4/16/82

RIVERVIEW RANCH
SPECIFIC PLAN OUTLINE

Appendix

LIST OF EXHIBITS

LIST OF TABLES

SECTION I - INTRODUCTION AND BACKGROUND

A. Introduction

1. Purpose and Intent

The Specific Plan for Riverview Ranch provides the mechanism to develop 61± acres of land in a comprehensive manner. This plan when adopted will function as both a planning and regulatory tool.

It is the intent of this document to implement Riverside County's General Plan. This plan will be site specific, responsive to the unique conditions and potentials for the property. The plan will provide the optimum integration of urban and natural amenities of the property. It will provide for the coordinated development of a mixture of residential densities, housing types, public and private community facilities, recreational and commercial areas. The Specific Plan will establish development standards and controls unique to this project which will assure the completion of this project as envisioned at time of approval.

The Specific Plan for Riverview Ranch is proposed to be adopted by ordinance and amended by legislative action, and when adopted, controls all development within the affected area.

The Riverview Ranch Specific Plan will provide for the coordinated development of a mixture of residential product types as well as commercial and recreational uses. Differences between product types are minimized by a lagoon, open space, the circulation system, and landscape buffers.

The following objectives have guided the preparation of the Riverview Ranch Specific Plan.

a. To provide the opportunity for a variety of housing product types.

b. To provide the opportunity to meet the housing needs of various households and income groups, primarily through the provision of second homes oriented to riverfront recreation.

c. To provide increased access to the Colorado River and the recreational opportunities the river presents.

d. To provide a cohesiveness within the community through the provision of private recreation facilities, a variety of housing types and convenience commercial facilities.

e. To provide a high quality development above that of existing river developments. This will be accomplished by architectural control, common area landscape and a security entrance to the project.

2. Authority

The adoption of the Riverview Ranch Specific Plan by the County of Riverside is authorized by California Government Code, Title 7, Divisional Chapter 3, Articles 8 and 9, Sections 65450 through 65507. A copy of these regulations is contained in Attachment A.

3. Application

The Riverview Ranch Specific Plan applies only to that property within the County of Riverside and known as "Riverview Ranch". The Land Use Development Plan in Exhibit 3 depicts the property which is subject to the provisions of the Riverview Ranch Specific Plan. The precise legal description of the property is included as Attachment B.

B. Project Description

1. Type of Project

The Riverview Ranch is a river-oriented mixed use development containing residential, commercial and recreational uses within the project site of 61± acres. The residential portion of the plan proposes a total of 172 dwelling units on 37.1 acres, excluding the recreation centers, lagoon and riverfront buffer, providing a variety of housing product types including attached and detached single-family residential units.

The recreation portion of the plan is primarily comprised of water-oriented activities. The Plan designates 20.4 acres for open space/recreation uses, including the lagoon, riverfront buffer zone and three recreation centers. The northern lagoon area will be developed to provide an enclosed or protected swimming beach area. The southern lagoon area will be developed for boating

activities, connected with the river. Open space along the river edge will be held in common ownership to provide easy access to the river. Recreation centers will be developed within the three residential areas, providing swimming pools, tennis courts and other active and passive recreation facilities. A community trail system will provide pedestrian and bicycle linkages connecting the residential areas, commercial center, recreation centers, lagoon and riverfront. The community trail system will also provide a pedestrian and bicycle linkage between the commercial center and the adjacent County Park.

The commercial portion of the plan proposes 3.5 acres to be allocated to commercial uses. These facilities could include a convenience market, a restaurant with take out capabilities, boat dock, equipment rental and recreational vehicle/boat storage area. The market support would be derived from four groups: project residents, Mayflower Park visitors, adjacent mobile home residents and boaters. A mutual agreement has been made between the applicant and the County Parks Department for development and joint use of one acre within Mayflower County Park as a paved parking area.

Properly integrated, the inclusion of all these land uses in the Riverview Ranch project results in a development where residents can live and recreate in the same general area.

Downtown Blythe will be the primary shopping and service area for the project residents.

2. Market Objectives

It is the intent of Riverview Ranch to provide mixed residential product types in a river-oriented planned community setting with support facilities provided by the convenience commercial area. More specific marketing objectives are:

a. To reflect anticipated marketing needs and public demand by providing a diversity of housing types which will be marketable within the developing economic trends.

b. To include design segments in the residential products that respond to forecastable demands in the market area.

c. To create a community identity for Riverview Ranch through the development of an architectural theme and a common landscape treatment which will create a continuity of design within the project.

d. To create a community focal point for both the residents and community at the commercial area.

e. To provide a higher quality image project than now exists in the area.

f. To provide improved access to the river to both the project residents and the community.

g. Provide housing types for the local as well as the second home market.

3. Supporting Documents/Cases

General Plan Amendment No. 206 was approved for the project site on October 7, 1981, amending the designation from Water Problem to Very Low Density Residential (57.5 acres) and General Commercial (3.5 acres). The Open Space Element designation was also amended from Mountain, Desert and Conservation Area to Urban Area.

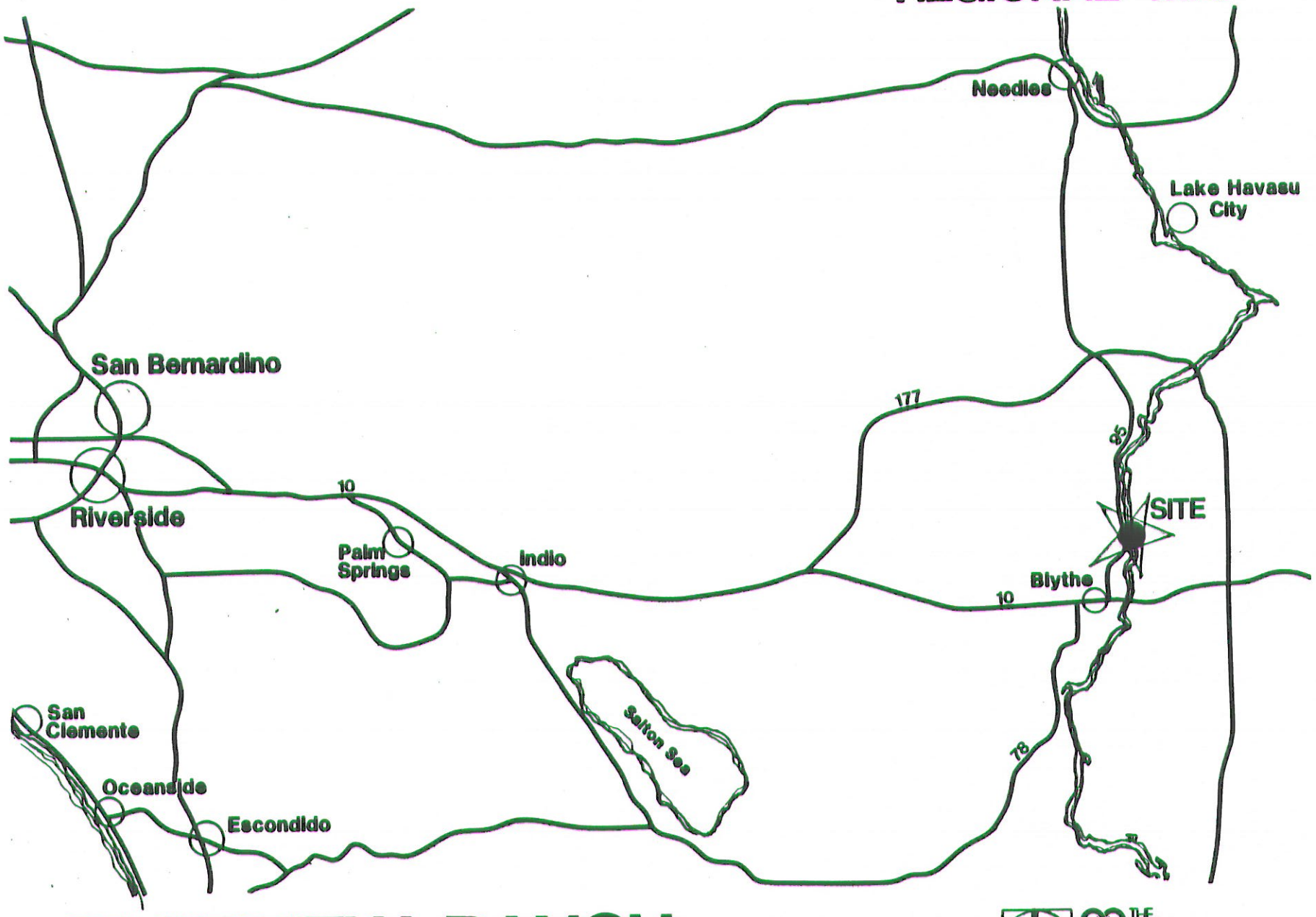
A Draft Environmental Impact Report for General Plan Amendment 206, (Final EIR #145) has been certified by the Riverside County Board of Supervisors and is incorporated herein by reference.

C. Project Setting

1. Project Location

The Riverview Ranch property encompasses approximately 61± acres in western Riverside County. The site is located approximately seven miles northeast of Blythe, California, on the west bank of the Colorado River. Specifically, the site is located one half mile north of Sixth Avenue. The site is partially bordered by the Colorado River to the east, Collis Mayflower County Park borders the south and the remaining eastern boundary. The northern and western boundaries are agricultural lands. The Ranch is located in the north 1/2 of section 12, Township 6 South, Range 23 East. Refer to Exhibit 1 for the regional location and Exhibit 2 depicts the property and local environs. Exhibit 3 presents an aerial photograph of the project site.

REGIONAL MAP



RIVERVIEW RANCH

THE PLANNING CENTER
240 NEWPORT CENTER DRIVE SUITE 215
NEWPORT BEACH, CA 92660 (714) 640-4911

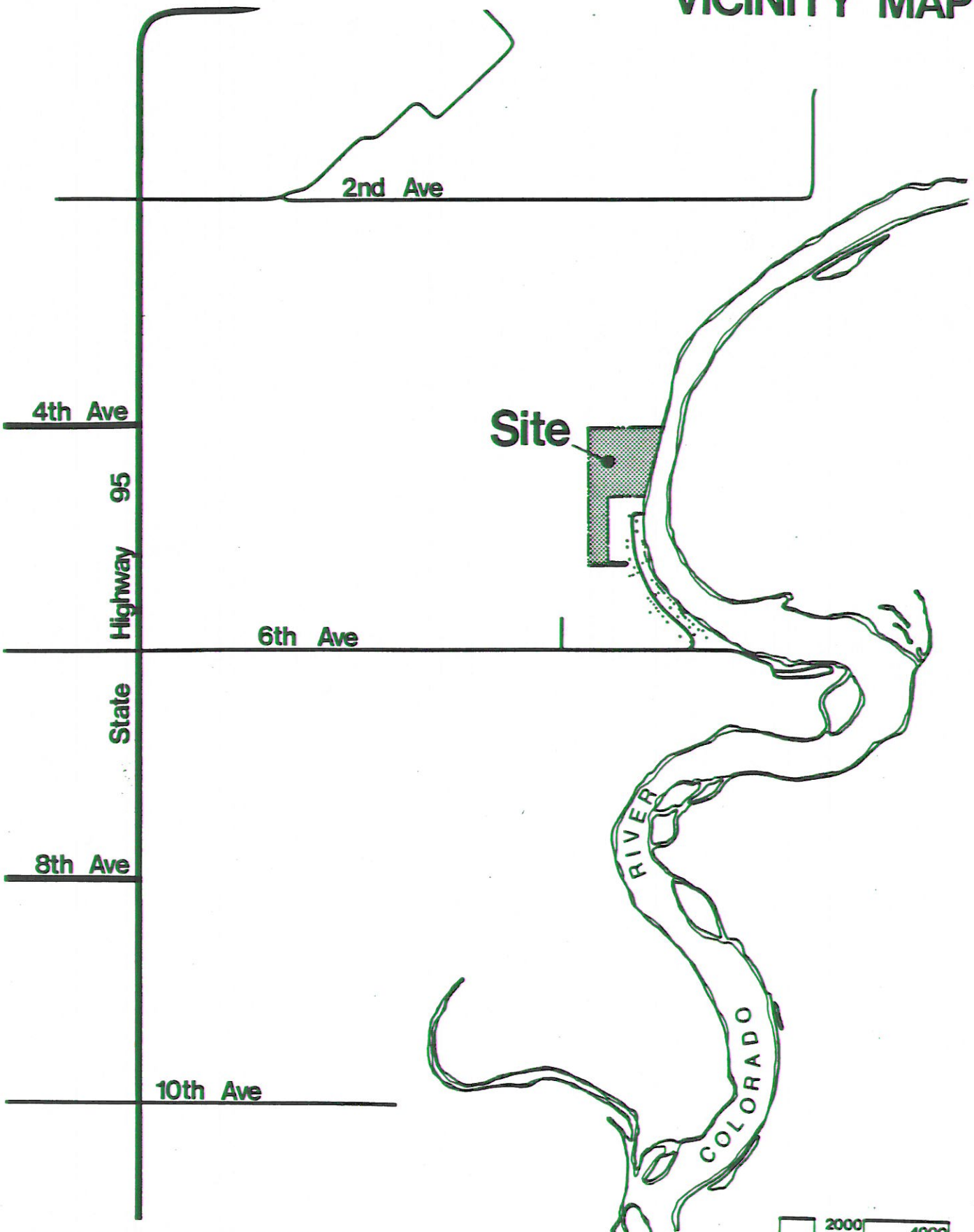
0 10 20 30 40 50 mi.

EXHIBIT 1

3/15/82

3/15/82

VICINITY MAP



RIVERVIEW RANCH

2000 4000

THE PLANNING CENTER

2421 NEWPORT CENTER DRIVE, SUITE 275, NEWPORT BEACH, CA 92660 (714) 640-1971

EXHIBIT 2

AERIAL PHOTOGRAPH

PROJECT BOUNDARY

RIVERVIEW RANCH

EXHIBIT 3

2. Community Setting

The Riverview Ranch is on the west bank of the Colorado River, northeast of Blythe, California. Blythe, located in eastern Riverside County, is predominantly an agricultural community.

The site is adjacent to Collis Mayflower County Park containing 184 camping spaces, swimming beach, boat dock, electrical outlets, water hook-ups, tables, showers and restrooms. South of the park are approximately 100 to 150 mobile homes and trailors in very low quality and in various stages of decline. The western and northern boundaries are in agricultural production owned by the project proponent.

3. Area Development Trends

The River City project is proposed to be located approximately five miles north of the site on Highway 95. The River City project is a residential/recreational water-oriented development of approximately 553 residential lots and 14 commercial lots. This development will also have river access through common areas and boat docks. This project is in the process of obtaining the required approvals.

4. Expected Time Frame For Development

An overall ten-year development program is proposed for residential uses, based upon market demand. Riverview Ranch will be developed in three phases, possibly overlapping as warranted by market conditions. Project completion is expected by 1993.

SECTION II - SITE DEVELOPMENT SETTING AND CONSTRAINTS

A. Environmental Considerations

1. Land Use

The current primary land use is agricultural. The site is planted with alfalfa except for a small portion adjacent to the lagoon which is in native brush. The Riverside County Parks Department is in the process of dredging a channel from the lagoon to the Colorado River. This channel will provide additional water frontage for both the park as well as the proposed development.

2. Land Form

The study area is directly adjacent to the Colorado River. The topographic relief of the site is slightly less than 0.05 percent towards the river from an elevation of approximately 280 feet above sea level. Landform modification will be directed toward creating streets and building pads to an elevation above the high water level of a 100-year storm. An additional northern lagoon will be constructed within the site boundaries to provide direct access to the river by project residents.

3. Soils and Geology

On-site soil types consist of Meloland Fine Sandy Loam (Capability Class of II w-3), Rositas Fine Sand (Capability Class III s-4), and Glen Bar Silty Clay (Capability Class II s-6). The Meloland soils cover 45 percent of the site, the Rositas soils cover 45 percent of the site and the Glen Bar soils cover 10 percent of the site.

The site is within a Zone I groundshaking area and is subject to liquefaction. Because of the minimal groundshaking, the liquefaction hazard is not significant.

4. Hydrology

The project site is located in the Palos Verde subunit of the East Colorado River Basin. The entire Colorado River Basin covers approximately 242,000 square miles of watershed that includes seven states. The project site is subject to inundation by the Colorado River if the levee failed during a 100-year storm. All building pads

will be constructed at or above elevation 280.5 feet, which would locate the first floor of any residence at a minimum of 18 inches above the high water level of 279.0 feet during a 100-year storm.

5. Noise

Boat traffic and the adjacent Collis Mayflower County Park are the two primary noise sources affecting the project site. The boat noise that is created by power boats passing the site as well as boats originating from the County park. Noise generated from the passing boats is of a short duration and medium intensity. Noise from the park will be that associated with automobile traffic. This noise is distant and also of short duration.

6. Biological Resources

There are no rare or endangered species of plants or animals known to exist on the site. The supplemental report, "Biological Assessment, Riverview Ranch Site", November 19, 1981 is included as Attachment C.

The bulk of the Riverview Ranch property is planted in alfalfa crops. Principle field edge settings vegetated by ruderals and grasses are along the concrete irrigation channel and its earthen dike at the west property boundary, in the transition area between the field panhandle and Mayflower County Park, and in vacant land west of the lagoon. Disturbed sandy areas north and east of the lagoon, and in the buffer strip bounding the west edge of the park contain several desert herb species and scattered tamarisk trees.

Desert riparian flora is found around the lagoon, on the bluff margin overlooking the Colorado River and on the slopes of the irrigation runoff channel. Lagoon flora is comprised of cattail, soft-stemmed bulrush, salt cedar and arrow weed species. The Colorado River bluff margin supports arrow weed, salt cedar, and saltbrush. The most diverse species composition of riparian shrubs and trees on-site occurs on the slopes of the irrigation runoff channel.

The project site supports a variety of invertebrates and reptiles. However, the overall diversity of reptile species expected on site is limited due to disturbed conditions. The site

also supports a variety of bird species, including raptors and infrequent waterfowl species. Small mammals and rodents are numerous on the site. Evidence of larger mammals, such as coyotes, racoons and mule deer have been found on the site. Additional species expected or reported include striped skunk, spotted skunk, gray fox, bobcat and possibly kit fox. The lagoon's aquatic ecosystem exhibits a depressed level of biotic activity, supporting bullfrogs and possibly leopard frogs and several fish species including catfish, perch, carp and large-mouthed bass. The agricultural drainage channel's aquatic habitat appears to be in very good condition, supporting a number of small fish and invertebrate species.

7. Cultural Resources

There are no recorded archaeological sites located on the project site, or within several miles of the site. Artificial leveling of the site for agricultural purposes combined with riverine deposition have rendered the area highly unproductive in terms of cultural resources. No archaeological sites or materials were observed during the survey of the property.

8. Air Quality

The Blythe area is located in the Southeast Desert Air Basin (SEDAB), which is considered a non-critical air basin. Since the SEDAB is considered a non-critical air basin, there are no definitive guidelines for assessing air quality impacts. The major source of air pollution associated with the project will be those from mobile sources (automobiles and boats). Stationary pollutant emissions will be attributable to residential and commercial use. During the actual construction of the project, dust and emissions from grading and construction equipment will be generated.

9. Energy

The project site presently consumes very small amounts of energy for agricultural uses. The proposed plan will result in increased energy demands attributable to increased automobile trips; boat trips; residential and commercial uses such as cooking and heating; construction vehicles; and raw materials consumed during construction. The aim of proposed mitigation measures for energy consumption is to minimize wasteful, inefficient

and unnecessary consumption of energy. Building energy conservation will be mainly achieved through compliance with Title 24 of the California Administrative Code.

B. Public Facilities Considerations

1. Water Supply

The project site is not within the service area of any existing domestic water supplier. The site is within the Palo Verde Irrigation District which supplies irrigation water to the area. Domestic water will be provided to the project from a private well system on-site.

2. Water Quality

Major problems being encountered in the Colorado River Basin include over commitment of flows, reduced flows, increased salinity and evaporation losses. These factors, along with planned upstream development, could increase the Total Dissolved Solids (TDS) in Colorado River water into the range of 1300 mg/l by the year 2000. Evaporation losses have also caused an increase in salinity. Groundwater on-site can be expected to be hard. The water quality analyses of samples taken from 1) Mayflower County Park tap water; 2) Mayflower County Park lagoon, and 3) the agricultural drain north of the site are included in Attachment D.

3. Wastewater

The project site is currently not located within the East Blythe County Water District service area. The project site will be served by septic sewage disposal facilities, including a community leach field along the western site boundary. The "Percolation Testing Feasibility Report", contained in Attachment E, indicates that leach line type sewage disposal is feasible on the site.

4. Fire Protection

Fire protection services are provided to the area by the California Division of Forestry under contract with Riverside County. The fire station is located approximately seven miles from the site in downtown Blythe. The current response time to the site is in the range of eight to ten minutes, exceeding the maximum response time prescribed in case of structural fires.

5. Police Protection

Police protection services are provided by the Riverside County Sheriff's Department, operating from the Blythe station located approximately seven miles from the site. The Blythe station serves all of eastern Riverside County, covering an area of roughly 65 miles east to west and 40 miles north to south. The Sheriff's Department does not patrol streets, but is a response agency only. Street patrol is the responsibility of the State Highway Patrol. Potential security problems exist between the project and adjacent Mayflower County Park.

6. Schools

The project is located within the Palo Verde Unified School District. The District has adequate capacity to serve the estimated 15-30 students generated by the project.

7. Traffic/Circulation

Sixth Avenue has an average daily traffic volume of approximately 934 vehicles east of State Highway 95. State Highway 95 has an average daily traffic volume of approximately 3,300 vehicles at Sixth Avenue. Both of these roadways are currently operating within their respective capacities.

At the present time, access to the site is gained through Mayflower County Park. An access road will be built from Sixth Street along the western boundary of Mayflower Park and dedicated to the Riverside County Road Department. The access road will have 40 feet of paving on a 60 foot right-of-way. The Parks Department will gain a potential new entrance to the park from this access road. The Traffic Analysis, prepared by Kunzman Associates is included as Attachment F of this text. The project will generate a maximum of 4,650 daily vehicle trips. The anticipated traffic generated by the project will not exceed roadway capacities.

8. Parks and Recreation

The project site is located adjacent to the northern and western boundaries of Mayflower County Park, a 10 acre multi-use facility including 184 campsites, a swimming beach, picnic areas and a

boat ramp. Mayflower County Park has approximately 20,000 visitors annually. The Specific Plan proposes a joint project with the County Parks Department to develop the lagoon for use by project residents and park users. Development of the northern lagoon area for beach activities and development of the southern lagoon area for boating activities will increase the use of the currently underutilized Mayflower County Park. A mutual agreement has been made between the applicant and the County Parks Department for development and joint use of one acre within Mayflower County Park as a paved parking area.

9. Solid Waste

The Blythe Disposal site, located approximately 6 miles from the property, serves the project area. The Blythe Disposal site has a remaining expected life beyond the year 2000. Solid waste collection services in the area are handled by the Blythe Sanitation Company.

10. Utilities

The Southern California Edison Company provides electrical service to the project area. Southern California Gas Company provides natural gas service to the project area. Telephone service is provided by General Telephone Company. Although electric, gas and telephone utilities will have to be extended onto the site, no service problems are anticipated.

11. Fiscal Considerations

A Cost/Revenue Analysis was prepared for the project by the Levander Company, an economic and management consulting firm located in Palos Verde Estates, California. Assumptions made relative to fiscal considerations include the following:

--Development to include 165 residential units and 6 acres of commercial facilities. Units assumed to include 85 single-family detached and 80 mobile homes.

--Assumed 8-year development period (through housing construction), based upon market research indications of a four to eight year buildout.

--20 to 40 percent local-area buyers, the balance to be non-local second-home and retiree residents. Market research indicates the 20 percent figure to be most likely.

--At project completion, peak population in the range of 425 to 428, at 20 percent and 40 percent local buyer mix, respectively.

--Year-round average population (reflecting only partial occupancy by second-home residents) estimated at 248 to 294, for 29 percent and 40 percent local buyer mix, respectively.

--Similarly, school enrollment of 15 to 30 at project completion.

--New development value at completion of approximately $21.4 million.

--Assessed value at completion of approximately $5.3 million, 640 times present property assessed valuation of approximately $11,600 under agricultural production. Future assessed value per capita estimated to be 3.4 times higher than current County levels (expressed in 1981 dollars), even though the project has relatively low commercial development and industrial development. Taxable sales generation at commercial facilities of approximately $750,000 annually, generating local sales tax to the County of $7,500 per year.

The fiscal analysis is predicated on the assumption that services provided to new residents of the subject site will be at the same level as those provided to existing residents in the unincorporated Blythe area. On this basis, the fiscal analysis indicates favorable project financial impacts. Briefly, findings for individual responsible agencies are as follows:

--General County Functions. Net cash surplus of about $100,000 generated during the 8-year development period, with ongoing cash surplus of about $32,000 annually (expressed in 1981 dollars and under the assumption of 20 percent local buyer mix). This estimate covers functions of police protection, fire protection, street services, park services, and development control activity (subdivision approvals, building permits, plan checks, etc.).

--County Flood Control. No revenues nor costs attributable to new development; and thus a breakeven situation.

--East Blythe County Water District. No negative fiscal impact, and possibly a positive impact. The District has capability of establishing rates sufficient to cover all capital and operating costs.

--Palo Verde Unified School District. Operating costs and revenues to be a minimum breakeven situation; and probably financially beneficial based upon current District Official's statements. Additional capital costs for the 15 to 30 student requirement will probably not be required by the District in light of current excess capacity. However, in the event that capital costs are required the costs per unit are quite modest in relation to housing values, estimated at about $739 to $1,490 per unit for permanent school facilities, and $273 to $546 per unit for relocatable facilities, both sets of numbers reflecting a 20 percent and 40 percent buyer mix respectively. If additional capital facilities are required, the financing solution appears well within reach of developer-school district cooperation.

--Homeowners' Association. The costs of maintenance (streets, open space, etc.) and services (security, development controls, etc.) will be borne by the association, with no imposition of financial burden on the community at large.

These judgments are predicated upon analysis of direct costs and revenues -- those which can be realistically attributed to new development activity. Analysis of indirect costs and revenues in other Southern California communities indicates that typically indirect revenues exceed indirect costs.

In general, the favorable financial impacts found in the fiscal analysis can be attributed to four major factors:

--The assumption of substantial services and facilities by the developer and an ongoing homeowners' association.

--Per unit and per capita values considerably higher than levels found in the existing community and the County at large.

--A substantially higher level of second-home and retired households than found in the County at large, with attendant savings in local governmental services.

--Somewhat lower service levels than found in most Southern California communities.

C. Special Design Considerations

1. Market Analysis

A market analysis was prepared by the Levander Company, an economic and management consulting firm located in Palos Verde Estates, California. The analysis was prepared to present an objective evaluation of the market demand and need for the project.

The principal findings and conclusions of the analysis are based on evaluation of the site, economic setting, residential market analysis, and commercial market analysis with implementation recommendations.

The following presents a brief summary of the analysis:

The project was assumed to contain 165 housing units and six acres of commercial usage. The need for three housing products was foreseen:

--Completed permanent housing (single-family attached or single-family detached.)

--Lots intended for subsequent permanent housing construction.

--Lots intended for mobile home occupancy.

Market research indicated that a strong market demand exists for such housing. However, this demand is primarily to meet the needs of second-home and retirement residents attracted mainly by water recreation. Indications are that only about 20 percent of the demand will stem from the local Blythe economy.

A key necessity for the project is convenient water access. Without such access, the residential market would be virtually nil. Thus, this type of project is of necessity limited to waterfront sites.

The specific division of product between permanent housing construction, permanent housing lot sales, and mobile home lot sales is a matter of subsequent developer determination, considering his financial and other objectives. For purposes of the cost-revenue analysis, contained in a separate report, development of 85 units of permanent housing and 80 units of mobile home was asssumed. This program should be achievable in a four to eight year development period, which was assumed to be eight years in the cost-revenue analysis.

The analysis identifies the need for three acres of commercial facilities, to serve convenience needs of local residents and also to capture market from adjacent park users, nearby mobilehome residents and recreational boaters.

A number of product recommendations were made, including:

--Striving for a high quality project with pricing 10 to 15 percent above competitive levels.

--Provisions of internal channeling if at all possible, which should increase project absorption and pricing potentials by a factor of about two.

--Provisions of convenience shopping amenities at the outset, even if this requires a developer operating loss.

--Physical separation of mobile home and permanent housing areas, and also separation from adjacent Mayflower Park.

--Possible provision of community-association services involving exterior maintenance and security.

--Construction of several units to assist in initial project marketing.

2. Viewshed and Visual Impact Analysis

The Riverview Ranch property is currently agricultural open space with no significant topographic or vegetative features. A lagoon, which lies within the Mayflower Park and project site boundaries is the most significant natural feature on the relatively level site. Due to the lack of significant topographic and vegetative features, views of the property from off-site are limited to view windows from adjacent properties and from the river.

