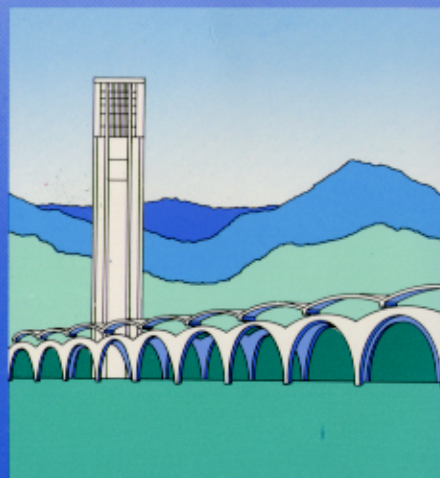


LONG RANGE
DEVELOPMENT
PLAN



UNIVERSITY
OF
CALIFORNIA
RIVERSIDE

JULY 1990

UNIVERSITY OF CALIFORNIA, RIVERSIDE LONG RANGE DEVELOPMENT PLAN

prepared by:

**THE UNIVERSITY OF CALIFORNIA, RIVERSIDE
OFFICE OF CAMPUS PLANNING**

with the assistance of:

ROYSTON HANAMOTO ALLEY & ABEY

LSA ASSOCIATES

REID & TARICS ASSOCIATES

KENNEDY, JENKS, CHILTON

MOORE IACOFANO & GOLTSMAN

ENSR

July 1990

THIS
LONG RANGE DEVELOPMENT PLAN
IS DEDICATED TO THE MEMORY
OF
MARY KIM McKEOWN
WHOSE TALENT, COMPASSION, AND
STRENGTH INSPIRED ALL WHO KNEW
HER.

Kim McKeown was the project manager for the consultant team. On October 17, 1989, she died in the earthquake-related collapse of the I-880 freeway structure, in the Bay Area, on her return home from two days of meetings at UCR.



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EXECUTIVE SUMMARY

The University of California, Riverside is experiencing the most dramatic growth in its history. The Academic Planning Statement (Appendix A) provides the context and direction for planning. The Long Range Development Plan (LRDP) constitutes the next step in this planning effort and provides the University community with the unparalleled opportunity of setting the first official guidelines for campus growth since 1964.

An LRDP is a comprehensive plan that guides the development of future facilities in the University of California system. The LRDP for the University of California, Riverside identifies the physical development needed to achieve the academic goals of the campus through the year 2005-06 with a projected student population of 18,050. Although this plan addresses an enrollment figure of 18,050, the planning decisions acknowledge the possibility of an enrollment level of 30,000 beyond 2005-06.

The 10-month process of preparing this plan has included extensive meetings, workshops and reviews with key academic and administrative officers, faculty, staff and students, interested citizens and representatives of local government. An Environmental Impact Report (EIR) has been prepared and is available under separate cover. The LRDP EIR examines the environmental effects of the LRDP and, together, these two documents present a detailed account of past planning, existing conditions and land uses, the proposed land uses, and mitigation recommendations.

UCR's 1,106-acre campus is located 3 miles east of downtown Riverside in California's "Inland Empire" region, the one time center of the citrus growing industry. Most academic and extracurricular activities occur within the 576 acre campus area east of the I-215/SR-60 freeway, with the remaining 530 acres west of the freeway used primarily for agricultural teaching and research.

Since the 1984-85 academic year, when UCR had a student enrollment of 4,623, enrollment has steadily increased to UCR's highest level ever of approximately 8,200 students, in the fall of 1989. This represents a rate of enrollment increase of approximately 15% per year from 1984 to 1989.

Academic Goals

As one of the nine campuses of the University of California, UCR shares the University's tripartite mission of teaching, research and public service. The specific mission of UCR is to continue its development as one of the premier public research university campuses in the United States.

