



MEMORANDUM

DATE: September 8, 2026
For September 24, 2026 Hearing

TO: Linus Kafka
Zoning Examiner

FROM: Koren Manning
Planning & Development Services
Director

SUBJECT: SPECIAL EXCEPTION LAND USE
PLANNING & DEVELOPMENT SERVICES REPORT
TP-ENT-0726-00013 Sonoran South Solar – 10002 S Swan Rd,
RH Zoning (Ward 5)

Issue – This is a special exception land use request in the RH Rural Homestead zone by Lazarus & Silvyn, P.C. on behalf of the property owner, Tucson Airport Authority, for the development of a utility-scale solar energy facility on approximately 1,400 acres of property located south of E Old Vail Connection Road, on either side of Swan Road (See case location map).

Renewable Energy Generation in the RH zone is subject to section 4.9.11.B.2, .3, .4, & .5 and 4.9.13.I of the *Unified Development Code (UDC)* and requires approval through the Zoning Examiner Special Exception Procedure, Sec. 3.4.3.

Planning and Development Services Recommendation – The Planning & Development Services Department recommends approval of the requested special exception land use, subject to the attached preliminary conditions.

Background Information

Existing Land Use: The project site consists of largely open space, with some existing surface mining quarries. While these cover a large area, they are relatively shallow compared to quarry sites further north on Swan Road. An existing TEP Substation is located east of Swan Road in the southern half of the project area.

Existing Zoning Description: Rural Homestead (RH) – This zone is intended to preserve the character and encourage the orderly growth of rural areas. It is intended to encourage rural development in areas lacking facilities for urban development and to provide for agriculture, commercial and industrial development only where appropriate and necessary to serve the needs of the rural area. This zone is solely to provide comparable zoning for annexed areas and is not intended for rezoning.

Surrounding Zones and Land Uses:

North – City I-2, P-I, County CI-2; Surface Mining
East – City RH; Arizona State Prison Complex
South – County RH; Single-family residential
West – City RH; Vacant State Trust Land

Previous Cases on the Property: There are no previous Special Exception cases on property.

Related Cases: None

Applicant's Request – The applicant request is for special exception approval for the Renewable Energy Generation land use on the site with associated site improvements.

The proposed use requires a Zoning Examiner Special Exception in the RH zone.

Planning Considerations – Land use policy direction for this area is provided by *Plan Tucson* and the *Rincon/Southeast Subregional Plan*.

Plan Tucson: This location is within the Industrial building block. The project is in proximity to the future Sonoran Spur interstate link between Interstate 10 and Interstate 19, and in an area long-range planned for a variety of industrial uses. Large-scale renewable energy generation at this location is aligned with these goals and Tucson climate and sustainability goals. This project is supported for improving the provision of utilities in a sustainable manner, in a way that's sensitive to the surrounding environment.

Rincon/Southeast Subregional Plan: This development is not within a Special Area or Map Detail Area of the *RSSP*, and there are no specific policies in favor of or against the development. The *Plan* does encourage an Environmental Resource Report, which was included in the applicant's materials.

Design Considerations

Land Use Compatibility – The subject site consists of primarily open space, with some shallow surface mining operations on the north half of the project area and a TEP substation on the south half. The only nearby residential area is a rural neighborhood in Pima County south of the project site. Swan Road, which bisects the project area, is the only road in and out of this neighborhood. No impacts to residents are expected to the west, north, or east, as that land is undeveloped, surface mining, or the Arizona State Prison Complex, respectively.

The proposal is for utility-scale solar arrays across the project area, which would tie into a collector substation adjacent to the existing TEP substation. A 6' wall and landscaping will be required along the south edge of the project, where it is adjacent to the single-family residential neighborhood in the County.

Although adjacent to a residential neighborhood, the *RSSP* and *Plan Tucson* designate large amounts of land in this area for Industrial Use – renewable energy generation is a low-intensity use of land, and the facility would buffer the existing neighborhood from more intense industrial development in the area, as well as from the Sonoran Spur interstate connector planned north and west of the project area. A large band of riparian habitat crosses the south edge of the project area, which further buffers it from the existing neighborhood.

The project is also located within the Tucson International Airport noise land use overlay areas, which a land use that has very low staffing requirements is more compatible with this type of overlay.

Drainage/Grading – Grading plans will be required during Development Package review showing the extent of disturbed areas, and a drainage report will need to delineate existing floodplain limits and show compliance with development in proximity to Environmental Regulatory Zone washes which run through the site.

Grading will be required to accommodate development in the surface mining areas on the north half of the site. The applicant's preliminary plans indicate grading will avoid major wash corridors for habitat preservation onsite. The project is designed to maintain the property's overall drainage characteristics.

Road Improvements/Vehicular Access/Circulation – Vehicle access to the project is proposed at three locations on Swan Road for maintenance personnel only. Renewable Energy Generation generates minimal additional trips and the project would have little to no impact existing roadway capacity.

The northwest corner of the project area is deliberately left undeveloped in anticipation of the future alignment of the Sonoran Spur highway, and the preliminary development plan shows landscaping and screening are contemplated along the corridor when the highway is developed.

Use Specific Standards – Renewable Energy Generation is allowed as a Special Exception in the Rural Homestead zone providing it meets the criteria established in Section 4.9.11.B.2, .3, .4, & .5 of the Unified Development Code (*UDC*) with approval through a Zoning Examiner Special Exception Procedure, in accordance with *UDC* Section 3.4.3.

Staff find the proposal to be in compliance with all applicable *UDC* Use-Specific Standards.

Conclusion –The proposal is in compliance with the performance criteria for a Renewable Energy Generation. The request is consistent with policy direction in *Plan Tucson* and the *Rincon/Southeast Subregional Plan*. Subject to compliance with the attached preliminary conditions, approval of the requested special exception is appropriate.

PROCEDURAL

1. A development package, in substantial compliance with the preliminary development package and required reports dated July 17, 2026, is to be submitted and approved in accordance with the Administrative Manual, Section 2-06. 2.
2. Historic or prehistoric features or artifacts discovered during future ground disturbing activities should be reported immediately to the City of Tucson Historic Preservation Officer. Pursuant to A.R.S. 41-865 the discovery of human remains and associated objects found on private lands in Arizona must be reported to the Director of the Arizona State Museum.

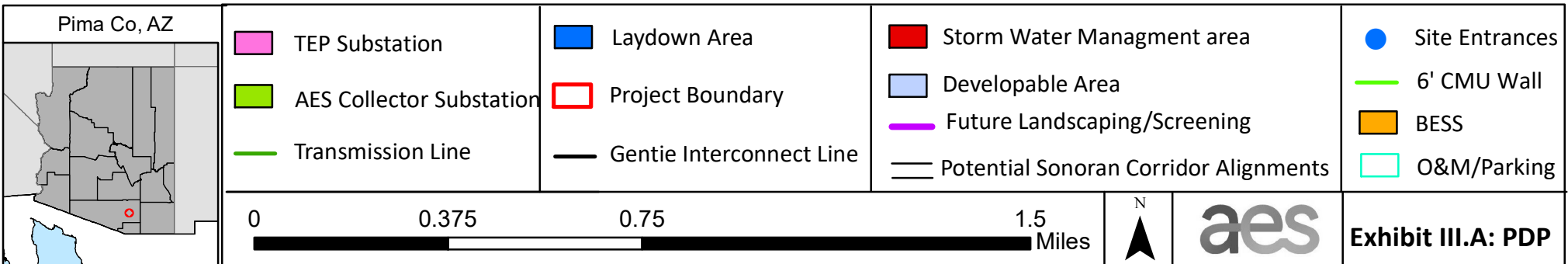
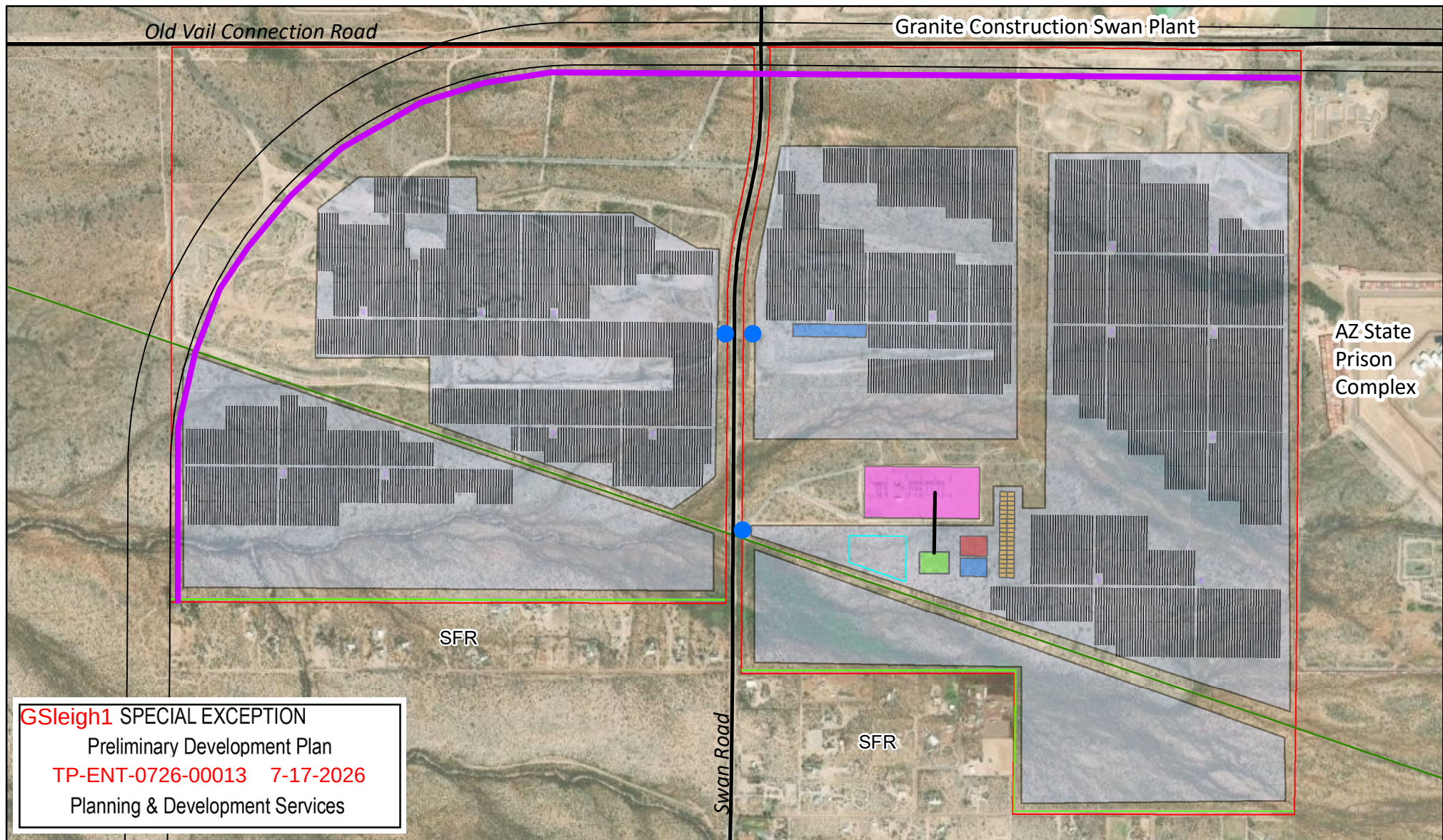
In the event that previously unreported cultural resources are encountered during ground disturbing activities, allowed work must immediately cease within 30 meters (100 feet) until a qualified archaeologist has documented the discovery and evaluated its eligibility for the Arizona or National Register of Historic Places in consultation with the lead agency, the SHPO, and Tribes, as appropriate. Work must not resume in this area without approval of the lead agency. If human remains are encountered during ground-disturbing activities, all work must immediately cease within 30 meters (100 feet) of the discovery and the area must be secured. All discoveries will be treated in accordance with NAGPRA (Public Law 101- 601; 25U.S.C. 3001-3013) or Arizona Revised Statutes (A.R.S. § 41-844 and A.R.S. § 41-865), as appropriate, and work must not resume in this area without authorization from Arizona State Museum and the lead agency.

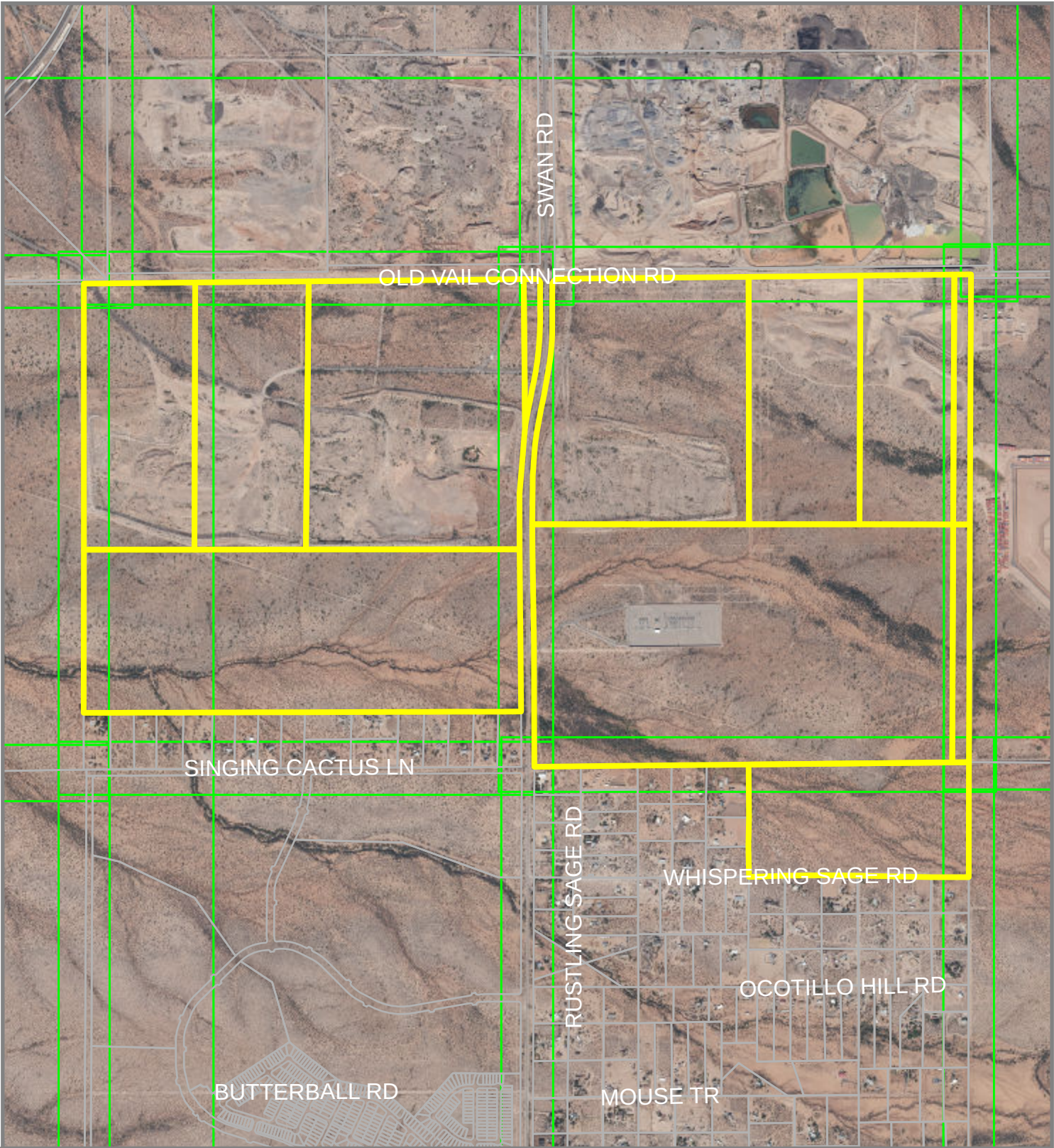
3. Any relocation, modification, etc., of existing utilities and/or public improvements necessitated by the proposed development shall be at no expense to the public.
4. Ten years are allowed from the date of initial authorization to implement and effectuate all Code requirements and Entitlement Conditions for this utility-scale solar installation as the project is tied to TEP process for timing to connect to their substation and required Request for Proposals.

LAND USE COMPATIBILITY

5. A qualified Archaeological consultant shall conduct a full Class I research study of the project area prior to submittal of the Development Package. If the Class I Research study recommends a Class III pedestrian survey of any areas, the Class III survey will be completed and submitted to the CHPO at the time of Development Package submittal for review and approval of the survey and potential treatment recommendation, if necessary, during the Development Package process.

6. Any Modification to Developable Area that may be required during the more detailed analysis of washes and existing riparian areas as part of the Development Package process shall not be considered substantial changes to the preliminary development package dated July 17, 2026.
7. In acknowledgement of current conditions UDC Section 7.6.4/Table 7.6.4-1 shall be applied as follows: Existing berms in their current condition satisfy the required opaque screening. For areas along Swan Road any fencing shall be located no closer than 200 feet from the Swan Road center line. Fencing located where there is no berm, shall be opaque, at least six (6) feet high, decorative and finished in non-reflective earth tones consistent with the surrounding desert.
8. Where existing berms are used to satisfy screening requirements along Swan Road, existing vegetation shall not be disturbed.
9. Naturally occurring vegetation between Swan Road and the required screening shall remain undisturbed, except where disturbance is necessary for approved access or utility crossings.





Area of Special Exception Request

2023 Aerial

Created: 7/22/2026



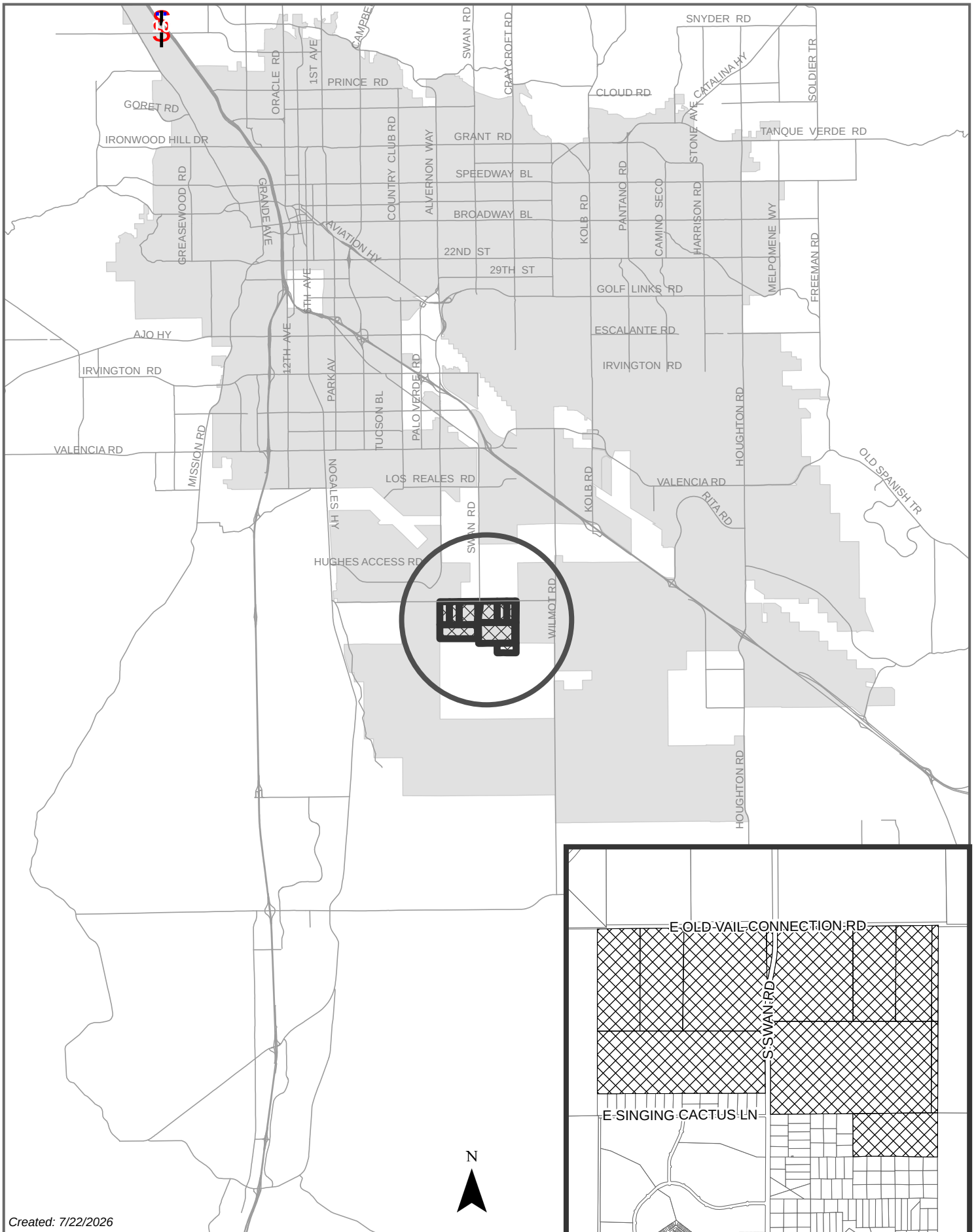
Address: 10002 S SWAN RD
Base Maps: Twp. 1603 Range 1402 Sec. 11
Twp. 1603 Range 1402 Sec. 12
Twp. 1603 Range 1402 Sec. 04
Twp. 1603 Range 1402 Sec. 03
Ward(s): 5

0 790 1,580 Feet

1:19,622



TestTP-ENT-0726-00013



Sonora South Solar

Special Exception Land Use Permit

July 2026



Project Team

AES CLEAN ENERGY DEVELOPMENT, LLC

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I. Introduction & Policy

A. Project Overview

AES Clean Energy Development, LLC (“AES”), through an affiliated entity, has entered into a lease with Tucson Airport Authority (“TAA”) to develop the City’s first utility-scale solar energy facility (the “Project”) on approximately 1,400 acres of property located south of E. Old Vail Connection Rd. on either side of S. Swan Rd. (the “Property”) within both the City of Tucson (“City”) and unincorporated Pima County (“County”). (See *Exhibit I.A.1: Regional Context Map* and *Exhibit I.A.2: Site Aerial*. An ALTA Survey of the Property is included as *Appendix A*.) Sonora South Solar, LLC (“SSS”), an affiliate of AES, is developing the Property. Approximately 1,290 acres of the Property are within City limits (the “City Parcels”)¹. The remaining +/- 110 acres are located in unincorporated County areas (“County Parcels”)². SSS intends to develop the Project on the City Parcels, which are zoned Rural Homestead (“RH”). RH permits the City’s Renewable Energy Generation (“REG”) use under the Utilities Use Group, subject to the Zoning Examiner (“ZE”) Special Exception Land Use (“SELU”) process.