The property is surrounded by predominantly agricultural uses with the exception of Mayflower County Park and a mobile home development located south of the site.

The site contains approximately 1,400 feet of Colorado River frontage. Open riverfront views are available from much of the site. Excellent open views of the Big Maria Mountains to the north and McCoy Mountains to the west are available from all portions of the property.

In summary, the major visual elements of the site are comprised of the riverfront view corridor, the lagoon on-site, and the panoramic views of surrounding mountains.

The view of the project from the adjacent Mayflower County Park will be screened by an intense landscape barrier adjacent to the commercial center and parking areas. A landscape screen is also proposed along the lagoon adjacent to the condominium area to minimize visual impacts upon the open view across the lagoon from Mayflower County Park. The riverfront view corridor will be maintained by the proposed 100 foot wide riverfront buffer zone. Panoramic views of the surrounding mountains will be maintained through the use of view fences, sky line tree groupings, low barrier shrubs, and special consideration to design and orientation of structures. Trails to the commercial center will be well marked.

3. Natural Features

The Colorado River frontage and lagoon are the only significant natural features on the property. The Specific Plan proposes an open space buffer averaging 100 feet in width along the riverfront and enhancement of the lagoon. The lagoon will be enlarged and improved for recreational use. Permission has been granted from all involved agencies to breach the levee east of the lagoon connecting the lagoon with the river. From the lagoon, the channel will be extended through the site, connecting to an agricultural water return canal on the north side of the property. Necessary approvals will be obtained from all involved agencies for the lagoon expansion prior to commencement of grading activities.

4. Energy Conservation/Prevailing Wind Patterns/Blow-sand

Energy Conservation measures contained in the Final EIR No. 145 for this property will be implemented. These Energy Conservation measures are included as Attachment G of this text.

The prevailing wind direction in the general area is from the north at a windspeed of approximately 10 miles per hour.

The blowsand issue is not a problem in the general project area. However, during certain conditions blowing dust from adjacent agricultural land could be a problem. A 10 foot wide landscaped buffer zone, including walls and fences, is proposed around the perimeter of the property to function as a wind and dust buffer between residential and agricultural land uses.

5. Corridors/Easements/Right-Of-Way

The project access road, to be dedicated to the County, will provide a 60 foot right-of-way.

The Colorado River Recreation Way Corridor will be preserved through provision of a riverfront buffer zone averaging 100 feet in width.

SECTION III - GENERAL PLAN RELATIONSHIP TO PROJECT

A. Countywide Policies

The Riverside County General Plan, originally adopted in 1965, contains topic - specific elements and a number of optional elements and plans. Community general plans have been adopted as Area Plans for major communities, including more precise land use forecast maps. During the last three years, Comprehensive Policy Plans have been adopted for the Riverside Extended Mountain Area and Rancho Village Area. In addition, focused policy studies have been adopted for the following areas: Hillside Development Policies Studies (Countywide); Romoland; Eastern Agricultural Areas; Hemet - San Jacinto Sphere Areas; Murrieta; and Antelope Valley.

General Plan Amendment No. 206 was approved on October 7, 1981 amending the designation from Water Problem to Very Low Density Residential (57.5 acres) and General Commercial (3.5 acres), according to the adopted Riverside County General Plan. The Open Space Element designation was also amended from Mountain, Desert, and Conservation Area to Urban Area.

The following sections address the relationship of the project to the elements of the General Plan. More specific information relative to the development criteria for each category are contained in Sections IV and V of this document as an integral part of the Specific Plan design and land use development plan.

B. Resource Elements

1. Land Use

The Land Use Element designates the project site for Very Low Density Residential (57.5 acres) and General Commercial (3.5 acres), based on General Plan Amendment No. 206. The Very Low Density Residential category permits a density of 0-3 dwelling units per acre. A maximum of 172 dwelling units could be developed on the site based upon the General Plan.

The Riverview Ranch Specific Plan proposes a maximum of 172 dwelling units (including 75 mobile home or manufactured housing units, 24 single-family units and 73 condominium units) and 3.5 acres of General Commercial uses consistent with the General Plan. The residential density proposed is 3.0 dwelling units per acre. The plan also provides 20.4 acres designated for open space/ recreation uses.

2. Open Space

The Open Space Element designates the project site as Urban Area. The project site is part of the designated Open Space Corridor along the Colorado River.

The Riverview Ranch Specific Plan proposes designation of 20.4 acres for open space/recreation uses, including the lagoon, riverfront buffer zone, and three recreation centers. The Specific Plan will provide for preservation and improvement of the lagoon in keeping with the goals of the Open Space Element. The plan also provides for an average 100 foot wide landscaped buffer zone along the Colorado River to preserve the designated Open Space Corridor. The plan provides for integration of the lagoon and commercial recreation facilities with the public open space uses at the adjacent Mayflower County Park. Adequate access to the riverfront Open Space Corridor will be ensured by provision of a community trail system connecting recreational amenities with the open space buffer area along the riverfront. The community trail system will also provide pedestrian and bicycle access to the commercial center from the adjacent Mayflower County Park.

3. Conservation

The goal of the Conservation Element of the General Plan is to manage the development and use of natural resources in the County in a manner that will protect and enhance the quality of the total environment.

The plan provides for the maintenance and conservation of the lagoon and inter-related open space.

4. Recreation

The project site is located within the Colorado River Recreation Way. The plan proposes that the entire riverfront area be left in open space (100 feet wide) with native vegetation, consistent with the Recreation Way designation. Introduced vegetation will be selected for drought tolerance. The proposed development of a swimming and boating lagoon will enhance the recreational opportunities for project residents and the general public. The plan will also increase the public use of the currently underutilized Mayflower County Park. The

applicant will participate in a joint project with the County Parks Department to develop the southern lagoon area. A mutual agreement has been made between the applicant and the County Parks Department for joint use and development of one acre within Mayflower County Park as a paved parking area. Construction of the one acre parking area will be phased concurrently with the adjacent commercial development.

The plan will provide for construction of commercial recreational facilities for use by both project residents and the Mayflower County Park users.

5. Scenic Highways

The Scenic Highways Element designates State Highway 95 as an eligible County Scenic Highway. Riverview Ranch is located two miles from State Highway 95 and will be consistent with the Scenic Highway Element.

6. Housing

The Riverview Ranch Specific Plan proposes a variety of housing types and prices consistent with the objectives of the Housing Element. The Specific Plan proposes development of 75 mobile-home or manufactured housing units, 73 condominium units and 24 single-family units responding to the market needs of three housing segments. The Specific Plan encourages energy efficient housing. The project will provide increased housing opportunities for a segment of the local Blythe market, the retirement market, and the second home market oriented to riverfront recreation.

7. Historical Preservation

There are no known archaeological or historical resources on the project site. Any archaeological or historical resources subsequently discovered will be preserved according to the recommendations of a qualified expert in the field.

C. Constraints Elements

1. Noise

The Riverview Ranch Specific Plan is consistent with the Noise Element. The site is not located within a high noise area. The proposed design

provides for landscaped open space buffer areas, walls and earthen berms to minimize noise intrusion between the adjacent Mayflower County Park and internal residential uses.

2. Seismic Safety

The Specific Plan is consistent with the goals and objectives of the Seismic Safety Element. The site is within a Zone I groundshaking area and is subject to liquefaction. However, liquefaction hazard is not significant on the site due to minimal groundshaking. Buildings will be designed in accordance with the Uniform Building Code.

3. Safety

The Safety Element designates the limits of the area within a 100-year flood plain of the Colorado River. The Specific Plan will provide for construction of all building pads a minimum of 18 inches above the river's regulated high water level of 279 feet. The fire protection response time to the site exceeds the maximum prescribed in the case of structural fires. The Specific Plan will comply with the Safety Element through the provision of mitigation measures as recommended by the Department of Fire Protection.

D. Public Facilities Elements

1. Circulation

The Specific Plan is consistent with the Circulation Element, which designates State Highway 95, Sixth Avenue, and Colorado Boulevard as arterials with 110 foot right-of-ways. The project traffic will not exceed roadway capacities. In cooperation with the County Parks Department, the Specific Plan proposes access to the site from Sixth Street along the western boundary of Mayflower County Park, providing a new entrance to the park. The main access road will be dedicated as a General Local Street with 40 feet of paving and a 60-foot right-of-way. The internal access road will be constructed as a Restricted Local Street with a pavement width of 32 feet on a 50 foot right-of-way. A community trail system is proposed to provide pedestrian and bicycle linkages connecting the residential areas, commercial center, recreation centers, lagoon and riverfront. The trail system will also provide a pedestrian

and bicycle linkage between the commercial center and the adjacent Mayflower County Park. The community trails will encourage people to use alternative means of transportation, reducing internal vehicular trips.

2. Water and Sewer Plan

The Specific Plan proposes privately maintained water and sewage systems at no cost to the County. An adequate level of service will be provided by an on-site water well system and sewage disposal facilities served by a community septic leach field.

3. Solid Waste Management Plan

Solid waste collection and hauling will be performed by a private disposal service, the Blythe Sanitation Company. Waste material will be properly hauled and disposed of at the County's Blythe Disposal site.

4. Airport Facilities Plan

The Airport Facilities Plan does not apply to the Riverview Ranch project.

SECTION IV - SPECIFIC DEVELOPMENT PLAN

A. Purpose

What a Specific Plan is and how it functions are best described by a comparison with the General Plan. The purpose of the General Plan is to express, in general terms, the County's thoughtful planning of its future environment. As its name implies, the General Plan functions as a general blueprint of future development within the County. It is adopted by the County as a legislative act and may, thereafter, be amended as required by changing circumstances. The Specific Plan is a more detailed version of the General Plan. The Specific Plan focuses on a particular parcel or parcels, articulates the planning consideration for such parcels and imposes regulations or controls on the use of such parcels. The Specific Plan may be adopted and amended by legislative action and, when adopted, controls all development within the affected area.

B. Design Objectives

The primary objective of the Riverview Ranch Specific Plan is to implement the Riverside County General Plan through the physical and economic development of the Riverview Ranch property. Included in the Riverview Ranch Specific Plan are a number of design objectives to guide the creation of a planned community which will be harmonious with the natural environment while meeting standards of open space, circulation, intensity of use, community character and fiscal responsibility. The following design objectives have guided the preparation of the Riverview Ranch Specific Plan:

An Enriched Community Environment - Riverview Ranch will provide for a variety of housing types and price options through a mixture of residential product types (attached and detached housing units), and will create an enhanced community space through a diversity of design. The commercial center will support the needs of project residents as well as the general public.

Aesthetically Cohesive Community - Continuity in the landscape and grading concepts tie this residential community together. Each element of the development is identifiable within the landscape hierarchy by the selection of plant materials employed. Similarly, the development areas are separated by natural drainage courses, the lagoon, or greenbelts which connect the neighborhoods as well as commercial and recreation areas together.

Compatibility of Land Uses - Compatibility of the proposed land uses with the adjacent Mayflower County Park and agricultural land is assured through the design of buffer areas separating conflicting uses. The commercial center is separated from the residential development area.

Secure Community Environment - The residential development area will be gated to provide security. Design techniques such as walls and buffers are employed around the perimeter of the project.

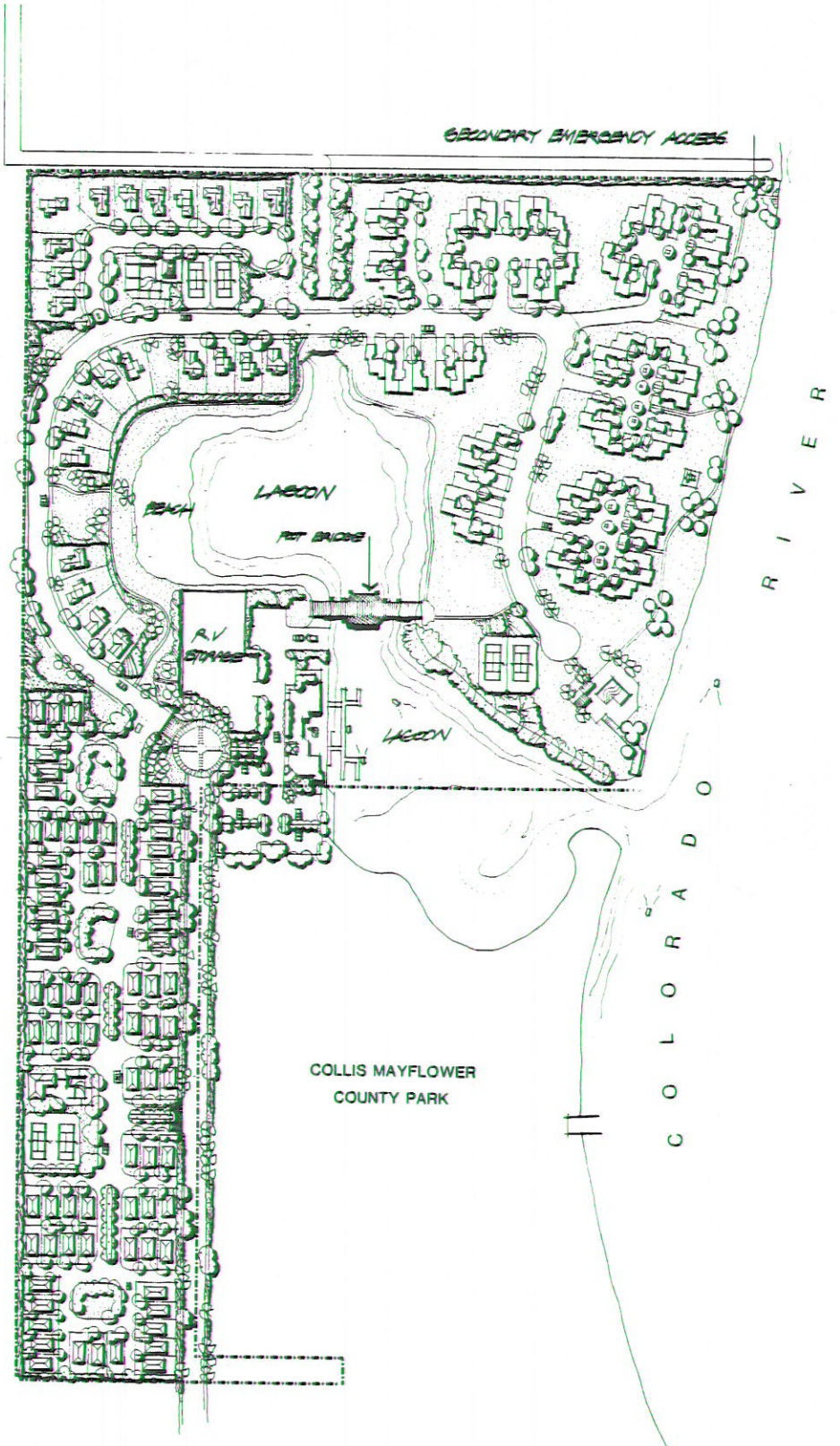
Harmonious Massing of Structures - The development has been clustered in pockets allowing drainage and open space uses to provide a separation between development areas. By varying the densities and allowing clustering, the buildings and surrounding areas can then be tied together by common elements, including the lagoon, landscaping and other recreational amenities. View potential is also enhanced by the design.

Interfacing of Private Development Areas with Public Access Areas - The design restricts public access to the residential housing areas while allowing public access to the Commercial center and southern lagoon area.

Interfacing of Private Open Space and Other Private Recreation Areas - By interfacing private open space and recreational amenities into the lagoon, view potential is enhanced and focused. In addition, the lagoon functions to integrate the recreational uses into residential areas. The trail system will tie all of the recreation and open space elements together.

Exhibit 4 presents the Illustrative Design Concept. The proposed design separates the residential development area from the adjacent Mayflower County Park without restricting public use of the southern lagoon area. A buffer area is provided between the residential units and the adjoining agricultural land. A buffer is also provided between the mobilehome/manufactured housing development and the camping area within Mayflower County Park to minimize noise and security problems.

The primary environmental issue affecting the site design relates to the hydrology. It is the objective of the plan to be responsive to this issue through the preservation of the lagoon and remedial grading to assure flood protection. The primary public facilities issues affecting the site include water supply and waste water. Public facilities are being provided in the plan through construction of road improvements, provision of an on-site water well system and an on-site septic system.



ILLUSTRATIVE PLAN
RIVERVIEW RANCH

THE PLANNING CENTER

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EXHIBIT 4

C. Development Plan

1. Land Use and Density

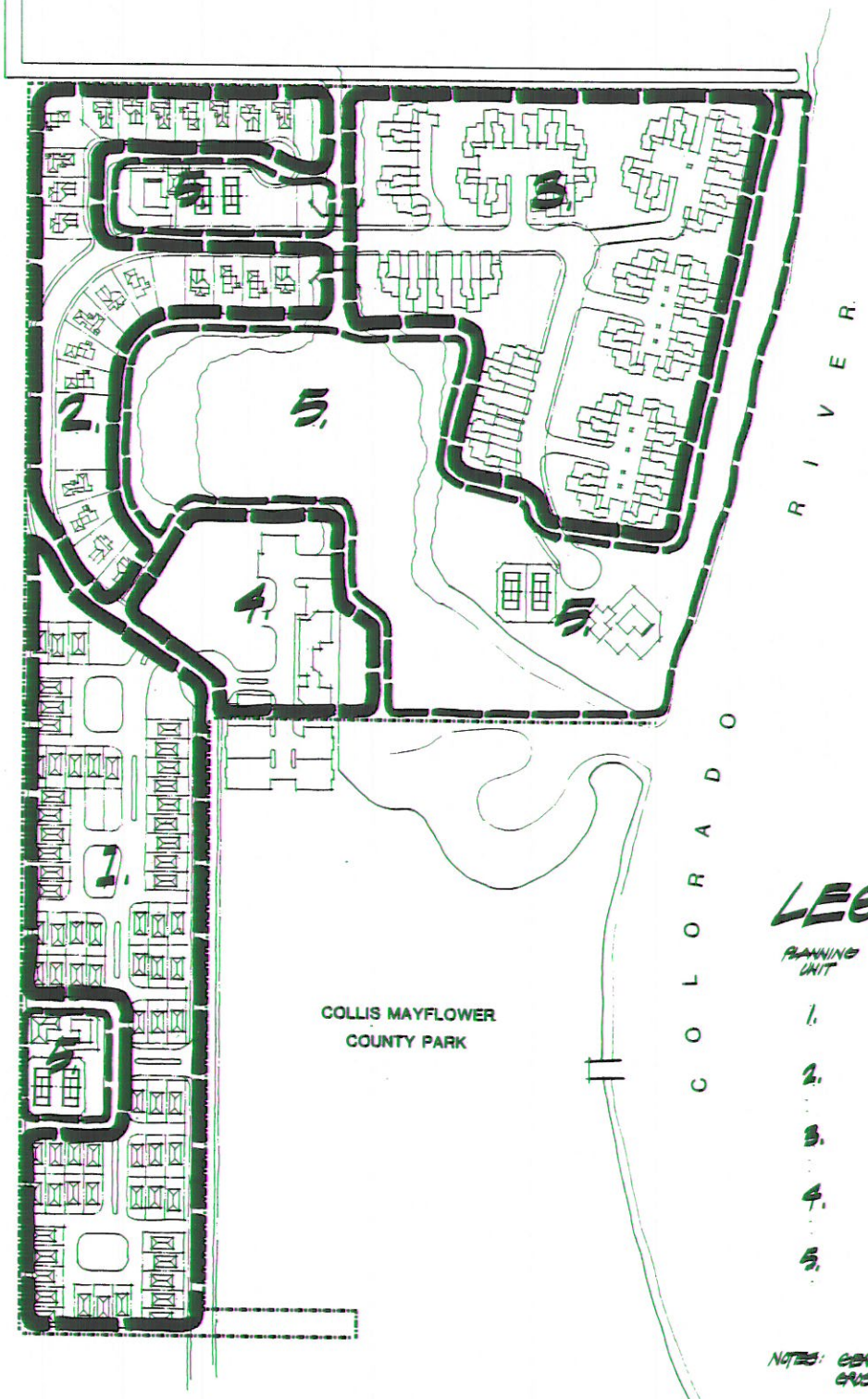
The Riverview Ranch project is a mixed-use development comprised of three types of residential uses, recreational open space and amenities, and commercial uses to serve the needs of the project residents and the general public. The Specific Plan area of approximately 61 acres is divided into three major land use types; residential, general commercial and recreation/open space. Table 1 presents a land use summary defining development within each planning unit. Exhibit 5 presents the Land Use Development Plan.

TABLE 1

Land Use Summary

Planning Unit	Land Use Designation	Proposed Product Type	Area (in Acres)	Dwelling Units	Density (DU/Acre)
1	Medium Density Residential	Mobilehome/ Manufactured Housing Units	13.7	75	5.5
2	Very Low Density Residential	Single-family Detached Units	8.2	24	2.9
3	Low Density Residential	Attached Units (Condominium)	15.2	73	4.8
4	General Commercial	Commercial Center/RV Storage/ Parking	3.5		
5	Open Space/ Recreation	Recreation Centers/ lagoon/open space	20.4		
TOTAL			61.0	172	2.8

4/16/82



LEGEND

PLANNING UNIT	LAND USE	PROPOSED PRODUCT TYPE	AC.	TOTAL DU	DENSITY
1.	MED. DEN. RES.	MOBILE HOME MANUFACTURED	18.7	75	4.0
2.	VERY LOW DEN. RES.	S.F.D.	8.2	24	2.9
3.	LOW DEN. RES.	ATTACHED PRODUCT	15.2	73	4.8
4.	GENERAL COMMERCIAL		3.9		
5.	OPEN SPACE REC. AREAS		10.4		

GROSS AVERAGE DENSITY 2.8 DU/AC.

TOTALS 61.0 AC 172 UNITS

NOTES: GENERAL PLAN DESIGNATION 0-3 DU/AC
GROSS AVERAGE DENSITY 172 DU ÷ 61 AC = 2.8 DU/AC.

LAND USE DEVELOPMENT PLAN
RIVERVIEW RANCH

THE PLANNING CENTER
2140 NEWPORT CENTER DRIVE, SUITE 215,
NEWPORT BEACH, CA. 92660, (714) 640-1971

EXHIBIT 5

Residential Uses

The residential portion of the plan proposes 172 dwelling units to be constructed in a variety of densities and product types. Each residential area has been designed with individual recreational centers while interrelating with the lagoon and overall open space plan. Single-family development is proposed on 8.2 acres, providing a maximum of 24 dwelling units. The 13.7 acre mobilehome/manufactured housing development will provide a maximum of 75 housing units. The condominium development will provide a maximum of 73 units, to be developed in clusters of 3 or 4 units per building on approximately 15.2 acres. Areas designated for recreation centers, the lagoon and the riverfront buffer have been excluded from the residential acreages. The project results in an overall residential density of 3.0 dwelling units per acre.

Commercial Uses

The commercial portion of the plan proposes general commercial development on 3.5 acres for use by project residents and the general public. The proposed commercial uses could include restaurant, boat rental, gas dock, boat storage and other related uses. A mutual agreement has been made between the applicant and the County Parks Department for development and joint use of one acre within Mayflower County Park as a paved parking area.

Recreation/Open Space Uses

The recreational/open space portion of the plan is oriented to two primary amenity features. The primary recreation/open space feature within the project is the lagoon. The lagoon will provide open space linkages between the various development areas of the plan as well as natural separation between various use areas. The lagoon will provide active boating and swimming opportunities for project residents and the general public, interrelated with the commercial center and adjacent Mayflower County Park. The County Parks Department and Homeowners Association will provide joint maintenance of the southern lagoon. In addition, recreation centers and open space are proposed within individual residential neighborhoods. An open space buffer zone averaging 100 feet in width is proposed along the Colorado River to provide a visual corridor and to allow access

to the river. A 10 foot wide landscaped buffer with walls or fences is proposed around the perimeter of the property. A community trail system is proposed to provide pedestrian and bicycle linkages between internal development and open space areas. The trails will also provide a linkage between Mayflower County Park and the commercial center. Areas designated for open space and recreational uses total 20.4 acres, including the three recreation centers, the lagoon, and the riverfront buffer zone.

2. Housing/Population

The housing program for Riverview Ranch is intended to provide a variety of housing types and price ranges to meet the expected demand for river-oriented residential and commercial development in the project area.

The project proposes 24 single-family units, 73 condominium units and 75 mobilehome or manufactured housing units. The peak population of the project is estimated to be 428 residents, assuming a full-time resident population.

However, due to the nature of the project, many second home buyers will occupy their units only a portion of the year or a portion of a week. The average occupancy of the project is estimated to result in a population of 294 residents, assuming that second home occupancy wil average 35% of peak occupancy.

3. Circulation

The purpose of the circulation system outlined in the Plan is to establish a general layout and design standards for roadways within the Riverview Ranch study area and to support the Circulation Element of the County of Riverside. The circulation system developed for this project will provide for the efficient movement of people and the natural features of the environment, while serving the needs of the proposed land uses and the Mayflower County Park. Necessary improvements will also be made on Sixth Avenue and Highway 95.

The residential land uses proposed for the Riverview Ranch property could generate approximately 1,650 trips per day. Proposed commercial land uses could generate approximately 3,000 trips per day. The circulation network proposed for the project will adequately service existing and project-generated traffic.

The main access road to be dedicated to the County will be constructed as a General Local Street, with a pavement width of 40 feet on a 60 foot right-of-way. A potential new entrance to Mayflower County Park will be available from the project access road. The internal access road will be constructed as a Restricted Local Street with a pavement width of 32 feet on a 50 foot right-of-way. Exhibit 6 presents the proposed Circulation Concept.

A community trail system is proposed to provide pedestrian and bicycle linkages between internal residential, commercial and recreation areas. In addition, pedestrian and bicycle access points to the commercial center will be provided from Mayflower Park, in coordination with the County Parks Department. The community trail system will enable project residents and Mayflower Park users to utilize alternative means of transportation, reducing internal vehicular trips.

4. Landscape and Design Concept

The landscape plan for the Riverview Ranch Specific Plan is defined primarily by the natural features of the property: the lagoon and the riverfront. The landscape concept strengthens the land use plan by establishing community identity and by preserving and integrating open space features with development. Exhibit 7 illustrates the proposed Landscape and Design Concept. As a design element, plant materials will be used to define space, provide boundaries along circulation corridors, act as screening, define entryways and provide unifying theme.

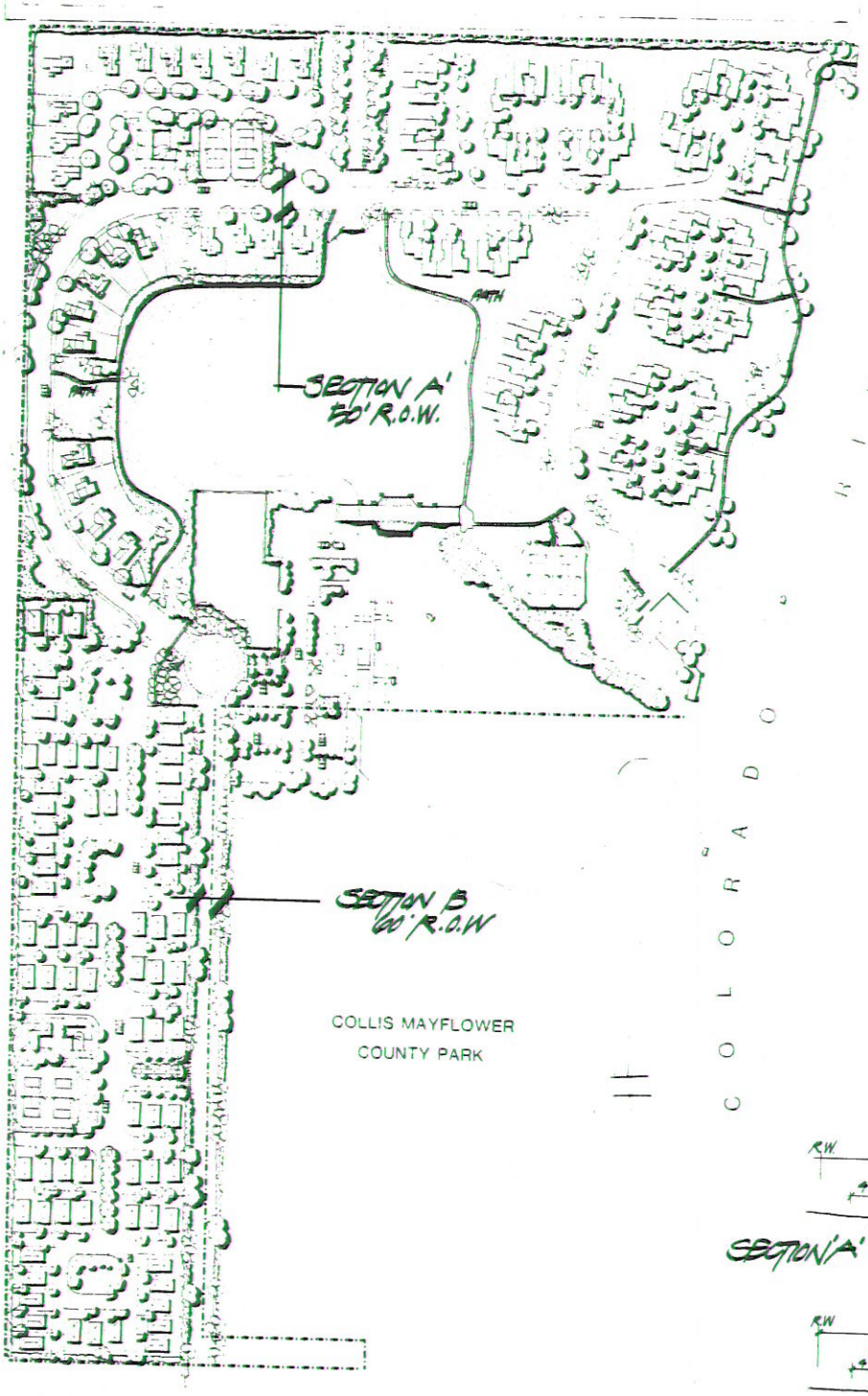
The landscape concept includes the following key elements:

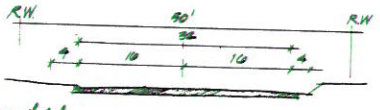
a. Use of native plant materials;

b. Use of drought-tolerant plant materials;

c. Buffer zones and visual screens;

d. Use of ornamental trees, shrubs and groundcover for accent and theme.





