

Welcome

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Bienvenidos

(Hablamos Español)

Por Favor Regístrese



Our Energy Grid

How we deliver electric service to you

TEP
Tucson Electric Power

Natural Gas
Sundt Generating Station
in Tucson and others

Community Scale Solar
Wilmoth Energy Center
and others

Wind Resources
Oso Grande Wind
and others

Coal
Springerville Generating Station
and others

High Voltage Substation
Steps up voltage for transmission

High Voltage Transmission Lines
(500 kV / 345 kV / 230 kV 138 kV)

46 kV Substation
Steps down voltage

138 kV Substation
Steps down voltage

138 kV Substation
Steps down voltage

Switchyard

4 kV Distribution Lines

14 kV Distribution Lines

Homes

Businesses

Commercial Facilities

Homes

Businesses

Commercial Facilities

Industrial Facilities

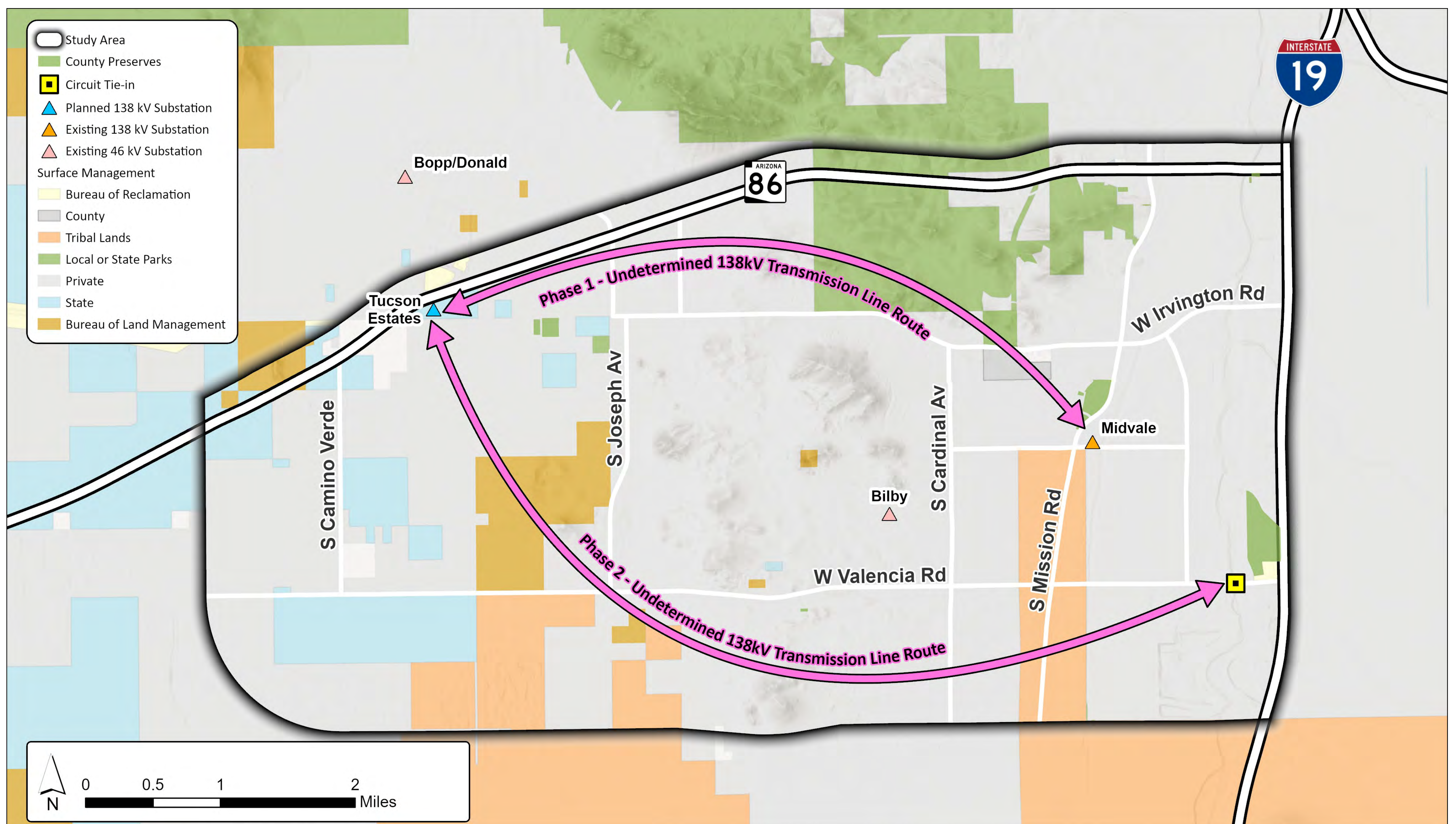
Generation

Transmission and Sub-Transmission

Distribution

Purpose

- Replace the 46 kV system with a new looped 138 kV transmission line and substation to support long-term reliability.



Project Map—Phase 1 and Phase 2 Conceptual Routes

Need

- Existing distribution system is supported by a radial 46 kV source.
- Existing system is at risk, with the potential for extended customer outages.

Benefits

- Upgrade from older lower voltage system, to modern 138 kV standard.
- Reduce outages and improve system reliability.
- Increase capacity to provide electrical service to existing and new customers.

Southwest Tucson Reliability Project



September 2026
CEC Application
Submittal



Quarter 1 2027
ACC Open
Meeting



2029
Construction of Phase 1:
Tucson Estates to Midvale Substation



2025

2026

2027

2028

2029

2030



October 2025 – September 2026
Transmission Line
Planning and Siting



November 2026
Line Siting
Public Hearing



2027—2028
Acquire Land Rights, Detailed Engi-
neering, and Procure Materials



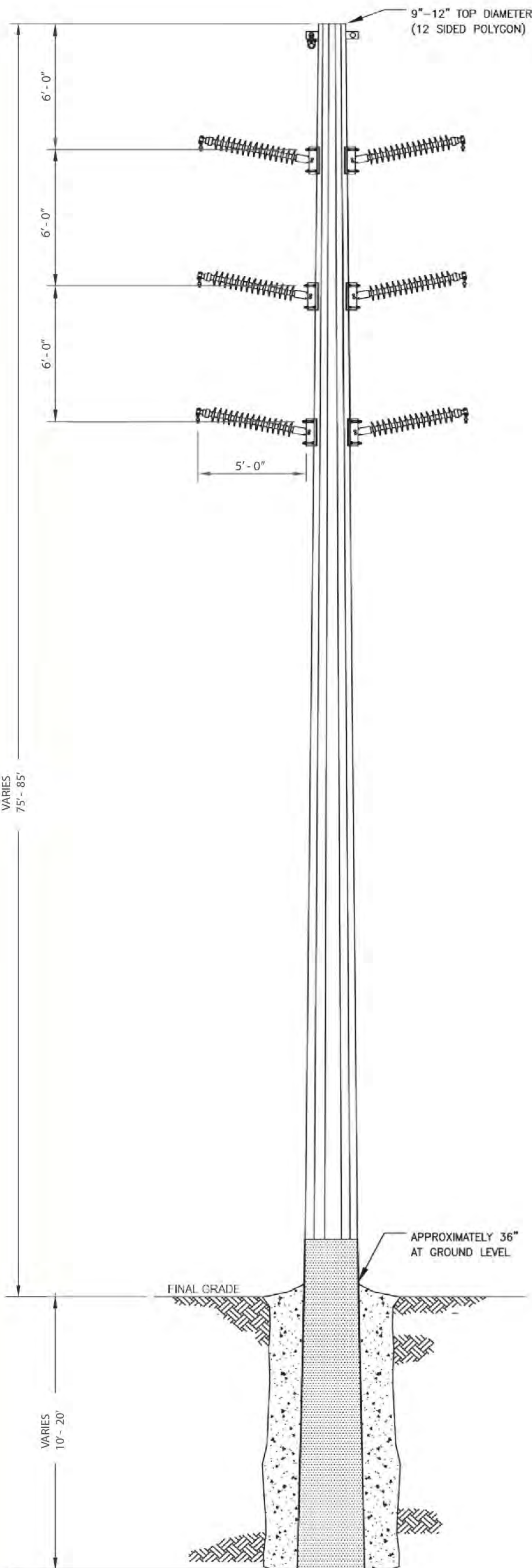
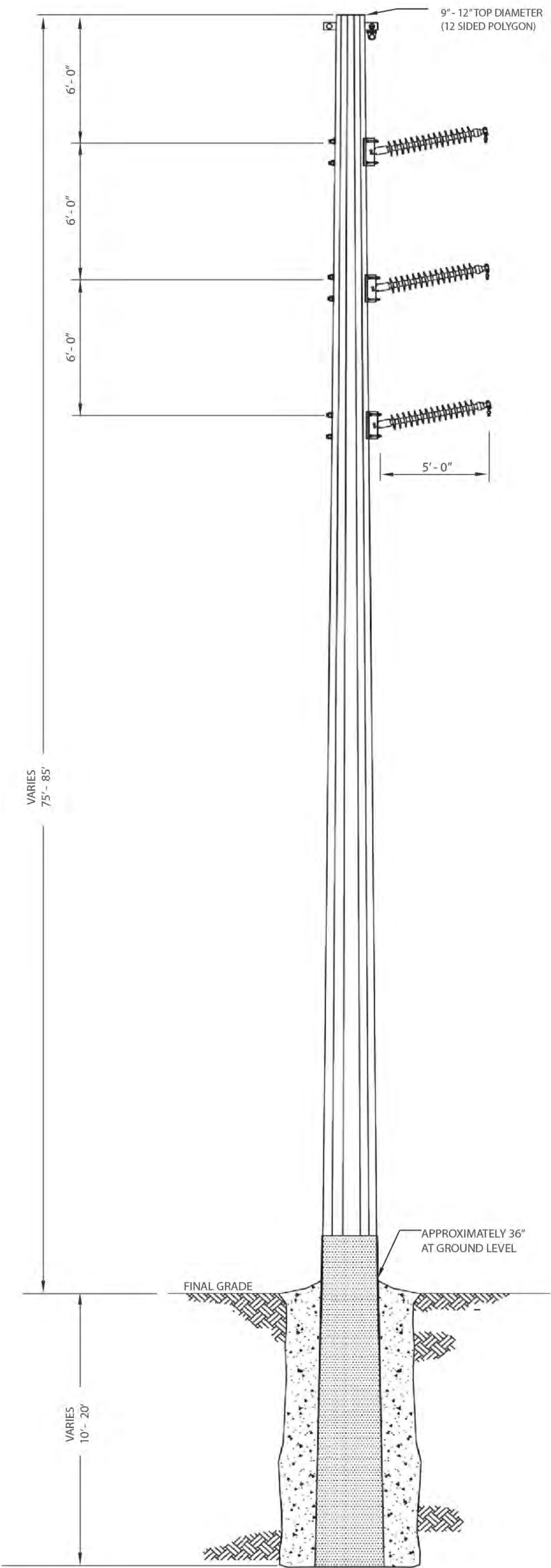
2030
Construction of Phase 2:
Tucson Estates Substation
to Circuit Tie



