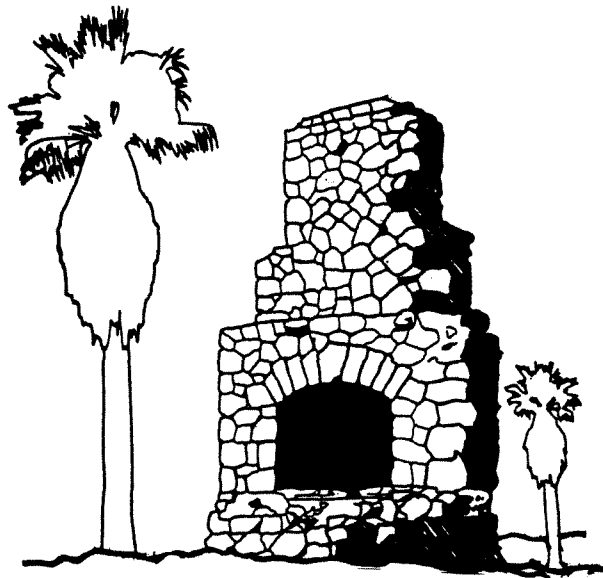


**Master Plan Development Report**  
City of Escondido, California

April 1984

# **KIT CARSON PARK**





# KIT CARSON REGIONAL PARK MASTER PLAN

APRIL 4, 1984

COMMUNITY SERVICES COMMISSION  
ESCONDIDO, CALIFORNIA

Prepared for the  
Community Services Commission  
City of Escondido, California

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(Equestrian)  
Escondido Humane Society



# SUMMARY

## INTRODUCTION

Since 1973, when the last Master Plan for Kit Carson Park was completed, the park has matured, changed in nature and expanded beyond its original boundaries. Rapid growth within the City of Escondido during that same period has put pressures on recreational, historical and cultural resources to meet present and future demands by residents.

## METHODOLOGY

A desire to maximize Kit Carson Park's contribution to the lifestyle of Escondido's residents led members of the city government and local private interests to request a new Master Plan and report. Van Dyke/ Halsey, recreational planners, (1) collated all available information, (2) studied the land and the public's needs and values, (3) prepared and evaluated alternative schemes and (4) developed a feasible Master Plan. Perhaps most important, the plan is both a program and a data base with which to maintain and expand the concept of a "natural" park system for Escondido.

## MASTER PLANS PURPOSE

The purpose of this Master Plan was to prepare a development plan and environmental impact report (EIR) in conjunction with each other to reduce or mitigate potential environmental impacts, while meeting and maximizing recreational opportunities.

## FINAL PLAN

At the completion of Phase 4 in the planning program, one final composite plan emerged. This, after extensive and careful data base analysis and public review, became the recommended physical development plan.

## PARK OBJECTIVES

The composite plan would:

- assist in maintaining the riparian area in a viable and high quality state,
- respect the natural resources and park's assets,
- manage the hydrological forces and water resources,
- expand recreational opportunities and unify the park space,
- manage long-term user impacts,
- maximize existing capital improvements where possible,

- provide for a sensitive interface between the North County Fair shopping center and Kit Carson Park,
- minimize and balance environmental impacts, and
- provide a logical implementation and phase schedule.

The revised Master Plan is one that employs a systems approach to the management of hydrological forces and respects the park's existing major capital improvements.

#### WATER

The system encompasses the management of hydrological forces, both low-flow and major 100-year event conditions. Maintenance of low-flow conditions allows the riparian area to exist and ensures habitat and water quality.

#### VEHICULAR

Vehicular access to the western part of the park via El-Ku Drive is to be eliminated in favor of a new road and stream crossing just north of the Arroyo de Oro play area. No vehicle access would be permitted beyond this point, except for emergency and service vehicles into the western portion past Sand Lake.

#### NATURE CENTER

A nature center development to educate and promote greater appreciation for flora and fauna resources in the community will be located near Sand Lake. Proximity to a number of ecological zones makes the location an ideal interpretive center site.

#### WATER MANAGEMENT

A proposed network for water resource management has been planned. This program will utilize surface flows, groundwater and potential reclaimed water for the development of new recreational lakes, will maintain and improve the ecological system's quality and will provide non-domestic water for irrigation. This approach, once studied through additional feasibilities as outlined, can result in major reductions in operational and maintenance costs.

#### FLOOD CONTROL

The proposed flood control system will protect and enhance the park's natural habitats from major damage or devastation as a result of a 100-year flood state. Even without this

event, it will benefit the ecological system through monitoring and improving the water quality.

#### SUMMARY

Kit Carson Park's future rests in its "natural" systems. The approach is a basic one: to relate time (leisure), activity (behavior) and space (environment) to provide a living park system.

With careful planning, resource management and recreational programming, as proposed, Kit Carson Park will provide the most cost-effective leisure time possible to the citizens of Escondido for years to come.

#### SUPPLEMENTARY DOCUMENTS

Supportive to the Kit Carson Final Master Plan is the E.I.R. Kit Carson Master Plan Revisions Report and the Appendices. Refer to these documents for further information and details.

## RECOMMENDATIONS

The Master Development Plan for the Park is a precise concept with specific guidelines and controls for its development. The plan is not a precisely "engineered" plan, and will require refinements during the detail design and construction document stages. FIGURE 55.

Implementation of the plan will follow and adhere to the concepts, priorities, and development controls outlined in the plan.

The plan's primary singular objective is to retain, enhance, and protect the park's natural environment, while providing recreational and educational opportunities for the community.

The following recommendations summarize the policies and concepts in the plan. Details can be found in the body of the report.

### IMPLEMENTATION

#### A. SPORTS AREA IMPROVEMENTS

1. Maximize existing sports area by combining uses, i.e., baseball and soccer fields.
2. Realign existing baseball and softball fields by overlapping with multi-use fields, and repositioning existing fields. Retain same number of fields.
3. Existing buildings and concession will be maintained in their current position and relationship to existing ballfields.
4. Reposition lighting for greater utilization, light control and glare reduction.
5. Provide for development of landscape buffer between Bear Valley Parkway and sports area.
6. Redesign will result in 9-10 ballfields and (7) soccer/football fields.
7. Additional parking will be expanded in the sports field area in the southeast corner of the park.
8. Informal picnic, pedestrian and bicycle circulation will be provided.
9. The existing (7) tennis court complex will be expanded by (4) or (8) courts.
10. The easterly half of the tennis court complex will be lighted.

11. A proshop/concession with restrooms will be developed.

12. Existing parking will be expanded.

#### B. HYDROLOGY AND RIPARIAN HABITAT

1. The water management and flood control system will provide for: (1) controlled release, (2) water impoundment, and (3) re-charge through the lake systems.

2. Utilize surface and ground-water resources, including potential reclaimed water.

3. Provide for enhancing and balancing the ecological system.

4. Reduce water damage by controlling erosive floodwater runoff.

5. Creation of a natural earth berm to control 50 to 100-year flood flows.

6. The berm will also act as a seasonal water management system.

7. Berm will provide for access for maintenance, bicycle, and pedestrians to the westerly portion of the park.

8. Sand Lake will continue to be used as a desiltation basin, with other upstream structures.

9. Tree Lake, in conjunction with the North County Fair flood control system, will be expanded to function as a closed natural recreational water body. Tree Lake will not be a desiltation for North County Fair's flood control system.

#### C. AQUATIC AND RIPARIAN

1. Natural aquatic plantings will be planted to maintain and reestablish newly developed areas.

2. Native plant species will be used for lakeside development.

3. Exotic species will be used only to create a desired ornamental affect and if there is no danger of upsetting the balance of native communities.

4. Primary maintenance required will be in the removal of silt from Sand Lake and other structures every 12-24 months.

5. Periodic maintenance of waterways, lakes, and ponds will be necessary for water quality and a balanced ecosystem.

6. The primary objective is to retain and preserve the "natural" feeling and systems within the park. These are the park's most important assets.

#### D. LANDSCAPE THEME

1. Kit Carson Park's "natural park" theme will be reinforced by the landscape concepts.
2. Landscape planting will complement the natural setting and topography of the site.
3. Vistas and views will be enhanced.
4. Accent and points of interest will be framed.
5. Screening and buffering of undesirable park edges and views will be provided in the design.
6. A major landscape screen is to be placed between Bear Valley Parkway and the sports areas.
7. The main entry at Kit Carson Way and Bear Valley Parkway will be enhanced with broad domed native trees and flowering shrubs, in combination with architectural features. Exotic plantings will be as secondary foundation plantings.

8. The park's interface with the North County Fair Shopping Center will have (3) basic transition areas along its edge.

- a. transition (1), located at the park's southern entry and southeast sports fields, will have a manicured appearance with a strong identity. FIGURE 46.
  - b. transition (2), located at the Trout tarn and Tree Lake area, will have a natural appearance and provide the major circulation linkage for pedestrians to the park from the shopping center. FIGURE 46.
  - c. transition (3), located at the southwest corner to Duck Lake, will combine plantings of coastal sage scrub and screening materials to blend the shopping center's landscape berm into the park's westerly natural area. FIGURE 46.
9. A nature center will be developed in the westerly portion of the park to provide development of the native ecology for recreational and educational purposes.
10. A 250 foot buffer or transition will protect the riparian area from activities in the parks western areas.



11. Limited single access points will only be provided in some areas, i.e., Duck Lake, if approved by California Fish and Game.

12. Special areas will be established for camping, picnicking and nature observation.

#### E. CIRCULATION SYSTEMS

1. The proposed circulation system will provide a comprehensive and sensitive linkage between various park facilities.

2. The circulation will link recreational facilities without creating physical and visual barriers.

3. The circulation will improve safety and sight distances.

4. Provide maximum access while keeping roads to a minimum.

5. Realign and strengthen internal traffic flows for ingress and egress.

6. Expand parking facilities.

7. Circulation will provide access to the new western portion of the park.

8. The main entry to the park will be by Kit Carson Way. (Mary Lane).

9. Amphitheater Drive will be realigned.

10. Casteneda Drive (to be renamed Arroyo Drive) will be vacated just above the Humane Society and be extended north-erly across the Arroyo picnic area to the nature center.

11. Pedestrian walkways and bikeways.

#### F. GRAPHIC CONCEPTS

1. Major signage and monumen-tation will occur at the park entries.

2. Vehicular regulatory and directional signs will be placed at control points to direct traffic and pedestrians.

3. Nature interpretive signs for trail and park native fea-tures.

4. Facilities will be ident-ified with symbols and graph-ics.

5. Graphics easy to read, sim-ple, durable, and replacable.

6. Colors and letter styles will be standardized and fit the parks architectural theme.

## G. UTILITIES

1. Utilities will be expanded to the new facilities as they are constructed.
2. As part of the North County Fair project, the existing on-site 12-KV electrical service will be underground.
3. All future utility installations will be placed underground.

## H. ARCHITECTURAL GUIDELINES AND CONTROLS

On June 17, 1970, the City of Escondido adopted Resolution No. 4679, to create a specific plan pertaining to Kit Carson Park and surrounding area. Subsequently, additional policies were approved, as outlined in the Master Plan.

## I. REVENUE GENERATORS

Various opportunities are available as the park expands to generate additional funds to operations and maintenance costs. City policy will determine level of revenue generation. Refer to the master plan section on revenue generators for examples.

## . SUMMARY OF COSTS AND PHASING

The method applied to develop the cost estimate consisted of quantitative and cost analysis for implementation of the Master Plan on present-day labor and material costs. All of the projected lease revenues from the North County Fair designated for Park use will be utilized in Kit Carson Park. FIGURE 53.

## INTRODUCTION

### HISTORY OF SITE

Named after Kit Carson, famous explorer of the western frontier, Kit Carson Park lies in a region that is rich in California history. The park sits at the western end of San Pasqual Valley, first inhabited by Indians of the Acorn culture but today a city of the San Diego agricultural preserve.

The valley also was the site of the Battle of San Pasqual, in which Kit Carson fought in 1846, about one mile southeast of the park on Mule Hill. A state historical monument recognizing the battle is located four miles east off San Pasqual Road.

The western end of the valley was home to the old stagecoach line, once heavily traveled by those on their way to the coast. Snook's Ranch, built on the site in the 1800's, was a way station for the stageline and its weary travelers. Today, all that remains of the ranch is a stone chimney located approximately 300 yards from the park's fire station and from which Mule Hill is visible.

During the 1900's, the park site was used for livestock grazing, farming, adobe manufacturing operations and development of wells, dikes and ponds by the Green Mutual Water Company.

Kit Carson Park, a 293-acre site, was acquired in 1967 by the City of Escondido from the City of San Diego.

### SITE CHARACTERISTICS

Kit Carson Park lies in a small valley surrounded by foothills in a rural setting just above Lake Hodges. The site is typical of the San Diego County chaparral, sage scrub inland foothills and is transected by two drainage courses from the north and northeast. This natural water flow has created unique habitats of riparian woodland, freshwater marsh lakes and a low water table through the heart of the park.

### NATURAL SYSTEMS

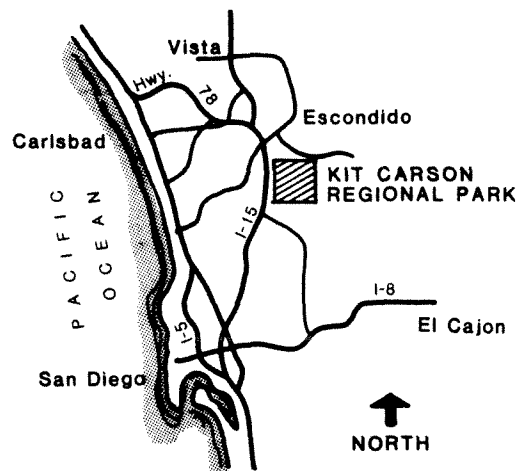
The natural waterways, bogs, lakes and cottonwood and oak trees create an oasis-like theme with cooler temperatures during the summer months and a large population of animal and bird life.

## REFERENDUM

In a referendum in 1979, the citizens approved a ballot measure to lease approximately 75 acres for a commercial development proposed for the southern portion of the site. This recreational acreage was replaced with 77.5 acres immediately to the north and adjacent to the site.

As a result of park boundary adjustments, new acreage being acquired and the impact of a major land use change, there was a need to take a fresh look at the park's potential and review the 1973 Master Plan.

A desire to refine the original concept of a "natural" park, retain the original 1973 Master Plan's goals and to channel community interest led to the present Master Planning process.

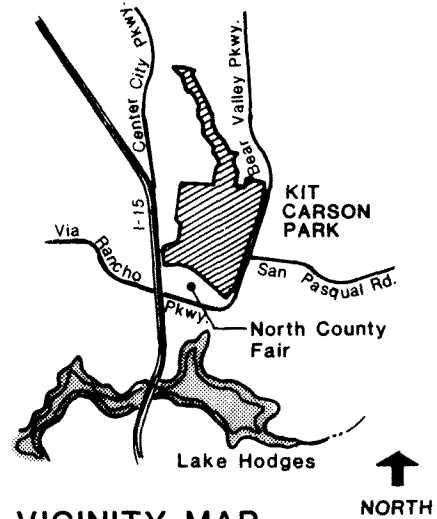


LOCATION MAP

## VICINITY

### INTRODUCTION

Kit Carson Park lies immediately east of Interstate Highway 15, north of the Via Rancho Parkway offramp, west of Bear Valley Parkway, and is surrounded by a low-density residential development to the north, extreme west and southwest; San Pasqual High School and some agricultural development to the east; Lake Hodges, and the proposed North County Fair Regional Shopping Center to the south.

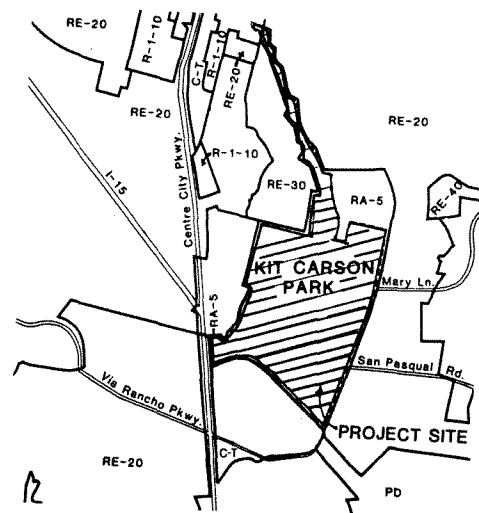


VICINITY MAP

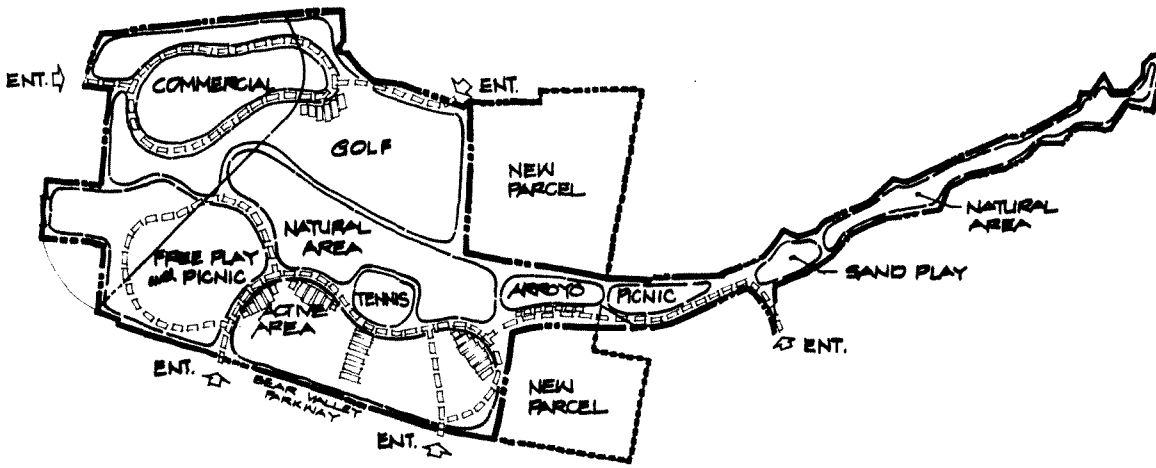
ZONING - Page 1

### INTRODUCTION

Current zoning plans in the general area of the I-15, Via Rancho Parkway intersection show Tourist-Commercial (C-T), Planned Commercial Development (PCD), Residential-Agricultural 5-acre (RA-5), or Residential Estates (RE-20, RE-30, and RE-40).



ZONING MAP

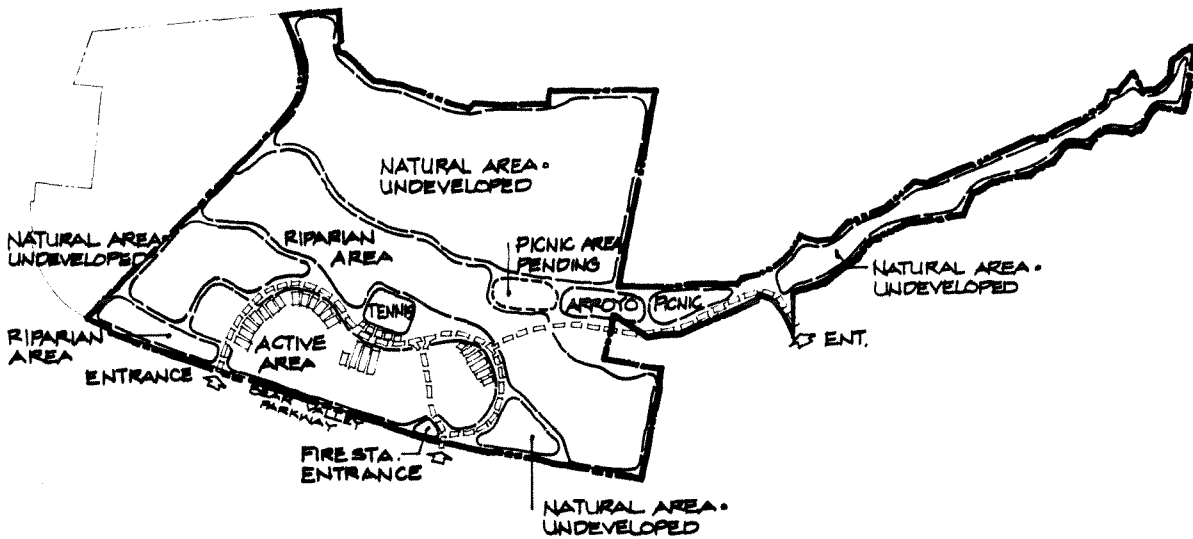


KIT CARSON PARK



**1973  
MASTER PLAN**

Figure 1



KIT CARSON PARK



**PARK  
LAND USES**

Figure 2

## 1973 MASTER PLAN / LAND USES

### INTRODUCTION

The 1973 Kit Carson Master Plan had identified numerous land uses.

The west side was to have a commercial core surrounded by a golf course.

The east area along Bear Valley Parkway was divided into two sections with the south end being developed into open or free play and picnic areas.

The northern end of the east side was to be and has been developed into an activity field area and an amphitheater area.

The central part of Kit Carson Park, a riparian area, was to remain a natural area with limited or no use.

The lower more open portions have been developed as previously identified, into a play structure area, the Arroyo de Oro and adjacent picnic areas.

The upper portion, not quite reaching Escondido Boulevard, being difficult to develop has been left much in its natural state. FIGURE 1.

### THE PARK TODAY

Park development to date has been limited generally to that area east of the riparian area. Included in the development are (7) tennis courts, (7) ball fields, restroom/concession facilities, amphitheater, fire station, soccer fields, picnic areas, the Arroyo de Oro play area and parking. FIGURE 2.

# PLANNING PROCESS

## INTRODUCTION

On March 10, 1982, the City of Escondido authorized Van Dyke/Halsey to proceed with the preparation of this Master Plan and report.

## REQUEST OF SERVICES

The initial request for planning services as stated by the City of Escondido Community Services Commission was based on one major issue "retain the Park's 'natural' character" and included the following summarized directives:

## ISSUES

- Review the existing Master Plan to retain previously adopted concepts of natural areas integrated with intense public use.
- Recommend specific park improvements based on existing usage and community input; also, test previously adopted improvement concepts.
- Provide inventory of existing park facilities and provide specific recommendations.
- Prepare a topographic survey.

- Provide for interface between park and shopping center.
- Provide recommendations for streambed development and maintenance.
- Provide revenue generating alternatives for park facilities and develop estimates for plan implementation and phasing program for construction.
- Study use of existing site wells for irrigation purposes and existing and future site utilities.
- Develop landscape theme and interface non-park uses into park.
- Make recommendations for enhancement and protection of wildlife in the park.
- Prepare site analysis of existing environmental elements.



## PLANNING PHASES

The planning process was structured into five major phases.

1. Initial Project Organization
  2. Data Base and User Demand Studies
  3. Analysis and Interpretation
  4. Alternative Concept Plans
  5. Master Development Plan
- FIGURE 3.

### Phase 1

As part of the planning process an EIR was prepared in conjunction with the Master Plan in order to evaluate and adjust the final planning concepts and to avoid and mitigate, where feasible, significant environmental impacts. The EIR is inclusive with this report and should be referenced for greater data detail.

### Phase 2

Informational in nature and focusing on assembling and analyzing the existing 1973 Master Plan, reports, data, shopping center EIR. Also included was extensive on-site surveys to collect all of the background information needed for the master planning effect.

This data provided the foundation for all subsequent work and identified environmental constraints and pertinent design issues. The "data base" contained various maps and charts on ecology, physical and use elements.

- Elevation & Slope Analysis
- Soils
- Drainage and Hydrology
- Vegetation/Eco-Zones
- Wells and Utilities
- Visual Image Analysis/Circulation
- Use to Use Analysis
- Remote Sensing Infrared Aerial Photography

This work program provided a logical sequence and stages at which the Community Services Commission, staff and public could review, comment upon and direct the progress of the plan.

### Phase 3

Was to analyze the reconnaissance in order to set direction and determine viable alternative concepts. Public presentations were made to the commission, staff and city council to review the findings and review observation initial findings for potential recreational opportunities.

### AERIAL PHOTOGRAPHY

One of the special tools utilized during this phase was color infrared photography. With this method, more detail is discernible since the human eye is much more sensitive to differences in color than to differences in shades of gray.

### COLOR-INFRARED PHOTOGRAPHY

Color-infrared film is especially useful for vegetation surveys because the image-forming dyes enhance infrared sensitivity. In this film, the top layer is sensitive to near infrared light, enabling the film to image this type of light as red in photography. Similarly, red will show as green, green as blue, and blue as black. Because infrared film does not produce an image that appears natural, it is often called "false-color" film.

### AERIAL ANALYSIS

Using color-infrared film, a series of aerial photographs was taken of the site for environmental analysis and interpretation. In the images, growing, healthy vegetation appears in various red hues, clear

water as black, sediment-laden water as light blue and urban areas as blue-gray. The health of the riparian habitat, water quality, vegetation life cycle and other site conditions were able to be studied. This was interfaced with other environmental issues and potential site opportunities.