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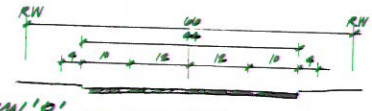

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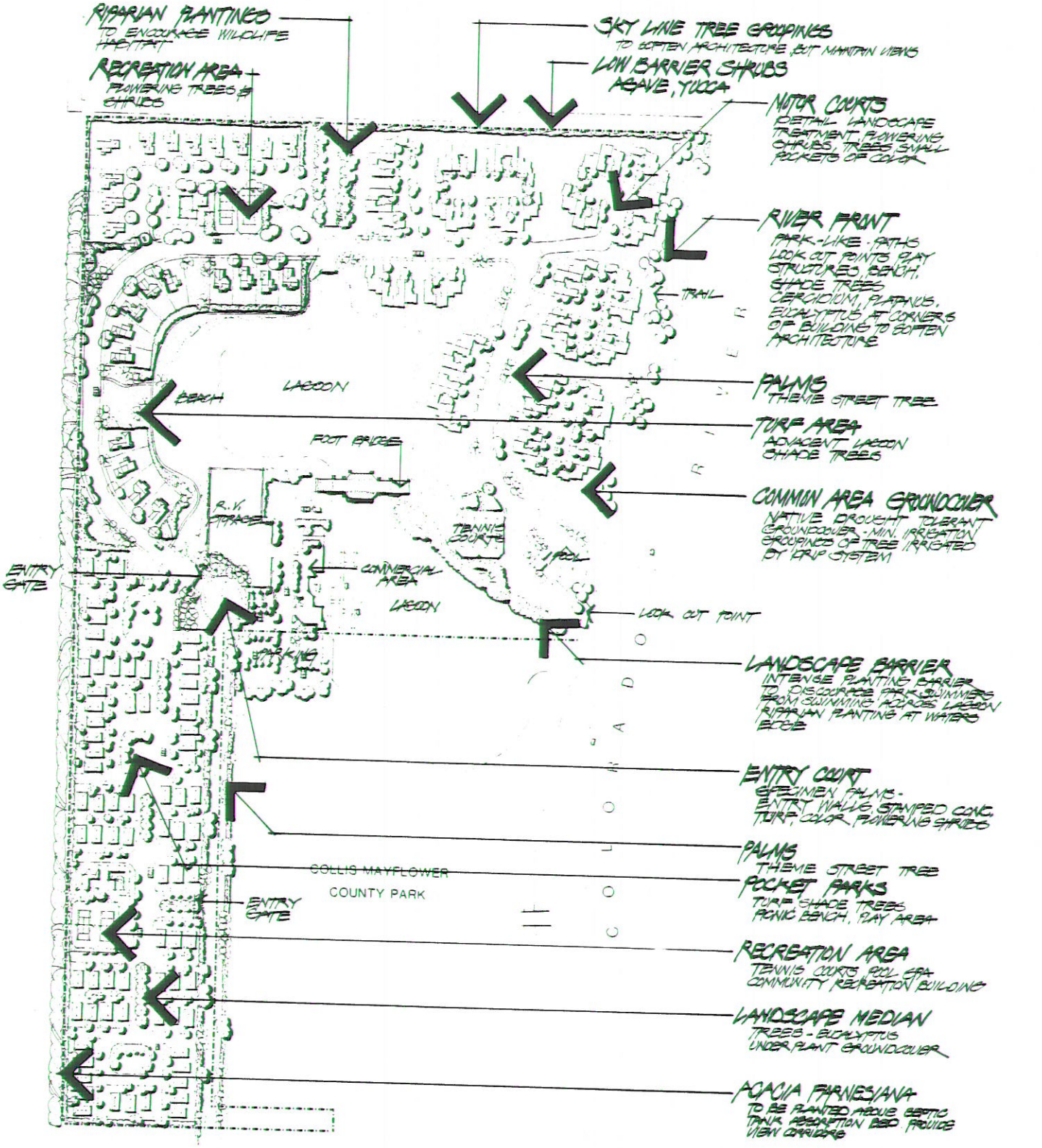
CIRCULATION PLAN
RIVERVIEW RANCH

THE PLANNING CENTER

EXHIBIT 6



LANDSCAPE CONCEPT
RIVERVIEW RANCH

THE PLANNING CENTER

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EXHIBIT 7

Buffer Zones:

The buffer zone averaging 100 feet in width along the Colorado River will include drought and traffic tolerant groundcover and native shade trees with a meandering path. Picnic areas and play areas for children could be included in the riverfront buffer zone.

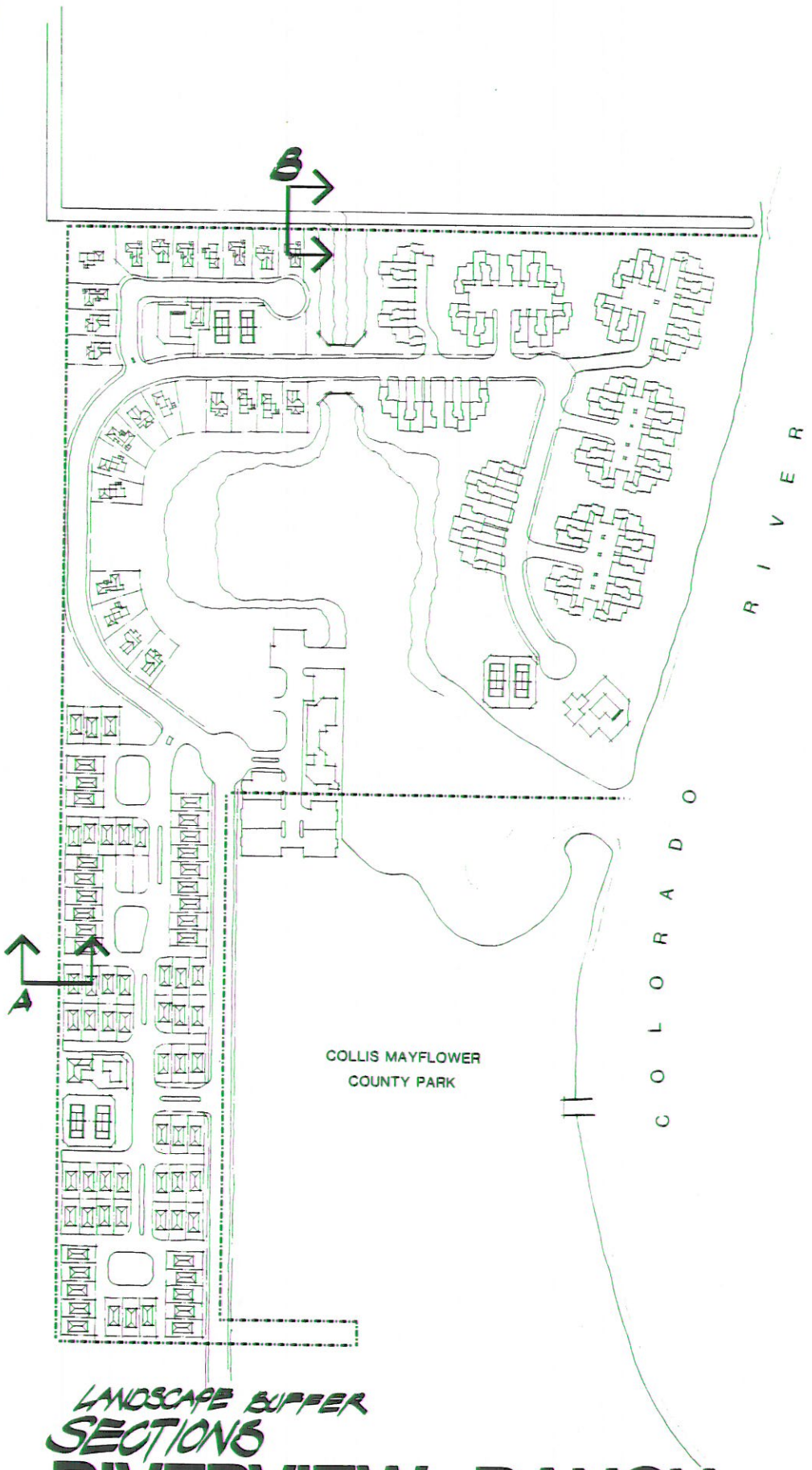
Buffer zones of trees and shrubs to provide visual and security screens, and to limit access will be located 1) adjacent to the access road and Mayflower County Park; 2) adjacent to the commercial center and the park; 3) between residential areas and adjacent agricultural uses and 4) along portions of the lagoon. Introduced windrows of screening trees would also function as dust and wind buffers from agricultural areas adjacent to the site. View windows will be taken into consideration in the placement and type of screening trees selected.

Exhibits 8 and 9 illustrate buffer zone cross-sections. A buffer zone 10 feet in width is proposed around the perimeter of the property. The 10 foot buffer zone will be permanently irrigated and landscaped with drought-tolerant plant materials, large shrubs and trees. The buffer zone is intended to protect the residential development from impacts of contiguous agricultural activities, such as blowing dust and the spraying of pesticides. Conversely, the buffer zone will assure that the project does not restrict existing farming activities. Homeowners will commonly own and maintain the landscaped buffer areas.

In addition to the 10 foot buffer zone on-site, other contiguous off-site easements, farm roads and irrigation canals will provide additional buffers between the project and adjacent agricultural land. A 16 foot wide septic easement off-site will extend along the western project boundary, in addition to the 10 foot buffer on-site. An irrigation canal and farm road border the northern site boundary, off-site, further increasing the distance between residential and agricultural land uses.

Lagoon/Inlet Channel:

The natural vegetative features within the lagoon area will be re-established and accentuated with



LANDSCAPE BUFFER
SECTIONS

RIVERVIEW RANCH

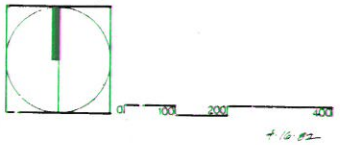
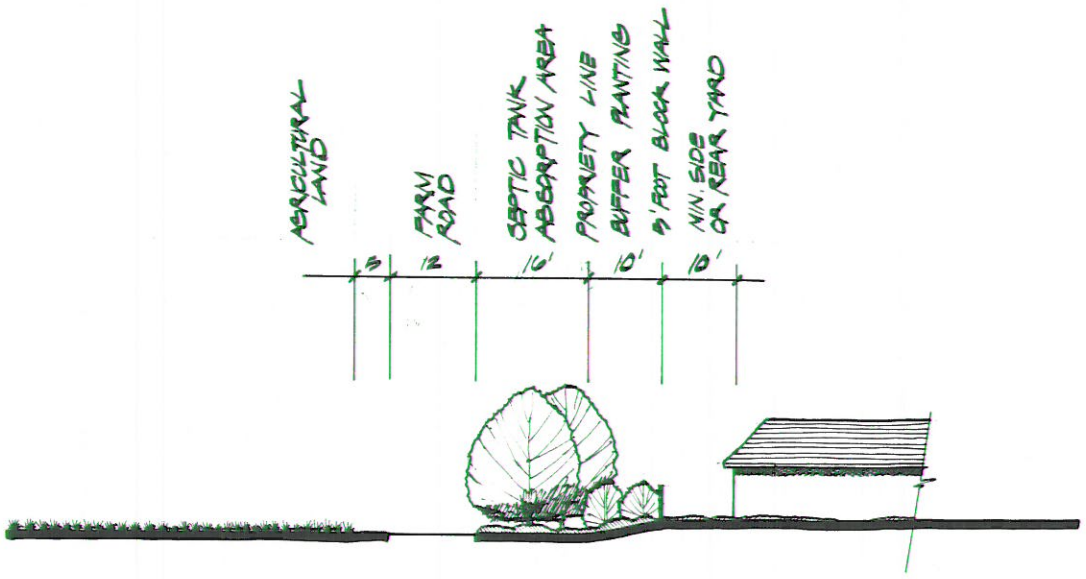
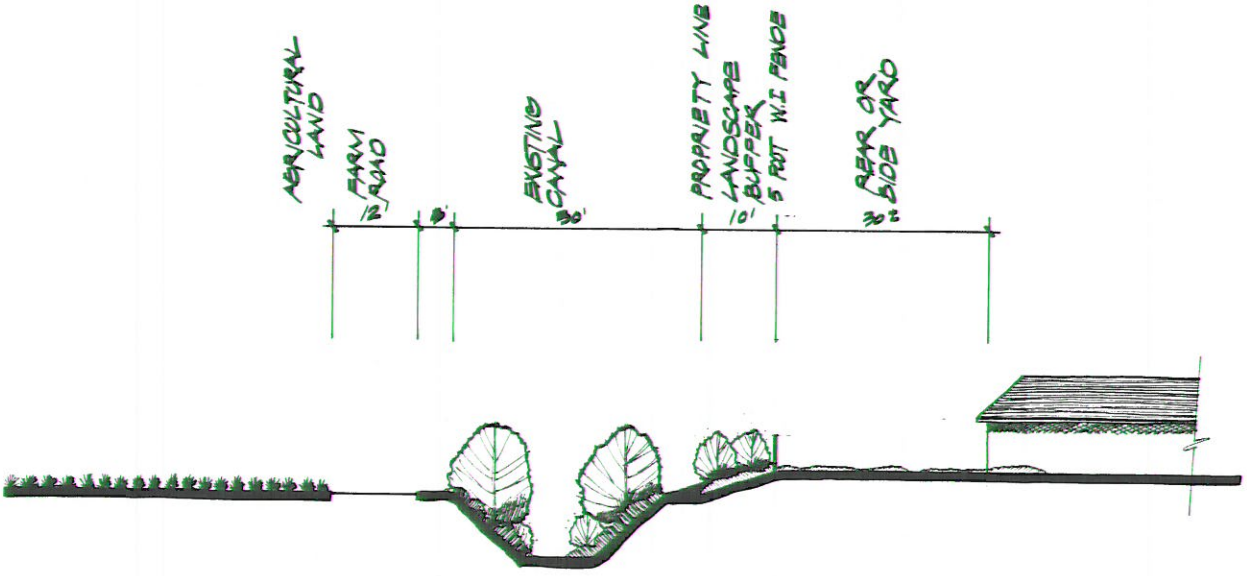


EXHIBIT 8



SECTION A-A'



SECTION B-B'

RIVERVIEW RANCH

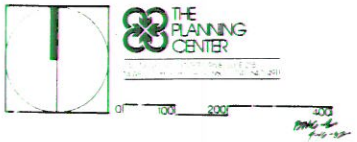


EXHIBIT 9

native riparian species. The upper lagoon recreation area will include a grass turf area, shade trees, path system, and sandy beach area for swimming and sun bathing. The inlet channel will be planted with riparian vegetation, trees and shrubs which will provide increased bird and wildlife habitat. The integration of the lagoon and inlet channel with the river will unify and enhance the landscape and design elements of the project.

Major Entry Points and Streetscape:

The major entries to the project, located adjacent to the commercial center and at the entrance to the mobilehome development, will be extensively landscaped with ornamental accent trees, flowering shrubs and groundcover to emphasize project identity. Theme trees, such as palms, will be planted along the access road and at entry points. Isolated pockets of highly visible manicured landscape materials will be located along the internal access road.

Mobilehome/Manufactured Housing Development Area:

In addition to perimeter landscape buffers, islands of ornamental landscaping, turf, shade trees and picnic areas are interspersed throughout the development. Due to the design, these landscaped areas will be visible from the majority of the units.

Single-Family Development Area:

Landscaping within the single-family lots will be provided at the discretion of individual property owners. Street treatment and open space buffers will integrate theme trees and ornamental shrubs.

Condominium Development Area:

Courtyards within building clusters will present a manicured, lush appearance including ornamental shrubs, groundcover and trees. Open space areas between building clusters will include native drought tolerant groundcover interspersed with trees.

Recreation Centers:

Recreation centers will be extensively landscaped with ornamental trees, shrubs and groundcover.

Commercial Area:

Ornamental trees and shrubs will surround the buildings. The perimeter landscaped buffer of large trees and shrubs will also be extended to screen the recreation-vehicle storage area. A mutual agreement has been made between the applicant and the County Parks Department for development and joint use of one acre within Mayflower County Park as a paved parking area. Parking lot plantings will be provided to break up the visual expanse of the asphalt.

5. Recreation and Open Space Concept

The recreation and open space concept is oriented toward the lagoon and the Colorado River. The lagoon will provide open space linkages between various development areas of the plan while serving as a buffer between various land use areas. Creation of the lagoon will provide recreation opportunities for boating and swimming. Joint maintenance of the lagoon will be provided by the Homeowner's Association and the County Parks Department. A 100 foot wide open space buffer along the riverfront will provide a visual corridor and access to the river consistent with the Colorado River Recreation way. A major aspect of the recreation/open space concept is the integration of the lagoon and related commercial recreational uses with the Mayflower County Park.

In addition, recreation amenities will be provided within individual residential areas, including three recreation centers with pools and tennis courts. Homeowners will commonly own all recreation and open space areas.

The plan designates a total of 20.4 acres for open space/recreation uses including the lagoon, riverfront buffer zone, and the three recreation centers.

A community trail system is proposed to provide pedestrian and bicycle linkages connecting the internal residential areas, commercial center, recreation centers, lagoon and riverfront. The trail system will also provide a pedestrian and bicycle linkage between the commercial center and the adjacent Mayflower County Park.

6. Grading Concept

The grading concept responds to the physical character of the site, the location and type of proposed land uses, drainage, flood protection, and creation of the lagoon. Exhibit 10 presents the Grading Concept.

Proposed lagoon excavation would generate sufficient fill material to raise all proposed residential building pads above the high floodplain elevation of 281.5 The street system is proposed to carry the majority of runoff from raised building pads. Street grades will vary from .4% - 1.0% minimizing excessive elevation change across the site. Drainage from each sub-catchment area will be directed to low-point catch basins located within the street right-of-way and discharged into the lagoon through underground storm drains.

Excavation and construction of the lagoon will comply with Riverside County regulations to minimize siltation impacts.

7. Public Facilities

The public facilities systems for Riverview Ranch are intended to provide the necessary systems to serve the maximum level of development proposed by the plan. These systems are being designed into the plan at the outset to ensure that design elements of the plan allow for provision of these infrastructure facilities along with phased development within the plan.

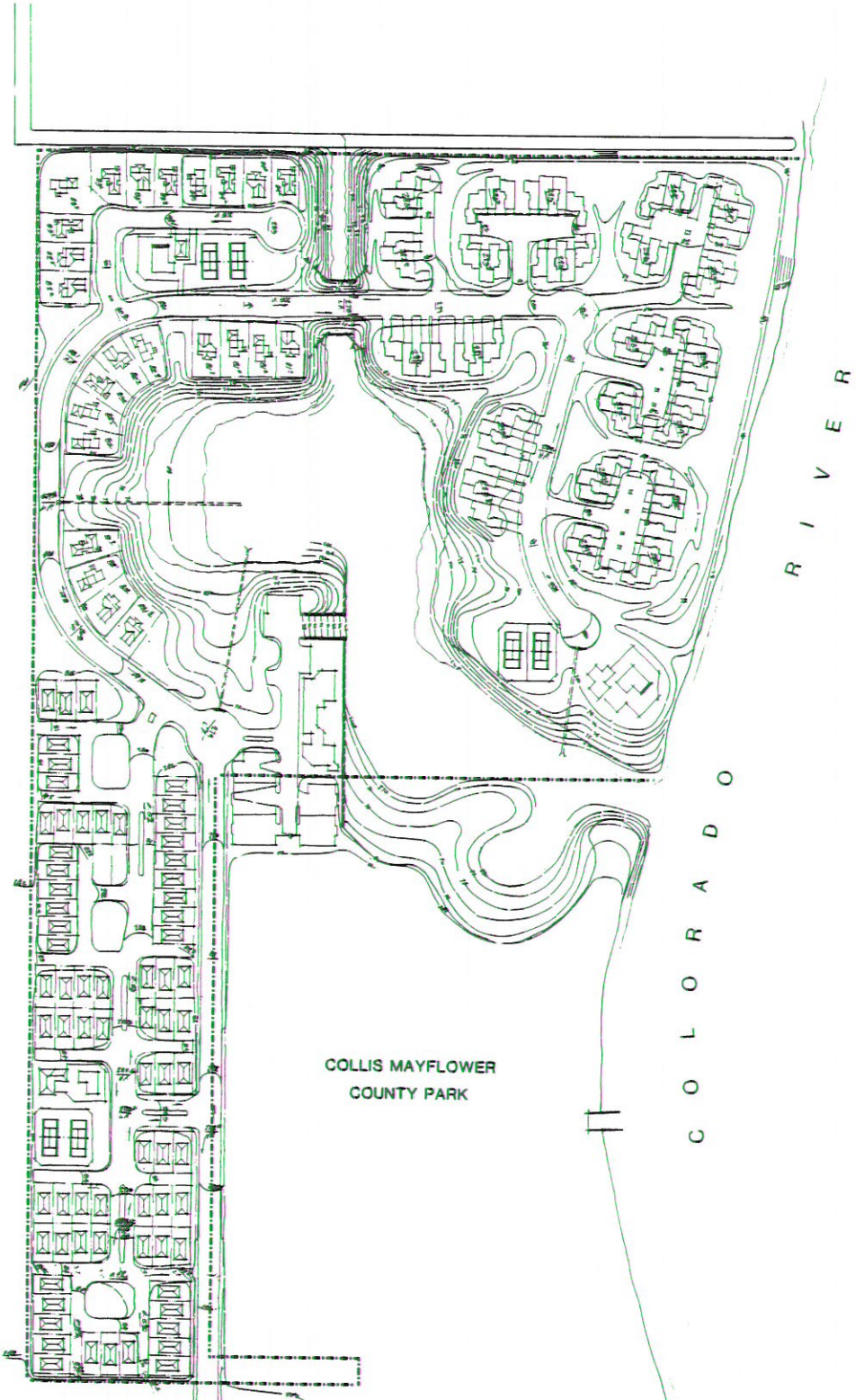
Water

An on-site well water distribution system is proposed to adequately satisfy the water requirements for residential, commercial, recreational, irrigation, and fire-fighting purposes. The major elements of the system are storage facilities, pipe systems, and pumping stations.

One of the objectives of the Specific Plan is to incorporate water conservation techniques in the planning and development design requirements.

Wastewater

The project will utilize a community subsurface sewage system to treat wastewater generated within the Specific Plan area. A community leach field



CONCEPTUAL GRADING PLAN
RIVERVIEW RANCH

THE PLANNING CENTER

EXHIBIT 10

is proposed off-site adjacent to the western site boundary within a 16 foot wide easement. The absorption bed will be designed to handle 67,000 gallons a day with a 200 percent backup capacity. The "Percolation Testing Feasibility Report", prepared by Buena Engineers, Inc., February 11, 1982, is included as Attachment D of this document. According to the engineer, leach lines should be acceptable on this property using an absorption rate of 20 $feet^2$/100 gallons of septic tank capacity. The groundwater table should not encroach within the current allowable limit set forth by County and State requirements, when the recommendations of the engineer are followed.

The sewage disposal system will comply with the requirements of the East Blythe Water District, the County Health Department and the Regional Water Quality Control Board. Pursuant to Regional Water Quality Control Board regulations, no subsurface sewage disposal system will be placed within 200 feet laterally of the regulated high water line of the Colorado River or any other water surface used for water contact sports. Exhibit 11 depicts the septic tank absorption area.

8. Environmental Safety and Quality

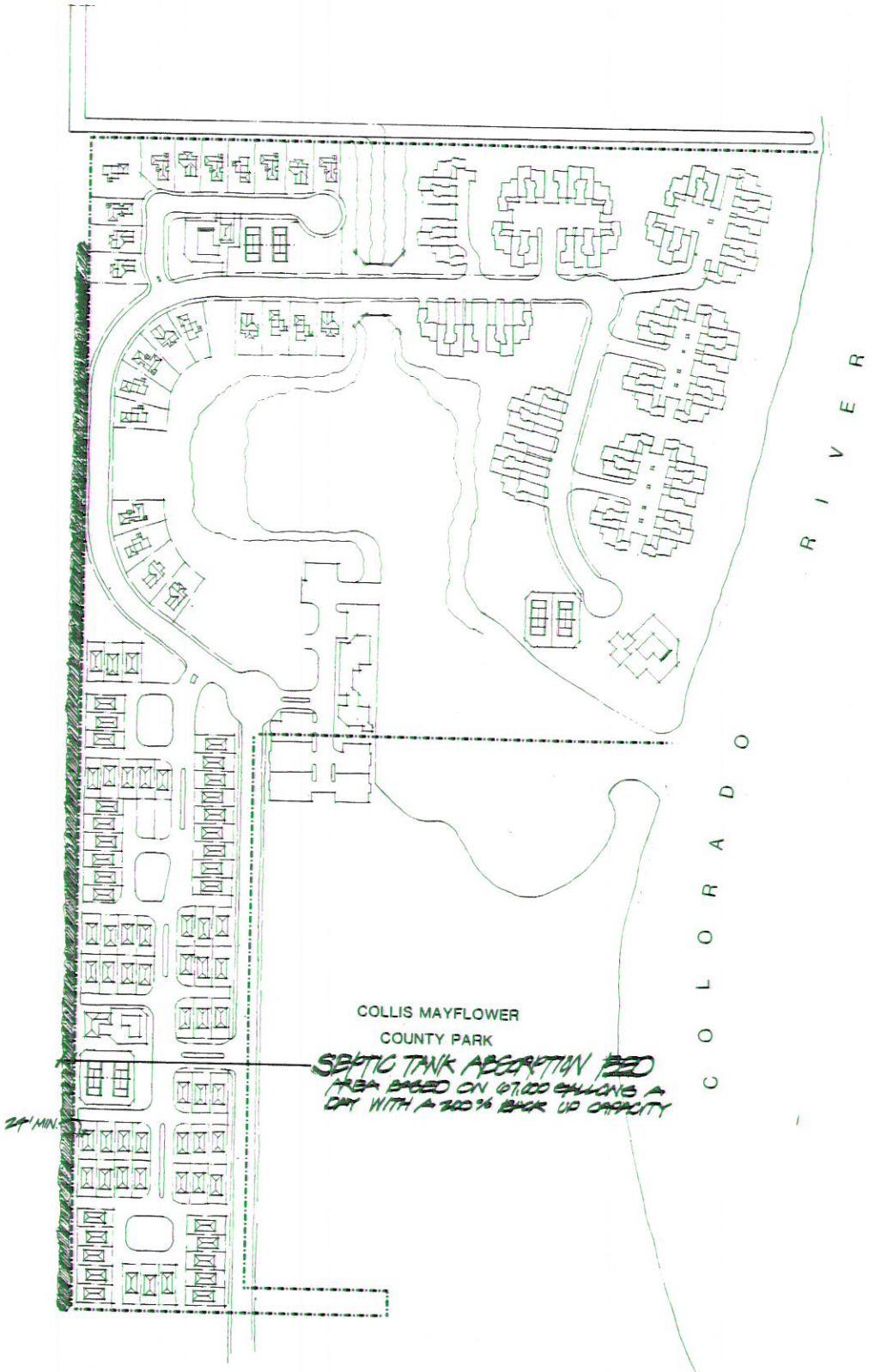
Features of this element of the Specific Plan are those concerning the public safety and welfare, and the protection of personal lives and property. The safety issues relevant to the site include: flooding hazards, fire protection, and police protection.

Flooding

All building pads will be constructed at or above elevation 280.5 feet which would locate the first floor of any residence a minimum of 18 inches above the high water level of 279.0 feet during a 100-year storm.

Fire Protection

An on-site water system adequate for fire-fighting purposes will be provided based upon the recommendations of the Division of Forestry.



