



# MEMORANDUM

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DATE: April 23, 2008  
For May 8, 2008 Hearing

TO: Peter M. Gavin  
Zoning Examiner

FROM:   
Albert Elias, AICP  
Urban Planning & Design  
Director

SUBJECT: SE-08-05 TEP Cienega Substation- Dawn Drive, RH Zone (Ward 4)  
URBAN PLANNING AND DESIGN REPORT

**Issue** – This is a request by Tucson Electric Power Company (TEP) for approval of an electric substation as a special exception land use in the RH zone. The project site is 12.72 acres in size and located on the north side of Dawn Drive, approximately 1000 feet west of Shalom Drive (see Case Location Map). The preliminary development plan indicates that 2.56 acres are to be occupied by the 138 kilovolt (138kV) substation equipment and enclosed with a decorative masonry wall, ten feet in height.

Power substations with an input voltage of one-hundred and fifteen kilovolts (115kV) or greater are allowed as a Special Exception land use providing they meet the criteria established in Section 3.5.11.1. C., F., G and J. and approval through the Zoning Examiner Full Notice Procedure, Section 23A-50 and 23A-53. A public hearing before the Zoning Examiner is required. The Zoning Examiner will render a decision to grant the use with or without conditions, or to deny the use.

**Department of Urban Planning and Design Recommendation** – The Department of Urban Planning and Design recommends approval of the requested special exception use, subject to the attached preliminary conditions.

## **Background Information**

Existing Land Use: Undeveloped.

Surrounding Zones and Land Uses:

North: Zoned RH; Undeveloped State Trust Land. Property 1840 feet north of the proposed substation is Pima County CMH-1 zoning and developed with mobile homes.

South: Zoned RH; Undeveloped State Trust Land.

East: Zoned RH; Undeveloped State Trust Land. Property on the east side of Shalom Drive (1200 feet east of the proposed substation) is Pima County GR-1 zoning and developed with single family residences.

West: Zoned RH; Undeveloped State Trust Land.

Previous Cases on the Property: None.

Related Cases:

SE-98-32 Tucson Electric Power Company – Broadway Boulevard, R-1 Zone. This was a request for approval as a special exception land use for the reconstruction and expansion of an electric substation in the R-1 zone. The site is located south of the El Conquistador Estates Subdivision, within the north parking lot of El Con Mall, approximately 1,600 feet north of Broadway Boulevard. The applicant proposed an expansion from 2,726 to 5,670 square feet within an easement of 11,543 square-feet in size. On November 5, 1998, the Zoning Examiner approved the Special Exception request.

SE-00-82 Tucson Electric Power Company – Valencia Road, RX-1 Zone. This was a request for approval of an electric substation, approximately 101,910 square feet in size, as a special exception land use in the RX-1 zone. The site is located south of Valencia Road, 4,741 feet west of Houghton Road. On December 14, 2000, the Zoning Examiner approved the Special Exception request.

SE-06-36 TEP – Silverbell Road, RX-1 Zone. This was a request for approval of a special exception land use for an electrical substation, approximately 106,000 square feet in size, located in the RX-1 zone. The substation is located on 3.42 acres at the northeast corner of Silverbell Road and El Camino del Cerro. The Zoning Examiner approved the special exception on November 2, 2006.

**Applicant's Request** – The applicant requests approval of a proposed 138kV substation as a special exception land use on 12.72 acres in the RH zone.

### **Planning Considerations**

The *Rincon Southeast Subregional Plan (RSSP)*, Houghton/Dawn Map Detail #8, and the City's *General Plan* provide land use policy guidance for the area in which the Tucson Electric Power substation is proposed. The *Design Guidelines Manual* suggests design techniques that can be used to implement land use plan policy objectives.

*General Plan policy* supports measures that protect life and property, including those that minimize potential loss due to flooding and erosion. Policies promote protecting washes and associated habitat and wildlife corridors. Other policies encourage environmentally sensitive site design that enhances the visual quality of the community. The *Design Guidelines Manual* recommends techniques for improving the visual appeal of freestanding walls, and screening less visually attractive uses, such as utility equipment.

