

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.

Project Name:

SunZia Transmission Line Project

User Project Number:

Z-PA-124-22

Project Description:

The anticipated construction will implement the SunZia Private Utility & Facility by allowing building height modifications.

Project Type:

Energy Storage/Production/Transfer, Energy Transfer, substation

Contact Person:

Sarah Fitzgerald

Organization:

Pew and Lake PLC

On Behalf Of:

PINAL

Project ID:

HGIS-17016

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

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. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), 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.

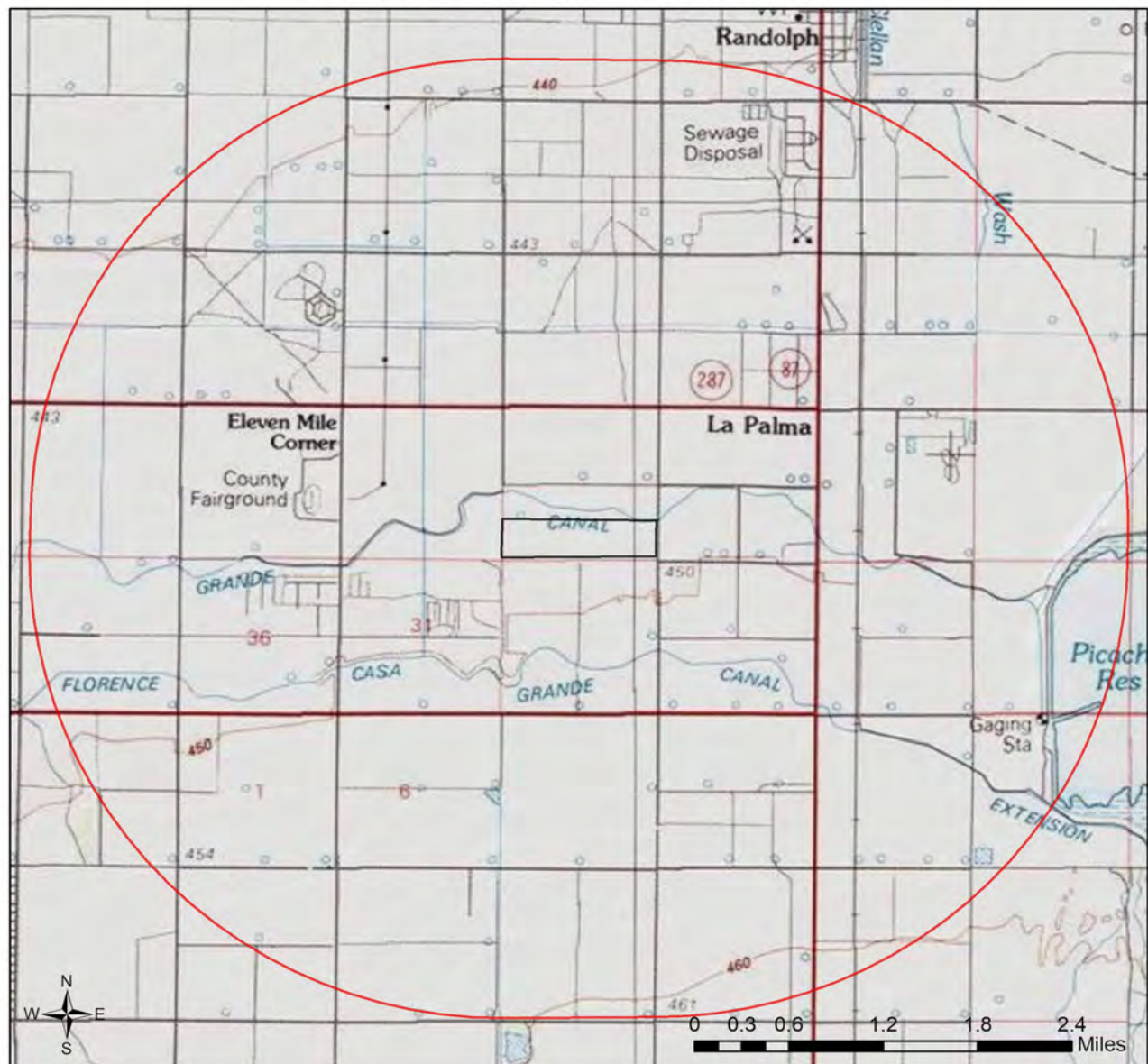
Locations Accuracy Disclaimer:

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 and those that may have not been documented within the project vicinity 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 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. Making this information directly available 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.
5. Further coordination with the Department requires the submittal 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 AGFD had 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
Phone Number: (623) 236-7600
Fax Number: (623) 236-7366
Or
PEP@azgfd.gov
6. 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

SunZia Transmission Line Project USA Topo Basemap With Locator Map



- Buffered Project Boundary
- Project Boundary

Project Size (acres): 151.93

Lat/Long (DD): 32.8667 / -111.5412

County(s): Pinal

AGFD Region(s): Mesa

Township/Range(s): T6S, R8E

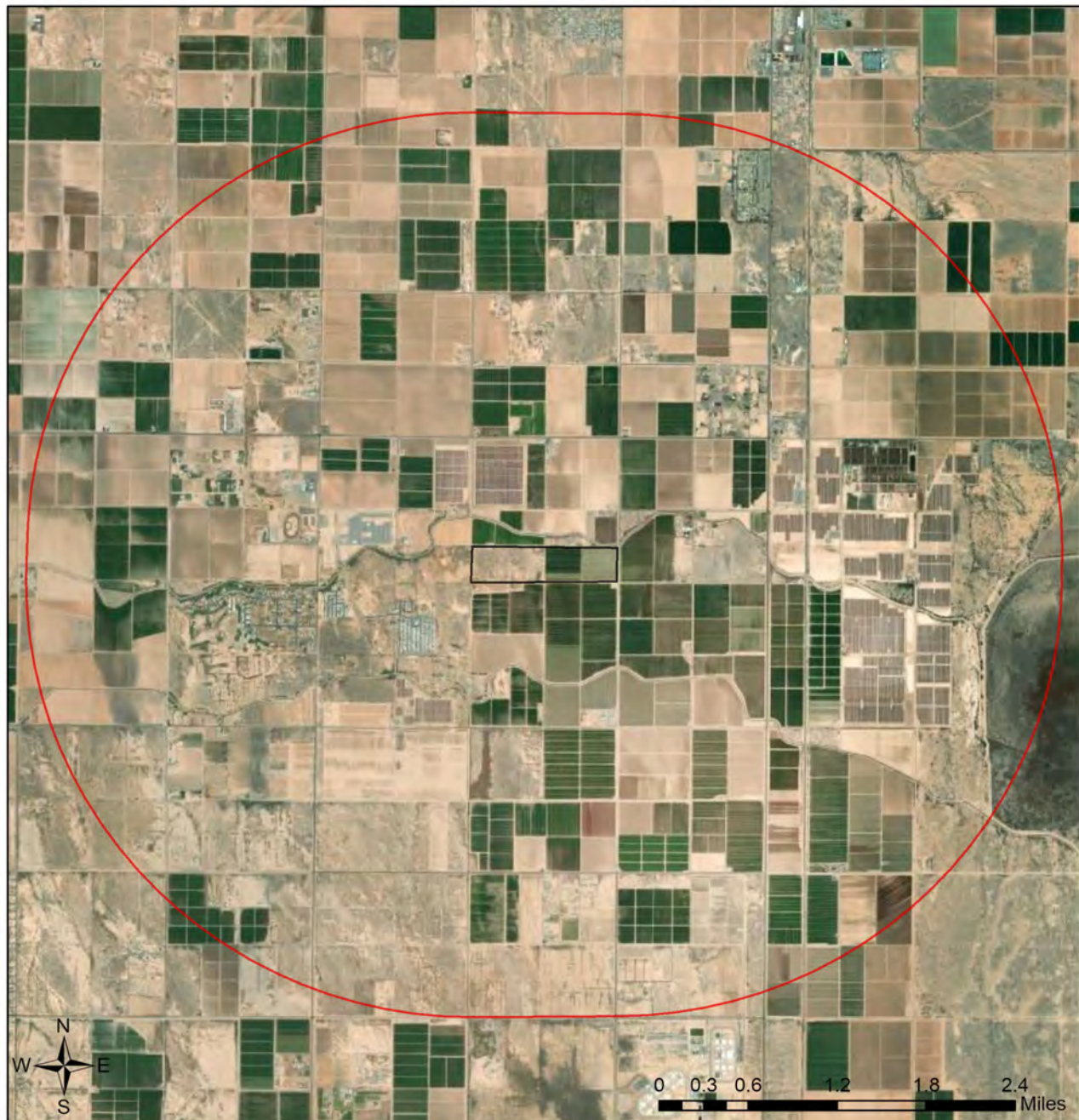
USGS Quad(s): ELOY NORTH

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community



SunZia Transmission Line Project

Web Map As Submitted By User

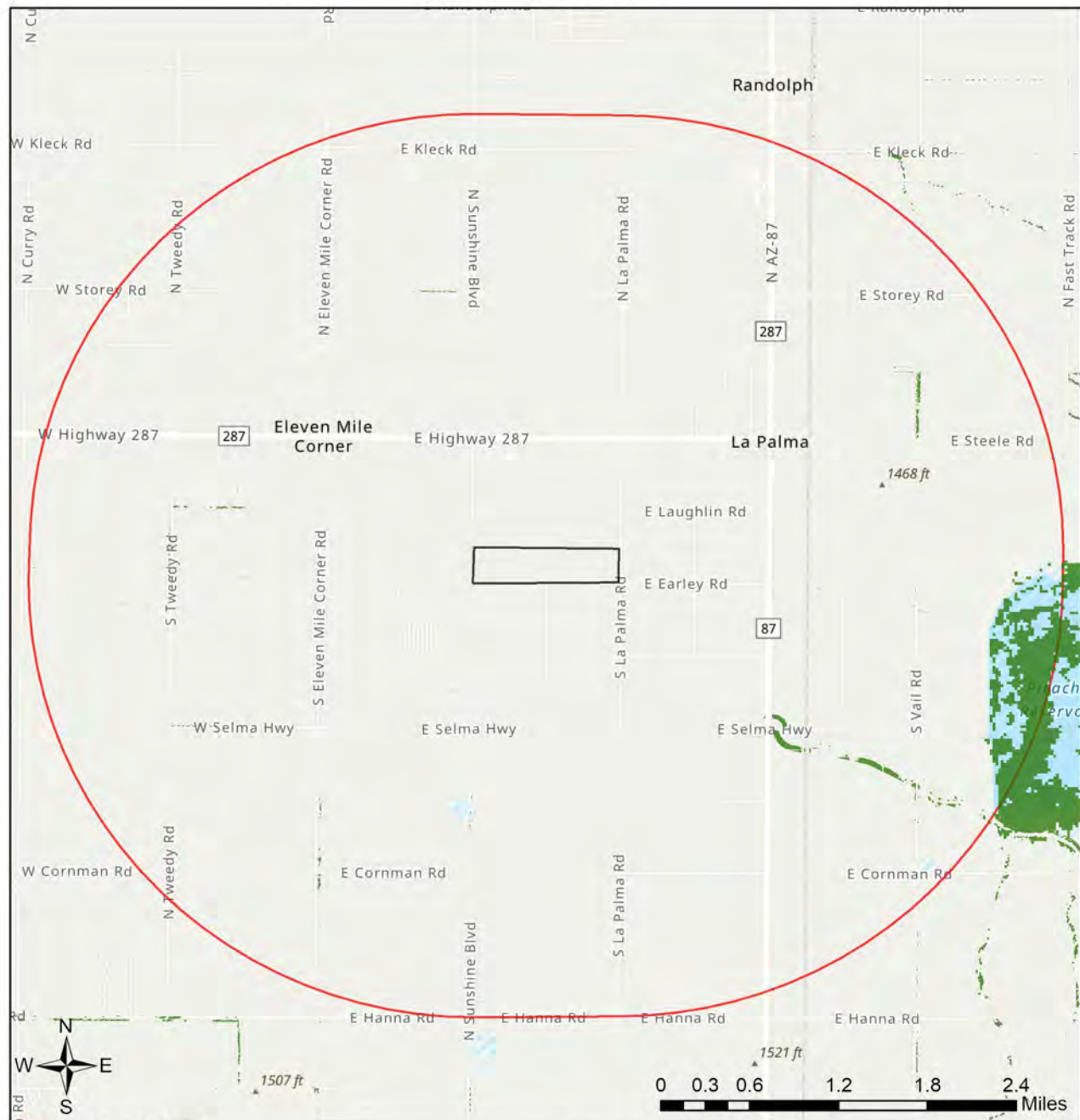


-  Buffered Project Boundary
-  Project Boundary

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AGFD Region(s): Mesa
Township/Range(s): T6S, R8E
USGS Quad(s): ELOY NORTH

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

SunZia Transmission Line Project Important Areas



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

Project Size (acres): 151.93
 Lat/Long (DD): 32.8667 / -111.5412
 County(s): Pinal
 AGFD Region(s): Mesa
 Township/Range(s): T6S, R8E
 USGS Quad(s): ELOY NORTH

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatasystelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
 Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

SunZia Transmission Line Project 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/Ranges

Project Size (acres): 151.93
Lat/Long (DD): 32.8667 / -111.5412
County(s): Pinal
AGFD Region(s): Mesa
Township/Range(s): T6S, R8E
USGS Quad(s): ELOY NORTH

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatasys, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community
Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1A
Rallus obsoletus yumanensis	Yuma Ridgway's Rail	LE		S		1A

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/>.

No Special Areas Detected

No special areas were detected within the project vicinity.

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
Aix sponsa	Wood Duck					1B
Ammospermophilus harrisi	Harris' Antelope Squirrel					1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Botaurus lentiginosus	American Bittern					1B
Buteo regalis	Ferruginous Hawk	SC		S		1B
Calypte costae	Costa's Hummingbird					1C
Chilomeniscus stramineus	Variable Sandsnake					1B
Chionactis annulata	Resplendent Shovel-nosed Snake	SC				1C
Cistothorus palustris	Marsh Wren					1C
Colaptes chrysoides	Gilded Flicker			S		1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1A
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A
Heloderma suspectum	Gila Monster					1A
Kinosternon sonoriense sonoriense	Desert Mud Turtle			S		1B
Lasiurus blossevillei	Western Red Bat		S			1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolni	Lincoln's Sparrow					1B
Melospiza aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B

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
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Passerculus sandwichensis	Savannah Sparrow					1B
Phrynosoma goodei	Goode's Horned Lizard					1B
Phrynosoma solare	Regal Horned Lizard					1B
Rallus obsoletus yumanensis	Yuma Ridgway's Rail	LE				1A
Setophaga petechia	Yellow Warbler					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Toxostoma lecontei	LeConte's Thrasher			S		1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Energy Storage/Production/Transfer, Energy Transfer, substation

Project Type Recommendations:

Fence recommendations will be dependant upon the goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located on Wildlife Friendly Guidelines page, which is part of the Wildlife Planning button at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/>.

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. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

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/unitedstates/az.shtml> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control. 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.

Follow manufacturer's recommended application guidelines for all chemical treatments. The U.S. Fish and Wildlife Service, Region 2, Environmental Contaminants Program has a reference document that serves as their regional pesticide recommendations for protecting wildlife and fisheries resources, titled "Recommended Protection Measures for Pesticide Applications in Region 2 of the USFWS", http://www.fws.gov/southwest/es/arizona/Documents/ECReports/RPMPA_2007.pdf. The Department recommends that direct or indirect impacts to sensitive species and their forage base from the application of chemical pesticides or herbicides be considered carefully.

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

For any powerlines built, proper design and construction of the transmission line is necessary to prevent or minimize risk of electrocution of raptors, owls, vultures, and golden or bald eagles, which are protected under state and federal laws. Limit project activities during the breeding season for birds, generally March through late August, depending on species in the local area (raptors breed in early February through May). Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during the nesting season. For underground powerlines, trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches. In addition, indirect affects to wildlife due to construction (timing of activity, clearing of rights-of-way, associated bridges and culverts, affects to wetlands, fences) should also be considered and mitigated.

Based on the project type entered, coordination with State Historic Preservation Office may be required (<http://azstateparks.com/SHPO/index.html>).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

Project Location and/or Species 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

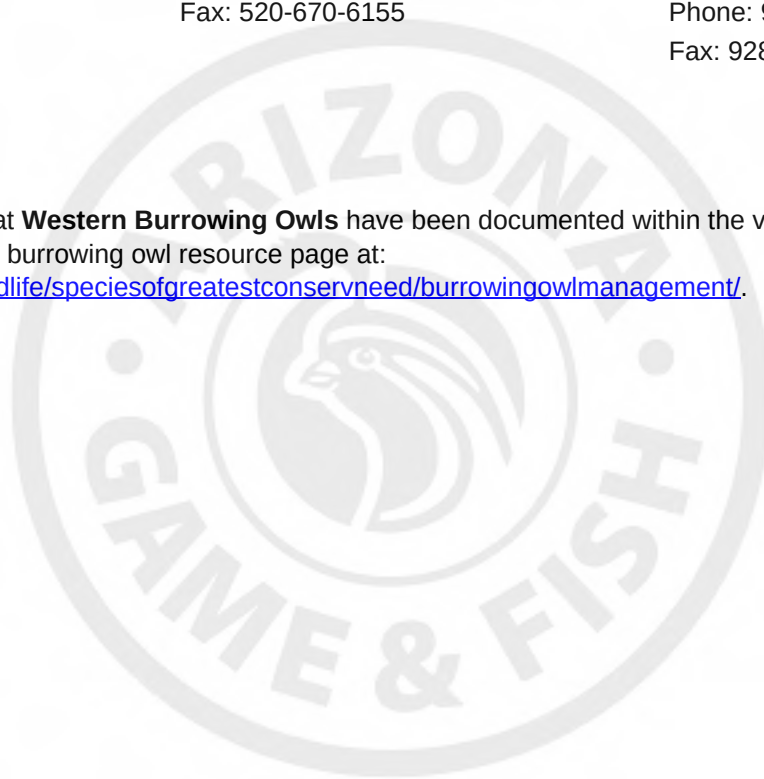
Tucson Sub-Office

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 **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/speciesofgreatestconservneed/burrowingowlmanagement/>.



Sarah Fitzgerald
Pew & Lake, PLC.
1744 S Val Vista Drive
Mesa, AZ 85204

August 24, 2022

RE: SunZia Transmission Line Project
Parcel 401430090

Dear Sarah,

The Arizona State Museum (ASM) has reviewed archaeological project and site records in support of the following project:

Pew & Lake, PLC.'s SunZia Transmission Line Project (Pew & Lake, PLC. Project No. Z-PA-124-22;
ASM Job No. 005023)

Correspondence indicates this project will involve the Converter Station element of the SunZia Transmission Line Project, and will take place on privately-owned land. The project area is located at Earley Road and La Palma Road in Pinal County, and encompasses parcel 401430090 within Township 6 South, Range 8 East, Section 29.

I invite you to review the results of ASM's research, which are summarized below.

Search Results:

According to a search of the archaeological site records and reports held in ASM collections, 31 archaeological investigations were conducted within a one-mile radius of the project area between 1982 and 2019. Of these 31 archaeological investigations, five intersect a portion of the project area.

For the five archaeological investigations that intersect the project area, Table 1 summarizes their basic information and scope.

Additionally, 25 archaeological sites have been identified within a one-mile radius of the project area. Of these 25 archaeological sites, three intersect a portion of the project area.

The following ASM site numbers intersect the project area: AZ AA:2:176(ASM), AZ AA:2:294(ASM), and AZ AA:3:209(ASM).



ASM Reference Number (AZProj/Accession)	Report Citation	Year(s) Conducted	Scope of Project	Partial or Entire Coverage of Current Project Area
AP-2008-0254	Caldwell 2008	2008	Survey for distribution line rehabilitation	Partial
AP-2012-0363	White et al. 2012	2012	Survey for transmission line	Partial
AP-2015-0603	Rich and Jones 2017	2015-2016	Survey for San Carlos Irrigation and Drainage District (SCIDD) system rehabilitation	Partial
AP-2016-0431	Swanson and Rayle 2018	2016-2017	Survey for clearance for transmission line construction	Partial
AP-2019-0218	Hayden et al. 2019	2019	Survey for proposed solar array and transmission line	Partial

Table 1. ASM archaeological investigations that intersect the project area

Recommendations and Responsibilities:

1. Since a portion of the project area has not been subject to prior archaeological survey, ASM recommends—but does not require—that a qualified archaeological contractor be consulted before any ground-disturbing activity begins. A list of archaeological contractors is available on the ASM website at:

<https://statemuseum.arizona.edu/crm/document/aaa-qualified-consultants>

2. Pursuant to Arizona Revised Statute §41-865, if any human remains or funerary objects are encountered during project work, all work must stop within the area of the remains and the ASM Repatriation Office must be contacted at 520-626-0320.

3. City, county, or municipal governments may have their own requirements. Therefore, ASM recommends that the relevant jurisdiction(s) be consulted.

If you have any questions about the results of this records search, please feel free to contact me at efioccop@arizona.edu or 520-621-4011.

Kind regards,

Emily Fiocoprile, PhD

Assistant Manager
Archaeological Records Office
Arizona State Museum
520-621-4011
efioccop@arizona.edu

References:

- Caldwell B (2008) *Class III cultural resources survey, La Palma tie rehabilitation, Pinal County, Arizona*. Coolidge, AZ: San Carlos Irrigation Project.
- Hayden C, Rawson P, and Hesse J (2019) *A cultural resources inventory for the proposed East Line Solar Project in Coolidge and Eloy, Pinal County, Arizona*. Cultural Resources Report No. 19-338. Phoenix, AZ: SWCA Environmental Consultants.
- Rich J and Jones T (2017) *A class III cultural resource survey for the San Carlos Irrigation and Drainage District (SCIDD) Rehabilitation Project in Reach 4 of the SCIDD and Joint Works irrigation facilities, Pinal County, Arizona*. Tempe, AZ: Archaeological Consulting Services, Ltd.
- Swanson S and Rayle CE, eds (2018) *A class III cultural resources survey of the SunZia Southwest Transmission Project phase one line in Arizona*. Cultural Resource Services Technical Paper No. 2017-06. Phoenix, AZ: Environmental Planning Group, LLC.
- White WA III, Benaron SM, Prasciunas MM, and Daughtrey CS (2012) *A cultural resources inventory of approximately 41 miles for the TEP Pinal-Tortolita 500-KV transmission line, Pinal County, Arizona*. 2 vols. Cultural Resources Report No. 2012-55. Tucson, AZ: WestLand Resources, Inc.

6.0 SUB1_ CHAPTER 2.176 OF THE PCDSC

6.1 Reviewed, met, and/or addressed the following in chapter 2.176 of the PCDSC:

PINAL COUNTY DEVELOPMENT SERVICES CODE REQUIREMENTS	APPLICABILITY
Minimum requirements for Open Space – (Section 130)	Not Applicable
Uses permitted within open space areas – (Section 140)	Not Applicable
Uses prohibited within open space areas – (Section 150)	Not Applicable
Minimum requirements for recreation areas – (Section 160)	Not Applicable
Minimum requirements for multi-use paths and trails – (Section 170)	Not Applicable
Minimum requirements for stormwater retention & detention basins – (Section 180)	Requirements have been reviewed and will be met.
Minimum requirements for streetscapes & entryways – (Section 190)	Not Applicable
Minimum requirements for conservation open space – (Section 200)	Not Applicable

7.0 SUB1_MASTER SIGN PLAN

7.1 Submit a master sign plan detailing the location and type of all proposed signage for the project.

A Master Sign Plan is not proposed for this use. Wayfinding and directional signage will be shown on the approved Site Plan.

8.0 SUB1_PRELIMINARY DRAINAGE REPORT

8.1 Submit a preliminary drainage report

A Preliminary Drainage Report is attached.

September 8, 2022

SUNZIA TRANSMISSION, LLC

SunZia West Converter Station

Stormwater/Drainage Report

PROJECT NUMBER:

178812

PROJECT CONTACT:

Thomas J Gill, PE

EMAIL:

Tom.Gill@powereng.com

PHONE:

513-326-1510



Stormwater/Drainage Report

PREPARED FOR: SUNZIA TRANSMISSION, LLC

PREPARED BY: THOMAS J GILL, PE

513-326-1510

TOM.GILL@POWERENG.COM

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ACRONYMS AND ABBREVIATIONS

CF	Cubic Feet
CFS	Cubic Feet per Second
HSG	Hydrologic Soil Group
kV	kilovolt
WSE	Water Surface Elevation

1.0 GENERAL INFORMATION AND PROJECT DESCRIPTION

1.1 CONTACTS AND RESPONSIBLE PARTIES

1.Owner:

SunZia Transmission, LLC

1088 Sansome Street

San Francisco, CA 94111

2. Engineer:

POWER Engineers, Inc.

Thomas J Gill, PE

(513) 326-1510

tom.gill@powereng.com

1.2 SITE/PROJECT LOCATION

Pinal County, Arizona

Latitude: 32.866863° N

Longitude: -111.544978° W

Assessor Parcel Number: 401430090

Section: 29 Township: 06S Range: 08E

1.3 DESCRIPTION OF PROPERTY AND PROJECT

SunZia Transmission, LLC proposes to construct a new electrical high voltage converter station to the north of E Earley Road approximately 14 miles east – southeast of the city of Casa Grande, Pinal County, Arizona (Project). The Project includes construction of a new electrical facility that will convert Direct Current voltage (DC) to Alternating Current Voltage (AC). The facility includes structural steel, buildings (including valve houses, control buildings and storage buildings) as well as other electrical equipment (transformers, breakers, switches, etc.) all contained within a fenced yard. Drive areas within the fenced area will be asphalt surfaced, and the remaining yard will be gravel surfaced.

The Project site is 80+/- acres and 36.4 acres will be disturbed as part of the construction project. The construction of the new electrical facility will add 3.21 acres of impervious area, consisting primarily of proposed buildings and asphalt access drives.

The 160+/- acre Rural/Agricultural property currently includes desert shrub with a GR (General Rural) zone classification. The property generally drains to the north, and the runoff is conveyed overland off-property. A Pre-Development Drainage Map is included in Appendix B within the construction drawings.

The adjacent land ownership is as follows:

- North – Wilburville, LLC
- South – Arizona State Trust Land
- East – Arizona State Trust Land
- West – Eleven Mile Corner Land Trust

The land to the west owned by 11 Mile Corner Land Trust has a MH (Manufactured Home) land zone classification, while all others are zoned GR.

NOTE: The Planned Area Development (PAD) overlay and Comprehensive Plan Amendment (CPA) being proposed for this property are administrative in nature and do not affect the calculations, assumptions, or outcome of this report.

2.0 DRAINAGE BASINS AND SUB-BASINS

2.1 BASIN AND PROJECT DESCRIPTION

The project is situated within the Lower Colorado River Basin, HUC 15050100. The project is situated on a property north of East Earley Road in Pinal County, AZ. Per FEMA, the project is not situated within a floodplain or floodway and is designated as Zone “X” – Minimal Flood Hazard Zone. The proposed project includes electrical equipment and associated buildings. The facility consists of a gravel pad with asphalt access drives within the facility fence line. Outside of the fence line, gravel access drives provide vehicles entry to the station from East Earley Road to the south. The station pad has been designed with positive slope to convey drainage off the pad via sheet flow to the north and south into retention basins.

The proposed development is approximately 15 acres. The on-site drainage features include components which handle runoff volumes generated from the development site. The on-site drainage features effectively collect the runoff and convey into five (5) retention basins located adjacent to the station pad.

In the pre-developed condition, off-site run-on generally enters the property from the south and flows north or west. East Earley Road acts as a run-off barrier from properties to the south. Off-site run-on areas do not extend south past East Earley Road. The developed area has been designed to allow the small amount of off-site stormwater run-on to be diverted around the retention basins, laydown yard, and station pad. After off-site run-on is diverted, it follows pre-existing drainage paths to the property line and historic outfall locations.