The Property is mostly vacant with much of the northern portion disturbed by prior surface mining. There is an existing Tucson Electric Power (“TEP”) substation (“TEP Substation”) on the Property east of Swan Rd. and several major overhead electric transmission lines crossing the Property, allowing the Project’s REG use to seamlessly connect to the local power supply. At the southwest corner of Swan Rd. and Old Vail Connection Rd. is a narrow, 5.6-acre parcel of land owned by the County (the “Sliver Parcel”)³. There are two narrow, 200-foot-wide, TAA-owned parcels along the Project’s eastern boundary (the “Eastern Parcels”) within the County’s jurisdiction. The Eastern Parcels, which are included in the lease area from TAA, and the Sliver Parcel are currently proposed to remain vacant with no Project improvements because they are within the County’s jurisdiction.

Adjacent to the Property to the north is Old Vail Connection Rd., which is part of the new State Route 410, known as the “Sonoran Corridor,” a 20-mile State highway connecting Interstates 10 and 19. Industrial properties are located on the north side of Old Vail Connection/Sonoran Corridor. The Sonoran Corridor curves to the south in the northwestern corner of the Property with vacant State Trust Land located farther to the west. The Arizona Department of Transportation (“ADOT”) is currently studying an approximately 2,000-foot-wide area for the Sonoran Corridor’s ultimate 400-foot-wide right-of-way (“ROW”), so that alignment is still in flux. The Arizona State Prison Complex at Wilmot (“State Prison”) is located east of the Property. Franco Wash is within the southern portion of the Property, and rural residential uses are adjacent to the Property’s southern boundary.

¹ City Parcels: Assessor’s Parcel Numbers (“APN”) 303-09-001Q, 303-09-001P, 303-09-002E, 303-09-0450, 303-70-0030, 303-70-0020, 303-70-001A & 303-70-005A

² County Parcels: APNs 303-09-0230, 303-70-005B & 303-70-001B

³ Sliver Parcel: APN 303-70-0040

Exhibit I.A.1: Regional Context Map

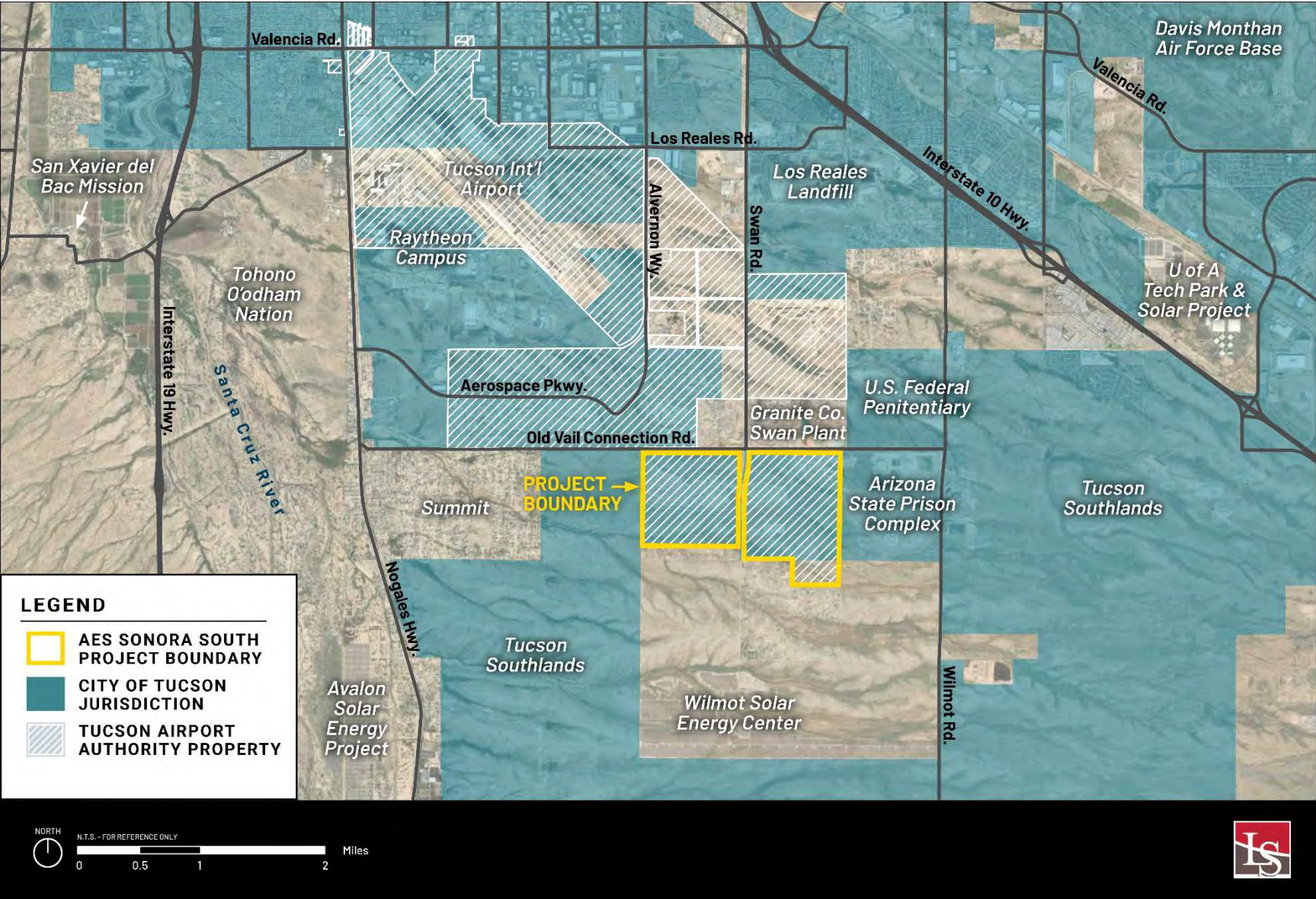
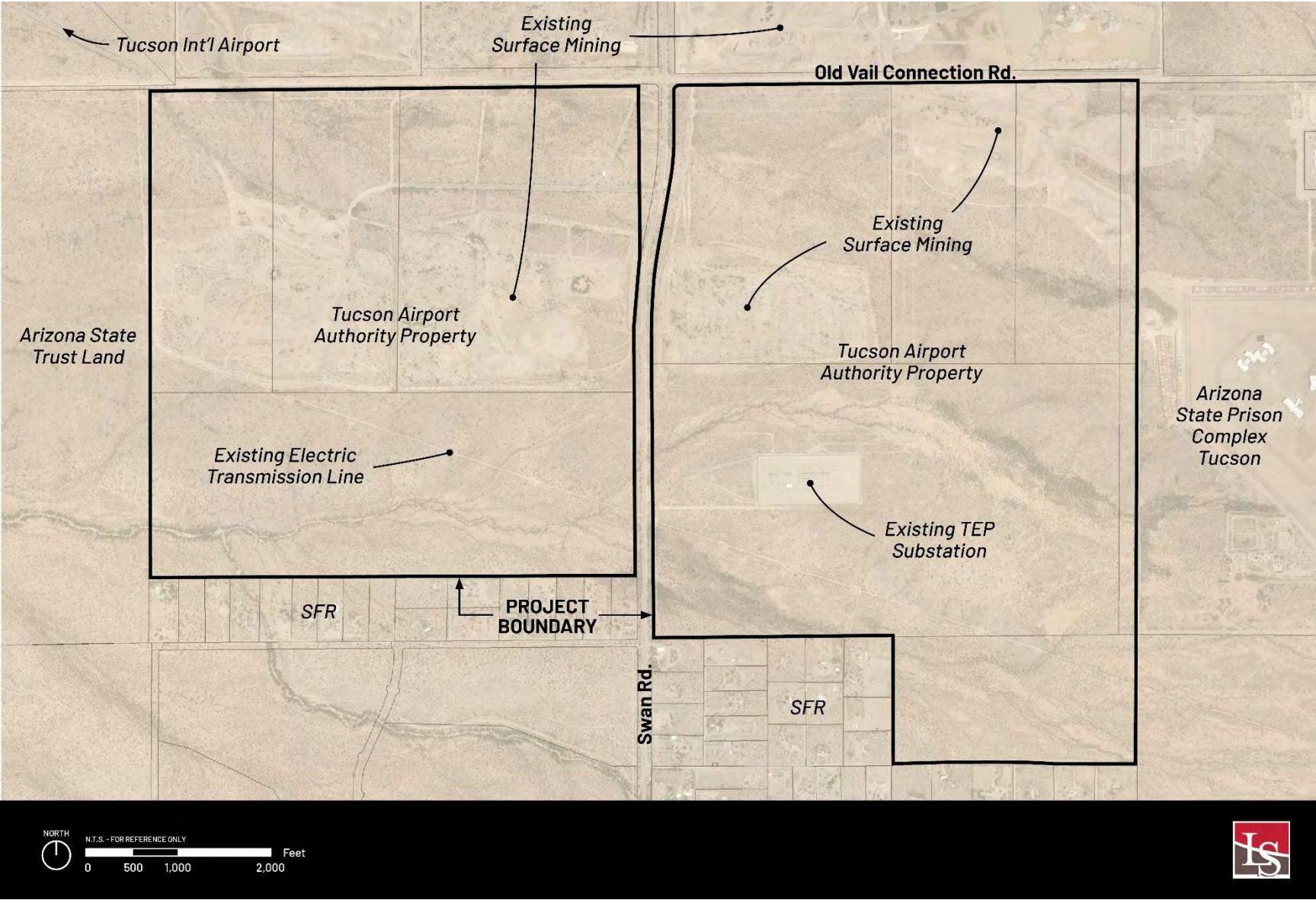


Exhibit I.A.2: Site Aerial



B. Plan Compliance

The Property is subject to the policies of Plan Tucson 2025 (“PT 2025”) and the City’s Rincon/Southeast Subregional Plan (“RSSP”).

1. Plan Tucson

PT 2025 recognizes solar and energy storage as growing industries that *“bring significant economic advantages to Tucson.”* The City has demonstrated its commitment to these industries by adopting policies aimed at resiliency and sustainability. The Project complies with the following PT 2025 policies:

Climate 8: Pursue local sources of renewable energy, including solar, wind, resource recovery, and geothermal, and apply heat exchangers and heat transfer technology to use renewable energy sources fully.

Climate 9: Install and promote distributed energy resources, such as rooftop solar, to provide local renewable energy and enhance energy reliability and resilience.

Climate 10: Increase the use of solar power and other renewable energy sources for City infrastructure, facilities, fleet and other assets, and operations.

Land Use 17: Coordinate with utility companies and other public service providers for the planning of infrastructure, facilities, and services, making sure the design and location of infrastructure and facility construction are sensitive to community health, environment, and historic resources.

The Property is located within an Industrial Building Block on the PT 2025 Future Growth Scenario Map. (See *Exhibit I.B.1: Plan Tucson Future Growth Scenario Map.*) This Building Block supports industrial land uses, including, but not limited to, manufacturing, warehouse and supportive retail services. The Project supports the following goals of the Industrial Building Block and guidelines for development review:

A.25: Improve the appearance of above-ground utilities and structures by requiring facilities to be located, installed, and maintained to minimize visual impact and preserve access to views.

I.2: Support environmentally sensitive design that protects the integrity of existing neighborhoods, complements adjacent land uses, and enhances the overall function and visual quality of the street, adjacent properties, and the community.

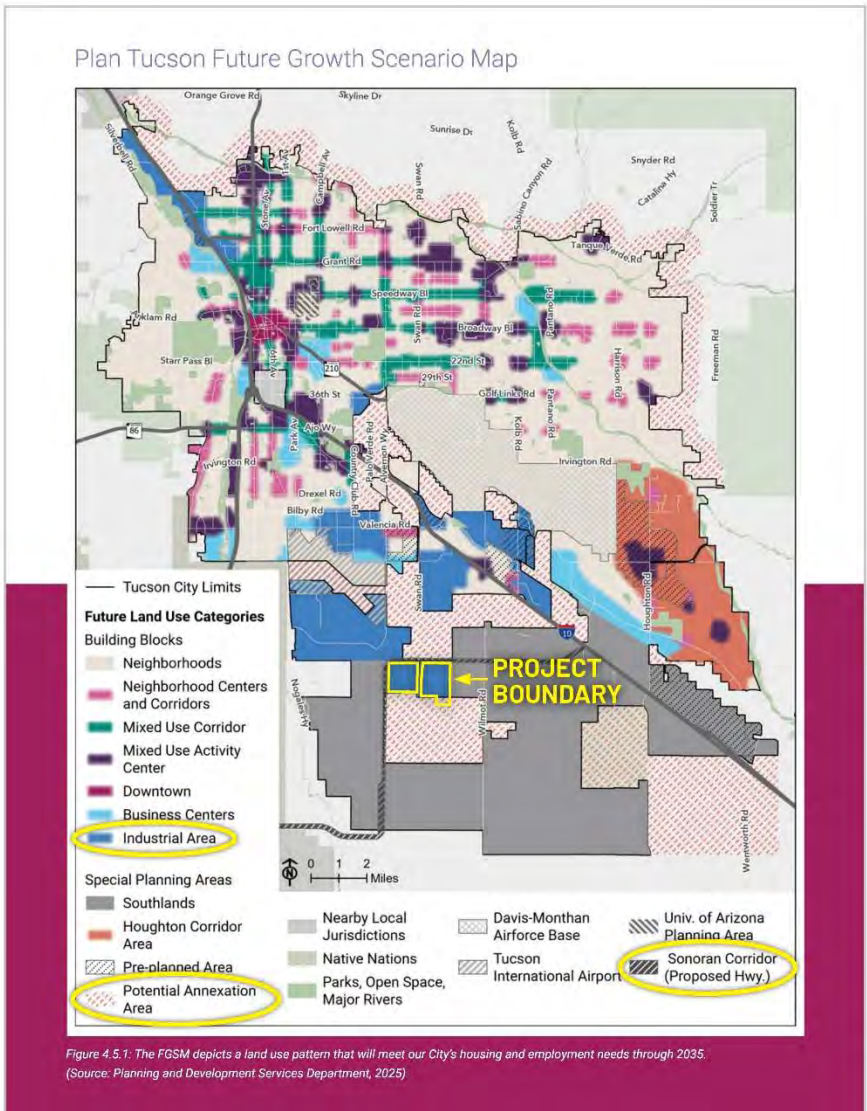
I.3: Protect established residential neighborhoods by supporting compatible development, which may include other residential, mixed-use, infill, and appropriate nonresidential uses.

Exhibit I.B.1: Plan Tucson Future Growth Scenario Map

BUILDING BLOCKS	Typical Land Use Mix	Typical Housing Types
 Industrial Areas	• Manufacturing • Warehouses • Supportive retail services	• Only where appropriate
Typical Commercial Types	Transportation	General Location/Attributes
• Supportive commercial • Offices • Restaurants	• Complete Streets typology: collector, thoroughfare, industrial • Transportation Access: Primarily public transit and vehicular; limited bicycle and pedestrian accessibility; Connecting regional railways, major highways, and the airports	• Located strategically along existing and proposed regional commercial transportation routes for efficient handling of national and international freight movements • Examples: I-10 frontage roads, airports • Relative Development Intensity: Medium; typically 1-2 stories

Sonoran Corridor The Sonoran Corridor is a multilevel, multistep, multiyear economic development initiative for Pima County and Southern Arizona. (Source: Pima.gov)

Potential Annexation Areas
Areas that the City of Tucson may be pursuing for annexation within the next decade, working with other local jurisdictions. The ultimate goal is to improve service delivery efficiency through closing jurisdictional gaps and having urban commercial and residential areas located within incorporated cities and towns.



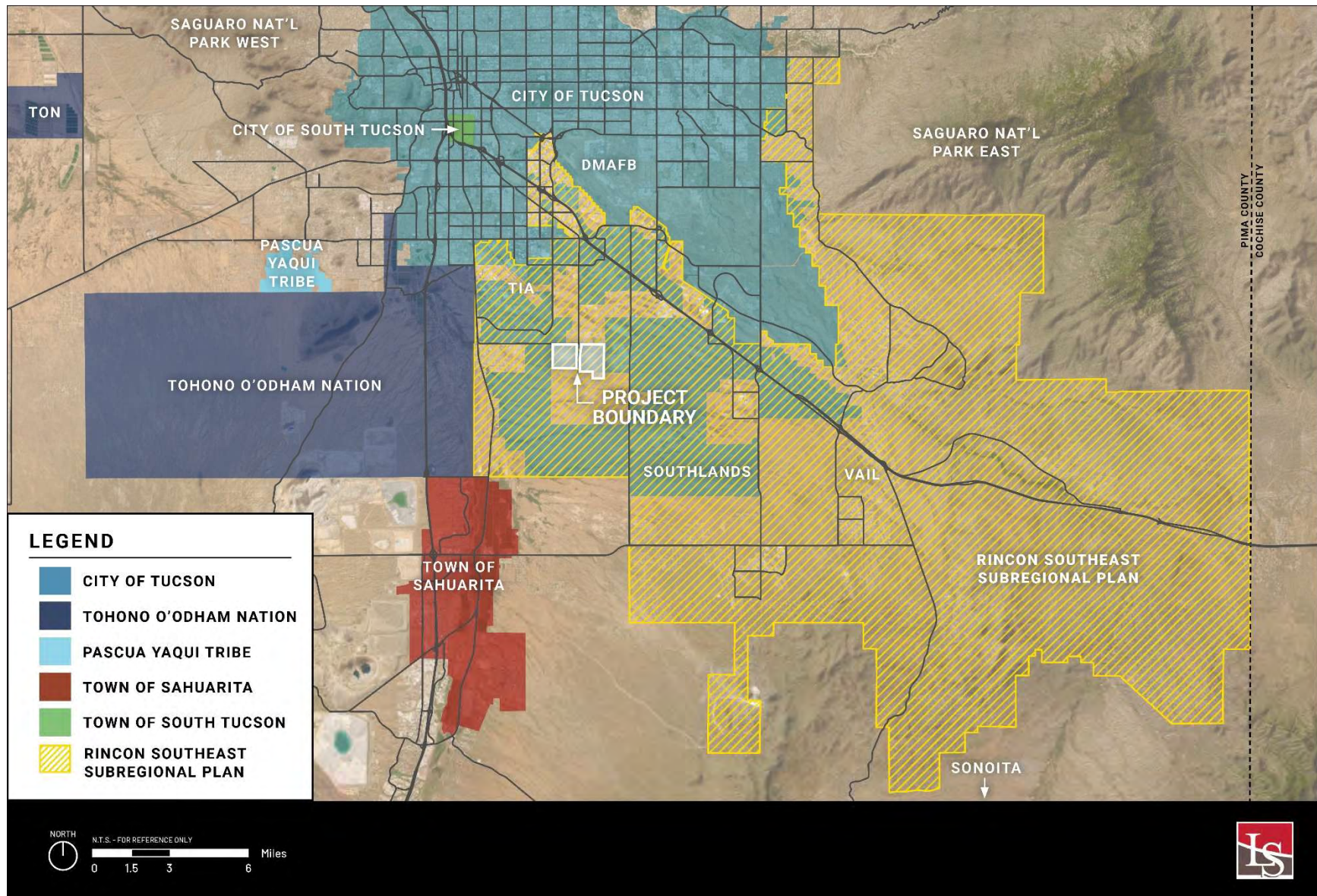
2. Rincon/Southeast Subregional Plan

The RSSP is intended to guide future development in the subregion so that environmental quality, scenic resources and community character are protected and enhanced. The Property is not located within a Map Detail Area or Special Policy Area of the RSSP. The RSSP suggests the preparation of an Environmental Resource Report (“ERR”) for site analysis of projects due to the sensitive terrain, wildlife habitat and proximity to public preserves within the Rincon Southeast Subregion. An ERR is submitted for review alongside this SELU application for this Project. (See *Exhibit I.B.2: Rincon/Southeast Subregional Plan.*)

3. Conflicts with Ordinances and Policies

The Project’s REG use is permitted in the City’s RH Zone and will comply with current Unified Development Code (“UDC”) standards, as modified in the City’s Zoning Administrator concurrence letter. (See *Appendix B: Zoning Administrator Concurrence Letter.*) The Project modifications approved in this letter include postponement of landscaping and screening installation along the future Sonoran Corridor route (northwestern Property boundary) and deletion of landscaping and screening requirements adjacent to the State Prison (eastern Property boundary).

