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Application for a Certificate of Environmental Compatibility

Arizona Public Service Company
North Valley 230kV Facility Siting Project

Prepared for:

Arizona Power Plant and Transmission Line Siting Committee

Submitted by:

Arizona Public Service Company

Date: _____
Case No. _____

BEFORE THE ARIZONA
POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

In the matter of the Application of Arizona Public Service Company, in conformance with the requirements of Arizona Revised Statutes Section 40-360, et seq., for a Certificate of Environmental Compatibility authorizing the North Valley 230kV Facility Siting Project, including the construction of approximately 31 miles of 230kV transmission lines, two 230kV substations, and three substation interconnections in Maricopa County, Arizona, originating at the Westwing Substation in Section 12, Township 4 North, Range 1 West, G&SRB&M and interconnecting at the Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East, G&SRB&M, continuing to the proposed Avery Substation in Section 15, Township 5 North, Range 2 East, G&SRB&M and the proposed Misty Willow Substation in Section 8, Township 4 North, Range 3 East, G&SRB&M, and terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East, G&SRB&M.	**L-00000D-02-0120** Case No. _____

APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

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LIST OF ACRONYMS AND ABBREVIATIONS

AC	alternating current
ADA	Arizona Department of Agriculture
ADOT	Arizona Department of Transportation
AGFD	Arizona Game and Fish Department
AM	amplitude modulated
APS	Arizona Public Service Company
ASM	Arizona State Museum
ASLD	Arizona State Land Department
ASU	Arizona State University
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CAP	Central Arizona Project Canal
CEC	Certificate of Environmental Compatibility
CWG	community working group
dB	decibels
dBA	decibels measured on an "A-weighted" scale
EHV	extra high voltage
EMF	electric and magnetic field
EPG	Environmental Planning Group
FM	frequency modulated
G&SRB&M	Gila and Salt River Base and Meridian
I-17	Interstate 17
KOP	Key Observation Point
kV	kilovolt
MHz	megahertz
NIEHS	National Institute of Environmental Health Services
NRHP	Natural Register of Historic Places
SHPO	State Historic Preservation Office
SQRU	Scenic Quality Rating Unit
SR	State Route

SRP	Salt River Project Agricultural Improvement and Power District
USFWS	U.S. Fish and Wildlife Service

INTRODUCTION

INTRODUCTION

Arizona Public Service Company (APS) is applying for a Certificate of Environmental Compatibility (CEC) for the proposed North Valley 230 kilovolt (kV) Facility Siting Project (North Valley Project or Project).

PROJECT OVERVIEW

The North Valley Project includes approximately 31 miles of double-circuit 230kV transmission lines, two new 230kV substations, and three interconnections to existing 230kV substations in north-central Maricopa County. The Proposed Route will interconnect with the existing Westwing, Raceway, and Pinnacle Peak substations and the proposed Avery and Misty Willow substations, crossing land under the jurisdiction of the City of Phoenix, City of Peoria, and unincorporated Maricopa County. The Project is an integral part of APS' long-range plans to develop a 230kV system for the North Valley that will accommodate existing and future load growth in conjunction with APS' 69kV subtransmission system in the area.

PROPOSED ROUTE

The Proposed Route for the North Valley Project is shown in Figure 1 of this Application. The Proposed Route originates at the Westwing Substation and proceeds to the northeast paralleling two 500kV transmission lines and a 230kV transmission line to the Raceway Substation. The route then turns southwest to the Dove Valley alignment and proceeds east along the Dove Valley alignment to a point approximately ½ mile west of Interstate 17 (I-17), at the proposed Avery Substation. From the proposed Avery Substation, the route extends south for approximately 1 mile adjacent to 39th Avenue, then turns to the southeast towards I-17. The Proposed Route then parallels the west side of I-17 south to the Happy Valley corridor, where the Proposed Route turns to the east and parallels a 230kV transmission line, interconnects with the proposed Misty Willow Substation, and continues east terminating at the existing Pinnacle Peak Substation.

PROJECT NEED

System studies have shown that new transmission facilities are necessary to accommodate continued load growth in the North Valley, as well as to enhance the reliability of the existing Valley Transmission System. Specifically, the construction of new 69kV subtransmission infrastructure is necessary to allow for the reliable distribution of electricity to customers as the North Valley continues to grow. This Project provides the 230kV "backbone" to the local 69kV system, including substations that will interconnect APS' 230kV system with the 69kV system being expanded in this area. The construction of the North Valley Project is necessary for APS to meet its legal obligation to serve customers in its growing North Valley service area.

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project
Figure 1
Proposed Route

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
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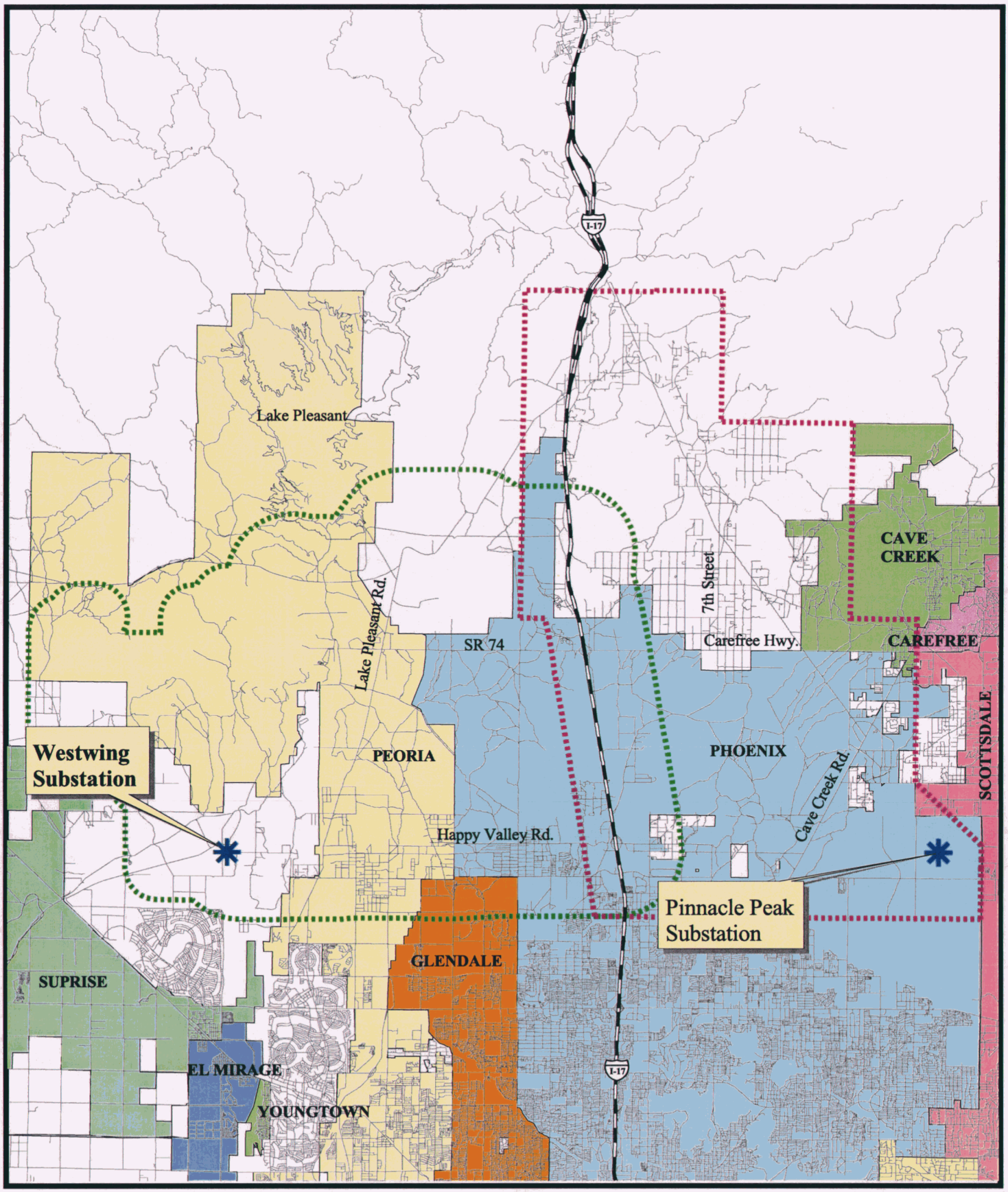
ENVIRONMENTAL STUDIES AND ROUTE SELECTION PROCESS

The North Valley Project incorporated information from two previous comprehensive siting studies referred to as the Northwest Valley Energy Enhancement Siting Project (Northwest Valley Project) and the North Central Facilities Siting Project (North Central Project). These studies were completed between September 1997 and March 2001, and further specific studies to support the North Valley Project were conducted between April 2001 and August 2002. The siting studies were conducted to evaluate potential 230/69kV transmission line routes and substation sites in north-central Maricopa County (Figure 2).

The two previous siting studies, which included extensive 69kV route planning, were conducted as separate studies to provide the public and affected jurisdictions the attention required to focus on local planning issues and concerns. The environmentally compatible 230kV transmission line routes and substation sites that were identified in each of the previous siting studies were then combined and updated, and are now referred to as the North Valley Project. Project updates have been given to public leaders and the Community Working Groups (CWGs). APS selected the Proposed Route and alternative routes based on engineering and technical considerations, environmental study results, public and agency input, and cost. More specific information on the Proposed Route selection is summarized below.

The Proposed Route, which is APS' preferred route, was selected based on environmental and engineering advantages and on agency and public input. Advantages of the Proposed Route include:

- maximizes opportunities to parallel and consolidate existing and approved linear facilities (e.g., transmission lines, utility corridors, and I-17)
- addresses key issues raised by the public and CWGs, including avoiding the Carefree Highway (a scenic corridor) and using existing utility corridors and other linear facilities (see Exhibits B and J)
- is supported or accepted by the two separate CWGs that were involved in the Northwest Valley Project and the North Central Project
- minimizes potential impacts to the proposed Sonoran Preserve
- is consistent with regional planning efforts in the Black Canyon corridor, due to coordination with the City of Phoenix and the Arizona State Land Department (ASLD)
- is consistent with the City of Peoria planning efforts



Legend

Northwest Valley Project Study Area Boundary

North Central Project Study Area Boundary

N
W E
S

2 0 2 4 Miles

Figure 2
Facility Siting Projects

APS

m:/projects/aps/ncp/cec/aprs/facilities.apr

In addition, potential visual impacts along the Proposed Route will be reduced through the use of dulled gray steel poles and non-specular conductors, matching structures and spans with existing transmission lines where practicable, and consolidation and underbuilding of planned and existing 69kV transmission lines. As part of this Application, cultural and biological resource studies were completed to identify potential areas of concern and develop mitigation as necessary. APS anticipates that impacts to registered historic sites and structures, registered archaeological sites, and sensitive species or habitat can be avoided or mitigated (see Exhibits C, D, and E).

PUBLIC INVOLVEMENT OVERVIEW

The public involvement program conducted for these studies was designed to disseminate information; establish lines of communication with interested agencies, groups or individuals; identify issues and concerns; and ensure that public input was integrated into the decision-making process. Elements of the program included advisory CWGs, public open house meetings, newsletters, small group meetings, as well as a Project website and telephone information lines.

Throughout the siting studies, a total of 11 newsletters and a fact sheet were distributed to project mailing lists and other interested parties. Thirteen public open houses were held for the Northwest Valley Project and North Central Project with a total of approximately 800 people attending these meetings. The final newsletter for the North Valley Project was mailed to over 65,000 area residents, property owners, business owners, and local officials.

Two CWGs were formed to provide additional input throughout the process. These advisory groups consisted of representatives from jurisdictions, state and federal agencies, school districts, homeowners groups, developers, and residents. The two groups met a total of 14 times. In addition, APS also met with smaller groups to disseminate project information and receive input from stakeholder groups. More information on these activities is included in Exhibit J.

RESULTS

The Proposed Route is environmentally compatible, and is a reasonable solution for interconnecting the Westwing, Raceway, Avery, Misty Willow, and Pinnacle Peak substations. It will also allow APS to meet its legal obligation to serve its growing North Valley customer base. Further, APS has coordinated its route planning and selection with the public and interested stakeholders. The Company has also worked closely with the City of Phoenix, City of Peoria, and ASLD to address these jurisdictions' planning and siting concerns in the rapidly developing I-17 corridor. Accordingly, APS requests that the Siting Committee and the Arizona Corporation Commission grant the Company a CEC for the Proposed Route and substation locations.

APPLICATION FOR
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

APPLICATION FOR A
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY

(Pursuant to A.R.S. 40-360.03 and 40-360.06)

1. Name and address of the applicant:

   Arizona Public Service Company
   400 N. Fifth Street
   Phoenix, Arizona 85004

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

   Michael DeWitt
   Project Manager, Transmission and Facilities Siting
   Arizona Public Service Company
   Mail Station 4030
   P.O. Box 53933
   Phoenix, Arizona 85072-3933
   Telephone: 602-493-4446

3. Dates on which the applicant filed a Ten Year Plan in compliance with A.R.S. Section 40-360.02, which the facilities for which this application is made were described:

   APS filed its current Ten Year Plan in January 2002, which includes the Project with the exception of the Misty Willow Substation. Previous Ten Year Plan filings for 2001, 2000, and 1999, also included facilities that are described in this application.

4. Description of the proposed facilities:

   4.1 Description of electric generating plant:

   (not applicable)

4.2 Description of the proposed transmission line:

4.2.1 General Description:

4.2.1.1 Nominal voltage for which the lines are designed:

230kV alternating current (AC)

4.2.1.2 Description of proposed structures:

The proposed facilities will include single pole structures with double-circuit 230kV transmission lines (which may be underbuilt with double-circuit 69kV transmission lines) that would be used for the majority of the route. Lattice towers with double-circuit 230kV transmission lines are proposed for the approximately 10-mile portion of the route along the Happy Valley corridor (illustrated in Figure 1 as Links 120, 140, and 170), to match existing structures and spans. Single-pole structures are typically between 110 and 150 feet in height with typical spans of between 300 and 700 feet. Lattice structures are typically between 105 and 150 feet in height with typical span lengths of between 800 and 1,200 feet. Typical structure diagrams are provided in Exhibit G. Final design characteristics will be determined in the detailed design phase of the Project.

4.2.1.3 Description of proposed switchyards and substations:

Two proposed sites for new 230kV substations have been identified (see Figure 1). The proposed Avery Substation will be located at the Dove Valley Road alignment approximately ½ mile to the west of I-17, in Section 15, Township 5 North, Range 2 East Gila and Salt River Base and Meridian (G&SRB&M). The substation will require approximately 10 acres and may be collocated with a proposed 10- to 15-acre service center. The proposed Misty Willow Substation will be located south of the Happy Valley corridor at the Central Arizona Project (CAP) Canal in Section 8, Township 4 North, Range 3 East G&SRB&M. This substation will require approximately 10 acres. The substation facilities would typically be surrounded by a block wall, solid steel gates, and landscaping. Final architectural characteristics and landscape density will be determined by the applicable permitting jurisdiction. Each

substation would also include dead-end structures, buswork, switches, transformers, and breakers.

Three 230kV substation interconnections will also be required at the Westwing Substation in Section 12, Township 4 North, Range 1 West G&SRB&M, the Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East G&SRB&M, and the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East G&SRB&M. Each substation interconnection would also include dead-end structures, buswork, switches, and insulators.

4.2.1.4 Purpose for constructing said transmission line:

Growth projections of the jurisdictions within the Project area show continued growth in the APS' North Valley service area. In particular, the I-17 corridor is projected to become a major area of growth for the City of Phoenix in the North Black Canyon Corridor Plan (1999). APS' electrical system planning is based on an assessment of projected growth and the associated electrical load growth, and forecasting the areas of future electrical overloads. APS has determined that new facilities will be required to address continued growth in the Project area. Additionally, the Project will enhance the reliability of the existing system. Based on the anticipated electrical demand and existing system limitations, the proposed 230kV improvements will allow for adequate power to be distributed in the area in accordance with APS' Ten-Year Plan.

4.2.2 General Location:

4.2.2.1 Description of the geographic points between which the transmission line will run:

The proposed transmission line must interconnect the following substations as shown on Figure 1:

- Westwing Substation in Section 12, Township 4 North, Range 1 West, G&SRB&M
- Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East, G&SRB&M

- proposed Avery Substation in Section 15, Township 5 North, Range 2 East, G&SRB&M

- proposed Misty Willow Substation in Section 8, Township 4 North, Range 3 East G&SRB&M

- Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East, G&SRB&M

4.2.2.2 Straight-line distance between such geographic points:

The straight-line distance between the Westwing and Pinnacle Peak substations is approximately 22 miles. The Raceway Substation site is approximately 7 miles from Westwing and 20.5 miles from Pinnacle Peak. The Avery Substation is approximately 11.5 and 13 miles from Westwing and Pinnacle Peak, respectively. The Misty Willow Substation is approximately 14 miles from the Westwing Substation and 8 miles from Pinnacle Peak.

4.2.2.3 Length of the transmission line for each alternate route:

Proposed Route: 31.2 miles
Alternative Route #1: 31.1 miles
Alternative Route #2: 30.2 miles
Alternative Route #3: 34.9 miles
Alternative Route #4: 32.8 miles

4.2.3 Detailed Dimensions:

4.2.3.1 Nominal width of right-of-way requested:

A maximum right-of-way width of up to approximately 150 feet is required for the Project. The typical right-of-way width for single-pole structures is approximately 100 feet, and up to approximately 120 feet is typically required for the lattice towers. Factors that will affect the right-of-way widths include span lengths, pole type and framing, circuit configuration, and total number of circuits.

4.2.3.2 Nominal length of span:

The nominal length of span will vary from 300 to 1,200 feet.

4.2.3.3 Typical height of structures above ground:

The typical height of the supporting structures will vary from approximately 105 to 150 feet above existing grade.

4.2.3.4 Minimum height of conductor above ground:

24 feet for 230kV transmission lines.

4.2.4 Estimated costs of proposed transmission line and substations:

Proposed Route:	$71,000,000
Alternative Route #1:	$71,000,000
Alternative Route #2:	$69,000,000
Alternative Route #3:	$76,000,000
Alternative Route #4:	$75,000,000

4.2.5 Description of the proposed and alternate routes:

The Applicant is requesting a corridor of between 1,000 and 2,000 feet in total width for the proposed or alternative routes described below to provide for sufficient flexibility to accommodate final design and engineering of the Project, as well as to allow APS to work with affected landowners on specific routing and pole placement. The typical right-of-way widths are described in Section 4.2.3.1.

The Proposed Route and alternative routes are illustrated in Exhibit A-5. The map identifies link numbers that are associated with segments that comprise each route as follows:

Proposed Route

Links 15, 35, 60, 70, 90, 115, 120, 140, and 170

The Proposed Route would originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and parallel an existing 500/230kV transmission line corridor northeast to approximately the Dove Valley Road alignment (Link 15). At that point, a radial line will extend northeast interconnecting with the 230/69kV Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East (Link 35). For this portion of the Proposed Route (Links 15 and 35), the Applicant requests a 1,500-foot corridor. This corridor would extend to the east from the

westernmost edge of the existing transmission line right-of-way. The Proposed Route continues east along the section line associated with the Dove Valley Road alignment to the proposed Avery Substation, located approximately ½ mile west of I-17 in Section 15 Township 5 North, Range 2 East (Link 70). The Applicant requests a 1,000-foot corridor on each side of the Dove Valley Road alignment. From that point, the line will continue south along the 39th Avenue alignment to the Lone Mountain Road alignment and cross Sections 22 and 23, Township 5 North, Range 2 East on the diagonal (Link 90) to meet I-17, and continue south paralleling the west side of I-17 to the south side of Skunk Creek (Link 115). From the proposed Avery Substation to I-17, the Applicant requests a 1,000-foot corridor on each side of the proposed centerline. As the Proposed Route parallels I-17 south to the south side of Skunk Creek, the Applicant requests a 1,000-foot corridor west of the freeway controlled access of I-17. The route parallels the south side of Skunk Creek to the 29th Avenue alignment where it turns south and parallels the 29th Avenue alignment to a point approximately ¼ mile south of Happy Valley Road. Along Skunk Creek and the 29th Avenue alignment, the Applicant requests 1,000 feet on either side of the proposed centerline. The Route will turn east and cross I-17 approximately ¼ mile south of Happy Valley Road and parallel an existing 230kV transmission line corridor, interconnecting with the proposed Misty Willow Substation located south of the existing transmission corridor and west of the CAP in Section 8, Township 4 North, Range 3 East. The Proposed Route then continues east and parallel to the 230kV transmission line corridor, terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (Links 120, 140, and 170). From I-17 east to the Pinnacle Peak Substation, the Applicant requests a 1,000-foot corridor north of the existing Salt River Project (SRP) transmission line.

Alternative Route #1

Links 15, 35, 60, 70, 90, 100, 110, 140, and 170

Alternative Route #1 would originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and parallel an existing 500/230kV transmission line corridor northeast to approximately the Dove Valley Road alignment (Link 15). At that point, a radial line will extend northeast interconnecting with the 230/69kV Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East (Link 35). For this portion of Alternative Route #1 (Links 15 and 35), the Applicant requests a 1,500-foot corridor. This corridor would extend to the east from the

westernmost edge of the existing transmission line right-of-way. Alternative Route #1 continues east along the section line associated with the Dove Valley Road alignment to the proposed Avery Substation, located approximately ½ mile west of I-17 in Section 15, Township 5 North, Range 2 East (Link 70). The Applicant requests a 1,000-foot corridor on each side of the Dove Valley Road alignment. From that point, the line will continue south along the 39th Avenue alignment to the Lone Mountain Road alignment and cross Sections 22 and 23, Township 5 North, Range 2 East on the diagonal to meet I-17, and continue south paralleling the west side of I-17 to the CAP (Link 90). From the proposed Avery Substation to I-17, the Applicant requests a 1,000-foot corridor on each side of the proposed centerline. As Alternative Route #1 parallels I-17 south to the CAP, the Applicant requests a 1,000-foot corridor west of the freeway controlled access of I-17. At the CAP, the line crosses I-17 (Link 100) and continues south paralleling the east side of I-17 (Link 110). From the CAP south to a point ¼ mile south of Happy Valley Road the Applicant requests 1,000 feet east of the freeway controlled access of I-17. The Route will turn east approximately ¼ mile south of Happy Valley Road and parallel an existing 230kV transmission line corridor, interconnecting with the proposed Misty Willow Substation located south of the existing transmission corridor and west of the CAP in Section 8, Township 4 North, Range 3 East. Alternative Route #1 then continues east and parallels the 230kV transmission line corridor, terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (Links 140 and 170). From I-17 east to the Pinnacle Peak Substation, the Applicant requests a 1,000-foot corridor north of the existing SRP transmission line.

Alternative Route #2

Links 15, 35, 60, 70, 90, 100, 150, and 170

Alternative Route #2 would originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and parallel an existing 500/230kV transmission line corridor northeast to approximately the Dove Valley Road alignment (Link 15). At that point, a radial line will extend northeast interconnecting with the 230/69kV Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East (Link 35). For this portion of Alternative Route #2 (Links 15 and 35), the Applicant requests a 1,500-foot corridor. This corridor would extend to the east from the westernmost edge of the existing transmission line right-of-way. Alternative Route #2 continues east along the section line associated with

the Dove Valley Road alignment to the proposed Avery Substation, located approximately ½ mile west of I-17 in Section 15, Township 5 North, Range 2 East (Link 70). The Applicant requests a 1,000-foot corridor on each side of the Dove Valley Road alignment. From that point, the line will continue south along the 39th Avenue alignment to the Lone Mountain Road alignment and cross Sections 22 and 23, Township 5 North, Range 2 East on the diagonal to meet I-17, and continue south paralleling the west side of I-17 to the CAP (Link 90). From the proposed Avery Substation to I-17, the Applicant requests a 1,000-foot corridor on each side of the proposed centerline. As Alternative Route #2 parallels I-17 south to the CAP, the Applicant requests a 1,000-foot corridor west of the freeway controlled access of I-17. At the CAP, the line crosses I-17 (Link 100) and continues east and southeast paralleling the CAP (Link 150) to an existing 230kV transmission line corridor approximately ¼ mile south of Happy Valley Road. The Applicant requests a 1,000-foot corridor on either side of the CAP. The route will turn east and parallel the transmission line corridor, interconnecting with the proposed Misty Willow Substation located south of the existing transmission corridor and west of the CAP in Section 8, Township 4 North, Range 3 East. Alternative Route #2 then continues along the 230kV transmission line corridor terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (Link 170). From the CAP east to the Pinnacle Peak Substation, the Applicant requests a 1,000-foot corridor north of the existing SRP transmission line.

Alternative Route #3

Links 15, 35, 45, 50, 90, 115, 120, 140, and 170

Alternative Route #3 would originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and parallel an existing 500/230kV transmission line corridor northeast interconnecting with the 230/69kV Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East (Links 15 and 35). The line continues in a northeasterly direction parallel to the existing transmission line corridor to the Joy Ranch Road alignment (Link 45). For this portion of Alternative Route #3 (Links 15, 35, and 45), the Applicant requests a 1,500-foot corridor. This corridor would extend to the east from the westernmost edge of the existing transmission line right-of-way. From that point, the line continues east paralleling the existing 69kV line to I-17, where the line turns south, paralleling the west side of the existing 69kV line for approximately 1 mile to the Cloud Road alignment. The Applicant requests a 1,000-foot

corridor on each side of the 69kV transmission line to the Cloud Road alignment. The line continues south paralleling the west side of I-17 to the Dove Valley Road alignment. Along this portion of I-17, the Applicant requests a 1,000-foot corridor west of the freeway-controlled access of the interstate. From this point, the line goes west to the proposed Avery Substation, located approximately ½ mile west of I-17 in Section 15, Township 5 North, Range 2 East (Link 50). From I-17 west to the proposed Avery Substation, the Applicant requests a 1,000-foot corridor on each side of the Dove Valley Road alignment. From that point, the line will continue south along the 39th Avenue alignment to the Lone Mountain Road alignment and cross Sections 22 and 23, Township 5 North, Range 2 East on the diagonal (Link 90) to meet I-17, and continue south paralleling the west side of I-17 to the south side of Skunk Creek (Link 115). From the proposed Avery Substation to I-17, the Applicant requests a 1,000-foot corridor on each side of the proposed centerline. As Alternative Route #3 parallels I-17 south to the south side of Skunk Creek, the Applicant requests a 1,000-foot corridor west of the freeway controlled access of I-17. The route parallels the south side of Skunk Creek to the 29th Avenue alignment where it turns south and parallels the 29th Avenue alignment to a point approximately ¼ mile south of Happy Valley Road. Along Skunk Creek and the 29th Avenue alignment, the Applicant requests 1,000 feet on either side of the proposed centerline. The route will turn east and cross I-17 approximately ¼ mile south of Happy Valley Road and parallel an existing 230kV transmission line corridor, interconnecting with the proposed Misty Willow Substation located south of the existing transmission corridor and west of the CAP in Section 8, Township 4 North, Range 3 East. Alternative Route #3 then continues east and parallel to the 230kV transmission line corridor terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (Links 120, 140, and 170). From I-17 east to the Pinnacle Peak Substation, the Applicant requests a 1,000-foot corridor north of the existing SRP transmission line.

Alternative Route #4

Links 15, 35, 60, 80, 90, 100, 150, and 170

Alternative Route #4 would originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and parallel an existing 500/230kV transmission line corridor northeast to approximately the Dove Valley Road alignment (Link 15). At that point, a radial line will travel northeast interconnecting with the 230/69kV Raceway Substation in Sections 4 and 5, Township 5 North, Range 1 East (Link 35). For this

portion of Alternative Route #4 (Links 15 and 35), the Applicant requests a 1,500-foot corridor. This corridor would extend to the east from the westernmost edge of the existing transmission line right-of-way. The route continues east/southeast paralleling the CAP (Links 60 and 80) to I-17. For this segment of the route the Applicant requests a 1,000-foot corridor on either side of the CAP. Alternative Route #4 would continue paralleling the west side of I-17 north to a point in Section 23, Township 5 North, Range 2 East where the route crosses Sections 23 and 22 diagonally to the northwest to the 39th Avenue alignment. The route continues north along the 39th Avenue alignment to the proposed Avery Substation located at the Dove Valley Road alignment and approximately ½ mile west of I-17 in Section 15, Township 5 North, Range 2 East. From the proposed Avery Substation south to I-17, the Applicant requests a 1,000-foot corridor on each side of the proposed centerline. As Alternative Route #4 parallels I-17 to the CAP, the Applicant requests a 1,000-foot corridor west of the freeway controlled access of I-17. At this point, the route crosses I-17 (Link 100) and continues east and southeast paralleling the CAP (Link 150) to an existing 230kV transmission line corridor approximately ¼ mile south of Happy Valley Road. The Applicant requests a 1,000-foot corridor on either side of the CAP east of I-17. The route will turn east and parallel the transmission line corridor, interconnecting with the proposed Misty Willow Substation located south of the existing transmission line corridor and west of the CAP in Section 8, Township 4 North, Range 3 East. Alternative Route #4 then continues along the 230kV transmission line corridor, terminating at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (Link 170). From the CAP to the Pinnacle Peak Substation, the Applicant requests a 1,000-foot corridor north of the existing SRP transmission line.

4.2.6 Land Ownership:

The Proposed Route and alternative routes would cross land owned by the following entities (see Exhibit A-2):

	BLM	BOR	State Trust Land	Arizona Game and Fish	Private	Total
Proposed Route	0.0	0.8	22.7	0.0	7.7	31.2
Alternative #1	0.0	0.8	22.4	0.0	7.9	31.1
Alternative #2	0.0	0.8	21.8	0.0	7.6	30.2
Alternative #3	0.1	0.7	26.1	1.5	6.5	34.9
Alternative #4	2.1	2.0	17.3	0.0	11.4	32.8
Distances in miles.						

5.0 Jurisdictions:

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

The Proposed Route crosses land under the jurisdiction of the cities of Phoenix and Peoria, and unincorporated land that is within the jurisdiction of Maricopa County (see Exhibit A-1). Miles of routes located within each jurisdiction are as follows:

	Phoenix	**Peoria**	**Unincorporated[1]**	**Total**
Proposed Route	19.6	8.5	3.1	31.2
Alternative #1	19.5	8.5	3.1	31.1
Alternative #2	18.1	8.5	3.6	30.2
Alternative #3	19.1	6.9	8.9	34.9
Alternative #4	18.8	10.4	3.6	32.8

Distances in miles
[1] Jurisdiction of Maricopa County

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

The Proposed Route was determined in coordination with the cities of Phoenix and Peoria, Maricopa County, and ASLD throughout the planning process. Representatives of these entities were included on the advisory CWGs or consulted individually or in small group meetings. The Proposed Route is not contrary to the current general plans and zoning ordinances of the affected jurisdictions.

6.0 Description of the environmental studies the Applicant has performed:

The North Valley Project incorporated information from two previous siting studies referred to as the Northwest Valley Project and the North Central Project. The Northwest Valley Project and the North Central Project were completed between September 1997 and March 2001, and the North Valley Project was conducted between April 2001 and August 2002. The siting studies were conducted to evaluate potential 230kV transmission line routes and substation sites in the north-central Maricopa County area.

The Northwest Valley Project looked at the area between 163rd Avenue and I-17, and Lake Pleasant and Pinnacle Peak roads; an area that includes the jurisdictions of Phoenix, Peoria, Surprise, and Maricopa County. The North Central Project evaluated the area between New River Road and Deer Valley Road, and I-17 and approximately 56th Street;

an area that includes the jurisdictions of Phoenix, Maricopa County, and small portions of Cave Creek and Scottsdale (Figure 2).

A summary of the results and planning processes implemented for these two siting studies are included as part of this Application (Exhibit B). The siting studies were conducted separately (west and east of I-17) to ensure the ability to include the affected public and agencies in processes that were more directly focused on their areas of concern. Each study identified alternative routes and substation siting areas based on technical and environmental criteria and public input. An assessment was conducted, evaluating potential land use and visual impacts that could result from the construction of the alternatives.

Throughout the studies, an extensive public involvement program was implemented to identify issues to be addressed, disseminate information, determine the acceptability of various alternative routes, and generally receive feedback. Participation tools to achieve these objectives included advisory CWGs, public open house meetings, paid advertisements, newsletters, small group meetings, and a website and telephone information lines.

The North Valley Project began with an evaluation of engineering and system requirements and environmentally compatible routes identified in the Northwest Valley Project and the North Central Project. In total, there were 60 miles of 230kV transmission line alternatives and one 230kV substation siting area carried forward from the previous siting studies (Figure B-2). After APS conducted further engineering and system analyses, the need for another 230/69kV substation along the Happy Valley transmission corridor was identified. The Misty Willow Substation, which was previously identified as a 69kV substation in the North Central Project, was then added to the alternatives. The next step in the process was to identify alternatives that would interconnect the Westwing Substation, Raceway Substation, the proposed Avery and Misty Willow Substations and the Pinnacle Peak Substation. Five primary alternatives and two proposed substation sites were taken forward for updated inventory, impact assessment, and comparison (Exhibit A-5). Project updates were given to public leaders and the CWGs, and the general public through a Project newsletter. Ultimately, APS selected the proposed and alternative routes based on engineering and technical considerations, environmental study results, public and agency input, and cost. More specific information on the proposed and alternative routes selection is summarized in Section 7.0 below.

This Application also includes results of a study of biological resources (Exhibits C and D), Class I and Class III surveys for cultural resources (Exhibit E), and land use and visual resource studies (Exhibits B and E, respectively).

7.0 Rationale for route preference

The range of impacts of each of the five alternatives described in this Application have been found by APS and its environmental consultant, Environmental Planning Group (EPG), to be "environmentally compatible" as that term is defined in the Siting Act and applied in prior Arizona siting decisions. A summary of the pertinent environmental differences among the five routing alternatives follows.

7.1 Proposed Route:

The Proposed Route is preferred by APS based on environmental, engineering and system planning, public input, and cost considerations. The environmental advantages of the Proposed Route include using existing linear corridors and consolidating existing and planned 69kV transmission line structures on the proposed 230kV transmission line to lower impacts. The Proposed Route parallels existing and planned transmission lines for approximately 27 miles of the total length of the route (31 miles), which would reduce potential land use and visual impacts. Along the west side of the interstate, the Proposed Route is adjacent to an existing landfill, reducing the proximity to more sensitive land uses. The Proposed Route also has support from the CWGs, the affected jurisdictions, and the ASLD (a major landowner in the area). APS, the City of Phoenix, and the ASLD worked together to locate the proposed Avery Substation and the Proposed Route south of the Carefree Highway and west of I-17 to accommodate future planning. Although the Proposed Route includes paralleling an existing residential area adjacent to I-17, APS would underbuild the existing 69kV transmission line for approximately ½ mile. APS has initiated discussions to locate facilities within the Arizona Department of Transportation (ADOT) right-of-way. APS would remove the 69kV transmission line from the edge of residential development and underbuild and consolidate the 69kV transmission line on the proposed 230kV transmission line within ADOT right-of-way adjacent to I-17. This would lower land use impacts to the residential development.

7.2 Alternative Route #1:

The Proposed Route and Alternative Route #1 are similar with the exception of Link 115 of the Proposed Route (along the west side of I-17 south of the CAP), and Link 110 of the Alternative Route #1 (along the east side of I-17). Advantages to Alternative Route #1 are similar to the Proposed Route. A disadvantage of Alternative Route #1 is that Link 110 would be located adjacent to existing and approved residential and commercial development for the majority of its length, while Link 115 of the Proposed Route parallels an existing landfill for approximately 1 mile. Another disadvantage to Alternative Route #1 includes a lack of support for the alternative from the City of Phoenix and the CWGs.

7.3 Alternative Route #2:

Alternative Route #2 differs from the Proposed Route because Alternative Route #2 goes east from I-17 at the Biscuit Flat Substation and parallels the CAP southeast to the Happy Valley 230kV corridor. Advantages to this alternative are similar to the Proposed Route. However, this route would potentially require a residential take and cross residential properties along the CAP, and would visually impact existing and approved residential developments.

7.4 Alternative Route #3:

Alternative Route #3 differs from the Proposed Route because it parallels the existing transmission line corridor north past the Raceway Substation to the Joy Ranch Road alignment. The route then parallels an existing 69kV transmission line east to I-17, where it turns south and parallels the west side of I-17. Advantages to this alternative include paralleling existing transmission lines for approximately 29 miles of the route's overall length (35 miles). Disadvantages to this alternative included crossing the Ben Avery Regional Park in two areas—along the Joy Ranch Road alignment and along I-17. This alternative also parallels a portion of I-17 north of the Cloud Road alignment that has been designated by Maricopa County as a scenic road. Advantages and disadvantages of Alternative Route #3 south of the Dove Valley Road alignment along I-17 are similar to the Proposed Route.

7.5 Alternative Route #4:

Alternative Route #4 differs from the Proposed Route because this route parallels the CAP from the Westwing transmission line corridor at the Dove Valley Road alignment to I-17. The route continues across I-17 parallel to the CAP until it meets the Happy Valley 230kV corridor. The route then parallels the corridor east to the Pinnacle Peak Substation. This alternative has visual impacts to users of the Deems Hills Recreation Area and the proposed Sonoran Preserve as it parallels over 5 miles of the preserve, as well as existing residential development along the CAP west of I-17. Alternative Route #4 also potentially has land use impacts as it could cross approximately 1 mile of the Deems Hills Recreation Area and over 5 miles of the proposed Sonoran Preserve along the CAP west of I-17. East of I-17, Alternative Route #4 would potentially require a residential take and cross residential properties along the CAP, and would visually impact existing and approved residential developments.

ARIZONA PUBLIC SERVICE COMPANY

BY: _____
Michael DeWitt
Project Manager

Original and 25 copies of the foregoing hand delivered and filed with the Director of Utilities, Arizona Corporation Commission, this 23RD day of SEPTEMBER, 2002.

EXHIBIT A
LOCATION AND LAND USE MAPS

EXHIBIT A
LOCATION AND LAND USE MAPS

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"*Where commercially available, a topographic map, 1:250,000 scale, showing any proposed transmission line route of more than 50 miles in length and the adjacent area. For routes less than 50 miles in length, use a scale of 1:62,500. If application is made for alternative transmission line routes, all routes may be shown on the same map, if practicable, designated by the applicant's order of preference.*"

Exhibit A-1: Jurisdiction
Exhibit A-2: Land Ownership
Exhibit A-3: Existing Land Use
Exhibit A-4: Future Land Use
Exhibit A-5: Proposed and Alternative Routes

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project Exhibit A-1 Jurisdiction

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET L-00000D-02-0120-00000

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project
Exhibit A-2
Ownership

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
L-00000D-02-0120-00000

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project
Exhibit A-3
Existing Land Use

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
L-00000D-02-0120-00000

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project
Exhibit A-4
Future Land Use

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
L-00000D-02-0120-00000

OVERSIZED MAP

-Arizona Public Service Company North Valley 230kV Facility Siting Project
Exhibit A-5
Proposed and Alternative Routes

TO REVIEW SEE DOCKET SUPERVISOR

DOCKET
L-00000D-02-0120-00000

EXHIBIT B
ENVIRONMENTAL REPORT

EXHIBIT B
ENVIRONMENTAL REPORT

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"Attach any studies which the applicant has made or obtained in connection with the proposed site(s) or route(s). If an environmental report has been prepared for any Federal agency or if a Federal agency has prepared an environmental statement pursuant to Section 102 of the National Environmental Policy Act, a copy shall be included as part of this exhibit."

INTRODUCTION

EPG completed the environmental studies for the proposed and alternative transmission line routes and substation sites. The environmental studies included land use, visual resources, biological resources, and cultural resources, and were conducted between September 1997 and August 2002. The environmental planning processes completed for the North Valley Project are described below, followed by a more detailed discussion of the land use study. The biological, visual, and cultural resource studies are discussed in more detail in subsequent Exhibits C, D, and E.

Environmental Planning Process

Overview

The North Valley Project incorporated information from two previous siting studies referred to as the Northwest Valley Project and the North Central Project. The Northwest Valley Project and the North Central Project were completed between September 1997 and March 2001, and the North Valley Project was conducted between April 2001 and August 2002. The siting studies were conducted to evaluate potential 230kV transmission line routes and substation sites in north-central Maricopa County (Figure 2). The two previous siting studies, which include extensive 69kV elements, were conducted in two separate studies to provide the public and the jurisdictions the attention required to focus on local planning issues and concerns. The environmentally compatible 230kV transmission line routes and substation sites that were identified in each of the previous siting studies were then combined and updated, and are now referred to as the North Valley Project. Project updates were given to public leaders and the CWGs. Ultimately, APS selected the proposed and alternative routes based on engineering and technical considerations, environmental study results, public input, and cost. More specific information on the proposed and alternative route selection is summarized below.

The environmental planning processes for the Northwest Valley Project and the North Central Project were similar and included a regional study and alternatives identification, and detailed corridor study and route selection. This information is presented below, followed by a

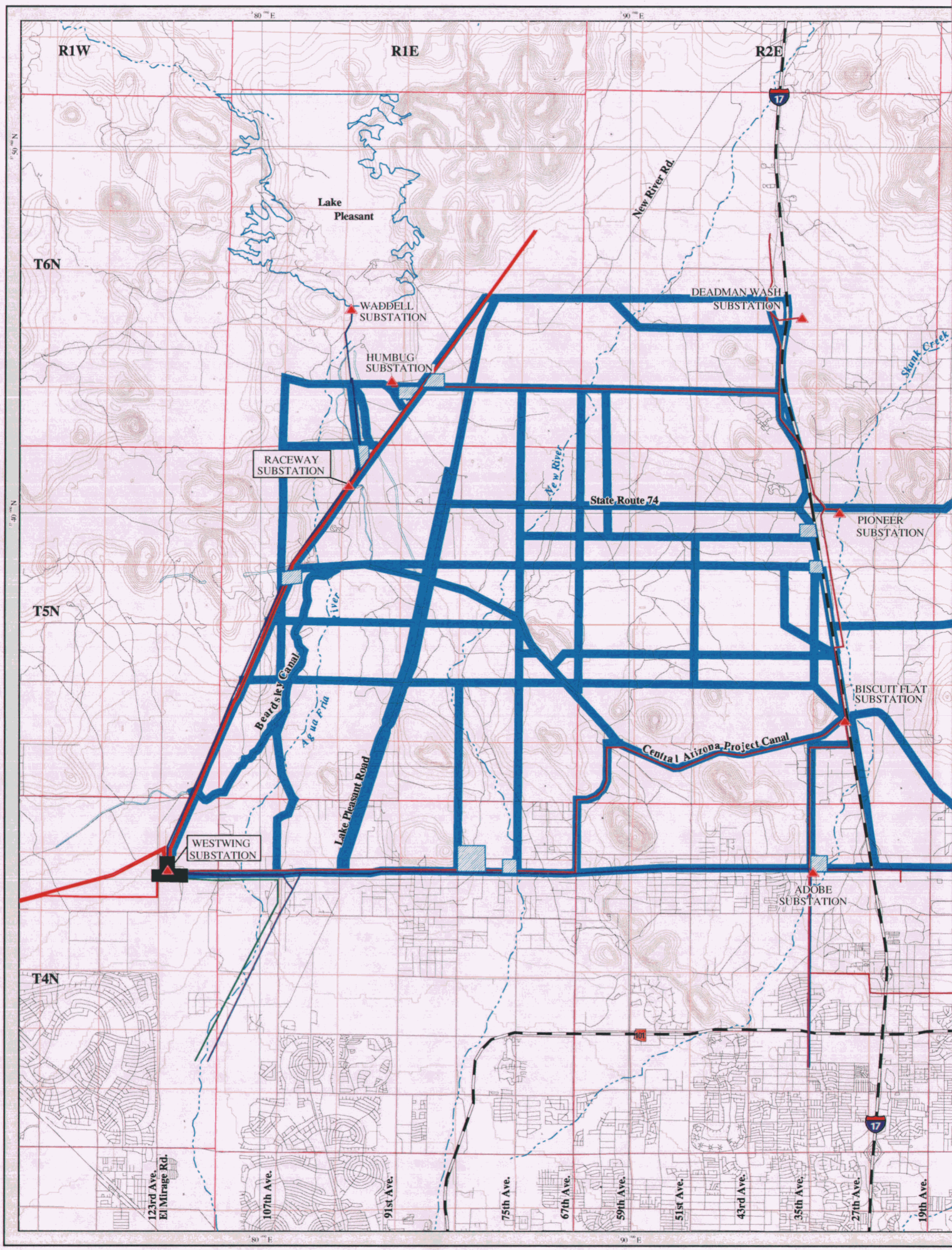
description of the update studies conducted for the North Valley Project. Each study identified alternative routes and substation siting areas based on engineering and environmental criteria and public input. Throughout the studies, an extensive public involvement program was implemented to identify issues to be addressed, disseminate information, determine acceptability of alternative routes, and generally receive feedback. Participation tools to achieve these objectives included advisory CWGs, public open house meetings, newsletters, small group meetings (e.g., homeowners associations), and the maintenance of a web site and telephone information lines (see Exhibit J).

Regional Study/Alternatives Identification

The Northwest Valley Project studied the area between 163rd Avenue and I-17, and Lake Pleasant and Pinnacle Peak Road; an area that includes the jurisdictions of Phoenix, Peoria, Surprise, and Maricopa County. The North Central Project evaluated the area between New River Road and Deer Valley Road, and I-17 and approximately 56th Street; an area that includes the jurisdictions of Phoenix, Maricopa County, and small portions of Cave Creek and Scottsdale (Figure 2). The Northwest Valley Project and North Central Project evaluated 230kV and 69kV transmission line routes and substation sites. The discussion for the North Valley Project will focus on the 230kV aspects of these previous studies.

The full set of preliminary alternative routes that were considered for the 230kV transmission lines are illustrated in Figure B-1. Land use and visual compatibility levels were developed to identify potential transmission line routing alternatives and substation siting areas. Determination of compatibility levels were based on resource value, protective status, present or future uses, and input from the public and governmental agencies (e.g., agency contacts, public open houses, and CWGs). This information was applied to the existing and future land use patterns within the regional study area, and transmission line route alternatives and substation locations were identified. The initial alternatives were chosen with a primary goal to maximize opportunities to utilize existing linear features (e.g., utility corridors, canals, and major roadways). The regional study and alternatives identification resulted in approximately 221 miles of 230kV transmission line routes and nine 230kV substation siting areas (Figure B-1).

After alternative identification, several levels of screening were conducted to eliminate alternatives based on criteria related to (1) minimizing potential land use and visual impacts, (2) meeting system or engineering requirements, and (3) responding to issues raised by the public. In both siting studies referenced above, the first level of screening was conducted for the purpose of eliminating less environmentally compatible or publicly acceptable routes prior to the detailed corridor study. Alternatives were eliminated along State Route (SR) 74 (Carefree Highway) west of I-17 because of a county scenic road designation and public concern. Carefree Highway to the east of I-17 was retained as an alternative to evaluate despite the scenic designation because of the scarcity of east-west linear corridors that avoid the proposed Sonoran Preserve. The alternative along the Dixileta Drive road alignment west of I-17 was eliminated


R1W
R1E
R2E
T6N
T5N
T4N
Lake Pleasant
New River Rd.
WADDELL SUBSTATION
HUMBUG SUBSTATION
DEADMAN WASH SUBSTATION
Skunk Creek
RACEWAY SUBSTATION
New River
State Route 74
PIONEER SUBSTATION
Beardsley Canal
Agua Fria
BISCUIT FLAT SUBSTATION
Central Arizona Project Canal
Lake Pleasant Road
WESTWING SUBSTATION
ADOBE SUBSTATION
17
101
123rd Ave.
El Mirage Rd.
107th Ave.
91st Ave.
75th Ave.
67th Ave.
59th Ave.
51st Ave.
43rd Ave.
35th Ave.
27th Ave.
19th Ave.

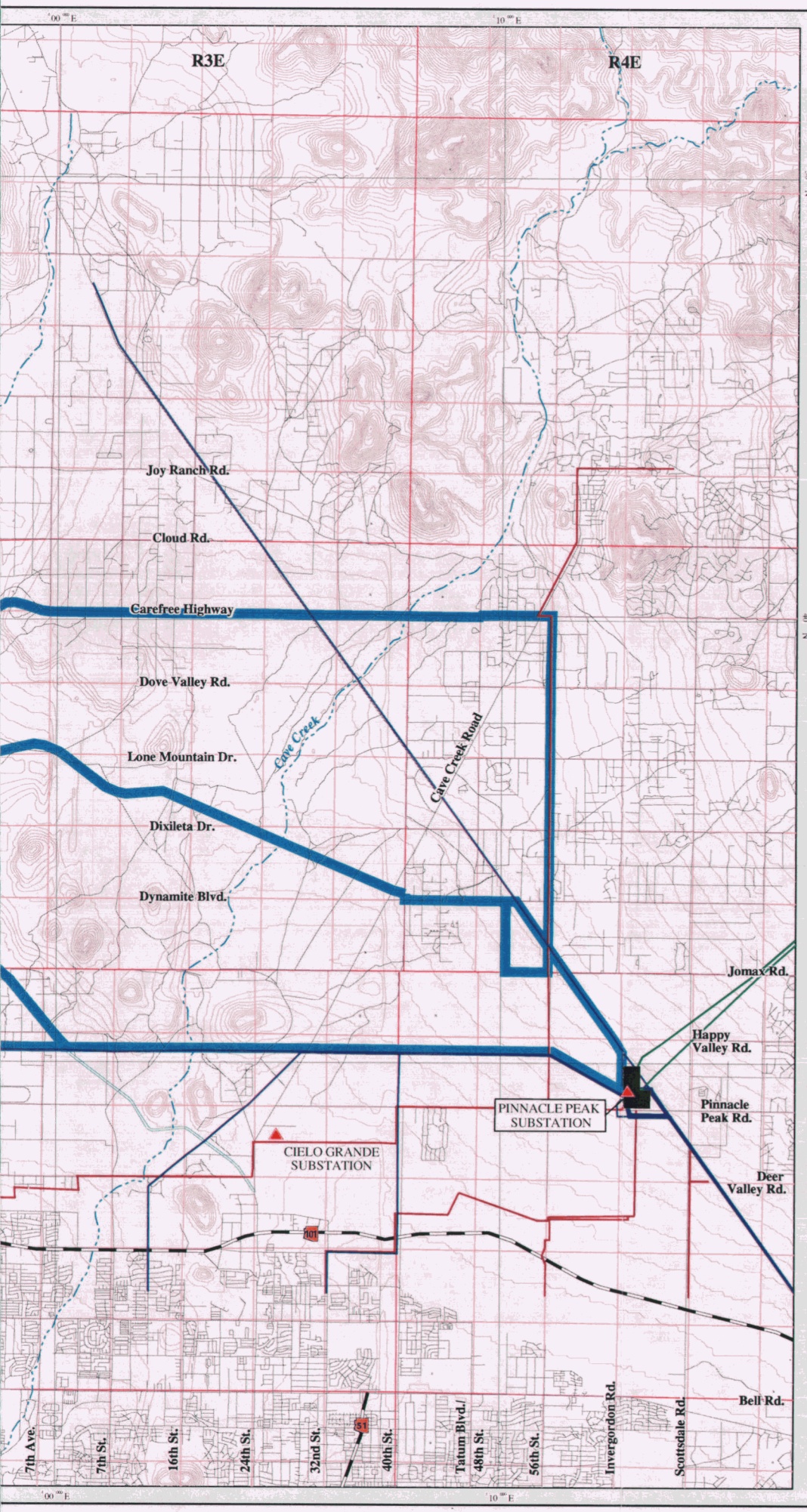


Figure B-1

PRELIMINARY ALTERNATIVES

NORTH VALLEY
230kV FACILITY SITING PROJECT

Preliminary Alternative Routes

Preliminary Substation Siting Area Considered and Eliminated

General Reference Features

- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- 69kV Transmission Line
- Interstate/Highway
- Transportation Route
- Lake
- Stream
- Canal
- Township and Range
- Section
- Contour
- ▲ / ■ Existing Substation

Sources:
Landiscor Aerial Information, June 2001.
Arizona State Land Department and Arizona Land Resources Information System, June 1995.

Scale 1:62,500

1 1/2 0 1 2 3 MILES

5000 2500 0 5000 10000 15000 FEET

APS

epg environmental planning group

m:/projects/aps/scp/cec/amls/figureb1.aml September 19, 2002

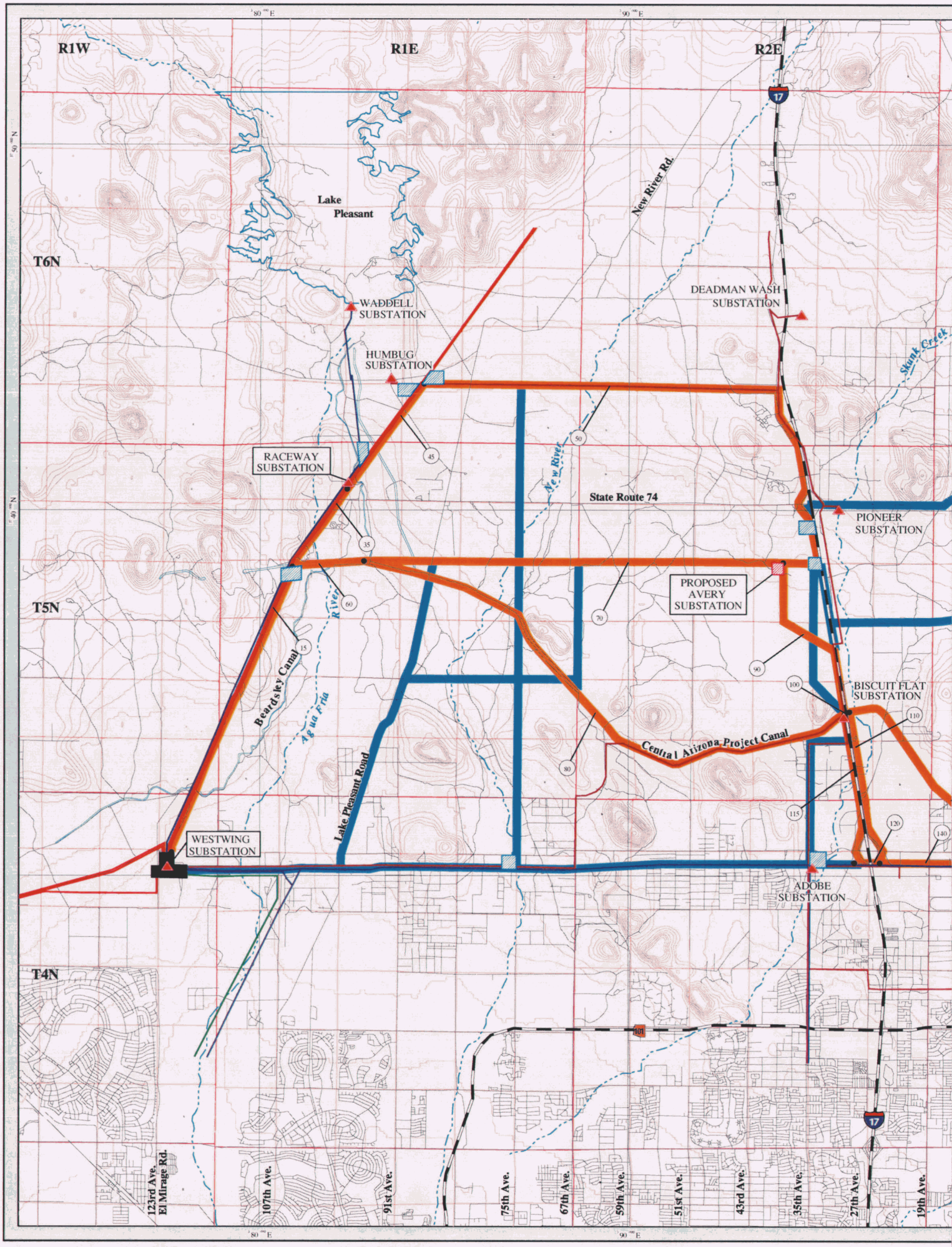
because it bisected the proposed Sonoran Preserve. East of I-17, an alternative that crosses the proposed preserve was retained because it would be collocated with a planned roadway. Several alternatives were eliminated based on potential aviation conflicts with the Pleasant Valley Airport. Engineering considerations resulted in the elimination of alternatives along the Beardsley Canal and several 12kV distribution lines; these were options that would have required a large number of turning structures that are costly and larger, while not providing environmental or other benefits.

Detailed Corridor Study/Route Selection

The detailed corridor study was an in-depth analysis of the potential land use and visual impacts of the proposed routes. A second level of screening occurred based on this information and public input that was solicited through the CWGs and another set of open houses. The detailed corridor study resulted in 124 miles of 230kV transmission line routes and nine 230kV substation siting areas to be evaluated in the alternatives comparison (Figure B-2). These alternatives were evaluated to determine the routes that were considered to be environmentally compatible, meet the engineering requirements of APS, and were acceptable to the public. The alternatives that were carried forward to the North Valley Project are also displayed in Figure B-2, under the alternatives and substation siting areas evaluated in the final comparison. In total, there were 60 miles of 230kV transmission line alternatives and one 230kV substation siting area. The discussion below focuses on the comparison of alternatives for the Northwest Valley Project and North Central Project, followed by an overview of the studies completed for the North Valley Project.

Alternatives paralleling the Dove Valley Road alignment, Joy Ranch Road alignment, and the existing Happy Valley utility corridor west of I-17 (Northwest Valley Project) were considered to have the highest level of environmental compatibility. This is primarily because of the high number of miles parallel to linear features, including utility corridors and existing and proposed major roadways. West of I-17, the Happy Valley route generated the highest level of opposition from the public and jurisdictions. The fewest number of public comments were associated with the Joy Ranch Road and Dove Valley Road route, and the Dove Valley route was preferred by the City of Phoenix, City of Peoria, and ASLD. The jurisdictions preferred this route because it is located 1 mile south of SR 74 (county designated scenic road), which was considered a sufficient buffer, and it avoided the most residences. Other routes west of I-17 that were not considered as environmentally or publicly acceptable as either the Dove Valley or Joy Ranch alignments include Lake Pleasant Road (county scenic road designation), 75th Avenue (existing residences), and 35th Avenue (existing residences).

East of I-17 (North Central Project), several alternatives were considered after the first level of screening. The alternative along Carefree Highway (county designated scenic road) was less acceptable to the public and affected jurisdictions due to potential visual impacts to residences and road users. Visual considerations were also a concern associated with the alternative


R1W
R1E
R2E
T6N
T5N
T4N
Lake Pleasant
New River Rd.
DEADMAN WASH SUBSTATION
WADDELL SUBSTATION
HUMBUG SUBSTATION
RACEWAY SUBSTATION
New River
State Route 74
PIONEER SUBSTATION
PROPOSED AVERY SUBSTATION
BISCUIT FLAT SUBSTATION
Beardsley Canal
Agua Fria River
Lake Pleasant Road
Central Arizona Project Canal
WESTWING SUBSTATION
ADOBE SUBSTATION
Skunk Creek
17
101
45
50
35
60
15
70
90
100
110
80
115
120
140
123rd Ave.
El Mirage Rd.
107th Ave.
91st Ave.
75th Ave.
67th Ave.
59th Ave.
51st Ave.
43rd Ave.
35th Ave.
27th Ave.
19th Ave.