### Phase 4

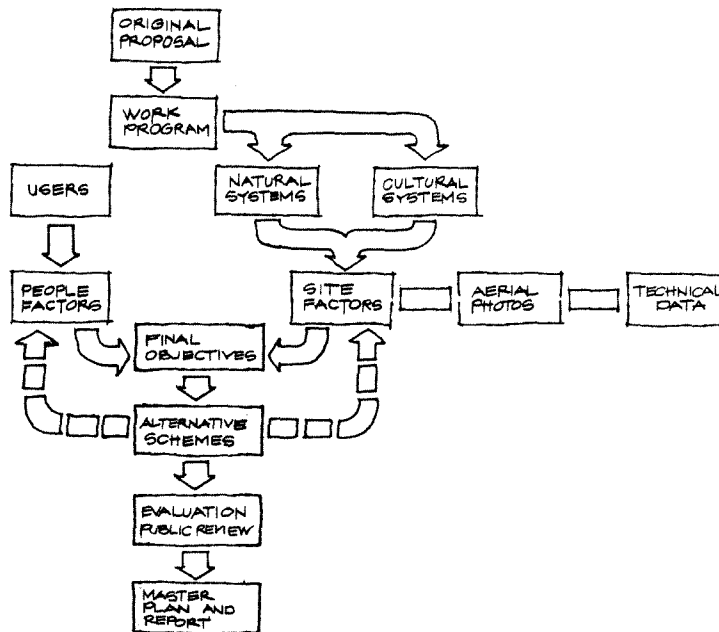
This phase developed four alternative schematic development plans which reflected various priorities based on phase 3 analysis. These plans schematically illustrated a broad range of design and policy directions that were available in terms of the park's size, user-orientation, ecology and new properties. Feedback from the community was collected and evaluated to determine positive and negative aspects of each. SCHEME 'A' took a natural ecological approach while expanding the recreational area to west in passive and active activities. SCHEME 'B' expanded concession activity in the western and southeast portions of the park and expanded vehicle access. SCHEME 'C' proposed realignment of a portion of the main collector and

park linkage system and included a nine-hole golf course. SCHEME 'D' took a position of emphasizing concessions and revenue-generating uses, major changes to the road systems to limit automobile access and expanding user areas.

Phase 5

Comments and feedback from community, staff, commission, and council provided valuable input.

After presentation of the alternatives and public input, a final "overall concept" plan, Phase 5, was presented. Changes were made based on the feedback received. The revised plan was presented to Community Services Commission and City Council and approved. With additional direction from the Parks and Recreation Department, the final Master Plan was prepared.



**PLANNING PROCESS**

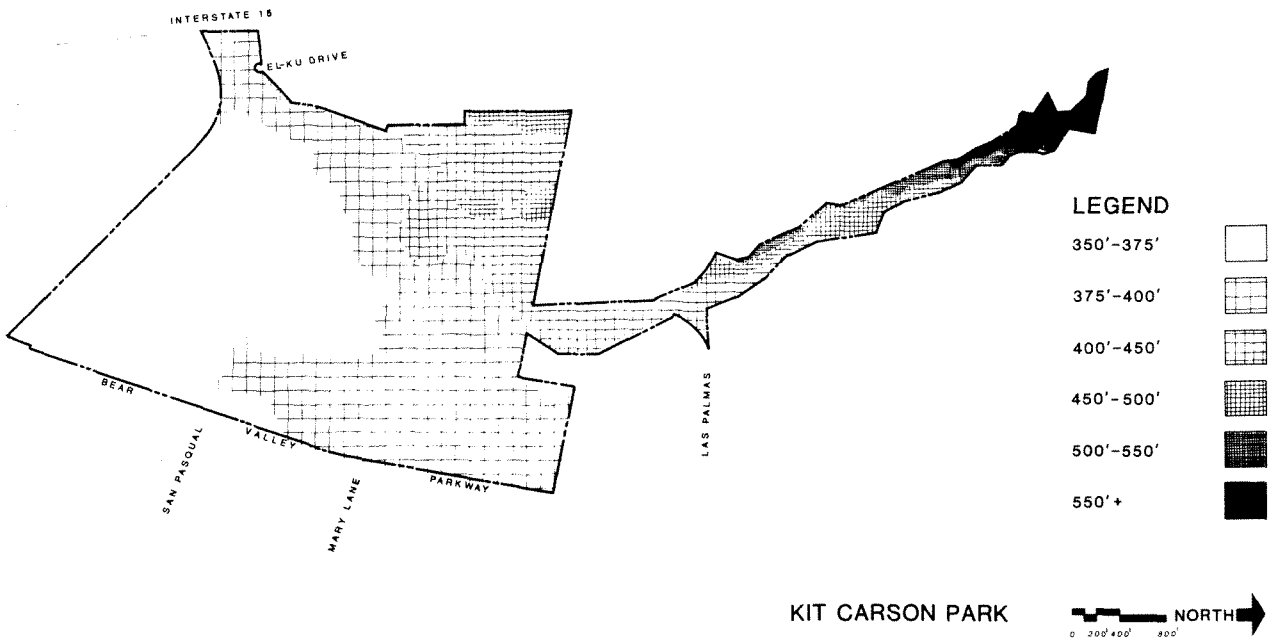
Figure 3

# **Inventory and Analysis**

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# ELEVATIONS

Over 60% of the site lies between the elevations of 340 to 400 feet. In the main body of the park on the western portion lies a small ridge entering from the north. From the ridge, panoramic views of the region and park overviews can be seen from two high points, one of which is at an elevation of 465 feet and the other at 472+ feet. The pan-handle rises from 400 to in excess of 550 feet at the northern end. FIGURE 4.



KIT CARSON PARK

**elevations**  
Figure 4

# SOILS

## INTRODUCTION

The site's soils exhibit a series of soils and formations. The erosion of these soils is the result of soil structure and slope gradient. Special attention and planning will be necessary to insure control and stabilization of soil erosion.

## SOIL FORMATIONS

The basic formations are:

RaB Ramona sandy loam  
CkA Chino silt, loam, saline  
C1G2 Creneba Coarse sandy loam, eroded  
RaC Ramona sandy loam  
FaD2 Fallbrook sandy loam, eroded  
FaC Fallbrook sandy loam  
VaB Visalia sandy loam  
PeC2 Placentia sandy loam, eroded  
Pfc Placentia sandy loam, thick surface  
RaC2 Ramona sandy loam, eroded  
RaD2 Ramona sandy loam, eroded  
FaE2 Fallbrook sandy loam, eroded

FIGURE 5

## SOIL STRUCTURE

Alluvium deposits cover a large portion of the site. Surface runoff from the surrounding developed watershed area has been spread out through the central portion of the site. As a result, the alluvium deposit in the park wetlands has been trenched by annual flood waters its total length to underlying clay. Based on these exposures, the alluvium in the park riparian area appears to have a maximum thickness of approximately 5 to 15 feet and consists essentially of silty, gravelly sands and clay deposits. FIGURE 6.

## SUMMARY

This soils report was based on preliminary surface reconnaissance for general planning purposes. In order to develop suitable recommendations for proposed site grading, more detailed soil and geological investigations will be required. Any structures that are planned in connection with the park's improvements would also require detailed foundation investigations including exploratory borings, especially in marginal areas such as in the alluvium-filled zones.

The principal considerations of the park's soils are the drainage characteristics, soil formation, environmental and use potentials. (For further details, see Kit Carson EIR.)

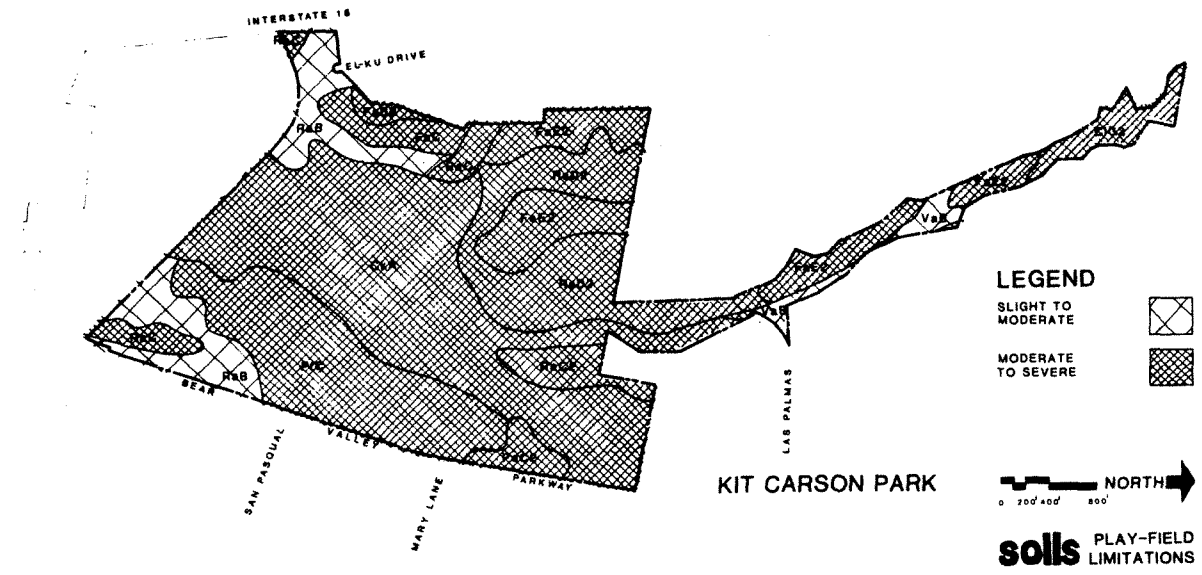


Figure 5

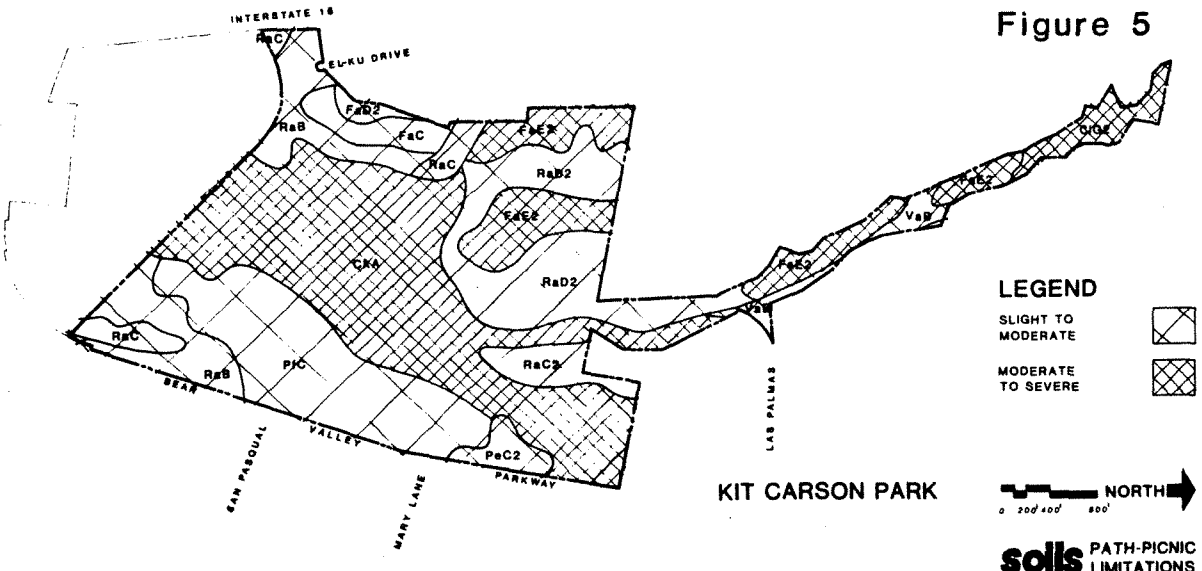


Figure 6

# DRAINAGE / HYDROLOGY

## INTRODUCTION

There are two main drainage flows through Kit Carson Park, one of which is through the panhandle area that drains approximately one square mile. The other flows into the park from the northeast, draining 5.5 to 6.0 sq. mi. FIGURE 7-8

## PANHANDLE DRAINAGE

\*The drainage through the panhandle delivers approximately 700 cubic feet per second with a velocity of 8.3 feet per second at the Las Palmas Avenue crossing. Flows from the northeast enter at the north edge of the riparian area with peak flows of 4000 cubic feet per second at a velocity of 1.85 feet per second. The drainage plain, covered by riparian vegetation, will flood with between 3 to 8 feet of water and will drain very slowly. Most of the topography in this area is in the 0-5% slope range and in many cases slope at 2% or less.

\*These figures are based on a 100 year frequency storm.

## NORTHEAST DRAINAGE

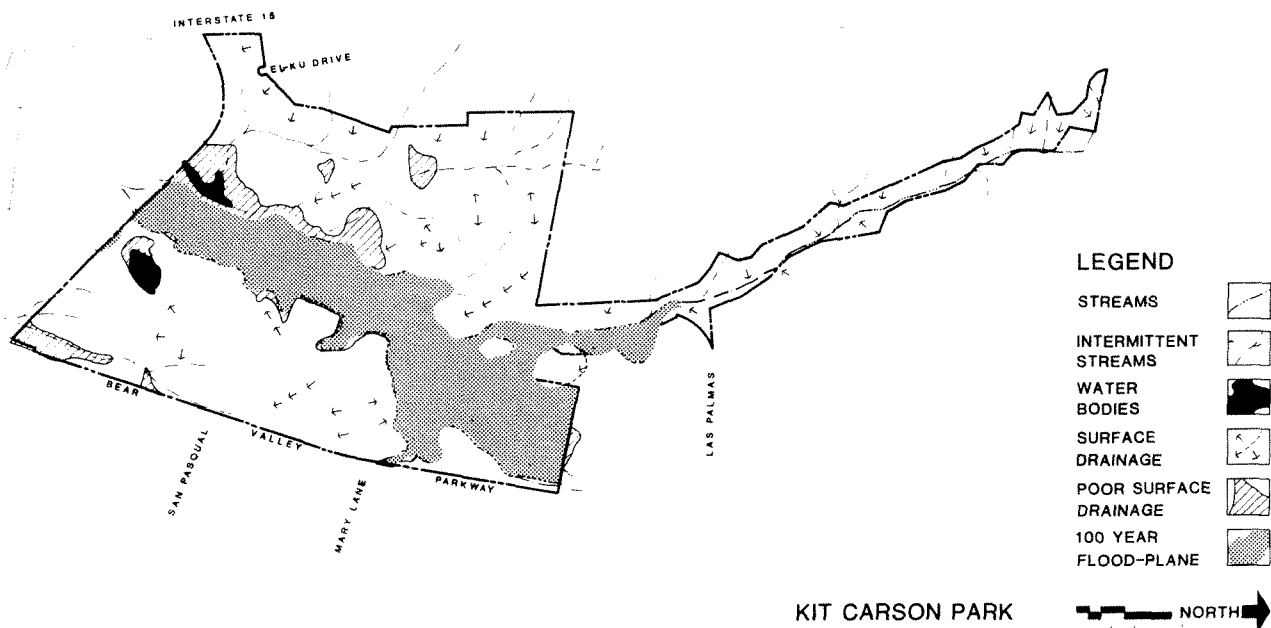
The drainage from the northeast is less erosive until it meets the panhandle flow at approximately the center of the site. Channel velocities at this convergence reach in excess of 11.20 feet per second. As a result of the high velocities and existing soil conditions, the stream in the riparian area becomes what is known as a braided stream, wandering freely from side to side in a wide flood plain corridor. Potentially, in a 100-year flood event, the riparian area could virtually be wiped out as a result of the undermining of the channel sides and destruction of large stands of trees.

## SAND LAKE

Sand Lake has become the sediment basin for materials carried out of the panhandle area and above. Currently, Sand Lake is dredged of this material based on sediment deposits.







Several other minor drainage swales enter the site but are of no significant impact on the major surface flows. FIGURE 7.





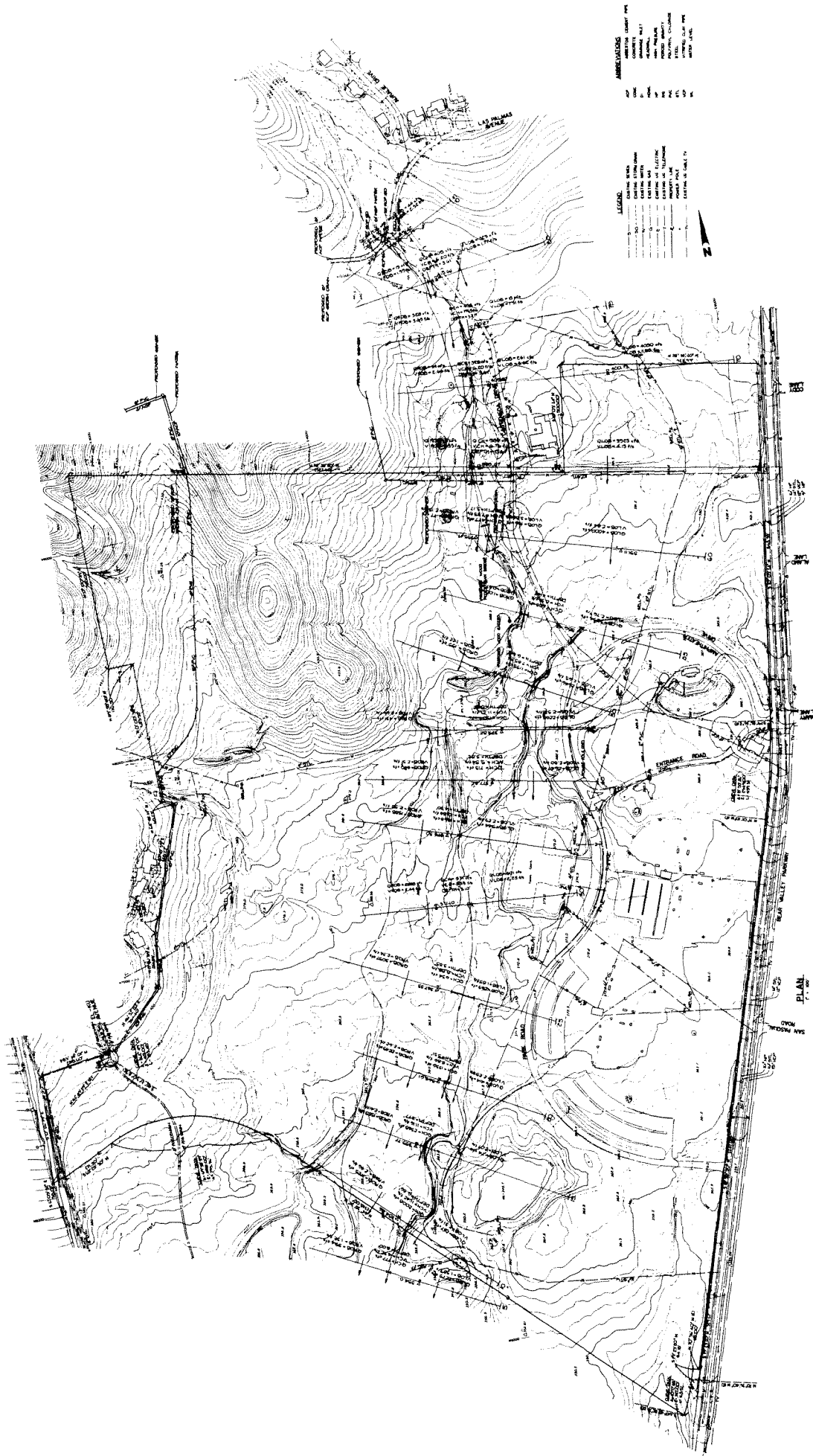
KIT CARSON PARK

**LEGEND**

- STREAMS 
- INTERMITTENT STREAMS 
- WATER BODIES 
- SURFACE DRAINAGE 
- POOR SURFACE DRAINAGE 
- 100 YEAR FLOOD-PLANE 

0 200' 400' 800' NORTH 

**drainage**  
Figure 7



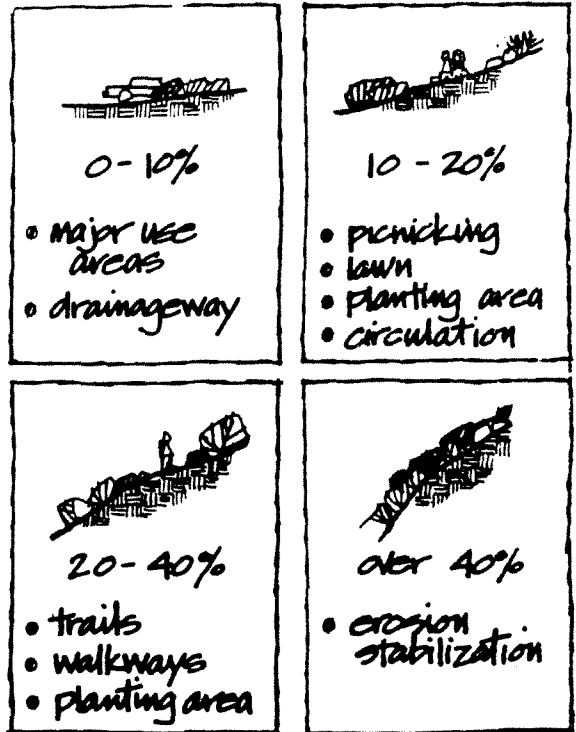
**KIT CARSON PARK EXISTING SITE CONDITIONS**

topographic, hydrology, drainage patterns, utilities and circulation

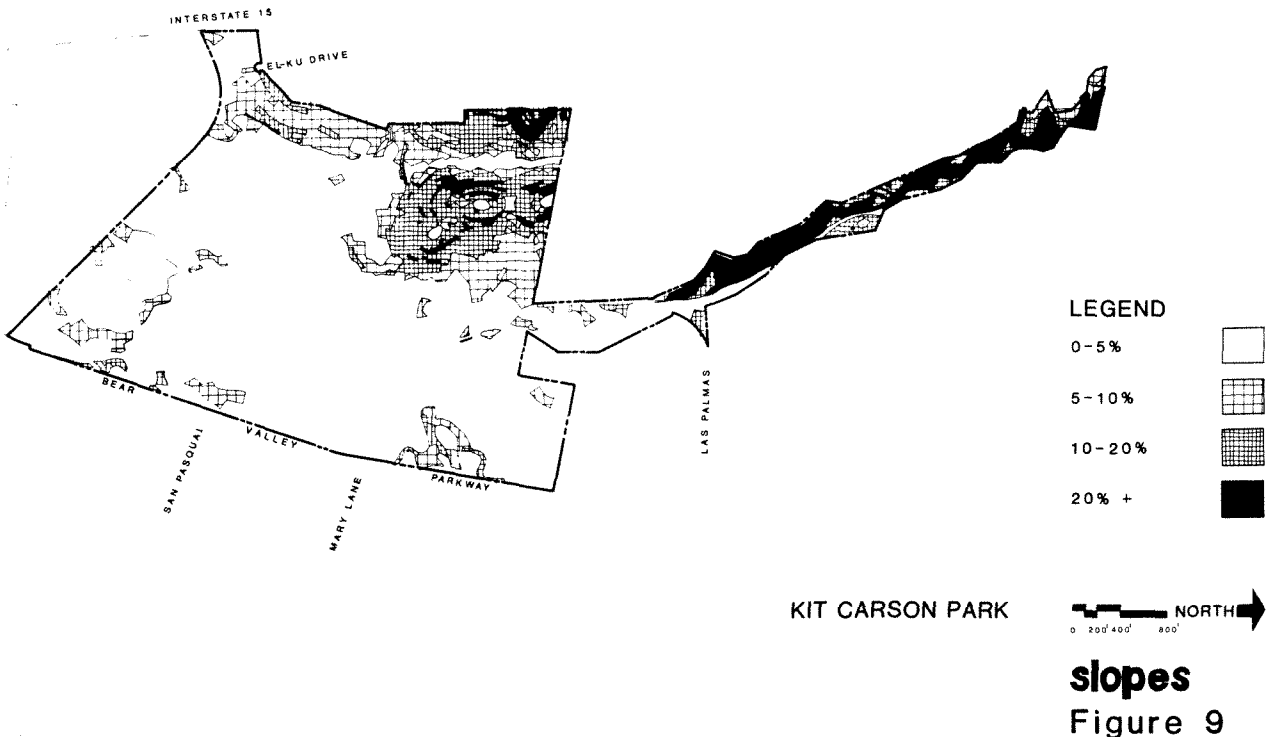
Figure 8

# SLOPES

Most of the grades in Kit Carson Park are in the range of 1-5%, making those areas feasible from a grading standpoint for active park development. Along the western edge and the ridge, grades generally range from 5-20%. In the panhandle area, grades are predominantly in excess of 20%. The steep-sided slopes of the panhandle limit development to trail(s) and overlooks. Special design considerations will be required for development in the panhandle area, relative to drainage, erosion and access. FIGURE 9.



