



## SPECIAL DISTRICTS APPLICATION

Application Stage:                      Pre-application                       Application

Permit Activity Number: T20SE00016      Case Number: DRB-21-03 / SE-20-16      Date Accepted: 3/30/2021  
For DRB Review

**PROPERTY LOCATION AND PROPOSED DEVELOPMENT**

Project / Development Name (if applicable):      TEP Vine Substation SELU

Property Address:      1602, 1610, 1640 & 1730 N. Vine Ave.

Pima County Tax Parcel Number/s:      123-10-001K

Current Zoning:      R-2

Applicable Overlay/                       Infill Incentive District                       Rio Nuevo Area  
Special Districts:                       Main Gate Overlay District                       Grant Road Overlay District  
    Neighborhood Preservation Zone       Historic Preservation Zone

Neighborhood Association (if any):      North University Neighborhood Association

PROJECT TYPE (check all that apply):                      Change of use to existing building   
New building on vacant land                       New building on developed land   
New addition to existing building                       Other redevelopment with new use

Description of Proposed Use:      Development of new 138 kV electric substation

Number of Buildings and Stories/Height of Proposed Structure(s):      canopy = 25 feet; wall= 13.5 feet; no buildings

Site Area (sq ft):      69,534 SF      Area of Proposed Building (sq ft):      N/A

**HISTORIC STATUS**

Site is within a:                      Historic Preservation Zone Please List:      N/A  
   National Register District      Please List:      N/A  
Site is/includes:                       A contributing structure                       Non-contributing structure  
    Is adjacent to a contributing structure                       Vacant

**APPLICANT INFORMATION** (The person processing the application and designated to receive notices):

APPLICANT NAME:      Brian Pugh, Tucson Electric Power Co.

ROLE:                       Property owner                       Architect                       Engineer                       Attorney                       Developer  
Other: \_\_\_\_\_

EMAIL:      bpugh@tep.com      PHONE:      (520) 460-6417

ADDRESS:      88 E. Broadway Blvd., Tucson, AZ 85701

PROPERTY OWNER NAME(S) (If ownership in escrow, please note):      Tucson Electric Power Co.

PHONE:      (520) 460-6417

I hereby certify that all information contained in this application is complete and true to the best of my knowledge.

SIGNATURE OF OWNER/APPLICANT\*                            03/29/21

\*If an authorized representative is signing on behalf of the property owner, please provide a letter of authorization      Date



## SPECIAL DISTRICTS APPLICATION CHECKLIST REQUIREMENTS

**PLEASE PROVIDE THE FOLLOWING MATERIALS IN THIS ORDER:**

X	1. <b>Application form</b> (signed by the Property Owner or Authorized Agent, include <b>letter of authorization</b> signed by property owner if needed).
X	2. <b>Project statement</b> outlining project scope which describes how the project meets applicable design guidelines and outlines any requested modifications/exemptions
X	3. <b>Proposed Site Plan</b> (landscape plan and floor plans if applicable) drawn to scale at 11"x17", prepared in accordance to Section 2-06.0.0, in the Administrative Manual
N/A	4. <b>Shade study</b> (for projects within the Rio Nuevo Area)
X	5. <b>Proposed Elevations</b> (and contextual elevations if applicable) drawn to scale at 11"x17", with dimensions and proposed materials noted (if applicable) prepared in accordance to Section 2-06.0.0.
X	6. <b>Renderings</b> depicting various views from the street level and birds eye view (recommended for major projects)
X	7. <b>Samples of proposed materials</b> , if applicable, to include cut sheets and/or photographs of the type, color and texture of the proposed materials.
N/A	8. <b>Zoning review comments</b> issued by PDS staff on development package or other submittal*
N/A	9. <b>Documentation of neighborhood meeting</b> to include invitation, affidavit of mailing, sign-in sheet, agenda/materials and meeting notes (if applicable)*
X	10. Color <b>aerial photograph</b> of subject property
X	11. Color, labeled <b>photographs of project site existing conditions</b> (north, south, east and west elevations of all structures on the property)
	12. Color, labeled <b>photographs of the surrounding area</b> ( <b>See SELU submittal materials</b> )
X	13. Color <b>photographs of precedent examples</b> in surrounding area, labeled with property addresses and keyed on the aerial photograph (if applicable)
X	14. Pima County assessor's record parcel detail and record map
	15. <b>Applicable fees</b> (confirm with PDS staff)* ( <b>to be submitted electronically</b> )
	IF HISTORIC REVIEW REQUIRED
N/A	16. Aerial photograph depicting the property's <b>Development Zone</b> . All building footprints within the development zone must be shown and labeled to indicate contributing/non-contributing status.
N/A	17. Arizona Historic Property Inventory form (if available)
	IF REQUESTING INDIVIDUAL PARKING PLAN
N/A	18. Parking narrative addressing items listed in UDC 7.4.5.A.4, sealed by a design professional licensed by the State of Arizona.