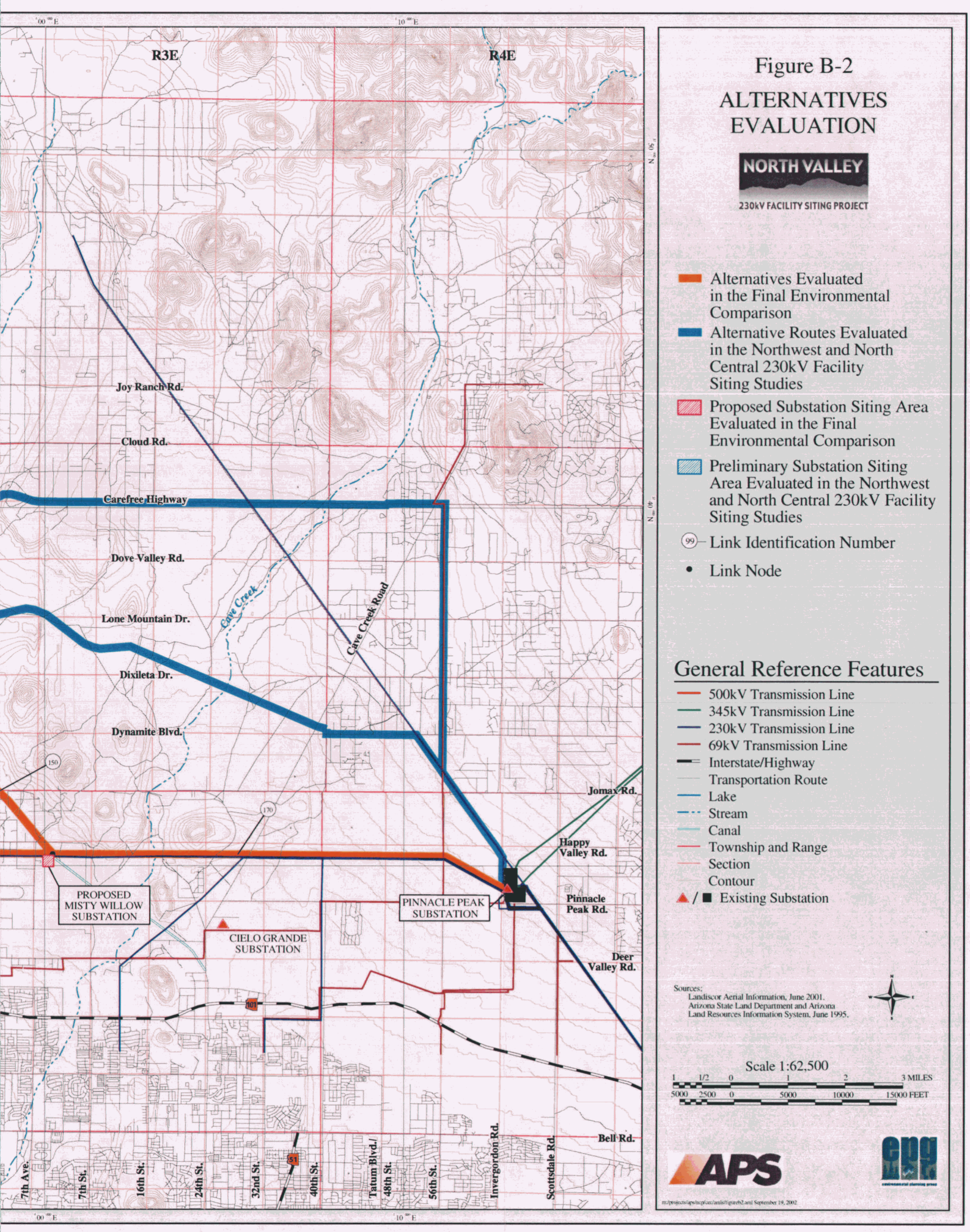


Figure B-2
ALTERNATIVES EVALUATION
NORTH VALLEY
230kV FACILITY SITING PROJECT
Alternatives Evaluated in the Final Environmental Comparison
Alternative Routes Evaluated in the Northwest and North Central 230kV Facility Siting Studies
Proposed Substation Siting Area Evaluated in the Final Environmental Comparison
Preliminary Substation Siting Area Evaluated in the Northwest and North Central 230kV Facility Siting Studies
99 Link Identification Number
Link Node
General Reference Features
500kV Transmission Line
345kV Transmission Line
230kV Transmission Line
69kV Transmission Line
Interstate/Highway
Transportation Route
Lake
Stream
Canal
Township and Range
Section
Contour
Existing Substation
Sources:
Landiscor Aerial Information, June 2001.
Arizona State Land Department and Arizona Land Resources Information System, June 1995.
Scale 1:62,500
1 1/2 0 1 2 3 MILES
5000 2500 0 5000 10000 15000 FEET
APS
epg
R3E
R4E
Joy Ranch Rd.
Cloud Rd.
Carefree Highway
Dove Valley Rd.
Lone Mountain Dr.
Dixileta Dr.
Dynamite Blvd.
Cave Creek
Cave Creek Road
Jomax Rd.
Happy Valley Rd.
Pinnacle Peak Rd.
Deer Valley Rd.
Bell Rd.
PROPOSED MISTY WILLOW SUBSTATION
PINNACLE PEAK SUBSTATION
CIELO GRANDE SUBSTATION
150
170
101
51
7th Ave.
7th St.
16th St.
24th St.
32nd St.
40th St.
Tatum Blvd./ 48th St.
56th St.
Invergordon Rd.
Scottsdale Rd.

paralleling the planned roadway through the proposed Sonoran Preserve. The alternative parallel to the CAP would have visual impacts to existing residences and planned developments. Residents adjacent to the CAP east of I-17 who attended the open house meetings opposed the CAP alternative and supported the I-17 alternative. The use of the I-17 corridor and the existing utility corridor located approximately ¼ mile south of Happy Valley Road were determined to be the most publicly acceptable and environmentally compatible.

North Valley Project

The North Valley Project began with an evaluation of engineering and system requirements and the environmentally compatible routes identified in the Northwest Valley Project and the North Central Project. The environmentally compatible alternatives that were carried forward from the previous siting studies are displayed in Figure B-2. In total, there were 60 miles of 230kV transmission line alternatives and one 230kV substation siting area. After APS conducted further engineering and system analyses, the need for another 230/69kV substation along the Happy Valley transmission corridor was identified. The Misty Willow Substation site was then added to the alternatives.

The next step in the process was to identify alternatives that would interconnect the Westwing Substation, Raceway Substation, the proposed Avery and Misty Willow substations, and the Pinnacle Peak Substation. The five primary alternative transmission line routes and two proposed substation sites that were taken forward for updated inventory, impact assessment, and comparison are displayed in Exhibit A-5. The Proposed Route includes preferred and environmentally compatible routes identified in the Northwest Valley Project and North Central Project. Project updates were given to public leaders and the CWG. Ultimately, APS selected the proposed and alternative routes based on engineering and technical considerations, environmental study results, public input, and cost. More specific information on the proposed and alternative routes environmental selection is summarized below.

The environmental advantages of the Proposed Route include using existing linear corridors and consolidating existing and planned 69kV transmission line structures on the proposed 230kV transmission line to lower impacts. The route parallels existing and planned transmission lines for approximately 27 miles of the total length of the route (31 miles), which reduces potential land use and visual impacts. The Proposed Route avoids potential residential takes and has isolated areas of visual impacts. Along the west side of the interstate, the Proposed Route is adjacent to an existing landfill, reducing the proximity to more sensitive land uses. The Proposed Route also has support from the CWGs, the affected jurisdictions, and the ASLD (a major landowner in the area). APS, the City of Phoenix, and the ASLD worked together to locate the proposed Avery Substation and the Proposed Route south of the Carefree Highway and west of I-17 to accommodate future planning. Although the Proposed Route includes paralleling an existing residential area adjacent to I-17 with an existing 69kV transmission line (for approximately ½ mile), APS will seek to acquire ADOT right-of-way. APS will remove the 69kV transmission line from the residential development and underbuild and consolidate the

69kV transmission line on the proposed 230kV transmission line within ADOT right-of-way adjacent to I-17. This would reduce impacts to the residential development.

The Proposed Route and Alternative Route #1 are similar with the exception of Link 115 of the Proposed Route (along the west side of I-17 south of the CAP), and Link 110 of Alternative Route #1 (along the east side of I-17). Advantages to Alternative Route #1 are similar to the Proposed Route. A disadvantage of the Alternative Route #1 is that Link 110 would be located adjacent to existing and planned residential or commercial development for the majority of its length, while Link 115 of the Proposed Route parallels an existing landfill for approximately 1 mile. Another disadvantage to Alternative Route #1 is a lack of support for the alternative from the City of Phoenix and the CWGs.

Alternative Route #2 differs from the Proposed Route because Alternative Route #2 goes east from I-17 at the Biscuit Flat Substation and parallels the CAP southeast to the Happy Valley 230kV corridor. Advantages to this alternative are similar to the Proposed Route. However, this route would potentially require at least one residential take and cross residential properties along the CAP, and would visually impact existing and proposed residential developments as well as cross the proposed Sonoran Preserve.

Alternative Route #3 differs from the Proposed Route because it parallels the existing 500kV corridor north past the Raceway Substation to the Joy Ranch Road alignment. The route then parallels an existing 69kV transmission line east to I-17, where it turns south and parallels the interstate on the west side. Advantages to this alternative include paralleling existing transmission lines for approximately 29 miles of the route's overall length (35 miles). Disadvantages to this alternative included crossing the Ben Avery Regional Park in two areas—along the Joy Ranch Road alignment and along I-17. This alternative also parallels a portion of I-17 north of the Cloud Road alignment that has been designated by Maricopa County as a scenic road. Advantages and disadvantages of Alternative Route #3 south of the Dove Valley Road alignment along I-17 are similar to the Proposed Route.

Alternative Route #4 differs from the Proposed Route because this route parallels the CAP from the Westwing transmission corridor at the Dove Valley Road alignment to I-17. The route continues across I-17 parallel to the CAP until it meets the Happy Valley 230kV corridor. The route parallels the corridor east to the Pinnacle Peak Substation. This alternative would have visual impacts to users of the Deems Hills Recreation Area and the proposed Sonoran Preserve as it parallels over 5 miles of the preserve, as well as a residential development along the CAP west of I-17. Alternative Route #4 also has land use impacts as it crosses approximately 1 mile of the Deems Hills Recreation Area and 1 mile of residential development along the CAP and west of I-17. East of I-17, Alternative Route #4 would potentially require at least one residential take and cross residential properties along the CAP and would visually impact existing and proposed residential developments.

Each of the five alternatives described in this Application is "environmentally compatible" as defined in the Siting Act and applied in prior Arizona siting decisions.

LAND USE

Overview

The Northwest Valley Project and North Central Project, referenced above, included a land use inventory and an assessment of potential impacts that may occur as a result of construction and operation of the Project. Since those siting studies were completed, additional land use studies were conducted for the North Valley Project, verifying existing land uses and updating land use plans. These studies were conducted from April 2001 to August 2002.

The following describes the inventory results for the land use study and updates for the North Valley Project.

Inventory

The land use inventory included the following major components: land ownership, jurisdiction, existing land uses, and future land uses. Methods used for the land use inventory include review and interpretation of maps, aerial imagery and other documents, and field verification. In addition, this inventory is based on communication with governmental agencies as well as private businesses within the study area. Land use data were inventoried for 2 miles on either side of the proposed and alternative routes and are illustrated on Exhibits A-1 through A-4 and described below.

Jurisdiction and Land Ownership

The proposed and alternative routes cross three jurisdictions including the cities of Phoenix and Peoria, and Maricopa County (unincorporated land) (see Exhibit A-1). Land ownership crossed by the proposed and alternative routes includes Bureau of Land Management (BLM); Bureau of Reclamation (BOR); ASLD; Arizona Game and Fish Department (AGFD), which owns the land associated with the Ben Avery Shooting Range; and private parties (see Exhibit A-2). The miles of the routes that cross each jurisdiction and type of land ownership are compiled in the following tables.

Land Ownership Crossed (in miles)						
	BLM	BOR	State Trust Land	Arizona Game and Fish	Private	Total
Proposed Route	0.0	0.8	22.7	0.0	7.7	31.2
Alternative #1	0.0	0.8	22.4	0.0	7.9	31.1
Alternative #2	0.0	0.8	21.8	0.0	7.6	30.2
Alternative #3	0.1	0.7	26.1	1.5	6.5	34.9
Alternative #4	2.1	2.0	17.3	0.0	11.4	32.8

Land Jurisdiction Crossed (in miles)				
	Phoenix	**Peoria**	**Unincorporated[1]**	**Total**
Proposed Route	19.6	8.5	3.1	31.2
Alternative #1	19.5	8.5	3.1	31.1
Alternative #2	18.1	8.5	3.6	30.2
Alternative #3	19.1	6.9	8.9	34.9
Alternative #4	18.8	10.4	3.6	32.8
[1] Jurisdiction of Maricopa County				

Existing Land Use

Existing land uses are mapped in Exhibit A-3. Overall, the Project area is sparsely populated to the west of I-17 and north of the CAP. South of the CAP, residential and industrial development is clustered largely around the I-17 corridor. The land use categories identified in Exhibit A-3 are described below.

Residential – Residential land uses primarily include low (less than 2 dwelling units per acre) and medium density residential areas (between 2 and 15 dwelling units per acre). Master planned residential developments have been built recently or are under construction on both the east and west sides of I-17.

Commercial/Office/Business Park – The majority of the commercial/office and business park land uses are located along the I-17 corridor in the City of Phoenix.

Industry/Light Industry – Industrial land uses are scattered throughout the study area and include gravel-mining operations, the Skunk Creek Landfill (located west of I-17 along Deer Valley Road), and utility uses. Light industrial operations are concentrated primarily in the vicinity of the Deer Valley Airport in the City of Phoenix.

Mixed Use – The mixed-use land designation is used for areas, which contain a combination of residential, commercial, and/or light industrial uses.

Schools/Educational Facilities – The school/educational facility land use designation includes all levels of schools and any facilities associated with them.

Public/Quasi-Public – Public/quasi-public uses in the study area include the Adobe Mountain Juvenile Institute, Veterans Administration Cemetery, churches, and government offices. The majority of these areas are located in the southeastern portion of the study area. Adobe Mountain Juvenile Institute is located between I-17 and the Skunk Creek Landfill; the Veterans

Administration Cemetery is located on the south side of Pinnacle Peak Road between 24th Street and 40th Street.

Airports – The Deer Valley Airport and the Pleasant Valley Airport are the only two airports within the study area. The Deer Valley Airport is located north of Deer Valley Road between 19th Avenue and 7th Street. The Pleasant Valley Airport is located on the north side of SR 74 between the 83rd Avenue alignment and 91st Avenue alignment.

Agriculture – Agricultural areas occur in the western portion of the study area. Two areas of irrigated farmland are adjacent to the Agua Fria River. Other agricultural land in the study area occurs adjacent to the southwestern border of the study area, approximately ½ mile southwest of the Westwing Substation.

Utilities – Power substations and transmission lines are present in the study area. Two 500kV transmission lines extend northeast from the Westwing Substation across the western side of the study area. A 230kV line parallels the 500kV lines for approximately 7 miles to the Raceway Substation before turning north and connecting to the Waddell Substation. Another 230kV transmission line extends east from the Westwing Substation for approximately 21½ miles to the Pinnacle Peak Substation. Various 345kV and 230kV transmission lines extend from the Pinnacle Peak Substation, and 500kV, 345kV, and 230kV transmission lines extend from the Westwing Substation. Additional 69kV substations are found throughout the study area along with a network of 69kV transmission lines.

Transportation – Major arterials in the study area include I-17, SR 74 (Carefree Highway), and Lake Pleasant Road. Scenic designations or characteristics of such designations (such as setbacks) are associated with Carefree Highway/SR 74, Cave Creek Road north of the CAP, Lake Pleasant Road, a portion of Happy Valley Road west of the CAP, and I-17 north of the Cloud Road alignment.

Vacant Land/Undeveloped – The majority of land in the study area is vacant or undeveloped. These lands are characterized by a lack of development and typical lower Sonoran desertscrub.

Regional Parks/Recreation Areas – There are four regional parks and recreation areas (Lake Pleasant Regional Park, Ben Avery Regional Park, Deems Hills Recreation Area, and Cave Buttes Recreation Area) and a number of recreation facilities located throughout the study area. Lake Pleasant Regional Park is located north of the Waddell Dam, in the far northwest corner of the study area. The Ben Avery Regional Park is located at the northwest corner of I-17 and SR 74. The Deems Hills Recreation Area is located at approximately the Dynamite Boulevard alignment between 51st Avenue and 39th Avenue. The Cave Buttes Recreation Area is located north of Happy Valley Road between approximately 7th Street and 40th Street. Other recreation facilities include golf courses, community parks, racetracks, and equestrian facilities.

Future Land Use

Future land uses are illustrated in Exhibit A-4. These data are based primarily on the City of Phoenix General Plan (2001), North Black Canyon Corridor Plan (1999), City of Peoria Comprehensive Land Use Plan (updated 2001), New River Area Plan (1999), site plans from private developers, and communication with staff planners and developers. Additional specific plans also were referenced, including the Sonoran Preserve Master Plan (1999).

Highlights of the future land use map and additional information are provided by jurisdiction below.

City of Phoenix – The Black Canyon Corridor (along I-17) is expected to experience rapid future population and employment growth. Numerous master planned communities are in various stages of the site approval process and construction on both sides of I-17. The status of these developments is current as of August 2002. In addition, a commercial development has been proposed on the southwestern corner of Carefree Highway and I-17.

The proposed Sonoran Preserve occupies portions of the study area. As of February 2002, 1 square mile north of Jomax Road between 7th Avenue and 7th Street had been purchased from the ASLD. The remainder of the proposed preserve totals almost 15,000 acres and must be obtained by the City of Phoenix from ASLD at auction.

City of Peoria – The current comprehensive plan for the City of Peoria focuses on low density residential development with open space corridors along major washes. The comprehensive plan also identifies a commercial/industrial core at the intersection of SR 74 and Lake Pleasant Road. Peoria master planned communities are located in the study area along the Westwing 500kV corridor.

An aviation study area is identified in Exhibit A-4, and several studies to locate an airport have been completed. However, the timing and location of a potential future airport have not been determined at this time.

Maricopa County – Portions of unincorporated land within the study area north of Cloud Road are included in the New River Area Plan. This includes the area along I-17. The New River Plan identifies I-17 north of Cloud Road as a scenic corridor. Other land in the New River Plan that is included in the North Valley study area is designated as low and medium density residential.

Impact Assessment Methods

Land use impacts may be defined primarily as (1) restrictions on a land use that would result from the construction or operation of the proposed Project, or (2) incompatibility with existing plans. Typically, restrictions on a land use would result from right-of-way acquisition across a property. An impact to existing land uses could adversely affect structures or improvements on a

property, or might cross the edge of a property adjacent to an existing linear feature without affecting any structures or improvements.

Land use impacts for each route are reported assuming that an existing transmission line right-of-way would be utilized from the Westwing Substation to the Raceway Substation and the existing SRP right-of-way would be utilized from I-17 to the Pinnacle Peak Substation. If use of the existing rights-of-way could not be secured for this Project, impacts were also evaluated assuming new rights-of-way in these corridors. Impact differences are also reported below. Field visits were completed to evaluate site-specific conditions and existing plans were provided by jurisdictions and developers in the Project area.

Results

Results of the impact analysis for both existing and future land use are described below in relation to each route as it crosses different land uses. The discussion of impacts for the Proposed Route will focus on the entire route, and the alternative routes will focus on differences from the Proposed Route.

Proposed Route

The Proposed Route is 31.2 miles long and achieves the necessary interconnections with the Westwing, Raceway, proposed Avery, proposed Misty Willow, and Pinnacle Peak substations with generally minimal impacts to existing and future residential properties and the proposed Sonoran Preserve. Approximately 17 miles of the Proposed Route parallels existing utility corridors (69kV transmission lines and greater). The majority of the route crosses existing vacant lands that are not included in specific development plans. An existing residential development located along the west side of I-17 and south of the CAP is paralleled by the Proposed Route for approximately ½ to 1 mile. An existing 69kV transmission line parallels the east side of this development in an open space area for approximately ½ mile. If APS is able to acquire ADOT right-of-way, the existing 69kV lines adjacent to the edge of the development will be underbuilt and consolidated on the new 230kV structures; therefore, residential land use impacts are reduced. Along the Happy Valley transmission corridor the Proposed Route may be located in an existing SRP utility right-of-way in which case no residential displacements are expected. If the SRP right-of-way could not be secured, approximately two residences could potentially be displaced with the acquisition of new rights-of-way along the north side of the existing right-of-way. Along the Dove Valley Road alignment, the Proposed Route will be underbuilt and consolidated with a planned APS 69kV transmission line.

Planned residential uses that are crossed by the Proposed Route are typically low or medium density residential uses indicated in general plans. A portion of the route crosses a proposed master planned community along Link 15; however, the Proposed Route may be located in an existing transmission right-of-way which the master planned community has designated as an open space corridor; therefore, minimal land use impacts are expected. South of the master

planned community there is a conceptual residential development. Because the proposed transmission line may be located within the existing transmission line right-of-way, minimal impacts are expected for the development. If the existing transmission line right-of-way were not able to be secured for this Project, both developments would incur some additional impacts from the acquisition of additional right-of-way adjacent to the existing transmission line corridor. The master planned community to the north would have a planned industrial area within the new right-of-way and the conceptual development to the south would have a planned residential area within the new right-of-way. Representatives of these developments were active participants in the CWG for the Northwest Valley Project. Two areas of proposed Sonoran Preserve are crossed by the proposed Project—along the Dove Valley Road alignment and along the Happy Valley transmission corridor. APS has acquired a corridor reservation for planning purposes for the Proposed Route from ASLD through the proposed Sonoran Preserve along the Dove Valley Road alignment. The other segment of the Proposed Route that would cross the proposed Sonoran Preserve would be located in the existing Happy Valley transmission corridor.

Alternative Route #1

Alternative Route #1 is 31.1 miles long. The primary distinction between the Proposed Route and the Alternative Route #1 is the use of Link 110 in place of Link 115. Link 110 is located along the east side of I-17. On the northeast corner of I-17 and Happy Valley Road, the insurance company USAA has an approved commercial park that is currently under construction. If APS is able to acquire ADOT right-of-way, existing and future land use impacts would be reduced. Link 110 also crosses land along Skunk Creek that is associated with the proposed Sonoran Preserve.

Alternative Route #2

Alternative Route #2 is 30.3 miles long and differs from the Proposed Route in that it follows a portion of the CAP east of I-17 to the Happy Valley corridor (Link 150). Residential land use impacts were identified for Alternative Route #2 because the portion of the route that follows the CAP could potentially result in an existing residential displacement and cross several residential properties. APS will seek to acquire right-of-way from the CAP for this portion of the route, eliminating residential land use impacts. Future land use impacts along Link 150 occur where the route crosses the proposed Sonoran Preserve and the Dynamite Mountain Ranch master planned community.

Alternative Route #3

Alternative Route #3 is 34.9 miles long and differs from the Proposed Route in that it goes north along the Westwing corridor past the Raceway Substation to the Joy Ranch Road alignment. The route follows the Joy Ranch Road alignment paralleling an existing 69kV transmission line east to I-17, where it turns south and connects to the proposed Avery Substation. From this point, the route is similar to the Proposed Route. Along the Joy Ranch Road alignment, the route would

require new easements parallel to the existing 69kV transmission line. Existing land use impacts resulting from Alternative Route #3 were identified where Alternative Route #3 crosses the Ben Avery Regional Park along the Joy Ranch Road alignment, as well as along I-17. Future land use impacts from the Alternative Route #3 were also identified where the route crosses the proposed Sonoran Preserve along the Joy Ranch Road alignment.

Alternative Route #4

Alternative Route #4 is 32.8 miles long and differs from the Proposed Route because this route parallels the CAP from the Westwing transmission line corridor at the Dove Valley Road alignment to I-17. The Route continues across I-17 parallel to the CAP until it meets the Happy Valley 230kV corridor, where it parallels the corridor east to the Pinnacle Peak Substation. Alternative Route #4 crosses approximately 1 mile of the Deems Hills Recreation Area along the CAP west of I-17. This route also crosses approximately 5 miles of the proposed Sonoran Preserve along the CAP. APS will seek to acquire right-of-way from the CAP for this portion of the route, eliminating land use impacts. Similar to Alternative Route #2, an existing residential displacement and crossing of several residential properties could potentially also occur along the CAP east of I-17.

Substations

Minimal land use impacts are anticipated to result from the construction and operation of the proposed Avery Substation. The proposed substation is located on currently vacant land owned by the ASLD. The Avery Substation site would be located on or near planned mixed use and residential land uses. The ASLD has been consulted with regard to the location of the proposed Avery Substation, and supports the general location as proposed. The proposed Misty Willow Substation site is located on vacant land and is adjacent to existing industrial areas. City of Phoenix general plan designations show the planned land use for the substation area to be commerce/business park and open space.

EXHIBIT C
AREAS OF BIOLOGICAL WEALTH

EXHIBIT C
AREAS OF BIOLOGICAL WEALTH

As stated in Arizona Corporation Commission Rules of Practice and Procedure R-14-3-219:

"Describe any areas in the vicinity of the proposed site or route which are unique because of biological wealth or because they are habitats for rare and endangered species. Describe the biological wealth or species involved and state effects, if any, the proposed facilities will have thereon."

BIOLOGICAL WEALTH

Arizona Game and Fish Department (AGFD), Arizona Department of Agriculture (ADA), and U.S. Fish and Wildlife Service (USFWS) have been contacted regarding this Project, and responses from these agencies are attached in Exhibit C-1. Supplemental letters with a current project description were sent on April 11, 2001 requesting information on special status species in the Project area. Only USFWS responded to the supplemental letter. AGFD identified five special status species that may occur in the Project vicinity (January 1999). These species are discussed below. The USFWS provided a list of 13 threatened or endangered species occurring in Maricopa County (April 2001). Only 3 of the 13 species are likely to occur in the Project area, and these species are discussed below. Table C-1 summarizes information on special status species with the potential to occur in the Project area. For the remaining 10 species on the USFWS Maricopa County list, refer to Table C-2.

Sonoran desert tortoise (*Gopherus agassizii*) may be present within rocky hills located along the proposed transmission line. The Sonoran desert tortoise is a species of wildlife of special concern in Arizona.

Gila topminnow (*Poeciliopsis occidentalis occidentalis*) is classified as wildlife of special concern by AGFD and endangered by USFWS. These fish are generally found in small streams and springs. This species may be present in areas of the Agua Fria and New River drainages.

Hohokam agave (*Agave murpheyi*) is classified as highly safeguarded by the ADA and is known from a number of sites in eastern Maricopa, Pinal, and Gila counties in rocky habitat. It may be present in the Project area.

The lowland leopard frog (*Rana yavapaiensis*) uses permanent water in springs, creeks, rivers and stock tanks. This species is classified as wildlife of special concern by AGFD and it may be present in the Project area.

Native vegetation in the vicinity of the proposed transmission line provides potential habitat for the federally listed endangered cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*).

Southwestern willow flycatcher (*Empidonax traillii extimus*), a federally listed endangered species, could occur in the cottonwood/willow/tamarisk riparian woodland on the Agua Fria River south of Lake Pleasant and possibly in tamarisk groves along Cave Creek.

Impacts

Potential effects of the proposed facilities on special status species include loss of foraging habitat for wildlife and potential disturbance of foraging or breeding activities. Special status species may be disturbed by noise from construction activities along the proposed transmission line route. However, any impacts resulting from construction activities are expected to be minimal.

Native vegetation, especially along xeroriparian washes, is one component of the cactus ferruginous pygmy-owl habitat. It is anticipated that the Proposed Route and alternative routes will span riparian areas and washes, avoiding the associated vegetation to the extent possible. However, surveys for the pygmy-owl will be conducted prior to construction of the proposed Project.

Vehicles and heavy equipment could displace or cause mortality in some fossorial species, particularly the desert tortoise. A biological monitor will assist in minimizing impacts on tortoise.

Riparian areas and their associated watersheds could be impacted by vegetation removal on banks of major drainages or direct disturbance to streambeds. Impacts to these areas should be minimized to avoid the loss of potential habitat for the Gila topminnow and lowland leopard frog in the unlikely case they are identified within the study area. In addition, clearing of riparian vegetation could result in habitat loss for the southwestern willow flycatcher. If vegetation disturbance in riparian areas is anticipated, surveys will be completed prior to disturbance.

APS will develop a construction, mitigation, and restoration plan to identify sensitive biological features and delineate access. A biological monitor will be on site during all groundbreaking activities in areas of biologically sensitive features (i.e., major river crossings and threatened and endangered species habitat).

TABLE C-1 SPECIAL STATUS SPECIES THAT MAY OCCUR IN THE PROJECT AREA				
Common Name	**Scientific Name**	**Habitat**	**Federal Status**	**State Status**
Cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	Sonoran desertscrub vegetation with saguaro cactus and trees	E	WC
Southwestern willow flycatcher	*Empidonax traillii extimus*	Riparian corridors with willow, cottonwood or tamarisk.	E	WC
REPTILES				
Desert tortoise	*Gopherus agassizii*	Rocky slopes, wash banks, creosote bush desert		WC
AMPHIBIANS				
Lowland leopard frog	*Rana yavapaiensis*	Permanent water in creeks, springs, rivers and stock tanks		WC
FISH				
Gila topminnow	*Poeciliopsis occidentalis occidentalis*	Small streams and springs below 4,500 feet	E	WC
PLANTS				
Hohokam agave	*Agave murphyi*	Rocky slopes		HS

Sources: AGFD 2000; Hoffmeister 1986; National Geographic Society 1999; USFWS 2000

Key to Table:
Federal Status: E = Endangered T=Threatened

State Status: WC = Wildlife of Special Concern in Arizona
HS= Highly Safeguarded Plant Species

TABLE C-2 SPECIAL STATUS SPECIES FROM MARICOPA COUNTY NOT IN THE PROJECT AREA				
Common Name	**Scientific Name**	**Habitat**	**Federal Status**	**Reason not found**
Bald eagle	*Haliaeetus leucocephalus*	Large trees or cliffs near water with large fish	T	No habitat; needs larger trees; winters in areas with larger permanent water bodies
Yuma clapper rail	*Rallus longirostris yumanensis*	Fresh and brackish marshes	E	No habitat; requires wet substrate with cattails and other dense emergent riparian vegetation
Mexican spotted owl	*Strix occidentalis lucida*	Canyons and dense forests with mixed conifer or higher elevation pine-oak	T	No habitat; habitat types not on Project; elevation too low
MAMMALS				
Lesser long-nosed bat	*Leptonycteris curasoae yerbabuenae*	Desertscrub with agaves and columnar cactus and mines or caves for roost sites	E	No habitat; forage plant density too low; lack of undisturbed roost sites in area
Sonoran pronghorn	*Antilocapra americana sonoriensis*	Broad valleys with palo verde-mixed cacti association	E	Outside of historic range, inappropriate habitat
FISH				
Desert pupfish	*Cyprinodon macularius*	Shallow springs, small streams and marshes	E	Very limited range; nearest population is the possible reintroduction to Lousy Canyon
Razorback sucker	*Xyrauchen texanus*	Rivers and lakes	E	Only one population in Maricopa County; reintroduced to Horseshoe Reservoir
PLANTS				
Arizona agave	*Agave arizonica*	Steep, rocky slopes	E	Grows in locations between 3,000 to 6,000 feet; known from New River Mountains
Arizona cliffrose	*Purshia subintegra*	Tertiary limestone lakebed deposits	E	No habitat; single known population 35 miles east of Project at Horseshoe Lake
Arizona Hedgehog cactus	*Echinocereus triglochidiatus arizonicus*	Ecotone between interior chaparral and madrean evergreen woodland	E	No habitat; known from elevations between 3,700 to 5,200 feet

Sources: AGFD 2000; Hoffmeister 1986; National Geographic Society 1999; USFWS 2000
Key to Table:
E = Endangered T=Threatened

LITERATURE CITED

Arizona Game and Fish Department, Heritage Data Management System. 2000. Special status species by county for Arizona. Arizona Game and Fish Department, Habitat Branch, Phoenix, Arizona, October 26, 2000.

Hoffmeister, D.F. 1986. Mammals of Arizona. University of Arizona Press, Tucson, Arizona. 602 pp.

National Geographic Society. 1999. Field guide to birds of North America. Third edition. National Geographic Society, Washington, D.C. 480 pp.

U.S. Fish and Wildlife Service (USFWS). 2000. Recommended guidance for private landowners concerning the cactus ferruginous pygmy-owl. March 2000. 6 pp.

EXHIBIT C-1
RESPONSE LETTERS

United States Department of the Interior
U.S. Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In Reply Refer to:

AESO/SE
2-21-02-I-275

July 26, 2002

RE
7.29.02

Mr. Paul Trenter, Project Manager
EPG Environmental Group
4350 East Camelback Road, Suite G-200
Phoenix, Arizona 85018

RE: Proposed Avery Substation

Dear Mr. Trenter:

This letter responds to your recent request for information on threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may occur in your project area. The Arizona Ecological Service Field Office has posted lists of the endangered, threatened, proposed, and candidate species occurring in each of Arizona's 15 counties on the Internet. Please refer to the following web page for species information in the county where your project occurs: **http://arizonaes.fws.gov**

If you do not have access to the Internet or have difficulty obtaining a list, please contact our office and we will mail or fax you a list as soon as possible.

After opening the web page, find Arizona County/Species List on the main page. Then click on the county of interest. The arrows on the left will guide you through information on species that are listed, proposed, candidates, or have conservation agreements. Here you will find information on the species' status, a physical description, all counties where the species occurs, habitat, elevation, and some general comments. Additional information can be obtained by going back to the main page. On the left side of the screen, click on Document Library, then click on Documents by Species, then click on the name of the species of interest to obtain General Species Information, or other documents when that may be available. Click on the cactus icon to view the desired document.

Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Under the General Species Information, citations for the Federal Register (FR) are included for each listed and proposed species. The FR is available at most public libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.

Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency will need to request formal consultation with us. If the action agency determines that the planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency will need to enter into a section 7 conference. The county list may also contain candidate species. Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

If any proposed action occurs in or near areas with trees and shrubs growing along watercourses, known as riparian habitat, we recommend the protection of these areas. Riparian areas are critical to biological community diversity and provide linear corridors important to migratory species. In addition, if the project will result in the deposition of dredged or fill materials into waterways, we recommend you contact the Army Corps of Engineers which regulates these activities under Section 404 of the Clean Water Act.

The State of Arizona protects some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species in your project area.

For future projects, you do not need to contact our office to obtain a project number. However, for additional communications regarding this project, please refer to consultation number 2-21-02-I-275. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Tom Gatz for projects in northern Arizona or along the Colorado River (x240) or Sherry Barrett for projects in southern Arizona.

Sincerely,

Jacqueline Johnson

Steven L. Spangle
Acting Field Supervisor

cc: John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

W:\Cathy Gordon\species list letters\epg proposed avery substation.wpd:cgg

THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
2221 WEST GREENWAY ROAD, PHOENIX, AZ 85023-4399
(602) 942-3000 • WWW.AZGFD.COM

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DUANE L. SHROUFE
DEPUTY DIRECTOR
STEVE K. FERRELL

April 26, 2001

Ms. Locana de Souza
EPG
1430 E Ft. Lowell Blvd.
Suite 304
Tucson, AZ 85719

Re: Special Status Species Information for **APS Proposed and Alternate Route North Valley 230kV Transmission Line Project (T4N,R1W Sec 12 to T4N,R4E Sec 10).**

Dear Ms. de Souza:

The Arizona Game and Fish Department (Department) has reviewed your letter, dated April 11, 2001, regarding special status species information associated with the above-referenced project areas. The Department's Heritage Data Management System (HDMS) has been accessed and current records show that the special status species listed on the attachment have been documented as occurring in the project vicinity. In addition, the project does not occur in the vicinity of any proposed or designated Critical Habitats.

The Department's HDMS data are 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. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity.

Making available this information does not substitute for the Department's review of project proposals, and should not decrease our opportunities to review and evaluate new project proposals and sites. The Department is also concerned about other resource values, such as other wildlife, including game species, and wildlife-related recreation. The Department would appreciate the opportunity to provide an evaluation of impacts to wildlife or wildlife habitats associated with project activities occurring in the subject area, when specific details become available.

If you have any questions regarding the attached species list, please contact me at (602) 789-3618. General status information and county distribution lists for special status species are also available on our web site at http://www.azgfd.com/frames/fishwild/hdms_site/Home.htm.

Sincerely,

Sabra S. Schwartz
Heritage Data Management System, Coordinator

SSS:ss

Attachment

cc: Bob Broscheid, Project Evaluation Program Supervisor
Russ Haughey, Habitat Program Manager, Region VI

AGFD# 04-13-01 (19)

Special Status Species within 5 Miles of Proposed and Alternate Route North Valley 230kV Transmission Line Project

Arizona Game and Fish Department, Heritage Data Management System

April 26, 2001

Scientific Name	Common Name	ESA	USFS	BLM	WSCA	NPL
BUFO MICROSCAPHUS MICROSCAPHUS	ARIZONA TOAD	SC	S			
GASTROPHRYNE OLIVACEA	GREAT PLAINS NARROWMOUTH TOAD				WC	
GOPHERUS AGASSIZII (SONORAN POPULATION)	SONORAN DESERT TORTOISE	SC			WC	
MYOTIS VELIFER	CAVE MYOTIS	SC		S		
RANA YAVAPAIENSIS	LOWLAND LEOPARD FROG	SC	S		WC	

No Critical Habitats in project area; AGFD #4-13-01(19), APS Proposed Transmission Line, North Valley (T4N,R1W Sec 12 to T4N,R4E Sec 10).

United States Department of the Interior
U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 FAX: (602) 242-2513

In Reply Refer To:

AESO/SE
2-21-01-I-251

April 17, 2001

Mr. Locana de Souza
Staff Biologist
Environmental Planning Group
1430 East Ft. Lowell Boulevard, Suite 304
Tucson, Arizona 85719

RE: APS 230 kV Transmission Line and Substations crossing Cities of Phoenix and Peoria (Westwing Substation to Pinnacle Peak Substation)

Dear Mr. de Souza:

This letter responds to your April 11, 2001, request for an inventory of threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may potentially occur in your project area (Maricopa County). The enclosed list may include candidate species as well. We hope the enclosed county list of species will be helpful. In future communications regarding this project, please refer to consultation number 2-21-01-I-251.

The enclosed list of the endangered, threatened, proposed, and candidate species includes all those potentially occurring anywhere in the county, or counties, where your project occurs. Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Also on the enclosed list is the Code of Federal Regulations (CFR) citation for each list and is available at most public libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.

Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency must request formal consultation with the Service. If the action agency determines that the planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency must enter into a section 7 conference with the Service. Candidate species are those which are being considered for addition to the list of threatened or endangered species. Candidate species are those for which there is sufficient information to support a

proposal for listing. Although candidate species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

If any proposed action occurs in or near areas with trees and shrubs growing along watercourses, known as riparian habitat, the Service recommends the protection of these areas. Riparian areas are critical to biological community diversity and provide linear corridors important to migratory species. In addition, if the project will result in the deposition of dredged or fill materials into waterways or excavation in waterways, we recommend you contact the Army Corps of Engineers which regulates these activities under Section 404 of the Clean Water Act.

The State of Arizona protects some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species in your project area.

The Service appreciates your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Tom Gatz (x240).

Sincerely,

Jacqueline Hanson

for David L. Harlow
Field Supervisor

Enclosure

cc: John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: MARICOPA

02/26/2001

1) LISTED

TOTAL= 13

NAME: ARIZONA AGAVE *AGAVE ARIZONICA*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: No CFR: 49 FR 21055, 05-18-1984

DESCRIPTION: HAS ATTRACTIVE ROSETTES OF BRIGHT GREEN LEAVES WITH DARK MAHOGANY MARGINS. FLOWER: BORNE ON SUB-UMBELLATE INFLORESCENCES.

ELEVATION RANGE: 3000-6000 FT.

COUNTIES: GILA, YAVAPAI, MARICOPA

HABITAT: TRANSITION ZONE BETWEEN OAK-JUNIPER WOODLAND & MOUNTAIN MAHOGANY-OAK SCRUB

SCATTERED CLONES IN NEW RIVER MOUNTAINS AND SIERRA ANCHA. USUALLY FOUND ON STEEP, ROCKY SLOPES. POSSIBLY MAZATAL MOUNTAINS. SHOULD BE LOOKED FOR WHEREVER THE RANGES OF Agave toumeyana var. bella AND Agave chrystantha OVERLAP.

NAME: ARIZONA CLIFFROSE *PURSHIA SUBINTEGRA*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 49 FR 22326 5-29-84

DESCRIPTION: EVERGREEN SHRUB OF THE ROSE FAMILY (ROSEACEAE). BARK PALE SHREDDY. YOUNG TWIGS WITH DENSE HAIRS. LEAVES 1-5 LOBES AND EDGES CURL DOWNWARD (REVOLUTE). FLOWERS: 5 WHITE OR YELLOW PETALS <0.5 INCH LONG.

ELEVATION RANGE: <4000 FT.

COUNTIES: GRAHAM YAVAPAI MARICOPA MOHAVE

HABITAT: CHARACTERISTIC WHITE SOILS OF TERTIARY LIMESTONE LAKEBED DEPOSITS.

WHITE SOILS OF TERITIARY LIMESTONE LAKEBED DEPOSITS CAN BE SEEN FROM A DISTANCE.

NAME: ARIZONA HEDGEHOG CACTUS *ECHINOCEREUS TRIGLOCHIDIATUS ARIZONICUS*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: No CFR: 44 FR 61556,10-15-1979

DESCRIPTION: DARK GREEN CYLINDROID 2.5-12 INCHES TALL, 2-10 INCHES IN DIAMETER, SINGLE OR IN CLUSTERS. 1-3 GRAY OR PINKISH CENTRAL SPINES LARGEST DEFLEXED AND 5-11 SHORTER RADIAL SPINES. FLOWER: BRILLIANT RED, SIDE OF STEM IN APRIL- MAY

ELEVATION RANGE: 3700-5200 FT.

COUNTIES: MARICOPA, GILA, PINAL

HABITAT: ECOTONE BETWEEN INTERIOR CHAPPARAL AND MADREAN EVERGREEN WOODLAND

OPEN SLOPES, IN NARROW CRACKS BETWEEN BOULDERS, AND IN UNDERSTORY OF SHRUBS. THIS VARIETY IS BELIEVED TO INTERGRADE AT THE EDGES OF ITS DISTRIBUTION WITH VARIETIES MELANCANTHUS AND NEOMEXICANUS CAUSING SOME CONFUSION IN IDENTIFICATION.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: MARICOPA

02/26/2001

NAME: LESSER LONG-NOSED BAT *LEPTONYCTERIS CURASOAE YERBABUENAE*

Tom - ILO

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 53 FR 38456, 09-30-88

DESCRIPTION: ELONGATED MUZZLE, SMALL LEAF NOSE, AND LONG TONGUE. YELLOWISH BROWN OR GRAY ABOVE AND CINNAMON BROWN BELOW. TAIL MINUTE AND APPEARS TO BE LACKING. EASILY DISTURBED.

ELEVATION RANGE: <6000 FT.

COUNTIES: COCHISE, PIMA, SANTA CRUZ, GRAHAM, PINAL, MARICOPA

HABITAT: DESERT SCRUB HABITAT WITH AGAVE AND COLUNMNAR CACTI PRESENT AS FOOD PLANTS

DAY ROOSTS IN CAVES AND ABANDONED TUNNELS. FORAGES AT NIGHT ON NECTAR, POLLEN, AND FRUIT OF PANICULATE AGAVES AND COLUMNAR CACTI. THIS SPECIES IS MIGRATORY AND IS PRESENT IN ARIZONA, USUALLY FROM APRIL TO SEPTMBER AND SOUTH OF THE BORDER THE REMAINDER OF THE YEAR.

NAME: SONORAN PRONGHORN *ANTILOCAPRA AMERICANA SONORIENSIS*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67

DESCRIPTION: BUFF ON BACK AND WHITE BELOW; HOOFED WITH SLIGHTLY CURVED BLACK HORNS HAVING A SINGLE PRONG. SMALLEST AND PALEST OF THE PRONGHORN SUBSPECIES.

ELEVATION RANGE: 2000-4000 FT.

COUNTIES: PIMA, YUMA, MARICOPA

HABITAT: BROAD, INTERMOUNTAIN ALLUVIAL VALLEYS WITH CREOSOTE-BURSAGE & PALO VERDE-MIXED CACTI ASSOCIATIONS

TYPICALLY, BAJADAS ARE USED AS FAWNING AREAS AND SANDY DUNE AREAS PROVIDE FOOD SEASONALLY. HISTORIC RANGE WAS PROBABLY LARGER THAN EXISTS TODAY. THIS SUBSPECIES ALSO OCCURS IN MEXICO.

NAME: DESERT PUPFISH *CYPRINODON MACULARIUS*

STATUS: ENDANGERED CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 51 FR 10842, 03-31-1986

DESCRIPTION: SMALL (2 INCHES) SMOOTHLY ROUNDED BODY SHAPE WITH NARROW VERTICAL BARS ON THE SIDES. BREEDING MALES BLUE ON HEAD AND SIDES WITH YELLOW ON TAIL. FEMALES & JUVENILES TAN TO OLIVE COLORED BACK AND SILVERY SIDES.

ELEVATION RANGE: <5000 FT.

Jo - Ann Watson, FWS 4/25/01

COUNTIES: LA PAZ, PIMA, GRAHAM, MARICOPA, PINAL, YAVAPAI, SANTA CRUZ

HABITAT: SHALLOW SPRINGS, SMALL STREAMS, AND MARSHES. TOLERATES SALINE & WARM WATER

CRITICAL HABITAT INCLUDES QUITOBAQUITO SPRING, PIMA COUNTY, PORTIONS OF SAN FELIPE CREEK, CARRIZO WASH, AND FISH CREEK WASH, IMPERIAL COUNTY, CALIFORNIA. TWO SUBSPECIES ARE RECOGNIZED: DESERT PUPFISH (C. m. macularis) AND QUITOBAQUITO PUPFISH (C. m. eremus).

→ no desert pupfish in the area, closest would be a possible reintroduction by AGFD into Lousy Canyon on BLM land.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: MARICOPA

02/26/2001

NAME: GILA TOPMINNOW *POECILIOPSIS OCCIDENTALIS OCCIDENTALIS*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES), GUPPY-LIKE, LIVE BEARING, LACKS DARK SPOTS ON ITS FINS. BREEDING MALES ARE JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: GILA, PINAL, GRAHAM, YAVAPAI, SANTA CRUZ, PIMA, MARICOPA, LA PAZ

HABITAT: SMALL STREAMS, SPRINGS, AND CIENEGAS VEGETATED SHALLOWS

SPECIES HISTORICALLY OCCURRED IN BACKWATERS OF LARGE RIVERS BUT IS CURRENTLY ISOLATED TO SMALL STREAMS AND SPRINGS

NAME: RAZORBACK SUCKER *XYRAUCHEN TEXANUS*

STATUS: ENDANGERED CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 55 FR 21154, 05-22-1990; 59 FR 13374, 03-21-1994

DESCRIPTION: LARGE (UP TO 3 FEET AND UP TO 16 POUNDS) LONG, HIGH SHARP-EDGED KEEL-LIKE HUMP BEHIND THE HEAD. HEAD FLATTENED ON TOP. OLIVE-BROWN ABOVE TO YELLOWISH BELOW.

ELEVATION RANGE: <6000 FT.

COUNTIES: GREENLEE, MOHAVE, PINAL, YAVAPAI, YUMA, LA PAZ, MARICOPA (REFUGIA), GILA, COCONINO, GRAHAM

HABITAT: RIVERINE & LACUSTRINE AREAS, GENERALLY NOT IN FAST MOVING WATER AND MAY USE BACKWATERS

SPECIES IS ALSO FOUND IN HORSESHOE RESERVOIR (MARICOPA COUNTY).CRITICAL HABITAT INCLUDES THE 100-YEAR FLOODPLAIN OF THE RIVER THROUGH GRAND CANYON FROM CONFLUENCE WITH PARIA RIVER TO HOOVER DAM; HOOVER DAM TO DAVIS DAM; PARKER DAM TO IMPERIAL DAM. ALSO GILA RIVER FROM AZ/NM BORDER TO COOLIDGE DAM; AND SALT RIVER FROM HWY 60/SR 77 BRIDGE TO ROOSEVELT DAM; VERDE RIVER FROM FS BOUNDARY TO HORSESHOE LAKE.

NAME: BALD EAGLE *HALIAEETUS LEUCOCEPHALUS*

Tom - no

STATUS: THREATENED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 60 FR 35999, 07-12-95

DESCRIPTION: LARGE, ADULTS HAVE WHITE HEAD AND TAIL. HEIGHT 28 - 38"; WINGSPAN 66 - 96". 1-4 YRS DARK WITH VARYING DEGREES OF MOTTLED BROWN PLUMAGE. FEET BARE OF FEATHERS.

ELEVATION RANGE: VARIES FT.

COUNTIES: YUMA, LA PAZ, MOHAVE, YAVAPAI, MARICOPA, PINAL, COCONINO, NAVAJO, APACHE, SANTA CRUZ, PIMA, GILA, GRAHAM, COCHISE

HABITAT: LARGE TREES OR CLIFFS NEAR WATER (RESERVOIRS, RIVERS AND STREAMS) WITH ABUNDANT PREY

SOME BIRDS ARE NESTING RESIDENTS WHILE A LARGER NUMBER WINTERS ALONG RIVERS AND RESERVOIRS. AN ESTIMATED 200 TO 300 BIRDS WINTER IN ARIZONA. ONCE ENDANGERED (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) BECAUSE OF REPRODUCTIVE FAILURES FROM PESTICIDE POISONING AND LOSS OF HABITAT, THIS SPECIES WAS DOWN LISTED TO THREATENED ON AUGUST 11, 1995. ILLEGAL SHOOTING, DISTURBANCE, LOSS OF HABITAT CONTINUES TO BE A PROBLEM. SPECIES HAS BEEN PROPOSED FOR DELISTING (64 FR 36454) BUT STILL RECEIVES FULL PROTECTION UNDER ESA.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: MARICOPA

02/26/2001

NAME: CACTUS FERRUGINOUS PYGMY-OWL *GLAUCIDIUM BRASILIANUM CACTORUM*

STATUS: ENDANGERED CRITICAL HAB Yes RECOVERY PLAN: No CFR: 62 FR 10730, 3-10-97

DESCRIPTION: SMALL (APPROX. 7"), DIURNAL OWL REDDISH BROWN OVERALL WITH CREAM-COLORED BELLY STREAKED WITH REDDISH BROWN. SOME INDIVIDUALS ARE GRAYISH BROWN

ELEVATION RANGE: <4000 FT.

COUNTIES: MARICOPA, YUMA, SANTA CRUZ, GRAHAM, GREENLEE, PIMA, PINAL, GILA, COCHISE

HABITAT: MATURE COTTONWOOD/WILLOW, MESQUITE BOSQUES, AND SONORAN DESERTSCRUB

RANGE LIMIT IN ARIZONA IS FROM NEW RIVER (NORTH) TO GILA BOX (EAST) TO CABEZA PRIETA MOUNTAINS (WEST). ONLY A FEW DOCUMENTED SITES WHERE THIS SPECIES PERSISTS ARE KNOWN. ADDITIONAL SURVEYS ARE NEEDED. CRITICAL HABITAT IN PIMA, COCHISE, PINAL, AND MARICOPA COUNTIES (64 FR 37419).

NAME: MEXICAN SPOTTED OWL *STRIX OCCIDENTALIS LUCIDA*

STATUS: THREATENED CRITICAL HAB Yes RECOVERY PLAN: Yes CFR: 56 FR 14678, 04-11-91; 66 FR 8530, 2/1/01

DESCRIPTION: MEDIUM SIZED WITH DARK EYES AND NO EAR TUFTS. BROWNISH AND HEAVILY SPOTTED WITH WHITE OR BEIGE.

ELEVATION RANGE: 4100-9000 FT.

COUNTIES: MOHAVE, COCONINO, NAVAJO, APACHE, YAVAPAI, GRAHAM, GREENLEE, COCHISE, SANTA CRUZ, PIMA, PINAL, GILA, MARICOPA

HABITAT: NESTS IN CANYONS AND DENSE FORESTS WITH MULTI-LAYERED FOLIAGE STRUCTURE

GENERALLY NESTS IN OLDER FORESTS OF MIXED CONIFER OR PONDERSA PINE/GAMBEL OAK TYPE, IN CANYONS, AND USE VARIETY OF HABITATS FOR FORAGING. SITES WITH COOL MICROCLIMATES APPEAR TO BE OF IMPORTANCE OR ARE PREFERED. CRITICAL HABITAT WAS REMOVED IN 1998 BUT RE-PROPOSED IN JULY 2000 AND FINALIZED IN FEB 2001 FOR APACHE, COCHISE, COCONINO, GRAHAM, MOHAVE, PIMA COUNTIES; ALSO IN NEW MEXICO, UTAH, AND COLORADO.

NAME: SOUTHWESTERN WILLOW FLYCATCHER *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HAB Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS. CRITICAL HABITAT ON PORTIONS OF THE 100-YEAR FLOODPLAIN ON SAN PEDRO AND VERDE RIVERS; WET BEAVER AND WEST CLEAR CREEKS, INCLUDING TAVASCI MARSH AND ISTER FLAT; THE COLORADO RIVER, THE LITTLE COLORADO RIVER, AND THE WEST, EAST, AND SOUTH FORKS OF THE LITTLE COLORADO RIVER, REFERENCE 60 CFR;62 FR 39129, 7/22/97.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: MARICOPA

02/26/2001

NAME: YUMA CLAPPER RAIL *RALLUS LONGIROSTRIS YUMANENSIS*

STATUS: ENDANGERED CRITICAL HAB No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 48 FR 34182, 07-27-83

DESCRIPTION: WATER BIRD WITH LONG LEGS AND SHORT TAIL. LONG SLENDER DECURVED BILL. MOTTLED BROWN ON GRAY ON ITS RUMP. FLANKS AND UNDERSIDES ARE DARK GRAY WITH NARROW VERTICAL STRIPES PRODUCING A BARRING EFFECT.

ELEVATION RANGE: <4500 FT.

COUNTIES: YUMA, LA PAZ, MARICOPA, PINAL, MOHAVE

HABITAT: FRESH WATER AND BRACKISH MARSHES

SPECIES IS ASSOCIATED WITH DENSE EMERGENT RIPARIAN VEGETATION. REQUIRES WET SUBSTRATE (MUDFLAT, SANDBAR) WITH DENSE HERBACEOUS OR WOODY VEGETATION FOR NESTING AND FORAGING. CHANNELIZATION AND MARSH DEVELOPMENT ARE PRIMARY SOURCES OF HABITAT LOSS.

THE STATE OF ARIZONA

GAME & FISH DEPARTMENT

2221 West Greenway Road, Phoenix, Arizona 85023-4399 (602) 942-3000
www.gf.state.az.us

Mesa Office, 7200 E. University, Mesa, Arizona 85207 (602) 981-9400

Governor
Jane Dee Hull

Commissioners:
Chairman, Herb Guenther, Tacna
Michael M. Golightly, Flagstaff
William Berlat, Tucson
M. Jean Hassell, Scottsdale
Dennis D. Manning, Alpine

Director
Duane L. Shroufe

Deputy Director
Thomas W. Spalding

January 26, 1999

Ms. Kimberly Otero
Environmental Planner
Dames & Moore
Cambric Corporate Center
1790 E. River Road, Suite E-300
Tucson, Arizona 85718-5876

Re: SRP Siting Projects

Dear Ms. Otero:

I would like to apologize for the delay in getting this letter to your firm. Hopefully this delay has not negatively impacted your project or delayed it in any way.

The Department's Heritage Data Management System has been accessed and current records show that the special status species listed below has been documented as occurring in the project vicinity.

Transmission line and substation in the Northeast Phoenix
Dames & Moore - 02353-139-050

COMMON NAME	SCIENTIFIC NAME	STATUS
Harris' hawk	*Parabuteo unicinctus*	**S**

Transmission lines and substations in the east valley
Dames & Moore - 01009-086-050

COMMON NAME	SCIENTIFIC NAME	STATUS
Harris' hawk	*Parabuteo unicinctus*	**S**
Sonoran desert tortoise	*Gopherus agassizii*	**WC,S**

4 New substations North Phoenix and New River
Dames & Moore - 02353-142-050

COMMON NAME	SCIENTIFIC NAME	STATUS
Gila topminnow	*Poeciliopsis occidentalis occidentalis*	**LE,WC,S**

Harris' hawk	*Parabuteo unicinctus*	**S**
Hohokam agave	*Agave murpheyi*	**S,HS**
lowland leopard frog	*Rana yavapaiensis*	**WC,S**
Sonoran desert tortoise	*Gopherus agassizii*	**WC,S**

STATUS DEFINITIONS

LE - Listed Endangered. Species identified by the U.S. Fish and Wildlife Service under the Endangered Species Act as being in imminent jeopardy of extinction.

WC - Wildlife of Special Concern in Arizona. Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Department's listing of **Wildlife of Special Concern in Arizona** (WSCA, in prep.). Species included in WSCA are currently the same as those in **Threatened Native Wildlife in Arizona** (1988).

S - Sensitive. Species classified as **"sensitive"** by the Regional Forester when occurring on lands managed by the U.S.D.A. Forest Service.

HS - Highly Safeguarded. Those Arizona native plants whose prospects for survival in this state are in jeopardy or are in danger of extinction, or are likely to become so in the foreseeable future, as described by the Arizona Native Plant Law (1993).

The Department recommends that the above mentioned special status species are considered in the planning and implementation of this project. We further recommend that the Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" are used in the instance that a tortoise or its burrow is located during project implementation. Also, your firm should contact the U.S. Fish and Wildlife Service to determine what effect, if any, the presence of the above species listed as "Endangered" may have on your project.

The Department also recommends that you contact the Arizona Department of Agriculture, at the address listed below, for additional information regarding Arizona Native Plant Law and potential restrictions which may apply to the salvage or removal of species noted above as "SR".

Mr. James McGinnis
Manager, Native Plant Law
Plant Services Division
Arizona Department of Agriculture
1688 West Adams
Phoenix, Arizona 85007
Phone: (602) 542-3292

The Department does not anticipate any significant impacts to wildlife resources due to the implementation of this project. We appreciate the opportunity to comment and again, apologize for the delay.

Sincerely,

Timothy Wade
Habitat Evaluation Specialist

TPW:tw

cc: Kelly Neal, Regional Supervisor, Region VI
Russell Haughey. Habitat Program Manager, Region VI
John Kennedy, Project Evaluation Program Supervisor, Habitat Branch

AGFD# 12-18-99(02), 12-18-98(14), 12-18-98(03)

United States Department of the Interior
Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 W. Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
(602) 640-2720 Fax (602) 640-2730

In Reply Refer To:
AESO/SE
2-21-99-I-073

December 23, 1998

Ms. Kimberly A. Otero
Dames & Moore
Cambric Corporate Center
1790 East River Road, Suite E-300
Tucson, Arizona 85718-5876

RE: 230/69kV Transmission Line and Substation Projects (D&M Job No. 02353-139-050 and 02353-142-050)

Dear Ms. Otero:

This letter responds to your December 14, 1998, requests for an inventory of threatened or endangered species, or those that are proposed to be listed as such under the Endangered Species Act of 1973, as amended (Act), which may potentially occur in your project areas (Maricopa County). The enclosed list may include candidate species as well. We hope the enclosed county list of species will be helpful. In future communications regarding this project, please refer to consultation number 2-21-99-I-073.

Please be aware that you may also access limited county species lists for Arizona on our internet web site at the following:

http://ifw2es.fws.gov/endspcs/lists/

The enclosed list of the endangered, threatened, proposed, and candidate species includes all those potentially occurring anywhere in the county, or counties, where your project occurs. Please note that your project area may not necessarily include all or any of these species. The information provided includes general descriptions, habitat requirements, and other information for each species on the list. Also on the enclosed list is the Code of Federal Regulations (CFR) citation for each listed or proposed species. Additional information can be found in the CFR and is available at most public libraries. This information should assist you in determining which species may or may not occur within your project area. Site-specific surveys could also be helpful and may be needed to verify the presence or absence of a species or its habitat as required for the evaluation of proposed project-related impacts.

Endangered and threatened species are protected by Federal law and must be considered prior to project development. If the action agency determines that listed species or critical habitat may be adversely affected by a federally funded, permitted, or authorized activity, the action agency must request formal consultation with the Service. If the action agency determines that the

planned action may jeopardize a proposed species or destroy or adversely modify proposed critical habitat, the action agency must enter into a section 7 conference with the Service. Candidate species are those which are being considered for addition to the list of threatened or endangered species. Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend that they be considered in the planning process in the event that they become listed or proposed for listing prior to project completion.

If any proposed action occurs in or near areas with trees and shrubs growing along watercourses, known as riparian habitat, the Service recommends the protection of these areas. Riparian areas are critical to biological community diversity and provide linear corridors important to migratory species. In addition, if the project will result in the deposition of dredged or fill materials into waterways or excavation in waterways, we recommend you contact the Army Corps of Engineers which regulates these activities under Section 404 of the Clean Water Act.

The State of Arizona protects some plant and animal species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department and the Arizona Department of Agriculture for State-listed or sensitive species in your project area.

The Service appreciates your efforts to identify and avoid impacts to listed and sensitive species in your project area. If we may be of further assistance, please feel free to contact Tom Gatz.

Sincerely,

For David L. Harlow
Field Supervisor

Enclosure

cc: Director, Arizona Game and Fish Department, Phoenix, AZ

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: Maricopa

10/5/98

LISTED TOTAL= 14

NAME: ARIZONA AGAVE *AGAVE ARIZONICA*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: No CFR: 49 FR 21055, 05-18-1984

DESCRIPTION: HAS ATTRACTIVE ROSETTES OF BRIGHT GREEN LEAVES WITH DARK MAHOGANY MARGINS. FLOWER: BORNE ON SUB-UMBELLATE INFLORESCENCES.

ELEVATION RANGE: 3000-6000 FT.

COUNTIES: GILA, YAVAPAI, MARICOPA

HABITAT: TRANSITION ZONE BETWEEN OAK-JUNIPER WOODLAND & MOUNTAIN MAHOGANY-OAK SCRUB

SCATTERED CLONES IN NEW RIVER MOUNTAINS AND SIERRA ANCHA. USUALLY FOUND ON STEEP, ROCKY SLOPES. POSSIBLY MAZATAL MOUNTAINS. SHOULD BE LOOKED FOR WHEREVER THE RANGES OF Agave toumeyana var. bella AND Agave chrystantha OVERLAP.

NAME: ARIZONA CLIFFROSE *PURSHIA SUBINTEGRA*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: Yes CFR: 49 FR 22326 5-29-84

DESCRIPTION: EVERGREEN SHRUB OF THE ROSE FAMILY (ROSEACEAE). BARK PALE SHREDDY. YOUNG TWIGS WITH DENSE HAIRS. LEAVES 1-5 LOBES AND EDGES CURL DOWNWARD (REVOLUTE). FLOWERS: 5 WHITE OR YELLOW PETALS <0.5 INCH LONG.

ELEVATION RANGE: <4000 FT.

COUNTIES: GRAHAM YAVAPAI MARICOPA MOHAVE

HABITAT: CHARACTERISTIC WHITE SOILS OF TERTIARY LIMESTONE LAKEBED DEPOSITS.

WHITE SOILS OF TERITIARY LIMESTONE LAKEBED DEPOSITS CAN BE SEEN FROM A DISTANCE.

NAME: ARIZONA HEDGEHOG CACTUS *ECHINOCEREUS TRIGLOCHIDIATUS ARIZONICUS*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: No CFR: 44 FR 61556,10-15-1979

DESCRIPTION: DARK GREEN CYLINDROID 2.5-12 INCHES TALL, 2-10 INCHES IN DIAMETER, SINGLE OR IN CLUSTERS. 1-3 GRAY OR PINKISH CENTRAL SPINES LARGEST DEFLEXED AND 5-11 SHORTER RADIAL SPINES. FLOWER: BRILLIANT RED, SIDE OF STEM IN APRIL- MAY

ELEVATION RANGE: 3700-5200 FT.