SEPTIC TANK ABSORPTION AREA
RIVERVIEW RANCH

THE PLANNING CENTER

EXHIBIT 11

Police Protection

The project design incorporates a separation and wall between the mobilehome development and adjacent Mayflower Park to minimize security problems and conflicts. On-site security will be provided through a combination of walls and view fences, card gates and home security alarm systems. The private residential areas will be gated for security. Exhibit 12 presents the proposed Fencing Plan. The Specific Plan provides for gated road access to the development to restrict public access to the residential housing areas, while allowing public access to the commercial center.

D. Phasing Plan

An overall ten-year development program is proposed for Riverview Ranch, based upon market demand. Three sequential development phases are proposed, possibly overlapping as warranted by market conditions. Exhibit 13 presents the proposed Phasing Plan as summarized in Table 2.

Phase I will involve development of the main access road, lagoon, project infrastructure, a portion of the commercial center, the riverfront recreation center, and portions of each residential housing type.

Phase II will involve development of the remaining portions of the single-family development, including the recreation center, a portion of the condominium development, and the remaining portion of the mobilehome/ manufactured housing development and its recreation center.

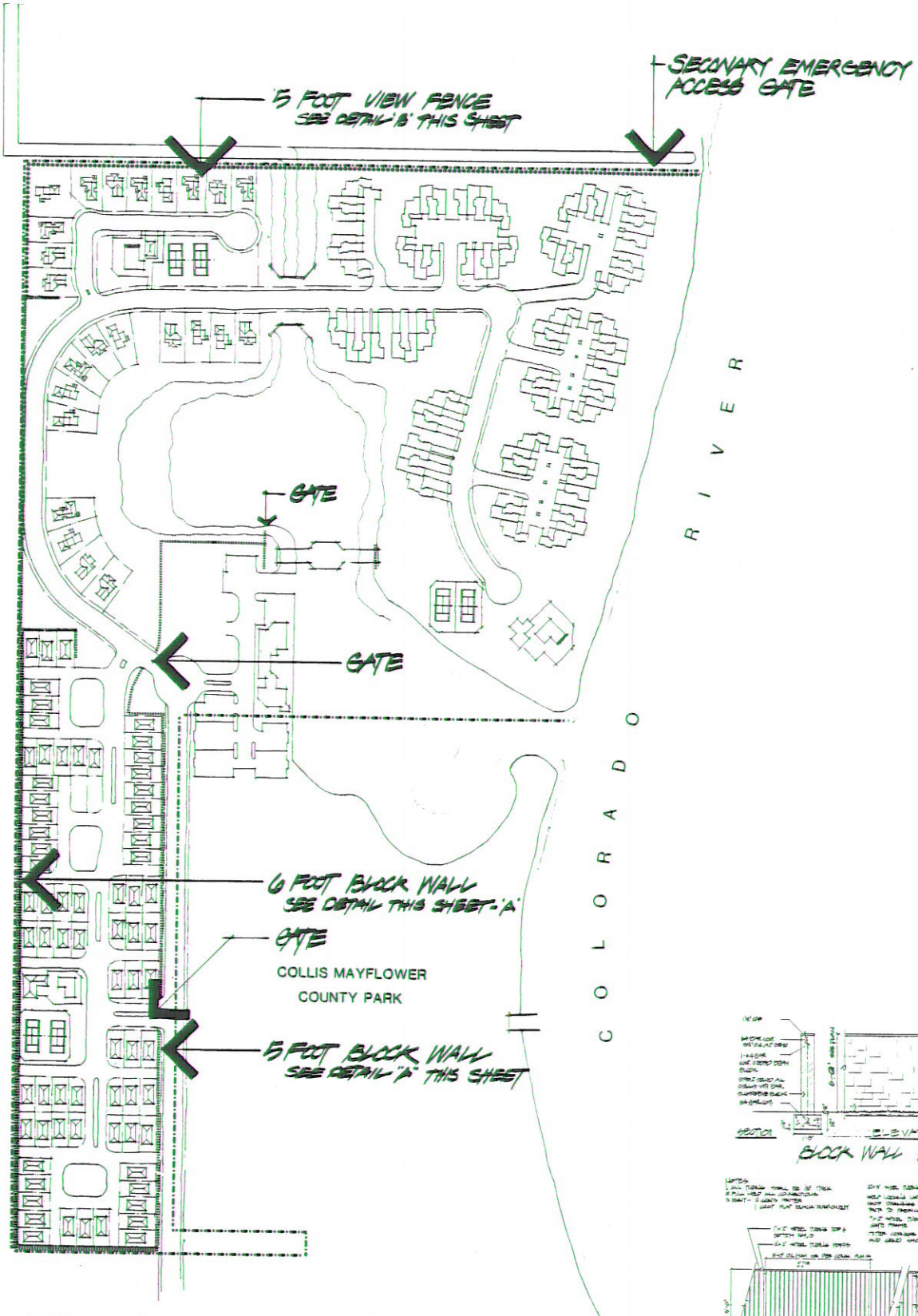
Phase III will involve final buildout of the remaining commercial and condominium developments. The project is expected to be completed by 1993.

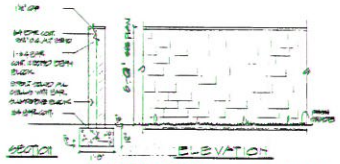
TABLE 2

Phasing Plan

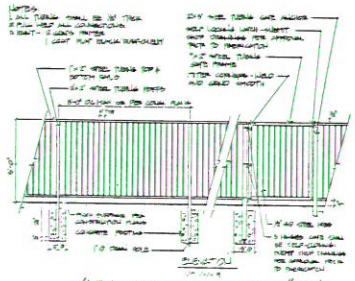
Phase I

Main Access Road Infrastructure Lagoon Commercial	2.5 acres
Mobilehomes/Manufactured Housing	42 D.U.
Single-Family Units	4 D.U.
Condominiums/Riverfront Recreation Center	14 D.U.
Total D.U. Phase I	60 D.U.





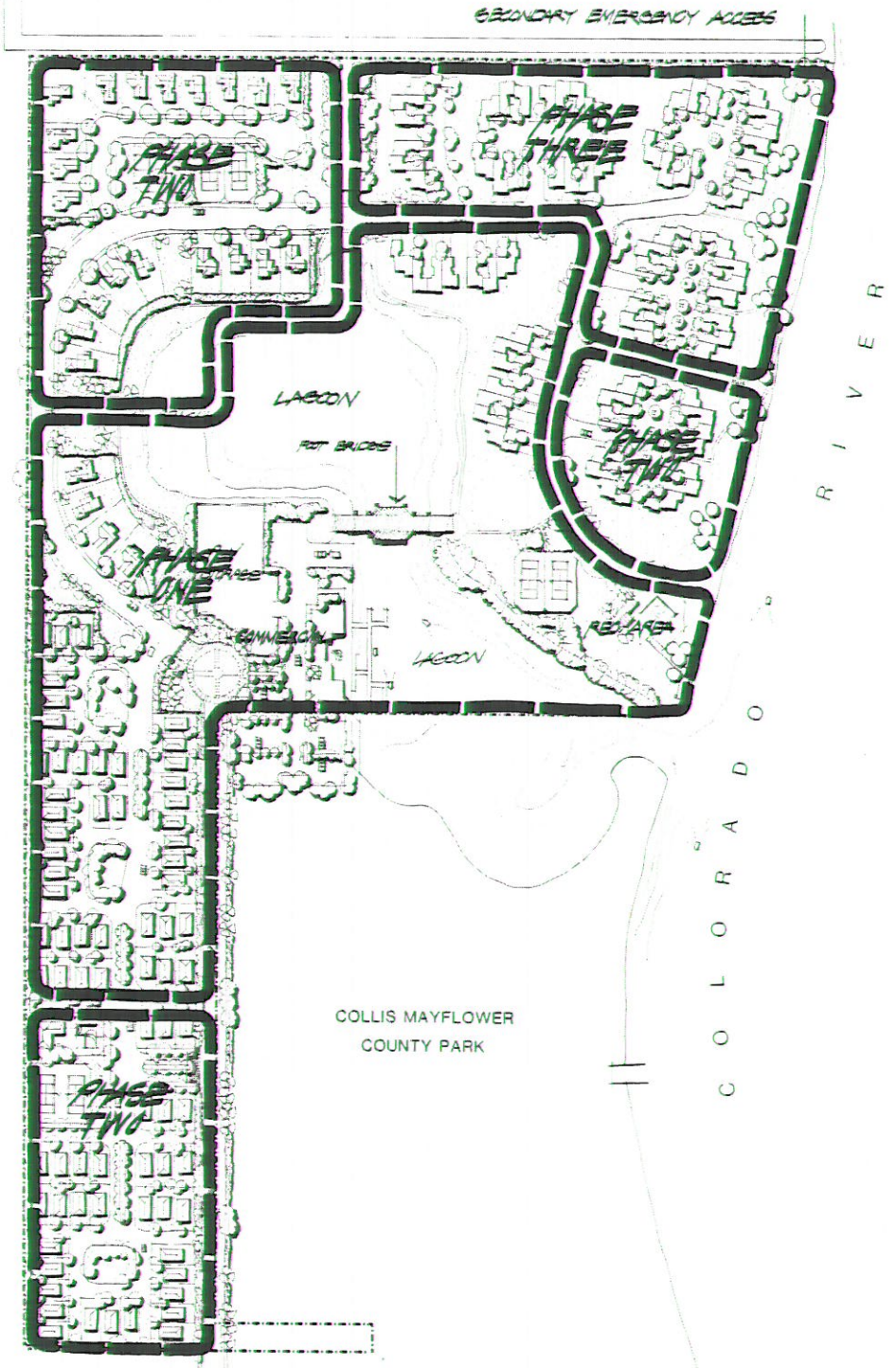
BLOCK WALL DETAIL A



VIEW FENCE DETAIL "B"

FENCING PLAN
RIVERVIEW RANCH

EXHIBIT 12



PHASING PLAN
RIVERVIEW RANCH

THE PLANNING CENTER

EXHIBIT 13

Phase II

Single-Family Units/Recreation Center	20 D.U.
Condominiums	13 D.U.
Mobilehomes/Manufactured Housing/ Recreation Center	33 D.U.
Total D.U. Phase II	66 D.U.

Phase III

Commercial	1.0 acres
Condominiums	46 D.U.
Total D.U. Phase III	46 D.U.
Total D.U. Project Completion (1993)	172 D.U.

SECTION V - SPECIFIC PLAN IMPLEMENTATION

Although the Riverview Ranch development will be implemented through a variety of approval steps, i.e., zoning, Subdivision Maps, Development Plans and Plot Plans, etc., the primary implementation tool is the Specific Plan itself which establishes the character of development through the definition of design concepts, plan features and development standards. These concept features and standards provide the framework upon which all subsequent implementing planning decisions are based. As such, the subsequent approval steps outlined above become somewhat perfunctory in the sense that they are based on concept and standards already established in the Specific Plan.

A. General Provisions and Conditions

1. The Riverview Ranch Specific Plan shall consist of a Specific Plan text and accompanying graphic Exhibits, and an Implementation section which contains information relative to Zoning, Development Standards, and a Development Monitoring System.

2. The development of the property shall be in accordance with the mandatory requirements of all Riverside County Ordinances and State laws and shall conform substantially with the approved Specific Plan as filed in the office of the Riverside County Planning Department, unless otherwise amended.

3. If any of the following conditions of approval differ from the commitment made by the Developer in the Specific Plan text or map exhibits, the conditions enumerated herein shall take precedence.

4. No portion of the Specific Plan which purports or proposes to change, waive or modify any ordinance or other legal requirement for the development or to set special time commitments for the development, shall be considered to be a part of the adopted Specific Plan.

5. Additional environmental requirements shall be met as determined by the County at such a time as precise planning is initiated.

6. All changes and/or modifications to the Specific Plan determined by the Planning Director to be significant shall be subject to the approval of a specific plan amendment.

7. Water and sewage disposal facilities shall be installed in accordance with the requirements and specifications of the Riverside County Health Department.

8. Drainage and flood control facilities and improvements shall be provided in accordance with the Riverside County's Flood Control and Water Conservation District requirements.

9. A Master Property Owners Association or other acceptable entity shall be established by the developer encompassing all privately owned portions of the Specific Plan under the developer's control for the ownership, maintenance and management of the open space and recreation areas shown in Exhibit "5", major project entry point facilities, and other responsibilities as defined through the Specific Plan conditions of approval.

10. Prior to recordation of any final subdivision map in the case of the Master Property Owners Association, (or similar entity) or the final subdivision map for a phase of development requiring an individual Homeowners Association, the applicant shall submit documents which shall demonstrate to the satisfaction of the County that the Master Property Owners Association and/or Homeowner's Association will be established and will operate in accordance with the intent and purpose of the Specific Plan, including:

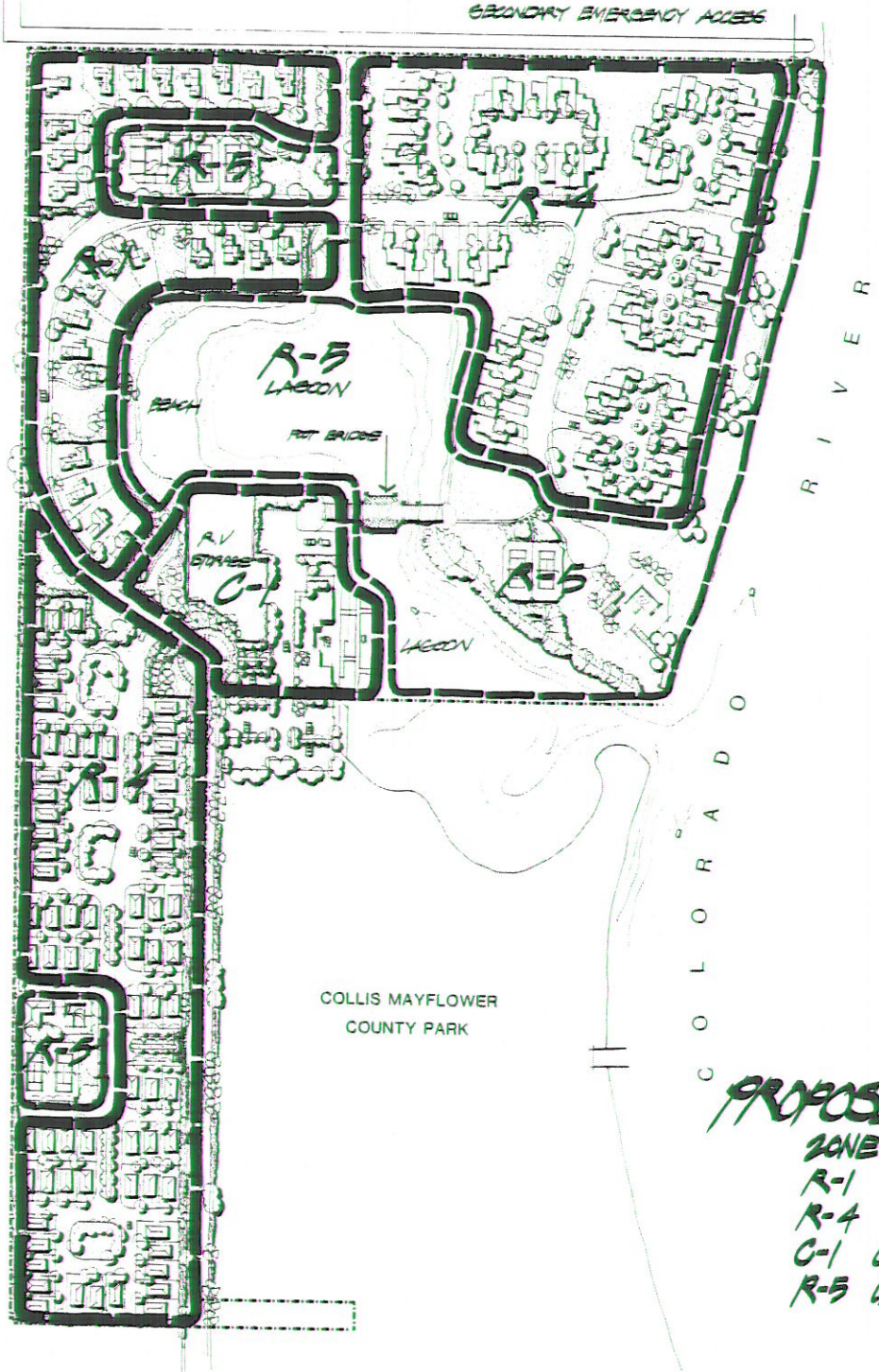
    a. The document to convey title,

    b. Covenants, Conditions, and Restrictions to be recorded.

11. Final mitigation measures recommended by the biological consultant shall be incorporated into project design.

12. Mitigation measures for energy conservation contained in Final EIR No. 145, included as Attachment G of this document, shall be incorporated into project design.

13. Fire protection facilities and improvements shall be provided in accordance with the requirements set forth by the California Division of Forestry.



PROPOSED ZONING

ZONE		AC.	UNITS
R-1		8.2	24
R-4		23.9	148
C-1	COMMERCIAL	3.5	
R-5	OPEN SPACE	20.4	
TOTALS		61.0	172

ZONING MAP
RIVERVIEW RANCH

THE PLANNING CENTER

0 100 200 400

4/16/82

EXHIBIT 14

a. Single-Family Detached Units (R-1)

Permitted Uses:

Introduction

The land designated for single-family detached residential uses (8.2 acres) on the Land Use Development Plan (Exhibit 5) shall be reserved for single-family detached units. The development standards for single-family development are set forth herein. A plot plan shall be prepared for all single-family residential development and submitted to the Planning Commission for approval.

(a) The following uses shall be permitted:

(1) One-family dwellings, not including mobilehomes. Accessory buildings, including a guest dwelling, provided there is a main building on the lot.

(2) Public parks and public playgrounds, golf courses with standard length fairways, and country clubs.

(3) Home occupations.

(4) Non-Profit Community Recreation Centers.

(b) The following uses are permitted provided a plot plan has been approved pursuant to the provisions of Section 18.30 of the Riverside County Ordinance No. 348:

(1) Beauty shops operated from a home by its inhabitants where no assistants are employed and the on-site sign is unlighted and does not exceed two square feet in area.

(2) Temporary real estate tract offices located within a subdivision, to be used only for and during the original sale of the subdivision, but not to exceed a period of 2 years in any event.

Development Standards

(a) Building height shall not exceed 2-1/2 stories, with a maximum height of 35 feet.

(b) Lot area shall be not less than 7200 square feet. The minimum lot area shall be determined by excluding that portion of a lot that is used solely for access to the portion of a lot used as a building site.

(c) The minimum average width of that portion of a lot to be used as a building site shall be 60 feet with a minimum average depth of 100 feet. That portion of a lot used for access on "flag" lots shall have a minimum width of 20 feet.

(d) The minimum frontage of a lot shall be 60 feet, except that lots fronting on knuckles or cul-de-sacs may have a minimum frontage of 35 feet.

(e) Minimum yard requirements are as follows:

(1) The front yard shall be not less than 20 feet, measured from the existing street line or from any future street line as shown on any Specific Plan of Highways, whichever is nearer the proposed structure.

(2) Side yards on interior and through lots shall be not less than 10 percent of the width of the lot, but not less than 3 feet in width in any event, and need not exceed a width of 5 feet. Side yards on corner and reversed corner lots shall be not less than 10 feet from the existing street line or from any future street line as shown on any Master Plan of Highways, whichever is nearer the proposed structure, upon which the main building sides, except that where the lot is less than 50 feet wide the yard need not exceed 20 percent of the width of the lot.

(3) The rear yard shall not be less than 10 feet.

b. Planned Residential Units (R-4)

Introduction

The land designated for Planned Residential uses (28.9 acres) on the Land Use Development Plan (Exhibit 5) shall be reserved for condominium, mobile home and manufactured housing. The development standards for planned residential development are set forth herein. A subdivision map shall be recorded for all planned residential development and a development plan must be submitted to the Planning Commission for approval.

Permitted Uses:

(a) One-family dwellings, and accessory uses or buildings normally incidental thereto.

(b) Multiple-family dwellings subject to the provisions of Section 8.96 of Riverside County Ordinance No. 348.

(c) Mobilehomes.

(d) Manufactured Housing.

(e) Non-profit Community Centers, social halls, churches, parks, and community recreation facilities, including but not limited to swimming pools, and golf courses and the normal accessory uses thereto.

(f) Community service areas and medical facilities designed primarily for the use of the residents of the subdivision.

(g) On-site signs, affixed to building walls, stating the name of the structure, use, or institution, not to exceed 5 percent of the surface area of the exterior face of the wall upon which the sign is located.

Development Standards:

(a) The minimum over-all area for each dwelling unit, exclusive of the area used for commercial purposes and area set aside for street rights of way, but including recreation and service areas, shall be 6000 square feet.

(b) The minimum lot area for the individual lots used as a residential building site shall be 3500 square feet. The minimum width of each lot shall be 40 feet and the minimum depth shall be 80 feet.

(c) One-family residences shall not exceed 35 feet in height. All other buildings and structures shall not exceed 50 feet in height, unless a height up to 75 feet is specifically permitted under the provisions of Section 18.34 of the Riverside County Ordinance No. 348.

(d) The minimum front and rear yards shall be 100 feet for buildings that do not exceed 35 feet in height. Any portion of a building which exceeds 35 feet in height shall be set back from the front and rear lot lines not less than 10 feet plus 2 feet for each foot by which the height exceeds 35 feet. The front setback shall be measured from any existing or future street line as shown on any specific street plan of the County. The rear setback shall be measured from the existing rear lot line or from any recorded alley or easement; if the rear line adjoins a street, the rear setback requirement shall be the same as required for a front setback.

(e) The minimum side yard shall be 5 feet for buildings that do not exceed 35 feet in height. Any portion of a building which exceeds 35 feet in height shall be set back from each side lot line 5 feet plus 2 feet for each foot by which the height exceeds 35 feet; if the side yard adjoins a street, the side setback requirement shall be the same as required for a front setback. Side yard areas may be reduced if the dwelling units are arranged so that the party wall is on the lot line.

(f) Off-street parking shall be provided as set forth in Section 18.12 of the Riverside County Ordinance No. 348.

(g) Individual sewage disposal systems shall not be permitted on lots containing an area of less than 6000 square feet until

a report has been received by the Commission from the Health Department of the County of Riverside stating that such a system will be acceptable.

(h) The recreation areas shall be of a size, based on the particular use, adequate to meet the needs of the anticipated population, and shall be arranged so as to be readily accessible to the residents of the subdivision.

(i) Adequate and permanent access from a public street to each family dwelling shall be provided for pedestrians and emergency vehicles.

2. Open Area Combining Zone Development Standards (R-5)

Introduction

The open area land (20.4 acres) designated on the Land Use Development Plan (Exhibit 5) shall be reserved for open space uses including the lagoon, riverfront buffer, neighborhood recreation centers, to be held in common ownership by the homeowners. The development standards for these open space, recreational areas and facilities are set forth herein. A plot plan shall be prepared for all Open Area Combining Zone development and submitted to the Planning Commission for approval.

Permitted Uses:

(a) Golf courses and appurtenant facilities, including clubhouse. A clubhouse is permitted to have customary retail shop and restaurant facilities.

(b) Noncommercial community association recreation and assembly buildings and facilities.

(c) Lakes, including noncommercial fishing therefrom.

(d) Picnic grounds.

(e) Parking lots, only for above-listed permitted uses pursuant to the provisions of Section 18.12 of the Riverside County Ordinance No. 348, except that not less than five percent of the interior or such parking lots shall

have distributed landscaping in addition to the landscaping requirements of Section 18.12 of the Riverside County Ordinance No. 348.

(f) Water wells and appurtenant facilities.

(g) On-site identification signs, maximum size - 10 square feet.

Development Standards:

(a) Lot area. This zone is to be applied to those areas within subdivisions and other residential developments that provide open space and recreational area and facilities for the project. Therefore, no minimum lot size is established for the zone.

(b) Yards. Whenever a building is to be constructed on a lot in this zone, it shall have a front yard, side yard and rear yard, each of which shall be not less than 50 feet. If more than one building is constructed on one lot, there shall be not less than 20 feet separation between the buildings.

(c) Trash areas. All trash collection areas shall be enclosed with a solid fence or wall not less than six feet high.

(d) Automobile storage space shall be provided as required by Section 18.12 of the Riverside County Ordinance No. 348.

(e) All buildings and structures shall not exceed 50 feet in height, unless a height up to 75 feet is specifically permitted under the provisions of Section 18.34 of the Riverside County Ordinance No. 348.

3. Commercial Development Standards (C-1)

Introduction

The commercial land (3.5 acres) designated on the Land Use Development Plan (Exhibit 5) shall be reserved for general commercial uses intended to serve the needs of project residents and the general public. The development standards for commercial development are set forth herein. A plot plan shall be prepared for all commercial development and submitted to the Planning Commission for approval.

Permitted Uses:

(a) Any uses permitted in the C-1 Zone, Section 9.1 of Riverside County Ordinance No. 348.

Site Development Requirements:

(a) Provide that the architectural and general appearance of all buildings and grounds shall be in keeping with good architectural and landscaping practice and such as not to be detrimental to the general welfare of the community in which the development is located.

Development Standards:

(a) There is no minimum lot area requirement, unless specifically required in a particular area.

(b) There are no yard requirements for buildings which do not exceed 35 feet in height. Any portion of a building which exceeds 35 feet in height shall be set back from the front, rear and side lot lines not less than 2 feet for each foot by which the height exceeds 35 feet. The front setback shall be measured from any existing or future street line as shown on any specific street plan of the County. The rear setback shall be measured from the existing rear lot line or from any recorded alley or easement; if the rear line adjoins a street, the rear setback requirement shall be the same as required for a front setback. Each side setback shall be measured from the side lot line or from any existing or future street line within the lot as shown on any specific street plan of the County.

(c) All buildings and structures shall not exceed 50 feet in height, unless a height up to 75 feet is specifically permitted under the provisions of Section 18.34 of Riverside County Ordinance No. 348.

(d) Automobile storage space shall be provided as required by Article XVIII of Riverside County Ordinance No. 348.

D. PROJECT MONITORING PROGRAM

The purpose of this monitoring program is to set forth a system whereby periodic adjustments in density and dwelling unit types within the project planning areas may be accomplished. Market changes may dictate revisions such as these which result in minor modifications to the overall Plan. In order to accommodate adopted County Ordinance, the following provisions shall guide and govern incremental allocation and provision of residential dwellings units within the Riverview Ranch Specific Plan Study area.

1. The overall assigned density of 172 residential dwelling units on 57.5 acres, including 20.4 acres of Open Space/Recreation area combined with the residential, shall not be exceeded.

2. Tentative Tract Map(s) shall be submitted to the County for review and approval simultaneous with or subsequent to the submittal of plot plans or development plans for review and approval as appropriate prior to development occurring in any planning unit. Such plans shall be subject to the conditions of approval set forth by the County of Riverside.

ATTACHMENT A

ATTACHMENT A

reported upon by the planning agency as to conformity with said adopted general plan or part thereof. The planning agency shall render its report as to conformity with said adopted general plan or part thereof within forty (40) days after the matter was submitted to it, or such longer period of time as may be designated by the legislative body.

If the legislative body so provides, by ordinance or resolution, the provisions of this subdivision shall not apply to: (1) the disposition of the remainder of a larger parcel which was acquired and used in part for street purposes; (2) acquisitions, dispositions, or abandonments for street widening; or (3) alignment projects, provided such dispositions for street purposes, acquisitions, dispositions, or abandonments for street widening, or alignment projects are of a minor nature.

(b) A county shall not acquire real property for any of the purposes specified in paragraph (a), nor dispose of any real property, nor construct or authorize a public building or structure, in another county or within the corporate limits of a city, if such city or other county has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, and a city shall not acquire real property for any of the purposes specified in paragraph (a), nor dispose of any real property, nor construct or authorize a public building or structure, in another city or in unincorporated territory, if such other city or the county in which such unincorporated territory is situated has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, until the location, purpose and extent of such acquisition, disposition, or such public building or structure have been submitted to and reported upon by the planning agency having jurisdiction, as to conformity with said adopted general plan or part thereof. Failure of the planning agency to report within forty (40) days after the matter has been submitted to it shall be conclusively deemed a finding that the proposed acquisition, disposition, or public building or structure is in conformity with said adopted general plan or part thereof. The provisions of this paragraph (b) shall not apply to acquisition or abandonment for street widening or alignment projects of a minor nature if the legislative body having the real property within its boundaries so provides by ordinance or resolution.

(c) A local agency shall not acquire real property for any of the purposes specified in paragraph (a) nor dispose of any real property, nor construct or authorize a public building or structure, in any county or city, if such county or city has adopted a general plan or part thereof and such general plan or part thereof is applicable thereto, until the location, purpose and extent of such acquisition, disposition, or such public building or structure have been submitted to and reported upon by the planning agency having jurisdiction, as to conformity with said adopted general plan or part thereof. Failure of the planning agency to report within forty (40) days after the matter has been submitted to it shall be conclusively deemed a finding that the proposed acquisition, disposition, or public building or structure is in conformity with said adopted general plan or part thereof. If the planning agency disapproves the location, purpose or extent of such acquisition, disposition, or the public building or structure, the disapproval may be overruled by the local agency.