Exhibit I.B.2: Rincon/Southeast Subregional Plan



II. Site Analysis

A. General

The Property includes approximately 1,400 acres at the southwest and southeast corners of Swan Rd. and Old Vail Connection Rd. within both the City and the County. The Project proposes development of the 1,290 acres within the City’s jurisdiction. (Refer to *Exhibit I.A: Location & Context Map*.)

B. Zoning & Land Use

The Property is zoned RH and is mostly vacant. There are areas disturbed by prior surface mining, an existing TEP Substation, and several major overhead electric transmission lines. The Swan Rd. public ROW bisects the Property. Current land uses and zoning designations for surrounding properties are listed in *Table II.B* and depicted in *Exhibit II.B.1: Existing Land Use & Zoning*.

The TAA-owned Property is also located within several City Airport Environs Zones (“AEZ”) overlays for Tucson International Airport (“TIA”), including the AEZ Height Zone, AEZ Noise Zone, and Airport Hazard District (“AHD”). The Property is not impacted by any overlays associated with Davis Monthan Air Force Base (“DMAFB”). See *Exhibit II.B.2: Airport Environs Zones*.

Table II.B: Existing Land Use & Zoning

	Zoning	Land Use
North	City I-2 and P-I County CI-2	Vacant TAA Property; Old Vail Connection Rd.; Proving Ground/Training Center; Surface Mining
South	County RH	Single-Family Residential
East	City RH	Arizona State Prison Complex
West	City RH	Vacant State Trust Land

Exhibit II.B.1: Existing Land Use & Zoning

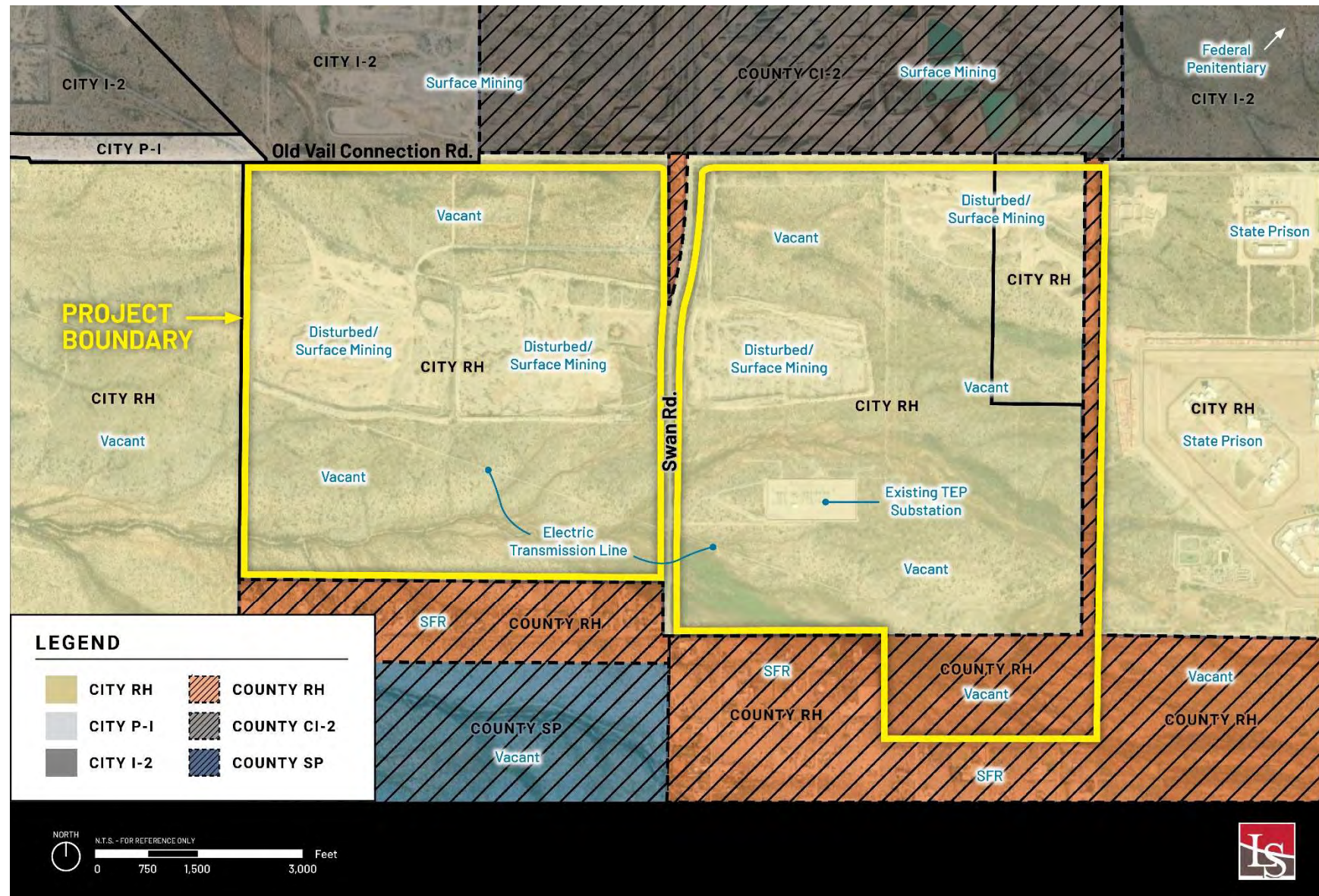
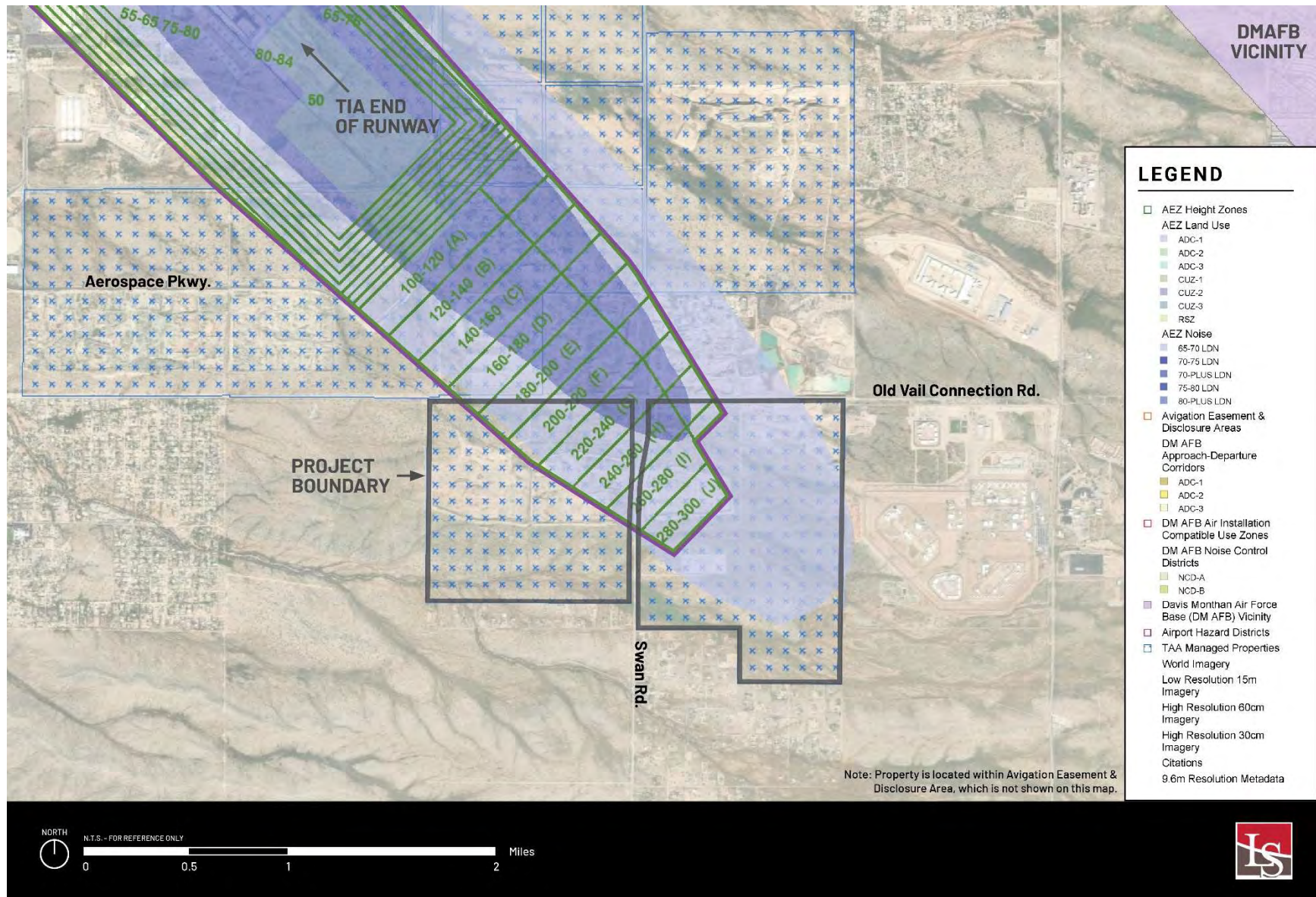


Exhibit II.B.2: Airport Environs Zones



C. Circulation & Trips

As shown on *Exhibit II.C: Traffic Circulation*, the Property is located south of E. Old Vail Connection Rd. on both the west and east sides of S. Swan Rd.

S. Swan Road: Swan Rd. is currently a two-way paved road bisecting the Property. Per the City's Major Streets & Routes ("MS&R") Map, this segment of Swan Rd. is a designated Arterial Street. The existing ROW width of Swan Rd. is 150 feet, while the future width is smaller at 105 feet. The main access point for the existing TEP Substation is located on Swan Rd.

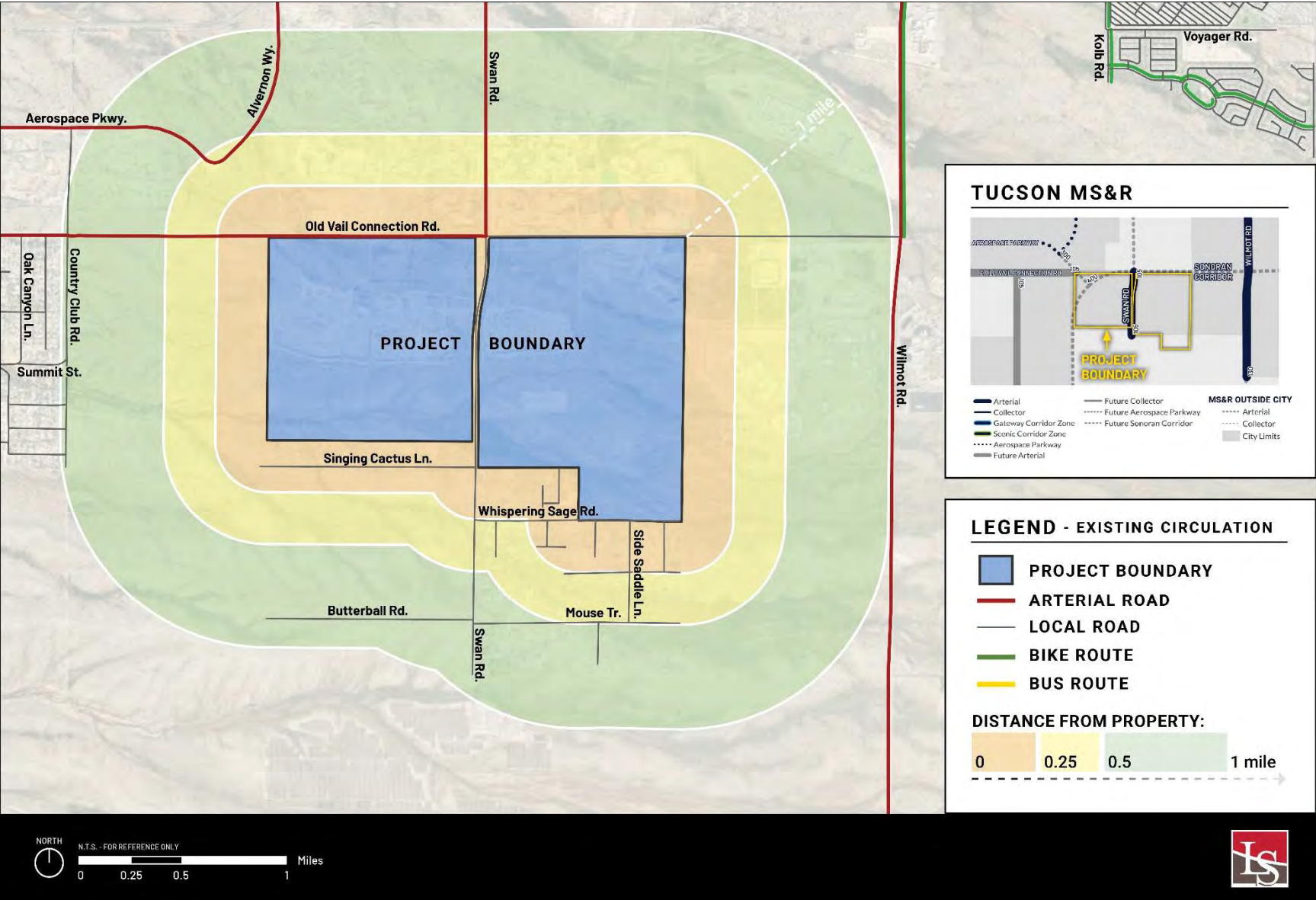
E. Old Vail Connection Road: Old Vail Connection Rd. is currently a two-way unpaved dirt road adjacent to the Property's northern boundary. Per the MS&R Map, this segment of Old Vail Connection Rd. is planned to become part of the new State Route 410, known as the "Sonoran Corridor", a 20-mile State highway connecting Interstates 10 and 19 through Tucson's Southlands area. ADOT is currently studying an approximately 2,000-foot-wide area for the ultimate 400-foot-wide ROW for the Sonoran Corridor, so this future road alignment has not yet been determined. The Sonoran Corridor is expected to run along much of the Property's western and northern boundaries, with a curve planned in northwestern corner of the Property.

There are no City bike routes within the vicinity of the Property. There are no Scenic or Gateway Routes abutting the Property. There are several existing driveways/access points to the Property along Swan Rd. and Old Vail Connection Rd. related to areas of current and prior surfacing mining operations.

Pima Association of Governments' ("PAG") Traffic Count Data System ("TCDS") data from 2025 show an average annual daily traffic ("AADT") count of 800 trips on Swan Rd. south of Old Vail Connection Rd., 816 trips on Swan Rd. north of Old Vail Connection Rd., and 246 trips on Old Vail Connection Rd. east of Swan Rd.

Current traffic conditions within one mile of the Property are depicted in *Exhibit II.C: Existing Traffic Circulation*.

Exhibit II.C: Existing Traffic Circulation



D. Cultural Resources

Preliminary cultural resource analysis indicates no critical issues pertaining to cultural resources on the Property were observed in both literature and records reviews. The Property is not located within an Archaeological Sensitivity Zone, according to MapTucson. Significant portions of the Property have been disturbed by prior surface mining. If cultural remains are discovered during any future ground-disturbing activities, the City's Historic Preservation Officer will be consulted.

E. Hydrology, Drainage, Topography & Soils

AES had preliminary hydrology and aquatic studies performed to analyze and review the existing hydrology of the Property. The 1,400-acre Property contains multiple washes, including a portion of Franco Wash and its tributaries near the southern portion of the Property. The portion of Franco Wash on the Property is a designated Environmental Resource Zone ("ERZ") Wash. The Project will be set back a minimum of 100 feet from this wash. *Exhibit II.E.1* depicts the drainageways on and around the Property. *Exhibit II.E.2* shows the 100-year floodplain.

The Property is relatively flat and generally slopes from east to west with approximately 70 to 100 feet of fall across the entire site. The highest elevations above sea level occur near the northeast (2,790 feet) and southeast (2,770 feet) corners of the Property. The lowest elevations occur near the northwest (2,700 feet) and southwest (2,690 feet) corners of the Property. See *Exhibit II.E.3: Existing Topography*.

The Property contains several significant areas of disturbance, the majority of which are related to current or prior surfacing mining operations. Other areas of the Property have been disturbed by utility infrastructure, including the TEP Substation, several transmission lines, and access roads. Areas of soil and vegetative disturbance are shown on *Exhibit II.E.3*.

In the southern portion of the Property, two flow paths that contribute to Franco Wash enter the Property from the east and flow west. In the central portion of the Property, an unnamed flow path begins and flows west across the Property. Ponding occurs within portions of the Property where previous earthwork activities have taken place. In general, the Property is relatively flat with slopes of less than 2%, although slopes can exceed 4% when adjacent to flow paths.

F. Schools, Recreation and Cultural Facilities

The nearest public facilities are shown in *Exhibit II.F: Schools, Recreation & Cultural Facilities*.

1. Parks

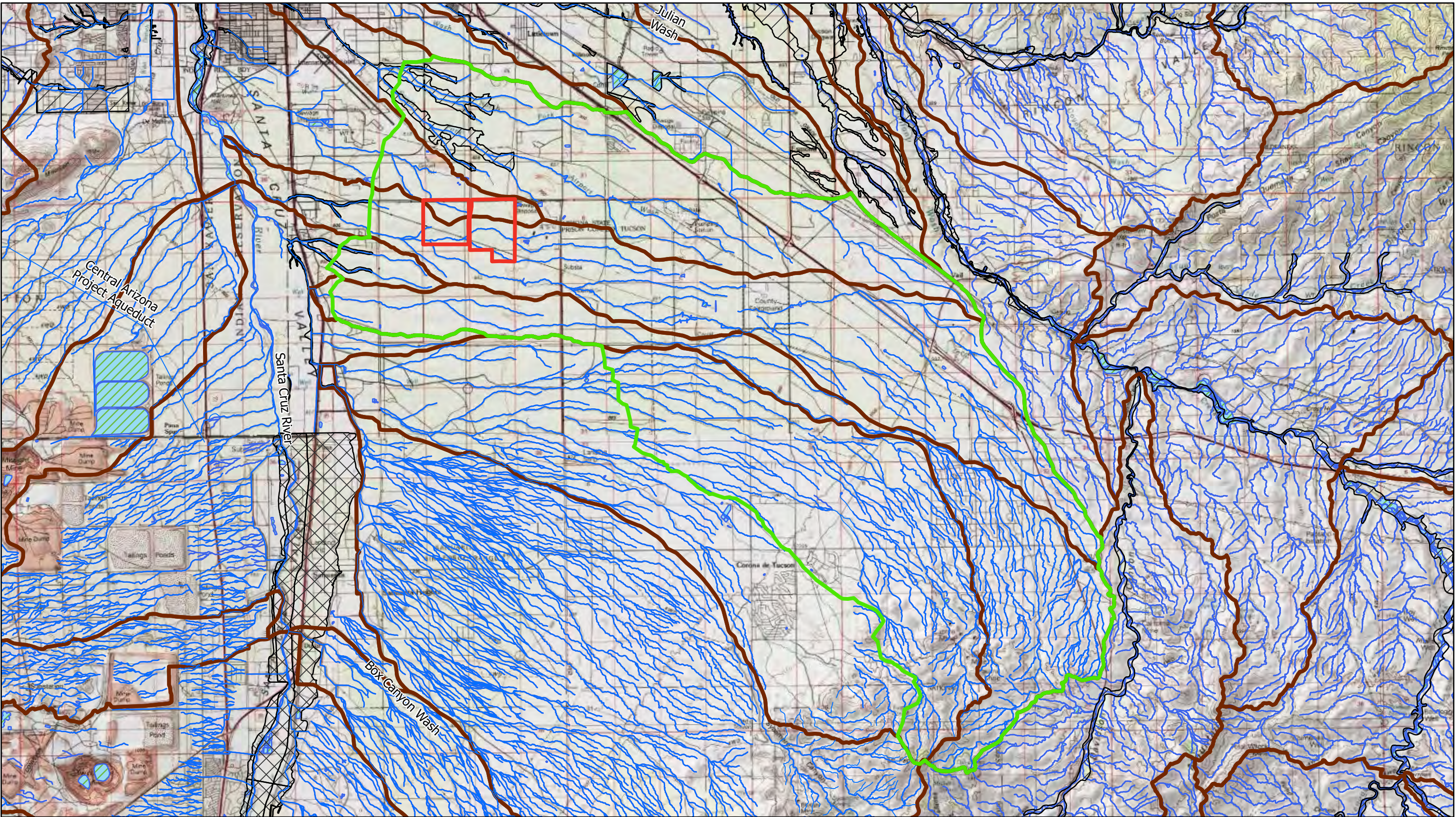
There are no public parks, recreation areas, trails, or bike paths within one mile of the Property. The nearest public park is Summit Old Nogales Park approximately 2 miles west of the Property.