COUNTIES: MARICOPA, GILA, PINAL

HABITAT: ECOTONE BETWEEN INTERIOR CHAPPARAL AND MADREAN EVERGREEN WOODLAND

OPEN SLOPES, IN NARROW CRACKS BETWEEN BOULDERS, AND IN UNDERSTORY OF SHRUBS. THIS VARIETY IS BELIEVED TO INTERGRADE AT THE EDGES OF ITS DISTRIBUTION WITH VARIETIES MELANCANTHUS AND NEOMEXICANUS CAUSING SOME CONFUSION IN IDENTIFICATION.

LISTED, PROPOSED, AND CANDIDATE SPECIES FOR THE FOLLOWING COUNTY: Maricopa

10/5/98

NAME: GILA TOPMINNOW *POECILIOPSIS OCCIDENTALIS OCCIDENTALIS*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-1967

DESCRIPTION: SMALL (2 INCHES), GUPPY-LIKE, LIVE BEARING, LACKS DARK SPOTS ON ITS FINS. BREEDING MALES ARE JET BLACK WITH YELLOW FINS.

ELEVATION RANGE: <4500 FT.

COUNTIES: GILA, PINAL, GRAHAM, YAVAPAI, SANTA CRUZ, PIMA, MARICOPA, LA PAZ.

HABITAT: SMALL STREAMS, SPRINGS, AND CIENEGAS VEGETATED SHALLOWS

SPECIES HISTORICALLY OCCURRED IN BACKWATERS OF LARGE RIVERS BUT IS CURRENTLY ISOLATED TO SMALL STREAMS AND SPRINGS

NAME: RAZORBACK SUCKER *XYRAUCHEN TEXANUS*

STATUS: ENDANGERED CRITICAL HAB: Yes RECOVERY PLAN: Yes CFR: 55 FR 21154, 05-22-1990; 59 FR 13374, 03-21-1994

DESCRIPTION: LARGE (UP TO 3 FEET AND UP TO 16 POUNDS) LONG, HIGH SHARP-EDGED KEEL-LIKE HUMP BEHIND THE HEAD. HEAD FLATTENED ON TOP. OLIVE-BROWN ABOVE TO YELLOWISH BELOW.

ELEVATION RANGE: <6000 FT.

COUNTIES: GREENLEE, MOHAVE, PINAL, YAVAPAI, YUMA, LA PAZ, MARICOPA (REFUGIA), GILA, COCONINO, GRAHAM

HABITAT: RIVERINE & LACUSTRINE AREAS, GENERALLY NOT IN FAST MOVING WATER AND MAY USE BACKWATERS

SPECIES IS ALSO FOUND IN HORSESHOE RESERVOIR (MARICOPA COUNTY). CRITICAL HABITAT INCLUDES THE 100-YEAR FLOODPLAIN OF THE RIVER THROUGH GRAND CANYON FROM CONFLUENCE WITH PARIA RIVER TO HOOVER DAM; HOOVER DAM TO DAVIS DAM; PARKER DAM TO IMPERIAL DAM. ALSO GILA RIVER FROM AZ/NM BORDER TO COOLIDGE DAM; AND SALT RIVER FROM HWY 60/SR 77 BRIDGE TO ROOSEVELT DAM; VERDE RIVER FROM FS BOUNDARY TO HORSESHOE LAKE.

NAME: AMERICAN PEREGRINE FALCON *FALCO PEREGRINUS ANATUM*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: Yes CFR: 35 FR 16047, 10-13-70; 35 FR 8495, 06-02-70

DESCRIPTION: A RECLUSIVE, CROW-SIZED FALCON SLATY BLUE ABOVE WHITISH BELOW WITH FINE DARK BARRING. THE HEAD IS BLACK AND APPEARS TO BE MASKED OR HELMETED. WINGS LONG AND POINTED. LOUD WAILING CALLS ARE GIVEN DURING BREEDING PERIOD.

ELEVATION RANGE: 3500-9000 FT.

COUNTIES: MOHAVE COCONINO NAVAJO APACHE SANTA CRUZ MARICOPA COCHISE YAVAPAI GILA PINAL PIMA GREENLEE GRAHAM

HABITAT: CLIFFS AND STEEP TERRAIN USUALLY NEAR WATER OR WOODLANDS WITH ABUNDANT PREY

THIS IS A WIDE-RANGING MIGRATORY BIRD THAT USES A VARIETY OF HABITATS. BREEDING BIRDS ARE YEAR-ROUND RESIDENTS. OTHER BIRDS WINTER AND MIGRATE THROUGH ARIZONA. SPECIES IS ENDANGERED FROM REPRODUCTIVE FAILURE FROM PESTICIDES.

NAME: SOUTHWESTERN WILLOW FLYCATCHER *EMPIDONAX TRAILLII EXTIMUS*

STATUS: ENDANGERED CRITICAL HAB: Yes RECOVERY PLAN: No CFR: 60 FR 10694, 02-27-95

DESCRIPTION: SMALL PASSERINE (ABOUT 6") GRAYISH-GREEN BACK AND WINGS, WHITISH THROAT, LIGHT OLIVE-GRAY BREAST AND PALE YELLOWISH BELLY. TWO WINGBARS VISIBLE. EYE-RING FAINT OR ABSENT.

ELEVATION RANGE: <8500 FT.

COUNTIES: YAVAPAI, GILA, MARICOPA, MOHAVE, COCONINO, NAVAJO, APACHE, PINAL, LA PAZ, GREENLEE, GRAHAM, YUMA, PIMA, COCHISE, SANTA CRUZ

HABITAT: COTTONWOOD/WILLOW & TAMARISK VEGETATION COMMUNITIES ALONG RIVERS & STREAMS

MIGRATORY RIPARIAN OBLIGATE SPECIES THAT OCCUPIES BREEDING HABITAT FROM LATE APRIL TO SEPTEMBER. DISTRIBUTION WITHIN ITS RANGE IS RESTRICTED TO RIPARIAN CORRIDORS. DIFFICULT TO DISTINGUISH FROM OTHER MEMBERS OF THE EMPIDONAX COMPLEX BY SIGHT ALONE. TRAINING SEMINAR REQUIRED FOR THOSE CONDUCTING FLYCATCHER SURVEYS. CRITICAL HABITAT ON PORTIONS OF THE 100-YEAR FLOODPLAIN ON SAN PEDRO AND VERDE RIVERS; WET BEAVER AND WEST CLEAR CREEKS, INCLUDING TAVASCI MARSH AND ISTER FLAT; THE COLORADO RIVER, THE LITTLE COLORADO RIVER, AND THE WEST, EAST, AND SOUTH FORKS OF THE LITTLE COLORADO RIVER, REFERENCE 60 CFR:62 FR 39129, 7/22/97.

NAME: **YUMA CLAPPER RAIL** *RALLUS LONGIROSTRIS YUMANENSIS*

STATUS: ENDANGERED CRITICAL HAB: No RECOVERY PLAN: Yes CFR: 32 FR 4001, 03-11-67; 48 FR 34182, 07-27-83

DESCRIPTION: WATER BIRD WITH LONG LEGS AND SHORT TAIL. LONG SLENDER DECURVED BILL. MOTTLED BROWN ON GRAY ON ITS RUMP. FLANKS AND UNDERSIDES ARE DARK GRAY WITH NARROW VERTICAL STRIPES PRODUCING A BARRING EFFECT.

ELEVATION RANGE: <4500 FT.

COUNTIES: YUMA, LA PAZ, MARICOPA, PINAL, MOHAVE

HABITAT: FRESH WATER AND BRACKISH MARSHES

SPECIES IS ASSOCIATED WITH DENSE EMERGENT RIPARIAN VEGETATION. REQUIRES WET SUBSTRATE (MUDFLAT, SANDBAR) WITH DENSE HERBACEOUS OR WOODY VEGETATION FOR NESTING AND FORAGING. CHANNELIZATION AND MARSH DEVELOPMENT ARE PRIMARY SOURCES OF HABITAT LOSS.

SHELDON R. JONES
Director

G. JOHN CARAVETTA
Associate Director

Arizona Department of Agriculture

1688 West Adams, Phoenix, Arizona 85007
(602) 542-4373 FAX (602) 542-0999

PLANT SERVICES DIVISION

December 18, 1998

Kimberly A. Otero
Project Biologist
Dames & Moore
Cambric Corporate Center
1790 E. River Rd., Ste. E-300
Tucson, AZ 85718-5876

RE: **D & M Job Number 01009-076-050**
D & M Job Number 02353-139-050
D & M Job Number 02353-142-050

Dear Ms. Otero:

The Arizona Department of Agriculture has reviewed the referenced information and maps dated December 14, 1998.

The Department recommends that, if any protected native plants exist on site, they be avoided or transplanted preferably on site. If any plants or wood are removed from the site for personal use, State permits must first be obtained.

If it is not known if protected plants occur on the proposed project site, the Department, upon request, will conduct a survey of the site to determine the type and number of protected plants present. The applicant, however, will be billed for the survey. The Department will also accept survey counts from other competent sources.

We appreciate the opportunity to review the proposed actions. If you need additional information, please contact me at 602/542-3292.

Sincerely,

James McGinnis
Chief Enforcement Officer
Native Plants/Antiquities

JM:clw

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Phoenix Field Office
2015 West Deer Valley Road
Phoenix, AZ 85027-2099

IN REPLY REFER TO:
(6840) (020)

December 18, 1998

Kim Otero
Dames & Moore
Cambric Corporate Center
1790 East River Road, Suite E-300
Tucson, Arizona 85718-5876

Ms. Otero:

The lands in the North Central Phoenix Siting Project are by and large devoid of Bureau of Land Management parcels. There are perhaps six isolated blocks still held in the public interest. None of these lands contains any high value habitats for special status plants or animals. It is possible, but highly unlikely, that the lands may contain Cactus Ferruginous Pygmy-owls or potential habitat. The areas have not been surveyed as they may be outside the current distribution for the species. Some of these lands may be slated for disposal, but until that time probably function best as Open Space.

There is a large block containing some hills on either side of the Cave Creek Dam Recreation Area and three smaller parcels adjacent to the Cave Creek Recreation Area, north of the Carefree Highway. These parcels in/near recreation areas with broken and elevated terrain should likely be left unencumbered by transmission lines and/or generating stations. Such actions would preserve the character of a natural view shed and avoid disturbance to such plants and animals that remain in these isolated natural areas.

Sincerely,

Eugene A. Dahlem

for Michael A. Taylor
Field Manager

EXHIBIT D
BIOLOGICAL RESOURCES

EXHIBIT D
BIOLOGICAL RESOURCES

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"List the fish, wildlife, plant life, and associated forms of life in the vicinity of the proposed site or route and describe the effects, if any, other proposed facilities will have thereon."

BIOLOGICAL RESOURCES

A biological field crew surveyed the proposed transmission line routes in order to assess the plant communities and associated fauna affected by the Project. Plants and animals were identified and noted along with major geographic features. Lists of potentially occurring species of animals were assembled from standard references for the state.

The Proposed Route and alternative routes cross areas that include native vegetation of the Lower Colorado River Valley and Arizona Upland subdivisions of the Sonoran desertscrub biome (Turner & Brown 1994). The majority of the Sonoran desertscrub on the Project site is dominated by creosote bush (*Larrea tridentata*) and triangle-leaf bursage (*Ambrosia deltoidea*), but these sites are regularly interrupted by washes and xeroriparian areas where larger shrubs and trees dominate. Plant species in these areas include saguaro cactus (*Carnegiea gigantea*), foothill palo verde (*Cercidium microphyllum*), blue palo verde (*Cercidium floridum*), ironwood (*Olneya tesota*), velvet mesquite (*Prosopis velutina*), and wolfberry (*Lycium* sp.). Barrel cactus (*Ferocactus wislizenii*), hedgehog cactus (*Echinocereus* spp.), and cholla cactus (*Opuntia* spp.) are found in both vegetation types.

The Proposed Route and alternative routes will cross the Agua Fria River, New River, Cave Creek Wash, Skunk Creek, and Beardsley Canal. The New River is dry in this area and flows only in response to storm events. The Agua Fria River shows some minor flow and pooling below the dam that forms Lake Pleasant. Vegetation in this area includes large stands of salt cedar (*Tamarix* sp.) and willow (*Salix gooddingii*).

For species of mammals, birds, and reptiles and amphibians that may occur in the Project area, refer to Tables D-1, D-2, and D-3 respectively.

Impacts

Potential effects of the proposed Project on wildlife and plants include vegetation clearing and associated habitat loss, as well as disturbance, injury, or mortality of wildlife due to construction activities.

One result of construction of this Project may be the potential removal of protected plant species as identified in the Arizona Native Plant Law. If these trees are removed during construction of the Project, ADA will be notified 30 days before plants are destroyed over an area of one acre or more but less than 40 acres, and 60 days before plants are destroyed over an area of 40 acres or more. Native vegetation characteristic of the Lower Colorado River Valley subdivision is extensive in southern Arizona. Therefore, removal of the relatively small amount of native vegetation present on the Project site would not harm this vegetation community as a whole.

In areas where native vegetation is cleared there may be a permanent loss of potential habitat for small mammals, reptiles, and birds. Construction activities may result in temporary disturbance of wildlife due to the presence of construction equipment and human activity. Another construction-related impact is the potential for incidental injury or mortality of small animals.

A construction, mitigation, and restoration plan will be developed to identify sensitive biological features (i.e., major river crossings and threatened and endangered species habitat) and delineate access. A biological monitor will be on site during all groundbreaking activities in areas of biologically sensitive features.

TABLE D-1 MAMMAL SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Desert shrew	*Notiosorex crawfordi*	Any area with ample ground cover including plant debris, trash and lumber
California leaf-nosed bat	*Macrotus californicus*	Sonoran desertscrub with caves and mines
Yuma myotis	*Myotis yumanensis*	Areas with rivers, ponds, canals, or other permanent water
Cave myotis	*Myotis velifer*	Desertscrub with caves, mines, or bridges and water nearby
California myotis	*Myotis californicus*	Desertscrub with rock faces containing crevices, occasionally caves and mines
Western pipistrelle	*Pipistrellus hesperus*	Areas with canyon walls or cliff faces for roosting, streambeds and tanks for foraging
Big brown bat	*Eptesicus fuscus*	Wooded areas, desertscrub
Southern yellow bat	*Lasiurus ega*	Areas with large trees, especially fan palms (*Washingtonia*)
Townsend's big-eared bat	Plecotus townsendii	Areas with caves or mines, structures for night roosts
Pallid bat	*Antrozous pallidus*	Desertscrub with caves, mine, cliffs, bridges or other structures for roosts
Brazilian free-tailed bat	*Tadarida brasiliensis*	Desertscrub and foothills with mines, caves, bridges or old buildings
Pocketed free-tailed bat	*Tadarida femorosacca*	Rocky cliffs and slopes, structures
Big free-tailed bat	*Tadarida macrotis*	Rocky cliffs with crevices
Western mastiff bat	*Eumops perotis*	Rocky cliffs with crevices or shallow caves
Desert cottontail	*Sylvilagus audubonii*	Desertscrub, semi-desert grassland
Black-tailed jack rabbit	*Lepus californicus*	Desertscrub and other areas with open ground cover
Harris' antelope squirrel	*Ammospermophilus harrisii*	Rocky areas of creosote bush/saltbush/bursage
Rock squirrel	*Spermophilus variegatus*	Rocky areas above 1,600 feet
Round-tailed ground squirrel	*Spermophilus tereticaudus*	Creosote bush/saltbush desert with sandy or gravelly soil
Botta's pocket gopher	*Thomomys bottae*	Any area with soil suitable for digging burrows
Little pocket mouse	*Perognathus longimembris*	Sandy or gravelly soils in broken or rolling country
Arizona pocket mouse	Perognathus amplus	Desertscrub
Rock pocket mouse	*Chaetodipus intermedius*	Rocky areas of desertscrub
Desert pocket mouse	*Chaetodipus penicillatus*	Sandy areas of desertscrub with sparse vegetation
Bailey's pocket mouse	*Chaetodipus baileyi*	Flats and lower slope areas of desertscrub
Merriam's kangaroo rat	*Dipodomys merriami*	Sandy areas of desertscrub
Desert kangaroo rat	*Dipodomys deserti*	Areas with deep sandy soil

TABLE D-1 MAMMAL SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Plains harvest mouse	*Reithrodontomys montanus*	Desertscrub or chaparral
Western harvest mouse	*Reithrodontomys megalotis*	Desertscrub or chaparral
Cactus mouse	*Peromyscus eremicus*	Desertscrub, rocky areas, chaparral
Deer mouse	*Peromyscus maniculatus*	Coniferous or riparian woodland, desertscrub adjacent to canals or intermittent creeks
Southern grasshopper mouse	*Onychomys torridus*	Desertscrub or semi-desert grassland with compact soil
Arizona cotton rat	*Sigmodon arizonae*	Mesquite scrub and weedy areas along canals and washes
White-throated wood rat	*Neotoma albigula*	Areas below the conifer belt, especially with *Opuntia*, or palo verde
Desert wood rat	*Neotoma lepida*	Desertscrub
House mouse	*Mus musculus*	Weedy areas and cultivated fields, usually near human habitation
Coyote	*Canis latrans*	Cosmopolitan, from spruce forest to low desert
Kit fox	*Vulpes macrotis*	Desertscrub and desert grassland with sandy or softer clay soils
Gray fox	*Urocyon cineroargenteus*	Open desertscrub, chaparral, lower elevation woodland
Raccoon	*Procyon lotor*	Areas with permanent water
Ringtail	*Bassariscus astutus*	Steep rocky areas near water
Badger	*Taxidea taxus*	Flats and drainages adjacent to mountains, grasslands
Western spotted skunk	*Spilogale gracilis*	Low and middle elevations, often in rocky areas or around human habitation
Striped skunk	*Mephitis mephitis*	From spruce/fir belt to sea level, usually near permanent water
Bobcat	*Felis rufus*	Rocky upland areas interspersed with open desert, grassland or woodland
Mule deer	*Odocoileus hemionus*	Pine forest, oak woodland, chaparral, upland desert
Source: Hoffmeister 1986		

TABLE D-2 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Common loon	*Gavia immer*	Lakes, ponds, and aqueducts
Pied-billed grebe	*Podilymbus podiceps*	Lakes, ponds, streams, and canals
Eared grebe	*Podiceps nigricollis*	Lakes and ponds
Western grebe	*Aechmophorus occidentalis*	Lakes, ponds, and lagoons
Double-crested cormorant	*Phalacrocorax auritus*	Lakes, ponds, streams, and aqueducts
Great blue heron	*Ardea herodias*	Lakes, ponds, streams, canals, and marshes
Great egret	*Ardea alba*	Ponds, streams, and marshes
Snowy egret	*Egretta thula*	Ponds, streams, and marshes
Green heron	*Butorides virescens*	Lakes, ponds, streams, marshes, and canals
Black-crowned night heron	*Nycticorax nycticorax*	Lakes, ponds, marshes, and streams
White-faced ibis	*Plegadis chihi*	Lakes, ponds, streams, marshes, and fields
Turkey vulture	*Cathartes aura*	Open country, woodlands, farms
Canada goose	*Branta canadensis*	Lakes, ponds, and fields
Gadwall	*Anas strepera*	Lakes, ponds, and streams
American wigeon	*Anas americana*	Lakes, ponds, and streams
Mallard	*Anas platyrhynchos*	Lakes, ponds, streams, and canals
Blue-winged teal	*Anas discors*	Ponds
Cinnamon teal	*Anas cyanoptera*	Ponds, streams, and canals
Northern shoveler	*Anas clypeata*	Lakes, ponds, and streams
Northern pintail	*Anas acuta*	Lakes, ponds, and streams
Green-winged teal	*Anas crecca*	Lakes, ponds, and streams
Redhead	*Aythya americana*	Lakes and ponds
Ring-necked duck	*Aythya collaris*	Lakes and ponds
Lesser scaup	*Aythya affinis*	Lakes and ponds
Bufflehead	*Bucephala albeola*	Lakes, ponds, and streams
Ruddy duck	*Oxyura jamaicensis*	Lakes and ponds
Northern harrier	*Circus cyaneus*	Wetlands, open fields
Sharp-shinned hawk	*Accipiter striatus*	Generally distributed
Cooper's hawk	*Accipiter cooperii*	Broken woodlands or streamside groves
Harris's hawk	*Parabuteo unicinctus*	Semiarid woodland, brushland
Swainson's hawk	*Buteo swainsoni*	Fields and desert
Red-tailed hawk	*Buteo jamaicensis*	Plains, prairie groves, desert
Ferruginous hawk	*Buteo regalis*	Dry, open country
American kestrel	*Falco sparverius*	Open country, cities
Prairie falcon	*Falco mexicanus*	Dry, open country, prairies
Gambel's quail	*Callipepla gambelii*	Desert scrublands and thickets
Common moorhen	*Gallinula chloropus*	Streams, marshes, and ponds
American coot	*Fulica americana*	Lakes, ponds, streams, and marshes
Killdeer	*Charadrius vociferus*	Ponds, streams, and fields
Greater yellowlegs	*Tringa melanoleuca*	Lakes, ponds, streams, and flooded fields
Spotted sandpiper	*Actitis macularia*	Lakes, ponds, streams, and canals
Western sandpiper	*Calidris mauri*	Ponds and streams

TABLE D-2 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Least sandpiper	*Calidris minutilla*	Ponds and streams
Long-billed dowitcher	*Limnodromus scolopaceus*	Ponds and streams
Common snipe	*Gallinago gallinago*	Ponds, marshes, streams, and wet fields
Ring-billed gull	*Larus delawarensis*	Lakes, ponds, and streams
Rock dove	*Columba livia*	Parks, fields, urban settings
Mourning dove	*Zenaida macroura*	Wide variety of habitats
Inca dove	*Columbina inca*	Near human habitations
Greater roadrunner	*Geococcyx californianus*	Scrub desert and mesquite groves, less common in chaparral and oak woodland
Barn owl	*Tyto alba*	Dark cavities in city and farm buildings, cliffs, trees
Western screech owl	*Otus kennicottii*	Open woodlands, streamside groves, deserts, suburban areas
Great horned owl	*Bubo virginianus*	Common in wide variety of habitats
Cactus ferruginous pygmy-owl	*Glaucidium brasilianum cactorum*	Saguaro deserts, woodlands
Elf owl	*Micrathene whitneyi*	Desert lowlands, canyons, foothills
Burrowing owl	*Athene cunicularia*	Open country, golf courses, airports
Lesser nighthawk	*Chordeiles acutipennis*	Dry, open country, scrubland, desert
Common poorwill	*Phalaenoptilus nuttallii*	Sagebrush and chaparral slopes
White-throated swift	*Aeronautes saxatalis*	Mountains, canyons, and cliffs
Black-chinned hummingbird	*Archilochus alexandri*	Lowlands and low mountains
Anna's hummingbird	*Calypte anna*	Coastal lowlands, mountains, deserts
Costa's hummingbird	*Calypte costae*	Desert washes, dry chaparral
Rufous hummingbird	*Selasphorus rufus*	Suburban and riparian areas
Belted kingfisher	*Ceryle alcyon*	Rivers and brooks, ponds and lakes, estuaries
Gila woodpecker	*Melanerpes uropygialis*	Towns, scrub desert, cactus country, streamside woods
Ladder-backed woodpecker	*Picoides scalaris*	Dry brushlands, mesquite and cactus country, towns and rural areas
Northern flicker	*Colaptes auratus*	Open woodlands, suburban areas
Gilded flicker	*Colaptes chrysoides*	Low desert woodlands, favors saguaro
Western wood-pewee	*Contopus sordidulus*	Riparian areas, wooded habitats, including suburban areas
Southwestern willow flycatcher	*Empidonax traillii extimus*	Brushy habitats in wet areas
Pacific-slope flycatcher	*Empidonax difficilis*	Migrant through lowlands
Black phoebe	*Sayornis nigricans*	Woodlands, parks, suburbs, prefers to nest near water
Say's phoebe	*Sayornis saya*	Dry, open areas, canyons, cliffs
Vermilion flycatcher	*Pyrocephalus rubinus*	Streamside shrubs, bottomlands, near small wooded ponds
Ash-throated flycatcher	*Myiarchus cinerascens*	Wide variety of habitats
Brown-crested flycatcher	*Myiarchus tyrannulus*	Saguaro desert, river groves, lower mountain woodlands
Western kingbird	*Tyrannus verticalis*	Dry, open country
Cassin's kingbird	*Tyrannus vociferans*	Varied habitats
Loggerhead shrike	*Lanius ludovicianus*	Hunt in open or brushy areas
Common raven	*Corvus corax*	Mountains, deserts, coastal areas

TABLE D-2 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Bell's vireo	*Vireo bellii*	Riparian areas, especially in mesquite trees
Plumbeous vireo	*Vireo plumbeus*	Woodland habitats
Warbling vireo	*Vireo gilvus*	Deciduous woods
Horned lark	*Eremophila alpestris*	Dirt fields, gravel ridges, shores
Tree swallow	*Tachycineta bicolor*	Streams, ponds, and lakes
Violet-green swallow	*Tachycineata thalassina*	Riparian areas, streams, ponds, and lakes
Northern rough-winged swallow	*Stelgidopteryx serripennis*	Banks of streams and canals, streams, ponds, and lakes
Cliff swallow	*Petrochelidon pyrrhonota*	Lakeside, cliffs, and canals; nesting under nearby bridges, buildings, and other overhangs; streams and ponds
Barn swallow	*Hirundo rustica*	Streams, ponds, lakes, and agricultural areas
Verdin	*Auriparus flaviceps*	Southwestern desert
Cactus wren	*Campylorhynchus brunneicapillus*	Cholla cactus habitat
Rock wren	*Salpinctes obsoletus*	Arid and semiarid habitats
Canyon wren	*Catherpes mexicanus*	Canyons and cliffs, often near water
Bewick's wren	*Thryomanes bewickii*	Wooded riparian areas
House wren	*Troglodytes aedon*	Dense, brushy areas
Ruby-crowned kinglet	*Regulus calendula*	Woodlands, thickets
Black-tailed gnatcatcher	*Polioptila melanura*	Desert, especially washes
Western bluebird	*Sialia mexicana*	Woodlands, farmlands, orchards, deserts, especially in mesquite-mistletoe groves
Hermit thrush	*Catharus guttatus*	Lowland woodlands and suburban areas
Northern mockingbird	*Mimus polyglottos*	Variety of habitats
Bendire's thrasher	*Toxostoma bendirei*	Open farmlands, grasslands, brushy desert
Curve-billed thrasher	*Toxostoma curvirostre*	Cholla deserts and suburban areas
Cedar waxwing	*Bombycilla cedrorum*	Riparian and suburban areas
Phainopepla	*Phainopepla nitens*	Riparian areas, especially in trees with mistletoe
Loggerhead shrike	*Lanius ludovicianus*	Generally distributed
European starling	*Sturnus vulgaris*	Generally distributed
Orange-crowned warbler	*Vermivora celata*	Open brushy woodlands, forest edges, thickets
Lucy's warbler	*Vermivora luciae*	Mesquites and cottonwoods along watercourses
Yellow warbler	*Dendroica petechia*	Wet habitats, open woodlands, gardens, orchards
Yellow-rumped warbler	*Dendroica coronata*	Riparian and suburban areas
Townsend's warbler	*Dendroica townsendi*	Riparian and suburban areas
Common yellowthroat	*Geothlypis trichas*	Marshes and suburban areas
Wilson's warbler	*Wilsonia pusilla*	Dense, moist woodlands, bogs, streamside tangles
Yellow-breasted chat	*Icteria virens*	Dense thickets and brush
Summer tanager	*Piranga rubra*	Riparian areas
Green-tailed towhee	*Pipilo chlorurus*	Brushy areas, riparian, and suburban areas
Spotted towhee	*Pipilo maculates*	Brushy areas, riparian, and suburban areas
Canyon towhee	*Pipilo fuscus*	Sonoran desertscrub
Abert's towhee	*Pipilo aberti*	Riparian areas, suburban areas
Chipping sparrow	*Spizella pallida*	Brushy edges and riparian areas
Brewer's sparrow	*Spizella breweri*	Deserts, field edges, and suburban areas

TABLE D-2 BIRD SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Black-chinned sparrow	*Spizella atrogularis*	Rocky hillsides in Sonoran desertscrub
Vesper sparrow	*Pooecetes gramineus*	Open weedy fields, roadsides, and grassy areas
Lark sparrow	*Chondestes grammacus*	Brushy, weedy areas, riparian areas, and field edges
Black-throated sparrow	*Amphispiza bilineata*	Desertscrub
Lark bunting	*Calamospiza melanocorys*	Brushy desert and field edges
Savannah sparrow	*Passerculus sandwichensis*	Open fields, roadsides, and grassy areas
Song sparrow	*Melospiza melodia*	Riparian areas, marshes, and vegetated lakesides
Lincoln's sparrow	*Melospiza lincolnii*	Riparian areas, marshes, brushy fields, and hedgerows
White-crowned sparrow	*Zonotrichia leucophrys*	Suburban, riparian, and other brushy areas
Dark-eyed junco	*Junco hyemalis*	Desertscrub
Northern cardinal	*Cardinalis cardinalis*	Woodland edges, swamps, streamside thickets, suburban gardens
Pyrrhuloxia	*Cardinalis sinuatus*	Thorny brush, mesquite thickets, desert, woodland edges, ranchlands
Blue grosbeak	*Guiraca caerulea*	Riparian areas
Lazuli bunting	*Passerina amoena*	Weedy and shrubby areas along irrigation ditches and other bodies of water and suburban areas
Red-winged blackbird	*Agelaius phoeniceus*	Riparian areas, irrigated fields, marshes, and feedlots
Western meadowlark	*Sturnella neglecta*	Fields and other open areas, deserts
Brewer's blackbird	*Euphagus cyanocephalus*	Fields, farmyards, feedlots, ponds, and riparian areas
Great-tailed grackle	*Quiscalus mexicanus*	Riparian areas, marshes, ponds, farmyards, and suburban areas
Bronzed cowbird	*Molothrus aeneus*	Riparian and suburban areas
Brown-headed cowbird	*Molothrus ater*	Suburbs and agricultural areas
Hooded oriole	*Icterus cucullatus*	Riparian and suburban areas
Bullock's oriole	*Icterus bullockii*	Riparian areas
House finch	*Carpodacus mexicanus*	Riparian and suburban areas, farmland, desert
Lesser goldfinch	*Carduelis psaltria*	Riparian areas
House sparrow	*Passer domesticus*	Associated with human presence
Sources: National Geographic Society 1999; Witzeman et al. 1997		

TABLE D-3 REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Sonoran desert toad	*Bufo alvarius*	Ranges from arid mesquite-creosote bush lowlands and arid grasslands into the oak-sycamore-walnut groves in mountain canyons, often found near permanent water of springs, reservoirs, canals, and streams, but also frequents temporary pools
Great plains toad	*Bufo cognatus*	Inhabits prairies or deserts, often breeding after heavy rains in summer in shallow temporary pools or quiet water of streams, marshes, irrigation ditches, and flooded fields, frequents creosote bush desert, mesquite woodland, and sagebrush plains
Red-spotted toad	*Bufo punctatus*	Desert streams and oases, open grassland and scrubland, oak woodland, rocky canyons and arroyos, in crevices among rocks for shelter, breeds in rain pools, reservoirs, and temporary pools of intermittent streams
Southwestern woodhouse toad	*Bufo woodhousei australis*	Grassland, sagebrush flats, woods, desert streams, valleys, floodplains, farms, and city backyards, in sandy areas, breeds in quiet water of streams, marshes, lakes, freshwater pools, and irrigation ditches
Canyon treefrog	*Hyla arenicolor*	Huddles in niches on sides of boulders or stream banks, favors intermittent or permanent streams with quiet pools that have a hard rocky bottom, frequents arroyos in semi-arid grassland, streams in piñon-juniper and pine-oak woodlands, and tropical scrub forest
Couch spadefoot	*Scaphiopus couchii*	Frequents shortgrass plains, mesquite savannah, creosote bush desert, thornforest, tropical deciduous forest, and other areas of low rainfall
Southern spadefoot	Spea multiplicata	Frequents desert grassland, shortgrass plains, creosote bush and sagebrush desert, mixed grassland and chaparral, piñon-juniper and pine-oak woodlands, and open pine forests, soil is often sandy or gravelly
Bullfrog	*Rana catesbeiana*	Highly aquatic, remaining in or near permanent water, frequents prairie, woodland, chaparral, forests, desert oases, and farmland, enters marshes, ponds, lakes, reservoirs, and streams – usually quiet water with thick growth of cattails or other aquatic vegetation
Lowland leopard frog	*Rana yavapaiensis*	Frequents desert, grassland, oak and oak-pine woodland, in permanent pools of foothill streams, overflow ponds and side channels of major rivers, permanent springs, and in drier areas – more or less permanent stock tanks
Sonoran mud turtle	*Kinosternon sonoriense*	Stream-dwelling turtle that frequents springs, creeks, ponds, and the water holes of intermittent streams, inhabits woodlands, or oaks and piñon–juniper or forests of ponderosa pine and Douglas fir, also occasionally inhabits foothill grasslands and desert
Sonoran desert tortoise	*Gopherus agassizii*	Completely terrestrial desert species requiring firm but not hard ground for construction of burrows, frequent desert oases, riverbanks, washes, and rocky slopes
Spiny softshell	*Trionyx spiniferus*	River turtle attracted to quiet water with bottom of mud, sand, or gravel, also enters ponds, canals, and irrigation ditches
Eastern collared lizard	*Crotaphytus collaris*	Rock-dwelling lizard that frequents canyons, rocky gullies, limestone ledges, mountain slopes, and boulder-strewn alluvial fans, usually where vegetation is sparse

TABLE D-3 REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Long-nosed leopard lizard	*Gambelia wislizenii wislizenii*	Arid and semiarid plains grown to bunch grass, alkali bush, sagebrush, creosote bush, or other scattered low plants, ground may be hardpan, gravel, or sand
Gila monster	*Heloderma suspectum*	Canyon bottoms and washes in desert or desert grassland
Desert iguana	*Dipsosaurus dorsalis*	Creosote bush desert to subtropical scrub, most common in sandy habitats but also occurs along rocky streambeds, on bajadas, silty floodplains, and on clay soils
Common chuckwalla	*Sauromalus obesus*	Rock-dwelling, herbivorous lizard, widely distributed in the desert
Zebra-tailed lizard	*Callisaurus draconoides*	Frequents washes, desert pavements of small rocks, and hardpan
Desert horned lizard	*Phrynosoma platyrhinos*	Arid lands on sandy flats, alluvial fans, along washes, and at the edges of dunes, associated with creosote bush, saltbush, greasewood, cactus, and ocotillo in the desert
Regal horned lizard	*Phrynosoma solare*	Frequents rocky and gravelly habitats of the arid and semiarid plains, hills, and lower slopes of mountains, often with cactus, mesquite, and creosote bush
Desert spiny lizard	*Sceloporus magister*	Arid and semiarid regions on plains and lower slopes of mountains, found in Joshua-tree, creosote bush, and shad-scale deserts, mesquite-yucca grassland, juniper and mesquite woodland, subtropical thornscrub, and along rivers grown to willows and cottonwoods
Brush lizard	*Urosaurus graciosus*	Desert species, frequents areas of loose sand and scattered bushes and trees, creosote bush, burrobush, galleta grass, catclaw, mesquite, and palo verde
Tree lizard	*Urosaurus ornatus*	Frequents mesquite, oak, pine, juniper, alder, cottonwood, and non-native trees such as tamarisk and rough-bark eucalyptus, but also may occur in treeless areas, especially attracted to river courses
Side-blotched lizard	*Uta stansburiana*	Arid or semiarid regions with sand, rock, hardpan, or loam with grass, shrubs, and scattered trees, often found along sandy washes
Western whiptail	*Cnemidophorus tigris*	Inhabits deserts and semiarid habitats, usually where plants are sparse, also found in woodland, streamside growth, and in the warmer, drier parts of forests
Western glossy snake	*Arizona occidentalis*	Below 6,000 feet in sparsely vegetated woodland, chaparral, grassland or desertscrub with loose soil
Western shovel-nosed snake	*Chionactis occipitalis*	Sparsely vegetated desert areas with pockets of loose soil
Night snake	*Hypsiglena torquata*	Various upland and desert habitats used
Coachwhip	*Masticophis flagellum*	Sparsely vegetated areas from juniper woodland to low desert
Spotted leaf-nosed snake	*Phyllorhynchus descurtatus*	Open desert with finer loose soils, especially creosote bush (*Larrea tridentata*)
Gopher snake	*Pituophis catenifer*	Various habitats from mountain to low desert and coastal
Long-nosed snake	*Rhinocheilus lecontei*	Desertscrub, prairie, tropical woodland to 5,500 feet
Western patch-nosed snake	*Salvadora hexalepis*	Piñon–juniper woodland to low deserts on variety of soil types
Ground snake	*Sonora semiannulata*	Wide range of habitats in loose soil with some subsurface moisture

TABLE D-3 REPTILE AND AMPHIBIAN SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	**Scientific Name**	**Habitat**
Southwestern black-headed snake	*Tantilla hobartsmithi*	In loose soil or plant litter in desert grassland and wood land habitats
Black-necked garter snake	*Thamnophis cyrtopsis*	Pine-fir forest to upland desert and chaparral, generally in the vicinity of a water source
Checkered garter snake	*Thamnophis marcianus*	Low elevation rivers, streams, ponds, and canals, and adjacent areas.
Lyre snake	*Trimorphodon biscutatus*	From oak and juniper woodland to higher elevation desert and grasslands, particularly in rocky areas.
Western coral snake	*Micruroides euryxanthus*	Wide range of arid habitats including grassland, woodland, scrub and agricultural lands, particularly upland desert in washes and river bottoms.
Western blind snake	*Leptotyphlops humilis*	Desertscrub and brush covered hillsides with loose soils
Western diamondback rattlesnake	*Crotalus atrox*	Wide range of habitats below 7,000 feet
Sidewinder	*Crotalus cerastes*	Desert areas with fine loose sand, often near small shrubs
Southwestern speckled rattlesnake	*Crotalus mitchellii*	From juniper woodland to succulent desert, often in rocky areas
Black-tailed rattlesnake	*Crotalus molossus*	Upland desert to pine-oak woodland
Mojave rattlesnake	*Crotalus scutulatus*	Mostly in upland desert and lower mountain slopes
Tiger rattlesnake	*Crotalus tigris*	Rocky desert canyons and foothills
Source: Prival 1999; Stebbins 1985		

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EXHIBIT E
SCENIC AND VISUAL RESOURCES, HISTORIC SITES AND STRUCTURES AND ARCHAEOLOGICAL SITES

EXHIBIT E
SCENIC AREAS, HISTORIC SITES AND STRUCTURES, AND ARCHAEOLOGICAL SITES

As stated in Arizona Corporation Commission Rules of Practice and Procedure R-14-3-219:

"Describe any existing scenic areas, historic sites and structures, or archaeological sites in the vicinity of the proposed facilities and state the effects, if any, the proposed facilities will have thereon."

INTRODUCTION

The visual resource analysis and the historic and archaeological resource analysis were conducted by EPG. Both analyses are detailed below.

VISUAL RESOURCES

Overview

The visual resource study for the North Valley Project addresses the potential visual effects of the proposed Project and alternatives on landscape scenic quality and sensitive viewers. The inventory and assessment was completed between April 2001 and August 2002.

Existing Conditions

Inventory Methods and Results

Inventory data for visual resources within the study area were collected from existing and future land use plans (see Exhibit A), aerial photography, previous studies, and field review. The visual resource inventory focused on landscape character, determination of scenic quality, identification of sensitive viewers, and viewing conditions within the study area. Data were collected 2 miles on either side of the centerline of the proposed and alternative route in order to characterize the visual resources in the study area.

The following describes the inventory results for landscape character, landscape scenic quality, and sensitive viewers.

Landscape Character

Due to the relatively large size of the Project, the study area was divided into three regions, the western region (the Agua Fria River valley), central region (volcanic and desert hills), and eastern region (Sonoran Desert lowlands). A description of the landscape character and existing visual conditions for each region of the study area including topographic character, vegetation character, and cultural/infrastructure modifications is presented below.

Western Region

The Agua Fria River and its associated river valley dominate the western region (Litchfield Road to approximately Lake Pleasant Road) of the study area. The land slopes gently towards the river channel to the south and east, whereas to the north the land is slightly more varied and includes desert foothills. New Waddell Dam and Lake Pleasant are located at the extreme northern portion of the region.

The vegetation character of the western region resembles that of the rest of the study area (i.e., lower Sonoran Desert type). However, because of the hydrology and geology of the Agua Fria River valley, the composition of the vegetation has a higher density than that of the rest of the study area. This condition is especially articulated along the northeastern side of the river valley with a dense stand of saguaros and other desert flora.

Several modifications to the landscape setting are apparent throughout this region, starting with the Westwing Substation in the southern portion of the area. Transmission lines (500kV, 345kV, 230kV, and 69kV) extend from the substation heading to the east, northeast, and southwest. Two areas of citrus orchards occur on the western side of the river. Other modifications to the region include Cowtown, a gravel extraction plant, a small airport, a racetrack, Beardsley Canal and CAP, and clusters of low density residences.

Central Region

The central region of the study area (Lake Pleasant Road to Cave Creek Road) consists of a variety of topographic features including volcanic knolls rising abruptly from the land, desert hills (Union Hills and Hedgepeth Hills), three ephemeral streams (New River, Cave Creek, Skunk Creek), and several xeroriparian washes. Many of the hills, knolls, and riparian areas have been viewed by the City of Phoenix as natural with recreational amenities and have therefore been designated as either natural preserves (proposed Sonoran Preserve) or recreation areas (Deems Hills Recreation Area, Adobe Dam Recreation Area, and Cave Buttes Recreation Area).

The vegetation that occurs throughout this region is typical of the rest of the study area. However, because of the varied topography the vegetation is more diverse. A mixture of

saguaros and chollas interspersed with palo verde occur on the southern slopes of the hills and mountains of the regions in abundance.

Cultural and infrastructure modifications to the natural landscape setting include several master-planned communities, dispersed low density residences, and an airport (Deer Valley/Phoenix Municipal Airport). The CAP crosses the region from the southeast to northwest. Four dams occur in this region with three of them regarded as recreational by the City of Phoenix including, Cave Creek Dam, Adobe Dam, and Cave Buttes Dam. New River Dam is not a designated recreation area. An existing 230kV transmission line crosses the region in the southern portion of the study area from west to east. Other power lines include several 69kV transmission and 12kV distribution lines mainly occurring in the medium and low density residences. Other visual modifications include a landfill along I-17, a juvenile detention center, and several gravel pits. There are five designated scenic roads in the region—Lake Pleasant Road to the west, I-17 (north of Cloud Road) and Carefree Highway Scenic Corridor (SR 74) to the north, Happy Valley Road to the south, and Cave Creek Scenic Road to the east.

Eastern Region

The topographic character of the eastern region (Cave Creek Road to Scottsdale Road) is rather homogenous in nature. The region consists of land that gently slopes towards the southwest.

The general vegetation character consists of the lower Sonoran Desert type. Saguaro, palo verde, ironwood, and creosote occur throughout the study area. Creosote and bursage are dominant plant species due to the relatively flat and sandy physiognomy of the region. Several drainages occur throughout occupied by mainly xeroriparian species including blue paloverde, velvet mesquite, and hackberry.

Cultural and infrastructure modifications to the natural landscape setting include four clusters of rural developments (medium density residential), a golf course, and the CAP. The region also includes four substations (Cielo Grande, Desert Ridge, Jomax, and Pinnacle Peak), three 230kV transmission lines (two which cross a portion of the study area east to west), 69kV transmission lines, and 12kV distribution lines.

Scenic Quality

Scenic Quality Rating Units (SQRUs) are used to describe specific natural landscape types found within the regional landscape. The designations are categorized into three classes—A (outstanding), B (above average), and C (common). The degree of diversity and variety of visual elements (i.e., landform, vegetation, color, etc.) associated with the previously described landscape character were used to derive the SQRUs along the proposed Project.

Within the study area, Class A landscapes included mountainous areas (e.g., Union Hills) with diverse landform and vegetation. Class B landscapes included undisturbed desert foothills and minor riparian corridors (intermittent washes). Class C landscapes consisted of relatively flat terrain comprised of a generally homogenous vegetative palette (e.g., creosote).

Sensitive Viewers and Viewing Conditions

Key Observation Points (KOPs) and their associated viewers were identified through previous studies recently completed for the APS Northwest Valley Project and North Central Project, data gathered during field inventories, and aerial photograph interpretation. The sensitive viewers were organized into three categories, including residential, recreation, and transportation viewers, and are described below.

Residential Viewers

Existing residential viewers occur throughout the study area in differing concentrations. Generally, the eastern and central regions of the study area contain dispersed low density residences. Medium and high density residences occur in clusters and are generally located in the south-central and northeastern regions of the study area, along I-17, and adjacent to the existing Happy Valley utility corridor. Residential visibility of the proposed Project varied depending on the proximity of the residences to an alternative route and the availability of natural or manmade screening elements.

Recreation Viewers

There are several recreation KOPs and associated viewers that occur within the study area. The western region of the study area contains Lake Pleasant Regional Park, Pleasant Valley Raceway, and Cowtown. Due to the mountainous character of this area and the occurrence of existing transmission lines, the views of the proposed Project from Lake Pleasant and Cowtown would be partially screened. The viewers from Pleasant Valley raceway have direct views of the Westwing to Raceway transmission line corridor. Ben Avery Regional Park (campgrounds, shooting range, and trailer park), and the trail that parallels the park's western boundary, are located in the north-central portion of the study area. Users of these recreation facilities will have distant views of the proposed and alternative routes with the exception of Alternative Route #3, which will be directly viewed from the park users. Within the central region of the study area users of the Deems Hills Recreation Area would have direct views of Alternative Route #4 and distant views of the proposed and alternative routes. Cave Buttes and Reach 11 recreation areas occur in the eastern portion of the study area. Views of the proposed Project from Cave Buttes Recreation Area would be intermittent because the recreation area is set to the north and at the base of Union Hills. Cave Buttes and Cave Creek dams will further screen the views of the

proposed Project from the users. Within Reach 11, recreation users will have distant views of the proposed Project.

Transportation Views

There are six transportation corridors in which motorists would have views of the proposed and alternative routes. Lake Pleasant Road and SR 74 (Carefree Highway) occur in the western and northern region of the study area. I-17, Parkway A, and Happy Valley Road all occur in the central and southern region of the study area, while Cave Creek Road occurs in the eastern region of the study area. Five of these corridors have scenic designations including Lake Pleasant Road, SR 74, Happy Valley Road, Cave Creek Road, and I-17 (north of Cloud Road). All transportation routes will have areas of modified views of the proposed and alternative routes because of the occurrence of existing transmission lines and/or other industrial modifications (i.e., CAP).

Impact Assessment

The visual resources impact assessment evaluated the level of potential change the proposed transmission line, substations, and associated substation interconnections would have on scenic quality and resulting effects to sensitive viewers. The components of the visual assessment included a visual contrast analysis and identification of impacts.

The visual impact assessment considered the effects of new structures introduced into the landscape, access and vegetation clearing, and the influence of existing modifications (i.e., transmission lines, gas pipelines, landfills, etc.). In general, impacts to sensitive viewers and landscape scenic quality would be lower than typical 230kV transmission line impacts for the following reasons: (1) the proposed and alternative routes were sited (to the extent possible) adjacent to existing transmission lines, distribution lines, and other utility features, (2) the proposed and alternative routes would be constructed using dulled steel structures and non-specular conductors, (3) placement of structures would match the spans of the existing 230kV transmission lines that occur in the study area where practicable, and (4) a construction, mitigation, and restoration plan would be designed and applied to the Project area during pre- and post-construction activities, reducing landscape modification and incorporating revegetation to disturbed areas.

Visual Contrast Analysis

Visual contrast is a measure of the anticipated changes that may occur with the construction of the proposed Project in specific landscape settings and at varying distances from sensitive viewers. The key factor that contributes to changes in contrast levels affecting scenic quality and sensitive viewers is the introduction of a manmade element into the landscape.

Visual contrast resulting from the proposed and alternative routes would typically be reduced because: (1) existing or approved transmission lines would be paralleled or underbuilt for portions of the proposed and alternative routes, (2) existing access is available on level terrain, and (3) other modifications in the landscape are present in the vicinity of the proposed and alternative routes.

Results

The following discussion identifies specific impacts to sensitive viewers and scenic quality that would occur if the proposed or any of the alternative routes were constructed. The Proposed Route was used as a baseline to compare all other alternatives (see alternatives map, Exhibit A-5).

Proposed Route

The visual impacts associated with the Proposed Route were reduced through siting and mitigation. Over three quarters (approximately 27 out of 31 miles) of the Proposed Route would parallel existing or planned 500kV, 230kV, and 69kV transmission lines, which would reduce potential visual impacts by matching similar facilities in the landscape. Matching existing 230kV transmission line structures and spans where practicable and the use of dulled structures and conductors would further lower potential impacts. In addition, the construction, mitigation, and restoration plan will further reduce project contrast resulting in lower viewer impacts. The City of Phoenix and ASLD requested that the Proposed Route be sited on the Dove Valley Road alignment, the location of a planned 69kV transmission line alignment, 1 mile south of SR 74 (designated scenic highway) at 39th Avenue, and ½ mile off of I-17 for approximately 1½ miles. The placement of the route in these locations would reduce visibility of the proposed 230kV transmission line and future development would screen the transmission line, resulting in lower impacts to the transportation viewers. A discussion of specific impacts to residential views, recreation views, transportation views, and scenic quality follows.

Residential viewer impacts would occur intermittently along the Proposed Route. Specifically, rural residential viewers (Links 15 and 35) and a future approved master planned development would incur minimal impacts because the Proposed Route would parallel the existing Westwing utility corridor (two 500kV and one 230kV transmission line[s]), which dominates the existing views. Impacts to a rural residential viewer were identified just north of the Proposed Route along the Dove Valley Road alignment (Link 70). However, a planned 69kV transmission line will be constructed along the Dove Valley Road alignment resulting in initial visual impacts to the residential viewer. Therefore, by taking advantage of this alignment, and consolidating the planned 69kV transmission line on the proposed 230kV transmission line, visual impacts would be lower relative to an alignment that does not have any existing or planned transmission lines. Visual impacts to residential viewers were identified along the Proposed Route (Link 115) (see simulations in Exhibits G-6 to G-7). However, the present landscape and resulting views

immediately adjacent to the development are modified. These modifications include: (1) an existing 69kV transmission line on the western border of the development (for approximately ½ mile), (2) Skunk Creek Landfill to the southeast, (3) the CAP and associated berm, and (4) existing 69kV transmission lines and associated substation to the northeast. Because of these existing visual modifications, the added visual impact of the proposed Project would be lower. Additional impacts to residential viewers (existing development and approved future development) would occur on the east side of I-17. Further visual impacts documented along this route would occur to residential viewers adjacent to the eastern and southern section of the proposed Project (Links 140 and 170). These impacts would be lowered because the Proposed Route would be on the north side of the existing 230kV transmission lines.

Impacts to recreation viewers were minimized through the siting of the proposed Project. No existing recreation facilities will be crossed by the Proposed Route. Minimal impacts were identified for the Ben Avery Regional Park because the Proposed Route is located over 1 mile from the park facilities. Minimal impacts would occur to a recreation facility (ramada) located between Dynamite and Jomax roads along the east side of I-17. Additional recreation views identified are from the Phoenix Sonoran Preserve, Deems Hills Recreation Area, Cave Buttes Recreation Area, and Reach 11 Recreation Area. Impacts identified for the majority of these recreational viewers are minimized because the proposed Project would parallel an existing 230kV transmission line with matching structure type and spans where practicable. Moreover, all four recreation areas have diverse topography and vegetation, which would screen the views of the proposed Project.

Visual impacts were evaluated along all of the travel routes that occur in the study area. Specific visual impacts to motorists for each travel route are discussed below:

- Lake Pleasant Road - The proposed Project would cross perpendicular to this transportation corridor, located in the western region of the study area, and will have a planned 69kV transmission line underbuilt on the proposed 230kV transmission line, thus consolidating and lowering overall impacts.

- I-17 - Impacts were identified for viewers along I-17 because a portion of the Proposed Route would parallel I-17 (see Exhibit G-5). Impacts would be reduced because approximately 1 mile of Link 90 was located ½ mile west of I-17 (Link 90). In addition, an existing 69kV transmission line would be underbuilt and consolidated on the proposed 230kV transmission line for approximately 1½ miles.

- Carefree Highway - Minimal impacts were identified for viewers along this travel route (west of I-17 for approximately 7 miles) because views to the proposed Project would be distant (1 mile to the south) and a planned 69kV transmission line along the Dove Valley Road alignment would be underbuilt, and thus consolidated on the proposed 230kV transmission line.

- Happy Valley Road - This transportation route is located in the south-central portion of the study area approximately ¼ mile north of an existing 230kV and 69kV transmission line corridor. The proposed Project would parallel the existing 230kV and 69kV transmission lines resulting in minimal visual impacts to viewers.

- Cave Creek Road - This transportation route runs northeast to southwest and is located in the eastern region of the study area. The Proposed Route crosses Cave Creek Road at the intersection of two 230kV transmission lines. The proposed Project will parallel the north side of the two existing 230kV transmission lines minimizing visual impacts to viewers along Cave Creek Road.

Impacts to National Memorial Cemetery viewers were identified. However, the impacts would be reduced because the views of the proposed Project are distant (1 mile) and modified by two 230kV transmission lines. Moreover, the Proposed Route would be on the north side of the existing 230kV transmission lines, further lowering impacts.

Impacts to landscape scenic quality are anticipated to be minimal. Existing transmission lines, the CAP, Skunk Creek Landfill, and I-17 all modify the natural scenic quality along the Proposed Route. The Proposed Route crosses approximately 2 miles of high scenic quality landscape (Link 15). However, minimal impacts to this landscape are anticipated because this portion of the route is located in the existing West Wing utility corridor (two 500kV and one 230kV transmission lines) lowering the natural scenic quality of the landscape.

Alternative Route #1

Alternative Route #1 is located on the east side of I-17 (Link 110) resulting in impacts to existing and future approved residential viewers on the east side of I-17. Impacts to views from I-17 will increase compared to the Proposed Route because the views will include the existing 69kV transmission line (west side) as well as the proposed 230kV transmission line (east side). Viewer impacts can be attributed to the fact that there are fewer existing modifications on the east side of I-17. All other visual impacts are similar to the Proposed Route.

Alternative Route #2

The primary distinction between Alternative Route #2 (Link 150) and the Proposed Route is the utilization of the CAP as a by-pass of I-17. For this route there would be impacts to existing medium density, low density, and future approved residences adjacent to the CAP. All other impacts are similar to that of the Proposed Route.

Alternative Route #3

Alternative Route #3 utilizes the Joy Ranch Road alignment and I-17 instead of the future Dove Valley Road alignment. Residential visual impacts were identified on the east and north sides of the Joy Ranch alignment (Link 50). On the east side, impacts to residential viewers would be lower because there is an existing 69kV transmission line that would be underbuilt, thus consolidated with the proposed 230kV transmission line. Along the northern boundary of the subdivision, the recently constructed 69kV transmission line would not be replaced and underbuilt on the proposed 230kV transmission line; therefore, the impacts would be slightly higher than the east side of the subdivision. Other impacts would occur to viewers residing in Tramonto (I-17 and SR 74).

Visual impacts were identified along the northern and southeastern limits of Ben Avery Regional Park. Along the northern boundary, Alternative Route #3 would parallel existing 69kV transmission lines lowering impacts. Along the eastern boundary the proposed 230kV transmission line would have direct impacts to the park users.

Additional impacts to motorists were identified along Alternative Route #3. SR 74 (north of Cloud Road), designated a scenic highway by Maricopa County, would be crossed twice resulting in higher impacts compared to the Proposed Route. Impacts to motorists on I-17 were identified because a 69kV transmission line occurring on the east side of the highway in conjunction with the proposed 230kV transmission line on the west side would result in a tunnel effect for approximately 1 mile (between Cloud Road and Carefree Highway). Further south along I-17 the impacts would be reduced because an existing 69kV transmission line (between Cloud Road and Joy Ranch Road) would be paralleled for approximately 1 mile. There would be distant views of Alternative Route #3 from Parkway A resulting in minimal impacts. All other visual impacts are similar to the Proposed Route.

Alternative Route #4

Alternative Route #4 parallels the CAP from the Westwing transmission line corridor at the Dove Valley Road alignment to I-17 (Links 80, 100, and 15). All other route components are identical to the Proposed Route.

Additional impacts identified along Alternative Route #4 would affect the Deems Hills Recreation Area, proposed Sonoran Preserve, and medium and low density residences. However, Alternative Route #4 would parallel the recently constructed 69kV transmission line and earthen berm associated with the CAP from 59th Avenue east to I-17, resulting in lower impacts. Impacts to existing and approved future residential viewers east of I-17 along the CAP were identified. Additional impacts to high scenic quality landscapes were also identified between 51st and 43rd avenues. These impacts are anticipated to be lower because the natural scenic quality is already modified by the CAP and an existing 69kV transmission line that Alternative Route #4 will parallel. All other impacts are similar to the Proposed Route.

Substations

Visual impacts from the proposed substations and substation interconnections were reduced through site location. The substation interconnections at the existing Westwing and Pinnacle Peak substations are located in an area with numerous existing substation facilities and transmission lines. The addition of substation interconnections at these locations would cause an incremental modification to the existing setting, resulting in minimal impacts to the landscape or viewers.

The two proposed substations are located in settings adjacent to existing and proposed transmission lines. The proposed Avery Substation located at Dove Valley Road and 39th Avenue was sited south and east of the proposed 230kV transmission line. The City of Phoenix and ASLD requested this location so the site would be located 1 mile south of SR 74 and ½ mile east of I-17. The placement of the substation in this location would reduce visibility and allow screening from future development resulting in lower impacts to the viewers. The proposed Misty Willow Substation would be located at 7th Avenue and Misty Willow. The substation was sited adjacent to the proposed 230kV transmission line north of industrial land and east of quasi-public land and light industry. Mitigation for the substations could be incorporated to screen the facility from viewers. Examples of mitigation for each facility would include a block wall, solid steel gates, and landscaping. Final architectural characteristics and landscape density will be determined by the permitting jurisdiction.

CULTURAL RESOURCES

Methods

A cultural resource study was conducted to assess the nature of cultural resources that may be potentially affected by the construction of the proposed North Valley Project. This study was based on records reviewed at a number of agencies and research institutions, including the following:

- State Historic Preservation Office (SHPO)
- Arizona State Museum (ASM)
- Department of Anthropology at Arizona State University (ASU)
- State Office and Phoenix Field Office of the BLM
- Museum of Northern Arizona

The goal of the review was to identify any prior cultural resource surveys and recorded archaeological and historical sites within 1 mile of the Project area.

In addition, a field survey of approximately 1,273 acres along the Proposed Route was conducted between June 24 and July 18, 2002. The surveyed area included:

- a 250-foot-wide, 20-mile-long (606 acres) corridor
- a 500-foot-wide, 11-mile-long (667 acres) corridor

This exhibit summarizes the results of the records review and field survey of the Proposed Route, which are being documented in a report to support the state review process in compliance with the Arizona Antiquities Act (A.R.S. § 41-841 through 41-847).

Findings

The records review identified 163 cultural resource studies conducted within the overall Project area, which includes a 1-mile buffer around the Proposed Route and four alternative routes. The studies undertaken in the overall Project area were conducted to support a variety of construction projects including road realignments, communication and power lines, and development projects.

A total of 229 archaeological and historical sites are located within the overall Project area. The Proposed Route and four alternatives cross 11 previously recorded sites (Table E-1). Each of the routes and the associated cultural resources that are within the area of potential effect are discussed below.

TABLE E-1
SUMMARY OF ARCHAEOLOGICAL AND HISTORICAL SITES WITHIN THE OVERALL PROJECT AREA

Site Designation	Description	Route	Significance/ Eligibility[1]	Potential Impacts[2]
AZ T:3:1 (MNA)	sherd scatter	all routes	potentially eligible	none
AZ T:3:2 (MNA)	artifact scatter	all routes	not eligible	none
AZ T:8:104 (ASU)	pot drop	all routes	not eligible	none
AZ U:5:72 (ASU)	sherd scatter	all routes	not eligible	none
AZ U:5:73 (ASU)	artifact scatter	all routes	not eligible	none
AZ T:8:74 (ASM)	historic site	Alternative Route #1	unevaluated	none
AZ T:4:25 (ASM)	prehistoric farmstead	Alternative Route #3	eligible	none
AZ T:4:107 (ASM)	lithic scatter	Alternative Route #3	eligible	none
AZ T:8:79 (ASU)	artifact scatter with check dams, terraces, and rock rings	Alternative Route #4	not eligible	none
AZ T:8:83 (ASU)	two rock rings	Alternative Route #4	not eligible	none
Beardsley Canal	historic canal	all routes	potentially eligible	none, spanned

[1]The significance of these properties and their eligibility for the State and National Register of Historic Places continues to be assessed in compliance with Arizona Antiquities Act, and a cultural resource report to support the ASLD compliance process is being prepared.

[2]The impact analysis will be made more specific as engineering designs are completed. Any impacts will continue to be addressed in consultation with the ASLD.

Proposed Route

Five previously identified archaeological sites (AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; and AZ U:5:73 [ASM]) and one historic property (Beardsley Canal) are identified within the Proposed Route corridor. In addition, the Proposed Route crosses portions of three areas of archaeological interest: (1) the Calderwood Butte District, (2) New River Dam Archaeological District, and (3) Cave Creek Dam Archaeological District. An archaeological district is a significant concentration of archaeological sites within a particular area. These areas represent areas of high archaeological potential that can be found in many localities across the northern margins of the Phoenix Basin. The Proposed Route crosses the edges of the archaeological districts. Within two of these districts the route follows existing transmission lines.

