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# **Application for a Certificate of Environmental Compatibility**

## **Project Red Hawk**

Prepared for:

**Arizona Power Plant and Transmission Line Siting Committee**

Prepared by:

**Salt River Project Agricultural Improvement and Power District**

**Volume 1 of 1**

**Date:** September 2019

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## LIST OF ACRONYMS AND ABBREVIATIONS

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ABTO	Abert's Towhee
ACC	Arizona Corporation Commission
A.D.	Anno Domini
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
AM	Amplitude Modulation
APE	Area of Potential Effects
APLIC	Avian Power Line Interaction Committee
ARHP	Arizona Register of Historic Places
ARS	Arizona Revised Statutes
ASM	Arizona State Museum
AZDA	Arizona Department of Agriculture
B.C.	Before Christ
BCC	Birds of Conservation Concern
BLM	Bureau of Land Management
BUOW	Western Burrowing Owl
CEC	Certificate of Environmental Compatibility
dB	Decibels
dBA	A-weighted Decibels
DNL	Day/Night Average Noise Level
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FEHA	Ferruginous Hawk
FHWA	Federal Highway Administration
FM	Frequency Modulation
GIS	Geographical Information Systems
GLO	General Land Office
Hz	Hertz
IPaC	Information for Planning and Consulting
KOP	Key Observation Point
kV	Kilovolt
MCDOT	Maricopa County Department of Transportation
NEPA	National Environmental Policy Act
NPL	Arizona Native Plant Law
NRHP	National Register of Historic Places
P-MIP	Pima-Maricopa Irrigation Project
PAD	Planned Area Development
PEFA	American Peregrine Falcon
PEP	Project Evaluation Program
Project	Project Red Hawk
ROW	Right-of-way
RWCD	Roosevelt Water Conservation District
SAVS	Savannah Sparrow
SGCN	Species of Greatest Conservation Need

## List of Acronyms

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SHPO	State Historic Preservation Office
SPRR	Southern Pacific Railroad Company
SR	State Route
SRP	Salt River Project Agricultural Improvement and Power District
T&E	Threatened and Endangered
T&PRR	Texas and Pacific Railroad Company
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSCA	Wildlife of Special Concern in Arizona

## INTRODUCTION

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The Salt River Project Agricultural Improvement and Power District (SRP), under Arizona Revised Statute §40-360 *et seq.*, submits this application for a Certificate of Environmental Compatibility (CEC or Application) for Project Red Hawk (Project). The Project is designed to serve a large data center being developed and owned by a customer. The Project is located on 187 acres owned by the customer in Mesa (the Project Site).

This Application requests approval for construction of electrical facilities to provide requested energy for the data center. The facilities will interconnect to the existing SRP Browning-Santan 230 kilovolt (kV) circuit and will include a switchyard and multiple transformers, located as needed throughout the Project Site. Each transformer will be connected to the switchyard by a 230kV circuit. The Project will be situated on the northwest corner of South Sossaman Road and East Elliot Road, within the City of Mesa, Arizona and Maricopa County, Arizona and all facilities will be constructed on the Project Site.

As required by Arizona Administrative Code R14-3-219, this CEC Application is structured as follows:

- Exhibit A – Project Location and Land Use
- Exhibit B – Environmental Studies
- Exhibit C – Areas of Biological Wealth
- Exhibit D – Biological Resources
- Exhibit E – Scenic Areas, Historic Sites and Structures, Archaeological Sites
- Exhibit F – Recreational Purposes and Aspects
- Exhibit G – Concepts of Typical Facilities
- Exhibit H – Existing Plans
- Exhibit I – Noise Emissions and Communication Interference
- Exhibit J – Special Factors

A list of acronyms is provided following the Table of Contents.

### Project Description

This Application presents to the Arizona Power Plant and Transmission Line Siting Committee (Committee) a Project designed to meet the customer's need to facilitate better integration of electric system and load. The objective is to provide a level of reliability, efficiency, and redundancy to the customer beyond traditional configurations. This Project will further the reputation of the valley as a world class center for high tech development and will further the economic development plans of the City of Mesa.