Academic goals will support UCR's continued reputation of academic quality during a period of rapid growth. These goals drive UCR's total planning effort both academically and physically:

- **Teaching** - Enhance and encourage further excellence in graduate and undergraduate instruction as the campus grows.
- **Research** - Continue to expand the research efforts and recognition of its faculty.

Introduction

Planning Context

Planning Determinants

- **Public Service** - *Expand the scope and impact of its service to the world, the nation, the state, and the local community.*

Long Range Academic Program Needs

Long range academic program needs identify the physical development needed to meet the academic and institutional goals of the campus during the planning horizon. Approximately 6,809,274 gross square feet (GSF) of additional space will be required to meet projected academic, administrative, and support needs. The plan anticipates housing 35% of UCR's student population in University-controlled housing. New facilities and playing fields will be required to meet the physical education, intramural sports, and recreational needs of students. Special campus projects will include a performing-visual arts and cultural center, an alumni/visitor center, and a conference center.

Goals

Long Range Development Plan

Goals for physical development of the campus evolved with input from the LRDP Planning Committee, the LRDP Steering Committee, the campus community and the public. Five primary goals will guide the growth and physical development of the campus to the target enrollment level of 18,050 by the year 2005-06:

- Create a State-of-the-Art Plan that Conveys the University's Excellence
- Develop Land Use Elements to Strengthen Academic, Cultural and Social Interaction
- Preserve, Enhance and Restore the Natural Environment
- Strengthen and Clarify Circulation Systems
- Maintain Planning Flexibility

Planning Principles

In developing the LRDP, several planning principles with implications for the physical plan directed the overall design concept for both the natural and built environment of the campus.

Open Space Network as the Unifying Element. An open space network will provide the primary structure to the LRDP and unify all land use elements. A strong open space system will enhance the desired ambience of existing landscaping, courtyards, and the general park-like setting. Open space will establish the parameters for academic precinct development by defining academic precinct locations and connecting precincts with malls, walkways, courtyards and plazas. An open space connection will unite the academic core to the east of the freeway with housing, parking and a Professional/Graduate School Reserve to the west.

Academic Core on East Campus. The existing academic core is concentrated to the east of I-215/SR-60. The College of Humanities and Social Sciences, including the Arts, and the College of Natural and Agricultural Sciences constitute the west and east sides of this core with graduate and professional programs distributed around the edges. The LRDP concentrates academic expansion on the east campus. Planning for academic expansion on the east

creates a unified, cohesive core undivided by the swath of the freeway. Maintaining the academic core encourages interaction of graduate and undergraduate students, faculty and staff, and sharing of facilities such as libraries and classrooms. The academic core provides the potential for interaction between disciplines and creates the vitality necessary for campus life. Agricultural research, housing, parking, University Extension, a conference center and a Professional/Graduate School Reserve will be located to the west.

Academic Precincts as Organizing Element. The LRDP capitalizes on the existing informal system of academic precincts. Academic precincts, the land area within which all research, teaching and office space for each college or school will be provided, allow for rational growth for the entire campus. With academic precincts, colleges/schools, and departments, can plan for their own growth within a defined campus area thus enabling academic uses to integrate their programs and to locate in appropriate functional relationships.



Create a Strong and Unique Place. The LRDP will preserve UCR's park-like quality and create a strong and unique place, an image befitting a major university. A ceremonial entrance off University Avenue with a traffic circle will provide a major entry and limit through traffic in keeping with a pedestrian-oriented campus. Clear attractive campus entries will identify the University and define circulation patterns. Preserving the "human-scale" of the campus with low buildings and clear pedestrian walkways will continue the desired park-like ambience. Clustering buildings to improve interaction between programs and providing more gathering places with courtyards and plazas will enhance UCR's image as a vibrant campus.