Addressing stormwater runoff at the site includes review of hydrologic and hydraulic analysis of the pre- and post-development site drainage characteristics described above. The management of stormwater includes the use of five (5) retention basins. The basins provide peak volume storage for the 100-year 2-hour storm event for the calculated weighted runoff coefficients for each basin’s upstream contributing drainage area. The detailed retention basin calculations are available in Appendix B on the construction

drawings. Post-development drainage area maps can be found in Appendix B on the construction drawings.

For the 100-year event, the post-development discharge rate is equal to or less than the pre-development discharge rate and is shown within the calculations and on the construction drawings.

The gravel access roads are designed with a cross slope that conveys stormwater runoff into the retention basins.

2.1.1 SOILS

The soils on site are described below. Soils information collected from the NRCS Web Soil Survey.

- 3, Casa Grande fine sandy loam, 0 to 3 percent slopes; well drained; HSG C.
- 43, Toltec fine sandy loam, 0 to 1 percent slopes; well drained; HSG B.

A Soil Boundary Map can be found within Appendix A.

2.1.2 RUNOFF COEFFICIENTS

The table below provides the runoff coefficients used to calculate stormwater runoff in both the pre- and post-development condition. Runoff coefficients from the Pinal County Drainage Manual were used in the calculations. Calculations showing the composite runoff coefficients are shown on the construction drawings.

TABLE 1 CURVE NUMBERS

LAND COVER	COEFFICIENT
Desert Scrub/Shrubs, HSG B	0.60
Desert Scrub/Shrubs, HSG C	0.80
Gravel, HSG B	0.80
Gravel, HSG C	0.84
Pavement / Impervious	0.95

3.0 DRAINAGE DESIGN CRITERIA

The project falls under the jurisdiction of Pinal County, AZ. The latest version of the Pinal County, AZ Drainage Manual, Volume I and II was used for the design. Per the manual, the 100-year, 2-hour storm event was analyzed using the Rational Method for retention basin volume sizing. The retention basins are designed to retain and infiltrate the entire 100-year, 2-hour storm event from the contributing upstream drainage area. 100-year events were used for calculations pre-developed vs. post-developed runoff rates at the outfalls. The Rational Method was used for calculating runoff peak flow rates.

There are five (5) retention basins proposed on-site. The retention basins capture and hold the 100-year 2-hour storm event at depths less than three (3) feet, plus at least one (1) foot freeboard to the top elevation of the basin. Side slopes of the basins are 3H:1V and will be protected with riprap stone. The bottom of each basin will be scarified and protected from compaction by vehicles or tracked equipment. The bottom of the basins will also be surfaced with clean sand to promote infiltration. Per the manual, the retained

water is to be infiltrated or released within 36 hours. Calculations for each retention basin include estimated hydraulic conductivity (inches/hour) of the in-situ soil based on the NRCS Web Soil Survey data and provide minimum surface area required to infiltrate within 36 hours. A factor of safety of 1.5 was used to estimate long-term infiltration. Retention basin calculations can be found within the Appendices and on the construction drawings.

The 100-year storm event was calculated at three (3) outfall points on-site. Outfall #1 is shown at the north property line, Outfall #2 is shown to the northeast property line, and Outfall #3 is shown at the western property line. Each outfall location follows the existing topography and generally represents the point where stormwater would leave the property.

Following the NOAA Precipitation Depth charts, a precipitation depth of 2.4 inches was used for the 100-year 2-hour storm event.

The NOAA Precipitation Intensity charts were used for the 100-year calculations for peak flows using the Rational Method.

3.1 HYDROLOGIC AND HYDRAULIC CALCULATIONS AND RESULTS

Per the Pinal County Drainage Manual, required 100-year 2-hour retention volumes were calculated for each retention basin. The volume formula is as follows:

$$V = P \cdot C \cdot A / 12$$

TABLE 2 RETENTION BASIN CALCULATIONS

RETENTION BASIN DESIGN DATA					
	BASIN 1	BASIN 2	BASIN 3	BASIN 4	BASIN 5
Required Retention Volume (CF)	15,830	17,759	26,720	38,435	42,477
Provided Retention Volume (CF)	43,400	44,900	55,650	67,370	75,264
100-Year Water Surface Elevation	1474.95	1473.35	1474.60	1474.85	1473.25
Top of Basin Elevation	1476.00	1474.50	1476.00	1476.00	1474.50
Basin Invert Elevation	1473.50	1472.00	1472.50	1473.00	1471.00

The hydrologic and hydraulic calculations can be found on the construction drawings. Table 3 below provides a summary of the infiltration calculations and sizing of the retention basin infiltration footprint. Each retention basin has been sized to infiltrate the 100-year, 2-hour event within 36 hours per Pinal County requirements. If the contractor finds that the on-site infiltration rates are less than the minimum required, below, then dry wells per Pinal County rules and regulations shall be installed to maintain the proper infiltration rate.

TABLE 3 INFILTRATION CALCULATIONS

RETENTION BASIN INFILTRATION CALCULATIONS					
	BASIN 1	BASIN 2	BASIN 3	BASIN 4	BASIN 5
Required Infiltration Volume (CF)	15,830	17,759	26,720	38,435	42,477
Required Area for Infiltration (SF)	13,192	19,303	9,824	17,159	16,090
Provided Area for Infiltration (SF)	13,209	19,394	9,875	17,225	16,118
Minimum Required Infiltration Rate / Hydraulic Conductivity (IN/HR)	0.40	0.31	0.91	0.75	0.88
Hydraulic Conductivity Range (IN/HR)	0.57 – 1.98	0.20 – 0.57	0.57 – 1.98	0.57 – 1.98	0.57 – 1.98

Table 4 below provides the stormwater runoff results at each designated outfall location on the property. 100-year storm rainfall intensity data was found using NOAA Atlas 14 Rainfall Intensity data. Time of concentration values, runoff coefficients and rainfall intensity values can be found in the calculations and on the construction drawings. All retention basins are designed to hold the entire upstream contributing area runoff volume and peak flow rates and do not have any discharge. Post-developed runoff rates at the outfalls are all shown to be less than the pre-developed runoff rates.

TABLE 4 STORMWATER RUNOFF RESULTS

	OUTFALL #1	OUTFALL #2	OUTFALL #3
Existing – 100-YR Storm (CFS)	9.30	10.10	10.40
Proposed – 100-YR Storm (CFS)	1.76	4.44	9.89

3.2 VARIANCES FROM PINAL COUNTY MANUAL

All design elements of this project meet the Pinal County Drainage Manual rules and regulations and no variances are proposed.

APPENDIX A SOIL BOUNDARY MAPS



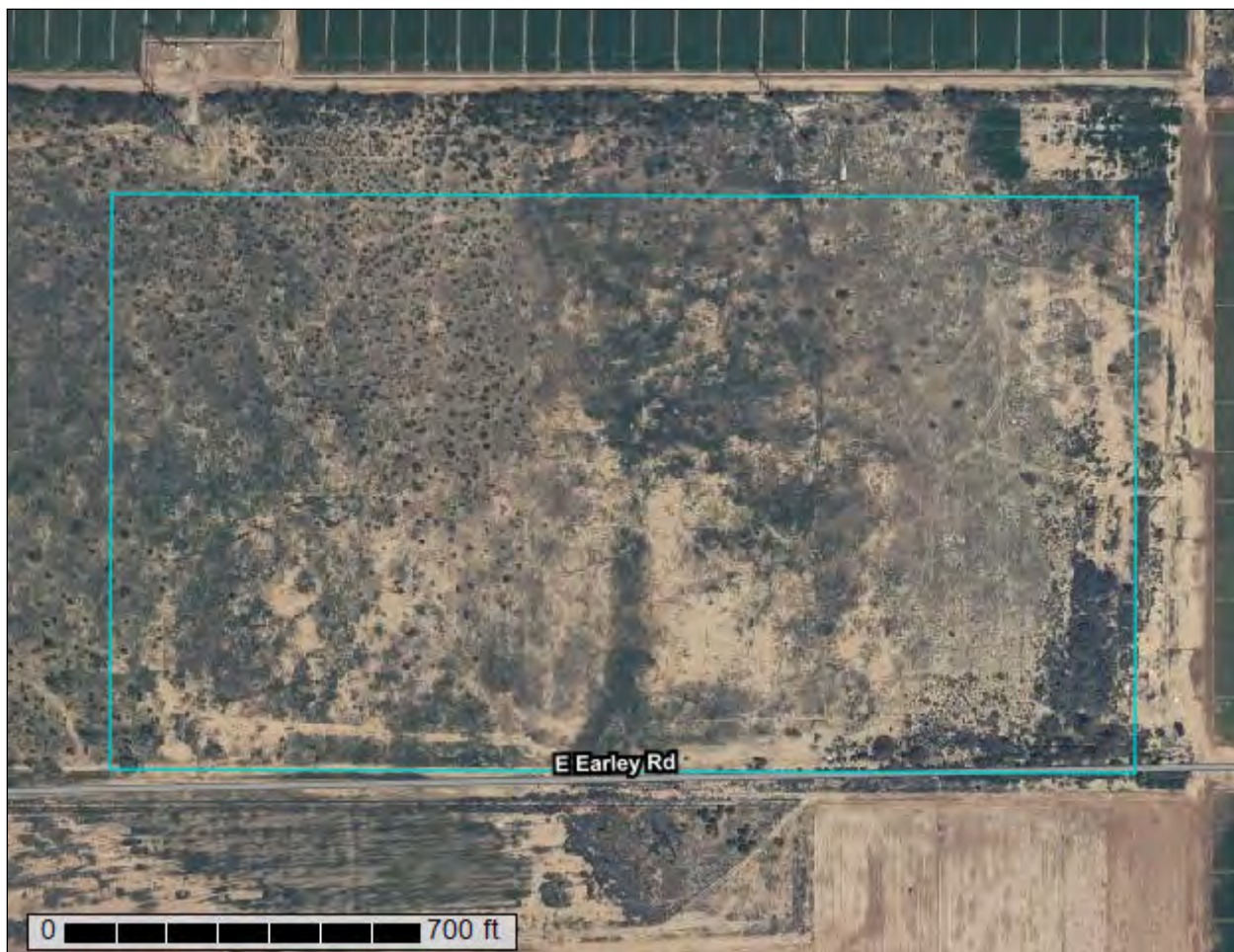
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Pinal County, Arizona, Western Part**



August 9, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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3—Casa Grande fine sandy loam, 0 to 3 percent slopes.....	13
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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

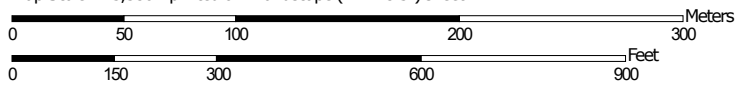
The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.

Map Scale: 1:3,380 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 12N WGS84

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MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pinal County, Arizona, Western Part
Survey Area Data: Version 18, Sep 16, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 18, 2020—Mar 7, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Casa Grande fine sandy loam, 0 to 3 percent slopes	22.8	43.6%
43	Toltec fine sandy loam	29.5	56.4%
Totals for Area of Interest		52.3	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Pinal County, Arizona, Western Part

3—Casa Grande fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tdtb
Elevation: 950 to 2,200 feet
Mean annual precipitation: 7 to 10 inches
Mean annual air temperature: 70 to 72 degrees F
Frost-free period: 240 to 325 days
Farmland classification: Farmland of unique importance

Map Unit Composition

Casa grande and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Casa Grande

Setting

Landform: Basin floors
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

Ap - 0 to 13 inches: fine sandy loam
Btknz - 13 to 23 inches: sandy clay loam
Btkknz1 - 23 to 28 inches: sandy clay loam
Btkknz2 - 28 to 49 inches: sandy clay loam
2Bkknz - 49 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 13 to 23 inches to natric
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Gypsum, maximum content: 3 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 200.0
Available water supply, 0 to 60 inches: Very low (about 1.3 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 7c
Hydrologic Soil Group: C
Ecological site: R040XB225AZ - Loamy Upland, Saline 7"-10" p.z.
Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 15 percent

Hydric soil rating: No

43—Toltec fine sandy loam

Map Unit Setting

National map unit symbol: 1sr2

Elevation: 1,190 to 1,990 feet

Mean annual precipitation: 6 to 8 inches

Mean annual air temperature: 68 to 72 degrees F

Frost-free period: 240 to 325 days

Farmland classification: Farmland of unique importance

Map Unit Composition

Toltec and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Toltec

Setting

Landform: Basin floors

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Dip

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Mixed stream alluvium and/or mixed eolian deposits

Typical profile

Ap - 0 to 12 inches: fine sandy loam

Bk - 12 to 36 inches: very fine sandy loam

Bkq - 36 to 60 inches: extremely gravelly fine sandy loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Maximum salinity: Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)

Sodium adsorption ratio, maximum: 30.0

Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

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Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: R040XB225AZ - Loamy Upland, Saline 7"-10" p.z.

Hydric soil rating: No

Minor Components

Unnamed soils

Percent of map unit: 10 percent

Hydric soil rating: No

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NOAA Atlas 14, Volume 1, Version 5
Location name: Casa Grande, Arizona, USA*
Latitude: 32.8677°, Longitude: -111.5437°
Elevation: 1474.5 ft**

* source: ESRI Maps

** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.206 (0.176-0.246)	0.269 (0.231-0.322)	0.365 (0.311-0.434)	0.437 (0.371-0.517)	0.535 (0.448-0.630)	0.610 (0.503-0.716)	0.686 (0.557-0.805)	0.763 (0.609-0.897)	0.866 (0.673-1.02)	0.945 (0.719-1.12)
10-min	0.314 (0.269-0.375)	0.409 (0.352-0.490)	0.555 (0.473-0.661)	0.665 (0.564-0.787)	0.815 (0.681-0.959)	0.928 (0.766-1.09)	1.04 (0.847-1.23)	1.16 (0.927-1.37)	1.32 (1.02-1.55)	1.44 (1.10-1.70)
15-min	0.389 (0.333-0.464)	0.507 (0.436-0.607)	0.688 (0.586-0.819)	0.824 (0.700-0.976)	1.01 (0.845-1.19)	1.15 (0.949-1.35)	1.29 (1.05-1.52)	1.44 (1.15-1.69)	1.63 (1.27-1.93)	1.78 (1.36-2.11)
30-min	0.524 (0.448-0.625)	0.683 (0.587-0.818)	0.927 (0.789-1.10)	1.11 (0.942-1.32)	1.36 (1.14-1.60)	1.55 (1.28-1.82)	1.74 (1.41-2.05)	1.94 (1.55-2.28)	2.20 (1.71-2.59)	2.40 (1.83-2.84)
60-min	0.648 (0.555-0.774)	0.845 (0.727-1.01)	1.15 (0.977-1.37)	1.37 (1.17-1.63)	1.68 (1.41-1.98)	1.92 (1.58-2.25)	2.16 (1.75-2.53)	2.40 (1.92-2.82)	2.72 (2.12-3.21)	2.97 (2.26-3.52)
2-hr	0.747 (0.644-0.877)	0.968 (0.835-1.14)	1.29 (1.11-1.52)	1.54 (1.31-1.80)	1.87 (1.57-2.18)	2.13 (1.76-2.48)	2.40 (1.95-2.78)	2.67 (2.13-3.10)	3.03 (2.36-3.53)	3.31 (2.53-3.88)
3-hr	0.810 (0.699-0.953)	1.04 (0.897-1.22)	1.36 (1.17-1.60)	1.62 (1.38-1.90)	1.98 (1.66-2.30)	2.26 (1.87-2.62)	2.55 (2.08-2.97)	2.86 (2.29-3.33)	3.29 (2.55-3.83)	3.63 (2.75-4.25)
6-hr	0.971 (0.853-1.12)	1.23 (1.08-1.42)	1.57 (1.38-1.81)	1.84 (1.61-2.12)	2.22 (1.91-2.54)	2.52 (2.13-2.86)	2.82 (2.35-3.22)	3.14 (2.56-3.58)	3.57 (2.83-4.07)	3.91 (3.03-4.47)
12-hr	1.11 (0.990-1.26)	1.41 (1.25-1.59)	1.78 (1.58-2.01)	2.07 (1.83-2.34)	2.47 (2.16-2.78)	2.78 (2.40-3.12)	3.10 (2.63-3.49)	3.42 (2.86-3.85)	3.86 (3.15-4.37)	4.19 (3.36-4.78)
24-hr	1.26 (1.14-1.39)	1.60 (1.45-1.77)	2.07 (1.88-2.29)	2.45 (2.21-2.70)	2.97 (2.67-3.27)	3.37 (3.01-3.71)	3.80 (3.37-4.18)	4.24 (3.73-4.67)	4.85 (4.22-5.35)	5.33 (4.59-5.89)
2-day	1.36 (1.22-1.51)	1.73 (1.57-1.92)	2.27 (2.05-2.52)	2.71 (2.43-3.00)	3.31 (2.96-3.67)	3.79 (3.37-4.20)	4.30 (3.79-4.77)	4.83 (4.22-5.37)	5.57 (4.82-6.21)	6.16 (5.27-6.90)
3-day	1.44 (1.30-1.60)	1.83 (1.66-2.04)	2.41 (2.17-2.69)	2.88 (2.59-3.20)	3.54 (3.15-3.92)	4.06 (3.60-4.50)	4.62 (4.07-5.12)	5.21 (4.55-5.79)	6.04 (5.21-6.72)	6.70 (5.73-7.49)
4-day	1.51 (1.37-1.69)	1.94 (1.75-2.16)	2.56 (2.30-2.85)	3.05 (2.74-3.40)	3.76 (3.35-4.18)	4.33 (3.84-4.81)	4.94 (4.35-5.48)	5.59 (4.88-6.20)	6.50 (5.60-7.23)	7.25 (6.18-8.08)
7-day	1.68 (1.51-1.88)	2.14 (1.93-2.40)	2.83 (2.54-3.16)	3.39 (3.04-3.78)	4.17 (3.71-4.64)	4.80 (4.25-5.34)	5.47 (4.81-6.08)	6.18 (5.39-6.87)	7.19 (6.19-8.01)	8.00 (6.81-8.94)
10-day	1.84 (1.66-2.07)	2.36 (2.13-2.66)	3.12 (2.80-3.50)	3.72 (3.33-4.18)	4.57 (4.07-5.12)	5.25 (4.65-5.88)	5.98 (5.25-6.69)	6.74 (5.87-7.55)	7.80 (6.72-8.76)	8.66 (7.39-9.74)
20-day	2.28 (2.05-2.54)	2.94 (2.64-3.28)	3.88 (3.48-4.32)	4.60 (4.11-5.10)	5.56 (4.95-6.17)	6.29 (5.58-6.98)	7.04 (6.22-7.82)	7.81 (6.86-8.67)	8.83 (7.69-9.83)	9.62 (8.31-10.7)
30-day	2.70 (2.45-2.97)	3.47 (3.15-3.83)	4.58 (4.15-5.04)	5.42 (4.91-5.96)	6.55 (5.90-7.19)	7.42 (6.65-8.14)	8.31 (7.40-9.12)	9.21 (8.16-10.1)	10.4 (9.15-11.5)	11.4 (9.91-12.6)
45-day	3.14 (2.85-3.47)	4.06 (3.67-4.47)	5.35 (4.83-5.89)	6.30 (5.68-6.93)	7.55 (6.78-8.30)	8.50 (7.60-9.35)	9.46 (8.42-10.4)	10.4 (9.22-11.5)	11.7 (10.3-12.9)	12.6 (11.0-14.0)
60-day	3.48 (3.15-3.83)	4.49 (4.07-4.95)	5.91 (5.35-6.50)	6.93 (6.27-7.63)	8.27 (7.45-9.09)	9.26 (8.31-10.2)	10.3 (9.16-11.3)	11.2 (9.98-12.4)	12.5 (11.0-13.8)	13.4 (11.8-14.9)

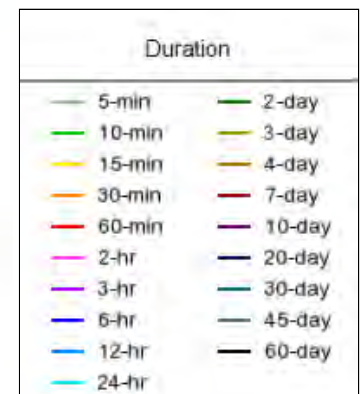
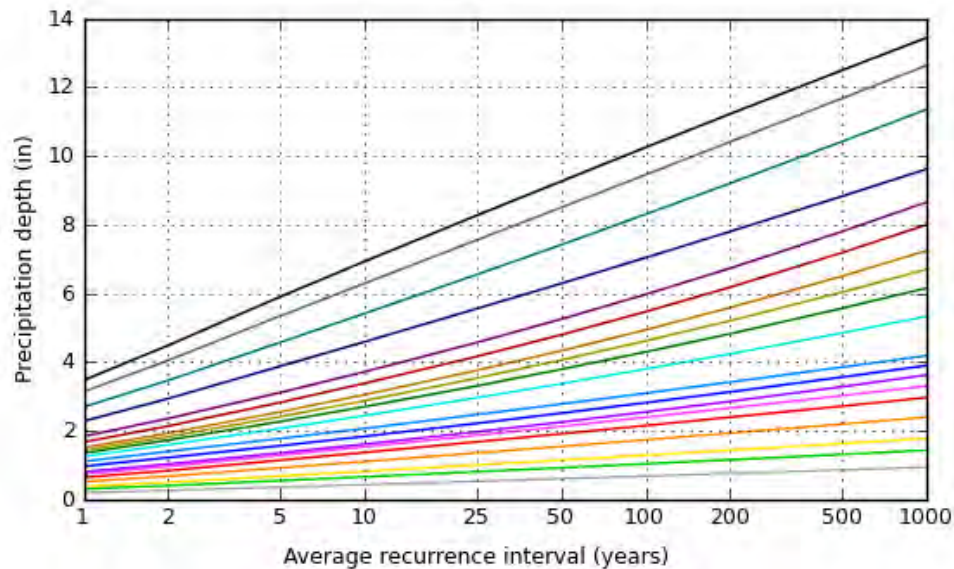
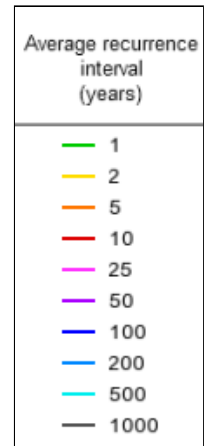
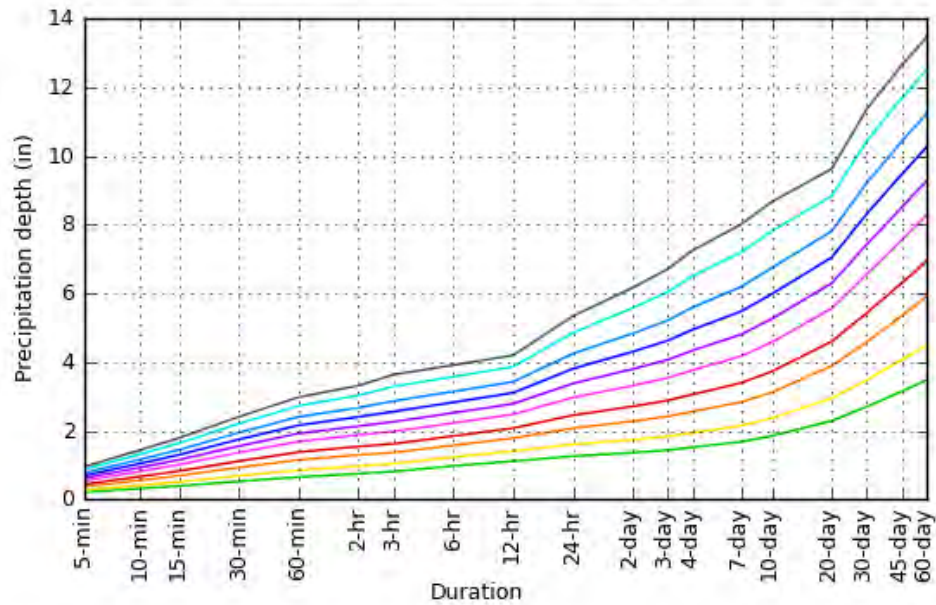
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
 Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based depth-duration-frequency (DDF) curves

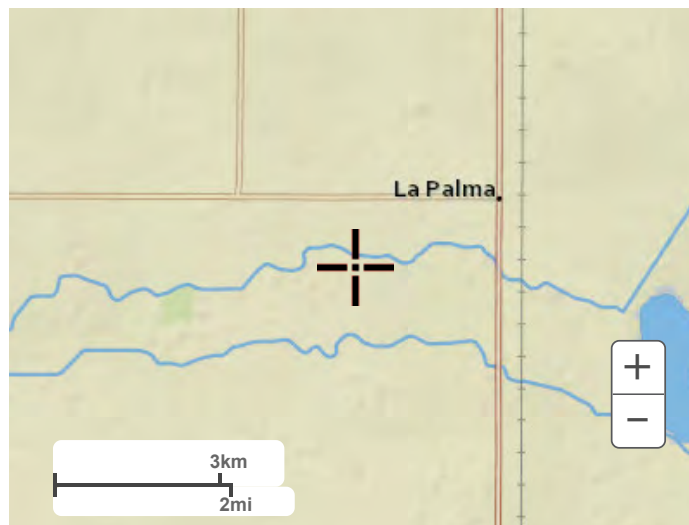
Latitude: 32.8677°, Longitude: -111.5437°



NOAA Atlas 14, Volume 1, Version 5

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[Back to Top](#)**Maps & arials****Small scale terrain**



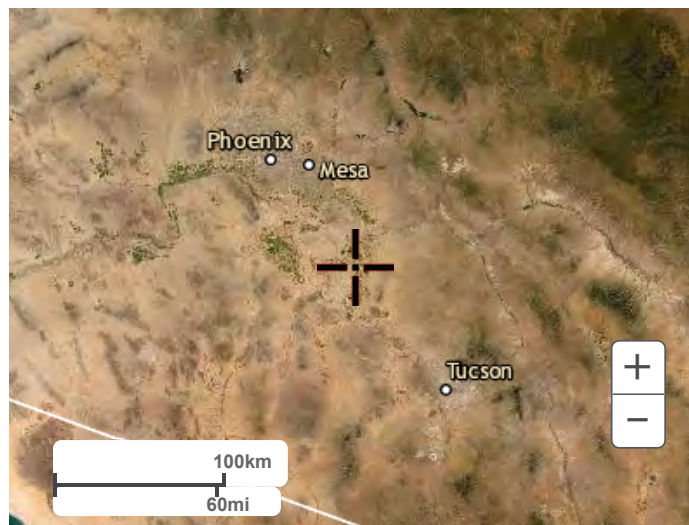
Large scale terrain



Large scale map



Large scale aerial



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[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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NOAA Atlas 14, Volume 1, Version 5
Location name: Casa Grande, Arizona, USA*
Latitude: 32.8677°, Longitude: -111.5437°
Elevation: 1474.5 ft**