The load proposed to be served by the facilities described by this Application will be contained within the 187 acre Project Site. The Project Site has recently been rezoned from Light Industrial and Planned Employment Park to Employment Opportunity to create the Red Hawk Employment Opportunity District. The City of Mesa approved the development plan for the data center

associated with the proposed Project. The proposed Project consists of a 230 kilovolt (kV) switchyard connected by two incoming 230kV transmission circuits and up to ten outgoing 230kV circuits, which will run to transformers in various locations on the Project Site. The existing Browning-Santan 230kV line will break into the new switchyard located on the northern portion of the Project Site. High voltage structures (230kV) will be constructed, as needed, to serve the transformers. The actual configuration will await the determination of customer need.

The Project will be located on land solely owned by the requesting customer or within SRP's existing right-of-way (ROW) in an area of Mesa which the City is actively marketing to high tech customers south of the existing SRP Browning-Santan high voltage transmission corridor.

**Figure 1** shows the Project Site and the surrounding area.

**Figure 2** depicts a closer view of the Project Site on an aerial basis.

In summary, the existing Browning-Santan 230kV line will break into a new switchyard on the customer's property. The switchyard will interconnect to multiple 230kV transformers, with the transformer low side voltage to be determined according to actual need. High voltage structures (230kV) will be constructed, as needed, to serve each transformer. It is estimated that the circuits will be supported by up to 22 structures having an approximate height of 130 feet.

The Project Site is in an area that the City of Mesa is targeting more high tech land uses and expects the areas to the south, west and east to transition to this new land use. The Project Site is bounded to the north by SRP's high voltage transmission corridor (one 500kV circuit, two 230kV circuits and one 69kV circuit) and then by residential development. However, the buffer of the existing transmission corridor will help to minimize any impact to these homes.

**Figure 3** is a land ownership map showing the major parcels and uses in the area.

SRP requests authorization to construct the facilities anywhere within the Project Site, as the customer's needs may dictate and requests a twenty year term.

## **Purpose and Need**

This Project is designed to efficiently and reliably provide large amounts of energy to expected customer uses. The Project will further the integration of the electric system and load to provide high levels of reliability and flexibility.

The Project supports Mesa's economic development plan. SRP's need for the Project draws on its dual role in the communities it serves – supporting long-term economic development and providing reliable power to its customers.

