<td>Rillito Fan Site</td>
<td>Hohokam/Ceramic period; Euro-American/Historic period</td>
<td>Determined eligible</td>
<td>Griset et al. (2018); Swartz (2018)</td>
</tr>
<tr>
<td>AZ AA:12:799(ASM)</td>
<td>Habitation site</td>
<td>Hohokam/Ceramic period</td>
<td>Determined eligible</td>
<td>Lindeman et al. (1998)</td>
</tr>
</tbody>
</table>

Green shading = previously recorded sites within the study area
The Tres Nogales subdivision was platted in 1948. Two houses from this subdivision are in the area that would be acquired for the project. One house is occupied; the other is abandoned. The houses were constructed in the early 1950s and, as such, are of historic age. The surrounding residential lots in the study area are vacant. Consultation with SHPO on December 1, 2020, confirmed that the two houses are ineligible for listing in the State Register of Historic Places or the NRHP (see Appendix C).

Though much of the study area and surrounding half-mile radius had been extensively investigated previously, an 8.5-acre Pima County–owned parcel of land in the study area was an exception, having been subjected to relatively limited previous investigation. The Pima County Office of Sustainability and Conservation’s Cultural Resources and Historic Preservation Division determined that this area had the potential to include terrace deposits containing buried cultural resources and requested that a geomorphological investigation be undertaken for the project in this area. Geomorphological fieldwork was subsequently completed for this 8.5-acre area, which is referred to as the “Treatment Area” in the cultural report (Huckleberry et al. 2020).

The geomorphological fieldwork of the Treatment Area assessed the potential for subsurface cultural resources. The results documented recent terrace deposits with very low potential for containing subsurface prehistoric cultural deposits.

An isolated occurrence consisting of a single ceramic sherd was discovered redeposited in relatively recent deposits. No archaeological sites were recorded, and there were no indications that sites would be likely in the Treatment Area. No site identification testing was conducted, and no additional archaeological work is recommended for the Treatment Area based on these results (Huckleberry et al. 2020).

**Environmental Impacts—Build Alternative**

Research identified two historic properties within the APE. The first is the historic Southern Pacific Railroad (SPRR) alignment, which has been determined eligible for listing in the NRHP pursuant to 36 CFR §§ 60.4(a) and (d) for its association with historic events and its information potential, respectively. The second is AZ AA:12:788(ASM), a prehistoric Huhugam site that has been determined NRHP-eligible pursuant to 36 CFR § 60.4(d) for its information potential. The SPRR alignment is located east of I-10, and AZ AA:12:788(ASM) is situated to the west.

If the Build Alternative is selected, there would be no potential to affect the SPRR alignment given the proposed scope of work. Construction west of I-10 would occur within the lateral boundary of AZ AA:12:788(ASM) but would not adversely affect the site. The Build Alternative has been designed in such a way that construction within AZ AA:12:788(ASM) would occur above ground, involving no excavation. Out of an abundance of caution, work within the site would be monitored by both a qualified archaeologist and a tribal monitor, in accordance with applicable permits, and a Monitoring and Discovery Plan (MDP) that would be developed. The MDP’s development would include collaboration with consulting parties as part of the Section 106 process.

Initial Section 106 consultation took place between November 8 and December 13, 2021, and was limited to preliminary utility relocation efforts. Though these took place within the SPRR’s administrative boundary, neither the alignment nor the infrastructure was affected. ADOT determined that the proposed “potholing” would have “no adverse effect” on historic resources, and SHPO subsequently concurred.
Section 106 consultation continued on December 13, 2021, with a review and comment period that ended on January 18, 2022. By way of this consultation, ADOT shared pertinent archaeological reports and described the undertaking in its entirety, including an expanded APE. ADOT also determined that the finding of “no adverse effect” remained appropriate for the undertaking.

If the Build Alternative is selected, additional Section 106 consultation would take place. Some of this may occur on an ad hoc basis, prompted by changes to the scope of work or APE, for example. ADOT also understands that collaborative consultation for the purpose of developing an MDP must occur prior to monitored construction.

**Environmental Impacts—No-Build Alternative**

Under the No-Build Alternative, no construction would occur. The No-Build Alternative would not have any direct or indirect effects on cultural resources.

**Environmental Commitments and/or Mitigation Measures**

**Contractor Responsibility**

- The contractor would contact the Arizona Department of Transportation Environmental Planning Historic Preservation Team (480.341.3029) at least 10 (ten) business days prior to the start of ground-disturbing activities to arrange for qualified personnel to monitor and be present during construction.

**Conclusion**

The proposed project is subject to Section 106 of the NHPA. Should the Build Alternative be selected, construction would have no effect on the SPRR and no adverse effect on AZ AA:12:788(ASM). To ensure the latter, construction within AZ AA:12:788(ASM) would be monitored by a qualified archaeologist and tribal cultural expert.

**F. Section 4(f) Resources**

Section 4(f) of the US Department of Transportation Act of 1966, as amended, states that the Department of Transportation “may approve a transportation program or project ... requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if (1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use” (49 USC 303[c]).

**Criteria**

Recreational resources are evaluated using four criteria to determine whether they are afforded protection under Section 4(f). The criteria are:

- **Public Ownership**—The property must be publicly owned through fee simple ownership, a public easement, or a long-term lease agreement. Recreational areas must be operated and managed by the public agency for the primary purpose of public recreation.

- **Primary Purpose**—The property is designated as a public park, recreation area, or wildlife and waterfowl refuge, and the primary purpose of the property is for recreation activities or wildlife and waterfowl refuge.
• **Open to Public**—The property must be open to the public.

• **Significance**—The property serves a major recreational role. The significance is determined by the Officials With Jurisdiction (OWJs). The OWJs are those officials of the agency or agencies that own or administer the property and are empowered to represent the agency on matters related to the property.

Cultural resources eligible for listing or listed in the NRHP under Criterion A, B, or C, and those listed under D that warrant protection in place (structures that cannot be removed and studied elsewhere), may be afforded protection under Section 4(f). These are commonly referred to as Section 4(f) “historic sites.”

**Exceptions**

Commonly used recreational facilities may not meet the criteria for Section 4(f) protections if the primary purpose is something other than recreation. For example, a flood control structure such as bank protection that is commonly used by the public for walking, running, or bicycle riding. Though the structures may have developed into a linear park, the primary function is flood control. In addition, a trail or multi-use path may be exempt if it falls within the Section 4(f) exemption clause: *Trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalks maintained [23 CFR subsection 774.13 (f)(3)].*

**Types of Use**

A “use” of a Section 4(f) resource, as defined in 23 CFR 774, occurs (1) when land is permanently incorporated into a transportation facility, (2) when there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purposes, or (3) when there is a constructive use of the Section 4(f) resource. A constructive use of a Section 4(f) resource occurs when the transportation project does not incorporate land from a Section 4(f) resource but the project’s proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. For example, a constructive use can occur when:

• The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f)

• The proximity of the proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource (an example of such an effect would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building or substantially detracts from the setting of a park or historic site that derives its value in substantial part due to its setting)

• The project results in a restriction of access that substantially diminishes the utility of a significant publicly owned park, recreation area, or historic site

The following section describes:

• The recreational resources that could meet the above evaluation criteria and could potentially be considered a Section 4(f) property and receive protections under Section 4(f) regulations

• How these resources would be impacted by the Build Alternative and the No-Build Alternative
Section 4(f) coordination with the OWJs for each potential Section 4(f) resource would be initiated by ADOT in compliance with Section 4(f). This coordination would address such considerations as the potential need for property acquisition, temporary closures, temporary trail or access detours, public outreach, and temporary signage, and would include concurrence on a Section 4(f) finding as appropriate, provided that the OWJs also concur with the project design.

Existing Conditions

The study area and a surrounding buffer area were examined to identify resources that could potentially be protected under Section 4(f). For the categories of parks, recreation areas, and wildlife and waterfowl refuges, the search area extended a quarter-mile beyond the study area boundary.

For cultural resources, a half-mile buffer around the study area was evaluated. No historic sites have been identified to date in the study area that would qualify for protection under Section 4(f).

Several publicly owned recreational facilities subject to protection under Section 4(f) if they were impacted by the project are located in the study area or the quarter-mile buffer (Figure 14).

The Chuck Huckleberry Loop Shared-Use Path

Developed by Pima County, The Loop is a system of paved, shared-use paths and short segments of bike lanes connecting Rillito, Santa Cruz, and Pantano river parks with the Julian Wash and Harrison Road greenways. There are currently over 120 miles of trails in The Loop, and an additional 11 miles are planned or under construction. The Loop extends through unincorporated Pima County and several municipal jurisdictions: Marana, Oro Valley, Tucson, and South Tucson. The trail is open to pedestrians, bicyclists, roller skaters, and equestrians. The Loop is publicly owned and open to the public, and, though some of the trails and greenways may be considered Section 4(f) resources, we must take a closer look at the segments that will be impacted within our study area.

Three existing segments of The Loop cross the study area on several alignments. These three segments are:

- The north bank of Rillito Creek (Rillito River Park)
- The south bank of Rillito Creek (Rillito River Park)
- The south side of the I-10 EBFR

The alignment of a planned segment of The Loop also crosses the study area:

- The west side of Sunset Road from the previously referenced I-10 EBFR trail segment to the north bank of the Santa Cruz River

The trail segments located within the banks of the Rillito Creek are managed by the PCFCD. Though these trails are enjoyed by thousands of Tucsonans every year, the primary purpose of these trails is to provide maintenance to the Rillito Creek infrastructure. Because the primary purpose of these trails is not for recreation, they do not qualify as Section 4(f) properties.

The multiple trail segments along the south side of the EBFR and the west side of Sunset Road are in similar situations; they are located within the transportation ROW of the adjacent road(s). As such, these segments fall into the Section 4(f) exception 23 CFR 774.13(f)(3), which means that these trails are also not considered Section 4(f) properties.
Pima Prickly Park

Just outside the study area limits to the north is Pima Prickly Park, a 9-acre desert park featuring native cactus and succulent species, ramadas, and multi-use paths. This is a Pima County–owned park that is open to the public and would be considered a Section 4(f) resource.
Figure 14. Potentially protected Section 4(f) resources
Dan Felix Memorial Park

Just northeast of the study area is Dan Felix Memorial Park, which is part of a regional park system and is easily accessible from Rillito River Park by foot or bicycle. This park supports soccer fields, ramadas, and a playground, among other features. This Pima County–owned park is open to the public and would be considered a Section 4(f) resource.

Environmental Impacts—Build Alternative

The Build Alternative does not use Section 4(f) resource properties.

The Chuck Huckleberry Loop Shared-Use Path

Though the trails within the study area are not Section 4(f) properties, Pima County intends to reconstruct the affected lengths of The Loop on a shifted alignment while accommodating a wider roadway profile. The Build Alternative would also construct a new segment of The Loop along the west side of Sunset Road south of I-10, in accordance with Pima County plans for expansion of The Loop, and construct other multimodal facilities (including ADA ramps).

North of I-10 where a new bridge would be constructed over Rillito Creek, adjustments would be made in the existing trail’s vertical alignment to satisfy required clearances between the trail and the underside of the bridge structure. Sidewalks and paved shoulders would be incorporated on the new segment of Sunset Road north of I-10, and new ADA-compliant ramps would be constructed to connect the new bridge over Rillito Creek with Rillito River Park and the associated segments of The Loop.

Ongoing coordination with PCNRPRD has occurred through monthly progress meetings and the environmental coordination kickoff meeting (January 7, 2020). Trail and park connectivity is anticipated to be enhanced as a result of the Build Alternative.

For some existing segments of The Loop, segments of trail would have to be abandoned and a shifted replacement alignment constructed. Some other segments of trail would be temporarily closed during construction to allow trail adjustments and new trail connections. Temporary trail detours would be planned through coordination with the PCNRPRD to reroute trail users around the construction zone.

Pima Prickly Park

With the Build Alternative, a new intersection would be constructed at the junction of Sunset Road and River Road, requiring improvements to a segment of River Road in the study area. River Road west of the new Sunset Road would be widened to the south (in the opposite direction of the park) to accommodate a new right-turn lane for the eastbound to southbound movement onto Sunset Road. This constitutes the closest construction to Pima Prickly Park, which is adjacent to and north of River Road. No take of Pima Prickly Park property would result from the project. Though Pima Prickly Park users could experience a temporary elevation in levels of noise, dust, and traffic congestion on River Road during construction, these impacts would not be severe and would cease following completion of project improvements in the vicinity. The park does not have activities that depend on a quiet setting. No temporary closure of Pima Prickly Park would be anticipated with construction of the Build Alternative. Ongoing coordination with PCNRPRD has occurred through monthly progress meetings and the environmental coordination kickoff meeting (January 7, 2020).
Dan Felix Memorial Park

Dan Felix Memorial Park is northeast of the project study area (see Figure 2). There would be no take of Dan Felix Memorial Park property as a result of the Build Alternative. The closest project construction activity to Dan Felix Memorial Park would be the construction of the new Sunset Road/River Road intersection and associated modifications to westbound River Road approaching the intersection. With these construction activities, park users could experience elevated levels of noise, dust, and traffic congestion during construction; however, these impacts would be temporary and minor and would cease following completion of project improvements in the vicinity. The park does not have activities that depend on a quiet setting. There would be no need to temporarily close Dan Felix Memorial Park with construction of the Build Alternative. Ongoing coordination with PCNRPRD has occurred through monthly progress meetings and the environmental coordination kickoff meeting (January 7, 2020).

Environmental Impacts—No-Build Alternative

Under the No-Build Alternative, no new segments of The Loop would be constructed, no additions would be made to trail connectivity in the study area, and no use of Section 4(f) resources in the study area would occur.

Conclusion

The Build Alternative would realign two existing segments of The Loop, which do not have the primary use of recreation, adjust the vertical alignment of at least one other existing segment, construct new segments of The Loop and other multimodal facilities (including ADA ramps), and connect these with existing trails. Trail and park connectivity would be enhanced as a result. Adjacent parks would experience short-term moderate noise impact associated with construction activities. Ongoing coordination with the PCFCD throughout final design would occur.

Under the No-Build Alternative, there would be no improvements in trail connectivity in the study area and no impacts to Section 4(f) resources in the study area.

G. Air Quality Analysis

Air quality is regulated by the Clean Air Act (CAA) of 1970 and the Clean Air Act Amendments of 1990, which direct the US Environmental Protection Agency (EPA) to develop and implement environmental policies and regulations that ensure cleaner air quality.

As required by the CAA and its Amendments, the EPA established National Ambient Air Quality Standards (NAAQS) for six “criteria” pollutants to protect public health and welfare. The six pollutants are: carbon monoxide (CO), nitrogen dioxide, ozone, particulate matter 10 microns or less, particulate matter 2.5 microns or less, sulfur dioxide, and lead. States are required to adopt standards that are at least as stringent as the NAAQS. The “primary” standards have been established to protect the public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation and other aspects of the general welfare.

The CAA requires that states classify air basins (or portions thereof) as “attainment” or “non-attainment” or “maintenance” with respect to criteria pollutants. If an air basin does not meet the NAAQS for one or more pollutants, the area is classified as “non-attainment” for that pollutant. For non-attainment areas, states are required to formulate and submit State Implementation Plans to the EPA.
that outline those measures the state uses to attain and maintain compliance with NAAQS (40 CFR 51). Maintenance areas are those that previously exceeded the NAAQS (non-attainment) for a criteria pollutant but are currently attaining the standard. Maintenance areas are required to develop a maintenance plan outlining steps for continued attainment over the maintenance period.

**Existing Conditions**

The project is in an area formerly designated as maintenance for CO (Tucson CO Maintenance Area) and designated as attainment or unclassified for all other criteria pollutants. The area had been subject to a CO maintenance plan for the past 20 years, beginning July 10, 2000. As of July 10, 2020, the Tucson CO Maintenance Area is in attainment for the 1-hour/8-hour CO NAAQS. Therefore, project-level conformity requirements no longer apply.

**Mobile Source Air Toxics**

The EPA also regulates mobile source air toxics (MSAT). Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

The purpose of this project is to create connectivity to address increasing growth in northwest Tucson by making roadway improvements to Sunset Road. The improvements include extending Sunset Road by 0.27 mile from the I-10 WBFR to River Road. Daily traffic volumes for 2045 associated with the proposed project range from about 16,000 to 23,000 vpd (Pima County 2020a). These volumes are well below FHWA’s threshold of 140,000 to 150,000 annual average daily traffic—the level at which the project could have a low potential for MSAT effects. This project has been determined to generate minimal air quality impacts for CAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project would not result in significant changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause a meaningful increase in MSAT impacts of the project from that of the No-Build Alternative.

Moreover, EPA regulations for vehicle engines and fuels would cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA’s Motor Vehicle Emissions Simulator (MOVES) 2014 model forecasts a combined reduction of over 90% in the total annual emissions rate for the priority MSAT from 2010 to 2050 while vehicle-miles of travel are projected to increase by over 45% (FHWA 2016). This would both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.

**Class I Areas**

Under the provisions of the CAA, the EPA has designated a number of areas in Arizona as Mandatory Class I Federal Areas, where visibility is an important value. These include national parks and wilderness areas. These mandatory Class I areas are listed in 40 CFR 81.403. Saguaro National Park Tucson Mountain District (West), which is 1.5 miles west of the study area, is not a Mandatory Class I Federal Area. The closest Mandatory Class I Federal Area is the Saguaro Wilderness Area in Saguaro National Park (East), more than 19 miles east of the study area.
Environmental Impacts—Build Alternative

Construction activities associated with the Build Alternative would generate air emissions and temporarily affect local air quality. The sources of these emissions would include:

- Fugitive dust generated during the demolition of existing facilities, such as structures and pavement
- Fugitive dust generated during excavation, grading, and loading and unloading activities
- Engine exhaust emissions from construction vehicles, construction worker vehicles, and diesel fuel-fired construction equipment
- Increased motor vehicle emissions associated with increased traffic congestion during construction
- Volatile organic compound and odorous compounds emitted during some construction activities, such as asphalt paving

Following construction, the generation of air emissions from the operation of motor vehicles on the roadway system would continue for the long term. With the Build Alternative, however, the transportation system would be improved to increase roadway and intersection capacity and enhance roadway connectivity. It would be expected to accommodate the predicted growth in vehicle trips out to 2045 with an acceptable LOS (LOS D or better), improving traffic flow and minimizing the emission increases associated with traffic congestion. In addition, future improvements in engine technology and cleaner vehicle power options would be expected to result in lower vehicle emissions than exist today. Overall impacts to air quality with the Build Alternative would be long-term, minor, and mostly beneficial.