Local agency as used in this paragraph (c) means an agency of the state for the local performance of governmental or proprietary functions within limited boundaries. Local agency does not include the state, or county, or a city.

(Amended by Stats. 1974, Ch. 700.)

Article 8. Authority For and Scope of Specific Plans

65450. The planning agency may, or if so directed by the legislative body shall, prepare specific plans based on the general plan and drafts of such regulations, programs, and legislation as may in its judgment be required for the systematic

execution of the general plan and the planning agency may recommend such plans and measures to the legislative body for adoption.
(Added by Stats. 1965, Ch. 1880.)

65450.1. A specific plan need not apply to the entire area covered by the general plan. The legislative body or the planning agency may designate areas within a city or a county for which the development of a specific plan will be necessary or convenient to the implementation of the general plan. The planning agency may, or if so directed by the legislative body shall, prepare specific plans for such areas and recommend such plans to the legislative body for adoption.
(Added by Stats. 1971, Ch. 1446.)

65451. Such specific plans shall include all detailed regulations, conditions, programs and proposed legislation which shall be necessary or convenient for the systematic implementation of each element of the general plan listed in Section 65302, including, but not limited to, regulations, conditions, programs and proposed legislation in regard to the following:

(a) The location of housing, business, industry, open space, agriculture, recreation facilities, educational facilities, churches and related religious facilities, public buildings and grounds, solid and liquid waste disposal facilities, together with regulations establishing height, bulk and setback limits for such buildings and facilities, including the location of areas, such as flood plains or excessively steep or unstable terrain, where no building will be permitted in the absence of adequate precautionary measures being taken to reduce the level of risk to that comparable with adjoining and surrounding areas.

(b) The location and extent of existing or proposed streets and roads, their names or numbers, the tentative proposed widths with reference to prospective standards for their construction and maintenance, and the location and standards of construction, maintenance and use of all other transportation facilities, whether public or private.

(c) Standards for population density and building density, including lot size, permissible types of construction, and provisions for water supply, sewage disposal, storm water drainage and the disposal of solid waste.

(d) Standards for the conservation, development, and utilization of natural resources, including underground and surface waters, forests, vegetation and soils, rivers, creeks, and streams, and fish and wildlife resources. Such standards shall include, where applicable, procedures for flood control, for prevention and control of pollution of rivers, streams, creeks and other waters, regulation of land use in stream channels and other areas which may have a significant effect on fish, wildlife and other natural resources of the area, the prevention, control and correction of soil erosion caused by subdivision roads or any other sources, and the protection of watershed areas.

(e) The implementation of all applicable provisions of the open-space element as provided in Article 10.5 (commencing with Section 65560) of this chapter.

(f) Such other measures as may be necessary or convenient to insure the execution of the general plan.
(Repealed and added by Stats. 1971, Ch. 1446.)

65452. Such specific plans may also include all detailed regulations, conditions, programs, and proposed legislation which may be necessary or convenient for the systematic implementation of any general plan element as provided in Section 65303.
(Added by Stats. 1971, Ch. 1446.)

65305. If the city does not have a planning commission, the only procedural steps required for the adoption of a specific plan or regulation or any amendment to a specific plan or regulation shall be those provided in this article for action by the legislative body.

(Repealed and added by Stats. 1965, Ch. 1880.)

65306. Nothing in this article applies to the adoption or amendment of any ordinance by the legislative body, whether or not it may relate to the subjects mentioned in Article 8 of this chapter, except ordinances expressly adopting or amending a specific plan initiated pursuant to this chapter.

(Amended by Stats. 1970, Ch. 1590.)

65307. When it deems it to be for the public interest, the legislative body may initiate and adopt an ordinance or resolution establishing a specific plan or an amendment thereto. The legislative body shall first refer such proposal to establish such specific plan or amendment thereto to the planning commission for a report. Before making a report, the planning commission shall hold at least one public hearing. The planning commission shall report within 40 days after the reference, or within such longer period as may be designated by the legislative body. Before adopting the proposed plan or amendment the legislative body shall hold at least one public hearing. Notice of the time and place of hearings held pursuant to this section shall be given in the time and manner provided for the giving of notice of hearings by the planning commission as specified in Section 65300.

(Added by Stats. 1970, Ch. 677.)

Article 10. Administration of Specific Plans and Regulations

65350. The legislative body may determine and establish administrative rules and procedures for the application and enforcement of specific plans and regulations, and may assign or delegate such administrative functions, powers, and duties to the planning or other agency as may be necessary or desirable.

(Repealed and added by Stats. 1965, Ch. 1880.)

65351. The legislative body may create administrative agencies, boards of review, appeal, and adjustment, and provide for other officials, and for funds for the compensation of such officers, employees, and agencies and for the support of their work.

(Repealed and added by Stats. 1965, Ch. 1880.)

65352. No street shall be improved and no sewers or connections or other improvements shall be laid or authorized in any street within any territory for which the legislative body has adopted a specific street or highway plan until the matter has been referred to the planning agency for a report as to conformity with such specific street or highway plan and a copy of the report has been filed with the legislative body unless one of the following conditions applies:

(a) The street has been accepted, opened, or has otherwise received the legal status of a public street prior to the adoption of the plan.

(b) It corresponds with streets shown on the plan.

(c) It corresponds with streets shown on a subdivision map or record of survey approved by the legislative body.

(d) It corresponds with streets shown on a subdivision map previously approved by the planning commission.

Such report shall be submitted to the legislative body within forty (40) days after the matter was referred to the planning agency.

(Repealed and added by Stats. 1965, Ch. 1880.)

65353. No street shall be improved, no sewers or connections or other improvements shall be laid or public building or works including school buildings constructed within any territory for which the legislative body has adopted a specific plan regulating the use of open-space land until the matter has been referred to the planning agency for a report as to conformity with such specific plan, a copy of the report has been filed with the legislative body, and a finding made by the legislative body that the proposed improvement, connection or construction is in conformity with the specific plan. Such report shall be submitted to the legislative body within forty (40) days after the matter was referred to the planning agency. The requirements of this section shall not apply in the case of a street which was accepted, opened, or had otherwise received the legal status of a public street prior to the adoption of the specific plan.

(Added by Stats. 1970, Ch. 1590.)

Article 10.5. Open-Space Lands

65560. (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted pursuant to Section 65563.

(b) "Open-space land" is any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section, and which is designated on a local, regional or state open-space plan as any of the following:

(1) Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.

(2) Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.

(3) Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(4) Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

(Repealed and added by Stats. 1972, Ch. 251.)

65561. The Legislature finds and declares as follows:

(a) That the preservation of open-space land, as defined in this article, is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.

Article 9. Procedure for Adoption of Specific Plans and Regulations

65500. Before recommending to the legislative body that it adopt a specific plan or regulation or any amendment to a specific plan or regulation, the planning commission shall hold at least one (1) public hearing. Notice of the time and place of said hearing shall be given at least 10 calendar days before the hearing in the following manner:

(a) If the matter is before a county planning commission, the notice shall be published at least once in a newspaper of general circulation published and circulated in the county, or if there is none, it shall be posted in at least three public places in the county.

(b) If the matter is before a city planning commission, the notice shall be published at least once in a newspaper of general circulation published and circulated in the city, or if there is none, it shall be posted in at least three public places in the city.

In addition to notice by publication, a county or city may give notice of the hearing in such other manner as it may deem necessary or desirable.

Any hearing may be continued from time to time.

(Repealed and added by Stats. 1965, Ch. 1880.)

65501. The recommendation of any specific plan or regulation, or of any amendment to a specific plan or regulation, shall be by resolution of the planning commission carried by the affirmative votes of not less than a majority of its total voting members.

(Repealed and added by Stats. 1965, Ch. 1880.)

65502. A copy of any specific plan, regulation, or amendment recommended pursuant to this article shall be submitted to the legislative body and shall be accompanied by a statement of the planning commission's reasons for such recommendation.

(Repealed and added by Stats. 1965, Ch. 1880.)

65503. Upon receipt of a copy of any proposed specific plan or regulation or amendment of such plan or regulation the legislative body may by ordinance or resolution adopt the plan or regulation. Before adopting the proposed specific plan or regulation the legislative body shall hold at least one (1) public hearing. Notice of the time and place of said hearing shall be given in the time and manner provided for the giving of notice of the hearing by the planning commission as specified in Section 65500.

In addition to notice by publication, a county or city may give notice of the hearing in such other manner as it may deem necessary or desirable.

Any hearing may be continued from time to time.

Such plan or regulation, as adopted, shall be designated as a specific plan or regulation.

(Repealed and added by Stats. 1965, Ch. 1880.)

65504. The legislative body shall not make any change or addition in any proposed specific plan, regulation, or amendment thereto recommended by the planning commission until the proposed change or addition has been referred to the planning commission for a report and a copy of the report has been filed with the legislative body. Failure of the planning commission to report within forty (40) days after the reference, or such longer period as may be designated by the legislative body, shall be deemed to be approval of the proposed change or addition. It shall not be necessary for the planning commission to hold a public hearing on such proposed change or addition.

(Repealed and added by Stats. 1965, Ch. 1880.)

ATTACHMENT B

LEGAL DESCRIPTION

Beginning at the N W Corner of Sec. 12, T6SR23E thence East 1660'± to the intersection of the N Boundary of said Section and the Colorado River, thence South Westerly along the West bank of the Colorado River to a point 1328' S of the North Boundary of said section, thence West a distance of 952.46 feet more or less to a point 400' feet East of the West Boundary of said section. Thence South 1328' to a point 400' E of the SW corner of the N W 1/4 of said section, thence West 400' to the S W Corner of the N W 1/4 of Sec. 12, Thence N 01°07.40" West 2655'60' to point of beginning.

ATTACHMENT C

BIOLOGICAL ASSESSMENT

RIVERVIEW RANCH SITE, BLYTHE, CALIFORNIA

PREPARED FOR ALBERT A WEBB AND ASSOCIATES

NOVEMBER 19, 1981

Karlin G. Marsh
Biological Consultant

30262 Acorn Lane, P.O. Box 404, Silverado, California 92676
714/649-2027

TABLE OF CONTENTS

1.0 INTRODUCTION

The purpose of this report is to describe the existing biological setting of the Riverview Ranch property, analyze impacts (adverse and beneficial) of construction and use of a 97 unit vacation-residential housing project and aquascape plan on the property and suggest habitat enhancement and other measures which would help to mitigate adverse impacts.

1.1 PHYSICAL SETTING

The Riverview Ranch property is located approximately six miles north of the community of Blythe, California on the west bank of the Colorado River. The 61 acre project site bounds Collis Mayflower County Park on the north, west, and for a short distance, on the south. The largest portion of the property, located to the north of the park, is the proposed site of five clusters of sixty attached residential dwelling units. The narrower panhandle west of the park is proposed as a mobile home development area, with thirty seven dwelling units designated. A visual core aquascape lagoon in the northern area, tennis courts, swimming pools, spa, small commercial area and boat docking facility, and bathing beach are other amenities planned for the property.

The planning area is located on a flat stream terrace about 11-14 feet above the water surface of the Colorado River Channel.[1] A small lagoon is located partially within the property and partially within Mayflower County Park. This body of water may be a remnant of an old cutoff oxbow lake created by an abandoned river meander. It presently has no exposed outlet, and only a remnant of an inlet (See Figure One). The water source for the lagoon appears to be lateral percolation from the Colorado River. The water level in the lagoon fluctuates with that of the river, being higher in summer and lower in winter.

Terrace soils on the property appear to be composed of sand and silt. The bulk of the site is currently in agricultural production. Remaining natural vegetation is found in the vicinity of the lagoon, along the margin of the Colorado River, at the northern boundary, flanking an offsite irrigation drainage channel, and in the narrow south boundary strip. Successional, mostly ruderal plant species grow along a cement lined irrigation ditch which demarcates the eastern boundary, and in a buffer area between the southern panhandle agricultural field and the irrigated turf on Mayflower County Park land.

1. The terrace elevation is about 280' above sea level. Normal summer flow of 20,000 cuF/S in the river maintains a water surface elevation of about 269.5'. Winter flows decline to approximately 4000 cuF/S and winter water surface elevation probably declines another three feet to about 266.5'. The water level of the river during 100 year floods can reach an elevation of 279'.

Land use in the area surrounding the parcel consists, to the north and west, of cotton and alfalfa agriculture and to the south, of open space-recreational and resort residential uses.

1.2 METHODS

The project site was surveyed on November 11 and 12, 1981. Approximately seven hours were spent on the property.

All areas containing natural habitat were inspected. All plant species found were either identified in the field or collected and later keyed in the lab. Terrestrial fauna were identified by sighting, voice, track, scat or burrow evidence. No fauna trapping was attempted. The two aquatic habitats affected by project implementation: the lagoon and the agricultural irrigation drainage channel, were inspected, and plankton, nekton and submerged aquatic plant samples taken from each, for later lab analysis.

The author gratefully acknowledges the assistance of the following individuals for their help in this study:

Ron Powell, California Department of Fish and Game.
Mr. Powell advanced a series of workable mitigation recommendations which would serve to enhance the future biological productivity of the project setting, and also acquainted the author with specific information and resources of value in understanding the local biological and hydrological setting.

Bertin Anderson, Arizona State University.
Dr. Anderson has been active in fauna documentation and small mammal trapping programs in the river edge area near Blythe. He was able to predict the kinds of small mammals utilizing different habitat types on the project site, and also supplied information on the local status of a number of medium and large mammal species.

Gordon A. Marsh, University of California, Irvine.
Mr. Marsh identified several insect specimens collected from the site.

Michael Horne, California State University, Fullerton.
Dr. Horne identified fish specimens collected from the irrigation drainage channel on the north boundary of the property.

The acreage was previously surveyed by Oscar Clarke, University of California, Riverside (retired). Findings of the Clarke study are incorporated into appropriate sections of this report.

Standard references utilized in this study are included in the appendix bibliography.

2.0 EXISTING BIOLOGICAL SETTING

The bulk of the Riverview Ranch property is in agriculture. At the time of field inspection, the fields had been freshly furrowed in preparation for planting, and contained no vegetative cover. A large number of foraging songbirds were present on the fields, however.

A dense growth of desert - saline/riparian shrubs and small trees occurs along the irrigation drainage channel, river bluff edge, peripheral to the lagoon and in the narrow strip of land south of Mayflower Park. Scattered tamarisk trees are found in non-agricultural areas, immediately north and west of the lagoon and between the southern panhandle and turf areas of Mayflower County Park.

The two aquatic habitats affected by the project differ markedly in condition: The lagoon is in an advanced state of eutrophication and exhibits a depressed level of biotic activity. The channel, however, is inhabited by a number and variety of plankton, nekton and submerged aquatic plants, exhibiting a healthy level of biotic utilization. The water in both settings appears to be mineralized and brackish.

Fauna utilization of the property is concentrated in those areas possessing natural habitat, enumerated above. Terrestrial fauna species detected include several beetles, one or two amphibians, two lizards and a variety of birds (including water dependent species and raptors), and small, medium and large mammals.

2.1 TERRESTRIAL SETTING

2.1.1 Vegetation

Agricultural fields and their margins

No vegetation was present in the agricultural fields during the inspection period. The field had been recently plowed and furrowed, and was being prepared for planting. Fields nearby are planted in cotton and alfalfa.

The field margins contain a variety of ruderal forbs and grass species. Common forbs include Palmer's amaranth (Amaranthus palmeri), five hooked bassia (Bassia hyssopifolia), Russian thistle (Salsola iberica), lambs' quarter (Chenopodium album), nettle-leaved goosefoot (C. murale) and in less frequently disturbed areas, wild sunflower (Helianthus annuus), prickly lettuce (Lactuca serriola), slender aster (Aster exilis) and tall horseweed (Conyza canadensis). Clusters of willow weed (Polygonum lapathifolium) occur in areas subject to irrigation runoff accumulation, and saline indicators such as bassia and alkali heliotrope (Heliotropium curassavicum) grow atop field edge earthen dikes in response to salts accumulation from irrigation water evaporation. Several other kinds of ruderal forbs were inventoried, as enumerated in the Appendix species list.

The most common grass, of field edges, fallow areas and within the turf of the adjacent park is Bermuda (Cynodon dactylon). Other species inventoried include Johnston grass (Sorghum halepense), yellow bristlegrass (Setaria lutescens) and Canary grass (Phalaris minor).

Principal field edge settings vegetated by these ruderals and grasses are along the concrete irrigation channel and its earthen dike at the west property boundary, in the transition area between the field panhandle and Mayflower County Park, and in vacant land west of the lagoon. The latter site contains a remnant of a second oxbow which is now dry and overgrown by a dense stand of ruderals and Bermuda grass, along with scattered desert riparian shrubs (one screwbean mesquite, Prosopis pubescens, one Emory's baccharis, Baccharis emoryi, and several salt cedars, Tamarix ramosissima). As well as species of ruderals and grasses enumerated above, wild turnip (Brassica tournefortii) and rescue grass (Bromus willdenovii) grow in the dry channel.

Desert-transitional fallow areas

Disturbed sandy areas north and east of the lagoon, and in the buffer strip bounding the west edge of the park contain several desert herb species, and scattered tamarisk trees (probably T. aphylla). The most common herb is apricot mallow (Sphaeralcea ambigua). Narrow-leaved cryptantha (Cryptantha angustifolia) is also quite common. Plicate coldenia (Coldenia plicata, a dune and sand plain low subshrub) occurs in a limited area southwest of the lagoon, in a setting otherwise overgrown by Bermuda grass. Russian thistle is also very common in these disturbed desert remnant habitats.

Desert Riparian Flora

Desert riparian flora is found around the lagoon, on the bluff margin overlooking the Colorado River and on the slopes of the irrigation runoff channel. Saline/alkaline tolerant shrub species characterize the makeup of these habitat areas, and zonation is evident, particularly around the lagoon.

Lagoon flora Three vegetative bands ring this cutoff oxbow lake. Nearest the water edge are scattered stands (some quite dense) of the cattail species, Typha domingensis and a few clumps of soft-stemmed bulrush (Scirpus validus). A broad band of salt cedar occurs on the slopes above. This is replaced on the upper margin of the bank by a dense stand of arrow weed (Pluchea sericea). This vegetative setting is quite simplified, probably in response to past site disturbance.

Colorado River Bluff Margin Along the southern portion of the bluff edge grows a fairly wide band of arrow weed (above) and salt cedar (below). This borders the margin of the transitional desert area east of the lagoon.

Northward along the edge of the plowed field, the brushy margin is reduced to a narrow band at the very edge of the bluff and its steep slope into the channel. Arrow weed is invaded by and finally replaced by lens scale saltbush (Atriplex lentiformis) as the irrigation runoff channel is approached.

Irrigation Runoff Channel The most diverse species composition of riparian shrubs and trees on site occurs on the slopes of this channel. Arrow weed and lense scale are its principal components, and there is also a substantial representation of salt cedar and Emory's baccharis shrubs and small screwbean mesquite trees. The steep, densely vegetated sides of the channel visually isolate its lower portions from the agricultural fields (and proposed housing) on the terrace above, and as noted in the following section, this area is an important fauna habitat.

2.1.2. Terrestrial Fauna

Invertebrates

Numerous Tenebrionid (darkling) beetle tracks lace the sandy margins of arrow weed stands. One kind, Eleodes armatus (complex) was collected. Curculionid beetles (weevils) were also collected in the sandy desert-transition area, of the species Dinocleus molitor. These insects and various kinds of ants, particularly the red harvester (Pogonomyrmex) may constitute an important food resource, particularly for lizard species and some rodents.

Vertebrates

Reptiles Two lizard species were observed on the property. The sideblotch (Uta stansburiana), was very common on the fallow area west of Mayflower County Park. A long-tailed brush lizard (Urosaurus graciosus) and many tracks believed to be of this species or of the related tree lizard (U. ornatus) were observed in the sandy margins of arrow weed scrub along the upper edge of the irrigation runoff channel and Colorado River bluff. The overall diversity of reptile species expected on site is limited because so little of it remains in an undisturbed condition. However, the following species and others listed in the appendix could occur here:

great basin whiptail (Cnemidophorus tigris tigris)
Sonora gopher snake (Pituophis melanoleucus affinis)
common kingsnake (Lampropeltis getulus)
checkered gartersnake (Thamnophis marcianus)
western ground snake (Sonora semiannulata)
western diamondback rattlesnake (Crotalus atrox)

Some burrowing activity suspiciously like that of the desert tortoise (Gopherus agassizi) was observed between the lagoon and the river at the edge of Mayflower County Park. It is questionable whether this species could long persist in an area so subject to frequent human use, however.

Birds[1] A variety of bird species were observed in the planning area and adjacent lands. A number of raptors were observed on site and also flying above the river and foraging in nearby alfalfa fields. This indicates that the carrying capacity for small fauna (rodent and reptile) prey species is relatively high, undoubtedly enhanced by the presence of irrigated agricultural fields and brushy irrigation ditches. Red-tailed hawks and marsh hawks were frequent, kestrels occasional. A large buteo tenatively identified as a ferruginous hawk was observed above the river. The dense brush and tree growth within the irrigation drainage channel harbored a great horned owl. Clarke reported a short eared owl and four burrowing owls but did not indicate where he saw them.[2]

The only waterfowl species expected with any frequency in the lagoon is the common coot, observed nearby on the Colorado River. Ducks were heard from the river, and observed flying above it. A green heron was seen at the lagoon, and a great blue heron in mesquite woodland on the Arizona bank of the river. Clarke sighted sixteen pintail ducks, four common egrets, twenty four great blue herons and a small sandpiper along the river.

Clarke noted the presence of Gambel's quail. Mourning doves are frequent on site and ground doves were observed in the nearby park. Roadrunners are common in the vicinity.

Clarke states that appropriate habitat does not exist here for the rare yellow-billed cuckoo. Powell indicated however that along the river, the species occupies mesquite and willow woodland. Dense mesquite-tamarisk woodland south of the project site could harbor this species and very well might also be occupied by the endangered least Bell's vireo, in the opinion of the author. However it is unlikely that either species occurs on site.

Fifteen barn swallows were observed by Clarke. Piciformes included a downy woodpecker (Clarke) and a common flicker. An ash-throated flycatcher, several black phoebes and a Say's phoebe (Clarke) were noted, the former species about mesquite near the park and the second, along the irrigation channel.

The author observed several hundred horned larks foraging in the furrowed agricultural field and in a similar field north of the project site. Meadowlarks were of frequent occurrence in open land.

1. Scientific names of bird species, included in Appendix list.

2. The Clarke survey included an additional land parcel about 1-1/2 miles south of the subject property.

Verdins and bushtits were frequent in arrow weed - salt cedar - mesquite scrub, especially on the irrigation drainage channel. Clarke noted mockingbirds, probably about the park. The author heard but did not see gnatcatchers in the riparian scrub, and assumes they were the blue-gray species. A logger-head shrike was observed by the author and twenty starlings by Clarke. The only warbler species seen was the yellow-rumped; additional kinds would be expected in summer.

Brewer's blackbirds are frequent, especially about the park.

Fringillids observed include the following: house finch, Abert's towhee and/or brown towhee, white crowned sparrow and (in mesquite - tamarisk habitat near the south boundary) Brewer's sparrow.

Mammals Small mammal evidence observed on site included tracks of kangaroo rats (presumably Dipodomys merriami), frequent in sandy areas peripheral to arrow weed and lens scale scrub, burrows of pocket gophers (Thomomys bottae) along the western dike and numerous minute tracks of a variety of mice seen in mudflat areas and in sand. Anderson stated that the following rodent species could be expected in habitats like those on site:

agricultural fields:

white-footed deer mouse (Peromyscus maniculatus)

salt cedar - arrow weed scrub and periphery:

desert pocket mouse (Perognathus penicillatus)
cactus mouse (Peromyscus eremicus)
white-throated woodrat (Neotoma albigula)
Merriam kangaroo rat (Dipodomys merriami)
desert kangaroo rat (D. deserti)
round-tailed ground squirrel (Citellus tereticaudus - observed on site)

moist riparian margin vegetation (cattails, etc.):

cotton rat (Sigmodon hispidus)
house mouse (Mus musculus)
harvest mouse (Reithrodontomys megalotis)
musk rat (Ondatra zibethica)

Numerous tracks and dropping piles of Audubon's cottontail (Sylvilagus auduboni) were noted along margins of brush vegetation. Larger mammal evidence seen was of coyotes (Canis latrans), an abundance of raccoons (Procyon lotor) around water and mule deer (Odocoileus hemionus) in the irrigation drainage channel.

Additional species expected or reported include striped skunk (Mephitis mephitis), spotted skunk (Spilogale gracilis), gray fox (Urocyon cinereoargenteus), bobcat (Lynx rufus) and possibly kit fox (Vulpes macrotis)1.

1. No kit fox burrows were found on site.

The most heavily utilized mammal habitats seem to be, in order of use:

1. The irrigation drainage channel.
2. The lagoon, with its peripheral brush.
3. The brush and tree habitat on the river bluff.

2.2 AQUATIC BIOLOGICAL SETTING

2.2.1 Lagoon

The cutoff oxbow lake was at a low water level when examined. Cattails which normally occur as emergent vegetation were perched on the bank some distance above the water line. A salt rime encrusted the lower bank, evidence of the high TDS within its waters.

The biotic makeup of the lagoon's aquatic ecosystem appeared to be simplified and evidenced an advanced state of eutrophication. Water samples from the site possessed a fetid odor. The only submerged aquatic plant species visible to the naked eye was a blue green alga, Oscillatoria, which occurred in clumps on the bottom. Microscopic analysis of samples revealed in addition, a few diatoms and minor amounts of Spirogyra, a green alga. No invertebrate nekton were observed. A rotifer, unsegmented roundworm and numbers of ciliate protozoa were noted in samples microscopically analyzed.

Larger aquatic fauna consist of bullfrogs (Rana catesbeiana) and possibly leopard frogs (R. pipiens), and several fish species. Long-term users of the adjacent park indicated that fish catches are better in the summer, when the water level is high. Species reportedly caught in the lagoon include catfish (Ictalurus sp.), "perch" (probably bluegills, Lepomis macrochirus,) carp (Cyprinus carpio) and a few large-mouthed bass (Micropterus salmoides).

Since the lagoon was not examined during its high summer water level, it is difficult to determine how much conditions change in this body of water through a year's time. It can be speculated, however, that the aquatic setting temporarily improves with the infusion of fresh water from the river. The proportion of green algae probably increases in relation to the amount of blue green algae. A greater variety of zooplankton and invertebrate nekton would be expected in summer. With fall drawdown, the body of water becomes more subject to overheating, resulting in mortality of most of the flora and invertebrate fauna. Frogs and hardier kinds of fish are apparently able to survive in the temporarily adverse low-water setting, however.

2.2.2 Agricultural Drainage Channel

In contrast to the stagnant, highly eutrophicated regime within the lagoon, the agricultural drainage channel's aquatic habitat appears to be in very good condition, with a variety of flora and fauna inhabiting clear, odorless water. An estimated flow of 10 cu F/S was observed here during field inspection. Water volume is probably somewhat greater in summer, varying in relationship to the amount of irrigation water used in the area (less the quantity lost from evaporation).

A substantial amount of northern water milfoil (Myriophyllum exalbescens) and green algae (cf. Mougeotia) vegetation was found in the shallow channel. Large numbers of diatoms and some ciliate protozoa were observed in microscopic samples. Water striders (Gerris sp.) and backswimmers (Trichocorixa reticulata) were among the invertebrate nekton observed. The latter of these is a species primarily of hyposaline or brackish waters and serves as biological indicator of the highly mineralized quality of irrigation runoff in the channel.

A number of small fish were also observed here. These were identified as a species of Poeciliidae, probably mosquito fish (Gambusia affinis) of immature status.

3.0 PROJECT IMPACTS

The following adverse and beneficial biological impacts are predicted with project implementation:

1. The bulk of the property will be converted from agricultural to resort residential use. While the value of the agricultural portions of the site for area fauna is relatively low, certain field crops such as alfalfa can support substantial populations of small rodents, forming a significant food resource for raptors.

2. Water in the irrigation drainage channel north of the development area will be diverted onto the site, to provide circulation for an expanded lagoon area, over twice the size of the present oxbow lake. The Colorado River bank will be breached to allow circulation between the lagoon and the river.

   Potential impacts of this series of actions include the following:

   a. Vegetation and habitat in the irrigation drainage channel below the diversion dam could be adversely impacted from the elimination of irrigation runoff flow.

   b. Water quality will improve in the existing lagoon. This will result in the following:

      - a more varied aquatic flora, with greater amounts of green algae along with submerged aquatic flowering plant species.
      - a greater variety of plant and animal plankton, and of invertebrate nekton.
      - a greater diversity and density of desirable game fish species including some or all of the following, found at present in the adjacent river:

        channel catfish (Ictalurus punctatus)
        bluegill (Lepomis macrochirus)
        green sunfish (L. cyanellus)
        white crappie (Pomoxis annularis)
        black crappie (P. nigromaculatus)
        smallmouthed bass (Micropterus dolomieui)
        largemouthed bass (M. salmoides)
        striped bass (Morone saxatilis)

        A variety of non-game fish species would also be found. The quiet lagoon setting would be appropriate for fish spawning, with installation of certain habitat amenities discussed in the following section.

   c. Riparian habitat may be removed in the periphery of the existing lagoon resulting in a loss from the site of those fauna species dependent on this type of setting.