SLOPE USE POTENTIAL



## VEGETATION / ECO-ZONES

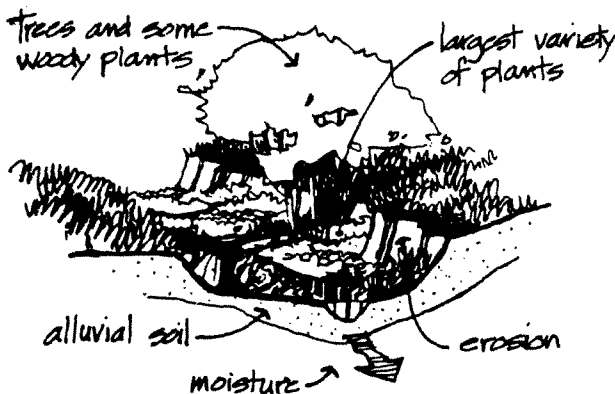
### INTRODUCTION

Kit Carson Park, a 293-acre park, contains complex ecological systems that provide habitats for several rare wildlife species and ecologies that require sensitive and special protection from impacts potentially generated by recreational development.

Van Dyke/Halsey, recognizing these conflicts, approached the challenge by preparing an integrated data base. In order to accomplish this task, aerial reconnaissance with the latest in aerial photographic techniques was utilized.

### ANALYSIS PROCESS

An analysis process was developed that combined standard black-and-white photography with color infrared photography. Existing historical aerial photos were used to supplement the photo interpretation process through record searches.



RIPARIAN

### PHOTOGRAPHY

Since color infrared film is sensitive to portions of the light spectrum that our eyes cannot see, it provides a much clearer picture of existing conditions. For example, healthy vegetation reflects light energy in the infrared spectrum, which allows the interpreter to identify species and relative plant vigor, delineate plant communities and ecological systems, interpolate ground water levels and trace changes in land use and drainage patterns. FIGURE 15.

### EXISTING DATA

Existing aerial photographs were used to help establish patterns of change that have occurred over the past 40 years. The accompanying photos were acquired from several public agencies and were located by an index system developed by Van Dyke/Halsey. FIGURE 14.

Overall, the application of the latest aerial photo interpretation techniques has allowed Van Dyke/Halsey to prepare a comprehensive data base of the park's whole environment, which helped to picture clearly an otherwise complicated system.

## HABITATS

The vegetation and natural habitats within the park are a result of various elements and ecologies. The most unusual aspect of Kit Carson Park's rare character is the high quality of riparian habitat. Other natural communities exist which combine to make Kit Carson Park a very special place. FIGURE 12.

## INTRODUCTION

Vegetation types within the park generally fall into one of six major plant associations:

1. Riparian Woodland
2. Freshwater Marsh
3. Oak Woodland
4. Coastal Sage Scrub/  
Successional Coastal  
Sage Scrub
5. Flood plain
6. Introduced

## RIPARIAN

The riparian woodland contains approximately 87 acres and is the largest association in the park. It measures 4,200 feet long and 580 feet wide at its widest point. It also supports the largest number of birds and animals and provides excellent breeding and feeding areas. FIGURE 13.

## INFLUENCES

This riparian area also positively influences the species diversity of the adjacent natural habitats. Mature pockets of cottonwood, sycamore and willow make up the major over-story vegetation. The under-story vegetation varies from impassable to open and marshy. FIGURE 10-11.

## COASTAL SAGE SCRUB

Coastal sage scrub occupies approximately 53 acres and is generally scattered throughout the park with the largest portion being located west of the riparian area. Successional coastal sage scrub is generally scattered at the edges of the coastal sage scrub and in areas that have been previously disturbed. The park contains approximately 32 acres of successional coastal sage scrub. FIGURE 12.

## FLOOD PLAIN

Flood plain habitat in Kit Carson Park is estimated at approximately 13 acres and is dominated by such plants as stinging nettle and mule fat. FIGURE 12.

PLANT ASSOCIATION

The existing diverse vegetation associations contribute to high diversity in animal habitats within Kit Carson Park. The park is also linked to additional natural habitats to the north and southeast and by the Lake Hodges and San Pasqual agricultural open spaces to the south. (For further details, refer to the Kit Carson EIR.)

The existing on-site vegetation and habitats support approximately 180+ varieties of birds, mammals, amphibians and reptiles commonly found on the coastal plain and in the low foothills of San Diego County.

ANIMAL

Direct or indirect on-site observation include the following mammals: desert cottontail, California ground squirrel, raccoon and a variety of common field rodents. Some of the large species may den off-site in natural scrub areas and hunt throughout the site. (Refer to appendices in the Kit Carson EIR.)

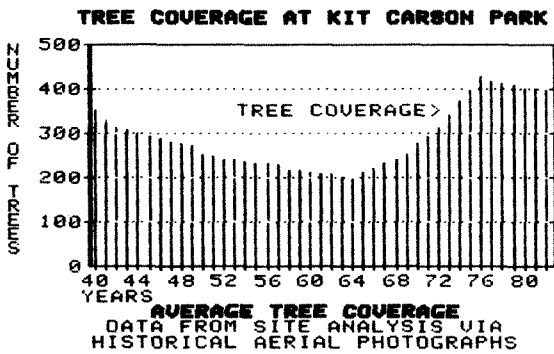


Figure 10

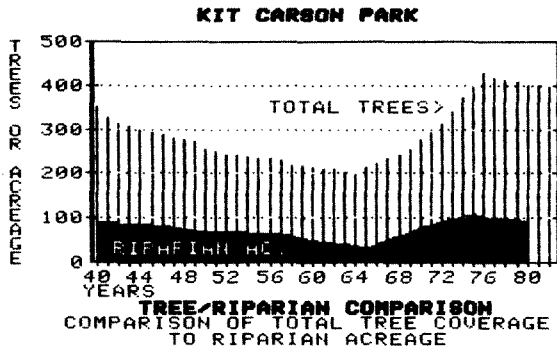


Figure 11

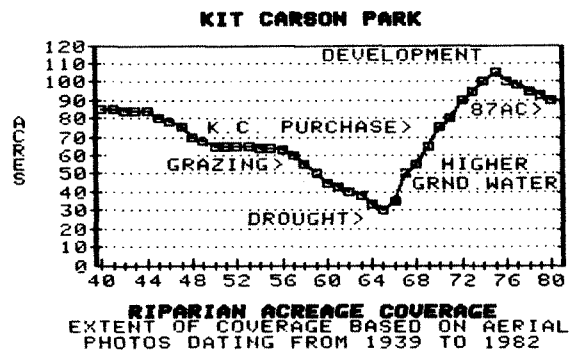


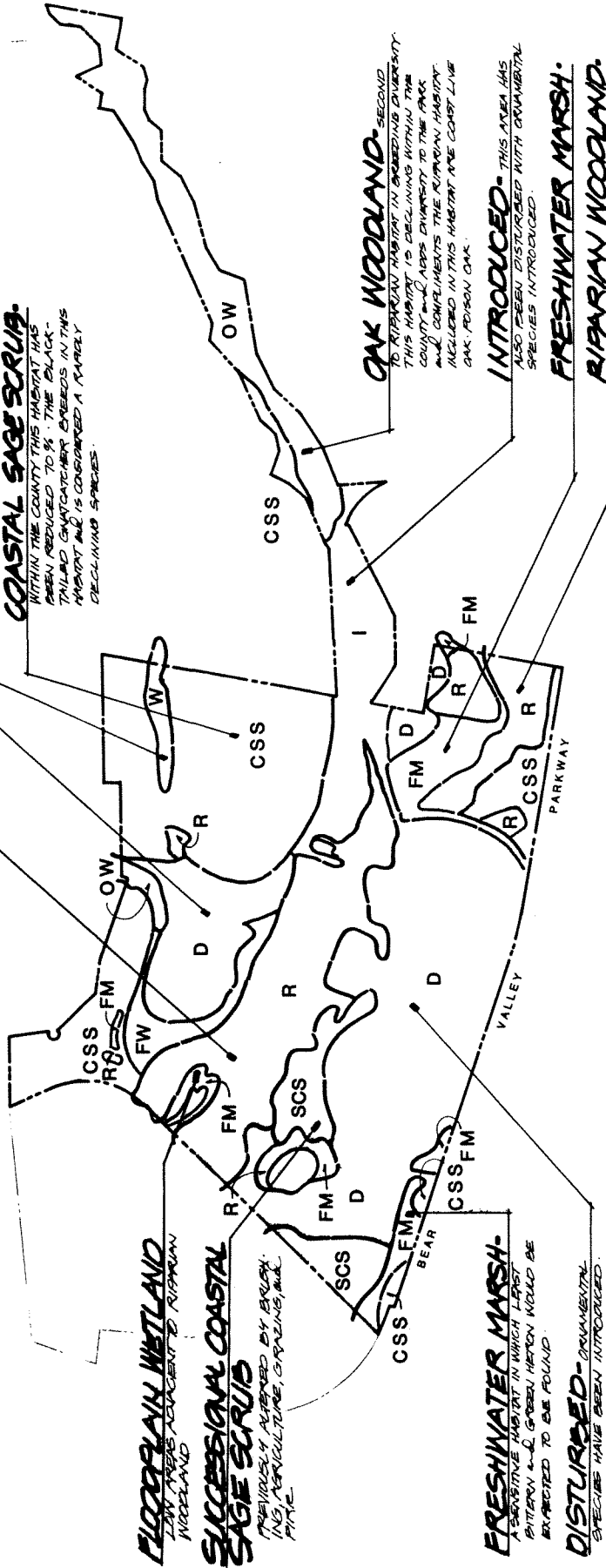
Figure 13

**RIPARIAN WOODLAND -**  
 BEST SUSTAINABLE HABITAT IN THAT IT ACCOMMODATES THE GREATEST VARIETY OF SPECIES AND A NUMBER OF OBLIGATE RIPARIAN BREEDING SPECIES WHICH ARE DECLINING: LEAST SWELL'S WIREB KESTRIS AND YELLOW-BREASTED CHAT. CONFINED AREAS IN THIS HABITAT ARE ON THE REGIONALLY DECLINING LIST.

**DISTURBED -** SUCCESSIONAL PLANT MATERIALS GRASSES AND SAGE SCRUB RETAINING.

**WOODLAND.**

**COASTAL SAGE SCRUB.**  
 WITHIN THE COUNTY THIS HABITAT HAS BEEN REDUCED TO 1%. THE BLACK-TAILED Gnatcatcher BREEDS IN THIS HABITAT AND IS CONSIDERED A RARELY DECLINING SPECIES.



**RIPARIAN WETLAND**  
 LOW AREAS ADJACENT TO RIPARIAN WOODLAND

**SUCCESSIONAL COASTAL SAGE SCRUB**  
 PREVIOUSLY AFFECTED BY BURNING, AGRICULTURE, GRADING, AND FILL.

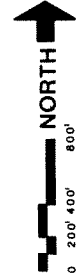
**FRESHWATER MARSH.**  
 A SENSITIVE HABITAT IN WHICH LEAST BENTON AND GREEN HERON WOULD BE EXPECTED TO BE FOUND.

**DISTURBED -** DOCUMENTAL SPECIES HAVE BEEN INTRODUCED. NO SIGNIFICANT WILDLIFE SPECIES TO NOTE.

**OAK WOODLAND -** SECOND TO RIPARIAN HABITAT IN BREEDING DIVERSITY. THIS HABITAT IS DECLINING WITHIN THE COUNTY AND ADDS DIVERSITY TO THE PARK AND COMPLEMENTS THE RIPARIAN HABITAT. INCLUDED IN THIS HABITAT ARE COAST LINE OAK, POISON OAK.

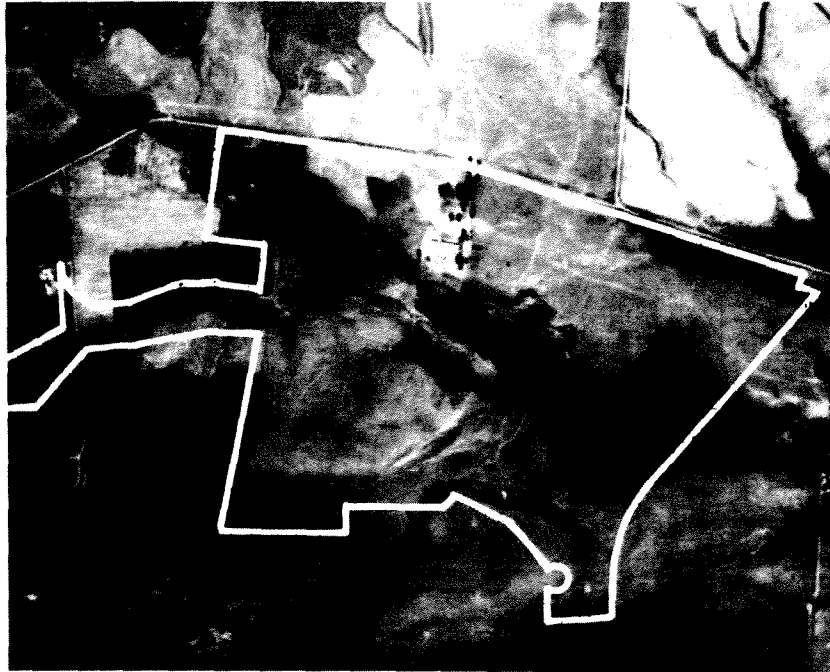
**INTRODUCED -** THIS AREA HAS ALSO BEEN DISTURBED WITH OCCASIONAL SPECIES INTRODUCED.

**FRESHWATER MARSH.**  
**RIPARIAN WOODLAND.**

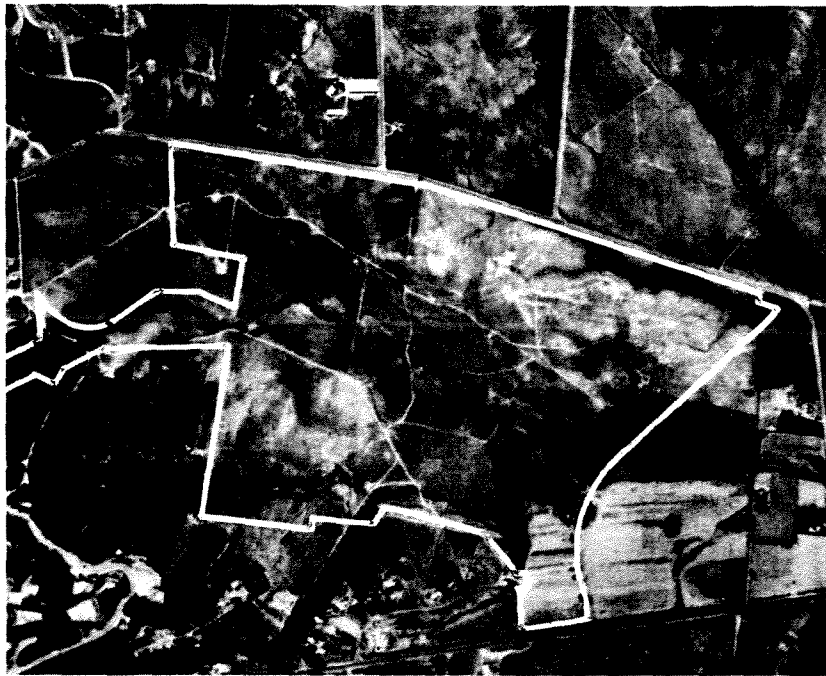


KIT CARSON PARK

**eco-zones**  
 Figure 12



1939: First of 12 study photos of Kit Carson Park. Riparian area is stable - 85 acres and 350 trees.



1964: Low water tables and overgrazing caused the riparian area to be reduced to 30 acres, 200 trees.





1982: Riparian area has stabilized higher groundwater levels, now 87 acres and 500 trees.

Figure 14



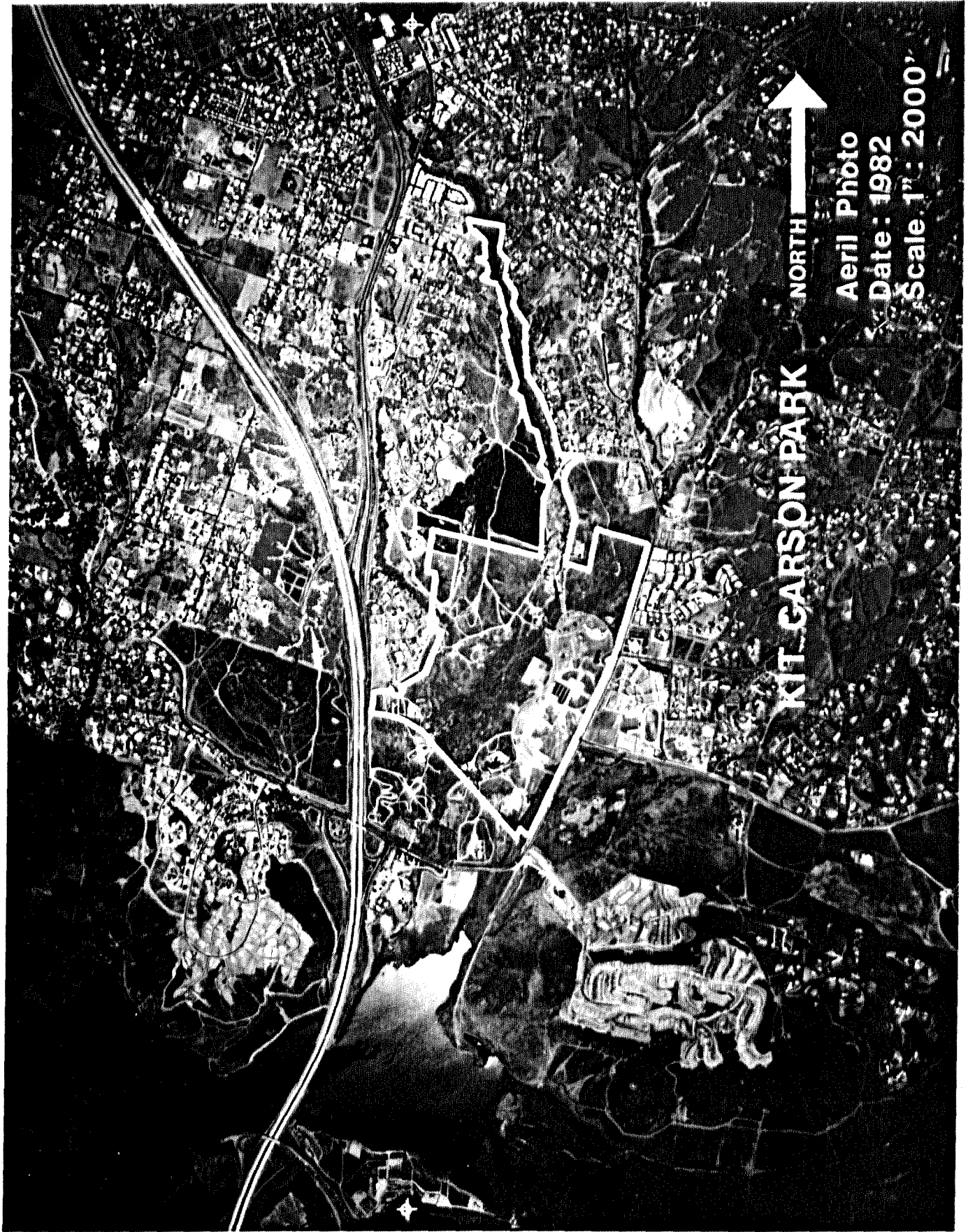


Figure 15



# UTILITIES

Located within the Bear Valley Parkway corridor are primary feeds for water, sanitary sewer, storm drain, telephone, electric, gas and television cable. Lines from these utilities currently serve the site, but only extend into the eastern portion of the park. Development in the western portion will require utility extensions. The current utility mains will adequately handle any increased load as a result of park development. FIGURE 16.

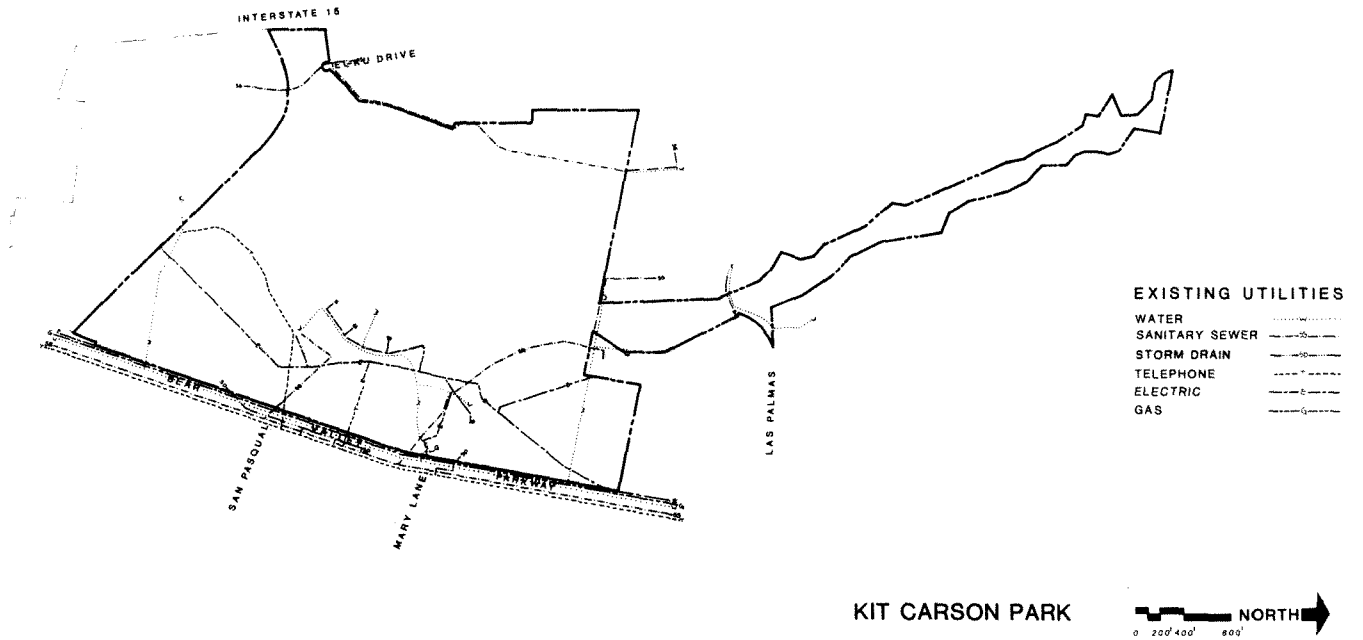


Figure 16

## WELLS AND WATER

### INTRODUCTION

The park is within the San Dieguito drainage basin located at the convergence of two tributary creeks which drain into Lake Hodges at the southern end of the park.

In early years, the Green Mutual Water Company tapped the aquifer with a series of 12 interconnected wells within the park's boundaries. During that period, the water quality was good enough to be used for agriculture grazing and domestic uses with the majority being used for orchard irrigation. Water was derived from both the Escondido Mutual and Green Mutual Water Companies.

### WELL SITE LOCATION

Two-thirds of the well sites are located on the eastern side of the riparian area. Of 12 wells, number 7, located near Tree Lake is the largest, with a 95 foot well and a 135 gallons per minute pump capacity. FIGURES 23 and 18. Water pumped from these wells varied from 598-741 acre feet per year. This practice has been abandoned. Several dikes were built to collect and channel surface water for increased

percolation and groundwater recharge. Duck Lake was created by such a dike. FIGURE 17.

### WATER QUALITY

During this period, the water quality was good enough for domestic use. However, present water quality does not meet municipal criteria for domestic use.

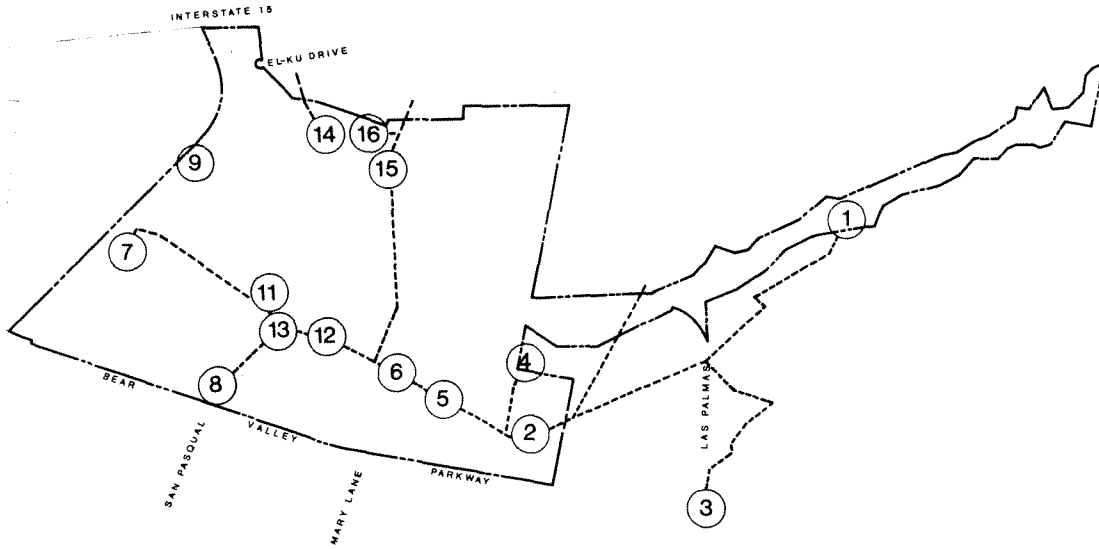
Some of the factors affecting the water quality are:

- Dissolved solid levels which are presently above the limit recommended by the state for potable water.
- Increased urbanization resulting from higher run-off from streets, septic tank systems, oils and insecticides.