Landscape and Open Space

The open space component of the LRDP is comprised of three elements: the formal landscape (landscape framework) of the central core and developed areas of campus; the natural landscape associated with the hillsides, the dry

washes and the Botanic Gardens; and the agricultural landscape, located primarily in the west campus area. The landscape framework will provide the primary structure to the campus plan, unifying all the land use elements by establishing the boundaries for precincts, connecting destinations, and strengthening the existing open space system.

Land Use

In order to accommodate the expected growth of UCR, major expansion of academic and support facilities within the central campus is required to meet campus academic program needs. The campus will expand by intensifying development where feasible and by building in areas that have as yet seen only limited development. Within the core and at the apex of the ceremonial entrance, the LRDP identifies locations for an Alumni/Visitor Center, Student Commons, University Club, Student Services, enrollment services, and central administration. Peripheral to the academic core and these land uses will be student housing, administrative support, recreation and other open spaces.

Transportation and Circulation

Changes to the transportation and circulation systems will improve access to the campus while minimizing through-traffic, orient the user or visitor, provide service and emergency access to all precincts, and minimize pedestrian/bicycle/vehicular conflicts. A primary circulation road will encompass the majority of the academic core, all on-campus housing, and all other campus uses except for the agricultural fields south of Pennsylvania Avenue and uses west of Iowa Avenue. The primary circulation route will use City streets for the most part, and redirect through-traffic off University Avenue. University Avenue will become a ceremonial approach to campus, with another approach at Big Springs Road. Secondary campus roads will be used to access parking lots and interior campus destinations but will be closed to through vehicular traffic.

Utilities

The Utility section of the LRDP focuses on the on-campus systems for: sanitary sewer; storm drains; domestic and landscape irrigation water; agricultural irrigation water; distilled water, compressed air and vacuum; natural gas; electrical distribution; chilled water and steam; and communications.

Updating, Monitoring Implementing the LRDP

The LRDP incorporates flexibility and provides areas to expand campus uses not known at present. As UCR's needs evolve, technology advances, and the campus matures, the LRDP should be reviewed and evaluated as to its appropriateness. This review should occur approximately every 5 years and would result in a revised LRDP, requiring approval by the University's Board of Regents.



INTRODUCTION

A Long Range Development Plan (LRDP) is a land use plan that guides the growth of a campus in the University of California system. The LRDP identifies the physical development needed to achieve the academic goals of the campus.

The University of California, Riverside (UCR) General Academic Plan, embodied in the Campus Academic Planning Statement (Appendix A), provides both the impetus and direction for the Long Range Development Plan (LRDP). As a land use plan, the 1990 UCR LRDP will guide the physical development of the campus through the academic year 2005-06 to meet the academic and support needs of a projected student population of 18,050. Although this plan addresses an enrollment figure of 18,050, the planning decisions acknowledge the possibility of an enrollment level of 30,000 beyond 2005-06 at ultimate campus maturation. The projected enrollment level of 18,050 for UCR resulted from an analysis of statewide demographic trends, University of California enrollment trends, and a number of factors specific to this campus including:

- Unique campus characteristics in light of its history and culture
- Campus opinions
- Academic and non-academic program requirements
- Demand for enrollment including graduate/undergraduate mix
- Environmental factors such as physical resources
- Prospects for faculty recruitment
- Various interests of the community affected by the work and prospective growth of the campus
- Optimum rate of growth for the campus in light of these campus factors

The LRDP is a commitment to a land use pattern. It is not an implementation plan and does not constitute a commitment to specific development projects, construction schedules or funding priorities. Each building proposal must be consistent with the LRDP land use patterns and must be individually approved after appropriate review by the Chancellor, the UC Office of the President, and the Regents. As a land use document, the LRDP does not address remodeling, renovating, upgrading or maintaining existing buildings.

This document presents the results of a concentrated effort on the part of UCR and its consultants to prepare an LRDP for the Riverside campus. This LRDP identifies the location of land uses for UCR's planned campus including: buildings; roads and parking; pedestrian circulation; recreation and open space; and utility infrastructure. Other areas or properties owned or used by UCR (detailed in *Appendix B, UCR Property Located Off the Main Campus*) are not included in the plan.