Site AZ T:3:1 (MNA) is a sherd scatter that had not been evaluated for National Register of Historic Places (NRHP) significance prior to the field visit. Based on the field visit it is recommended that the site is potentially eligible.

Site AZ T:3:2 (MNA) is an artifact scatter containing sherds, lithics, and ground stone. Evidence of previous site disturbance (pot holes) has been noted in the records. The site had not been evaluated for NRHP significance prior to the field visit. Based on the field visit, it is recommended that the site is not eligible.

Site AZ T:8:104 (ASU) is a pot drop within a 1-square-meter area. The site is considered not eligible for listing on the NRHP.

Site AZ U:5:72 (ASU) is a small sherd scatter within a 25-square-meter area. The site is considered not eligible for the NRHP.

Site AZ U:5:73 (ASU) is small scatter of chipped stone and ceramic artifacts within a 600-square-meter area. It is not eligible for listing on the NRHP.

The Beardsley Canal is part of the Maricopa Water District irrigation system. The 33-mile-long canal delivers surface flow from the Agua Fria River to the New Waddell Dam. The canal was constructed as part of an irrigation project in 1888 by the Agua Fria Water and Land Company (AFWLC) (Fenicle et al. 1994; Introcaso 1998). William Beardsley worked to help the AFWLC and soon took control of the company. Financial hardships and natural disasters delayed the progress of the canal and storage dam. Construction on the diversion dam, storage dam, and the canal resumed in 1926 (Fenicle et al. 1994). Major repairs were made in 1934 and 1935 and some structures were replaced with reinforced concrete structures (Introcaso 1998). The historic context of the canal was documented in the Historic American Engineering Record compiled for Waddell Dam (Bauer et al. 2001). Bauer et al. (2001) have recommended that the Beardsley Canal is eligible for the Arizona and National Registers under Criterion A for its association with agricultural development in the Salt River Valley.

The five scatters (sites AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; AZ U:5:73 [ASU]) of prehistoric ceramic and lithic artifacts pertain to Hohokam cultural traditions. Sites AZ T:8:104 (ASU); AZ U:5:72 (ASU); and AZ U:5:73 (ASU) are considered ineligible for the NRHP; while sites AZ T:3:1 (MNA) and AZ T:3:2 (MNA) had not been previously evaluated. These sites were revisited during the field survey. As a result of the revisit, it is recommended that site AZ T:3:1 (MNA) is potentially eligible for listing on the NRHP, while site AZ T:3:2 (MNA) is recommended not eligible.

The Calderwood Butte District encompasses approximately 4,480 acres along the lower Agua Fria River and contains more than 70 archaeological sites (Rogge and Darrington 2000). Previous research along the Agua Fria River suggests that this area has been occupied since AD 300 and contains evidence of both prehistoric and historic use. One of the most interesting sites within this area is the Westwing Site, AZ T:7:27 (ASU), a classic period Hohokam village investigated by ASU in the early 1970s (Weaver 1974). The Proposed Route crosses approximately 3½ miles of the Calderwood Butte District in an area where two transmission lines already exist. No archaeological or historic sites are present within the Proposed Route corridor through Calderwood Butte District.

New River Dam Archaeological District contains approximately 9,000 acres along the middle New River drainage. A total of 43 archaeological sites have been recorded within this district. These sites range from large habitation sites to sherd and lithic scatters. The Proposed Route extends for 2 miles through the northern edge of the district. No sites are located within the area of potential effect within this portion of the district.

Cave Creek Dam Archaeological District contains approximately 8,000 acres within the Cave Creek Recreation Area. Prehistoric occupation of this area dates from AD 700. Cave Creek Dam Archaeological District contains 19 prehistoric sites and 3 historic sites. Five previously recorded sites within the Cave Creek Dam Archaeological District have been destroyed. The site types identified within the district include habitation areas, field houses, garden plots, agricultural terraces, water control features, canals, and petroglyph panels. The Proposed Route extends through 2 miles of the southern section of the district. No sites are located within the area of potential effect in this portion of the district.

Alternative Route #1

For most of its length Alternative Route #1 follows the identical corridor as the Proposed Route except along I-17 where Alternative Route #1 is situated on the eastern side of I-17 south of the CAP. Six sites, the three archaeological districts areas, and one historic property are located within this alternative. These include the five sites (AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; and AZ U:5:73 [ASU]) that are identified within each of the routes. The sixth site, AZ T:8:74 (ASM), occurs only within Alternative Route #1's area of potential effect.

Site AZ T:8:74 (ASM) is a historic site consisting of two unpaved roads, trash scatters, well pipe and an associated rock alignment. The site also contains a small ditch, a road alignment, and a rock pile that are probably associated with the construction of the road. One diagnostic artifact was identified, a clear Owens-Illinois wine bottle base. The Owens-Illinois bottle base dates between 1929 and 1954. The site occupies approximately 13,000 square meters. The site has not been evaluated for listing on the NRHP.

Alternative Route #2

Alternative Route #2 follows the Proposed Route alignment but diverges following the CAP at the Biscuit Flat Substation to the proposed Misty Willow Substation. Alternative Route #2 then joins the Proposed Route alignment and proceeds to the Pinnacle Peak Substation. No previously recorded cultural resources were identified within the area of potential effect adjacent to the CAP. The five sites (AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; and AZ U:5:73 [ASU]), the three archaeological districts, and the one historic property located within each route are also within Alternative Route #2.

Alternative Route #3

Alternative Route #3 follows the proposed alignment to the Raceway Substation where it proceeds northeast parallel to the existing 500kV transmission line until the Humbug Substation. Alternative Route #3 then turns east paralleling Joy Ranch Road and continues east to I-17 where it proceeds south to the Dove Valley Road alignment. At the Dove Valley Road alignment, Alternative Route #3 ties in with the Proposed Route alignment. Two previously recorded cultural resources, sites AZ T:4:25 (ASM) and AZ T:4:107 (ASM), are located solely within the Alternative Route #3 corridor. The five sites (AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; and AZ U:5:73 [ASU]), three archaeological districts, and one historic property located within each route are also within Alternative Route #3.

Site AZ T:4:25 (ASM) is a prehistoric site consisting of a field house, two canals, rock piles, and an artifact scatter. Artifacts identified at the site include ceramics, lithics, and ground stone. The site is recommended eligible for listing on the NRHP. The site has been monitored during the construction activity associated with the Humbug Tap-Humbug Substation 69kV Rebuild.

Site AZ T:4:107 (ASM) is a lithic scatter with six to eight chipping stations. One Clovis point was collected at the site. Lithic artifacts include flakes, cores, and a hammer stone. The site is considered eligible for the NRHP.

Alternative Route #4

Alternative Route #4 follows the Proposed Route except where it diverges at the Dove Valley Road alignment to follow the CAP (for approximately 13 miles) to the proposed Misty Willow Substation. Alternative Route #4 then joins with the Proposed Route and proceeds to the Pinnacle Peak Substation. Two previously recorded sites are located only within this alternative. These sites are AZ T:8:79 (ASU) and AZ T:8:83 (ASU). The five sites (AZ T:3:1 [MNA]; AZ T:3:2 [MNA]; AZ T:8:104 [ASU]; AZ U:5:72 [ASU]; and AZ U:5:73 [ASU]), three archaeological districts, and one historic property located within each route are also within Alternative Route #4.

AZ T:8:79 (ASU) is a series of check dams, terraces, and rock rings associated with prehistoric artifacts. Artifacts identified at the site include ceramics, chipped stone, and ground stone. The site is considered not eligible for the NRHP.

Site AZ T:8:83 (ASU) consists of two rock rings with no associated artifacts. The site is considered not eligible for the NRHP.

A Class III cultural resource survey is being conducted for the Proposed Route. In addition to the previously recorded sites and structures identified in the Class I cultural resource survey, nine newly recorded sites have been identified during the Class III survey and will be evaluated for NRHP significance during the preparation of the Class III survey report.

Potential Impacts

No archaeological or historic properties located within the affected area that are recommended eligible for NRHP listing appear to be threatened by ground-disturbing activities associated with the proposed Project. However, if some of the archaeological sites cannot be avoided, important information would be recovered and preserved prior to the start of construction and such mitigation is likely to be considered satisfactory by the applicable authorities. The Proposed Route must cross the historic Beardsley Canal and peripheral portions of three archaeological districts. This historic canal would be spanned by the Proposed Route and would not be directly impacted by construction activities. The Proposed Route crosses portions of the three archaeological districts in areas that have a low density of previously existing archaeological sites. In addition, the installation of the line is not anticipated to have any indirect effects on the eligible properties within the Project area. Auditory and atmospheric effects associated with construction activities would be minimal and of limited duration. The setting of these properties and portions of archaeological districts have been previously altered by the existing transmission line; therefore, the selected crossings of the districts for the new line would result in minimal visual intrusions.

The proposed Project would also not directly affect any of the NRHP eligible or listed properties located beyond the area of potential effect. Because of the proximity of the Proposed Route to an

existing transmission line, there would also not be any indirect (visual, atmospheric, or auditory) affects to properties beyond the area of potential effect.

There is a low potential for encountering human remains or funerary objects at any of the sites within the Project area; however, if such remains were found on state land they would be reported to the director of the Arizona State Museum in accordance with A.R.S. § 41-865.

It is most likely that register eligible sites identified within the Project area of potential effect will be avoided during construction activity. Standard operating procedures for avoidance of register eligible sites include the following measures: (1) sites will be clearly marked on the construction, mitigation, and restoration plans, (2) prior to ground disturbing activities, archaeologists would barricade the sites and post clearly visible signs denoting such areas as "environmental sensitive areas: do not disturb," (3) prior to ground disturbing activities, the archaeologist would instruct the construction company in the location of the sites, (4) during construction activities, an archaeologist would monitor all ground disturbing activities within the vicinity of all barricaded sites. In the past, these mitigation measures have been considered satisfactory by the responsible authorities, and included in a construction, mitigation, and restoration plan.

In the unlikely event that archaeological sites can not be avoided, APS would prepare a treatment plan to address the mitigation of those eligible sites that could not be avoided during construction activities. The treatment plan would be prepared in consultation with SHPO and other interested land management agencies.

REFERENCES CITED

Bauer, Sharon, A.E. Rogge, Kirsten Winter, and Laura Rames. 2001. *Cultural Resource Inventory for the White Tanks Flood Retarding Structure #3 Project, Maricopa County, Arizona.* URS Corporation, Phoenix.

Fenicle, Diane, J.E. Ayres, E.J. Bassett, C.L. Myers, A.E. Rogge, M. Keane, and D.L. Douglas. 1994. *The Historical Archaeology of Dam Construction Camps in Central Arizona.* Vol. 2B: Sites in the New Waddell Dam Area. Intermountain Cultural Resource Services Research Paper No. 12. Dames & Moore, Phoenix.

Introcaso, David M. 1998. *Waddell Dam, Agua Fria River, Maricopa County, Arizona.* Historic American Engineering Record No. AZ-11. Salt River Project, Phoenix, and National Park Service, Western Region, San Francisco.

Rogge, A.E. and Glenn P. Darrington. 2000. *Phoenix Sonoran Desert Preserve Cultural Resource Database, Maricopa County, Arizona.* URS Dames & Moore, Phoenix.

Weaver, Donald E. 1974. *Archaeological Investigations at the Westwing Site, AZ T:7:27 (ASU), Agua Fria River Valley, Arizona.* Arizona State University Anthropological Research Paper No. 7, Tempe.

EXHIBIT F
RECREATIONAL PURPOSES AND ASPECTS

EXHIBIT F
RECREATIONAL PURPOSES AND ASPECTS

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"*State the extent, if any, the proposed site or route will be available to the public for recreational purposes, consistent with safety considerations and regulations and attach any plans the applicant may have concerning the development of the recreational aspects of the proposed site or route.*"

As the transmission corridor passes through the affected incorporated communities, unincorporated Maricopa County and Arizona State Trust Land, the Applicant shall offer to work with these communities and agencies to assist in establishing future recreation plans.

EXHIBIT G
CONCEPTS OF PROPOSED FACILITIES

EXHIBIT G
CONCEPTS OF PROPOSED FACILITIES

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"*Attach any artist's or architect's conception of the proposed plant or transmission line structures and switchyards, which applicant believes may be informative to the committee.*"

Exhibit G-1 to G-4	Typical 230kV Structures
Exhibit G-5	Typical 230/69kV Substation
Exhibit G-6 to G-7	Simulations

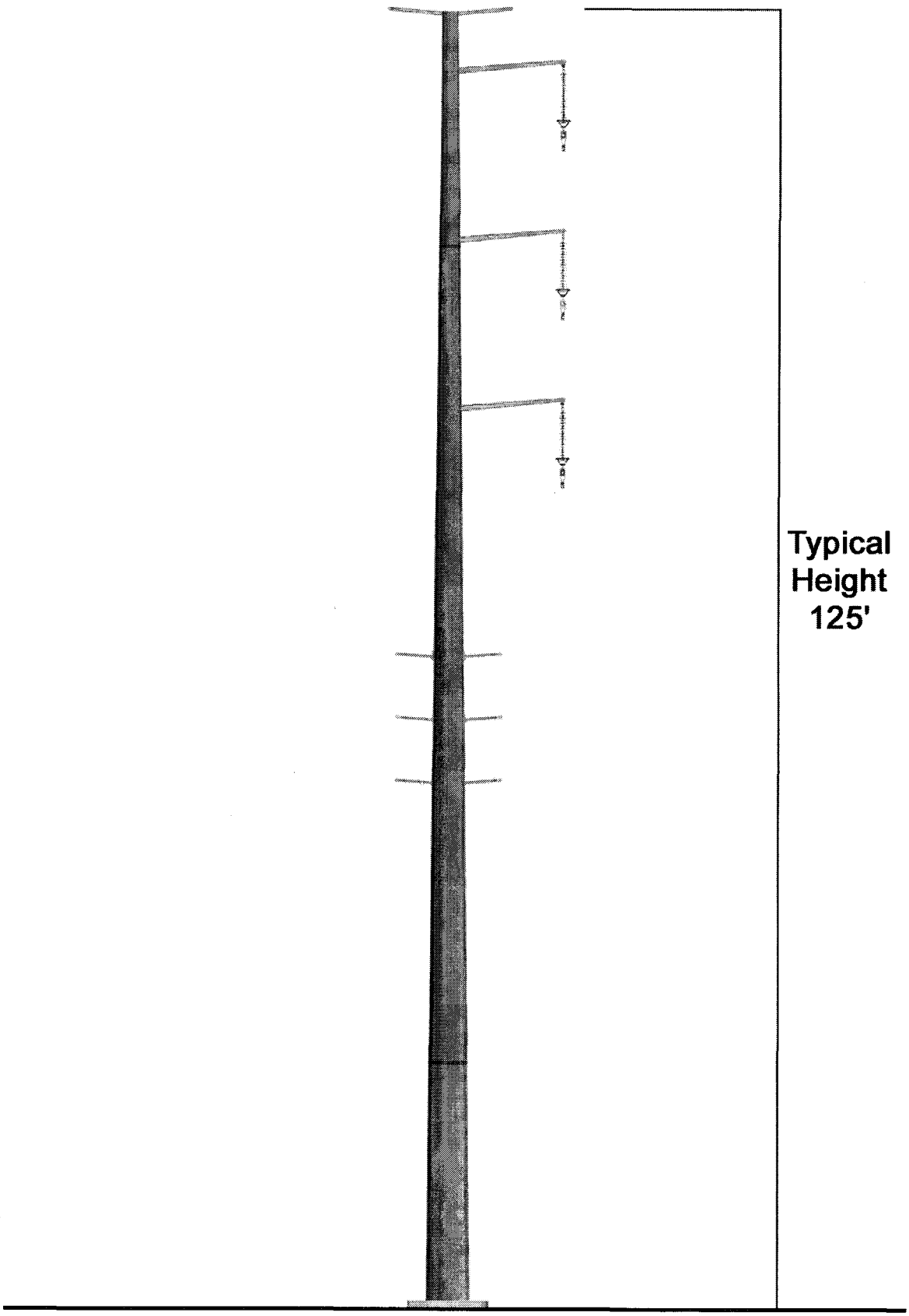


EXHIBIT G-1

Typical 230kV Single-Circuit Tangent Steel Pole with Double-Circuit 69kV Underbuild

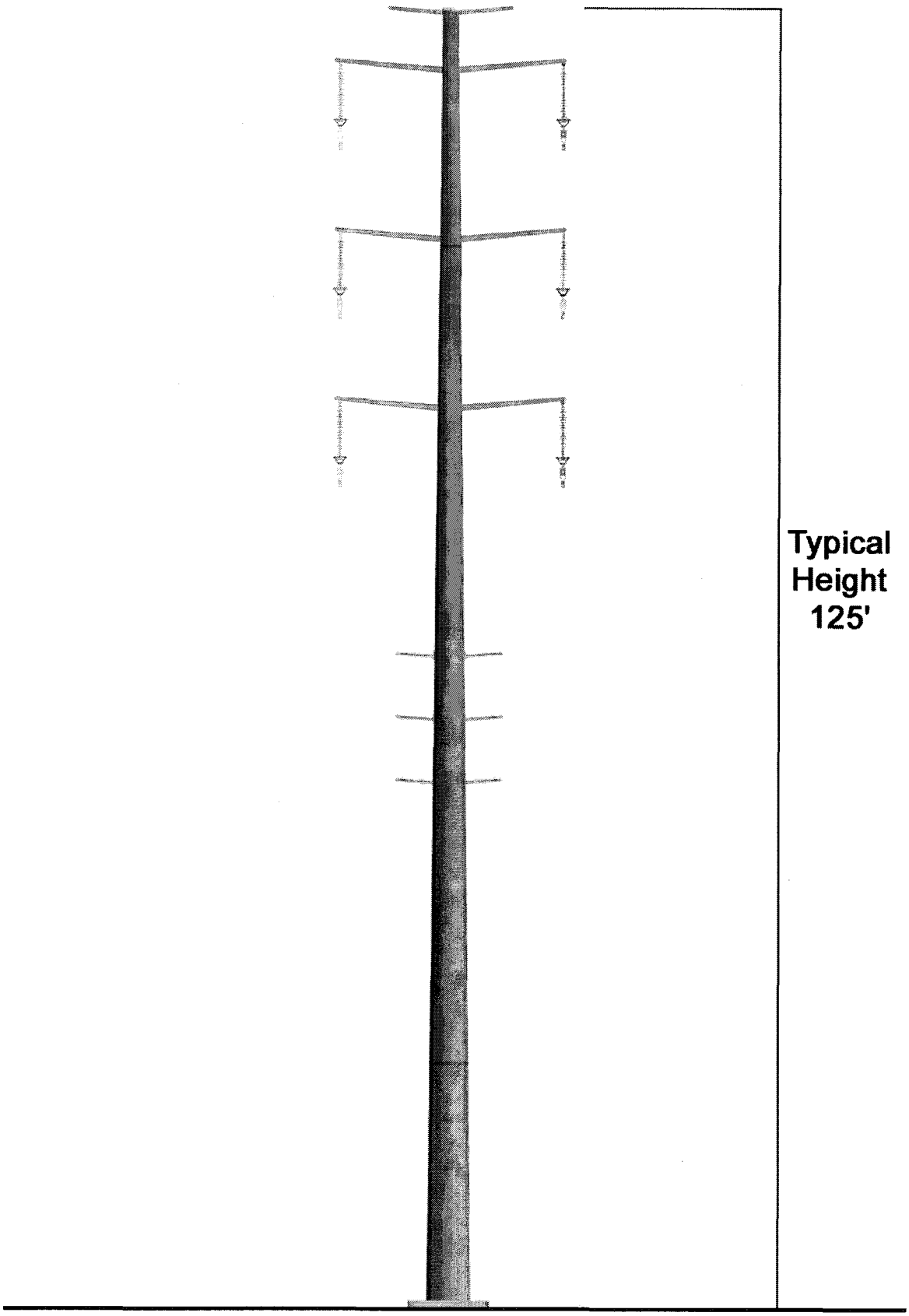


EXHIBIT G-2

Typical 230kV Double-Circuit Tangent Steel Pole with Double-Circuit 69kV Underbuild

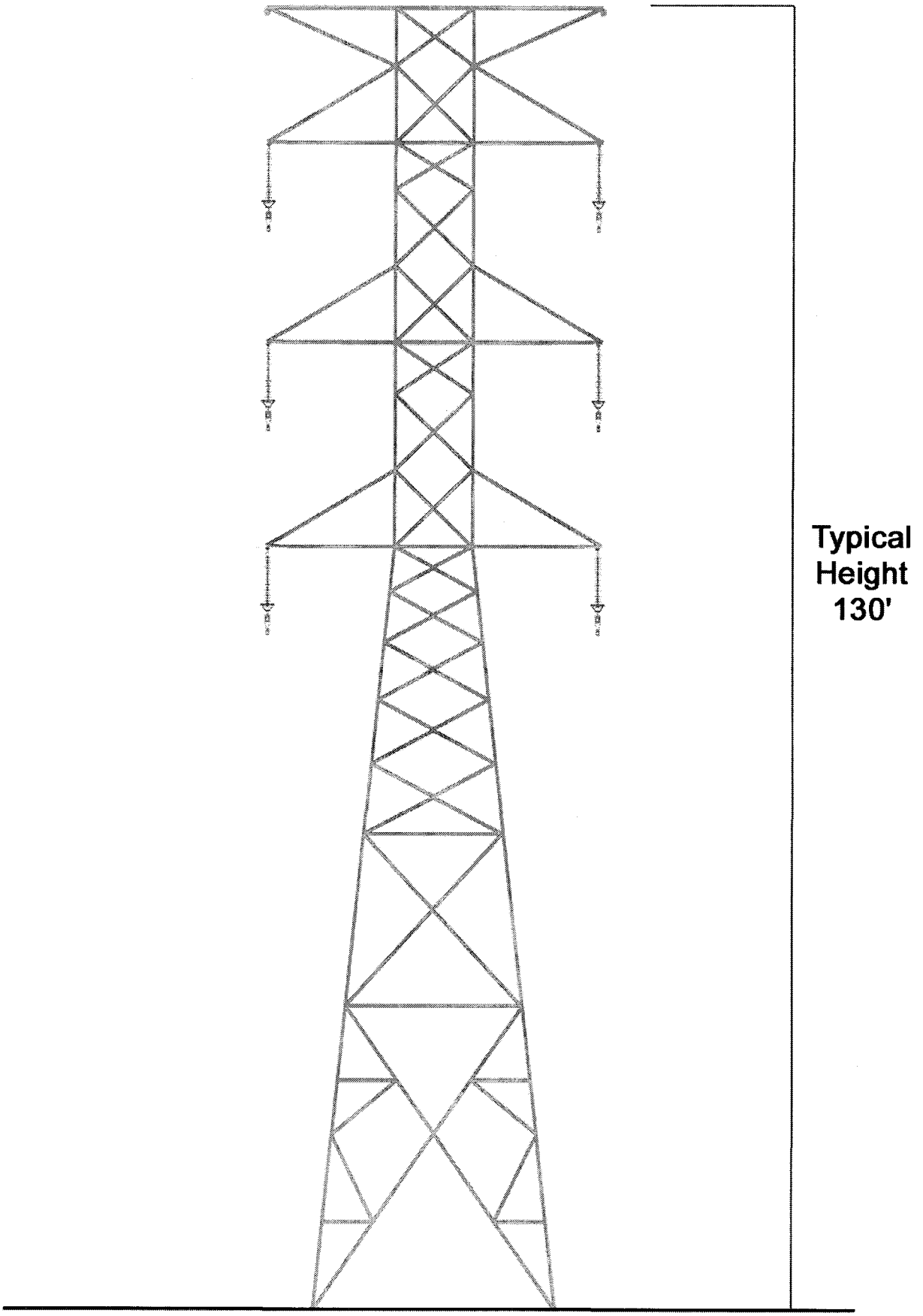


EXHIBIT G-3

Typical 230kV Double-Circuit Tangent Steel Lattice Structure

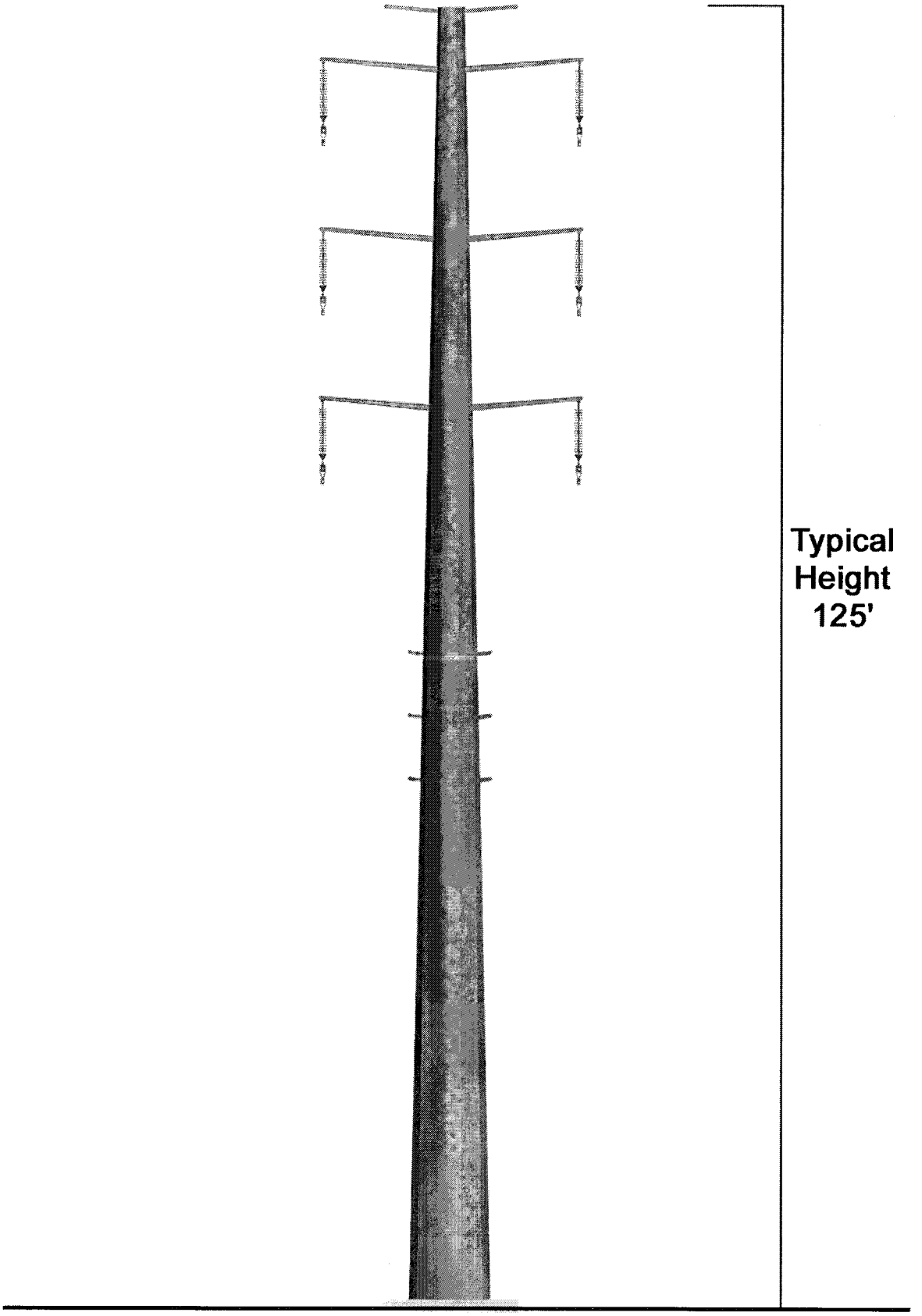
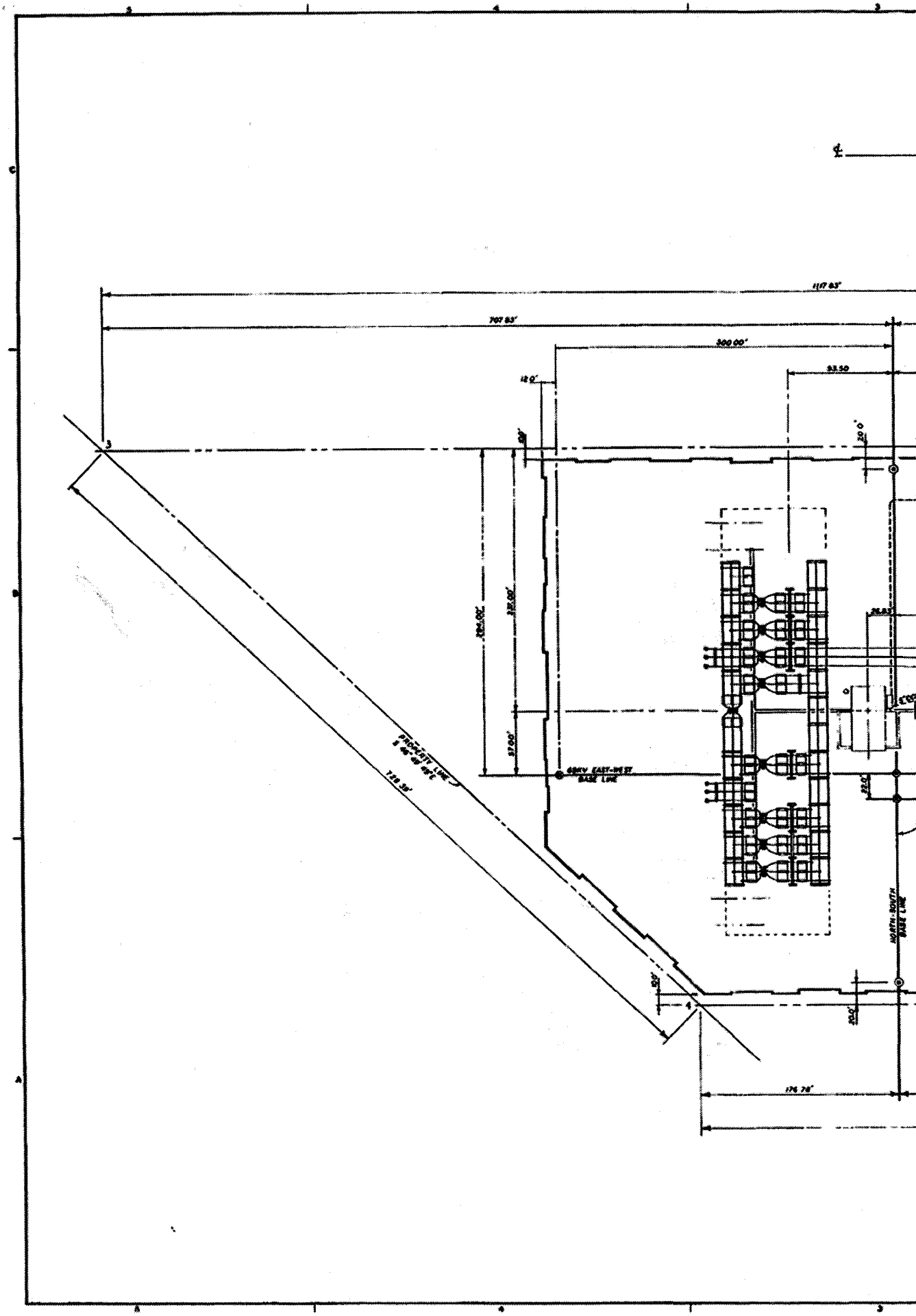


EXHIBIT G-4

Typical 230kV Double-Circuit Steel Pole Turning Structure with Double-Circuit 69kV Underbuild



1117.83'
707.83'
500.00'
93.50
12.0'
20.0'
284.00'
57.00'
PROPERTY LINE
728.38'
69KV EAST-WEST BASE LINE
NORTH-SOUTH BASE LINE
176.78'

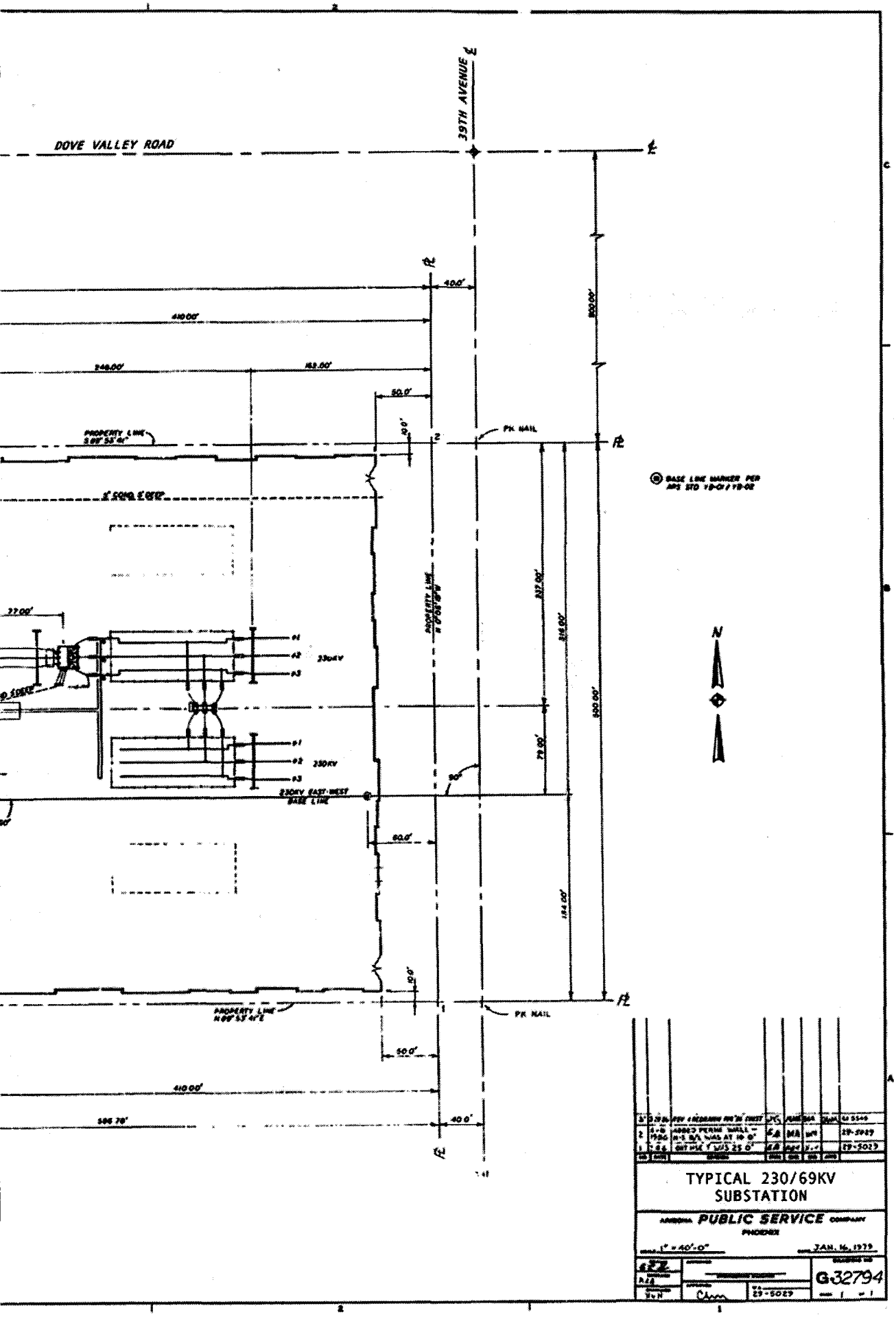

DOVE VALLEY ROAD
39TH AVENUE ℄
PROPERTY LINE
PK NAIL
BASE LINE MARKER PER APS STD 19-01 / 19-02
230KV
230KV EAST-WEST BASE LINE
PROPERTY LINE N 89°53'41"E
N
TYPICAL 230/69KV SUBSTATION
ARIZONA PUBLIC SERVICE COMPANY
PHOENIX
JAN. 16, 1979
G-32794
29-5029

EXHIBIT G-5

Existing Conditions - Single-Circuit 69kV Transmission Line

Simulation of Proposed Route - 230kV Double-Circuit Steel Pole with Double-Circuit 69kV Underbuild

Viewpoint from I-17 (looking northwest toward Arizona Westwood at I-17 and Dynamite subdivision)

SIMULATION DATA

Date: 5-31-2002
Time: 1:05 pm
Weather: Clear
Simulated Focal Length: 16.24 mm
Simulated Field of View : 95 degrees

NORTH VALLEY

230kV FACILITY SITING PROJECT

APS

EXHIBIT G-6

Existing Conditions - Single-Circuit 69kV Transmission Line

Simulation of Proposed Route - 230kV Double-Circuit Steel Pole with Double-Circuit 69kV Underbuilc

Viewpoint from inside Arizona Westwood at I-17 and Dynamite subdivision (looking north towards SR 74)

l (located on the west side of I-17)

SIMULATION DATA

Date: 05-09-2002
Time: 2:17 pm
Weather: Clear
Simulated Focal Length: 21.66 mm
Simulated Field of View : 79.43 degrees

NORTH VALLEY

230kV FACILITY SITING PROJECT

APS

EXHIBIT G-7

EXHIBIT H
EXISTING PLANS

EXHIBIT H
EXISTING PLANS

As stated in Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"*To the extent applicant is able to determine, state the existing plan of the state, local government, and private entities for other developments at or in the vicinity of the proposed site or route.*"

Existing and future land uses are mapped in Exhibits A-3 and A-4, respectively, and discussed in Exhibit B. As part of the land use study, general and specific plans were gathered for the Project area from the jurisdictions and private developers. Representatives from planning departments, agencies, and developers were included on advisory CWGs for the siting projects through which the Proposed Route was determined. The purpose of this representation was to ensure consistency with plans as well as to identify potential issues throughout the planning and route selection process.

Throughout the siting studies, the Project team also met with representatives from the planning departments from the cities of Phoenix, Peoria, Surprise, town of Cave Creek, Maricopa County, and ASLD. In July 2002, letters were sent to entities (listed in Table H-1, next page) to provide Project information, announce the Proposed Route and alternative routes, and request new or additional information on planned developments. Exhibit H-1 provides a copy of the July 2002 letter, written responses, and other correspondence from relevant jurisdictions.

TABLE H-1 LETTER RECIPIENTS	
Contact Name and Title	**Jurisdiction/Agency**
Cindy Lester, Chief, Arizona Section Regulatory Branch	U.S. Army Corps of Engineers
David Harlow	U.S. Fish and Wildlife Service
Bruce Ellis, Chief, Environmental Planning Division	Bureau of Reclamation, Phoenix Area Office
Melissa Chiechi, Public Affairs	Western Area Power Administration
John Kennedy	Arizona Game & Fish Department
Matthew Bilsbarrow, Compliance Specialist	Arizona State Historic Preservation Office
Sheila McCafferty, Rights-of-Way Manager	Arizona State Lands Department, Planning and Disposition Division
Gordon Taylor, Planner	Arizona State Land Department
Mary Lynn Tischer	Arizona Department of Transportation, Transportation Planning Division
Gary Ijams, Power Program Manager	Central Arizona Project
Matt Holm	Maricopa County Planning & Development Department
Michael Ellegood, Chief Engineer	Maricopa County Flood Control District
Tom Buick, Director	Maricopa County Department of Transportation
William Scalzo, Director	Maricopa County Parks and Recreation Department
Dennis Smith, Associate Director	Maricopa Association of Governments
Charles Fitzhugh, Planner II	City of Phoenix Planning Department
Debra Stark, Director	City of Peoria Planning Division, Community Development Department
Skip Brown, Associate Superintendent for Support Services	Paradise Valley School District
Sandra Kube, Planning Analyst	Deer Valley School District
Ed Gillam, P.E., Director	Peoria Unified School District No. 11, Planning and Construction
Harrison Merrill	Vanguard Properties, Dynamite Mountain Ranch
E.R. and Lila Schneider	Schneider Trust Property
Gary Torjeom	Lake Pleasant Heights
Roger Pryor	Continental Homes
Heidi Kimball	Sunbelt Holdings, Sonoran Foothills
Rick West	Carefree Partners, Canyon Crossroads
Steve Pritulsky	Communities Southwest, Tramonto
S. Wayne Peacock, Senior Vice President, Corporate Real Estate	USAA
Mark Hammonds	Lakeland Village
Peggy Grunewald, Engineer – Land	KB Homes

EXHIBIT H-1
CORRESPONDENCE

environmental planning group

July 12, 2002

Charles Fitzhugh, Planner II
City of Phoenix Planning Department
200 W. Washington, 6th Floor
Phoenix, Arizona 85003-1611

Dear Mr. Fitzhugh:

Arizona Public Service Company (APS) is proposing to construct a 230 kilovolt (kV) transmission line and two 230/69kV substations in north-central Maricopa County, as illustrated on the enclosed map. The purpose of constructing this line is to address current demand and reliability issues, and to plan for continued reliability as planned development occurs. The transmission line may be constructed in sections between 2005 and 2011.

The selection of the proposed route and substation locations is the result of two siting studies that were completed between 1997 and 2001. Environmental Planning Group, Inc., an environmental consulting firm, conducted the studies and currently is assisting APS in compiling information for an application for a Certificate of Environmental Compatibility (CEC) to be submitted to the Arizona Power Plant and Transmission Line Siting Committee and the Arizona Corporation Commission in compliance with Arizona Revised Statutes § 40-360.

The proposed transmission line is approximately 30 miles long and crosses land under the jurisdiction of the city of Phoenix, city of Peoria, and Maricopa County. The proposed route and alternative routes originate at the Westwing Substation in Section 12, Township 4 North, Range 1 West and terminate at the Pinnacle Peak Substation in Section 10, Township 4 North, Range 4 East (see enclosed map).

The proposed Avery Substation is located in Section 15, Township 5 North, Range 2 East, and the Misty Willow Substation is located in Section 8, Township 4 North, Range 3 East. Each of the substations will require approximately 10 acres. The determination of the final sites will be based on land acquisition, site-specific considerations, and CEC requirements.

We request your response as to whether you are aware of potential issues related to the proposed project or existing plans in the project area. Comments will be received until August 2nd for inclusion in the CEC. Thank you in advance for your reply. Please call if you have questions or require additional information on the project.

Sincerely,

Paul Trenter
Project Manager

Enclosure

4350 E. Camelback Rd. • Suite G-200 • Phoenix, Arizona 85018
602-956-4370 • 602-956-4374 fax • www.epgaz.com

United States Department of the Interior

BUREAU OF RECLAMATION
Phoenix Area Office
PO Box 81169
Phoenix, Arizona 85069-1169

received
8-8-02

IN REPLY REFER TO
PXAO-1500
ENV-1.10

AUG 7 2002

Mr. Paul Trenter
Project Manager
Environmental Planning Group
4350 East Camelback Road, Suite G-200
Phoenix, Arizona 85018

Subject: Your Correspondence Dated July 12, 2002

Dear Mr. Trenter:

This is in response to the above-referenced correspondence regarding the proposed Arizona Public Service (APS) North Valley 230kV Facility Siting Project. The map enclosed with your correspondence indicates features associated with the proposed project, and alternatives would be located either on or adjacent to, or would cross, Reclamation property. Depending upon the final siting of these features, Reclamation may have significant issues that would need to be resolved.

It has been Reclamation's policy to disallow lateral encroachments along its right-of-way. Any need for encroachment upon Central Arizona Project (CAP) land needs to be requested through the managing entity's land department. Requests can be sent to the attention of Ms. Sharon Hood, Land Administrator, Central Arizona Project, P.O. Box 43020, Phoenix, Arizona 85080-3020.

Notwithstanding the above, should Reclamation approve use of its land for the proposed project, we would be responsible for ensuring compliance with the National Environmental Policy Act and other applicable environmental regulations, prior to Reclamation's approval of any permanent easement.

Thank you for providing us with the opportunity to provide our input. Should you have any questions regarding this matter, please contact Mr. Peter Castaneda, Chief of the Water and Lands Division, at the above address. His telephone number is 602-216-3928.

Sincerely,

Bruce D. Ellis

Bruce D. Ellis
Chief, Environmental Resource
Management Division

Enclosure

cc: Ms. Sharon Hood, Land Administrator, Central Arizona Project, P.O. Box 43020, Phoenix, Arizona 85080-3020 (w/ cpy of incoming)

Jane Dee Hull
Governor

Michael E. Anable
State Land
Commissioner

Arizona
State Land Department

1616 West Adams Street Phoenix, AZ 85007 www.land.state.az.us

August 6, 2002

Mr. Paul Trenter, Project Manager
epg, inc.
4350 E. Camelback Road #G-200
Phoenix, Az. 85018

re: Proposed 230 KV Transmission line

Dear Mr. Trenter

Thank you for your recent letter regarding the above referenced issue since its location will impact the block of Trust land that it will bisect.

As you know the Department has a long history associated with the alignments proposed for the area west of the I-17 and between the CAP canal and the Carefree Highway. We have supported the Dove Valley Road alignment based upon the recommendations of the siting committee and Cities of Phoenix and Peoria. Your enclosure of July 12 showed other possible alignments for the proposed 230 KV facility and solicited our comments regarding these options.

We still maintain our previous position supporting the Dove Valley Road alignment. But we also believe that there are other options you may want to consider as part of the review process. The one corridor that is not shown is the Lone Mountain Road alignment. Lone Mountain Road is currently shown as a major arterial street on the Phoenix General Plan and will serve as a primary connection between Peoria and Phoenix. ADOT is currently studying the Loop 303 alignment connecting the west valley to the north Phoenix area and Lone Mountain Road is one of the corridors under consideration for the Loop 303 . The 230 KV corridor could follow this alignment whether it remains a major arterial or it is selected as the corridor for the Loop 303 by ADOT. Visually this alternative would allow the Department to cohesively plan the block of Trust land north of the Lone Mountain/303 corridor as a single planning unit. While we feel there are advantages to the Lone Mountain Road alignment we also accept the findings of the siting committee which included State Land representation and therefore maintain our support for Dove Valley Road.

Thank you for allowing us to comment on the issue. Call me 602-542-2647 if you have any additional concerns.

Sincerely

Gordon Taylor, Planning Manager

c:Greg Novac

F:\WPDOCS\G.T. COP 230 APS ltr 080502.wpd

City of Phoenix

August 2, 2002

Mr. Larry Krueger
APS
Mail Station 4030
P.O. Box 53933
Phoenix, Arizona 85072-3933

Dear Mr. Krueger:

RE: LOCATION FOR PROPOSED 230 KV ELECTRICAL TRANSMISSION LINES

Thank you for recently involving Mark Steele and Charles Fitzhugh of my North Team staff to review the APS North Valley recommendation on the route for the proposed 230 Kv electrical transmission lines. We are in agreement with the location of these electrical lines (as shown on the map mailed with your consultant's 7/12/02 letter) on the west side of Interstate 17 throughout the North Black Canyon Corridor. We are of the understanding that the proposed 230kv location will also include the underhanging of 69kv lines which currently are located along the east side of I-17, between Carefree Highway and the Central Arizona Project Canal. Additionally, the proposed route takes into consideration City staff's initial concerns regarding the visual quality of development in the North Black Canyon Corridor, as well as future land usage as mandated by the Phoenix General Plan.

The North Team Planning Staff looks forward to continuing their work with you to conclude the North Valley Facilities Siting Study in the near future. Staff has been instructed to attend the CEC (Certificate of Environmental Compatibility) hearings through the Arizona Corporation Commission this fall and provide support for this study and the (proposed) location of the electrical transmission line route. Please have your staff provide them with information on where and when these meetings are to be held. They also are anticipating further meetings with your staff and consultants (EPG) to discuss the possible undergrounding of 69Kv lines throughout the North Black Canyon Corridor once funding or financing mechanisms have been fully explored and approved at the City level.

Please feel free to contact Charles Fitzhugh at (602)-261-8802 should you have any questions or concerns regarding the City's recommendation regarding proposed electrical transmission line routes in North Phoenix.

Sincerely,

David E. Richert
Planning Director

DER:CF\c:\data\2 dr\2002\dfr0806a.doc

Arizona Department of Transportation

Transportation Planning Division

206 South Seventeenth Avenue Phoenix, Arizona 85007

Jane Dee Hull
Governor

Victor M. Mendez
Director

Mary Lynn Tischer
Division Director

August 1, 2002

To: Paul Trenter
Project Manager
Environmental Planning Group
4350 E. Camelback Rd. Suite G-200
Phoenix, Arizona 85018

Re: Arizona Public Service (APS) proposed 230 Kilovolt Line

Dear Mr. Trenter:

This letter is in response to the request for information on the proposed 230 kV line that APS would like to construct. I have forwarded your request to the Arizona Department of Transportation's State Engineer and Phoenix District Maintenance Engineers. They will be better able to reply to your request for information on the proposed transmission line.

If there are other comments or concerns please do not hesitate to contact me at (602) 7121-7431.

Sincerely,

Mary Lynn Tischer

MLT/ags

Cc: Dick Wright – State Engineer
Dan Lance – Assistant State Engineer
John Hauskins – Maintenance Engineer
Al Field - Utilities

Attachment

Arizona Governor's Award for Quality
2001 Award Recipient

Continental

July 31, 2002

VIA FACSIMILE & MAIL
FAX # 602-956-4374

Mr. Paul Trenter
Environmental Planning Group
4350 East Camelback Road
Suite G-200
Phoenix, Arizona 85018

Re: North Valley 230 kV Facility Siting

Dear Mr. Trenter:

Continental Homes, Inc. (CHI) has reviewed your letter and associated exhibit dated July 12, 2002, concerning the proposed routing for the North Valley 230kV transmission line. CHI is in favor of the proposed alignment along Happy Valley Road from the Pinnacle Peak substation west to Interstate 17. We would also favor the routing west of Interstate 17 north of Happy Valley Road as shown on your siting exhibit.

CHI is currently developing a residential development north and south of the CAP on the Dynamite Boulevard alignment and strongly objects to Alternative Route #1 and #3 along the CAP canal from the proposed Misty Willow substation to Interstate 17. These lines will be highly visible from the residential component of this unique desert setting known as the North Black Canyon Corridor. Additionally, the City of Phoenix is working closely with APS and the stake holders in the North Black Canyon Corridor area to underground the proposed 69kV transmission lines to serve the North Black Canyon Corridor. Alternative route #1 and #3 would defeat this objective.

Thank you for the opportunity to evaluate the proposed alternatives. Please feel free to call should you have any questions.

Sincerely,

CONTINENTAL HOMES, INC.

Roger D. Pryor, P.E.
Director of Entitlements
Land Acquisition

RP/ah

Welcome Home

CONTINENTAL HOMES, INC.
7001 NORTH SCOTTSDALE ROAD
SUITE 2050
SCOTTSDALE, ARIZONA 85253
480.483.0006
a D•R•HORTON Company

City of Peoria

8401 West Monroe Street, Peoria, Arizona 85345

July 19, 2002

Mike DeWitt, BSCE
Project Manager
Transmission & Facility Siting
P.O. Box 53933
Phoenix, AZ 85072-3933

Dear Mr. DeWitt:

I want to thank you again for inviting me to the meeting on the Northwest Valley Siting Project. It helps my department to have your information. When we meet with the public and development community, we are better informed. In any future projects, I hope you continue to work closely with us.

I appreciate your efforts! And please let Larry Krueger know that we appreciate his efforts as well!

Sincerely,

Debra Stark
Community Development Director

communities southwest
Neighborhoods With Lasting Value

July 17, 2002

Paul Trenter
Environmental Planning Group
4350 E. Camelback Road, Suite G-200
Phoenix, Arizona 85018

Re: Future Transmission Line and Substations

Dear Mr. Trenter:

In response to your letter dated July 12, 2002, and attached proposed route map exhibit for the above referenced project, I offer the following comments:

The proposed route of the 230kV, which appears to run along the west side of Interstate 17, does not appear to impact our Tramonto project, located at the northeast corner of Interstate 17 and Carefree Highway, nor do the proposed alternate routes. The existing 69kV transmission line, however, clips the corner of our commercial property. We are currently dealing with Tom Brennan, Senior Design Project Leader with APS, on this issue. Feel free to contact Mr. Brennan at 602-493-4466 or myself at 602-328-5228 should you have any questions or require any additional information.

Sincerely,

TRAMONTO DEVELOPMENT, LLC
an Arizona limited liability company

George Cannon

By: George Cannon, Vice President, Land Development
of CSW Management Co (FN), the authorized agent
of Tramonto Development, LLC

GEC/nb

20 North 16th Street, Suite 310
oenix, Arizona 85020
2.265.1952
2.265.7740 Fax

communities-southwest.com

181 Old Springs Road
Anaheim, California 92808
714.279.6555
Fax 714.279.6556

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
ARIZONA-NEVADA AREA OFFICE
3636 NORTH CENTRAL AVENUE, SUITE 760
PHOENIX, ARIZONA 85012-1936

July 16, 2002

REPLY TO

Office of the Chief
Regulatory Branch

Mr. Paul Trenter
Project Manager
Environmental Planning Group
4350 E. Camelback Rd., Ste. G-200
Phoenix, Arizona 85018

received
7.17.02

File Number: 2002-01220-EHB

Dear Mr. Trenter:

It has come to our attention that you plan to construct a 230 kilovolt transmission line and two 230/69kV substations in north-central Maricopa County in the various waters at (Section 15, T5N, R2E and Section 8, T4N, R3E), Maricopa County, Arizona.

This activity may require a Department of the Army permit issued under Section 404 of the Clean Water Act. A Section 404 permit is required for the discharge of dredged or fill material into the "waters of the United States," including adjacent wetlands. Examples of activities requiring a permit are placing bank protection, temporary or permanent stock-piling of excavated material, grading roads, grading (including vegetative clearing operations) that involves the filling of low areas or leveling the land, constructing weirs or diversion dikes, constructing approach fills, and discharging dredged or fill material as part of any other activity.

Enclosed you will find a permit application form and a pamphlet that describes our regulatory program. If you have questions, please contact Elizabeth H. Brooks at (602) 640-5385 x 223. Please refer to file number 2002-01220-EHB in your reply.

Sincerely,

Sallie McGuire
Cindy Lester
for Chief, Arizona Section
Regulatory Branch

Enclosure(s)

City of Phoenix

OFFICE OF THE CITY COUNCIL
Councilwoman Peggy Neely
District 2

May 3, 2002

Michael DeWitt
Transmission & Facility Siting project Manager
APS
Mail Station 4030
PO Box 53933
Phoenix Arizona 85072

Dear Michael,

Thank you for coming in to meet with me regarding planned APS sites and the possibility of undergrounding lines in District 2. I enjoyed our discussion and will keep your ideas and concerns in mind. As you may know, availability of development services such as power and water is an important issue to the constituents in District 2. I believe that by working together we can help make Phoenix a better place to live, work and play.

Again, I enjoyed meeting you and look forward to working with you in the future. If I can be of any assistance to you, please do not hesitate to call me.

Sincerely,

Peggy Neely
Councilwoman
District 2

Tel. (602) 262-7445 • 200 West Washington Street, Phoenix, Arizona 85003 • FAX 602 495 6527

Recycled Paper

City of Phoenix
PLANNING DEPARTMENT

May 3, 2002

Mr. Mike DeWitt, Project Manager
Transmission and Facilities Siting Department
APS
P.O. Box 53933, Mail Station 4030
Phoenix, AZ 85072-3933

Dear Mr. DeWitt:

Please find enclosed a map of the electrical transmission line alignments (both 230 and 69 kV lines) that affect the North Black Canyon Corridor, and, as previously discussed, the City of Phoenix recommendation regarding the undergrounding of these 69KV lines. The underground (69KV) lines as represented on the attached map are in excess of 19 total miles. This map, to the best of our knowledge, shows the APS recommended locations for existing and proposed substations and the agreed upon route(s) for the soon to be constructed 230 kV line (west of Interstate 17). Please let us know if there are any inconsistencies shown on this map based on our previous discussions.

The City of Phoenix is aware of the immediate need for several of these lines and will be involved in scheduling a property owner(s) meeting in the next few weeks to discuss the feasibility of utilizing a special improvement district for the partial funding of these underground facilities. It is an important issue to the City of Phoenix to underground these proposed lines in this particular part of North Phoenix because of the emphasis placed and high visibility of the surrounding mountain views and also the proximity of proposed Sonoran Preserve located on both sides of Interstate 17, south of Carefree Highway.

Thank you for the opportunity to be involved in the overall electrical transmission line siting process and in considering the City of Phoenix recommendation(s) on how these electrical transmission lines are located and ultimately constructed. We will keep you informed of our progress with the public (property owner) meetings and any additional changes we foresee regarding the information shown on the attached transmission line location map.

Please feel free to contact Mr. Charles Fitzhugh of this office at 602-261-8802, should you have any further questions or concerns regarding this issue.

Sincerely,

David E. Richert
Planning Director

DER:CF
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200 West Washington Street, Phoenix, Arizona 85003 602-262-7131 FAX: 602-495-3793

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Jane Dee Hull
Governor

Michael E. Anable
State Land
Commissioner

Arizona
State Land Department

1616 West Adams Street Phoenix, AZ 85007 www.land.state.az.us

October 2, 2001

Mr. Larry Krueger
Arizona Public Service Company
Mail Station 4030
P.O. Box 53933
Phoenix, Az 85072-3933

Re: Location for Proposed 230 KV Transmission Lines

The Arizona State Land Department, as a major landowner in the North Phoenix area concurs with the alignment of the proposed 230 KV transmission line alignment as discussed in the April 19, 2001 letter you received from the City of Phoenix Planning Department. We appreciate being involved the alignment selection of these lines as they cross State Trust Lands.

If the Department can be of further assistance to you in this matter please contact Gordon Taylor in our planning section at 602-542-2647 or myself at 602-542-2648.

Sincerely,

Sheila McCafferty
Rights of Way Manager

USAA

June 7, 2001

Mr. Paul Trenter
Environmental Planning Group
4350 E. Camelback Rd. Suite G-200
Phoenix, AZ 85018

Dear Paul:

I'm writing to express concern over the potential location of a new set of 230 kV transmission lines proposed to run parallel to I-17 between the Pioneer and Adobe substations in North Phoenix.

As you may know, our new Phoenix Campus is planned to house all of our expected growth in the coming years. In our master plan, we anticipate building six million square feet of office space that could in the long term accommodate up to 30,000 employees. Governor Hull has called this the single largest employment center development in Arizona's history. We want to continue to work closely with the community in order to bring this important development to fruition.

We have met on several occasions with your Phoenix based North Central Substation Site Study Team led by Larry Krueger Brad Larson and Mike Dewitt. We have also had conversations with City of Phoenix staff members and the State Land Department to learn all that we can about the options that are available to APS for locating these facilities. To the extent possible, we have provided our input and encouraged the thorough evaluation of alternative alignments that would keep the overhead lines on the west side of I-17 (where the existing 69 kV overhead power lines are located, or as recommended by the City of Phoenix, which is also west of I-17). It is evident that the APS Engineers are doing everything they can to incorporate the input of everyone that might be impacted by the final decision.

One of the options currently being considered is for the lines to be placed on the east side of I-17. If these lines were to be placed on the east of the highway then they would adversely impact our immediate and future development plans for our newly acquired campus site.

The APS project managers say they will rely on the recommendations of their consultant (the Environmental Planning Group) for developing the final recommendations. These are scheduled to be presented to the State Corporation Commission in May. We understand that EPG is to include the input of the public with the submittal. We would appreciate your consideration of our input.

We ask that you will consider all the merits of locating these lines located on the west side of I-17 near the location of the existing lines or in the western alignment being proposed by the City of Phoenix Planning Staff.

If I can shed more light on this matter or if you would like to discuss it with me, please feel free to contact me at (210) 498-5384. I am looking forward to meeting you soon.

Sincerely,

S. Wayne Peacock
Senior Vice President
Corporate Real Estate

City of Phoenix
PLANNING DEPARTMENT

April 19, 2001

Mr. Larry Krueger
APS
Mail Station 4030
P.O. Box 53933
Phoenix, AZ 85072-3933

Dear Mr. Krueger:

RE: LOCATION FOR PROPOSED 230 KV ELECTRICAL TRANSMISSION LINES

Thank you for scheduling a meeting earlier this week with the Arizona State Land Department and your staff for the purpose of determining a final recommendation on the route for the proposed 230 Kv lines to be located west of Interstate 17 (between the Central Arizona Project Canal and Carefree Highway). The Arizona State Land Department, as a major landowner in the area, has decided upon a primary north/south alignment for the electrical transmission lines at 39th Avenue between Dove Valley and Lone Mountain Road(s). We are in agreement with the location of these electrical lines as proposed by the Arizona State Land Department, since their proposal takes into consideration City staff's initial concerns regarding the visual quality of development in the North Black Canyon Corridor, as well as future land usage as mandated by the Phoenix General Plan.

The North Team Planning Staff looks forward to continuing their work with you to conclude the North Central Facilities Siting Study in the near future. They are anticipating further meetings with your staff and consultants (EPG) to discuss the possible undergrounding of 69Kv lines throughout the North Black Canyon Corridor once your final site determinations and cost estimates have been made.

Please feel free to contact Charles Fitzhugh at (602)-261-8802 should you have any questions or concerns regarding the City's recommendation regarding proposed electrical transmission line routes in North Phoenix.