\*Required for final application only

Refer to Supplemental Information for additional instructions for these items. Additional application materials may be required based on scope of project.

**Submitting your Application:** Once you have completed the Application Form and compiled the Submittal Requirements, submit a pdf of all through the PDS Filedrop Portal, at [www.tucsonaz.gov/file-upload-PDS](http://www.tucsonaz.gov/file-upload-PDS)

March 29, 2021

VIA E-MAIL (MARIA.GAYOSSO@TUCSONAZ.GOV)

City of Tucson Design Review Board  
Planning & Development Services Dept.  
201 N. Stone Avenue  
Tucson, Arizona 85701

**SUBJECT: Special Exception Land Use Permit – TEP Vine Substation**

Dear Board Members:

This design review package is being submitted as part of the Zoning Examiner Special Exception Land Use process to permit the construction of a new 138 kilovolt (“kV”) electric power substation (the “Project”) on N. Vine Avenue near Banner University Medical Center (“Banner”). Tucson Electric Power Company (“TEP”) is proposing the construction of the Vine Substation (formerly referred to as “UA North Substation”) to strengthen electric reliability for residential and commercial customers in central Tucson and help satisfy growing energy needs in our community. The Project is located on approximately 1.6 acres (the “Property”) on N. Vine Avenue near its intersection with E. Lee Street and adjacent to N. Ring Road, which is a private roadway serving the Banner Campus. (*See Location Map.*)

The Design Review Board’s (“DRB”) role within the SELU process is to review certain aspects of the application (landscaping/screening/exterior wall design, color and materials) for the proposed Vine Substation and offer a recommendation to the Zoning Examiner as part of the SELU process on those items. Because this is part of a larger project, TEP wanted to provide additional background to the DRB below.

**A. Background**

TEP is the electric service provider throughout the entire central Tucson area. TEP currently serves its customers in the area with a 46-kV sub-transmission system directly south of the proposed Vine Substation. That 46 kV sub-transmission system includes equipment reaching the end of its useful life. Due to increased energy demands, some electric infrastructure in the area has reached or is approaching capacity limitations and will need to be upgraded. By constructing a 138 kV system in the area, TEP can avoid overload conditions that can damage equipment, causing outages or low voltage for customers. Construction of the Vine Substation will resolve overloading and capacity concerns, as well as replace aging infrastructure and improve overall service reliability for homes, businesses and other customers in the area.

In addition to the immediate upgrade requirements in this area, TEP has been working on a larger Kino to DeMoss-Petrie (“Kino-DMP”) Transmission Line Project, with a line-sighting process for those transmission lines that is governed and regulated through a completely separate Arizona Corporation Commission (“ACC”) process. In determining where to locate new energy infrastructure, TEP considers

the projected energy needs of nearby residential and commercial customers, anticipated economic development, proximity to existing equipment, project costs, geography, the environment, public input and other factors. Transmission lines link to substations that change the voltage of electric facilities from transmission levels to distribution levels in order to safely delivery electric service to area customers. The proposed Vine Substation is one component of the larger Kino-DMP Transmission Line Project.

## **B. Project Overview**

The Property is zoned R-2, and an SELU Permit is required to establish the Distribution System use under the Utility Land Use Group in R-2 zone. There are use-specific standards for the development of a substation within the context of a residential zone. The Property is surrounded by R-2 zoning on three sides (east, west and south), although the only residential uses are located to the west across N. Vine Avenue. (*See Adjacent Uses.*)

Per use-specific standard UDC § 4.9.11.A.8, the Project shall be presented to the City's DRB, which shall review architectural style, building elevations, materials on exterior facades, color schemes, new mechanical equipment locations, lighting of outdoor areas, window locations and types, screening, landscaping, vehicular use areas, and other contributing design features. Because there are no buildings associated with this application nor vehicular use areas, the focus of the DRB in this SELU application is the landscaping, screening, wall design, colors and materials.