2. Schools

There are no schools located within one mile of the Property. The nearest school is Vail Academy & High School approximately three miles northeast of the Property.

3. Libraries

There are no libraries located within one mile of the Property. The nearest library is Valencia Library approximately five miles northwest of the Property.



Data Source(s): Westwood (2024); Esri WMS
Basemap Imagery (Accessed 2024); USGS
(2024); FEMA (2024); USDA (2024)

Westwood

Toll Free (888) 937-5150 westwoodps.com

Legend

- | | | |
|---|--|---|
|  Project Area |  County Boundary |  NWI Wetlands |
|  FLO-2D Model Boundary |  FEMA Zone A |  NHD Flowlines |
|  HUC-12 Boundary |  FEMA Zone AE | |

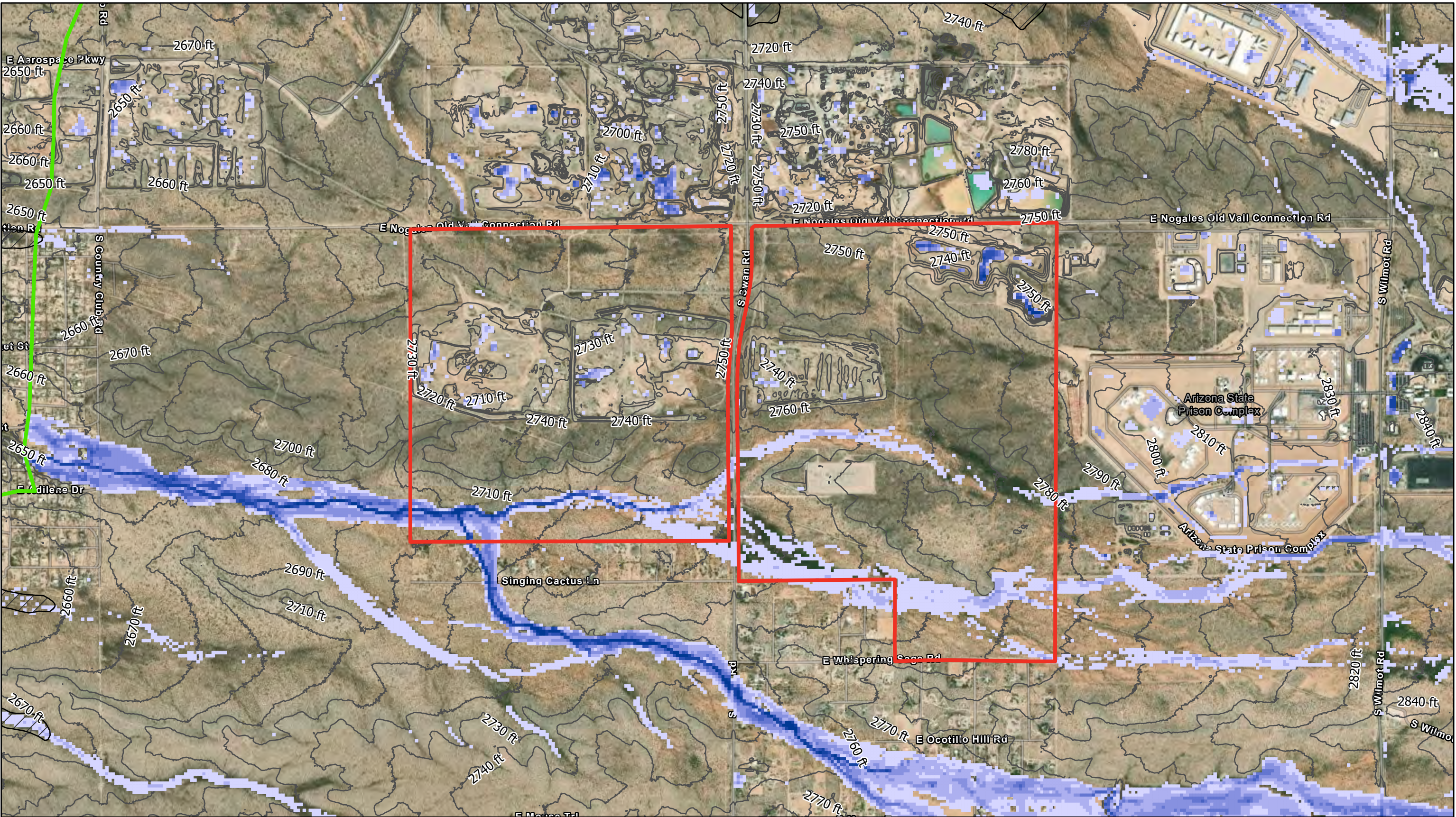
Sonora South Solar Project

Pima County, Arizona



Exhibit II.E.1: Drainageways

August 2, 2024



Data Source(s): Westwood (2024); Esri WMS
Basemap Imagery (Accessed 2024); USGS
(2024); FEMA (2024); USDA (2024)

Westwood

Toll Free (888) 937-5150 westwoodps.com

Legend

Project Area

FLO-2D Model Boundary

County Boundary

FEMA Zone A

FEMA Zone AE

10' Contours

Max Water Depth (ft)

0.50 - 1.00

1.01 - 1.50

1.51 - 2.00

2.01 - 2.50

2.51 - 3.00

3.01 - 4.00

4.01 - 6.00

6.01 +

Sonora South Solar Project

Pima County, Arizona

Exhibit II.E.2: 100-Year Max
Water Depth Project Area Map

August 2, 2024



Exhibit II.E.3: Existing Topography

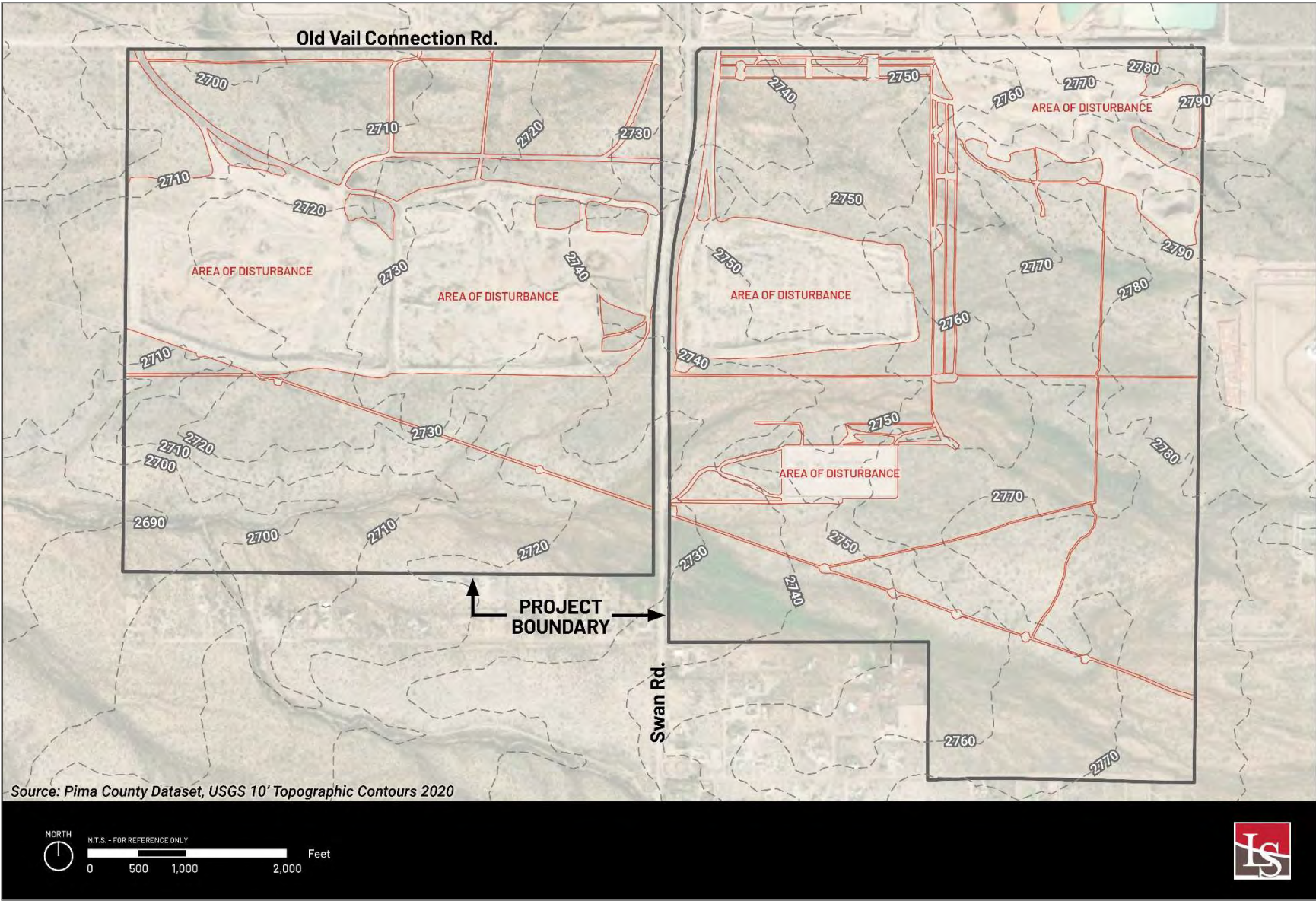
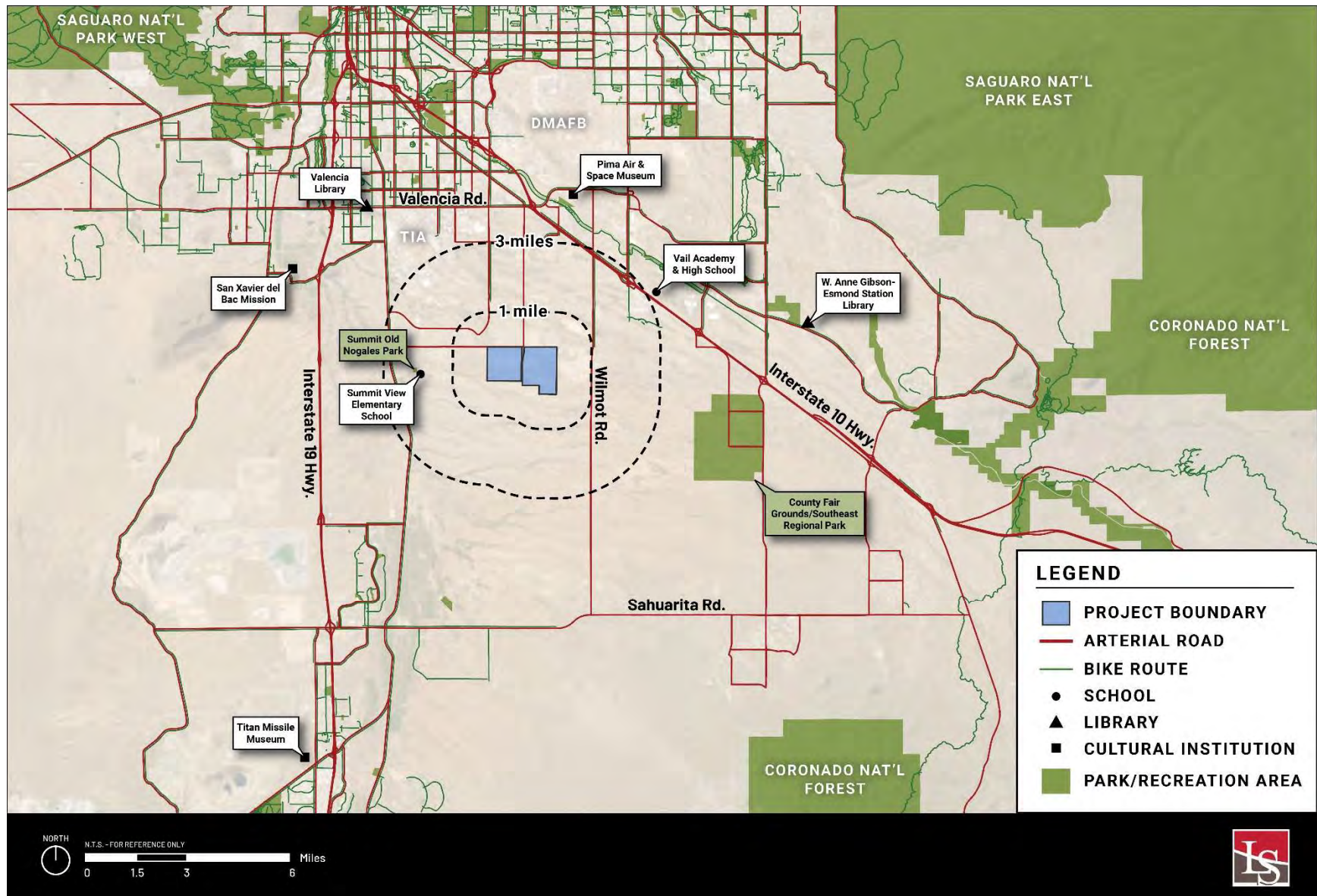


Exhibit II.F: Schools, Recreation & Cultural Facilities



G. Utilities

The Property contains multiple overhead electric transmission lines and a TEP Substation. There is a Pima County Regional Wastewater Reclamation Department (“PCRWRD”) sanitary sewer line running east to west directly north of the Property within the Old Vail Connection Rd. ROW. The Property’s City Parcels are located within a Tucson Water obligated service area; however, the Property currently does not appear to have potable water infrastructure service.

H. Vegetation

Vegetation observed onsite primarily includes creosote bush, velvet mesquite, and teddy bear cholla. Other less common plant species on the Property include saguaro, Pima pineapple cacti, prickly pear, barrel cacti, yucca, acacia and multiple species of grasses. Significant vegetation onsite is mostly located within and around existing wash channels, where areas of vegetative density are larger and more diverse. See *Appendix C: Environmental Resource Report* for additional information regarding onsite vegetation.

I. Views

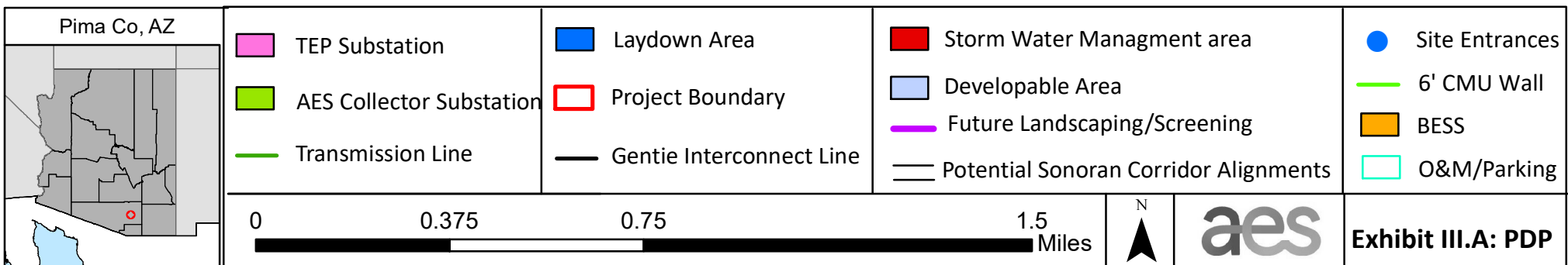
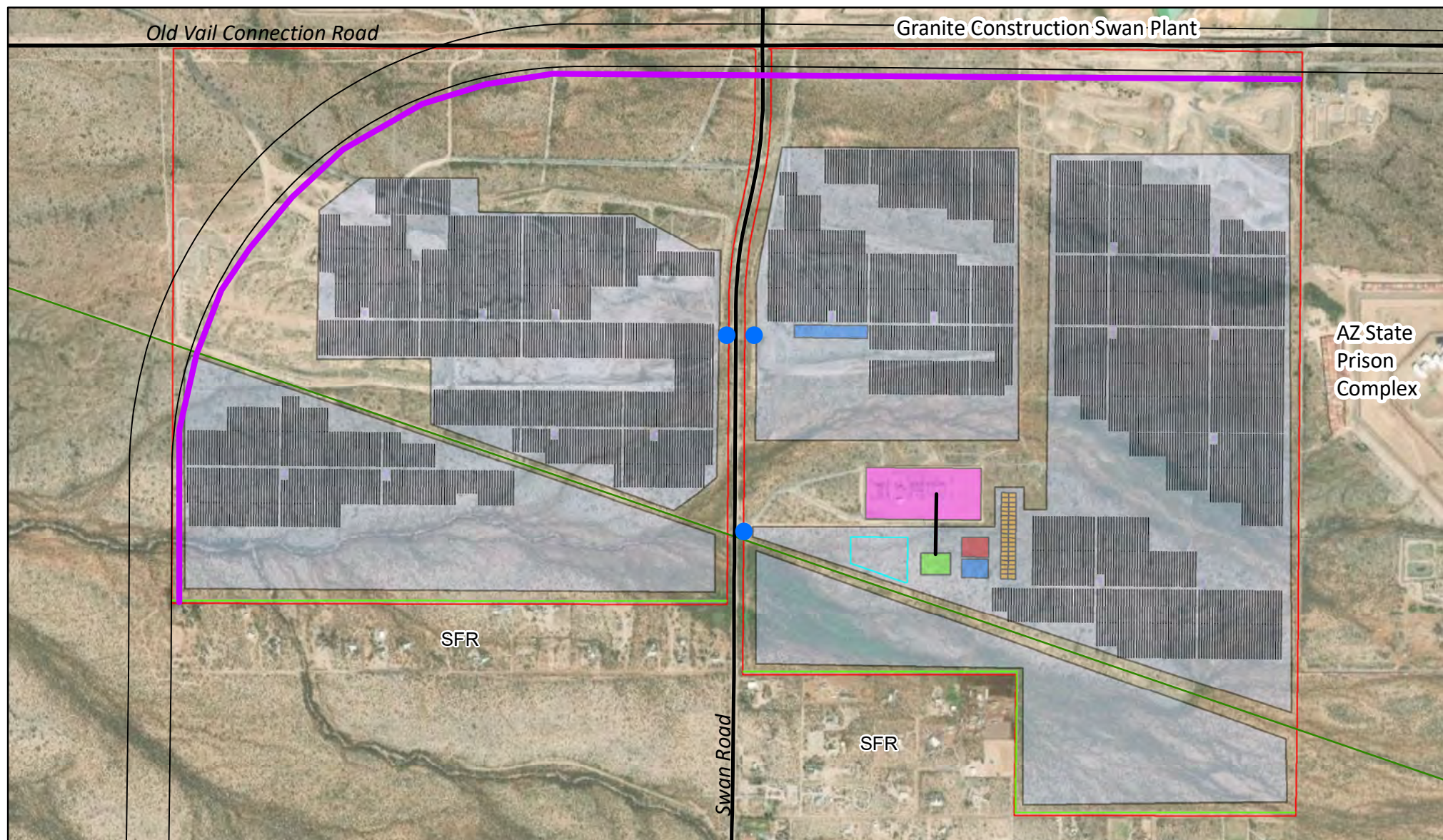
The Property has distant views of the Catalina Mountains to the north, Rincon Mountains to the east, Santa Rita Mountains to the south, and Tucson Mountains and Sierrita Mountains to the West.