The LRDP is organized into four chapters. *Chapter 1 - Introduction* describes the purpose of the LRDP and the planning process. *Chapter 2 - Planning Context* provides information on the physical setting of the UCR campus. *Chapter 3 - Planning Determinants* summarizes UCR's goals and academic program needs, including a description of the space needed to implement academic goals. *Chapter 4 - Long Range Development Plan* describes the land use, circulation, open space and infrastructure elements. *Appendices* provide background material.

Purpose of the LRDP

The companion document, an Environmental Impact Report (EIR), prepared in conformance with the California Environmental Quality Act (CEQA), is presented under separate cover. The EIR contains detailed discussion of the existing environmental setting of UCR, the potential environmental impacts of the LRDP, proposed mitigation measures, and alternatives to the proposed LRDP. Together these two documents provide an in-depth investigation into the existing nature of the campus and its plans for growth and change.

Need for LRDP

While several previous campus master plans had been commissioned by the Regents, UCR's first official LRDP was approved by the Regents in May 1964. The 1964 LRDP outlined a physical development program for a projected enrollment of 10,000 students by 1970. The 1964 LRDP has remained the guiding campus plan for the past 25 years.*

A number of factors, such as enrollment pressures, programmatic changes and technological advances necessitate reexamining existing land use patterns and facility requirements.

The increased rate of campus growth indicates the need for an updated LRDP. Since the 1984-85 academic year, when UCR had a student population of 4,623, enrollment has increased to UCR's highest level of approximately 8,200 students in Fall 1989. This represents a rate of enrollment increase of approximately 15% per year from 1984 to 1989. Based on the overall increase in population statewide, the regional growth pattern and campus enrollment trends, the Riverside campus is expected to continue to experience an increase in demand for student enrollment.

Planning Process

The LRDP is the product of an extensive planning and review process involving key academic and administrative officers, faculty, staff and students, interested citizens and representatives of local government. Preliminary planning began in 1988 with preparation of the Academic Plan. In 1989 work began on preparing both an LRDP and an accompanying EIR.

Two committees were established to work in tandem to guide this effort: the Long Range Development Planning Committee (LRDPC) and the Long Range Development Plan Steering Committee (LRDPSC). The LRDPC was composed of 23 individuals representing the administration, faculty, students, campus organizations, City officials and community leaders. The LRDPC met on a monthly basis and was provided an in-depth understanding of, and contributed significantly to, the LRDP process, approaches and solutions. The LRDPSC was composed of eight individuals representing the faculty, administration, and the City of Riverside. The role of the LRDPSC was to advise the Chancellor on matters of process, policy and decision-making related to the LRDP and EIR. (See *Appendix F, LRDP Committees* for list of LRDPC and LRDPSC members).

*In 1968, during the preparation of a second LRDP for a UCR student population of 25,000, it was found that student projection figures nationwide were in error. Student enrollment numbers stagnated and at some campuses enrollment dropped. In light of these occurrences, the 1968 LRDP did not go forward and was never adopted.