The Houghton/Dawn map detail of the *RSSP* covers an approximately 3,500-acre or 5.5-square-mile area of undeveloped Arizona State Trust lands, generally located north and south of

Interstate 10 between Houghton Road on the west and Colossal Cave Road on the east. This map detail area lies immediately east of map detail #4-RSSP and the area depicted shares many of the same environmental characteristics.

The Environmental Resource Zone (ERZ) recognizes the value of Tucson's open space resources, particularly the critical and sensitive wildlife habitat of eastern Pima County associated with public preserves. The Houghton/Dawn area contains numerous significant washes that were added to the ERZ base map when original City zoning was established for this area. There is one ERZ watercourse and one proposed ERZ watercourse within the Arizona State Land Department (ASLD) parcel boundary.

Vehicular access to the project site is proposed from Dawn Drive using two 20-foot private access easements, one at the southeast corner, and the other at the southwest corner of the lease site, to accommodate TEP vehicles with a loop access around/through the substation. The small portion of Colossal Cave Road located within the City is identified as a scenic arterial street with a future right-of-way of 150 feet on the *Major Streets and Routes Plan* map.

The Pima Association of Governments - Transportation Planning Division (PAG-TPD) did not provide estimates regarding the number of vehicle trips per day generated by the proposed development. Field inspection by staff indicates there are currently no billboards on the project site.

### **Design Considerations**

Land Use Compatibility – The ASLD parcel is located approximately one-half mile east of the intersection of Colossal Cave Road and Dawn Drive. The proposed TEP lease site is to be centrally located along the southern boundary of the State parcel, adjacent to an existing electrical transmission line. An unpaved road parallels the southern boundary of the project site. A transmission line easement, 330 feet in width and located on the north side of Dawn Drive, crosses the project site in an east-west direction. Shalom Drive represents the boundary of the City limits on the east and Dawn Drive defines the south City limit boundary.

The area is zoned RH (Rural Homestead, very low-density residential) and RX-1 (low-density residential). The closest residential development within the City is a recreational vehicle park located east of Houghton Road, just north of the Rocket Road alignment. The TEP substation lease boundary is approximately 1,000 feet from the existing residential properties to the east, with an additional two hundred feet interior setback from the lease boundaries to a proposed perimeter wall. A decorative masonry wall, ten feet in height, is proposed to enclose the substation and ground equipment. The height of the substation equipment within the walled area is approximately 14 feet. The applicant proposes an area of 0.88 acres of landscaping with drought tolerant plants outside the perimeter wall and 0.12 acres of mitigation area for the encroachment into the protected riparian area located on the northwest corner of the proposed facility.

Drainage/Grading/Vegetation – The terrain is generally flat and braided by a network of shallow washes. The characteristic vegetation is creosote, bur sage, and cacti species, with mesquite found in and along the washes. There is one ERZ watercourse and one proposed ERZ watercourse within the ASLD parcel boundary. Both regulated watercourses are reaches of Franco Wash. According to the Wash information maps, there is no presence of Critical and Sensitive Biological Communities (Shaw 1986) within the project site. An area west of the proposed substation is classified as Class II Habitat, which is associated with a reach of the Franco Wash.

Soils and topography on the site are characteristic of alluvial fans. Vegetated soils are resistant to erosion but will erode when disturbed or when vegetation is removed. The northern one-third of the site is subject to frequent flows and contains a regulatory floodplain. The proposed substation development encroaches slightly into the floodplain as determined by the applicant's consultant. The site lies in a non-designated basin and is not subject to detention requirements. Threshold retention is indicated and water harvesting is required by the LUC.

Grading will be limited to the footprint of the substation, driveways into and around the outer portion of the substation site to limit sheet flow flooding off-site. The majority of vegetation will remain in place. However, replanting will mitigate vegetation removed during grading.