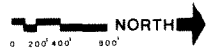
Although the surface water and groundwater are two separate systems, they interconnect in a delicate ecological system.

### TESTING

The existing physical condition of the pumps and wells is not known at present, but their specifications are shown in FIGURE 18, and accompanying graphs. FIGURES 20-28.



KIT CARSON PARK



**wells**  
Figure 17

WELL DATA			GROUNDWATER DATA				PUMP DATA			LATERAL CHARTS	CHEMICAL ANALYSIS
WELL NUMBER	ELEVATION OF PUMP	WELL DEPTH	DATA AVAILABLE	AVERAGE DEPTH	LOWEST DEPTH	HIGHEST DEPTH	PRESSURE	HORSEPOWER	GPM		
2	397.3	88					5	3	70	X	
4	396.7	80					7	2	70	X	
5	388.3	60	56-73	18.5	40.0	3.8	8	2	70		
6	383.6	70	62-71	9.9	28.0	Flow	9	2	70		
7	359.4	95	56-76	44.4	84.6	7.3	22	15	135	X	
8	377.4	85	56-76	33.3	63.1	5.9	15	5	85	X	
11	367.0	70	62-76	18.6	57.0	2.0	16	3	80		
12	374.1	65	65-73	14.4	46.6	-.1		3	25		
13			60-63								
14			56-73	15.8	57.0	3.2		5			X
15			56-57	21.2	54.0	8.8					X
16			56-73	21.8	42.8	8.7		3			

Figure 18

There are five basic tests and/or feasibility studies that should be performed to prepare a basic data base for decision making:

- Pump testing and mechanical inspection,
- Select well sites for draw-down tests,
- Water quality tests,
- Soil tests for permeability, and
- Economic feasibility for domestic versus other sources.

#### WATER SUITABILITY

Although the water quality may not be potable, it may be suitable for irrigation.

The most recent information shows that salinity (total dissolved solids, or TDS) problems exist due to agricultural and municipal return flows and poor quality sub-surface inflow from the San Pasqual Basin. It is the quality of this runoff water which will largely determine the quality of water in the lakes fed through surface waters. FIGURE 19.

#### WATER QUALITY CRITERIA

The following basic fundamental criteria shape the quality requirements for use of existing groundwater and future reclaimed water for irrigation and lake re-charge:

##### Public Protection

- For the protection of the general public, the use of reclaimed water must pose no bacteriological or virological hazard.

##### Salinity

- Salinity (TDS) must be low enough to maintain favorable osmotic pressures for plants to take up water.

##### Chemicals

- Certain ions making up TDS, such as boron, chlorides and sodium, are specifically harmful to some vegetation. A high level of sodium can also be harmful to soils.

##### Trace elements

- Trace levels of certain metals and synthetic organics can effect plant growth. Obviously,



even very low concentrations of herbicides can be toxic to plant life.

Other constituents which effect water quality: (FIGURE 19)

### CONSTITUENTS OF WATER QUALITY

Constituent	Recommended Limit	Remarks
pH	4.5-9.0	Most effects of pH on plant growth are indirect (e.g., pH effects on heavy metals' toxicity described above).
Fecal Coliform Density	1,000/100 ml	Irrigation waters at or below this limit should pose no hazard to animals or man from their use or from consumption of raw crops irrigated with the waters.
TDS	500-5,000 mg/l	Below 500 mg/l, no detrimental effects are usually noticed. Between 500 and 1,000 mg/l, TDS in irrigation water can affect sensitive plants. At 1000 to 2000 mg/l, TDS levels can affect many crops, and careful management practices should be followed. Above 2,000 mg/l, water can be used regularly only for tolerant plants on permeable soils.

**Figure 19**

(Source: Guidelines for Water Reuse. Camp Dresser & McKee Inc.)

#### Water Movement

- ° Return flows from both surface and sub-surface irrigation are non-point sources of pollutants and either are, or soon can be, subject to control. The quality requirements that are imposed on irrigation return flows may dictate a high quality of the applied water.

#### Solids

- ° Suspended solids, chemical precipitants, and algae growth can clog the spray nozzles and drip applicators of irrigation units.

#### Total Dissolved Solids (TDS)

The most recent tests for TDS show levels of 1,000 P.P.M.-plus and the most recent test at well number 7 of 1,342 P.P.M. During the period from 1956 thru 1976, when the Green Mutual Water Company operated, the Department of Water Resources monitored well data. Data was compiled on a month-to-month or quarter-to-quarter basis with several gaps in between.

The data shown on FIGURE 18, and graphs plot the well information. The "depth to groundwater" levels show two significant occurrences; the first being the seasonal fluctuations

of the levels, with the lowest occurring in the late fall and highest in early spring. They also illustrate a gradual increase in the water table level as a result of increased urbanization within the watershed. Well data was not kept on every well or was not available at the time of our research.

#### Water Sources

In the early past, the City of Escondido attempted to use reclaimed water for irrigation in the Park from the now dismantled treatment plant south of the park site. The reclaimed water from the plant was found to contain high levels of salinity and solids made up of clay soils.

#### PRIMARY PROBLEMS

The primary problems with use of the groundwater or reclaimed water is the total dissolved solids (TDS) in the water. It alters the osmotic state of water in the soil. When concentrations of TDS become high, plants can wilt even when they have been watered.

Control of salinity is an important criterion in open space landscape irrigation reuse systems. Where TDS is high, the

problem can be aggravated by poor leaching characteristics in the soils, high evapotranspiration rates and by the type of materials being irrigated.

#### OPPORTUNITIES FOR WATER

There are two opportunities for supplying non-domestic water sources for irrigation and lake re-charge: (1) groundwater usage with proper planning and (2) reclaimed water.

#### SOURCE 1

Groundwater usage from existing pumps could provide the water source. Pumping from the groundwater should not affect surface flows unless excessive pumping and overdraft occurs.

This would be prevented through establishment of a water management program to balance the flows and park ecology. Through proper planning to monitor surface flows and irrigation practices, run-off would minimize increases in TDS levels in the systems.

#### IRRIGATION MANAGEMENT

Practicing proper irrigation management is an important factor in the water management program. Certain systems, such

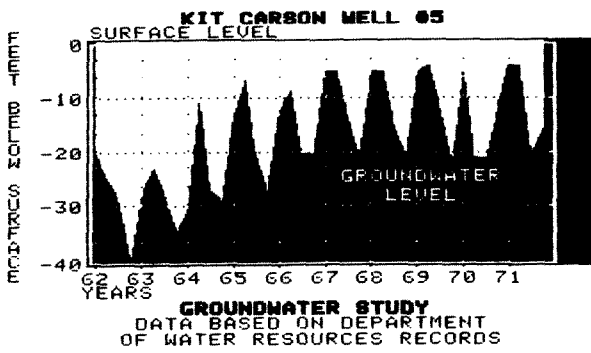


Figure 20

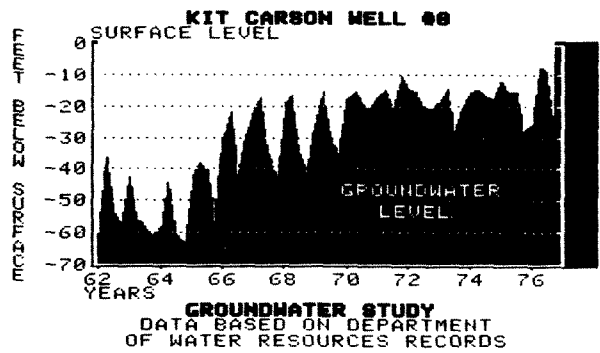


Figure 22

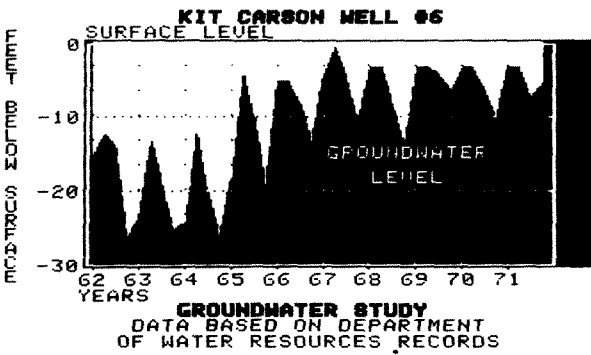


Figure 21

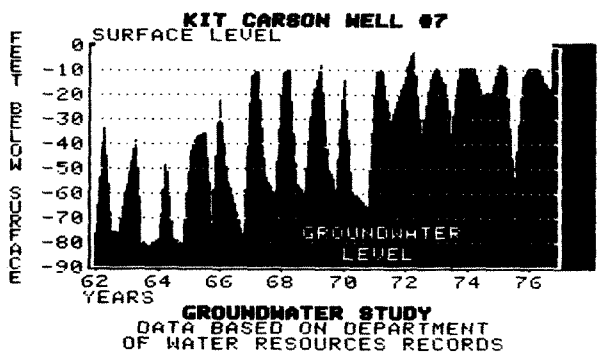
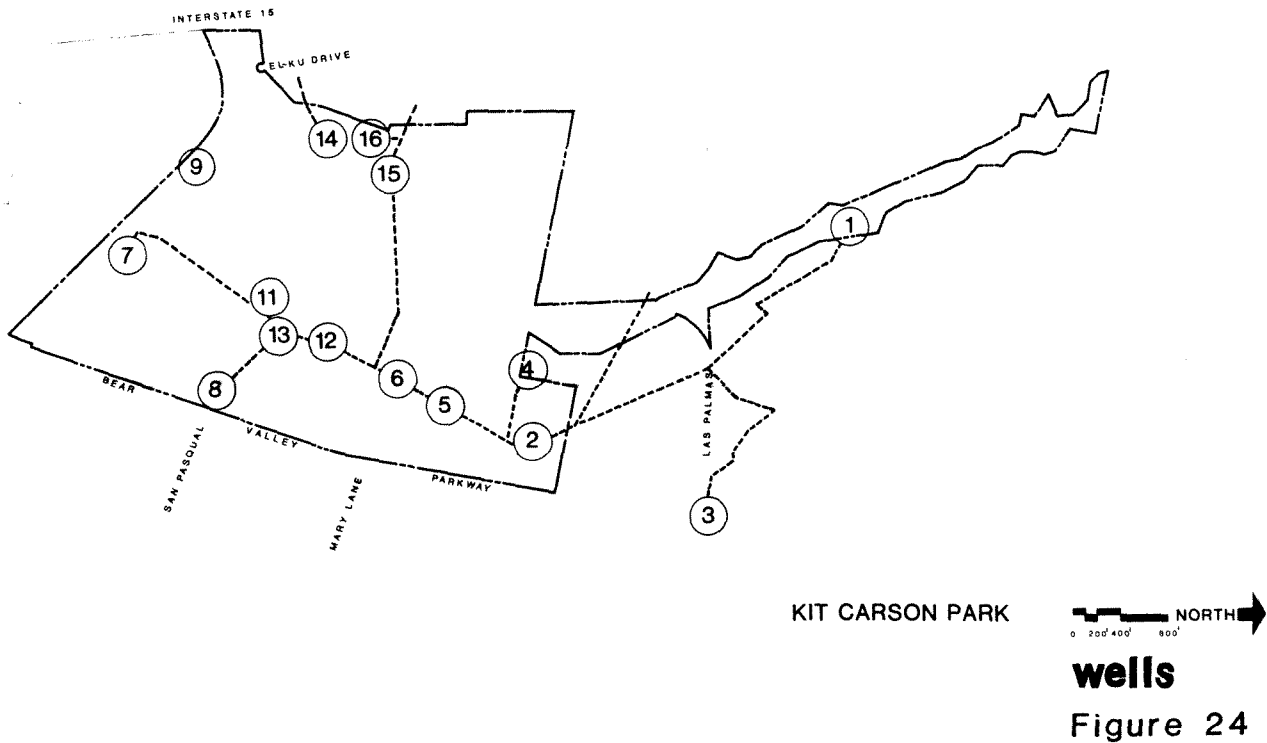


Figure 23



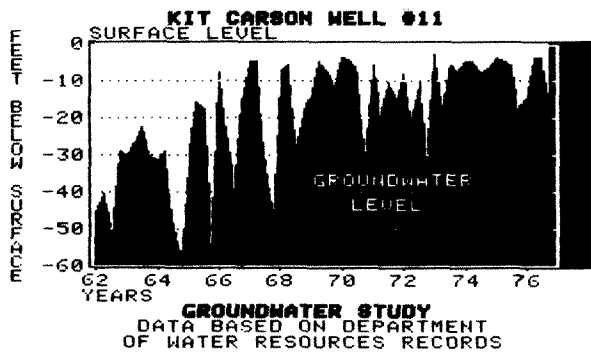


Figure 25

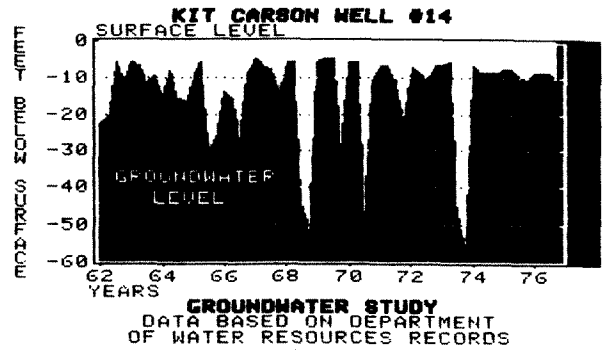


Figure 27

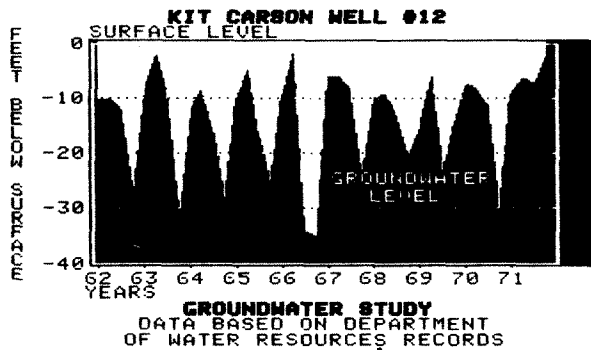


Figure 26

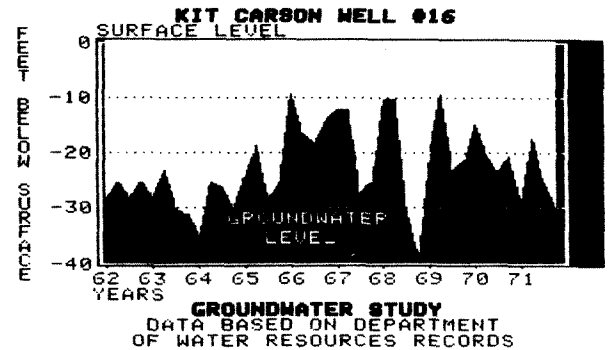
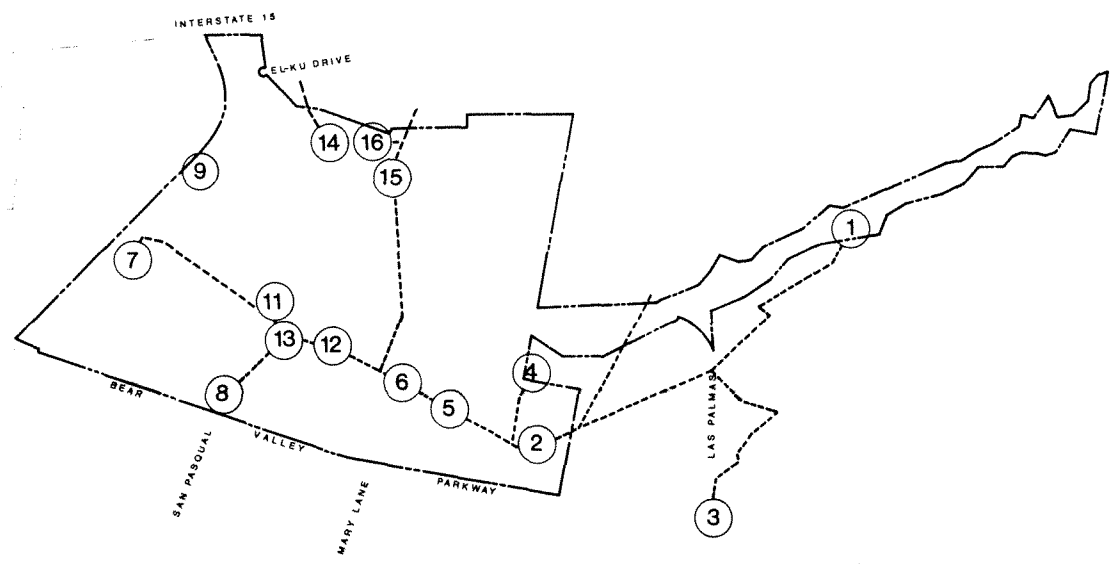


Figure 28



KIT CARSON PARK  
0 200 400 800' NORTH

**wells**

Figure 29

as drip irrigation methods, permit use of water with somewhat higher TDS than can be used for spray irrigation, because in spray irrigation, the higher salt concentration could damage foliage. Increased leaching will help to flush out excess salts in the soil, but at the risk of polluting groundwater. The lake system in the park provides a special opportunity for recreation and ecological preservation.

#### LAKE MANAGEMENT

Although some of the lakes are fed by groundwater, most depend on runoff from watershed areas and it is the quality of this runoff water which will largely determine the quality of water in the lake. Nutrients and pollutants may increase weed growth and sediment will cause the buildup of silt.

#### SOURCE 2

#### COUNTY STUDY

Presently, the San Diego County Water Authority is preparing a study on reclaimed water for the area called "Water Reuse Study for San Pasqual and San Dieguito Watershed".

#### HALE AVENUE PLANT

The project proposed would take reclaimed water from the Hale Avenue plant, desalinate and pump it into the San Pasqual Valley Aquifer via injection wells. The water would then be extracted at the east end of Lake Hodges and pumped to the north by the park at the corner of San Pasqual and Bear Valley Parkway.

If the irrigation value of reclaimed or groundwater is high enough, methods of demineralization, which can reduce TDS levels while retaining inorganic nitrogen as a nutrient in the water, are available.

#### SUMMARY

Because of the increasing potential for water shortages, coupled with increased costs, the use of groundwater and reclaimed water provides a viable and long-term cost effective method of maintaining recreational resources and values, particularly during drought seasons.

## EXISTING SITE OBSERVATIONS

### (1) HISTORICAL

- Fireplace from former Snooks Ranch existing has not been developed for park use or focal point

### (2) FIRE STATION

- Potential conflict between emergency and public vehicles at Mary Lane entrance

### (3) ACCESS POINT - NORTH

- Potential conflict with emergency vehicle access
- No sense of entry
- No graphic development

### (4) VIEW - INWARD

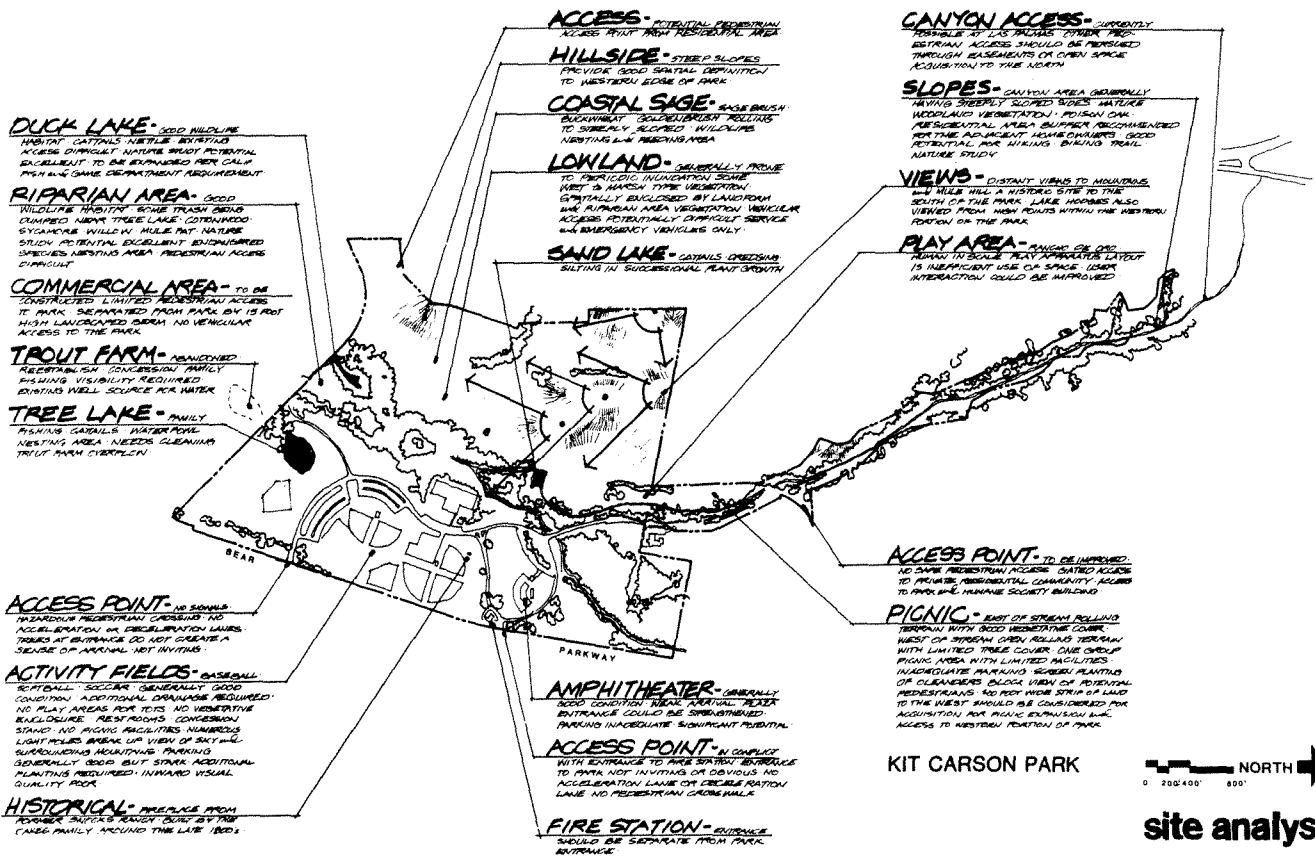
- View into park unscreened, cluttered, many light poles for athletic fields visible, not a park-like view

### (5) TENNIS COURTS

- Seven existing courts in good condition
- Expansion to eleven courts possible

### (6) AMPHITHEATER

- Approximately 1,800 permanent seating - 1,400 lawn seating
  - Lawn areas adjacent inadequately drained
  - Parking and circulation inadequate
  - No sense of arrival
  - Use not maximized
  - Restrooms, stage and other facilities generally in good condition
- FIGURE 30



KIT CARSON PARK

0 200' 400' 800'

NORTH

site analysis

Figure 30

(7) DUCK LAKE

- Good wildlife habitat, potential for additional wildlife habitat development
- Excellent nature study potential
- Difficult access
- Nettles, cattails

(8) COMMERCIAL INTERFACE

- Access to park limited to pedestrian and bicycle
- Bike and pedestrian path running along the top of a landscaped berm between commercial center and park

(9) TROUT TARN

- Abandoned concession to be reestablished
- Needs proximity to water source
- Public visibility required
- Parking required