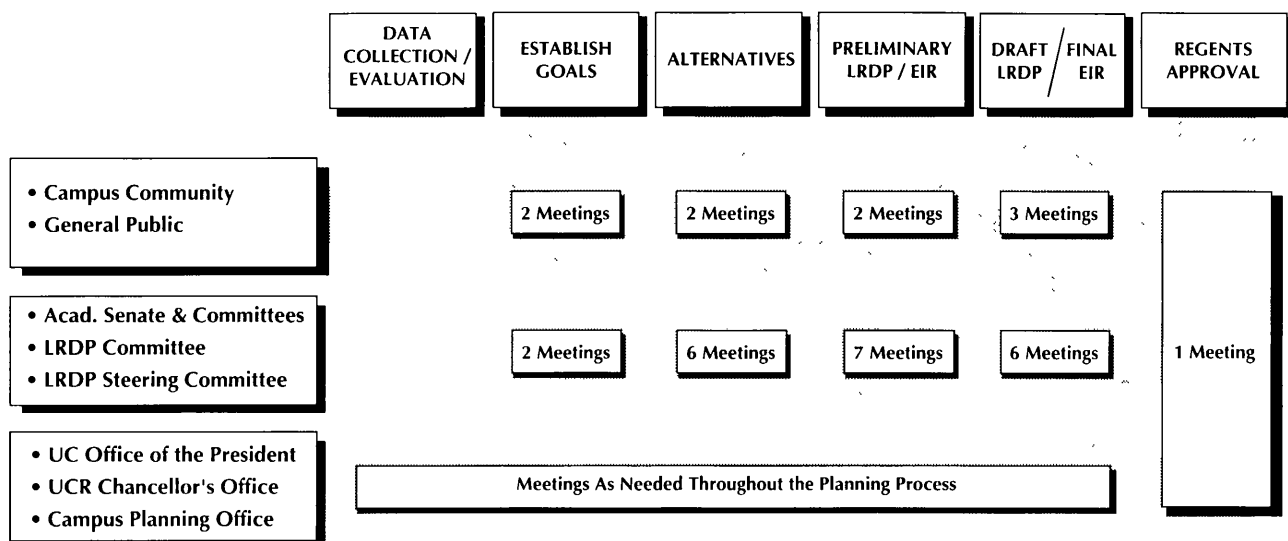
The LRDP planning process included regular meetings with: the Academic Senate and its Physical Resources Planning, Planning and Budget, and Senate Advisory Committees; Department Chairs; the UC Office of the President; and the City of Riverside. Additional meetings and presentations were held with: student groups; the Associated Students UCR Legislative Council, university units and associations (e.g., Housing Services, Parking Services, Institutional Planning and Analysis, Emeritus Faculty Association, and UCR Alumni and Parents Association); civic organizations (e.g., Riverside County PTA, the Downtown Association); and various governmental officials and agencies.

To increase the outreach to students, an information booth was set up on the Carillon Mall and manned two days a week during the winter and spring quarters by Campus Planning staff. Newsletters, maps and graphics of the planning process and the proposed land use plan were widely circulated. In addition, the Campus Planning Office discussed the LRDP on KUCR, the student radio station, responding to questions and issues phoned in by student listeners and fielding questions from the student interviewers.

A multifaceted public involvement program ensured the active participation of City of Riverside residents as well as the campus community. Four sets of workshops (8 total), held at key points in the planning process, encouraged people to identify important issues for campus growth, discuss plan alternatives, evaluate the preliminary land use plan, and review the proposed draft LRDP. The workshops were scheduled with both daytime and evening sessions in order to accommodate as many people as possible.

Figure 1

PLANNING PROCESS



All workshops were announced by advertisements in the local newspaper, the *Press-Enterprise*, and the campus student newspaper, the *Highlander*. Advertisement time was also purchased on local radio. Calendar listings were published in the student newspaper and the *UCR Report/Calendar*, a campus publication. Flyers were sent to all campus departments, City and County agencies, community groups, and libraries for posting. Both the educational access and community access cable television channels listed workshop dates on their bulletin board announcements. The University Relations Office also issued press releases resulting in articles in the local and campus press as well as public service announcements on local radio and television stations. In addition, the University published four LRDP newsletters, "Campus Visions," and distributed them extensively both on and off campus.

Updating, Monitoring, Implementing the LRDP

This LRDP represents the needs of UCR and is based on information available in 1990. Built into the plan is flexibility in phasing and areas for expansion for campus uses not known at present. However, as UCR's needs evolve, technology advances and the campus matures, the LRDP should be reviewed and evaluated as to its appropriateness. This review should occur approximately every 5 years and may result in a revised LRDP, requiring Regents' approval. Subsequent LRDP revisions should follow a similar process as was followed in the preparation of this LRDP.