III. Plan Proposal

A. Site Layout

As shown in *Exhibit III.A: Preliminary Development Plan* (“PDP”), SSS intends to develop the majority of the Property with solar photovoltaic arrays, producing utility-scale power that will then be supplied to the local energy grid in the form of renewable energy. The Project will include a battery energy storage system (“BESS”) for onsite electricity storage and a Project-specific/SSS collector substation (“Project Substation”) adjacent to the existing TEP Substation to regulate the flow of power and protect the grid from system overloads or failures. There will also be a small personnel-only office (approx. 500 square feet, not to exceed 16 feet in height) for operations and management (“O&M Building”) near the Project Substation. All Project uses are permitted under the City’s Renewable Energy Generation (REG) use, subject to all applicable use-specific standards and zoning requirements, and pursuant to approved modifications as requested during future development package phases and described in the City’s Zoning Administrator concurrence letter. (See *Appendix B: Zoning Administrator Concurrence Letter*.)

The Project will provide certain perimeter treatments as appropriate to mitigate potential impacts to surrounding areas (discussed below in Section III.D), including a masonry wall along the southern Property boundary adjacent to existing residential uses and future landscaping and screening along the west and north Property boundaries upon determination of the Sonoran Corridor’s final route. Areas of Franco Wash to be left undisturbed will provide a significant buffer between residential properties to the south and the Project’s proposed solar arrays and facilities.



B. Design Compatibility

1. Privacy Mitigation

The Project's REG use is a relatively benign, quiet land use with limited onsite operations and personnel activity throughout the day. The Project will be equipped to handle a small number of employees working onsite; however, the use is expected to generate little to no noticeable traffic and is not expected to negatively impact the privacy of nearby residents. As described below in Section III.D, a 6-foot masonry wall set back 20 feet from the Property line will be required along the Property's southern boundary, adjacent to residential uses for screening and safety purposes.

2. Built Environment & Compatibility with Surroundings/Climate

The Project represents a significant step forward for Southern Arizona's clean energy future. Regional benefits include clean and renewable energy generation, reliable and efficient energy storage, reduced reliance on fossil fuels and lower greenhouse gas emissions. The Project's design attempts to minimize land disturbance by locating the solar arrays in existing disturbed areas and avoiding development near major wash and riparian areas, including the Franco Wash.

All components of this Project, including the solar arrays, BESS, Project Substation, and O&M Building will be properly sited to minimize disturbance to adjacent properties and natural environment. As shown on the PDP, preservation of significant wash areas will help buffer adjacent residential properties from the Project's solar arrays and facilities.

3. Energy Conservation Techniques

The Project is a renewable energy project with energy conservation features. The Project is unique in that its BESS component is designed to capture and store solar energy for later use during peak usage periods. Solar energy projects produce electricity only during daylight hours, meaning peak production often occurs when energy demand is lowest. BESS are critical to improving the use of renewable energy because they enable users to store low-cost off-peak energy and use it during high-demand, high-price periods. Without the BESS, excess energy produced by the Project would effectively be wasted, requiring nonrenewable peak-time energy production elsewhere in the power grid. BESS also significantly improve grid reliability by regulating energy flows and preventing blackouts by storing electricity for use during outages and emergencies.

The Project's solar arrays will be adequately spaced to allow airflow beneath the panels, reducing heat buildup underneath arrays. The panels themselves act like shade trees in that they shade the ground throughout the day. The panels also divert rainwater to areas of vegetative undergrowth between rows of panels, allowing native shrubs and flowering plants to grow and provide additional ground shading and cooling benefits for the Project site.

4. Use-Specific Standards

The REG use in City's RH zone is subject to the Use-Specific Standards in UDC § 4.9.11.B.2, .3, .4, & .5 and 4.9.13.I as follows:

- UDC § 4.9.11.B.2: The setback of the facility, including walls or equipment, shall be 20 feet from any adjacent residential zone.

The Project meets this requirement. The masonry wall along the southern Property boundary will be set back a minimum of 20 feet from the Property line.

- UDC § 4.9.11.B.3: All activities shall be conducted in conformance with the following use specific standards.
 - a. Noise. The sound level of any individual operation shall not exceed the levels permitted in Section 16-31, *Excessive Noise*, of the Tucson Code.

The Project meets this requirement, as it does not generate any significant amounts of noise.

- b. Smoke. Smoke emission from any source is not permitted to exceed a density greater than that described as No. 1 on the Ringleman Chart.

The Project meets this requirement, as it does not generate smoke or emissions from solar power generation or storage.

- c. Glare or Heat. Any activity producing intense glare or heat shall not be performed in such a manner as to create a nuisance or hazard beyond the property lines of the project site.

The Project meets this requirement through the use of advanced solar panel technology specifically engineered to optimize light absorption. The panels incorporate anti-reflective coatings and textured surfaces that significantly reduce glare as seen from both the sky and adjacent properties. This simultaneously improves efficiency, as reducing reflected light increases the amount of solar energy captured. The Project will not adversely impact TIA operations. TAA, lessor of the Property, is aware of the Project's REG use and supports development of the Project on the Property.

- d. Odors. Emission of odorous gases or other odorous matter is not permitted in such quantities as to be offensive or cause nuisance beyond the property lines.

The Project meets this requirement, as it does not emit odorous or otherwise offensive gases.

- e. Vibration. Vibration discernible beyond the property lines of the project site is prohibited.

The Project meets this requirement, as it does not generate discernible vibrations beyond the Property.

- f. Fly Ash, Dust, Fumes, Vapors, Gases, and Other Forms of Air Pollution. Emissions that can cause damage to health, animals, vegetation or property is prohibited.

The Project meets this requirement, as it does not emit these types of pollutants during operation. The Project will comply with all dust control requirements during construction, including using water to minimize dust.

- g. Liquids and Solid Waste. Waste shall not be discharged into the streets, drainage ways, or on property possibly creating a danger to the public health and safety.

The Project meets this requirement. The small O&M Building will use a septic system for employee restrooms, subject to all local and state regulations.

- h. Illumination. Illumination of buildings and open areas shall be located and directed so as to eliminate glare toward streets and adjoining properties and shall comply with the requirements of the *Outdoor Lighting Code* in Chapter 6 of the Tucson Code.

The Project meets this requirement. The Project's solar panels are designed to essentially eliminate glare. Any lighting used for this Project will be Outdoor Lighting Code ("OLC")-compliant and located several hundred feet from the nearest property.

- i. Interference. TVI (television interference) or RIV (radio interference) that emanates from the project site is prohibited.

The Project meets this requirement and is not expected to interfere with regional communication systems.

- UDC § 4.9.11.B.4: A service or storage yard is prohibited.

The Project meets this requirement.

- UDC § 4.9.11.B.5: In addition to the requirements of Section 7.6, *Landscaping and Screening*, there shall be a decorative masonry wall at least six feet in height between the project site and any residential zone.

The Project meets this requirement. The Project will provide a 6-foot masonry wall along the southern Property boundary as required by this provision and pursuant to the City's Zoning Administrator concurrence letter (Appendix B).

- UDC § 4.9.13.1: RH Exception. Parcels of less than 180,000 square feet, recorded prior to December 1, 1985, conforming to the minimum parcel size requirements at the date of recording, are deemed non-conforming.

This General Exception provision for REG uses is not applicable to the Project.

C. Hydrology & Drainage

The stormwater basins will be designed to collect and manage water on site. Existing storm water drainage paths will be honored. Drainage swales will be used where necessary to collect stormwater and route to basins before discharge to existing drainage paths.

Post-development water discharge on and off the Property are expected to remain in approximately the same locations. Stormwater basins are expected to discharge in the existing flow paths to follow historic flow paths. There are no expected drainage impacts to the off-site land uses upstream and downstream of the Project.

D. Landscaping & Screening

Landscaping and screening for the Project will be installed in accordance with the UDC, unless otherwise modified by the City's Zoning Administrator in the attached concurrence letter (*Appendix B*), as follows:

- **East.** Landscaping and screening will not be included on the east side of the Project due to the Project's adjacency to the State Prison. The State Prison has erected a wall of shipping containers along their side of the eastern Property boundary. UDC § 6.4.5.D.4 permits using non-residential perimeter yard requirements when adjacent to a residential zone under certain conditions, specifically when adjacent to a governmental use such as the State Prison, subject to approval from the City's Zoning Administrator. This modification for the eastern perimeter yard was approved in the City's Zoning Administrator concurrence letter.
- **North and West.** The Project will comply with the City's landscaping and screening requirements along the Sonoran Corridor route once the final alignment and acquisition of right-of-way for this transportation project is complete. This delayed compliance is a special circumstance meant to avoid installation and subsequent removal of required landscaping and screening along the current alignments of Old Vail Connection Rd. and Swan Rd. during construction of the Sonoran Corridor. SSS will work with the City to implement this future landscaping and screening commitment and has made note of their intent to do so on the PDP for this SELU application. This modification was approved in the City's Zoning Administrator concurrence letter (*Appendix B*). As stated in the concurrence letter, installation of required future landscaping and screening on the northern and western Project

boundaries will be resolved during development package review, subject to Zoning Administrator concurrence.

- **South.** The Project will comply with the City’s landscaping and screening requirements along the southern Property boundary adjacent to existing residential properties. Per UDC §§ 7.6.4.C.3.a; Table 7.6.4-1, Utility Service uses such as the Project must provide a 6-foot high wall where adjacent to residential zones. Interior landscape borders and landscaping adjacent to surrounding parcels are neither required nor provided. Per the REG use-specific standards UDC §§ 4.9.11.B.2 and 5, the wall will be set back 20 feet from adjacent residential zones and will be made of decorative masonry block.
- **Swan Rd. Frontage.** The Project will comply with the City’s landscaping and screening requirements where adjacent to Swan Rd., which require 10-foot street frontage landscape borders measured from the future MS&R ROW line, in addition to a 6-foot opaque screen. The area of the Property currently around Swan Rd. already contains relatively dense natural vegetation. These existing trees may be incorporated into required landscaping areas, per UDC § 7.6.4.4.a., with additional trees and shrubs added as needed to meet applicable code standards. AES believes the retention of this natural vegetation where feasible along both sides of this mile-long stretch of roadway frontage is preferable over a man-made landscape border.

E. Signs

Except for signage describing access to the Project and restricted access onto the TAA-owned Property, no new signage is proposed as part of this Project. Any signage that may be proposed in the future will comply with UDC and applicable Sign Code requirements.

F. Lighting

The Project is not expected to use a significant amount of lighting. Standard and/or motion-censored security lighting may be used in and around the BESS and Project areas for safety and security purposes. However, any such lighting would be used sparingly and be limited to a small area of the Property located hundreds of feet away from the nearest adjacent neighbor. As described above in Section II.B.2.h, any lighting installed for the Project will comply with the City’s Outdoor Lighting Code (OLC) and be directed downward to avoid light pollution and spillover onto adjacent properties.

G. Pedestrian Access

The 1,400 acre-Property is located in a rural industrial area south of Tucson International Airport (TIA) and within TIA’s Airport Environs Zones (AEZ) overlays. The Project’s utility-scale REG use will have limited vehicular access from the public ROW for facilities maintenance

and/or emergency personnel only. No public access into the site will be permitted, and public pedestrian traffic is and will continue to be extremely unlikely at this location for the foreseeable future. Pursuant to City Technical Standards Manual (“TSM”) Sections 10-01.2.7.A.5 and 10-01.3.3.C.1, AES will request omission of public sidewalk requirements for the Project along public ROW at the development package review phase, subject to City Engineer authorization and City Development Review Committee (“CDRC”) approval.

H. Traffic & Vehicular Use Areas

As shown in the PDP, the Project is located south of Old Vail Connection Rd., both east and west of Swan Rd. The Project will have several points of gated access along Swan Rd. and will provide limited private vehicular access across the site for operational personnel only. Public access to the Project will be prohibited. The BESS, Project Substation, and other ancillary operational and management uses will be accessible from the TEP Substation’s existing access driveway on Swan Rd. Trip generation for this Project is minimal and will have little to no impact on existing roadway capacities in the area.

The northern and western portions of the Property are located directly adjacent to the proposed Sonoran Corridor route, a planned state parkway/highway connecting I-19 to the I-10 through portions of southern Tucson and unincorporated County. Locations of future Sonoran Corridor ROW are expected to be determined at a later date.

I. Topography

The Project will require site grading for operational and drainage purposes. A significant portion of the Project’s solar arrays will be installed in areas with prior surface mining disturbance. Considering energy production and construction viability, the site will be graded to have a maximum 5% slope in the north, 7%-15% slope in the east/west, and 15% maximum slope in the south. Spot grading will be done where the elevation change is abrupt. As shown in the PDP, Project development will avoid major wash corridors for vegetation and habitat preservation onsite. The Project intends to maintain the Property’s overall drainage characteristics, with limited modifications intended to support the development of the Project.

J. Utilities

Tucson Electric Power (TEP) serves the Property. The existing TEP Substation is located near the southern portion of the Property east of Swan Rd. and connects to several overhead transmission lines cross the Property at various points. The proposed BESS and Project Substation (a collector substation) will interconnect to this existing grid infrastructure via a generation tie-in line (“Gen-Tie”). The Gen-Tie will facilitate transmission of energy from the new REG use to the existing power grid. No changes to existing utility facilities or easements are anticipated as part of this Project, nor will any relocation, expansion, or adjustment to

existing utility infrastructure or associated easements outside the utility fenceline be required.

AES intends to connect with existing infrastructure. Water demand will be limited to domestic use for employee restrooms and a small kitchen area. The solar panels do not require washing, and overall water use is expected to be minimal and limited to the needs of approximately four (4) long-term employees.

AES would prefer to connect to the PCRWRD sewer system. If not feasible, AES will explore a buried septic system or ensure an accessible waste disposal system for regular servicing.

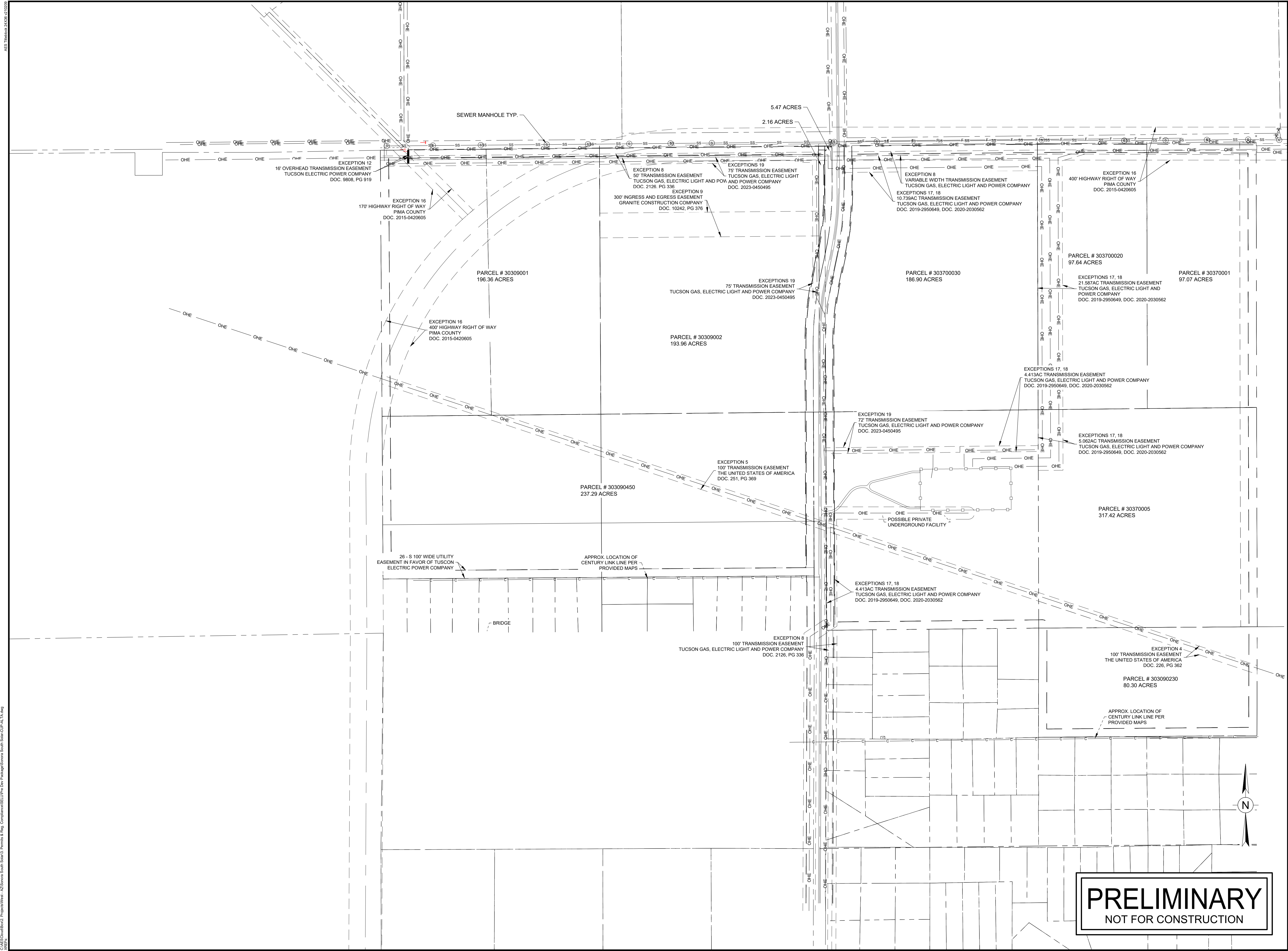
K. Undisturbed Areas

More detailed flood plain and vegetation analyses will be performed prior to development package submittal to determine the location of Protected Riparian Areas (“PRA”), where the 100-year flood plain overlaps existing riparian habitat. This may result in minor modifications to the PDP. Such modifications may include the relocation of solar arrays and/or other components of the Project away from PRA. Any changes in the developable area required to preserve protected riparian area are not considered significant for purposes of the SELU approval.

The 30% set-aside method will be used to meet the Native Plant Preservation Ordinance requirements. To accomplish this, 30% of the Project area supporting existing native vegetation will be designated as protected in the development plan.

Appendix A: ALTA Survey

[See PDF on next page.]



PRELIMINARY
NOT FOR CONSTRUCTION



2180 South 1300 East, Suite 600
Salt Lake City, UT 84106-2749
(801) 679 - 3500

PE STAMP:

KEY PLAN:

REVISIONS:

NO.	DATE	DESCRIPTION

PROJECT TITLE:

SONORA SOUTH SOLAR

PROJECT LOCATION:

SHEET TITLE & DESCRIPTION:

CUP ALTA

PROJ

NUM:

DES:

DWN:

CHK:

APV:

DATE:

SCALE AT 24" x 36":

0 250' 500' 750' 1,000'

1" = 500'

SHEET NO:

REV:

Appendix B: Zoning Administrator Concurrence Letter

[See PDF on next page.]

VIA E-MAIL: ELISA.HAMBLIN@TUCSONAZ.GOV)

February 5, 2026

Elisa Hamblin
Zoning Administrator
City of Tucson
Planning and Development Services Department
201 N. Stone Avenue
Tucson, AZ 85701

RE: Sonora South Solar Zoning Concurrence

Dear Elisa:

Our client, AES Clean Energy Development, LLC (“**AES**”), has entered into a lease between ACE DEVCO NC, LLC an affiliate of AES, and Tucson Airport Authority (“**TAA**”) effective August 1, 2025 for approximately 1,400 acres of property located south of E. Old Vail Connection Road on either side of S. Swan Road (the “**Property**”) within both the City of Tucson (“**City**”) and unincorporated Pima County (“**County**”). Sonora South Solar, LLC (“**SSS**”), also an affiliate of AES, is developing the Property. Approximately 1,290 acres of the Property is in the City (the “**City Parcels**”) and the remaining +/- 110 acres is in the County (“**County Parcels**”). (See **Attachment 1**, Project Map, which includes all associated Assessor’s Parcel Numbers.) SSS intends to develop a utility-scale solar energy facility and battery energy storage system (“**BESS**”) on the City Parcels (the “**Project**”), which are zoned Rural Homestead (“**RH**”). RH permits Renewable Energy Generation (“**REG**”) use under the Utilities Use Group, subject to a Zoning Examiner (“**ZE**”) Special Exception Land Use (“**SELU**”) process. The purpose of this letter is to confirm all Project uses are within the REG use and to clarify the required edge treatment around the Project’s eastern perimeter and adjacent to the planned Sonoran Corridor alignment.