3. Dense riparian brush and some trees on a narrow strip of land on the south boundary (south of Mayflower County Park), will be removed to allow construction of an access road into the park.

4. A park-like river-edge landscaping plan has the potential of improving the habitat along the river bluff margin. The river bluff park-like landscaping will not result in any clearing of existing bluff vegetation, but will consist of plantings which augment this habitat.

5. Increased human use of the site will adversely impact those areas of natural habitat remaining, resulting in a loss of intolerant fauna from the project area.

6. The project is not expected to adversely impact rare, threatened or endangered plant or animal species, since none are known from the site or area.

   Several raptor species blue listed[1] as declining in numbers by the National Audubon Society, will be adversely impacted. These include marsh hawk, burrowing owl, and short-eared owl.

   The site could potentially harbor the desert tortoise. This species is listed among the Special Animals of the California Fauna by the California Natural Diversity Data Base.[2]

1. Tate, 1981.
2. Csuti, 1980.

4.0 IMPACT MITIGATIONS, EXISTING OFFSITE COMPENSATIONS, HABITAT ENHANCEMENT RECOMMENDATIONS.

Mitigations for adverse impacts listed in the previous section are discussed in the same order as the negative impacts identified.

1. Loss of agricultural foraging habitat for raptors.

The presence of substantial areas of alfalfa cropland and weedy dikes bounding irrigation ditches in the vicinity of the project site constitutes an existing offsite compensation for loss of agricultural land here. It does not appear that development pressures are presently sufficient to result in the conversion of significant amounts of agricultural lands to residential or other intensive human uses in the near future.

2. a. Impact on irrigation channel riparian vegetation downstream from diversion dam.

The natural vegetation in the downstream channel area should be allowed to remain. A bleeder pipe through the dam allowing for 1 cu F/S downstream flow is recommended by California Department of Fish and Game.

b. To enhance the enlarged lagoon's capability to function as a fish spawning habitat.

California Department of Fish and Game recommends the following, detailed in an attachment to this report. The Department will supervise the installation of these amenities, the developer supplying materials and manpower:

- spawning gravel held in place by automobile tires and cut out tire sidewalls.
- underwater brush piles held in place by 4' x 4' x 8' rebar frames.

installation is recommended for the part of the lagoon above the area used for boating. A weir is suggested for placement beneath the footbridge separating the upper and lower lagoon. This weir would be overtopped by water coming in from the river in summer, carrying with it, individuals of game fish species. The water level behind the weir would be higher than that of the river and lower lagoon in winter, enhancing the riparian edge habitat and aesthetic quality of the upper lagoon. Game fish would be retained behind the weir until subsequent summer water levels again overtopped the retaining structure. The workability of this recommendation depends in part on the elevation of the inlet channel carrying irrigation runoff into the upper lagoon, since water quality here is dependent on ample circulation and a movement of water through and out of the impoundment.

An additional recommendation is to maintain a gradual drop-off from the shore to bottom of the existing and future portions of the lagoon, to permit the growth of emergent aquatic vegetation vital for young fish and other aquatic biota and for waterbirds and certain mammal species. Within the lower lagoon, such an edge could be maintained by deepening only the central portions and areas used for boat docking, allowing a "shelf" of natural-contour bottom to remain elsewhere.

c. At least a portion of the natural riparian vegetation should remain for fauna species dependent on this type of setting.

A portion of the natural riparian vegetation belt of salt cedar and arrow weed around the existing lagoon should be allowed to remain, along with a band of sandy desert-like habitat at its outer periphery. The upper lagoon margin should be enhanced by the planting of indigenous or otherwise appropriate tree and shrub species (listing below) and a natural salt cedar - arrow weed - cattail riparian zone should be permitted to develop on portions of the lagoon bank.

3. Removal of trees and brush on south boundary strip.

The project developer owns a large area of property south of Mayflower County Park. This site contains the same kind of dense tamarisk - mesquite - lens scale - arrow weed scrub as is found in the narrow southern land strip designated as a road right of way. The property owner has indicated that he intends to leave this large valuable habitat as it is now.

4. Park-like landscaping along the river front and other site landscaping.

Tree and shrub species which will enhance the habitat value of the site are recommended by California Fish and Game. These include:

- Fremont cottonwood (Populus fremontii)
- honeybean mesquite (Prosopis glandulosa var. torreyana)
- screwbean mesquite (P. pubescens)
- fruitless mulberry (Morus alba var.)
- lens scale saltbush (Atriplex lentiformis)

An enhanced habitat margin along the river bluff edge is not in conflict with the site plan. Additional plantings are recommended in open space areas between the condominium clusters, near the margin of the upper and lower lagoon and within the mobile home park. California Department of Fish and Game recommends that C.C. and Rs. be placed on the deeds for the mobile home park spaces, requiring their owners to plant and maintain several trees, of one or more of the species listed above.

While "native grasses" are designated on the conceptual site plan for the open space areas between condominium clusters, local experience indicates that Bermudas (Cynodon dactylon and related species and varieties) are more successfully maintained along the river front.

5. Impact of human activity on indiginous biota.

For the most part, this is an unavoidable adverse impact of the project, particularly when coupled with the high use levels of the adjacent park. Some impacts noticed on the lagoon, from heavy park visitor use include trampling of the riparian edge zone. This could be mitigated in part by providing areas of improved access such as beaches, piers or boardwalks, and discouraging ingress into other portions of the lagoon edge habitat, by signing, planting of dense vegetation or fencing.

The most sensitive habitat in the vicinity of the project site appears to be the drainage channel. The lower slopes of this drainage will be visually separated from the development area. It is recommended that additional edge plantings be installed between the channel and the northernmost home-site clusters, to provide additional screening and habitat enhancement. A single, smooth wire strand and signing at the upper edge of the drainage slope might discourage ingress. Such signing, and similar signing at the lagoon habitat edge should not be prohibitory in nature, but should explain the reasons for habitat protection and enlist the reader's cooperation in achieving the goals of such action.

5.0 APPENDIX

5.1 BIBLIOGRAPHY

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THALLOPHYTA

CYANOPHYCEAE - BLUE GREEN ALGAE

Oscillatoria sp.	4a - C

CHLOROPHYCEAE - GREEN ALGAE

cf. *Mougeotia* sp.	4b - C
Spirogyra sp.	4a - O

PHAEOPHYCEAE - BROWN ALGAE

Diatomeae - diatoms

cf. *Navicula* sp.	4a and b - C

5.2 FLORA AND FAUNA SPECIES LISTS

5.2.1 Flora

Legend

Habitat

1 Disturbed areas at the periphery of agricultural fields.

2 Disturbed desert-like habitats.

3 Desert riparian scrub and woodland.

4 Aquatic submerged and emergent plants.

4a lagoon

4b drainage channel

Occurrence

D Dominant

C Common

O Occasional

U Uncommon

* introduced species

TRACHEOPHYTA

ANGIOSPERMAE

DICOTYLEDONAE

AMARANTHACEAE - AMARANTH FAMILY

Amaranthus palmeri Palmer's amaranth	1 - C

ASTERACEAE - SUNFLOWER FAMILY

Aster exilis slender aster	1 - O
Baccharis emoryi Emory baccharis	3 - O
*Conyza canadensis horseweed	1 - O
Helianthus annuus common sunflower	1 - O
*Lactuca serriola prickly lettuce	1 - O
Palafoxia linearis Spanish needles	1 - U
Pluchea sericea arrow weed	3 - D
*Sonchus oleraceus common sow thistle	1 - U

BORAGINACEAE - BORAGE FAMILY

Coldenia plicata plicate coldenia	2 - U
Cryptantha angustifolia narrow-leaved cryptantha	2 - C
Heliotropium curassavicum salt heliotrope	1 - U

BRASSICACEAE - MUSTARD FAMILY

*Brassica tournefortii wild turnip	1 - U
*Sisymbrium irio London-rocket	1 - U

CHENOPODIACEAE - GOOSEFOOT FAMILY

Atriplex lentiformis lens scale	3 - C
*Bassia hyssopifolia five-hooked bassia	1 - C
*Chenopodium album lamb's-quarters	1 - 0
*Chenopodium murale nettle-leaved goosefoot	1 - 0
*Salsola iberica Russian-thistle	1, 2 - C

FABACEAE - PEA FAMILY

*Medicago sativa alfalfa	1 - U
Prosopis pubescens screwbean mesquite	3 - 0

HALORAGACEAE - WATER MILFOIL FAMILY

Myriophyllum exalbescens northern water milfoil	4b - D

MALVACEAE - MALLOW FAMILY

*Malva parviflora cheeseweed	1 - 0
Sphaeralcea ambigua apricot mallow	2 - D

14. Police protection and security facilities and improvements shall be provided in accordance with the requirements set forth by the Riverside County Sheriff's Department.

15. A mutual agreement shall be enacted between the County Parks Department and the applicant, or other acceptable entity such as the Master Property Owner's Association, for continued maintenance and remedial repairs of the lagoon.

16. A mutual agreement shall be enacted between the County Parks Department and the applicant for joint use and development of one acre within Mayflower County Park for paved parking.

B. Zoning

Rezoning of the Riverview Ranch property will be necessary to bring the zoning designations into conformance with the Land Use Development Plan adopted as a part of the Specific Plan.

Exhibit 14 presents the proposed zoning plan, dividing the 61 acre site into the following zoning designations:

R-1 Zone	One-Family Dwellings	8.2 acres
R-4 Zone	Planned Residential	28.9 acres
R-5 Zone	Open Area Combining Zone	20.4 acres
C-1 Zone	General Commercial	3.5 acres

C. Development Standards

1. Residential Development Standards

Introduction

The residential land designated on the Land Use Development Plan (Exhibit 5) shall be reserved for three basic residential housing types:

Housing Types	Zoning Designation
Single-Family Detached	R-1
Planned Residential (Condominium)	R-4
Planned Residential (Mobilehome/ Manufactured Housing)	R-4

The development standards for each residential housing type are set forth herein. A subdivision map, development plan, or plot plan shall be prepared where appropriate for each residential development area and submitted to the Planning Commission for approval.

POLYGONACEAE - BUCKWHEAT FAMILY

*Polygonum aviculare common knotweed	1 - 0
Polygonum lapathifolium willow-weed	1 - 0
*Rumex crispus curly dock	1 - 0

PORTULACACEAE - PURSLANE FAMILY

*Portulaca oleracea purslane	1 - U

SALICACEAE - WILLOW FAMILY

Salix gooddingii black willow	3 - U (1 specimen on river bluff.)

TAMARIACEAE - TAMARISK FAMILY

*Tamarix aphylla athel	2 - 0
Tamarix ramosissima salt cedar	3 - D

MONOCOTYLEDONAE

CYPERACEAE - SEDGE FAMILY

Scirpus validus soft-stemmed bulrush	4a - 0

POACEAE - GRASS FAMILY

*Bromus willdenovii rescue grass	1 - U
*Cynodon dactylon bermuda grass	1 - D
*Phalaris minor canary grass	1 - 0
*Polypogon monspeliensis rabbit's-foot grass	3 - 0
*Setaria lutescens yellow bristlegrass	1 - 0
*Sorghum halepense Johnson grass	1 - 0

TYPHACEAE - CAT-TAIL FAMILY

Typha domingensis cattail	4a - C

5.2.2 Vertebrate Fauna Species List

Legend

Habitat

1 Agricultural fields and their margins.

- 1a agricultural fields
- 1b weedy field edges

2 Disturbed desert-like habitats.

3 Desert riparian scrub.

- 3a around lagoon
- 3b along drainage channel
- 3c along river bluff
- 3d area mostly south of site

4 Aquatic setting.

- 4a lagoon
- 4b drainage channel
- 4c Colorado River, adjacent to site.

Status

O Observed during field survey

R Reported from site

E Expected, reported from similar habitats in the area.

P Possible occurrence in the area

FISH

CYPRINIDAE - MINNOWS

Cyprinus carpio carp	4a - R,	4c - E

CATOSTOMIDAE - SUCKERS

Zyrauchen texanus humpback sucker	4c - E

ICTALURIDAE - CATFISH

Ictalurus melas black bullhead	4a - R,	4c - E
Ictalurus punctatus channel catfish	4a - R?,	4c - R

POECILIIDAE - LIVE BEARERS

Gambusia affinis mosquito fish	4b - O,	4a,c - E

PERCICHTHYIDAE - TEMPERATE BASSES

Morone saxatilis striped bass	4c - P

CENTRARCHIDAE - SUNFISH

Lepomis macrochirus bluegill	4a - R,	4c - E
Lepomis cyanellus green sunfish	4c - E	
Pomoxis annularis white crappie	4c - E	
Pomoxis nigromaculatus black crappie	4c - R	
Micropterus dolomieui small-mouthed bass	4c - R	
Micropterus salmoides Texas large-mouthed bass	4a,b,c - R	

CICHLIDAE - CICHLIDS

Tilapia zilli — 4c - P

red-belly tilapia

AMPHIBIANS

SALIENTIA - FROGS AND TOADS

Scaphiopus couchi Couch's spadefoot	2,3 - P
Bufo cognatus Great Plains toad	4b - E
Bufo punctatus red-spotted toad	3c, 4c - P
Rana catesbeiana bullfrog	4a - O, 4c - E
Rana pipiens leopard frog	4a,b,c - E

REPTILES

CHELONIA - TORTOISES AND TURTLES

Gopherus agassizi desert tortoise	2 - P (O?)
Trionyx spiniferus emoryi Texas spiny soft shell	4c - E

SQUAMATA - LIZARDS AND SNAKES

Dipsosaurus dorsalis desert iguana	2, 3 - P
Callisaurus draconoides zebra-tailed lizard	2 - P
Sceloporus magister uniformis yellow-backed desert spiny lizard	3 - P
Urosaurus ornatus tree lizard	2, 3 - E
Urosaurus graciosus long-tailed brush lizard	2, 3 - O
Uta stansburiana ssp. *stejnegeri* desert side-blotched lizard	1b - O
Phrynosoma platyrhinos calidiarum southern desert horned lizard	2 - P
Cnemidophorus tigris tigris Great Basin whiptail	3 - E
Leptotyphlops humilis western blind snake	2, 3 - P
Masticophis flagellum piceus red racer	2, 3 - P
Pituophis melanoleucus affinis Sonora gopher snake	1, 2, 3 - E
Lampropeltis getulus common kingsnake	1b, 3 - E
Rhinocheilus lecontei long-nosed snake	3 - P
Thamnophis marcianus checkered garter snake	3, 4 - E

SQUAMATA - LIZARDS AND SNAKES (Continued)

Sonora semiannulata western ground snake	3 - E
Hypsiglena torquata deserticola desert night snake	2, 3 - P
Crotalus atrox western diamond back rattlesnake	Ib, 2, 3 - P (E?)

BIRDS

PELECANIFORMES - PELICANS AND ALLIES

Phalacrocorax auritus double-crested cormorant	4c - E

CICONIIFORMES - HERONS AND ALLIES

Ardea herodias great blue heron	4c - O
Butorides virescens green heron	4a - O, 4c - E
Casmerodius albus common egret	4c - E
Nycticorax nycticorax black-crowned night heron	4c - E

ANSERIFORMES - WATERFOWL

Branta canadensis Canada goose	4c - E
Chen caerulescens snow goose	4c - E
Anas platyrhynchos mallard	4a - E, 4c - O?
Anas strepera gadwall	4c - P
Anas acuta pintail	4c - R
Anas crecca green-winged teal	4a - P
Anas cyanoptera cinnamon teal	4a - P
Anas americana American wigeon	4c - P
Aythya collaris ring-necked duck	4a, c - P

ANSERIFORMES - WATERFOWL (Continued)

Aythya vallisneria canvasback	4c - P
Aythya affinis lesser scaup	4c - E
Bucephala albeola bufflehead	4c - E
Oxyura jamaicensis ruddy duck	4c - E

FALCONIFORMES - VULTURES, HAWKS, OSPREYS AND FALCONS

Cathartes aura turkey vulture	all - E
Accipiter striatus sharp-shinned hawk	all - R
Buteo jamaicensis red-tailed hawk	all - O
Buteo regalis ferruginous hawk	4c - O?
Aquila chrysaetos golden eagle	4c - P
Circus cyaneus marsh hawk	all - O
Pandion haliaetus osprey	4c - R
Falco mexicanus prairie falcon	1a - P
Falco sparverius American kestrel	all - O

GALLIFORMES - GALLINACEOUS BIRDS

Lophortyx gambelii Gambel's quail	1b, 3 - R

GRUIFORMES - CRANES, RAILS, GALLINULES AND COOTS

Porzana carolina sora rail	3a, 4a,c - P
Fulica americana American coot	4a - R, 4c - O

CHARADRIIFORMES - SHOREBIRDS, GULLS AND ALCIDS

Charadrius vociferus killdeer	1a, 4c - E
Actitis macularia spotted sandpiper	4a,c - E
Calidris minutilla least sandpiper	4a, 4c - E
Calidris mauri western sandpiper	4c - R
Capella gallinago common snipe	4a,c - E
Larus argentatus herring gull	4c - E
Larus californicus California gull	4c - E
Larus delawarensis ring-billed gull	4c - E
Hydroprogne caspia Caspian tern	4c - P
Sterna forsteri Forster's tern	4c - P

COLUMBIFORMES - PIGEONS AND DOVES

Zenaida macroura mourning dove	1, 2, 3 - O
Columbigallina passerina ground dove	adjacent park - O

CUCULIFORMES - CUCKOOS AND ROADRUNNERS

Geococcyx californianus roadrunner	1a, b - O

STRIGIFORMES - OWLS

Bubo virginianus great horned owl	3b - O
Speotyto cunicularia burrowing owl	1a,b - R
Asio flammeus short-eared owl	3 - R

APODIFORMES - SWIFTS AND HUMMINGBIRDS

Aeronautes saxatalis white-throated swift	4c - E
Archilochus alexandri black-chinned hummingbird	1b, 2, 3 - P
Calypte costae Costa's hummingbird	1b, 2, 3 - P
Calypte anna Anna's hummingbird	1b, 2, 3 - P
Selasphorus rufus rufous hummingbird	1b, 2, 3 - P

CORACIIFORMES - KINGFISHERS AND ALLIES

Megaceryle alcyon belted kingfisher	4c - E

PICIFORMES - WOODPECKERS AND ALLIES

Colaptes auratus common flicker	3 - O	
Dendrocopos scalaris ladderbacked woodpecker	3 - E	
Dendrocopos pubescens downy woodpecker	3 - R	

PASSERIFORMES - PERCHING BIRDS

Pyrocephalus rubinus vermilion flycatcher	3, 4 - P	
Tyrannus verticalis western kingbird	all - E	
Tyrannus vociferans Cassin's kingbird	3 - P	
Myiarchus cinerascens ash-throated flycatcher	3 - O	
Sayornis nigricans black phoebe	4b - O	4a,c - E
Sayornis saya Say's phoebe	1 - R	
Empidonax traillii willow flycatcher	3, 4 - P	
Empidonax difficilis western flycatcher	3, 4 - P	
Eremophila alpestris horned lark	1a - O	
Stelgidopteryx ruficollis rough-winged swallow	4c - E	
Hirundo rustica barn swallow	all - R	
Petrochelidon pyrrhonota cliff swallow	1a, 4c - E	
Riparia riparia bank swallow	4c - E	

PASSERIFORMES - PERCHING BIRDS (Continued)

Aphelocoma coerulescens scrub jay	3 - P
Corvus corax common raven	all - P
Corvus brachyrhynchos common crow	all - E
Psaltriparus minimus bushtit	3 - O
Auriparus flaviceps verdin	3 - O
Troglodytes aedon house wren	3 - P
Thryomanes bewickii Bewick's wren	3 - E
Campylorhynchus brunneicapillus cactus wren	R (habitat not given)
Telmatodytes palustris long-billed marsh wren	3a, 4a - O
Mimus polyglottos mockingbird	all - R
Polioptila caerulea blue-gray gnatcatcher	3 - O?
Anthus spinoletta water pipit	1a - E
Lanius ludovicianus loggerhead shrike	1b - O
Sturnus vulgaris starling	adjacent park - R
Vireo bellii Bell's vireo	3 - P
Vermivora celata orange-crowned warbler	3 - P
Dendroica petechia yellow warbler	3 - P
Dendroica coronata yellow-rumped warbler	3 - O

PASSERIFORMES - PERCHING BIRDS (Continued)

Geothlypis trichas common yellowthroat	3, 4 - E
Wilsonia pusilla Wilson's warbler	3, 4 - E
Sturnella neglecta western meadowlark	1 - O
Xanthocephalus xanthocephalus yellow-headed blackbird	3, 4 - E
Agelaius phoeniceus red-winged blackbird	3, 4 - E
Icterus galbula northern oriole	3 - R
Euphagus cyanocephalus Brewer's blackbird	1, 3, 4 - O
Molothrus ater brown-headed cowbird	1, 3 - E
Pheucticus melanocephalus black-headed grosbeak	3 - P
Guiraca caerulea blue grosbeak	3 - P
Passerina amoena Luzuli bunting	3 - E
Carpodacus mexicanus house finch	3 - O
Spinus tristis American goldfinch	1b, 3 - E
Spinus psaltria lesser goldfinch	1b, 3 - E
Spinus lawrencei Lawrence's goldfinch	1b, 3 - E
Chlorura chlorura green-tailed towhee	3 - R

PASSERIFORMES - PERCHING BIRDS (Continued)

Pipilo fuscus brown towhee	3 - O
Pipilo aberti Abert's towhee	3 - O?
Passerculus sandwichensis savannah sparrow	1 - P
Pooecetes gramineus vesper sparrow	1 - P
Junco hyemalis dark-eyed junco	1, 3 - P
Spizella passerina chipping sparrow	1 - P
Spizella breweri Brewer's sparrow	3d - O
Zonotrichia leucophrys white-crowned sparros	1b, 3 - O
Melospiza lincolnii Lincoln's sparrow	3, 4 - P
Melospiza melodia song sparrow	3, 4 - E

MAMMALS

MARSUPIALIA - POUCHED MAMMALS

Didelphis virginiana Virginia opossum	1 - O (road kill, off site)

CHIROPTERA - BATS

Macrotus waterhousii leaf-nosed bat	all - P
Myotis - several species	all - E
Pipistrellus hesperus western pipistrel	all - E
Tadarida - several species freetailed bats	all - P

CARNIVORA - FLESH-EATERS

Procyon lotor raccoon	3, 4 - O
Bassariscus astutus ringtail	3, 4 - P
Lutra canadensis river otter	4c - E
Spilogale gracilis spotted skunk	3, 4 - E
Mephitis mephitis striped skunk	3, 4 - R
Canis latrans coyote	all - O
Urocyon cinereoargenteus gray fox	3, 4 - E
Lynx rufus bobcat	3 - E

RODENTIA - GNAWING MAMMALS

Citellus tereticaudus round-tailed ground squirrel	1b - O
Thomomys bottae Botta pocket gopher	1b - O
Perognathus penicillatus desert pocket mouse	2, 3 - E
Dipodomys merriami Merriam kangaroo rat	2, 3 - O
Dipodomys deserti desert kangaroo rat	2 - P
Reithrodontomys megalotis western harvest mouse	4 - P
Peromyscus eremicus cactus mouse	3 - E
Peromyscus maniculatus deer mouse	1b - E
Onychomys torridus southern grasshopper mouse	2, 3 - E
Neotoma albigula white-throated wood rat	3 - E
Sigmadon hispidus cotton rat	3, 4 - E
Ondatra zibethica muskrat	4b - P, 4c - E
Mus musculus house mouse	3, 4 - E
Castor canadensis beaver	4c - E

LAGOMORPHA - HARES AND RABBITS

Lepus californicus black-tailed hare	1 - E
Sylvilagus audubonii desert cottontail	2, 3 - O

ARTIODACTYLA - EVEN-TOED HOOFED MAMMALS

Odocoileus hemionus mule deer	4b - O

5.3 ATTACHMENTS AND EXHIBITS

EXHIBIT: Biotic Resources

ATTACHMENTS: California Department of Fish and Game - "Fishery Improvement Measures", Clarke, Oscar, 1981.

Biological Survey for GPA 205 and 206.

STATE OF CALIFORNIA

OFFICE MEMO DATE: 11-16-81

TO: Karlin Marsh, P.O. Box 404, Silverado, CA 92676

FROM: Ron Powell, CA Fish & Game, P.O. Box B-D, Blythe, CA 92226
Phone Number: 922-5613

SUBJECT: Fishery improvement measures

The spawning gravel item was an experiment on the part of our biologists. They felt they got several years of use out of them before silt covered them. However, this was done in a backwater just off the main channel. A pond would be more protected from silt invasion. The brushpiles proved much more important. As you can see many of the expenses were higher due to the location up on Lake Havasu, and our manpower & travel expense.

If you have any questions let me know.

DRAFT

State of California — The Resources Agency

MEMORANDUM

TO: Keith Anderson
Jim St. Amant

DATE: July 22, 1981

FROM: Department of Fish and Game, William E. Loudermilk

SUBJECT: Evaluation of Lake Havasu Habitat Improvement Project, February 1981.

On February 21-22, 1981, two coves in Lake Havasu (San Bernardino County) were enhanced with 25 and 21 brush shelters, respectively. The intent of the project was to increase protective, resting and feeding cover for centrarchid fishes. The remainder of this memorandum will summarize the progression and expenditures for this project.

Identification of land status, feasibility and planning through the DJ Habitat Improvement Project began early in 1980. Article 2, Sections 757 and 760, Class 4 of CEQA (1976) describe Categorical Exemption requirements which improvement projects must be within. Four months should be allocated for processing a Negative Declaration from the Region through the Deputy Director of Operations for approval. Concurrently the U.S. Army Corps of Engineers Section 10, Rivers and Harbors Act (1899) permit application was initiated. Distribution and discussion of the proposed improvement with review agencies prior to submitting the Section 10 permit application is advisable to incorporate needed input and may actually expedite the permit process. The Colorado River Work Group is one vehicle for soliciting comments for projects on the river. The final permit received was dated 11/14/80.

Several meetings with the Lake Havasu Bass Club and Metropolitan Water District were attended to coordinate rebar frame welding, brush acquisition, stuffing and hauling the shelters to the project sites. The attached Project Cost Estimate indicates that only 35% of the cost was supplied by donations. In reality, the initiative, community involvement and capabilities of the volunteers were impossible to put values on, but significantly increased the input to the project.

Construction of the rebar frames was accomplished in January and early February 1980, by the Welding Shops at both Parker and Lake Havasu City High Schools. The rebar provided the material for metal shop training and the end result was 46 frames for the project.

The weekend prior to actual placement, approximately 25 shelters were filled with mesquite (Prosopis sp.). Several marinas and facilities prune vegetation in January and February and are glad to have it removed. This time period also corresponds to slow fishing and closed hunting seasons so sportsmen are available to assist. The thick ends of brush protruding from the 4' x 4' x 8' rebar frame were wired to the frame corners with baling wire to help retain the shelter density over time. The remaining shelters were filled on 2/21/81. Volunteers were divided into crews and

rotated between cutting, stuffing, loading, hauling and placement of shelters in coves.

Cove selection was based on its potential value to centrarchids, proximity to marinas and its suitability for electroshocking evaluation. A Lowrance 1510A Line Graph was used to determine the pre-project structure available. Divers surveyed the bottom and bouyed the shelter sites just prior to placement. Protective and holding cover in proximity to spawning habitat were the selection criteria. Sites were large enough for 2 - 4 shelters in clusters (see maps). Lift bags designed for underwater demolition work were used to build one shelter pyramid in each cove. A ring of 3 - 4 shelters on the bottom formed the base and a single unit (4' x 4' x 8') was placed on top providing a maximum relief of 8' off the bottom. The center cavity of the base ring provides additional protective area. Using the module shelter design and diver assistance there is potential to construct stable reefs with 12' - 16' relief off the bottom. This technique may be particularly valuable in deep water where structure is desirable but fluctuating water levels will require boating safety considerations.

Several other individuals and groups have suggested similar projects along the river. The Project Cost Estimate should provide a fair guideline for future planning and mitigation proposals. If the effective life of this project is only 5 years, our amortized investment of $1,787.00/year is a good one.