The Property currently houses the UA Facilities Management and Maintenance Operations Center, which includes warehouses for parts storage, an engine repair shop, an outdoor materials storage area and office space. This Project is the same type of use (an unmanned electric substation) that exists on the two properties to the south. It will have negligible traffic generation and is less intense than the existing use on the Property, as well as the surrounding uses to the north, east and west. The change in use on this Property will relieve traffic and parking congestion and improve the visual quality and pedestrian experience along the Vine Avenue streetscape.

No buildings are proposed as part of this Project. All new Gas-Insulated Substation ("GIS") equipment for the Vine Substation will be located within the perimeter walls. A protective mechanical canopy, including a gantry crane, will be installed over the GIS equipment. (*See Preliminary Development Plan.*) This canopy will be 25 feet high in compliance with R-2 height standards. The canopy, which is integral to the equipment, houses a crane mechanism that allows movement of the electrical components. (GIS substations cannot operate without the canopy and crane.) The canopy also shields the gear from direct heat, as the equipment degrades in higher temperatures.

Applicable use-specific standards for Distribution Systems specify that the height of the perimeter wall must be 10 feet in height where contiguous to a residential zone.<sup>1</sup> In accordance with federal critical infrastructure protection ("CIP") standards<sup>2</sup>, TEP must ensure the protection of its electric infrastructure. TEP has conducted an in-depth review of these CIP standards, specifically related to the prevention of physical breaches of their substation facilities. TEP has developed security standards that include the use of minimum 12-foot-high masonry security walls around its electric power substations. Further, TEP has

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<sup>1</sup> UDC § 4.9.11.9 & 10.

<sup>2</sup> Federal Energy Regulatory commission ("FERC") has tasked the North American Reliability Corporation ("NERC") with the obligation to create mandatory electric reliability standards governing the protection of critical electric infrastructure in the United States. These Critical Infrastructure Protection ("CIP") standards are applied to all built electric system facilities, including TEP's existing and future 138kV, 345kV and 500kV substations within the City.

agreed with the UA to match the perimeter wall height, materials and style of the wall surrounding the UA's 46 kV GIS substation south of the Property at the southeast corner of N. Vine Avenue and E. Lee Street. That wall is 13.5 feet in height.

The proposed 13.5-foot decorative masonry wall will completely surround the use/equipment and will be constructed on all four sides of the project. The wall will be located directly on the north, south and east Property lines. The wall will be set back 20 feet from the western Property boundary adjacent to N. Vine Avenue (and across from the only residential uses near the Property), and a landscape border will be installed within this setback area. (*See Photo Simulations and Perimeter Wall & Access Gate Details.*) Lighting will be installed as part of the Project strictly for emergency and maintenance situations that may occur at night.

The Zoning Examiner has the discretion to modify structural and vegetative screening standards for screening with a condition on the SELU permit.<sup>3</sup> TEP will provide the required street landscape border on the west, which is the only perimeter adjacent to residential uses (and N. Vine Avenue). As part of this SELU, TEP is requesting a perimeter wall height increase from 10 feet to 13.5 feet, which both meets the CIP standard and matches the perimeter wall height of the UA 46 kV GIS substation to the south. In addition, TEP is requesting relief from the 20-foot setback on the north, south and east to permit construction of the perimeter wall on those Property lines. Although those perimeters are adjacent to residential zones, the uses on the north, south and east are similar to or more intense than the proposed Vine Substation use. (*See Proposed Plan Palette & Water Harvesting Materials.*)

### **C. Conclusion**

We thank the DRB for reviewing the landscaping/screening and wall design, color and materials for this Project. We believe the perimeter treatment acknowledges the existing uses in the area and provides a more aesthetically pleasing and consistent wall/landscape treatment along N. Vine Avenue. We respectfully request your recommendation of approval to the Zoning Examiner on these items.

Sincerely,



Robin M. Large  
Senior Land Use Planner

Attachments

cc: Mr. Brian Pugh (via email)  
Environmental & Land Use Planner, Land Resources  
Tucson Electric Power Company

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<sup>3</sup> UDC § 3.4.6.A.1.