Environmental Impacts—No-Build Alternative

Under the No-Build Alternative, the extension of Sunset Road from I-10 to River Road would not be built and the existing segment of Sunset Road south of I-10 would not be improved. There would be no construction-related air quality impacts associated with the No-Build Alternative. Roadway and intersection capacity and roadway connectivity in the study area would not be improved, and no new north–south access across I-10 and the UPRR would be constructed. The north–south trips generated out to 2045 that would have used the new Sunset Road extension would shift to the two closest crossings, El Camino del Cerro/Ruthrauff Road and Ina Road. This shifting of traffic would contribute to an increase in traffic congestion at these locations and, thereby, contribute to an increase in vehicular emissions compared with the Build Alternative. Anticipated future improvements in engine technology and cleaner vehicle power options would be expected to result in air quality improvements, though to a lesser extent than the Build Alternative. Overall impacts to air quality with the Build Alternative would be long-term, moderate, and both positive and negative.

Environmental Commitments and/or Mitigation Measures

Contractor Responsibility

- For milling activities, the roadway surface preceding the milling machine would be kept sufficiently wet so as to prevent the generation of any visible fugitive dust particles but not so wet as to cause excess runoff from the roadway surface onto the roadway shoulder.

Conclusion

The Build Alternative would result in minor and temporary air quality impacts during construction, and the overall impacts to air quality from its implementation would be long-term, minor, and mostly
beneficial. Without implementation of transportation improvements, the No-Build Alternative’s overall impact to air quality would be long-term, moderate, and both positive and negative.

**H. Noise Analysis**

Sound is created when an object vibrates and radiates part of its energy as acoustic pressure or waves through a medium, such as air, water, or a solid object. Sound levels are expressed in units called decibels (dB). Noise is generally defined as the undesired component of sound. Noise levels are also expressed in decibels. Because the human ear does not respond equally to all frequencies or pitches, measured noise levels are adjusted or weighted to correspond to the frequency-response of the human hearing capability and the human perception of loudness. The weighted noise level corresponding to the human ear is designated as A-weighted in decibels, or dBA.

Typical noise levels range from 40 dBA (the daytime level in a quiet living room) to 85 dBA (the approximate level from a sidewalk adjacent to a roadway during rush-hour traffic). A 3-dBA change in noise level may be perceptible to most listeners, whereas a 10-dBA change may be perceived as a doubling of the noise level.

**Existing Conditions**

Existing noise-sensitive land uses in the study area consist of six residences and undeveloped lands that do not have active building permits. Short-term noise level monitoring was conducted for the project on May 20, 2020, during the afternoon peak traffic hours. Three measurement locations were chosen to represent noise-sensitive receptors in residential communities and to validate the noise model. Three 10-minute interval equivalent noise level measurements (Leq) were conducted at each site. Noise level monitoring helps describe the existing noise environment throughout the study area and captures the contribution of traffic noise from surrounding roadways. Measured noise levels may include contributions from other noise sources, including but not limited to, airplanes, trains, wind, birds, and insects. The measured noise level ranged from 57 dBA to 74 dBA.

The key guidance document used to determine noise impacts for noise-sensitive land areas and receptors is the ADOT Noise Abatement Requirements (NAR) (ADOT 2017). Impacts are based on the noise levels approaching the FHWA Noise Abatement Criteria (NAC) for different land use categories (Table 9). The ADOT NAR defines “approaching” as within 1 dBA of the FHWA NAC for Activity Categories A, B, C, D, and E. There are no noise impact thresholds for Activity Category F or G. The ADOT NAR determines highway traffic noise level impacts and considers mitigation for residential land uses when the predicted noise level is equal to or greater than the noise impact threshold of 66 dBA. In addition, guidelines also state that noise abatement should be considered when the noise levels substantially exceed the existing noise levels (23 CFR 772.5). This criterion is defined by ADOT as increases in the Leq of 15 dBA or more above existing noise levels. ADOT also indicated that noise levels should be rounded to the nearest integer prior to impact determination and in project reports. The results of the noise analysis are reported in Final Noise Analysis Technical Report, Sunset Road : I-10 to River Road (Pima County 2020c).
Table 9. FHWA Noise Abatement Criteria

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>dBA, LAeq1h</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 (exterior)</td>
<td>Land on which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose</td>
</tr>
<tr>
<td>B</td>
<td>67 (exterior)</td>
<td>Residential</td>
</tr>
<tr>
<td>C</td>
<td>67 (exterior)</td>
<td>Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, play grounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings</td>
</tr>
<tr>
<td>D</td>
<td>52 (interior)</td>
<td>Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio structures, recording studios, schools, and television studios</td>
</tr>
<tr>
<td>E</td>
<td>72 (exterior)</td>
<td>Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in categories A–D or F</td>
</tr>
<tr>
<td>F</td>
<td>—</td>
<td>Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing</td>
</tr>
<tr>
<td>G</td>
<td>—</td>
<td>Undeveloped lands that are not permitted</td>
</tr>
</tbody>
</table>

Source: FHWA 2011

The FHWA-approved Traffic Noise Model Version 2.5 (TNM 2.5) is the computer noise model used for the prediction of highway and roadway traffic noise levels. The output of the model is dependent on variables, which include atmospheric conditions, roadway geometries, topographic data, ground types, noise receiver locations, traffic volumes, vehicle speed, and vehicle mix.

Throughout the preparation of this noise analysis technical report, the consultant has been in communication with Pima County officials to confirm all potential new developments being planned within the project corridor for inclusion in this analysis.

Traffic noise impacts occur when the predicted traffic noise levels approach or exceed the FHWA noise abatement criteria or substantially exceed the existing noise levels (increase of 15 dBA or more).

FHWA and ADOT require that feasible and reasonable measures be considered and evaluated to abate traffic noise at all identified traffic noise impacts. Abatement measures include:

- Acquisition of ROW to provide a buffer zone
- Change of horizontal or vertical alignment
- Insulation of Category D land uses
- Traffic management measures
- Noise barriers

**Environmental Impacts—Build Alternative**

A summary of the noise analysis results is presented in Table 10. For the Build Alternative, predicted unmitigated noise levels in 2045 would range from 59 dBA to 64 dBA, and the noise level difference from existing conditions would range from 2 to 5 dBA at each representative location. The increases
would occur due to predicted increases in traffic volumes and congestion. Under the Build Alternative, no locations would exceed ADOT’s NAR “approach” of the FHWA NAC threshold of 66. The consideration of noise abatement measures was not necessary for the proposed project because there are no impacted receptors with the future build scenario (2045 Build Alternative).

Table 10. TM 2.5 Predicted Noise Levels—Build Alternative and No-Build Alternative

<table>
<thead>
<tr>
<th>Receiver ID</th>
<th>NAC Category</th>
<th>No. of Dwelling Units</th>
<th>Description of Receiver</th>
<th>2019 Existing (dBA)</th>
<th>2045 Build Alternative (dBA)</th>
<th>2045 No-Build Alternative (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>B</td>
<td>1</td>
<td>Residential</td>
<td>–</td>
<td>63</td>
<td>62</td>
</tr>
<tr>
<td>R2</td>
<td>B</td>
<td>1</td>
<td>Residential</td>
<td>–</td>
<td>63</td>
<td>61</td>
</tr>
<tr>
<td>R3</td>
<td>B</td>
<td>1</td>
<td>Residential</td>
<td>–</td>
<td>61</td>
<td>60</td>
</tr>
<tr>
<td>R4</td>
<td>B</td>
<td>1</td>
<td>Undeveloped land</td>
<td>–</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>R5</td>
<td>B</td>
<td>1</td>
<td>Residential</td>
<td>–</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>R6</td>
<td>G</td>
<td>–</td>
<td>Undeveloped land</td>
<td>–</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>R7</td>
<td>G</td>
<td>–</td>
<td>Undeveloped land</td>
<td>–</td>
<td>64</td>
<td>63</td>
</tr>
<tr>
<td>R8</td>
<td>G</td>
<td>–</td>
<td>Undeveloped land</td>
<td>–</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>R9</td>
<td>G</td>
<td>–</td>
<td>Undeveloped land</td>
<td>–</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>R10</td>
<td>B</td>
<td>1</td>
<td>Residential</td>
<td>–</td>
<td>59</td>
<td>60</td>
</tr>
<tr>
<td>Mon 1</td>
<td>B</td>
<td>–</td>
<td>Monitoring site</td>
<td>68</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>Mon 2</td>
<td>B</td>
<td>–</td>
<td>Monitoring site</td>
<td>60</td>
<td>61</td>
<td>60</td>
</tr>
<tr>
<td>Mon 3</td>
<td>B</td>
<td>–</td>
<td>Monitoring site</td>
<td>57</td>
<td>59</td>
<td>59</td>
</tr>
</tbody>
</table>

Construction Noise and Vibration

Construction noise is anticipated for roadway improvement projects and lasts for the duration of construction. Construction activities are temporary and generally of short-term duration. Depending on the nature of construction operations, the duration of the noise could last from seconds (e.g., a truck passing a customer) to months (e.g., constructing a bridge). Construction noise is also intermittent and depends on the type of operation, location, and function of the equipment and the equipment usage cycle. Table 11 shows the overall predicted maximum noise level (Lmax) of the construction equipment at 50 feet for different phases of roadway construction.

Ground vibration and ground-borne noise can also be a source of annoyance to individuals who live or work close to vibration-generating activities. Pile driving, demolition activity, blasting, and crack-and-seat operations are the primary sources of vibration. The impact of pile driving can be the most significant source of vibration at construction sites. It is recommended to apply methods that may be practical and appropriate in specific situations to reduce vibration to an acceptable level.

Table 11. Construction Equipment Noise

<table>
<thead>
<tr>
<th>Phase</th>
<th>Equipment</th>
<th>Noise Limit (Lmax) at 50 feet, dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site clearing</td>
<td>Dozer</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>Backhoe</td>
<td>80</td>
</tr>
<tr>
<td>Grading and earthwork</td>
<td>Scraper</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>Grader</td>
<td>85</td>
</tr>
<tr>
<td>Foundation</td>
<td>Backhoe</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Front loader</td>
<td>80</td>
</tr>
<tr>
<td>Base preparation</td>
<td>Compressor (air)</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Dozer</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: FHWA 2006
**Environmental Impacts—No-Build Alternative**

Under the No-Build Alternative, the primary elements of the proposed project would not be built. Predicted unmitigated noise levels in 2045 would range from 59 dBA to 63 dBA, and the noise level increase from existing conditions would range from 2 to 5 dBA at each representative location. The increases would occur due to predicted increases in traffic volumes and congestion. Under the No-Build Alternative, no locations would exceed ADOT’s NAR “approach” of the FHWA NAC threshold of 66 dBA (see Table 10).

**Environmental Commitments and/or Mitigation Measures**

PCDOT and the contractor would follow the Pima County *Noise Analysis and Mitigation Guidance for Major Roadway Projects*, April 2008.

**Conclusion**

The FHWA-approved noise model TNM 2.5 was used to evaluate traffic noise for the 2045 Build and No-Build alternatives. In comparison, noise predictions for 2045 for the Build Alternative were the same as, or one or two dBA higher than, the No-Build Alternative. Noise impacts did not occur at any of the six noise receivers, representing six noise-sensitive receptors. The consideration of noise abatement measures was not necessary because there are no impacted receptors in the 2045 Build Alternative. A final determination of noise abatement measures would be made upon completion of the project design, the public involvement process, compliance with the ADOT NAR, and ADOT and FHWA approval.

With the Build Alternative, construction noise would be generated and would last for the duration of construction. Ground vibration can also be a source of annoyance to individuals who live or work close to construction-related, vibration-generating activities.

I. **Utilities and Railroad**

**Existing Conditions**

Utility maps from ADOT and PCDOT projects that overlap the current study area were used to identify existing utilities in the study area. These utilities include a full range of communications, electric power, natural gas, petroleum, irrigation, water, and wastewater. All utilities in the study area were sent a preliminary notification for this project to provide their latest facility maps, prior rights documentation, and any plans for betterments or expansions of facilities.

The UPRR is north of and parallel to I-10 through the study area. A future UPRR access road/drainageway is planned to adjoin the railroad. There are no grade-separated crossings of the UPRR in the study area.

Table 12 lists the names of railroad and utility companies with facilities in the study area. The facility type is also noted. Project coordination has been initiated or is ongoing with each of these companies.
Table 12. Railroad and Utility Companies Within the Study Area

<table>
<thead>
<tr>
<th>Company</th>
<th>Facility Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Telephone &amp; Telegraph</td>
<td>Underground fiber optics</td>
</tr>
<tr>
<td>Arizona Department of Transportation</td>
<td>Freeway Management System (FMS), signals, lighting, power and irrigation</td>
</tr>
<tr>
<td>CenturyLink Local</td>
<td>Underground copper cables and fiber optics</td>
</tr>
<tr>
<td>CenturyLink National</td>
<td>Long-haul fiber optic system</td>
</tr>
<tr>
<td>Kinder Morgan</td>
<td>Petroleum lines</td>
</tr>
<tr>
<td>Metro Water</td>
<td>Water lines</td>
</tr>
<tr>
<td>Pima County Regional Wastewater and Reclamation</td>
<td>Sewer lines</td>
</tr>
<tr>
<td>Department</td>
<td></td>
</tr>
<tr>
<td>Pima County Information Technology</td>
<td>Sewer monitoring system</td>
</tr>
<tr>
<td>Pima County</td>
<td>Intelligent Transportation Systems (ITS), irrigation</td>
</tr>
<tr>
<td>Southwest Gas</td>
<td>High-pressure and distribution gas lines</td>
</tr>
<tr>
<td>Sprint</td>
<td>Long-haul fiber optic system</td>
</tr>
<tr>
<td>Tucson Electric Power</td>
<td>Local and transmission electric systems (underground and overhead)</td>
</tr>
<tr>
<td>Tucson Water</td>
<td>Water lines</td>
</tr>
<tr>
<td>Verizon</td>
<td>Long-haul fiber optic system</td>
</tr>
<tr>
<td>Union Pacific Railroad</td>
<td>Railroad, power, and communication systems</td>
</tr>
</tbody>
</table>

Environmental Impacts—Build Alternative

The Build Alternative would require relocations or modifications of utility facilities at multiple locations in the study area, the installation of new maintenance access to some of these facilities, and the installation of new utility lines or extensions (e.g., electric power for proposed new street lighting and traffic signals, and irrigation infrastructure for proposed landscaping).

During the DCR/EA phase, coordination with utility companies (electric, natural gas, water, sewer, and telecom services) was initiated to determine how the future Sunset Innovation Campus would be serviced.

The Build Alternative would not be expected to impact the long-haul communication and petroleum lines parallel to the UPRR mainline and within the UPRR ROW. The location of these facilities would need to be verified during final design.

The extended alignment of Sunset Road from the I-10 WBFR to River Road would cross the UPRR alignment and adjoining planned access road/drainageway on a grade-separated bridge structure. Two bridge structures were identified for consideration. One bridge structure would span the entire UPRR ROW and referenced access road/drainageway clear of any piers or obstructions. UPRR guidelines require that the entire ROW be clear of any piers or obstructions. The other option includes a pier in the UPRR ROW and was included in the Initial Bridge Selection report to evaluate the cost savings if UPRR provides a variance. To minimize impacting railroad operations, prefabricated superstructures were identified for the crossing.

During final design, the extent of impact would be determined and coordinated with the affected utilities. This coordination would include determination of prior rights with each utility and the UPRR. Design plans are made available to the utilities early in the process to facilitate planning and scheduling of service relocations or modifications. Minor modifications to the electrical distribution lines on Tres Nogales Road are expected. Anticipated power outages will be limited to approximately two hours
in duration. A subsurface utility engineering investigation, including potholing, is recommended during
the final design phase to verify conflict locations of all utilities prior to construction.

Environmental Impacts—No-Build Alternative
Under the No-Build Alternative, no impact to utilities or the railroad would occur.

Environmental Commitments and/or Mitigation Measures
The contractor would follow the ADOT Standard Specifications for Road and Bridge Construction.

Conclusion
The preliminary design stage is not of sufficient engineering detail to determine the full extent of
utilities in conflict with the proposed roadway improvements. Coordination with all affected utilities,
including the UPRR, would continue throughout design and construction to minimize costs and potential
service outages to customers.

J. Visual Resources
A Visual Assessment Report was prepared for the proposed project (Pima County 2020d). This section
describes the characteristics of the viewshed in the study area and potential impacts on visual
resources. For roadway improvement projects, visual resources are considered from two perspectives:
(1) motorists’ views from the roadway and (2) the surrounding community’s views of the roadway.
Visual resources and effects to these resources are defined by identifying key views and considering
community goals and preferences, when applicable.

Existing Conditions
The Sunset Road project is in northwest Tucson, just south of the confluence of Rillito Creek and the
Santa Cruz River. The project is not within an ADOT- or Pima County–designated scenic corridor. The
area is highly modified from natural conditions.

Outlying views are of the Tortolita Mountains to the northwest, the Santa Catalina Mountains to the
northeast, and the Tucson Mountains to the west. Rillito Creek has soil-cement banks and has recently
had sediment removed for flood control purposes, leaving it relatively unvegetated. The most dominant
visual elements within the river are nonnative and invasive tamarisk (*Tamarix* spp.) trees, which are
proposed for removal in conjunction with the project.

North of Rillito Creek, the land slopes gradually upward. Pima Prickly Park and Dan Felix Memorial Park
lie just northwest and east of River Road. South of Rillito Creek, the land is relatively flat between the
river and the UPRR tracks that flank the east edge of I-10. This area is highly disturbed, includes the
existing PCNRPRD maintenance yard, and has mounds of previously dumped soil. A large part of the
area lacks established native vegetation.

In the study area, The Loop follows both sides of Rillito Creek. Trail users can access the path system
from River Road or Camino de la Tierra. Overhead power lines traverse the Rillito Creek channel and
cross The Loop, transitioning to the west upper bank in the study area.
**Environmental Impacts—Build Alternative**

The visual assessment prepared for the proposed project describes the existing viewsheds in the study area and vicinity and how the viewsheds would be altered by proposed project elements. The surrounding community includes residents, park users, The Loop users, and adjacent roadway (River Road and Camino de Oeste) users.