Transmission Line Characteristics

Single or Double-Circuit 138 Kilovolt

Structure Type	Tubular, weathering steel monopoles
Typical Structure Height	75-85 feet
Typical Span Length	600-1,000 feet
Typical Right-of-Way Width	Up to 100 feet



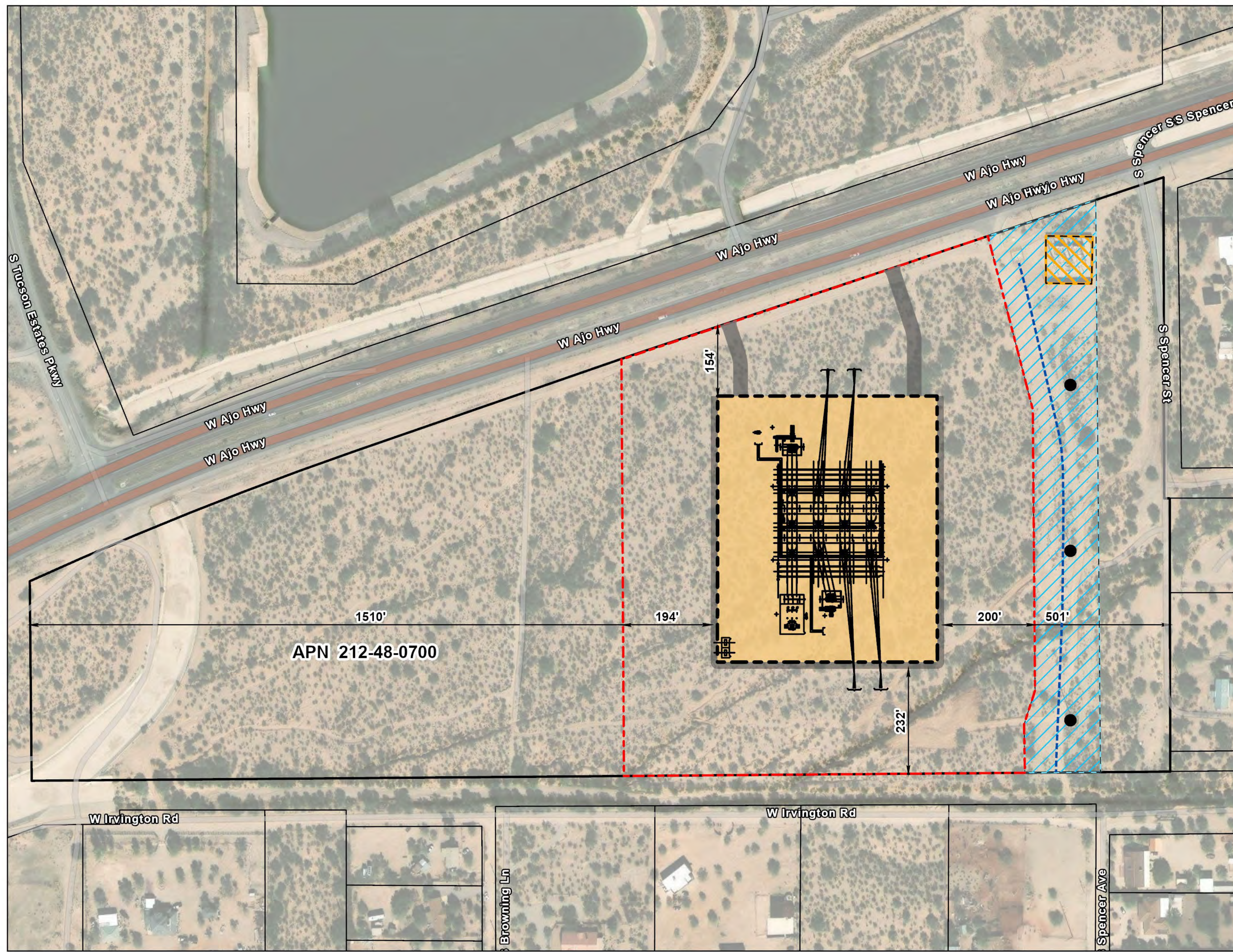
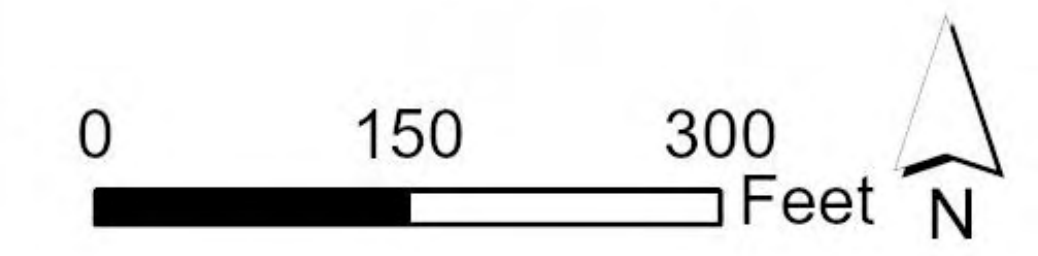
Tucson Estates Substation Preliminary Design ASLD Lease KE 14-124573-00-100

- Transmission Structures
- BOR Aquaduct (Approx.)
- Equipment
- 15 Acre Lease Site
- Security Wall
- Security Road
- Subject Parcel
- Parcels
- BOR 4.19 A.c
- Permanent Easement
- WAPA Substation



Sources: Pima County, TEP, ESRI
Projection: NAD 83 UTM Zone 12N
Basemap: ESRI World Imagery

This map is for planning purposes only.
TEP and Sonoran Land Resources
makes no warranty of its accuracy.

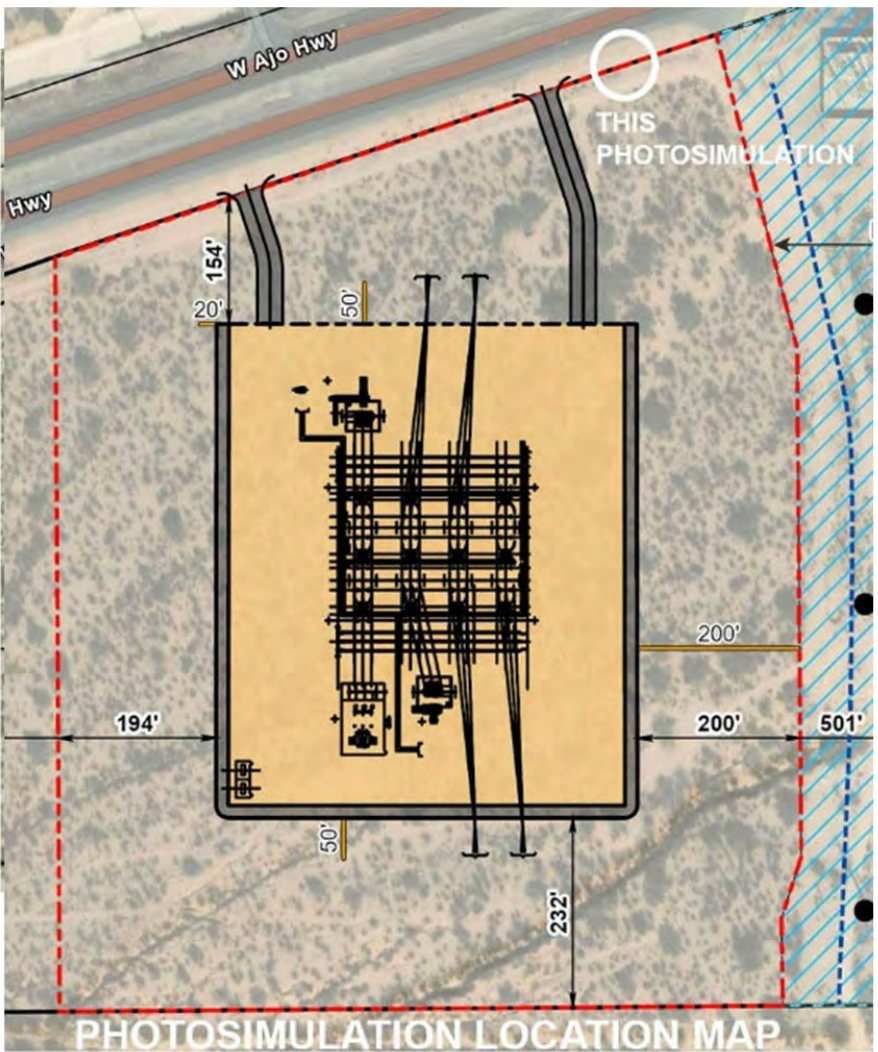
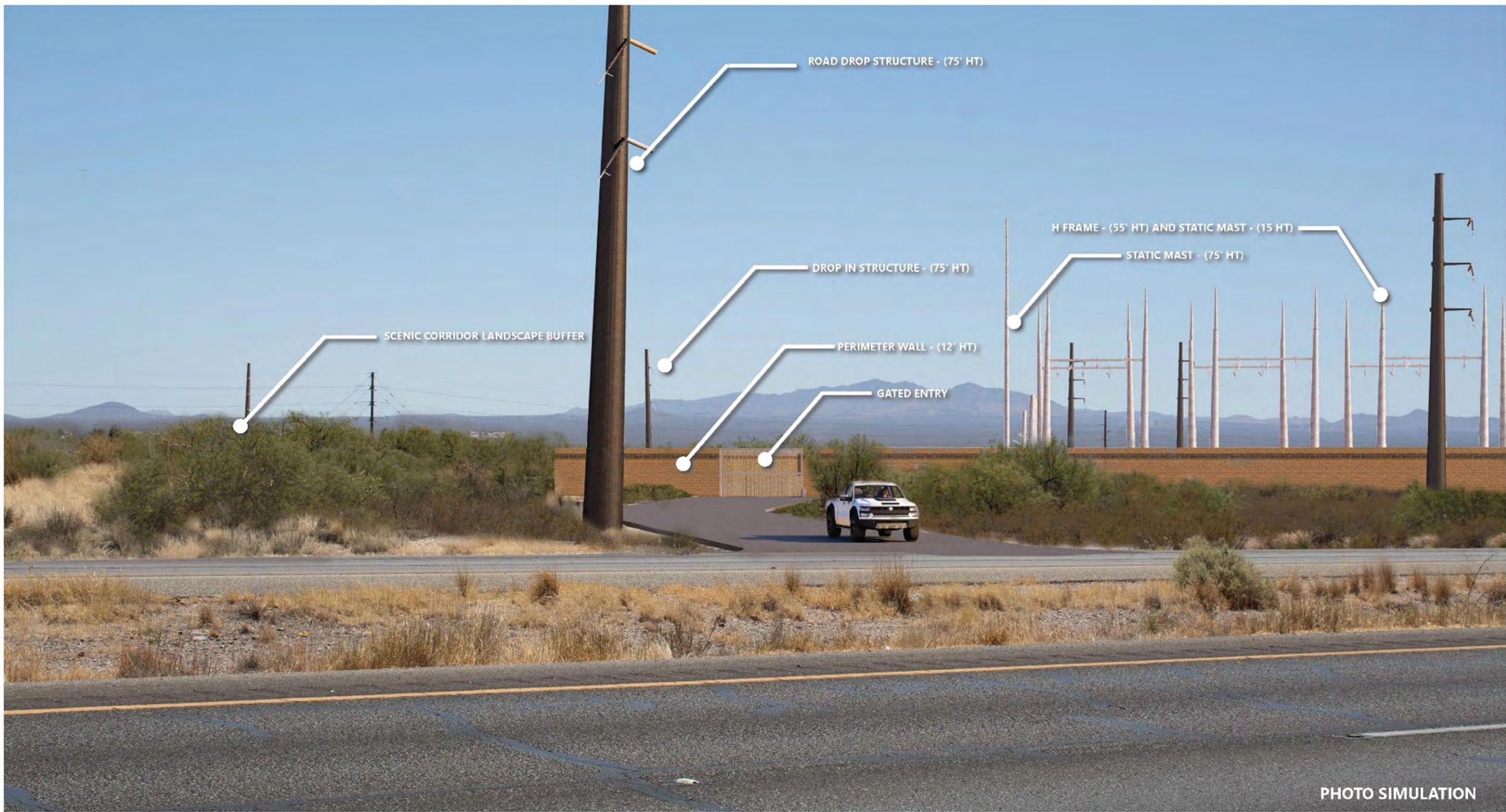