William E. Loudermilk
Fishery Biologist

WEL:bw

Attach.

cc: K. Aasen
D. Drake
Jack Hanson, Sacramento
Ron Powell

BRUSH SHELTER PROJECT COST ESTIMATES, 1981

I. Calif. Dept. of Fish and Game

A. Manpower

Biologist(s) 1.5mm	$3,000
Seasonal aid 1.0mm	700
Dive pay (pre/post)	200
Staff Benefits	678
Travel (30 days)	1,500
	$6,078

B. Equipment

Rebar (4,000', 1/2")	1,000
Wire	50
Air refills (divers)	100
Maps (project site)	100
Tools	100
Trailer rental	150
Misc. equipment	100
	$1,600

C. Operations

Vehicle Gas & Maintenance	1,000
Boat Gas & Maintenance	300
	$1,300

SUBTOTAL (I, Sections A,B, & C)	$8,978

II. Donations

A. Manpower

Welding - 0.3mm@$15/hr.	$ 850
Labor - 3.1mm@$4.50/hr.	2,250
	$3,100

B. Equipment

Trailer use (6 x $50/day)	300
Welding supply	200
Launching	20
Pontoon boat (4 x $100/day)	400
Chain saw (expenses)	100
Brush hooks	50
Misc. tools	100
	$1,170

C. Operations

Vehicle Gas & Maintenance	500
	$ 500

SUBTOTAL (II, Sections A,B, & C)	$4,770 (35%)

TOTAL ESTIMATED PROJECT COST = $13,748

State of California — The Resources Agency

MEMORANDUM

Date: April 30, 1980

TO: Inland Fisheries File

FROM: Dept. of Fish and Game, B. Loudermilk and M. Gleason, Blyth

SUBJECT: Experimental Spawning Habitat Improvement Project

On April 10, 1980, some artificial spawning habitat for centrarchids was placed in the first small backwater south of the Palo Verde Oxbow Lake, Cibola Division. The unnamed backwater is located approximately at rivermile 99. (See Figure 1.)

The purpose of the project was to see if the artificial spawning sites were more acceptable to centrarchids than the dredge sand present in most local backwaters, if one or both of the gravel sizes chosen for the projects would decrease chances of fish eggs becoming silted-in, and if the tires used would prevent or delay the gravel from being silted-in.

Twelve auto tires were prepared by cutting one sidewall out of each tire with a linoleum knife. Three quarters of a yard of 3/4 inch gravel ($7.50/yd.), and 1/2 yard of pea gravel ($8.00/yd.) were purchased and transported to the work site.

Two rows of alternating tires and cut-out sidewalls were placed parallel to the east shoreline of the backwater and then filled with either pea gravel, 3/4 inch gravel, or a mixture of the two. (See Figure 2) One tire in the outer row was filled with local dredge sand. The outer row was placed in 5-1/2 to 6 feet of water and spaced 5 to 15 feet apart. The inner row was in approximately 4-1/2 to 5 foot deep water and spaced about 6 to 7 feet apart. Enough gravel for six tires and six sidewalls was left over. It was broadcast in two beach areas nearby.

Four spawning cans donated by the Imperial Valley Warmwater Fish Hatchery for channel catfish spawning were placed due west of the tires in 10 to 15 feet of water about 15 to 20 feet apart on the same day. At that time the water releases from Parker Dam were approximately 17100 cfs or at an elevation of 446.2 ft.

Two biologists, one seasonal aide, and a six-person BLM Young Adult Conservation Corps crew did the work in 5 hours. It is planned that the experimental spawning sites and the spawning cans will be checked for fish use this spring. A preliminary check showed that the outer (shallower) row of tires was already slightly silted, while the inner (deeper) row was still clean.

State of California — The Resources Agency

MEMORANDUM — Date: May 28, 1980

TO: Inland Fisheries Files - Region 5

FROM: Dept. of Fish and Game - B. Loudermilk and Ellen Gleason Blythe

SUBJECT: Evaluation of Experimental Spawning Habitat Project

On April 10, 1980 some artificial spawning habitat for centrarchid fishes was placed in the first small backwater south of Palo Verde Oxbow Lake, Cibola Division (River Mile 99). Material costs, manpower required and design of the project were outlined in a previous memorandum dated 4/30/80.

Since that time these structures have been swum three times to document siltation and fish utilization. The structures along the east shoreline were already covered with a thin layer of fine silt on 4/25/80, just 15 days after placement. The silt covering was easily resuspended when briskly fanning over the gravel with force similar to what smaller centrarchids could apply. No fish or obvious nesting activity was observed and surface water temperatures was 19°C (68.2°F). The deeper row of tires was not covered with the silt layer.

A second survey on 5/9/80 again showed no sign of fish utilization and siltation had progressed. The outer row of tires was still less affected by the fine silt covering. Surface water temperature was 23°C (73.4°F).

A third survey on 5/21/80 yielded some interesting results. Surface water temperature was 24°C (75.2°F). Ninety-five percent (95%) of the structures observed (N=21) had recent nesting activity or were in use by adult BG. Paired BG were observed on 2 structures and 8 others had guarding males only. The circumference and depth of the indentations considered as "nesting activity" indicators were all fairly uniform and very similar to those actually guarded by male BG. I believe all nesting activity observed was from this single species. The mean number of nest cavities/structure over pea gravel, 3/4" gravel and a 50/50 mix of the first two gravel types was 1.7, 1.4 and 2.3 respectively (N=7). The mean number of nest cavities per tire structure in the eastern row and western row of tires was 1.5 and 2.2 respectively. (High N=10, low N=11). Only 2 of the 20 actively used structures had nest cavities in the center of the tires and the majority of cavities were around the base of the tires in the area where gravel spilled over during the initial filling. The depths of these cavities varied considerably, but all had some gravel left in the bottom. Male BG attempting to build nests in the spill gravel outside the tires may have fanned out several nests in search of a firm bottom in the backwater substrate. Previous observations of colonial nesting BG in backwaters indicated that nest-to-nest radii rarely is less than 5'. The radii observed between cavities around the tire perimeters ranged 1'-2'. Surveys in the next few weeks should indicate if new individuals or species move in and use abandoned nests or if multiple nests are made by individual male BG.

Nesting activities between or in the vicinity of these structures on silt/sand bottom was not observed. It appears that these structures can provide more acceptable spawning habitat for BG initially. The duration of this acceptability and the design of the structures need further evaluation.

BILL LOUDERMILK
Assistant Fishery Biologist

ELLEN GLEASON
Assistant Fishery Biologist

BL/EG/saa

cc: R. Powell, K Aasen, Blythe Files, DJ Files, M. Donahoo

BIOLOGICAL SURVEY FOR
GPA 205 AND 206

Biological EIR for two land development sites adjacent to the Colorado River. The field trip was taken in company with Paul Thompson, Chris Drover, and Andy Jackson during the day of Saturday, February 21, 1981.

The emphasis of this study is focused on three species of endangered birds: the Yellow-billed cuckoo, Bell's Vireo, and Yellow-breasted Chat. There is no vegetation remaining on the two properties concerned that would in any way attract or hold any of these three species. There are a few fairly small mesquite thickets on adjacent properties that might support the vireo, but probably not the cuckoo or chat. The latter two require a riverine environment containing willows, cottonwoods, and vines. No abundance of these types of plants seem to be present nearby.

On viewing directly across the Colorado River into Yuma County, Arizona, I noted a great expanse of little-disturbed mesquite thickets. This appears to be the typical environment for the vireo. However, it did not look riparian enough to nurture either the cuckoo or chat.

The plant materials on these two highly disturbed properties are meager and consist of those most common and hearty forms which best survive heavy human abuse.

The herptofauna would be of little concern here and now.

It is indeed lamentable that California agricultural and industrial enterprises have been allowed to destroy nearly all the natural environment up and down the river for countless miles. This has all been done without even setting aside a reasonable sized natural history preserve.

CONCLUSION:

To the best of my knowledge, there are no rare or endangered species of plants or animals to be found on these two properties at present.

Submitted March 27, 1981

Oscar F. Clarke

ATTACHMENT D

AGRICULTURAL CONSULTANTS
CHEMISTS
APPROVED WATER LABORATORY
PHONE 684-1881
AREA CODE 714
LABORATORIES
3215 CHICAGO AVENUE

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC.

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

NOV 11 1981

TO A.A. Webb Associates
3788 McCray Street
Riverside, CA. 92506

RECEIVED
NOV 12 1981
CIVIL ENGINEERS

Lab No. 811028-4
Invoice No. 10035

	Submitted	Sampled
By	Eddie	PRT
Date	10/28/81	10/27/81
Time	9:35	1145

SAMPLE MARKED #1, NW, Corner Sec. 12, Olive Lake Drain, Surface Water, T6S,R23E

To
WO
File

☒ General Mineral ☒ Inorganic Chemical ☐ General Physical ☐ As Marked ☐ Basic ☐ Domestic

☒ Total Hardness as $CaCO_3$: 507 mg/L	☒ Total Alkalinity as $CaCO_3$: 228 mg/L	☒ Electrical Conductivity EC x 10^6 @ 25 C: 1570 µmho/cm — KS 10-28	☒ Total Dissolved Residue @ 180 C: 1000 mg/L — DF 11/4	☐ mg/L	☐ mg/L
☒ Calcium (Ca): 136 mg/L, 6.80 me/L	☒ Hydroxide (OH): none mg/L me/L				
	☒ Carbonate (CO_3): none mg/L me/L	☒ pH: 7.7 units — KS 10-28	☐ Arsenic (As): <0.01 mg/L — AM 11/7	☒ Copper (Cu): <0.01 mg/L — LJC 11/2	☒ Mercury (Hg): <0.001 mg/L — LJC 10/28
☒ Magnesium (Mg): 40 mg/L, 3.33 me/L — JKB 11/8	☒ Bicarbonate (HCO_3): 278 mg/L, 4.55 me/L — KS 10-28				
		☐ Color units	☒ Barium (Ba): <0.5 mg/L — LJC 11/2	☒ Fluoride (F): 0.6 mg/L — KS 11-4	☒ MBAS: <0.1 mg/L — JKB 11/5
☒ Sodium (Na): 166 mg/L, 7.22 me/L — AM 11/4	☒ Sulfate (SO_4): 460 mg/L, 9.58 me/L — JKB 11/6				
		☐ Odor TON	☐ Boron (B) mg/L	☒ Iron (Fe): 0.06 mg/L — LJC 11/2	☒ Selenium (Se): <0.01 mg/L — LJC 11/5
☒ Potassium (K): 8 mg/L, 0.21 me/L — AM 11/4	☒ Chloride (Cl): 130 mg/L, 3.65 me/L — KS 11-2				
		☐ Turbidity NTU	☒ Cadmium (Cd): <0.005 mg/L — LJC 11/2	☒ Lead (Pb): 0.03 mg/L — LJC 11/2	☒ Silver (Ag): <0.01 mg/L — LJC 11/2
☐ Ammonium (NH_4) mg/L me/L	☒ Nitrate (NO_3): 1, 0.02 mg/L me/L — KS 11-2				
		☐ mg/L	☒ Chromium (Cr) Total: <0.01 mg/L — LJC 11/2	☒ Manganese (Mn): 0.02 mg/L — LJC 11/2	☒ Zinc (Zn): 0.01 mg/L — LJC 11/2
Cations Total: 17.56 me/L	Anions Total: 17.80 me/L				

EDWARD S. BABCOCK & SONS, INC.

Herman Babcock

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92668 - 714/771-6900

CLIENT EDWARD S. BABCOCK & SONS, INC.
P.O. BOX 432
RIVERSIDE, CA 92502

LAB NO. C3149

REPORTED 11/9/81

SAMPLE WATER

RECEIVED 10/29/81

IDENTIFICATION LAB #811028-3 (A. A. WEBB)

BASED ON SAMPLE AS SUBMITTED

TITLE 22 ORGANIC CHEMICALS

CONSTITUENT:

(A) CHLORINATED HYDROCARBONS

ENDRIN	ND <0.00001 MG/L
LINDANE	ND <0.00001 MG/L
METHOXYCHLOR	ND <0.0001 MG/L
TOXAPHENE	ND <0.0002 MG/L

(B) CHLOROPHENOXYS

2, 4-D	ND <0.0001 MG/L
2,4,5-TP SILVEX	ND <0.0001 MG/L

ASSOCIATED LABORATORIES

HENRY M. ESPOY

HME/DSV

AGRICULTURAL CONSULTANTS
CHEMISTS
APPROVED WATER LABORATORY
PHONE 684-1881
AREA CODE 714
LABORATORIES
3215 CHICAGO AVENUE

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, INC

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

NOV 11 1981

TO A.A. Webb Associates
3788 McCray Street
Riverside, CA. 92506

Lab No. 811028-6
Invoice No. 10035

	Submitted	Sampled
By	Eddie	PAUL
Date	10/28/81	10/27/81
Time	9:35	1210

SAMPLE MARKED #3, Mayflower Park, Tap Water, Sec 12, T6S, R23E

☒ General Mineral ☐ Inorganic Chemical ☐ General Physical ☐ As Marked ☐ Basic ☐ Domestic

☒ Total Hardness as $CaCO_3$: 368 mg/L ☒ Calcium (Ca): 102 mg/L, 5.10 me/L ☒ Magnesium (Mg): 27 mg/L, 2.25 me/L JKB 11/8	☒ Total Alkalinity as $CaCO_3$: 185 mg/L ☒ Hydroxide (OH): none mg/L, me/L ☒ Carbonate (CO_3): none mg/L, me/L ☒ Bicarbonate (HCO_3): 226 mg/L, 3.70 me/L KS 10-28	☒ Electrical Conductivity EC x 10^6 @ 25 C: 1130 µmho/cm³ KS 10-28 ☒ pH: 7.4 units KS 10-28	☒ Total Dissolved Residue @ 180 C: 580 mg/L DF 11/4 ☐ Arsenic (As): mg/L	☐ mg/L ☒ Copper (Cu): 0.01 mg/L LJC 11/2	☐ mg/L ☐ Mercury (Hg): mg/L
☒ Sodium (Na): 98 mg/L, 4.26 me/L AM 11/4	☒ Sulfate (SO_4): 210 mg/L, 4.38 me/L JKB 11/6	☐ Color: units	☐ Barium (Ba): mg/L	☐ Fluoride (F): mg/L	☒ MBAS: <0.1 mg/L JKB 11/5
☒ Potassium (K): 5 mg/L, 0.13 me/L AM 11/4	☒ Chloride (Cl): 133 mg/L, 3.75 me/L KS 11-2	☐ Odor: TON	☐ Boron (B): mg/L	☒ Iron (Fe): 0.25 mg/L LJC 11/2	☐ Selenium (Se): mg/L
☐ Ammonium (NH_4): mg/L, me/L	☐ Nitrate (NO_3): mg/L, me/L	☐ Turbidity: NTU	☐ Cadmium (Cd): mg/L	☐ Lead (Pb): mg/L	☐ Silver (Ag): mg/L
Cations Total: 11.74 me/L	Anions Total: 11.83 me/L	☐ mg/L	☐ Chromium (Cr) Total: mg/L	☒ Manganese (Mn): 0.08 mg/L LJC 11/2	☒ Zinc (Zn): 0.07 mg/L LJC 11/2

EDWARD S. BABCOCK & SONS, INC.

Herman Babcock

AGRICULTURAL CONSULTANTS
CHEMISTS
APPROVED WATER LABORATORY
PHONE 684-1881
AREA CODE 714
LABORATORIES
3215 CHICAGO AVENUE

ESTABLISHED 1906

EDWARD S. BABCOCK & SONS, IN

P. O. BOX 432
RIVERSIDE, CALIFORNIA 92502

NOV 11 1981

TO A.A. Webb Associates
3788 McCray Street
Riverside, CA. 92506

Lab No. 811028-5
Invoice No. 10035

	Submitted	Sampled
By	Eddie	PAUL
Date	10/28/81	10/27/81
Time	9:35	1205

SAMPLE MARKED #2, Mayflower Lagoon, Sec 12, T6S, R23E

☒ General Mineral ☐ Inorganic Chemical ☐ General Physical ☐ As Marked ☐ Basic ☐ Domestic

☒ Total Hardness as $CaCO_3$ 520 mg/L	☒ Total Alkalinity as $CaCO_3$ 248 mg/L	☒ Electrical Conductivity EC x 10^3 @ 25 C 3050 mmho/cm³ KS 10-28	☒ Total Dissolved Residue @ 180 C 2070 mg/L DF 11/4	☐ mg/L	☐ mg/L
☒ Calcium (Ca) 190 mg/L 9.50 me/L	☐ Hydroxide (OH) none mg/L me/L	☒ pH 7.7 units KS 10-28	☐ Arsenic (As) mg/L	☒ Copper (Cu) < 0.01 mg/L LJC 11/2	☐ Mercury (Hg) mg/L
☒ Magnesium (Mg) 108 mg/L 9.00 me/L JKB 11/8	☒ Carbonate (CO_3) none mg/L me/L	☐ Color units	☐ Barium (Ba) mg/L	☐ Fluoride (F) mg/L	☒ MBAS < 0.1 mg/L JKB 11/5
	☒ Bicarbonate (HCO_3) 302 mg/L 4.95 me/L KS 10-28	☐ Odor TON	☐ Boron (B) mg/L	☒ Iron (Fe) 0.65 mg/L LJC 11/2	☐ Selenium (Se) mg/L
☒ Sodium (Na) 400 mg/L 17.39 me/L AM 11/4	☒ Sulfate (SO_4) 1100 mg/L 22.92 me/L JKB 11/6	☐ Turbidity NTU	☐ Cadmium (Cd) mg/L	☐ Lead (Pb) mg/L	☐ Silver (Ag) mg/L
☒ Potassium (K) 17 mg/L 0.44 me/L AM 11/4	☒ Chloride (Cl) 320 mg/L 9.00 me/L KS 11-2	☐ mg/L	☐ Chromium (Cr) Total mg/L	☒ Manganese (Mn) 0.20 mg/L LJC 11/2	☒ Zinc (Zn) 0.01 mg/L LJC 11/2
☐ Ammonium (NH_4) mg/L me/L	☐ Nitrate (NO_3) mg/L me/L				
Cations Total 36.33 me/L	Anions Total 36.87 me/L				

EDWARD S. BABCOCK & SONS, INC.

Andrew Boland

ATTACHMENT E

Buena Engineers, Inc.
ENGINEERING
TESTING • INSPECTION
1731-A WALTER STREET • VENTURA, CALIFORNIA 93003 • PHONE (805) 642-6727

82-2-105
B-12528-P1

February 11, 1982

John Ahlstrom
10345 Cresta Drive
Los Angeles, California 90064

Project: Riverview Ranch
Blythe, Riverside County, California

Subject: Percolation Testing Feasibility Report

Dear Sir:

As requested, we have performed the necessary drilling and testing for the sewage disposal feasibility report for Riverview Ranch in the Blythe area of Riverside County, California. The scope of work was based on the current Riverside County guidelines as contained in their publication "Waste Disposal for Individual Homes, Commerical and Industrial", and on the information submitted to our office. It is emphasized that the purpose of our testing was to determine the feasibility of on-site sewage disposal systems, and not to design systems for any particular application.

The property is located at the south end of River Road, north of Sixth Street on the California side of the Colorado River in the Blythe area of Riverside County, California. Septic tanks and leach line disposal systems are recommended for this property, due to the relatively flat nature of the site and the relatively high water table. Free water was detected at depths of fourteen (14) to sixteen (16) feet.

Test holes and logging holes were excavated on the property on January 25, 1982, using a CME 45B Drill Rig. Test holes were presoaked immediately after drilling, and tested. The location of borings were determined by pacing and sighting from the existing road and other prominent features. The location of the borings should only be considered accurate to the degree implied by this method.

Percolation tests were performed by placing several inches of water in the test holes and recording the depth over a period of time. Due to the rapid rate of fall, water was added after each reading. Tests were performed for approximately one (1) hour, with readings taken approximately every ten minutes, except where the rate was very rapid. Test results are summarized on the following pages:

February 11, 1982

82-2-105
B-12528-P1

Test No.	RATE	
a	1.0 min/inch	20 ft^2/100 gal
b	1.0 min/inch	20 ft^2/100 gal
c	1.0 min/inch	20 ft^2/100 gal
d	1.0 min/inch	20 ft^2/100 gal
e	1.0 min/inch	20 ft^2/100 gal
f	1.0 min/inch	20 ft^2/100 gal
g	1.0 min/inch	20 ft^2/100 gal
h	1.0 min/inch	20 ft^2/100 gal
i	1.0 min/inch	20 ft^2/100 gal
j	1.0 min/inch	20 ft^2/100 gal

Leach lines should be acceptable on this parcel using an absorption rate of 20 ft^2/100 gallons of septic tank capacity. The leach lines may be located in any area of the parcel except as outlined in table 5.6 of the Riverside County guidelines, and all systems should operate by gravity flow. No grading should be necessary in the area of the leach lines, which should be located approximately three (3) to four (4) feet below the existing ground surface.

Based on the data presented in the report and using the recommendations set forth, it is the judgement of this engineer that leach line type sewage disposal could be used on this property, if location and density of development is coordinated with the engineer at the time of planning.

Based on the data presented in the report and the testing information accumulated, it is the judgement of the engineer that the ground water table should not encroach within the current allowable limit set forth by County and State requirements, when the recommendations of this report are followed.

Respectfully submitted,

BUENA ENGINEERS, INC.

Craig S. Hill

Craig S. Hill

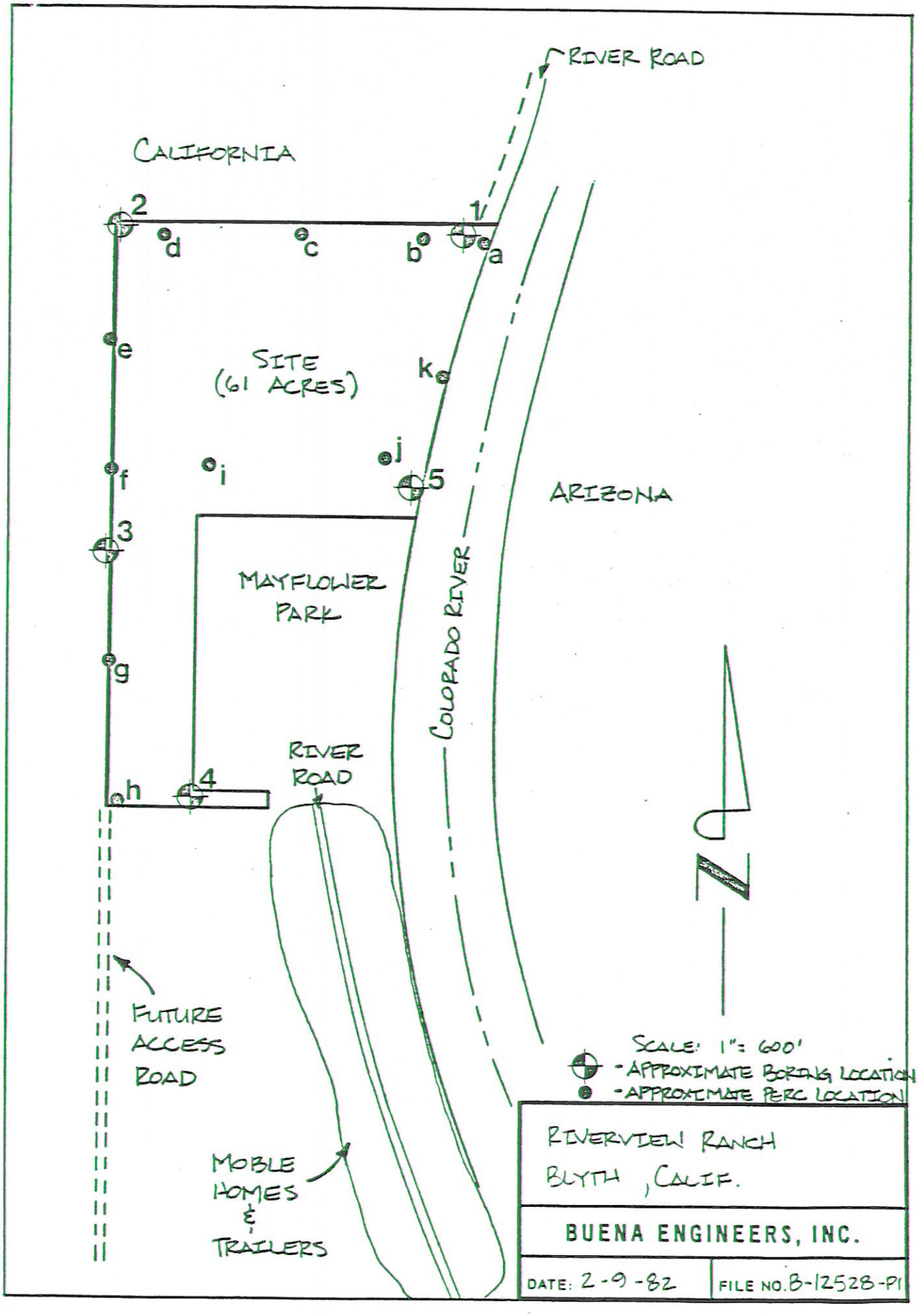
Reviewed and approved,

Raymond E. Brannen

Raymond E. Brannen
CE 28966

REB/NGH/nan

Copies: 6 - Ahlstrom
1 - PS file
1 - VTA file


RIVER ROAD
CALIFORNIA
2
1
d
c
b
a
e
SITE
(61 ACRES)
k
j
i
f
5
ARIZONA
3
MAYFLOWER
PARK
COLORADO RIVER
g
RIVER
ROAD
h
4
N
FUTURE
ACCESS
ROAD
SCALE: 1" = 600'
- APPROXIMATE BORING LOCATION
- APPROXIMATE PERC LOCATION
MOBLE
HOMES
&
TRAILERS
RIVERVIEW RANCH
BLYTH, CALIF.
BUENA ENGINEERS, INC.
DATE: 2-9-82
FILE NO. B-12528-P1

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. A Date Excavated: 1-27-82

Depth of Test Hole: 37 Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr. Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-28-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	3:30 3:42	12	35	0	35
2	3:45 4:00	15	35	0	35

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
	Someone ran over it and broke it and caved it in.					