Sincerely,

David E. Richert
Planning Director

DER:CF
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200 West Washington Street, Phoenix, Arizona 85003 602-262-7131 FAX: 602-495-3793

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TOWN OF CAREFREE
100 EASY STREET
P.O. BOX 740
CAREFREE, ARIZONA 85377
(480) 488-3686 • FAX (480) 488-3845

April 5, 2001

Mr. Michael L. DeWitt, Project Manager
Transmission & Facility Siting
Arizona Public Service
Mail Station: 4030
P. O. Box 53933
Phoenix, AZ 85072-3933

RE: North Central Facility Siting Project Final Routes

Dear Mr. DeWitt:

On behalf of the Town of Carefree, I commend you and APS for your thoroughness and public involvement in selecting the overhead routes for 69KV and 230 KV transmission lines. We are especially appreciative of the decision not to locate the transmission lines along Carefree Highway. As we previously indicated, the lines would have had a very serious negative impact to the Carefree Highway scenic corridor.

Thank you again for including the Town of Carefree in your public participation process. If we can be of assistance, please contact me or Jonathan Pearson at 480-488-3686.

Sincerely,

Edward C. Morgan
Mayor

JHP/EM:al

Cc: Siting Committee for Power and Transmission, AZ Corporation Commission
Carefree Town Council

EXHIBIT I
ANTICIPATED NOISE AND INTERFERENCE WITH COMMUNICATION SIGNALS

EXHIBIT I
ANTICIPATED NOISE AND INTERFERENCE WITH COMMUNICATION SIGNALS

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"Describe the anticipated noise emission levels and any interference with communication signals which will emanate from the proposed facilities."

Certain electromagnetic effects are inherently associated with overhead transmission of electrical power at extra high voltage (EHV). These effects are produced by the electric and magnetic fields of the transmission line with one of the primary effects being corona discharge. Corona effects manifest as audible noise, radio interference, and television interference. These particular effects will be minimized by line location, line design, and construction practices.

CORONA

Corona is a luminous discharge due to ionization of the air surrounding a conductor and is caused by a voltage gradient, which exceeds the breakdown strength of air. Corona is a function of the voltage gradient at the conductor surface. This voltage gradient is controlled by engineering design and is a function of voltage, phase spacing, height of conductors above ground, phase geometry, and meteorological conditions. In particular, irregularities on the surface of the conductor such as nicks, scratches, contamination, insects, and water droplets, increase the amount of corona discharge. Consequently, during periods of rain and foul weather, corona discharges increase. For the various transmission design configurations considered for this Project, the average calculated voltage gradient at the conductor surface was 11.6kVrms/cm. The maximum calculated voltage gradient at the conductor surface is 12.9kVrms/cm. For comparison purposes, the breakdown strength of air is 21.1kVrms/cm at 25 degrees Celsius (°C) and 76 millimeter (mm) barometric pressure.

Corona represents power loss on the transmission line and creates transmission line noise. Successful operation of 230kV lines with similar gradients indicates that this transmission line will not create adverse corona effects.

TRANSMISSION LINE AUDIBLE NOISE

Audible noise is created by corona discharge along the transmission line. As a result, the amount of audible noise is directly related to the amount of corona, which is in turn affected by meteorological conditions (most notably rain). Transmission line audible noise is categorized

into broadband high frequency sounds, which can be described as hissing or sputtering, and low frequency tones, which are best described as humming sounds.

The highest calculated audible noise levels generated by this transmission line design during foul weather (rain) may reach 39.7 dB measured on an "A" weighted scale at the edge of the right-of-way. This noise level will occur only during very heavy rain conditions, which will serve to mask the noise. During light rain, or wet conductor conditions, the maximum expected audible noise is in the range of 24.8 dB(A) at the edge of the right-of-way. During fair weather the audible noise generated by this line as heard at the edge of the right-of-way is significantly reduced with a maximum value of 12.4 dB(A). For the locations where the transmission line parallels existing EHV lines, no audible increase in noise at the edge of the right-of-way is caused by addition of the new transmission line.

Study work of transmission line noise has categorized noise levels by the probability of complaints being generated. The noise generated by this transmission line is well below this value and no noise problems due to this line are expected.

SUBSTATION AUDIBLE NOISE

The audible noise from a substation is generally intermittent and is the result of operation of equipment in the substation such as circuit breakers and disconnect switches. The transformers in the substation do emit a sound that can be characterized as a hum within the frequency range of the human ear. Sound levels are specified at the time of purchase of the equipment, and design of the substation will be such that the hum generated by the transformers will be in compliance with the sound level required by industry standards, governing regulations, or local ordinances.

RADIO INTERFERENCE

Radio interference is the reception of spurious energy not generated by the transmitting station. This energy affects the amplitude modulated (AM) radio band, but not the frequency modulated (FM) radio band. Transmission line radio interference is caused by corona and by gap discharges. Gap discharges are electrical discharges across a small gap with the most common cause being loose hardware. Gap discharges comprise a large percentage of all interference problems and are easily remedied. Experience shows that gap discharges are not a problem with steel structures, but are more prevalent with wood structures due to the expansion and contraction of the wood causing hardware to loosen.

Corona caused radio interference is dependent on various factors including distance from the line to the receiver, radio signal strength, ambient radio noise level, receiving antenna orientation, and weather conditions. A common practice of determining the expected level of radio interference is to calculate the transmission line radio interference at a frequency of 1 MHz.

Comparison of the calculated radio noise levels for the transmission line design shows fair weather radio noise levels generated by this transmission line in the range of 20 to 24 dB (above 1 μV/meter) at a distance of 100 feet from the outside phase. This compares favorably with the maximum suggested noise level of 40 dB, above 1 μV/meter (IEEE 1980). During inclement weather, transmission line noise levels increase to levels in the range of 45 dB, above 1 μV/meter 100 meters from the outside phase. Even though radio reception quality is reduced during periods of rainy weather, the impact is expected to be minimal due to the low frequency of inclement weather. In addition to these comparisons of calculated and recommended interference values, transmission line experience for lines of similar design traversing similar terrain has shown radio interference to be insignificant. Should radio interference caused by the transmission line become unacceptable in a given situation, mitigating techniques can be applied on an as needed basis between the utility and the complainant.

TELEVISION INTERFERENCE

Traditional television broadcasts occur in three ranges:

54 - 88 MHz (Channels 2 - 6)
174 - 216 MHz (Channels 7 - 13)
470 - 890 MHz (Channels 14 - 83)

Transmission line interference reduces with increasing frequency above 100 MHz. Consequently, television interference only affects the lower VHF band (Channels 2 through 6) and no interference will be experienced in the upper VHF (Channels 7 - 13) and UHF bands (Channels 14 - 83) even during foul weather. Television interference noise levels can potentially affect AM signals; therefore the picture quality, which is AM, can be affected, but not the sound quality as these signals are FM.

Comparison of expected television interference levels at the edge of the right-of-way show levels consistent with values calculated for other 230kV lines, which traverse similar terrain (APS 1981). Calculated foul weather television interference at the edge of the right-of-way generated by a typical span of this line is calculated at 1.1 dB above 1 μV/m. Consequently, no transmission line generated television interference is expected along the line, even during periods of inclement weather.

Where transmission line generated television interference has been found to be a problem, it is generally the result of induced voltage on fences, conductors, and hardware, which are adjacent to the right-of-way. In these situations, the interference can be easily corrected by grounding the objects, or by realigning, relocating, or providing higher gain television antennas. APS is prepared to assist affected parties in resolving television interference problems resulting from the operation of the proposed facilities. However, with the increasing popularity of newer

technologies such as cable, satellite, and digital television, transmission line television interference problems warranting any sort of corrective action are even more unlikely.

ELECTRIC AND MAGNETIC FIELD EFFECTS

Electric and magnetic field (EMF) effects are primarily electric and magnetic induction effects whereby voltages and currents are induced in nearby conductive objects by the voltage and current on the line.

Electrostatic induction is the capacitive coupling of a voltage onto insulated objects near the transmission line. The induced voltage is a function of the electric field associated with the line, which is a function of the line voltage. Other factors, which affect the level of induced voltage include insulation, object orientation and dimensions, and line height. When a person reaches to touch a conducting object which has been charged by electrostatic induction, a spark discharge will occur similar to that experienced by a person reaching for a doorknob after walking on a nylon carpet with the difference that sparking will continue to occur as long as the person's hand remains close enough to the object for the sparks to occur. Based on computer modeling the electric fields associated with the proposed transmission lines will be consistent with the electric field values of other similarly configured 230kV transmission lines in the state. Based on this, it is anticipated that any electrostatic induction problems that occur can be easily corrected by grounding the conductive objects.

The magnetic fields associated with transmission lines can also induce voltages and currents in conductive objects (e.g. fences, communication lines, railroads, pipelines, etc.), which are close to and run parallel to the transmission line. The magnetic field level is a function of the current level in the transmission line, which in turn is a function of the line loading. The transmission line will be designed to limit the value of short-circuit current from a conductive object to 5 mA or below, which is the maximum design limit permitted by the National Electrical Safety Code.

In addition to the EMF induction issues described above, public interest regarding potential health effects of human exposure to 60 hertz EMF has led to extensive study for more than 20 years. One recent example of such research was a 5-year study program completed in 1999, which was jointly coordinated by the National Institute of Environmental Health Sciences (NIEHS) and the Department of Energy. In its May 1999 report to Congress, the NIEHS concluded that there was insufficient evidence of any health risk associated with EMF that would warrant new regulatory action (NIEHS 1999). An additional review of this 5-year research program conducted by the National Research Council of the National Academy of Sciences in 1999 concluded "the results of the EMF Rapid program do not support the contention that the use of electricity poses a major unrecognized public-health danger." (National Academy of Sciences 1999).

The actual EMF associated with these power lines will depend on the construction type, the amount of current in the lines, height of the conductors, and other nearby sources of fields. Based on computer modeling of various construction options and operating conditions, the EMF associated with these lines is comparable to other already existing lines of this voltage in the state. Further, where there are multiple transmission lines in the same corridor, phase management of the subject line, where feasible, will minimize the resulting magnetic fields.

There is current carrying equipment operating at high voltages within a substation. EMFs are generated during the operation of a substation. The substation design provides for adequate separation of this equipment from the fence line of the property to control the fields generated by the substation equipment to levels nearing background levels. The strongest EMFs around the substation will come from the EHV lines entering and leaving the substation.

In conclusion, potential EMF effects from the Project are insignificant. Any voltage or current induction effects can be mitigated appropriately through coordination and planning between the Applicants and those experiencing the problem. The fields expected from these lines will be similar to other transmission lines of this voltage, and there are currently no known adverse health effects associated with EMF exposures at levels typically found near such transmission lines.

REFERENCES

Arizona Public Service Company. 1981. APS/SDG&E Interconnection Project-Application for Certificate of Environmental Compatibility, April 27, 1981.

IEEE. 1980. "Review of Technical Considerations on Limits to Interference from Power Lines and Stations", IEEE Radio Noise and Corona Subcommittee Report, RI Limits Task Force, Working Group #3, IEEE Transactions on Power Apparatus and Systems, Vol. PAS-99, No. 1, Jan./Feb. 1980, pages 365-388.

National Institute of Environmental Health Sciences, National Institutes of Health. 1999. NIEHS Report on Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields. NIH Publication No. 99-4493, May 1999.

National Research Council, National Academy of Sciences. 1999. "Research on Power Frequency Fields Completed Under the Energy Policy Act of 1992." ISBN: 0-309-06543-7, 1999.

EXHIBIT J
SPECIAL FACTORS

EXHIBIT J
SPECIAL FACTORS

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

"Describe any special factors not previously covered herein, which Applicant believes to be relevant to an informed decision on its application."

INTRODUCTION

This exhibit includes information on the public involvement program that has been conducted for the North Valley Project. This public involvement program consisted of three separate segments. The most recent occurred in 2002 to inform the public of the upcoming filing of an application for a CEC and to explain how the two previous siting studies that were conducted between September 1997 and March 2001 had resulted in the route alternatives identified as part of the North Valley Project. Each of these siting studies, known as the Northwest Valley Project and North Central Project, also included a separate public involvement program. All three public involvement efforts included the same components discussed below, with the exception of the open houses, which were held during the two previous siting studies.

PUBLIC INVOLVEMENT PROGRAM

Public involvement is a vital component of the environmental planning process. Components of the public involvement programs conducted for the North Valley Project included Project newsletters and mailing list, website, telephone information line, CWG, public open houses, media contacts, and local official briefings and small group meetings. The public involvement program was designed to allow the Project team to establish and maintain open communication with the public. Through this communication the team was able to educate the public about the Project as well as gather public input, identify issues, and respond to those issues through the planning process.

Project Newsletters and Mailing List

A total of 11 newsletters containing updates on Project developments and route selections were distributed to the public. Six newsletters were distributed as part of the Northwest Valley Project and four were distributed during the North Central Project. Recipients of the newsletters included people who had provided comments, as well as APS customers within the study area and property owners near the route alternatives. The Northwest Valley mailing list included more than 5,000 names, and the Applicant endeavored to include all parties within ½-mile of any route alternatives. The North Central Project mailing list included over 23,000 names and targeted parties located in the study area. The introductory newsletter for each project contained a

comment form allowing the public to mail in comments, requests to be added to the mailing list, or questions for response by appropriate team members. Subsequent newsletters provided updates on the planning process, including alternatives selection, open house announcements, and issue summaries.

A final newsletter was mailed in July 2002 to provide an update on the status of the two studies, the proposed 230kV route, and the upcoming filing of the CEC application. This final newsletter was mailed to over 65,000 area residents, property owners, business owners, and local officials, and included parties within 1 mile of all route alternatives. The North Valley Project mailing list also incorporated the mailing lists from the two previous siting studies. Copies of all newsletters can be found in Exhibit J-1.

Website

A website, http://siting.apsc.com, was established and maintained to provide access to Project information and electronic versions of distributed materials. Through the website, viewers could obtain meeting dates, view current and past newsletters, routing maps, submit written comments or requests, and be added to the mailing list. The website address was advertised in newsletters, paid advertisements, and on the telephone information line. In July 2002 the North Valley Project was added to the website to coincide with the distribution of the newsletter. This website also included links to both the Northwest Valley Project and North Central Project websites.

Telephone Information Line

For both the Northwest Valley Project and North Central Project, telephone numbers were made available to the public to obtain information and speak to team members. The phone lines provided general Project information or open house dates and allowed callers to leave a message requesting information, a return call, or to submit a comment on the Project. The phone lines were advertised in newsletters, paid advertisements, and on the Project website. The July 2002 newsletter also provided a number to a Project team member for the North Valley Project.

Community Working Group

Two CWGs were assembled for both the Northwest Valley Project and North Central Project after interviewing about 55 local residents and community leaders and contacting a total of almost 70 people. CWG members were selected based on their knowledge of the area and their willingness to participate in the group and review materials impartially. The members represented a wide range of interests including business, education, landowners, residents, developers, and various levels of government. The two groups, composed of 13 and 19 members for the Northwest Valley Project and North Central Project respectively, met a total of 14 times throughout the Project (seven CWG meetings for the Northwest Valley Project, and six meetings

and one field trip for the North Central Project). Through these meetings, APS was able to share information and obtain community feedback in a small, informal setting. The CWGs helped to identify potential issues, provide feedback, and ultimately supported the final location of the Proposed Route and alternative routes. As part of the communication effort for the North Valley Project, the groups were reassembled in July 2002 for a final meeting to discuss the 230kV alternatives to be included in the application for a CEC, and to provide an update on the construction status of the 69kV components of the studies. Membership rosters and meeting summaries for both CWGs are included in Exhibit J-2.

Public Open Houses

Public open houses were held during both the Northwest Valley Project and North Central Project. These meetings were held at key milestones in the planning process to present the most current information and to solicit comments from the public. Each meeting was announced through newspaper articles, paid advertisements, newsletters, telephone information line and website. The open houses were organized in an informal format, allowing community members to attend at their convenience, review displays, and speak with Project team members. General information was presented on need, description, and routing alternatives. Comment forms were provided to solicit public comment on the Project and the information that was presented. A total of 13 open house meetings were held, seven for Northwest Valley Project and six for North Central Project. About 274 people attended the open houses for the Northwest Valley Project and 523 attended the North Central Project meetings, for a total of almost 800 attendees.

Media Contacts

APS conducted a media relations program that was initiated early and continued throughout the planning process. To keep the public informed, APS periodically met with local newspaper reporters. Several articles on the Project were published in local papers, and prior to each public open house paid display advertisements announcing the meetings were placed in local papers. Copies of newspaper articles on the Project are included in Exhibit J-3. Copies of the paid display advertisements are contained in Exhibit J-4.

Local Official Briefings and Small Group Meetings

APS met with specific individuals, groups, and village planning committees to enable the Project team to better understand the public's concerns, and to assist specific groups and individuals in understanding the Project. In addition, APS conducted briefings with local city and area officials to ensure that jurisdictions were informed about the Project and updated on new developments. This enabled APS to identify and respond to any potential concerns or suggestions held on a municipal level. APS again met with local officials and interested parties in 2002 as part of the North Valley Project communication efforts. The following people were briefed:

Maricopa County

- Supervisor Andy Kunasek

City of Phoenix

- Frank Fairbanks, City Manager
- Dave Richert, Planning Manager
- Alton Washington, Assistant City Manager
- Peggy Neely, Councilwoman
- Dave Siebert, Councilman

City of Peoria

- Debra Stark, Community Development Director
- Ken Forgia, Councilman

Other entities contacted included SRP, Western Area Power Administration, CAP, and ADOT.

ISSUES IDENTIFICATION

Throughout the public process comments and concerns were expressed primarily on the location of facilities, aesthetic considerations and scenic quality of the study area, need for the projects, property values, and health and safety. Issues identified through these comments were incorporated into the criteria for evaluating alternatives, where possible. The impact assessment of the routes emphasized avoidance of existing residential areas and Carefree Highway to the extent possible, in part to respond to visual and other concerns raised by the public. In addition, project information and personnel were available at public meetings to answer questions about other recurrent public issues (e.g., need, health, safety). A summary of the primary issues identified during the planning process is provided below.

Location of Facilities – Rather than constructing the proposed transmission line in residential areas, people expressed the preference that it be built in undeveloped areas, along existing transmission lines, main roads, freeways, future roads, riverbeds, and the CAP. However, concern was also expressed about the impact of the new facilities to open spaces and recreational areas. People felt that these open spaces should be preserved and maintained as natural habitat for various wildlife.

Although comments did express the preference for following existing linear features, many people felt that the Carefree Highway should be the exception due to its designation as a scenic highway. In addition, residents, developers and municipalities stated that the route should follow I-17, rather than going through preserve lands or the on the Carefree Highway.

Aesthetics/Scenic Quality – As stated above, the public had great concern for impacting the existing recreation areas (Cave Creek Dam, Cave Buttes Recreation Area) and proposed City of Phoenix preservation lands. Also, generally the public preferred the proposed facilities would not be located on roads with scenic designations (county or city) including Carefree Highway, Cave Creek Road, Lake Pleasant Road, and I-17 (north of Cloud Road).

Project Need – Overall, comments indicated that the public recognizes the growth occurring in the north valley and, therefore, understands the need for the Project. However, some residents in the study area disputed the need for additional electrical facilities.

Property Values – Although property values would be addressed during right-of-way negotiations, questions on the potential impacts from the proposed Project to property values were received from both developers and local homeowners.

Health and Safety – Some people questioned the safety of siting electric facilities near populated areas due to the perceived potential effects of electric magnetic fields on health.

EXHIBIT J-1
NEWSLETTERS

NORTH VALLEY

APS

newsletter

JULY 2002

230kV FACILITY SITING PROJECT

Introduction

The north valley has experienced rapid growth in the past few years. To meet the electrical demands associated with this growth, APS plans to construct a 230kV transmission line and two new substations in the north valley. This newsletter is being distributed to the local community to provide an update on previous siting studies and the next steps in the permitting process.

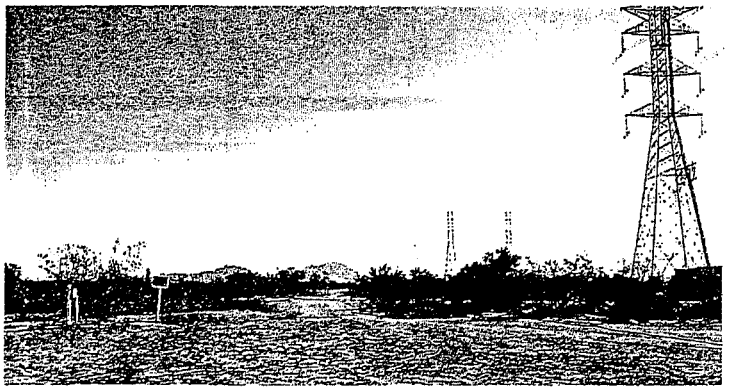
APS has identified a proposed route and several alternative routes for the transmission line. In addition, APS has identified two new 230kV substation sites needed for this project. They are shown on the map on page 2.

The proposed route for the 230kV transmission line was identified as a result of two previous studies, known as the Northwest Valley and North Central facility siting projects. A summary of both studies is provided in the sidebar on page 3.

The Proposed 230kV Transmission Line Route

The map on page 2 of this newsletter shows the proposed 230kV transmission line route, as well as route alternatives. APS has selected the proposed route because it best meets the siting considerations, which include environmental compatibility, public input, electrical system requirements, cost, and constructibility.

The proposed route originates at the Westwing Substation and follows the east side of an existing 500/230kV transmission line corridor northeast for about 6 miles, then east following the proposed Dove Valley Road alignment for 9 miles to the proposed Avery Substation (also being sited as part of this project). From there, the route goes south on the 39th Avenue alignment for 1 mile, then southeast for another mile to Interstate 17 (I-17). The route follows the west side of I-17 for 3 1/2 miles to an existing 230kV transmission corridor just south of Happy Valley Road. The line then goes east, following the north side of the existing corridor for about 3 miles to the other proposed substation (Misty Willow), and continues for 7 1/2 miles, terminating at the Pinnacle Peak Substation.



Example of existing 230kV corridor (Happy Valley Road at 24th Street)

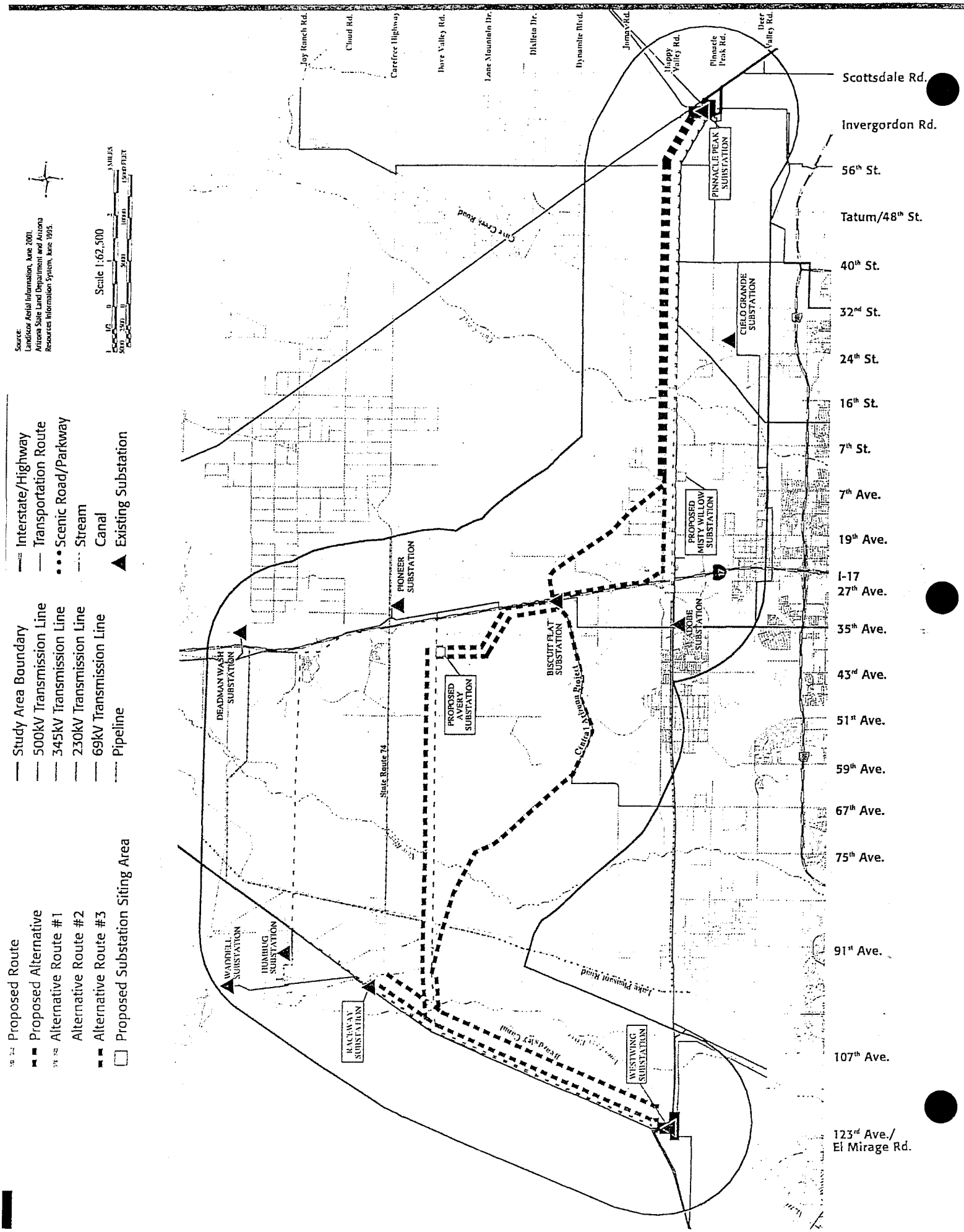
For More Information

If you would like more information, or would like to speak with a project team member, please visit the project website or call the number listed below.

http://siting.apsc.com

(602) 956-4370 ext. 120

North Valley 230kV Facility Siting Project Proposed Route Map



Common Questions

APS wants to update the local community on the North Valley Project and the electrical needs in the area. The sidebar (right) gives a few basic facts about how the North Valley Project started. Answers to other commonly asked questions are provided below.

Why is This Project Needed?

The north valley is experiencing tremendous growth. You have probably noticed that on almost every corner there are new homes, stores, or restaurants. In fact, the population of Phoenix grew 34% between 1990 and 2000, and the population of Peoria grew by 113%! (Data obtained from the U.S. Census Bureau website, 1990 and 2000 population counts.) More people means there is a need for more electricity.

What is the Project History?

The siting studies for these projects were completed over the past several years as part of a regional planning effort. For regulatory purposes, the Northwest Valley Project and North Central Project are being combined. See the sidebar for detailed project histories.

What Does the Permitting Process Involve?

A Certificate of Environmental Compatibility (CEC) for the project will be filed in summer of 2002. The 230kV transmission line will be constructed in sections between 2005 and 2011. APS' response to growth will be timely, ensuring a reliable source of power to residents and businesses.

The CEC is a document prepared to show that the proposed and alternative routes and substation sites are environmentally compatible. State approval of the CEC is required before construction can begin. After the document is filed, the Arizona Power Plant and Transmission Line Siting Committee (siting committee) will hold hearings on the project.

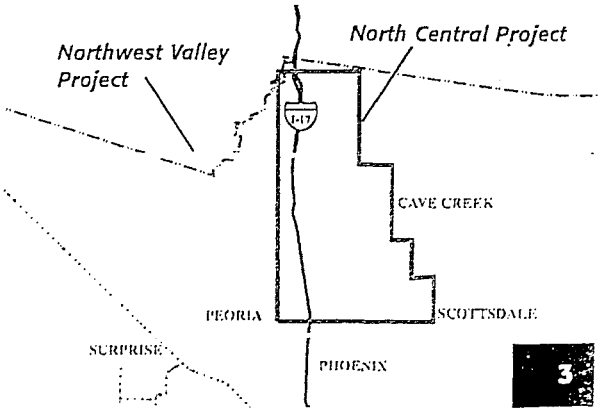
After the siting committee votes to approve or deny the CEC, their decision is forwarded as a recommendation to the Arizona Corporation Commission, or ACC. The ACC holds a public open meeting, and votes to approve or deny the CEC.

Northwest Valley Project

- Initiated in September 1997, formally known as the Northwest Valley Energy Enhancement Siting Project
- Proposed transmission line routes announced in November 1998
- Study area extended between I-17 and 163rd Avenue, and between Pinnacle Peak and Honda Bow roads, and included parts of Peoria, Phoenix, Surprise, and Maricopa County (see map below)
- APS anticipated that the 230kV facilities would be needed in 5-10 years
- Public involvement activities included open houses, community presentations, newsletters, advertisements, and a community working group

North Central Project

- Initiated in July 1999, formally known as the North Central Facilities Siting Project
- Proposed transmission line routes announced in March 2001
- Study area extended between 27th Avenue and Scottsdale Road, and between Deer Valley and Photo View roads, and included parts of Phoenix, Carefree, Cave Creek, Scottsdale, and Maricopa County (see map below)
- APS anticipated that the 230kV facilities would be needed between 2005 and 2011, depending on area growth
- Public involvement activities included open houses, community presentations, newsletters, advertisements, and a community working group



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NORTH VALLEY

230KV FACILITY SITING PROJECT

official notice

NORTH CENTRAL FACILITIES SITING PROJECT

NEWSLETTER #1

OCTOBER 1999

INTRODUCTION

APS is developing a plan to build new electrical facilities to better serve the rapidly growing population in the north-central metropolitan Phoenix area. The facilities proposed by APS are expected to be needed within the next 15 years, some of which will be needed within the next few years.

Environmental Planning Group (EPG), an environmental consulting firm, has been retained by APS to assist with siting the facilities by conducting environmental planning studies and public participation activities. This newsletter is the first in a series of project information materials designed to inform and involve the community throughout the project.

DESCRIPTION OF PROJECT

APS needs to supplement its electrical system in the north-central metropolitan Phoenix area due to continued growth. There also is a need to enhance the reliability of the existing system. The study area is bounded generally by Photo View Road to the north, City of Phoenix boundaries and portions of Cave Creek and Carefree to the east, Deer Valley Road to the south, and Interstate 17 to the west (refer to map).

APS will study options for locating the following proposed facilities:

- 230 kilovolt (kV) transmission lines (see diagram on pg. 2)
- 69kV subtransmission lines (see diagram on page 2)
- 230kV substations
- 69kV substations

Please attend one of the upcoming

PUBLIC INFORMATION OPEN HOUSES

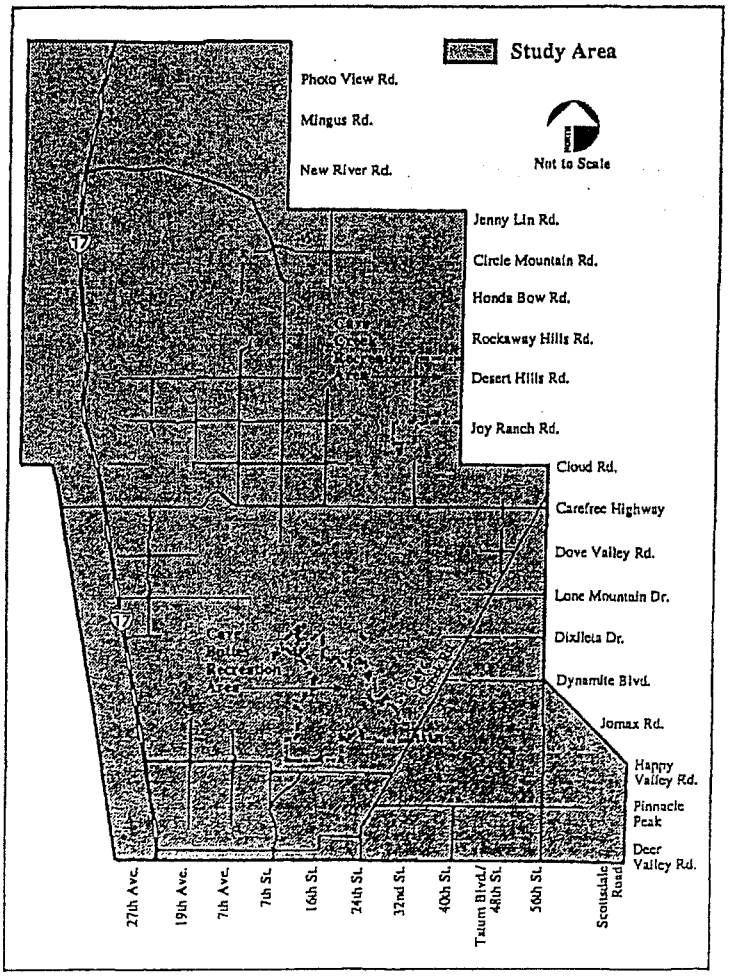
to introduce the

NORTH CENTRAL FACILITIES SITING PROJECT

Tuesday, October 26, 1999 - 6:00 pm - 8:00 pm
New River Elementary School
48827 N. Black Canyon Hwy.
(I-17 New River exit, north on frontage road)

and

Wednesday, October 27, 1999 - 7:00 pm - 9:00 pm
Esperanza Elementary School Cafeteria
251 W. Mohawk Lane - Phoenix
(take 7th Avenue south of Deer Valley Road)



APS

APS

APS is the state's largest energy services provider, meeting the electricity needs of more than 805,000 residential, commercial, and industrial customers in 11 of Arizona's 15 counties. APS has long been involved with the communities it serves. Last year APS shared more than $5.3 million with community-based agencies and organizations in communities throughout Arizona and the Southwest, offering its large employee volunteer task force to help boost local charities.

APS' core business and commitment is to deliver energy and superior customer service. To this end, APS is committed to working with, and involving the community in planning the location of its major electrical facilities.

Environmental Planning Group (EPG)

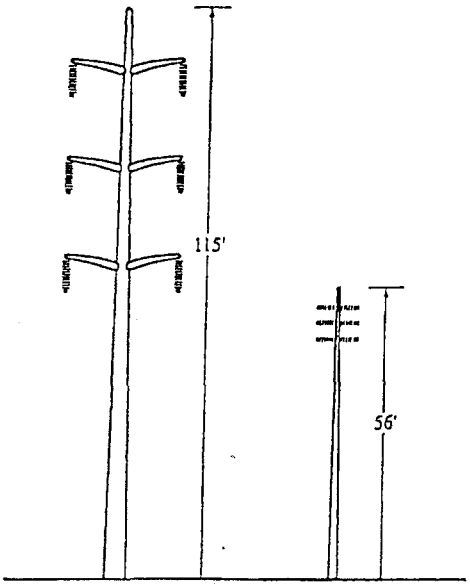
EPG staff has provided environmental consulting services in the Phoenix area for more than 25 years. In the western United States, their professional staff has participated in siting and licensing more than 100 transmission lines. An important objective of their approach is to integrate community input with the environmental planning process.

Need for Project

The north-central metropolitan Phoenix area continues to expand rapidly in population. APS expects residential, commercial, and industrial development to continue in Phoenix, New River, and in the Cave Creek area.

Increased development translates into increased demand for electricity, and soon demand in the north-central metropolitan communities will exceed APS' ability to deliver reliable power. If unaddressed, existing and future customers could be faced with difficulty in obtaining reliable and quality power, potentially resulting in outages, surges, and "brown-outs." In addition, customers could have problems in the operation of sensitive electronic equipment (computers, medical equipment, etc.) and other applications requiring quality power or precise voltage controls.

In summary, APS is planning today for tomorrow's electrical needs. The APS North Central Facilities Siting Project is needed to accommodate APS customers' increasing electrical power demand and to ensure a reliable, high-quality power source to this area in the future.



Typical Double-Circuit 230kV Steel Pole Structure

Typical Double Circuit 69kV Steel or Wood Pole Structure

Community Involvement

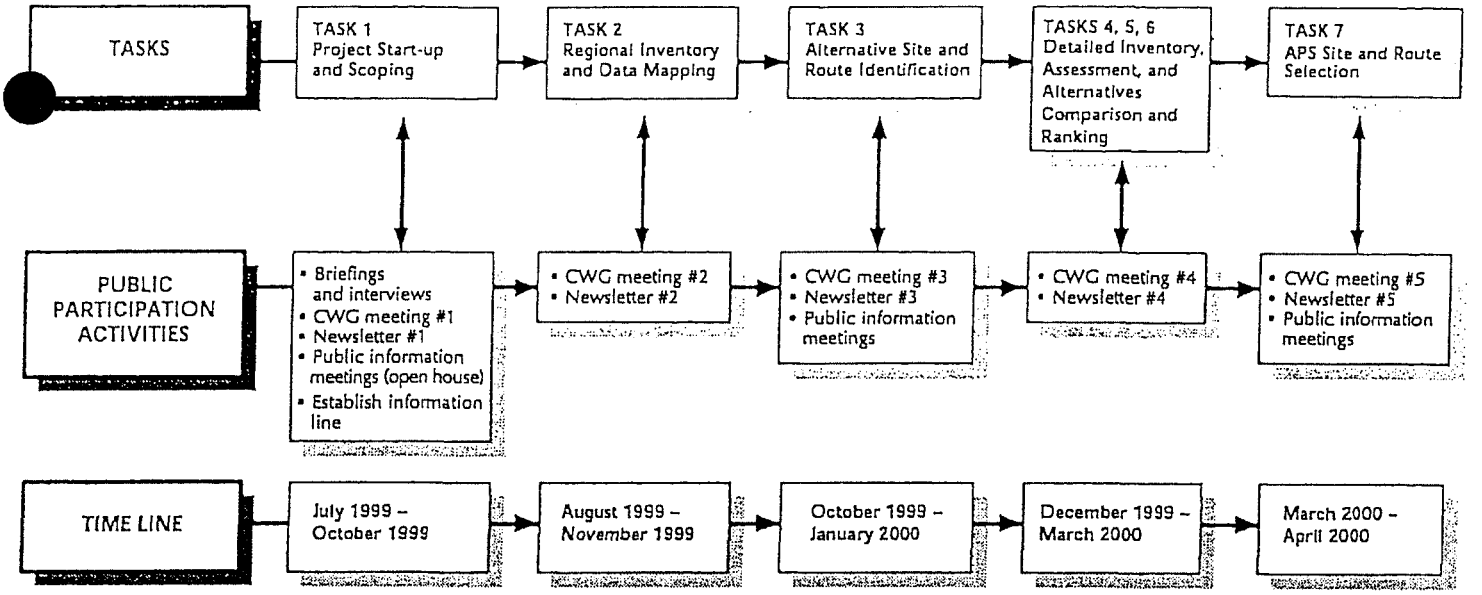
APS and EPG have created a Community Working Group (CWG) by conducting interviews with the public and other interested parties. The CWG represents a cross-section of people who are familiar with issues in the community and who represent a wide range of views. Members include a broad base of interested residents, property owners, developers, relevant agencies, and local officials. The CWG will meet with EPG and APS five times to provide feedback at key milestones of the planning process. Public information open houses also will be held to review the CWG recommendations. The CWG will eventually recommend power line routes and substation locations to APS, with the help of EPG's expertise.

The CWG is an important element of the planning process and public participation program and serves as a "sounding board" throughout the facility siting process. The group will provide information and comment on the environmental planning process that will be used in the decision making.

Planning Process

There are seven primary tasks to be conducted during the environmental planning process. A general sequence of the tasks is shown on the flow diagram on the next page.

The process of identifying issues associated with the study area and the proposed facilities has begun (Task 1). Initial data gathering has also begun in order to compile a regional environmental inventory representing the natural resources,



land uses, visual/aesthetics, biological, and cultural resources (Task 2). The project team will then analyze the issues and data to identify the constraints and opportunities for locating the substation sites and transmission line routes. Based on this analysis, alternative routes and locations for facilities will be identified (Task 3). Following that effort, the project team will conduct a more detailed analysis resulting in a comparison and environmental ranking of the alternative sites and routes (Task 4, 5, 6). Selection criteria will then be finalized, including engineering and system data, environmental ranking of alternatives, and public input. Combined, this information will be the basis for APS to select the preferred and alternative routes and sites (Task 7).

As shown in the flow diagram, each task includes public participation by either the CWG and/or through newsletters and public open houses.

Schedule

The planning process began in July 1999 and is tentatively scheduled for completion in 10–12 months. APS plans to construct facilities in phases—facilities will be built first where they are needed most. Currently, APS expects that the first of the facilities will need to be in service by the end of year 2001.

Public Participation

Besides the close coordination with the CWG previously mentioned, there will be several opportunities for the public to be informed and/or participate in this project including the following:

- ***Public Information Open Houses***
  There will be three sets of informative public meetings throughout the course of the project. These meetings will follow an informal open house format to allow individual discussion with project team members. Details for the open houses will be announced through paid advertisements, news releases, direct mail, and updates on the APS web site.

- ***Voice Message Line***
  A telephone voice message line has also been established for the public to ask questions, request information, or to be added to the mailing list. Please call (602) 381-1769.

- ***Project Mailing List and Newsletters***
  A mailing list will be updated throughout the project. Newsletters will be distributed to those on the mailing list at key milestones of the project. Comment forms will be included in the newsletters to allow opportunities for the public to comment on the project.

- ***Web Site – http://siting.apsc.com***
  An internet web site has been established that will provide updated project information and the opportunity to provide comments by e-mail. The public also may request to be added to the project mailing list by registering on the web site.

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NORTH CENTRAL
FACILITIES SITING PROJECT

APS

OFFICIAL NOTICE

The community is invited to attend a

PUBLIC INFORMATION OPEN HOUSE

to introduce

APS' NORTH CENTRAL FACILITIES SITING PROJECT

Please attend one of the two meetings!

Tuesday, October 26, 1999 - 6:00 pm - 8:00 pm
New River Elementary School - Cafeteria
48827 N. Black Canyon Hwy
(I-17 New River exit, north on frontage road)

AND

Wednesday, October 27, 1999 - 7:00 pm - 9:00 pm
Esperanza Elementary School Cafeteria
251 W. Mohawk Lane - Phoenix
(Take 7th Avenue, south of Deer Valley Road)

Your input is important to us!

NORTH CENTRAL

FACILITIES SITING PROJECT

NEWSLETTER #1

OCTOBER 1999

At this early stage of the APS North Central Facilities Siting Project, we want to hear your initial views on the project. Your comments are important to help develop and enhance the studies that are beginning. Please take a few minutes to consider the information provided and complete and return this comment form.

COMMENTS: _____

_____

_____

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MAILING LIST

The project mailing list will be supplemented as needed throughout the project. If you would like to be included on the mailing list, you can either call (602) 381-1769, provide your name and address below, or submit your name through our web site, http://siting.apsc.com. Also, if you know of additional people you believe should be included on the mailing list, please provide their names and addresses as well.

Name: _____

Address: _____

City, State: _____

Zip Code: _____

E-Mail: _____ Phone Number (optional): _____

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NORTH CENTRAL
FACILITIES SITING PROJECT

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Phoenix, Arizona 85018

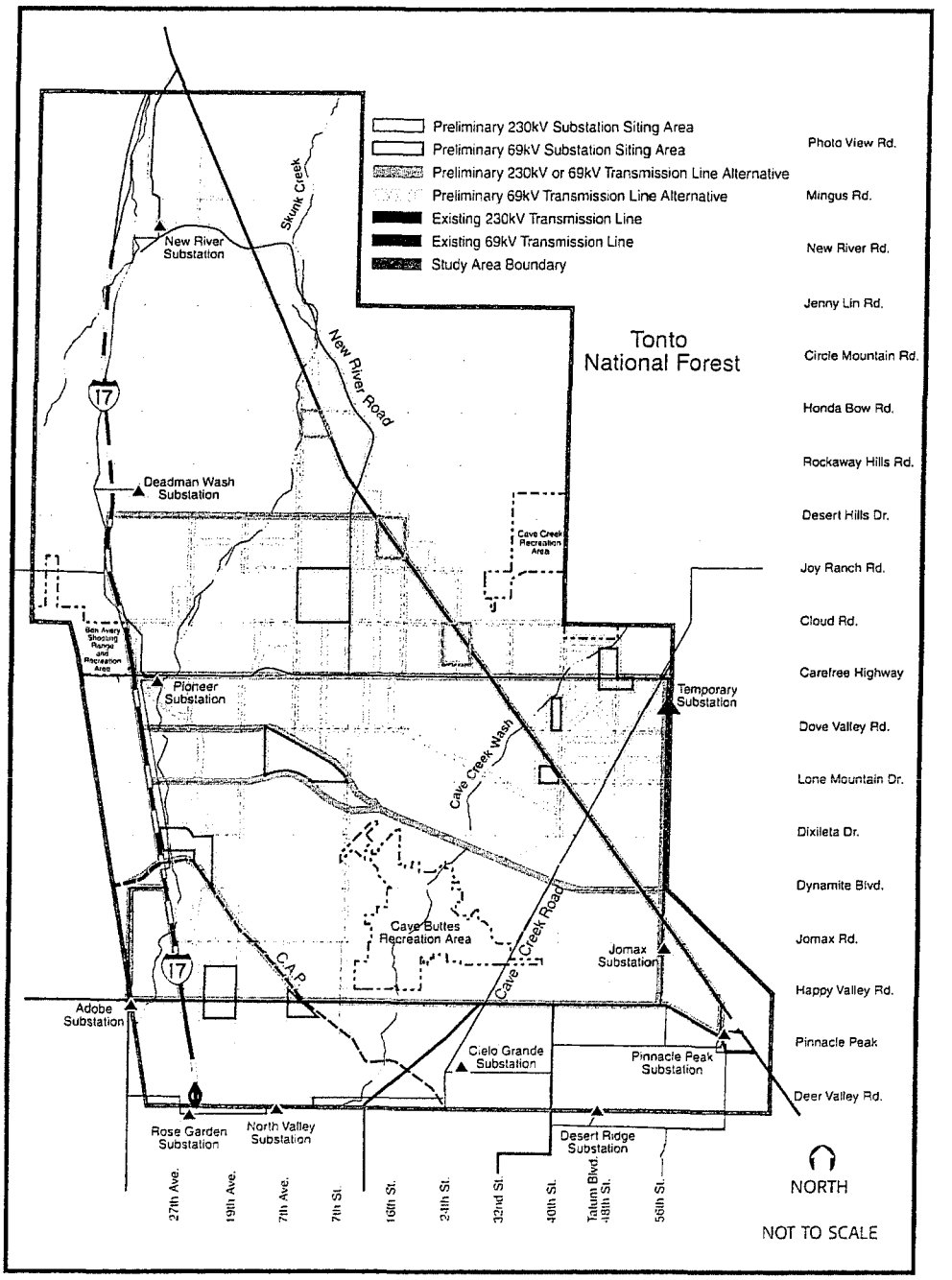
FACILITIES SITING PROJECT

NEWSLETTER #2 • JANUARY 2000

INTRODUCTION

This is the second in a series of newsletters designed to keep you informed about APS' North Central Facilities Siting Project. APS and the Environmental Planning Group Inc. (EPG), an environmental consulting firm, are working with the communities of the north-central valley to develop a plan to provide additional power to meet this area's rapidly growing needs. Based on anticipated demand, electrical facilities such as a 230 kilovolt (kV) substation, 69kV substations, and 230kV and 69kV transmission lines will need to be built. The proposed facilities are expected to be needed within the next 15 years, however, some will be needed within the next few years.

The purpose of this newsletter is to summarize the project work that has occurred to date, particularly work with the community and progress on identifying preliminary transmission line routes and substation locations, and describe upcoming activities, including a set of public open houses to be held in January.



PRELIMINARY TRANSMISSION LINE ALTERNATIVES AND SUBSTATION SITING AREAS

COMMUNITY WORKING GROUP FORMED

After contacting more than 40 individuals representing a cross-section of the community, EPG formed a 19-member Community Working Group (CWG) to assist the study team throughout the project. The CWG will provide information about community concerns and values which will be integrated with the technical information to help APS develop their plans.

The first meeting of the CWG was held in August 1999. Members met with APS and EPG to become familiar with the project and define the roles and responsibilities of project participants. The second CWG meeting was held in mid-November. At that time, the team reviewed and discussed the public comments received to date, examined regional inventory data (existing and future land use), reviewed engineering system information, and discussed the siting criteria to be used to identify alternative locations for substations and transmission lines. Throughout the project, the CWG will be presented with detailed information about the project and asked for input. The community at large will be presented with the same information at public open houses and asked for their comments.

FIRST ROUND OF PUBLIC OPEN HOUSES HELD

APS hosted two public open houses in late October 1999 to introduce the project to the community and gather initial public comments. A total of 84 people attended the two open houses - 62 on October 26, at the New River Elementary School; and 22 on October 27, at the Esperanza Elementary School.

Maps, graphics, and other information about the project were displayed at the open houses. Personnel from APS and EPG answered questions, explained the need for the project, described how APS plans for future facilities, and discussed the environmental planning process and public participation program.

Those who attended the open houses were encouraged to provide written comments when possible. Approximately 150 responses have been received to date via mail, e-mail, telephone, and comment forms received at the October open houses. The comments have been condensed into two main categories and summarized below.

Project Need and Location

Many respondents acknowledge the growth within the study area and recognize the need for the project. Others asked whether conservation of electricity had been examined as an alternative to construction of new facilities. Several, though, expressed concern that facilities might be placed within existing developed areas to serve new growth in other parts of the study area. Several suggestions were made to locate facilities away from the mountain areas, preferring that they be located in previously developed areas. Questions were raised concerning cost, particularly whether electric rates will be affected and whether existing customers will be paying to provide service for new customers.

Project Description and Potential Impacts

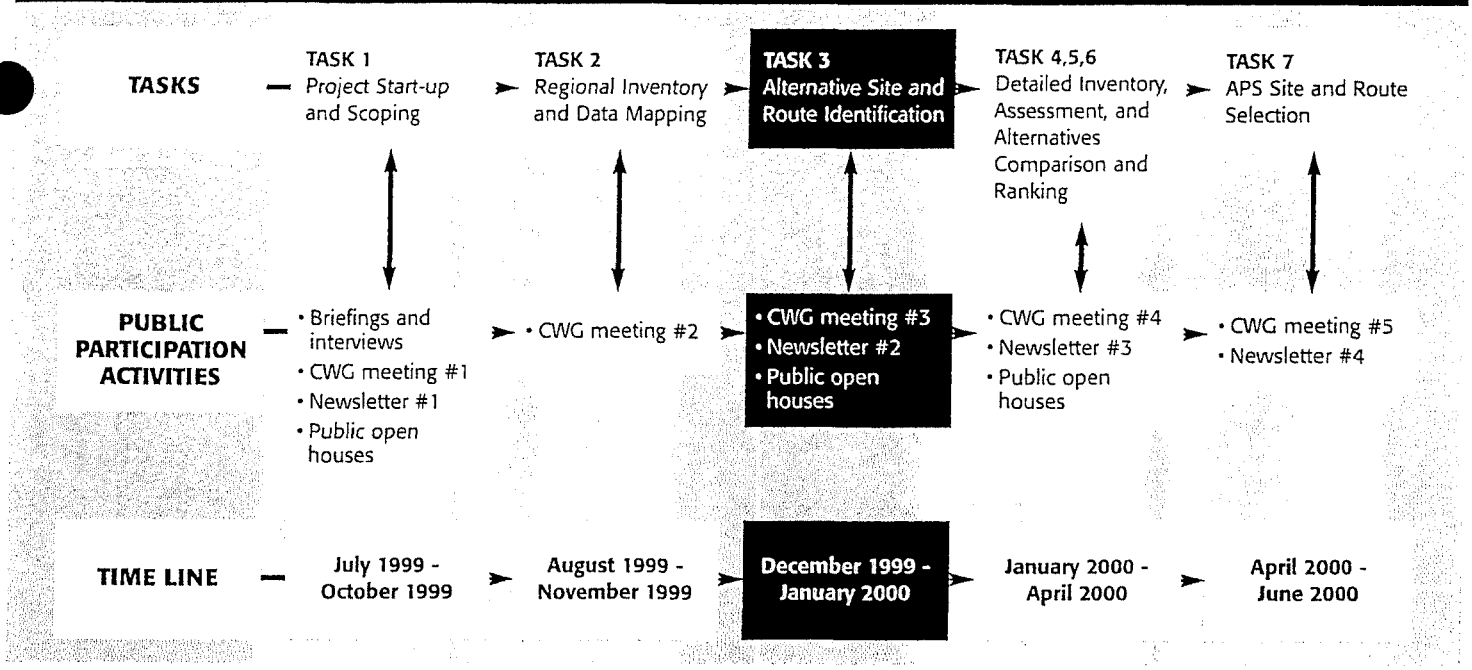
Some respondents asked questions about the potential health effects of living near electric facilities, and members of the community expressed concern that their property may be devalued should transmission lines be placed adjacent to their property. Respondents also expressed concern for aesthetics (e.g., appearance of facilities, views from residences, compatibility with rural environment). Several individuals were interested in the feasibility and cost of burying transmission lines underground. Questions were also raised regarding the process used to form the CWG.

These and additional issues and questions raised by the community will be addressed through newsletters and open houses as the project progresses.

ENVIRONMENTAL STUDIES UNDERWAY

Currently, EPG is nearing completion of *Task 3 - Alternative Site and Route Identification,* a description of which is shaded in the planning process chart provided on the top of page 3. Task 3 will be completed after the public has had the opportunity to review and comment on the proposed substation sites and transmission line routes at the upcoming public open houses. Prior to Task 3, EPG planners conducted a regional inventory to identify the human, natural, and cultural resources within the study area. One component of the inventory is to identify existing land uses (e.g., residential areas, commercial areas, preservation areas, infrastructure) as well as plans for future development. To collect this information, the planners are studying aerial photographs; reviewing plans

PLANNING PROCESS



and reports; verifying information in the field; and coordinating with the state, county, and municipal agencies as well as others, such as land developers.

In addition to the land use studies, the area is being inventoried for plants and wildlife that may be protected or have other special status, and for cultural resources (e.g., historical, archaeological) that may be important in the area.

Also, the planners began preliminary work on visual studies to determine how proposed electrical facilities may affect the scenic quality or aesthetics of the area from various viewpoints (e.g., residences, recreation areas).

Data gathered during the regional inventory have been mapped. EPG planners in conjunction with the CWG have identified land uses and lineal features, such as existing transmission lines, roads, and canals that may be more compatible with the project facilities. From this siting criteria, the planners have identified opportunities and constraints which will assist in the determination of preliminary substation sites and transmission line routes (see map on front page).

THE NEXT STEPS

Up to this point, the information gathered and mapped has addressed the overall project area. To complete the next steps, *Tasks 4, 5, 6 - Detailed Inventory, Assessment, and Alternatives Comparison and Ranking,* the study team will need to review and evaluate each of the alternative transmission line routes and substation siting areas in detail. The route inventory will focus on the human environment (i.e., existing and future land use, visual/aesthetic characteristics, recreation, etc.) and natural and cultural resources.

After the detailed inventory is completed, the study team will conduct alternatives assessment and mitigation planning (Tasks 5 and 6). During this time, the study team will evaluate potential impacts that the proposed facilities could have on the environment and develop plans to reduce (i.e., mitigate) those impacts when possible.

OPPORTUNITIES FOR PUBLIC PARTICIPATION CONTINUE

Public open houses will be held on January 25 and 26 (see page 4 for location and times). The purpose of the open houses is to present the preliminary substation sites and transmission line alternatives that have been identified for the project facilities and give the public the opportunity to review and comment on them. The open house format provides an informal atmosphere to allow the community to review project displays and talk individually with project team members. Your comments are important and will assist in refining the alternatives - so please plan to attend one of the open houses.

In the meantime, a telephone voice mail information line and web site have been established for the community to ask questions, request information, or be added to the mailing list. Please call **(602) 381-1769** or visit **http://siting.apsc.com.**

Environmental Planning Group
4350 East Camelback Road
Suite G200
Phoenix, Arizona 85018

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FACILITIES SITING PROJECT

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APS OFFICIAL NOTICE

Please attend one of the upcoming

PUBLIC INFORMATION OPEN HOUSES

to introduce the

NORTH CENTRAL FACILITIES SITING PROJECT

Tuesday, January 25, 2000 6:00 p.m. - 8:00 p.m.
New River Elementary School Cafeteria
48827 N. Black Canyon Highway
(I-17 east off New River exit, north on frontage road)

Wednesday, January 26, 2000 5:30 p.m. - 7:30 p.m.
Desert Willow Elementary School Multi-purpose room
4322 E. Desert Willow Parkway
(West of Cave Creek Rd. between Lone Mountain Rd. and Dynamite Rd.)

NORTH CENTRAL FACILITIES SITING PROJECT

APS

NEWSLETTER #3 • JULY 2000

INTRODUCTION

This newsletter has been designed as an update to keep you informed of the ongoing North Central Facilities Siting Project. APS has plans to build new electrical facilities to better serve the rapidly growing population in north-central Phoenix and Maricopa County. The proposed new transmission lines and substations are expected to be needed within the next 15 years and some will be required as soon as 2001/2002.

APS and the Environmental Planning Group, Inc. (EPG), an environmental consulting firm, are working with communities within the study area as part of a planning process to site the needed electrical facilities in the area (see map page 2). Based on anticipated demand, electrical facilities are expected to include a 230 kilovolt (kV) substation, 69kV substations, and 230kV and 69kV transmission lines.

Please attend one of the upcoming

PUBLIC INFORMATION OPEN HOUSES

for the

NORTH CENTRAL FACILITIES SITING PROJECT

Tuesday, July 18, 2000
6:00 p.m. - 8:00 p.m.
Desert Willow Elementary School
4322 E. Desert Willow Parkway
Multi-purpose Room

Thursday, July 20, 2000
6:00 p.m. - 8:00 p.m.
Desert Mountain Middle School
35959 N. 7th Avenue
Multi-purpose Room

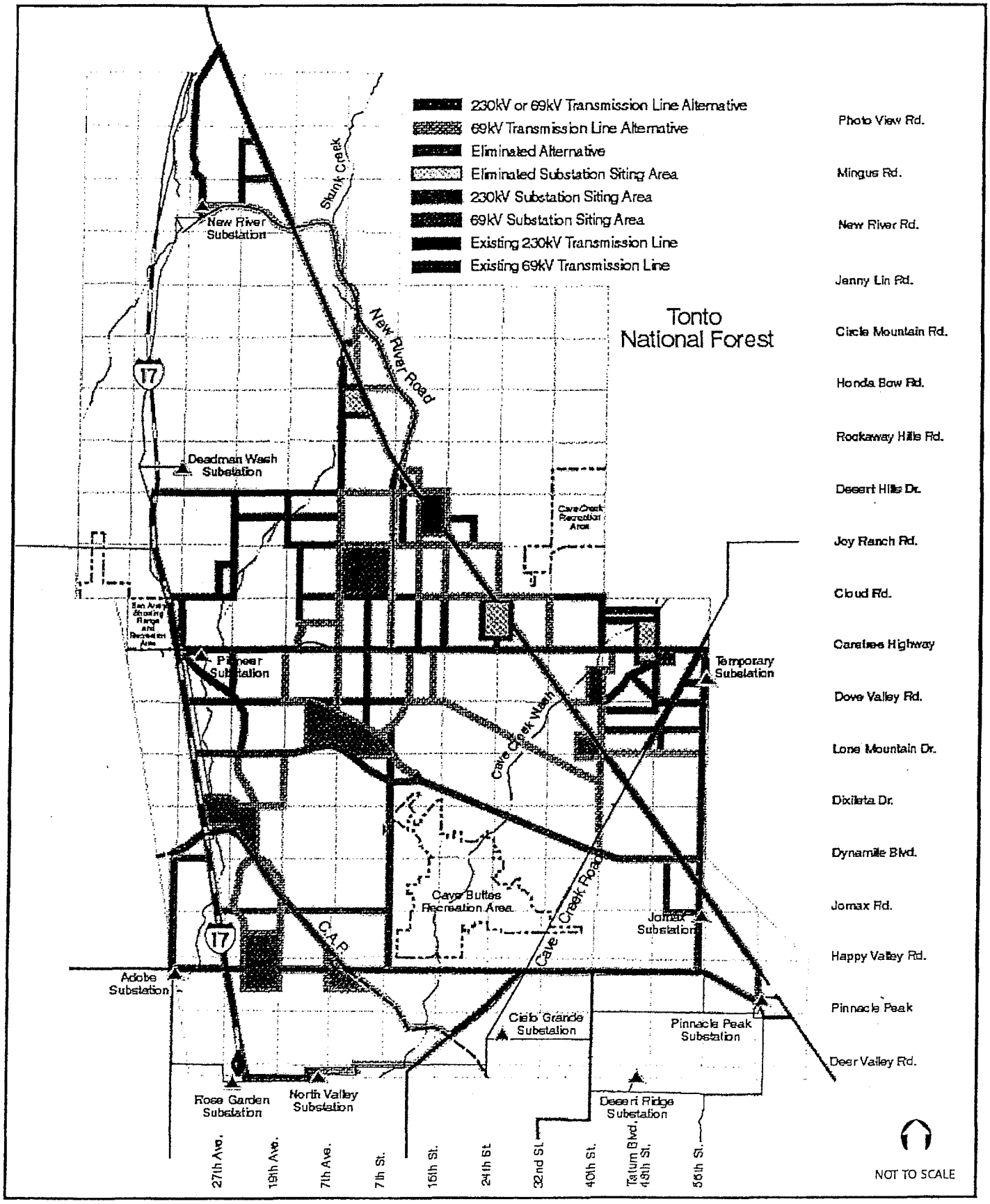
UPDATES AS OF SECOND ROUND OF OPEN HOUSES

APS hosted two public open houses in January 2000 to update the community on the environmental studies being conducted and to display the preliminary alternative routes and substation sites that had been identified. Public comments were encouraged and have been entered into the project record to assist the project team in refining the initial alternatives.

A total of 168 people attended the two open houses—65 on January 25 at the New River Elementary School, and 103 on January 26 at the Desert Willow Elementary School. Those who attended the open houses were encouraged to submit written comments. A total of 470 comments have been received as of May 31, with 290 of those being submitted since the last open house through mail, e-mail, telephone, and comment forms.