Tucson Estates 138 kV Substation

Photo Simulations



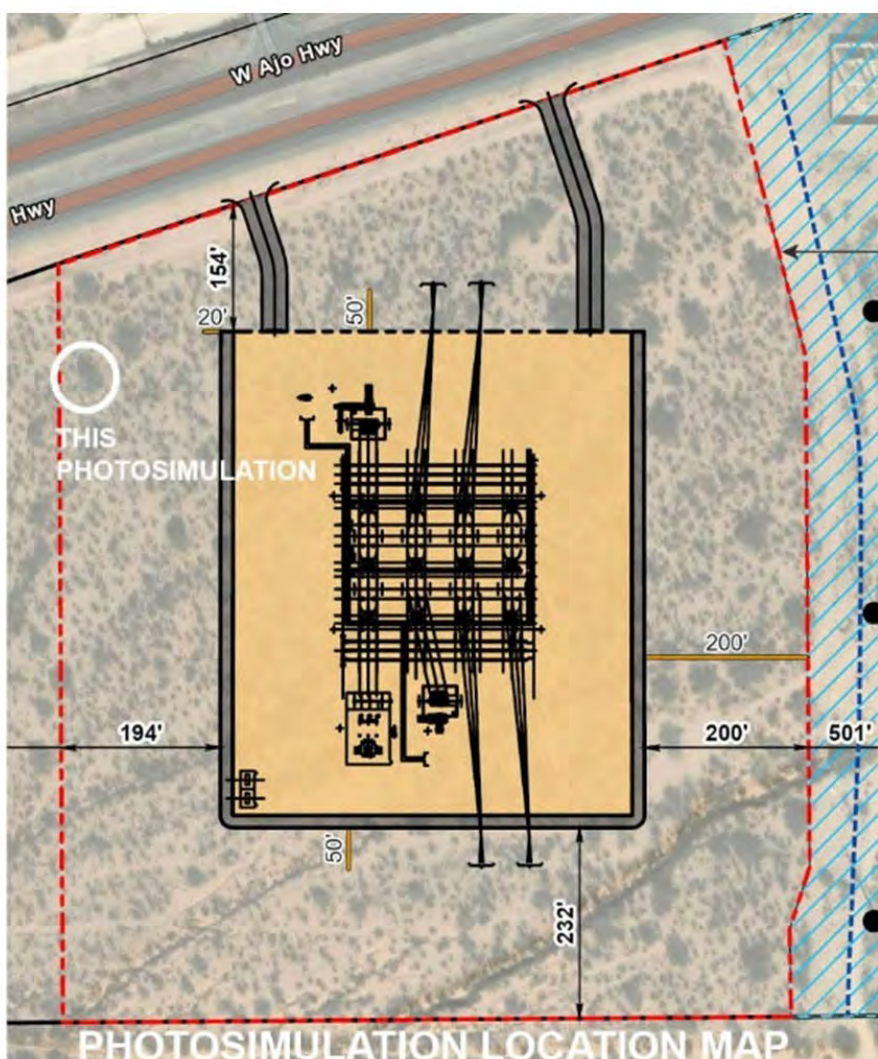
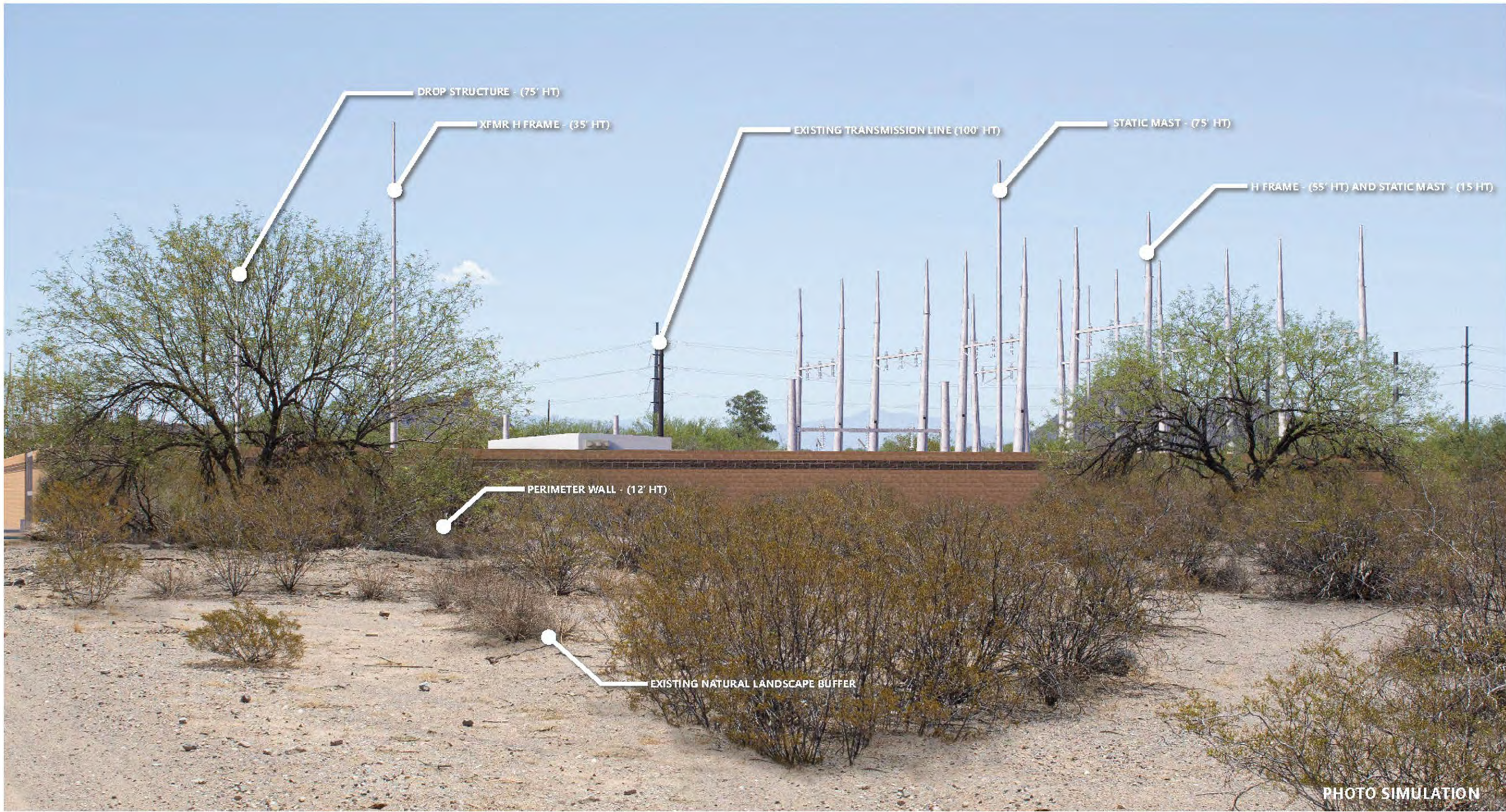
PHOTO SIMULATION 1