## **Summary of Public Process**

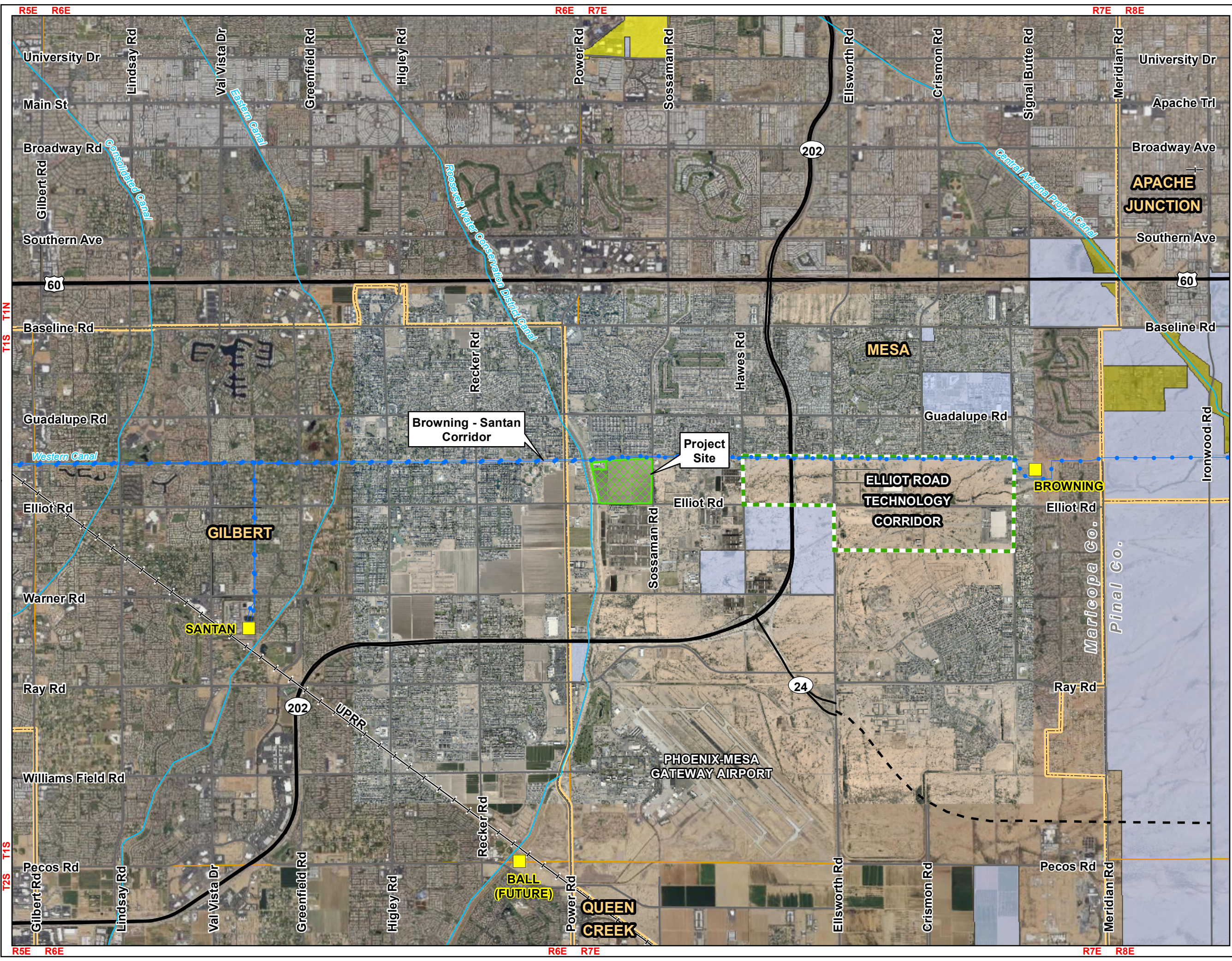
While this Project is to be constructed on land owned by the requesting customer and does not present traditional route option proposals, SRP has conducted a public process comprised of numerous outreach activities. The outreach process informed the public, public officials representing the region, jurisdictional agencies, key landowners and stakeholders. The process included briefings, post card mailings, phone calls and emails to inform the public. A 1-800 information line and a Project website were developed to allow members of the public to obtain information about the Project. This process is described in further detail in **Exhibit J**.

## **Summary of Environmental Compatibility**

The following provides a summary of the environmental compatibility of the Project sought in this Application:

- No significant or detrimental effects to fish, wildlife, plant life, and associated forms of life upon which they are dependent.
- No significant or detrimental effects associated with noise emission levels and interference with communication signals.
- Neither SRP nor jurisdictional agencies have any plans for future development of recreational facilities associated with the Project. Project implementation would be consistent with safety considerations and regulations.
- No significant or detrimental effects to existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the proposed site.
- The Project is environmentally compatible with the total environment of the area.
- No significant or detrimental effects to geology and soils, surface water, or groundwater quality and availability.





### Legend

- Existing / Future Substation
- Existing Transmission Lines
- US Route or State Highway
- Future State Highway 24
- Major Road
- Railroad
- Canal
- Municipal Boundary
- Project Site
- Elliot Road Technology Corridor
- Township / Range Boundary

### Jurisdictional Land Ownership

- Bureau of Land Management Land
- Bureau of Reclamation Land
- State Land

0 0.5 1 1.5 2  
Miles

SPCS NAD 83, AZ Central, US Ft.  
Data Sources: BLM, City of Mesa, ESRI, Maricopa Co., Pinal Co., SRP, Town of Gilbert, USGS.

#### ARIZONA

Map Extent

### PROJECT RED HAWK

#### FIGURE 1 REGIONAL OVERVIEW

Map Extent: Maricopa & Pinal Counties, AZ

Date: 9.17.19	Author: sjw
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- Legend**
- Existing 500 kV Transmission Line
  - Existing 230 kV Transmission Line
  - State Highway
  - Major Road
  - Canal
  - Municipal Boundary
  - Project Site
  - Elliot Road Technology Corridor

0 0.1 0.2 0.3 0.4 0.5  
Miles

SPCS NAD 83, AZ Central, US Ft.  
Data Sources: BLM, City of Mesa, ESRI, Maricopa Co., Pinal Co., SRP, Town of Gilbert, USGS.