* source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	2.47 (2.11-2.95)	3.23 (2.77-3.86)	4.38 (3.73-5.21)	5.24 (4.45-6.20)	6.42 (5.38-7.56)	7.32 (6.04-8.59)	8.23 (6.68-9.66)	9.16 (7.31-10.8)	10.4 (8.08-12.2)	11.3 (8.63-13.4)
10-min	1.88 (1.61-2.25)	2.45 (2.11-2.94)	3.33 (2.84-3.97)	3.99 (3.38-4.72)	4.89 (4.09-5.75)	5.57 (4.60-6.53)	6.26 (5.08-7.35)	6.97 (5.56-8.19)	7.90 (6.15-9.32)	8.63 (6.57-10.2)
15-min	1.56 (1.33-1.86)	2.03 (1.74-2.43)	2.75 (2.34-3.28)	3.30 (2.80-3.90)	4.04 (3.38-4.76)	4.60 (3.80-5.40)	5.18 (4.20-6.08)	5.76 (4.60-6.77)	6.53 (5.08-7.70)	7.13 (5.43-8.45)
30-min	1.05 (0.896-1.25)	1.37 (1.17-1.64)	1.85 (1.58-2.21)	2.22 (1.88-2.63)	2.72 (2.28-3.20)	3.10 (2.56-3.64)	3.48 (2.83-4.09)	3.88 (3.09-4.56)	4.40 (3.42-5.18)	4.80 (3.66-5.69)
60-min	0.648 (0.555-0.774)	0.845 (0.727-1.01)	1.15 (0.977-1.37)	1.37 (1.17-1.63)	1.68 (1.41-1.98)	1.92 (1.58-2.25)	2.16 (1.75-2.53)	2.40 (1.92-2.82)	2.72 (2.12-3.21)	2.97 (2.26-3.52)
2-hr	0.374 (0.322-0.438)	0.484 (0.418-0.570)	0.646 (0.553-0.758)	0.769 (0.654-0.900)	0.936 (0.786-1.09)	1.07 (0.882-1.24)	1.20 (0.977-1.39)	1.33 (1.07-1.55)	1.51 (1.18-1.76)	1.65 (1.26-1.94)
3-hr	0.270 (0.233-0.317)	0.345 (0.299-0.407)	0.453 (0.390-0.534)	0.538 (0.459-0.631)	0.658 (0.553-0.766)	0.751 (0.622-0.872)	0.850 (0.692-0.987)	0.952 (0.762-1.11)	1.09 (0.850-1.27)	1.21 (0.915-1.41)
6-hr	0.162 (0.142-0.188)	0.205 (0.180-0.236)	0.262 (0.230-0.303)	0.308 (0.268-0.354)	0.371 (0.318-0.423)	0.420 (0.355-0.478)	0.471 (0.392-0.537)	0.524 (0.428-0.598)	0.596 (0.473-0.680)	0.652 (0.506-0.747)
12-hr	0.092 (0.082-0.105)	0.117 (0.104-0.132)	0.148 (0.131-0.167)	0.172 (0.152-0.194)	0.205 (0.179-0.231)	0.231 (0.199-0.259)	0.257 (0.218-0.289)	0.284 (0.237-0.320)	0.320 (0.261-0.363)	0.348 (0.278-0.397)
24-hr	0.052 (0.048-0.058)	0.067 (0.061-0.074)	0.086 (0.078-0.095)	0.102 (0.092-0.113)	0.124 (0.111-0.136)	0.141 (0.126-0.155)	0.158 (0.140-0.174)	0.177 (0.155-0.195)	0.202 (0.176-0.223)	0.222 (0.191-0.245)
2-day	0.028 (0.025-0.031)	0.036 (0.033-0.040)	0.047 (0.043-0.053)	0.056 (0.051-0.063)	0.069 (0.062-0.076)	0.079 (0.070-0.088)	0.090 (0.079-0.099)	0.101 (0.088-0.112)	0.116 (0.100-0.129)	0.128 (0.110-0.144)
3-day	0.020 (0.018-0.022)	0.025 (0.023-0.028)	0.034 (0.030-0.037)	0.040 (0.036-0.044)	0.049 (0.044-0.054)	0.056 (0.050-0.063)	0.064 (0.057-0.071)	0.072 (0.063-0.080)	0.084 (0.072-0.093)	0.093 (0.080-0.104)
4-day	0.016 (0.014-0.018)	0.020 (0.018-0.023)	0.027 (0.024-0.030)	0.032 (0.029-0.035)	0.039 (0.035-0.044)	0.045 (0.040-0.050)	0.051 (0.045-0.057)	0.058 (0.051-0.065)	0.068 (0.058-0.075)	0.075 (0.064-0.084)
7-day	0.010 (0.009-0.011)	0.013 (0.011-0.014)	0.017 (0.015-0.019)	0.020 (0.018-0.022)	0.025 (0.022-0.028)	0.029 (0.025-0.032)	0.033 (0.029-0.036)	0.037 (0.032-0.041)	0.043 (0.037-0.048)	0.048 (0.041-0.053)
10-day	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.013 (0.012-0.015)	0.016 (0.014-0.017)	0.019 (0.017-0.021)	0.022 (0.019-0.025)	0.025 (0.022-0.028)	0.028 (0.024-0.031)	0.033 (0.028-0.037)	0.036 (0.031-0.041)
20-day	0.005 (0.004-0.005)	0.006 (0.006-0.007)	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.012 (0.010-0.013)	0.013 (0.012-0.015)	0.015 (0.013-0.016)	0.016 (0.014-0.018)	0.018 (0.016-0.020)	0.020 (0.017-0.022)
30-day	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.006-0.007)	0.008 (0.007-0.008)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.012 (0.010-0.013)	0.013 (0.011-0.014)	0.014 (0.013-0.016)	0.016 (0.014-0.017)
45-day	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.010-0.012)	0.012 (0.010-0.013)
60-day	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.004 (0.004-0.005)	0.005 (0.004-0.005)	0.006 (0.005-0.006)	0.006 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.009 (0.008-0.010)

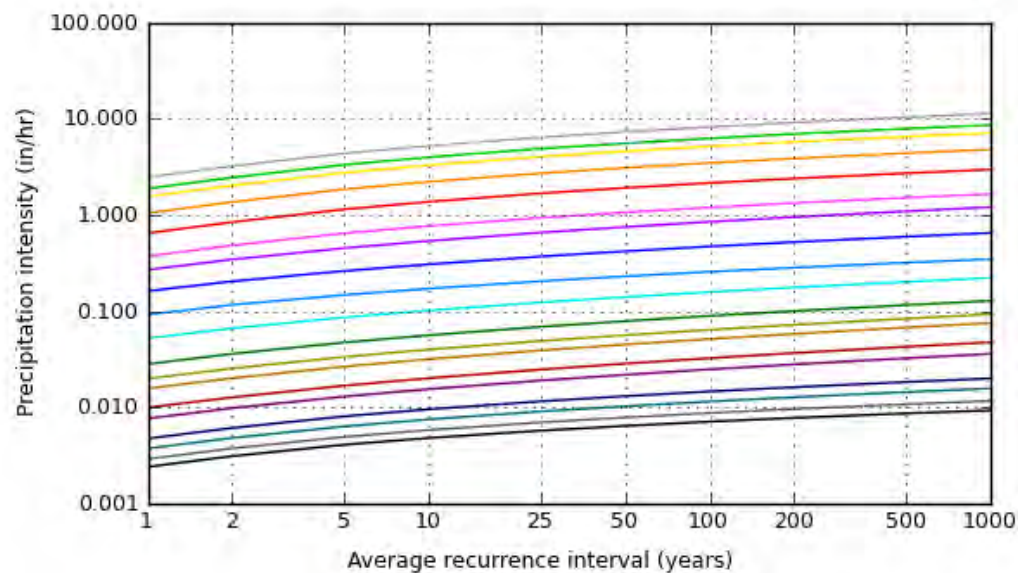
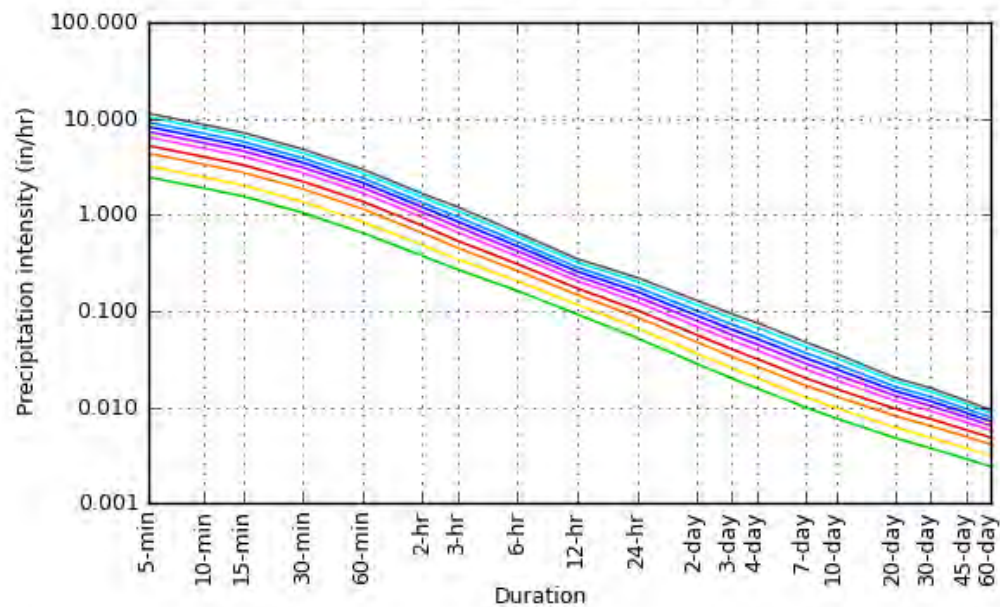
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
 Please refer to NOAA Atlas 14 document for more information.

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PF graphical

PDS-based intensity-duration-frequency (IDF) curves

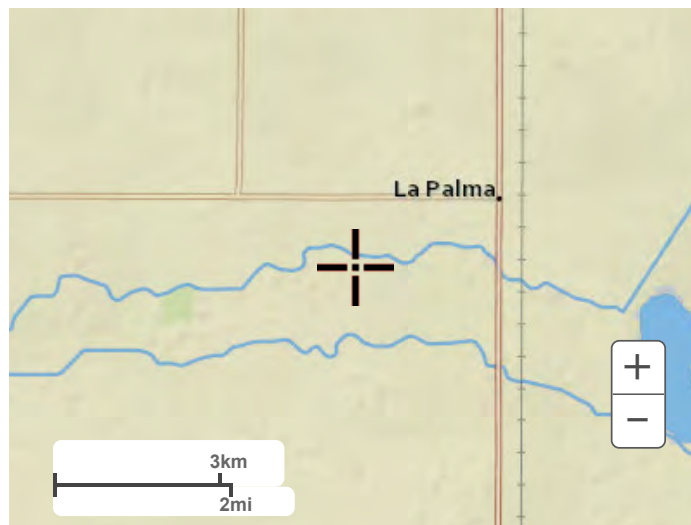
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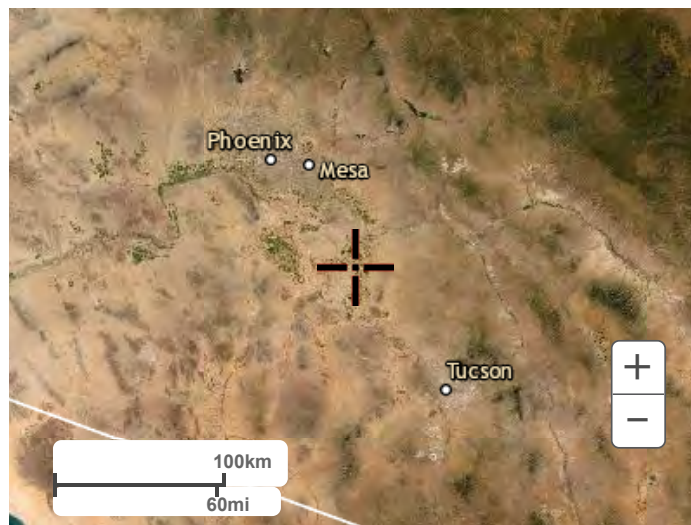
Large scale terrain



Large scale map



Large scale aerial



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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

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APPENDIX B CONSTRUCTION DRAWINGS

SPECIFIC SITE PLAN FOR:
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
PARCEL NO. 401430090

DRAWING INDEX

SZCW-SS1-C-GR1-G01-01	CIVIL COVER SHEET
SZCW-SS1-C-GR1-G01-02	GRADING PLAN NOTES
SZCW-SS1-C-GR1-P01-01	EXISTING CONDITIONS
SZCW-SS1-C-GR1-P01-02	SITE LAYOUT PLAN
SZCW-SS1-C-GR1-P01-03	OVERALL GRADING PLAN
SZCW-SS1-C-GR1-P01-04	EROSION CONTROL PLAN PHASE I
SZCW-SS1-C-GR1-P01-05	EROSION CONTROL PLAN PHASE II
SZCW-SS1-C-GR1-D01-01	GRADING DETAILS
SZCW-SS1-C-GR1-D01-02	EROSION CONTROL DETAILS
SZCW-SS1-C-GR1-D01-03	STORMWATER MANAGEMENT DETAILS / CALCULATIONS
SZCW-SS1-C-GR1-S01-01	GRADING SECTIONS I
SZCW-SS1-C-GR1-S01-02	GRADING SECTIONS II
SZCW-SS1-C-SWP-G01-01	PRE-DEVELOPMENT DRAINAGE
SZCW-SS1-C-SWP-G01-02	POST-DEVELOPMENT DRAINAGE

LEGAL DESCRIPTION OF SITE

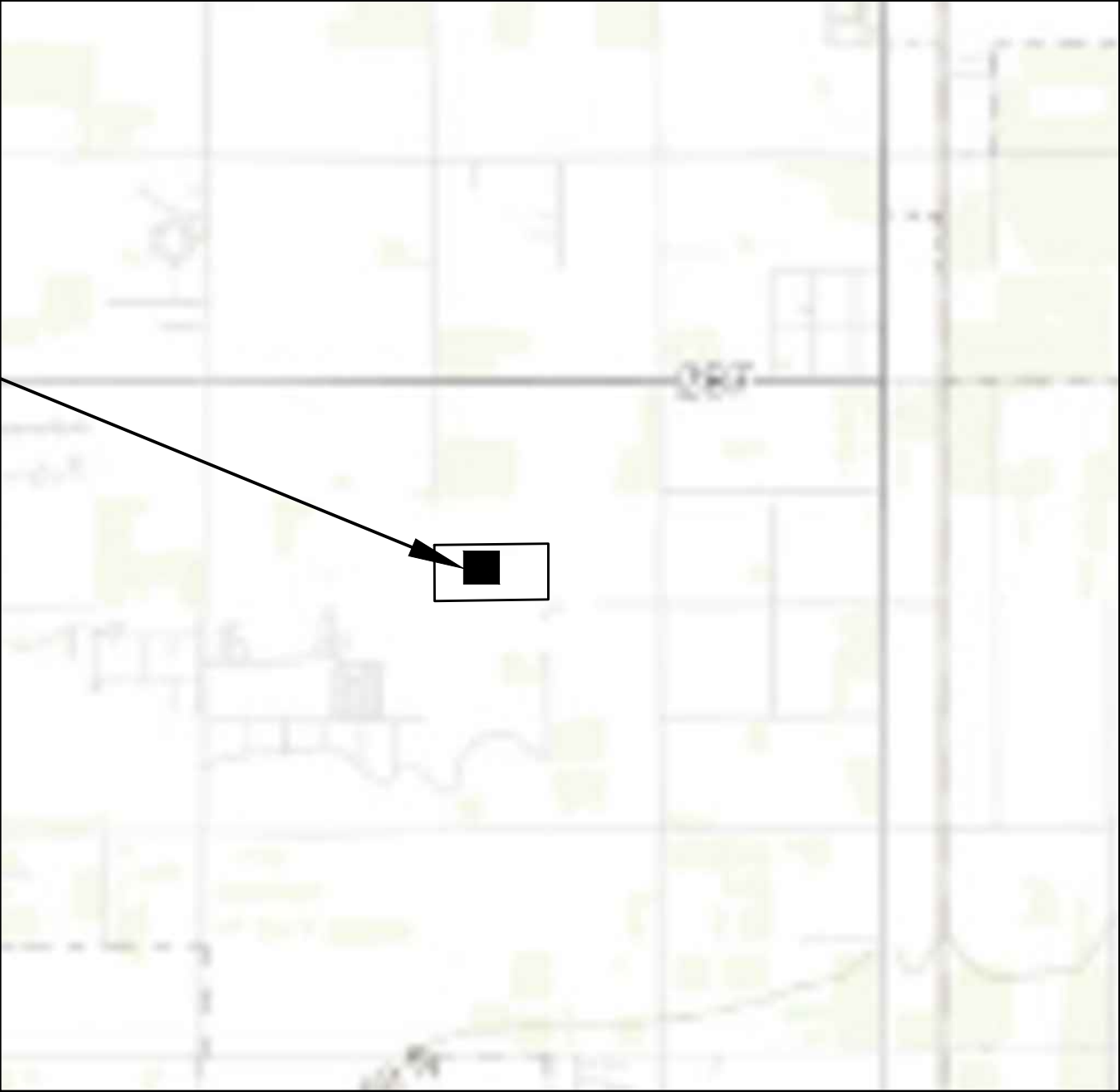
S1/2 OF THE SW1/4 OF SECTION 29, T06S, R08E, GILA & SALT
RIVER BASE & MERIDIAN,
PINAL COUNTY, AZ

OWNER
SUNZIA TRANSMISSION, LLC.
1088 SANSOME STREET
SAN FRANCISCO, CA 94111

DEVELOPER:
TBD

ENGINEER:
POWER ENGINEERS, INC.
11733 CHESTERDALE ROAD
CINCINNATI, OH 45246
THOMAS GILL, PE
513-326-1510
TOM.GILL@POWERENG.COM

SITE
PROJECT
LOCATION



VICINITY MAP
NOT TO SCALE



N.T.S.

SURVEY CONTROL

ARIZONA CENTRAL ZONE, INT. FT COORDINATE SYSTEM,
COORDINATE SYSTEM CODE: AZ83-CIF,
ELEVATIONS SHOWN ARE NAVD 88 DATUM.

SURVEY DATA FURNISHED BY SAM LLC.,
555 ZANG STREET,
STE 110,
LAKEWOOD, CO 80228.

BASIS OF BEARING

SOUTH LINE OF SECTION 29, WHICH BEARS S89° 52' 08.06" WEST
AS MEASURED

ESTIMATED QUANTITIES

*QUANTITIES LISTED ARE ESTIMATES ONLY. CONTRACTORS TO
CALCULATE THEIR OWN BID QUANTITIES. ESTIMATE QUANTITIES
ARE IN BANK CUBIC YARDS WITH NO ALLOWANCE FOR SHRINK
OR SWELL. QUANTITIES LISTED REPRESENT THE SITE
CONTRACTOR / MASS EARTHWORK SCOPE OF WORK AND ARE
SHOWN ON THE DRAWINGS AND SECTIONS. NET CUT AND FILL
REPRESENTS GROSS VOLUMES +/- OTHER MATERIAL FOUND
WITHIN THIS SCOPE OF WORK.

NET CUT	27,000 CY
NET FILL	26,200 CY
COMPACTED AGGREGATE	4,930 CY
LOW VOLUME	
CHANGE MATERIAL	3,400 CY
CONCRETE ROADWAY	
DRAINAGE DIPS	110 CY
RIPRAP	2040 CY
SAND	1400 CY
SILT FENCE	7123.7 SF
NET SOIL HAUL OFF /	
SPREAD ON SITE	750 CY

PINAL COUNTY SPECIFIC SITE PLAN APPROVAL:

ENGINEERING DIVISION	DATE
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PLANNING DIVISION	DATE
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FIRE DISTRICT/MARSHALL	DATE
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PINAL COUNTY SPECIFIC SITE PLAN REAPPROVAL:

ENGINEERING DIVISION	DATE
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PLANNING DIVISION	DATE
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FIRE DISTRICT/MARSHALL	DATE
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THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.		4	UPDATED PER COUNTY COMMENTS	11/23/22	AA	TJG	TJG					DSGN	TJG	09/09/22		SUNZIA TRANSMISSION, LLC	JOB NUMBER 178812	REV 4
		3	ISSUED FOR 90% REVIEW	09/09/22	HXD	TJG	TJG					DRN	HXD	09/09/22				
		2	ISSUED FOR 60% REVIEW	07/29/22	HXD	TJG	TJG					CKD	TJG	09/09/22				
		1	ISSUED FOR 30% REVIEW	06/24/22	HXD	TJG	TJG					SCALE: NONE				SUNZIA WEST HVDC CONVERTER STATION	DRAWING NUMBER SZCW-SS1-C-GR1-G01-01	
		0	ISSUED FOR 30% REVIEW	04/29/22	HXD	TJG	TJG											
		REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS				FOR 24x36 DWG ONLY					
		CIVIL COVER SHEET																

CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090

EROSION CONTROL NOTES

1.

CONTROLLING SEDIMENT TRANSPORT AND PREVENTING AND/OR CORRECTING PROBLEMS ASSOCIATED WITH EROSION AND RUNOFF PROCESSES WHICH COULD OCCUR BOTH DURING AND AFTER PROJECT CONSTRUCTION WILL BE CLOSELY MONITORED. PERIODIC MAINTENANCE AND INSPECTION OF SEDIMENT CONTROL DEVICES WILL BE SCHEDULED.
2.

THE CONTRACTOR SHALL COMPLY WITH PINAL COUNTY AND APPLICABLE GOVERNING AGENCIES FOR TEMPORARY EROSION CONTROL MEASURES.
3.

SHOULD SEDIMENT LEAVE THE SITE OR EROSION OCCUR, THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE CORRECTIVE ACTION AND REPAIR ANY DAMAGE CAUSED BY SEDIMENT OR EROSION IMMEDIATELY. ALL COSTS ASSOCIATED WITH THE PREPARATION, MODIFICATION AND APPROVAL OF THE PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. BEFORE CONSTRUCTION BEGINS, THE LIMITS OF DISTURBANCE BOUNDARY SHALL BE FLAGGED ON SITE. UNDER NO CIRCUMSTANCES SHALL SITE DISTURBANCE OCCUR OUTSIDE THE DESIGNATED AREAS AT ANY TIME DURING CONSTRUCTION.
4.

EXCAVATION AND EMBANKMENT OPERATIONS SHALL PROCEED IN SUCH A MANNER SO THAT FINISHING OF SLOPES, INCLUDING REVEGETATION, SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER ROUGH GRADING. ALL SLOPES 15% OR FLATTER SHALL BE SCARIFIED WITH HEAVY EQUIPMENT, LEAVING TRACKS PERPENDICULAR TO THE SLOPE. THE TOPS OF ALL CUT SLOPES IN SOIL SHALL BE ROUNDED FOR A HORIZONTAL DISTANCE OF THREE FEET BEYOND THE CATCH POINT. SLOPE ROUNDING SHALL OCCUR AS THE SLOPE IS BEING BROUGHT DOWN. THE OVERALL SHAPE, HEIGHT AND GRADE OF ANY CUT AND/OR FILL SLOPE SHALL BE DEVELOPED IN CONCERT WITH THE EXISTING NATURAL CONTOURS, SCALE AND VEGETATION OF NATURAL TERRAIN.
5.

STABILIZATION PRACTICES MAY INCLUDE, BUT NOT BE LIMITED TO MULCHING, GEOTEXTILES, STABILIZATION, VEGETATIVE BUFFER STRIPS, PRESERVATION OF NATURAL VEGETATION, AND OTHER APPROPRIATE MEASURES. USE OF IMPERVIOUS SURFACES FOR STABILIZATION SHALL BE AVOIDED. EXCEPT AS PROVIDED BELOW, PROVIDE TEMPORARY STABILIZATION OR INITIATE PERMANENT STABILIZATION WITHIN 14 CALENDAR DAYS OF THE MOST RECENT LAND DISTURBANCE IN AREAS WHERE CONSTRUCTION OR SUPPORT ACTIVITIES HAVE TEMPORARILY BEEN SUSPENDED OR HAVE PERMANENTLY CEASED.

5.1

WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY PERMANENTLY CEASES IS PRECLUDED BY DEEP SNOW OR FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

5.2

WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING WILL RESUME WITHIN 14 CALENDAR DAYS, TEMPORARY STABILIZATION MEASURES NEED NOT BE INITIATED ON THAT PORTION OF THE SITE.
6.

SPECIFICALLY OUTLINED DISTURBED AREAS, BOTH ON AND OFF-SITE SHALL BE REVEGETATED. THESE AREAS MAY INCLUDE, BUT NOT BE LIMITED TO ALL UNSURFACED AREAS WITHIN THE FLAGGED LIMITS OF DISTURBANCE, STAGING AND STORAGE AREAS, MATERIAL WASTE AREAS, UNDERGROUND UTILITY CONSTRUCTION AREAS, BENCHED AREAS, AND TEMPORARY OR EXISTING ACCESS ROADS USED FOR CONSTRUCTION ACTIVITIES. CUT AND FILL SLOPES 3H:1V OR GREATER REQUIRE THE PLACEMENT OF EROSION CONTROL/REVEGETATION MATTING. SLOPES LESS THAN 3H:1V MAY BE SPRAYED WITH TACKIFIER.
7.

TYPICAL FUGITIVE DUST SHALL BE CONTROLLED BY WATERING AND/OR CHEMICAL TACKIFIER, PROVIDING VEGETATIVE OR SYNTHETIC COVER AND WIND BREAKS CONSISTENT WITH THE PINAL COUNTY AND STATE OF ARIZONA REQUIREMENTS.

GENERAL NOTES

1.

DEVELOPER SHALL OBTAIN PINAL COUNTY RIGHT-OF-WAY USE PERMIT PRIOR TO ANY WORK BEING PERFORMED WITHIN THE COUNTY RIGHT-OF-WAY. CONTACT THE PINAL COUNTY PUBLIC WORKS INSPECTION SECTION AT LEAST SEVEN (7) DAYS PRIOR TO WORK.
2.

DRAINAGE REPORT AND GRADING & DRAINAGE PLAN SHALL BE IN ACCORDANCE WITH THE CURRENT PINAL COUNTY DRAINAGE ORDINANCE AND DRAINAGE MANUAL.
3.

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE SUBMITTED TO PINAL COUNTY PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
4.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN EARTH MOVING PERMIT FROM PINAL COUNTY AIR QUALITY DEPARTMENT AND THE ADEQ, AND FOR COMPLYING WITH THEIR REQUIREMENTS FOR DUST CONTROL.
5.

ANY WORK DONE IN A DRAINAGE CHANNEL OR WASH MUST COMPLY WITH STATE AND FEDERAL REGULATIONS.
6.

ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION WITHIN THE COUNTY RIGHT-OF-WAY COVERED BY THESE PLANS SHALL BE IN ACCORDANCE WITH THE PINAL COUNTY DESIGN MANUAL AND APPLICABLE MAG STANDARD SPECIFICATIONS AND DETAIL.
7.

ALL FRAMES, COVER, VALVE BOXES AND MANHOLE COVERS SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO COMPLETION OF PAVING OR RELATED CONSTRUCTION.
8.

CONTRACTOR IS RESPONSIBLE FOR BLUE STAKE MARKING AS CONSTRUCTION IS IN PROGRESS.
9.

NO TRENCH TO BE LEFT OPEN / UNCOVERED AFTER WORKING HOURS.
10.

TRAFFIC CONTROL AND BARRICADING SHALL BE ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND / OR PINAL COUNTY REQUIREMENTS.
11.

ANY WORK AND ARTERIAL OR COLLECTOR ROADS SHALL REQUIRE AN OFF-DUTY PINAL COUNTY SHERIFF'S OFFICER FOR TRAFFIC CONTROL. CONTACT SHALL BE MADE THROUGH PCSO REPRESENTATIVE.
12.

ALL RETENTION BASINS MUST DRAIN THE DESIGN STORM RUNOFF VOLUME WITHIN 36 HOURS. THE OWNER IS RESPONSIBLE FOR ANY BASIN FAILING TO MEET THE REQUIREMENTS AND TAKE CORRECTIVE ACTION TO BRING THE BASIN INTO COMPLIANCE WITH THIS CRITERIA AS WELL AS PINAL COUNTY STANDARDS AND DRAINAGE ORDINANCE.
13.

ALL DRY WELLS SHOWN ON THIS PROJECT SHALL BE MAINTAINED BY THE OWNER AND ARE TO BE REPLACED BY THE OWNERS WHEN THEY CEASE TO DRAIN THE SURFACE WATER IN A 36 HOUR PERIOD. REGULAR MAINTENANCE OF THE DRY WELL'S SILTING CHAMBER IS REQUIRED TO ACHIEVE THE BEST OPERATION OF THE DRYWELLS. THE OWNER SHALL BE RESPONSIBLE FOR REGISTERING THE DRYWELLS WITH ADEQ. DRY WELL GRATE ELEVATION SHALL BE A MINIMUM 0.3' FT. ABOVE THE BOTTOM OF RETENTION BASIN (TO ALLOW FOR SEDIMENT ACCUMULATION).
14.

AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WHILE WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
15.

ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE COUNTY ENGINEER AND / OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE COUNTY SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENTS AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES

1.

COORDINATES LISTED ARE ARIZONA CENTRAL STATE PLANE. ELEVATIONS BASED ON NORTH AMERICAN VERTICAL DATUM 1988.
2.

ALL ELEVATIONS SHOWN FOR THE SITE GRADING ARE TOP OF SUBGRADE ELEVATIONS.
- 3..

EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 1' INTERVALS.
4.

ALL CUT & FILL SLOPES SHALL BE AT 3H:1V UNLESS NOTED OTHERWISE.
5.

COORDINATE ELECTRICAL GROUNDING INSTALLATION WITH CIVIL WORK SHOWN.
6.

THE TOP LAYER OF MATERIAL WITHIN THE GRADING LIMITS SHALL BE REMOVED OF VEGETATION, SCARIFIED AND COMPACTED PER THE REQUIREMENTS IN THE GEOTECHNICAL REPORT.
7.

AFTER SITE STRIPPING, PRIOR TO PLACING AGGREGATE OR FILL, SUBGRADE SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK AND INSPECTED. ANY SOFT AREAS SHALL BE EXCAVATED AND FILLED WITH COMPACTED ENGINEERED FILL. IN AREAS REQUIRING FILL PLACEMENT THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF APPROX. TEN (10) INCHES AND MOISTURE CONDITIONED BETWEEN MINUS THREE (-3) AND PLUS THREE (+3) PERCENT OF THE OPTIMUM MOISTURE CONTENT. SEE GEOTECHNICAL REPORT FOR DETAILS.
8.

ROCK FILLS SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557. SEE PROJECT SPECIFICATIONS FOR DETAILS.
9.

SUBGRADE MATERIAL SHALL CONSIST OF ON-SITE OR APPROVED IMPORT FILL SOILS. SEE GEOTECHNICAL REPORT FOR DETAILS ON COMPACTION REQUIREMENTS.
10.

CONTRACTOR SHALL GRADE THE AREA AROUND THE DOUBLE DRIVE GATES LEVEL TO ALLOW FOR COMPLETE OPERATION OF THE GATES. ELEVATIONS FOR THE PERIMETER ACCESS DRIVE SHALL MEET ELEVATION OF THE ROAD BASE STONE WITHIN THE GATE. INTERIOR ASPHALT ROAD SURFACE (BY OTHERS) SHALL BE FEATHERED TO MEET THE PERIMETER ACCESS DRIVE ELEVATION PART OF SEPARATE SCOPE.
11.

THE CONTRACTOR SHALL VERIFY THAT NO EXISTING UNDERGROUND UTILITIES EXIST IN THE CONSTRUCTION AREA & ROAD RIGHT OF WAY PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
12.

FOR GEOTECHNICAL INFORMATION REFER TO THE GEOTECHNICAL ENGINEERING REPORT PREPARED ON 04/14/2022 BY TERRACON CONSULTANTS, INC. PROJECT NO. 63205074.
13.

FOR DESIGNATED TRAFFIC AREAS REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL SUBGRADE PREPARATION AND RECOMMENDATIONS.

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

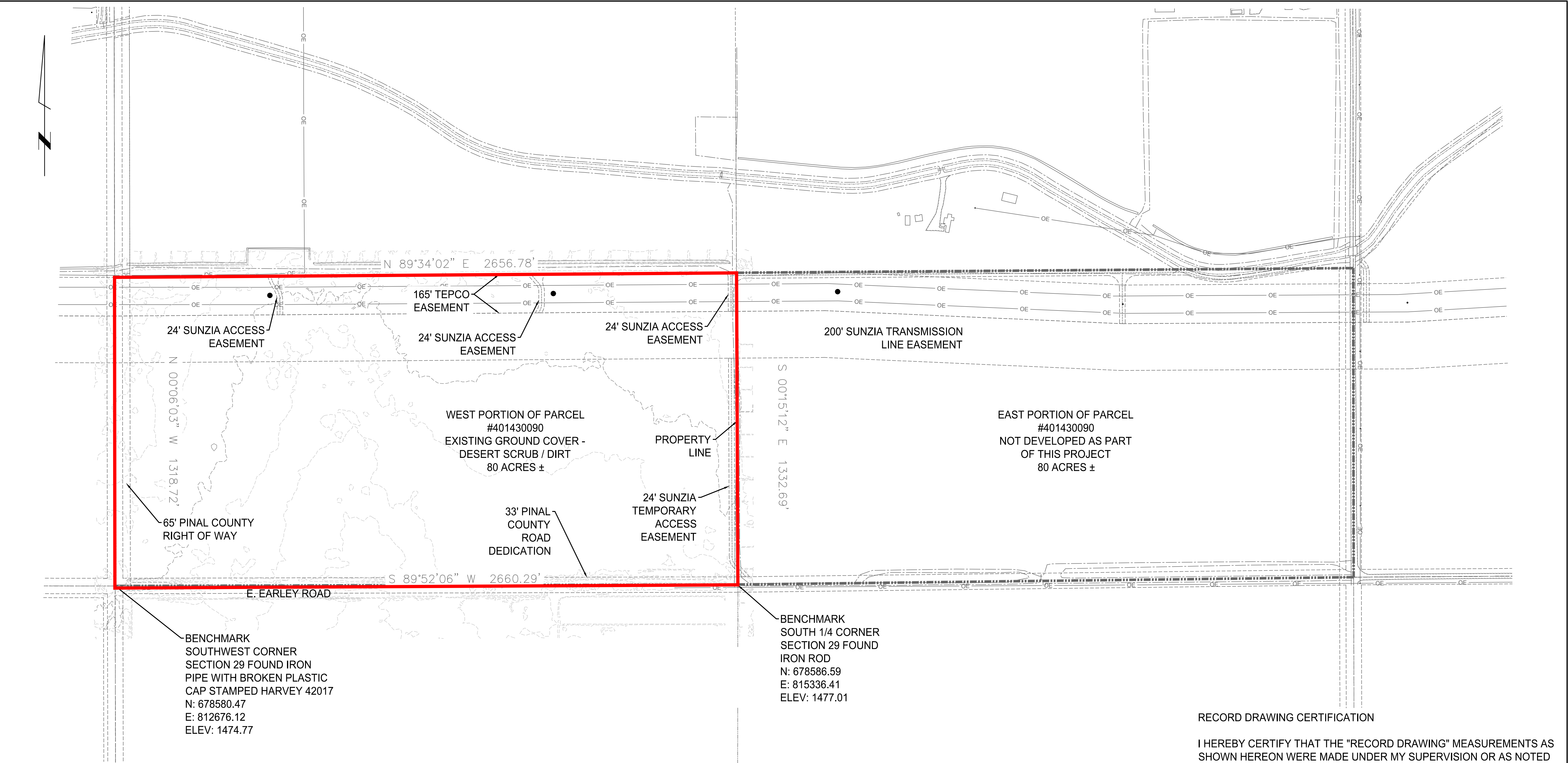
DATE

REGISTRATION NUMBER



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CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



NOTE: SOURCE OF TOPOGRAPHIC AND ALTA SURVEY INFORMATION
FROM SAM, INC - SEE CONTACT INFORMATION ON COVER SHEET.

EXISTING CONDITIONS
1" = 200'

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS
SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED
AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER



THIS DRAWING WAS PREPARED BY POWER
ENGINEERS, INC. FOR A SPECIFIC PROJECT.
TAKING INTO CONSIDERATION THE SPECIFIC
AND UNIQUE REQUIREMENTS OF THE PROJECT,
REUSE OF THIS DRAWING OR ANY INFORMATION
CONTAINED IN THIS DRAWING FOR ANY PURPOSE
IS PROHIBITED UNLESS WRITTEN PERMISSION
FROM BOTH POWER AND POWER'S CLIENT IS
GRANTED.



REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
1	UPDATED PER COUNTY COMMENTS	11/23/22	AA	TJG	TJG		
0	ISSUED FOR SITE PLAN REVIEW	10/03/22	HXD	TJG	TJG		

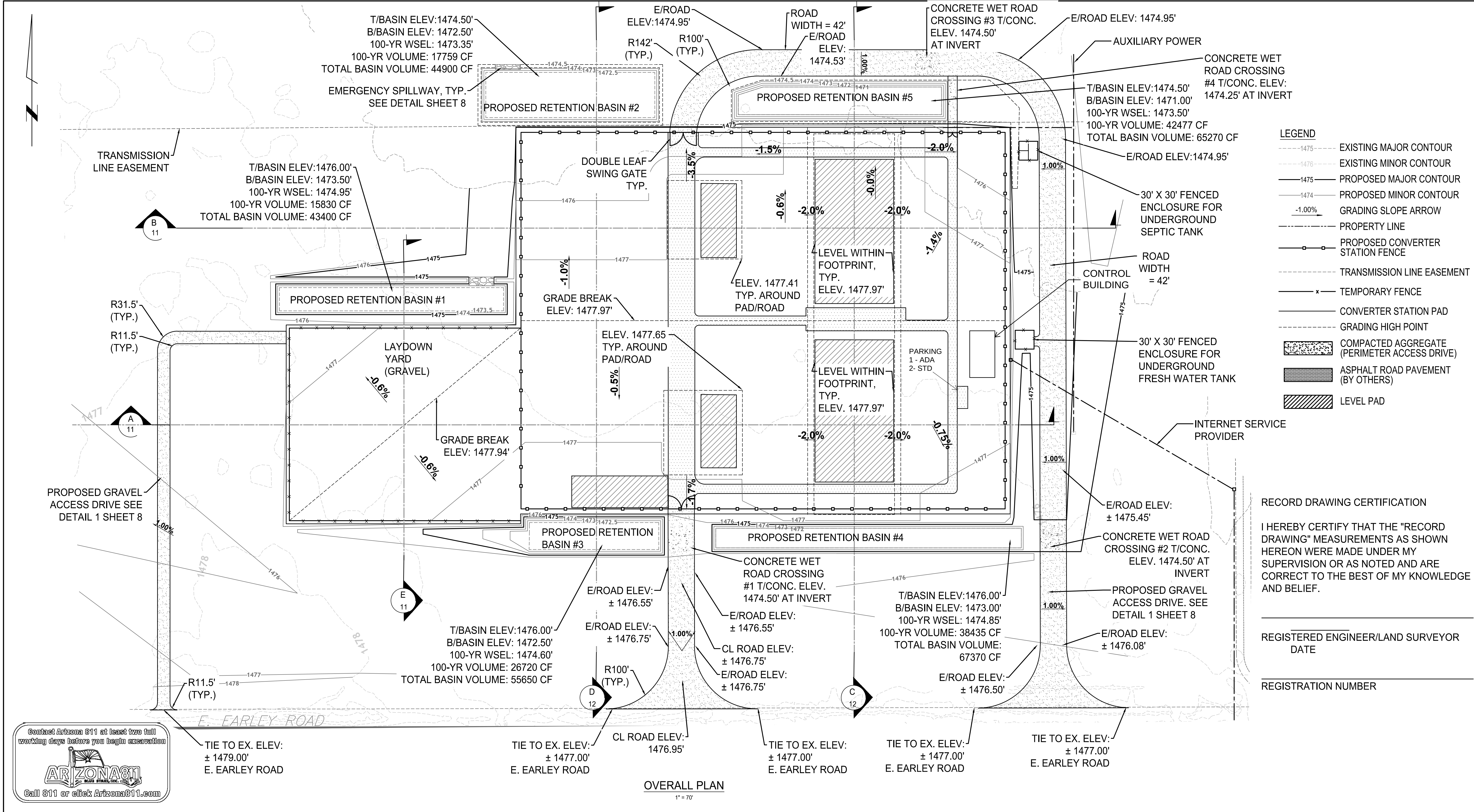
DSGN	TJG	10/03/22
DRN	HXD	10/03/22
CKD	TJG	10/03/22
SCALE: 1" = 200'		
FOR 24x36 DWG ONLY		



SUNZIA TRANSMISSION, LLC SUNZIA WEST HVDC CONVERTER STATION EXISTING CONDITIONS	JOB NUMBER 178812	REV 1
	DRAWING NUMBER SZCW-SS1-C-GR1-P01-01	

[illegible]

CIVIL SITE PLAN
SUNZIA WEST HVDC CONVERTER STATION
SWITCHYARD
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



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1 UPDATED PER COUNTY COMMENTS										11/23/22		AA		TJG		TJG		TJG		SUNZIA WEST HVDC CONVERTER STATION		DRAWING NUMBER	
0 ISSUED FOR SITE PLAN REVIEW										10/03/22		HXD		TJG		TJG		TJG		OVERALL GRADING PLAN		SZCW-SS1-C-GR1-P01-03	
REV REVISIONS										DATE		DRN		DSGN		CKD		APPD		REFERENCE DRAWINGS			

SZW_C3-03.dwg

CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090

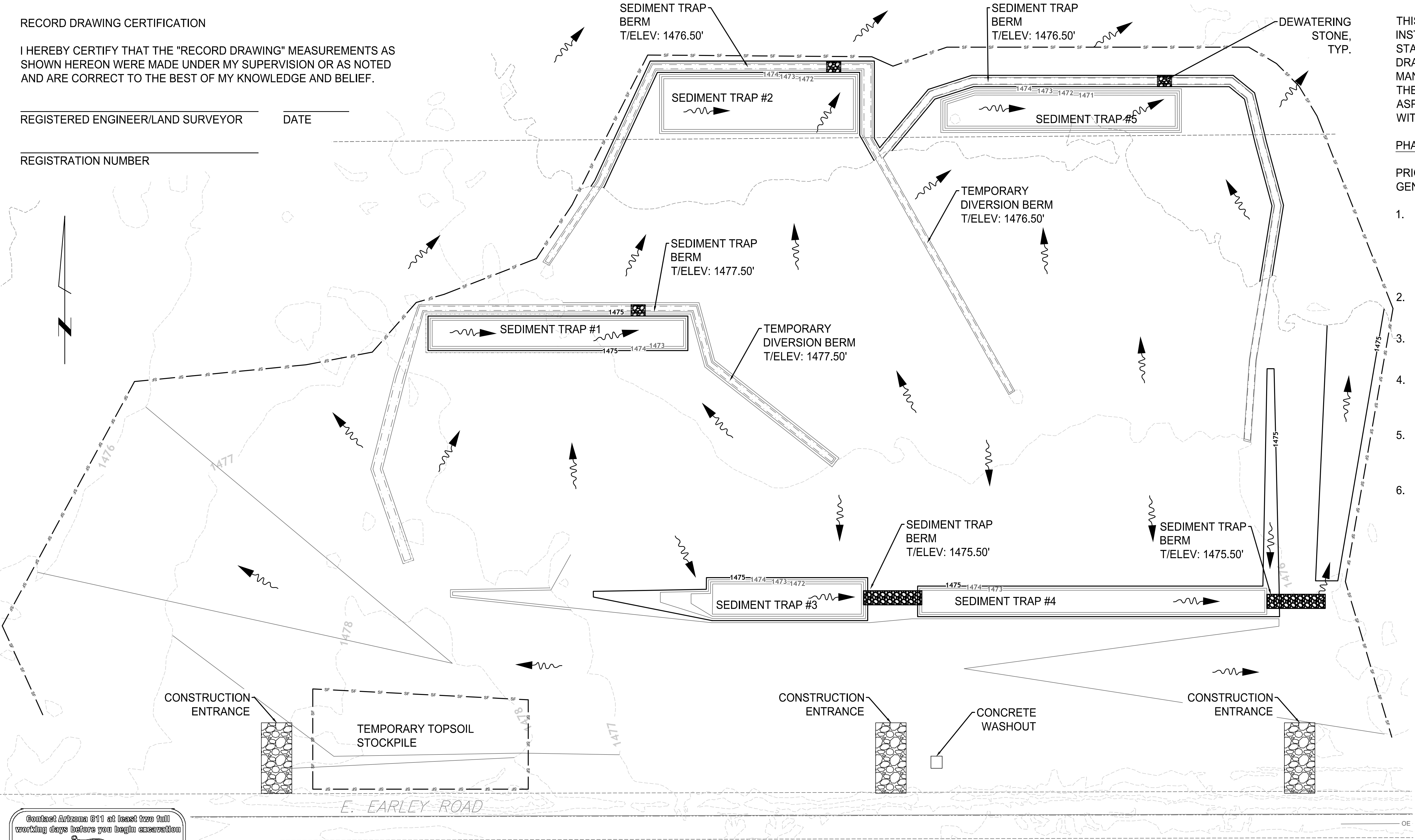
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REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER



THIS PROJECT INCLUDES GRADING AND INSTALLATION OF AN HVDC CONVERTER STATION, ASSOCIATED ACCESS ROADS, DRAINAGE FEATURES AND STORMWATER MANAGEMENT / WATER QUALITY FEATURES. THE PAD WILL BE STABILIZED WITH STONE OR ASPHALT AND REMAINING DISTURBED AREAS WITH ROCK MULCH COVER.

PHASE I CONSTRUCTION SEQUENCE:

PRIOR LAND USE AT THE SITE INCLUDES GENERAL RURAL ZONING.

1. CONTACT ARIZONA 811 BEFORE ALL EARTHWORK AND LAND DISTURBANCE ACTIVITIES. ALL UTILITIES MAY NOT BE SHOWN. SOME LOCATIONS ARE APPROXIMATE.
2. INSTALL THE TEMPORARY CONSTRUCTION ENTRANCE.
3. INITIATE MONITORING ACTIVITIES AND REPORTING.
4. INSTALL PERIMETER SILT FENCE CONTROLS AND BEGIN TOPSOIL STRIPPING.
5. INSTALL TEMPORARY DIVERSION BERMS THE SEDIMENT TRAP AND CONCRETE WASHOUT.
6. MAKE APPROPRIATE DEWATERING ARRANGEMENTS IF REQUIRED. PUMP STANDING WATER THROUGH A SEDIMENT FILTER BAG PRIOR TO DISCHARGE. AREAS DOWNSTREAM OF DISCHARGE SHALL BE PROTECTED FROM EROSION.

LEGEND

- 1475----- EXISTING MAJOR CONTOUR
- 1476----- EXISTING MINOR CONTOUR
- 1475----- PROPOSED MAJOR CONTOUR
- 1474----- PROPOSED MINOR CONTOUR
- PROPERTY LINE
- SF --- SILT FENCE

NOTES: SEDIMENT TRAPS PROVIDE 2,000 SF PER ACRE DRAINED OF STORAGE. TOP 2 FEET - DEWATERING STORAGE (WITH DEWATERING STONE / RIPRAP FILTERS), BOTTOM 1.5 FEET- SEDIMENT STORAGE / SETTLING VOLUME.

EROSION CONTROL PLAN PHASE 1
1" = 70'



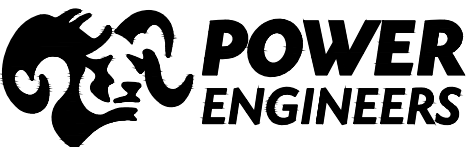
SZW_ C3-08.dwg

THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.



REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
1	UPDATED PER COUNTY COMMENTS	11/23/22	AA	TJG	TJG		
0	ISSUED FOR SITE PLAN REVIEW	10/03/22	HXD	TJG	TJG		

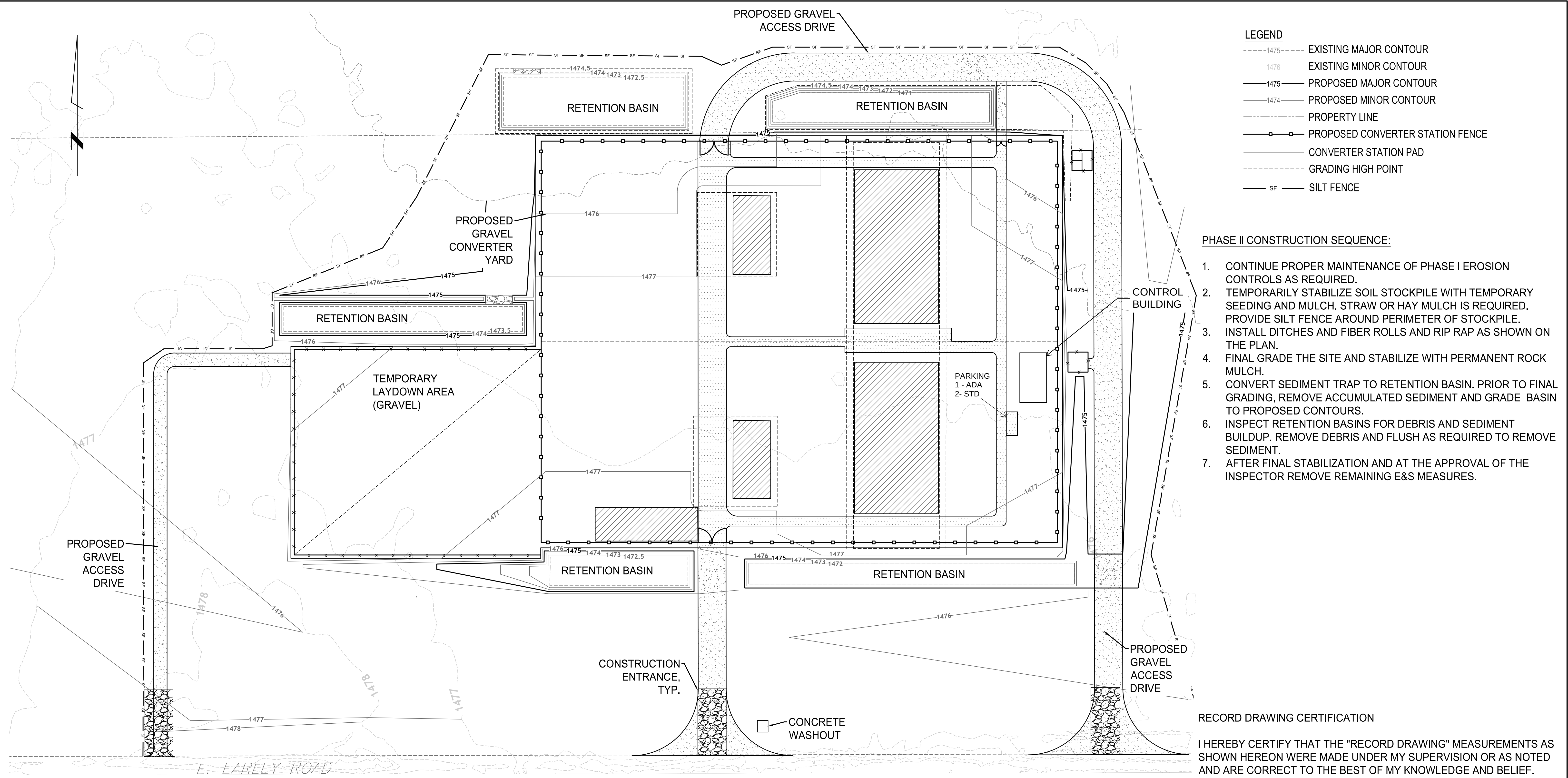
DSGN	TJG	10/03/22
DRN	HXD	10/03/22
CKD	TJG	10/03/22
SCALE:	1" = 70'	
FOR 24x36 DWG ONLY		



SUNZIA TRANSMISSION, LLC
SUNZIA WEST
HVDC CONVERTER STATION
EROSION CONTROL PLAN PHASE 1

JOB NUMBER	178812	REV	1
DRAWING NUMBER	SZCW-SS1-C-GR1-P01-04		

CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



- LEGEND**
- 1475--- EXISTING MAJOR CONTOUR
 - 1476--- EXISTING MINOR CONTOUR
 - 1475— PROPOSED MAJOR CONTOUR
 - 1474— PROPOSED MINOR CONTOUR
 - PROPERTY LINE
 - PROPOSED CONVERTER STATION FENCE
 - CONVERTER STATION PAD
 - GRADING HIGH POINT
 - SF — SILT FENCE

- PHASE II CONSTRUCTION SEQUENCE:**
1. CONTINUE PROPER MAINTENANCE OF PHASE I EROSION CONTROLS AS REQUIRED.
 2. TEMPORARILY STABILIZE SOIL STOCKPILE WITH TEMPORARY SEEDING AND MULCH. STRAW OR HAY MULCH IS REQUIRED. PROVIDE SILT FENCE AROUND PERIMETER OF STOCKPILE.
 3. INSTALL DITCHES AND FIBER ROLLS AND RIP RAP AS SHOWN ON THE PLAN.
 4. FINAL GRADE THE SITE AND STABILIZE WITH PERMANENT ROCK MULCH.
 5. CONVERT SEDIMENT TRAP TO RETENTION BASIN. PRIOR TO FINAL GRADING, REMOVE ACCUMULATED SEDIMENT AND GRADE BASIN TO PROPOSED CONTOURS.
 6. INSPECT RETENTION BASINS FOR DEBRIS AND SEDIMENT BUILDUP. REMOVE DEBRIS AND FLUSH AS REQUIRED TO REMOVE SEDIMENT.
 7. AFTER FINAL STABILIZATION AND AT THE APPROVAL OF THE INSPECTOR REMOVE REMAINING E&S MEASURES.