# Vine Substation

(formerly UA North Substation)

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SPECIAL EXCEPTION LAND USE PERMIT

DESIGN REVIEW BOARD MEETING

APRIL 9, 2021

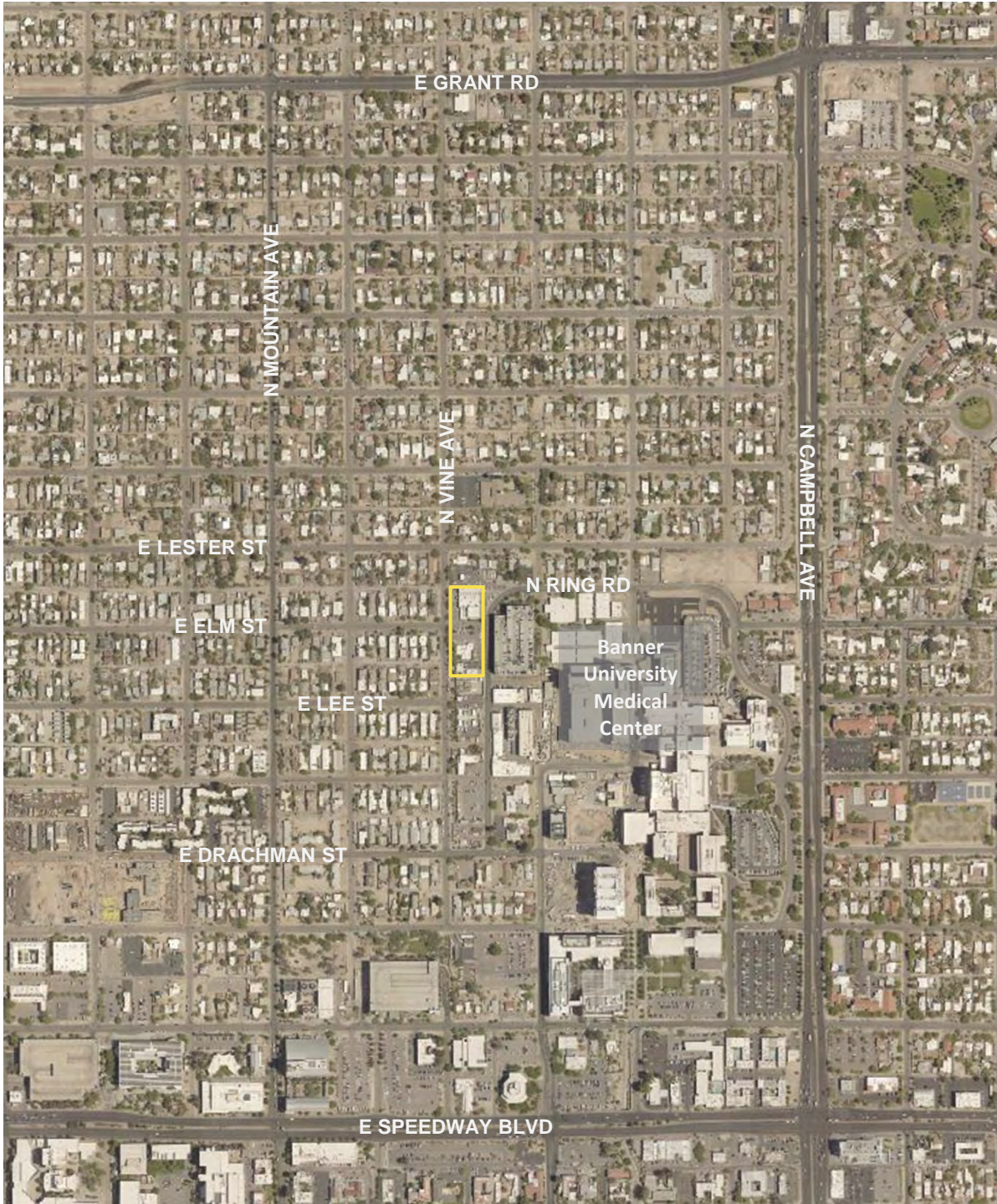
# Vine Substation – DRB Package

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- Project Summary
- Location Map & Aerial Photo
- Preliminary Development Plan
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- Perimeter Wall & Access Gate Details
- Proposed Plant Palette & Water Harvesting Materials