Residents living south of the new roadway would have the greatest modification in views as a result of the project. Preconstruction views to the north are of the UPRR and I-10, open space (all disturbed), and Pima County facilities. Post-construction, views would be of the roadway side slopes (fill slopes would be approximately 20 feet tall) and mechanically stabilized earth retaining walls proposed at a new cul-de-sac off Tres Nogales Road.

Views from The Loop would also be affected by the project, with the addition of the new bridge over Rillito Creek and the new tie-in of Sunset Road to River Road.

Views from Camino de Oeste would change for motorists due to the addition of the new bridge, and there would be a minor modification in views from River Road due to the proposed roadway tie-in.

The proposed structure additions would be consistent with recent transportation enhancements along the I-10 corridor. The design of the bridge elements and the incorporation of public artwork to include sculptures on both sides of the bridge would take into account The Loop users (and their relatively close-up views of the bridge) and Sunset Road users. Roadway side slopes for the new Sunset Road would be predominant features. Revegetation of the roadway side slopes would be undertaken to create a more natural appearance for these predominant features.

**Environmental Impacts—No-Build Alternative**

Under the No-Build Alternative, no impact to visual quality would occur.

**Environmental Commitments and/or Mitigation Measures**

PCDOT and the contractor would follow the ADOT *Standard Specifications for Road and Bridge Construction*.

**Conclusion**

Views of residents living south of the study area and users of The Loop and adjacent roadways would be altered. The proposed structure additions are consistent with recent transportation enhancements along the Interstate corridor. A public art component would be integrated with the bridge design. Design of bridge elements and incorporation of artwork would take into account The Loop users and Sunset Road users. The roadway side slopes for the new Sunset Road would be predominant features. Revegetation of the roadway side slopes would be undertaken to create a more natural appearance.

**K. Drainage and Floodplain Considerations**

Executive Order 11988, Floodplain Management, requires that impacts to floodplains be evaluated for all federal actions and directs agencies to reduce impacts to floodplains, minimize flood risks on human safety and well-being, and restore and preserve floodplain values. Floodplains are delineated and managed by the Federal Emergency Management Agency (FEMA). A floodplain is land subject to periodic flooding from an adjacent body of water. National Flood Insurance Program Regulations (44 CFR 65.12) require compliance with community floodplain ordinances.
A 100-year flood is a storm having a 1% chance of being exceeded in magnitude in any given year. The 100-year floodplain includes areas adjoining a water body that are inundated by water during a 100-year flood. The floodway is the area within the floodplain where the water is likely to be the deepest and fastest; this area should be kept free of obstructions to allow 100-year floodwaters to move downstream without increasing the water surface elevation more than 1 foot. FEMA Flood Insurance Rate Maps depict the delineated 100-year floodplain. The 100-year floodplain is divided into flood zones including:

- Zone A: areas subject to inundation by 100-year floods that have been identified through qualitative methodologies; no base flood elevations have been determined
- Zone AE: areas subject to inundation by 100-year floods that have been identified through quantitative methodologies; base flood elevations have been determined
- Zone AH: areas subject to inundation by 100-year shallow floods where ponding occurs and flood depths are between 1 and 3 feet deep; base flood elevations have been determined
- Zone AO: areas subject to inundation by 100-year shallow floods typified by sheet flow on sloping terrain with flood depths of between 1 and 3 feet; base flood elevations have been determined
- Zone X: areas of 500-year flood, areas of 100-year flood with average depths of less than 1 foot

**Existing Conditions**

Rillito Creek is an ephemeral drainage that flows through the north portion of the study area. It runs from southeast to northwest and discharges into the Santa Cruz River approximately one mile downstream from the study area.

Drainage characteristics vary across the study area. The area south of I-10 is overland flow to the Santa Cruz River via swales, catch basins, and culverts. North of I-10, drainage patterns comprise shallow flows, with runoff generally from east to northwest, parallel to the UPRR ROW, and with several outfalls to Rillito Creek. Rillito Creek in the study area is an improved trapezoidal channel with an earthen bottom, soil cement bank protection, and vehicular maintenance access ramps. At the crossing point for the new bridge, the channel can contain the 100-year regulatory discharge within its banks. River Road is a divided four-lane arterial street with catch basins and storm drain system. Runoff from the River Road ROW is conveyed to Rillito Creek via the storm drain system and culverts.

A review of FEMA Flood Insurance Rate Maps 04019C1660L and 04019C1666L indicates that the study area includes the 100-year floodplain (FEMA 2020). Rillito Creek is identified as a Floodway-Zone AE, and other areas of Zone AE were also delineated (Figure 15). The 100-year floodplain falls within the jurisdictional limits of the City of Tucson and unincorporated Pima County. Coordination has been initiated with city and county floodplain managers.
Figure 15. Floodplains
Environmental Impacts—Build Alternative

With the Build Alternative, the proposed Sunset Road bridge would cross Rillito Creek floodway and its floodplain, and a bridge would be constructed. No other drainages would be impacted as a result of the project. Current river topography would be updated during final design. The project is not expected to substantially modify the topography of the floodplain by placement or removal of materials within the floodplain; however, due to the need to shift the north bank of Rillito Creek for construction of the new Sunset Road bridge structure, the project would follow FEMA’s Conditional Letter of Map Revision (CLOMR)/Letter of Map Revision (LOMR) process. It is anticipated that no new properties would be subject to additional flood hazard. The final designer would coordinate with the Pima County Regional Flood Control District and the City of Tucson.

The widening of existing roadways and the construction of a new roadway under the Build Alternative would increase surface areas subject to precipitation runoff. Under the Build Alternative, new on-site, off-site, and riverine design features would be installed to collect, store, and/or convey that runoff.

On-site features include swales, channels, catch basins, and storm drains to collect and convey on-site flows to logical outfalls. In addition, bridge deck drains would collect and shed pavement runoff from the roadway. Off-site features include roadside earthen channels, concrete channels, and culverts to capture and convey stormwater to logical outfalls. The riverine design features consist of a three-span bridge with cylindrical piers and vertical abutments to adequately convey the FEMA and design discharges in Rillito Creek while minimizing the local scour associated with a bridge.

Environmental Impacts—No-Build Alternative

Under the No-Build Alternative, no modifications or improvements would be made to drainage structures. No impact on floodplains would occur.

Environmental Commitments and/or Mitigation Measures

Pima County Department of Transportation Design Responsibility

- During final design, the Pima County Department of Transportation would prepare a Conditional Letter of Map Revision and a Letter of Map Revision to document changes to the floodplain and floodway in accordance with Federal Emergency Management Agency requirements.

Conclusion

The floodplain would have to be altered to accommodate a shift in the north bank of Rillito Creek as a result of the Build Alternative. The CLOMR and LOMR process would be followed during final design of the proposed project.

L. Clean Water Act Sections 404, 401, 408, and the National Pollutant Discharge Elimination System

The Clean Water Act (CWA) is the primary federal statute governing discharge of pollutants into jurisdictional Waters of the United States (Waters), which, in Arizona, include perennial and ephemeral watercourses and their tributaries and adjacent wetlands. The principal goal of the CWA is to establish water quality standards to restore and maintain the chemical, physical, and biological integrity of the nation’s Waters by preventing point (concentrated output) and nonpoint (widely scattered output) pollution sources. The CWA program regulates the placement of fill or dredged material into Waters.
Section 404 of the CWA “requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the discharge of dredged or fill material into all Waters, including wetlands. Discharges of fill material generally include, without limitation: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other materials for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection or reclamation devices such as riprap, groins, seawalls, breakwaters and revetments; beach nourishment; levees; fill for intake and outfall pipes and subaqueous utility lines; fill associated with the creation of ponds; and any other work involving the discharge of fill or dredged material” (US Army Corps of Engineers [Corps] 2020a).

Section 401 of the CWA requires any applicant requesting a federal permit or license for activities that may result in discharge into Waters to first obtain a Section 401 certification from the state in which the discharge originates. The Section 401 certification verifies that the prospective permits comply with the state’s applicable effluent limitations and water quality standards. Federal permits or licenses are not issued until the Section 401 certification is obtained. For this project, the Arizona Department of Environmental Quality (ADEQ) is the agency responsible for Section 401 certification. If a project meets criteria for conditional Section 401 certification, notification to the ADEQ is not required. However, if a project does not meet criteria for conditional certification, such as projects occurring within 0.25 mile of unique or impaired waters, an individual Section 401 certification application to the ADEQ is required.

Section 402 of the CWA formed the National Pollutant Discharge Elimination System (NPDES), which regulates pollutant discharges, including stormwater, into Waters. A NPDES permit sets specific discharge limits for point-source pollutants into Waters and outlines special conditions and requirements for a particular project to reduce impacts to water quality. In 2002, the EPA authorized the ADEQ to administer the NPDES program at the state level, called the Arizona Pollutant Discharge Elimination System (AZPDES). AZPDES permits require that the project be designed to protect Waters, erosion control best management practices (BMPs) be implemented, and a Stormwater Pollution Prevention Plan (SWPPP) be prepared for construction activities with one or more acres of ground disturbance. Municipal Separate Storm Sewer Systems (MS4s) convey stormwater runoff through drains, streets, and open channels, directly discharging untreated stormwater into retention basins, washes, rivers, or lakes. Municipalities operating MS4s within local urbanized areas designated by the EPA or the ADEQ are required to obtain individual discharge permits under NPDES or AZPDES authority. ADOT, the City of Tucson, and Pima County are MS4s and implement individual permits in the study area.

The ADOT MS4 permit authorizes discharges of stormwater and other discharges to Waters for activities associated with the MS4 operated by ADOT; this includes Statewide Stormwater Management Programs, BMPs, and monitoring of outfalls following storm events.

The City of Tucson and Pima County have similar MS4 permits specific to their facilities and operations.

The Corps has constructed many civil works projects in partnership with stakeholders across the United States. To ensure that these projects continue to provide their intended benefits to the public, Congress mandated that any use or alteration of a civil works project by another party is subject to the approval of the Corps. This requirement was established in Section 14 of the Rivers and Harbors Act of 1899, which has since been amended several times and is codified at 33 USC 408 (Section 408). “Section 408 provides that the Corps may grant permission for another party to alter a civil works project upon a determination that the alteration proposed would not be injurious to the public interest and would not impair the usefulness of the civil works project” (Corps 2020b).
Existing Conditions

Clean Water Act

Aerial photography, Pima Maps (Pima County 2020b), and field observations were used to determine potential presence of jurisdictional Waters in the study area. Within the survey area, one drainage, Rillito Creek, has been preliminarily identified as potential Waters. Rillito Creek flows from southeast to northwest and joins the Santa Cruz River approximately 0.8 mile downstream from the northwest edge of the survey area. The Santa Cruz River is designated an impaired waters by the Corps. The Corps issued a Preliminary Jurisdictional Delineation (PJD) of the project study area on March 16, 2020. The PJD identified 7.785 acres of Waters in the study area.

Throughout much of the developed Tucson basin, including the portion impacting this project, the Rillito River consists of an earthen bottom with soil cement bank protection. The Corps constructed soil cement bank protection on both banks of the Rillito Creek in 1995, leaving the wash bottom earthen (Gila River and Tributaries, Arizona and New Mexico, Rillito River, Tucson, Arizona, Bank Protection; Alvernon Way to North Campbell Avenue and Camino de la Tierra to Santa Cruz River, 1995). The project was completed for flood control and erosion protection, providing containment of Rillito Creek 100-year flood flows, protection of the banks from erosion, and prevention of lateral migration of the creek, and is maintained by the Pima County Regional Flood Control District. This project falls within the Camino de la Tierra to Santa Cruz River footprint of the original Corps civil works project.

MS4s convey stormwater runoff through drains, streets, and open channels, directly discharging untreated stormwater into retention basins, washes, rivers, or lakes. Municipalities operating MS4s within local urbanized areas designated by the EPA or the ADEQ are required to obtain individual discharge permits under NPDES or AZPDES authority. ADOT, the City of Tucson, and Pima County are MS4s and implement individual permits in the study area. The ADOT MS4 permit authorizes discharges of stormwater and other discharges to Waters for activities associated with the MS4 operated by ADOT; this includes Statewide Stormwater Management Programs, BMPs, and monitoring of outfalls following storm events.

The City of Tucson and Pima County have similar MS4 permits specific to their facilities and operations.

Environmental Impacts—Build Alternative

Clean Water Act Section 404/401

This project will result in a total of 0.44 acre of impact to Waters (0.0009 acre of permanent impact and 0.44 acre of extended temporary impacts). Within the ordinary high water mark of Rillito River, permanent impacts to potential Waters include impacts from three bridge columns. Due to the project duration of approximately nine months, extended temporary impacts to Waters include equipment maneuvering and access. The project is anticipated to be administered by ADOT during construction, and a Regional General Permit 96 with a Pre-Construction Notification is required. The current Regional General Permit is in effect until May 6, 2026. The proposed bridge structure is within one mile of the Santa Cruz River, which is classified as an impaired water; therefore, a Section 401 Water Quality Certification from the ADEQ would be required.

Clean Water Act Section 402

Construction activities such as clearing, grading, trenching, and excavating would disturb soils and sediment. If not managed properly, disturbed soils and sediments could be washed into nearby...
drainages and impact water quality. To control construction-related pollutant discharges into Waters, PCDOT would prepare and implement erosion and sediment control plans, details, and specifications using BMPs from the ADOT Erosion and Pollutant Control Manual for Highway Design and Construction (ADOT 2020). In addition, ADOT would follow the ADOT Post-Construction Best Management Practices Manual for Water Quality (ADOT 2016). A Notice of Intent would be filed with the ADEQ and the MS4 jurisdictions (City of Tucson, Pima County) to request coverage under the AZPDES Construction General Permit. These design and construction activities would be documented in a SWPPP.

Clean Water Act Section 408
This project falls within the Camino de la Tierra to Santa Cruz River footprint of the original Corps civil works project. Because the study area includes bank protection previously constructed by the Corps and the Build Alternative would involve the modification of that bank modification, a Section 408 permit inquiry would need to be prepared and submitted to the Corps once the environmental document is complete (sans CWA permits). The Section 408 permit inquiry is submitted in conjunction with the CWA Section 404/401 permit application. This project has been designed to avoid impacts to Corps facilities. The PCFCD issued a Statement of No Objection to the project and will file a Section 408 permit inquiry with the Corps.

Environmental Impacts—No-Build Alternative
Clean Water Act
Under the No-Build Alternative, no modifications to existing drainages would occur, and no impacts to CWA resources would occur.

Environmental Commitments and/or Mitigation Measures
PCDOT and the contractor would follow the ADOT CWA Section 404/401 Guidance Manual, the ADOT Erosion and Pollution Control Manual for Highway Design and Construction, and the ADOT Standard Specifications for Road and Bridge Construction.

Pima County Department of Transportation Design Responsibilities
• During final design, the Pima County Department of Transportation would determine Clean Water Act Section 404, Section 401, and Section 408 permitting needs and would follow permitting requirements.
• No work would take place within Rillito Creek or Cañada del Oro Wash until Section 408 and Section 404/401 permits have been obtained.

Conclusion
The proposed project is not expected to result in substantive impacts to CWA resources or result in degradation of water quality. The modifications to existing drainages would be minor, regulatory requirements would be followed, and BMPs would be implemented to minimize any impacts due to storm-related runoff into the storm sewer system and receiving waters. The project would be expected to require a Section 404 permit, and a Section 408 permit inquiry will be submitted to the Corps. The project would be conditionally certified under Section 401. A Notice of Intent would be filed with the ADEQ and the MS4 jurisdictions (City of Tucson, Pima County) to request coverage under the AZPDES Construction General Permit.
M. Biological Resources

Biological resources include native plants, habitat, and protected plant and animal species. These resources are regulated under various state and federal laws or regulations:

- Arizona Native Plant Act (Arizona Revised Statutes, Title 3, Chapter 7)
- Section 7(c) of the Endangered Species Act (ESA) of 1973
- Migratory Bird Treaty Act (50 CFR 10.13)
- Bald and Golden Eagle Protection Act
- Fish and Wildlife Coordination Act

A Biological Evaluation (BE) was prepared for the project and approved by Pima County on June 22, 2020, and by ADOT on December 17, 2021. The document evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the project on listed species and/or critical habitat.

Existing Conditions

Threatened and Endangered Species

The US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system was accessed on October 12, 2021 (Consultation Code: 02EAAZ00-2020-SLI-0146) and the Arizona Game and Fish Department (AGFD) Arizona Environmental Online Review Tool (Online Review Tool) was accessed on November 8, 2021 (HGIS-10046); results of both are included in the BE. The ESA species list from the IPaC receipt was reviewed by a qualified biologist (Maria M. Altemus, EcoPlan Associates, Inc.), and the species are listed in the BE. The IPaC and the AGFD Online Review Tool results were reviewed for the presence of critical habitat within the action area; however, neither identified critical habitat within the search area for the project. No suitable habitat for threatened or endangered species was identified in the study area; therefore, no species were analyzed in detail in the BE.

Other Special Status Species

A portion of the study area overlaps the permit area for the Pima County Multi-Species Conservation Plan. In addition, the Tucson Habitat Conservation Plan identifies conservation goals and objectives for seven species. Two of those seven species—cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum) and yellow-billed cuckoo (Coccyzus americanus)—were documented within 3 miles of the study area by the AGFD Online Review Tool.

Species of Greatest Conservation Need

The AGFD Online Review Tool included a list of Species of Greatest Conservation Need (SGCN), as classified by the AGFD, known to occur within 3 miles of the project. Arizona ridge-nosed rattlesnake (Crotalus willardi willardi), American peregrine falcon (Falco peregrinus anatum), Sinaloan narrow-mouthed toad (Gastrophryne mazatlanensis), cactus ferruginous pygmy-owl, Sonoran Desert tortoise (Gopherus morafkai), Gila monster (Heloderma suspectum), desert mud turtle (Kinosternon sonoriense sonorensis), lesser long-nosed bat (Leptonycteris yerbabuenae), cave myotis (Myotis velifer), Gila topminnow (Poeciliopsis occidentalis occidentalis), Brazilian free-tailed bat (Tadarida brasiliensis), and desert box turtle (Terrapene ornate luteola) were identified by the AGFD Online Review Tool as being SGCN; however, the BE determined that these species would not be affected by the project. In addition,
the AGFD was sent a scoping letter regarding the project, and the agency returned a response letter that did not include any species-specific concerns for SGCN related to this project. No protection of SGCN is necessary.