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR _____ DATE _____

REGISTRATION NUMBER _____

Contact Arizona 811 at least two full working days before you begin excavation

ARIZONA811

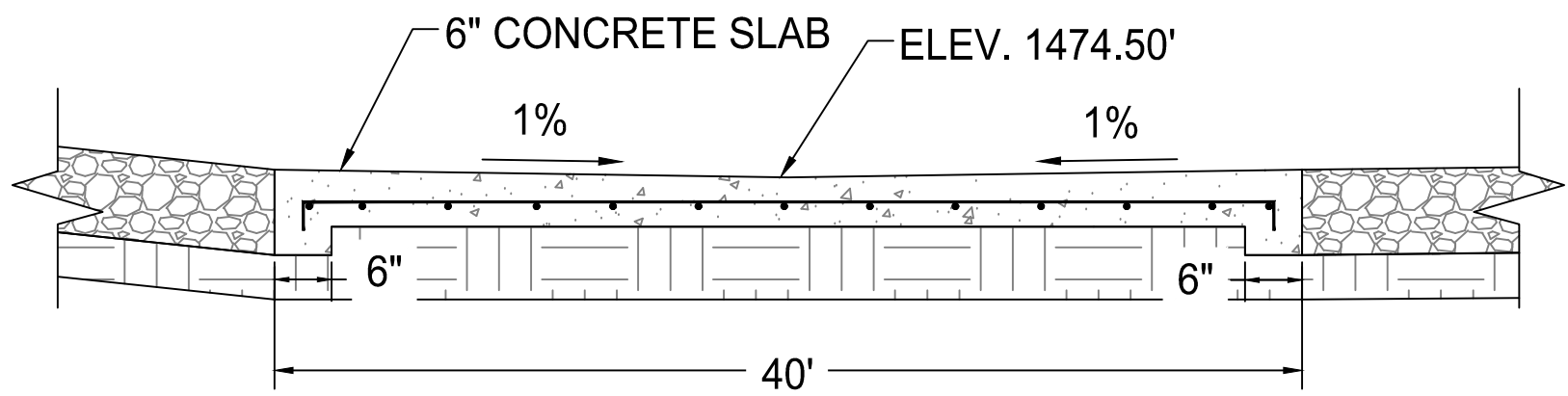
Call 811 or click Arizona811.com



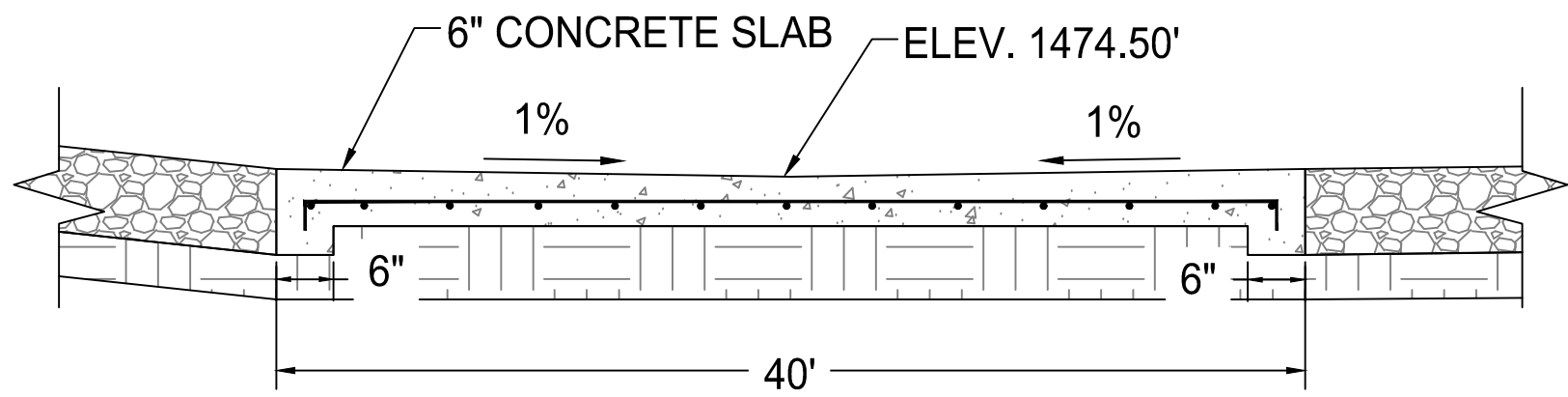
EROSION CONTROL PLAN PHASE 2
1" = 70'

									DSGN	TJG	10/03/22		SUNZIA TRANSMISSION, LLC	JOB NUMBER	REV	
								DRN	HXD	10/03/22			SUNZIA WEST HVDC CONVERTER STATION	178812	1	
								CKD	TJG	10/03/22						
1	UPDATED PER COUNTY COMMENTS		AA	TJG	TJG			SCALE:			1" = 70'		POWER ENGINEERS	EROSION CONTROL PLAN PHASE 2	DRAWING NUMBER	
0	ISSUED FOR SITE PLAN REVIEW		10/03/22	HXD	TJG	TJG									SZCW-SS1-C-GR1-P01-05	
REV	REVISIONS		DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS								
												FOR 24x36 DWG ONLY				

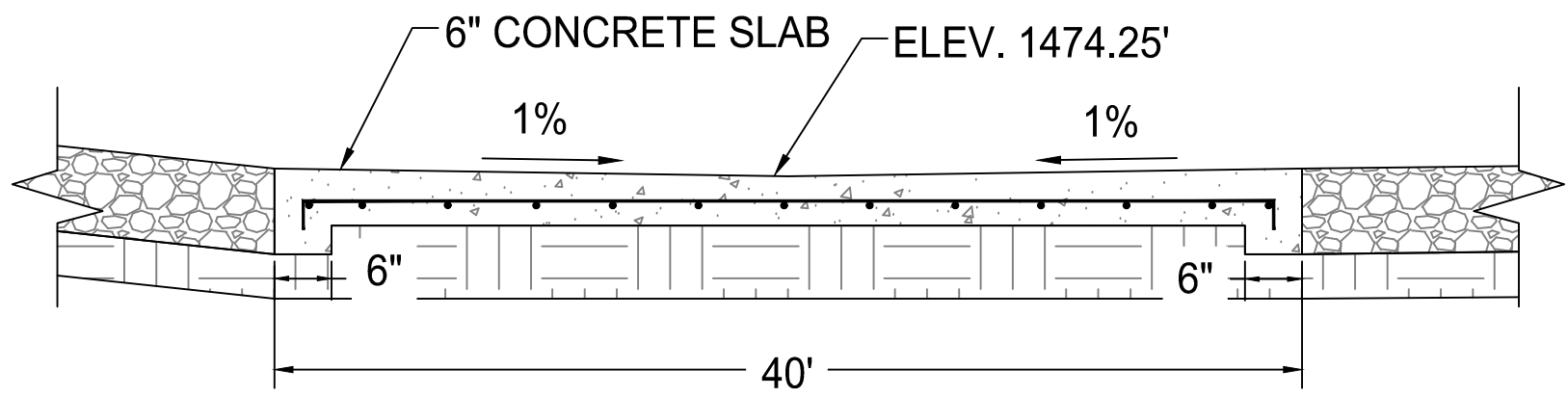
CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



CONCRETE WET ROAD CROSSING #1 AND #2
AT ROAD CENTERLINE LOOKING EAST
SCALE : NTS



CONCRETE WET ROAD CROSSING #3
AT ROAD CENTERLINE LOOKING NORTH
SCALE : NTS

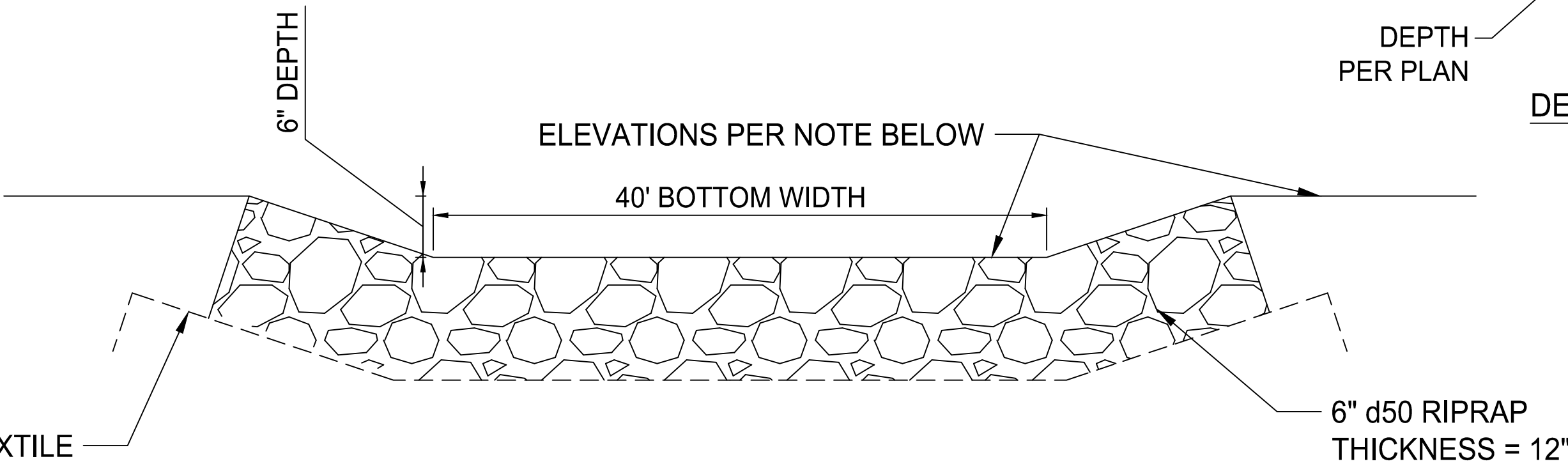


CONCRETE WET ROAD CROSSING #4
AT ROAD CENTERLINE LOOKING EAST
SCALE : NTS

NOTES

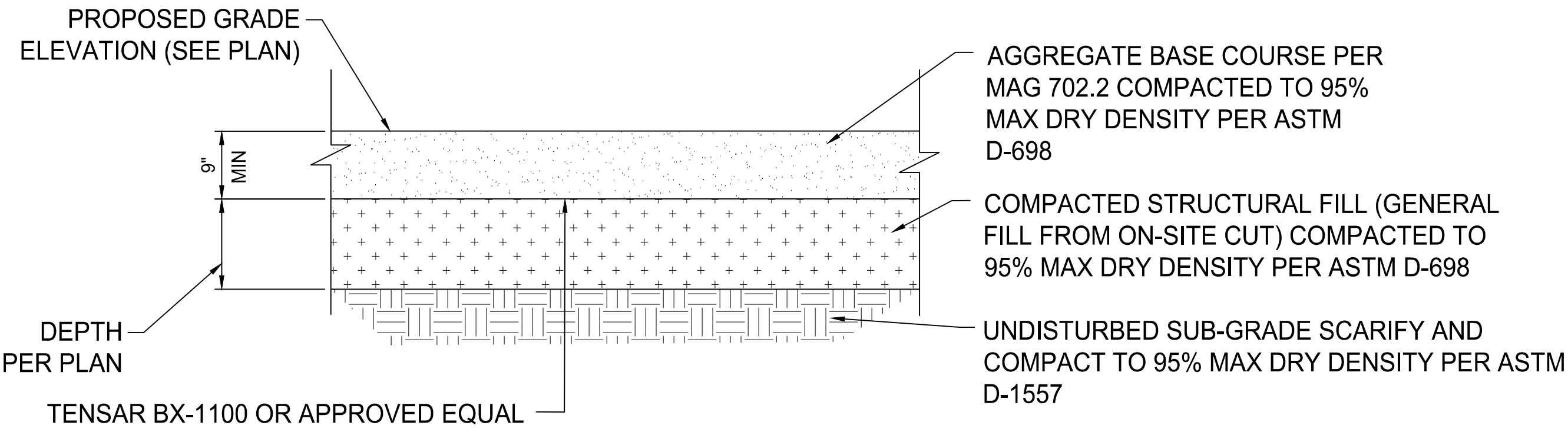
- REBAR SHOULD BE INSTALLED WITH 3" CLEAR FROM EDGES AND BOTTOM OF CONCRETE.
- CONCRETE SLAB TO BE INSTALLED FOR THE FULL 42' ROADWAY WIDTH.
- CONCRETE SHALL HAVE A 4,500 PSI COMPRESSIVE STRENGTH AT 28 DAYS AND SHALL CONFORM TO CHAPTER 4 OF ACI 301. PORTLAND CEMENT SHALL BE ASTM C150, TYPE II WITH A MAX COARSE AGGREGATE SIZE OF 3/4".

NONWOVEN GEOTEXTILE
KEY 12" INTO SUBGRADE

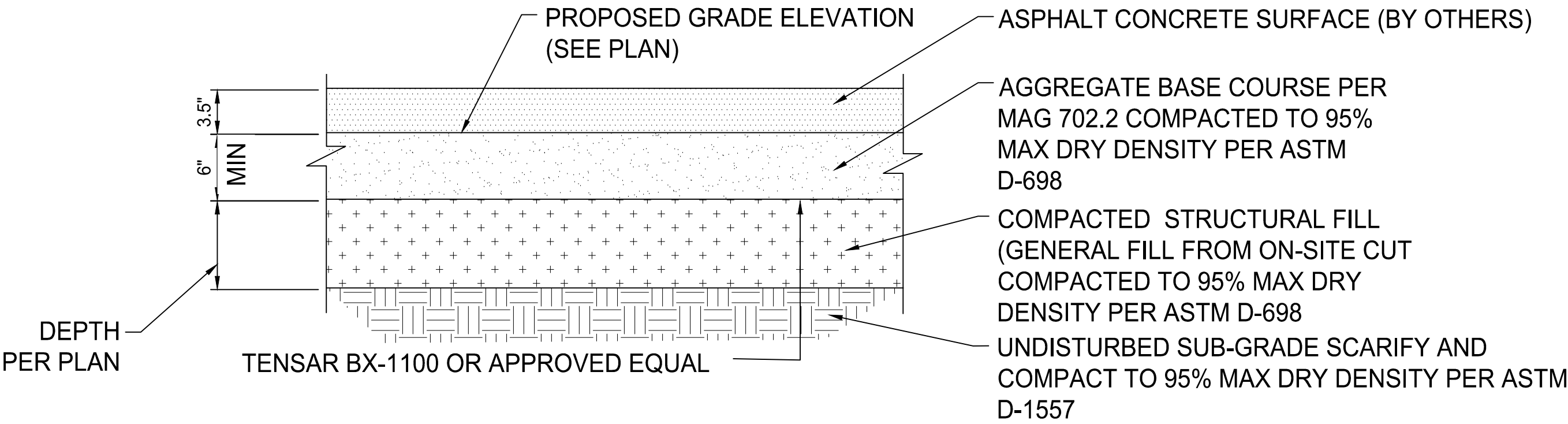


RETENTION BASIN EMERGENCY SPILLWAY
SCALE : NTS

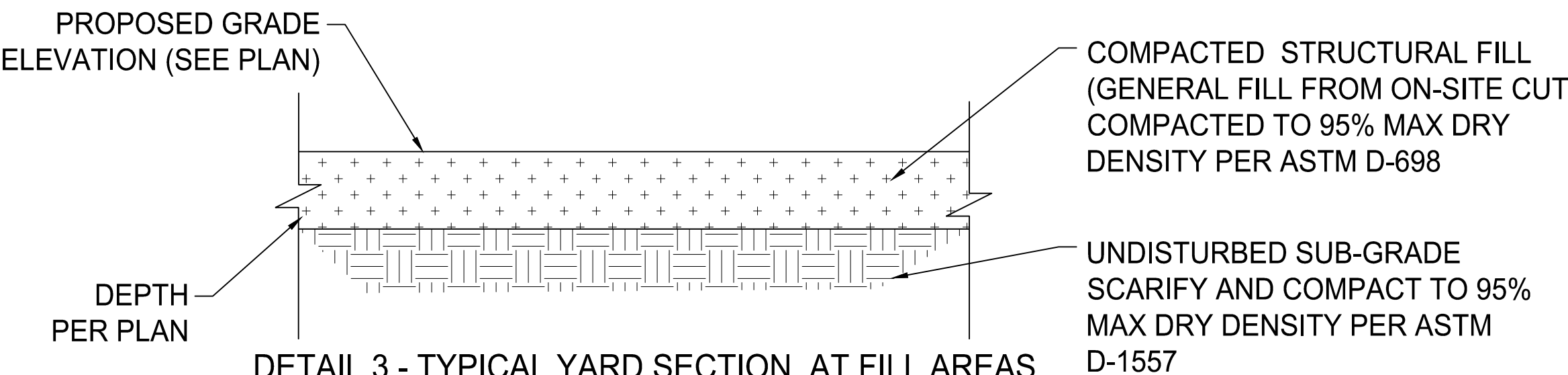
RETENTION BASIN 1 SPILLWAY TOP ELEV: 1474.50' INVERT ELEV: 1474.00'
RETENTION BASIN 2 SPILLWAY TOP ELEV: 1475.00' INVERT ELEV: 1474.50'



DETAIL 1 - TYPICAL GRAVEL ROADWAY SECTION OUTSIDE CONVERTER FENCE
SCALE : NTS



DETAIL 2 - TYPICAL ASPHALT ROADWAY SECTION WITHIN CONVERTER FENCE (BY OTHERS)
SCALE : NTS



DETAIL 3 - TYPICAL YARD SECTION AT FILL AREAS
SCALE : NTS

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER

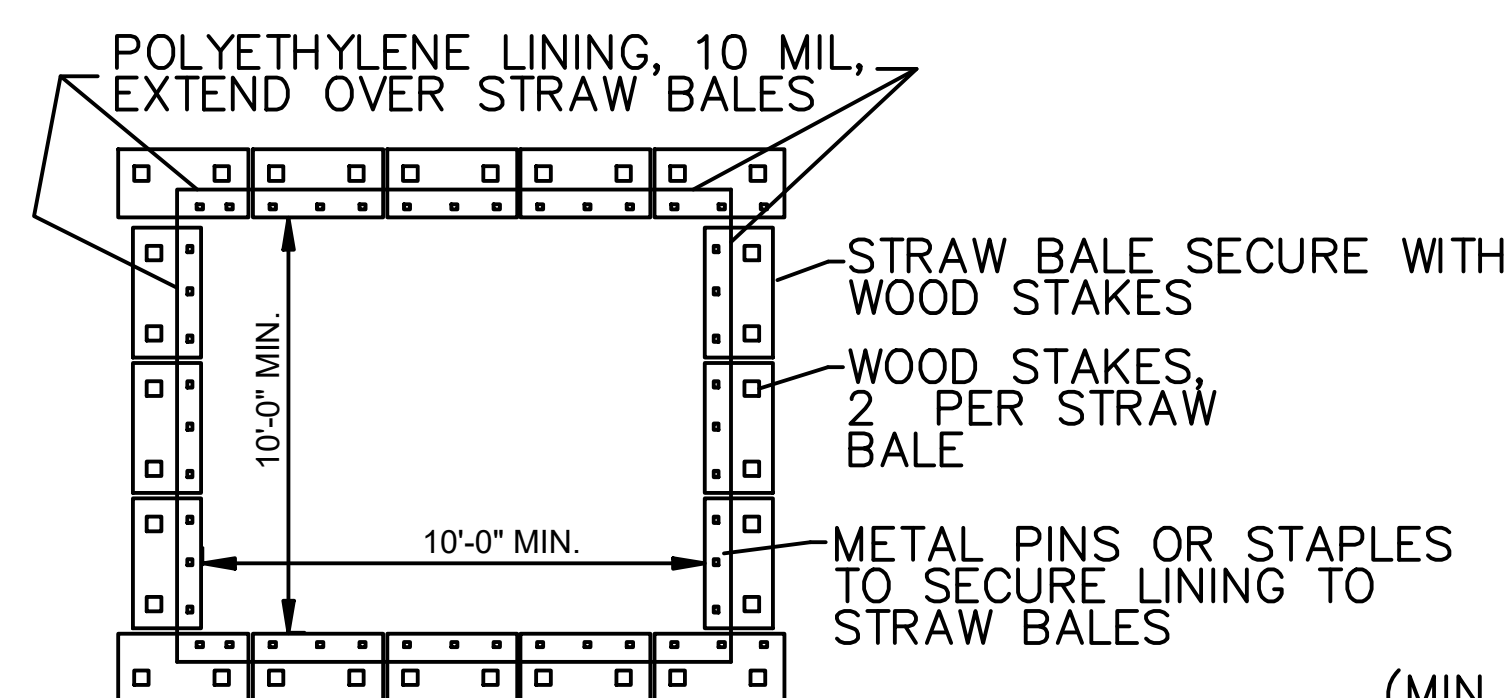


SZW_ C3-04.dwg

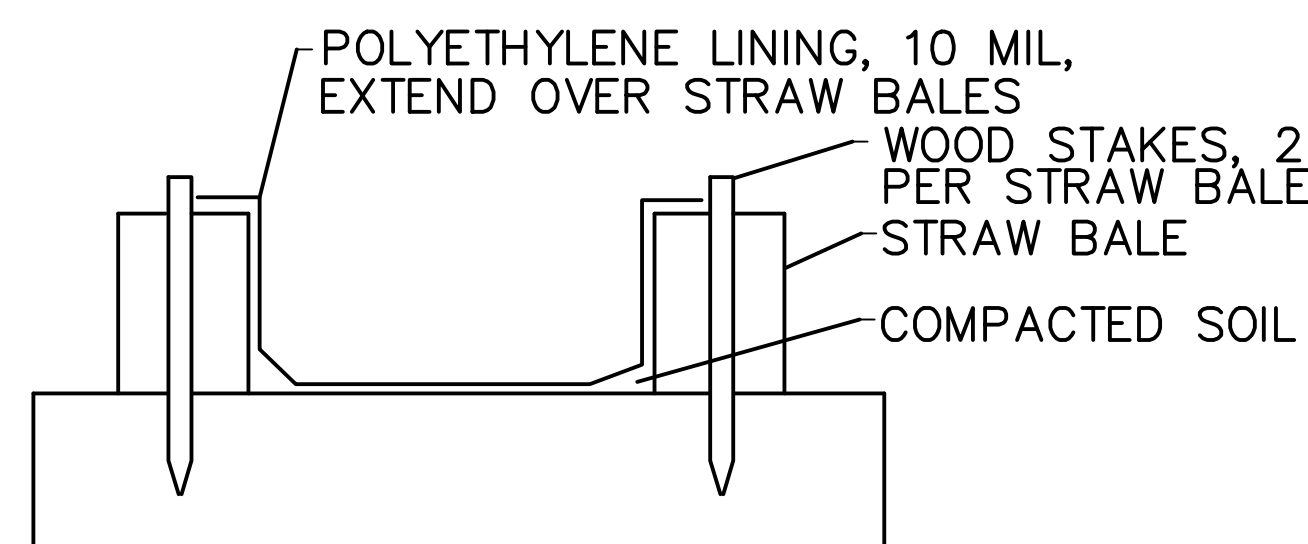
THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT. TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWERS CLIENT IS GRANTED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
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SILT FENCE NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN THE TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE REMOVED IN A MANNER SO AS NOT TO CONTRIBUTE TO ADDITIONAL SILTATION.

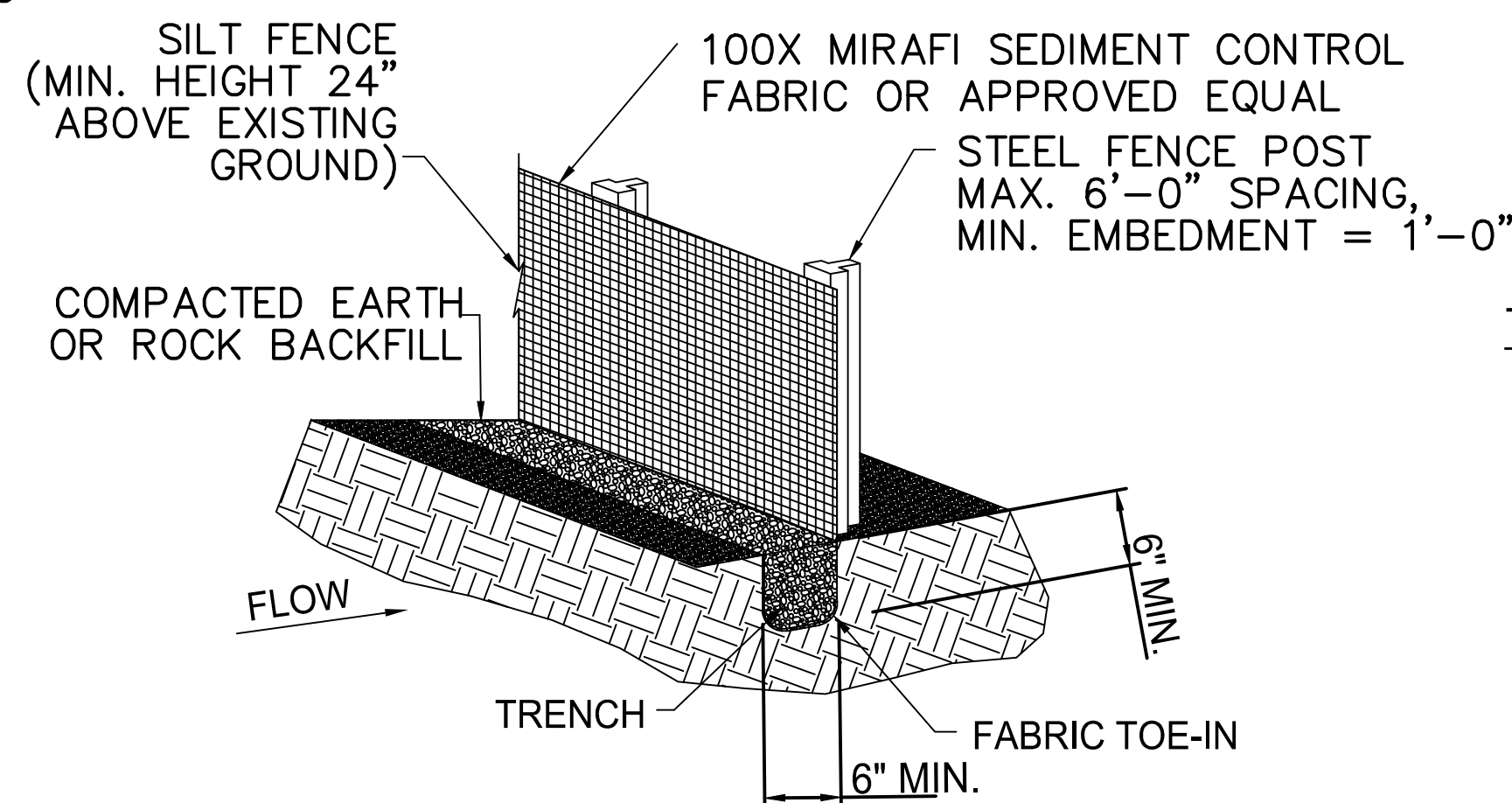


PLAN



CONCRETE
WASHOUT
(TEMPORARY)
N.T.S.

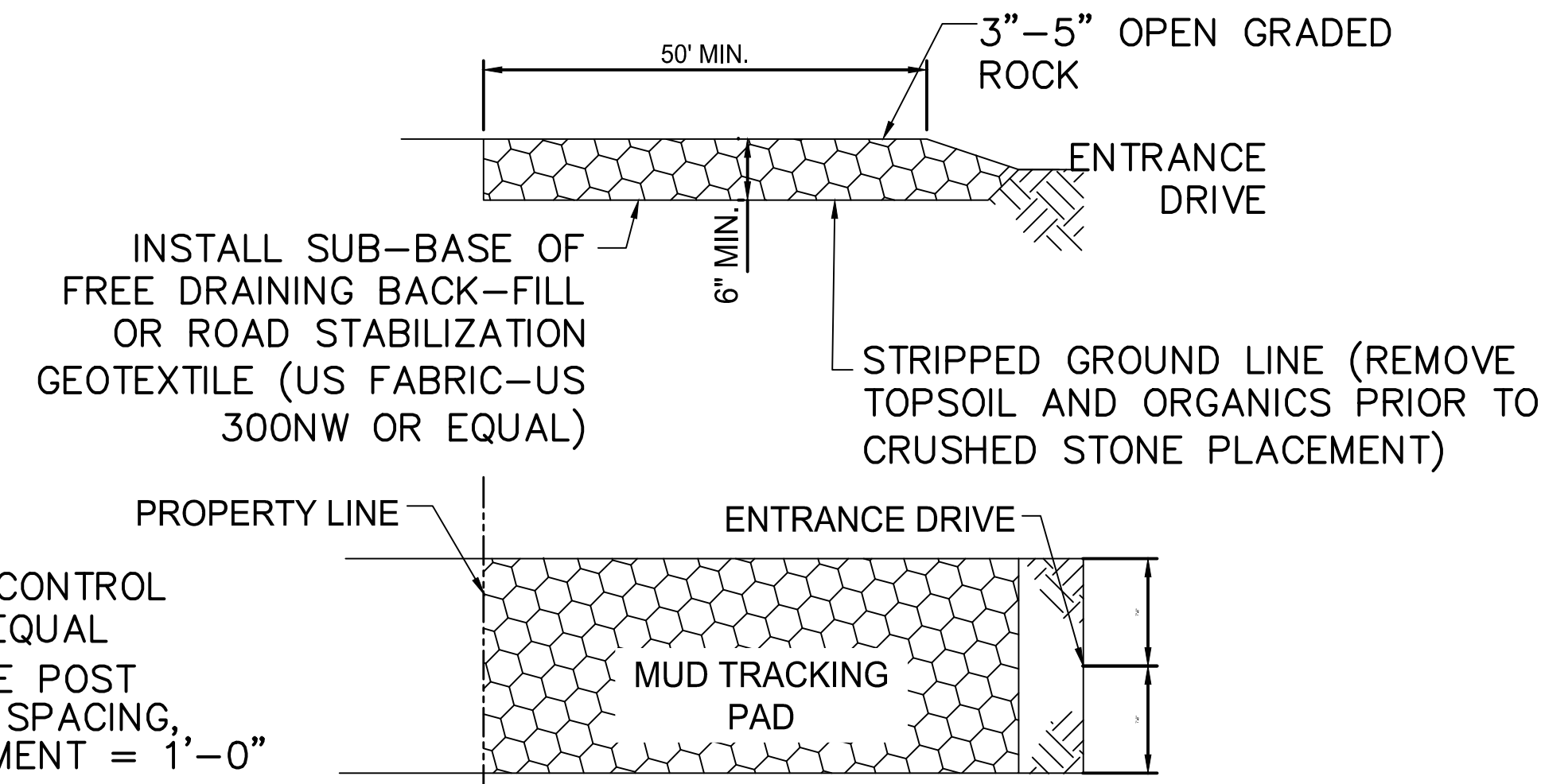
1. CONCRETE WASHOUT SYSTEM WILL CONTAIN WASHOUT WATER WHEN CHUTES & HOPPERS ARE RINSED FOLLOWING CONCRETE DELIVERY TO THE CONSTRUCTION SITE.
2. SCRAPE AS MUCH MATERIAL FROM CHUTES AS POSSIBLE BEFORE WASHING THEM. USE DRY CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
3. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE, IT SHOULD BE RESTRICTED TO THE PLANT.
4. DO NOT USE ADDITIVES WITH WASH WATER. DO NOT USE ACID OR SOLVENTS.
5. FURNISH SIGNAGE FOR THE CONCRETE WASHOUT AREA.
6. FURNISH ORANGE SAFETY FENCING OR EQUAL.