The campus intends to establish implementation guidelines along with appropriate administrative procedures to ensure compliance with the goals and policies of the LRDP.



PLANNING CONTEXT

Early Development

Recognizing the need for research into the methods and problems of citrus agriculture, the University of California established an experimental orchard and research facility in 1907 on 30 acres of leased land at the eastern base of Mt. Rubidoux. The University of California's College of Agriculture, which administered the program and facility, recognized the need for a larger station where citrus, as well as other southern California crops such as walnuts and avocados, could be studied.

In 1917, after an extensive search, the University of California acquired 370 acres from the City of Riverside with access to a reliable source of water from the Gage Canal. The first Citrus Experiment Station* facilities were formally dedicated in 1918 with the initial complex including: the Horticulture Building, Irrigation Building, Director's and Superintendent's residences, and Barn, with the major buildings designed in a modified Mission Style with tile roofs, arched doorways, and open arcades.

In the early 1930s, expansion of the Citrus Experiment Station was undertaken with the addition of a north wing to the central Horticulture Building, and construction of an Insectary Building and a new Entomology Building. Later additions included a Faculty Club (1948), Entomology Annex (1948), and a number of specialized agricultural buildings and farm lands.

University of California, Riverside Campus Development

The University of California, Riverside, had its official beginning in 1948, when a committee of the State Legislature recommended that a small liberal arts college be established in proximity to the Citrus Experiment Station. Although the governor's approval of an appropriation bill came in July of 1949, immediate development was interrupted by the Korean War. In April 1951, a College of Letters and Science was approved by the Academic Senate of the University and ground was broken for an initial building. By this time additional lands had been acquired north of the original Citrus Experiment Station, bringing the combined total to approximately 1000 acres.

A complement of core campus buildings were completed by 1954: the Library, Webber Hall, Physical Sciences Building, Physical Education Building and the Social Sciences Building. Classes began in February of that year with a faculty of 55, a student body of 117, and a planned capacity for 1,500. In 1954, in anticipation of campus growth, the University initiated work on a residence hall and investigated purchase of surplus military housing to provide adequate student and faculty housing. In 1955, the Canyon Crest housing, previously used by personnel stationed at nearby March Air Force Base and Camp Hahn, an Army World War II training camp, were purchased from the federal government. Also in 1955, enrollment objectives were revised upward and a Campus Master Plan based on an enrollment of 5,000 students was endorsed by the University of California Regents.

Historical Perspective

*Three connected structures constitute the original Citrus Experiment Station Building. This building is known variously as the Horticulture Building, Irrigation Building, Citrus Experiment Station Building, and the Soils and Plant Nutrition (SPN) Building. The new occupant of the renovated structure will be the Graduate School of Management (GSM).