*Migratory Bird Treaty Act*

The Migratory Bird Treaty Act makes it unlawful to pursue, hunt, take, capture, kill, or sell birds listed therein. The statute does not discriminate between live or dead birds and grants full protection to feathers, eggs, and nests. A take does not include habitat destruction or alteration as long as there is not a direct taking of birds, nests, eggs, or parts thereof. Birds protected under the act include all common songbirds, waterfowl, shorebirds, hawks, owls, eagles, ravens, crows, native doves and pigeons, swifts, martins, and swallows. Feathers, plumes, nests, and eggs are also protected. A complete list of protected species is found in 50 CFR 10.13.

The AGFD Online Review Tool provided a list of occurrence records of special status species, which included the yellow-billed cuckoo, fulvous whistling-duck (*Dendrocygna bicolor*), American peregrine falcon (*Falco peregrinus anatum*), and cactus ferruginous pygmy-owl within 3 miles of the study area. Other non–special status bird species are likely found within the construction footprint, though no observations of nesting birds were made during the field visit.

*Native Plants*

A Native Plant Inventory was conducted for the study area and an Environmentally Sensitive Roadway (ESR) Vegetation Inventory Report was prepared (Pima County 2020e). Plants found in the study area that are protected under the Arizona Native Plant law include foothill paloverde (*Parkinsonia microphylla*), blue paloverde (*Parkinsonia floridum*), and velvet mesquite (*Prosopis velutina*).

*Invasive Species*

Numerous noxious and invasive plant species have been identified in the study area, including buffelgrass (*Cenchrus ciliaris*), Russian thistle (*Salsola tragus*), and stinknet (*Oncosiphon pilulifer*).

*Wildlife and Habitat Connectivity*

The movement of wildlife depends on the availability of preferred habitat, foraging range, migration, and dispersal patterns. In the study area, I-10, with limited vegetative cover, altered habitat, and presence of structures and roads, acts as a barrier to movement and connectivity for wildlife species. Rillito Creek in the study area may act as a wildlife corridor for some animals, though the riverbed does not provide adequate cover for large animals to use as a movement corridor.

The Arizona Wildlife Linkages Workgroup is a cooperative effort among ADOT, the USFWS, the Bureau of Land Management, the AGFD, and several other federal and state agencies, academic institutions, and conservation organizations. This group has identified known and potential wildlife corridors and developed Arizona’s Wildlife Linkages Assessment. No recognized wildlife corridors or connections occur in the study area (ALRIS 2014).

Similar to wildlife corridors identified in Arizona’s Wildlife Linkages Assessment, Pima County has identified Critical Landscape Connections (CLCs) (Arizona Wildlife Linkages Workgroup 2006) that outline general areas where wildlife moves between large habitat blocks of intact, protected natural landscapes in Pima County. CLCs are defined as “areas where biological connectivity is significantly compromised, but where opportunity to preserve or otherwise improve the movement of wildlife between major
conservation areas and/or mountain ranges still persists” (Pima County 2011). There are no CLCs in the study area (Pima County 2011).

**Riparian Areas and Wetlands**

There is mapped riparian habitat, as delineated by Pima County, in the study area within the soil-cement-protected banks of Rillito Creek. IRA-Xeroriparian D habitat is mapped on the north portion of Rillito Creek, while the south portion of Rillito Creek is mapped as Important Riparian Area-Hydroriparian (IRA-H). In the study area, these mapped areas are similar in vegetation densities and species. The mapped riparian habitat is highly disturbed and not consistent with Pima County Regional Flood Control District descriptions of habitat class. Typical representative plant species of IRA-H are willow and cottonwood (*Populus* spp.), which are associated with perennial watercourses. These plant species are not present in the study area.

**Environmental Impacts—Build Alternative**

**Threatened and Endangered Species**

The BE determined that the Build Alternative would have no effect on any listed, threatened, or endangered species or their habitat.

**Other Special Status Species**

The BE determined that special status species would not be affected by the Build Alternative.

**Species of Greatest Conservation Need**

The BE determined and the AGFD letter concluded that there are no species-specific concerns and that no protection of state sensitive species is necessary with the Build Alternative.

**Migratory Bird Treaty Act**

There is the potential for nesting birds to be present, though limited, in the study area. Removal of vegetation would occur along the new Sunset Road alignment and in Rillito Creek. The extent of vegetation removal would be determined during final design.

**Native Plants**

The type and number of native plants that would be impacted or removed by the project has not been determined at this preliminary design stage. Much of the plant material that might need to be removed falls along the new Sunset Road alignment and in Rillito Creek.

**Invasive Species**

During final design, there may be additional surveys for the presence of invasive species. Construction practices would be developed to minimize the potential to disperse plant seeds.

**Wildlife and Habitat Connectivity**

No recognized wildlife corridors or connections occur in the study area. Terrestrial wildlife crossings, particularly through Rillito Creek, would be expected to continue to some extent in the study area. After project construction, the new Sunset Road alignment over Rillito Creek would not have a large impact on wildlife connectivity because the channel would still be open and numerous vehicular bridges span...
Rillito Creek. No other drainages cross the study area; therefore, there are no opportunities to provide improved crossing locations.

Riparian Areas and Wetlands

Though there are mapped riparian areas in the study area, there are no true riparian areas or wetlands in the study area.

Environmental Impacts—No-Build Alternative

Under the No-Build Alternative, no impacts to vegetation, habitat, or wildlife would occur.

Environmental Commitments and/or Mitigation Measures

Arizona Department of Transportation Southcentral District Responsibilities

• If active bird nests are identified within the project limits, construction activities would avoid disturbing any active nest. Avoidance areas, if necessary, would be marked in the field with temporary fencing or T-posts with flagging by the approved biologist. The Engineer would confer with the approved biologist to determine the appropriate avoidance strategies until the nestlings have fledged from the nest and the nest is no longer active.

• If any active bird nests cannot be avoided by vegetation clearing or construction activities, the Engineer would contact the Arizona Department of Transportation Environmental Planning biologist (602.341.9331) to evaluate the situation.

Arizona Department of Transportation Roadside Development Section Responsibilities

• Protected native plants within the project limits would be impacted by this project; therefore, the Arizona Department of Transportation Roadside Development Section would determine whether Arizona Department of Agriculture notification is needed. If notification is needed, the Arizona Department of Transportation Roadside Development Section would send the notification at least 60 (sixty) calendar days prior to the start of construction.

• The Arizona Department of Transportation Roadside Development Section would provide special provisions for the control of noxious and invasive plant species during construction that may require treatment and control within the project limits.

Contractor Responsibilities

• If clearing, grubbing, or tree/limb removal would occur between March 1 and August 31, the contractor would employ a qualified biologist to conduct a migratory bird nest search of all vegetation within 10 (ten) days prior to removal. Vegetation may be removed if it has been surveyed and no active bird nests are present. If active nests cannot be avoided, the contractor would notify the Engineer to evaluate the situation. During the nonbreeding season (September 1 to February 28), vegetation removal is not subject to this restriction.
• The contractor would develop a Noxious and Invasive Plant Species Treatment and Control Plan in accordance with the requirements in the contract documents. Plants to be controlled would include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The plan and associated treatments would include all areas within the project right-of-way and easements as shown on the project plans. The treatment and control plan would be submitted to the Engineer for the Arizona Department of Transportation Construction Professional Landscape Architect for review and approval prior to implementation by the contractor.

• Prior to the start of ground-disturbing activities and throughout the duration of construction and any landscape establishment period, the contractor would arrange for and perform the control of noxious and invasive species in the study area.

• To prevent the introduction of invasive species seeds, all earthmoving and hauling equipment would be washed prior to entering the construction site and the contractor would inspect all construction equipment and remove all attached debris, including plant parts, soil, and mud, prior to the equipment entering the construction site.

• To prevent invasive species seeds from leaving the site, the contractor would inspect all construction and hauling equipment and remove all debris, including plant parts, soil, and mud, prior to leaving the construction site.

Conclusion

In general, the expected impacts of the Build Alternative are minor because no threatened or endangered species, critical habitat, or designated wildlife corridors are present in the study area. Numerous noxious and invasive plant species are present in the study area. Native trees and shrubs would be removed with the Build Alternative. At this preliminary stage of design, the numbers of trees and shrubs and the acreages of disturbance are undetermined. During final design, more detailed information would be developed.

N. Hazardous Materials

Existing Conditions

A Preliminary Initial Site Assessment (PISA) with an asbestos-containing material and lead assessment was prepared for the project (October 22, 2021) to determine whether regulated or hazardous materials are present. The investigation consists of a regulatory records search, site reconnaissance by an environmental professional, and a historical aerial photograph review. The preliminary results are summarized below (Pima County 2020f).

A search of federal, state, and local environmental databases was conducted for the study area and adjacent properties. The results are summarized in a May 18, 2020, Allands report (Allands 2020). The records search identified one former underground storage tank (UST) in the study area—Sunset Farms. This UST was installed in 1984 and removed in 1994. No leaking UST has been identified, and no further action is recommended. The Shannon Road–El Camino del Cerro Water Quality Assurance Remediation groundwater contamination plume is located about a third of a mile southeast of the study area. Remediation through the ADEQ is ongoing.

A site visit was conducted on December 5, 2019, by Engineering and Environmental Consultants, Inc. A petroleum pipeline parallels the railroad line along the north side of I-10. Thirty-nine samples were collected and analyzed for asbestos, and 19 samples were collected and analyzed for lead. No asbestos
was detected in any of the samples collected, and no asbestos-containing materials were identified in the study area. No lead-based paint or lead-containing paint materials were identified in the study area.

Periodic historical aerials from 1997 through 2017 were reviewed for the study area. No issues of concern were identified from this review.

A review of adjacent properties was also conducted as part of the PISA. A recommendation was made to exercise caution before subsurface excavation/digging occurs near the UPRR due to the presence of the petroleum pipeline. No other environmental conditions indicated the presence of hazardous materials or petroleum products on adjacent properties that have impacted the study area.

**Environmental Impacts—Build Alternative**

Based on the preliminary findings of the PISA, no additional assessment or further action is recommended concerning the study area. During final design, the project would be reevaluated regarding its impact on buildings and structures to identify additional hazardous materials sampling or testing that might be required.

**Environmental Impacts—No-Build Alternative**

Under the No-Build Alternative, no involvement with potential “high environmental risk” locations would occur.

**Environmental Commitments and/or Mitigation Measures**

ADOT and the contractor would follow the SAF-6.01 Asbestos Management Policy and the ADOT Standard Specifications for Road and Bridge Construction.

**Conclusion**

Acquisition of properties listed as having the potential for presence of regulated materials is possible with the Build Alternative. The extent of impact on project cost or schedule due to remediation needs cannot be determined until final design and the completion of subsequent Phase I Environmental Site Assessments.

**O. Material Sources and Waste Materials**

Roadway construction projects typically require additional fill material (“borrow”) or generate excavated earth or pavement/structures that require disposal (“waste”).

**Existing Conditions**

The proposed project is located in the northwest region of the Greater Tucson Basin. Topography is generally flat in the study area. The study area falls between the Rillito and Santa Cruz wash systems and gently slopes to the west.

**Environmental Impacts—Build Alternative**

Large sections of fill material would be required to construct the Build Alternative on the proposed vertical alignment. South of I-10, from the proposed Sunset Innovation Campus northern intersection to the EBFR, the Build Alternative would reconstruct Sunset Road on an embankment to connect it with the new Sunset Road TI and bridge over the I-10 mainline. North of I-10, from the north UPRR bridge
abutment to the south Rillito Creek bridge abutment, Sunset Road would be built on a roadway embankment. A maximum cut and fill slope of 3H:1V would be used outside the clear zone.

Based on the proposed vertical alignment and preliminary engineering, construction of the Build Alternative is estimated to require about 250,000 cubic yards of borrow material. Final earthwork factors and slope recommendations would be developed as part of the geotechnical investigations. The construction contractor would seek either existing commercial sources or would develop nearby sources of borrow, if required.

**Environmental Impacts—No-Build Alternative**

The No-Build Alternative would not borrow material or generate waste material. Therefore, the No-Build Alternative would have no impact related to the use of materials sources or waste sites.

**Conclusion**

It would be the responsibility of the contractor to identify any needed material sources or waste disposal sites and to provide the environmental documentation regarding the potential use of these sites, as specified in the ADOT Standard Specifications for Road and Bridge Construction (ADOT 2021).

**P. Secondary Impacts**

In the context of NEPA, secondary impacts, or indirect effects, are defined by the CEQ as impacts that are “caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable.” Actions that may induce secondary (or indirect) impacts can be less obvious than those identified as direct impacts. They are more difficult to quantify, additive in nature, or long-term in occurrence and effect. This section identifies the likely, foreseeable secondary impacts that would result from the construction of the proposed roadway (cumulative impacts are addressed in a subsequent section).

The FHWA is required to implement NEPA and the CEQ guidelines under 23 CFR 771. The FHWA has developed interim guidance on the analysis of indirect and cumulative impacts, which supplements the CEQ guidance. Combined, these documents provide the primary basis for analysis. The classification of secondary and cumulative impacts, in accordance with FHWA guidance, is presented in Table 13.

**Table 13. Secondary and Cumulative Impacts Classifications**

<table>
<thead>
<tr>
<th>Impact Category</th>
<th>Impact Classification</th>
<th>Description</th>
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<tbody>
<tr>
<td>Type</td>
<td>Neutral, positive, or negative</td>
<td>Compares the final condition of a given resource with its existing condition (assumes that the expected impact occurs); impacts on personal property are considered negative</td>
</tr>
<tr>
<td>Severity</td>
<td>Minor, moderate, or substantial</td>
<td>Considers the relative contribution of the proposed project to a given impact</td>
</tr>
<tr>
<td>Duration</td>
<td>Temporary or permanent</td>
<td>Assumes “permanent” unless otherwise specified</td>
</tr>
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**Land Use and Social and Economic Conditions**

It is expected that the proposed roadway improvements under the Build Alternative would enhance the development appeal of the Sunset Innovation Campus by providing roadway improvements that meet
the developments’ projected traffic demand at build-out (2045) and completing a north–south connection between Silverbell Road and River Road. Therefore, the Build Alternative has the potential to induce changes in land use and land development. In addition, the development of Sunset Innovation Campus would create employment opportunities in the immediate area, which could enhance population growth in the region. The addition of the TI at River Road would facilitate access for these employment and residential opportunities.

The Build Alternative would result in a moderate positive secondary impact on land use, social, and economic conditions in the study area and vicinity.

**Neighborhood Continuity and Community Cohesion**

The acquisition of two lots within the northwest portion of the Tres Nogales subdivision would not cut off residents from jobs, schools, medical care, grocery stores, public transit, and other essential resources and services, or divide a residential community. It would, however, diminish the number of lots in the subdivision by roughly 20% and would eliminate one occupied residence. With one of the two lots vacant, the acquisition area reflects the past transitions in land use in the subdivision overall. The sense of neighborhood has likely changed over the years, and the Build Alternative would foster an additional minor negative sense of change. A minor negative secondary impact on neighborhood continuity is expected with the acquisition of these lots and the acquisition of the occupied residence. The loss of one occupied structure and one abandoned property would have a minor negative impact to the county property tax base. Pedestrian access and recreational activities are expected to increase as a result of better access to The Loop. This represents a positive minor impact to the community. In all, a minor secondary impact on community cohesion is expected with the Build Alternative.

**Water Resources**

The project would not be expected to result in secondary impacts to water resources. Existing watercourses would be maintained in their current locations, and modifications would not be expected to result in a degradation of water quality or volume.

**Biological Resources**

No secondary biological impacts are expected. Due to the lack of critical habitat, wildlife corridors, and protected species, current populations and species diversity would remain consistent with current conditions.

**Cultural Resources**

The construction of new roads can open up access to previously undisturbed areas, which can hold intact cultural resources. New access can lead to intentional or inadvertent damage to cultural resources, a potential secondary effect. Though the Build Alternative would improve north–south access, it would not provide new vehicular access to previously undisturbed areas and would not be expected to cause a secondary impact on cultural resources.

**Conclusion**

Under the Build Alternative, the improved traffic operations would be expected to benefit future development and economic vitality and result in a moderate positive impact to the region. The Build Alternative would also result in a minor negative secondary impact on neighborhood continuity with the acquisition of one occupied structure in the Tres Nogales subdivision. This impact is deemed minor.
because the two parcels to be acquired are on the north edge of the subdivision adjacent to three undeveloped parcels. This isolated neighborhood is situated in an industrial area and has experienced a shift in neighborhood composition away from residential toward more commercial and industrial uses. The Build Alternative would have no secondary impacts to water resources or biological resources within the study area and is not expected to have secondary impacts to cultural resources because there would be no new vehicular access to previously undisturbed areas.

Q. Cumulative Impacts
Within the context of NEPA, cumulative effects are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.” Cumulative impacts include the direct and indirect impacts of a project together with the impacts of all other past, present, and reasonably foreseeable future actions in the area, including those of others. This analysis of cumulative impacts concentrates on current and future actions that could contribute to cumulative impacts on key social, economic, and environmental resources.

Past, present, and reasonably foreseeable future actions considered in this analysis include projects/development by the City of Tucson, Pima County, PAG, and private developers. For this cumulative impacts assessment, past, present, and reasonably foreseeable future transportation projects and non-transportation-related projects are considered. This EA assumes that the local municipalities and county comprehensive and general plans direct the type of development in the study area. This development would likely occur eventually regardless of whether the Sunset Road: I-10 to River Road project is implemented.

Past Actions/Completed Projects
Two recently completed projects (within the past 5 years) were identified in the study area:

- PCDOT—Sunset Road: Silverbell to I-10 (Segment I), completed 2017
- ADOT—Prince Road to Ruthrauff Road pavement preservation, completed 2016

Ongoing/Present Actions

- ADOT—I-10/Ruthrauff Road TI, reconstruction of TI underway with completion expected in 2021
- CalPortland materials extraction operations in the area bounded by the Santa Cruz River, Rillito Creek, I-10, and Sunset Road

Reasonably Foreseeable Future Actions

- ADOT—I-10, Ina Road to Ruthrauff Road, interstate widening, bridge widening over Rillito Creek and Cañada del Oro Wash, and reconstruction of Sunset Road TI, planned to begin construction in FY 2022
- PCDOT—The Sunset Innovation Campus—a 100-acre site at the southeast corner of I-10 and Sunset Road that would be targeted as a primary employment site for new, high-wage industries
- PCFCD—The Loop Shared-Use Path—new segments of path planned or under development in the study area
Cumulative Impacts

Land Ownership, Jurisdiction, and Land Use

Changes in land ownership would be minor with the proposed project and moderate when considered along with past, ongoing, and reasonably foreseeable future actions. For the most part, the conversion of land use with the proposed project, past, present/ongoing, and future projects would be limited. The most notable modification in land use would be two future projects: Sunset Innovation Campus and Pima County Regional Park, which would transform a large vacant tract of land and a large materials extraction operation to a business/professional campus and a regional park, respectively. The development of Sunset Innovation Campus could still occur without the Sunset Road project. However, the improved access from River Road would provide a substantive benefit. The development of the regional park would not occur until the end of the useful life of the extraction operation in this location. Both of these developments would present a long-term beneficial change to the land uses of the properties by converting the lands to commercial or regional recreational uses. No funding is in place for this regional park. In general, the Sunset Road improvements with the proposed project would support these future uses.