Public input has focused on several alternative routes. Comments were received suggesting that the route that runs along I-17 (north/south) and just south of Happy Valley Road (east/west) be utilized for the 230kV line to connect the Pioneer and Pinnacle Peak substations. The east/west portion of this route would follow an existing 230kV corridor. Alternative routes that have been suggested for elimination have been the 230kV alternatives along Desert Hills Road and Carefree Highway. *(cont. page 3)*

TRANSMISSION LINE ALTERNATIVES AND SUBSTATION SITING AREAS

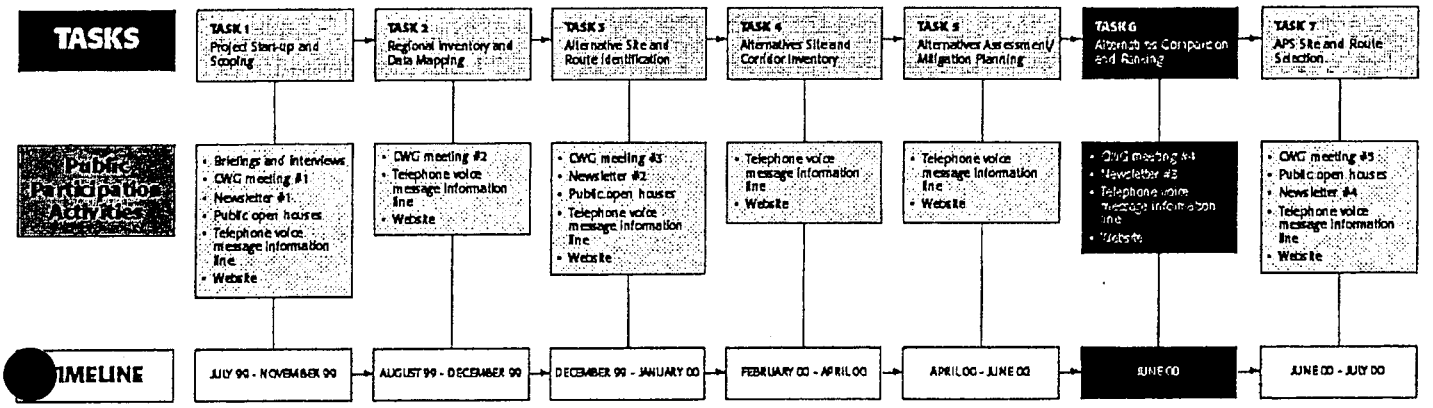


Some have noted Carefree Highway's scenic designation, believing that the aesthetic impact would be too great along this route. The alternative routes that have been included in the assessment and route comparison are displayed on the updated alternatives map (page 2).

ENVIRONMENTAL STUDIES CONTINUE

Currently, EPG is conducting an impact assessment to evaluate the potential effects to land use and visual resources from the construction of the proposed facilities. The results of the assessment will help to narrow the alternatives and ultimately lead to a ranking of alternatives based on environmental factors. The results of these studies will be provided at the next public open houses scheduled for July 18 and 20.

PLANNING PROCESS



THE NEXT STEPS

A set of public open houses is scheduled for July 18 and 20 from 6:00 to 8:00 pm, at the locations listed on page 1. Please plan on attending one of the open houses to review updated project information and to speak individually with project team members. After this set of open houses and a following comment period, APS will select the final routes and sites. This decision will be based on environmental factors, public input and engineering and system requirements. Please submit your comments by August 4, 2000 for them to be considered in the final selections.

Comments and requests to be added to the mailing list may be submitted through the following methods:

- **comment forms (available at the open house)**
- **telephone voice message information line (602) 381-1769**
- **project website - http://siting.apsc.com**

Once the decision-making process has been completed, a final newsletter will be mailed to APS customers within the study area and to those who have requested to be on the project mailing list. This newsletter will announce the selection of locations for new facilities. Shortly after this announcement, land easements and right-of-way acquisitions will begin. Construction on early phases of the project will begin next year.

Environmental Planning Group
4350 East Camelback Road
Suite G200
Phoenix, Arizona 85018

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Newsletter #3

APS OFFICIAL NOTICE

Please attend one of the upcoming

PUBLIC INFORMATION OPEN HOUSES

for the

NORTH CENTRAL FACILITIES SITING PROJECT

Tuesday, July 18, 2000 6:00 p.m. - 8:00 p.m.
Desert Willow Elementary School • Multi-purpose Room
4322 E. Desert Willow Parkway
(west of Cave Creek Rd. between Lone Mountain Rd. and Dynamite Blvd.)

Thursday, July 20, 2000 6:00 p.m. - 8:00 p.m.
Desert Mountain Middle School • Multi-purpose Room
35959 N. 7th Avenue
(north of Carefree Highway on 7th Avenue)

APS

FACILITIES SITING PROJECT

NEWSLETTER #4 • MARCH 2001

TRANSMISSION LINE ROUTES AND SUBSTATION SITES SELECTED

PROJECT UPDATE

This is the fourth newsletter in a series designed to inform the public about the North Central Facilities Siting Project, a comprehensive planning project which began in July 1999.

To better serve the rapidly growing population in north-central Phoenix and Maricopa County, APS plans to construct electrical facilities that include a 230 kilovolt (kV) substation, 69kV substations, and 230kV and 69kV transmission lines. The planning process, which is now complete, included detailed environmental studies and extensive public involvement activities to assist in the determination of the most appropriate placement of the proposed facilities.

Public open houses were held in October 1999, January 2000, and July 2000. The July set of open houses was held to gather community input regarding the preliminary alternative routes and substation sites that had been identified. A total of 271 people attended the July meetings and more than 400 comments were submitted from July to September 30, 2000.

FINAL ROUTES

APS has selected overhead routes for 69kV and 230kV transmission lines, seven 69kV substation siting areas, and one 230kV substation siting area. The primary comments heard from the public throughout the planning process were to parallel existing transmission lines (when possible) and to avoid Carefree Highway. Through the planning process, both of these primary requests from the public were accommodated. Refer to the map on page 2 and the explanation that follows for route and site locations.

230kV FACILITIES

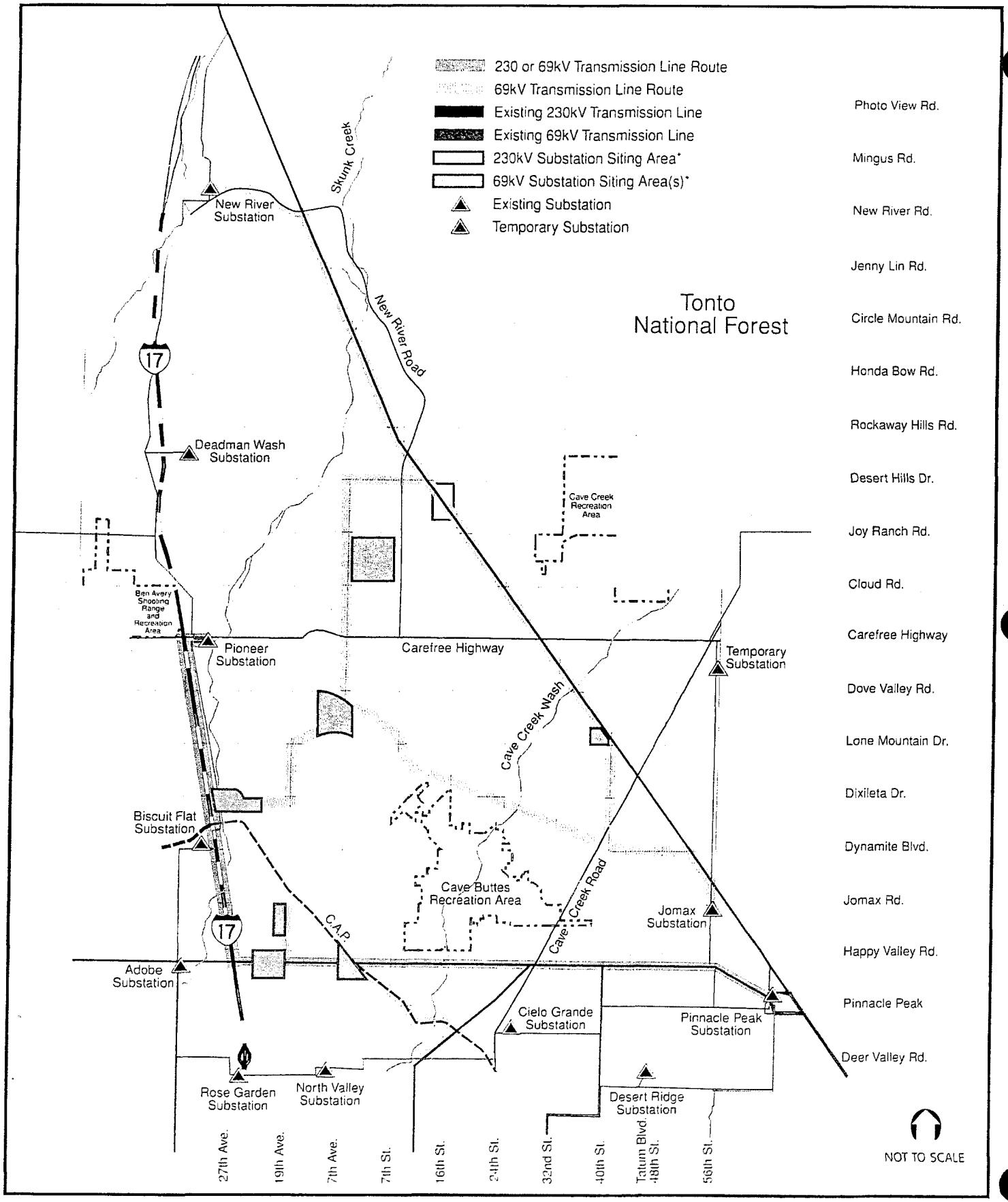
The purpose of the 230kV transmission line is to connect the Pioneer Substation near Carefree Highway and Interstate 17 (I-17) with the Pinnacle Peak Substation near 64th Street and Pinnacle Peak Road. The preferred route, which had the least amount of environmental impacts coupled with the largest public support, follows I-17 south from Pioneer Substation, turning east just south of Happy Valley Road. It then follows an existing 230kV transmission line corridor to the Pinnacle Peak Substation. The final alignment for the 230kV transmission line will be determined through the state certificate of environmental compatibility process. A 230kV substation siting area was selected south of Desert Hills Drive and east of 16th Street. This siting area met engineering requirements, while minimizing environmental impacts.

69kV FACILITIES

The lower voltage 69kV transmission routes and sites had the fewest environmental impacts and largest public support, while still meeting the engineering and economic requirements for the project. These routes generally follow direct paths to connect existing and planned substations located throughout the study area.

From the New River Substation south, a 69kV line will parallel the existing Western Area Power Administration 230kV transmission line, connecting with a planned 230kV substation located near

APS' FINAL ROUTES AND SUBSTATION SITING AREAS



Please note that less than 2 acres of land are required to construct a 69kV substation, and 10 acres are required for a 230kV substation; therefore, the entire shaded area on the map would generally not be utilized.

Desert Hills Drive and 16th Street. The route will continue southwest to a 69kV substation located near 40th Street and Lone Mountain Drive. The 69kV line will continue south along 40th Street to Dynamite Blvd., then head east to the existing Jomax Substation located at Jomax Road and 56th Street. Other 69kV transmission line routes include:

- connecting the 230kV substation near Desert Hills Drive and 16th Street to a 69kV substation along 7th Avenue between Joy Ranch Road and Cloud Road, and to a 69kV substation located near 7th Avenue and Dove Valley Road
- connecting the 69kV substation near 7th Avenue and Dove Valley Road to the existing Jomax Substation by following the proposed Sonoran Preserve Freeway, and to a planned 69kV substation east of I-17 at Dixileta Drive
- connecting two planned 69kV substations south of Happy Valley Road and west of the Central Arizona Project Canal (CAP) along the existing transmission line corridor
- connecting a planned 69kV substation north of Happy Valley Road along 19th Avenue
- connecting a planned substation at the CAP and 7th Avenue south of Happy Valley Road along the CAP
- placing the 69kV transmission line underneath the 230kV transmission line on the same structure where possible

For a complete layout of the preferred 69kV transmission line routes and sites, refer to the map on page 2.

SELECTION CRITERIA

Numerous transmission line routes and substation site alternatives were evaluated and ranked considering environmental criteria (e.g., land use and visual resources) and input from the public and Community Working Group.

Public participation was a key component of the planning process and included three newsletters, website updates, telephone information line, three sets of public open house meetings, comment forms, and a Community Working Group comprised of area citizens and agency representatives. Comments received assisted in the refinement of alternatives as the project evolved.

After extensive review and consideration, the APS final routes and substations sites were selected based on a combination of the environmental evaluation results, engineering and system requirements, economics of each alternative, and public input.

WHAT'S NEXT?

APS will begin acquiring right-of-way for the 69kV transmission line routes and property for the 69kV and 230kV substation sites immediately. The construction of the 69kV facilities will be determined over the next 10 years as electricity demands increase.

Before construction on the 230kV transmission lines can begin, a certificate of environmental compatibility (CEC) must be granted by the Arizona Corporation Commission. Environmental studies data and recommended routes from a prior siting study in the Northwest Valley will be combined with information from the North Central Facilities Siting Project to complete the CEC application. The project team expects the application to be submitted to the Arizona Power Plant and Transmission Line Siting Committee, a group appointed by the Corporation Commission, in early 2001. A hearing for the CEC will be held by the Committee after the application is submitted.

With the selection of the APS final routes, the environmental planning and public process is complete. APS and EPG are very appreciative of all the input and participation from the community throughout the project, and would like to express thanks to the Community Working Group as well for their efforts and commitment.

Please visit the website, http://siting.apsc.com, or call the voice message information line at (602) 381-1769 if you have further questions.

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FACILITIES SITING PROJECT

Newsletter #4

APS OFFICIAL NOTICE

NORTH CENTRAL FACILITIES SITING PROJECT UPDATE

APS announces transmission line routes and substation sites

NEWSLETTER 1

V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

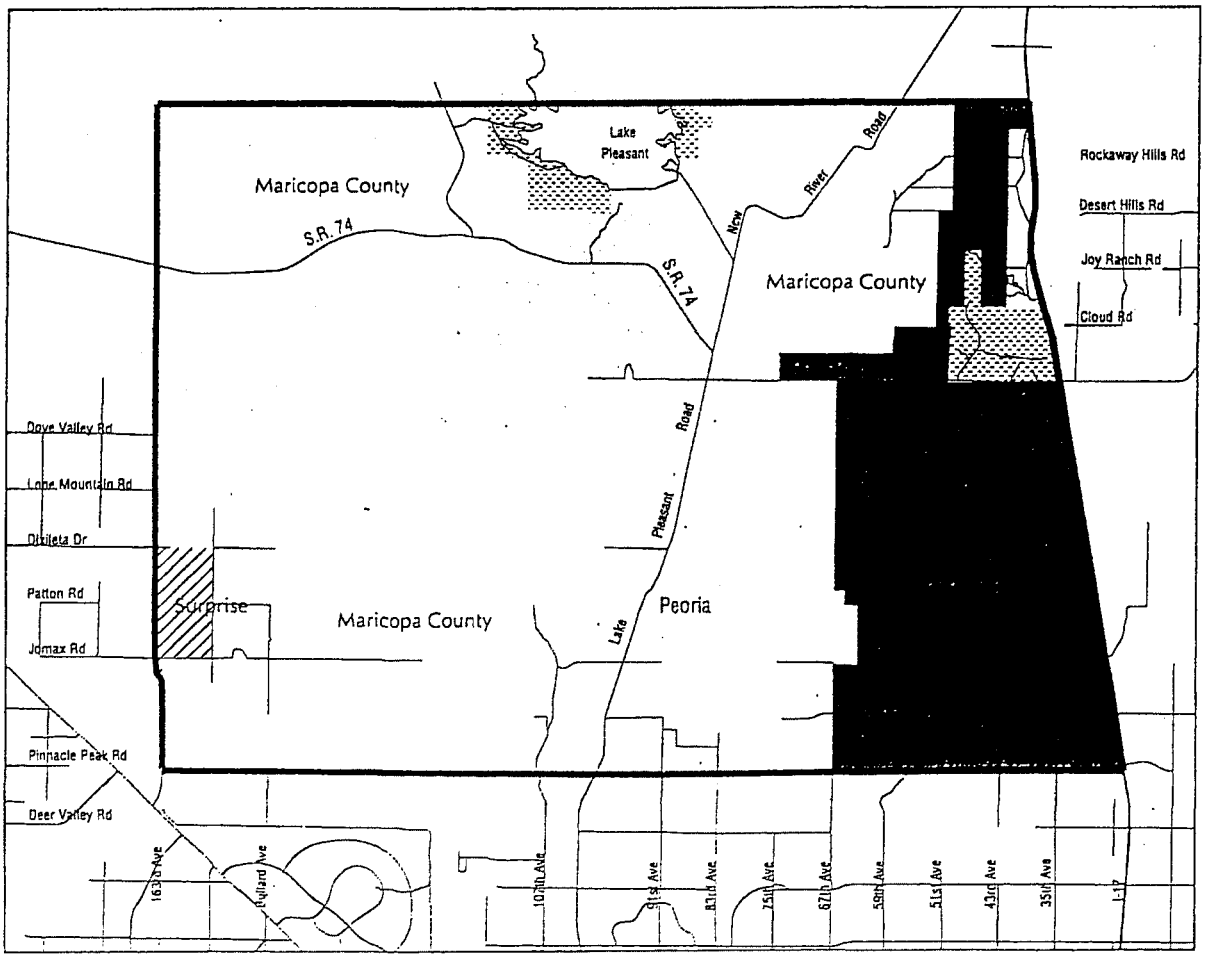
Introduction

APS is in the initial phases of developing a plan to build new energy facilities to better serve the rapidly growing population in the northwest valley. The facilities that APS is proposing are expected to be needed within the next 10 years. However, some facilities will be needed within the next few years.

Dames & Moore, an environmental consulting firm, is being retained by APS to assist with siting the facilities by conducting the environmental planning studies and public participation activities. This fact sheet provides preliminary information about the overall project.

What is the APS NW Valley Energy Enhancement Siting Project?

Considering the continuing growth in the northwest valley, APS recognizes and understands the need to supplement and enhance its electrical system. To comprehensively study the needs of the area, a large portion of APS' northwest valley service territory will be studied. The study area is bounded generally by the Maricopa County line to the north, Interstate 17 to the east, Pinnacle Peak Road to the south, and 163rd Avenue to the west (refer to map).

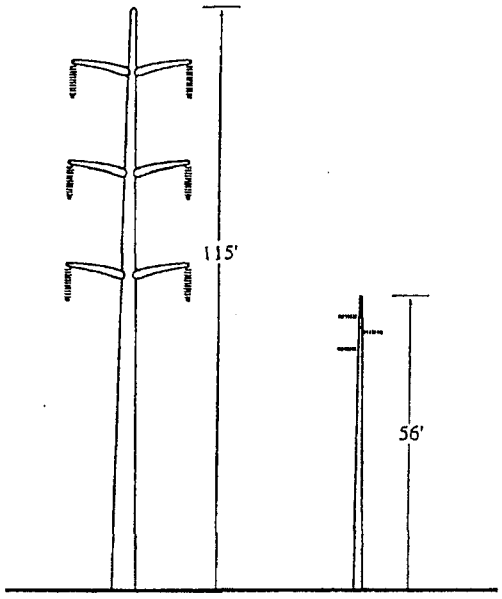


Peoria · Surprise · Recreation Area
Phoenix · Maricopa County Lands · Study Area Boundary

NOVEMBER 1997

The facilities that APS will study include planning for the following:

- 10 to 20 miles of 230 kilovolt (kV) transmission lines
- 40 to 60 miles of 69kV subtransmission lines
- 2 to 4 transmission substations
- 6 to 10 distribution substations



Typical Double-Circuit 230kV Steel Pole Structure

Typical Single Circuit 69kV Steel or Wood Pole Structure

Who is APS?

APS is the state's largest energy services provider, meeting the electricity needs of more than 740,000 residential, commercial, and industrial customers in 11 of Arizona's 15 counties.

APS has long been involved with the communities it serves, whether it's sharing more than $2.7 million with community-based organizations, as it did in 1996, or offering its large employee volunteer task force to help boost a local charity.

However, APS' core business and commitment is to provide energy and superior customer service. To this end, APS is committed to working with, and involving, the community in planning the location of its major electrical facilities.

Who is Dames & Moore?

Dames & Moore has provided environmental consulting and engineering services in the Phoenix area for more than 20 years. In the western United States, our professional staff has been responsible for siting and licensing more than 100 transmission lines. An important objective of our approach is to accurately reflect and integrate the community's values with the environmental planning process.

Why is this project needed?

The northwest valley, especially north Peoria and northwest Phoenix, continues to expand rapidly. For example, from 1980 to the present, Peoria has grown tremendously from 12,171 to 78,310 residents. This growth is expected to continue, including residential development and commercial and industrial expansion.

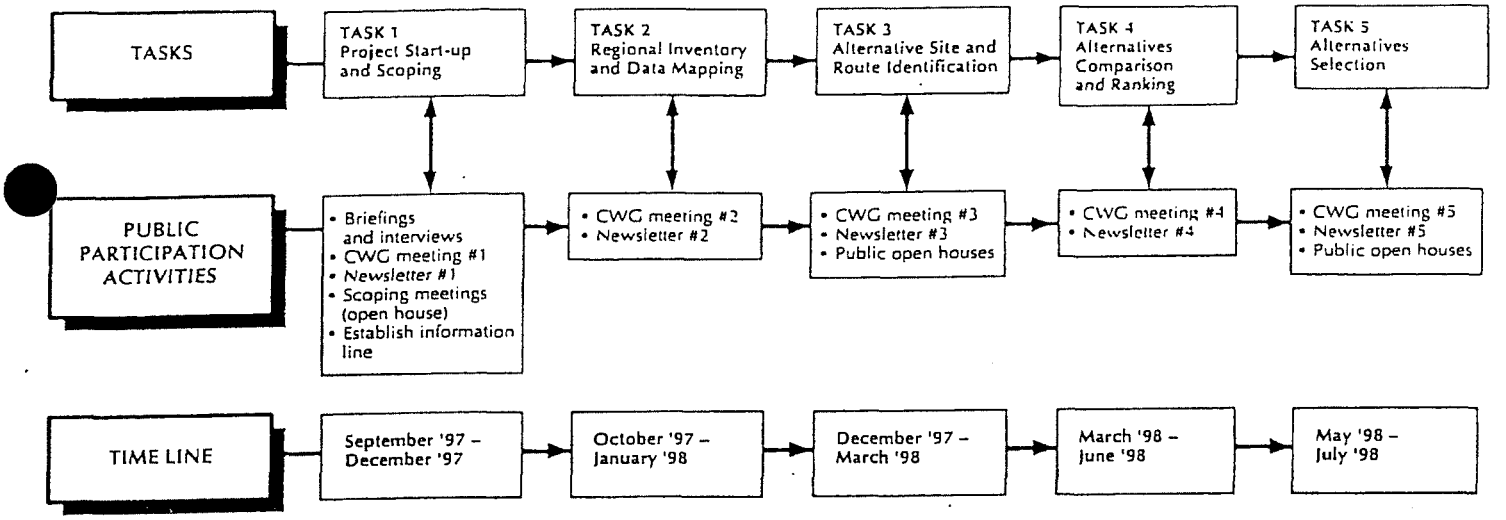
This development translates into increased demand for electricity that will soon exceed APS' capacity to deliver reliable power to the northwest valley service area. If unaddressed, existing or future customers could be faced with difficulty in obtaining reliable and quality power, potentially resulting in outages, surges, and "brown-outs." In addition, customers could have problems in the operation of sensitive electronic equipment (computers, medical equipment, etc.) and other applications requiring quality power or precise voltage controls. Infrastructure (water, power, sewers, communications, roads) to support this development must be planned in advance. APS is planning today for tomorrow's electrical needs.

In summary, the APS NW Energy Enhancement Siting Project is needed to accommodate APS customers' increasing electrical power demand and to ensure a reliable, high-quality power source to this area in the future.

What are the steps in the planning process?

Dames & Moore has identified five primary tasks to be conducted during the environmental planning process. A general sequence of the tasks is shown in the flow diagram on page 3.

Early in the project, issues associated with the study area and the proposed facilities are being identified through interviews for potential community working group (CWG) members and public scoping meetings (Task 1). The study team is gathering data representing the natural resources, land uses, visual/aesthetics, biological, and cultural resources to compile a regional environmental inventory (Task 2). The team will analyze the issues and data to identify the constraints to and opportunities for siting the substation sites and transmission line routes, which will result in



identifying alternative locations for the sites and routes (Task 3). The team will conduct more detailed inventory, assessment, mitigation planning, and comparison and environmental ranking for the alternative sites and routes identified in Task 3 (Task 4). Then APS will establish selection criteria, which will include engineering and system data, environmental ranking of alternatives, and public input. Combined, this information will be the basis for APS to select the preferred and alternative routes (Task 5).

As shown in the flow diagram, each task includes public participation activities. An important element of the planning process and public participation program is a CWG that serves as a "sounding board" throughout the facility siting process. The CWG will provide information and comment on the environmental planning process that will be integrated with decision making. The CWG represents a cross-section of people who are familiar with issues in the community, and who represent a wide range of views. Members were selected based on informal interviews with residents, property owners, developers, representatives of industry and agriculture, relevant agencies, local officials, and other various interests. The CWG will meet with Dames & Moore and APS approximately five times to provide feedback at key milestones of the planning process.

What is the schedule for completing the project?

APS plans to complete the facilities in phases–to build facilities where they are most needed first. The project began in September and is tentatively scheduled for completion in nine to twelve months. Currently, APS expects that the first of the facilities will have to be in service by 1998.

How can the public participate in the project?

Aside from the close coordination with the CWG mentioned above, there will be several opportunities for the public to be informed and/or participate in this project, including the following:

- ***Public Open Houses:***
  There will be three sets of informative open houses throughout the course of the project. See the back of this newsletter for the locations of the upcoming open house on December 10, 11, and 13. These open houses will be informal so the public can talk individually with project team members. Details for the open houses will be announced through advertisements, press releases, and direct mail.

- ***Information Line:***
  A telephone line has been established for the public to ask questions, request information, or to be added to the mailing list. Call Dames & Moore at 861-7471 for more information.

- ***Project Mailing List and Newsletters:***
  A mailing list will be updated throughout the project. Newsletters will be distributed to those on the mailing list at key milestones of the project. Comment forms will be included in the newsletters to allow opportunities for the interested public to comment on the project. Interested parties should call the telephone number above to be added to the mailing list.

PUBLIC OPEN HOUSE

PLEASE ATTEND!!

Wednesday, December 10, 1997, 6:00–8:00pm
(presentation from 6:30–7:00)
Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(east of 59th Avenue north
of Pinnacle Peak Road)

Thursday, December 11, 1997, 6:00–8:00pm
(presentation from 6:30–7:00)
Lake Pleasant Regional Park
Headquarters Conference Room
41835 North Castle Hot Springs Road
(State Route 74 and Castle Hot Springs Road)

Saturday, December 13, 1997, 10:00am–12:00 noon
(presentation from 10:30–11:00)
Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(east of 59th Avenue north
of Pinnacle Peak Road)

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Dames & Moore
7500 N. Dreamy Draw Dr., Ste. 145
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V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

NEWSLETTER 2

V·A·L·L·E·Y

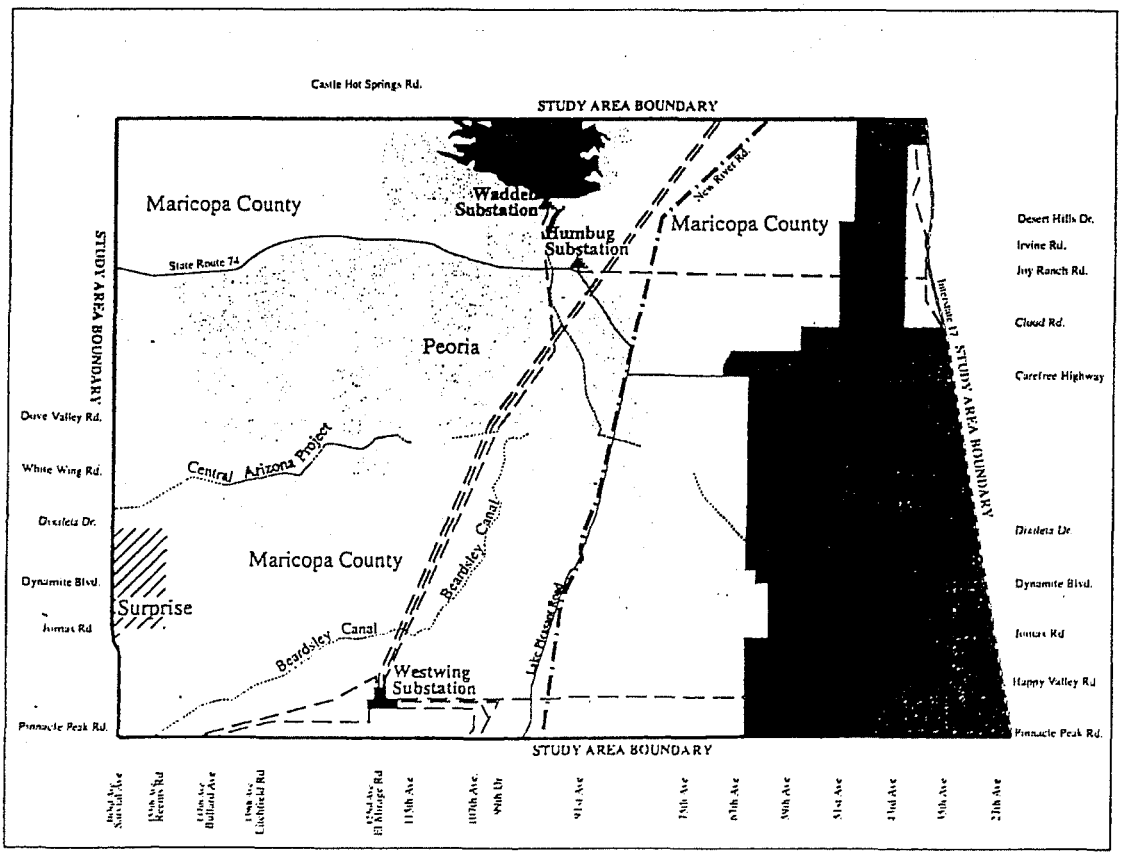
ENERGY ENHANCEMENT SITING PROJECT

Project Update

This is the second in a series of newsletters designed to keep you informed about APS' Northwest Valley Energy Enhancement Siting Project. APS and the environmental consulting firm, Dames & Moore, are working with the community in the area outlined on the map below to develop a plan to provide enough energy to serve the northwest valley over the next 10 years. Based on anticipated demand, facilities such as 230 kilovolt (kV) transmission lines, 69kV transmission lines, and transmission and distribution substations will need to be built, some even within the next few years. The purpose of this newsletter is to summarize what project work has occurred to date, particularly work with the community, and to identify activities coming up in the next few months.

Community Working Group Formed

After meeting with and interviewing about 30 individuals representing a cross-section of the study area, Dames & Moore formed a 13-member Community Working Group (CWG), who will work with the study team throughout the project. The CWG will provide information about community concerns and values, which will be integrated with technical information to develop APS' plan. Members of the CWG include agency representatives that have administrative jurisdiction within the project area such as the Bureau of Land Management; State of Arizona; Maricopa County; and the cities of Peoria, Phoenix, and Surprise; as well as school district, agriculture, real estate, and land development representatives. Citizens serving on



Maricopa County · Phoenix · Existing Transmission Line

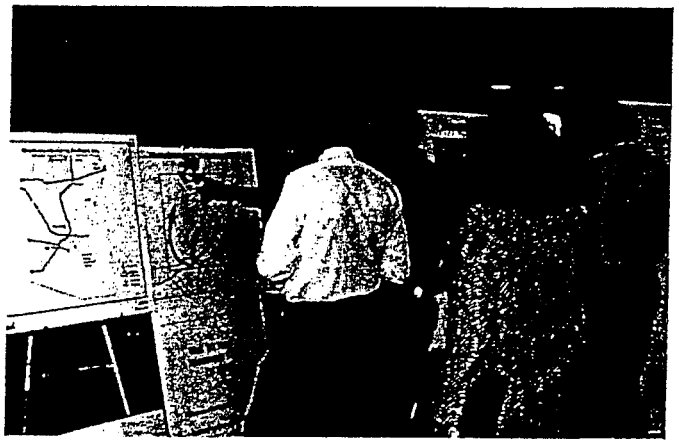
Peoria · Surprise · Existing Pipeline

NORTH · Not To Scale

FEBRUARY 1998

behalf of their communities also are on the CWG. Members were selected based on their knowledge of the project area, capability to commit the time required to participate in the CWG throughout the project, and willingness to be impartial.

The first meeting of the CWG was held in December 1997. Members met with the APS and Dames & Moore project team to become familiar with the project, and define roles and responsibilities of the participants. The second meeting of the CWG was held in early February 1998 to review and discuss the issues identified from public participation activities since the beginning of the project, examine the resource information that has been mapped to date, and discuss the planning criteria to be used to identify alternative locations for substations and transmission lines. Comments from the CWG members assisted in refining the information and criteria. As the project progresses, the project team will continue to present information to the CWG about the results of different studies and analyses.



First Round of Public Open Houses Held

APS hosted a series of public open houses in December 1997 to introduce the project to the community and gather initial public comments. A total of 75 people attended the meetings. Forty people attended the meeting Wednesday evening, December 10; 11 attended the meeting Thursday evening, December 11; and 24 people attended the meeting Saturday morning, December 13.

Four stations of graphic displays were manned by project team members to explain and answer questions about the need for the project and how APS plans for future facilities, environmental planning process, and public participation program.

At this early stage of the project, the majority of the comments and questions were general and are summarized below. The issues that were raised by the public will be addressed during the planning studies.

Need

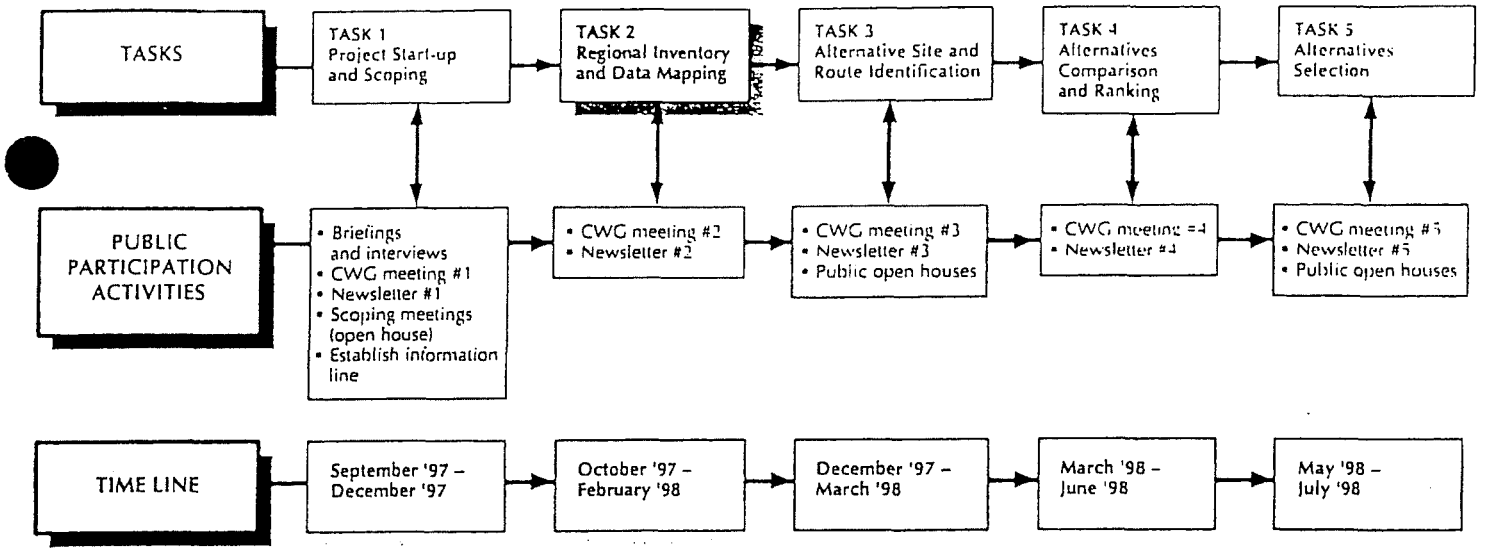
Most of the people commenting did not question the need for the project, but did want to understand how APS determines where and when there is a need for additional electrical facilities and the types of electrical facilities that may be needed.

Facility Siting

Several people provided their opinions regarding the potential locations of the facilities. Members of the CWG offered specific ideas that support compatibility of the project facilities with adjacent land uses. The public generally suggested areas to avoid and areas to consider for siting the facilities. A number of people suggested paralleling existing linear features such as transmission lines; however, several people in the neighborhoods adjacent to the utility corridor south of Happy Valley Road prefer that another transmission line not be placed parallel to the existing 230kV transmission line in that corridor.

Underground Placement

Several people asked about the feasibility of burying the transmission lines underground. This question was prompted by the public's concerns and perceptions about visibility, effects on property values, and safety of overhead lines.



Health and Safety

A few people expressed their concerns regarding the safety of overhead transmission lines. Also, a number of people requested an explanation about electric and magnetic fields and the public's general perception regarding potential effects of the fields.

Right-of-way

Individuals asked that landowners' property and ranching operations be respected during construction. One individual asked whether unwarranted access by the public onto existing rights-of-way can be curtailed to reduce disturbance to adjacent private properties.

Environmental Studies Underway

Dames & Moore is working on Task 2 of the planning process, the regional inventory to identify the human, natural, and cultural resources in the project area. One component of the inventory is to identify existing land uses (e.g., residential areas, commercial areas, parks and recreation areas, and infrastructure) as well as plans for future development. To accomplish this inventory, environmental planners reviewed data in the field, analyzed aerial photos, and contacted area developers, as well as the following agencies to determine their plans for development:

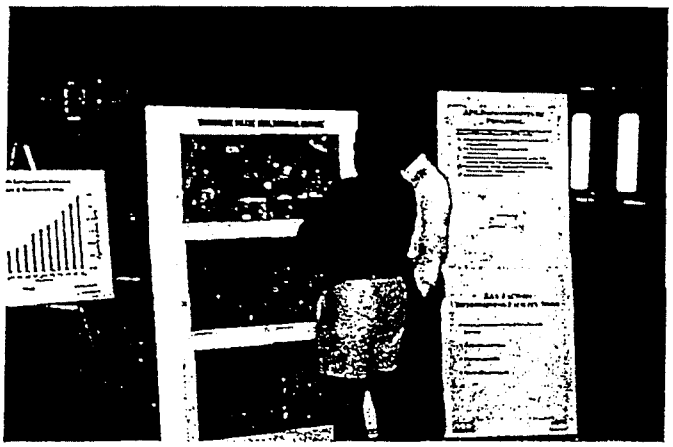
- Bureau of Land Management (U.S. Department of the Interior)
- Arizona State Lands Department
- Arizona Department of Transportation
- Maricopa Association of Governments
- Maricopa County
- Maricopa County Department of Transportation
- City of Peoria
- City of Phoenix
- City of Surprise

In addition to the land use studies, the area was inventoried for plants and wildlife that may be protected or have special status and for cultural resources that may be important in the area. Also, the planners began preliminary work on visual studies to determine how planned facilities may affect the scenic quality or aesthetics of the area from various viewpoints (e.g., residences, recreation areas).

Data gathered during the regional inventory have been mapped. The planners in conjunction with the CWG currently are in the process of identifying which land uses and other resources may be compatible with the project facilities. From this information, the planners will be developing a map illustrating areas that are opportunities for and constraints to siting project facilities.

Opportunities for Public Participation Continue

The next round of public open houses will be held this spring when various preliminary alternative sites and routes for the electrical facilities have been identified. The public will be encouraged to attend and review and comment on the planning process, regional inventory information, as well as the preliminary alternatives. A third newsletter will be sent to announce those meetings. In the meantime, a telephone line has been established for you to ask questions, request information, or be added to the mailing list. Call Dames & Moore at 861-7471 for more information.



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Dames & Moore
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V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

NEWSLETTER 3

V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

Project Update

This is the third in a series of newsletters designed to keep you informed about APS' Northwest Valley Energy Enhancement Siting Project. APS and the environmental consulting firm, Dames & Moore, are working with the community in the area outlined on the map below to develop a plan to provide enough energy to serve the northwest valley over the next 10 years.

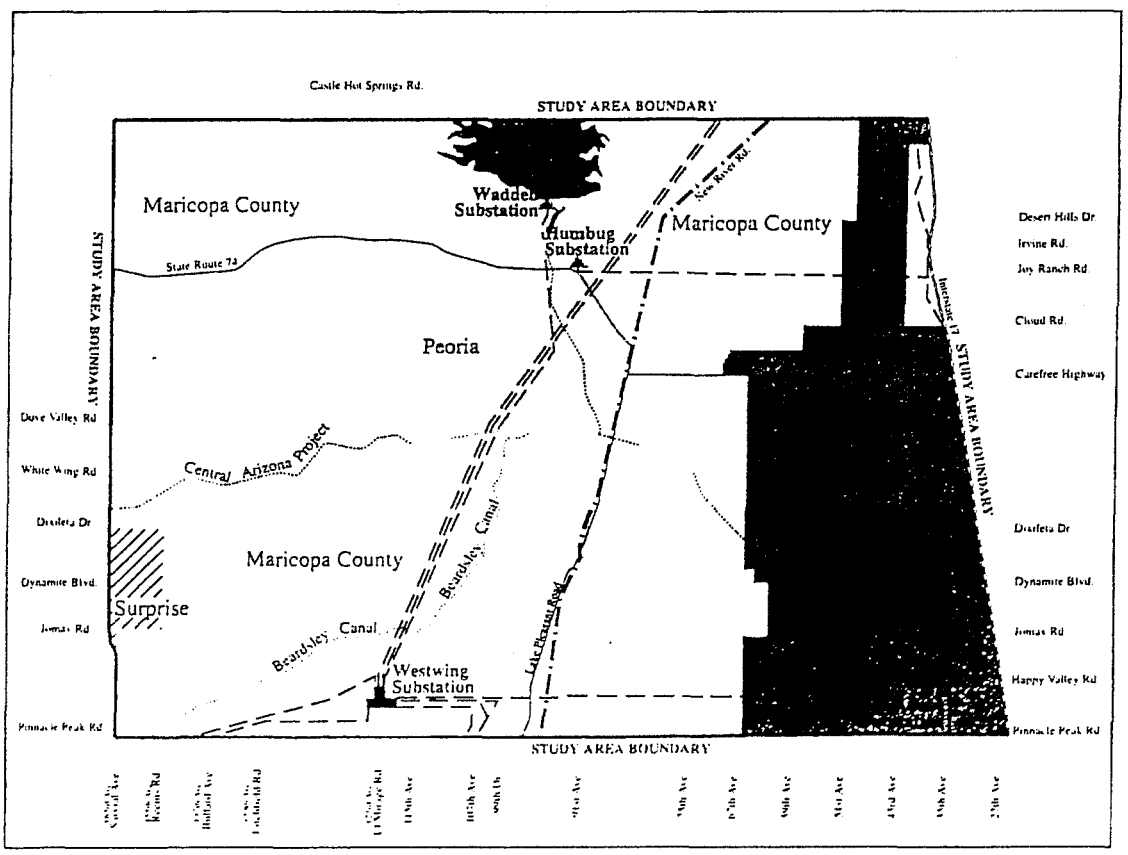
Open Houses to be Held

Open houses will be held on April 1 and 4 at the Las Brisas Elementary School Cafeteria (see reverse side of this newsletter.) The upcoming open houses are the second of three sets of meetings to update the public about the ongoing comprehensive siting study and involve the public in the planning process. The purpose of the open house is to present the alternatives locations for you to review and provide comments.

Since the last open houses in December, the study team has gathered and analyzed information about the existing and planned land uses, and natural and cultural resources. The team and the Community Working Group (CWG) have worked together to analyze the data and issues, and to identify alternative locations for 69kV and 230kV transmission lines and substation siting areas. The open houses will be informal for the public to review project displays and discuss the project individually with project team members. Your comments are important to us so please plan to attend!

The Next Steps

Once comments have been received and reviewed, and the alternative locations are refined, the team will conduct more detailed studies of the alternative locations, identify the potential impacts of the locations on the environment and land uses, and plan measures to mitigate the impacts. Then the team, in conjunction with the CWG, will compare the alternative locations and recommend locations for the public to review.



Maricopa County | Phoenix | Existing Transmission Line | Not To Scale

Peoria | Surprise | Existing Pipeline

MARCH 1998

PUBLIC OPEN HOUSE

PLEASE ATTEND!!

Open house dates and times:

Wednesday, April 1, 1998, 6:30–8:30 pm

Saturday, April 4, 1998, 10:00 am–12:00 noon

Both open houses will be held at:

Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(west of 55th Avenue north
of Pinnacle Peak Road)

Cindy L. Smith
Dames & Moore
7500 N. Dreamy Draw Dr., Ste. 145
Phoenix, AZ 85020

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V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

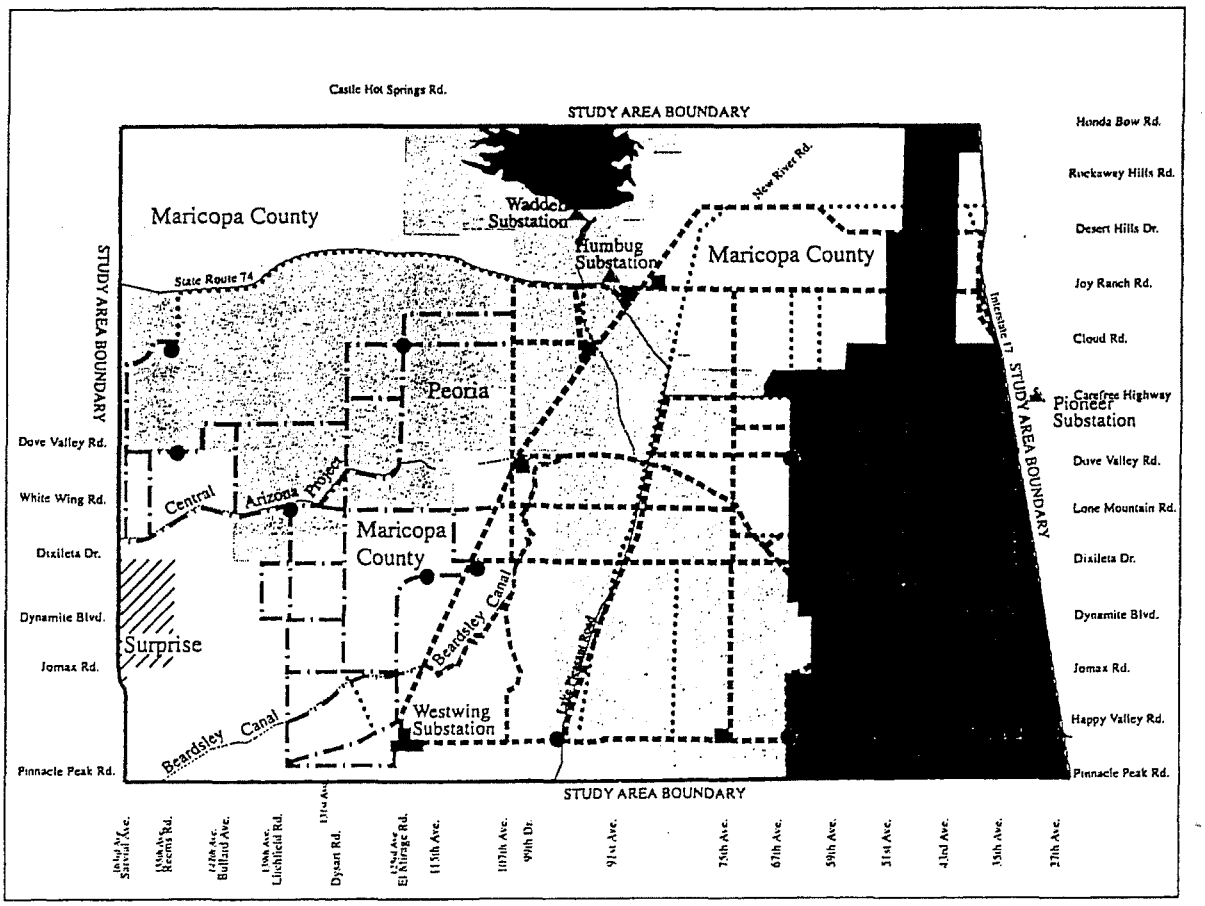
NEWSLETTER 4

V·A·L·L·E·Y

ENERGY ENHANCEMENT SITING PROJECT

Introduction

This is the fourth in a series of newsletters designed to keep you informed about the APS Northwest Valley Energy Enhancement Siting Project. The continued growth in the northwest valley translates into increased demand for electricity, which will soon exceed APS' capacity to deliver reliable power to the northwest valley. Considering this continued growth, APS recognizes and understands the need to supplement and enhance its electrical system. APS and the environmental consulting firm of Dames & Moore have been working with the community since September 1997 to develop a plan to provide enough energy to serve the area (see map) for the next 10 years.



Maricopa County
Peoria
Phoenix
Surprise

Preliminary 230kV and/or 69kV Transmission Line Alternatives
Preliminary 69kV Transmission Line Alternatives
Preliminary Transmission Line Alternative Recommended for Elimination
Preliminary 230kV/69kV Substation Siting Area
Preliminary 69kV Substation Siting Area

NORTH

Not To Scale

JUNE 1998

Public Review of Preliminary Alternatives

The 13-member Community Working Group (CWG), representing a wide range of views and interests in the project area, met in March to review each of the preliminary alternative transmission line routes and substation sites according to siting criteria established specifically for the project. CWG members provided input and comments helpful to suggest changes to the alternative routes and sites for presentation to the public.

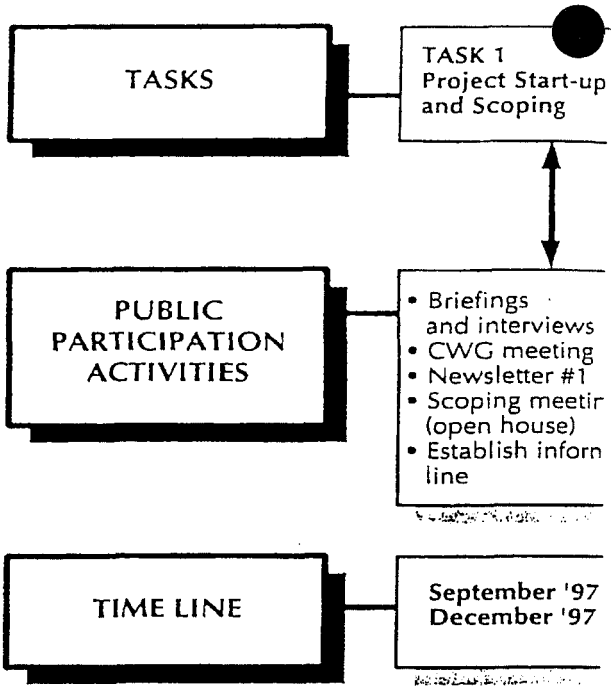
APS hosted public open houses on April 1 and 4, 1998 to provide an update of the project to the community and present the preliminary alternative routes and sites for public input. A total of 72 people attended the two open houses (36 people at each). Graphics on display helped explain the project, the environmental planning process including the siting criteria, and preliminary alternative transmission line routes and substation sites. Representatives of APS and Dames & Moore explained the project and answered questions.

Numerous opinions were expressed at the open houses and 35 people provided written comments. Several commentors supported co-locating facilities (e.g., paralleling existing transmission lines, roads, canals). However, others preferred that the facilities be located in areas that are least developed (e.g., away from residential areas).

Review of Preliminary Alternatives Continues

Following the open houses, each preliminary alternative transmission line route and substation site was reviewed considering the input from the CWG and public, and the environmental and engineering siting criteria. As a result, alternatives were modified or eliminated. The map shows the preliminary alternatives that will be carried forward to study in detail. *Note that not all of these alternatives will be constructed.*

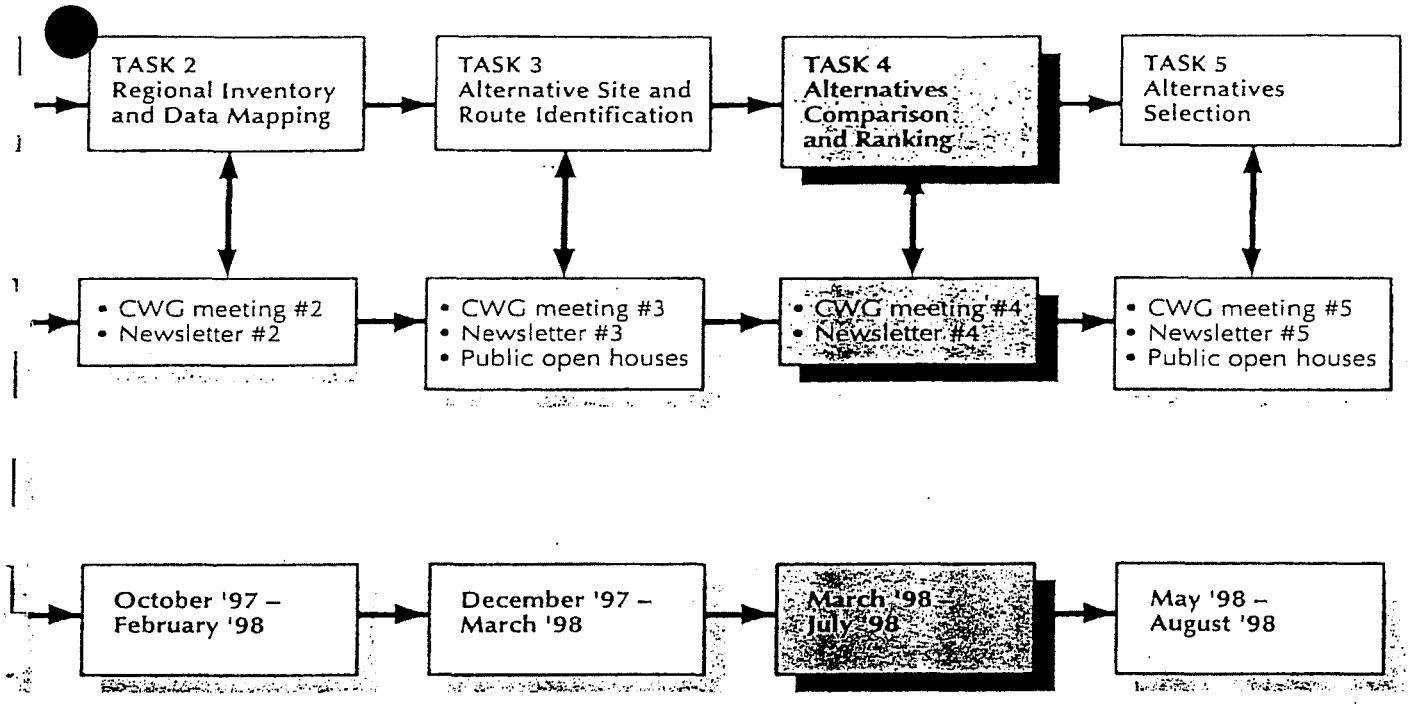
PLANNING ACTIVIT



Next Steps

Up to this time, the information gathered and mapped has addressed the regional project area. Now the study team will review and evaluate each of the remaining alternative routes and substation sites in detail (see flow chart). The information has been collected from a variety of sources including published and unpublished planning or environmental reports, maps, aerial photography, and knowledge of agency personnel. Fieldwork is being conducted to verify information and collect original data where existing information may be limited. The purpose of these activities is to comprehensively describe the environment as it currently exists and use this information for analysis. The information will focus on the human environment (e.g., existing and future land use, visual/aesthetic characteristics, recreation). Natural and cultural resources also will be addressed as needed.

S AND SCHEDULE



Using the information gathered, the study team will evaluate the potential impacts that project activities could have on the environment, specifically within and near the alternative routes and sites. Once the potential impacts have been determined, the study team will determine measures that would reduce and minimize the impacts on the environment.

The alternative routes and substations sites will be evaluated and ranked to identify those that are preferred. In addition to the environmental considerations, APS must evaluate the electrical performance, engineering constraints, system reliability, and costs of each alternative. The preferred and final alternative routes and sites will be selected based on a combination and balance of the environmental evaluation, engineering criteria, and public input.

Public Participation Opportunities

The next round of public open houses will be held later this summer (tentatively August) once the detailed studies, impact evaluation, and comparison of alternative routes and sites have been conducted. The public will be asked to comment on the results and the remaining alternative routes and sites. A fifth newsletter will be sent to announce those meetings. In the meantime, if you have questions, want additional information, or want to be added to the mailing list, call the telephone information line at 861-7471.

WW VALLEY

OFFICIAL NOTICE

APS

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ENERGY ENHANCEMENT SITING PROJECT

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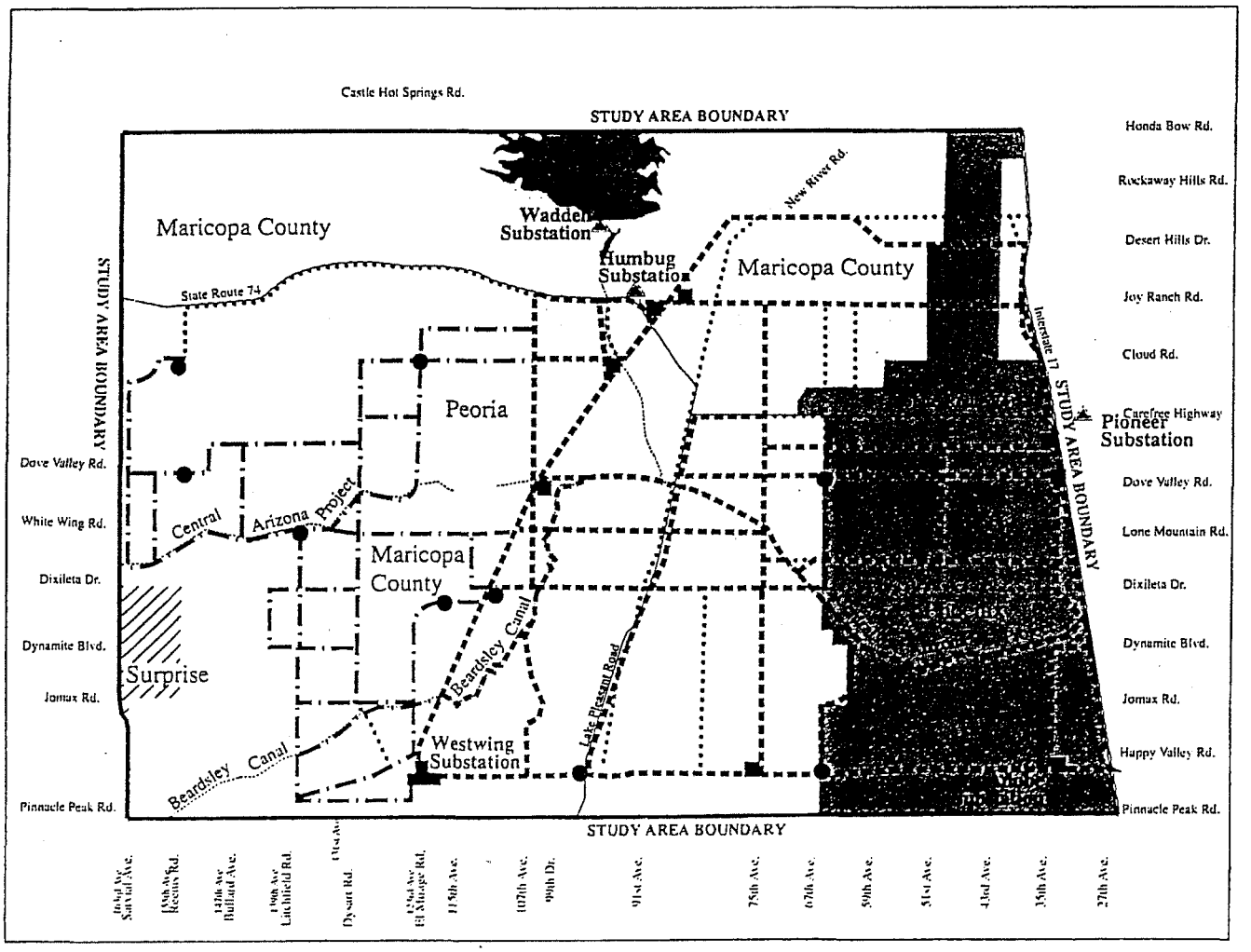
V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

NEWSLETTER 5

V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

Introduction

This is the fifth in a series of six newsletters designed to keep you informed about the APS Northwest Valley Energy Enhancement Siting Project. APS and the environmental consulting firm of Dames & Moore continue to work on a plan to build new energy facilities to better serve the rapidly growing population in the northwest valley. These facilities will enable APS to continue delivering reliable, high-quality power for the next 10 years.