**SRP**  
**PROJECT RED HAWK**  
**FIGURE 2**  
**PROJECT LOCATION**

Map Extent: Maricopa County, AZ

Date: 9.17.19 Author: sjw







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**APPLICATION**

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(Pursuant to Arizona Revised Statutes (A.R.S.) Sections 40-360.03 and 40-360.06)

***1. Name and address of the Applicant, or in the case of a joint project, the Applicants.***

Name: Salt River Project Agricultural Improvement and Power District (SRP)  
Address: 1500 North Mill Avenue  
Tempe, AZ 85281-1298

***2. Name, address and telephone number of a representative of the Applicant who has access to technical knowledge and background information concerning the application in question, and who will be available to answer questions or furnish additional information.***

Name: Kim Humphrey, PE, Manager Strategic System Projects  
Address: PO Box 52025, Phoenix 85072-2025  
Telephone: (602) 236-4451  
Fax: (602) 236-0180  
Email: Kim.Humphrey@srpnet.com

***3. State each date on which the Applicant has filed a Ten Year Plan in compliance with A.R.S. Section 40-360.02 and designate each such filing in which the facilities for which this Application is made were described. If they have not been previously described in a ten-year plan, state the reasons therefore.***

In accordance with A.R.S. Section 40-360.02, SRP files Ten Year Plans each year with the Arizona Corporation Commission (ACC). Because this Project is driven solely by customer need it was not filed in SRP's latest Ten Year Plan filed with the Arizona Corporation Commission on January 31, 2019. While this Project can be viewed largely similar to a distribution project, SRP plans to include the project in future Ten Year Plans.

***4. Description of the proposed facilities, including:***

***4.1 Description of electric generating plant.***

Not Applicable.

***4.2 Description of the proposed transmission lines.***

***4.2.1 General Description.***

The proposed Project consists of a 230 kilovolt (kV) switchyard connected by two incoming 230kV circuits and up to ten outgoing 230kV circuits, which will run to transformers in various locations on the Project Site. The existing Browning-Santan

230kV line will break into the new switchyard located on the northern portion of the Project Site. High voltage structures (230kV) will be constructed, as needed, to serve the transformers. The actual configuration will await the determination of customer need.

**4.2.1.1 *Nominal voltage for which the lines are designed.***

The lines are designed for a nominal voltage of 230kV.

**4.2.1.2 *Description of proposed structures.***

The Project proposes to use single shaft tubular steel structures (poles). The incoming 230kV transmission circuits will require replacement and new poles as necessary to break the existing Browning-Santan 230kV line into the switchyard, and related components. The outgoing circuits will require up to 22 poles, framed as single and/or double circuit as required by the design.

**4.2.1.3 *Description of proposed switchyards and substations.***

The proposed 230kV switchyard will be within the Project Site and will accommodate up to 12 230kV circuit terminations. The switchyard will include a control room, bus work, circuit breakers, conduits, relaying and communication equipment, and other related components. The switchyard will be enclosed by chain link fencing.

The 230kV switchyard will serve transformers located around the Project Site. Each transformer location will include a control room, bus work, circuit breakers, conduits, relaying and communication equipment, and other related components, and will be enclosed by chain link fencing.

**4.2.1.4 *Purpose for constructing proposed transmission lines.***

- This Project is designed to efficiently and reliably provide large amounts of energy to expected customer uses. The Project will further the integration of the electric system and load to provide high levels of reliability and flexibility.
- The Project will locate high voltage power transformers adjacent to electric loads, which may differ from typical configurations.

- The objective is to provide a level of reliability and redundancy to the customer beyond traditional configurations.

#### **4.2.2 General Location.**

##### **4.2.2.1 Description of the geographic points between which the transmission line will run.**

All components of the proposed Project will be built within SRP's existing right-of-way (ROW) or the 187 acre parcel located on the northwest corner of South Sossaman Road and East Elliot Road. The proposed switchyard will be located on the northern boundary of the parcel adjacent to the existing Browning-Santan 230kV line.