Social and Economic Considerations

Cumulative impacts on social and economic considerations with the proposed action when considered with past, ongoing, and reasonably foreseeable future actions would continue to be mostly positive and minor. The Sunset Innovation Campus would provide employment opportunities and would directly contribute to economic development in the area. The proposed project and other referenced transportation improvements support this development and other projected increases in traffic demand.

Environmental Justice

Cumulative impacts on environmental justice and community cohesion with the proposed action are expected to be minor and neutral to beneficial. No additional displacements are foreseen in any of the ongoing or future actions described above. Additional segments of The Loop are expected to provide increased recreational opportunities and improved pedestrian access for the adjacent communities.

Cultural Resources

Impacts on cultural resources anticipated with the proposed action would add to those of past, ongoing, and reasonably foreseeable future projects and would be moderate and adverse. With the proposed project, there would be no historic properties affected north of I-10. West of I-10, however, past improvements to Sunset Road (Sunset Road: Silverbell Road to I-10) resulted in an adverse effect on cultural resources, requiring data recovery activities. The proposed project would add to the loss of cultural resources in the area by further impacting this archaeological site.

Air Quality

Cumulative air quality impacts would be expected to continue to be minor and positive, with improvements in traffic operations and reductions in traffic congestion. The planned project and ongoing and future transportation projects are all accounted for in the PAG regional air quality conformity in the FY 2020–2024 PAG TIP (PAG 2020).
**Traffic Noise**

With the proposed project, 2045 predicted increases in dBA from traffic noise would be no more than 2 dBA over that predicted for the 2045 No-Build Alternative and would not impact noise receptors. However, increases in traffic noise would be expected with ADOT’s planned widening of I-10 through the study area.

**Water Resources**

Because the improved transportation system would be expected to result in some new growth, demand for water would increase. This would be a cumulative impact in consideration of past, present, and other reasonably foreseeable future actions that consume water resources for construction and long-term development activities. Cumulative impacts on water resources would be expected to be moderate and negative. Water quality impacts are not anticipated. All work at regulated water courses would be subject to Corps and ADEQ requirements. Standard construction mitigation measures would protect water quality. Future projects would be subject to similar permitting and mitigation requirements.

**Biological Resources**

Cumulative biological resource impacts are expected to be negative but minor. The Build Alternative and other past, present, and reasonably foreseeable projects are generally in an area of limited biological resources or are subject to City of Tucson or Pima County requirements, which consider impacts to biological resources.

**Conclusion**

The Build Alternative would likely contribute to minimal to minor negative cumulative effects on biological resources, and moderate negative cumulative impacts on cultural resources and water resources. Cumulative impacts on noise levels would be minor to moderate and negative. Cumulative impacts associated with social and economic conditions and land use would be moderate and mostly neutral or positive. Cumulative impacts on air quality would be minor and positive.
V. Public Involvement and Coordination

As part of the NEPA process, agency and public scoping meetings were held early in the Sunset Road: I-10 to River Road (Segment II) DCR/EA stage to discuss and evaluate potential modifications to improve capacity and traffic flow on the proposed project in Tucson, Arizona.

The purpose of the scoping process is to identify potential issues, concerns, and opportunities that should be considered in the development of alternatives and environmental studies for the proposed project. Information on potential issues, concerns, and opportunities was obtained from area residents, business and property owners, stakeholders, and government agency representatives through the agency and public meetings. A website was developed to provide an overview of the study, public meeting information, and technical reports (www.roadprojects.pima.gov). Agency scoping was conducted through letters to affected jurisdictions, agencies, organizations, and interest groups, an agency scoping meeting, and a virtual open house.

A. Agency and Public Scoping Efforts

Agency Scoping

An agency stakeholder meeting was held October 16, 2019, to kick off the DCR/EA process. The meeting was held at the Pima County Public Works Building, with attendees representing ADOT, Pima County, the City of Tucson, and project consultants. The project was described, the project-related roles and responsibilities were generally outlined, and the history of past connected projects and environmental documents was discussed. A summary of that meeting is included in Appendix D.

An environmental coordination meeting was held on January 6, 2020. Attendees included representatives from Pima County (Department of Transportation, Flood Control District, Project Management Office, and Cultural Resources), the City of Tucson, the AGFD, and project consultants. Meeting discussions focused on environmental topics and related technical issues, the required environmental documents and submittal sequence, and the approval process.

Scoping letters were mailed to 20 entities representing city, county, state, and federal agencies, jurisdictions, emergency services, schools, and interest groups on February 5, 2020. An example letter is included in Appendix E. The letters provided project information and solicited input from these entities on their interests, concerns, or potential opportunities to be considered during the alternatives development and design.

The comments and recommendations received are summarized below.

Comments

- The project would benefit commercial operations and protect commercial development potential by improving traffic congestion.
- Extending Sunset Road from I-10 to River Road would benefit residents living west of I-10 by providing improved access to jobs, shopping, and other amenities east of I-10.

Recommendations

- Provide access to the Tres Rios major recreation area from Orange Grove Road, Sunset Road (from River Road), Silverbell Road, and I-10.
• Consider flooding potential in plans to relocate the PCNRPRD maintenance yard.
• Ensure that PCFCD requirements for The Loop, floodplain management, and property rights are fully considered.
• Consider potential impacts to federally listed species protected under the ESA and migratory birds protected under the Migratory Bird Treaty Act.
• Ensure invasive plant species are not spread downstream.
• Consider the incorporation of bat-roosting and breeding structures.
• Ensure project lighting is Dark Sky–compliant, and bird- and bat-friendly.
• Enhance riparian habitat.

The written comments received from agencies and non-governmental entities and responses to these comments from PCDOT are provided in Appendix F.

Public Scoping

Scoping letters dated February 5, 2020, describing the project and soliciting input were sent to private landowners holding property in the study area. Project information was also posted on the Pima County website. All materials sent to the public by PCDOT included a reference on how to receive the information in Spanish. Spanish translation services were available at all public meetings. In response, Pima County received letters or emails from three landowners, with the following questions identified:

• Would Sunset Road have a future connection to Tres Nogales Road?
• How would the project affect the privately owned parcels along Tres Nogales Road within the project study area?
• What private property would need to be acquired?

PCDOT was planning to hold the first public open house for the project on March 31, 2020; however, due to the COVID-19 global pandemic, the in-person open house was canceled. In lieu of the open house, agency representatives and members of the public were invited to review project materials on the Pima County website and provide comments. Project materials were posted on March 31, 2020, at www.roadprojects.pima.gov. The initial public open house invitation and the cancellation of the in-person meeting and invitation to review materials on the website were sent by US Postal Service mail and electronic postcards (ecards) to all adjacent property owners, interested parties, and agencies (480 recipients). Ecards are attached in Appendix G. Meeting materials were posted on March 31, 2020. Nearly 200 page reviews were recorded on the Pima County project website between April 1 and April 29, 2020. Opportunities for Spanish translation were available for all notices.

Pima County provided a second opportunity for the public to review project information and related documents in February and March 2021. Notices of the public review period were sent via US Postal Service mail, and advertisements were provided in local newspapers. The notices included a reference in Spanish for more information to call the appropriate contact person at PCDOT. The documents were made available on the Pima County project website, and a hard copy was available for review at 201 N. Stone Ave., 4th Floor, Tucson, Arizona.
Related Public Engagements

The extension of Sunset Road from I-10 to River Road is the second phase of the Sunset Road extension. Two public open house meetings were held for the first phase of this project: an initial public open house on June 9, 2014, and a second open house on October 30, 2014.

Due to the close relationship between the proposed project and the planned I-10 improvements between Ina Road and Ruthrauff Road, the Sunset Road extension has been presented and discussed at the following I-10 meetings:

- I-10 Ina Road to Ruthrauff Road Scoping Meeting—November 18, 2009
- I-10 Ina Road to Ruthrauff Road Public Property Owner Briefings #1—October 4, 2010 (two meetings held on this date, one in Marana and one in Tucson)
- I-10 Ina Road to Ruthrauff Road Public Property Owner Briefings #2—November 8, 2010
- I-10 Ina Road to Ruthrauff Road Public Information Meeting—March 10, 2011
- I-10 Ina Road to Ruthrauff Road Public Hearing—June 21, 2012

In addition, the Sunset Road extension was presented in conjunction with the following meetings held during planning for Silverbell Road:

- Silverbell Road, Ina Road to Grant Road Initial Public Open House—August 12 and 19, 2009
- Silverbell Road, Ina Road to Grant Road Interim Public Open House—June 7 and 9, 2010
- Silverbell Road, Ina Road to Grant Road Final Public Open House—October 19 and 21, 2010

Community Advisory Committee

The Pima County Board of Supervisors issued a waiver of Ordinance 10.56.110, Establishment of a Community Advisory Committee, on January 3, 2013, at the recommendation of PCDOT (Appendix H). The waiver was justified due to the extensive previous public involvement noted above through the I-10 and Silverbell Road projects. The public strongly supported the Sunset Road extension and timing to have the improvements in place prior to the ADOT reconstruction of I-10. In addition, the waiver notes that the majority of the study area is owned by the Pima County Regional Flood Control District and that there are limited alignment options due to floodplain and CalPortland operations.

B. EA Comment Period and Potential Public Hearing

Agencies and members of the public are invited to review and comment on the EA and the DCR. The EA and the Final DCR can be reviewed on the study website at www.roadprojects.pima.gov. Newspaper advertisements will be posted notifying the public of the upcoming public review period. All notices will provide an opportunity to receive the information in Spanish. A hard copy of the EA and the DCR are available for public review at the following locations:

- Elle Town Center, 1670 W. Ruthrauff Road, Tucson
- Joel D. Valdez Main Library, 101 N. Stone Ave., Tucson
- Southwest Public Library, 6855 S. Mark Road, Tucson

A 30-day public comment period will be held in April 2022. If ADOT makes a decision to hold a public hearing, potential dates for a hearing will be reviewed at that time.
Comments can also be submitted any time during the comment period using any of the following methods:

- Mail to:
  Pima County Community Relations Office
  201 N. Stone Ave., Tucson, AZ 85701
- Telephone: 520.724.6410
- Email to: Stephen.Wilson@pima.gov
- Online via: www.roadprojects.pima.gov

All comments received by PCDOT during the public comment period will be considered in the Final EA and Final DCR. PCDOT responses to each comment will be included as part of the Final EA.

Pursuant to Title VI of the Civil Rights Act of 1964, the ADA, and other nondiscrimination laws and authorities, PCDOT does not discriminate on the basis of race, color, national origin, sex, age, or disability. Persons that require a reasonable accommodation based on language or disability should contact Carol Brichta at 520-724-6410, or Carol.Brichta@pima.gov. Requests should be made as early as possible to ensure Pima County has an opportunity to address the accommodation.
VI. References

Engineering and environmental reports completed for the Sunset Road: I-10 to River Road project are available for public review on the Pima County project website (www.roadprojects.pima.gov). These reports are noted in the reference list below.


_____. 2021. Standard Specifications for Road and Bridge Construction.


FHWA. 1987. FHWA Technical Advisory T 6640.8A. *Guidance for Preparing and Processing Environmental and Section 4(f) Documents.*


____. 2016. *2045 Regional Mobility and Accessibility Plan.* May.


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Appendix A

Right-of-Way Acquisition
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<table>
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<tr>
<th>ASSESSOR'S PARCEL NUMBER</th>
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<th>OWNER</th>
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Table B-1. 2014–2018 Racial and Ethnic Demographics

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<th>Pacific Islander</th>
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<th>Two or More Races</th>
<th>Hispanic or Latino by Origin*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>CT 44.18, BG 1</td>
<td>2,821</td>
<td>2,487</td>
<td>88.2</td>
<td>29</td>
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<td>78.8</td>
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<td>0</td>
<td>7</td>
<td>0.4</td>
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<td>80.0</td>
<td>82</td>
<td>4.0</td>
<td>22</td>
<td>1.1</td>
<td>16</td>
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<tr>
<td>CT 46.13, BG 3</td>
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<td>954</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Tucson, Arizona</td>
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<tr>
<td>Pima County, Arizona</td>
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<td>76.2</td>
<td>35,973</td>
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<td>38,200</td>
<td>3.1</td>
<td>29,475</td>
<td>2.9</td>
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</table>

Source: US Census Bureau 2018b

# = number, % = percentage, CT = census tract, BG = block group

* In addition to race, residents were asked to categorize themselves by one of two ethnicities: Hispanic or Latino and Not Hispanic or Latino. "Hispanic or Latino by Origin" is derived from the total population, not as a separate race.

Table B-2. 2014–2018 Total Minority, Ages 60 and Older, and Below Poverty Level

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Population</th>
<th>Total Minority*</th>
<th>Ages 60 and Older</th>
<th>Total Population for Whom Poverty Is Determined</th>
<th>Below Poverty Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>CT 44.18, BG 1</td>
<td>2,821</td>
<td>832</td>
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<td>304</td>
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Source: US Census Bureau 2018b

# = number, % = percentage, CT = census tract, BG = block group

* "Total Minority" is composed of all people who consider themselves Non-White racially plus those who consider themselves White Hispanic or Latino.

Table B-3. 2014–2018 Disabled, and Female Head of Household Populations

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Population</th>
<th>Total Population for Whom Disabled is Determined</th>
<th>Disabled</th>
<th>#</th>
<th>%</th>
<th>Households</th>
<th>Female Head of Household</th>
<th>#</th>
<th>%</th>
</tr>
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<td>406</td>
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<td>406</td>
<td>16.3</td>
<td></td>
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<td>406</td>
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<td>513,204</td>
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</tbody>
</table>

Source: US Census Bureau 2018b

# = number, % = percentage, CT = census tract, BG = block group
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November 24, 2020

Ms. Kathryn Leonard – State Historic Preservation Officer
Arizona State Historic Preservation Office
1100 W. Washington St.
Phoenix, AZ 85007

Re: Pima County – Sunset Road Phase 2 Extension Project (I-10 to River Road)

Dear Ms. Leonard,

The Regional Transportation Authority’s (RTA) 20-year multimodal plan includes roadway improvements for Sunset Road from Silverbell Road to River Road, in the City of Tucson (COT), Pima County (County), Arizona. The improvements were divided into two phases: Sunset Road; Silverbell Road to I-10 Eastbound Frontage Road (Phase 1) and Sunset Road (Phase 2) that included the southerly approach to the Sunset Traffic Interchange (South Project Area) and the connection from the I-10 Westbound Frontage Road to River Road (North Project Area). The project is located within portions of Sections 8, 17 and 18 of Township 13 South, Range 13 East, relative to the Gila and Salt River Baseline and Meridian, as depicted on United State Geological Survey topographic maps (7.5-minute series) of the Jaynes (AZ) quadrangle (Figure 1 – Project Area). The Southern Project Area is located entirely on County lands, while the Northern Project Area is located within Union Pacific Railroad (UPRR) ROW, County lands, and private lands that the County is currently acquiring.

The Phase 1 construction project was completed in 2017 by Pima County as a local project. As a separate initiative, the Arizona Department of Transportation (ADOT) completed a Design Construction Report (DCR) and Environmental Assessment (EA) in 2013 for improvements on I-10 from the Ina Road Traffic Interchange to the Ruthrauff Road Traffic Interchange which included reconstruction of the I-10 Sunset Road Traffic Interchange. The DCR and EA did not include reconfiguring the southerly approach to the Sunset Traffic Interchange for connection to a new overpass nor the connection from the new overpass over the I-10 Westbound Frontage Road to River Road.

ADOT and Pima County are currently in negotiations for the following Scenarios:

Scenario 1: ADOT Lead on North and South Project Areas - ADOT agrees to include the South Project Area and the North Project Area with the I-10 Widening project from Ina Road to Ruthrauff Road. This scenario requires that Pima County assist ADOT with updating the already completed DCR and EA for the I-10 widening project.

Scenario 2: ADOT Lead on South Project Area and Pima County Lead on North Project Area - ADOT agrees to include only the South Project Area in their I-10 widening project, and Pima County designs and constructs the North Project Area as a local project that will require ADOT coordination due to the tie-in at the I-10 traffic interchange. This scenario requires that Pima County assist ADOT with updating
the already completed DCR and EA for the I-10 widening project, and Pima County will establish a separate DCR and EA for the North Project Area.

**Scenario 3: Pima County Lead on North and South Project Areas** - No ADOT involvement with design and construction of the South or North Project Areas, and both segments will be designed and constructed by Pima County as a local project, although coordination with ADOT will be required due to the tie-ins required at the I-10 interchange. Pima County will establish a DCR and EA that includes both project areas, and no modification to the existing EA and DCR for the I-10 Widening Project would be needed.

As part of the County’s planning effort for all three scenarios, Pima County is initiating non-mandated consultation in order to provide a preliminary finding of the project’s potential to effect historic properties, as defined in 36 Code of Federal Regulations Part 800, for each of the three scenarios.

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**CULTURAL RESOURCES BACKGROUND**

*Archaeological Inventory*

The vast majority of both the Northern and Southern Project Areas have been subjected to multiple cultural resources inventory efforts. The most recent inventory was sponsored by Pima County in 2012 as part of a largescale planning initiative for multiple County departments. The resulting report (Enclosure 1 – Milliken and Boley 2012) documented two previously recorded archaeological sites that intersect the Southern Project Area, AZ AA:12:11(ASM) and AZ AA:12:788(ASM). Both sites were recommended as eligible for inclusion on the National Register of Historic Places (NRHP) under Criterion D. No archaeological sites were identified in the Northern Project Area.