Tucson Estates Substation Photo Simulations

Bowman

PHOTO SIMULATION 2



Tucson Estates Substation Photo Simulations

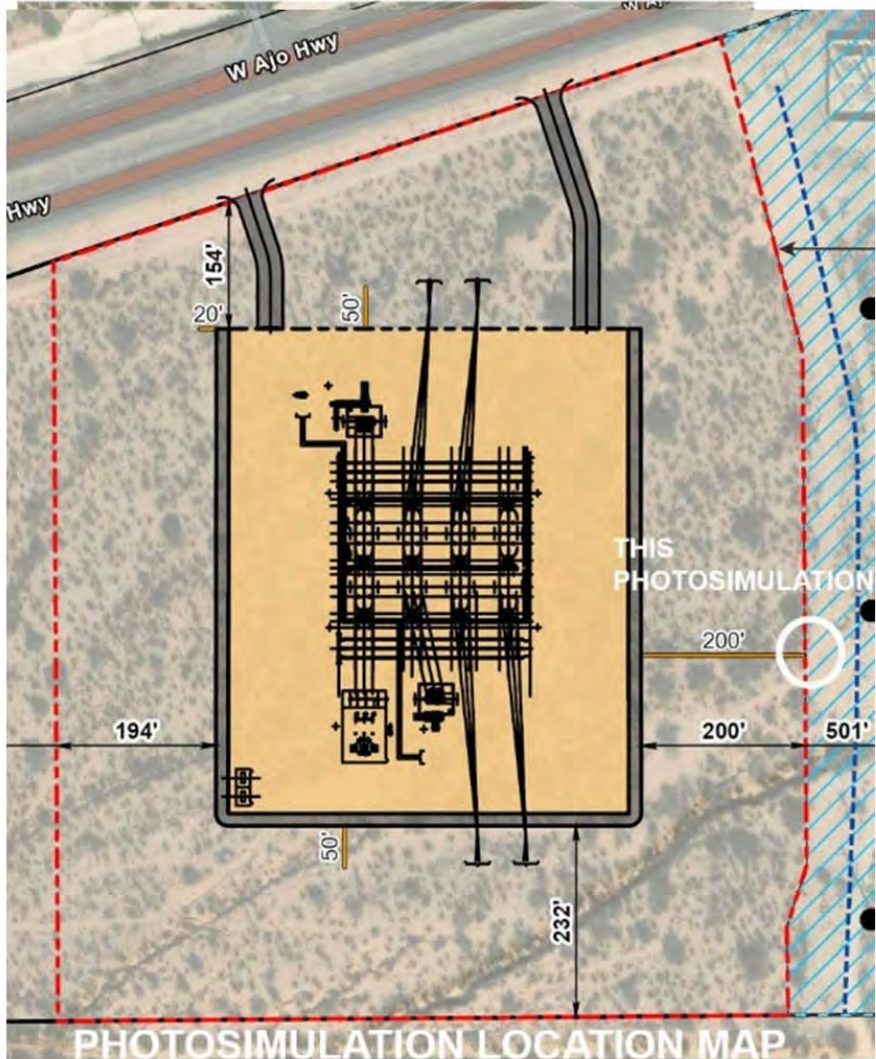
Bowman

Tucson Estates 138 kV Substation

Photo Simulations



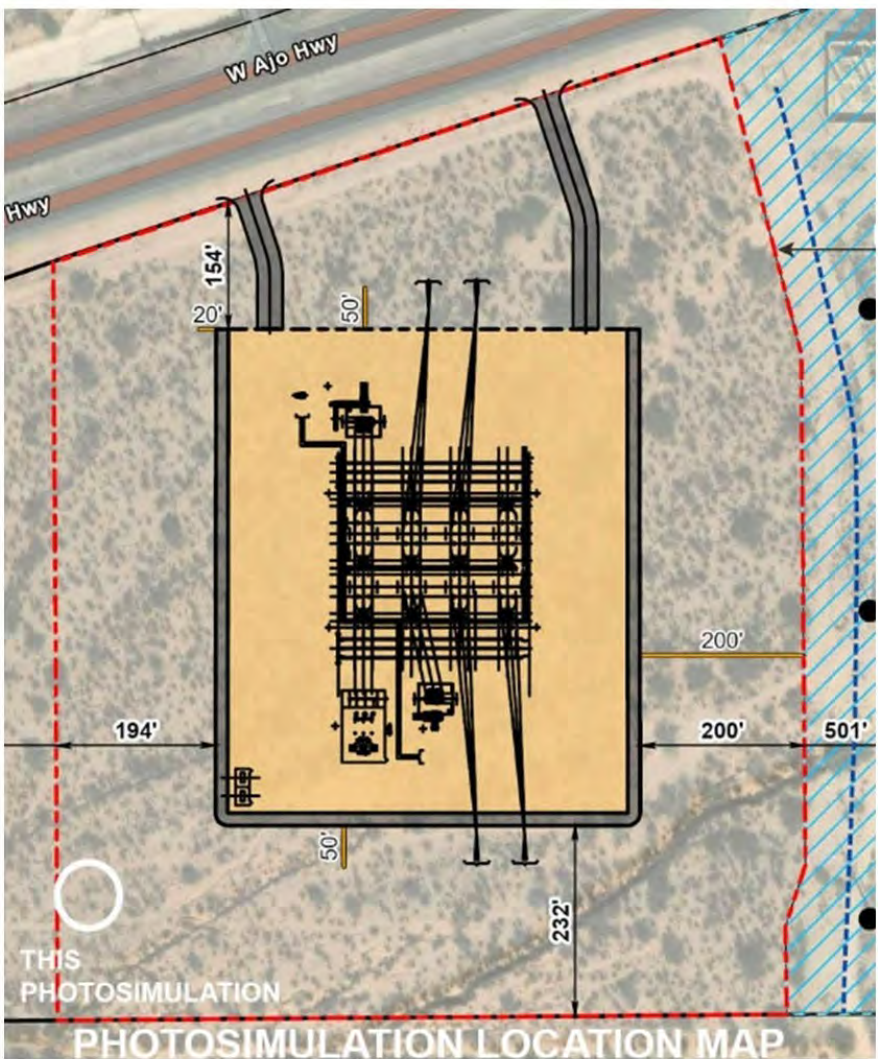
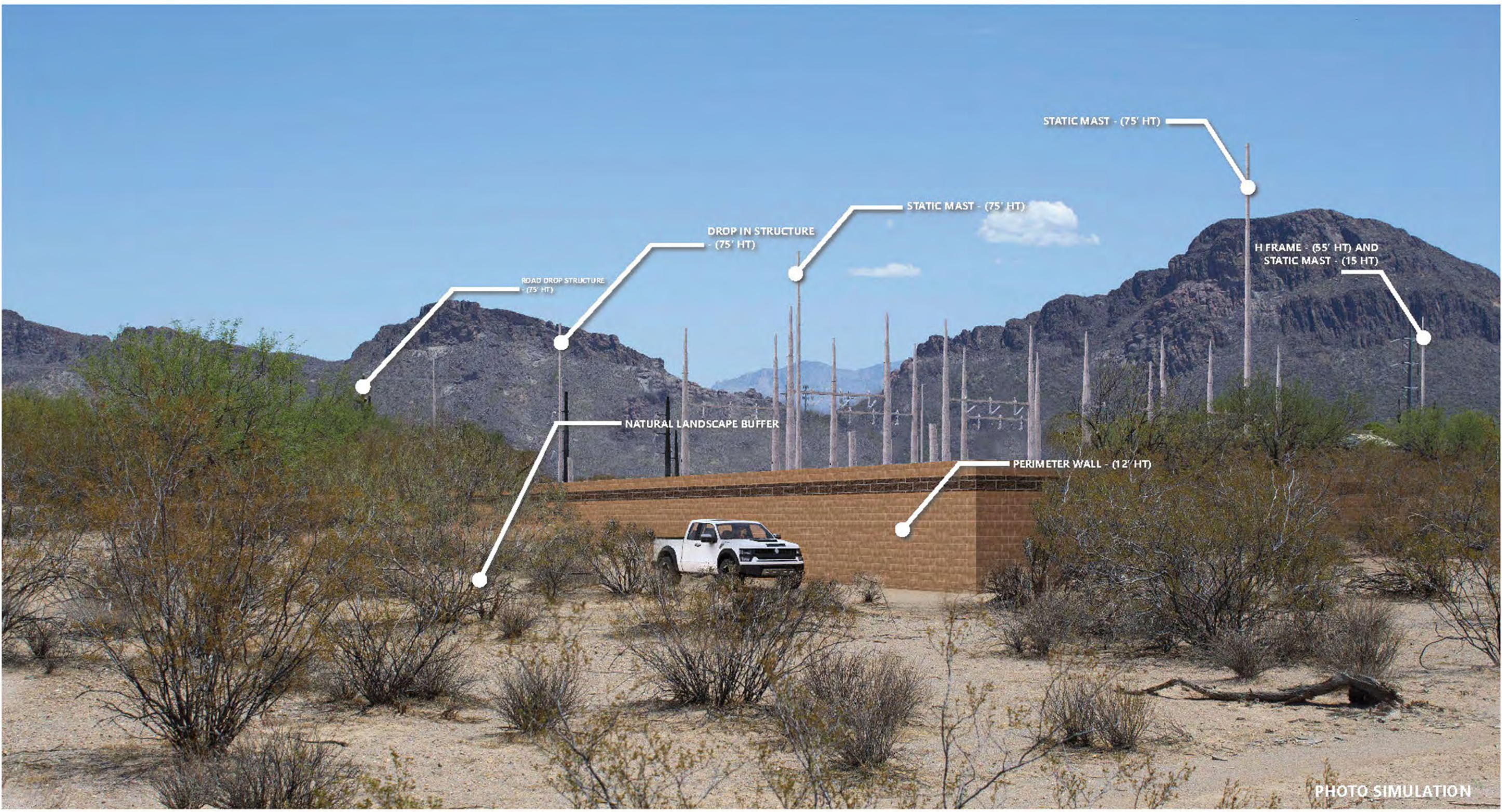
PHOTO SIMULATION 3