# Location Map



# Adjacent Uses

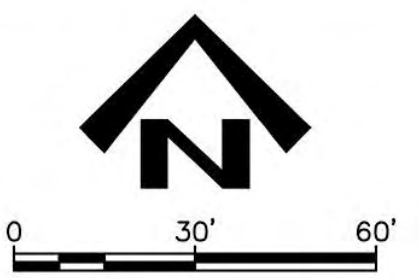
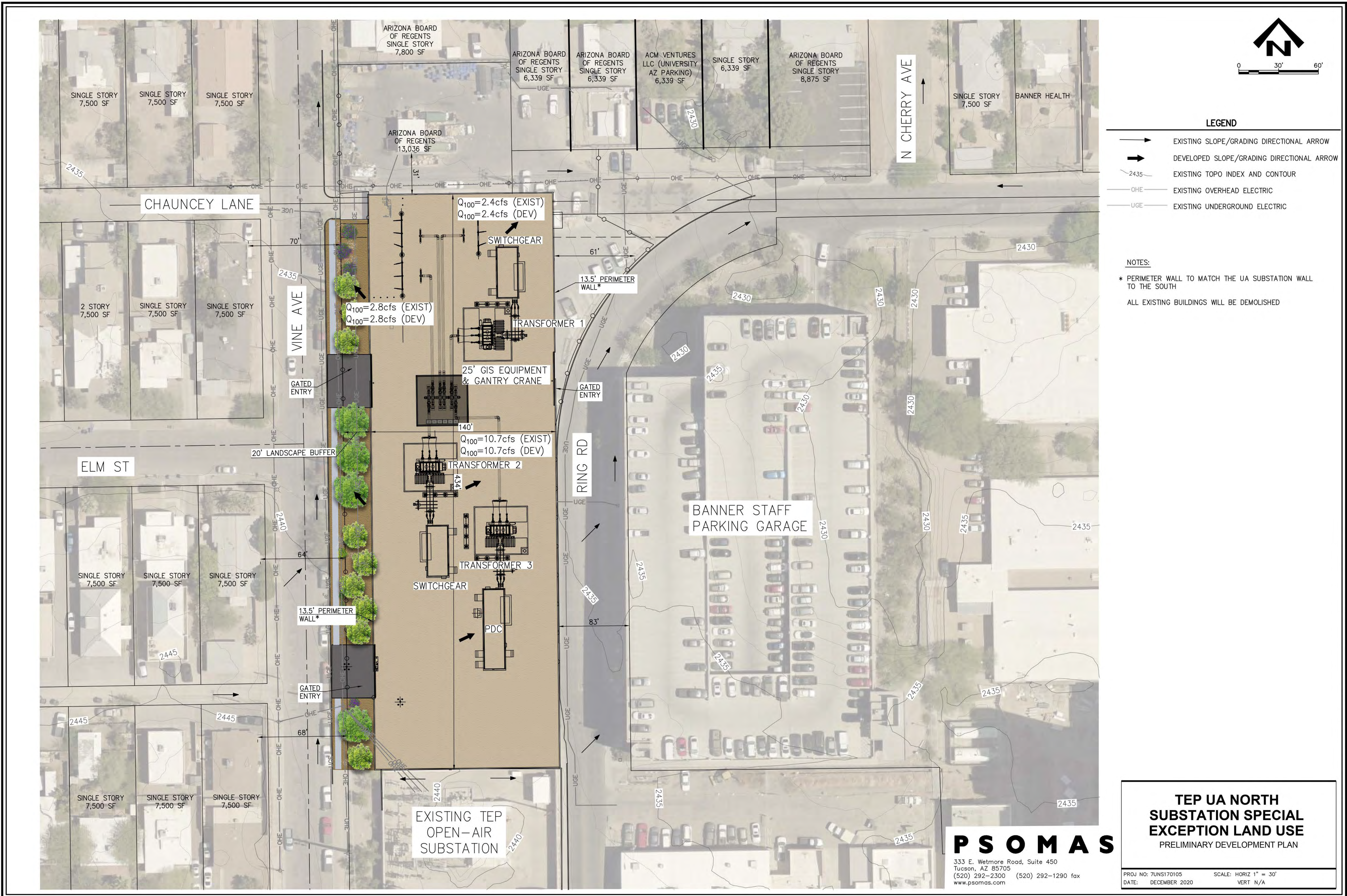
- North: UA salvaging & recycling
- South: Existing electric substations
- East: Ring Road/Banner parking garage
- West: Vine Avenue & residential