A. The Property & Surroundings

The Property is mostly vacant with much of the northern portion disturbed by prior surface mining. There is also an existing Tucson Electric Power (“**TEP**”) substation (“**TEP Substation**”) and two major overhead electric transmission lines on the Property, which allows the REG use to connect seamlessly to the local power utility. At the southwest corner of Swan and Old Vail Connection is a narrow, 5.6-acre parcel of land owned by the County (the “**Sliver Parcel**”). There are two narrow, 200-foot-wide, TAA-owned parcels along the Project’s eastern boundary (the “**Eastern Parcels**”) within the County’s jurisdiction. The Eastern Parcels, which are included in the lease area from TAA, and the Sliver Parcel are currently proposed to remain vacant with no Project improvements because they are within the County jurisdiction.

Adjacent to the Property to the north is the Old Vail Connection Road, which is part of the new State Route 410, known as the “**Sonoran Corridor**,” a 20-mile State highway connecting Interstates 10 and 19. Industrial properties are located on the north side of Old Vail/Sonoran Corridor. The Sonoran Corridor curves to the south in the northwestern corner of the Property with vacant State Trust Land located further to the west. Arizona Department of Transportation (“**ADOT**”) is currently studying an approximately 2,000-foot-wide area for the ultimate 400-foot right of way for the Sonoran Corridor so that alignment is still in flux. To the east are the Eastern Parcels within the County and then the Arizona State Prison Complex at Wilmot (“**State Prison**”). Along the southern edge within the Property is a large wash area and then residential uses border the Property to the south.

B. The Project.

SSS intends to develop the majority of the Property with solar photovoltaic panels. As a REG use, the Project will also include a BESS for onsite electricity storage and a Project-specific/SSS substation adjacent to the existing TEP Substation. There will also be a small office for required staffing on-site. (See SSS Conceptual Site Plan, **Attachment 2**.)

C. Concurrence Analysis

1. The Use.

Below are relevant Unified Development Code (“**UDC**”) definitions:

- A REG is defined as “A principal use producing commercial power from natural resources, such as sunlight, wind, rain, tides, and geothermal heat, that are renewable (naturally replenished). Typical uses are solar, geothermal, natural or methane gases, and wind power.” UDC § 11.3.11.C.
- A “principal use” is defined as “the primary use to which the premises is devoted and the primary purpose for which the premises exist.” UDC § 11.4.17.
- An “accessory use” to a principal use is defined in the UDC as: “A use or a structure subordinate to the principal use or building on a lot and serving a purpose customarily incidental to the use of the principal building. An accessory use or structure must be established or built together with or after the establishment or construction of the principal use or building.” UDC §11.4.2.

As noted above, the principal use for the Project will be the solar panels, which will produce the commercial power from the sunlight and will provide the commercial power into the local energy grid. The BESS is a necessary accessory use to the solar panels required to store the energy/power generated by the solar panels. Similarly, the substation is a required accessory use to convert the energy/power for delivery to the local energy grid. Based on the UDC, we consider the BESS and the substation are permitted accessory uses to the REG primary use and, therefore, permitted under the UDC definition of the REG use through the required ZE process.

2. Landscaping & Screening – East Property Line

The Project will comply with all City development regulations. The REG Use under RH zone includes several use-specific standards: UDC § 4.9.11.B.2, .3, .4, & .5 and 4.9.13.I. SSS is seeking clarification regarding the application of two of these standards on the eastern boundary:

- UDC § 4.9.11.B.2: The setback of the facility, including walls or equipment, shall be 20 feet from any adjacent residential zone.
- UDC § 4.9.11.B.5: In addition to the requirements of Section 7.6, Landscaping and Screening, there shall be a decorative masonry wall at least six feet in height between the project site and any residential zone.

All adjacent properties south of Old Vail Connection Road are zoned City RH or County RH. The only adjacent residential uses are located along the Property's southern boundary. As shown on the SSS Conceptual Site Plan (Attachment 2), the Project's setbacks are over 100 feet from these residential uses, and SSS proposes a 10-foot masonry wall along the entire southern Property boundary, as well as along the southern portion of the section line on the west side of the Property, adjacent to State Trust Land.

While the property to the east is zoned RH, along the eastern boundary of the Project are the Eastern Parcels (within County jurisdiction), which are part of the Property, and then the State Prison is directly adjacent to the eastern boundary. The State Prison, a governmental use, has been operational since the late 1970s and is intended to remain well into the future. The UDC permits using non-residential perimeter yard requirements when adjacent to a residential zone under certain conditions, specifically when adjacent to a governmental use. UDC § 6.4.5.D.4 states that, with Zoning Administrator approval, a Project's perimeter yard may be modified to equal the non-residential use to non-residential zone perimeter yard requirement for governmental uses.

The dimensional standard for non-residential uses (i.e., this Project) adjacent to non-residential zones is 0 (zero) feet. As such, this UDC provision (§ 6.4.5.D.4) supports the scenario in which no perimeter yard (including landscape border or masonry wall) is provided adjacent to the Sliver Parcel or along the Project's eastern boundary.

3. Landscaping & Screening – Northwest Property Line

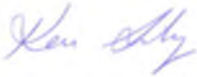
The Project will comply with the City's development regulations for landscaping and screening along the Sonoran Corridor once the Sonoran Corridor final alignment and acquisition of right-of-way is complete. In order to avoid installation and subsequent removal of required landscaping and/or screening along the current alignments of Old Vail and Swan when the Sonoran Corridor is established, SSS will work with the City to install the landscaping/screening along the north and west at such time as the final alignment is established and necessary right-of-way is acquired. At that time, the new north and west Property lines will be established for the landscaping/screening along those edges. To facilitate this, SSS has noted the Future Landscaping/Screening

commitment along the north and west boundaries of the Property on the Conceptual Site Plan and will note this future installation on the required City development plan.

D. Conclusion

SSS is excited to be partnering with TAA to bring this renewable energy Project to the City. This Project is unique not only due to its size, but also because of its rural residential zoning and being surrounded by a variety of land uses within that same RH zoning designation. As the first REG use within the City, we respectfully request your concurrence on the interpretation of the site-specific requirements described above by your signature below. As always, feel free to contact me if you have any questions about the above request or require any additional information. Thank you for all your time and attention on this matter.

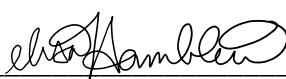
Sincerely,



Keri Silvyn, Esq.
Partner

Attachments:

- 1 – Project Map
- 2 – SSS Conceptual Site Plan

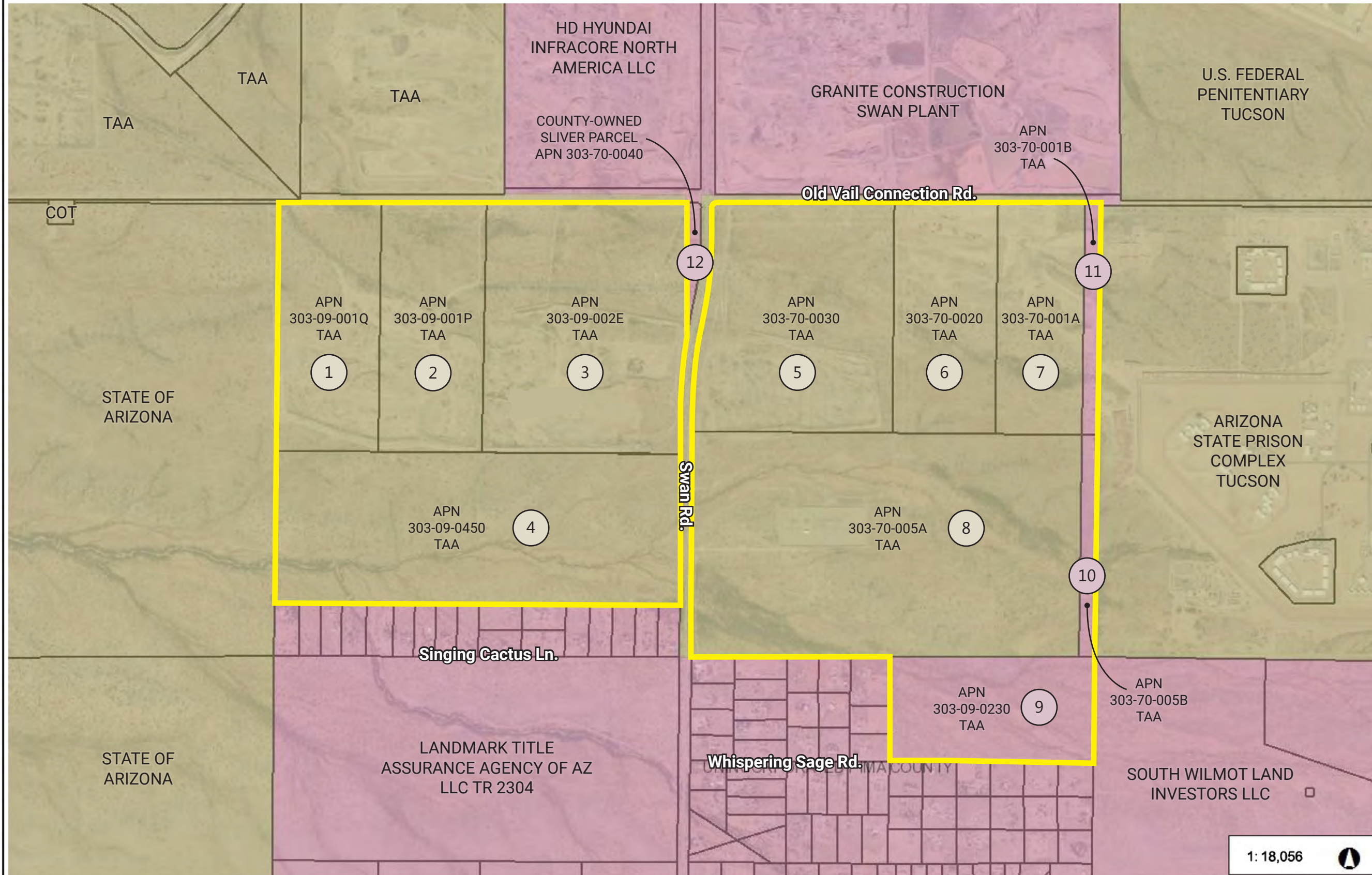
AGREED TO BY:  3/6/26
Elisa Hamblin Date

Zoning Administrator
City of Tucson

EH: the process for requiring and installing future landscaping, screening, etc. will need to be resolved during the development package review phase with concurrence of the Zoning Administrator.

cc: Ms. Claire O'Donnell
Ms. Kellie Pitera

ATTACHMENT 1 - AES SONORA SOUTH - PROJECT MAP



Legend

- Jurisdictions**
- MARANA
 - ORO VALLEY
 - SAHUARITA
 - SOUTH TUCSON
 - TUCSON
 - UNINCORPORATED PIMA COUNTY
- Parcels**

CITY OF TUCSON
JURISDICTION

UNINCORPORATED
PIMA COUNTY
JURISDICTION

5 CITY PARCELS

5 COUNTY PARCELS

Notes

1: 18,056

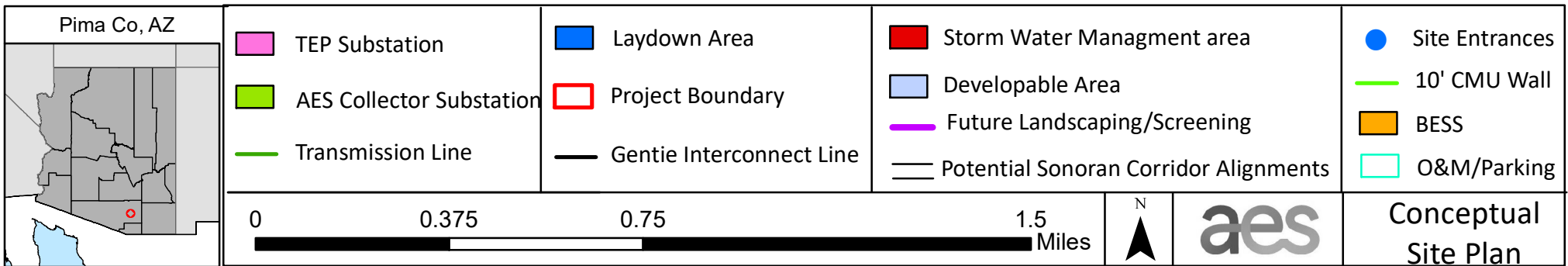
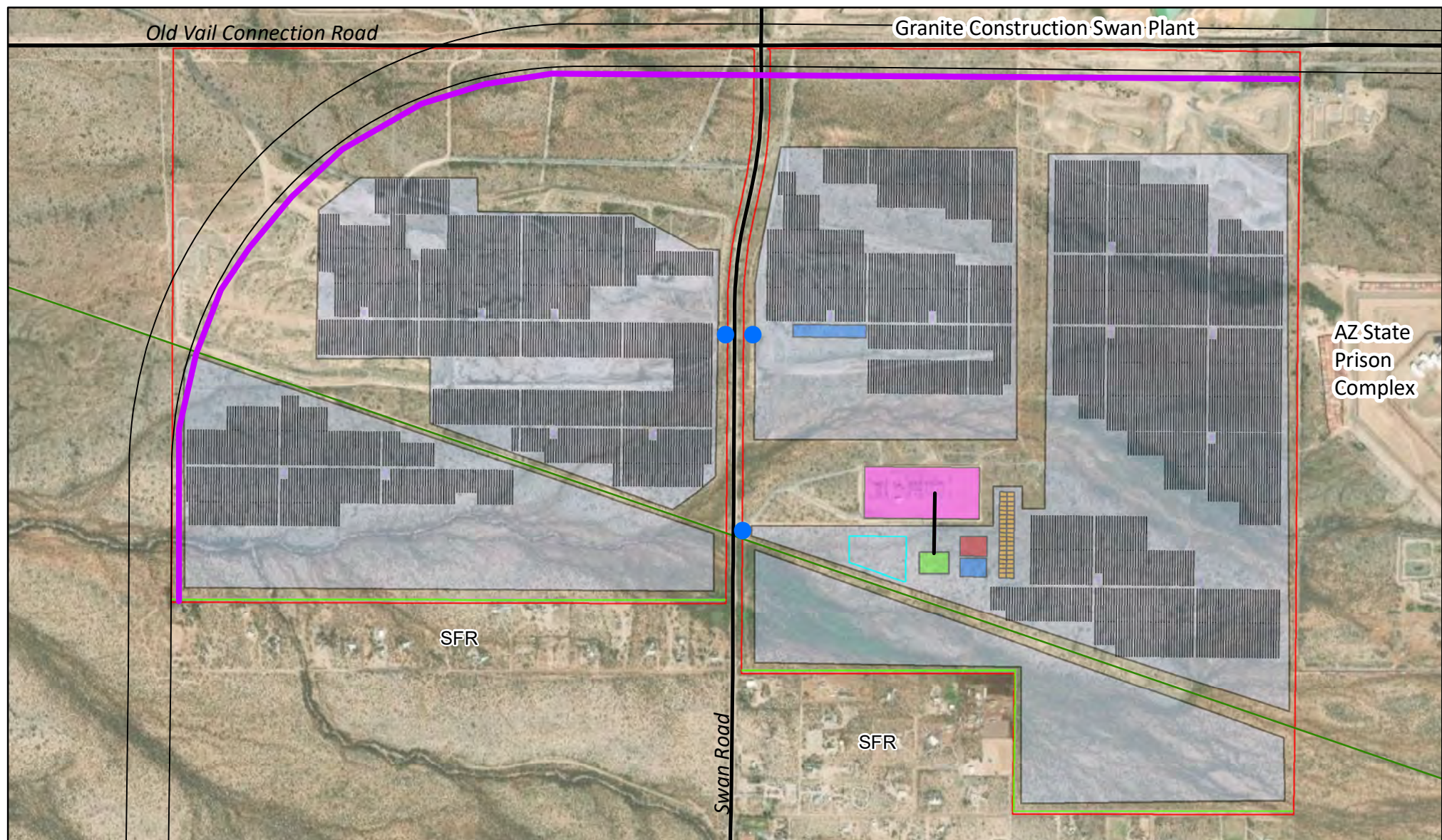


3,009.3 0 1,504.66 3,009.3 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
© City of Tucson

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION



Appendix C: Environmental Resource Report

[See PDF on next page.]

Environmental Resource Report:

Sonora South Solar, LLC

Tucson, Arizona

DP #XXXX | NE# 26026

Prepared for:

AES Clean Energy - Sonora South Solar, LLC

282 Century Place, Suite 2000

Louisville, CO 80027

Prepared by:

Novak Environmental, Inc.

4574 North First Ave. Ste. 100, Tucson, Arizona 85718

(520) 206-0591

For questions regarding this report please contact:

Karen M. Cesare, RLA, FASLA

karen@novakenvironmental.com

July 8, 2026



Novak Environmental, Inc.

4574 North First Avenue #100 • Tucson, AZ 85718
Phone 520.206.0591 Fax 520.882.3006



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A. GENERAL

A.1. Introduction

This is an Environmental Resource Report (ERR) for a large-scale solar energy development project located in the City of Tucson, Pima County, Arizona. The project, known as Sonora South Solar, LLC, is proposed by AES Clean Energy and consists of an approximately 100 MW AC solar power generation facility and a 100 MW battery energy storage system (BESS). The proposed development area totals approximately 1,400 acres. (See Figures 1 Vicinity Map and Figure 2 Location Map).

This report is provided as part of the Special Exception Land Use (S.E.L.U.) application for this project. Upon approval, the applicant will be required to submit a Development Plan (DP) consistent with the approval to the City of Tucson with more detailed information.

The subject site is located approximately 2.0 miles southeast of Tucson International Airport in the City of Tucson, Arizona. The property includes portions of Section 2, 3 & 11 of Township 16S, Range 14E, G&SRM, Tucson, Pima County, Arizona. South Swan Road bisects the project site from north to south. In Section 2 parcel numbers include, 303700030, 303700020, 30370001A, 30370001B, 30370005A, 30370005B. In Section 3 parcel numbers include, 30309001Q, 30309001P, 30309002E and 303090450. In Section 11 is parcel 303090230.



Figure 1 - VICINITY MAP

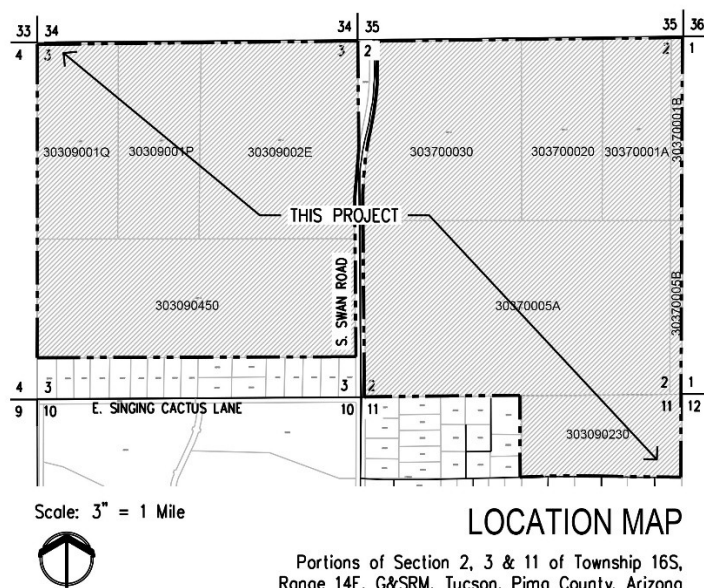


Figure 2 - LOCATION MAP

A.2. Native Plant Preservation Ordinance “Set Aside” Option

The “set aside” option will be used to meet the requirements of the Native Plant Preservation Ordinance (NPPO). This requires that 30% of the site be “set aside” as permanent natural open space. Undisturbed areas have been identified in the Composite Map (see page 11) and will be used as the basis for the Native Plant Set Aside Plan. The 1,400-acre site will need 420 acres of set aside area to meet the 30% requirement.

A.3. Site Description

The project site is located approximately 2.0 miles southeast of Tucson International Airport, within the City of Tucson, Pima County, Arizona. Adjacent land uses include low-density residential to the south, the Manzanita Arizona State Prison Complex to the east, gravel mining operations to the north, and areas subject to continuous low-elevation air traffic associated with the nearby airport. To the south of the project site are low density residential single family homes.

The site is characterized by relatively flat terrain bisected by arroyos and small ephemeral tributaries that drain surface water westward toward the Santa Cruz River. Existing infrastructure within and adjacent to the project area includes Swan Road (which bisects the site), several paved and unpaved internal roads, seven existing electrical transmission lines crossing the site, and the existing Sonoran Substation located east of Swan Road within the project area.