The applicant has prepared a draft mitigation plan that identifies approximately 0.04 acres of encroachment of the Protected Riparian Area. The mitigation area depicted on the draft plan is 0.12 acre.

The applicant does not indicate whether buffelgrass is present on the project site. If buffelgrass is present, the applicant will be required to prepare and implement an eradication mitigation plan, including continuing site monitoring and treatment.

Road Improvements/Vehicular Access/Circulation – The substation site lies along the north side of Dawn Drive, about 2100 feet east of Colossal Cave Road. The site is part of a 308.15-acre Arizona State Land Department parcel and is currently undeveloped. Dawn Drive is a paved, two-lane local street with a 150 feet wide right-of-way and generally serves the rural residential properties in this area. Access to this site will be from Dawn Drive. No road improvements are planned as part of this project.

**Performance Criteria** - Power substations with an input voltage of one-hundred and fifteen kilovolts (115kV) or greater are allowed as a Special Exception land use providing they meet the criteria established in Section 3.5.11.1. C., F., G and J. and approval through the Zoning Examiner Full Notice Procedure, Section 23A-50 and 23A-53.

3.5.11.1 Distribution System.

C. *The setback of the facility, including walls or equipment, is two hundred (200) feet from any existing adjacent residential zone. The setback may be varied as provided in Sec. 5.3.3, Variance.*

The TEP substation lease boundary is approximately 1,000 feet from the existing adjacent residential zoned and developed properties to the east, with an additional two hundred feet interior setback from the lease boundaries to a proposed perimeter wall.

F. *Noise emission at the property line is to be equivalent to the residential requirements of the noise ordinance.*

The TEP standard for noise emissions is 55dB (A) at the lease area boundary of the substation. This decibel level will be maintained for the ultimate build out of three transformers. The City's residential requirement of the noise ordinance is 62dB (A).

G. *No TVI (television interference) or RIV (radio interference) on a continuous basis is permitted.*

There will be no continuous TV or radio interference associated with the proposed substation.

J. *The use must include a ten (10) foot high wall in an earth tone and vegetative landscaping where contiguous to a residential zone.*

The substation equipment will be enclosed with an earth tone color masonry wall, ten feet in height. The applicant proposes 0.88 acres of landscaping with drought tolerant plants around the exterior of the perimeter wall.

**Conclusion** – The proposed substation use is consistent with *Rincon Southeast Subregional Plan* and in compliance with performance criteria of LUC 3.5.11.1. Screening and buffering proposed for the project is consistent with *General Plan* policies and will minimize visual impacts on the surroundings natural and built environment. Subject to compliance with the attached preliminary conditions, approval of the requested special exception land use in the RH zone is appropriate.

## Preliminary Conditions

PROCEDURAL

1. A development plan in substantial compliance with the preliminary development plan dated March 10, 2008, and the Design Compatibility Report, is to be submitted and approved in accordance with Section 5.3.8 of the *Land Use Code*.
2. The property owner shall execute a waiver of potential claims under A.R.S. Sec. 12-1134 for this zoning amendment as permitted by A.R.S. Sec. 12-1134 (I) in the form approved by the City Attorney and titled “Agreement to Waive Any Claims Against the City for Zoning Amendment”.
3. An archaeological assessment and survey shall be performed by a qualified archaeologist before any grading or other ground modification takes place. If cultural features or remains are found, testing and data recovery shall be completed as needed. Copies of testing plans, testing reports, data recovery plans and final reports shall be submitted to and approved by the City Historic Preservation Office prior to construction work commencing. If, during construction, human remains and/or associated burial items are discovered, ground disturbing activities in the vicinity of the discovery will cease, the discovery site will be secured, and the Arizona State Museum will be immediately notified as required under A. R. S. 41-865.
4. Any relocation, modification, etc., of existing utilities and/or public improvements necessitated by the proposed development shall be at no expense to the public.
5. “Safe by Design” concepts shall be incorporated in the development plan for review by the Tucson Police Department.
6. Owner/developer shall enter into a Sewer Service Agreement with Pima County that specifies the improvements to be made to Pima County's public sewerage system, and the timing of said improvements.
7. Five years are allowed from the date of initial authorization to implement and effectuate all Code requirements and conditions of the special exception.