Maricopa County
Peoria
Phoenix
Surprise

Preliminary 230kV and/or 69kV Transmission Line Alternatives
Preliminary 69kV Transmission Line Alternatives
Preliminary Transmission Line Alternatives Recommended for Elimination
Preliminary 230kV/69kV Substation Siting Area
Preliminary 69kV Substation Siting Area

NORTH
Not To Scale

AUGUST 1998

Alternatives Selection

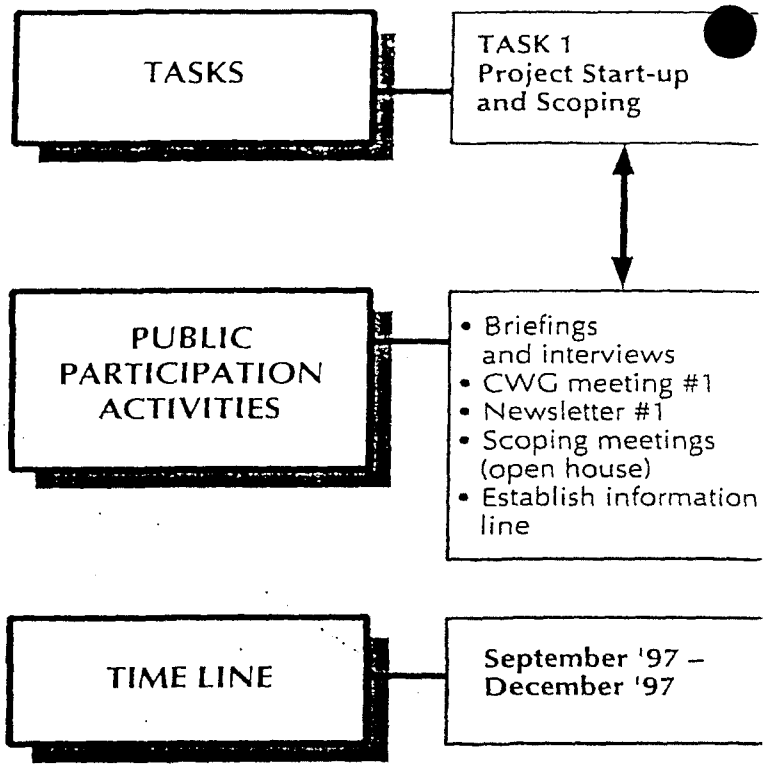
Since June 1998, the study team, which includes APS, Dames & Moore, and the Community Working Group (CWG), has reviewed and compared the various preliminary 230kV and 69kV transmission line routes and substation site alternatives (refer to map). To fully evaluate each option, published and unpublished planning and environmental materials, such as reports, maps, aerial photography, and agency information, were examined. In addition, fieldwork was conducted to verify this information and collect pertinent data. These activities allowed the study team to gain an accurate understanding of the existing environment and retrieve information for further analysis.

The information collected was used to compare the different alternatives, and the potential impacts that project activities could have on the environment. As a result, some alternatives were modified or eliminated. In order to lessen these potential impacts, measures that would minimize impacts on the environment were examined. One measure used to reduce the visual impact of the transmission line is a non-reflective surface for the transmission line conductors.

The next step in the process is to identify the preferred alternatives. To accomplish this, each route and substation site will be evaluated and ranked considering environmental criteria, electrical system standards, and comments from the CWG and public. APS will review the electrical performance, engineering constraints, system reliability, and costs of each alternative. The preferred and alternative routes and sites will be selected based on a combination of the environmental evaluation, engineering criteria, and public input.

V·A·L·L·E·Y

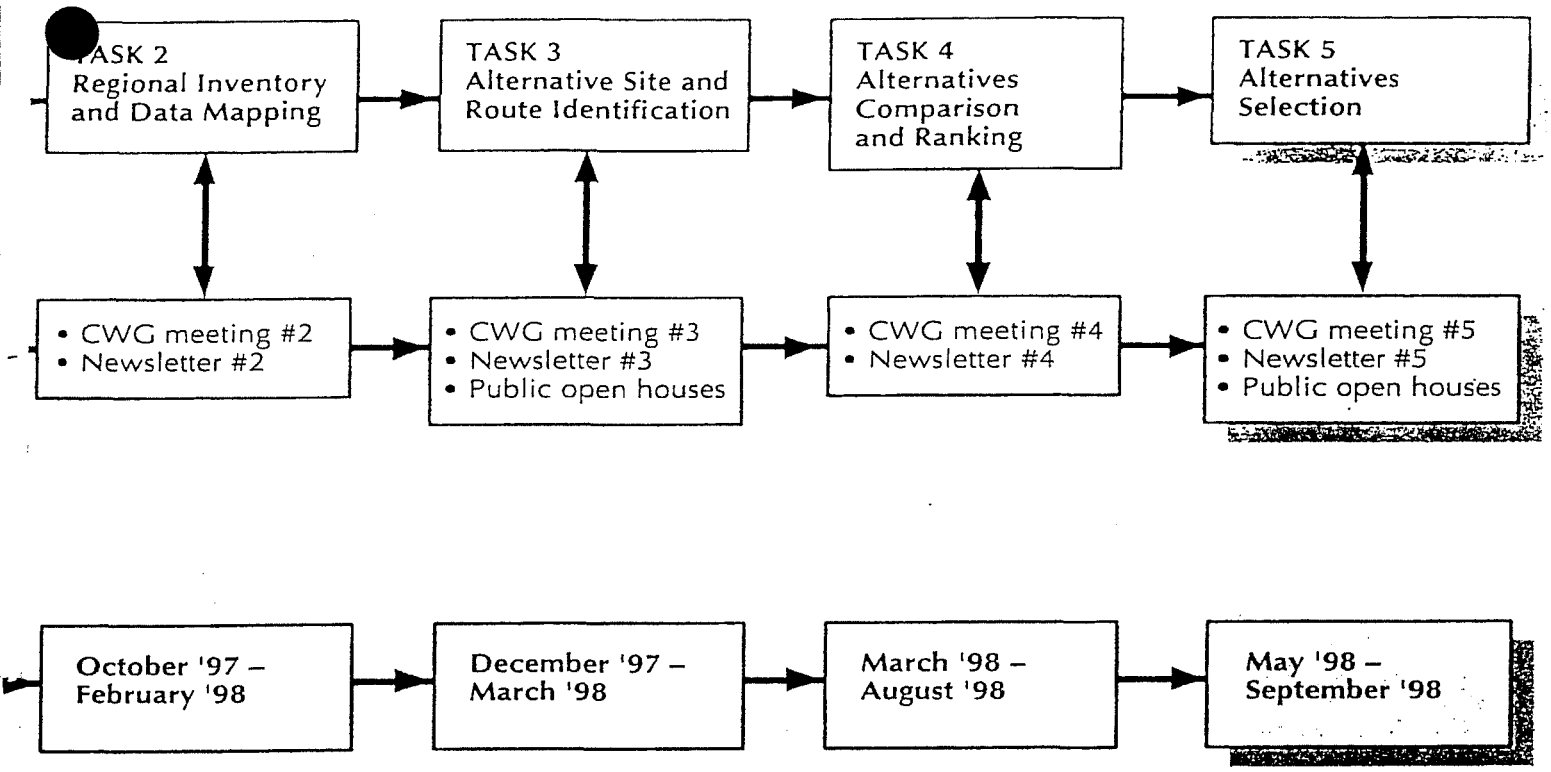
PLANNING ACTIVITIE



Opportunities for Public Participation Continue

The study team currently is considering several 230kV and 69kV transmission line routes and substation site alternatives. We invite the public to review and comment on the refined alternative routes and sites through our public participation opportunities. At a later date (to be determined), APS will present its recommendations for 230kV transmission line routes, 230kV substation sites, and the complete planning process results in a hearing before the Arizona Power Plant and Transmission Line Siting Committee (APPTLSC), a part of the Arizona Corporation Commission. The APPTLSC has the responsibility for approving the proposed 230kV transmission line routes and substation sites. The proposed 69kV transmission line routes and 69kV substation sites are not required to go through hearings before the APPTLSC. APS also will work with the local jurisdictions to incorporate the 230kV and 69kV transmission line routes and substation sites into their General Plans for future planning purposes.

AND SCHEDULE



The final round of public open houses will be held on September 17 and 19, 1998 at the Las Brisas Elementary School. You are encouraged to attend and comment on the refined alternative routes and sites. The open houses will be informal to allow people to review project displays and discuss the project individually with project team members. Your input is important to us so please plan to attend!

If you are unable to attend, please call the telephone information line at 861-7471 to ask questions or request information.

The sixth and final newsletter will be distributed this fall, after APS has had the opportunity to evaluate the public's comments from the last set of open house meetings. The intent of the sixth newsletter is to list the 230kV and 69kV transmission line routes and substation sites that APS will permit and construct.

PUBLIC OPEN HOUSES

PLEASE ATTEND!!

Open house dates and times:

Thursday, September 17, 1998,
6:00-8:00 pm
Saturday, September 19, 1998,
10:00 am-12:00 noon

Both open houses will be held at:

Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(west of 55th Avenue north
of Pinnacle Peak Road)

ENERGY ENHANCEMENT SITING PROJECT

V·A·L·L·E·Y

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V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

NEWSLETTER 6

V·A·L·L·E·Y ENERGY ENHANCEMENT SITING PROJECT

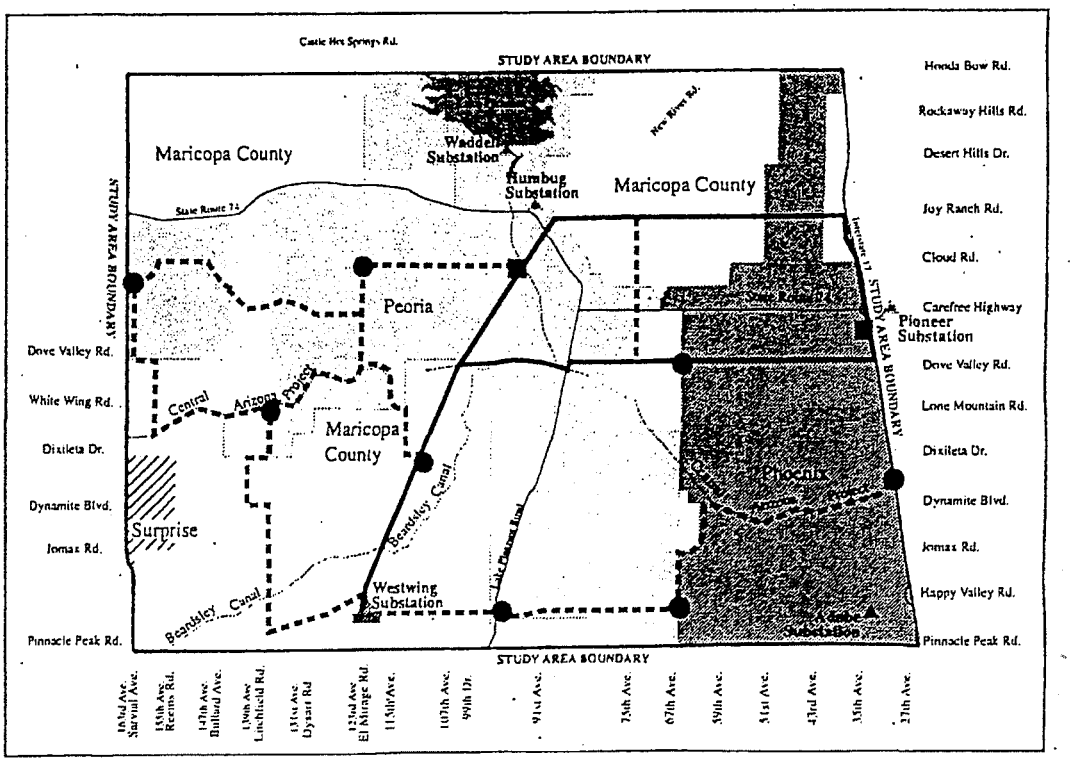
Introduction

This is the sixth in a series of newsletters designed to keep you informed about the APS Northwest Valley Energy Enhancement Siting Project, a comprehensive and systematic environmental planning process which began in September of 1997. Throughout this process, APS and the environmental consulting firm of Dames & Moore have studied and identified numerous possible transmission line routes and substation sites to serve the rapidly growing population in the northwest valley. After extensive consideration and review, APS has selected preferred transmission line routes and substation sites. This newsletter will describe the preferred routes and sites, and will explain upcoming steps in the process.

APS Preferred Routes and Substation Sites

The APS preferred system of 230 kilovolt (kV) and 69kV transmission line routes and substation sites for the northwest valley is shown on the map below.

The APS preferred route for the 230kV transmission line, which would deliver power in bulk from Westwing Substation to the northwest valley area, would initiate at the Westwing Substation at about 123rd Avenue between Happy Valley and Pinnacle Peak roads. The route, shown as a solid line on the map, would leave the Westwing Substation in a northeast direction, paralleling the existing 500kV transmission line, to an APS preferred substation site at Cloud Road. The line then would continue north



Maricopa County
Peoria
Phoenix
Surprise

APS Preferred 230/69kV Transmission Line Routes
APS Preferred 69kV Transmission Line Routes
APS Preferred 230kV/69kV Substations
APS Preferred 69kV Substations

NORTH
Not To Scale

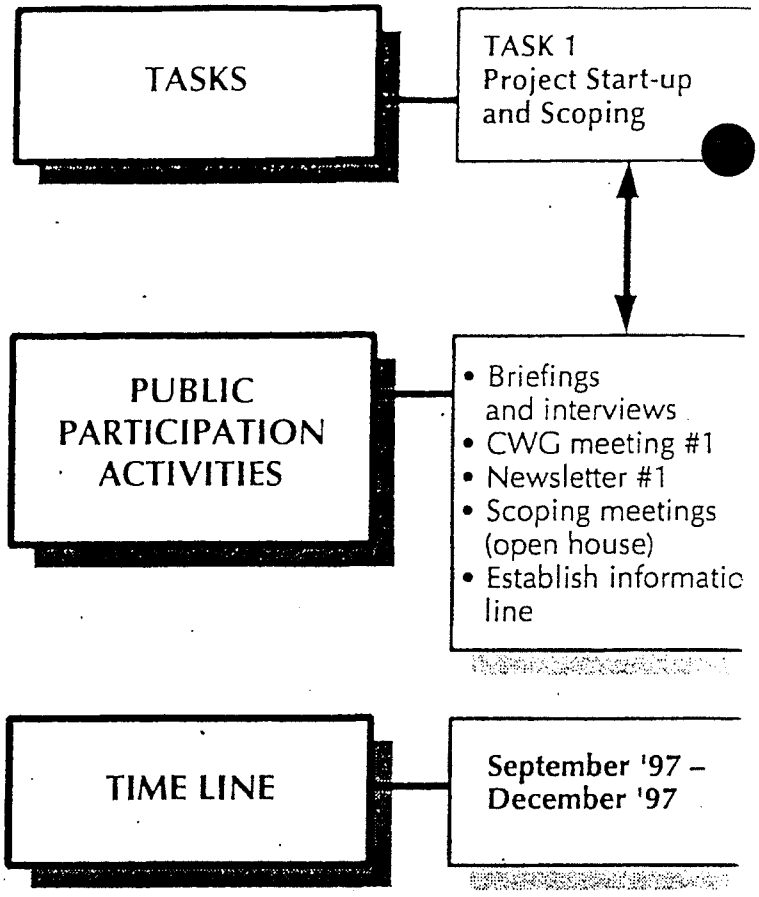
NOVEMBER 1998

and follow an existing 69kV transmission line parallel to Joy Ranch Road, extending east to Interstate 17. The 230kV transmission line route would continue south along Interstate 17 to an APS substation site between the Carefree Highway and Dove Valley Road. The 230kV transmission line route would parallel Dove Valley Road, creating a loop for system reliability back to the existing 500kV line to the west. APS anticipates needing the 230kV facilities within five to ten years.

The APS preferred lower voltage 69kV transmission system (shown as a dashed line on the map), which would incorporate existing 69kV lines in the area and distribute power to neighborhoods within the northwest valley, consists of several sections. The section that is needed most immediately is in the southern portion of the project area. The 69kV transmission line would initiate at and head east from the Westwing Substation. The route would connect to two APS preferred 69kV substation sites, while paralleling the existing 230kV transmission line between Happy Valley and Pinnacle Peak roads to 67th Avenue. There, the route would turn to the north along 67th Avenue and continue to the Central Arizona Project canal. The 69kV line would parallel the canal east to an APS preferred substation site near Interstate 17 between Dixileta Drive and Dynamite Boulevard. APS anticipates that design and construction on a portion of this section of 69kV line will be completed within the next few months. The remaining portion of 69kV line and substations will be completed by the year 2000.

Other APS preferred substation sites and sections of 69kV transmission lines needed within the next five to ten years would parallel the APS preferred 230kV transmission line (solid line on the map). Along the preferred 230kV line, APS will underbuild 69kV transmission lines on the same poles as the APS preferred 230kV transmission line. In addition, a section of 69kV line is proposed along 75th Avenue between Joy Ranch and Dove Valley roads (dashed line on the map).

V·A·L·L·E·Y

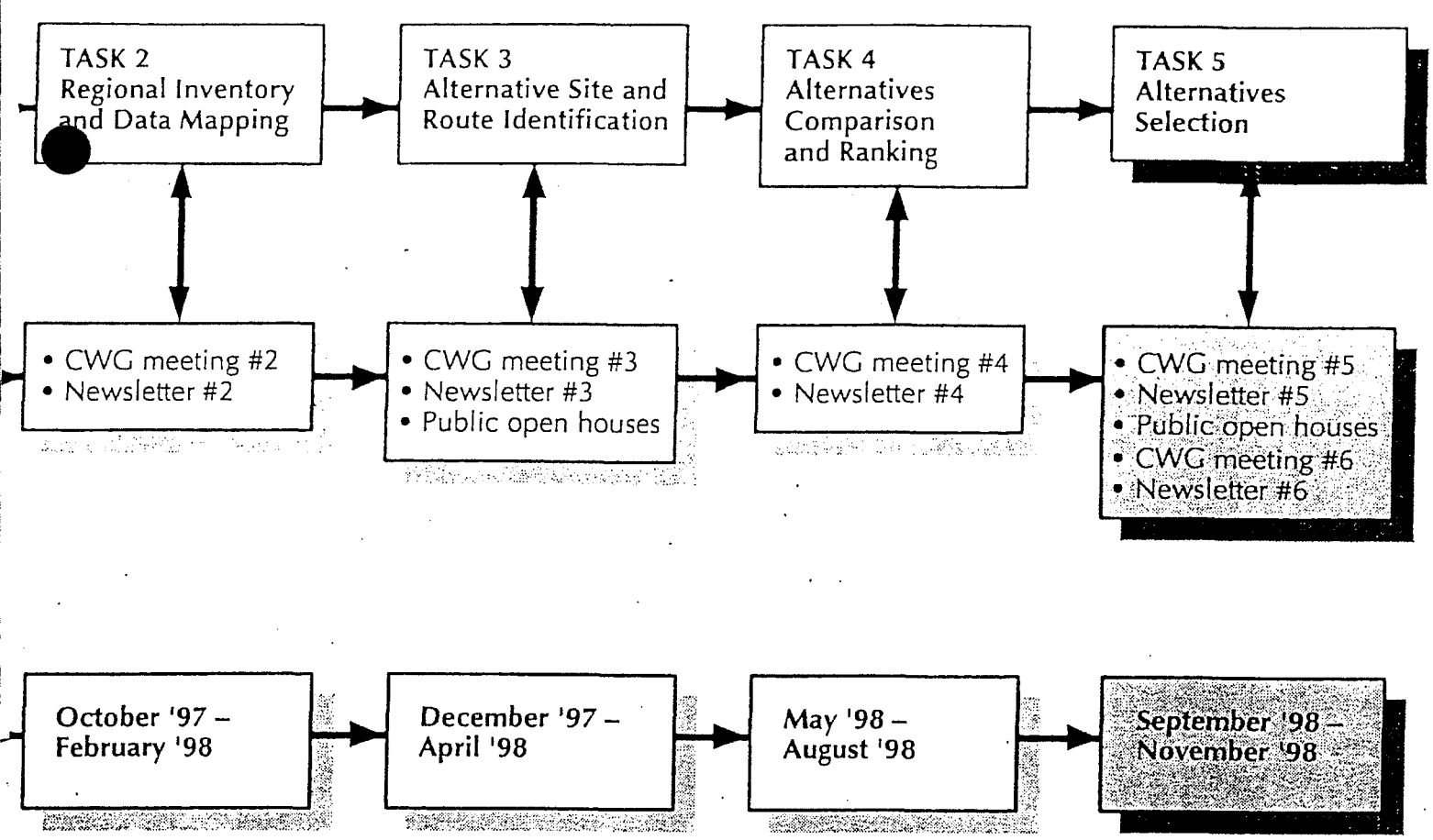


There are several APS preferred substation sites and sections of 69kV transmission line routes that will be needed to the west of the APS preferred 230kV line (also shown as dashed lines). However, construction of these substations and transmission lines will be determined by future growth and need.

What Happens Next?

The next step for APS will be to acquire the land for the substation sites and right-of-way for the 69kV transmission line section in the southern portion of the project area by December 1999 for design and construction in the year 2000.

As mentioned above, APS anticipates needing the 230kV facilities within five to ten years. In the state of Arizona, approval of a 230kV transmission line route is within the jurisdiction of the Arizona Power Plant and Transmission Line Siting Committee (APPTLSC), a committee that is part of the Arizona Corporation Commission. APS will prepare and submit an application for a Certificate of Environmental Compatibility to the APPTLSC for processing and hearing by June 2000.



Planning and Selection Process

To identify the preferred alternatives, each 230kV and 69kV transmission line route and substation site was evaluated and ranked considering environmental criteria, electrical system standards, and comments from the Community Working Group (CWG) and public. At key points during the process, the study team and the CWG worked together to discuss community concerns, examine environmental and engineering issues, and compare and refine the alternative routes. In addition, public open houses were held in December 1997, April 1998, and September 1998 to present and explain project information and obtain public comments and concerns. These public comments were incorporated into the ranking and evaluation of the alternative routes and sites facilitated by Dames & Moore.

APS reviewed the electrical performance, engineering constraints, system reliability, and economics of each alternative. After extensive review and consideration, the APS preferred routes and sites were selected based on a combination of the environmental evaluation, engineering criteria, and public input.

Public Participation

With the selection of the preferred alternative, the environmental planning and public participation component of the project is complete. The comments received from you, the public, during the planning process and the commitment of the CWG members were very helpful and greatly appreciated by Dames & Moore and APS.

Since this will be the final newsletter, thank you for your interest and valuable assistance on the project! If you have additional comments or questions, please call the telephone message line at 861-7471.

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Phoenix, AZ 85020

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NW VALLEY ENERGY ENHANCEMENT SITING PROJECT

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NW VALLEY

ENERGY ENHANCEMENT SITING PROJECT

EXHIBIT J-2
COMMUNITY WORKING GROUP
ROSTER AND MEETING SUMMARY

NORTHWEST VALLEY SITING PROJECT
COMMUNITY WORKING GROUP INTERVIEWS

Federal

- Rich Hanson, Bureau of Land Management

State

- Sheila McAfferty, Arizona State Lands Department

County

- Neil Urban, Maricopa County Planning Department
- Aaron Iverson, Maricopa County Department of Transportation

City

- Jolene Ostler, City of Phoenix Planning Department
- Al Deshazo, City of Surprise
- Ken Forgia, City of Peoria
- Betty Lynch, Peoria Chamber of Commerce
- Phil Bloom, City of Peoria Neighborhood Services Department

School Districts

- Ed Gillam, Peoria Unified School District No. 11
- Salem Ashatti, Deer Valley Unified School District

Business and Industry

- Bruce Agenter, Southwest Builders
- Debbie Wilden, Northwest Valley Chamber of Commerce
- John Kimmeries, Kimmeries Aviation
- Ron Hilgardt, CMX Group
- Jim Miller, John F. Long Properties
- Ferrin Squires, Cactus Land Ranch
- Jim Norton, Arizona Rock Products Association
- Allen Williams, Pensus Group
- Gary Torhjelm, Lake Pleasant Estates
- Steve Campbell, JD Campbell Realty

- Steve Voss, Larson, Voss Associates, Inc
- Gary Knight, Knight Transportation
- Kent Forsey, Paine Webber
- Ken Estrada, Del Webb

Individuals

- Vonda Culp
- Joe Hull
- J.D. Campbell
- Josi Campbell

NORTHWEST VALLEY SITING PROJECT
COMMUNITY WORKING GROUP MEMBERS

Federal

- Rich Hanson, Bureau of Land Management

State

- Mark Keller, Arizona State Lands Department

County

- Neil Urban, Maricopa County Planning Department

City

- Debra Stark, City of Peoria Planning Department
- Jim Mathien, City of Phoenix Planning Department
- Ellis Perl, City of Surprise

School Districts

- Ed Gillam, Peoria Unified School District No. 11

Individuals

- Doug Nelson, Cactus Lane Ranch
- Steve Campbell, JD Campbell Realty
- Steve Voss, Larson, Voss Associates, Inc.
- Vonda Culp
- Gary Knight, Knight Transportation
- Joe Hull

NORTHWEST VALLEY SITING PROJECT
COMMUNITY WORKING GROUP MEETING SUMMARY

APS met with the CWG six times throughout the planning process. An additional meeting was held in July 2002 during the North Valley Project. The meetings were generally two hours in length and covered a variety of topics. Each of the meetings is summarized below.

Meeting 1/December 1997 – The primary function of the first CWG meeting was to provide background information on the mission of the CWG, define the purpose and need for the project, describe the environmental siting process and schedule, and review the public involvement activities and project schedule.

Meeting 2/February 1998 – The second CWG meeting focused on a review of the project description and status, the results of scoping, assessment issues (e.g., visual, land use), regional environmental inventory results, and an introduction to preliminary siting criteria.

Meeting 3/March 1998 – The main emphasis of the third CWG meeting was the development of preliminary alternatives. The group reviewed siting criteria developed to identify areas of opportunities for and constraints to siting transmission lines and substation sites. These criteria were used to develop preliminary alternative transmission line routes and substation sites. An integral part of the planning process was determining which alternatives should be eliminated from further study or brought forward for detailed analysis.

Meeting 4/June 1998 – The purpose of the fourth CWG meeting was to select alternatives for further evaluation. The group as a whole made recommendations and agreed upon the selection of alternatives. The meeting also reviewed the detailed inventory, impact assessment, and mitigation planning. Examples of mitigation were examined during the meeting.

Meeting 5/September 1998 – The fifth CWG meeting was spent examining the environmental screening that was used to rank alternatives for environmental preference and discussing possible mitigation measures and planning. APS explained their alternatives selection criteria. The group made recommendations for the preferred routes and substation sites.

Meeting 6/November 1998 – During the sixth and final CWG meeting the group reviewed APS' alternatives selection process, public and agency issues and concerns, and discussed the final alternatives.

Meeting 7/July 2002 – This meeting was held to advise members of the upcoming filing of an application for a CEC and update them on the status of the 69kV components of the project.

NORTH CENTRAL FACILITY SITING PROJECT
COMMUNITY WORKING GROUP INTERVIEWS

State

- Jim Gross, Arizona State Lands Department

County

- Ann Blech, Maricopa County Department of Transportation
- Supervisor Andy Kunasek, Maricopa County Board of Supervisors
- Mark Wheaton, Maricopa County Planning Department

City

- Lynn Favour, City of Phoenix Planning Department
- Jim Mathien, City of Phoenix Planning Department
- Bruce Swanson, City of Phoenix Parks, Recreation, and Library Department
- Usama Abujbarah, Town of Cave Creek

School Districts

- Skip Brown, Paradise Valley Unified School District
- Tom Boone, Deer Valley Unified School District
- Joe Ewan, ASU Landscape Architecture and Planning Department

Land Development

- Dan Freese, Anthem by Del Webb
- John Svechovsky, CMX Group, Inc.

Neighborhood/Local Area

- Joseph Hudock, Desert View Village Planning Committee
- Clancy Jayne, North Gateway Village Planning Committee
- Barbara Maroney, North Gateway Village Planning Committee
- Diane Sangirardi, Deer Valley Village Planning Committee
- Carol Caldwell, New River
- Gary Giordano, Save New River
- Lynn Grant, New River/Desert Hills Community Association
- Jerry Jacka

- Bud Redeker, Desert Hills Improvement Association
- Steve Sorenson, Tatum Highlands
- John Wenner, Tatum Highlands
- Woody Woods

NORTH CENTRAL FACILITY SITING PROJECT
COMMUNITY WORKING GROUP MEMBERS

State

- Diane Crawford, Arizona State Lands Department

County

- Tom Loomis, Maricopa County Flood Control District
- Neil Urban, Maricopa County Planning Department
- Chuck Williams, Maricopa County Department of Transportation

City

- Charles Fitzhugh, City of Phoenix Planning Department
- Ron Short, Town of Cave Creek Planning Department
- Bruce Swanson, City of Phoenix Parks, Recreation, and Library Department

School Districts

- Skip Brown, Paradise Valley Unified School District
- Sandra Kube, Deer Valley Unified School District

Land Development

- Matt Christensen, Anthem by Del Webb
- Shelby Moores, CMX Group, Inc.

Utilities

- Melissa Chiechi, Western Area Power Administration

Neighborhood/Local Area

- Steve Beurerlein, Deer Valley Village Planning Committee
- Gary Giordano, Save New River
- Lynn Grant, New River/Desert Hills Community Association
- Ray Griswold, North Gateway Village Planning Committee
- Joseph Hudock, Desert View Village Planning Committee

- Teri Lynch, Desert Hills
- John Wenner, Tatum Highlands

NORTH CENTRAL FACILITY SITING PROJECT
COMMUNITY WORKING GROUP MEETING SUMMARY

APS met with the CWG five times throughout the planning process and once for a group "field trip" of the study area. An additional meeting was held in July 2002 during the North Valley Project. The meetings were generally two hours in length and covered a variety of topics. Each of the meetings is summarized below.

Meeting 1/August 1999 – The first meeting provided information on the role and responsibilities of the CWG members, described the environmental planning process and public involvement activities, defined the purpose and need for the project, and provided a project description.

Meeting 2/November 1999 – The second CWG focused on a review of project description and status, public comments received to date, regional environmental inventory results, and an introduction to preliminary system planning and siting criteria.

Meeting 3/January 2000 – The emphasis of the third CWG meeting was the development of preliminary siting alternatives. The group reviewed land use data and compatibility mapping developed to identify opportunities for and constraints to siting transmission lines and substation sites. These criteria were used to develop preliminary alternative transmission line routes and substation sites.

Field Trip/March 2000 – The CWG took a van field trip of the study area. This trip provided group members with the opportunity to review preliminary alternatives and siting opportunities or constraints first-hand.

Meeting 4/June 2000 – The fourth meeting provided a status of the project and the public participation activities. The group was then presented with information on the impact assessment portion of the planning process, including land use and visual resource impacts. The project team discussed how alternatives are screened and compared. Based on group discussion, routes were recommended to be eliminated or carried forward.

Meeting 5/October 2000 – APS preferred routes and substation sites were presented to the CWG at the final group meeting. A summary of public comment and route preference, and a review of the APS selection process were also provided.

Meeting 6/July 2002 – This meeting was held to advise members of the upcoming filing of an application for a CEC and update them on the status of the 69kV components of the project.

EXHIBIT J-3
NEWSPAPER ARTICLES

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THE DESERT ADVOCATE

The Oldest Newspaper in Northern Maricopa County
Est. 1989

Vol. 12, No. 17 March 13, 2002

APS planning area substations, power lines

DESERT FOOTHILLS – Arizona Public Service is planning to construct five electric substations and three major power lines in the near future. The substations are needed to serve the rapidly growing Desert Foothills area.

Locations of the substations will be 12th Street and Desert Hills Drive, 40th Street and Lone Mountain Drive, 23rd Avenue and Happy Valley Road, Misty Willow Drive and Central Avenue, and I-17 and Dynamite Boulevard.

The 12th Street and Desert Hills Drive location, referred to by APS as the Gavilan Peak site, is on 10 acres APS is leasing from the State Land Department. Site construction

APS

Please see page 10

APS *Cont...*

From page 1

may begin early 2003.

Known as the Dove Valley site, the 40th Street and Lone Mountain Drive location is also being leased from State Land. Site construction there is scheduled to begin by the end of 2002.

The 23rd Avenue and Happy Valley Road location, called the Stout site, is on land owned by APS. Construction is slated to begin by the end of 2002.

The Misty Willow site is also owned by the public utility, with construction not currently scheduled.

The location east of I-17 and one mile north of Dynamite is the North Gateway Water Reclamation Plant site, land owned by the City of Phoenix. APS is currently working with the City to tie down a substation on the property. Construction of the substation is currently being driven by the need for power at the water reclamation site. At this time construction is not scheduled to begin in 2002.

Three other substations are identified on an APS North Central Siting Study. APS has not yet purchased property for those sites. The substations will be needed sometime from 2005-2009.

APS is also planning construction of three power lines in the area–New River to Dove Valley, Dove Valley to Jomax, and Gavilan Peak to North Gateway.

Easements for the New River to Dove Valley and Dove Valley to Jomax power-line corridors are currently being obtained by APS. Construction of portions of these lines may begin in early 2003. The Gavilan Peak to North Gateway corridor is on State land. APS has submitted a request for an easement on this property, which is also being driven by the power requirements of the new water reclamation plant.

The North Central Siting Study shows a new 230kV transmission line from Phoenix going north along I-17 to just south of Happy Valley Road, then turning east and terminating at the Pinnacle Peak Station. APS is finalizing documentation to file with the State Siting Committee, and is expected to file for a Certificate of Environmental Compatibility (CEC) by the summer of 2002. The route of the line requires approval by the Arizona Corporation Commission. Obtaining of easements and construction will not begin until the Corporation Commission has granted a CEC.

For more information on the siting study, contact APS official Maria Arellano at 602-493-4478.

HELP ?

SITES NEAR FOR NEW POWER LINES IN FAR NORTH VALLEY

Arizona Republic; Phoenix, Ariz.; Jul 28, 2000; Brent Whiting. The Arizona Republic;

*Sic:*221112 4931*Duns:*00-690-1995
Sub Title: [Final Edition]
Start Page: 1
ISSN: 08928711
Personal Names: Arellano, Maria
Companies: Arizona Public Service*Ticker:*APSEL*Duns:*00-690-1995*Sic:*221112 4931

Abstract:
Electrical demand in this high-growth area is getting stretched to capacity. The 186-square-mile APS study area runs roughly from Deer Valley Road on the south to Interstate 17 on the west, Photo View Road on the north and a jagged eastern boundary running from Scottsdale Road north roughly along 56th Street.

Full Text:
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Site recommendations soon will be made for additional electrical substations and transmission lines to keep pace with explosive growth in the far north Valley.

"We expect our recommendations to be made in late August or early September," said Maria Arellano, a spokeswoman for **Arizona Public Service** Co.

Her announcement followed two informal meetings last week at which APS officials discussed site options. APS is expected to announce the final sites, and the public will have an opportunity to respond to the selections.

Last week's open houses marked the final round of such meetings in a selection process that began a year ago to determine the site for substations and 69- and 230-kilovolt transmission lines in the scenic area from north Phoenix to New River.

Electrical demand in this high-growth area is getting stretched to capacity. The 186-square-mile APS study area runs roughly from Deer Valley Road on the south to Interstate 17 on the west, Photo View Road on the north and a jagged eastern boundary running from Scottsdale Road north roughly along 56th Street.

The area includes the Cave Buttes Recreation area and the proposed Sonoran Preserve.

Residents have until next Friday to voice their view on the matter.

Comments can be mailed to EPG Inc., 4350 E. Camelback Road, Suite G-200, Phoenix, AZ 85018.

Further information is available at http://siting.apsc.com, the siting project Web site.

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Sonoran News
July 12, 2000

Power line meetings set

by Curtis Riggs

DESERT HILLS – Public meetings concerning the placement of power lines in the area will take place next week. The meetingS are being held as part of the North Central Facilities Citing Project.

An open house hosted by consultants on the project, Environmental Planning Group, will be held from 6 to 8 p.m. on Tuesday, July 18, in the multi-purpose room at Desert Willow Elementary School, 4332 E. Desert Willow Parkway. The meeting concerns future placement of 69-KV power lines in the vicinity of Carefree Highway. The placing of a 230-KV line is also being considered.

On Thursday, July 20, an open house will be held at Desert Mountain Elementary School, 35959 N. 7th Avenue in the multi-purpose room.

PARADISE VALLEY INDEPENDENT

JULY 19-25, 2000

Open house is slated for APS siting project

Utility to choose alternatives in August

By TOM BARRY
Independent Newspapers

A third and final round of open houses is being held this week to help Arizona Public Service finalize alternative routes and locations for proposed power transmission lines and substations to serve the fast growing north-central Valley.

The utility is seeking the public's input as part of its North Central Facilities Siting Project, a year-long study that began in July 1999 and will be completed in August.

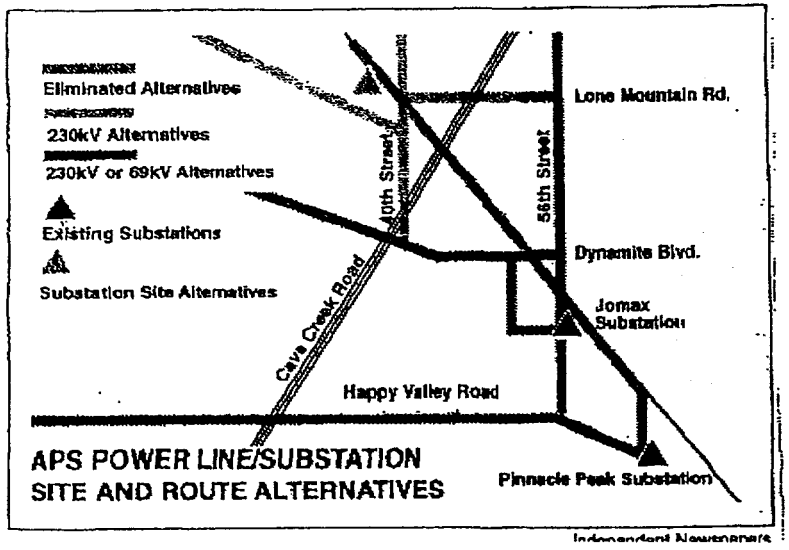
The project encompasses 186 square miles in north-central Phoenix and Maricopa County. APS plans to build a 230 kilovolt substation, up to five 69kV substations, and install 230kV and 69kV power lines throughout the area.

"This is an ongoing, comprehensive siting study to determine the potential locations of those facilities needed to accommodate growth in the region well into the next decade and beyond," said Brad Larsen, APS project manager.

"Many of these facilities will be built over the next 15 years, but some are needed as early as 2001."

This spring, APS finalized site and route selections for a similar

See ■ APS, Page 10



Independent Newspapers

■ APS

From Page 1

project, which involves the installation of nearly 20 miles of 230kV and 69kV lines and three substations in northeast Phoenix south of Happy Valley Road, between Cave Creek and Scottsdale roads.

He said the open houses are designed to allow the public another opportunity to give APS input on the proposed alternatives (see accompanying map). Since the project's inception, the utility has held two series of open houses which helped to address aesthetic, logistical and environmental concerns.

APS is inviting the public to attend its final open house from 6-8 p.m. Thursday, July 20, in the multipurpose room at Desert Mountain Middle School, 35959 N. 7th Ave. in Desert Hills (north of Carefree Highway, just south of Cloud Road).

Currently, Environmental Planning Group, Inc., an environmental consulting firm hired by APS, is conducting an impact assessment to evaluate the potential effects of land use and visual resources from the construction of the proposed facilities. The results will help narrow the alternatives and will be provided at Thursday's open house.

To date, Mr. Larsen said public comments have persuaded APS to utilize an existing east-west 230kV corridor just south of Happy Valley Road to connect its Pioneer substation with the Pinnacle Peak substation, at 64th Street and Pinnacle Peak Road.

APS has also identified an alternative route for a 230kV or 69kV line that extends east from Lone Mountain Road at Interstate 17 to 56th Street and Jomax Road, connecting the Pioneer substation with its Jomax substation.

In northeast Phoenix, APS is considering as many as three sites for a 69kV substation, including two sites on 40th Street, between Lone Mountain and Carefree Highway, and a third site at 48th Street and Carefree.

Alternative routes that have been suggested for elimination include the 230kV alternatives along Desert Hills Road and Carefree Highway. Some members of the public have noted Carefree Highway's scenic designation, believing that the aesthetic impact would be too great along this route, said Mr. Larsen.

In an effort to keep customers and residents in the north-central Valley abreast of the project, APS mailed more than 40,000 newsletters this week. A final newsletter detailing site and route selection will be mailed in August.

Land, easements, and rights-of-way acquisitions will begin this fall. Construction on the early phases of the project will begin next year, added Mr. Larsen.

Those wanting specific project information may call the project hotline, 602-381-1769, or visit the Web site at http://siting.apsc.com.

Last Chance to Express Opinions on APS Area Project

by Karen Seemeyer

Arizona Public Service has scheduled the last open house of a series designed to update and inform area residents of the ongoing North Central Facilities Siting Project in which APS plans to build new transmission lines and substations that, due to the increased growth within north- central Maricopa County and the New River Land Use Plan area, are projected to be needed within the next 15-year-period.

This appears to be the last meeting for public input as to the locations of new substations and transmission lines. If you are interested or have concerns as to the locations, you must attend. Currently, the proposed substation sites include a 230kV substation between 16th St and 20th St from north of Joy Ranch Rd to Desert Hills Dr and a 69kV substation to be located between 7th St and 7th Ave from

APS Substation *Continued to page 18*

APS *continued from page 1*

Cloud Rd to Joy Ranch Rd. The 230kV substation will require 10 acres and the 69kV substation one acre.

Public input to date has focused on several alternative transmission line routes and suggests that the route which runs along I-17 (north/south) and just south of Happy Valley Rd (east/west) be utilized for the 230kV line to connect the Pioneer and Pinnacle Peak substations. The east/west portion of this route would follow an existing 230kV corridor.

Routes that have been suggested for elimination have been the 230kV alternative along Desert Hills Rd and Carefree Hwy. Some have noted Carefree Hwy's scenic corridor designation, believing that the aesthetic impact would be too great along this route. Alternative transmission line routes and substation sites that have been identified in the APS assessment and route comparison will be on display at the open house.

After this open house and following a comment period ending August 4, 2000, APS will select the final routes and sites. Once the decision-making process has been completed, a newsletter mailed to APS customers within the area will announce the final locations for new facilities. Shortly thereafter, land, easements and right-of-way acquisitions will begin. Construction of initial phases of the project will commence next year.

This is your community and your opinions are needed. This is your last chance to meet face- to-face with APS planners and express any concerns you may have. You need to be there. Thursday, July 20, 6:00 p.m. to 8:00 p.m. at Desert Mountain Middle School, 35959 N. 7th Ave.

Volume 2, Number 2 March/April 2000

DOVE VALLEY ESTATES Messenger

A PUBLICATION BY AND FOR THE MEMBERS OF THE DOVE VALLEY ESTATES HOME OWNERS ASSOCIATION

Be Sure to Join Us on May 15!

APS PRESENTATION SCHEDULED

by Mike Rich

During the past few days, I have been talking with APS, trying to get an idea of the *North Central Facilities Siting Project* status. This is the project that can bring 6-story high power poles and a power substation in our neighborhood, and/or 12-story high voltage transmission towers very near (less than a mile) our neighborhood.

Since APS takes public opinion into consideration before the facilities siting is final, they have graciously (and bravely!) accepted an invitation to give a special presentation at the next Dove Valley Estates Homeowners' Association meeting.

In general, the plan is to discuss what has happened since the last public Open House in January and why the project is moving so slowly. They will also specifically discuss our proposed route and answer questions.

APS is coming prepared - they are sending the Project Manager, an engineer and representative from their consulting firm Environmental Planning Group (EPG).

This is a great opportunity to make your opinions known. Be sure to attend so APS knows we are a concerned and active community!!

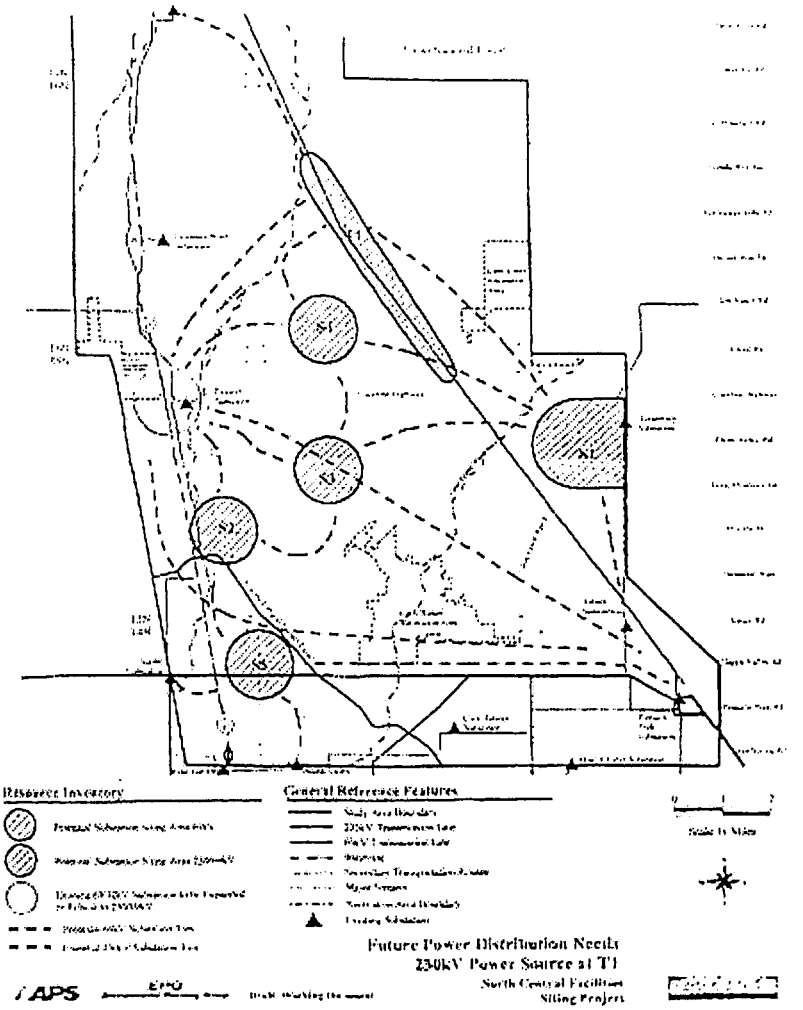
APS seeks citizen input for placement of power lines

by Kat Gallant

DESERT HILLS/NEW RIVER - APS is making the rounds trying to get input from residents in the North Phoenix region on where to put their new sites for their 230 KB lines, 69 KB lines and substations.

Brad Larsen, project manager, says that so far, they have received over 300 comments from residents voicing their opinion. Most of the comments have been to the tune of, "Don't put it in my backyard!"

But Maria Arellano, assistant project manager, says that is the way most people feel about the placement of power lines. She cautions that before residents take to the streets protesting, APS is merely in the process of getting comments from the residents and exploring all the alternate possibilities.



They have held public meetings in New River, one with the Desert Hills/New River Homeowner's Association and at the Desert View Village Planning Committee Meeting held on Mar. 7th at the Paradise Community Center.

Arellano confirms that they have made no decisions yet but will conclude their study at the end of the summer.

From there she says, "The when and where will largely be based on the growth." However, she anticipates construction will start next year around 2001 to 2002 and will take over a period of 15 years to build.

Their study includes 186 square miles with the perimeters running from Deer Valley Road on the southern boundary, I-17 on the western boundary, the Maricopa County line for the northern boundary and 56th Street over to Scottsdale Road on the eastern boundary.

Alternate locations to run the power lines include I-17 to 56th Street, Carefree Hwy. from I-17 towards Scottsdale Road, along an existing power line at Happy Valley Road or from I-17 through the Southern part of Anthem along Desert Hills Road alignment.

According to Larsen, Anthem will have less chance of placing a new substation in their backyard because they have constructed their own substation located at Deadman Wash.

"They have all the power there they need," says Larsen. "However, the new power lines will assist

Anthem because currently they only have one main power source that runs parallel to I-17."
He says with the new implementation of power lines, it will provide a backup in case Anthem experiences a power outage.
Larsen says the project will consist of overhead lines but the type of poles may vary. "We can use the giant looking power poles or a single steel pole, it depends on where we place them. If we are going to build next to another power pole, we will most likely use the same type."
For the fashion conscious, the poles also come in different colors. There is the regular steel, dull steel and corten. Corten is a rust color, which Larsen says is liked by the rural communities.
Arellano says that they are still working through the public process, holding open houses, evaluating data, and studying environmental alternatives. "When the study becomes more fully developed, we will hold another open house within two months."

Power-line plans upset residents

By Brent Whiting
The Arizona Republic

When Teresa Vincent and her husband purchased their home in the far north Valley about a year ago, they picked a one-acre site with underground utility lines.

They wanted an uninterrupted view of the desert surrounding their nearly $400,000 home in the Carefree Highlands subdivision along Central Avenue, north of the Carefree Highway.

"We just wanted some land, some space and some desert view so we could watch the coyotes, jackrabbits and all sorts of things running through the back yard," Vincent said.

Now she is upset at plans by Arizona Public Service Co. that could drastically change things. The utility is studying the area as a possible route for a new high-capacity power line.

"Things will go to hell in a handbasket now, if they can put up a thing," Vincent said during an open house by APS last week at New River Elementary School.

She's not alone in her concern. Other Carefree Highlands residents, as well as homeowners in New River and Desert Hills, attended the informal meeting to learn about siting proposals and to provide input.

"My concerns are about the environment and what this will do to property values," said John Bennici, who has lived in Desert Hills since 1974.

The meeting was part of an

See POWER LINE | Page 11

FRIDAY
February 4, 2000

Editor, Julie Morris
(602) 444-7470
Julie.Morris@ArizonaRepublic.com

POWER LINE | Plans upset residents

From Page 1

ongoing study by APS to determine the site for electrical substations and 69- and 230-kilovolt transmission lines in the scenic area from north Phoenix to New River, a high-growth area that is getting stretched to capacity with electrical demand.

Another open house also was held at Desert Willow Elementary School, 4322 E. Desert Willow Parkway. About 150 people attended the two meetings, said Maria Arrelano, an APS spokeswoman. Similar meetings in October attracted about 80 people.

The 186-square-mile APS study area roughly runs from Deer Valley Road on the south; Interstate 17 on the west; Photo View Road on the north; and a jagged eastern boundary running from Scottsdale Road north roughly along 56th Street.

The area includes the Cave Buttes Recreation area and the proposed Sonoran Preserve.

Brad Larsen, manager of the APS North Central Facilities Siting Project, said the meetings were the second step of a selection process that started in mid-1999. The utility is seeking citizen input and hopes to complete its study by June, he said.

Nothing will be going up soon, but APS wants to put routes in general plans so that developers and others will be put on notice where the transmission lines and substations are going to be placed, Larsen said.

"We always hope that people will tell us something that will work, not just what they don't want and don't like," he said.

Larsen said the growing study area is vulnerable to power outages because the major 69-kilovolt line along Interstate 17 is mostly strung on aging wooden poles, which are susceptible to auto accidents and windstorms.

Jim Kuester, a Scottsdale resident who is planning to build a home in New River, said that because of the outages, he understands that things need to be improved to make electrical service more dependable.

However, Kuester said he thinks that, as much as possible, transmission lines should be put up along existing corridors for minimal impact upon residential areas. He said APS is doing the right thing in trying to communicate with people about the issue.

Teri Lynch, a Cave Creek merchant who lives in Desert Hills, said the farther north in the study area, the more pristine the desert. She favors routes that can avoid pristine sites.

"There is a need for new power lines," she said. "I think that running them along existing corridors is a great idea."

Reach the reporter at Brent.Whiting@ArizonaRepublic.com or (602) 444-7119.

More Volts For New River/ Desert Hills

by Karen K. Seemeyer

The Desert Advocate
February 3, 2000

At the APS Public Information Open House held Jan. 25 at the New River Elementary School, residents surrounded the maps, graphs and photos of electrical facilities in order to learn of the upcoming APS North Central Facilities Siting Project in other words, more substations and transmission lines in the Desert Hills/New River area. APS has explained that anticipated future demand for power due to development, both north and south of Carefree Hwy, fuels the study and planning for new facilities locations.

An initial public open house was held in late October '99 to gather public comments. Out of 9000 residents in the New River/Desert Hills area, less than 70 attended.

According to public comments made during the past open house, suggestions were made that new facilities should be placed where the major growth areas are located and that facilities should not be constructed near mountain areas. Others were concerned that electric rates will be affected by the capital improvements.

Three possible locations for a new 230 kilovolt(kV) substation sit along the existing 230kV transmission line, the large metal towers which run through the Desert Hills/ New River area from approximately 24th St northwest, intersecting I-17 just north of the county line. The first proposed location is between Carefree Hwy and Cloud Rd. along 24th St. Site two is between Joy Ranch Rd and Desert Hills Dr west of 16th St. Site three is located south of Honda Bow and just east of 7th Ave. The 230kV substation will require ten acres of land.

A 69kV substation, which requires one acre of land, has several proposed locations. However, there is only one location north of Carefree Hwy, the section of land between 7th St and 7th Ave, Cloud and Joy Ranch Rd, being the preferred site. The logic for placement in this area is that the state-owned 640 acres at this location will be zoned for development and the substation could be placed contiguous to the development.

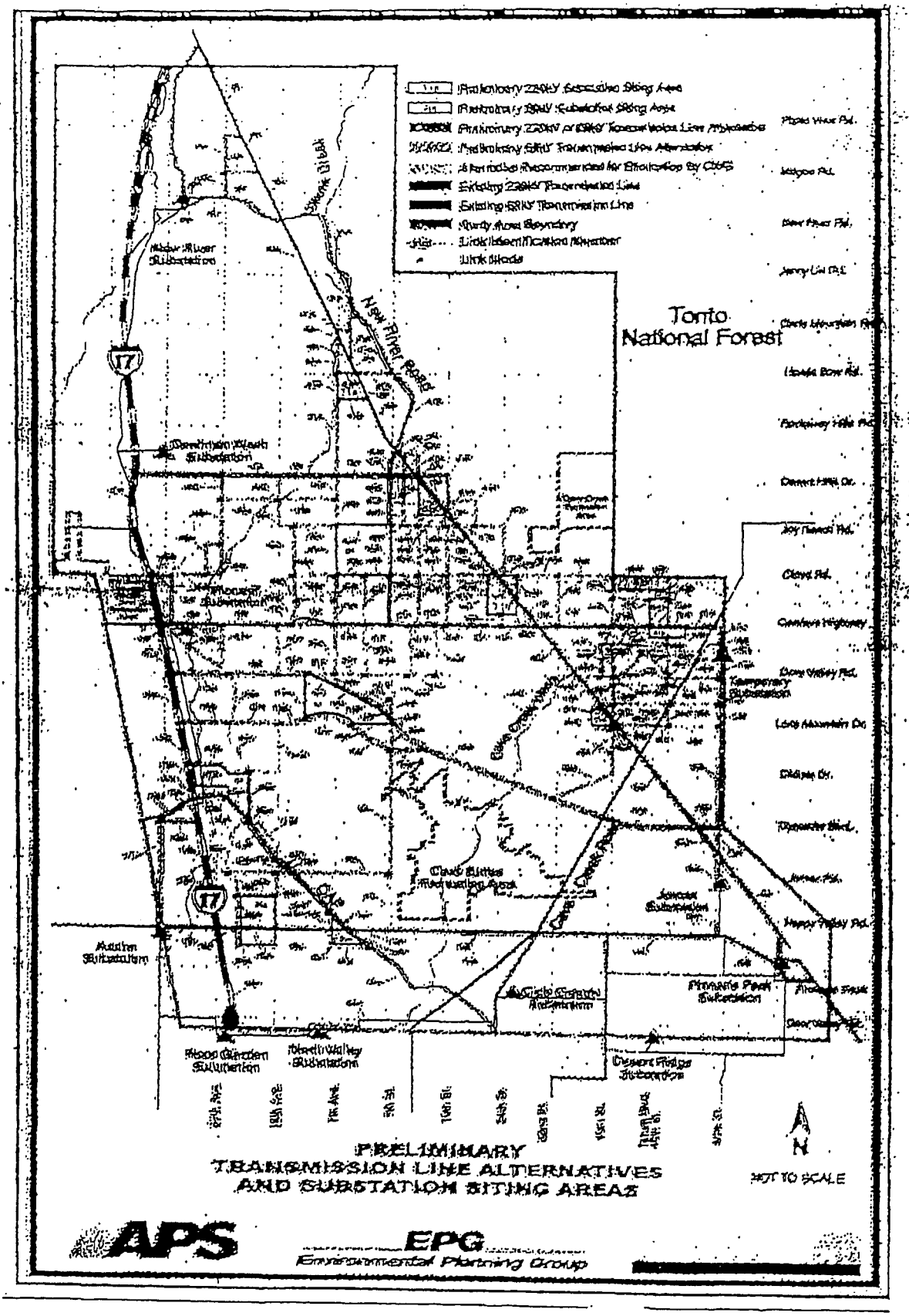
Seven proposed sites south of Carefree Hwy for 69kV substation construction range from the area around 56th St and Carefree Hwy westward to I-17 and south to the CAP canal.

Environmental Planning Group, Inc., a consulting firm working with APS, has chosen a 19-member Community Working Group (CWG) ostensibly representing a cross-section of the community that will assist the planners with input of concerns and viewpoints of the community. Terri Lynch, a member of the CWG, stresses, "I believe that the community needs to become involved now. Their input is vital to the planning process and their public comments, either through the comment line or e-mail, could very well affect the outcome of the decision."

A consensus of public opinion states that the new facilities should be placed where the majority of area residents prefer they be located, versus just the most cost efficient locations, and that every effort should be made to accommodate residents requests.

As usual, the future of the community rests on the shoulders of those who choose to participate. Unfortunately, to date all too few have taken the opportunity to voice their opinions.

APS has sent out two newsletters to keep community members informed. If you have not received a newsletter or would like to ask questions or make comments, you may call 602-381-1769 or visit the website at http://siting.apsc.com.



PRELIMINARY
TRANSMISSION LINE ALTERNATIVES
AND SUBSTATION SITING AREAS

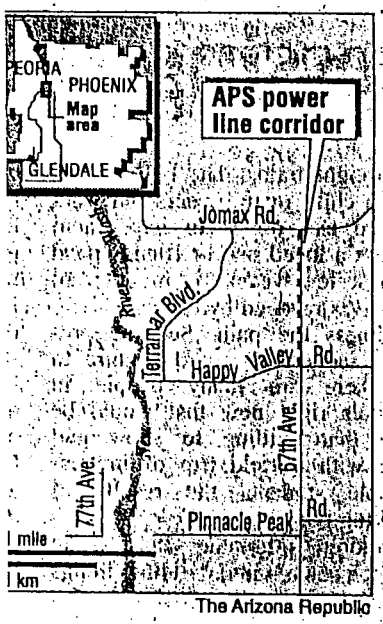
NOT TO SCALE

APS

EPG
Environmental Planning Group

The Arizona Republic
August 24, 1999

New APS line in North Valley has neighbors buzzing



The Arizona Republic

Neighbors in a booming area of northwest Phoenix bought their homes for the desert vistas, but lately, they've been looking up, not out.

Signs posted along 67th Avenue south of Jomax Road read, "Future Power Line Corridor."

For the past two years, Arizona Public Service Co. and area residents have been working on plans for new power lines and substations to serve the growing Northwest Valley. There have been open houses, newsletters, even a special telephone number to call.

The problem is, many of the homes along 67th Avenue have been built only in the past few months, and some new owners say they were caught off guard when they moved in. The same goes for

what they're talking about

other residents who are waiting for their new homes to be built.

"Even though we've done what we consider a fair amount of outreach, we know there are some residents who don't know about the plans," said Maria Arellano, a siting consultant for APS. "The area is growing so darn fast."

But, she added, "That line is going to serve the new customer base."

There are last-minute calls by some homeowners to pull the plug on the plan. Some have tried to enlist the help of Phoenix City Councilman Dave Siebert, who represents the area.

But APS is moving forward.

In six weeks or so, crews will install dozens of 58-foot, brown steel poles along 67th Avenue between Jomax and Happy Valley Road. The poles, about 400 feet apart, will carry a 69,000-volt line. Once they've begun, crews can have the line up in about a week.

The new power line is just one piece of a larger plan by APS to serve a sprawling area roughly bounded by Honda Bow and Pinnacle Peak roads, Interstate 17 and 163rd Avenue.

Plans call for 67,000-volt and 230,000-volts lines, as well as new substations. APS must get the OK from the Arizona Corporation Commission's siting committee for the 230,000-volt routes.

Meanwhile, residents along North 67th Avenue can have the last word — for a price.

The overhead line can be take down and buried if neighbors form an improvement district an pay for the work. The cost of burying a line is about 10 times the cost of installing one overhead.

APS would pay that cost upfront, and the residents who participate in the district would rep it.

Arellano stressed, however, th APS will not reroute the line.

"We know we need to build th line," she said.

Information: (602) 493-4478 o Larry Krueger at (602) 493-420

— Susie Steckn

The Arizona Republic
October 30, 1999

Residents review power pole plans

By Betty Beard
The Arizona Republic

NEW RIVER — Most people probably aren't like Lynette Polewka, who doesn't mind living near power lines.

For one thing, there's a road under them where you can walk your dog, she points out.

The best thing is that every fall, hundreds of buzzards fly through and rest on the lines in front of her home, perhaps on their way from the Boyce Thompson Arboretum near Superior to the south for the winter.

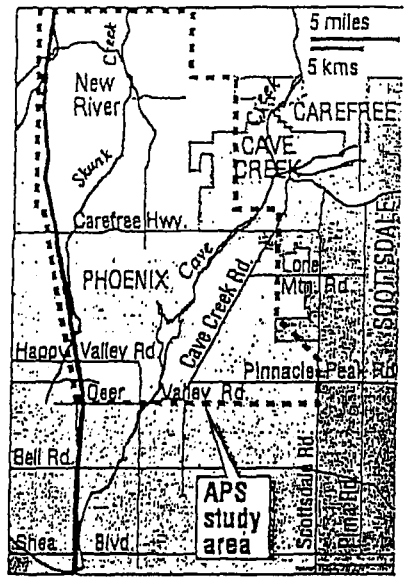
"It gets crowded up there," Polewka said of the visiting birds.