Figure 3 - AERIAL PHOTO - View West from S. Swan Road, (Novak Environmental Inc., 5-27-26)

The site is within Sonoran Desert scrub plant community typical of the Santa Cruz River valley floor. Portions of the site have been subject to significant prior disturbance. Historic sand and gravel extraction (borrow pit) operations occurred within the north and central portions of the site between approximately 1992–2002 and again between 2012–2023. Some disturbed areas have been regraded and support reestablished native revegetation, while others exhibit various stages of recovery including barren pits, piles, and gravel-dominated surfaces. Evidence of off-road vehicle use was also observed in historic borrow areas. Areas accessible by site road have also been used for illegal dumping of construction debris, tires and other refuse. Approximately half of the project area retains habitat with minimal disturbance. Existing land uses include vacant/open land, grazing, and electric transmission infrastructure.



Figure 4 - AERIAL PHOTO - View East from S. Swan Road (Novak Environmental Inc., 5-27-26)

B. TOPOGRAPHY/HYDROLOGY

B.1. Topography

Site topography for the entire site was not available as two-foot contours at the time of this report. Areas of abrupt changes in elevation are present on site associated with the pits and berms resulting from past sand and gravel mining. Contour map data for the site will be provided with the grading element of the Development Plan (DP).

B.2. On-Site Predevelopment Hydrologic Characteristics

The 100-year flood zones will be identified as part of the hydrology portion of the DP. This information will be used along with riparian habitat already identified to determine the site's Protected Riparian Area (PRA).

C. VEGETATION AND WILDLIFE

C.1. Protected Riparian Areas (PRA)

The most prominent wash is the Franco Wash which runs across the southern portion of the project site and drains to the Santa Cruz River approximately 5.5 miles downstream of the project boundary. In addition, the site is bisected by arroyos and small ephemeral tributaries draining generally westward toward the Santa Cruz River. Riparian vegetation is associated with these washes characterized by palo verde (*Parkinsonia florida*), mesquite (*Prosopis velutina*), and catclaw acacia (*Senegalia greggii*) along channel margins. This riparian vegetation is shown on the Composite Map. The 100-year floodplain has not been determined at this time and is needed for a final delineation of PRA. A hydrology study and identification of the 100-year floodplain will be completed as part of the DP. Areas of riparian vegetation that are within the 100-year flood plain will constitute Protected Riparian Area. Once the PRA is determined, the site plan will be adjusted to protect these areas. This change will not constitute a significant modification of the Preliminary Development Plan that is part of the S.E.L.U..

C.2. Critical and Sensitive Biological Communities

Portions of the Franco Wash in the southern portion of the site and west of Swan Road are classified as a Type II Habitat on the Critical and Sensitive Biological Communities (CSBC) Map.

C.3. Arizona Environmental Online Review Tool Report (Report attached - Appendix A)

The Arizona Game and Fish Department (AZGFD) Online Environmental Review Tool was queried for the Sonora South Solar project on June 16, 2026. The screening area consisted of a five-mile buffer surrounding the project site located in Township 16S, Range 14E, Pima County, within the Tucson SW USGS quadrangle. (Arizona Environmental Online Review Tool Report attached, see Appendix A)

The AZGFD Report identifies the Lee Moore Wash Flow Corridors as intersecting the project footprint as drawn. However, The Lee Moore Wash and its tributaries all occur to the southwest and do not intersect the site.

C.3.a. Endangered Species

AZGFD Report identifies several federally listed, proposed, or candidate species documented within five miles of the project vicinity and/or predicted to intersect the project footprint based on AZGFD range models.

1. Pima Pineapple Cactus (*Coryphantha scheeri* var. *robustispina*) is listed as Endangered and documented within five miles of the site. Note: A single Pima Pineapple Cactus was found on site during a site visit on 5-27-26 to identify riparian vegetation. The site will be surveyed for Pima Pineapple cacti and a strategy created for their protection as part of the development plan.
2. Yellow-billed Cuckoo, Western DPS (*Coccyzus americanus*), is listed as Threatened and is both documented within five miles and predicted to intersect the project footprint. However, no habitat for this species exists on site.
3. Monarch butterfly (*Danaus plexippus*) is a Proposed Threatened species documented within five miles.
4. Sonoran Desert Tortoise (*Gopherus morafkai*) carries a Candidate Conservation Agreement designation and is both documented within five miles and predicted to intersect the footprint.
5. Cactus Ferruginous Pygmy-owl (*Glaucidium brasilianum cactorum*), listed as Threatened, appears only in the predicted range model intersecting the footprint, with no documented occurrence record within five miles.

The report specifically flags Sonoran Desert Tortoise and Western Burrowing Owl as documented within the project vicinity and directs the applicant to species-specific handling guidelines for each. The report also notes that one or more native plants protected under the Arizona Native Plant Law and Antiquities Act have been documented in the vicinity, requiring coordination with the Arizona Department of Agriculture. A Notice of Intent to Clear Land will need to be filed with the Arizona Department of Agriculture before site disturbance begins.

C.3.b. Significant Densities of Wildlife by Species

The Report identifies 28 special-status species documented within five miles, including avian species such as Western Burrowing Owl, Swainson's Hawk, Gilded Flicker, and Rufous-winged Sparrow; reptiles such as Sonoran Desert Tortoise and Regal Horned Lizard; and small mammals such as Bailey's Pocket Mouse, Antelope Jackrabbit, Cave Myotis, and Western Yellow Bat.

The Report also identifies a list of bat species with potential to occur on site or overlap the site within their range. The site is unlikely to provide attractive bat roosting habitat due to a lack of suitable roosting structures, including caves, cliff faces, mature trees or saguaros with cavities, or existing buildings/bridges.

The Report also identifies species of economic and recreational importance predicted to occur on site, namely Gambel's Quail, Mule Deer, Javelina, Mountain Lion, White-winged Dove, and Mourning Dove, reflecting game species use of the surrounding desert habitat.

D. CONCEPTUAL GRADING PLAN

D.1. Grade Changes

The Composite Plan shows the proposed grading limits for the preliminary design. Information such as changes in elevations, maximum grade differential from adjacent properties will be provided following completion of a grading plan.

D.2. Disturbance Area

The preliminary site plan proposes site grading of 650 acres (46%) of the 1,400-acre site.

D.3. Changes to Drainageways

An assessment of impacts on upstream and downstream drainageways conditions will be completed as part of the Development Plan.

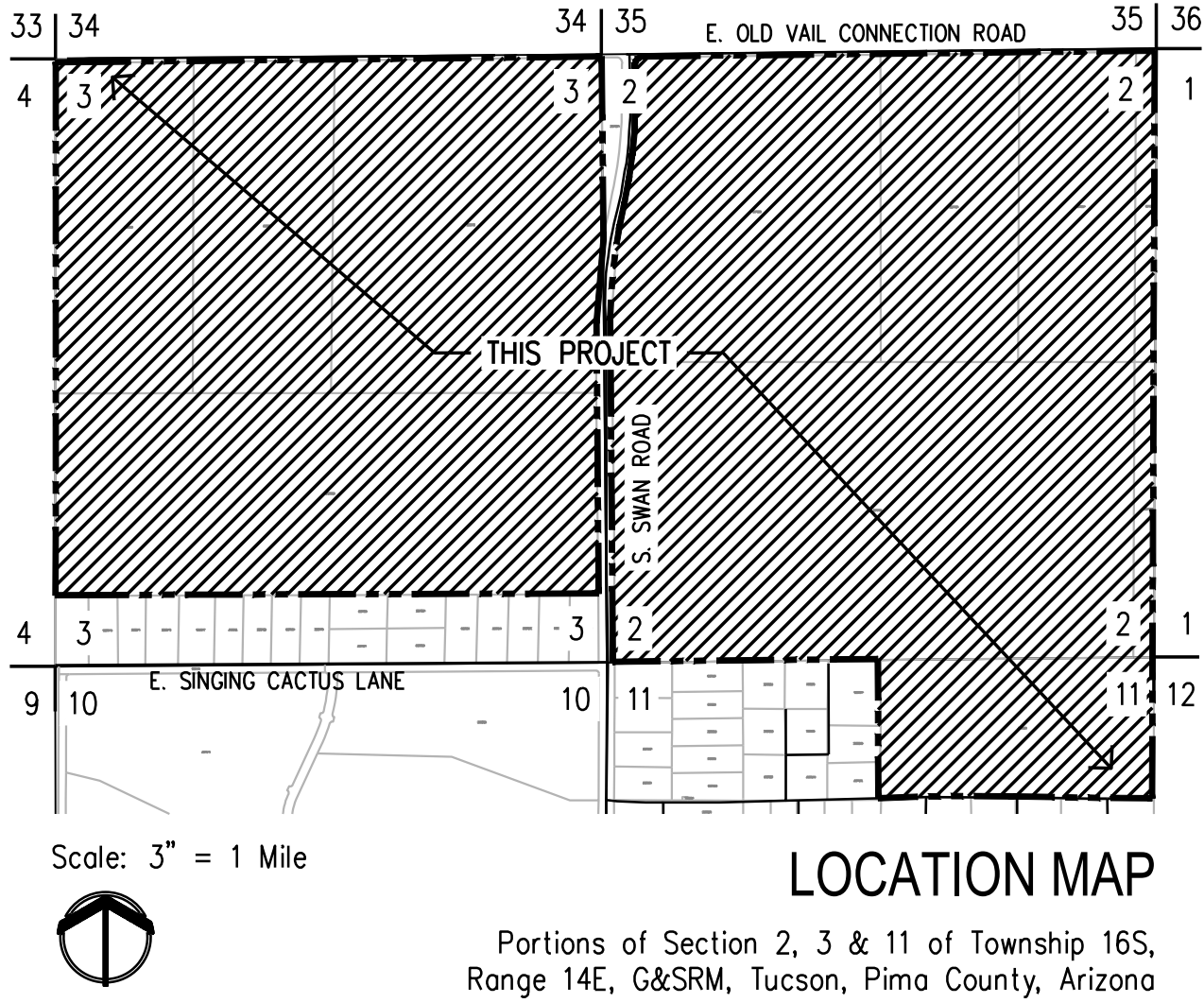
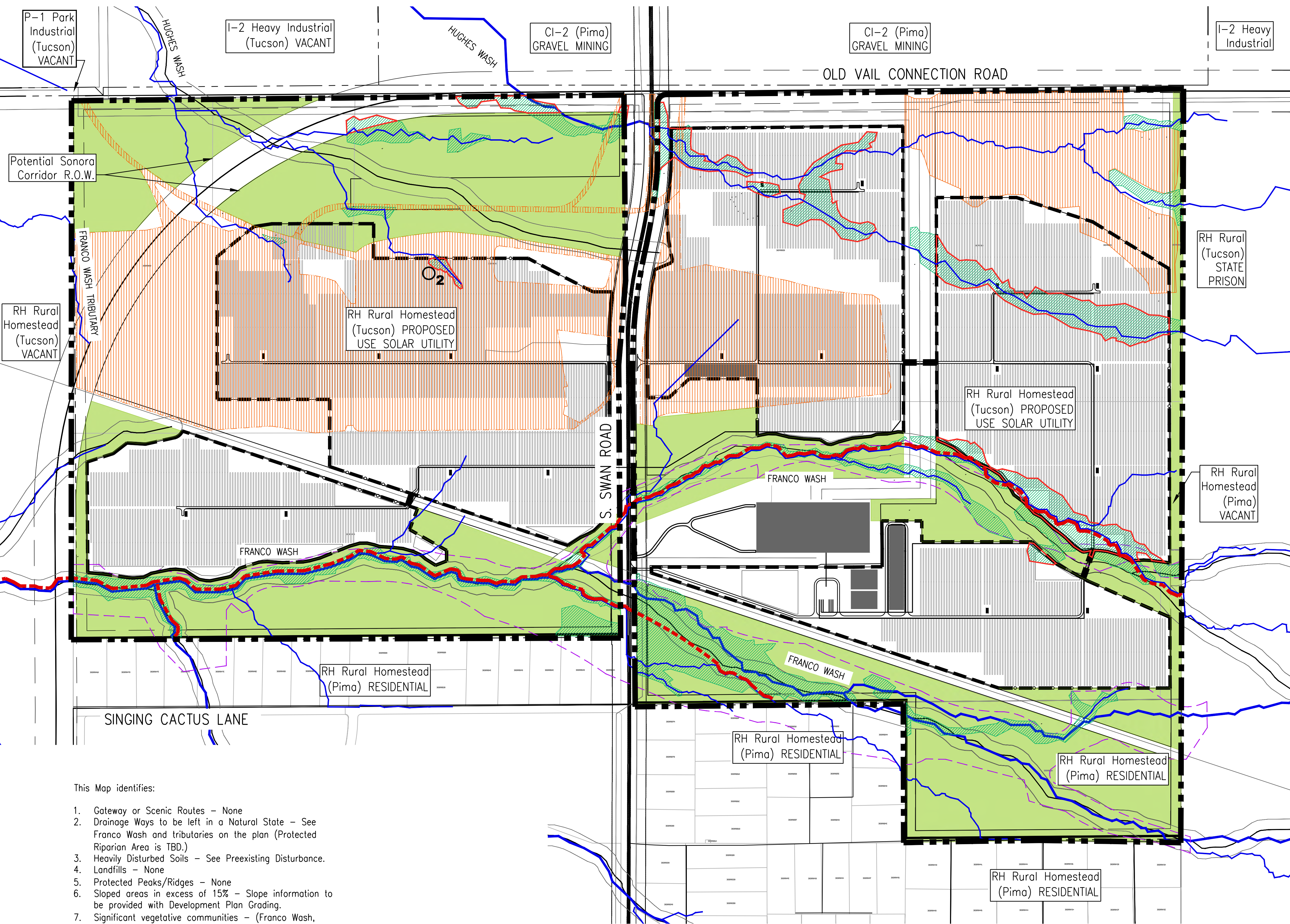
E. COMPOSITE MAP

The composite map shows the presence and general location of key elements of the ERR. Final locations of these elements will be provided with the Development Plan, including but not limited to the Preliminary Development Plan site plan and PRA.

See Figure 5 (Next Sheet).

SONORA SOUTH SOLAR - TUCSON ARIZONA

ERR COMPOSITE MAP



MAP KEY

- PROPERTY LIMITS**
- 100-Year 6"+ Flood Depth (Traced from Westwood Preliminary Hydrology Study, 2024)
- WASH 100+ cfs (from PimaMaps)
- WASH 1k+ cfs (from PimaMaps)
- ERZ (from Map Tucson)
- PROPERTY LIMITS:** 1400 acres
- GRADING LIMITS:** 650 acres
- PREEXISTING DISTURBANCE:** 339 acres (Pima aerial photo)
- NATIVE PLANT**
- NPPO SET-ASIDE AREA: 438 acres (31%) (Required 30% Set-Aside Area = 420 acres)
- RIPARIAN**
- RIPARIAN VEGETATION: 117 acres (from PimaMaps aerial photo)
- POSSIBLE PRA Impacts: 41 acres (Pending 100-Year Flood Delineation)
- O₂ PIMA PINEAPPLE CACTUS

- This Map identifies:
- Gateway or Scenic Routes - None
 - Drainage Ways to be left in a Natural State - See Franco Wash and tributaries on the plan (Protected Riparian Area is TBD.)
 - Heavily Disturbed Soils - See Preexisting Disturbance.
 - Landfills - None
 - Protected Peaks/Ridges - None
 - Sloped areas in excess of 15% - Slope information to be provided with Development Plan Grading.
 - Significant vegetative communities - (Franco Wash, Protected Riparian Area is TBD)
 - Trails and Trail Access Points - None
 - Adjacent Land Uses - City and County Zoning Shown

ADDRESS: S Swan Rd & E Old Vail Rd, Tucson, AZ 85756, USA
DPXXX-XX-XXXX

Novak Environmental, Inc.
4574 North First Avenue #100 • Tucson, AZ 85718
Phone 520.206.0591 Fax 520.882.3006
Landscape Architecture • Natural Resources • Planning • Mitigation

SONORA SOUTH SOLAR
ERR COMPOSITE MAP

Portions of Section 2, 3 & 11 of Township 16S, Range 14E, G&SRM, Tucson, Pima County, Arizona

NO.	REVISION	DATE

DESIGNED:	DRAWN:	CHECKED:	SHEET
RA	RA	KC	1

DATE:	PROJECT NO.:	SCALE:	1 OF 1
JULY 2026	26026	SEE PLAN	

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Appendix A –

Arizona Game and Fish Department's Arizona Environmental Online Review Tool Report

Arizona Environmental Online Review Tool Report



*Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and
manage for safe, compatible outdoor recreation
opportunities for current and future generations.*

The Department requests further coordination to provide project/species specific recommendations. Please use the [Project Evaluation Form](#) to submit your project to the Project Evaluation Program at PEP@azgfd.gov.

Project Name:

Sonora South Solar - Solar Utility

Project Type:

Energy Production/Storage/Transfer, Energy Production (generation), photovoltaic solar facility (new/expansion)

Project ID:

HGIS-28765

User Project Number:

NE26026

Project Description:

Solar array and battery storage

Contact Person:

Riaz Adaikkalam

Organization:

Novak Environmental Inc.

On Behalf Of:

CITY

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. Arizona Wildlife Conservation Strategy (AWCS), specifically Species of Greatest Conservation Need (SGCN), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

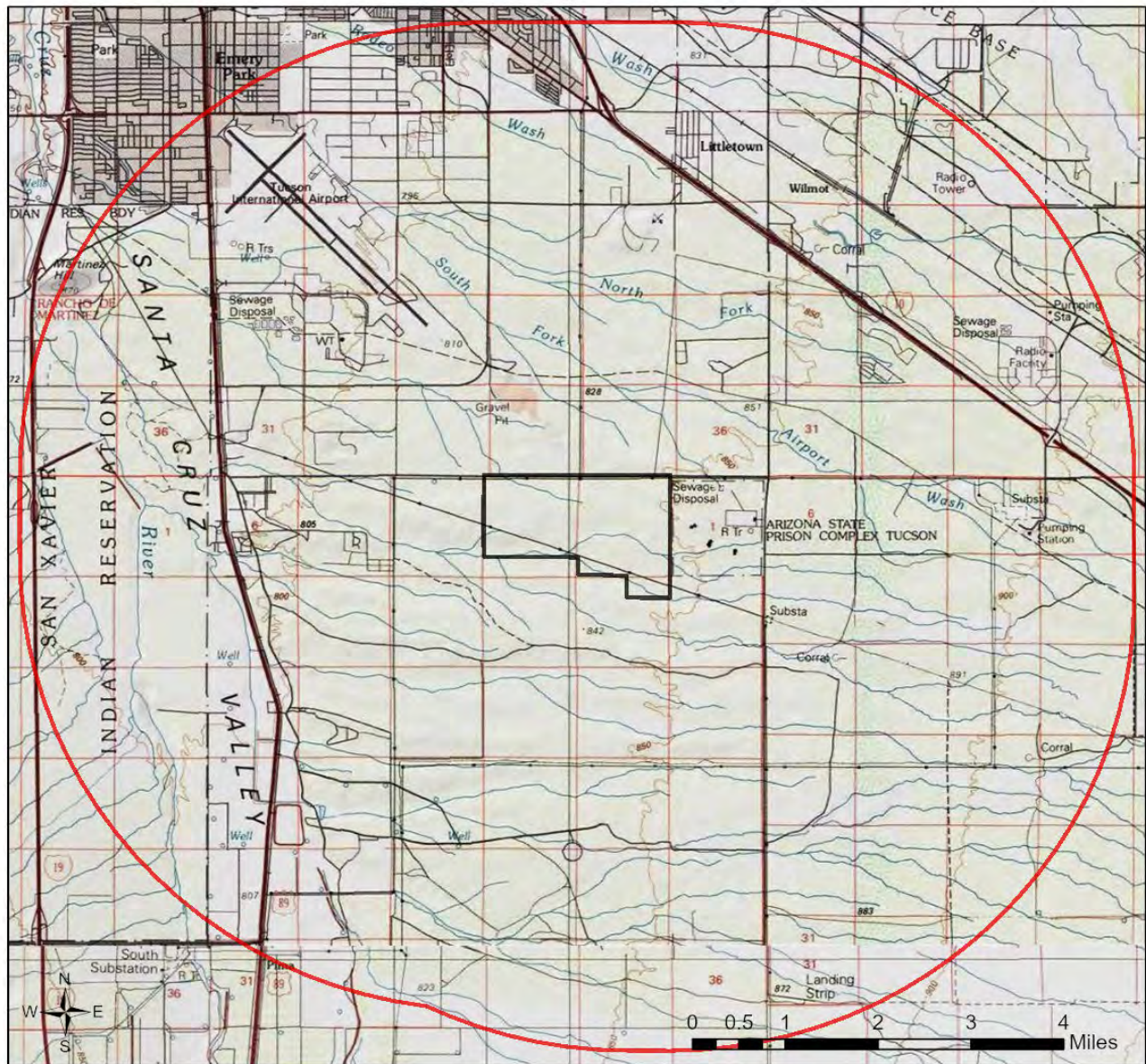
Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by implementing the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. When the Department requests further coordination on the project report, this report does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals. Further coordination with the Department requires the submission of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once the Department has received the information, please allow 30 days for completion of project reviews. Send requests to:?