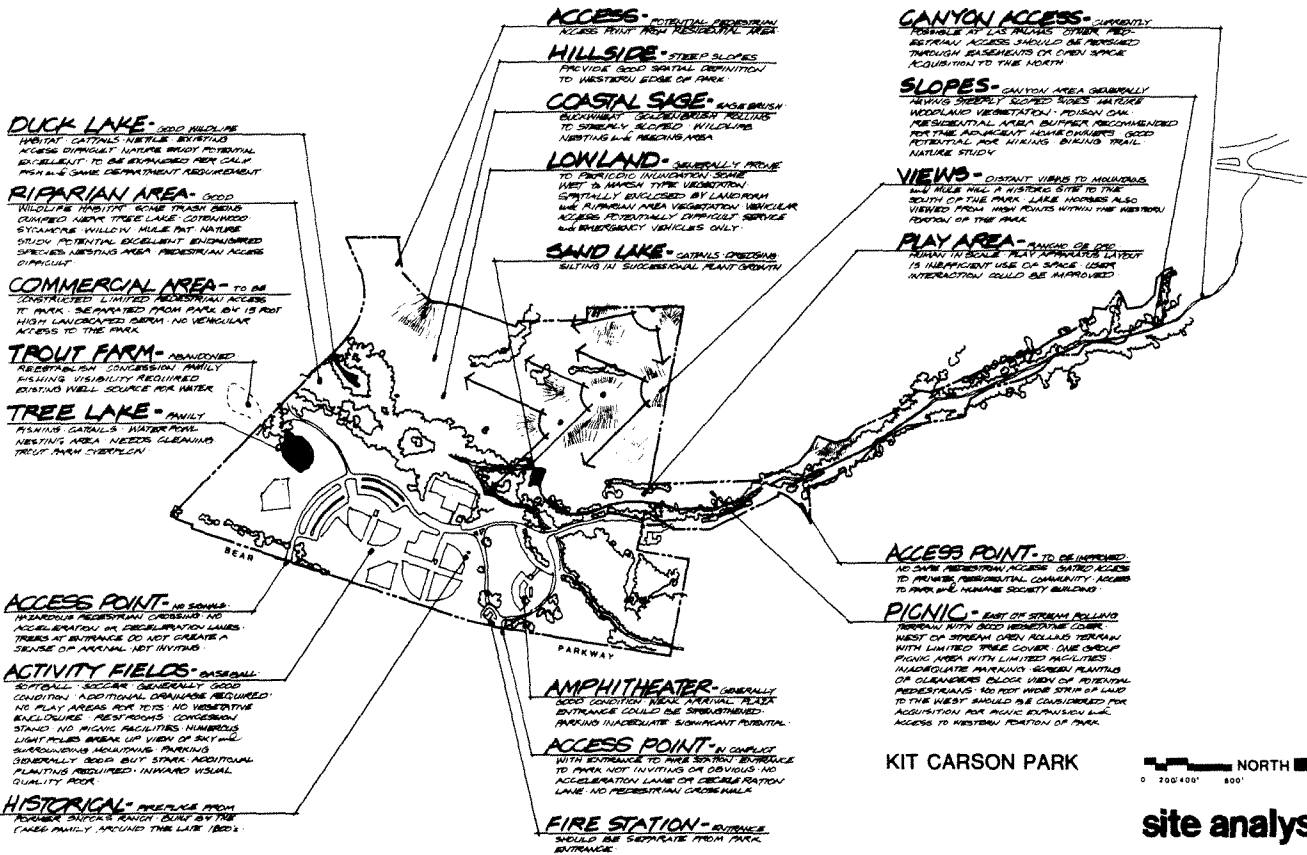
(10) TREE LAKE

- Family fishing area
- Clean-up required
- Trout tarn overflow

(11) ACCESS - SOUTH

- No signals
  - Hazardous pedestrian crossing
  - No acceleration or deceleration lanes
  - No sense of arrival
  - No entry graphics
- FIGURE 31





KIT CARSON PARK

0 200' 400' 800'

NORTH

site analysis

Figure 31

(12) SAND LAKE

- Successional plant growth
- Siltation evident
- Man-altered shoreline
- Adjacent to riparian area - nature study potential high
- Waterfowl area

(15) HILLSIDE

- Steeply sloping
- Provides good spatial definition to western portion of the site

(13) LOWLAND

- Generally disturbed or man altered
- Successional plant growth
- Dump Site
- Subject to inundation
- Slow runoff

(16) ACCESS

- Potential access point to western portion of the site
- Residential street

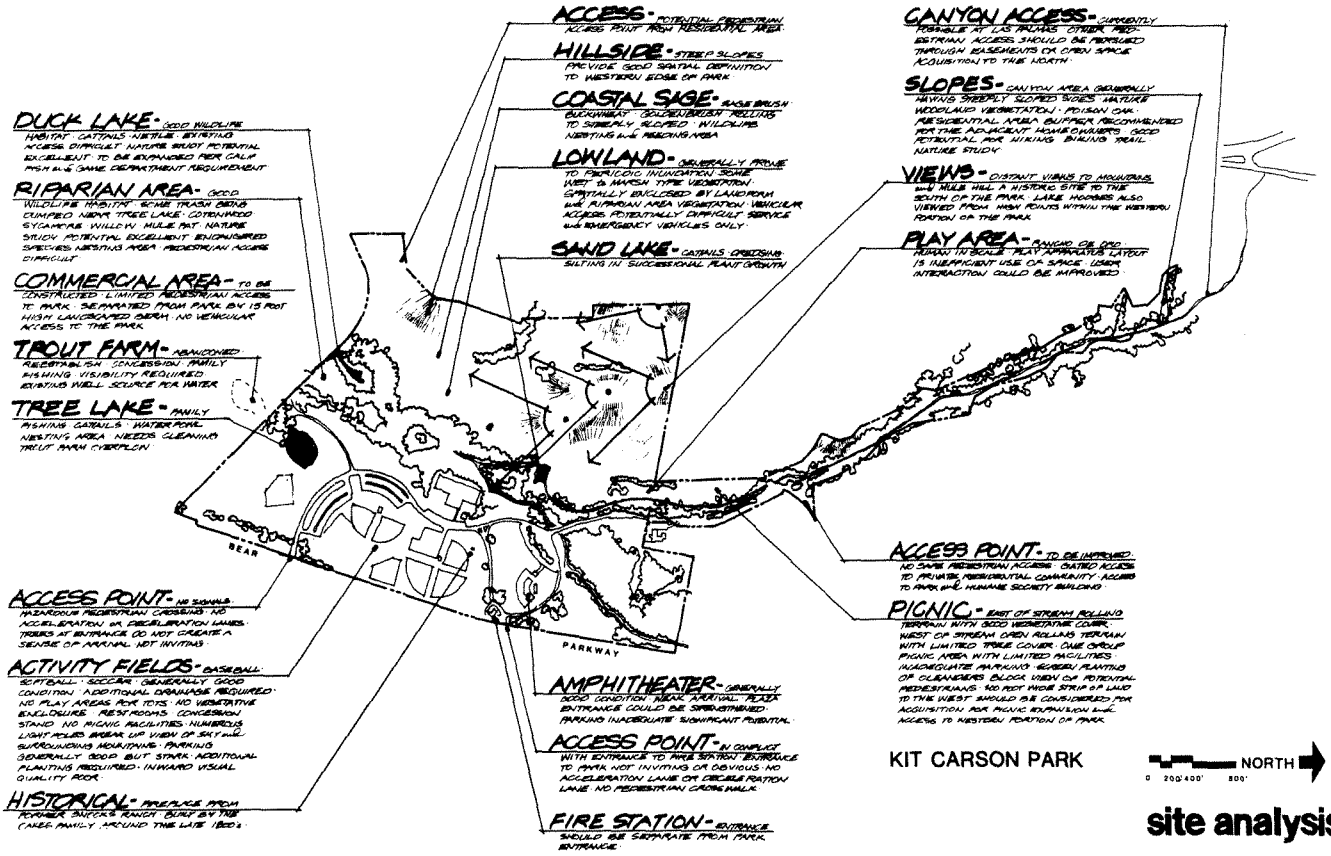
(14) COASTAL SAGE

- Sagebrush, buckwheat, goldenbrush
- Rolling to steeply sloped
- Wildlife nesting and feeding

(17) PICNIC

- Open and relatively flat - some low spots
- Vegetation immature
- New restroom facility
- New gazebo and group picnic area
- Supplemental temporary parking along western edge

FIGURE 32



KIT CARSON PARK  
 0 200' 400' 800' NORTH  
**site analysis**  
 Figure 32

PICNIC (cont.)

- Parking limited
- Roadway use hazardous to pedestrians
- Eastern portion good vegetative cover along stream
- Western open and rolling with boulder grouping

(20) PEDESTRIAN

- No pedestrian circulation exists between park uses
- Jogging and hiking occur on an uncontrolled basis

(18) VIEWS

- Park (main body) high point
- Panoramic views excellent
- Manmade trails
- Erodible soils
- Possible nature study observation point

(21) BICYCLE

- No bicycle paths exist within the park
- Bicycles currently use roadway and/or lawn areas

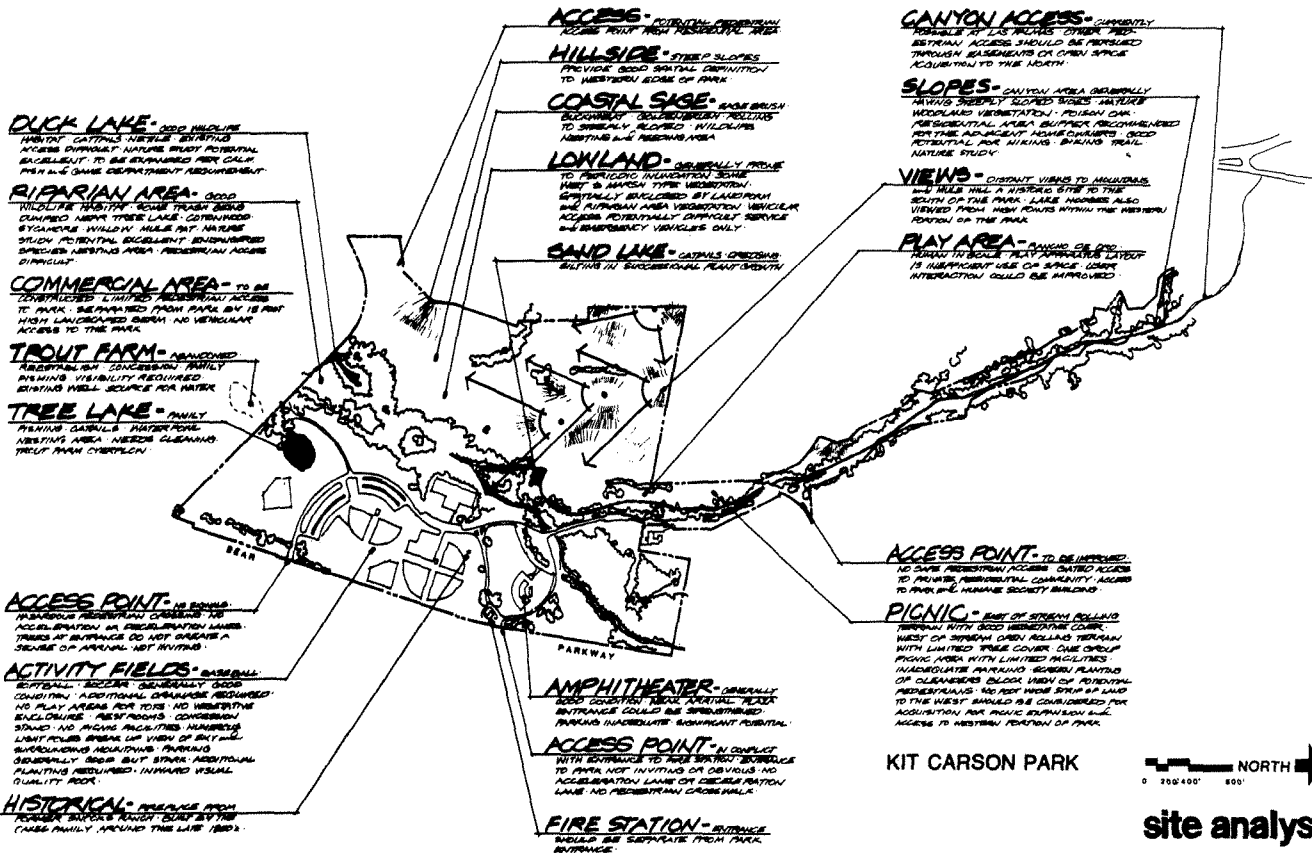
(19) CANYON

- Steeply sloped canyon walls
- Relatively mature oak woodland with sycamores along stream
- Heavily vegetated in poison oak
- Development difficult
- Trail possible
- No northern access

(22) VEHICULAR CIRCULATION

- Speed limit is not enforced
- Uncontrolled access by vehicles to sensitive areas
- Casteneda Drive, north of Humane Society Building, hazardous to pedestrians
- Internal park intersection narrow and potentially hazardous

FIGURE 33



KIT CARSON PARK



site analysis

Figure 33

(23) ARROYO PLAY AREA

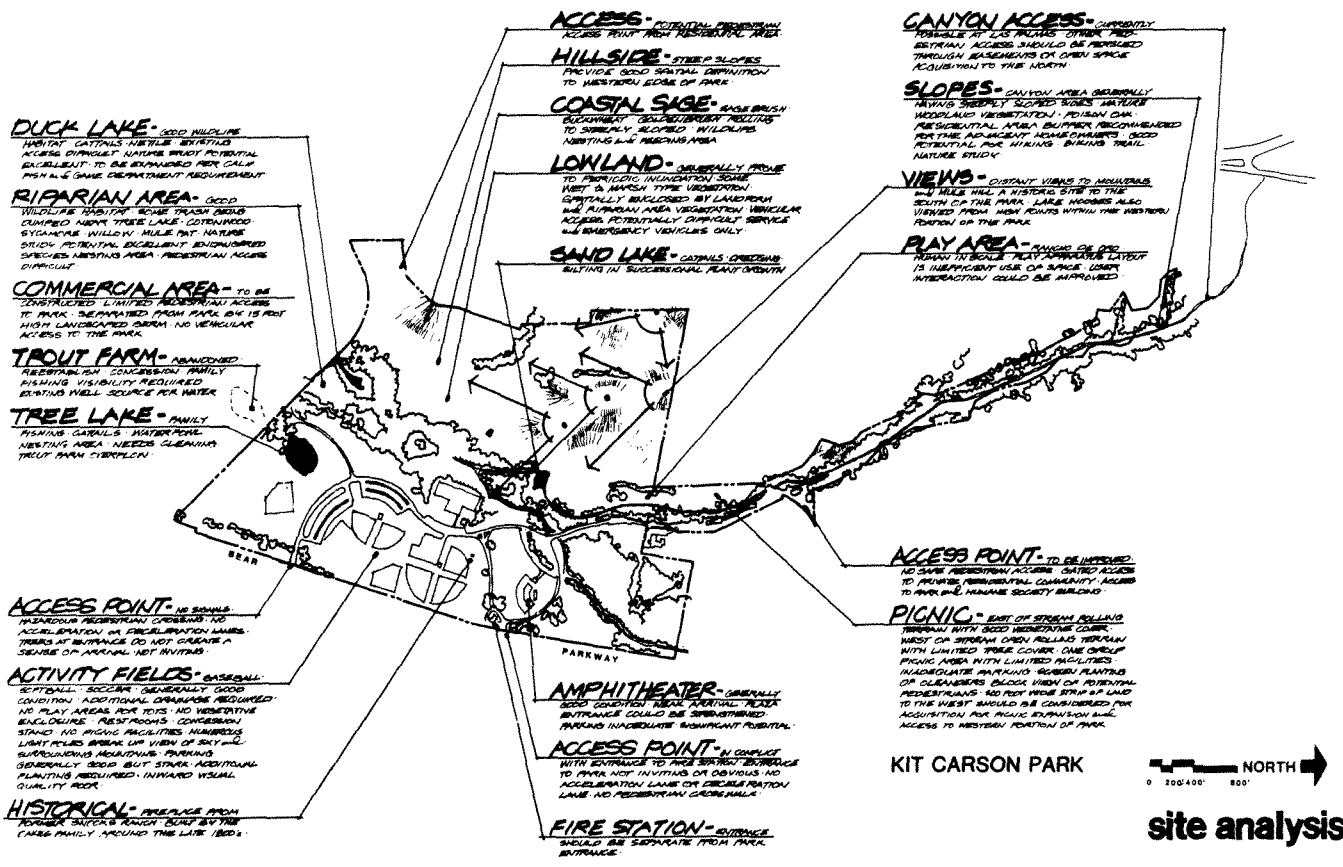
- Enclosed feeling - screened from rest of park
- Diverse introduced vegetation
- Gated entrance-not inviting
- Low/flatland strong stream subject to periodic inundation
- Play apparatus generally large - out of scale with children - dispersed throughout area
- Limited open play
- Fenced
- Parking limited

(24) PARKING

- Parking generally is inadequate for the amphitheater area and other park uses
- Parking areas generally inefficient
- Developed as a "sea of asphalt" no relief - no planting islands to break up monotony
- Some turning radii are too small
- Limited parking area lighting
- "Some unstructured overflow parking - inadequate and inefficient."

GENERAL

- Benches other than picnic tables do not exist
- The number of picnic tables is inadequate
- Signage within the park is minimal and unaesthetic - no area identification signage - inconsistent graphics
- No entry graphics or monumentation
- Trash receptacles are either the 30-gallon drum or dumpster type with no enclosures for screening. Locations are inconsistent and additional areas required
- Drinking fountains appear in the tennis court area and in conjunction with the ballfield restroom facilities. Additional drinking fountains appear to be needed throughout the park.
- Lighting within the park is confined to the ballfield area and limited parking lot lighting. The number of light poles and glare in the ballfield area make the lighting visually unpleasing. FIGURE 34.



# USE TO USE ANALYSIS

## INTRODUCTION

As part of the planning process, user and cultural information was collected and analyzed.

One technique was to prepare a "use to use" metrics chart. This allowed Van Dyke/Halsey to evaluate numerous potential uses to determine inter-relationships and suitabilities. Three objectives were targeted to measure use relationships and their compatibility: (1) compatible, (2) limited compatibility, or (3) not compatible.

## SUMMARY

This resulted in identified special consideration, design controls, the relationship between compatible uses and/or whether further study would be required.

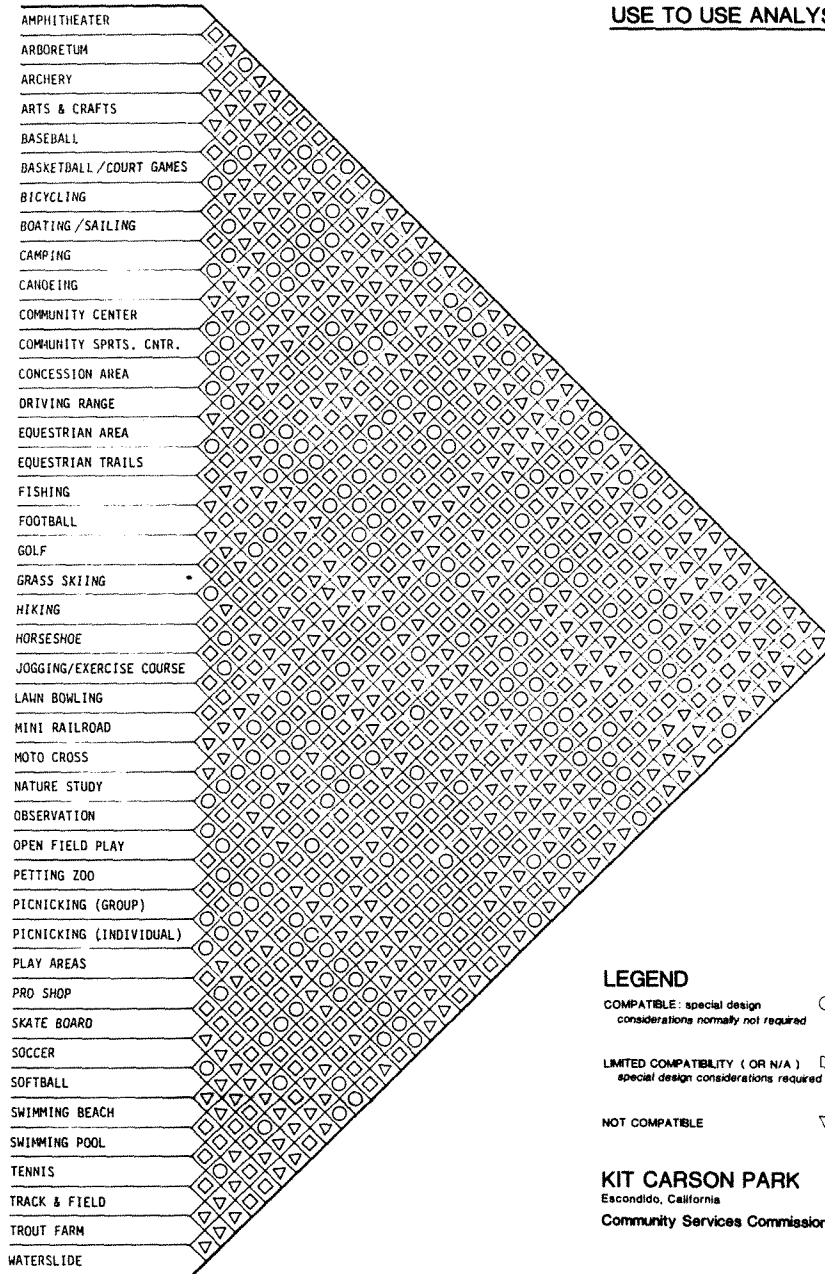
This material was overlaid with user demands and environmental data to determine impact and priorities. FIGURE 35.

FACILITY	AREA SUITABILITY					FACILITY REQUIREMENTS									
	IMPACT POTENTIAL	RIPARIAN	HILLSIDE	LOWLAND	CANYON	ORIENTATION	AREA REQUIRED	PARKING	ELECTRICITY	GAS	WATER	SEWER RESTROOMS	TELEPHONE	REVENUE GENERATOR	STAFF REQUIREMENTS
AMPHITHEATER	H					NS									
ARBORETUM	L														
ARCHERY	M					NS	50'-400'								
ARTS & CRAFTS	M					NA									
BASEBALL	H					NS	400'-400'								
BASKETBALL	M					NS	60'-100'								
BICYCLING	L					NA	8'-12'								
BOATING / SAILING	L					NA	4-8 acres								
CAMPING	M					NA									
CANOEING	L					NA	4-8 acres								
COMMUNITY CENTER	H					NA									
COMMUNITY SPORTS CENTER	H					NA									
CONCESSION AREA	H					NA									
DRIVING RANGE	M					N									
EQUESTRIAN AREA	H					NA									
EQUESTRIAN TRAILS	M					NA	6-10'								
FISHING	M					NA									
FOOTBALL	M					NS	200'-100'								
GOLF	H					NS	75'-150' ac.								
GRASS SKIING	H														
HIKING	L					NA	1/2-1 mile								
HORSESHOE	L					NS	10'-15'								
JOGGING/EXERCISE COURSE	L					NA	2 miles								
LAWN BOWLING	M					NS	150'-150'								
MINI RAILROAD	M					NA									
MOTO CROSS	H					NA	4 acres								
NATURE STUDY	L					NA	5 acres								
OBSERVATION	L														
OPEN FIELD PLAY	M					NA	1-2 acres								
PETTING ZOO	H					NA	1 acre								
PICNICKING (GROUP)	H					NA									
PICNICKING (INDIVIDUAL)	M					NA									
PLAY AREAS	M					NA	50'-50'								
PRO SHOP	H					NA									
SKATE BOARD	M														
SOCCER	M					NS	105' x 360'								
SOFTBALL	M					NS	215' x 275'								
SWIMMING BEACH	M					NS									
SWIMMING POOL	H					NS									
TENNIS	M					NS	60' x 120'								
TRACK & FIELD	M					NS	275' x 750'								
TROUT FARM	H					NA									
WATERSLIDE	H														

Figure 35



**USE TO USE ANALYSIS**



**Figure 35a**

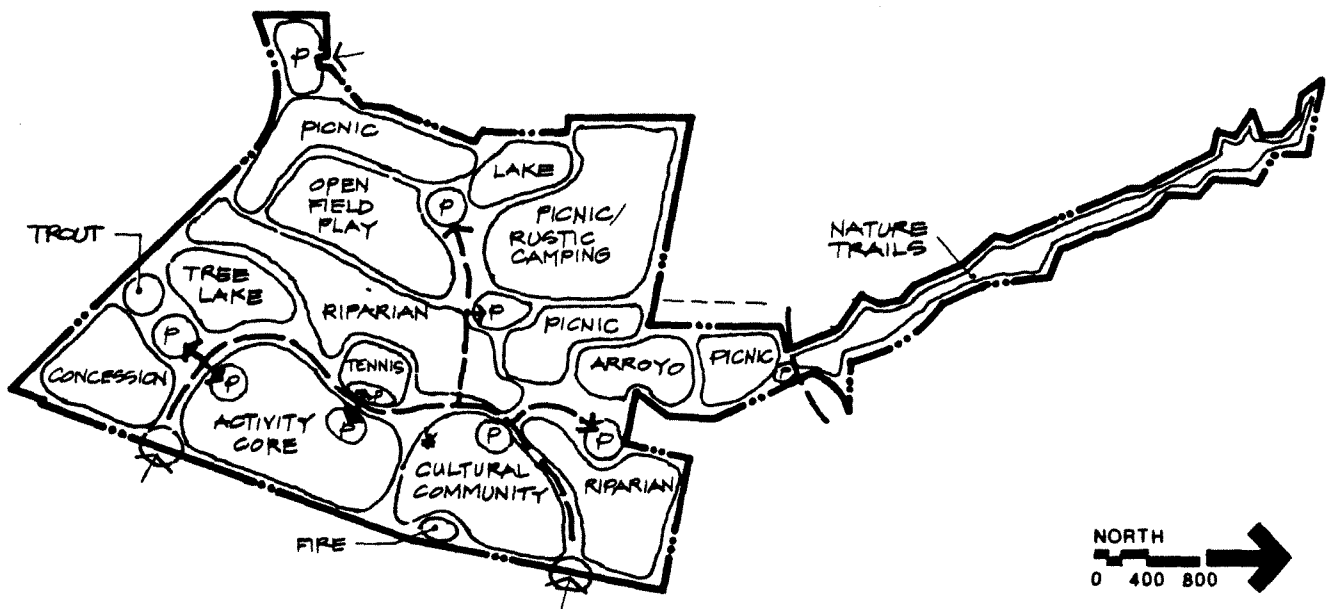
## ALTERNATIVE SCHEMES

Alternative schematic studies were prepared for City and public review after completion of Phase 3. At this time, public opinion surveys were taken to determine preferred park uses and responses to the schematic plans.