LAND USE COMPATABILITY

8. A decorative masonry screen wall, ten feet in height, is to be provided around the perimeter of the substation and the masonry shall be a color that blends in with the natural surroundings.
9. All walls visible from a public right-of-way and/or adjacent to existing residential development, are to be graffiti-resistant and incorporate one (1) or more visually appealing design treatments, such as the use of two (2) or more decorative materials like stucco, tile, stone, or brick; a visually interesting design on the wall surface; varied wall alignments, (jog, curve, notch, setback, etc.); and/or trees and shrubs in voids created by the wall variations.
10. Six (6) inch wide fence block or greater shall be used for perimeter walls.

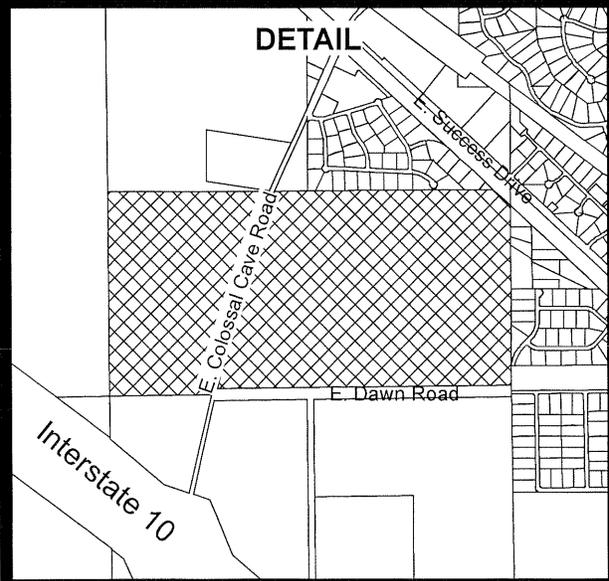
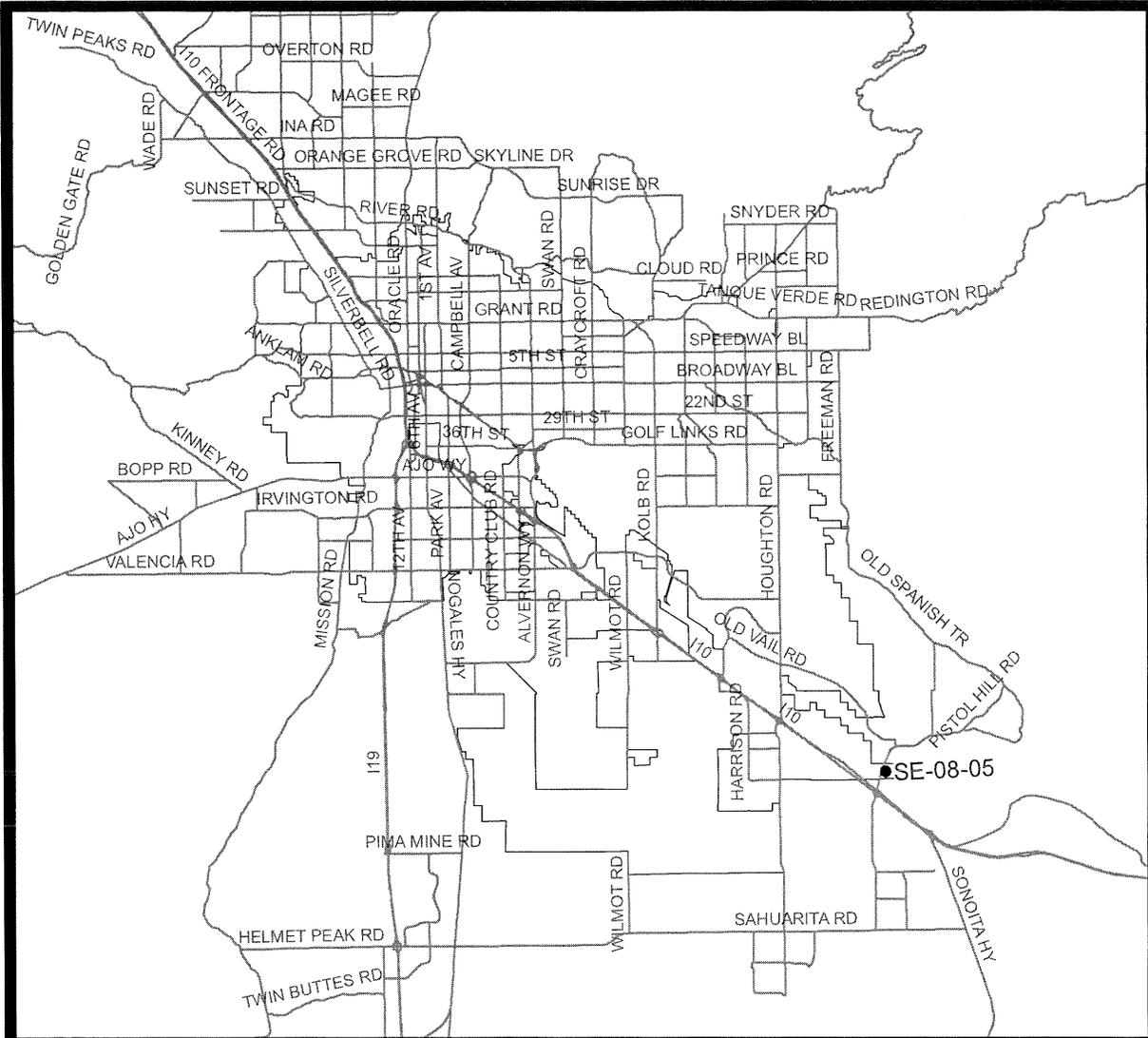
Preliminary Conditions