Tucson Estates Substation Photo Simulations



PHOTO SIMULATION 4

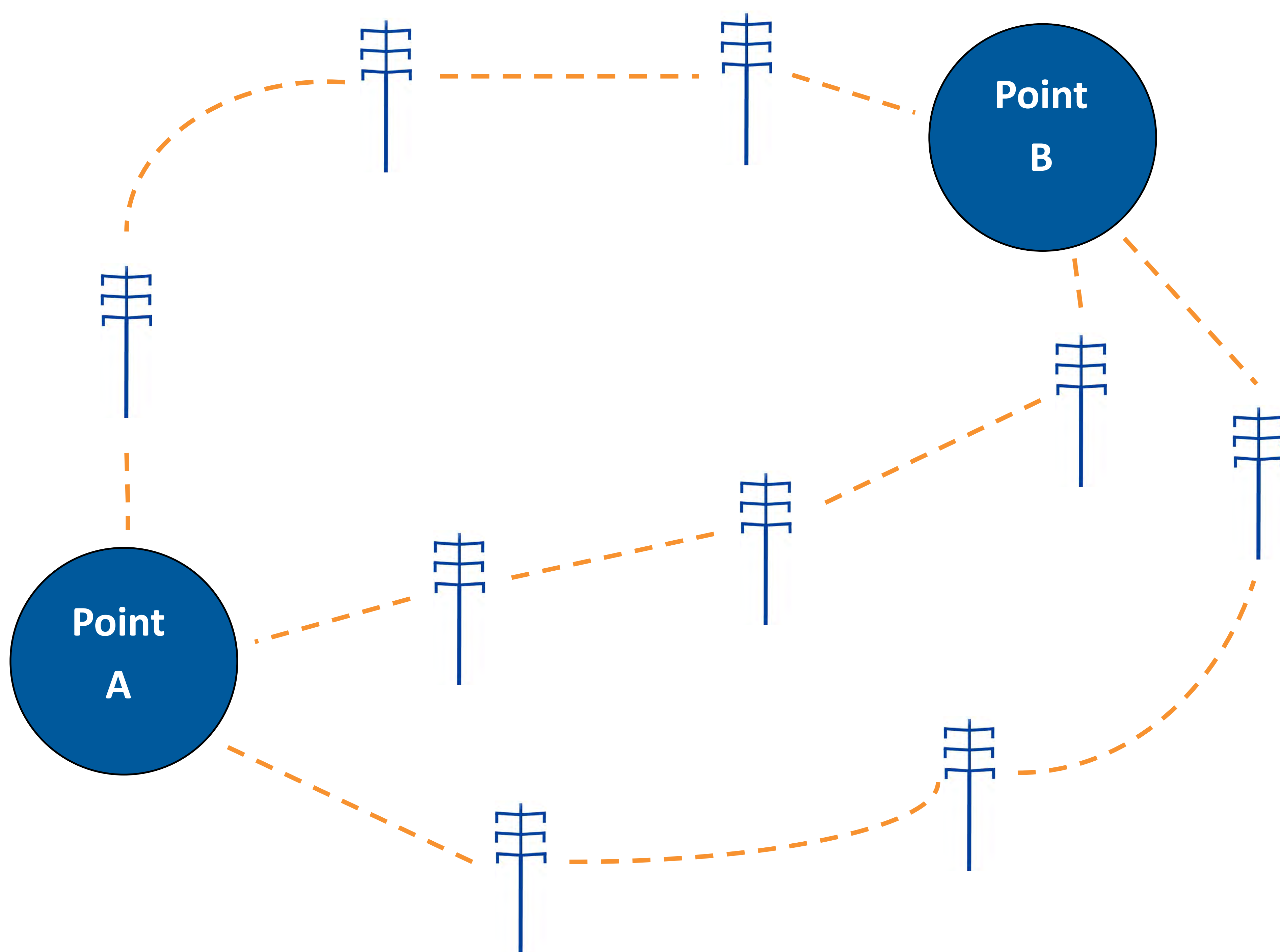


Tucson Estates Substation Photo Simulations



What is Siting?

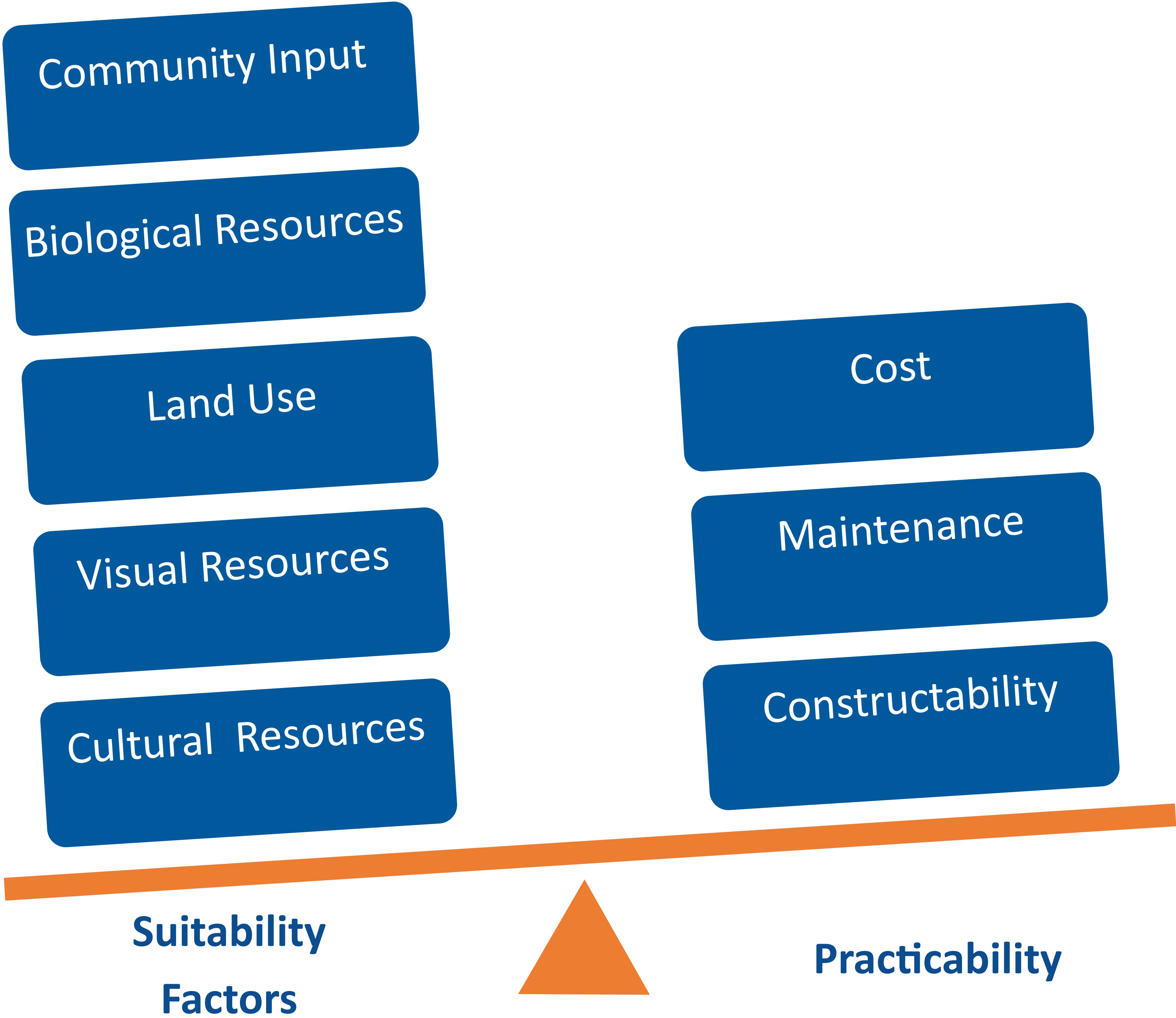
The process of determining the exact route or location where a high-voltage transmission line will be built between two or more points. These points could be new or existing substations, switchyards or energy resources.



A component of siting is permitting. Under Arizona law (A.R.S. § 40-360 et seq.), certain transmission line configurations require a Certificate of Environmental Compatibility (CEC) before construction and operation along an approved route.

Project Route Development and Evaluation

Tucson Electric Power considers factors important to the community and environment, and balances them with constructability, maintenance, and cost to find the most suitable path for the transmission line that satisfies the need for the project.



Siting Process Flowchart

Phase 1:
Pre-Analysis

- Conduct Field Visits
- Develop Study Area
- Identify Opportunities & Constraints
- Conduct Public & Stakeholder Outreach
- Develop Preliminary Segments

Phase 2:
Data Inventory

- Conduct Research & Collect Data

Phase 3:
Suitability
Assessment

- Develop Suitability Models
- Conduct Suitability Assessment
- Field Review
- Engage with Public & Stakeholders
- Refine Segments

Phase 4:
Compatibility
Analysis

- Conduct Compatibility Analysis
- Develop Route Alternatives
- Field Review

Phase 5:
Concept
Evaluation

- Engage with Public & Stakeholders
- Identify Preferred Route
- Submit CEC Application
- Public Notification and Hearing



Siting Criteria

Tucson Electric Power (TEP) will be applying for a Certificate of Environmental Compatibility (CEC) from the Arizona Corporation Commission. Several criteria are considered under the Arizona Revised Statutes when making the decision to issue a CEC. TEP also considers additional factors identified through public engagement and feedback to evaluate route segments, and when selecting a preferred route.



Public input



Scenic areas, historic & cultural sites



Wildlife & plants



Existing or potential recreation uses



Existing & planned land use



Engineering & construction feasibility



Overall environment



Noise emission levels & interference with communication signals



Project costs & potential impact on customer rates

In your opinion, which criteria are most important in developing a route for the Project? Let us know what you think and if there are any other criteria we should consider.