LEACH LINE PERC DATA SHEET

Project: Riverview Rand Job No: B-12528-P1

Test Hole No. B Date Excavated: 1-27-81

Depth of Test Hole: 39 Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr Date: 1-27-81 Presoak: yes

Actual Percolation Tested by: N Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	3:00 3:10	10	38	0	38
2	3:12 3:25	13	38	0	38

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
7:00 7:10	10	10	38	27	11	.91 use 1
7:11 7:21	10	21	38	22	16	.63 use 1
7:22 7:32	10	32	38	22	16	.63 use 1
7:33 7:43	10	43	38	22	16	.63 use 1
7:44 7:54	10	54	38	22	16	.63 use 1
7:55 8:05	10	65	38	22	16	.63 use 1
	Total Depth when done = 37"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. C Date Excavated: 1-27-81

Depth of Test Hole: 57 Soil Classification:

Check for Sandy Soil Criteria Tested By: N Sr. Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	10:27 10:30	3	45	0	45
2	10:32 10:35	3	45	0	45

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
8:10 8:20	10	10	50	2½	47½	.21 use 1
8:21 8:31	10	21	50	3	47	.21 use 1
8:32 8:42	10	32	50	3	47	.21 use 1
8:43 8:53	10	43	50	4	46	.22 use 1
8:54 9:04	10	54	50	4½	45½	.22 use 1
9:05 9:15	10	65	50	6	44	.23 use 1
	Total Depth when done = 53½"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. D Date Excavated: 1-27-81

Depth of Test Hole: 40" Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr. Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	10:15 10:20	5	38	0	38
2	10:42 10:55	13	38	0	38

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
9:20 9:30	10	10	37	3½	33½	.30 use 1
9:31 9:41	10	21	37	6½	30½	.33 use 1
9:42 9:52	10	32	37	7½	29½	.34 use 1
9:53 10:03	10	43	37	6½	30½	.33 use 1
10:04 10:14	10	54	37	8	29	.35 use 1
10:15 10:25	10	65	37	11	26	.39 use 1
	Total Depth when done = 37"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. E Date Excavated: 1-27-82

Depth of Test Hole: 53 Soil Classification:

Check for Sandy Soil Criteria Tested By: N Sr. Date: 1-29-82 Presoak: yes

Actual Percolation Tested by: N Sr. Date: 1-30-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	11:00 11:25	25	50	49	1
2	11:26 11:51	25	50	48	2

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
9:20 9:30	10	10	44	23	21	.48 use 1
9:31 9:41	10	21	44	18	26	.39 use 1
9:42 9:52	10	32	44	11	33	.30 use 1
9:53 10:03	10	43	44	12	32	.31 use 1
10:04 10:14	10	54	44	12	32	.31 use 1
10:15 10:25	10	65	44	12	32	.31 use 1

LEACH LINE PERC DATA SHEET

Project: Riverview Rand Job No: B-12528-P1

Test Hole No. F Date Excavated: 1-27-82

Depth of Test Hole: 37 Soil Classification:

Check for Sandy Soil Criteria Tested By: N Sr. Date: 1-29-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-30-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	11:30 11:55	25	35	30	5
2	12:05 12:30	25	35	28	7

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
8:10 8:20	10	10	31	8	23	.44 use 1
8:21 8:31	10	21	31	7	24	.42 use 1
8:32 8:42	10	32	31	5½	25½	.39 use 1
8:43 8:53	10	43	31	5½	25½	.39 use 1
8:54 9:04	10	54	31	5½	25½	.39 use 1
9:05 9:15	10	65	31	4½	26½	.38 use 1
	Total Depth when done = 28"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. G Date Excavated: 1-27-82

Depth of Test Hole: 46 Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr. Date: 1-28-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-30-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	11:52 12:27	27	46	3½	42½
2	12:29 12:56	27	46	4	42

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
7:00 7:10	10	10	40	13	27	.37 use 1
7:11 7:21	10	21	40	14	26	.39 use 1
7:22 7:32	10	32	40	11	29	.35 use 1
7:33 7:43	10	43	40	9	31	.32 use 1
7:44 7:54	10	54	40	7	33	Cave in
7:55 8:05	10	65	40	7	33	"
	Hole caved in around pipe					
	otal Depth 35"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. H Date Excavated: 1-27-82

Depth of Test Hole: 107 Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	12:45 1:10	25	62	30	32
2	1:15 1:40	25	64	32	32

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
3:20 3:30	10	10	68	11	57	1
3:31 3:41	10	21	68	9	59	1
3:42 3:52	10	32	68	9	59	1
3:53 4:03	10	43	68	9	59	1
4:04 4:15	10	54	68	7	61	1
4:15 5:25	10	65	68	2	66	1
	Total Depth 100"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. I Date Excavated: 1-27-82

Depth of Test Hole: 48 Soil Classification:

Check for Sandy Soil Criteria Tested By: N. Sr. Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	1:17 1:42	25	48	3½	44½
2	1:45 2:10	25	48	5	43

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
2:10 2:20	10	10	45	10½	34½	1
2:21 2:31	10	21	45	12½	32½	1
2:32 2:42	10	32	45	12½	32½	1
2:43 2:53	10	43	45	12½	32½	1
2:54 3:04	10	54	45	12½	32½	1
3:05 3:15	10	65	45	10½	34½	1
	Total Depth = 45"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. J Date Excavated: 1-27-82

Depth of Test Hole: 46 Soil Classification: _____

Check for Sandy Soil Criteria Tested By: N. Sr. Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	1:30 1:55	25	44	4	40
2	2:00 2:25	25	44	5	39

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
1:00 1:10	10	10	41	7	34	1
1:11 1:21	10	21	41	9½	31½	1
1:22 1:32	10	32	41	9	32	1
1:33 1:43	10	43	41	9	32	1
1:44 1:54	10	54	41	8	33	1
1:55 2:05	10	65	41	8½	32½	1
	Total Depth = 41"					

LEACH LINE PERC DATA SHEET

Project: Riverview Ranch Job No: B-12528-P1

Test Hole No. K Date Excavated: 1-27-82

Depth of Test Hole: 45 Soil Classification:

Check for Sandy Soil Criteria Tested By: Date: 1-27-82 Presoak: yes

Actual Percolation Tested by: N. Sr. Date: 1-29-82

SANDY SOIL CRITERIA TEST

Trial No.	Time	Time Interval (min)	Initial Water Level (Inches)	Final Water Level (Inches)	△ in Water Level (Inches)
1	2:07 2:18	11	43	0	43
2	2:20 2:33	13	43	0	43

Use Normal Sandy (Circle One) Soil Criteria

Time	Time Interval (min)	Total Elapsed Time (min)	Initial Water Level (inches)	Final Water Level (inches)	△ in Water Level (inches)	Percolation Rate (min/inch)
10:35 10:45	10	10	37	11	26	1
10:46 10:56	10	21	37	12	25	1
10:57 11:07	10	32	37	17	20	1
11:08 11:18	10	43	37	17	20	1
11:19 11:29	10	54	37	17	20	1
11:30 11:40	10	65	37	17	20	1
	Total Depth = 37"					

LOG OF BORING
for
Riverview Ranch

Job No. B-12528-P1
Report No. 82-2-105

DATE 1-27-82 BORING NO. 1 LOCATION Per Plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION	Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS Sand	Silt	Clay
0				Light brown silty very fine to medium sand with traces of pea gravel			A1				
5									89.7	9.7	0.6
10				Light brown fine to medium sand			A2				
15									95.7	2.7	1.6
									▽	Free Water @ 16.0'	
20									Total Depth at 20.0'		

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

Plate B

LOG OF BORING
for
Riverview Ranch

Job No. B-12528-P1
Report No. 82-2-105

DATE 1-27-82 BORING NO. 2 LOCATION Per Plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION	Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS Sand	Silt	Clay
0				Soil A1, as below			A1				
5				Medium brown very fine sandy very silty clay			C1		3.8	67.8	28.4
10				Light brown fine to medium sand			A2				
15									▽ Free water at 14.0'		
									Total Depth at 15.0'		

Soil A1: Light brown silty very fine to medium sand with traces of pea gravel

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

Plate B

LOG OF BORING
for
Riverview Ranch

Job No. B-12528-P1
Report No. 82-2-105

DATE 1-27-82 BORING NO. 3 LOCATION Per Plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION	Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0				Soil C1, as below			C1		
5				Light brown fine to medium sand			A2		
10									
15									▽ Free water at 14.0'
									Total Depth at 15.0'
				Soil C1: Medium brown very fine sandy very silty clay					

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

Plate B

LOG OF BORING
for
Riverview Ranch

Job No. B-12528-P1
Report No. 82-2-105

DATE 1-27-82 BORING NO. 4 LOCATION Per Plan

Depth (ft)	Symbol Core	Blows/ft	DESCRIPTION	Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0			Light brown silty very fine to medium sand with traces of pea gravel			A1		
5			Light brown fine to medium sand			A2		
10								
15								▽ Free water at 14.0'
								Total Depth at 15.0'

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

Plate B

LOG OF BORING
for
Riverview Ranch

Job No. B-12528-P1
Report No. 82-2-105

DATE 1-27-82

BORING NO. 5

LOCATION Per Plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION	Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0				Light brown silty very fine to medium sand with traces of pea gravel			A1		
				Soil C1, as below			C1		
5				Light brown fine to medium sand			A2		
10									
15									▽ Free water at 15.0'
									Total Depth at 16.0'

NOTE: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

Plate B

ATTACHMENT F

Traffic Analysis *

This traffic impact analysis contains documentation of existing traffic conditions, traffic generated by the project, distribution of the project traffic to roads outside the project site, and an analysis of future traffic conditions.

Existing Traffic Conditions

This section addresses the surrounding street system, traffic volumes, and volume to capacity ratios. Figure 1 illustrates existing traffic conditions.

The surrounding roadway system that will serve the project site is Sixth Avenue and State Highway 95.

. Sixth Avenue is an east-west, two-lane roadway which has no curbs or gutters.

. State Highway 95 is a north-south, two-lane state roadway.

Based on the latest traffic counts made by the Riverside County Road Department, April 1981, Sixth Avenue has a two-way Average Daily Traffic (ADT) of 934 vehicles east of State Highway 95. For the purposes of this analysis, an ADT of 1,000 vehicles will be used. Based upon the latest counts made by Caltrans, 1981, State Highway 95 has an ADT of 3,300 vehicles at Sixth Avenue. The distribution of vehicles is a two-way ADT of 1,400 north of Sixth Avenue and a two-way ADT of 1,900 south of Sixth Avenue.

The daily capacity of a road is defined as that daily volume of traffic which will have "at-capacity" operation in the peak hour of the day. Volumes on a road typically are very low

* SOURCE: KUNZMAN ASSOCIATES, PREPARED FOR GPA 206.

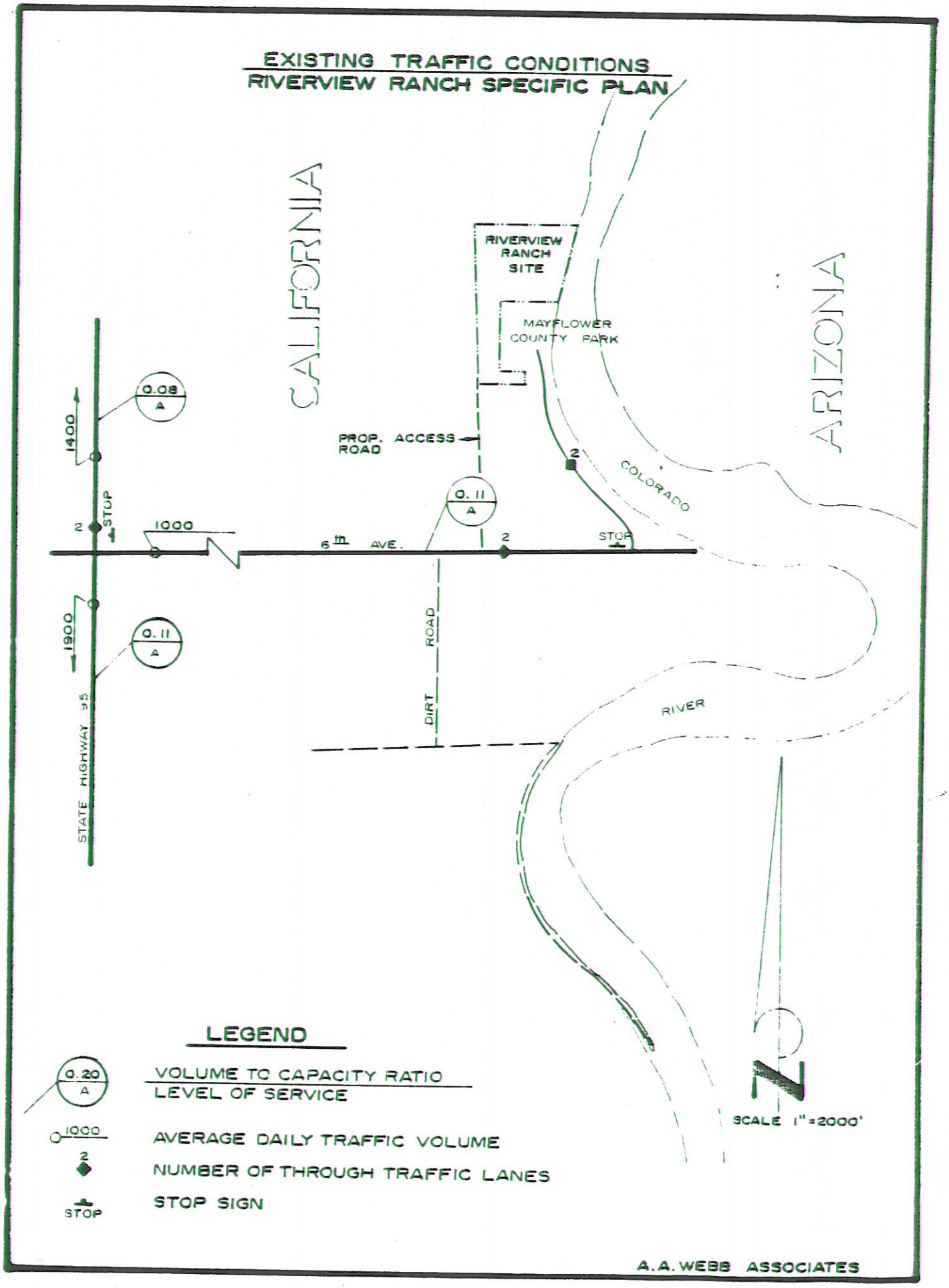

EXISTING TRAFFIC CONDITIONS
RIVERVIEW RANCH SPECIFIC PLAN
CALIFORNIA
ARIZONA
RIVERVIEW RANCH SITE
MAYFLOWER COUNTY PARK
PROP. ACCESS ROAD
COLORADO
RIVER
6th AVE.
DIRT ROAD
STATE HIGHWAY 95
1400
1900
1000
0.08 A
0.11 A
0.11 A
2
STOP
STOP
SCALE 1" = 2000'
LEGEND
0.20 A
VOLUME TO CAPACITY RATIO
LEVEL OF SERVICE
1000
AVERAGE DAILY TRAFFIC VOLUME
NUMBER OF THROUGH TRAFFIC LANES
STOP
STOP SIGN
A.A. WEBB ASSOCIATES

FIGURE 1

late at night and peak at some point during daylight hours. If the daily volume is doubled, the volume in any hour is doubled. As the daily volume is increased, the peak hour traffic will eventually reach capacity. It is this daily volume which is defined as the daily capacity. The San Bernardino District office of Caltrans generally estimates capacities for rural two-lane roads at 16,500 vehicles per day. For State Highway 95, the Caltrans capacity is used.

The County of Riverside generally estimates capacities at 9,000 for two-lane roads. The County's capacity has been used for Sixth Avenue.

In determining a roadway's volume to capacity ratio, the existing daily traffic volume is divided by the roadway's estimated capacity. Using the capacities noted above, the roadways studied in this report are operating within their respective capacities. Table 1 gives a comparison of volume to capacity ratios and levels of service.

Impacts

To estimate project-related traffic volumes at various points on the street network, a three step process is utilized. First, the traffic which will be generated by the proposed development is determined. Secondly, the traffic volumes are geographically distributed to major attractions of trips, such as employment centers, commercial developments, and recreational centers. Finally, the trips are assigned to specific roadways and the project related traffic volumes are determined on a route-by-route basis.

TABLE 1

LEVEL OF SERVICE DESCRIPTIONS

Level of Service	Traffic Flow Quality	Volume to Capacity Ratio (a)
A	Low volumes; high speeds; speed not restricted by other vehicles.	0.00 - 0.60
B	Operating speeds beginning to be affected by other traffic.	0.61 - 0.70
C	Operating speeds and maneuverability closely controlled by other traffic; recommended ideal design standard.	0.71 - 0.80
D	Tolerable operating speeds; often used as design standard in urban areas.	0.81 - 0.90
E	Capacity; the maximum traffic volume a roadway can accommodate during peak traffic periods.	0.91 - 1.00
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service E.	Not Meaningful

(a) Although the Highway Capacity Manual recommends the above relationship between Level of Service and volume to capacity ratios, field observation shows that a more appropriate relationship would be as follows:

A, 0.00 to 0.80; B, 0.81 to 0.85; C, 0.86 to 0.90; D, 0.91 to 0.95; and E, 0.96 to 1.00. Source: Kunzman & Associates

Source: Highway Capacity Manual, Highway Research Board Special Report 87, National Academy of Sciences, Washington, D.C., 1965, page 320.

The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are expressed in terms of trip ends per person, trip ends per employee, trip ends per acre, trip ends per dwelling, or trip ends per thousand square feet of floor space. If a particular land use generates six outbound trips per acre in the morning peak hour, then six vehicles are expected to leave the site in the morning peak hour for each acre of development.

Significant research efforts have been made by Caltrans, the Institute of Transportation Engineers, County of Riverside, and others to establish the correlation between trips and land use. From this body of information, trip generation rates can be estimated with reasonable accuracy for various land uses. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Table 2 depicts the trip generation rates by various types of land use. Table 3 indicates the total daily and peak hour trips generated by the project.

Traffic distribution is the determination of the directional orientation of traffic. It is based on the geographical location of employment opportunities along with commercial, business, and recreational opportunities.

TABLE 2

TRIP GENERATION RATES*

Land Use	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Daily
Estates 0.1-1.0 Dwellings per acre	0.3	0.5	0.6	0.3	8.5
Single Family Detached 3.0-8.6 Dwellings per acre	0.3	0.6	0.7	0.4	10.0
Multi Family 12-13 Dwellings per acre	0.1	0.3	0.3	0.2	4.6
Commercial	10.0	10.0	25.0	25.0	500

*Kunzman & Associates

TABLE 3

PROJECT TRIPS GENERATED
RIVERVIEW RANCH SPECIFIC PLAN

Land Use	Dwellings/ Acre	AM Peak Hour In	AM Peak Hour Out	PM Peak Hour In	PM Peak Hour Out	Daily
Single Family	175 DU's	53	105	123	70	1750
Residential Total	175	53	105	123	70	1750
Commercial	2.5 Acres	25	25	63	63	1250
Totals		78	130	186	133	3000

Traffic assignment is the determination of which specific route development traffic will use, once the generalized traffic distribution is determined. The basic factors affecting route selection are minimum time path and minimum distance path. Quite often the minimum time and distance paths are one and the same. When the two paths are different, the minimum time path will usually take precedence, assuming all other considerations are equal. Other considerations might be the aesthetic quality of alternate routes, grades, and so forth. It should be noted that the minimal time path is cognizant of congestion. As a roadway's volume approaches capacity, operating speeds decrease. Ultimately, congestion on the shortest distance path will decrease the speed until an alternate path has a shorter time path, then traffic will divert to the shorter time path.

The project will generate a total of 1,937 external vehicle trips per day (Table 4). Assuming the "worst case" situation and all of the offsite trips impact Sixth Avenue and State Highway 95, the roadways will still operate within their capacity (Figure 2). Assuming a growth rate of 2 percent per year over the next ten years, all roadways will continue to operate within their capacity.

LARTS data by Caltrans suggests a 6.9 mile per trip average for all homebased trips. This estimate appears to be low for the project site, so a trip average of 11 miles is used for off-site trips and 1 mile is used for on-site trips. Based on the above trip length figures, the proposed project will

TABLE 4

PROJECT INTERNAL - EXTERNAL TRIPS
RIVERVIEW RANCH SPECIFIC PLAN

Description	Land Use: Residential	Land Use: Commercial	Total
Total Trips			
Daily	1,750	1,250	3,000
Peak Hour			
AM-In	53	25	78
AM-Out	105	25	130
PM-In	123	63	186
PM-Out	70	63	133
Internal Trips			
Daily	438	625(1)	1,063
Percent of Daily	25	50	
Peak Hour			
AM-In	13	13	26
AM-Out	26	13	39
PM-In	31	32	63
PM-Out	18	32	50
External Trips			
Daily	1,312	625	1,937
Percent of Daily	75	50	
Peak Hour			
AM-In	40	13	53
AM-Out	79	13	92
PM-In	92	32	124
PM-Out	52	32	84

(1) This reflects the fact that the trips from the residential and commercial land uses will remain on-site and were counted twice (once at each end). Approximately 25 percent of the residential trips will be destined for the commercial development proposed on-site. Also, 50 percent of the commercial trips will be destined for the project's residential areas.

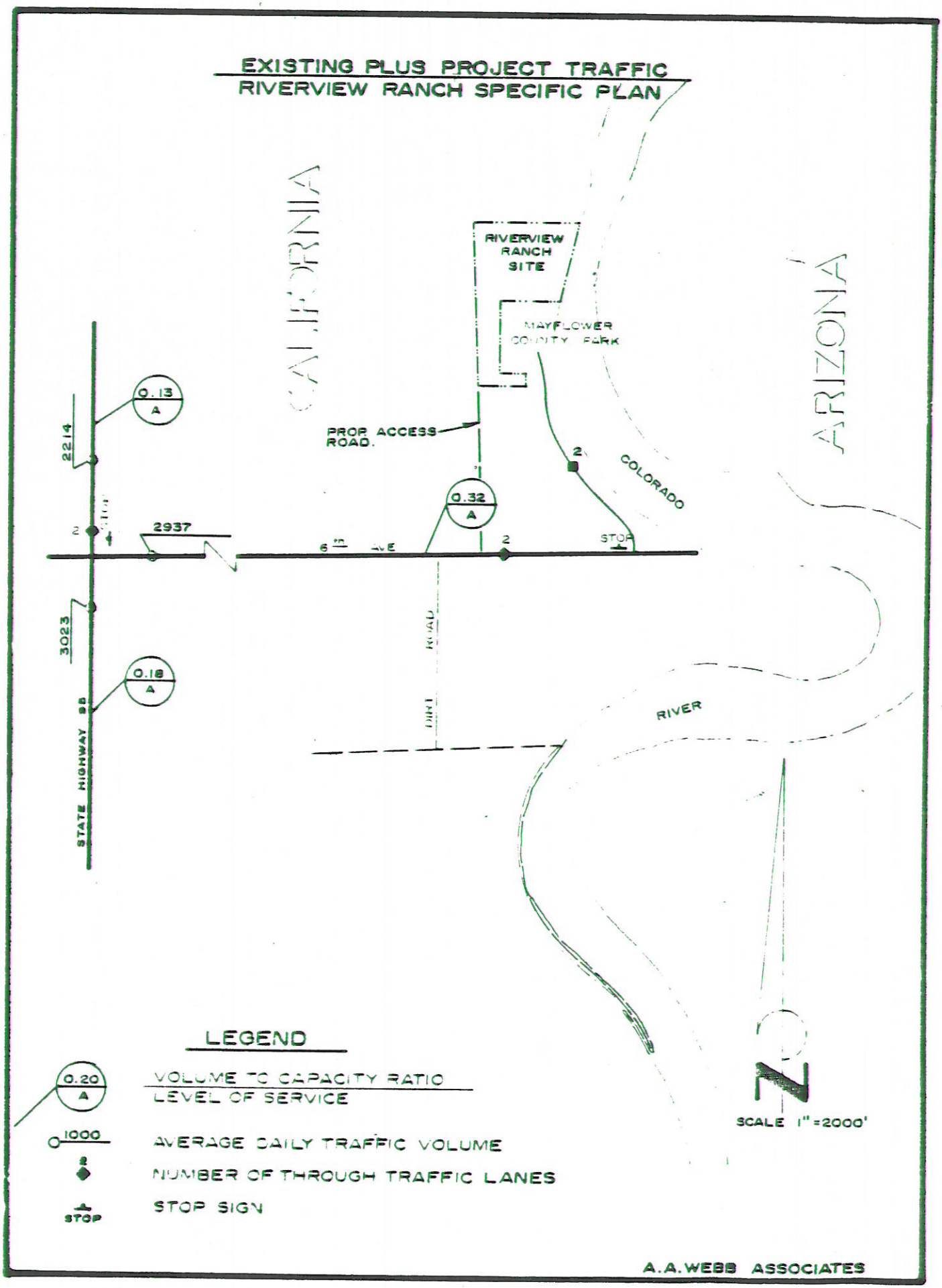

EXISTING PLUS PROJECT TRAFFIC
RIVERVIEW RANCH SPECIFIC PLAN
CALIFORNIA
ARIZONA
RIVERVIEW RANCH SITE
MAYFLOWER COUNTY PARK
PROP ACCESS ROAD.
COLORADO
RIVER
0.13
A
2214
0.32
A
2937
6TH AVE
STOP
3023
0.18
A
STATE HIGHWAY 95
DIRT ROAD
LEGEND
0.20
A
VOLUME TO CAPACITY RATIO
LEVEL OF SERVICE
1000
AVERAGE DAILY TRAFFIC VOLUME
NUMBER OF THROUGH TRAFFIC LANES
STOP
STOP SIGN
N
SCALE 1" =2000'
A.A.WEBB ASSOCIATES

FIGURE 2

generate approximately 22,370 vehicle miles of travel daily.

At the present time, access to the project site is gained through Mayflower County Park.

An access road will have to be constructed and dedicated to the Riverside County Road Department. Minimum standards for this road will be 26 feet of paving on 60 feet of right-of-way. The new access road will be aligned in such a way as to provide an alternate entrance and exit to Mayflower County Park.

The traffic analysis was based on the "worst case" situation which assumed that all the homeowners within the project site were year-round residents and worked in the Blythe area. However, due to the resort nature of most desert communities, the following items should be considered:

- Desert communities have high second home occurrences.
- "Second home" resident occupancy is not year round.
- The market study revealed that 60 to 80 percent of the new dwellings in the desert area are occupied by retired persons or "second home" residents.
- Trip generation in retirement areas runs between 2.8 to 4.9 trips per unit. This is one-third to one-half the rate of non-retirement areas.

These items will inherently reduce vehicle trips and vehicle miles traveled.

The California Department of Transportation, District 11, indicated that because of the additional vehicle trips

generated by the project, the intersection of State Highway 95 and Sixth Avenue would require left-turn channelization on State Highway 95 with standard public road connections. This work would be subject to an encroachment permit. Caltrans also indicated that the intersection of State Highway 95 and Hobson Way may warrant signalization because of the traffic generated by the project.

Mitigation Measures

Methods of reducing the number of vehicle trips and vehicle miles traveled would be carpooling and bike paths. Bike paths would reduce the number of internal vehicle trips while carpooling would reduce the number of external vehicle trips. Carpooling is a matter of personal preference. However, as the cost of gasoline approaches two dollars a gallon, it is likely that this type of travel will increase.

Based on a market analysis, conducted for the project by the Levander Company, it was concluded that the project would be primarily a second home market oriented to riverfront recreation. The market distribution would be as follows:

- About 90% to weekend and vacation use by nearby Greater Los Angeles and Phoenix residents, with the figure distributed at about 90-10 Los Angeles versus Phoenix.
- About 10% winter-month occupancy by persons with permanent residence in Canada, the mid-west, etc. (So called "snowbirds").

The traffic analysis was based on a "worst case" situation and assumed the project site residents would live on the site year-round. This will not be the case, as is evidenced by the market analysis. It is also expected that about 90% of the project residents would approach from the south, resulting in no need for left-turn channelization of State Highway 95.

According to signal warrants adopted by Caltrans and the Federal Highway Administration, the intersection of Hobson Way and State Highway 95 does not warrant signals at the present time, nor will the project generate enough additional traffic to warrant traffic signals.

ATTACHMENT G

Impacts on Energy

The commitment of the project for energy can be viewed in a short-term and long-term basis.

In the short-term, energy will be required for onsite grading and construction. This impact is a short-term unavoidable impact that will cease as soon as the construction phase of the project has ended.

One long-term commitment for energy results from the need for space heating and other household related demands.

Table 3-8 shows the energy required by the project, based on the average Southern California residential customer. As a result of the location of the site, the energy consumption in the summer will be greater based on a larger demand for air conditioning. However, this greater summer time usage should be somewhat offset by the lower amount of energy used in the winter for heating purposes.

TABLE 3-8

GPA-206
ENERGY REQUIRED FOR RESIDENTIAL USE

Project	Electricity* (KWH/Month)	Natural Gas** (Therms/month)
GPA-206	90,750	14,636

*At rate of 550 KWH/Month/Dwelling Unit, Southern California Edison Company
**At rate of 88.7 Therms/Month/Dwelling Unit, Southern California Gas Company

SOURCE: DRAFT ENVIRONMENTAL IMPACT REPORT, GENERAL PLAN AMENDMENT NO. 206, MAY 1981, ALBERT A. WEBB ASSOCIATES

Mitigation Measures

Since energy impacts during the construction phase are short-term and unavoidable, no mitigation measures are given.

At the present time, the California Energy Commission is working on building performance standards to reduce the amount of energy needed by new buildings.

The purpose of the 1980 Residential Building Standards Project is to meet the Warren-Alquist Act (Public Resources Code 25402) requirement for periodically updating the building standard to increase the efficiency of energy use in new buildings. The Legislature mandated that the California Energy Commission (CEC) adopt residential building performance standards by January 1, 1981.

The goal of the 1980 Residential Building Standards is to develop regulations which will require new residential buildings to achieve maximum energy savings while remaining cost-effective when compared to buildings built prior to 1975, the year the Warren-Alquist Act was passed. Marginal costs, which reflect the costs of the additional energy supply avoided due to the proposed standards, will be used to determine cost-effectiveness.

The California Energy Commission's 1979 Biennial Report sets a CEC goal to develop building standards that would "reduce the electricity and gas now used in typical new buildings by at least 80 percent for new buildings constructed after 1990".

Clearly, new residential buildings can be designed and built which save 80 percent or more of the energy used by buildings built prior to the Warren-Alquist Act. Such residences are currently being built and marketed successfully by innovative builders throughout the state. Saving this much energy in all new buildings is the goal for the 1980 Residential Building Standards.

The Building Standards will emphasize the performance approach. The performance standards will be maximum allowable annual energy budgets in BTU's per square foot for particular building types in specific climate zones in California. The performance standards will encourage building designers to optimize the energy efficiency for planned new buildings, based on local climate conditions. In addition to performance standards, equivalent prescriptive standards will be established. The prescriptive standards will identify combinations of conservation and solar measures that will satisfy the performance budget. Builders who do not wish to determine the energy performance of their buildings may comply with the building standards simply by installing these conservation and solar measures.

The major energy savings measures investigated for inclusion in the standards were:

- Building envelope efficiency improvements
- Passive solar space heating systems

- Active solar water heating systems
- Heating and cooling equipment size limitations
- Lighting efficiency improvement

It is anticipated that, since the proposed project will be developed after adoption of the 1980 Residential Building Standards, all buildings within the proposed project will include the above stated energy saving measures.

Water Quality

Existing Conditions

The project site is located in the Palo Verde subunit of the East Colorado River Basin. The entire Colorado River Basin covers approximately 242,000 square miles of watershed that includes seven states.

Major problems that are being encountered in the Basin are as follows:

- Over commitment of flows
- Reduced flows
- Increasing salinity
- Evaporation losses

These four factors, along with planned upstream development under present practices, could increase the Total Dissolved Solids (TDS) into the range of 1300 mg/l by the year 2000. Evaporation losses in 1968 on Lake Mead, Mojave and Havasu amounted to 944,000 acre-feet. This evaporation caused an increase of 80 mg/l in salinity downstream of Parker Dam.