*Archaeological Mitigation*

**Southern Project Area**

Shortly after the 2012 inventory was completed, Pima County began plans for the Phase I Sunset Road Realignment project. The project was locally funded, and was located entirely on lands that are owned by Pima County. The project had no defined federal or state nexus, and was therefore not subject to compliance with the Arizona State Historic Preservation Act nor the National Historic Preservation Act, however the project was subject to compliance with Pima County Board of Supervisors (BOS) Resolution 1983-104, BOS Policy C 3.17 and implementing Administrative Procedure 34-1, as well as the Arizona Antiquities Act A.R.S. § 41-841 et. Seq (Local Compliance Framework).

Due to the project requiring impacts within the previously documented site boundaries of AZ AA:12:11(ASM) and AZ AA:12:788(ASM), Pima County procured SWCA Environmental Consultants to implement a testing and data recovery program. The resulting data recovery report (Enclosure 2 – Griset 2018) documented a significant assemblage of buried cultural features, including an extensive agricultural field system with ancestral footprints which dates to the Tucson Basin’s Early Agricultural period (~800-750 B.C.). As a result of SWCA’s investigations, AZ AA:12:11(ASM) and AZ AA:12:788(ASM) were combined under the AZ AA:12:788(ASM) designation. Pima County required scalable mitigation during this effort, and data recovery activities were limited to the maximum level of ground disturbance corresponding to...
the roadway project’s needs. Testing activities identified extensive and deeply buried deposits associated with AZ AA:12:788(ASM) that continue to be preserved in place within the footprint of the Southern Project Area.

Northern Project Area
No archaeological resources have ever been identified as a result of surface inventories in the Northern Project Area. This is, however, not necessarily indicative of the potential for intact subsurface deposits absent of any surface evidence which is common within riverine contexts in the Tucson Basin.

In 2016, Desert Archaeology performed limited testing on the west side of I-10, just north of the Southern Project Area in an area that was going to be developed by the CalPortland Cement Company for mining. As the underlying land is owned by Pima County, we used this opportunity to perform a geomorphological investigation of the Rillito Fan landform in order to better understand the potential for cultural deposits in this part of the Tucson Basin. As a result of this investigation, Desert documents in their report (Enclosure 3 – Swartz 2016) that they discovered a clear break in terms of a widely identified geomorphological separation of the Qt1 and Qt2 terraces in the Tucson Basin, where the Qt1 has been determined to be very young deposits with no potential to hold ancestral materials, and potential only beginning in the Qt2.

Due to the complex geomorphological history associated with flood deposits at the confluence of the Santa Cruz and Rillito Rivers, Pima County was interested to see whether this same natural break could be observed in the Northern Project Area east of 1-10. To this end, Pima County contracted SWCA to perform a geomorphological assessment of a sample of the Northern Project Area in 2020. The sample area was specifically selected as it is the furthest point from the current Rillito River alignment under the assumption that should the break be identified, any areas to the north would be entirely Qt1 contexts as they approach the river channel. The resulting report (Enclosure 4 – Rawson 2020) documents that the entire investigated area is situated in Qt1 deposits, and thus confirms that there is no potential for effects to archaeological resources in the Northern Project Area. It should be noted that the Northern Project Area boundary has changed slightly since the time of SWCA’s investigation, however, the augmentation occurred in areas that continue to be Qt1 mapped contexts.

Built Environment
As currently planned, the project requires the acquisition of three privately owned parcels within the Northern Project Area, however, only two of which contain any above ground infrastructure (Figure 2). Pima County, therefore, contracted SWCA to document and evaluate the NRHP-eligibility of two residences located at 3404 Tres Nogales Road, and 3428 Tres Nogales Road. Both properties were inventoried on Arizona Historic Property Inventory Forms (Enclosures 5 & 6) and are recommended as not eligible for listing on the NRHP. All other infrastructure within the Northern Project Area serves as a storage yard for Pima County’s Natural Resources Parks and Recreation and is of modern age. The Southern Project Area does not contain any architectural resources.
SCENARIO 1
Federal Compliance, ADOT as Lead Agency, Adverse Effects Determination

In this scenario, ADOT would agree to combine the Phase 2 project with the I-10 Widening Project, and thus the project is considered an undertaking subject to review under Section 106 (54 U.S. Code [USC] § 306108) of the National Historic Preservation Act of 1966, as amended (54 USC § 300101 et seq.) and its implementing regulations (36 Code of Federal Regulations Part 800). The environmental review, Section 106 process, and other actions would be pursued by ADOT on behalf of the County. Because both the Northern and Southern Project Areas would be subsumed into the I-10 Widening Project for which there is already a finding of adverse effects, there would be no overall change as the adverse effects to AZ AA:12:788(ASM) would require mitigation.

SCENARIO 2
Southern Project Area: Federal Compliance, ADOT as Lead Agency, Adverse Effects Determination
Northern Project Area: Local Compliance, Pima County as Lead Agency, No Potential for Effects

In this scenario, ADOT would subsume the Southern Project Area into the I-10 Widening Project, which would trigger Section 106 compliance and maintain the finding of adverse effects based on incorporating an additional portion of AZ AA:12:788(ASM) into the overall project’s Area of Potential Effects.

The Northern Project Area would be administered under the Local Compliance Framework by Pima County, and the County would proceed without any additional coordination regarding cultural resources as there is no potential for adverse effects to historic properties.

SCENARIO 3
Local Compliance, Pima County as Lead Agency

In this scenario, Pima County would administer both project areas under the Local Compliance Framework. Pima County would require no further work within the Northern Project Area, and project impacts to AZ AA:12:788(ASM) would be mitigated per compliance with Pima County Board of Supervisor’s Policy C 3.17, as well as the Arizona Antiquities Act A.R.S. § 41-841 et. Seq.

Based on the information provided, Pima County requests your concurrence and comments for each scenario presented above.

Please let me know if you require any additional information- (520) 724-6684.

Sincerely,

Ian M. Milliken, Program Coordinator
ian.Milliken@pima.gov
Ms. Kathryn Leonard, Arizona State Historic Preservation Officer
RE: Pima County – Sunset Road Phase 2 Extension Project (I-10 to River Road)
November 20, 2020
Page 5

Enclosures:

2) Footprints along the Santa Cruz: Results of Archaeological Investigations at Sunset Road, Pima County, Arizona, prepared by Suzanne Griset et al., SWCA Cultural Resources Report No. 17-591, 2018
4) Archaeological Records Search and Geomorphological Assessment for Sunset Road Extension Phase 2 (I-10 to River Road), Pima County, Arizona, prepared by Paul Rawson, SWCA Environmental Consultants Report No. 48803-15, 2020
5) 3404 West Tres Nogales Road, Arizona Historic Property Inventory Form, SWCA Environmental Consultants, 2020
6) 3428 West Tres Nogales Road, Arizona Historic Property Inventory Form, SWCA Environmental Consultants, 2020

c: Kris Powell, Arizona Department of Transportation
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December 1, 2020

Ian M. Milliken, Program Coordinator
Office of Sustainability and Conservation, Pima County Public Works
201 North Stone Avenue, 6th Floor
Tucson, AZ 85701

RE: Sunset Road, I-10 to River Road Extension Project Phase 2
Pima County, Regional Transportation Authority Multimodal Plan
Determinations of Eligibility for Two Structures
SHPO-2020-1580 (156746)

Dear Mr. Milliken:

Thank you for consulting with the State Historic Preservation Office (SHPO) regarding Phase 2 of the Pima County’s Sunset Road Extension Project, part of the county’s 20-year multimodal plan that includes roadway improvements for Sunset Road from Silverbell Road to River Road in the City of Tucson, Pima County, Arizona. Phase 1 of the project was completed in 2017 by Pima County as a local project, while the status of Phase 2 is currently in negotiations with the Arizona Department of Transportation [ADOT]. The current submission consists of the eligibility status of two buildings within the project area, and a request for comments on the possible scenarios involving Pima County and the ADOT. SHPO historian Dr. Bill Collins and I have reviewed all of the submitted materials and have the following comments:

We agree that the two submitted Historic Property Inventory Forms for buildings at 3404 West Tres Nogales Road and 3428 West Tres Nogales Road are adequate, and neither of the two documented buildings are eligible for listing in the State or National Register of Historic Places.

Regarding your request for SHPO comment on the possible scenarios involving Pima County and ADOT, we do not believe the agency plans have sufficiently developed to allow for our consideration at this time. We look forward to continued consultation, and also request that you inform us of tribal concerns, if any, prior to requesting our concurrence on a finding of effect for the undertaking.

We appreciate your compliance with historic preservation requirements for local, state, and federal undertakings. Please keep our office updated on the dynamic status of Phase 2 of the
project, and don’t hesitate to contact me at (602) 542-7140 or electronically at djacobs@azstateparks.gov if you have any questions.

Sincerely,


David Jacobs
Compliance Specialist/Archaeologist
Arizona State Historic Preservation Office
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Design Team Kickoff Meeting

MINUTES
3:00-5:00 PM on October 16, 2019
Pima County Public Works Building
4th Floor Large Conference Room
Tucson, AZ 85701

1. Introductions

Steve Wilson brought meeting to order at 3:05 pm. Attendees introduced themselves and stated their role on the project. Sign-in sheet attached with attendees.

2. Background
   a. RTA Project #8: Sunset Road (Silverbell Road to River Road)
   b. ADOT DCR & EA: I-10 (Ina to Ruthrauff)
   c. Sunset Road (Silverbell to I-10)
   d. Sunset Campus

Steve provided background on project.

The goal is to achieve agreement among ADOT / PCDOT and TDOT on connection of I-10 to River Road from Sunset TI.

ADOT’s 2011 / 2012 DCR / EA effort for the “Gap” project, I-10 from Ina to Ruthrauff acknowledged the connection, but its details were not developed.

Sunset from Silverbell to I-10 was completed over two years ago.

Pima County controls property south of I-10 and Sunset. It is referenced as the “Sunset Campus.” A conceptual plan of the proposed development is attached. Connections to Sunset will have to comply with ADOT access control standards.

3. Sunset: I-10 to River Road
   a. Proposed Improvements
      i. South approach to TI
      ii. I-10 TI
      iii. UPRR bridge
      iv. PCNRPR yard
Steve walked the team from “south to north” along Sunset. In general, it will be assumed that I-10 runs east and west, therefore Sunset southwest of I-10 will be referenced simply as south. Likewise, Sunset northeast of I-10 will be referenced as north. The Pima County Natural Resources Parks and Recreation maintenance yard is often referred to by its historical use, namely the “Chicken Ranch.” Note the connections to The Loop on the south side of the Rillito have to circle away from the roadway to address slope issues. The project is relatively short, only 0.6 of a mile.

b. Initial and Final Design Concept Report (reports and deliverables required)

*Steve and Jim Glock quickly ran through the key products noted below that are needed for the DCR*

i. **Utilities**
   1. Initial Utility Reports
   2. Plans for distribution to Utilities
   3. Letters of acceptance from Utilities
   4. List of utility impacts and mitigation measures

ii. **Surveying and Mapping**
   1. Horizontal Control
   2. Vertical Control
   3. Results of Survey drawing
   4. Topographic Mapping
   5. Utility Surveys
   6. Culture Surveys
   7. Right-of-way Surveys
   8. Legal Descriptions and reference maps
   9. Boring locations

iii. **Drainage**
   1. Overview with graphics / maps
   2. Scour analysis

iv. **Geotechnical**
   1. Initial Geotechnical Report
   2. Initial Pavement Design Report

v. **Structures**
   1. Preliminary Bridge Structure Selection Report (UPRR & Rillito)

vi. **Traffic**
   1. Initial and Final Traffic Engineering Report

vii. **Lighting**
    1. Initial Arterial Street Lighting Design Report

viii. **Public Art Opportunities**

ix. **Design Standards**
   1. Criteria Summary

x. **Cost Estimates**
   1. Jurisdictional Cost Breakdown as required

xi. **15% Plans and Cross Sections**
   1. Cover sheet (1)
   2. Design Data Sheet (1)
   3. Typical Sections & Pavement Structural Sections (2)
4. Geometric Data Sheets (3)
5. Barrier Summary Sheets (1)
6. Offsite Drainage Plans – P&P’s (4)
7. Riverine Improvement Plans / Details (4)
8. Roadway Plan and Profiles Sheets (13)
9. Pavement Marking General Notes and Plans (4)
10. UPRR & Rillito Bridge Plans (6)
11. Cross Sections (20)

Rick Ellis asked about plan sheets associated with Utilities (namely sewer and water). It was noted that any new facilities will simply be noted on P&P sheets.

c. Environmental Assessment (reports and deliverables required)

Steve and Jim Glock quickly ran through the key products noted below that are needed for the EA

i. Public and Agency Scoping Letters
ii. Meeting with US Army Corps of Engineers
iii. Summary of Environmental Coordination Meeting
iv. Completed Questionnaire for Establishing Potential Areas of Impact
v. Summary Impact Matrix
vi. Environmental Results Memorandum
vii. Cultural Resources Report
viii. Section 4(f) analysis
ix. Biological Evaluation
x. Native Plant Inventory
xi. Preliminary Jurisdictional Delineation
xii. PISA
xiii. Air Quality Conformity Report
xiv. Quantitative noise analysis Report
xv. Visual Analysis
xvi. Riparian Habitat Impact Assessment
xvii. Environmental Commitments Memorandum / mitigation measures
xviii. Environmental Clearance for cultural & geotechnical investigations

4. Schedule

a. Detailed schedule to be developed over next week
   i. DCR and deliverables – substantially complete by May, 2020.
   ii. EA and deliverables – substantially complete by October, 2020.

Rick asked about ACC/UPRR coordination. Steve noted that he anticipated meeting with ADOT and UPRR and will take the discussion as far as possible given time constraints during the DCR development process. Steve noted that UPRR issues were identified as part of the Wall Selection Report.

5. Protocols

a. Keep PC and SG Project Manager aware of all communications
b. Review approach with PCDOT / ADOT / TDOT prior to completing tasks
Rod Lane noted that Derek Boland will be the primary ADOT contact for the project. He did request that the District be copied when communicating with Derek. Austin Wesnitzer will be the point of contact for the City of Tucson along with Anna Steiner, who is TDOT’s liaison to ADOT.

6. Start Up Action Items
   a. Data Gathering (SGI and others)
      i. Design Criteria
      ii. Site Visit
      iii. Available Documents to date:
          1. Documents will be stored at the following OneDrive location: https://tinyurl.com/Sunset-files
             a. Original 2014 Basefiles for I-10 to River
             b. Silverbell to I-10 reports
                i. Geotechnical Report (includes draft report which includes partial information on I-10 to River Rd)
                ii. Final Design Concept Report
                iii. Final Environmental Assessment and Mitigation Report
                iv. Infiltration Study Report
                v. Initial Traffic Engineering Report (Silverbell to River Road)
          c. I-10 (Ina to Ruthrauff) ADOT DCR Material
      iv. Additional Documents to secure and post
          1. Geotechnical Report for I-10 (Ina to Ruthrauff) – ADOT
          2. Utility Mapping and Data for I-10 (Ina to Ruthrauff) – ADOT
          3. River Road As-Builts – PCDOT/SGI

Design Criteria need to be established ASAP and agreed upon by ADOT / PCDOT / TDOT for the various elements of the project. Maintenance responsibilities also need to be established ASAP as they will influence the Design Criteria.

   b. Start up (what is needed, from whom should it come, when needed):
      i. AECOM – Utilities / Roadway Geometry / Arterial Lighting

Charlene Robinson noted that she will need to get with PCDOT to obtain base files that they might have with respect to utilities. Utilities can contact through Steve.

Formal request for Ruthrauff basefiles to ADOT is needed. Need to see if they have any base files on work to the north.

There are challenges associated with “The Loop” connections due to clearances and maximum path slopes.

In work under phase I the TI was slimmed down due to traffic modelling needs. Will follow ADOT’s direction once we can share traffic numbers. Note, traffic numbers may change due to forecast population estimates dropping considerably.

   ii. WSP -- Drainage

Looking at local offsite drainage for both approaches. On site drainage will be evaluated at a conceptual level to support estimating, but not in detail. Major item will be Rillito Creek. Early discussion with PCRFCD appears to indicate that we have a “no rise” scenario. Responsibility of Rillito Creek bridge needs to be established. To maintain conveyance is appears there will be some modification to the channel banks.
Will need some modelling files from El Corazon project. Need drainage reports for I-10 GAP design DCR. Might also be something associated with Frontage Road design. Note, I-10 bridge over Rillito will be reconstructed when the Sunset Rillito Creek bridge is constructed.

iii. EEC – Surveying and Mapping / PISA

Need to make sure we are same coordinate system and datum with ADOT projects. Need to make sure there is agreement with ADOT / PCDOT on control points. Right of Way plans are included as part of contract (Task 3.19)

iv. Wilder – Vegetation. Visual assessment & riparian habitat impacts

Jennifer Patton noted that she needs contacts at PC for Releves and visual assessment. Steve is contact in the short term. Need project footprint to get going.

v. EcoPlan – Environmental Assessment

Mike Dawson noted footprint and area of potential effect needed ASAP.

Purpose and need / scope bullets. Need to understand association with Sunset Campus. Need to know construction staging areas as soon as possible. Two public information meetings scoped, only one may be needed based on limited number of alternatives anticipated.

Critical path will be Section 106 and work with SHPO. Will need to coordinate closely with PCOCS / Ian Milliken. Footprint in Rillito Creek needed for preliminary jurisdictional delineation. Air and Noise going to need input from traffic. Unclear on modeling needed for Air Analysis. Will use FHWA criteria on noise analysis. Need early PISA for Geotech clearance. Cultural clearance and biology done under Phase I for portion of project south of I-10 but would be needed for any bore holes north of I-10.

Five items are EAMR (PCDOT) components, not part of EA. PC will need to indicate who will want to be involved in the review of these deliverables.

Need to get TRACS number to get ADOT involved.

May trigger a 408 issue if bank protection was funded with federal / Bureau Reclamation dollars. (Was it an Army Corps of Engineers constructed project?).

4(f) needs to be addressed for Dan Felix Memorial Park and “The Loop.” “The Loop” may be seen as a PCFCD flood control purpose as opposed to recreation. The parking area is also part of this equation.

vi. Golder – Geotechnical

Phase I effort did include two bore holes in Rillito Creek. Will be conducting to ADOT preliminary geotechnical requirements.

Getting permits to bore holes on UPRR right-of-way is a critical. To access UPRR right-of-way ADOT permits may be needed. River Road boreholes will need permits from City. Need to be out there in early December.
Final geotechnical report for Ina to Ruthrauff is needed.