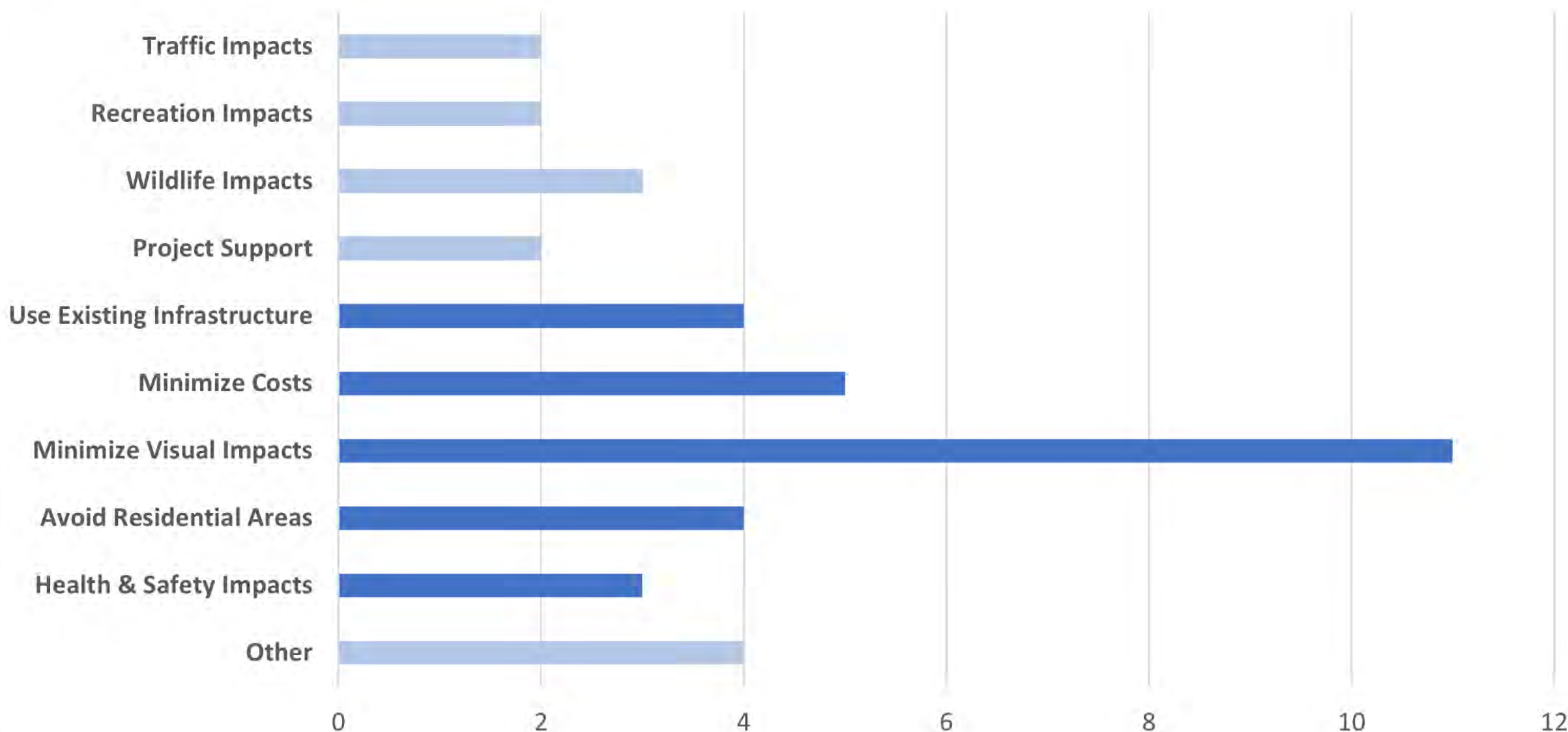
Southwest Tucson Reliability Project



Your Input Matters!

What we heard...

Summary of Public Comments

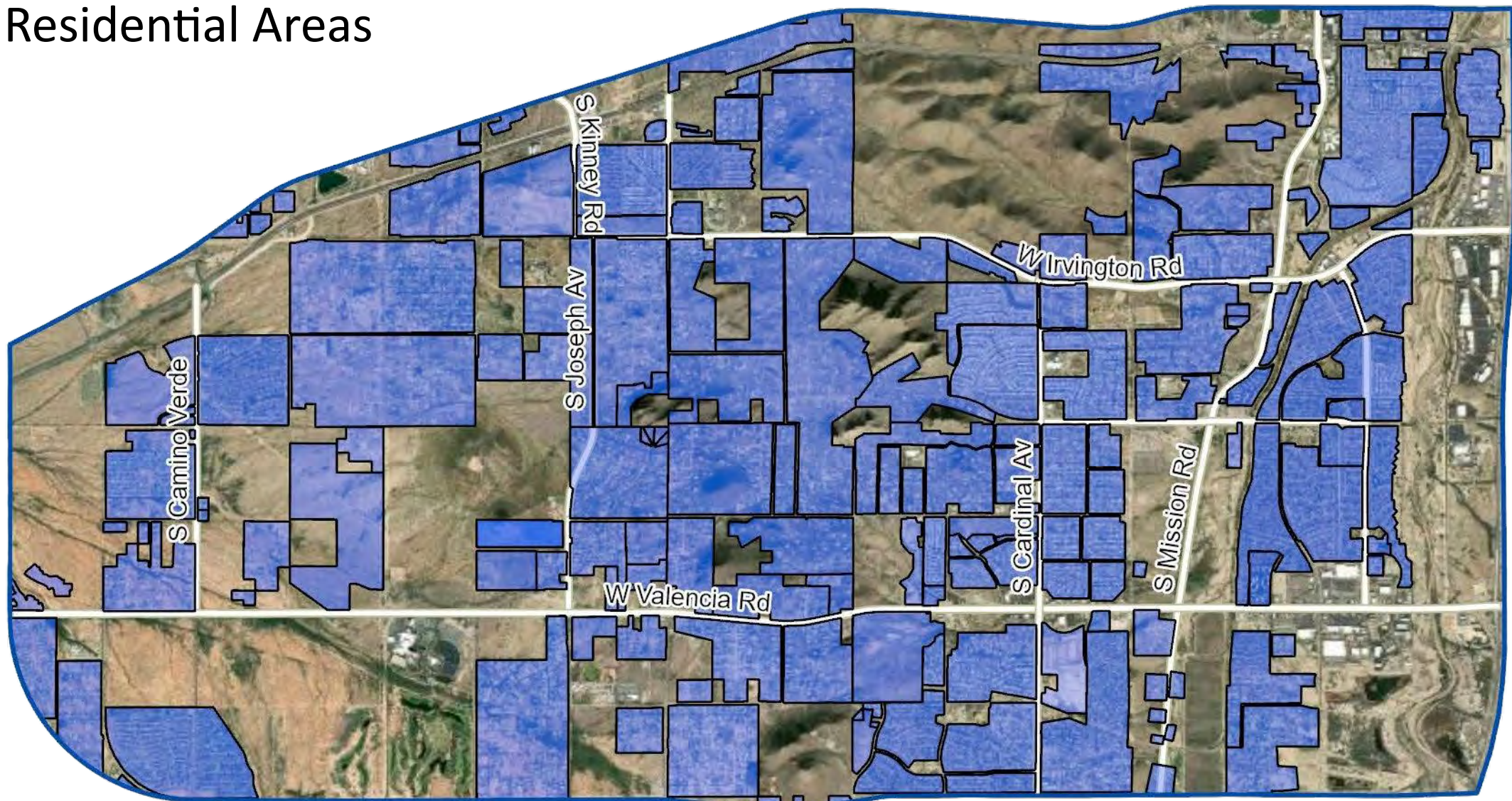


What we did to address residential visual impacts...

- ◆ Identified Existing & Planned Residential Areas
- ◆ Identified Peaks & Ridges Visible from Residential Areas



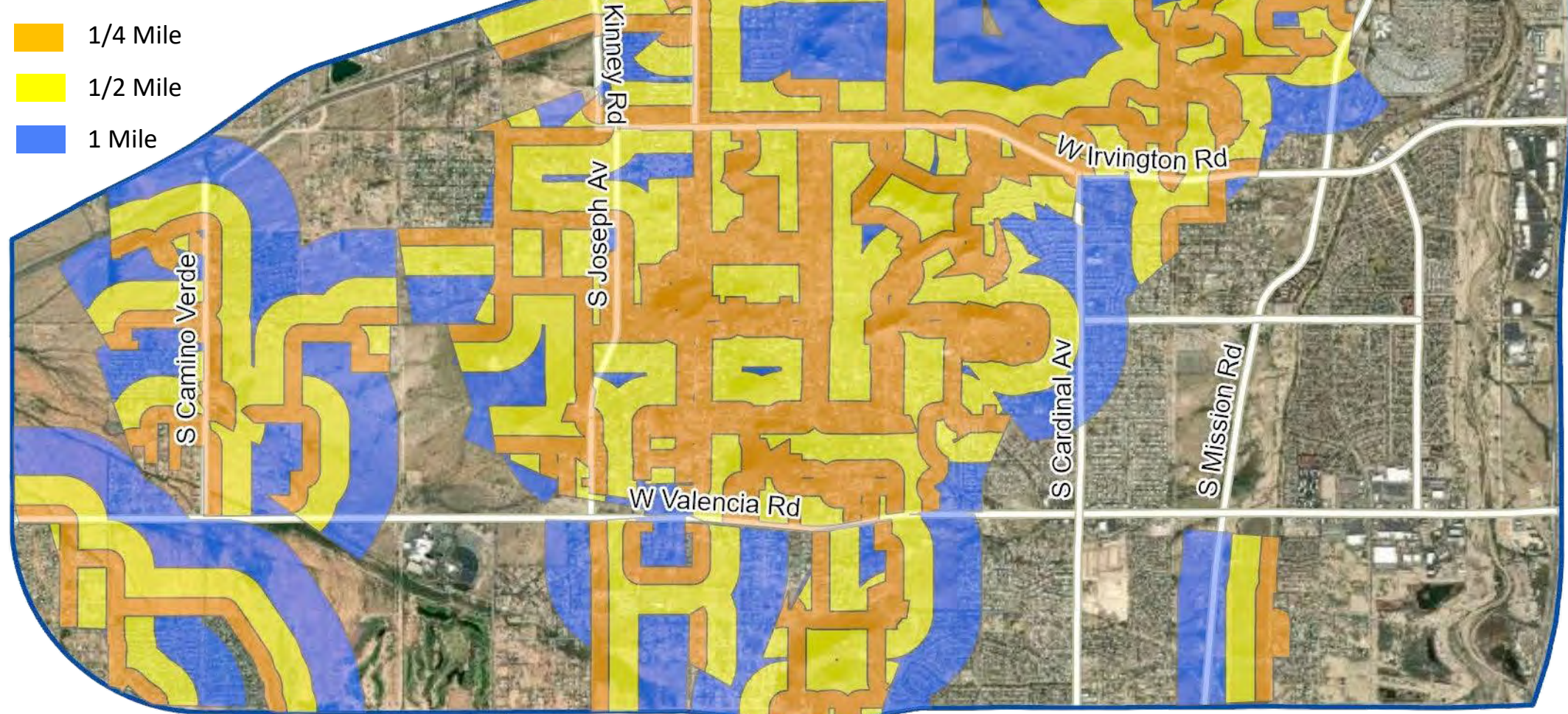
Residential Areas



- ◆ Created a Residential Viewshed Layer
- ◆ Ranked/Scored the Residential Viewshed Areas Against Areas Outside of the Viewshed Areas