##### **4.2.2.2 Straight-line distance between such geographic points.**

The straight line distance is not known at this time but all components will be located on SRP's existing ROW or the 187 acre customer's private property.

##### **4.2.2.3 Length of the transmission line for each alternative route.**

Not Applicable.

#### **4.2.3 Detailed Dimensions.**

##### **4.2.3.1 Nominal width of Right-of-way (ROW) required.**

Each 230kV line (single or double circuit) will occupy a width between 80 and 100 feet within the Project Site.

##### **4.2.3.2 Nominal length of span.**

Span length is the distance between each pole. The nominal length of span may vary from approximately 600 feet to 800 feet depending on numerous factors, including the needs of the customer as they develop.

##### **4.2.3.3 Maximum height of supporting structures.**

The nominal height of the proposed structures would be 110 to 130 feet. The maximum height of the proposed structures would not exceed 160 feet.

**4.2.3.4 Minimum height of conductor above ground.**

The minimum height of the 230kV conductor above existing grade would be 22.5 feet.

**4.2.4 To the extent available, estimate costs of proposed transmission line and route, stated separately. (If Application contains alternative routes, furnish an estimate for each route and a brief description of the reasons for any variations in such estimates.)**

The costs related to the switchyard are estimated to be approximately \$36.5 million. This is an estimate only and actual costs will vary. Other Project costs are not known at this time.

**4.2.5 Description of the proposed route and substation locations.**

All components of the proposed Project will be built within SRP's existing ROW or the 187 acre parcel located on the northwest corner of South Sossaman Road and East Elliot Road, within the City of Mesa, Arizona and Maricopa County, Arizona.

**4.2.6 Land Ownership**

All components of the proposed Project will be built within SRP's existing ROW or the customer's private 187 acre parcel.

**5. Jurisdiction.**

**5.1 Areas of jurisdiction (as defined in A.R.S. Section 40-360) affected by this route.**

The proposed Project would be constructed within the jurisdiction of the City of Mesa, Arizona and Maricopa County, Arizona.

**5.2 Designation for proposed sites or routes, if any, which are contrary to the zoning ordinances or master plans of affected areas of jurisdiction.**

Not Applicable.

**6. Description of the environmental studies the Applicant has performed or intends to perform.**

KP Environmental, Inc. has conducted environmental studies, including field studies and routing analyses, to support this Application. Potential environmental effects of construction and implementation of the Project are included in the exhibits to this Application. In addition, a Class I Previous Cultural Resources Records Review has

been provided (See **Exhibit E-1**). Prior to construction, the Applicant will conduct a Class III pedestrian survey for disturbed areas of the parcel not previously surveyed.

**7. *Rationale for route selection/preference.***

The proposed Project described in this Application was selected and supported by environmental studies, customer needs and electrical system planning. Advantages of this Project include the following:

- This Application presents to the Committee with a plan for the integration of the electric system and load to better facilitate the customer's specific uses. The concept is to modify the usual substation location so that the electric loads can be located adjacent to the high voltage transformers at the request of the customer. The objective is to provide a level of reliability, efficiency, and redundancy to the customer beyond traditional configurations. This Project will further the reputation of the valley as a world class center for high tech development and will further the economic development plans of the City of Mesa.
- No significant or detrimental effects to fish, wildlife, plant life, and associated forms of life upon which they are dependent.
- No significant or detrimental effects associated with noise emission levels and interference with communication signals.
- Neither SRP nor jurisdictional agencies have any plans for future development of recreational facilities associated with the Project. Project implementation would be consistent with safety considerations and regulations.
- No significant or detrimental effects to existing scenic areas, historic sites and structures or archaeological sites at or in the vicinity of the Project Site.
- The Project is environmentally compatible with the total environment of the area.
- No significant or detrimental effects to geology and soils, surface water, or groundwater quality and availability.

Based on the information provided above, SRP hereby affirms, upon thorough expert scientific environmental evaluation and analysis, that the Project is environmentally compatible and respectfully requests the Committee issue a Certificate of Environmental Compatibility (CEC), with a term of 20 years.

By:

Kim Humphrey

ORIGINAL and 25 copies of the foregoing hand delivered and filed with the Director of Utilities, Arizona Corporation Commission, this September 23, 2019.