# Preliminary Development Plan (PDP)

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- Project Area: 1.6 acres
- Proposed Use: 138kV GIS Substation (Distribution System Use)
- Only residential uses located across Vine Avenue
- West edge 20-foot setback, landscape border & new wall
- Proposed Height:
  - Equipment Canopy: 25 feet
  - Perimeter Masonry Wall: 13.5 feet (to match wall of existing UA substation)



**LEGEND**

- EXISTING SLOPE/GRADING DIRECTIONAL ARROW
- DEVELOPED SLOPE/GRADING DIRECTIONAL ARROW
- 2435 EXISTING TOPO INDEX AND CONTOUR
- OHE EXISTING OVERHEAD ELECTRIC
- UGE EXISTING UNDERGROUND ELECTRIC

**NOTES:**

- \* PERIMETER WALL TO MATCH THE UA SUBSTATION WALL TO THE SOUTH
- ALL EXISTING BUILDINGS WILL BE DEMOLISHED

**PSOMAS**

333 E. Wetmore Road, Suite 450  
Tucson, AZ 85705  
(520) 292-2300 (520) 292-1290 fax  
www.psomas.com

**TEP UA NORTH  
SUBSTATION SPECIAL  
EXCEPTION LAND USE**  
PRELIMINARY DEVELOPMENT PLAN

PROJ NO: 7UNSI70105      SCALE: HORIZ 1" = 30'  
DATE: DECEMBER 2020      VERT N/A

P:\Projects\PSO-01\AutoCAD\From Other\Pasomas 12.9.2020\Site\Site PIP CAD.dwg 7 C-TEP-RZM-07-REV\_DRAINAGE Chris Loria Mon, 14 Dec 2020, 10:24am

**Vine Substation**  
RENDERED PRELIMINARY DEVELOPMENT PLAN



VIEW POINT



EXISTING CONDITIONS



PHOTO SIMULATION



Vine Substation  
Photo 1 North

Note:  
This is for Visual purposes with two drop-ins from Vine Street and one drop-in from Ring Road. This is dependent on the outcome of the line siting.



VIEW POINT



EXISTING CONDITIONS



PHOTO SIMULATION



Vine Substation  
Photo 1 South

Note:  
This is for Visual purposes with two drop-ins from Vine Street  
and one drop-in from Ring Road. This is dependent on the  
outcome of the line siting.



VIEW POINT



EXISTING CONDITIONS



PHOTO SIMULATION



Vine Substation  
Photo 2 North

Note:  
This is for Visual purposes with one drop-in from Vine Street  
and two drop-ins from Ring Road. This is dependent on the  
outcome of the line siting.



VIEW POINT



EXISTING CONDITIONS



PHOTO SIMULATION



Vine Substation  
Photo 2 South

Note:  
This is for Visual purposes with one drop-in from Vine Street and two drop-ins from Ring Road. This is dependent on the outcome of the line siting.







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BULL GRASS



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LITTLE LEAF CORDIA



WHITE LANTANA



MEXICAN FENCE POST



PARRY'S AGAVE



MOUNT LEMMON MARIGOLD

# Vine Substation

PLANT PALETTE

Note:  
Plant materials and example imagery are provided for context only.  
Final plant material may vary. Trees shall not exceed twenty feet in height due to overhead powerlines.



EXAMPLE 1



EXAMPLE 1



EXAMPLE 2



EXAMPLE 2

# Vine Substation

WATER HARVESTING

Note:  
Every effort will be made to include water harvesting techniques similar to the C2E project that exists in the Jefferson Park Neighborhood north of the site. Water harvesting may not impede pedestrian needs or the function of the substation.

# Questions?

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**Keri Silvyn** | Lazarus & Silvyn, P. C.

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**Robin Large** | Lazarus & Silvyn, P. C.

RLarge@LSLawAZ.com | 520.207.4464

<https://www.tep.com/ua-north-substation/>