Most people probably would avoid living near power poles and electrical substations if they had a choice. They would not be happy to know that Arizona Public Service Co. is planning to build two new lines and five substations in the scenic area from north Phoenix to New River.

The 186-square-mile target area includes the Cave Buttes Recreation area and the proposed Sonoran Preserve.

Brad Larsen, manager of the APS North Central Facilities Siting Project, said the rapidly growing area is vulnerable to power outages because the major 69-kilovolt line along Interstate 17 is mostly strung on aging wooden poles that are susceptible to auto accidents or windstorms.

"Any problem with that line means we pretty much lose everything," Larsen said.



The Arizona Republic

Also, the electrical demand in the area is growing faster than in any other APS system in the state, and the company wants to stay ahead of the growth, he said. Construction of the power systems wouldn't begin until the end of 2001, and some parts wouldn't be built for 15 years.

APS is replacing the wooden poles with stronger steel ones and wants to build one 230-kilovolt line and one 69-kilovolt line to make the system more reliable.

Officials with APS emphasize that they have not decided where to put the lines and substations and are just beginning to ask the public for suggestions. It plans to take 8 to 12 months for environmental studies and public comment.

The utility held the first of three sets of public hearings Tuesday and Wednesday at the New River and Esperanza elementary schools.

APS no longer just decides to put in power poles or substations, buys the land and puts them in, as it used to do, Larsen said. Its new philosophy is to get public comment ahead of time. To find out what the public wants, the company formed a siting department a few months ago. It also has formed a 19-member working group that includes residents and is using an outside consulting group, Environmental Planning Group.

Boundaries of the study area are roughly Deer Valley Road on the south; Interstate 17 on the west, Photo View Road on the north and a jagged eastern boundary running from Scottsdale Road north roughly along 56th Street.

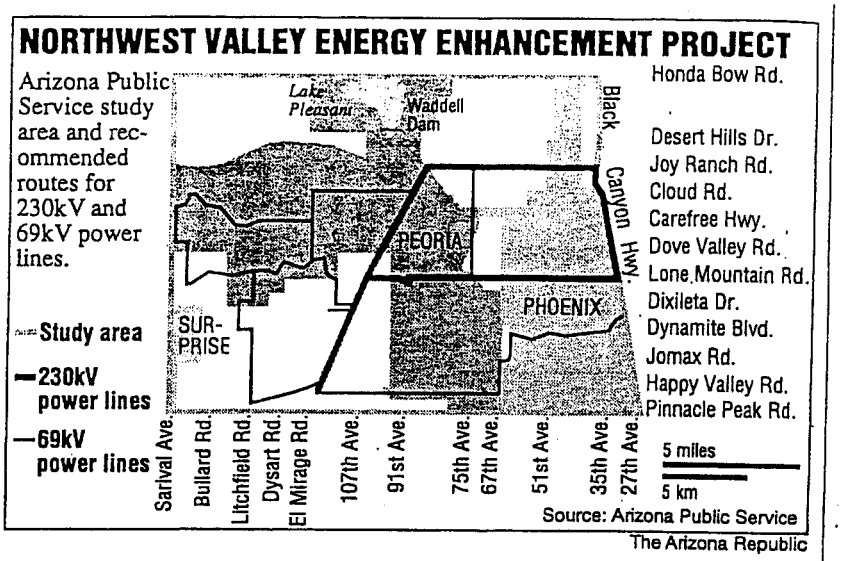
At Tuesday's hearing in New River, about 30 residents showed up, crowding around maps to examine some approximate locations.

Dawn Abbey wasn't surprised by the turnout, saying it's typical of any project affecting the community.

"Meetings tend to be packed," she said. "People want to preserve their lifestyles."

Power line protests defused

APS gives notice of proposed routes



By Jeffry Nelson
The Arizona Republic

Some say they hurt property values. Some believe they're unhealthy. Most just think they're plain ugly. Whatever the reason, people do not like living near high-voltage power lines.

Arizona Public Service Co. found out last year just how deep that animosity runs when it announced plans to string a 69,000-volt power line along 83rd Avenue between Beardsley and Happy Valley roads in Peoria.

Within days, residents organized to fight the plan. In the end, APS chose a different route for the line.

Hoping to avoid another quarrel, APS has produced a map showing the planned routes of future high-voltage lines in a 200-square-mile area in the far northwest Valley. The map shows where APS plans to install 69,000-volt and 230,000-volt power lines, as well as electrical substations.

"These are the routes that have come up as Number One in our book as to where we'll go," said Maria Arellano, spokeswoman for APS.

By producing a map showing where the transmission lines will go, APS hopes property owners won't be caught by surprise when a line crew shows up and starts digging a hole for a 65-foot-tall power pole or a 120-foot-tall metal tower.

"We want people to know ahead of time," Arellano said.

The map represents nearly a year's work for APS and a 13-member committee, dubbed the Community Working Group. The committee included residents, developers, a school-district representative, and city, county and state representatives.

Using maps and aerial photographs and on-site visits, the group determined which routes it felt would least affect existing property owners and the environment. Several possible routes were recommended to APS, which made the final determination.

Apparently, people are pleased with the final outcome.

There was some concern among homeowners living along Happy Valley Road between 67th Avenue and Interstate 17 that APS would string a second high-voltage power line alongside an existing 230,000-volt power line that follows Happy Valley Road.

Neighbors protested the route at a recent open-house meeting, saying that the existing transmission line has hurt their property values and that it would be unfair to erect another one.

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To appease those residents, APS chose a route that takes the 69,000-volt line around the existing homes.

The 69,000-volt line now is planned to head east along Happy Valley Road, then turn north on 67th Avenue, avoiding the homes. The power line would travel two miles to the Central Arizona Project, then follow the canal east to I-17.

That pleased homeowners, most of whom learned of the change last week.

"I'm surprised and very pleased that's what they chose to do," Maroney said. "It shows grass-roots involvement can make a difference."

Susan Tranter, a homeowner in the Pinnacle Ridge development near 59th Avenue and Happy Valley Road, worried about the effects of having two high-voltage lines near her home.

"You never know in the future what the health implications will be," she said.

There's no conclusive evidence that exposure to electromagnetic fields causes cancer. However, there is no conclusive evidence that it does not.

Before the map is final, the utility company will have to get the blessing of the Arizona Corporation Commission's siting committee for the 230,000-volt routes.

Meanwhile, APS officials will begin working to get the planned routes included in the various municipalities' general plans so potential homeowners and developers can find out exactly where high-voltage lines are planned before building or buying a residence.

Copies of the map can be obtained by calling 861-7471.

Jeffry Nelson can be reached at 444-7117 or at jeffry.nelson@pni.com via e-mail.

News For

Date: Friday, November 13, 1998

City: Peoria, Arizona

Media: THE PEORIA TIMES

Page: A8

APS selects power line routes in NW Valley

By GREG ZEMEIDA

Growth in Peoria has occurred faster than many expected, including utility companies. To help catch up with, and even get a step ahead of, future growth in the city, Arizona Public Service (APS) plans to build miles of new power lines in the mostly undeveloped northern parts of Peoria.

APS spokesman Larry Krueger said the new power lines will meet energy demands for the area for the next 20 years.

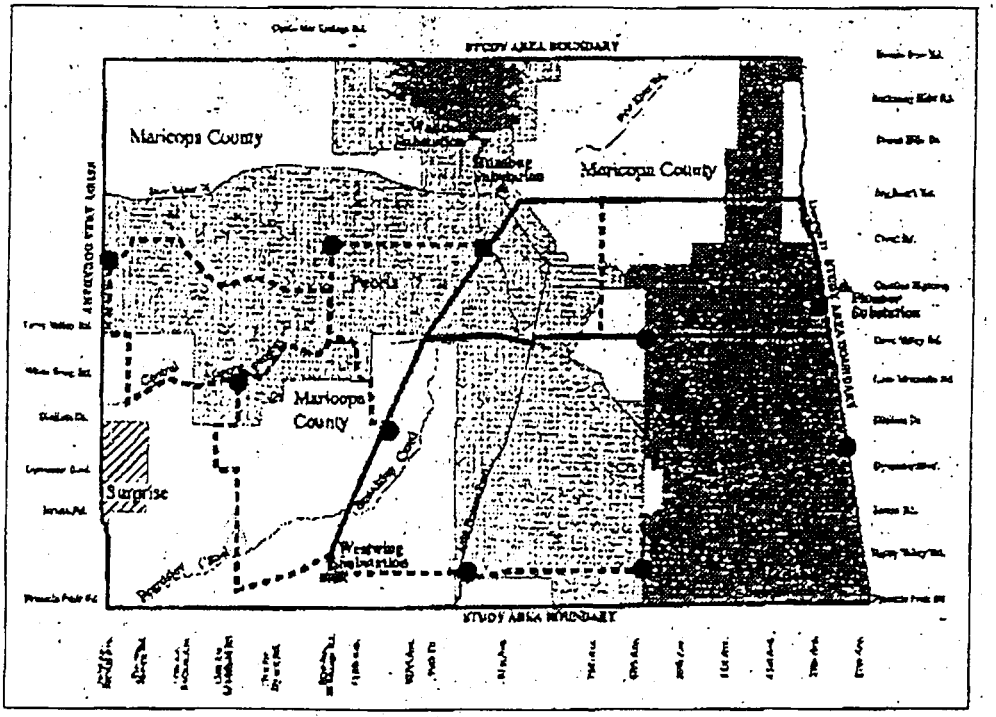
In addition, by building the lines now before homes are put in, there will be less controversy about their location.

"What we're trying to do is get ahead of the growth so people will know in advance where they are located," Krueger said.

Mayor John Keegan said he was pleased with the way APS worked with Peoria residents in coming up with the power-line routes. The power company had put together a 13-member community working group which provided input on the various land issues facing the power-line siting.

"This seems to be a substantial effort to ensure the infrastructure is there before housing comes in," Keegan said.

APS plans to install both 230 kilovolt (kV) power lines as well as 69 kV lines throughout the Northwest Valley. Extensive portions of the new lines will pass through the city of Peoria north of Pinnacle Peak Road.



Proposed Routes
APS NW Valley
Energy Enhancement
Siting Study
November 6, 1998

The 230 kV line will run northeast from the Westwing substation near 123rd Avenue and Happy Valley Road, passing through Peoria until it reaches Joy Ranch Road just south of Lake Pleasant. The line will then extend east until it reaches Interstate 17.

The 230 kV line then heads south until it reaches Dove Valley Road. From there, it turns west and passes through Peoria until it connects back up with the other 230 kV line near 107th Avenue.

The majority of the 69 kV lines will be located in the far northwest sections of Peoria south of State Route 74. Portions of the lines will also be built along

Happy Valley Road and on 67th Avenue just north of Happy Valley.

The first lines to go in will be the 69 kV ones connecting the Westwing substation up to 67th Avenue. Work is expected to begin on those lines some time next year.

The 230 kV lines will be built within the next five to 10 years. Construction of both 230 kV and 69 kV lines will be determined by future growth and need.

For the first time ever, Peoria residents moving into the areas with planned power lines can choose to have them built underground. At Peoria officials' urging, the state Legislature passed a new law this spring allowing citizens to form improvement districts to pay for putting power lines underground.

Keegan said city officials will talk with future home developers to see if they want to pay for putting lines underground.

"We're trying to make sure those lines are put underground with the initial development that goes in," he said.

Krueger said APS would build power lines underground if it receives the extra funding from the improvement districts. He didn't have any cost estimates for such a project, but said putting lines underground costs about 10 times more than building them above ground.

For more information about the power line routes, call 861-7471.

Wednesday +
September 16, 1998

2 chances left to get say on power lines

By Jeffry Nelson
The Arizona Republic

PHOENIX — Arizona Public Service Co. is putting finishing touches on a map that will show the future routes of high-voltage power lines and electrical substations in the far northwest Valley.

But before the map is made final, the public will get two more chances to view the proposed routes and suggest changes.

Open houses will be held at Las Brisas Elementary School, 5805 W. Alameda Road (north of Pinnacle Peak Road). The first will be from 6 to 8 p.m. Thursday, and the second will from 10 a.m. to noon Saturday.

The map will show the locations of 230,000-volt lines, 69,000-volt lines and electrical substations in a 200-square-mile area bounded roughly by Honda Bow Road on the north, Interstate 17 on the east, Pinnacle Peak Road on the south and Sarival Avenue (163rd Avenue) on the west.

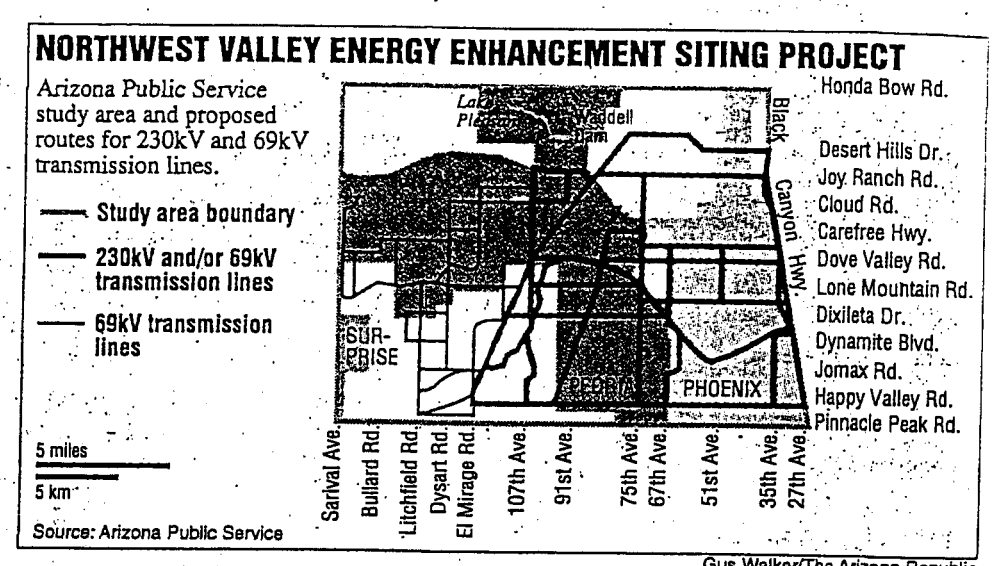
Earlier this year, Dames & Moore, a Phoenix environmental-consulting firm hired by APS, came up with a list of possible routes.

The list was then narrowed by members of a 13-member committee, dubbed the Community Working Group. The committee includes residents, developers, school-district representatives, and city, county and state representatives.

It has taken the group about nine months to decide where the power lines and substations should go. The group used maps, aerial photographs and on-site visits to help choose the routes, many of which follow existing features such as the CAP Canal, major streets and other power lines.

Larry Krueger, area manager of customer relations for APS, said the committee also

— Please see 2 CHANCES, Page 3



Gus Walker/The Arizona Republic

2 chances for say on power lines

— 2 CHANCES, from Page 1

wanted to choose routes that would make the power lines as unobtrusive as possible. The 230,000-volt lines are typically strung on poles 120 feet tall, while 69,000-volt lines are typically hung on poles 65 feet tall.

"You wouldn't want to take power lines up and over mountains because they become very visible," Krueger said. "You try to keep them in the lower areas so they kind of disappear into the desert."

After the two public hearings, the Community Working Group will meet again to review comments made at the hearings. Krueger said the hearings could result in changes to the map if enough people object to a proposed route.

The map the committee ends up recommending to APS will include suggested routes for the power lines, as wells as some alternative routes, said Paul Trenter, project manager for Dames & Moore. After it receives the recommendation, sometime in October or November, APS will decide which of the recommended routes it will use.

APS will have to get the permission of the Arizona Corporation Commission's siting committee for routes with 230,000-volt lines.

After APS and the Corporation Commission sign off on the routes, APS will then work to get the routes included in municipal general plans so potential homeowners and developers know exactly where the lines are planned before building or buying a residence.

By doing this, APS hopes to avoid some of the problems it had in north Peoria recently.

Last summer, APS ran into resistance from residents who opposed its plans to string a 69,000-volt power line along 83rd Avenue between Beardsley and Happy Valley roads. Eventually, it was forced to choose a different route for the line.

For more on the Northwest Valley Energy Enhancement Siting Project or the open houses, call 861-7471.

THE ARIZONA REPUBLIC

Glendale/Peoria

NW

Editor,
Laura McBride
444-7122

Friday
November 20, 1998

COMMUNITY EDITION 2 A B C D E F G Online: www.azcentral.com/wv/wv.shtml

APS maps high-voltage routes

Public alerted on where future lines will cross northwest Valley

By Jeffry Nelson
The Arizona Republic

Some say they hurt property values. Some believe they're unhealthful. Most just think they're plain ugly. Whatever the reason, people don't like living near high-voltage power lines.

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By producing a map showing where the transmission lines will go, APS hopes property owners won't be caught by surprise when a line crew shows up and starts digging a hole for a 65-foot-tall power pole or a 120-foot-tall metal tower.

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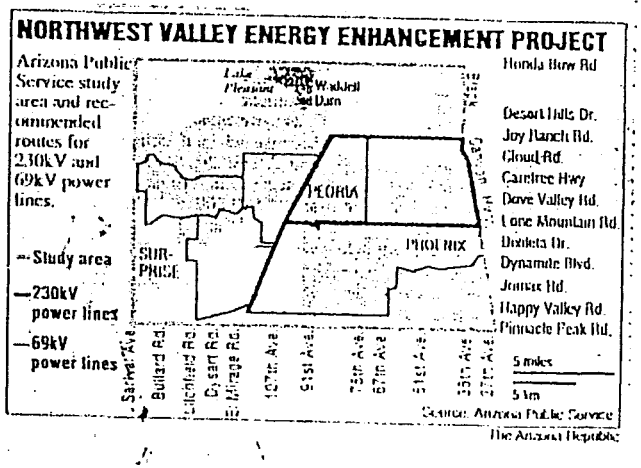
— Please see APS, Page 9



APS maps future high-voltage lines in NW Valley

APS, *from Page 1*

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Meanwhile, APS officials will begin working to get the planned routes included in the various municipalities' general plans so potential homeowners and developers can find out exactly where high-voltage lines are planned before building or buying a residence.

APS said the lines will be built as they are needed. Selected sections of the 69,000-volt line will be constructed by June 2000, according to the company.

Copies of the map can be obtained by calling 861-7471.

Jeffry Nelson can be reached at 444-7117 or at jeffry.nelson@pni.com via e-mail.

THE ARIZONA REPUBLIC

NW

Editor,
Laura McBride
444-7122

Friday
November 20, 1998

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OMMUNITY EDITION 3 Online: www.azcentral.com/ww/ww.html

APS maps high-voltage routes

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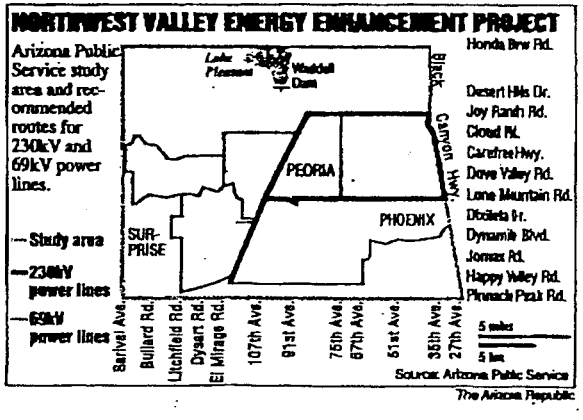

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Future high-voltage lines mapped for NW Valley

— FUTURE, from Page 1

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Jeffry Nelson can be reached at 444-7117 or at jeffry.nelson@pni.com via e-mail.

APS won't make power-line decision alone

Utility still seeking members for site-selection committee

By CAROLYN DRYER

The decision about where Arizona Public Service Company's high-voltage lines will go in the Northwest Valley will be made by a community working group.

That's what APS spokesmen and the utility's consultant, Dames & Moore, are saying and they are sticking to it. It won't work any other way, APS spokesman Larry Krueger said. Krueger said if APS doesn't listen to the city planners, residents and others who have a vested interest in the area, everything the utility does could backfire.

That's why Krueger said it is very important to remind people that there will not be a return visit to the question of whether there will be a high-voltage line installed along 83rd Avenue north of Union Hills Drive to Happy Valley Road. APS doesn't have to get hit over the head with a 2-by-4.

"We are not going back to reconsider 83rd Avenue," Krueger said.

When APS came out with a preliminary plan to build the 69kv line on 83rd Avenue in north Peoria instead of siting it closer to Glendale, some vocal north Peoria residents became incensed and actively recruited others in the area to join in a concerted fight to oppose placing the lines on 83rd.

Instead of fighting back, APS sought the advice of Dames & Moore to work with the residents rather than against them. Instead of the 83rd Avenue line, there will be a 69kv line added from the Rio Vista Substation south to Bell Road to provide back-up electrical service from the Mountain View Substation to the Westbrook, Arrowhead and Pleasant substations; APS will change the existing wire on the 69kv power line from Union Hills Drive to Bell Road with a fourth circuit into the Bell Substation to provide more electrical capacity and system reliability to the area; and a 69kv capacitor bank at the Arrowhead Substation will be added to support the voltage profile in the area.

Photo by Bill Dosham

APS spokesman Larry Krueger (left) and Paul Trenter, spokesman for consulting firm Dames & Moore, are still looking for volunteers to serve on the community working group that will decide where the high-power lines will go in Peoria.

These three actions are not solutions, Krueger warned. They are just to manage until a long-term solution is agreed upon for the entire Northwest Valley. These actions are interim measures, Krueger said, just "little pieces" to handle the growth that's taking place now to handle the higher demands on the utility next summer, the crunch season in the Valley for APS.

So, an alternate route for the 230kv lines, the higher-voltage high-voltage lines, will be decided by members of the immediate area affected by their installation. But what about underground? The city of Peoria's government relations liaison Phillip Hubbard, Peoria Mayor John Keegan and the city council are working on a bill to present to the Arizona Legislature that would require all future electrical utility lines installed in the city of Peoria be placed underground.

Krueger said, "We were supporting what Hubbard wants to do with that. We're not sure if it will be a legislative or city thing."

Krueger added that, although APS is willing to do whatever the city wants in the area of underground installation, the funding mechanism is another story: the additional costs associated with underground installation would have to be borne by someone other than APS.

APS is "trying to get out ahead of the curve," Krueger said.

The utility is working with city planners on the utility elements of the city's comprehensive master plan, he said, and APS hopes its future line installations will be included in that plan.

Larger, higher-voltage lines will have to be constructed in Peoria in the future just to handle future demands and siting of those lines will have to go through a Arizona Corporation Commission (ACC)-mandated state siting process. To those who may question the objectivity of that process, Paul Trenter of Dames & Moore said, "Yes, it does matter."

Trenter recalled a siting process that took place in

More APS on A18

APS

From A3

southeast Phoenix where a siting committee listened to citizens in the area and placed their concerns at the top of their considerations when it came time to make a decision. APS had to comply with that decision. The siting committee is comprised of delegates from Arizona State Parks, state legislators, the public at large and staff from the ACC. Nine people serve on the committee.

Trenter said there are five stages to the task portion of the community working group (CWG) process. Dames & Moore had hoped that by now the CWG members would already be selected and the first meeting would have taken place. Trenter said the group needs another citizen from the Lake Pleasant vicinity to create a better cross-section of people from the Northwest Valley. Once the committee is in place, it will hold its first meeting and be briefed on the scope of the project.

The second stage of the task portion - from now to January - will involve the CWG holding its second meeting and the second newsletter being sent to citizens in the affected areas. Dames & Moore will inventory the region and perform its data-mapping tasks.

When the CWG holds its third meeting, sometime between December and March, Trenter said a second public open house should take place and the third newsletter should be mailed. The CWG will have decided on alternative sites and route identifications by that time.

The fourth stage of the task portion outlined by Dames & Moore involves comparing and ranking the alternative routes. By this time - between March and June 1998 - the CWG will hold its fourth meeting and the fourth newsletter will be sent.

Between May and July 1998, the CWG will hold its fifth meeting, the fifth newsletter will be sent to affected citizens and another public open house will be held. At that time, the CWG will select all of the alternatives and present them to the public for consideration.

All of the above stages of the public-participation process will be announced through advertisements or releases to the press and through direct mailing to affected citizens. APS' mailing list will be comprised of APS customers of record and Maricopa County tax record address information. Other interested parties are advised to call Dames & Moore at 861-7471 for more information.

APS to use public's help mapping power line routes

By Jeffry Nelson
The Arizona Republic

PEORIA — Concerns over the placement of a high-voltage power line in the north end of town have prodded Arizona Public Service Co. to begin work on a map that will show the future routes of high-power lines in the northwest Valley.

The idea, APS spokesman Larry Krueger said, is to let people know where the company has high-voltage power lines planned before the lines are strung.

That way, no one is caught by surprise when APS shows up and starts digging a hole for a 56-foot-tall power pole.

"We didn't have to do a study area this big," Krueger said. "We just felt we needed to move and get ahead of the growth."

By doing that kind of planning, APS is hoping to avoid some of the problems it has encountered in north Peoria recently.

Over the summer, APS ran into resistance from residents who opposed the company's plans to string a 69,000-volt power line along 83rd Avenue between Beardsley and Happy Valley roads.

Opponents were concerned that putting the line near their homes could cause health problems and depress property values.

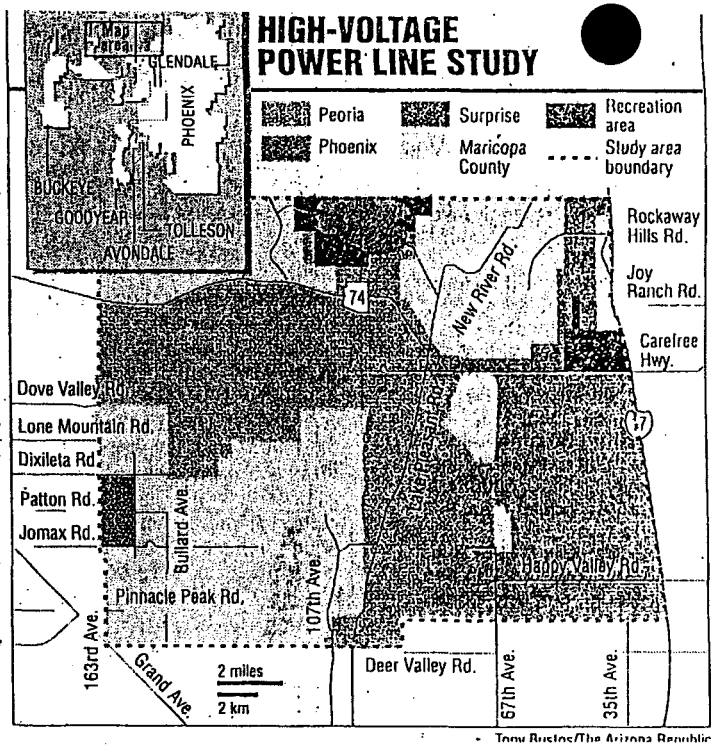
The company dropped the plans for the 83rd Avenue route in August and formed a "community working group" to suggest an alternate route for the line.

APS officials were in the process of accepting volunteers to serve on the committee when they decided to expand the study.

"We figured that since we're going through the process, why not look at the big picture instead of the little picture?" Krueger said.

APS has hired a consulting group, Phoenix-based Dames & Moore, to assemble a committee of 15 to 20 people to look at a 200-square-mile area bounded

— Please see PUBLIC, Page 4



Tony Rustos/The Arizona Republic

Public to help APS map NW Valley power line routes

— PUBLIC, from Page 1

roughly by the Maricopa County line on the north, Interstate 17 on the east, Deer Valley Road on the south and 163rd Avenue on the west.

The area includes portions of west Phoenix, Glendale, Peoria, Surprise and the county.

In addition to having residents and city officials from each areas, the committee likely will include developers, farmers and school-district representatives.

Krueger said the committee, which is still being assembled, will recommend where to place 50 to 80 miles of high-voltage power lines and eight to 14 electrical substations.

They will decide where to place:

- 10 to 20 miles of 230,000-volt transmission lines.
- 40 to 60 miles of 69,000-volt transmission lines.
- Two to four transmission substations.
- Six to 10 distribution substations.

Krueger said the committee will produce a recommended plan and likely a couple of alternatives.

He said APS then will work to get the recommended routes included in the various municipalities' general plans so city planners can tell potential homeowners and developers where high-voltage lines are planned.

The recommended routes for the 230,000-volt lines will have to be approved by the siting committee of the Arizona Corporation Commission.

Cindy Smith, senior project manager for Dames & Moore, said the pace of growth in the northwest Valley means these power lines and substations will be needed within 10 years.

Smith said the committee will hold five meetings and three open houses over the next nine to 12 months, after which it should have a recommendation.

The committee is expected to begin meeting next month, but a date hasn't been set.

Jeffry Nelson can be reached at 444-7117 or at jeffry.nelson@pni.com via e-mail.

SERVING
Glendale
Northwest Phoenix
Peoria

Monday, November 17, 1997

Peoria Times
October 24, 1997

APS power-line study committee being formed

Group will try to find acceptable APS route in north Peoria

By CAROLYN DRYER

Those high-power lines in north Peoria may find a permanent home after all.

Peoria city officials met last week with representatives from Dames & Moore, a consulting firm hired by Arizona Public Service to conduct an environmental study. According to Phil Hubbard, the city's intergovernmental affairs and community relations liaison, Dames & Moore was also hired to help with selection of a citizens committee to come up with an acceptable route for the lines.

The utility's plans to install overhead power lines along 83rd Avenue north of Union Hills Drive to Happy Valley Road was met with strong opposition from residents in the vicinity. One group even hired a public-relations firm and threatened to file an injunction to stop the installation. That is when APS decided to back off and do another study to determine whether another route might be more feasible and more acceptable to the residents of the area.

Hubbard said Dames & Moore gave city officials a briefing Oct. 16 on time lines, objectives, stakeholders and other aspects of a project that will place about 10 to 20 miles of 230 kilovolt transmission lines in the Northwest Valley. The study area has been broadened to include the area bounded by the Maricopa County line to the north, Interstate 17 to the east, Pinnacle Peak Road to the south and 163rd Avenue to the west.

For the area that will be studied in northeast Peoria, Dames & Moore will be researching who might be able to give time to serving on a citizens committee (called a CWG, or community working group), Hubbard said. The list of stakeholders should be completed by Nov. 1 with the CWG's first meeting tentatively scheduled for

More POWER on A9

Power

From A3

late November.

Hubbard said the 15- to 20-member CWG will represent a cross-section of stakeholders that will include representatives from the state of Arizona, Maricopa County, the cities of Peoria and Phoenix, employees of the Peoria Unified School District, members of homeowners' associations and an ultralight flyers' organization that uses the air space over the study area. Two Dames & Moore employees will facilitate the group's meetings and there will be no chairman involved, Hubbard said.

"Everyone is equal and the same," Hubbard said. "Dames & Moore will staff every meeting, be a neutral facilitator to keep everybody on track and focused on the issue."

Cindy Smith, senior project manager for Dames & Moore, will be paired with fellow employee Paul Trenter to facilitate the meetings. Dames & Moore is also establishing a telephone hotline to get the word to the public about when and where the meetings will be held. The firm also plans to publish a newsletter that will include updates about what the committee is doing and a coupon that will allow citizens to ask to be put on the CWG's mailing list.

The newletter's first publication will be mailed out a couple of weeks prior to an open house where CWG members will be introduced to the public. Three open houses will be held before a final decision will be made about where to locate the high-power lines. All APS utility customers in the affected area will receive the publication.

"The mailing list will grow as people want to be involved," Hubbard said.

Individuals interested in being placed on the mailing list should call Dames & Moore at 861-7471.

Peoria Times
September 26, 1997

Progress crackles on power line issue

City of Peoria and APS officials talk next week

By L.E. McCORMACK

If north Peoria citizens are still concerned about where and how APS will construct a 69kv power line originally planned for 83rd Avenue, Peoria Mayor John Keegan can assure them that the issue is being worked on.

On Aug. 7, about 40 people came to Sunrise Mountain High School to an on-again-off-again meeting about the placement of the power line. Although city and APS officials were present, the formal meeting had been "canceled" by parties unknown and an informal meeting took place instead, mostly consisting of citizens voicing individual concerns.

The casual nature of the meeting aside, the citizens' comments were not lost on the city and APS representatives.

After citizen protests, APS had backed off the 83rd avenue plan before the meeting and agreed to study other alternatives. Mayor Keegan says changes in state law will be necessary for alternatives that make sense for the citizens of Peoria.

Next week, Keegan, council member Ken Forgia, and Phillip Hubbard, the city's government affairs and community relations liaison, will meet on the power line issues with APS representatives and the consulting firm of Dames and Moore.

APS hired the consulting firm to develop a study that will include a larger area than just north Peoria to get a better picture of cost implications for citizens.

Keegan and Forgia have supplied Dames and Moore with a list of citizens who have contacted the city or APS on the power line issue. The firm is interviewing people on the list to serve on a committee with city and APS officials to review the power line study.

Keegan indicated earlier that the committee would probably meet three or four times and then present its findings at a series of public hearings.

Meanwhile, Hubbard is researching the current law, drafting language for a bill to put before the legislature in its January 1998 session and lining up legislators to sponsor it. The council plans to have the bill ready for "pre-filing" in mid-December so that it will get a jump start on the legislative action in January.

Arrowhead Ranch Independent
December 10, 1997

Sites sought for APS power lines in NW Valley

By PATRICK O'GRADY
Arrowhead Ranch Independent

Arizona Public Service officials are planning for new power lines in the northwest Valley to bolster the company's supply lines in the area.

The company, Arizona's largest supplier of electric power, is conducting public meetings to detail its plans to install new lines and equipment in the area bounded by Interstate 17 to the east, Pinnacle Peak Road on the south, 163rd Avenue to the west and the county line to the north.

Company officials will hold open houses this week to explain the project and its effects on area neighborhoods from 6 to 8 p.m. Dec. 10 and 10 a.m. to noon Dec. 13 at Las Brisas Elementary School, 5805 W. Alameda in Phoenix.

Although there are no plans to establish power lines near Arrowhead Ranch, residents could still be effected. Without the project, their power supply would be less reliable because of the number of new residents moving to the area, company officials said.

"We're trying to get out in front of development on this," said Larry Krueger, siting project manager.

The company plans to install up to 80 miles of transmission lines, 4 transmission substations and 10 distribution substations in the next several years, primarily in north Peoria and areas of unincorporated Maricopa County.

APS is trying to map out its strategy for the next 10 years because of the tremendous growth in these areas, as well as northeast Phoenix, Surprise, the Sun Cities and other areas of the northwest Valley. Some equipment recommended in the siting study, however, will be needed in the near future.

The new equipment will be connected to the company's sprawling power grid that, along with the Salt River Project,

See ■ PENNIES, Page 10

■ POWER

From Page 1

supplies power to the Phoenix metropolitan area. The interconnected grids within the system will allow APS to re-establish power quickly should it fail in other areas, Mr. Krueger said.

"What we are trying to ensure is that we have more than one source of power into an area," he said.

The project is being designed by Dames and Moore, an environmental consulting and engineering firm in Phoenix. The company will conduct the early public meetings, gather information and select sites.

The selection process will be complete by June 1998 when the first of the new facilities will be needed.

The Arizona Republic
July 30, 1997

Power line faces new opposition

83rd Avenue residents say concerns ignored by APS

By Jeffry Nelson
The Arizona Republic

Saying it would endanger their health and property values, a group of residents living near 83rd Avenue has banded together to try to pull the plug on a plan to erect a 69,000-volt power line along 83rd Avenue.

The group, calling itself the Protect Peoria Committee, says Arizona Public Service Co. ignored the concerns of area residents when it decided July 1 to string a high-voltage power line along the road.

APS officials, meanwhile, say the decision was made with public input from area residents.

But some homeowners argue that APS did not make enough of an effort to inform residents near 83rd Avenue of its plans.

"We don't want to sound like a bunch of screaming people with a 'not in my back yard' philosophy," committee Chairman Kent Forsey said.

Forsey said residents want APS to bury

— Please see POWER LINE, Page 7

Power line faces new opposition

— POWER LINE, from Page 1

the power line or install it along 75th Avenue.

"The point is, when you live in an area and they come in and want to put the power line up, it's different than having them put up lines first and then people moving into an area knowing that's where they are before they go to move in," he said.

The controversy surrounds a plan to run a power line that would connect the proposed Arrowhead substation northwest of 75th Avenue and the Beardsley Road alignment with the proposed Happy Valley substation west of the New River Wash on Happy Valley Road.

APS had considered connecting the two substations with an overhead power line running along 75th Avenue, 79th Avenue, the New River Wash or 83rd Avenue.

But those options were scrapped in favor of 83rd Avenue when hundreds of Glendale and Peoria residents voiced their opposition.

Residents were concerned that putting the line near their homes close to 75th Avenue could result in health problems and declining property values. Also, there were concerns about power lines ruining plans to provide recreational facilities in the New River Wash.

The current plan is to have the overhead line exit the yet-to-be-built Arrowhead substation and travel west along the Beardsley Road alignment to 83rd Avenue, then north to Happy Valley Road, then east to the yet-to-be-built Happy Valley substation.

Shortly after the power company announced that it would put the overhead line along 83rd Avenue, residents near 83rd Avenue began to voice the same concerns as those near 75th Avenue.

Since then, the Peoria Unified School District and leaders of a church under construction on 83rd Avenue have joined the neighbors in opposing the power line.

"We strongly oppose the installation of the 69,000-volt power line," said Lloyd Price, stake president for the Church of Jesus Christ of Latter-day Saints.

The proposal is scheduled to be discussed at a public meeting to be held at 7 p.m. Aug. 7 at Sunrise Mountain High School, 21200 N. 83rd Ave., Peoria.

Meanwhile, APS officials say they are going forward with plans for the 83rd Avenue alignment.

"We made the decision based on working with the two cities, input from residents, and input from organizations with an interest in that area, such as developers, the school district and others," Hatten said.

"It was a decision reached through a long process of public involvement."

According to Larry Krueger, area manager for APS, the 83rd Avenue route was chosen in part because an existing 12,000-volt overhead line runs along a major portion of the alignment. The existing line will be placed underground to help minimize the impact on the area, according to APS.

Krueger said community impact, service reliability, engineering standards and right-of-way availability were other factors in choosing that route.

Jeffry Nelson can be reached at 444-7117 or jeffrynelson@prodigy.com via e-mail.

EXHIBIT J-4
DISPLAY ADVERTISEMENTS

APS NORTH CENTRAL FACILITIES SITING PROJECT

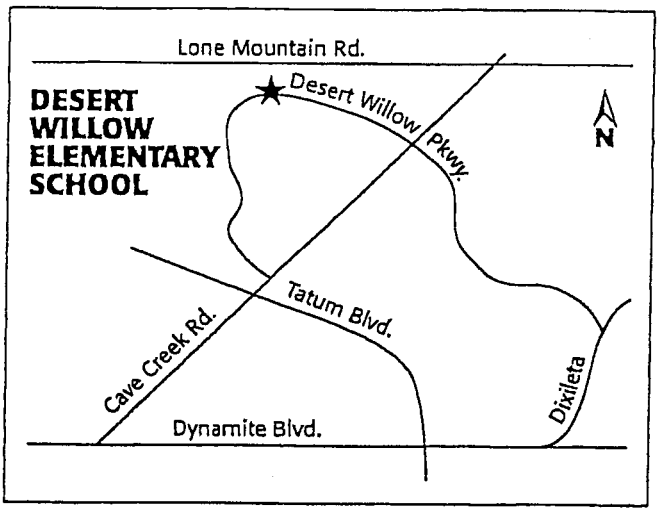
PUBLIC OPEN HOUSE

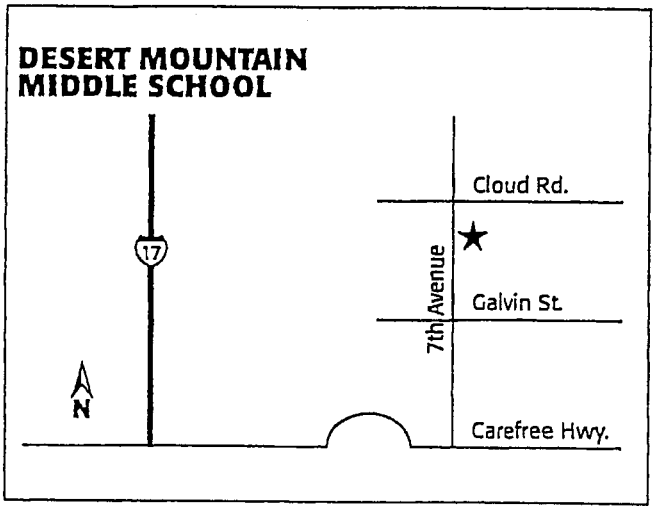
FOR NORTH CENTRAL FACILITIES SITING PROJECT

APS invites the community to attend one of two Public Information Open Houses:

Tuesday, July 18, 2000
6:00 - 8:00 p.m.
Desert Willow Elementary School
Multi-purpose room
4322 E. Desert Willow Parkway
Cave Creek
(west of Cave Creek Rd. between Lone Mountain Rd. and Dynamite Blvd.)

Thursday, July 20, 2000
6:00 - 8:00 p.m.
Desert Mountain Middle School
Multi-purpose room
35959 N. 7th Avenue
Desert Hills
(north of the Carefree Hwy. on 7th Avenue; south of Cloud Rd.)





The North Central Facilities Siting Project is an ongoing comprehensive siting study to determine the potential locations of transmission lines and substations needed to accommodate growth in the north-central Valley. The proposed facilities are expected to be needed within the next 15 years, however some will be required as soon as 2001/2002.

Since the open houses in January, studies have been done to determine the impact of the proposed alternatives. Preliminary alternative routes were evaluated (some were eliminated) based on environmental and engineering considerations. A comparison of the remaining preliminary route and site alternatives has been completed to rank the alternatives for environmental compatibility. Results of these studies will be provided at the final set of open houses in July to gather public input.

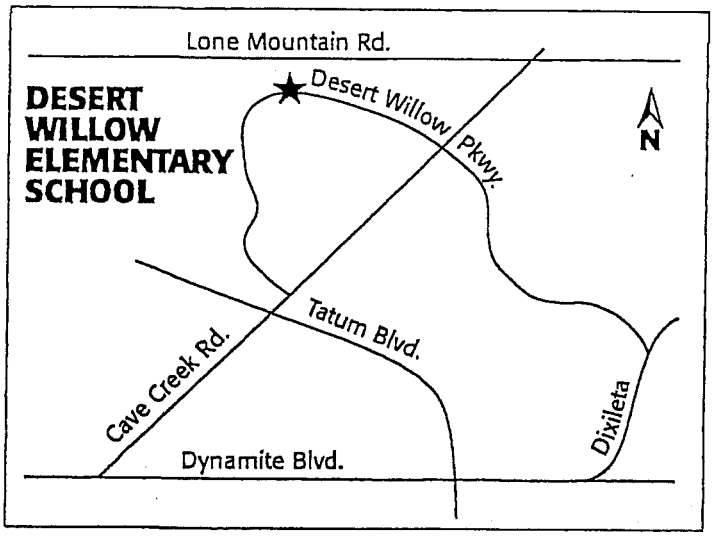
The public will have the opportunity to review project maps and displays, provide comments, and speak individually with project team members at the open houses. For more information, call the voice message information line at (602) 381-1769 or log on to http://siting.apsc.com.

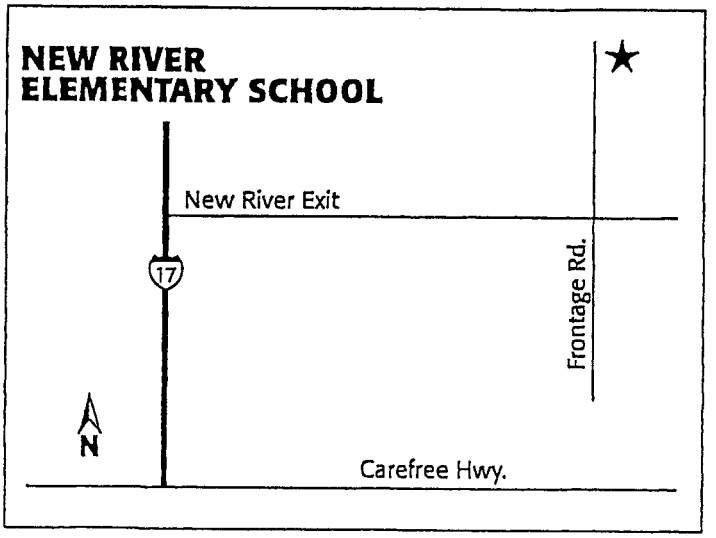
APS

FACILITIES SITING PROJECT

▪ PUBLIC OPEN HOUSE ▪

FOR APS NORTH CENTRAL FACILITIES SITING PROJECT





Public information open houses will be held at the location and dates noted below to update the public about the ongoing comprehensive siting study that APS is conducting in the north-central valley. The purpose of the study is to determine the potential locations of transmission lines and substations needed in the north-central valley over the next 15 years, depending on the rate of growth. The upcoming open houses are the second of three sets of meetings to involve the public in the planning process.

Since the last open houses in October, the study team has gathered and analyzed information about the existing and planned land uses, and natural and cultural resources. The team and the Community Working Group have reviewed and refined alternative locations for 69 and 230 kilovolt transmission lines and substation siting areas. These preliminary alternatives will be presented at the open houses for review and comment by the public. The open houses will be informal for the public to review project displays and discuss the project individually with project team members.

Call the project information line (602) 381-1769 for more information, or log on to http://siting.apsc.com.

PUBLIC OPEN HOUSE DATES AND TIMES:

Tuesday, January 25, 2000
6:00 - 8:00 p.m.
New River Elementary School
Cafeteria
48827 N. Black Canyon Highway
(I-17 east off New River exit, north on frontage road)

Wednesday, January 26, 2000
5:30 - 7:30 p.m.
Desert Willow Elementary School
Multi-purpose room
4322 E. Desert Willow Parkway
(West of Cave Creek Rd. between Lone Mountain Rd. and Dynamite Blvd.)

FACILITIES SITING PROJECT

PUBLIC INFORMATION OPEN HOUSES

Public information open houses will be held to introduce the public to the comprehensive siting study that APS is conducting in the north central Phoenix metropolitan area. The meetings will be informal and provide an opportunity for the public to review project displays and discuss the project with project team members.

The upcoming open houses are the first of three sets of public meetings to be conducted throughout the planning study. In addition, a community working group has been established to work with the study team throughout the planning process.

The purpose of this study is to determine the potential location of facilities needed to expand electrical service in the north central Phoenix metropolitan area over the next 15 years, with the exception of some facilities that will be needed within the next few years. The study will address existing land uses, aesthetic characteristics, and natural and cultural resources. The planning process will result in recommendations to APS for alternative locations for substation sites and transmission line routes.

Please call the project information line (602-381-1769) for more information.

Tuesday, October 26, 1999

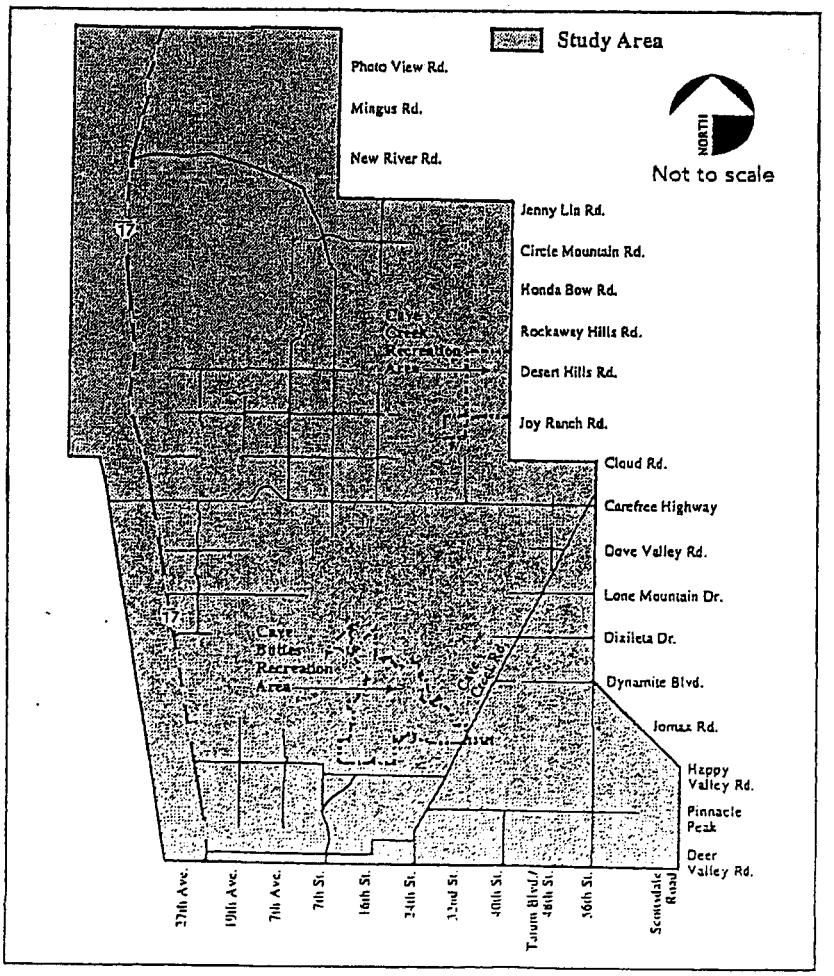
6:00 pm - 8:00 pm

New River Elementary School
Cafeteria
48827 N. Black Canyon Highway
New River
(I-17 - New River exit, north on frontage road)

Wednesday, October 27, 1999

7:00 pm - 9:00 pm

Esperanza Elementary School
Cafeteria
251 W. Mohawk Lane
Phoenix
(Take 7th Avenue, south of Deer Valley Road)



APS

OPEN HOUSE

V·A·L·L·E·Y

FOR APS NW VALLEY SITING

Open house dates and times:

Thursday, September 17, 1998,
6:00–8:00 pm

Saturday, September 19, 1998,
10:00am–12:00 noon

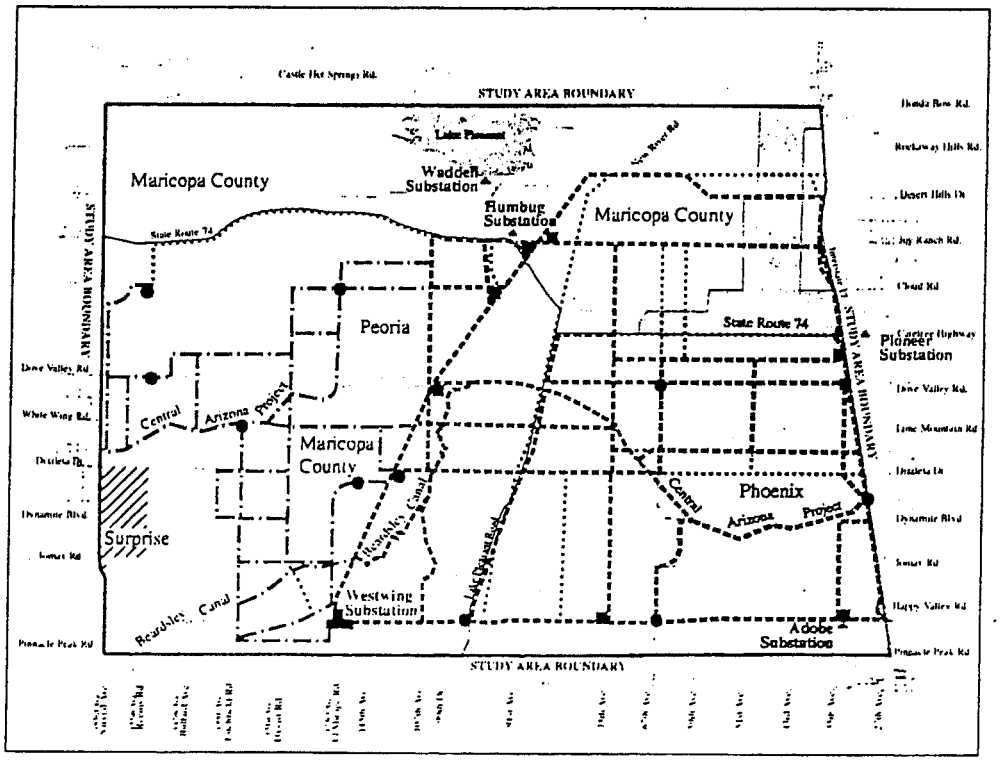
Both open houses will be held at:

Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(west of 55th Avenue north
of Pinnacle Peak Road)

Open houses will be held at the location and dates noted to update the public about the ongoing comprehensive siting study that APS is conducting in the northwest valley. The purpose of the study is to determine the potential locations of transmission lines and substations needed in the northwest valley over the next 10 years, depending on the rate that growth occurs. The upcoming open houses are the third of three sets of meetings to involve the public in the planning process.

Since the last open houses in April, the study team has gathered and analyzed information about the existing and planned land uses, and natural and cultural resources. The team and the Community Working Group have reviewed and refined alternative locations for 69kV and 230kV transmission lines and substation siting areas. These alternatives will be presented at the open houses for review and comment by the public. The open houses will be informal for the public to review project displays and discuss the project individually with project team members.

Call the project information line (861-7471) for more information.



Maricopa County
Peoria
Phoenix
Surprise

Preliminary 230kV and/or 69kV Transmission Line Alternatives
Preliminary 69kV Transmission Line Alternatives
Preliminary Transmission Line Alternatives Recommended for Elimination
Preliminary 230kV/69kV Substation Siting Area
Preliminary 69kV Substation Siting Area

NORTH
Not To Scale

OPEN HOUSE

FOR APS NW VALLEY SITING

Open house dates and times:

Wednesday, April 1, 1998, 6:30–8:30 pm

Saturday, April 4, 1998, 10:00am–12:00 noon

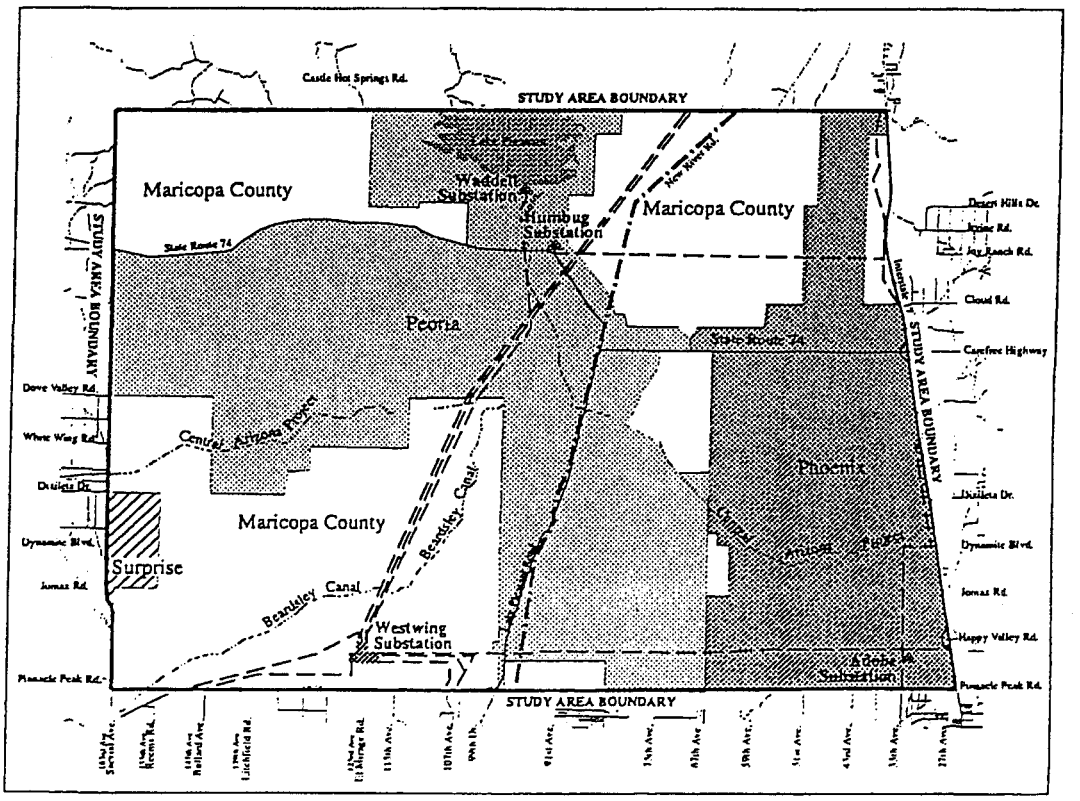
Both open houses will be held at:

Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(west of 55th Avenue north
of Pinnacle Peak Road)

Open houses will be held at the location and dates noted to update the public about the ongoing comprehensive siting study that APS is conducting in the northwest valley. The purpose of the study is to determine the potential locations of transmission lines and substations needed in the northwest valley over the next 10 years, depending on the rate that growth occurs. The upcoming open houses are the second of three sets of meetings to involve the public in the planning process.

Since the last open houses in December, the study team has gathered and analyzed information about the existing and planned land uses, and natural and cultural resources. The team and the Community Working Group have identified alternative locations for 69kV and 230kV transmission lines and substation siting areas. These alternatives will be presented at the open houses for review and comment by the public. The open houses will be informal for the public to review project displays and discuss the project individually with project team members.

Call the project information line (861-7471) for more information.



OPEN HOUSE

FOR APS NW VALLEY SITING PROJECT

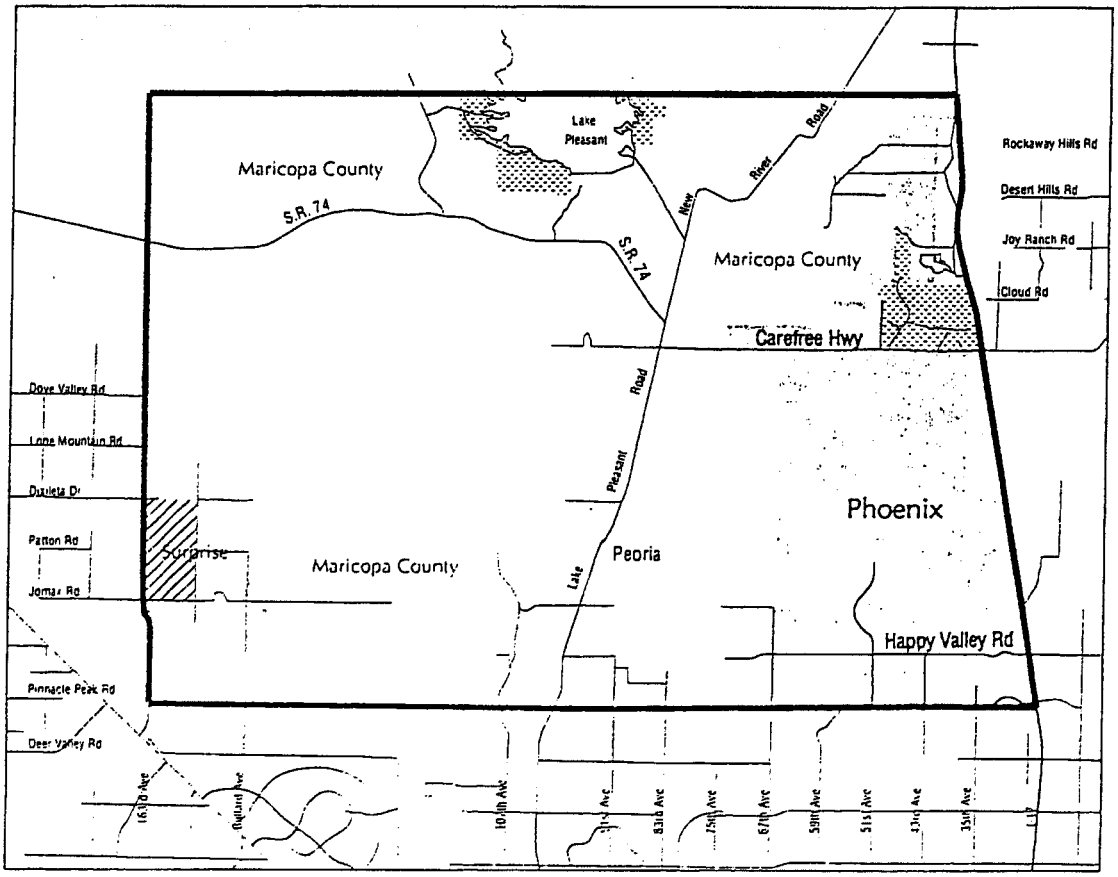
Wednesday, December 10, 1997, 6:00–8:00pm
(presentation from 6:30–7:00)
Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(east of 59th Avenue north
of Pinnacle Peak Road)

Thursday, December 11, 1997, 6:00–8:00pm
(presentation from 6:30–7:00)
Lake Pleasant Regional Park
Headquarters Conference Room
41835 North Castle Hot Springs Road
(State Route 74 and Castle Hot
Springs Road)

Saturday, December 13, 1997, 10:00am–12:00 noon
(presentation from 10:30–11:00)
Las Brisas Elementary School Cafeteria
5805 West Alameda, Phoenix
(east of 59th Avenue north
of Pinnacle Peak Road)

Open houses will be held at the locations and dates noted to introduce the public to the comprehensive siting study that APS is initiating in the northwest valley. The open houses, including a brief presentation, will be informal for the public to review project displays and discuss the project individually with project team members.

The upcoming open houses are the first of three sets of public meetings to be conducted throughout the planning study. In addition, a community working group has been established to work with the study team throughout the planning process.

The purpose of the study is to determine the potential location of facilities needed for expanding electrical service that may be needed in the northwest valley area over the next 10 years, depending on the rate that growth occurs. The studies will address existing land uses, visual and aesthetic characteristics, as well as natural and and cultural resources. The planning process will result in recommendations to APS for alternative locations for substation sites and transmission line routes.

Call the project information line (861-7471) for more information.