TYPICAL SILT FENCE DETAIL
N.T.S.

DEWATERING NOTES

1. DO NOT CONSTRUCT OR PLACE STRUCTURES IN THE PRESENCE OF ACCUMULATED WATER.
2. PUMP WATER FROM ALL DEWATERING ACTIVITY THROUGH SEDIMENT FILTER BAG OR APPROVED SEDIMENT REMOVAL DEVICE PRIOR TO DISCHARGING DOWNSTREAM OF THE PROJECT SITE IN A CONTROLLED MANNER. AREAS DOWNSTREAM OF DEWATERING SHALL BE PROTECTED FROM EROSION.
3. USE TEMPORARY SAND BAGS OR COFFER DAM IN THE EXISTING DITCH BOTH UP AND DOWNSTREAM OF THE PLANNED WORK AREA AND DEWATER THE DITCH PRIOR TO THE START OF WORK.
4. PROPERLY PREPARE THE SUBGRADE IN THE EXISTING DITCH. IF THE SUBGRADE CANNOT BE DEWATERED TO BE FREE OF MUD, FLEXIBLE BASE, CEMENT-STABILIZED BASE OR BACKFILL, LEAN CONCRETE OR OTHER STABILIZING MATERIAL AS APPROVED BY THE ENGINEER IS REQUIRED BENEATH THE PIPE BEDDING AND FILL PLACEMENT.



TYPICAL CONSTRUCTION ENTRANCE (ROCK CONSTRUCTION)
N.T.S.

CONSTRUCTION ENTRANCE NOTES

1. STONE SIZE - 3 TO 5 INCH OPEN GRADED ROCK.
2. LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 6 INCHES.
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE - ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

RECORD DRAWING CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION OR AS NOTED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE _____

REGISTRATION NUMBER

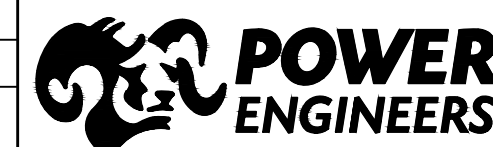


NOTES

1. FOR GENERAL NOTES AND LEGENDS, SEE
DRAWING 2.



												DSGN	TJG	10/03/22
												DRN	HXD	10/03/22
												CKD	TJG	10/03/22
1	UPDATED PER COUNTY COMMENTS	11/23/22	AA	TJG	TJG							SCALE: 1" = 70'		
0	ISSUED FOR SITE PLAN REVIEW	10/03/22	HXD	TJG	TJG									
REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS						FOR 24x36 DWG ONLY	



SUNZIA TRANSMISSION, LLC	JOB NUMBER	REV
SUNZIA WEST HVDC CONVERTER STATION	178812	1
EROSION CONTROL DETAILS	DRAWING NUMBER	
	SZCW-SS1-C-GR1-D01-02	

STORMWATER RUNOFF
CALCULATIONS

VOLUME PARAMETERS FOR 100-YEAR,
2-HOUR STORM EVENT

RAINFALL DEPTH (P) (FROM NOAA ATLAS 14) 2.4 INCHES

RUNOFF COEFFICIENTS

Land Cover	Runoff Coef. C
Gravel, B	0.8
Gravel, C	0.84
Desert Shrubs, B	0.6
Desert Shrubs, C	0.7
Impervious	0.95

VOLUME SIZING PER PINAL COUNTY DRAINAGE MANUAL
REQUIREMENTS FOR RETENTION BASIN, 100-YEAR, 2-HOUR
STORM EVENT

VOLUME = RAINFALL DEPTH*RUNOFF COEFFICIENT*AREA/12

RETENTION BASIN 1	Area, AC.
Land Cover	
Gravel, B	1.40
Gravel, C	0.01
Desert Shrubs, B	0.86
Desert Shrubs, C	0.24
Impervious	0
Total Area	2.52
Weighted C	0.72
Vol. AC.FT	0.36
Vol. CU. FT	15830.28

RETENTION BASIN 2	Area, AC.
Land Cover	
Gravel, B	0.24
Gravel, C	1.52
Desert Shrubs, B	0.08
Desert Shrubs, C	0.75
Impervious	0
Total Area	2.58
Weighted C	0.79
Vol. AC.FT	0.41
Vol. CU. FT	17759.14

RETENTION BASIN 3	Area, AC.
Land Cover	
Gravel, B	2.73
Gravel, C	0.09
Desert Shrubs, B	0.99
Desert Shrubs, C	0
Impervious	0.22
Total Area	4.04
Weighted C	0.76
Vol. AC.FT	0.61
Vol. CU. FT	26720.10

RETENTION BASIN 4	Area, AC.
Land Cover	
Gravel, B	1.94
Gravel, C	0.61
Desert Shrubs, B	0
Desert Shrubs, C	1.25
Impervious	1.55
Total Area	5.35
Weighted C	0.82
Vol. AC.FT	0.88
Vol. CU. FT	38435.34

RETENTION BASIN 5	Area, AC.
Land Cover	
Gravel, B	1.92
Gravel, C	1.37
Desert Shrubs, B	0.86
Desert Shrubs, C	0.43
Impervious	1.44
Total Area	6.02
Weighted C	0.81
Vol. AC.FT	0.98
Vol. CU. FT	42476.68

RETENTION BASIN STAGE-STORAGE
CALCULATIONS

RETENTION BASINS HOLD THE
REQUIRED 100-YEAR, 2 HOUR STORM
EVENT WITH <3' DEPTH AND 1'
FREEBOARD

RETENTION BASIN 1 - Stage Storage

Depth, Ft Elevation, Ft Incremental Depth Area, SqFt Avg Area					Required Volume, CuFt 15830.28	
Volume, CuFt					Cumulative Volume, CuFt	
0	1473.5	0	13209	0	0	0
.5	1474	.5	15609	14409	7205	7205
1.5	1475	1	18081	16845	16845	24050
2.5	1476	1	20625	19353	19353	43403

RETENTION BASIN 2 - Stage Storage

Depth, Ft Elevation, Ft Incremental Depth Area, SqFt Avg Area					Required Volume, CuFt 17759.14	
Volume, CuFt					Cumulative Volume, CuFt	
0	1472.5	0	19393	0	0	0
.5	1473	.5	21477	10218	10218	20435
1.5	1474	1	23633	22555	22555	32773
2.0	1474.5	0.5	24738	24185.5	12093	44865

RETENTION BASIN 3 - Stage Storage

Depth, Ft Elevation, Ft Incremental Depth Area, SqFt Avg Area					Required Volume, CuFt 26720.10	
Volume, CuFt					Cumulative Volume, CuFt	
0	1472.5	0	9875	0	0	0
.5	1473	.5	11248	10561.5	5281	5281
1.5	1474	1	13998	12623	12623	17904
2.5	1475	1	18031	16014.5	16014.5	33918
3.5	1476	1	25442	21736.5	21736.5	55655

RETENTION BASIN 4 - Stage Storage

Depth, Ft Elevation, Ft Incremental Depth Area, SqFt Avg Area					Required Volume, CuFt 38435.34	
Volume, CuFt					Cumulative Volume, CuFt	
0	1473	0	17225	0	0	0
1	1474	1	20901	19063	19063	19063
2	1475	1	24138	22519.5	22519.5	41582.5
3	1476	1	27437	25787.5	25787.5	67370

RETENTION BASIN 5 - Stage Storage

Depth, Ft Elevation, Ft Incremental Depth Area, SqFt Avg Area					Required Volume, CuFt 42476.68	
Volume, CuFt					Cumulative Volume, CuFt	
0	1471	0	14035	0	0	0
1	1472	1	16246	15140.5	15140.5	15140.5
2	1473	1	18527	17386.5	17386.5	32527
3	1474	1	20878	19702.5	19702.5	52229.5
3.5	1474.5	0.5	31278	26078	13039	65268.5

PER PINAL COUNTY - INFILTRATE THE 100-YEAR, 2 HOUR VOLUME
WITHIN 36 HOURS
INFILTRATION RATES PER NRCS WEB SOIL SURVEY SHOWING
MINIMUM REQUIRED INFILTRATION RATE
CONTRACTOR TO VERIFY INFILTRATION RATE ON SITE WITH
DOUBLE RING INFILTRATION TEST AFTER PONDS ARE INSTALLED.

RETENTION BASIN 1 Infiltration

Infiltrate within 36 hours	
Design Volume (CuFt)	15830.28
Required Area, min, infiltration (SqFt)	13192
Provided Area, infiltration, in-situ soils, 12" depth (SqFt)	13209
Minimum Constructed Infiltration Rate, FS = 1.5 (In/Hr)	0.4
NRCS Web Soil Survey kSAT Range (In/Hr)	0.57 - 1.98

RETENTION BASIN 2 Infiltration

Infiltrate within 36 hours	
Design Volume (CuFt)	17759.14
Required Area, min, infiltration (SqFt)	19303
Provided Area, infiltration, in-situ soils, 12" depth (SqFt)	19394
Minimum Constructed Infiltration Rate, FS = 1.5 (In/Hr)	0.31
NRCS Web Soil Survey kSAT Range (In/Hr)	0.20 - 0.57

RETENTION BASIN 3 Infiltration

Infiltrate within 36 hours	
Design Volume (CuFt)	26720.10
Required Area, min, infiltration (SqFt)	9824
Provided Area, infiltration, in-situ soils, 12" depth (SqFt)	9875
Minimum Constructed Infiltration Rate, FS = 1.5 (In/Hr)	0.91
NRCS Web Soil Survey kSAT Range (In/Hr)	0.57 - 1.98

RETENTION BASIN 4 Infiltration

Infiltrate within 36 hours	
Design Volume (CuFt)	38435.34
Required Area, min, infiltration (SqFt)	17159
Provided Area, infiltration, in-situ soils, 12" depth (SqFt)	17225
Minimum Constructed Infiltration Rate, FS = 1.5 (In/Hr)	0.75
NRCS Web Soil Survey kSAT Range (In/Hr)	0.57 - 1.98

RETENTION BASIN 5 Infiltration

Infiltrate within 36 hours	
Design Volume (CuFt)	42476.68
Required Area, min, infiltration (SqFt)	16090
Provided Area, infiltration, in-situ soils, 12" depth (SqFt)	16118
Minimum Constructed Infiltration Rate, FS = 1.5 (In/Hr)	0.88
NRCS Web Soil Survey kSAT Range (In/Hr)	0.57 - 1.98

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REGISTERED ENGINEER/LAND SURVEYOR

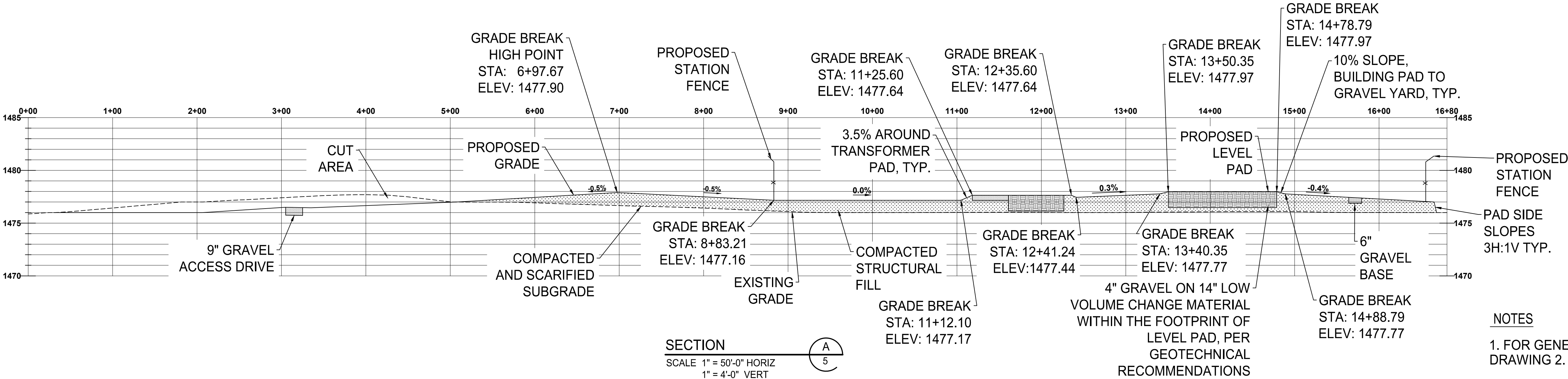
DATE

REGISTRATION NUMBER

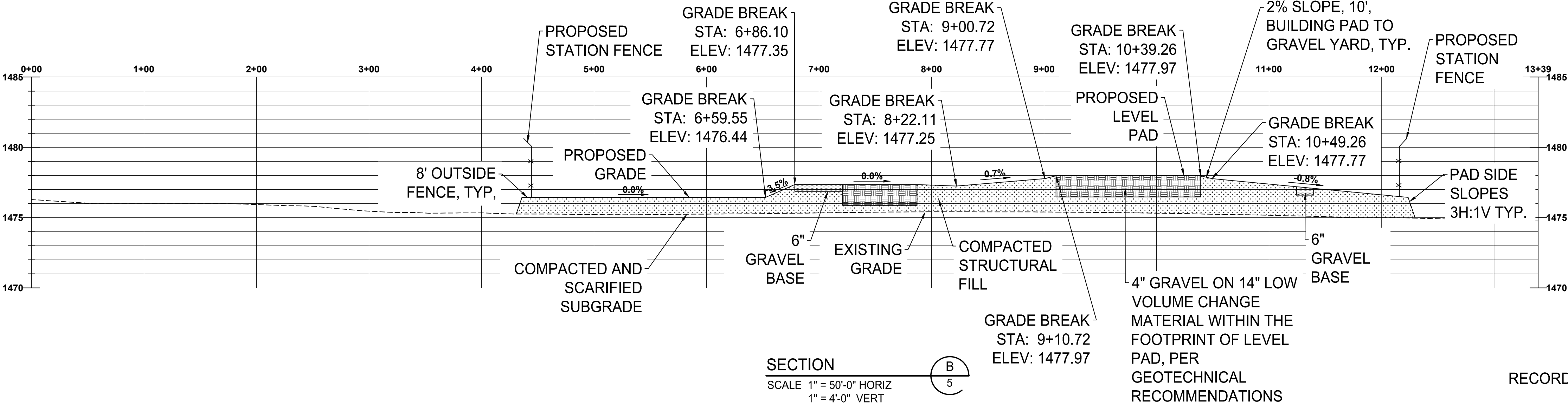


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CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



- NOTES
1. FOR GENERAL NOTES AND LEGENDS, SEE DRAWING 2.
 2. GRADES SHOWN REPRESENT TOP OF SUBGRADE ELEVATION. ASPHALT ROAD TOP COURSE AND STATION STONE WITHIN LIMITS OF THE CONVERTER YARD TO BE INSTALLED BY OTHERS, AS PART OF SEPARATE SCOPE. SEPARATE SCOPE ALSO INCLUDES OVEREXCAVATION FOR ROAD BASE, LOW VOLUME CHANGE MATERIAL WITHIN THE LIMITS OF THE HVDC YARD/FENCE.



RECORD DRAWING CERTIFICATION

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REGISTERED ENGINEER/LAND SURVEYOR _____ DATE _____

REGISTRATION NUMBER _____



REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD	REFERENCE DRAWINGS
1	UPDATED PER COUNTY COMMENTS	11/23/22	AA	TJG	TJG		
0	ISSUED FOR SITE PLAN REVIEW	10/03/22	HXD	TJG	TJG		

DSGN	TJG	10/03/22
DRN	HXD	10/03/22
CKD	TJG	10/03/22
SCALE: 1" = 70'		
FOR 24x36 DWG ONLY		



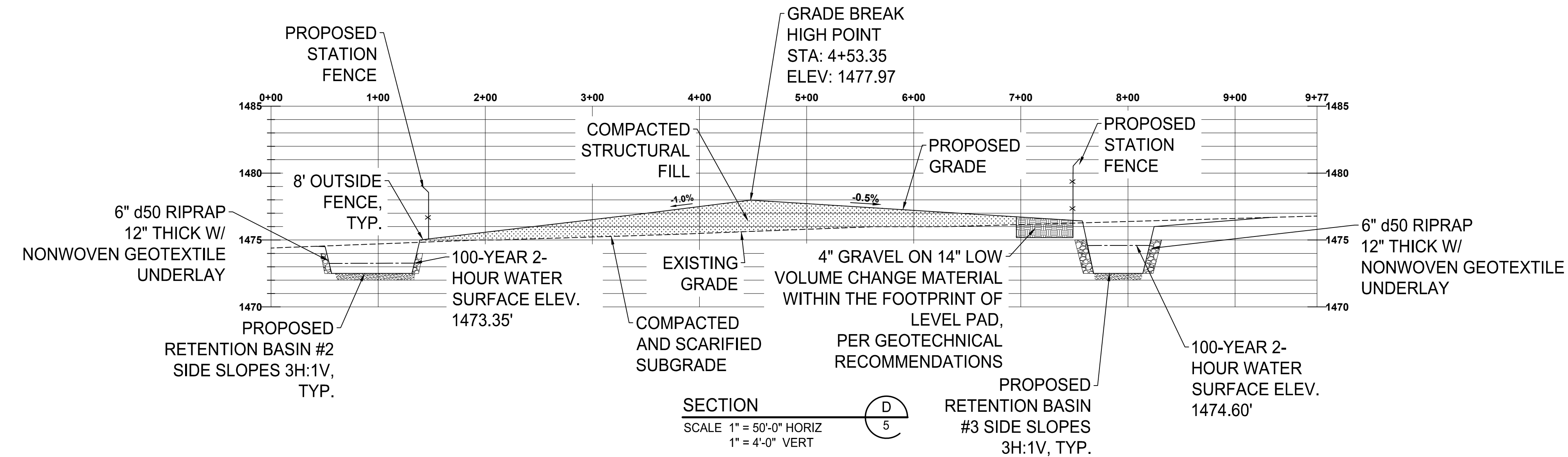
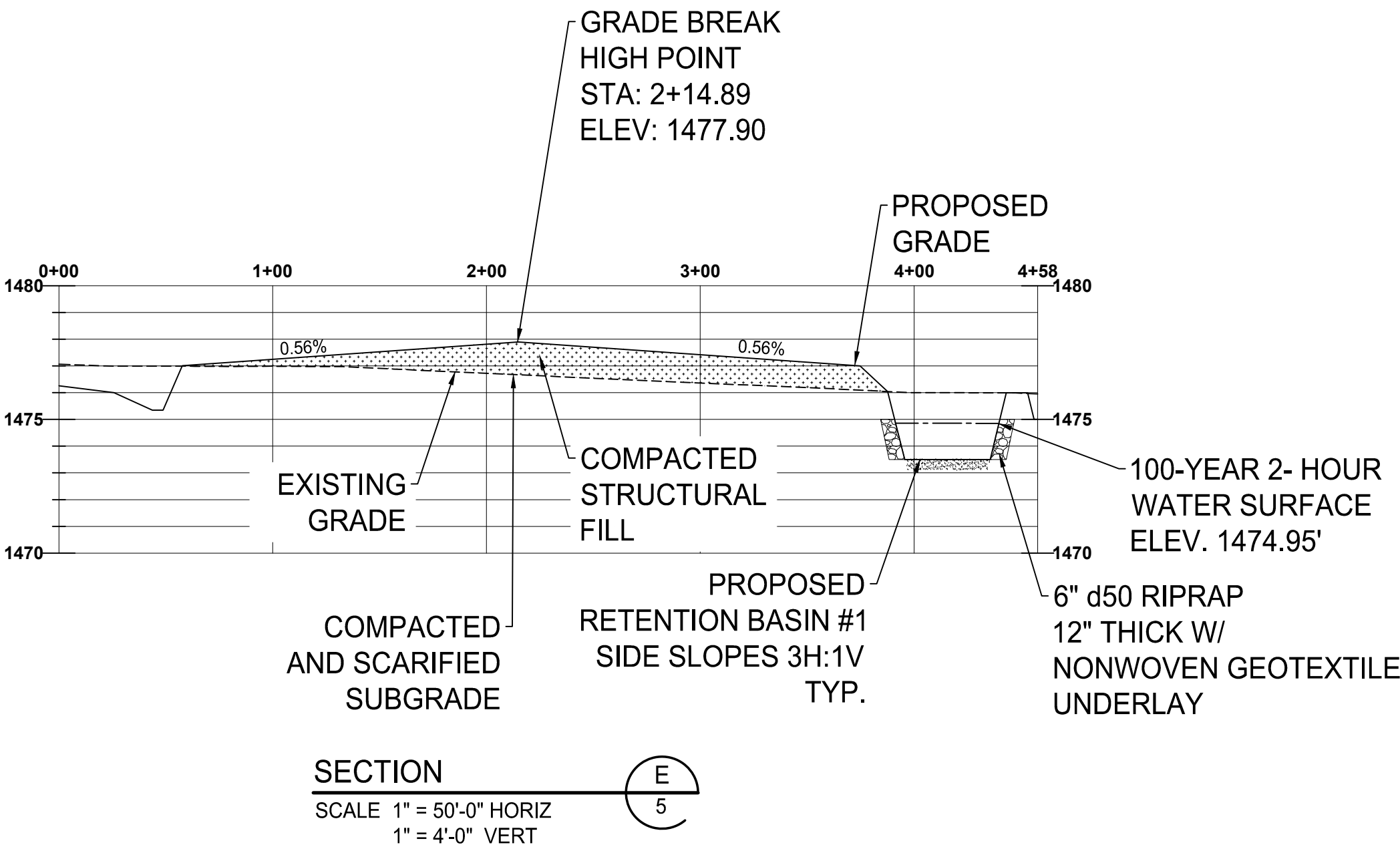
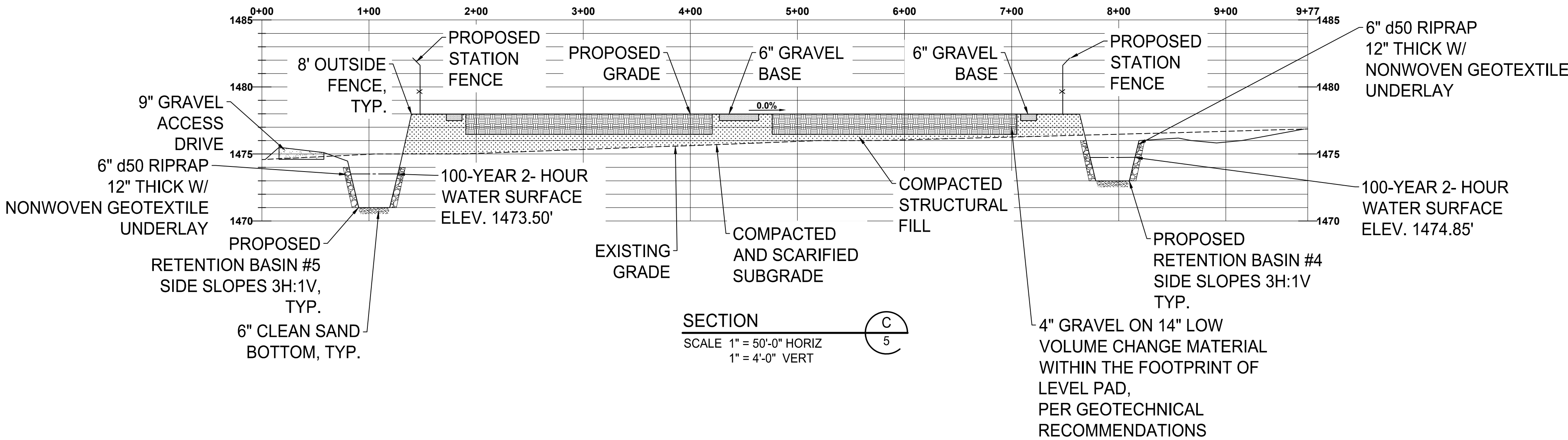
SUNZIA TRANSMISSION, LLC		JOB NUMBER	REV
SUNZIA WEST HVDC CONVERTER STATION		178812	1
GRADING SECTIONS		DRAWING NUMBER	
		SZCW-SS1-C-GR1-S01-01	

CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
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DATE

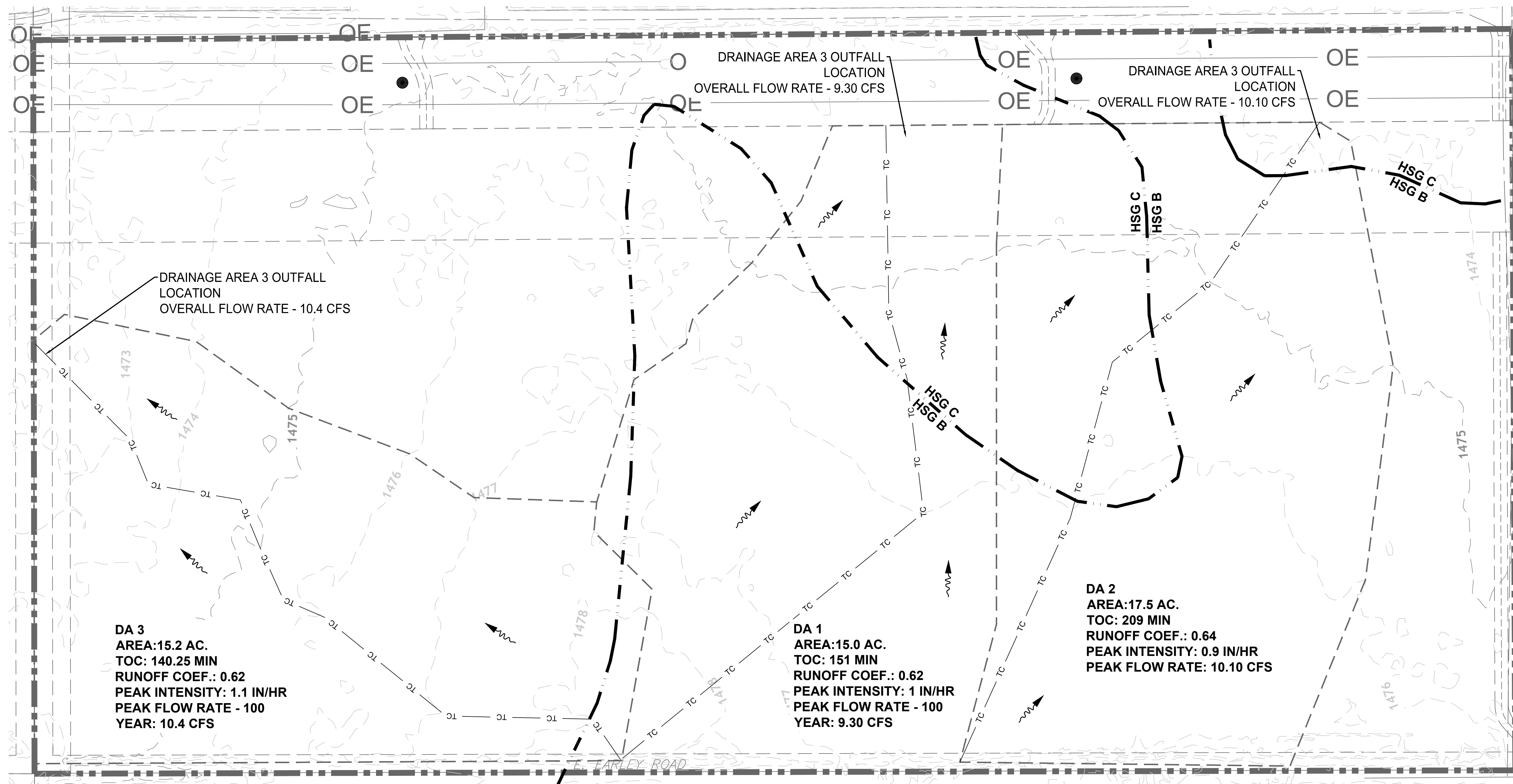
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SZW_ C3-06.dwg

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CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



LEGEND

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|---|----------------------------------|
|  | EX. CATCHMENT BOUNDARY |
|  | HYDROLOGIC SOIL GROUP |
|  | EX. MINOR CONTOUR |
|  | EX. MAJOR CONTOUR |
|  | EX. FLOW ARROW |
|  | EX. TIME OF CONCENTRATION |

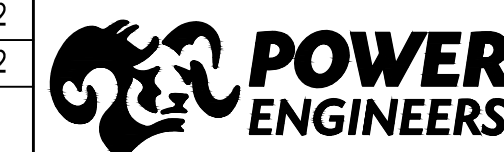
NOTES

1. RAINFALL INTENSITY USED FOR THE 100-YEAR EVENT FROM NOAA PEAK RAINFALL INTENSITY TABLES
2. HYDROLOGIC METHOD USED - RATIONAL METHOD- $Q=C*I*A$
3. E. EARLY ROAD CAUSES A BREAK IN THE OVERALL DRAINAGE PATTERNS FOR THE SURROUNDING PROPERTIES. DRAINAGE THAT PASSES THROUGH THE SUBJECT PROPERTY IS MAINLY MINIMIZED SOUTH OF E. EARLY ROAD. OFF-SITE RUN-ON FROM THE SOUTH IS MINIMAL AND ANY STORMWATER RUNOFF GENERATED FROM OFF-SITE SOURCES FROM THE SOUTH WILL BE REROUTED EAST AND WEST AROUND THE CONVERTER YARD - SEE STORMWATER GRADING PLAN AND POST - DEVELOPMENT DRAINAGE MAP ON SHEET 14.
4. PER FEMA, THE PROJECT IS SITUATED IN THE ZONE "X" AREA OF MINIMAL FLOOD HAZARD. NO FLOODPLAINS OR FLOODWAYS EXIST WITHIN THE PROJECT BOUNDARIES.