### SCHEME "A"

"A" maintained the eastern activity core, tennis complex, riparian area and a major portion of the existing roadway. Additionally, it called for concessions and hobby areas in the southeast corner and a Cultural and Community Center in the area of the

existing chimney and amphitheater. Also, relocation of the north entrance to align with Alamo Lane and the elimination of Casteneda Drive north of the Humane Society to Las Palmas Avenue. For the western portion of the park, in the low, relatively flat area, open field play was proposed with picnic, rustic camping, and interpretive trails planned for the balance. Tree Lake would be increased in size to approximately 5+ acres. An additional storage lake was proposed in the western canyon, an area previously used for water impoundment. FIGURE 36.



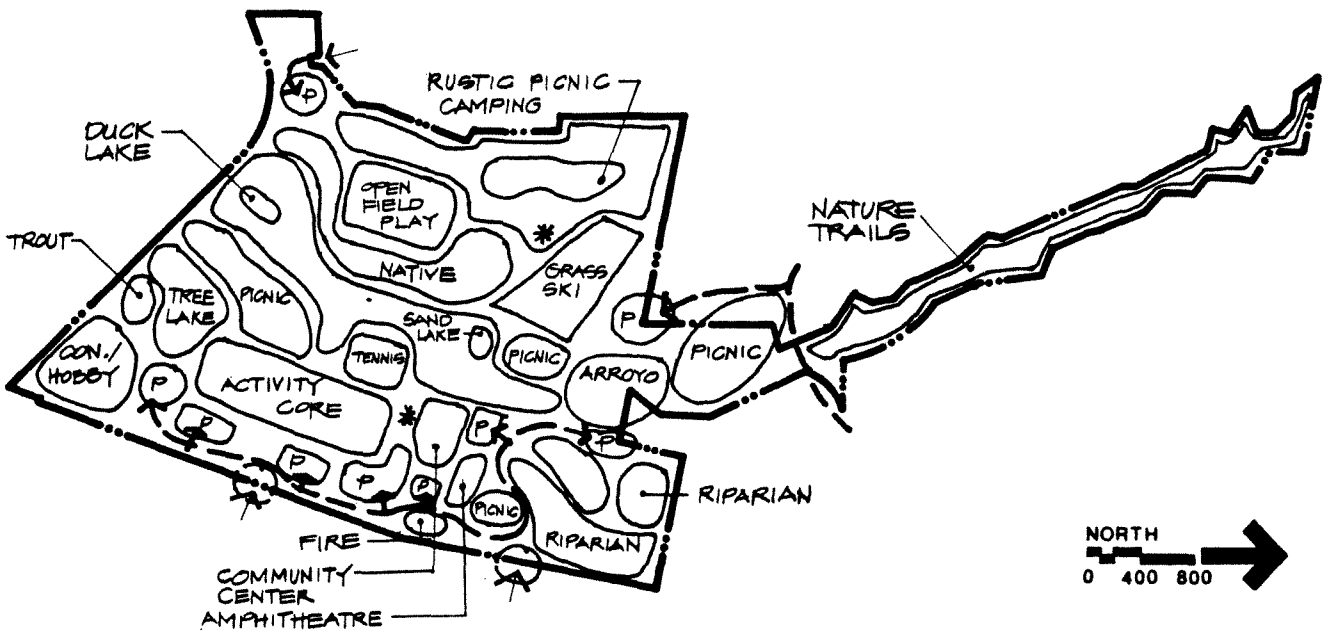
KIT CARSON PARK  
SCHEME 'A'

Figure 36

### SCHEME "B"

"B" proposed major layout changes, but uses remained relatively the same. Vehicular circulation and parking were shifted to a frontage road concept with expanded parking nodes adjacent to these facilities. Significant realignment of fields in the activity core was proposed. Additional picnic facilities and concession and/or hobby areas were also proposed for the east side. Rustic picnicking, camping, open field play and a grass ski facility were

proposed for the west portion, along with the preservation of a significant acreage of native vegetation as a buffer to the riparian habitat. Lakes and lake expansions were as proposed in Scheme "A". Access to the western portion of the site was gained through El-Ku Drive and off Las Palmas, west of the existing picnic area.  
FIGURE 37.

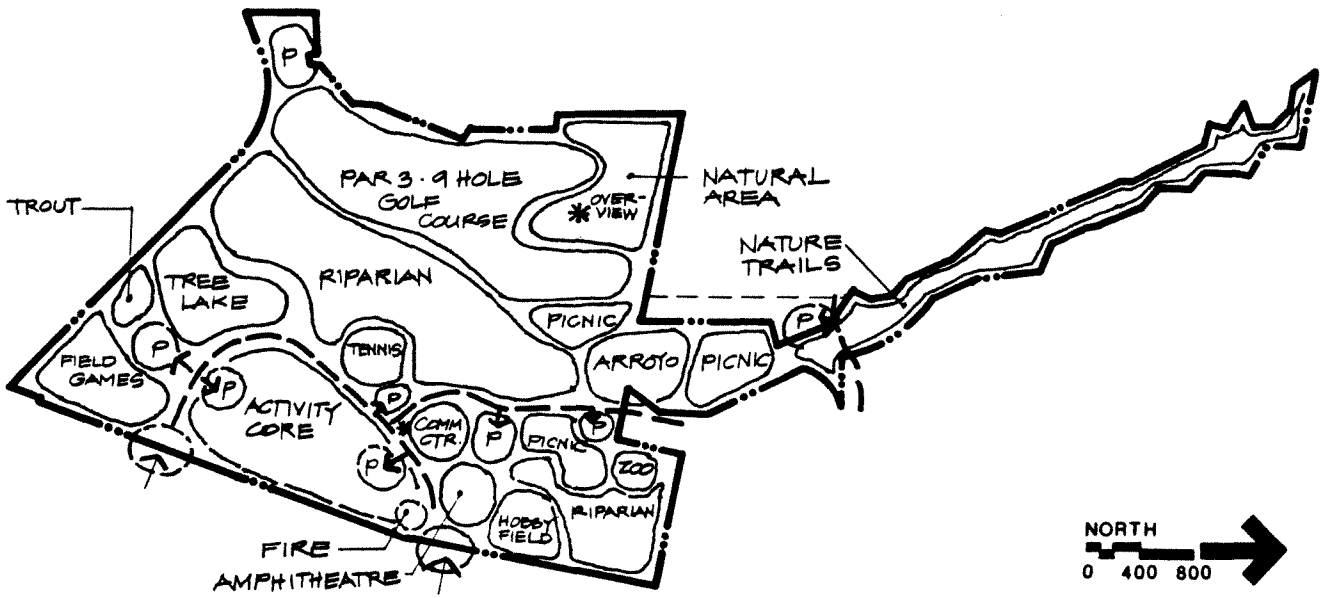


KIT CARSON PARK  
SCHEME 'B'

Figure 37

SCHEME "C"

Proposed realignment of the existing roadway north of the existing tennis courts, additional picnic areas, and a Par 3 executive golf course west of the riparian area. The steeply sloped ridge that enters the main body of the park from the north would be maintained as a natural area with trails and observation points. Realignment of some of the fields in the activity core and field games area would be required. In conjunction with the Humane Society, zoo type facilities were proposed. FIGURE 38.



KIT CARSON PARK  
SCHEME 'C'

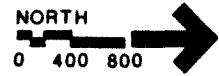


Figure 38

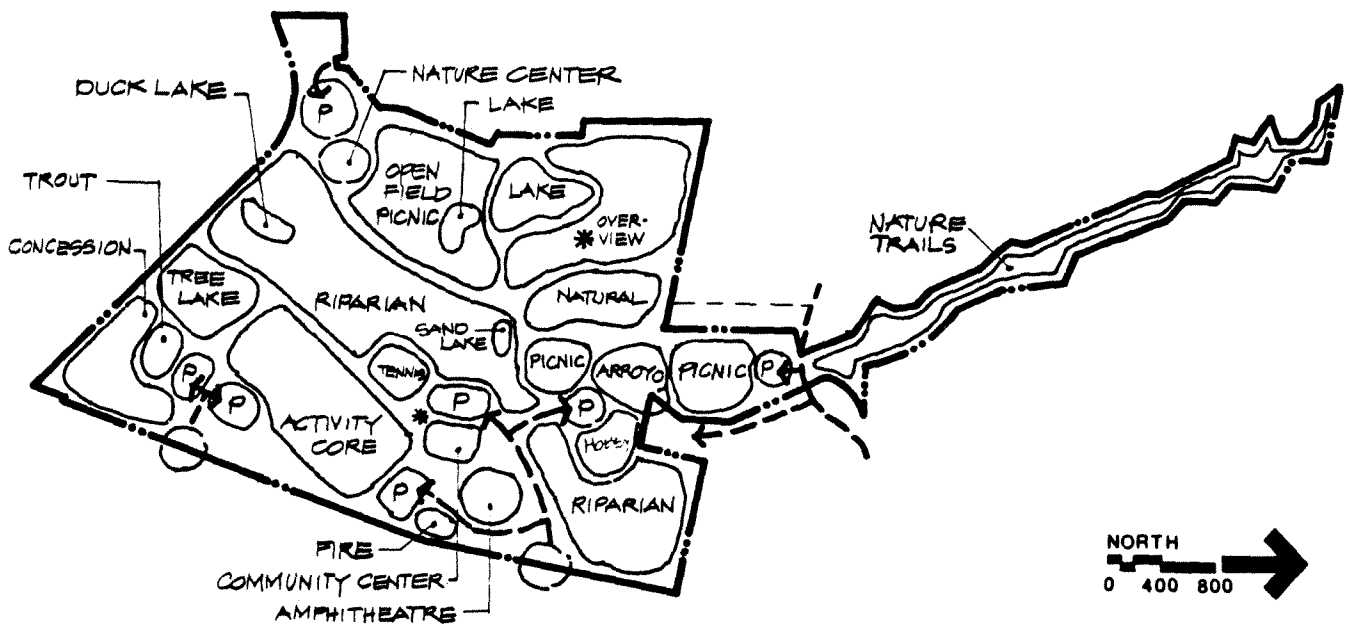
#### SCHEME "D"

With the elimination of through-circulation, significant realignment of activity fields, concession areas and relocation of existing parking areas proposed the most severe changes to the existing facilities. West of the riparian area, a nature center, open field play, picnic area, native vegetation preservation area and two lakes were proposed.

All schemes indicated a need to provide a landscape buffer along Bear Valley Parkway, maintaining the panhandle for nature trails and a pedestrian/bicycle link system.

The responses from both City and public preferred to have the western portion to be planned as a nature interpretive center and passive recreational uses. Scheme "A" reflected a preference to maintain the existing park improvements, i.e., restrooms and concession facilities much as they are. Some field realignment was acceptable. The north park entrance at Mary Lane was felt to be preferred as it is signalized. FIGURE 39.





KIT CARSON PARK  
SCHEME 'D'

Figure 39

## FINAL COMPOSITE SCHEME

### FINAL

The final concept development plan shown in FIGURE 40 refines the initial program recommendations using input from the environmental data sections, E.I.R. process, City departments and community review process.

The Final Composite Scheme establishes specific use concepts for Kit Carson Park. The important step in the process was the cross referencing of specific site environmental resource information with potential uses and community needs to evolve the final plan.

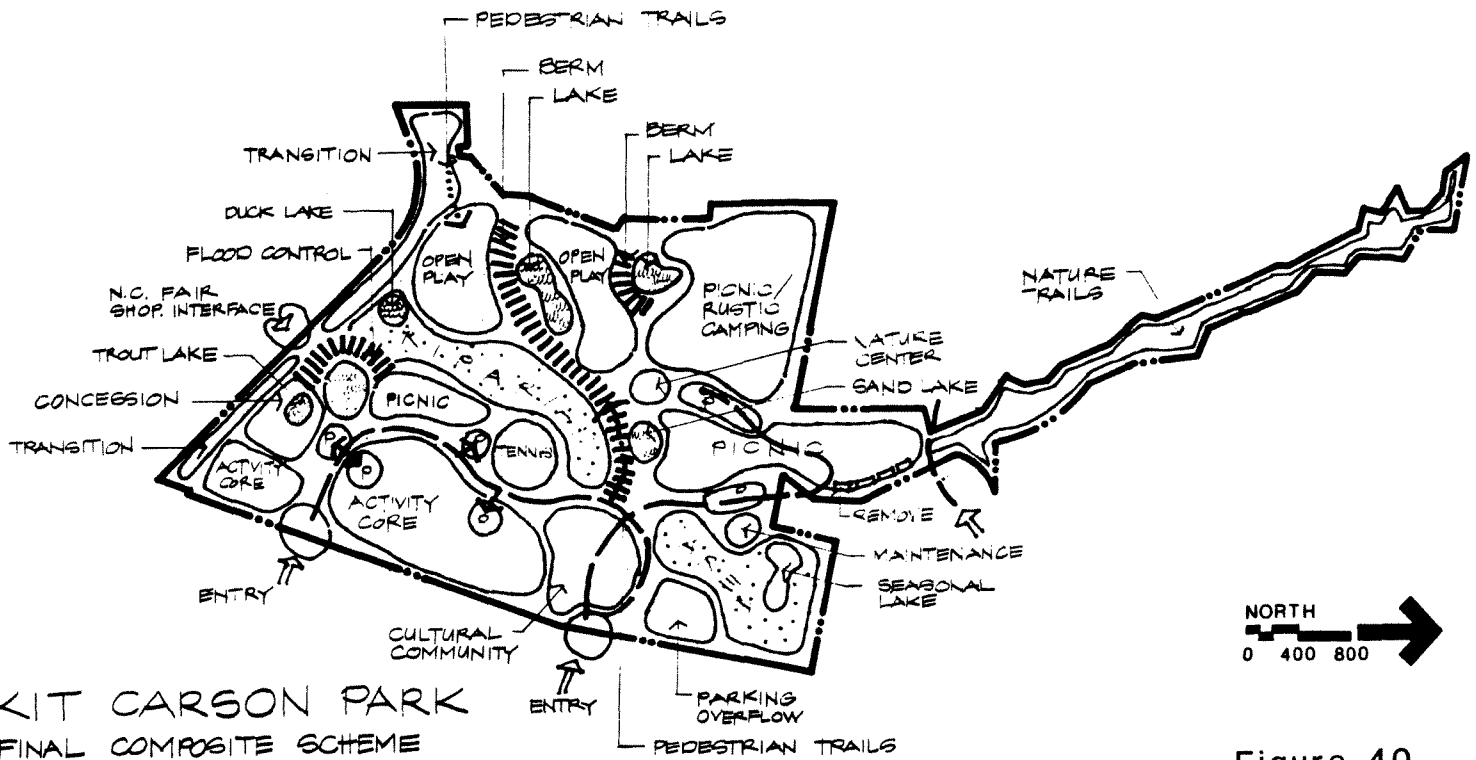


Figure 40

# MASTER PLAN IMPLEMENTATION

## SPORTS AREA IMPROVEMENTS

### INTRODUCTION

After the completion of Phase 4, a composite plan was prepared in Phase 5 illustrating and combining desirable elements of the alternatives and community feedback. The area relationship plan in FIGURE 40 illustrates diagrammatically the final approved plan for Kit Carson Park. This plan was then developed in detail with the following recommendations. FIGURE 55.

### RECOMMENDATIONS

The following recommendations establishes the parks theme and major facilities. They are divided into park zones, basically relative to the parks physical character and uses. For a summarized version, see the Summary Recommendations Section.

### USERS

Community input and high user demands indicated a significant need for intensive use areas (field activities). Areas within Kit Carson that can compatibly accommodate this type of use are very limited, so multi-use programming of fields is recommended.

The overlapping of baseball/softball fields and soccer or football fields results in a savings of 40-50% of land required to accommodate these uses. This savings does not include the savings realized by the reduction of parking if the facilities were to be developed separately at individual sites.

### SPORTS AREA

Currently (8) ball fields, (2) structured soccer fields and (5) unstructured soccer fields exist. Four of the (8) fields accommodate approximately a 250 foot radius. The balance fall in the 200 foot range. Realignment of two fields along Bear Valley Parkway will allow for the multi-use concept and provide the opportunity for buffering the uses from the roadway.

### REALIGNMENT OF FIELDS

The realignment of ball fields in the central core will allow for (7) and possibly (8) fields. Orientation and size must be considered during detailed design development. FIGURE 41.

The present configuration of fields that are directly adjacent to the existing concession/restroom buildings will be maintained. Relighting of the field areas should be considered to achieve the following:

- 1) Provide more efficient and higher quality field lighting.
- 2) Reduce glare through the use of cut-off luminaires.
- 3) Provide a more aesthetic park environment.

The area south of the park road will be developed into (2) ball fields and (2) soccer/football fields. The total number of athletic fields for Kit Carson Park will be 9-10 ballfields and (7) soccer/football fields. Additional parking will be provided south of the park road for the expanded activity fields and adjacent uses. In addition to the development of the activity fields, satellite play areas, informal picnic areas, pedestrian and bicycle circulation, signage and fitness trails will be provided.

FIGURE 41.

### TENNIS COMPLEX

Full build out of the existing tennis court complex is proposed. In addition to the existing (7) tennis courts, (4-8) courts are to be added. These courts should provide for lighting at a later phase.

The (14) court complex should be complemented with the development of a pro shop, meeting/classroom and restroom facility. This building would also function to monitor court times and reservations and schedule tennis tournaments for private groups and schools.

MULTI-USE FIELDS

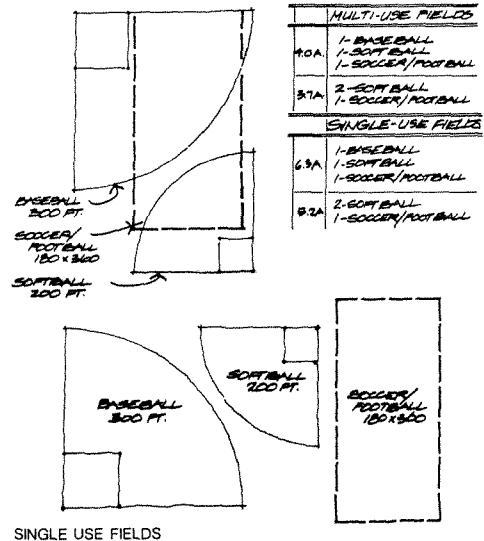


Figure 41

# HYDROLOGY AND RIPARIAN HABITAT

## INTRODUCTION

The proposed water management and flood control system involves a comprehensive and interfaced network between watershed, park ecology and recreational uses via a three-tiered system: (1) controlled release, (2) water impoundment, and, (3) re-charge through a lake system. Basically the proposal calls for utilizing water resources, including potential reclaimed water for irrigation and ecosystem balancing.

For example, reclaimed or groundwater can be used effectively to create or reclaim wetlands and lakes that are valuable assets and wildlife havens. Moreover, water discharged into these managed habitats can receive the equivalent of "tertiary treatment" through natural physical and biological processes in the ecosystem.

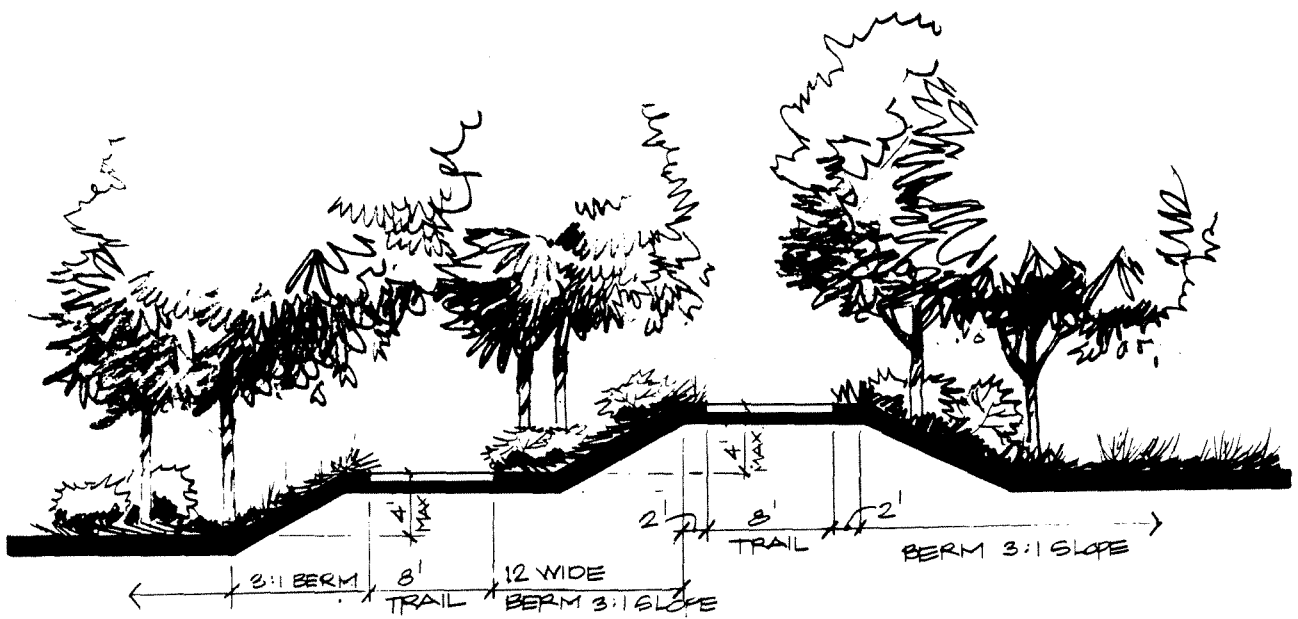
## FLOOD CONTROL CONCEPT

The system would employ velocity dissipators, low profile berms and lakes for control and diversion of flood waters.

The function of the berm system concept is to prevent destructive and erosive floodwater run-off flows to damage the ecosystem. Its primary purpose is to manage the 50- and 100-year flood flows. Secondly, it will act as a seasonal water management system. The system would impound water flows during the winter months as run-off from the two converging drainage flows enter the park. Normal low flows will be able to pass through during a normal seasonal basis. This would maintain and improve the quality of the lakes and wetlands.

## BERM

The main element in the system is a berm approximately 2 1/2 to 3 feet high and 30 to 35 feet wide. The berm proposed is a low profile berm designed to blend in and flow naturally with the topography of the site. (SEE FIGURE 42) This, plus revegetation, will blend the feature into the riparian landscape. The actual design of the berm will be developed through further engineering studies during preparation of construction documents.



**FLOOD CONTROL BERM**  
**PEDESTRIAN & MAINTENANCE ACCESS**

Figure 42





The berm will act as part of the circulation system within the park, providing pedestrian, bicycle and maintenance access to the western portion of the site.

#### DRAINAGE FLOWS

Two main drainage flows, one from the panhandle and the other east of Bear Valley Parkway, impact the park. The panhandle flow is 20 percent of the Bear Valley flow, but with higher velocities and silt which combine to be very erosive. To reduce the velocities, a series of drop structures is proposed from the Las Palmas bridge through the Arroyo picnic area to Sand Lake. These structures will reduce the velocities and their erosive forces.

#### SAND LAKE

Sand Lake is the first desiltation basin and is located adjacent to the proposed berm and service road. This will allow for easy maintenance. Water impounded by Sand Lake would then be released through the proposed water and wetlands management program.

During severe flooding periods, the berm concept would allow water to impound behind the berm moving and spreading westerly into the lowland towards Lower Lake. Upper Lake is fed by intermittent surface flows from Rancho Los Palmas to the north.

Once capacity is reached, flood waters would flow over the length of the berm at a low velocity with most of the silt having already dropped out. It then continues northerly towards Tree Lake and Duck Lake, terminating at North County Fair's flood control structure. The water continues its journey towards Lake Hodges under the shopping center.

#### NORTH COUNTY FAIR FLOOD CONTROL

The North County Fair's flood control and desiltation system should, by design, allow Tree Lake to function as a natural recreational water body during normal seasonal flows. Protection and interface with the fragile park ecological systems and proposed recreational development is absolutely necessary in order to preserve a natural lakeshore beauty.

# LAKES AND PONDS

## INTRODUCTION

The proposed lakes and ponds for Kit Carson Park can be divided into three categories: (1) those created by the construction of dams to impound water from springs, streams, or surface runoff; (2) those created by dredging; and, (3) those created by a combination of these methods. FIGURE 43. They can also be classified according to whether they are on-channel (constructed so that the stream flows through the impoundment), or off-channel (constructed so that the stream by-passes the impoundment) and according to whether their water supply is groundwater or surface water.

The development and management of lakes and ponds, whether they are natural or man-made, is a complex task and can cause many difficulties.