11. Substation noise emissions, at the lease area boundary of the substation depicted on the March 10, 2008 preliminary development plan, shall not exceed the residential requirements of the City's noise ordinance.

DRAINAGE/GRADING/VEGETATION

12. Should buffelgrass be present on the site, a buffelgrass mitigation management plan shall be created and implemented for the site as a component of the Native Plant Preservation Plan portion of the Landscape Plan.
13. A final mitigation plan for the area disturbed outside the perimeter wall during construction shall be submitted for approval by Development Services Department and the Office of Conservation and Sustainable Development staffs.
14. Preparation of a complete Drainage Report, including details of detention/retention, is required. The following will apply:
  - a. Each detention/retention basin shall include a sediment trap, or other sediment control measures as approved by the City Engineer, to prevent sedimentation of the detention/retention basin. Each sediment trap, or other sediment control measure, shall have a provision for total drainage.
  - b. Detention/retention basin floors shall be graded to drain either toward the outlet structure or other logical point. Basin floors shall not be flat.

s/rezoning/SE-08-05 preliminary conditions.doc



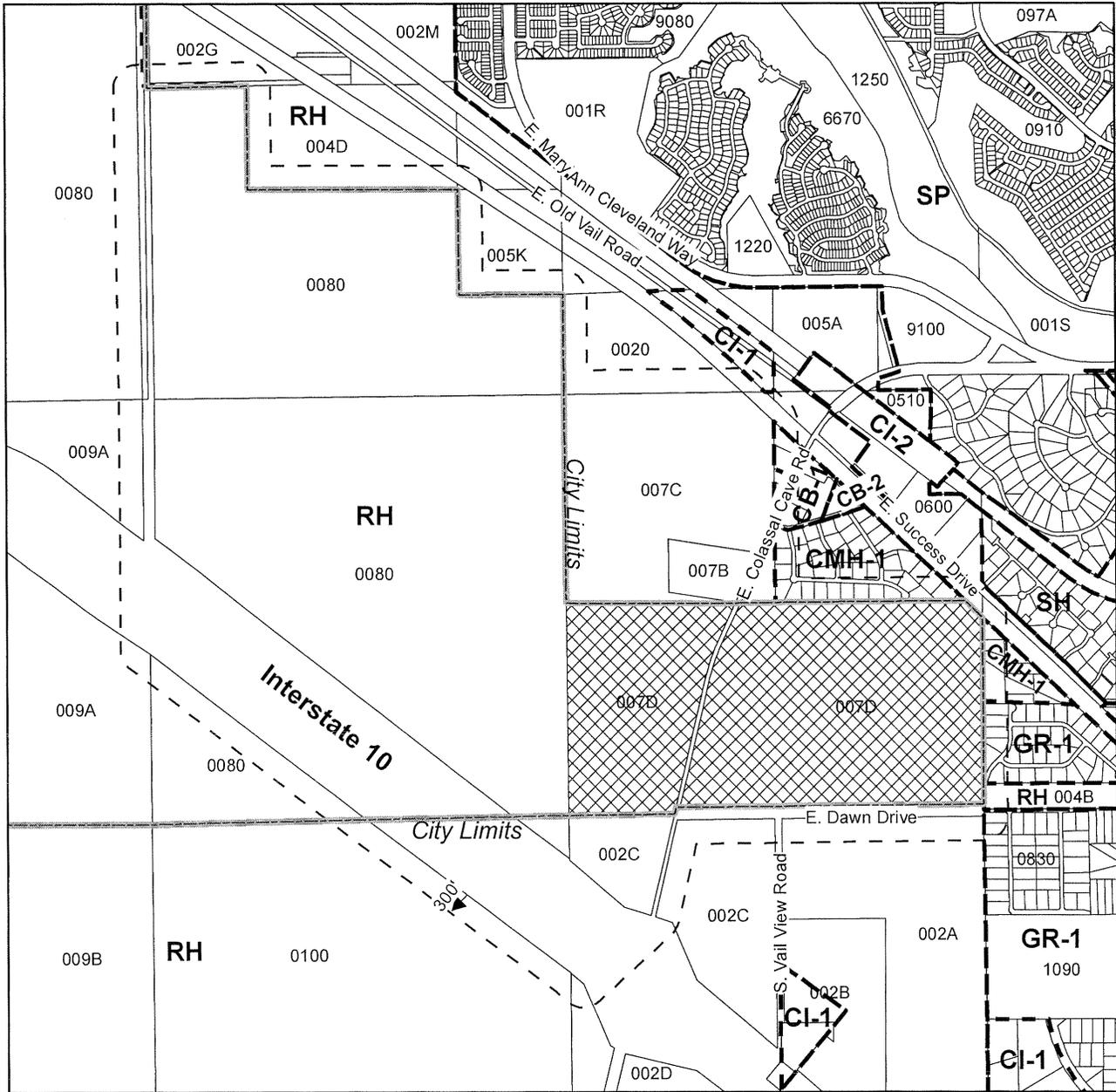