PRE-DEVELOPED DRAINAGE MAP
SCALE: 1" = 100'

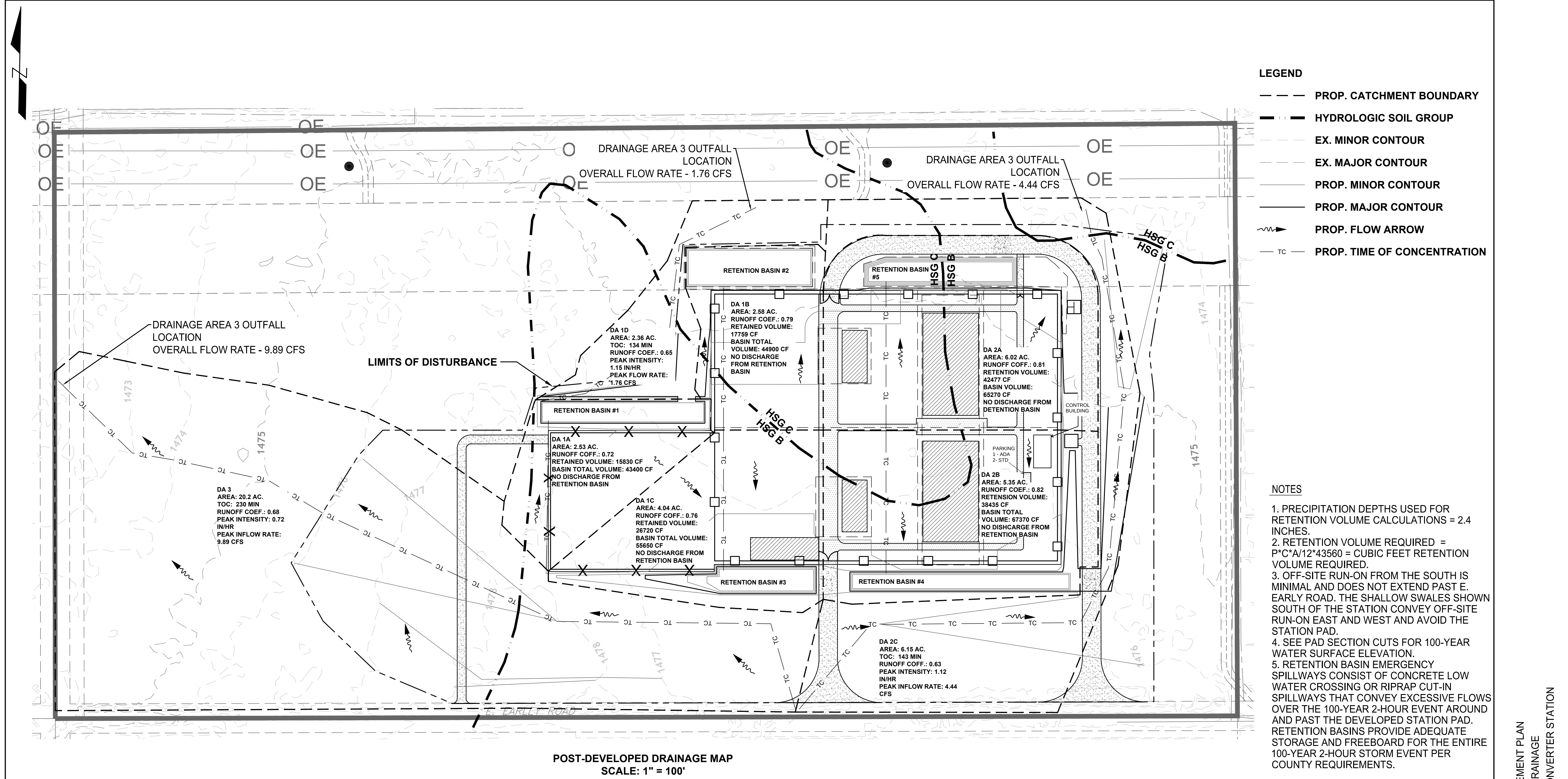
CIVIL SITE PLAN
STORMWATER MANAGEMENT PLAN
PRE-DEVELOPMENT DRAINAGE
SUNZIA WEST HVDC CONVERTER STATION
13 OF 14

THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.

[illegible]

SUNZIA TRANSMISSION, LLC	JOB NUMBER	REV
SUNZIA WEST HVDC CONVERTER STATION	178812	1
CIVIL PRE-DEVELOPMENT DRAINAGE	DRAWING NUMBER	
	SCZW-SS1-C-SWP-G01-0	

CIVIL SITE PLAN
SUNZIA WEST HVDC
CONVERTER STATION
SECTION 29 TOWNSHIP 06S RANGE 08E
PINAL COUNTY, ARIZONA
WEST PORTION OF PARCEL NO. 401430090



THIS DRAWING WAS PREPARED BY POWER ENGINEERS, INC. FOR A SPECIFIC PROJECT, TAKING INTO CONSIDERATION THE SPECIFIC AND UNIQUE REQUIREMENTS OF THE PROJECT. REUSE OF THIS DRAWING OR ANY INFORMATION CONTAINED IN THIS DRAWING FOR ANY PURPOSE IS PROHIBITED UNLESS WRITTEN PERMISSION IS GRANTED FROM BOTH POWER AND POWER'S CLIENT IS GRANTED.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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9.0 SUB1_TIA

9.1 Submit a preliminary traffic impact assessment (TIA)*

Vehicle trips during construction will vary. At the start of construction, there will be 15 to 20 trips per day. At the peak of construction, there will be 50 to 60 trips per day. The peak of construction is approximately six months (about months 10 through 16) of the 24-month construction period. There will be 20 to 25 workers on site, concrete deliveries, and material deliveries. Near the end of construction, the number of trips will decrease, with the trip amount similar to the beginning of construction. Anticipated vehicle trips per day during the operation phase of the project is two trips per day. Per Public Works Traffic Engineering Review Comment Letter dated 8/9/22, County staff anticipated traffic generated by this project will not require TIA or TIS. Therefore, a Preliminary Traffic Impact Assessment has not been prepared for the subject property.

10.0 SUB1_ALTA SURVEY

10.1 Submit a copy of a certified A.L.T.A. survey, including a legal description of the PAD boundary and legal descriptions of all zoning district boundaries

An ALTA Survey is attached.

ALTA/ NSPS LAND TITLE SURVEY

LEGAL DESCRIPTION:

AMTRUST TITLE INSURANCE COMPANY FILE NUMBER: ATIC-20216-AZ-56 REV. 2:

PARCEL 1: (401-43-0090) (CLIENT INTEREST IS THE W/2, E/2 IS NOT A PART OF THIS SURVEY)

THE SOUTH HALF OF THE SOUTH HALF OF SECTION(SIC) 29, TOWNSHIP 6 SOUTH, RANGE 8 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA.

PARCEL 2: (401-42-009A&B) (NOT A PART OF THIS SURVEY)

THE WEST HALF OF THE SOUTHWEST QUARTER AND THE WEST HALF OF THE EAST HALF OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 6 SOUTH, RANGE 8 EAST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, PINAL COUNTY, ARIZONA;

EXCEPTING THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 28; THENCE WEST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER OF SAID SECTION 28, A DISTANCE OF 600 FEET; THENCE SOUTH A DISTANCE OF 600 FEET TO THE FLORENCE-CASE GRANDE CANAL; THENCE NORTHEASTERLY, ALONG SAID FLORENCE-CASE GRANDE CANAL TO A POINT ON THE EAST LINE OF SAID NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28; THENCE NORTH , ALONG SAID EAST LINE, A DISTANCE OF 157 FEET TO THE POINT OF BEGINNING.

ALTA NOTES (OPTIONAL SURVEY RESPONSIBILITY NOTES) - TABLE A

- MONUMENTS PLACED (OR A REFERENCE MONUMENT OR WITNESS TO THE CORNER) AT ALL MAJOR CORNERS OF THE BOUNDARY OF THE SURVEYED PROPERTY, UNLESS ALREADY MARKED OR REFERENCED BY EXISTING MONUMENTS OR WITNESSES IN CLOSE PROXIMITY TO THE CORNER.
- VICINITY MAP SHOWN HEREON
- THIS SURVEY IS LOCATED IN:
"OTHER AREAS" ZONE X (UN-HATCHED).
FLOOD INSURANCE RATE MAP: MAP NUMBER 04021C1600E, EFFECTIVE DATE DECEMBER 04, 2007.

- THE APPROXIMATE TOTAL LAND AREA OF THIS SURVEY IS 80.909 ACRES +/-.

- SUBSTANTIAL FEATURES ARE SHOWN HEREIN.

- UTILITY PLANS AND/OR REPORTS WERE NOT PROVIDED BY CLIENT. SEE EASEMENT LABELS AND LEGEND FOR MORE INFORMATION. THE OVERHEAD ELECTRIC LINES WERE THE ONLY VISIBLE UTILITIES OBSERVED ON THE SITE AND ARE SHOWN HEREON. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

- BASED UPON TAX RECORDS PROVIDED BY CLIENT, NAMES OF ADJOINING LAND OWNERS ARE SHOWN HEREIN.

- REMOTE SENSING DATA PROVIDED BY SAM, LLC, FLOWN MAY, 2021 FOR 1"=100' PLANIMETRIC MAPPING AND IMAGERY. IMAGERY ACCURACY IS RMSE 0.5" OR BETTER WITH LIDAR ACCURACY BEING RMSE 0.33" FOR WELL-DEFINED GOUND CONTROL POINTS. FOR ILLUSTRATIVE PURPOSES ONLY.

- EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS ARE DEPICTED HEREIN AS APPLICABLE.

- PLOTTABLE APPURTENANT EASEMENTS DISCLOSED IN DOCUMENTS PROVIDED TO, OR OBTAINED BY THE SURVEYOR, ARE SHOWN HEREIN.

- DOCUMENTATION PROVIDED TO CLIENT.

SURVEY NOTES:

- BEARINGS, DISTANCES, AND AREAS ARE ARIZONA COORDINATE SYSTEM, NAD83(2011), CENTRAL ZONE, GRID, INTERNATIONAL FEET.
- EASEMENTS, RIGHTS OF WAY, AND RECORDED DEED REFERENCES SHOWN HEREON WERE PROVIDED BY THE CLIENT, BASED UPON THE NOTED TITLE COMMITMENT.
- THIS SURVEY DOES NOT SHOW THE LOCATION OF THE PROPOSED PROJECT IMPROVEMENTS PROVIDED TO THE SURVEYOR BY THE CLIENT OR CLIENT'S REPRESENTATIVE.
- RECORD BEARINGS AND DISTANCES HAVE NOT BEEN SHOWN HEREON.
- THE SUBJECT TRACT HAS ACCESS FROM EARLEY ROAD, SHOWN HEREON.

EXCEPTIONS

- THROUGH 9. NOT ADDRESSED HEREIN.
- ROAD DECLARATION AS SHOWN IN INSTRUMENT RECORDED FEBRUARY 21, 1964, IN BOOK 375, PAGE 572, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (AS SHOWN)
- RESOLUTION AS SHOWN IN INSTRUMENT RECORDED JUNE 21, 1984, IN BOOK 1231, PAGE 386, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- MEMORANDUM OF OPTION AGREEMENT AS SHOWN IN INSTRUMENT RECORDED JULY 12, 2019, AS FEE NO. 2019-055954, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- NON-EXCLUSIVE FRANCHISE FOR SOUTHWEST GAS OROPORATION AS SHOWN IN INSTRUMENT RECORDED JUNE 21, 2016, AS FEE NO. 2016-039825, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- LICENSE AGREEMENT TO PROVIDE CABLE SERVICES BETWEEN PINAL COUNTY AND CABLE ARIZONA CORPORATION AS SHOWN IN INSTRUMENT RECORDED MAY 2, 2003, AS FEE NO. 2003-029073, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- RESOLUTION AS SHOWN IN INSTRUMENT RECORDED MAY 2, 2003, AS FEE NO. 2003-029072, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- RESOLUTION AS SHOWN IN INSTRUMENT RECORDED JANUARY 20, 2000, AS FEE NO. 2000-003019, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- PRE-ANNEXATION AN DEVELOPMENT AGREEMENT AS SHOWN IN INSTRUMENT RECORDED SEPTEMBER 6, 2006, AS FEE NO. 2006- 125478, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- MEMORANDUM OF AGREEMENT AS SHOWN IN INSTRUMENT RECORDED JULY 1, 2004, AS FEE NO. 2004-049919, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (NOT A SURVEY MATTER)
- CONTRACT AND GRANT OF EASEMENT AS SHOWN IN INSTRUMENT RECORDED AS BOOK 1732, PAGE 629, OF THE OFFICIAL RECORDS OF PINAL COUNTY, ARIZONA. (DOES NOT AFFECT THE SURVEYED PARCEL)

TO: PATTERN SOLAR AND STORAGE DEPARTMENT, LLC;

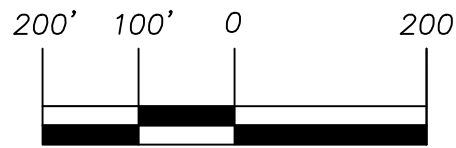
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED IN 2021 BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11, 13, 15, 16, 18 AND 19 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED IN JULY, 2022.

DATE: SEPTEMBER 08, 2022

SURVEYOR
ARIZONA PLS No. 75819



SUNZIA WEST CONVERTER STATION



SCALE 1"= 200'
GRID

BEARINGS, DISTANCES, COORDINATES AND ACREAGE SHOWN HEREON ARE GRID, NAD83(2011), ARIZONA CENTRAL ZONE, INTL. FEET.

LEGEND

- MONUMENT FOUND AS NOTED
- POWER POLE
- OVERHEAD ELECTRIC LINE
- DOWN GUY
- WIRE FENCE
- P
- SURFACE PIPELINE
- W
- WATER LINE
- WATER VALVE/METER
- IRRIGATION SPINDLE
- WINDMILL
- W
- WATER WELL
- GAS METER
- FIBER OPTIC/TELEPHONE EQUIPMENT BOX/MARKER

C/L
TYP.
P.O.B.
P.O.B.
T-LINE
(BRC-DIST.)

CENTERLINE
TYPICAL COMMENCEMENT OF LEGAL DESCRIPTION
POINT OF BEGINNING OF LEGAL DESCRIPTION
OVERHEAD ELECTRIC TRANSMISSION LINE
RECORD CALL

- SUBJECT TRACT BOUNDARY
- QUARTER SECTION-ADJACENT LINE
- SECTION LINE
- HIGHWAY/ROAD R-O-W LINE
- FLOOD HAZARD ZONE LINE
- EASEMENT LINE
- GRAVEL/DIRT ROAD

TITLE CO. AMTRUST TITLE INSURANCE CO.

TITLE FILE # ATIC-20216-AZ-56 Rev. 2

EFFECTIVE DATE AUGUST 15, 2022 8:00AM

VERSION 1

SCHEDULE A PG 1

SCHEDULE B PG 1

NOTES PG 1

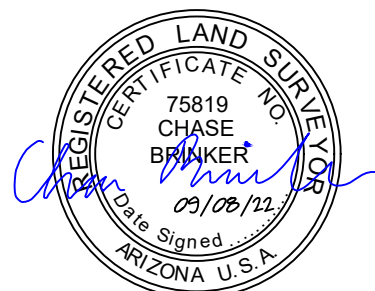
SEP. 8, 2022

ALTA/NSPS LAND TITLE
SURVEY MAP OF THE
S/2 OF THE SW/4
SECTION 29, T-6-S,
R-8-E OF THE GILA
AND SALT RIVER BASE
AND MERIDIAN
PINAL COUNTY,
ARIZONA



555 Zang St.
Suite 210,
Lakewood CO. 80228

Ofc: 303.988.5852
email: info@sam.biz



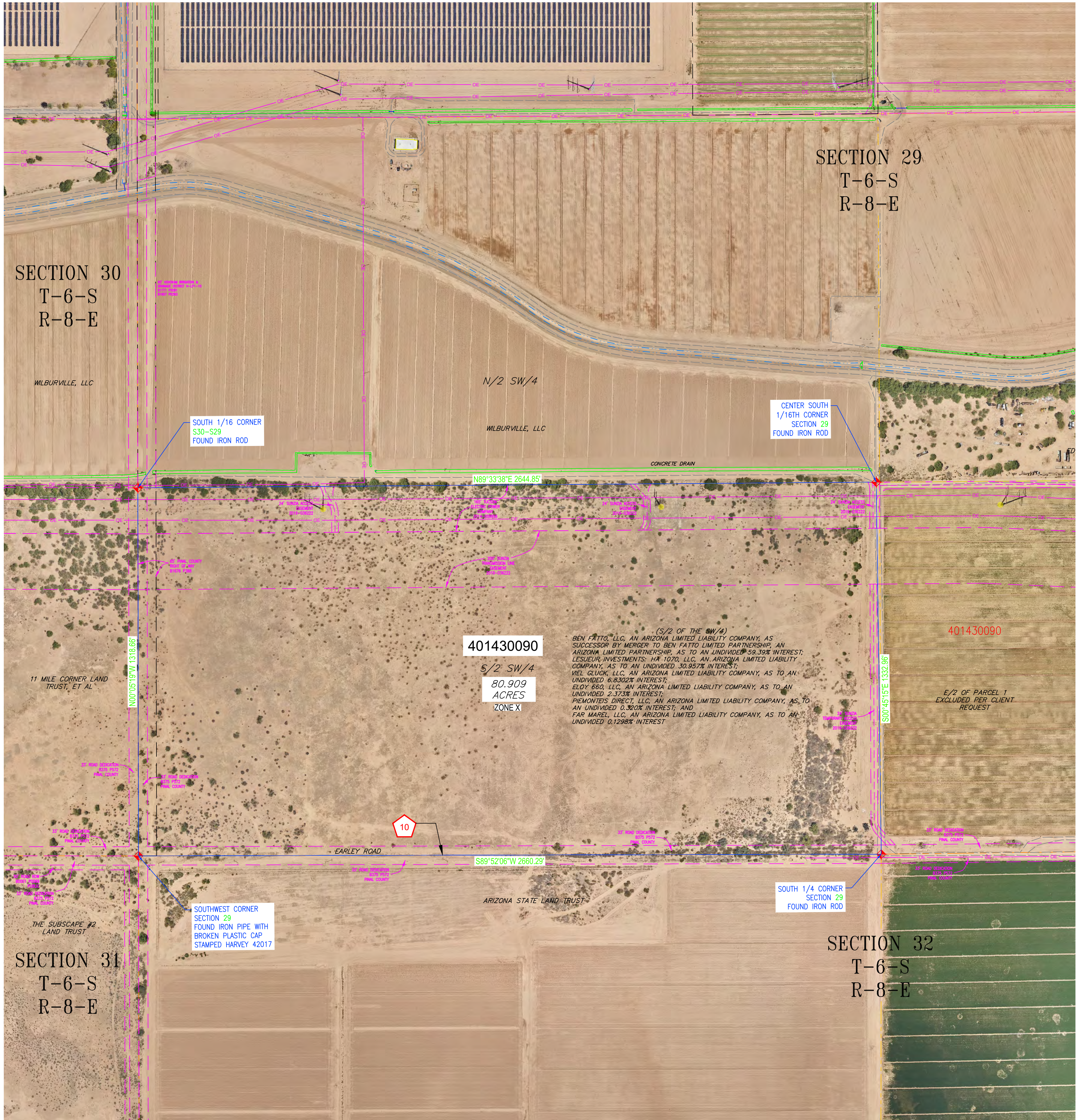
JOB NO.: 1021060099 FIELD BOOK DENVER
DRAFT JFW CHECKED SGR
DATE 02/18/2022 REV. BH
DATE 08/04/2022 REV. ERH
DATE 09/08/2022 REV. ERH
FILE: 1021060099/JFW-SUNZIA-WESTERN INTERCONNECT

SHEET TITLE
ALTA/NSPS SURVEY

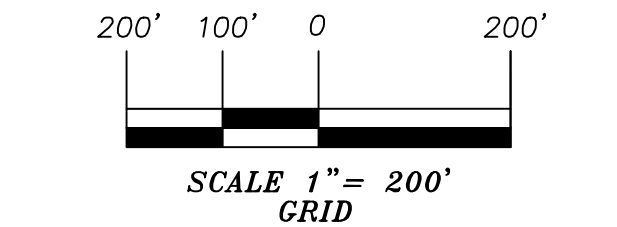
SHEET NUMBER

1 OF 2

PROVISIONAL & CONFIDENTIAL



SUNZIA WEST
CONVERTER
STATION



BEARINGS, DISTANCES, COORDINATES AND ACREAGE SHOWN HEREON ARE GRID, NAD83(2011), ARIZONA CENTRAL ZONE, INTL. FEET.

- LEGEND**
- MONUMENT FOUND AS NOTED
 - POWER POLE
 - OVERHEAD ELECTRIC LINE
 - DOWN GUY
 - WIRE FENCE
 - PIPELINE
 - SURFACE PIPELINE
 - WATER LINE
 - WATER VALVE/METER
 - IRRIGATION SPINULE
 - WINDMILL
 - WATER WELL
 - GIS METER
 - FIBER OPTIC/TELEPHONE EQUIPMENT BOX/MARKER

C/L CENTERLINE
TYP. TYPICAL
P.O.B. POINT OF BEGINNING OF LEGAL DESCRIPTION
P.O.B. POINT OF BEGINNING OF LEGAL DESCRIPTION
T-LINE OVERHEAD ELECTRIC TRANSMISSION LINE (BRC-DIST.) RECORD CALL

- SUBJECT TRACT BOUNDARY
- QUARTER SECTION-ADJACENT LINE
- SECTION LINE
- HIGHWAY/ROAD R-D-W LINE
- FLOOD HAZARD ZONE LINE
- EASEMENT LINE
- GRAVEL/DIRT ROAD

TITLE CO. AMTRUST TITLE INSURANCE CO.
TITLE FILE # ATIC-20216-AZ-56 Rev. 2
EFFECTIVE DATE AUGUST 15, 2022 8:00AM
VERSION 1
SCHEDULE A PG 1
SCHEDULE B PG 1
NOTES PG 1

SEP. 8, 2022
ALTA/NSPS LAND TITLE
SURVEY MAP OF THE
S/2 OF THE SW/4
SECTION 29, T-6-S,
R-8-E OF THE GILA
AND SALT RIVER BASE
AND MERIDIAN
PINAL COUNTY,
ARIZONA



555 Zang St.
Suite 210,
Lakewood CO. 80228
Ofc: 303.988.5852
email: info@sam.biz



JOB NO.: 1021060099 FIELD BOOK DENVER
DRAFT JFW CHECKED SGR
DATE 02/18/2022 REV. BH
DATE 08/04/2022 REV. ERH
DATE 09/08/2022 REV. ERH
FILE: 1021060099/JFW-SUNZIA-WESTERN INTERCONNECT

SHEET TITLE
ALTA/NSPS SURVEY
SHEET NUMBER
2 OF 2

11.0 SUB1_PROPERTY OWNERS

- 11.1 Submit a list of all property owners within 600' (feet) of the subject property boundary showing name, mailing address and tax parcel numbers. This list must be obtained within 30 days prior to application submission. A map showing the 600' boundary and parcels must be included as well (a tax assessor parcel map is acceptable). - (this list is a separate list from the "neighborhood/community meeting list of 1,200' however use page 5 of this application).**

A list of property owners within 600 feet is attached and a map showing parcel boundaries has been included as well.

PROPERTY OWNERSHIP LIST

(Required for filing all applications)

Instructions: Print Name, Address, City, State, Zip Code and Tax Parcel Number for each property owner within 600/1,200 (circle one) feet of the subject parcel boundary. Feel free to attach a separate list if generated digitally. Please see "How to use the Buffer Tool" on our FAQ's page if you are generating the list.