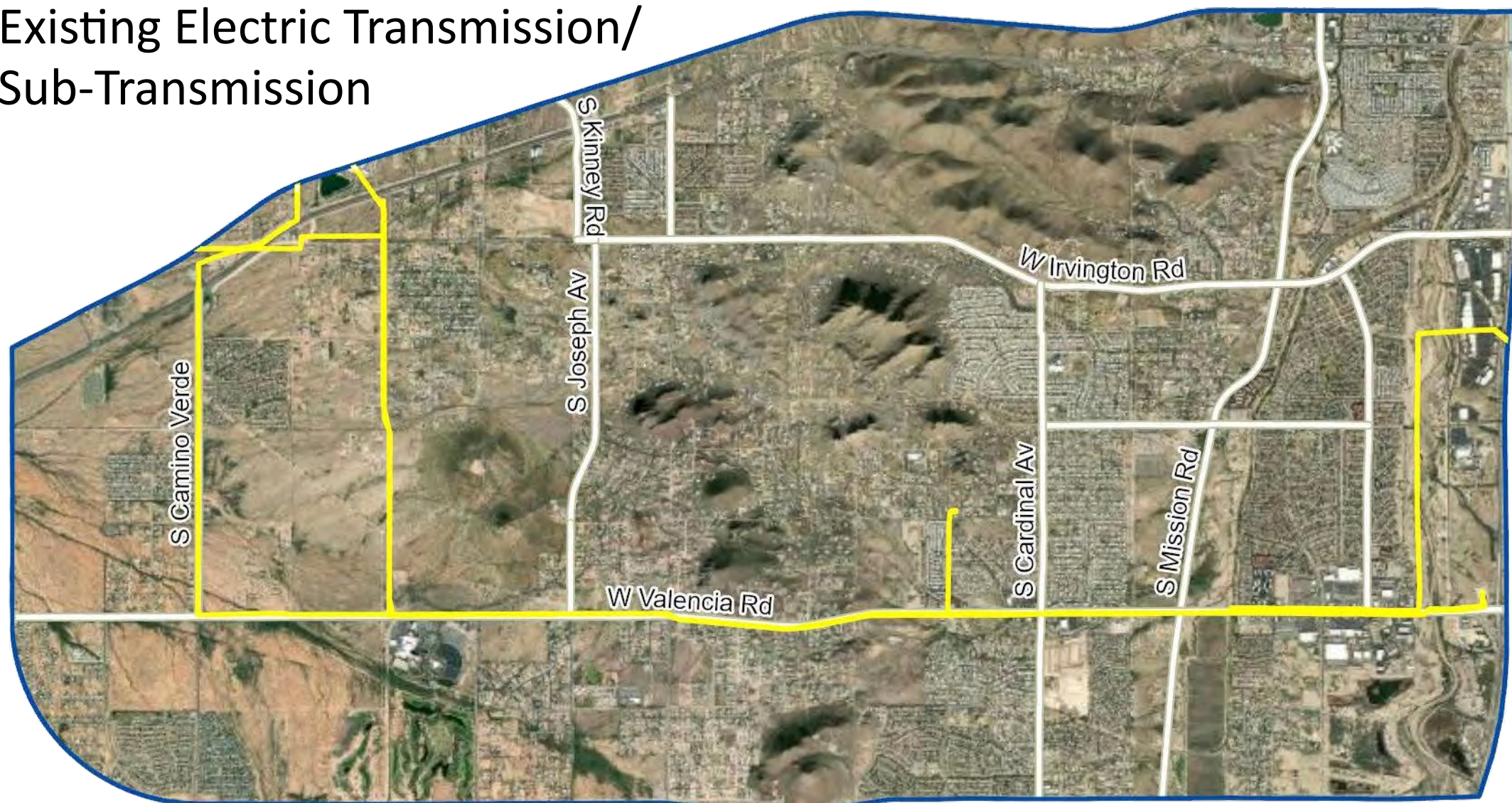
Residential Proximity to Viewshed



- ◆ Identified Existing Transmission/ Sub-Transmission Infrastructure that Could Potentially be Used

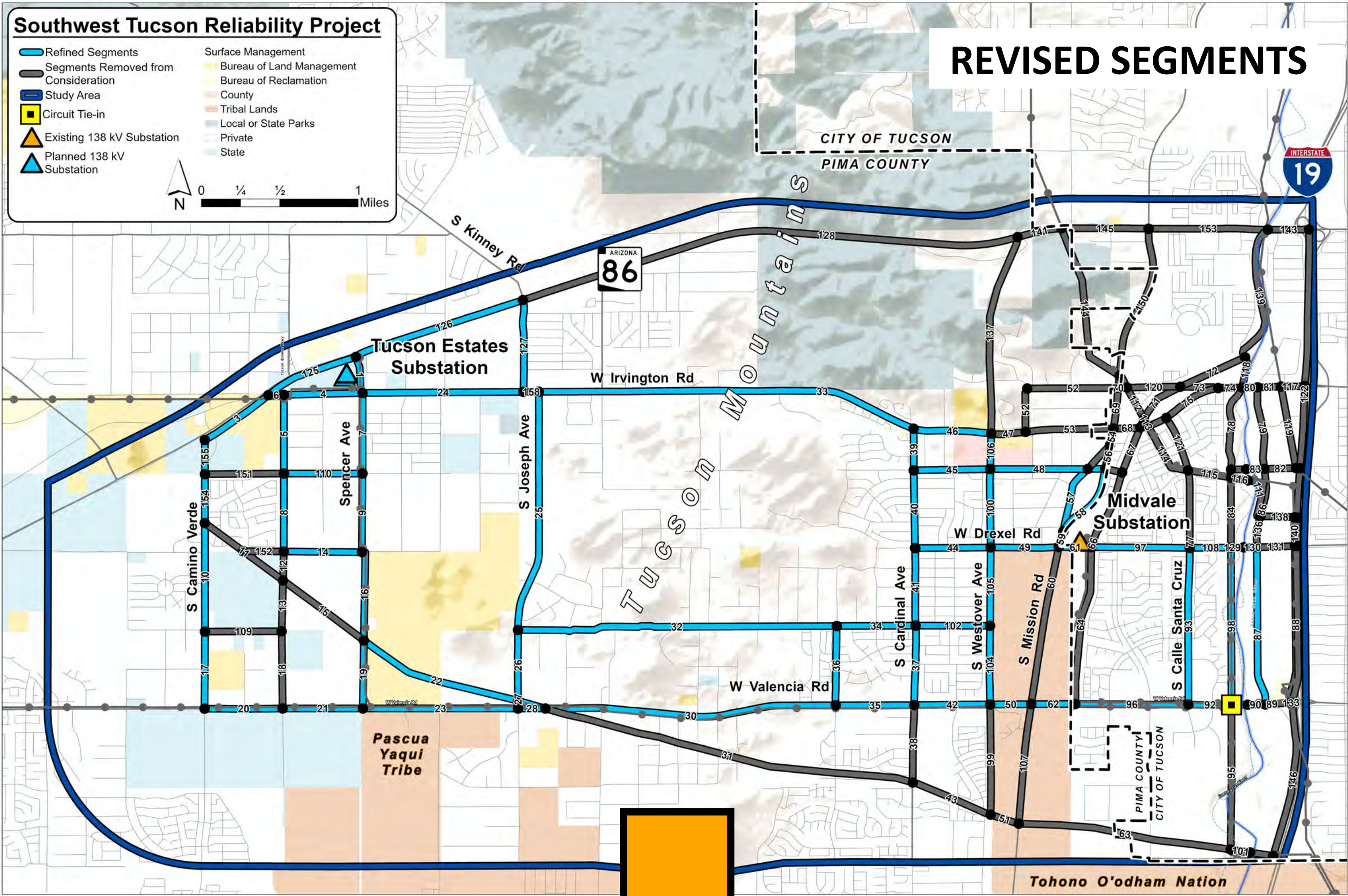


Existing Electric Transmission/ Sub-Transmission



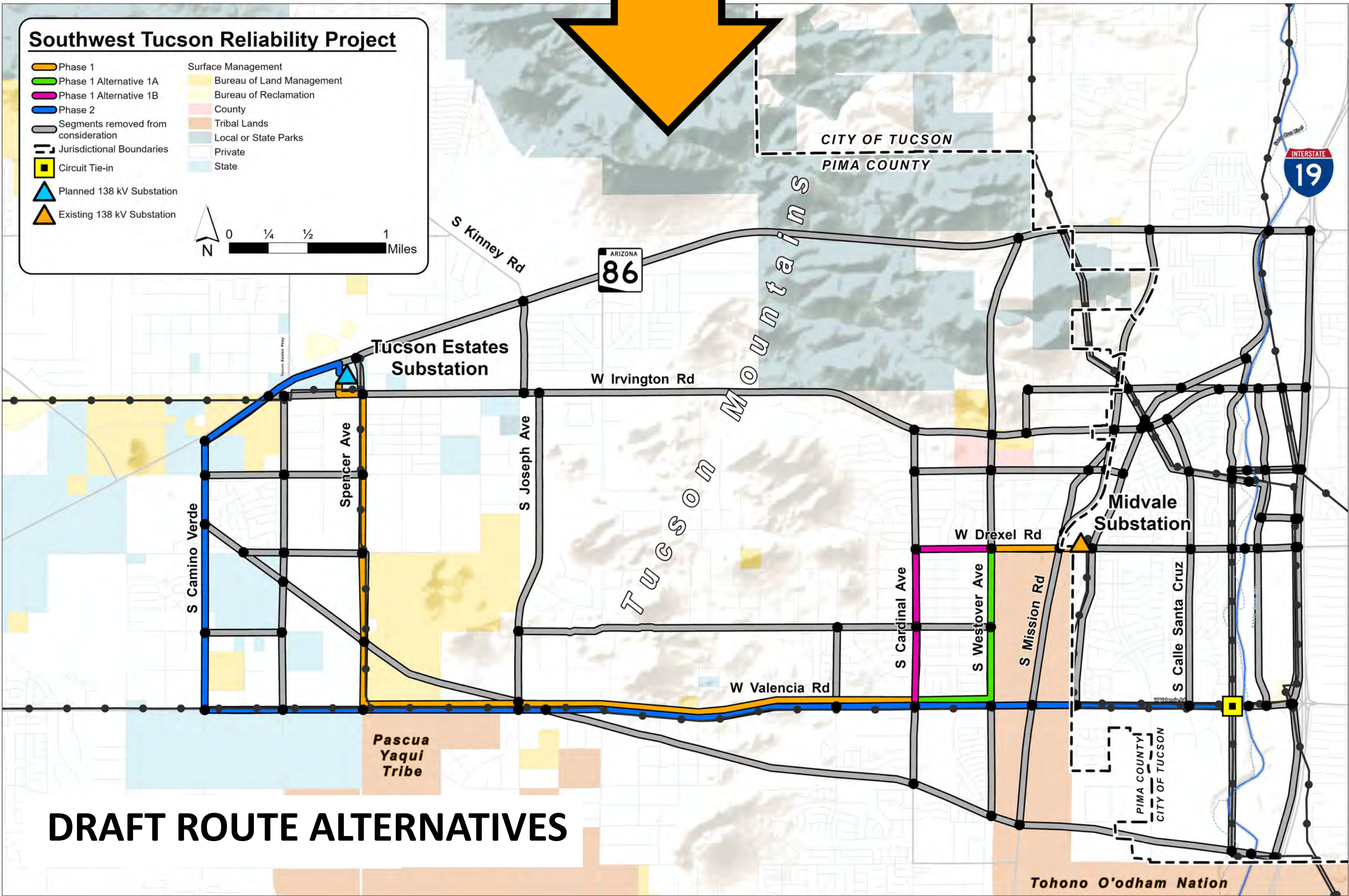
Southwest Tucson Reliability Project

Compatibility Analysis



Subject matter experts in 15 areas reviewed each refined segment to identify those with the lowest overall impacts.