Interested in installing a hole for instrumentation to monitoring groundwater levels outside of project budget. Steve willing to have further discussion if it benefits project.

vii. Kittelson – Traffic

Felipe Ladron de Guevara needs crash data from ADOT and City of Tucson.

Needs to meet with PAG asap to understand traffic projections.

Needs square footage of land uses in Sunset Campus.

viii. SWCA – Cultural Resources (PC Office of Sustainability and Conservation)

Ian Milliken noted that south side of I-10 is eligible for national designation. If local, we could possible protect in place. Not clear if ADOT will support that, they may want mitigation. Need an answer ASAP sooner than later to approach SHPO.

On north side there are no documented resources. But, SWCA will do a geomorphological assessment to determine whether there could be any potential resources.

Will need to prepare a package for consulting with SHPO. Confirmed by Sarah Karasz. Sarah believes this question can be answered by ADOT quickly if Ian were to send an email with the details known to date.

7. Monthly Progress Meetings
   a. Location
   b. Time / Date

Tentatively scheduled for the third Tuesday of the month at 3 pm. 4th Floor conference room.

8. Other Items

Will need to develop IGA between ADOT and PC to pay for final design.

There is a portion of Sunset Road north of I-10 that will need to be renamed. Renaming it to “Old Sunset” road appears to be the strategy to take. Will impact 12 parcels. Will be a secondary Socio-Economic impact that will need to be noted in the EA.

Looking at a couple of staging areas. One area is south of the Rillito Creek, north of RR and Sunset. Also could consider staging area that was used during Phase I and finally another location could be the Sunset Campus site.

Public outreach will be handled by PCDOT with help from RTA and perhaps City along with ADOT. Will need to meet for best approach.

Sarah asked if we knew right-of-way limits. Steve indicated that there is one residential relocation and one business relocation. Six parcels total. Slope easements may be used outside of right-of-way. PC will be
transferring county land to right-of-way before transferring project to ADOT. ADOT right-of-way folks believe PC will acquire right-of-way, further discussion needed

Meeting adjourned at 4:56. Jim passed out draft project schedule to sub consultants.
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February 5, 2020

Chuck Huckelberry
County Administrator
Pima County
130 W. Congress St., 10th Floor
Tucson, AZ 85701

Re: PCDOT No. 4SRRIV
Sunset Road: I-10 to River Road

Dear Mr. Huckelberry:

The Pima County Department of Transportation (PCDOT) is planning to extend Sunset Road from Interstate 10 (I-10) to River Road. The project would begin south of the I-10 Sunset Road traffic interchange (TI) and extend to River Road in the City of Tucson and unincorporated Pima County, Arizona (Figure 1–Project location and Figure 2–Project vicinity). The project would also necessitate improvements to River Road at the new intersection with Sunset Road. Lands within the study area are owned by Pima County, the Arizona Department of Transportation (ADOT), the Union Pacific Railroad (UPRR), and private landowners. Several parks and trails are in the project vicinity, including the Chuck Huckelberry Loop (The Loop), Rillito River Park, Pima Prickly Park, and Dan Felix Memorial Park.

This project is the second phase of a two-phase plan to provide a connection between Silverbell Road and River Road. Phase 1, the construction of Sunset Road from the eastbound I-10 frontage road to Silverbell Road, was completed in 2017 and included a bridge over the Santa Cruz River. Phase 2 would modify up to 2,000 feet of Sunset Road from the Santa Cruz River Bridge to the eastbound frontage road and extend Sunset Road to the north from the westbound frontage road a distance of approximately 1,400 feet to River Road and construct a bridge over the Rillito River. The River Road improvements would extend in each direction from the new intersection with Sunset Road, for a total distance of up to 2,000 feet.

The project would establish an important link between Silverbell Road, I-10, and River Road, and provide additional roadway capacity for existing and future travel needs. The project purpose is to relieve traffic congestion, improve travel safety, and provide an alternative route between I-10 and River Road.

The scope of work for this project would consist of:

- Conducting geotechnical and utility potholing investigations.
- Staging and stockpiling equipment and materials during construction.
- Modifying the Sunset Road south approach to the future reconstructed I-10 Sunset Road TI and accommodating any potential modifications to The Loop.
- Constructing a Sunset Road overpass spanning the UPRR and the future alignment of the UPRR access road.
• Constructing a new segment of Sunset Road from the I-10 westbound frontage Road to River Road, including a bridge spanning the Rillito River.

• Building Americans with Disabilities Act–compliant bicycle and pedestrian access ramps from the new Rillito River bridge to The Loop.

• Modifying the elevation of The Loop at the Rillito River banks, as needed, to accommodate the new bridge.

• Installing new traffic signals at the intersection of Sunset Road and River Road.

• Constructing improvements to River Road to accommodate the new intersection with Sunset Road, such as new turning lanes.

• Constructing maintenance access roads, as needed.

• Constructing connections to adjacent parcels, as needed.

• Installing lighting and landscaping, as needed.

• Constructing drainage improvements, as needed.

• Relocating existing and installing new utilities, and installing underground conduit for future utilities, as needed.

• Relocating the Pima County Natural Resources Parks and Recreation Department maintenance yard to an adjacent county-owned property.

• Constructing new vehicular access from Tres Nogales Road to the relocated Pima County Natural Resources Parks and Recreation Department maintenance yard.

Project construction is tentatively scheduled for Fiscal Year 2022, with an expected duration of 24 months. No lane closures on I-10 are anticipated. Traffic restrictions at the eastbound and westbound frontage roads and the River Road connections are expected during construction. Access to residences and businesses would be maintained throughout construction. New right-of-way would be required for the project from ADOT, Pima County, the UPRR, and several private landowners. Slope easements and temporary construction easements would also be required. No detour is anticipated at this time.

This letter serves as your invitation to review the proposed project based on the scope of work outlined above. If you have specific concerns or suggestions pertaining to this proposed project, please let us know.
Please submit your comments or concerns by March 5, 2020, to Stephen Wilson, P.E., via mail at Pima County Department of Transportation, 201 N. Stone Ave., 4th Floor, Tucson, AZ 85701-1207; via email at stephen.wilson@pima.gov; or by phone at 520-724-5912.

Sincerely,

[Signature]

Stephen Wilson, P.E.
Pima County Department of Transportation

Enclosures: Figure 1–Project location
Figure 2–Project vicinity

C: Karla Reeve-Wise, Pima County Environmental Quality
   Jim Glock, P.E., Structural Grace
   Ron van Ommeren, EcoPlan Associates, Inc.
   Leslie J. Stafford, EcoPlan Associates, Inc.
PCDOT No. 4SRRIV
Sunset Road: I-10 to River Road

Figure 1. Project location
PCDOT No. 4SRRIV
Sunset Road: I-10 to River Road

Figure 2. Project vicinity
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From: Michael Ortega <Michael.Ortega@tucsonaz.gov>
Sent: Monday, February 10, 2020 10:48 AM
To: Leslie Stafford
Cc: Ron Van Ommeren; Karla Reeve Wise; 'Stephen Wilson'; 'Jim Glock'; Albert Elias; Andrea Flores; Diana Alarcon; Lane Mandle
Subject: Re: [EXTERNAL]Agency Scoping Letter - Sunset Road: I-10 to River Road - Pima County DOT #4SRRIV

Thanks for the opportunity to provide feedback. I will route to staff and provide comment...

>>> Leslie Stafford 2/5/2020 5:42 PM >>>
Mr. Ortega:
On behalf of the Pima County Department of Transportation, transmitted herewith is the agency scoping letter for the referenced roadway extension project referenced above. The attached letter requests your response by March 5, 2020.

Best regards,

Leslie J. Stafford
Director of Environmental Planning

EcoPlan Associates, Inc.
701 W. Southern Ave., Suite 203
Mesa, AZ 85210

O: (480) 733-6666, ext. 138
C: (480) 733-6666, ext. 238
February 18, 2020

Mr. Stephen Wilson, P.E.
Pima County Department of Transportation
201 N. Stone Avenue, 4th Floor
Tucson, AZ 85701

Re: Sunset Road, I-10 to River Road
Pima County Project 4SRRIV
RTA #8b; TIP10.18

Dear Mr. Wilson,

We reviewed the scope of the above referenced project and find it to be more extensive than the scope of the project identified in the 2006 RTA Plan. That said, we have no objection nor comments to offer on the scope described in your letter of February 5, 2020.

Thank you for the opportunity to review the proposed scope of project.

Sincerely,

[Signature]

James R. DeGrood
Deputy Director
February 19, 2020

Stephen Wilson, P.E.
Pima County Department of Transportation
201 N. Stone Ave, 4th Floor
Tucson, AZ 85719-1207

Submitted by email to stephen.wilson@pima.gov

Re: PCDOT No. 4SRRIV
   Sunset Road: I-10 to River Road

Dear Mr. Wilson,

Thank you for the opportunity to provide comment on the PCDOT project No. 4SRRIV Sunset Road extension I-10 to River Road. We write to you today with a simple extension of goodwill and introduction. Established in 1949, Tucson Audubon has worked to inspire people to love and protect birds and the habitats they need. We serve all of Southeast Arizona and currently have over 2,300 dues paying members. We also have an extensive history in parting with regional jurisdictions to ensure the protection of birds and their habitats during jurisdictional projects. We offer several suggestions below regarding the PCDOT project to extend Sunset Road I-10 to River Road.

1) Throughout staging, construction and stockpiling (including equipment and materials during construction) extreme care and control should be taken to ensure invasive plant species - especially stinknet – are not spread downstream.
2) Opportunities should be explored for bat roosting and breeding structures – similar to the I-10 overpass at Ina – on the new overpass to span the Rillito River.
3) All lightening structures should be Dark Sky compliant, bird, and bat friendly. We would be happy assist in evaluating options for lighting and landscaping that would improve bird and wildlife habitat.
4) Any drainage improvements should be utilized to improve riparian habitat along the Rillito – including active rain and storm water directed runoff collection.

Thank you for your time,

Jonathan Lutz
Executive Director, Tucson Audubon Society
As the Economic Development Director for Pima County, my comments will be less technical and will instead address the economic and commercial aspects of the proposed Project. There are a number of economic advantages to the completion of this project. Some are generically stated in the Project Purpose which is “…to relieve traffic congestion, improve travel safety, and provide an alternative route between I-10 and River Road.”

The operational advantage of smooth traffic flow without congestion is a major benefit to commercial operations, especially retail operations that attract high numbers of customers. Congestion negatively impacts consumer’s willingness to use certain locations. The heavy concentration of retail around the corner of River Road – Orange Grove – Thornydale Road as well as the convergence of three major arterials and heavy traffic exiting I-10 to travel north, east and southeast creates significant traffic congestion, long delays and a negative experience for commercial customers. As increased home development occurs north along Thornydale, this intersection will see even more congestion with traffic on Thornydale wanting to access I-10. Feeder traffic along River Road to and from I-10 exacerbates the demand at that same intersection. The alternative access to I-10 created by a new Sunset to River Road connection should have a positive impact on the River Road – Orange Grove – Thornydale Road intersection as well as improve consumer traffic, sales, and property values.

As exhibited in most metropolitan areas, Interstate frontage is prime property for commercial development. In Tucson, this scenario is demonstrated in downtown Tucson, south along I-19 near Irvington and Valencia Roads, and in Marana between Ina and Cortaro Farms Roads and the rapidly developing Twin Peaks intersection with I-10. Twin Peaks is similar to Sunset in that it provides freeway access to developing residential parcels as well as demonstrating the development potential of a large parcel adjacent to I-10 that makes both sites primary locations for mixed-use commercial development.

There are few large parcels to attract major development along I-10 north of Tucson. One of the most attractive parcels for major commercial development along I-10 is the approximately 100 acres on the SW corner of I-10 and Sunset. This was the site proposed by Sun Corridor, Inc. and Pima County for the southern Arizona location of the planned second headquarters of Amazon. In 2018, a meeting with major developers from Phoenix, Tucson, and California was convened with a request for suggestions related to the SW Corner of I-10 and Sunset Road. The overwhelming majority of comments considered the highest and best use of that property to be a mixed-use commercial development with office and retail – but only if there was a new traffic Interchange at Sunset and I-10 that improved access to I-10 as well as to River Road. An appealing site like this provides an ideal location to attract corporate headquarters interested in efficient access to their property by workforce and customers; ready access to downtown Tucson; proximity to the Phoenix and Tucson airports; and higher end, large parcel housing to the west. Additionally, a new interchange would provide much quicker access to the Catalina foothills and Oro Valley for higher end housing and easy proximity to Tucson’s only major east-west parkway, River Road. The site lends itself to major corporate campus type developments similar to the ASU SkySong concept in the east Phoenix area. These developments employ hundreds, if not thousands, of people and any development of this size will clearly generate significant traffic volumes.
North of the Phase I Sunset Road improvement and west of I-10, Pima County has a master plan for the Tres Rios major recreation area. Access to this planned development must be available from both Orange Grove Road and Sunset Road (from River Road) as well as Silverbell Road and I-10. Improving access from all directions to this planned regional recreation area is critical to long term development success.

The rolling topography west of Silverbell Road to the Tucson Mountains has seen a great deal of development of medium density 3+ acre residential lots with moderate to high-end housing. There is a scarcity of retail and employment opportunities in this area. Access to I-10 and points east is very limited. Providing a route from Silverbell east to River Road will significantly improve the access to shopping and other amenities east of I-10 without travel north to Ina Road or south to Camino del Cerro. This connection should also provide traffic relief to Silverbell Road. Increasing access to points east of I-10 from homes west of Silverbell will also improve the desirability and home values in that area with decreased commute times to jobs and shopping for middle and upper level income families that typically live in that area.

Finally, this location will improve the “gateway” image as travelers come into Tucson. Not only will the extension of Sunset provide much greater mobility, but it has the potential to enable the development of a signature employment center that provides economic benefits to Pima County and significantly increases the tax base.

John Moffatt
Director, Economic Development
Pima County
March 5, 2020

Stephen Wilson, P.E.
Pima County Department of Transportation
201 N. Stone Ave., 4th Floor
Tucson, AZ 85701-1207

Re: Review of the Sunset Road extension: I-10 to River Road project

Dear Mr. Wilson:

The Arizona Game and Fish Department (Department) reviewed your Project Evaluation Request dated February 5, 2020, regarding the planning to extend Sunset Road from Interstate 10 (I-10) to River Road in the City of Tucson and unincorporated Pima County. As seen on the Department's Heritage Data Management System (HDMS)’s Online Environmental Tool report you created on November 20, 2019, a number of special status species have been reported within a three mile radius of your proposed project, primarily associated with the Rillito and Santa Cruz Rivers.

Based on the information provided, the Department offers the following general recommendations:

● Minimize impacts to vegetation during project construction. Staging areas should be located in previously disturbed sites, and kept as small as possible. Implement erosion and drainage control measures during the project to prevent the introduction of sediment-laden runoff into adjacent surface waters, and to prevent impacts to surface water quality. Stabilize exposed soils, particularly on slopes, with native vegetation as soon as possible to prevent excess erosion.

● The yellow-billed cuckoo (Coccyzus americanus), which is federally listed as Threatened under the Endangered Species Act (ESA), has been recorded with a three mile radius of your proposed project. If you are uncertain about the effects of your project to the yellow-billed cuckoo, or if you anticipate your project will not be in compliance with the ESA, the Department recommends that you and/or the project proponent contact the U.S. Fish and Wildlife Service (USFWS) for their Technical Assistance. The USFWS will provide options to comply with the ESA, such as conservation measures to avoid or minimize adverse effects to listed species.

● The western burrowing owl (Athene cunicularia hypugaea), a special status species that is regulated under the Migratory Bird Treaty Act (MBTA), is known to occur at numerous locations along the Santa Cruz and Rillito Rivers. Although it hasn’t been recorded in the immediate vicinity, the Rillito River and its surrounding banks and floodplain may provide
suitable habitat for this species. The Department recommends conducting an occupancy survey for western burrowing owl to determine if this species occurs within your project footprint. Guidelines for conducting this survey are found in Burrowing Owl Project Clearance Guidance for Landowners which can be accessed on-line through the Department’s website. Please note that the survey should be conducted by a surveyor that is certified by the Department. If an active burrowing owl burrow is detected, please contact the Department and the U.S. Fish and Wildlife Service for direction, in accordance with the Burrowing Owl Project Clearance Guidance for Landowners.


- For construction of the bridge that will span the Rillito River, the Department recommends referring to the Guidelines for Bridge Construction to Accommodate Fish & Wildlife Movement and Passage. Additionally, the Department recommends referencing the Wildlife Crossing Structure Handbook Design and Evaluation in North America. We suggest utilizing the higher end of the recommended dimensions for a large mammal underpass within these guidelines. Additionally, we recommend a concrete bottomless arch or a bridge span for this type of construction.


https://www.azgfd.com/wildlife/planning/wildlifeguidelines/

- The Guidelines for Bridge Construction to Accommodate Fish & Wildlife Movement and Passage also provides recommendations to incorporate bat friendly design elements within the structure of the new bridge that will span the Rillito River. We request coordination with our Wildlife Contracts Specialist, Ron Mixan (rmixan@azgfd.gov 602.942.3000), to discuss the design of the new bridge at the earliest stages of design development.

- Please determine if bats are currently roosting in the 2017 Sunset bridge that crosses the Santa Cruz River or the nearby drainage culverts on N. Camino de la Tierra; bats may use structures seasonally, so evidence of bat use, such as guano, should also be evaluated. If construction could encroach on the breeding season (May - August), impacts could occur to a maternity colony of bats, if present. If necessary, bat surveys should be conducted prior to any work adjacent to the bridge; surveys should be scheduled far in advance of proposed work to allow for schedule modification to avoid disruption of maternity roosts during the breeding season, and again immediately prior to construction. If the project will impact a roosting feature, roost friendly designs should be incorporated into the design plans to replace loss of roosting habitat. Refer to the Guidelines for Bridge Construction or Maintenance to Accommodate Fish & Wildlife Movement and Passage, for additional guidance on bats as appropriate.

Stephen Wilson, P.E.
March 4, 2020
3

The Department understands that Pima County DOT will comply with the Arizona Native Plant Law for any ground disturbing activities, efforts will be made to minimize ground disturbance, and all temporarily disturbed land will be re-seeded to minimize erosion. In addition, the Department understands that, in accordance with Pima County DOT’s guidelines, invasive species and the Migratory Bird Treaty Act (MBTA) will be addressed within the proposed project’s biological report, if applicable.