Project Evaluation Program, Habitat Branch
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086-5000
Email: PEP@azgfd.gov
Phone Number: (623) 236-7600

5. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

Sonora South Solar - Solar Utility USA Topo Basemap With Locator Map



-  Buffered Project Boundary
-  Project Boundary

Project Size (acres): 1,367.97

Lat/Long (DD): 32.0676 / -110.8917

County(s): Pima

AGFD Region(s): Tucson

Township/Range(s): T16S, R14E

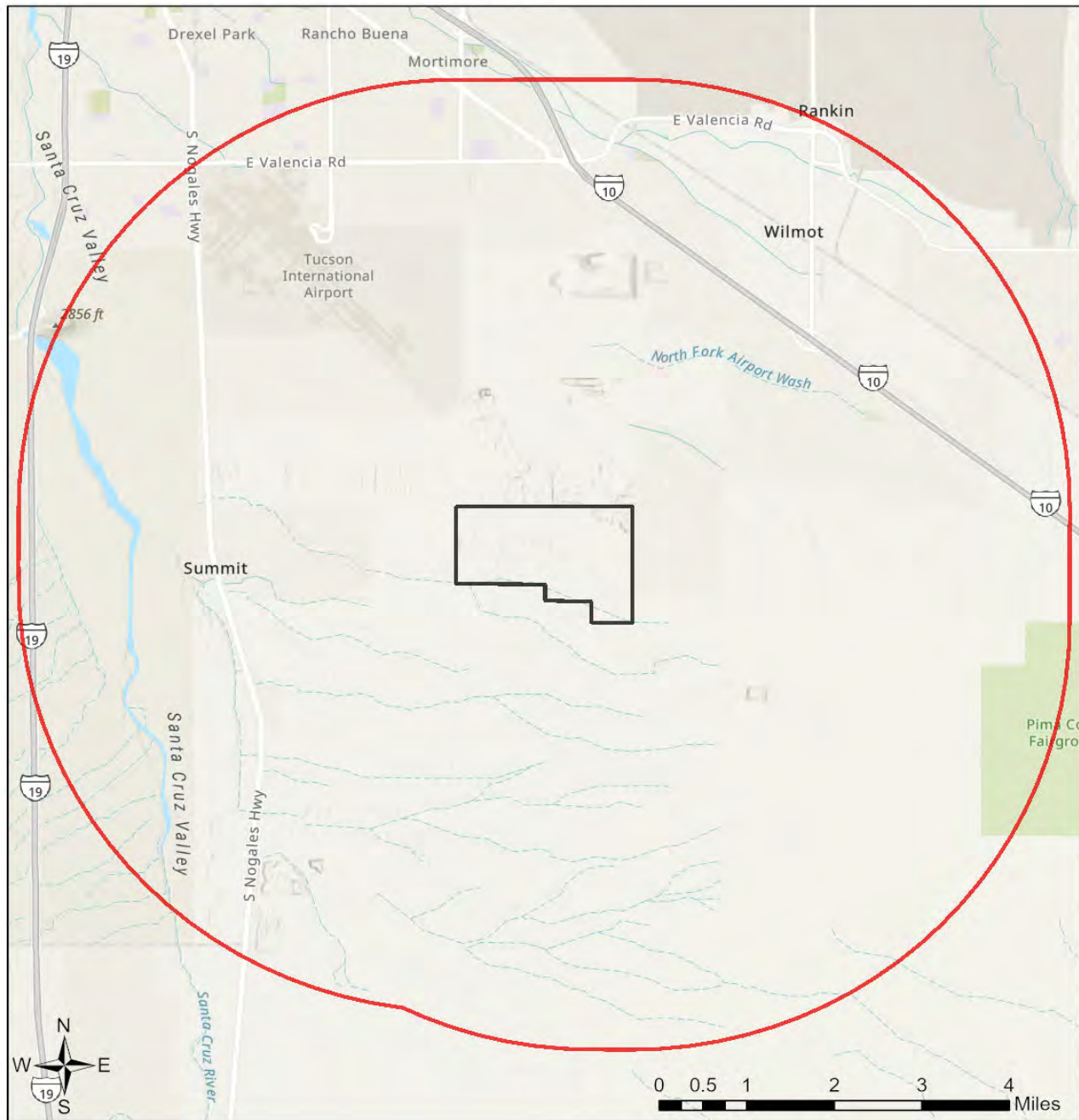
USGS Quad(s): TUCSON SW

County of Yavapai, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Copyright:© 2013 National Geographic Society, i-cubed
Esri, USGS



Sonora South Solar - Solar Utility

Important Areas



- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Wildlife Connectivity

Project Size (acres): 1,367.97

Lat/Long (DD): 32.0676 / -110.8917

County(s): Pima

AGFD Region(s): Tucson

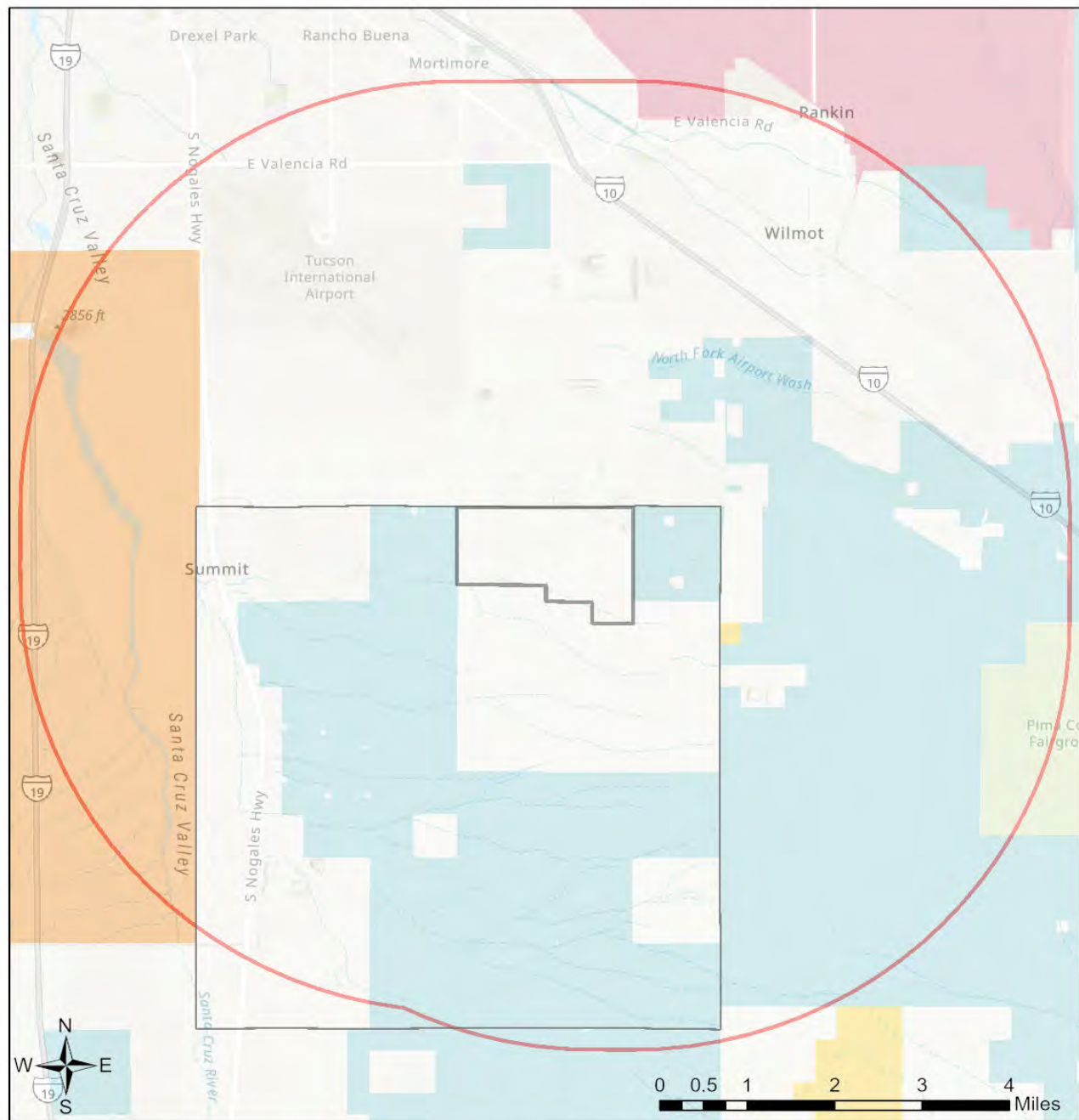
Township/Range(s): T16S, R14E

USGS Quad(s): TUCSON SW

Esri, NASA, NGA, USGS
CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,
Bureau of Land Management, EPA, NPS, USDA, USFWS

Sonora South Solar - Solar Utility

Township/Ranges and Land Ownership



- Buffered Project Boundary
- Project Boundary
- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military

- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge
- Township/Range

Project Size (acres): 1,367.97
Lat/Long (DD): 32.0676 / -110.8917
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T16S, R14E
USGS Quad(s): TUCSON SW

Esri, NASA, NGA, USGS
CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,
Bureau of Land Management, EPA, NPS, USDA, USFWS

Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Agosia chrysogaster chrysogaster	Gila Longfin Dace			S		2
Aspidoscelis sonorae	Sonoran Spotted Whiptail					2
Athene cunicularia hypugaea	Western Burrowing Owl		S	S		2
Auriparus flaviceps	Verdin					2
Bat Colony						
Buteo swainsoni	Swainson's Hawk					2
Campylorhynchus brunneicapillus	Cactus Wren					2
Cardinalis sinuatus	Pyrrhuloxia					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1
Colaptes chrysoides	Gilded Flicker			S		2
Coryphantha scheeri var. robustispina	Pima Pineapple Cactus	LE		S	HS	
Danaus plexippus	Monarch	PT		S		
Didelphis virginiana californica	Mexican Opossum					2
Echinocereus fasciculatus	Magenta-flower Hedgehog-cactus				SR	
Gastrophryne mazatlanensis	Sinoloan Narrow-mouthed Toad			S		2
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Icterus bullockii	Bullock's Oriole					2
Incilius alvarius	Sonoran Desert Toad					2
Lasiurus xanthinus	Western Yellow Bat		S			2
Lepus alleni	Antelope Jackrabbit					2
Megascops kennicottii	Western Screech-owl					2
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza aberti	Abert's Towhee		S			2
Melospiza fusca	Canyon Towhee					2
Myotis velifer	Cave Myotis			S		2
Peucaea carpalis	Rufous-winged Sparrow					2
Phrynosoma solare	Regal Horned Lizard					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					2

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Lee Moore Wash Flow Corridors	Pima County Wildlife Movement Area - Riparian/Wash					

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Ammodramus savannarum perpallidus</i>	Western Grasshopper Sparrow					2
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					2
<i>Anarhynchus montanus</i>	Mountain Plover					2
<i>Anthus spragueii</i>	Sprague's Pipit					2
<i>Aquila chrysaetos</i>	Golden Eagle	BGA		S		2
<i>Asio otus</i>	Long-eared Owl					2
<i>Aspidoscelis sonora</i>	Sonoran Spotted Whiptail					2
<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl		S	S		2
<i>Auriparus flaviceps</i>	Verdin					2
<i>Botaurus lentiginosus</i>	American Bittern					2
<i>Buteo regalis</i>	Ferruginous Hawk			S		2
<i>Buteo swainsoni</i>	Swainson's Hawk					2
<i>Buteogallus anthracinus</i>	Common Black Hawk					2
<i>Calcarius ornatus</i>	Chestnut-collared Longspur					2
<i>Calypte costae</i>	Costa's Hummingbird					2
<i>Camptostoma imberbe</i>	Northern Beardless-Tyrannulet		S			2
<i>Campylorhynchus brunneicapillus</i>	Cactus Wren					2
<i>Catharus ustulatus</i>	Swainson's Thrush					2
<i>Chaetodipus baileyi</i>	Bailey's Pocket Mouse					2
<i>Chilomeniscus cinctus</i>	Variable Sandsnake					2
<i>Choeronycteris mexicana</i>	Mexican Long-tongued Bat		S	S		2
<i>Chordeiles minor</i>	Common Nighthawk					2
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1
<i>Colaptes chrysoides</i>	Gilded Flicker			S		2
<i>Columbina inca</i>	Inca Dove					2
<i>Corvus cryptoleucus</i>	Chihuahuan Raven					2
<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat		S	S		1
<i>Crotalus tigris</i>	Tiger Rattlesnake					2
<i>Cynanthus latirostris</i>	Broad-billed Hummingbird		S			2
<i>Empidonax wrightii</i>	Gray Flycatcher					2
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat			S		2
<i>Falco mexicanus</i>	Prairie Falcon					2
<i>Falco peregrinus anatum</i>	American Peregrine Falcon		S	S		1
<i>Falco sparverius</i>	American Kestrel					2
<i>Gastrophryne mazatlanensis</i>	Sinoloan Narrow-mouthed Toad			S		2
<i>Glaucidium brasilianum cactorum</i>	Cactus Ferruginous Pygmy-owl	LT	S	S		1
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	CCA	S	S		1
<i>Icterus bullockii</i>	Bullock's Oriole					2

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Incilius alvarius</i>	Sonoran Desert Toad					2
<i>Kinosternon sonoriense sonoriense</i>	Desert Mud Turtle			S		2
<i>Lanius ludovicianus</i>	Loggerhead Shrike					2
<i>Lasiurus cinereus</i>	Hoary Bat					2
<i>Lasiurus frantzii</i>	Desert Red Bat		S			2
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			2
<i>Macrotus californicus</i>	California Leaf-nosed Bat			S		2
<i>Megascops kennicottii</i>	Western Screech-owl					2
<i>Melanerpes uropygialis</i>	Gila Woodpecker					2
<i>Melospiza lincolni</i>	Lincoln's Sparrow					2
<i>Melospiza aberti</i>	Abert's Towhee		S			2
<i>Micrathene whitneyi</i>	Elf Owl					3
<i>Micruroides euryxanthus</i>	Sonoran Coralsnake					2
<i>Myadestes townsendi</i>	Townsend's Solitaire					2
<i>Myotis auriculus</i>	Southwestern Myotis					2
<i>Myotis velifer</i>	Cave Myotis			S		2
<i>Myotis yumanensis</i>	Yuma Myotis					2
<i>Notiosorex cockrumi</i>	Cockrum's Desert Shrew					2
<i>Nyctinomops femorosaccus</i>	Pocketed Free-tailed Bat					2
<i>Nyctinomops macrotis</i>	Big Free-tailed Bat					2
<i>Parabuteo unicinctus</i>	Harris's Hawk					2
<i>Passerculus sandwichensis</i>	Savannah Sparrow					2
<i>Perognathus amplus</i>	Arizona Pocket Mouse					2
<i>Peucaea carpalis</i>	Rufous-winged Sparrow					2
<i>Phrynosoma solare</i>	Regal Horned Lizard					2
<i>Poocetes gramineus</i>	Vesper Sparrow					2
<i>Progne subis hesperia</i>	Desert Purple Martin			S		2
<i>Rana yavapaiensis</i>	Lowland Leopard Frog		S	S		1
<i>Spizella breweri</i>	Brewer's Sparrow					2
<i>Tadarida brasiliensis</i>	Brazilian Free-tailed Bat					2
<i>Toxostoma bendirei</i>	Bendire's Thrasher					2
<i>Troglodytes pacificus</i>	Pacific Wren					2

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Callipepla gambelii</i>	Gambel's Quail					
<i>Odocoileus hemionus</i>	Mule Deer					
<i>Pecari tajacu</i>	Javelina					
<i>Puma concolor</i>	Mountain Lion					

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Energy Production/Storage/Transfer, Energy Production (generation), photovoltaic solar facility (new/expansion)

Project Type Recommendations:

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and it is important to identify and conserve upland wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife species. Guidelines for many of these can be found at:

<https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-friendly-guidelines/>.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Artificial lighting could impair the ability of nocturnal animals to navigate (e.g., owls, migratory birds, bats, and other nocturnal mammals) and may affect wildlife behavior and populations. The AZGFD recommends using only the minimum amount of light needed for safety, especially in areas immediately adjacent to open space or undeveloped lands. The AZGFD encourages the use of motion sensing lighting and narrow spectrum lighting (amber or warm tones typically 2700 Kelvin or lower) wherever possible to lower the range of species affected by lighting. Also, please consider shielding, canting, or cutting all lighting, where possible, to ensure that light reaches only areas needing illumination and to minimize impacts to nocturnal wildlife.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at <https://www.invasivespeciesinfo.gov/> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control these species. To view a list of documented invasive species or to report invasive species in or near your project area visit [iMapInvasives](#) - a national cloud-based application for tracking and managing invasive species at <https://imap.natureserve.org/imap/services/page/map.html>.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select "See What's Here" for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

Evaluate potential impacts to wildlife and fish species due to changes in access to water, water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods). Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing the project to minimize impacts to spawning fish and other aquatic species. Wash, drain, and dry equipment to reduce the spread of exotic invasive species. AZGFD recommends early coordination with the Project Evaluation Program (PEP@azgfd.gov) for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The AZGFD recommends that wildlife surveys are conducted to determine if noise-sensitive species, such as birds or mammals, occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

The AZGFD recommends following the Avian Power Line Interaction Committee (APLIC) guidelines for new power lines, which can be found in the current version of *Suggested Practices for Avian Protection on Power Lines and Reducing Avian Collisions with Power Lines*. Large bodied birds, such as hawks, owls, vultures, and eagles, may be vulnerable to line strikes and electrocution during construction and operation of power lines and substations; power poles can also serve as perches for large-bodied birds. These potential impacts can be avoided or minimized by following the APLIC guidelines which include designing the power lines with enough space between energized components to reduce the likelihood of a bird electrocution or installing bird flight diverters in sections of line where elevated bird strikes are anticipated (e.g. lines over water bodies or in the path of colonial roosting locations). The AZGFD's Raptor Coordinator, who can be contacted at raptors@azgfd.gov or 623-236-7575, can provide further information on specific design features and best management practices.

The AZGFD recommends that a qualified biologist conduct a survey for nesting birds within the project area prior to removal or trimming of trees/vegetation, if the removal or trimming occurs during the breeding season (the Project Evaluation Program can be contacted at PEP@azgfd.gov or 623-236-7600 to determine the appropriate breeding season within the project area). Trees and/or vegetation within the project area may provide nesting opportunities for avian species that are regulated under the Migratory Bird Treaty Act (MBTA) and protected under state law. If it is anticipated the project will not be in compliance with MBTA, the AZGFD recommends contacting the U.S. Fish and Wildlife Service (<https://www.fws.gov/office/arizona-ecological-services>) for technical assistance. The USFWS will provide options to comply with the MBTA.

The AZGFD recommends revegetating disturbed areas with native drought-tolerant species that represent the natural surrounding landscape. Landscaping with native plants can help support wildlife and pollinator species in the area while reducing dust and erosion. In addition, the applicable land management agencies should be consulted regarding guidelines for revegetation efforts. The AZGFD also recommends the development of a short and long-term monitoring plan, including adaptive management guidelines to address invasive species control and maintain native vegetation.

Project Location and/or Species Recommendations:

HDMS records indicate that one or more native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:

Arizona Department of Agriculture
1688 W Adams St.
Phoenix, AZ 85007
Phone: 602.542.4373

<https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf> starts on page 44

Analysis indicates that your project is located in the vicinity of an identified wildlife habitat connectivity feature. The **County-level Stakeholder Assessments** contain five categories of data (Barrier/Development, Wildlife Crossing Area, Wildlife Movement Area- Diffuse, Wildlife movement Area- Landscape, Wildlife Movement Area- Riparian/Washes) that provide a context of select anthropogenic barriers, and potential connectivity. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-identifying-corridors/>. Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

HDMS records indicate that one or more **Listed, Proposed, or Candidate** species or **Critical Habitat** (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <https://www.fws.gov/office/arizona-ecological-services> or:

Phoenix Main Office

9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office

201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office

SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121

HDMS records indicate that **Sonoran Desert Tortoise** have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at <https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/2014%20Tortoise%20handling%20guidelines.pdf>.

HDMS records indicate that **Western Burrowing Owls** have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at <https://www.azgfd.com/wildlife-conservation/conservation-and-endangered-species-programs/burrowing-owl-management/>.