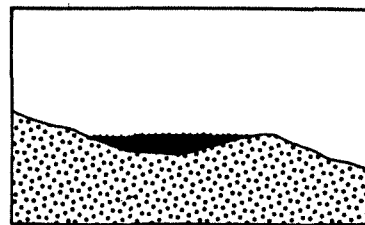
## LAKE DESIGN

The design of the overall shape of lakes and their shorelines is most important for their future use and maintenance. Wind patterns, water flow patterns and suitability of the shoreline for various uses

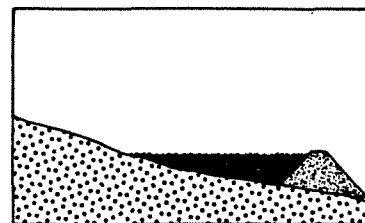
are all factors that need to be considered during the construction documents period. FIGURE 43.

The major problem of excavated lakes is obtaining an exact balance between water supply and losses from seepage and evaporation. The depth of an impoundment must be sufficient to offset seepage and evaporation. If seepage and other losses total more than three inches (3") per month, the depth should probably be increased.

Kit Carson is a semi-arid region in which a 10 to 12 foot water depth is recommended (source: U.S. Department of Agriculture). Since an excavated lake is a closed system, prevention of nutrient build-up (see section on wells) and other problems of water quality maintenance will require more attention and a special maintenance program.



Typical profile of a natural lake.



Typical profile of an artificial lake.

Figure 43

# AQUATIC AND RIPARIAN VEGETATION

## INTRODUCTION

Aquatic vegetation and riparian trees have an important role in the ecology of streams, lakes and ponds.

## IMPORTANT FACTORS

- Lakes without riparian vegetation look unnatural and alien to the landscape.
- Riparian plants provide shelter for waterfowl and other forms of wildlife in the park.
- Shade from riparian trees lowers the water temperature, increases the amount of oxygen in the water, and reduces the evaporation rate.
- Vegetation may filter polluted runoff and cause the precipitation of sediments.
- Certain reeds and aquatic plants have been found to improve water quality by absorbing pollutants, utilizing nutrients and providing suitable habitat for microorganisms that help to cleanse water.

## RIPARIAN TREES

Riparian trees are affected by water level fluctuations. Short periods of flooding will usually not permanently damage the trees, but prolonged flooding will cause oxygen deficiency and inhibit root growth. Draw-down from the water table can reduce soil moisture levels and can lead to the death of trees if not managed properly. The primary objective of the proposed and fully networked water management system for Kit Carson Park is to prevent such an event.

## AQUATIC PLANT LIFE

Aquatic plant life can assist in retarding sedimentation along with mechanical methods. Certain water plants, such as Carex and Schoenoplectus, can improve water quality and, when planted in feeder streams, may filter out large amounts of sediment. Artificial reed banks can be created at the point where feeder streams enter ponds by constructing a berm and planting reeds that extend into the shallows behind the berm, FIGURE 44. This is where the sediments will be deposited.

### NATURAL PARK CONCEPT

The natural park system concept for Kit Carson Park proposes to balance recreational needs with nature systems. On the other hand, no ecosystem is completely stable. Some changes must necessarily occur and natural systems management must be aimed at guiding rather than eliminating those changes.

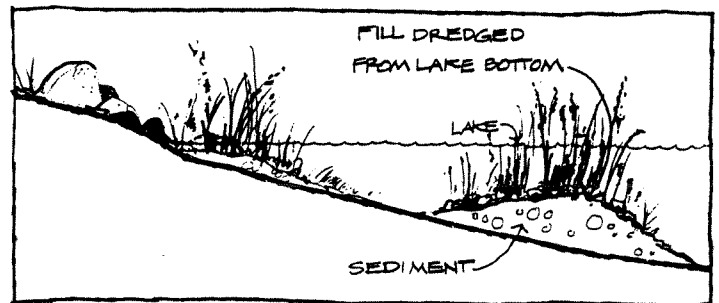
### PLANTING THEME

The proposed planting concept calls for native plant species being used for lakeside planting. They are better adapted to the ecosystem. Exotic species are to be used only to create a desired ornamental effect and if there is no danger of upsetting the balance of native plant communities.

### MAINTENANCE

The primary maintenance required will be in the removal of silt at Sand Lake. The frequency of maintenance in the Sand Lake area is directly related to yearly storm conditions and is generally unpredictable. However, based on current data, it is estimated that removal of sedimentation

materials would be required every 12 to 24 months. Minor siltation in the riparian area is a natural element in order to maintain the viability of the riparian system and will still occur. Periodic maintenance of waterways, lakes and ponds will be necessary for water quality and a balanced ecosystem.



REED-COVERED BERMS LOCATED AT MOUTH OF STREAMS

### **STREAM PLANTINGS AT LAKE EDGES**

Figure 44

# LANDSCAPE THEME

## INTRODUCTION

Kit Carson Park's "natural park" theme will be reinforced by the proposed landscape concept.

Planting of native and exotic plants will complement the natural setting and topography of the site. Plantings will be used to make strong statements to:

## DESIGN THEMES

- 1) enhance vistas,
- 2) accent focal points,
- 3) buffer undesirable park edges, and
- 4) screen poor views while respecting adjoining properties.

## LANDSCAPE BUFFER

A landscape buffer is proposed along Bear Valley Parkway. This screening will enclose the park user and reduce visual pollution as well as audible sounds. It will frame a pedestrian and bicycle circulation link between the athletic fields and Bear Valley Parkway, FIGURE 45.

Additional plantings for framing and screening the auto circulation and parking areas are

planned. The main entry at Mary Lane will have flowering shrubs and large native canopy trees in combination with architectural features to create a sense of entry and arrival.

One of the more important interface landscape zones is the treatment between the North County Fair Shopping Center and the Park. This area is basically divided into three transitions: (1) eastern transition at Bear Valley Parkway, (2) center transition at Tree Lake, and (3) southwestern riparian transition to I-15 corridor. FIGURE 46.

## TRANSITION 1

Transition 1 will have a manicured appearance between multi-purpose fields, baseball fields and shopping center while respecting the existing wetland present there. It shall also have a strong enough identity to act as a secondary entrance and exit to the park.

## TRANSITION 2

Transition 2 will have strong natural planting respecting the plant communities present. Special planting treatments, where desired effects are needed,

will be planted in and around Tree Lake. This will focus attention to the pedestrian linkage to the center and park.

### TRANSITION 3

Transition 3 will combine the plantings of coastal sage scrub and screening materials to blend the shopping center's landscape berm into the park. A visual softening of the southwest corner of the park at El Ku Drive will result in completing this transition. The appropriate blending of landscapes will significantly lessen the visual impact of the center on the park.

### NATURE CENTER

The Nature Center will expand the park concept of natural settings by further development of botanical communities to mix with recreational opportunities. Basically, the Nature Center will encompass four areas:

1. upland
2. lowland
3. riparian
4. Duck Lake

FIGURE 46

Each of these will be developed into its own microenvironment. This will expand and protect for observation, study and recreation, the natural phenomenon.

### BUFFER ZONE

A buffer zone of approximately 250 feet will provide protection for the riparian habitat. This western portion will create and establish wildlife habitats and stabilize soil erosion. Plantings will provide nesting areas and food for various birds and animal life. Specific zones will be planned for camping, picnicking and nature observation. Limited single access points will only be provided in some areas (providing no loop trails).

Revegetation of the proposed flood control berm will be based on the material outlined in the biological section of the Appendix. FIGURE 46.

### PLANTINGS

A large portion of the plantings will be along the property line and around buildings and structures, for screening and creating tree groves. The

majority of the internal open space is to remain open for long views, vistas and safety.

The Arroyo picnic area should be selectively thinned of existing materials to open the area up and regain visual continuity. FIGURE 47.

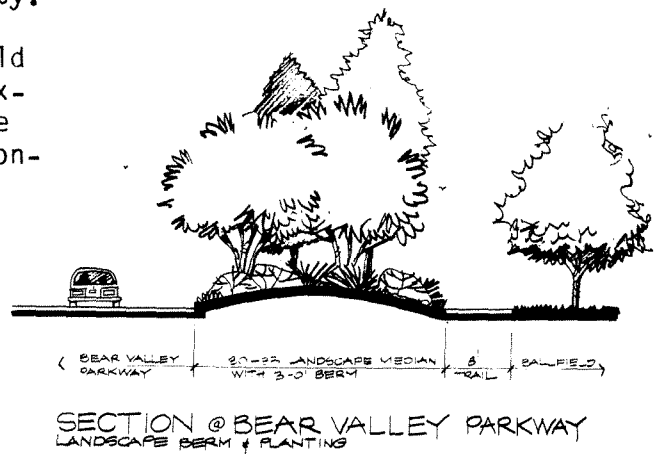
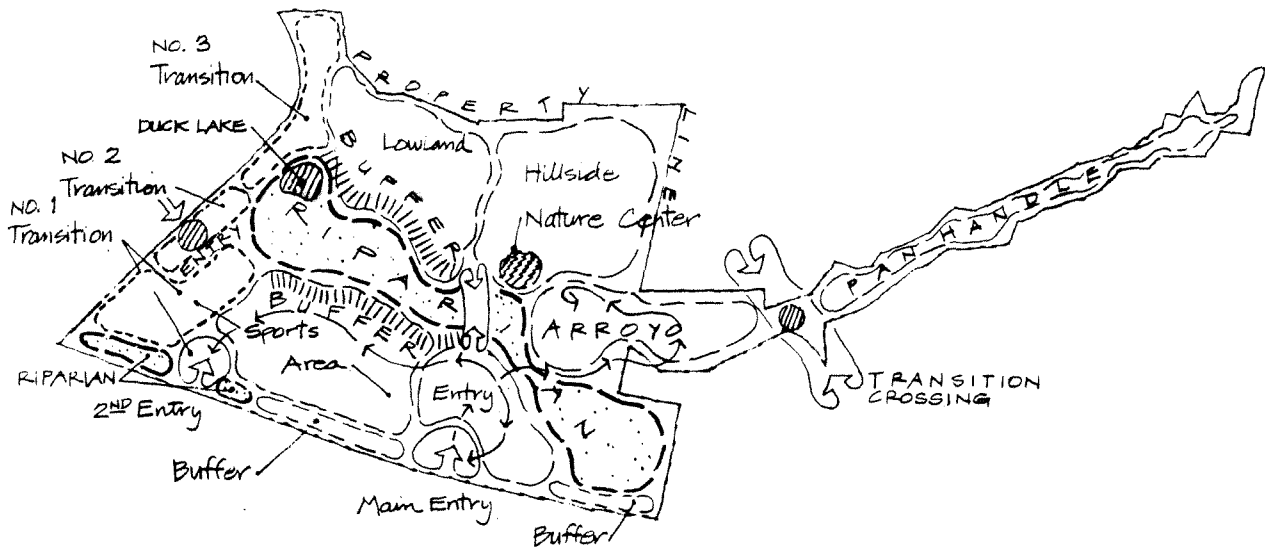


Figure 45



PLANTING CONCEPT

Figure 46

## SUGGESTED PLANTINGS

The list of materials below are suitable for Kit Carson Park's location and design theme. Careful attention will have to be given during the final design development to arrange and use the materials to create the desired effect.

EXPOSURE: N = North slope  
S = South slope or open site

- Can tolerate moderate irrigation

### CHAPARRAL:

- S Cercocarpus minutiflorus
- S ◦ Eriodictyon crassifolium
- N Arctostaphylos glandulosa  
var. crassifolia
- S ◦ Dendromecon rigida
- S Rhamnus californica
- S ◦ Rhus ovata
- S Yucca whipplei
- S Keckiella antirrhinoides
- N ◦ Keckiella cordifolia
- S Salvia clevelandii
- S ◦ Trichostemma lanatum
- S ◦ Penstemon spectabilis
- N Comarostaphylis diversifolia
- S ◦ Acalypha californica
- N ◦ Berberis pinnata
- S Ceanothus tomentosus  
var. olivaceus
- S Ceanothus cyaneus
- N ◦ Styrax officinalis  
var. californica

FIGURE 47

### COASTAL SAGE SCRUB:

- S Mammillaria dioica
- S Simmondsia chinensis
- S ◦ Vigueria laciniata
- S Cneoridium dumosum
- S Ribes indecorum
- S Euphorbia misera
- S Bergerocactus emoryi

OAK WOODLAND: Native to open valleys and along creeks, valley slopes, typical of the Ramona area.

- Quercus agrifolia
- Quercus engelmannii
- Juglans californica
- Rhus integrifolia
- Rhus ovata

VALLEY GRASSLAND: Once wide ranging and loosely defined association found on level valley meadows and burned areas. Mostly succeeded in the wild by non-native pasture grasses.

- Stipa pluchra
- Stipa cernua
- Poa scabrella
- Aristida divaricata

### COASTAL SAGE SCRUB: Alluvial Phase

- Artemisia palmeri
- Romneya coulteri
- Lupinus longiflorus
- Atriplex lentiformis  
var. breweri
- Ribes Speciosa
- Juncus acutus



RIPARIAN:

Vitis girdiana  
Alnus rhombifolia  
Anemopsis californica  
Carex spissa  
Quercus agrifolia  
Plantanus racemosa  
Baccharis glutinosa  
Salix (species)  
Populus fremontii

FRESH WATER MARSH: Areas which are fairly large expanses of standing or sluggishly moving, shallow water, along creeks, sloughs, and river courses.

Typha spp.  
Scirpus spp.  
Carex spp.  
Polygonum amphibium  
Lemna spp.

PICNIC AREAS, TRANSITIONAL,  
HIGH USE AREA PLANTINGS: Plants which lack stickers and prickles and can tolerate irrigation from an impact type sprinkler.

- Heteromeles arbutifolia  
Heteromeles arbutifolia  
var. cerina
- Rhus laurina  
Rhus integrifolia
- Prunus ilicifolia
- Myrica californica
- Lavatera assurgentiflora
- Pinus torreyana
- Cupressus forbesii
- Libocedrus decurrens  
Umbellularia californica

Partial List

Activity and sports areas,  
special effects, entries and  
use areas.

Abelia edward goucher  
Agapanthus africanus  
Arutus unedo compacta  
Calliandra inequilatera  
Cottoneaster (species)  
Raphiolepis indica  
Rosmarinus officinalis  
Veronica (species)  
Xylosma senticosa  
Acacia (by species)  
Ceanothus (species)  
Melaleuca leucadendron  
Eucalyptus (by species)  
Liquidambar styraciflua  
Metrosideros tomentosa  
Pinus (species)  
Pistacia chinensis  
Schinus molle  
Aloe  
Elaeagnus pungens  
Bougainvillea  
Palo verde  
Rhus lancia  
Locust  
Populus fremontii  
Lysiloma thornberi  
Cassia

# VEHICULAR CIRCULATION

## INTRODUCTION

A comprehensive park circulation system must provide links through sensitive environmental areas of the site and include an expanded road system. FIGURE 50.

## CIRCULATION ELEMENTS

The fundamental concept of the proposed circulation is to

1. link recreational facilities without creating physical and visual barriers,
2. improve safety and sight distance,
3. maximize access while keep roads to a minimum,
4. realign and strengthen internal traffic flows for ingress and egress,
5. redefine the park's entries,
6. expand parking facilities, and
7. provide access to the new western portion of the park.

## CIRCULATION CONCEPT

Although the main patterns for traffic remain the same, several major changes are proposed.

During the environmental review period, the benefit of developing a transit facility serving both Kit Carson Park and North County Fair Shopping Center.

The potential concept does exist for a joint sharing of a single transit facility which would service both the North County Fair Shopping Center, Kit Carson Park and link up with other public transit facilities.

The location of such a facility would best serve both projects located on the southside of the landscape berm between the center and park. This would reduce route circuitry and increase transit efficiency.

### 1. MAIN ENTRY

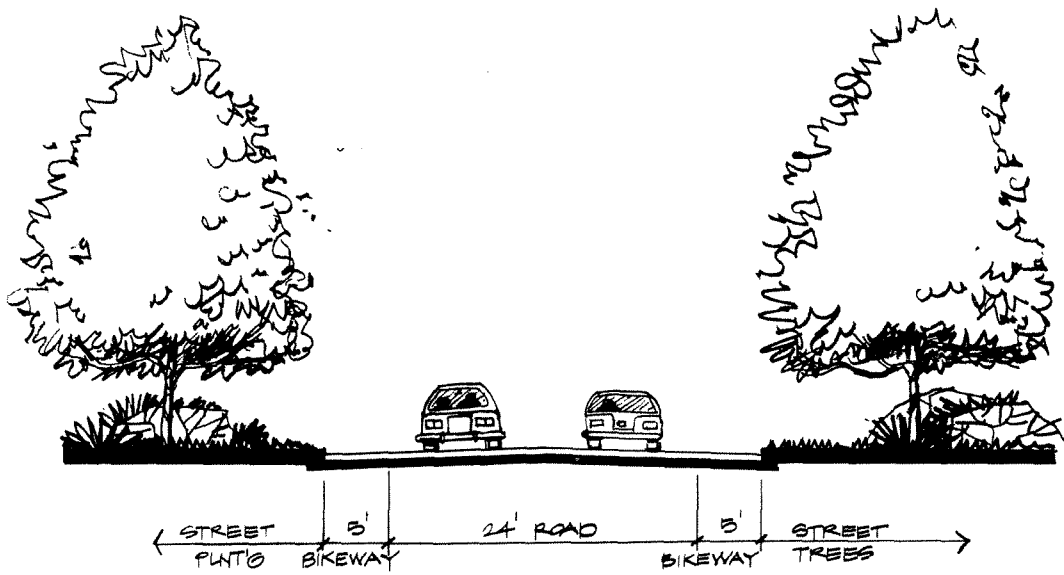
The main entrance road at the intersection of Mary Lane and Bear Valley Parkway will be enlarged and realigned. The road will be renamed "Kit Carson Way" and converge at a new intersection between Kit Carson Way, Casteneda Drive, and Amphitheater Drive. FIGURE 48-49.

### 2. AMPHITHEATER DRIVE

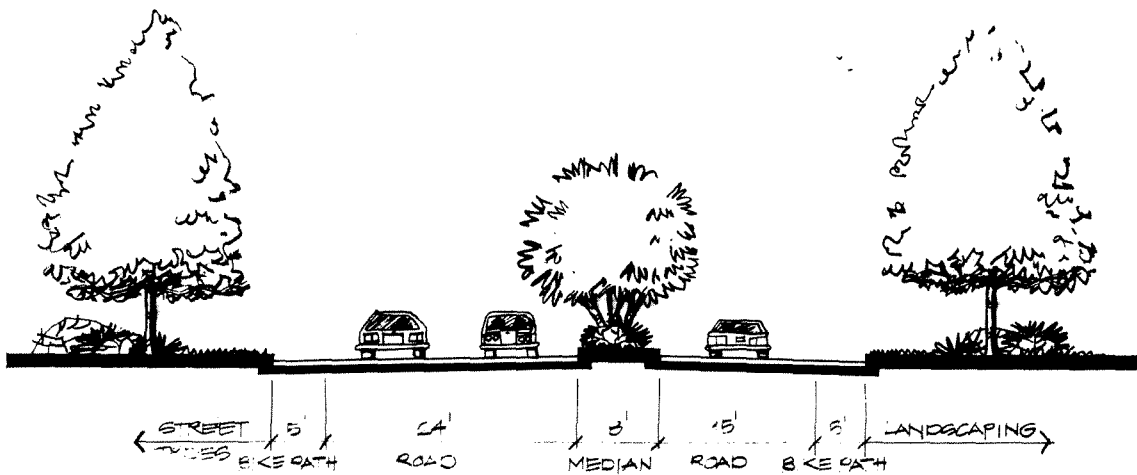
Amphitheater Drive will be realigned to allow for the redevelopment of several parking areas located to the north of the amphitheater. Amphitheater Drive will be a one-way road in an easterly direction. This will act as a loop road to provide traffic control during performances at the amphitheater. FIGURE 50.

### 3. CASTENEDA DRIVE

The through connection from Las Palmas and Casteneda Drive will be vacated and used for emergency access only. Casteneda will be realigned in a westerly direction crossing the northerly portion of the Arroyo picnic area to provide access to the park's Nature Center recreational area. The drive should be renamed to reflect its area to: "Arroyo Drive".



SECTION @ KIT CARSON WAY  
Figure 48



MAIN ENTRY  
AMPHITHEATRE DRIVE & KIT CARSON WAY

Figure 49

# PARKING

## INTRODUCTION

Existing parking facilities are being expanded to accommodate proposed facilities and existing ones. Under long-term plans, additional reserve parking areas can be added as the need arises. The tables illustrate the parking configurations.

## AMPHITHEATER

The Amphitheater's 3,000 seat capacity creates a special problem for parking. This demand would be met within the park, but with a major impact to other park facilities. Since the theater operates periodically and on scheduled events, this problem can be managed by proper scheduling. Additional overflow parking areas to the one planned can be utilized.

Based on the generally accepted ratio of 2.5 persons per auto would travel to the event at any one time, the parking requirements for the amphitheater's 3,000 seat capacity would be 1,200 spaces. With the proposed plan, approximately 62%, or 744 parking spaces of the 1,200 required, will be available within an acceptable distance.

Of the 744 spaces, 350 spaces will be within a 600 foot radius and 394 spaces within a 1,000 foot radius of the amphitheater. Walking time would be between 5 to 10 minutes. The balance of the 456 required parking spaces will be found at other on-site parking areas, assuming no conflicting events would be scheduled for the same time period.

Total parking for the entire Park, including the amphitheatre's overflow area, will be 1,800 parking spaces. The Master Plan has provided for approximately 500 additional spaces for future needs by expanding the new lots.

## PARKING DATA FOR ENTIRE PARK

Total Existing Parking	800
New Parking	710
Amph. New Overflow	<u>300</u>
Total New and Old	1800+

The total proposed parking facilities expands the park's existing lots by 125% with potential for additional overflow provisions.

# BICYCLE AND PEDESTRIAN CIRCULATION

## INTRODUCTION

To enhance the user's experience, a certain element of challenge in the trail and bike circulation system has been planned. However, this is not the case with the interpretive trails. These trails are proposed to (1) provide an enjoyable and meaningful experience and (2) protect the resources by minimizing the effects of use. Most important is the quality of the interpretation of the trail systems natural and cultural elements. FIGURE 50.

## MAJOR LINK

A major pedestrian circulation link is provided across the riparian habitat via the flood control berm. Its location is at the narrowest point in the riparian zone and loops around the western portion and back across the Arroyo picnic area.

## ACCESS POINTS

Bicycle and pedestrian access points, in addition to the one from North County Fair, will occur at the following points:

- a. Las Palmas Avenue at abandoned north entrance.

- b. Mary Lane and Bear Valley Parkway.
- c. Southeast corner in public R.O.W.
- d. El-Ku Drive.

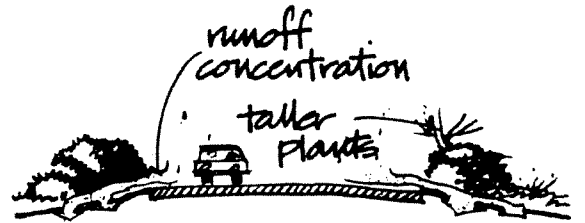
Additional multi-use bike and pedestrian paths will interlink use areas within the park.

## TRAILS

Some trails within the park will be designated only for bikes and others only for pedestrian use. Grade constraints within the panhandle will only permit the development of pedestrian trail(s).

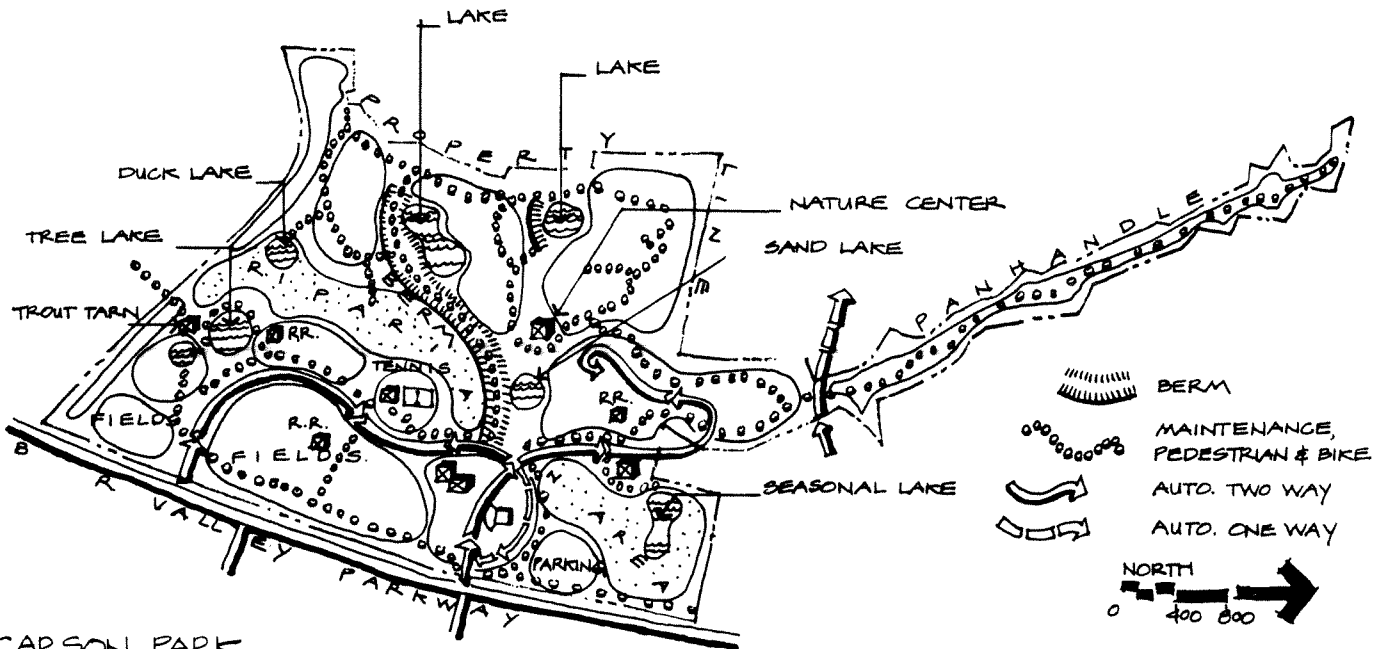
Bike and service vehicle trails will be constructed of asphalt; whereas nature trails through the western portion of the site will be asphalt, wood chips or decomposed granite depending on the service level of the trail. Fitness trails and exercise stations are proposed in the eastern portion of the site generally adjacent to the pedestrian/bike path. Nature trails will be laid out in the field to provide for alignment that is sensitive to (1) the environment, (2) the nature center's educational needs and (3) the overall program needs of the western portion of the site. FIGURE 50.