**The Department requests continued coordination on this project, as planning progresses.** Please coordinate with Wildlife Contracts Specialist, Ron Mixan (rmixan@azgfd.gov 602.942.3000) when draft design plans and/or planning documents are available for review. Additionally, visit our website for additional guidelines at: [https://www.azgfd.com/wildlife/planning/wildlifeguidelines/](https://www.azgfd.com/wildlife/planning/wildlifeguidelines/).

Sincerely,

[Signature]

Cheri A. Bouchér
Project Evaluation Program Specialist, Habitat Branch
Arizona Game and Fish Department

cc: Ginger Ritter, Project Evaluation Program Supervisor
    John Windes, Habitat Program Manager, Region V
    Ron Mixan, Wildlife Contracts Specialist
    Karla Reeve Wide, Pima County

AGFD# M20-02063839
TO: Ana Olivares, P.E. Director  
Department of Transportation

FROM: Suzanne Shields, P.E.  
Director

DATE: March 25, 2020

SUBJECT: Sunset Road Interchange and Connection to River Road

The purpose of this memorandum is to discuss a design issue regarding Regional Flood Control District (District) property where the Sunset Road interchange and bridge to River Road will be located.

Some of the design discussion includes the storage area at the “Chicken Ranch” which has been utilized as a storage yard by the Department of Transportation and most recently by the Natural Resources, Parks and Recreation Department (NRPR). Relocating the storage yard to the west side of Sunset Road at the Rillito River is not an option. The west side is extremely flood prone due to backwater at the Union Pacific Railroad Bridge and material from a storage yard could clog the bridge and compromise the flow capacity. Additionally, this area is to be a possible environmental restoration site along the Loop.

I will work with Chris Cawein to determine a suitable area to meet NRPR’s needs. I would ask that you keep Ann Moynihan and Andy Dinauer involved with your design team to make sure the District’s requirements for the Loop, floodplain management and property rights are fully considered.

Please let me know if you have any questions.

SS/tj

c: Carmine DeBonis, Deputy County Administrator – Public Works  
Chris Cawein, Director – Natural Resources, Parks and Recreation  
Eric Shepp, P.E., Deputy Director – Regional Flood Control District  
Andy Dinauer, P.E., Division Manager – Regional Flood Control District  
Ann Moynihan, Civil Engineering manager – Regional Flood Control District  
Stephen Wilson, Program Manager – Department of Transportation
May 8, 2020

Cheri A. Boucher
Project Evaluation Program Specialist, Habitat Branch
Arizona Game and Fish Department
5000 W. Carefree Highway
Phoenix, AZ 85086

RE: Sunset Road: I-10 to River Road (4SRRIV)

Dear Ms. Boucher:

This letter is in response to the letter we received from the Arizona Game and Fish Department dated March 5, 2020, for the above-referenced project. We offer the following responses to the recommendations mentioned in the letter:

- Vegetation removal will be confined to the construction footprint of the project. The proposed staging areas are located on previously disturbed sites, as recommended. The project will require a Storm Water Pollution Prevention Plan, which will include temporary erosion control measures for grading within the project footprint. New slopes will be stabilized as soon as possible with seeding or rock mulch to minimize erosion and sedimentation.

- A review of the project site by a qualified biologist did not find any suitable habitat for the yellow-billed cuckoo. Adverse effects to yellow-billed cuckoo habitat are not anticipated.

- A burrowing owl site survey was conducted by a biologist certified by the Arizona Game and Fish Department. The survey did not find any evidence of burrowing owls, burrows, or sign within the project footprint. However, if burrowing owls are found at the project site, we will contact the Arizona Game and Fish Department and the US Fish and Wildlife Service for direction.

- The proposed bridge spanning the Rillito River would consist of a three-span precast-prestressed concrete girder bridge that is 384 feet long by 83.75 feet wide and would average approximately 21 feet high. Using the “Guidelines for Bridge Construction or Maintenance to Accommodate Fish and Wildlife and Passage,” the approximate openness ratio was calculated to be 4.7. This ratio is relatively high, which is conducive to use by large and small mammals. The bridge would also meet the size of openings for large mammals per the “Wildlife Crossing Structure Handbook Design and Evaluation in North America.” The channel would remain as is without a concrete bottom.

- The Pima County Department of Transportation (PCDOT) recently completed a new bridge of the Santa Cruz River as part of Phase I of the project from Silverbell Road to Interstate 10 (I-10). Bat boxes were installed on the bridge over the Santa Cruz River in 2017 as part of that project. As of March 2020, there has been no evidence of bats roosting in the bat boxes. PCDOT will continue to monitor for the presence of bats at Sunset Road and the Santa Cruz River. If, however, bats do not utilize bat boxes on the Santa Cruz River, we recommend that bat boxes not be installed at the...
Rillito River crossing. We will coordinate with the Arizona Game and Fish Department Wildlife Contracts Specialist, Ron Mixan, to discuss the design of the new bridge.

- A Native Plant Inventory was conducted for the project in accordance with the PCDOT Memorandum, update to Appendix 4D of the Environmentally Sensitive Roadway (ESR) Design Guidelines, PCDOT Roadway Design Manual dated July 2015. Vegetation removal will be confined to the construction footprint of the project. Vegetation removal will be timed in consideration of the mitigation required for the project to conform with the Migratory Bird Treaty Act.

We appreciate the Arizona Game and Fish Department’s recommendations and look forward to working with you on the design and construction of the project in the future.

Sincerely,

Stephen Wilson, P.E.
Project Manager
Pima County Department of Transportation

   Karla Reeve-Wise, Pima County Department of Environmental Quality
   Jim Glock, P.E., Project Manager, CONSOR Engineers
May 8, 2020

John Moffatt
Director
Pima County Economic Development
130 W. Congress St., 10th Floor
Tucson, AZ 85701

RE: Sunset Road: I-10 to River Road (4SRRIV)

Dear Mr. Moffatt:

We wanted to take this opportunity to thank you for your response to our scoping letter for the above-referenced project. We appreciate your support for the project and valuable insight into the access and future land use potential in the project area. It is helpful to understand how infrastructure improvements will support the economic development in the vicinity of the project and beyond.

The Design Concept Report and Environmental Assessment currently in development have incorporated planning for the Sunset Innovation Campus. The proposed improvements for the project have been designed to accommodate 2045 traffic volumes, including traffic generated from the future Sunset Innovation Campus. The design and planning efforts have been coordinated with the Arizona Department of Transportation, and the agency is on board with what we are proposing. Planning efforts also incorporate provisions for future utilities to the Sunset Innovation Campus. The Environmental Assessment includes all improvements proposed by the Sunset Road: I-10 to River Road project.

We look forward to working with you to further develop and implement the project in the future.

Sincerely,

Stephen Wilson, P.E.
Project Manager
Pima County Department of Transportation

    Karla Reeve-Wise, Pima County Department of Environmental Quality
    Jim Glock, P.E., Project Manager, CONSOR Engineers
May 8, 2020

Jonathan Lutz
Executive Director, Tucson Audubon Society
300 E. University Blvd., #120
Tucson, AZ 85705

RE: Sunset Road: I-10 to River Road (4SRRIV)

Dear Mr. Lutz:

This letter is in response to the letter we received from the Tucson Audubon Society dated February 19, 2020, for the above-referenced project. We offer the following responses to the suggestions mentioned in the letter:

1. Proper care will be taken during construction to ensure invasive species are not spread downstream. The contractor will be required to develop a Noxious and Invasive Plant Species Treatment and Control Plan. Plants to be controlled shall include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The Noxious and Invasive Plant Species Treatment and Control Plan will be reviewed by a Professional Landscape Architect, and implementation will be overseen by the Resident Engineer for the project to ensure conformity to state and federal laws.

2. The Pima County Department of Transportation (PCDOT) recently completed a new bridge of the Santa Cruz River as part of Phase I of the project from Silverbell Road to I-10. Bat boxes were installed on the bridge over the Santa Cruz River in 2017 as part of that project. As of March 2020, there has been no evidence of bats roosting in the bat boxes. PCDOT will continue to monitor for the presence of bats at Sunset Road and the Santa Cruz River. If, however, bats do not utilize bat boxes on the Santa Cruz River, we recommend that bat boxes not be installed at the Rillito River crossing.

3. Lighting on Sunset Road will be designed to limit light pollution in compliance with the Pima County Outdoor Lighting Code. Luminaire fixtures will be downward-facing, fully shielded, and compliant with source color temperature requirements and maximum illumination levels appropriate for the type of roadway being lighted. The Sunset Road project will provide landscaped areas that will provide habitat for birds and wildlife.

4. There is very little riparian habitat in the Rillito River remaining intact at the onset of this project. However, the project will include landscaping along Sunset Road near the Rillito River, and graded drainage channels may have opportunities for adjacent landscaping.

ANA M. OLIVARES, P.E., Director
201 N. Stone Avenue, 4th Floor, Tucson, Arizona 85701-1207 • Phone: 520-724-6410 • Fax: 520-724-6439
We appreciate the Tucson Audubon Society’s suggestions and look forward to working with you on the design and construction of the project in the future.

Sincerely,

Stephen Wilson, P.E.
Project Manager
Pima County Department of Transportation

   Karla Reeve-Wise, Pima County Department of Environmental Quality
   Jim Glock, P.E., Project Manager, CONSOR Engineers
Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA) invite you to attend a public open house for a project to connect Sunset Road from I-10 to River Road.

The project is part of the 2006 voter approved Regional Transportation Authority (RTA) 20-year multimodal plan. The project is in the early stages of the planning phase. PCDOT is developing a Design Concept Report (DCR) and an Environmental Assessment (EA). The project scope consists of planning efforts for roadway and bridge improvements necessary to connect Sunset Road from I-10 to River Road.

Representatives from Pima County PCDOT will be available to answer questions and address concerns about the project. The meeting will consist of an open house format with a short presentation at 6:00 p.m. Exhibits and project information will be on display, and comment forms will be available. For more information about the public open house, visit: [www.roadprojects.pima.gov](http://www.roadprojects.pima.gov)

Individuals with disabilities who require accommodations for effective participation and communication during this meeting should call Carol Brichta with PCDOT Community Relations at 520-724-6410 by March 23rd to make appropriate arrangements.

All meetings sites are accessible. Para información en español, contacte a Annabelle Valenzuela al 520-724-6410.
PUBLIC OPEN HOUSE

Sunset Road: I-10 to River Road
Tuesday, March 31, 2020 • 5:30 to 7:00 p.m.
Natural Resources, Parks and Recreation
3500 W. River Road
Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA) have cancelled the public open house for a project to connect Sunset Road from I-10 to River Road due to the recent health concerns. Information about the project is available online at www.roadprojects.pima.gov.

The project is part of the 2006 voter approved Regional Transportation Authority (RTA) 20-year multimodal plan. The project is in the early stages of the planning phase. PCDOT is developing a Design Concept Report (DCR) and an Environmental Assessment (EA).

The project scope consists of planning efforts for roadway and bridge improvements necessary to connect Sunset Road from I-10 to River Road.

Public participation is encouraged while in the planning process. Presentation materials and exhibits showing the proposed project improvements are being made available for public viewing, review and comments. Information will be available by March 31st along with a comment form that may either be mailed in or emailed to Carol.Brichta@pima.gov.

You may also call our office for more information. Para información en español, contacte a Annabelle Valenzuela al 520-724-6410.
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ADOT along with the Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA), invite you to review and comment on the public documents for the project to connect Sunset Road from I-10 to River Road. The project is part of the 2006 voter approved Regional Transportation Authority (RTA) 20-year multimodal plan. The project scope consists of planning efforts for roadway and bridge improvements necessary to connect Sunset Road from I-10 to River Road. A copy of the Draft Environmental Assessment (DEA) and Design Concept Report (DCR) is available for viewing on the project website www.roadprojects.pima.gov and at the following locations: Joel D. Valdez Main Library located at 101 N. Stone Avenue, Ellie Towne Center: 1670 W. Ruthrauff Road, and Southwest Public Library: 6855 S. Mark Road.

Comments or questions on the DEA and DCR can be submitted to the address included below. Additionally, any interested person may request a public hearing covering the social, economic, and environmental impacts of the proposed project. Please note that due to the ongoing Covid-19 pandemic, email is the preferred method of communication. Comment period will be from March 28, through April 26, 2022.

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Arizona Department of Transportation (ADOT) pursuant to 23 USC 327 and a Memorandum of Understanding dated April 16, 2019, and executed by the Federal Highway Administration and ADOT. Comments or requests for public hearing must be submitted on or before April 26, 2022. Comment forms can be found on our project website and may be emailed back to Carol Brichta at Carol.Brichta@pima.gov or mailed to Department of Transportation, 201 N. Stone 4th floor, Tucson AZ 85701.

For more information about the project, visit: www.roadprojects.pima.gov or call our office at 520-724-6410. Para información en español, contacte a Annabelle Valenzuela al 520-724-6410.

Pursuant to Title VI of the Civil Rights Act of 1964, the ADA, and other nondiscrimination laws and authorities, Pima County Department of Transportation (PCDOT) does not discriminate on the basis of race, color, national origin, sex, age, or disability. Persons that require a reasonable accommodation based on language or disability should contact Annabelle Valenzuela at 520-724-6410, or Annabelle.Valenzuela@pima.gov. Requests should be made as early as possible to ensure Pima County has an opportunity to address the accommodation.

De acuerdo con el título VI de la Ley de Derechos Civiles de 1964 y la Ley de Estadounidenses con Discapacidades (ADA por sus siglas en inglés) y otras normas y leyes antidiscriminatorias, el Departamento de Transporte de Pima County (PCDOT por sus siglas en inglés) no discrimina por raza, color, nacionalidad, edad, género o discapacidad. Personas que requieren asistencia (dentro de lo razonable) ya sea por el idioma o por discapacidad deben ponerse en contacto con Annabelle Valenzuela al 520-724-6410 o por correo electrónico al Annabelle.Valenzuela@pima.gov. Las solicitudes deben hacerse lo más pronto posible para asegurar que el equipo encargado del proyecto tenga la oportunidad de hacer los arreglos necesarios.
Public Notice


ADOT along with the Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA), invite you to review and comment on the public documents for the project to connect Sunset Road from I-10 to River Road.

The project is part of the 2006 voter approved Regional Transportation Authority (RTA) 20-year multimodal plan. The project scope consists of planning efforts for roadway and bridge improvements necessary to connect Sunset Road from I-10 to River Road. A copy of the Draft Environmental Assessment (DEA) and Design Concept Report (DCR) is available for viewing on the project website www.roadprojects.pima.gov and at the following locations: Joel D. Valdez Main Library located at 101 N. Stone Avenue, Ellie Towne Center: 1670 W. Ruthrauff Road, and Southwest Public Library: 6855 S. Mark Road.

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Comments or requests for public hearing must be submitted on or before April 26, 2022. Comment forms can be found on our project website and may be emailed back to Carol Brichta at Carol.Brichta@pima.gov or mailed to Department of Transportation, 201 N. Stone 4th floor, Tucson AZ 85701.

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ADOT along with the Pima County Department of Transportation (PCDOT) and the Regional Transportation Authority (RTA), invite you to review and comment on the public documents for the project to connect Sunset Road from I-10 to River Road.

The project is part of the 2006 voter approved Regional Transportation Authority (RTA) 20-year multimodal plan. The project scope consists of planning efforts for roadway and bridge improvements necessary to connect Sunset Road from I-10 to River Road. A copy of the Draft Environmental Assessment (DEA) and Design Concept Report (DCR) is available for viewing on the project website www.roadprojects.pima.gov and at the following locations:

- Joel D. Valdez Main Library located at 101 N. Stone Avenue, Ellie Towne Center: 1670 W. Ruthrauff Road, and Southwest Public Library: 6855 S. Mark Road.

Comments or questions on the DEA and DCR can be submitted to the address included below. Additionally, any interested person may request a public hearing covering the social, economic, and environmental impacts of the proposed project. Please note that due to the ongoing Covid-19 pandemic, email is the preferred method of communication. Comment period will be from March 28, through April 26, 2022.

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Comments or requests for public hearing must be submitted on or before April 26, 2022. Comment forms can be found on our project website and may be emailed back to Carol Brichta at Carol.Brichta@pima.gov or mailed to Department of Transportation, 201 N. Stone 4th floor, Tucson AZ 85701.

For more information about the project, visit: www.roadprojects.pima.gov or call our office at 520-724-6410. Para información en español, contacte a Annabelle Valenzuela al 520-724-6410.

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DATE: January 3, 2013

TO: C.H. Huckelberry, County Administrator

FROM: Priscilla S. Cornelio, P.E., Director

SUBJECT: Request for Waiver from Pima County Ordinance 10.56.110

As the Department of Transportation is preparing to move forward with the Sunset Road project from Silverbell Road to River Road, we are asking for your concurrence to request the Board of Supervisors (BOS) to exempt this project from Ordinance 10.56.110, Establishment of Community Advisory Committee.

Although this project has not yet officially been started, the basic location, configuration and approximate timing for implementation has been shared at the various public meetings and community outreach affronts associated with the I-10 project from Ina Road to Ruthrauff, as well as the Silverbell project from Grant Road to Ina Road. In the majority of these meetings, the inquiries and comments regarding the future Sunset Road project were favorable and the majority of the residents and citizens expressed a desire to see the project move forward as quickly as possible.

In addition, the constraints surrounding this project, most notably the location of the I-10 interchange, floodway limits, water surface elevation, gravel pit operations between Silverbell and I-10, plus overall project costs; severely restrict the number of alternatives and configuration possibilities that can be explored. As a result, the opportunity to adjust the design based on public comments and input is greatly limited.

Based on these two factors, we are recommending that the BOS exempt the project from the requirements of forming a Community Advisory Committee (CAC). We still plan to incorporate community outreach and input via open house forums, newsletters, project website, etc., as appropriate, and neighborhood meetings as requested. In addition, we will also develop an Environmental Assessment and Mitigation Report (EAMR) that will be presented to the BOS for final approval. We believe that this approach will still provide ample opportunity to share project information with the public as well as solicit any comments and feedback.

We appreciate your consideration of this request and if you need any further information, please let me know.

PSC:RE:sap

Concur:

John M. Bernal, Deputy County Administrator – Public Works  
Date: 1/3/13

Approved / Not Approved

C.H. Huckelberry, County Administrator  
Date: 1/3/13
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