- Existing and Planned Land Use
- Adjacent Residential Properties
- Conservation and Preservation
- Fish, Wildlife, and Plants
- Noise
- Communication Signal Interference
- Archaeological and Historical Resources
- Scenic Area
- Residential Visual Impact
- Total Environment
- Engineering and Construction
- System Operation
- Right-of-Way Acquisition
- Cost



Southwest Tucson Reliability Project

Phase 1

Phase 1 Alternative 1A

Phase 1 Alternative 1B

Phase 2

Segments removed from consideration

Jurisdictional Boundaries

Circuit Tie-in

Planned 138 kV Substation

Existing 138 kV Substation

Surface Management

Bureau of Land Management

Bureau of Reclamation

County

Tribal Lands

Local or State Parks

Private

State

N

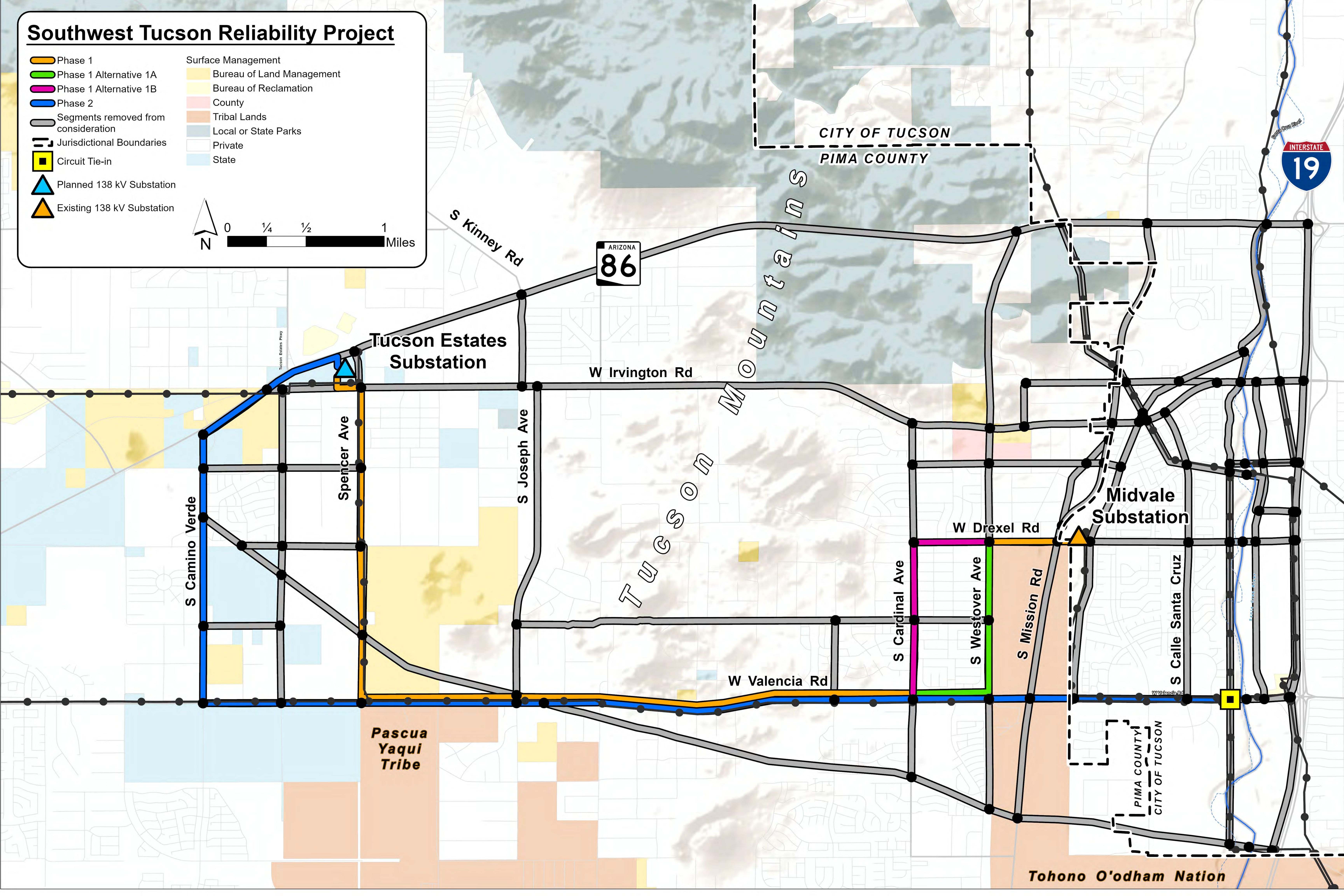
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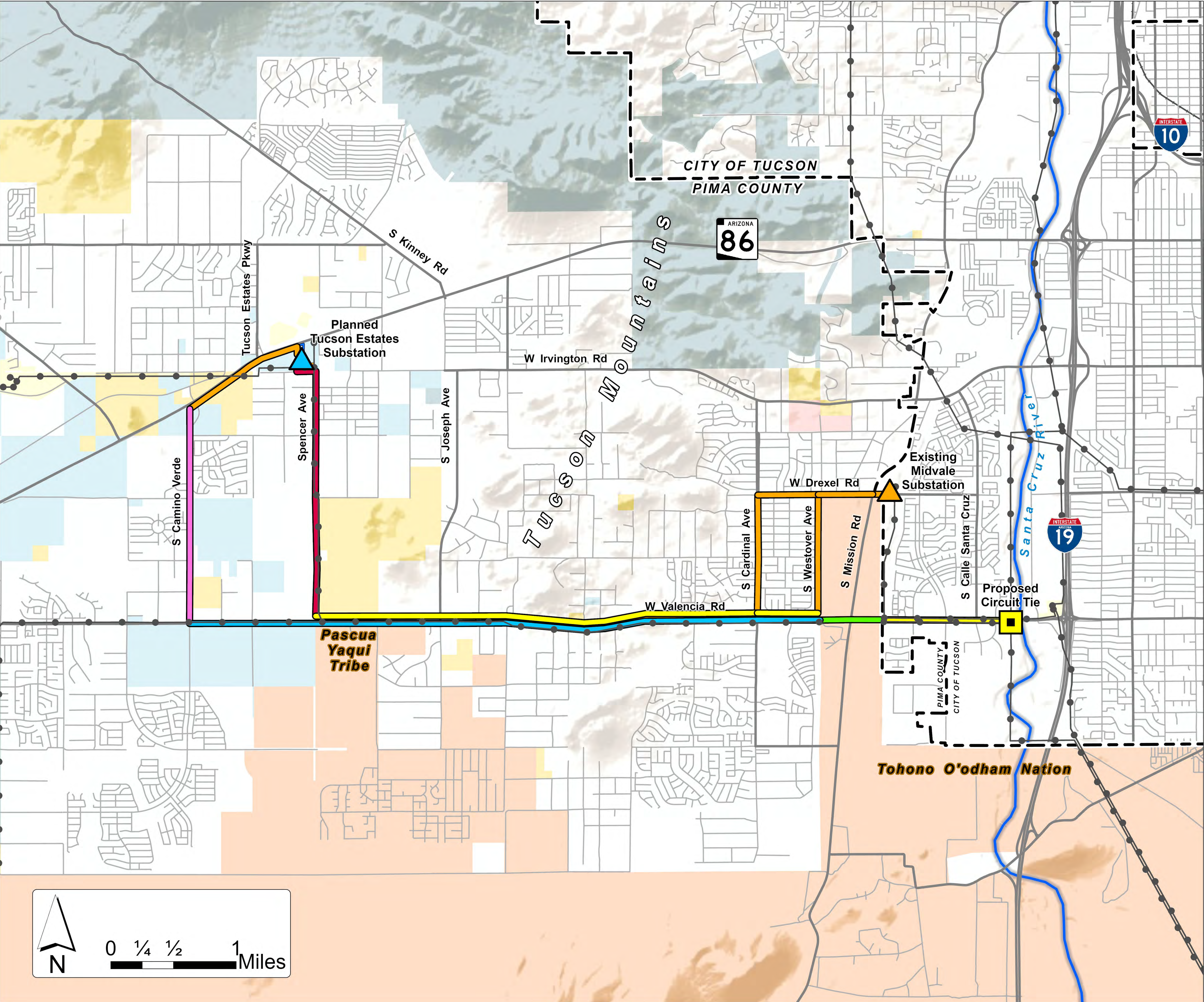
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1

Miles





Southwest Tucson Reliability Project

Draft Route Alternatives by Construction Type

Draft Route Alternatives

Add 138kV Circuit to Existing 115kV Structures (~13%)

New Build (~12%)

Re-Energize Existing 115kV to 138kV (~31%)

Rebuild Existing 46kV Circuit to 46/138kV Double Circuit (~3%)

Rebuild Existing 46kV Circuit to 138kV Circuit (~10%)

Replace 46kV Circuit with 138kV Circuit on Existing Structures (~31%)

Existing Transmission Line

Jurisdictional Boundaries

Surface Management

Bureau of Land Management

Bureau of Reclamation

County

Indian Lands

Local or State Parks

Private

State



Tucson Electric Power

Sources: City of Tucson, Pima County, TEP
Projection: NAD 1983 UTM Zone 12N
Base map: Custom Base map

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of its accuracy.

PLEASE COMMENT HERE



- Fill out an online comment form at:
tep.com/southwest-tucson-reliability-project
- Mail a comment form to this address:
TEP SW Tucson Reliability Project
P.O. Box 711
Mail Stop CB200
Tucson, AZ 85701-0711
- Email comments to swtucson@tep.com
- Call 1-520-770-7522 and leave a voicemail

Interactive Map Station



**See where you live in
relation to the project**