Parcel No.: 40144011B
Name: 11 Mile Corner Land Trust, et al : Tammy Sheele
Address: 20301 E. Superstition Dr.
City/ST/Zip: Queen Creek, AZ 85142

Parcel No.: 401430080
Name: Wilburville, LLC : Marvin Wuertz
Address: 2487 E. Highway 287
City/ST/Zip: Casa Grande, AZ 85194

Parcel No.: 401460010
Name: Ben Fatto LTD Pship, Etal
Address: Lesueur Inv: HA 1070 LLC; Dilla LLC, Et Al 1223 S Clearview Ave Ste 103
City/ST/Zip: Mesa, Arizona 85209

Parcel No.: 401691000
Name: The Sunscape #2 Land Trust : R. J. McBride, Trustee
Address: PO Box 9252
City/ST/Zip: Chandler Heights, AZ 85227

Parcel No.: 401430070
Name: Quick Draw Farm, LLC
Address: 2487 E. Highway 287
City/ST/Zip: Casa Grande, AZ 85194

Parcel No.: 401430090
Name: Ben Fatto Limited Partnership
Address: 1223 S Clearview Ave Ste 114
City/ST/Zip: Mesa, AZ 85209

Parcel No.: 40144011A
Name: Wilburville, LLC : Marvin Wuertz
Address: 2487 E. Highway 287
City/ST/Zip: Casa Grande, AZ 85194

Parcel No.: ASL11100.060832
Name: Arizona State Land Department, Tenant: Brandon Salmons Et al
Address: 1616 W Adams St.
City/ST/Zip: Phoenix, AZ 85007

Parcel No.: AZ-PINAL
Name: Pinal County : Yvonne Hernandez
Address: 31 N Pinal St., Bldg F
City/ST/Zip: Florence, AZ 85132

Parcel No.: 40143006A & 40143006B
Name: PAUL F & MELANIE A EDWARDS
Address: 22301 W LOWER BUCKEYE RD
City/ST/Zip: BUCKEYE, AZ 85326

I hereby verify that the name list above was obtained on the 22 day of August, 20 22, at the office of Pinal County Assessor Data - online and is accurate and complete to the best of my knowledge.
(Source of Information)

On this 22 day of August, 20 22, before me personally appeared Michael Doyle
(Name of signor)

Signature Michael Doyle Date 8/22/2022

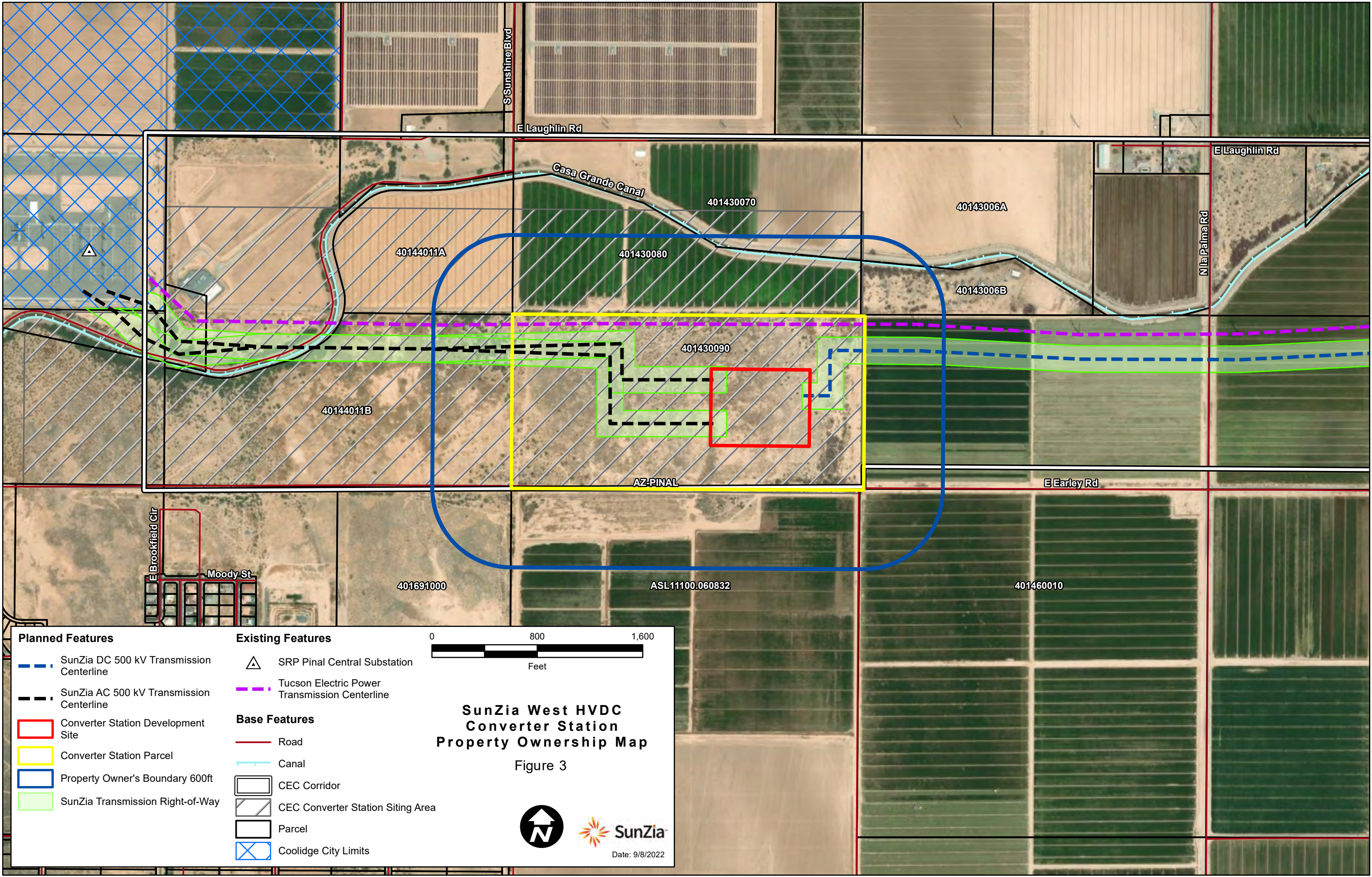
State of Texas
County of Travis)ss.

My Commission Expires 5/31/2025



(SEAL)

Signature of Notary Public [Signature]



12.0 SUB1_MASTER PLANS

12.1 Submit separate Preliminary Reports or Master Plans for:

STORMWATER DRAINAGE

Stormwater drainage is addressed in the Preliminary Drainage Report. A Master Plan for Stormwater drainage is not applicable to the subject property.

WASTEWATER AND DOMESTIC WATER SERVICE

Not applicable to the subject property.

13.0 SUB1_ADDITIONAL MATERIALS FOR COMMERCIAL AND INDUSTRIAL USES

13.1 COMMERCIAL USES:

Not applicable to the subject property.

13.2 INDUSTRIAL USES:

Not applicable to the subject property.

13.3 STANDARDS OF:

PINAL COUNTY DEVELOPMENT SERVICES CODE:	GENERAL RURAL ZONING/PAD REQUIREMENTS	PLAN FOR DEVELOPMENT
Height	2.40.020 Maximum height of any structure shall be 30 feet.	The Applicant is requesting a PAD Overlay District for the sole purpose of deviating from the maximum height standard in the (GR) zoning category for several buildings within a new proposed Converter Station.
Open space	2.176.100 All residential portions of a PAD overlay zoning district shall preserve a required percentage of open space as shown in PCDSC 2.176.130.	Not Applicable
Buffering	2.40.020 Minimum front yard: 40 feet. Minimum side yards: 20 feet each. Minimum rear yard: 40 feet.	Minimum 350 feet from property boundaries
Landscaping	2.176.060. <i>Landscaping of individual lots by developer.</i> Landscaping shall consist primarily of "low water use" ground covers, trees, shrubs, and plants and with sufficient permanent irrigation to properly maintain all vegetation.	See response to item 2.18
Pedestrian & vehicular circulation	2.176.170 A multi-use path and trail system shall be developed as part of the pedestrian circulation system for all residential PAD overlay zoning districts.	The proposed streets and thoroughfares are suitable and adequate to serve the proposed uses of the Converter Station.
Off-street parking & loading (the PAD document cannot alter minimum requirements for parking)	2.140.010 Entrances and exits to parking lots and other parking facilities shall be provided only at defined entry and exit locations approved by the Pinal County public works department. 2.140.0120 Industrial minimum requirements: One per 1,000 square feet of total floor area or one per three employees in the largest working shift, whichever is greater 2.140.030 Where parking space is required, the surface of such space shall be paved as specified by the Pinal County public works department. All off-street parking areas shall comply with ADA (American with Disabilities Act) standards for accessible design.	Parking requirements will be met and are shown on Site Plan.
Signs	2.145.110 Permanent and temporary signs are permitted as stipulated in the PAD, or special use permit approval, or (if not stipulated) consistent with the regulations of the underlying zoning district. (Ord. No. PZ-C-002-12 , § 17; Ord. No. 61862, § 2211)	Not Applicable
Nuisance controls	12.10.030A A person, firm or corporation shall have committed a civil violation of this chapter if such a person places, permits or provides for rubbish, trash, weeds, filth, debris, or dilapidated buildings to remain upon property of which they are owner, lienholder, lessee or occupant, or upon contiguous sidewalks, streets or alleys dedicated and open to the public.	Site will be maintained by operations personnel daily.

14.0 SUB1_COMPREHENSIVE PLAN COMPLIANCE CHECKLIST

14.1 Complete and submit the “Comprehensive Plan Compliance Checklist”

See prior response to Section 2.12 – Conformance with Comprehensive Plan.

15.0 SUB1_AUTOCAD

Site Plan drawings are attached in Section 5 and 8.

APPENDIX A PROPERTY OWNERSHIP AGREEMENTS AND AUTHORIZATION FORMS

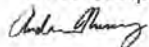
I certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed. All notices will be sent to the applicant unless otherwise directed in writing

SunZia Transmission LLC

1088 Sansome Street, San Francisco, CA 94111

Name of Applicant

Address



Andrew Murray, Authorized Signatory

natalie.mccue@patternenergy.com 281-536-0247

Signature of Applicant

E-Mail Address

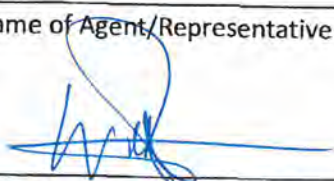
Phone Number

Ralph Pew

1744 S Val Vista Dr, Ste 217, Mesa, AZ 85204

Name of Agent/Representative

Address



ralph.pew@pewandlake.com

480-461-4670

Signature of Agent/Representative

E Mail Address

Phone Number

The Agent/Representative has the authority to act on behalf of the landowner/applicant, which includes agreeing to stipulations. The agent will be the contact person for Planning staff and must be present at all hearings. Please use attached Agency Authorization form, if applicable.

inSuar Investments HA 1070, LLC, Eloy 660, LLC, Ben Fatto Limited Partnership, Andama Limited Partnership

3850 E. Baseline Road, Suite 114 Mesa, AZ 85206

Name of Landowner

Address



ty@lesueurinvestments.com

480-424-3400

Signature of Landowner

E-Mail Address

Phone Number

If landowner is not the applicant, then applicant must submit a signed notarized consent form from the landowner with this application. Please use attached Consent to Permit form, if applicable.

AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

Viel Gluck, LLC an Arizona limited liability company, as successor by Merger to Viel Gluck Limited Partnership

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

Hereinafter referred to as "Owner," is/are the owner(s) of 80 acres located at
S1/2 of the SW1/4 of Section 29, T06S, R08E, and further identified

[Insert Address of Property]

As assessor parcel number 401-43-009 and legally described as follows:

[Insert Parcel Number]

Insert Legal Description Here OR Attach as Exhibit A

Said property is hereinafter referred to as the "Property."

Owner hereby appoints Pew & Lake, PLC

[Insert Agent's Name. If the Agent is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

**(Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE)**

[Signature]

[Signature]

[Address]

[Address]

Dated: _____

Dated: _____

STATE OF _____)
) ss.

(SEAL)

COUNTY OF _____)

The foregoing instrument was acknowledged before me, this ____ day of _____, 20____
by _____

My Commission Expires _____

Printed Name of Notary

Signature of Notary

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

The appropriate corporate officer or trustee signs this signature block NOT the block on the previous page

Viel Gluck, LLC, an Arizona limited liability company
[Insert Company's or Trust's Name]
By: B.A. Bowden
[Signature of Authorized Officer, or Trustee]
Its: Manager of CB Vineyard Group, LLC, Manager
[Insert Title]

Dated: 09/14/2022

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

The foregoing instrument was acknowledged before me, this 14th day of September, 2022 by
Brent A. Bowden, Manager of CB Vineyard Group, LLC, Manager of
[Insert Signor's Name] [Insert Title]
Viel Gluck, LLC, an Arizona limited liability company an,
[Name of Company or Trust] [Insert State of Incorporation, if applicable]

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires:



Terri Newman
Printed Name of Notary

Terri Newman
Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF _____)
) ss.
COUNTY OF _____)

(Seal)

The foregoing instrument was acknowledged before me, this _____ day of _____, 20____ by
_____, who acknowledges himself/herself to be
[Insert Signor's Name]

_____, of _____
[Title of Office Held] [Second Company]

As _____ for _____, and who being
[i.e. member, manager, etc.] [Owner's Name]

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires _____

Printed Name of Notary

Signature of Notary

AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

Ben Fatto, LLC an Arizona limited liability company, as successor by Mergert to Ben Fatto Limited Partnership

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

Hereinafter referred to as "Owner," is/are the owner(s) of 80 acres located at
S1/2 of the SW1/4 of Section 29, T06S, R08E, and further identified

[Insert Address of Property]

As assessor parcel number 401-43-009 and legally described as follows:
[Insert Parcel Number]

Insert Legal Description Here OR Attach as Exhibit A

Said property is hereinafter referred to as the "Property."

Owner hereby appoints Pew & Lake, PLC

[Insert Agent's Name. If the Agent is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

**[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]**

[Signature]

[Signature]

[Address]

[Address]

Dated: _____

Dated: _____

STATE OF _____)
) ss.
COUNTY OF _____)

(SEAL)

The foregoing instrument was acknowledged before me, this ____ day of _____, 20____
by _____

My Commission Expires _____

Printed Name of Notary

Signature of Notary

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

The appropriate corporate officer or trustee signs this signature block NOT the block on the previous page

Ben Fatto, LLC, an Arizona limited liability company
By: Craig D Cardon [Insert Company's or Trust's Name]
[Signature of Authorized Officer, or Trustee]
Its: Manager of Cardon Hiatt Investments, LLC, Manager of CH Vineyard Group, LLC, Manager
[Insert Title]

Dated: 09/14/2022

STATE OF ARIZONA)
) ss.

COUNTY OF MARICOPA)

The foregoing instrument was acknowledged before me, this 14 day of September, 20 22 by
Craig D. Cardon, Manager of Cardon Hiatt Investments, LLC, Manager of CH Vineyard Group, LLC, Manager of
[Insert Signor's Name] [Insert Title]
Ben Fatto, LLC, an Arizona limited liability company an,
[Name of Company or Trust] [Insert State of Incorporation, if applicable]

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the
purposes stated therein.

My Commission Expires: 7-16-23

Terri Newman
Printed Name of Notary

Terri Newman
Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF)
) ss.
COUNTY OF)



(Seal)

The foregoing instrument was acknowledged before me, this _____ day of _____, 20____ by
_____, who acknowledges himself/herself to be
[Insert Signor's Name]

_____, of _____
[Title of Office Held] [Second Company]

As _____ for _____, and who being
[i.e. member, manager, etc.] [Owner's Name]

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated
therein.

My Commission Expires _____

Printed Name of Notary

Signature of Notary

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

Piemonteis Direct, LLC

[Insert Name -- If a Corporation, Partnership or Association, include State of Incorporation]

[Insert Address of Property]

401-43-009

Owner hereby appoints Pew & Lake, PLC

**[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]**

Page | 4

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

The appropriate corporate officer or trustee signs this signature block NOT the block on the previous page

Piemonteis Direct, LLC, an Arizona limited liability company

[Insert Company's or Trust's Name]

By: _____

[Signature of Authorized Officer, or Trustee]

Its: Manager

[Insert Title]

Dated: 09/14/2022

STATE OF ARIZONA)

) ss.

COUNTY OF MARICOPA)

The foregoing instrument was acknowledged before me, this 14 day of September, 20 22 by

Grif C. Hiatt

Manager

[Insert Signor's Name]

[Insert Title]

Piemonteis Direct, LLC

an Arizona limited liability company

an,

[Name of Company or Trust]

[Insert State of Incorporation, if applicable]

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires: 7.18.23

Terri Newman

Printed Name of Notary

Terri Newman

Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF _____)

) ss.

COUNTY OF _____)



(Seal)

The foregoing instrument was acknowledged before me, this _____ day of _____, 20____ by _____, who acknowledges himself/herself to be

[Insert Signor's Name]

_____, of _____

[Title of Office Held]

[Second Company]

As _____ for _____, and who being

[i.e. member, manager, etc.]

[Owner's Name]

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires _____

Printed Name of Notary

Signature of Notary

AGENCY AUTHORIZATION

(To be completed by all landowners who do not represent themselves. Instructions for completing required information are in bold and brackets below lines. If applicant is a company, corporation, partnership, joint venture, trustee, etc., please use the corporate signature block and have the notary fill in the notarization section for corporations not individuals and cannot be submitted digitally)

TO: Pinal County Community Development
P.O. Box 2973
Florence, AZ 85232

Far Marel, LLC **an Arizona limited liability company**

[Insert Name -- If a Corporation, Partnership or Association, Include State of Incorporation]

Hereinafter referred to as "Owner," is/are the owner(s) of 80 acres located at
S1/2 of the SW1/4 of Section 29, T06S, R08E, and further identified

[Insert Address of Property]

As assessor parcel number **401-43-009** and legally described as follows:

[Insert Parcel Number]

Insert Legal Description Here OR Attach as Exhibit A

Said property is hereinafter referred to as the "Property."

Owner hereby appoints Pew & Lake, PLC

[Insert Agent's Name. If the Agent Is a Company, Insert Company Name Only]

Hereinafter referred to as "Agent," to act on Owner's behalf in relation to the Property in obtaining approval from Pinal County for a minor land division and to file applications and make the necessary submittals for such approvals.

**[Individual PROPERTY OWNER signature block and acknowledgment.
DO NOT SIGN HERE IF SIGNING AS AN OFFICER OF A CORPORATION SIGN NEXT PAGE]**

[Signature]

[Signature]

[Address]

[Address]

Dated: _____

Dated: _____

STATE OF _____)
) ss.

(SEAL)

COUNTY OF _____)

The foregoing instrument was acknowledged before me, this _____ day of _____, 20____
by _____

My Commission Expires _____

Printed Name of Notary

Signature of Notary

CORPORATE PROPERTY OWNER SIGNATURE BLOCK AND ACKNOWLEDGMENT

The appropriate corporate officer or trustee signs this signature block NOT the block on the previous page

Far Marel, LLC, an Arizona limited liability company

[Insert Company's or Trust's Name]

By:

B.A. Bowden

[Signature of Authorized Officer, or Trustee]

Its: Manager

[Insert Title]

Dated: 09/14/2022

STATE OF ARIZONA)

) ss.

COUNTY OF MARICOPA)

The foregoing instrument was acknowledged before me, this 14 day of September, 2022 by

Brent A. Bowden, Manager

[Insert Signor's Name]

[Insert Title]

Far Marel, LLC

an Arizona limited liability company

an,

[Name of Company or Trust]

[Insert State of Incorporation, if applicable]

And who being authorized to do so, executed the foregoing instrument on behalf of said entity for the purposes stated therein.

My Commission Expires: 7.18.23

Terri Newman

Printed Name of Notary

Terri Newman

Signature of Notary

ALTERNATE: Use the following acknowledgment only when a second company is signing

On behalf of the owner:

STATE OF _____)

) ss.

COUNTY OF _____)



(Seal)

The foregoing instrument was acknowledged before me, this _____ day of _____, 20____ by

_____, who acknowledges himself/herself to be

[Insert Signor's Name]

_____, of _____

[Title of Office Held]

[Second Company]

As _____ for _____, and who being

[i.e. member, manager, etc.]

[Owner's Name]

Authorized to do so, executed the foregoing instrument on behalf of said entities for the purposes stated therein.

My Commission Expires _____

Printed Name of Notary

Signature of Notary

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY PLANNING AND ZONING COMMISSION AT 9:00 A.M. ON THE **15th** DAY OF **DECEMBER, 2022**, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A **NON-MAJOR COMPREHENSIVE PLAN AMENDMENT, AND A PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT**, TO AMEND THE PINAL COUNTY COMPREHENSIVE PLAN.

PZ-PA-014-22 - PUBLIC HEARING/ACTION: Viel Gluck, LLC, Far Marel LLC, Piemonteis Direct, LLC and Ben Fatto, LLC, landowners, Pew & Lake, PLC, Ralph Pew agent, requesting, a Non-Major Comprehensive Plan amendment to re-designate 80± acres from **Moderate Low Density Residential** land use designation to **General Public Facilities/Services** situated in Section 29, Township 06, South, Range 08 East, G&SRB&M, west portion of tax parcel 401-43-0090 (legal on file), located east of Sunshine Blvd and north of Earley road, in Pinal County.

PZ-PD-046-22 – PUBLIC HEARING/ACTION: Viel Gluck, LLC, Far Marel LLC, Piemonteis Direct, LLC and Ben Fatto, LLC, landowners, Pew & Lake, PLC, Ralph Pew agent, requesting approval of a **Planned Area Development (PAD) Overlay District** on 80± acres in General Rural zoning district, to modify the development standards, situated in the Section 29, T06S, R08E G&SRB&M, west portion of tax parcel 401-43-0090 (legal on file), located east of Sunshine Blvd and north of Earley road, in Pinal County.

At least 24 hours prior to the public hearing, documents pertaining to these requests are available for public inspection at the Pinal County Planning and Development Department, Pinal County Complex, 85 N. Florence Street, Florence, Arizona, Monday through Friday between the hours of 8:30 a.m. and 4:30 p.m. and on the internet at:

<http://pinalcountyz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#>

ALL PERSONS INTERESTED IN THESE MATTERS MAY APPEAR AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE AND STATE THEIR APPROVAL OR OBJECTION TO THE PROPOSED AMENDMENT. PROTESTS TO THE REZONING AND/OR PAD OVERLAY ZONE BY 20% OF THE PROPERTY OWNERS BY AREA AND NUMBER WITHIN 300 FEET OF THE PROPERTY PROPOSED FOR REZONING WILL REQUIRE AN AFFIRMATIVE VOTE OF THREE-FOURTHS OF ALL MEMBERS OF THE BOARD OF SUPERVISORS FOR APPROVAL.

DATED ON THIS **11th** DAY OF **November, 2022** by Pinal County Planning & Development Dept.



Brent Billingsley, Community Development Director

A WRITTEN STATEMENT OF APPROVAL OR PROTEST MAY BE FILED WITH THE PINAL COUNTY PLANNING & DEVELOPMENT DEPARTMENT, P.O. BOX 2973, FLORENCE AZ 85132 NO LATER THAN 5:00 P.M. ON DECEMBER 5, 2022. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

- 1) The Planning Case Number(s) See above
- 2) Your name, address, telephone number and property tax parcel number (print or type)
- 3) Whether you support or oppose the request
- 4) A brief statement of reasons for supporting or opposing the request
- 5) Whether or not you wish to appear and be heard at the hearing.

NO LATER THAN 5:00 PM ON DECEMBER 05, 2022

Contact for this matter: Sangeeta Deokar

E-mail Address: Sangeeta.deokar@pinalcountyz.gov

Phone # (520) 866-6641 Fax # (520) 866-6530

[Anything below this line is not for publication.]

PUBLISH ONCE:

Florence Reminder & Blade Tribune;

Tri Valley Dispatch

STATE OF ARIZONA

COUNTY OF PINAL

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY PLANNING AND ZONING COMMISSION AT 9:00 A.M. ON THE 15th DAY OF DECEMBER, 2022, AT THE PINAL COUNTY ADMINISTRATIVE COMPLEX, IN THE BOARD OF SUPERVISORS HEARING ROOM, 135 N. PINAL STREET, FLORENCE, ARIZONA, TO CONSIDER THE APPLICATION FOR A NON-MAJOR COMPREHENSIVE PLAN AMENDMENT, AND A PLANNED AREA DEVELOPMENT (PAD) OVERLAY DISTRICT, TO AMEND THE PINAL COUNTY COMPREHENSIVE PLAN.

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/s/Brent Billingsley
Brent Billingsley, Community De-

velopment Director

A WRITTEN STATEMENT OF APPROVAL OR PROTEST MAY BE FILED WITH THE PINAL COUNTY PLANNING & DEVELOPMENT DEPARTMENT, P.O. BOX 2973, FLORENCE AZ 85132 NO LATER THAN 5:00 P.M. ON MARCH 7, 2022. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

- 1) The Planning Case Number(s) See above
 - 2) Your name, address, telephone number and property tax parcel number (print or type)
 - 3) Whether you support or oppose the request
 - 4) A brief statement of reasons for supporting or opposing the request
 - 5) Whether or not you wish to appear and be heard at the hearing.
- NO LATER THAN 5:00 PM ON DECEMBER 05, 2022 Contact for this matter: Sangeeta Deokar
E-mail Address: Sangeeta.deokar@pinalcountyaz.gov Phone # (520) 866-6641 Fax # (520) 866-6530

No. of publications: 1; date of publication: Nov. 24, 2022.

SS.

Affidavit of Publication

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Tri-Valley Dispatch, a newspaper published at Casa Grande, Pinal County, Arizona, Thursday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publications thereof having been on the following date:

11/24/2022

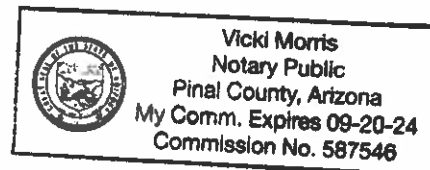
TRI-VALLEY DISPATCH

By Kara K. Cooper
agent and/or publisher of the Tri-Valley Dispatch

Sworn to before me this 1st
day of Dec. A.D., 2022

Vicki Morris

Notary Public in and for the County
Of Pinal, State of Arizona



Pinal County
AFFIDAVIT OF POSTING BROADCAST SIGN

I, the applicant's representative for case # PZ-PD-046-22 & PZ-PA-014-22, personally caused at least one sign to be posted in a visible place on or near the proposed project site at W of NWC Early Rd & La Palma Rd, at least 28 days before the Planning and Zoning Commission Public Hearing, in Pinal County.

See attached photo exhibit.

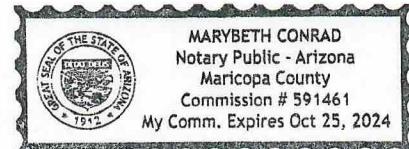
Dynamite Signs
Sign Company Name

Meghan Liggett
Sign Company Representative

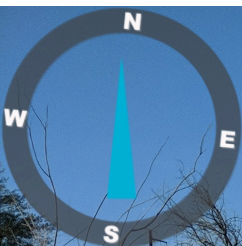
Subscribed and sworn to be on 11/17/22 by Meghan Liggett.

IN WITNESS WHEREOF, I Hereto set my hand and official seal.

Marybeth Conrad
Notary Public



My Commission expires: 10-25-24



PINAL COUNTY *Public Hearings*

Planned Area Development Overlay District Case Number: PZ-PD-046-22

Existing Zoning: General Rural

Proposed Zoning: General Rural PAD

Non-Major Comprehensive Plan Amendment Case Number: PZ-PA-014-22

Existing Comprehensive Plan Designation: Moderate Low
Density Residential

Proposed Comprehensive Plan Designation: General Public
Facilities/Services

Acreage: 80±

Applicant Name: SunZia Transmission LLC

Applicant Phone Number: 480-461-4670

Case Information Available at Pinal County Planning & Development Services
(520) 866-6442

*Public Hearing
Information*



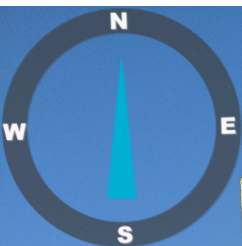
Nov 17, 2022 3:55:52 PM
354° N

2162-752 East Earley Road
Casa Grande
Pinal County
Arizona



E Earley Rd

Google



PINAL COUNTY *Public Hearings*

Planned Area Development Overlay District Case Number: PZ-PD-046-22

Existing Zoning: General Rural

Proposed Zoning: General Rural PAD

Non-Major Comprehensive Plan Amendment Case Number: PZ-PA-014-22

Existing Comprehensive Plan Designation: Moderate Low
Density Residential

Proposed Comprehensive Plan Designation: General Public
Facilities/Services

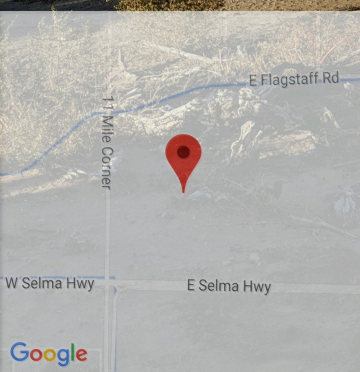
Acreage: 80±

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Applicant Phone Number: 480-461-4670

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Public Hearing
Information



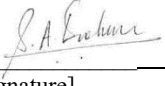
Nov 17, 2022 4:12:57 PM
86° E

2344 West Selma Highway
Casa Grande
Pinal County
Arizona

CERTIFICATION OF POSTING

I hereby certify that the notice(s) shown below was/were posted on the property described in the notice on 11/22/22.

COMMUNITY DEVELOPMENT DEPARTMENT

BY:  Sangeeta Deokar, Planner DATED: 12/8/2022
[signature] [print name and title]

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DATED ON THIS 11th DAY OF November, 2022 by Pinal County Planning & Development Dept.



Brent Billingsley, Community Development Director

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NO LATER THAN 5:00 PM ON DECEMBER 05, 2022

Contact for this matter: Sangeeta Deokar
E-mail Address: Sangeeta.deokar@pinalcountyz.gov
Phone # (520) 866-6641 Fax # (520) 866-6530

[Anything below this line is not for publication.]

PUBLISH ONCE:
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