As California Department of Fish and Game requirements are met for Duck Lake, it may be determined that a nature trail spur will require special treatment for ecological interpretation.



ROAD IMAGE

Bike and pedestrian crosswalks will be provided at several locations along Park Road, Entrance Road and realigned Casteneda Drive. Proper site distances and safe clearances will be maintained along internal roads at all crosswalks and vehicular intersections. FIGURE 50.



KIT CARSON PARK  
CIRCULATION SYSTEMS DIAGRAM

Figure 50

## COMMERCIAL CENTER INTERFACE

### PROPOSED INTERFACE

As part of the North County Fair development, access to the Park for bicycles and pedestrians will be provided. Current North County Fair plans call for a pedestrian boardwalk to enter the park approximately in line with Tree Lake. The boardwalk will continue into the park at grade level in the vicinity of the proposed Trout tarn. At the point where the boardwalk and the pedestrian/bicycle path intersect, an area with an information kiosk, seating and a Tree Lake overlook will be developed.

This area will receive detailed design consideration in the design development phase as this is the first significant pedestrian level interest point into Kit Carson Park from the center. FIGURE 46.

### LANDSCAPE BERM

A bike path is proposed along the top of the landscaped berm separating the shopping center from the park running the full length of the southern park edge and extending across to I-15. The landscape development on the berm, as identified in the landscape theme section, will also serve as an interface element. FIGURE 46.

## PROPOSED AND EXISTING UTILITIES

### INTRODUCTION

The existing utilities available will adequately accommodate proposed park improvements as recommended in this Master Plan. FIGURE 51.

### ELECTRICAL

As part of the North County Fair project, the existing on-site 12-KV electrical service line will be placed underground on the southwest portion of the site only. All future utility installations will be placed underground as new recreational facilities are constructed.

### SUMMARY

The following is a summary of schematic utility extensions and should be reviewed and adjusted accordingly based on final design development and a facilities program.

- A. Tree Lake Concession/Restroom
1. water - 1" 350-400 ft.
  2. electric - 110/220 v  
200 AMP 250-300 ft.
  3. sewer - 6" 800-850 ft.
  4. gas - 800-850 ft.

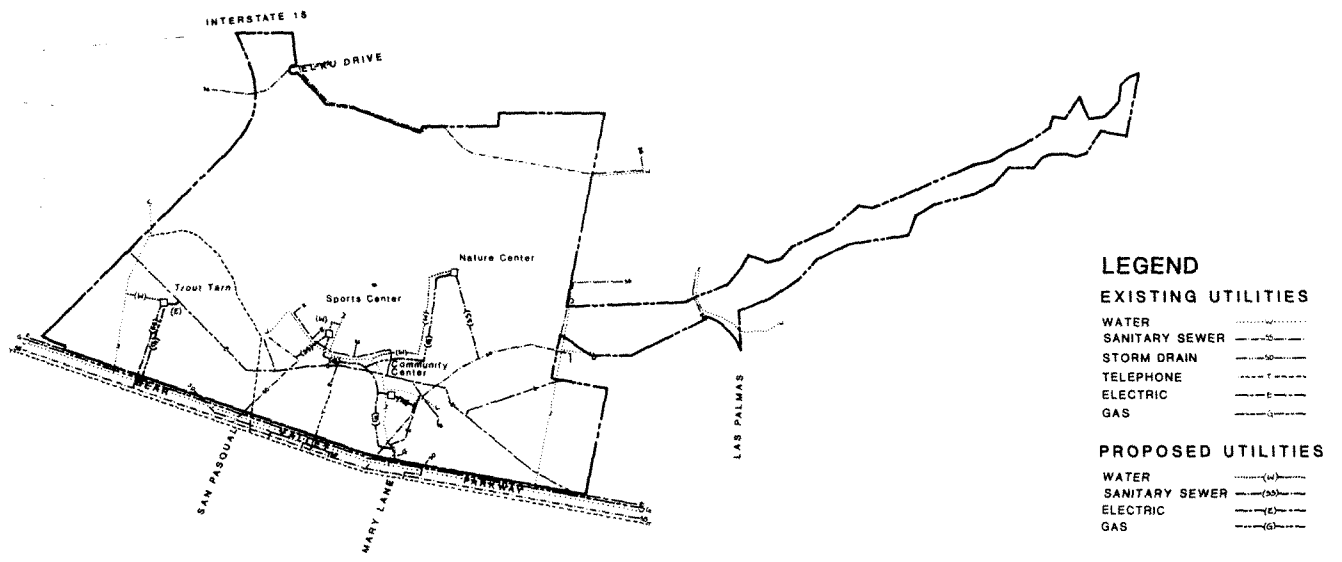
- B. Tennis Complex
1. water - 1" 100-150 ft.
  2. electric - 110/220 v  
200 AMP 100-150 ft.
  3. sewer - 6" 200-250 ft.
  4. gas - 100-150 ft.

- C. Community Center
1. water - \* 100-150 ft.
  2. electric - 110/220 v  
600 AMP 350-400 ft.
  3. sewer - 6" 250-300 ft.
  4. gas - 100-150 ft.

\* size will depend on final program, 2" minimum.

- D. Nature Center
1. water - 2" 1400-1500 ft.
  2. electric - 110/100 AMP.  
1300-1400 ft.
  3. sewer - Ejector station  
required 4" force main  
800- 850 ft.
  4. gas 1400-1500 ft.





KIT CARSON PARK



**utilities**

Figure 51



## ARCHITECTURAL GUIDELINES AND CONTROLS

In order to develop, maintain and preserve the Kit Carson Park Master Plan theme and the surrounding area, specific design criteria and elements will be followed.

### RESOLUTION NO. 4679

On June 17, 1970, the City of Escondido adopted Resolution No. 4679, to create a specific plan pertaining to Kit Carson Park and surrounding area.

The purpose of the specific plan was to retain and preserve the area's character and theme as well as promote orderly development.

### FUTURE DEVELOPMENT

Any future design and development within this specific planning area will adhere to Resolution No. 4679, and the guidelines stated in the Kit Carson Master Plan report. (Refer to Resolution No. 4679 details.)

### GUIDELINES

The following are additional policies and guidelines to establish primary design priorities when developing architectural and site amenities within Kit Carson Park.

1. Energy conservation.
2. Close integration into the park, emphasizing the park's character and naturalistic setting.
3. Maximum accessibility.
4. Ease of circulation within.
5. Efficiency of area relationship.
6. Minimization of maintenance requirements.
7. Flexibility, allowance for maximum kinds of expansion.
8. Use materials that will minimize vandalism damage and reduces weather and sun damage.
9. Design elements shall follow a rustic and early California theme.
10. Design elements shall blend and be in harmony and scale within each use area's environmental image.
11. Capture the individual character and function of the park's recreational areas.

# GRAPHIC CONCEPT

## INTRODUCTION

The graphic concept will coordinate directional and identification signage throughout the park to reinforce the park's natural image. Colors, letter style and materials of signboards will be standardized, with varied mountings or supports to relate to the park use areas. Character signage will also conform and relate to the architectural theme.

## GRAPHIC LEVELS

Five levels of graphics or signage are proposed within the park: (FIGURE 52)

1. Entry Monumentation
2. Vehicular Regulatory and Directional
3. Bike/Pedestrian Regulatory and Directional
4. Nature Interpretive
5. Facility Identification

Informational kiosks (2 or 3) will be strategically located to inform the park user of facility location and upcoming scheduled events.

Consistent use of materials and graphic design standards will add unity and continuity to the sign program.

## ENTRY MONUMENTS

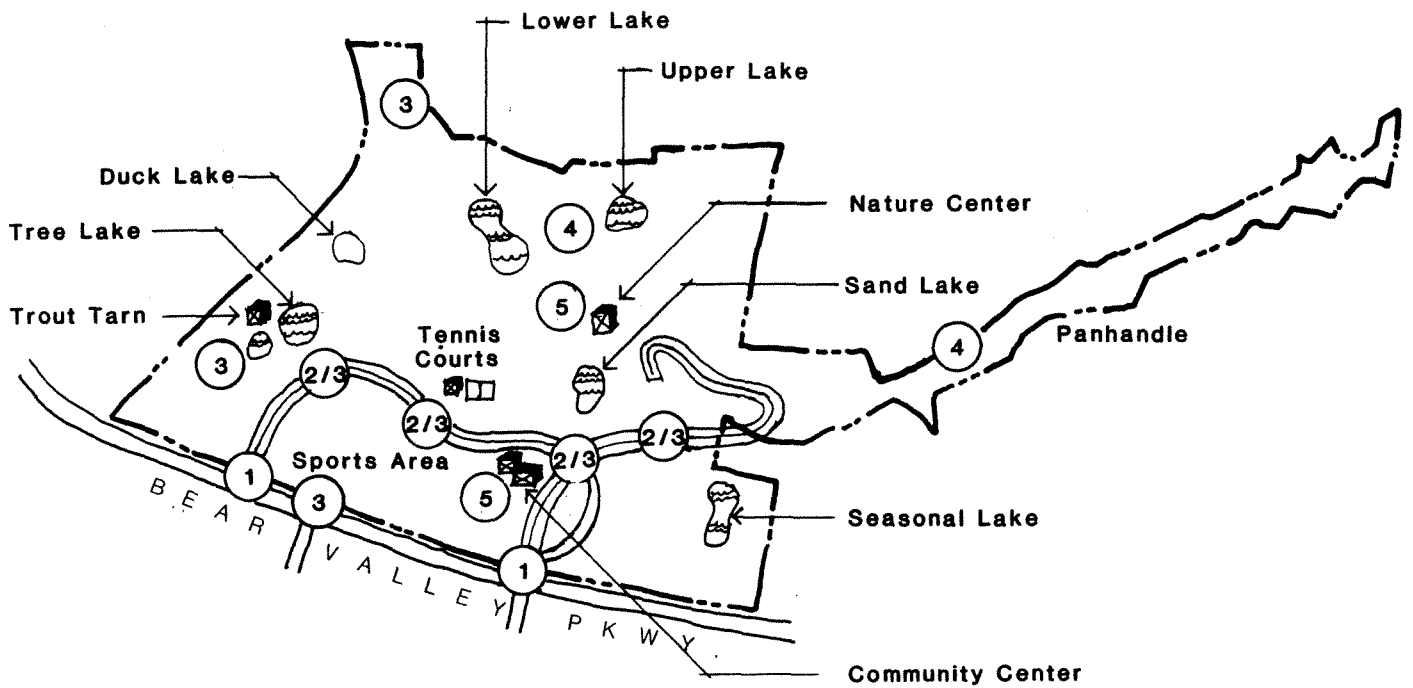
Entry monumentation will be developed at the south entrance and at Mary Lane. The concept will be to provide a sense of arrival to the park and allow for safe ingress and egress for vehicles, bikes and pedestrians.

The entry development will set the tone throughout the park by providing unifying design features through the use of similar tree and shrub plantings, architectural and landscape architectural styles and detail treatments.

## TRAFFIC SIGNS

Traffic regulating and direction signs will be of the same material with the use of standard traffic symbols and directional signage.

Bike and pedestrian-level signage will be reduced in scale to reflect the scale of the observer.



KIT CARSON PARK

0 400 800 NORTH

**sign locations**

Figure 52

# REVENUE GENERATORS

## INTRODUCTION

In addition to funds received from the North County Fair lease agreement, other on-site means of generating revenues should be considered by the city. In order for the city to provide the high level of recreational facilities that the community and general public demand, additional funds can be generated from alternative on-site revenue.

## EXAMPLES

The following is a list of potential revenue generators that may be implemented. They must, like every plan or recommendation, be reviewed and evaluated prior to implementation.

1. Parking meters - it is estimated that an initial investment would require two years to pay off. Beside the benefit of additional revenues, it could potentially reduce one-person-per-car situations, thereby lessening potential parking deficiencies during special events, i.e. tennis courts and community center.
2. Trout tarn - lease an area in the vicinity of Tree Lake that would provide trout fishing via rental of fishing equipment, paddle-boat type equipment, and other fishing related materials, equipment and supplies.
3. Amphitheater - increased events, plays, musical performances, special events.
4. Rental of group picnic facilities for outdoor breakfasts or dinners for fund-raising groups.
5. Lighted tennis courts - fees could be charged for nighttime use of tennis courts. Four of the courts could be lighted. An evening curfew is suggested.
6. Tennis Pro Shop - in conjunction with the tennis courts, a facility that would include a tennis pro shop and restrooms could be built and leased. Or, the land could be leased with the tenant building the structure.

7. Baseball/Softball with a full tournament-type facility constructed for major tournaments or special sport events.
8. Tree & Native Nursery - could be developed for supplying trees to the city and for sale to the general public.
9. Rental of equipment such as skates, bicycles, charts, play equipment, etc.
10. User fees - User fees could be charged for use of park facilities including:
  - nature center meeting rooms
  - community center meeting rooms
  - exercise facilities in the community center
  - swimming pool
  - swimming lessons and events
  - scuba lessons
  - recreation activity classes, etc.

The above is only a partial list of potential revenue generating ideas that should be explored.

# SUMMARY OF PHYSICAL IMPROVEMENTS AND COSTS

## INTRODUCTION

The method applied to develop the cost estimate consisted of quantitative and cost analysis for implementation of the Master Plan on present-day labor and material costs. All costs are in 1983 dollars. 1-10 year development costs are based on a five stage phasing program reflecting logical sequence for construction of improvements.

## COST ANALYSIS

To assist in this evaluation, estimates were made for major improvement items, although the project categories are at a conceptual level and will be subject to more exact estimation when final design and construction documents are completed.

As a result of approving the leasing of 75 acres for commercial development, revenues from the lease will be made available for proposed Master Plan improvements starting in 1983.

## PHASING STUDY

The following chart, FIGURE 53, indicates a logical sequence of park construction elements. It also divides each element into a workable number of increments. Certain items must be completed before others, based on a logical construction sequence, necessary prerequisites, or priorities. The recommended sequence is flexible, offering various options to be selected based on community priorities at the time funds become available.

The map, FIGURE 54, diagrammatically illustrates the zones located within the park that would be constructed in phases. There are five major phases, arranged in an order to maximize funds and provide for construction scheduling. For example, FIGURE 54 shows the relationship between the chart phasing, the facilities location, and the park site. Those areas numbered with a (1) will be constructed during the first phase. Those areas with two numbers would be constructed during two separate phases, i.e., 2-3 or 4-5 and so on.

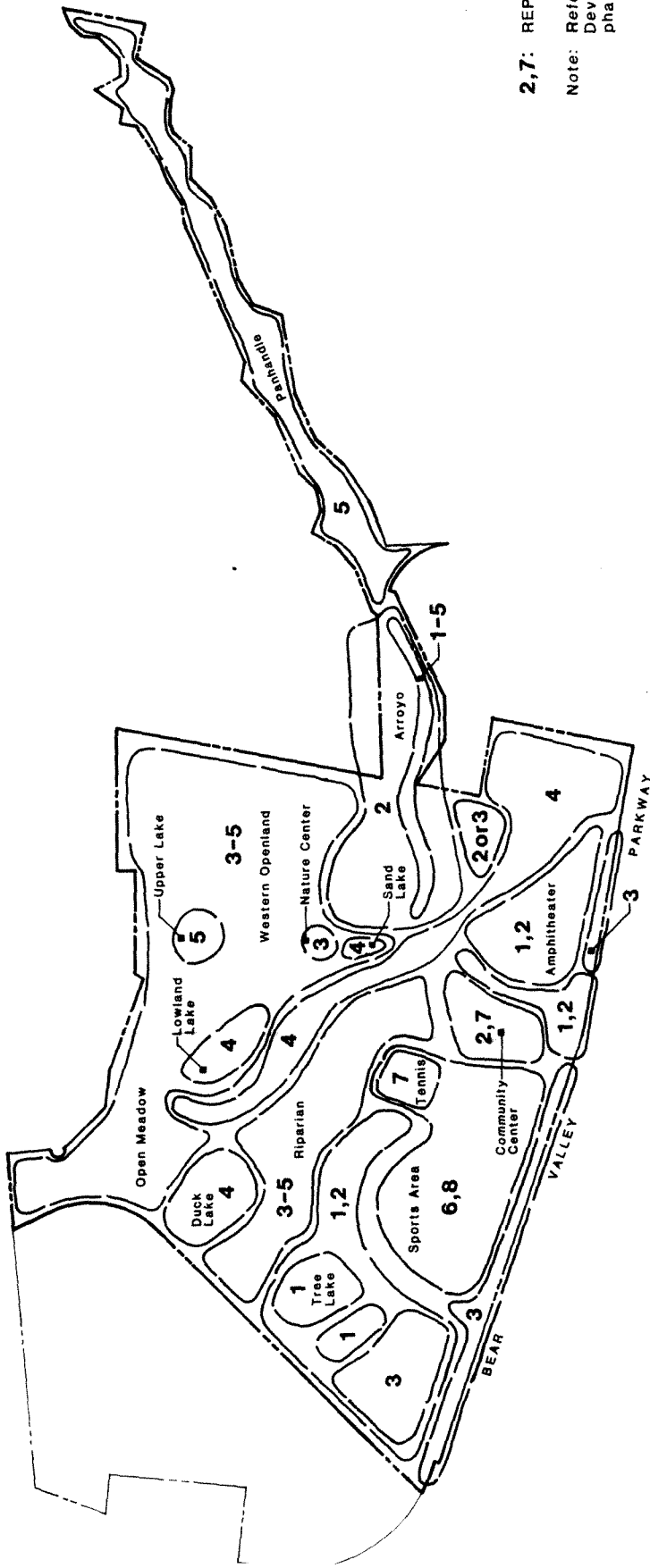


## PHASE PROGRAM AND DEVELOPMENT COSTS

FACILITIES & IMPROVEMENTS	PHASES (1-2 years per phase)					COST PER ITEM*
	1 PHASE 1	2 PHASE 2	3 PHASE 3	4 PHASE 4	5 PHASE 5	
<b>CIRCULATION</b>						
realignment of entry drive	200					200
additional parking spaces	150	250		50		450
bicycle trail system		100	75			175
pedestrian trail system		100	25			125
road landscaping, etc.		50	150			200
road and entry graphics		25	20			45
Bear Valley landscape plantings			100			100
Casteneda stream crossing				200		200
<b>WATER MANAGEMENT</b>						sub-total 1495
N.C.F. flood project	250					(not a part)
park flood control project		150	100			500
pump and irrigation system		50				50
water monitoring system		20				20
<b>NATURE CENTER</b>						sub-total 570
re-established habitats	50	50	50	20		170
interpretive trail system		50				50
trail facilities			100			100
arboretum, native plants			25	25		50
nature center building				50	50	100
<b>PARK FACILITIES</b>						sub-total 470
utility improvements	50	25	25	25		125
re-established trout tarn	200	By Concession Operater				200
expanded sport facilities	75					75
public restrooms		50	50	50	70	220
expanded picnic areas		40				40
additional sport facilities		20	70	100	50	240
additional picnic areas			100	20	20	140
tot-lots/open play areas			100	200		300
maintenance service yard				50	20	70
<b>COMMUNITY CENTER</b>						sub-total 1410
amphitheatre parking/landscape	15	10				25
community center building				200	450	650
community & historical plaza					80	80
community swimming pool					250	250
sub-total 1005						
* costs are shown in thousands						TOTAL PROJECT COST \$4,950,000

Figure 53





2,7: REPRESENTS PHASE

Note: Refer to "Phase Program and Development Costs" chart for phasing details.

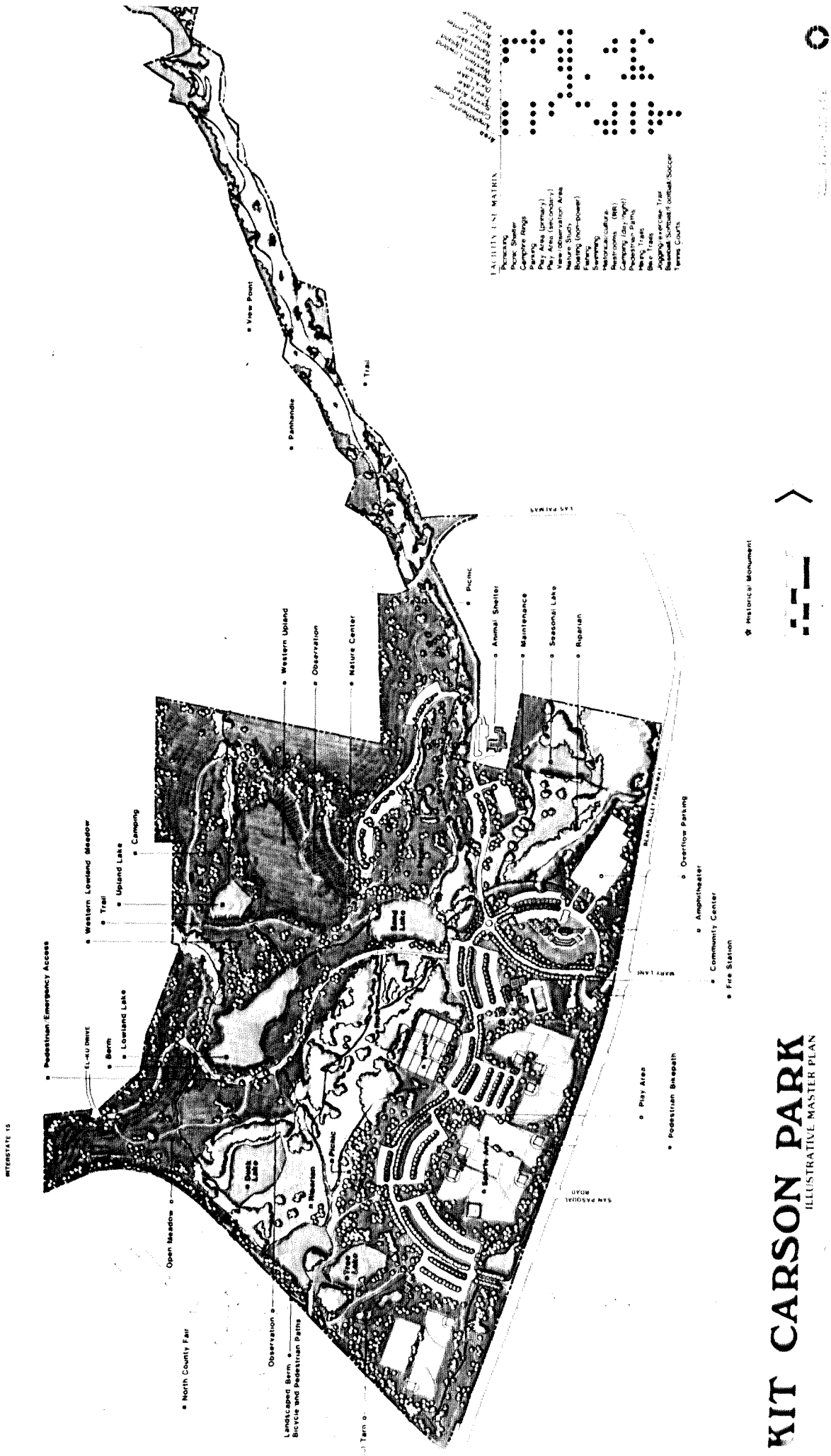
KIT CARSON PARK



# construction phasing

Figure 54





**KIT CARSON PARK**  
 ILLUSTRATIVE MASTER PLAN  
 Community Services Commission  
 Escondido, California

Figure 55





**KIT CARSON PARK**

Looking southwest toward tennis complex

Figure 56







KIT CARSON PARK  
Nature study lookout

Figure 57





KIT CARSON PARK

Looking east across tree lake

Figure 58