**CASE LOCATION MAP**

CASE NO. SE-08-05

North of Dawn Road, both sides  
of Colossal Cave Road



**CITY OF  
TUCSON**



**SE-08-05 TEP Cienega Substation**  
 Special Exception - Full Notice Procedure

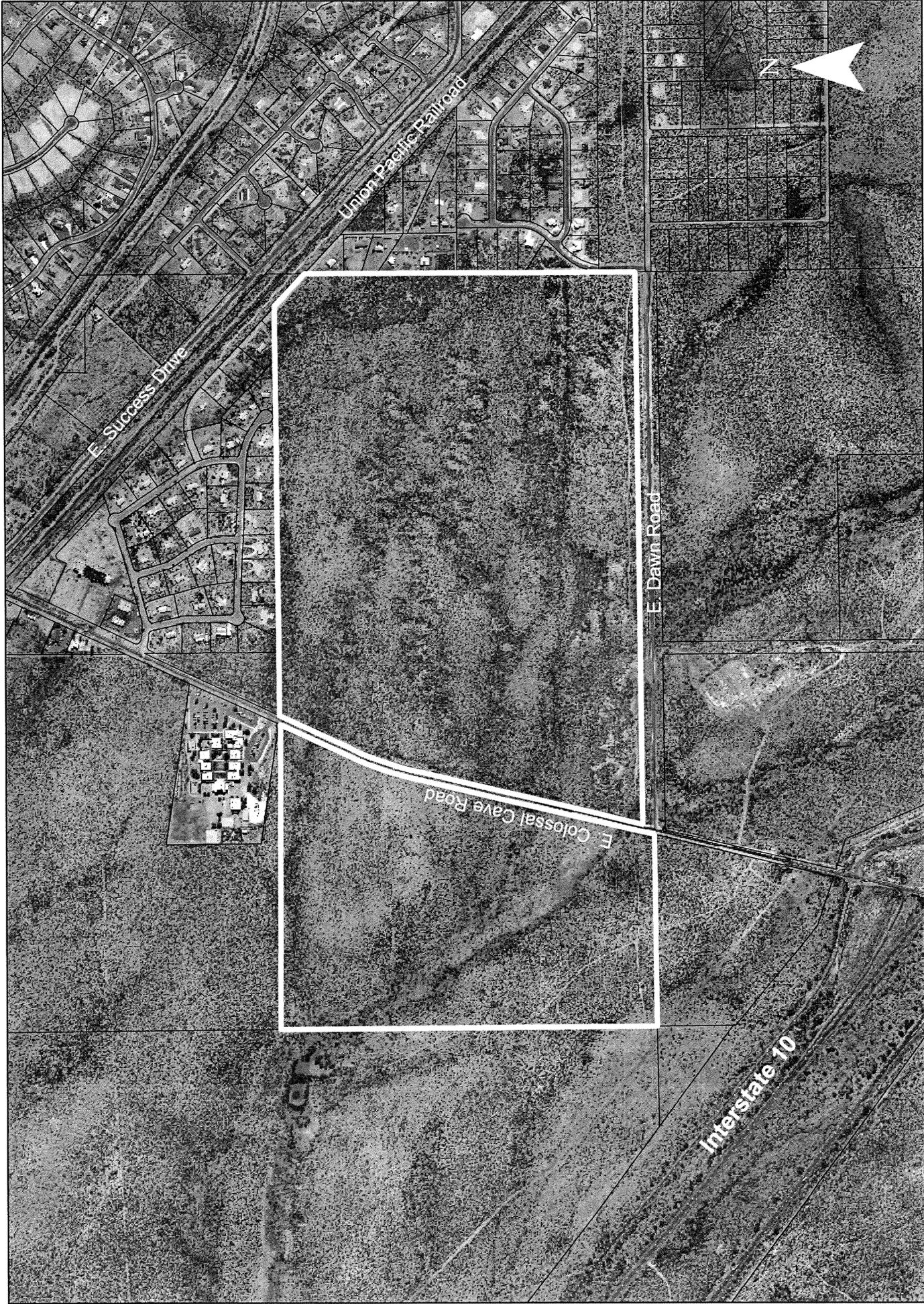


0 1,000 2,000  
 Feet  
 1 inch equals 2,000 feet

-  Area of Special Exception Request
- RH** Zoning of Requested Area
-  Notification Area (300 foot radius)
-  Zone Boundaries
-  City Limits

Neighborhood, Area Plan(s): Rincon/Southeast Subregional Plan  
 Address: North of Dawn Road, on either side of Colossal Cave Road  
 Base Maps: Sec.16 T.16 R.16  
 Ward: 4





**SE-08-05 TEP Cienega Substation**  
2005 Aerial