The Historical Development of the UCR Campus

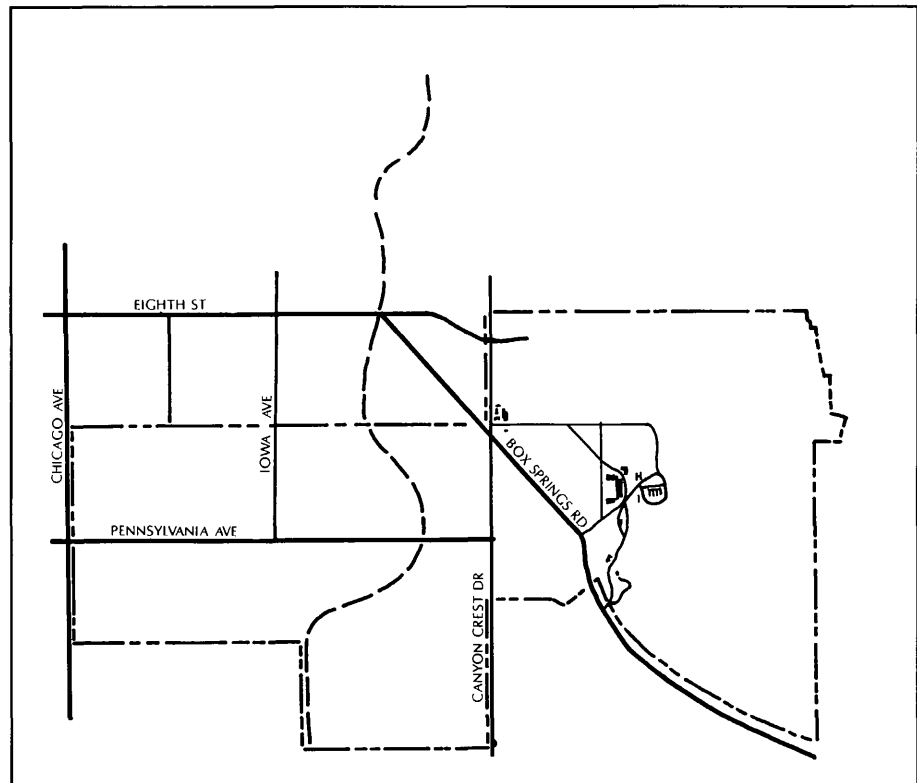


Figure 2 UCR Campus (Citrus Experiment Station) – 1934

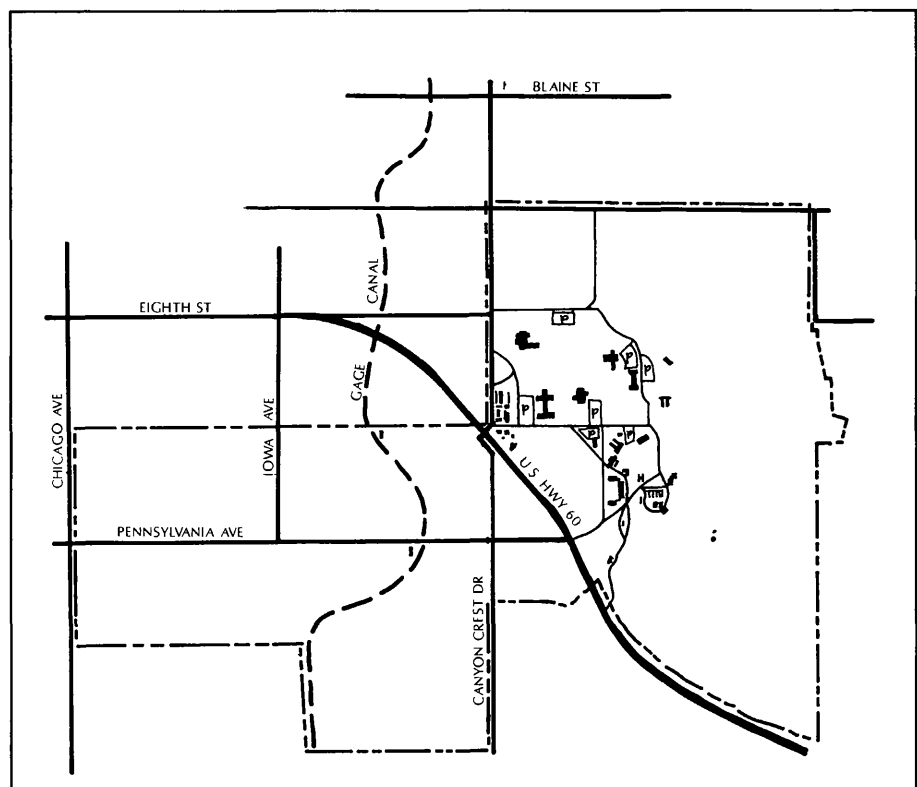


Figure 3 UCR Campus (College of Letters and Science) – 1954

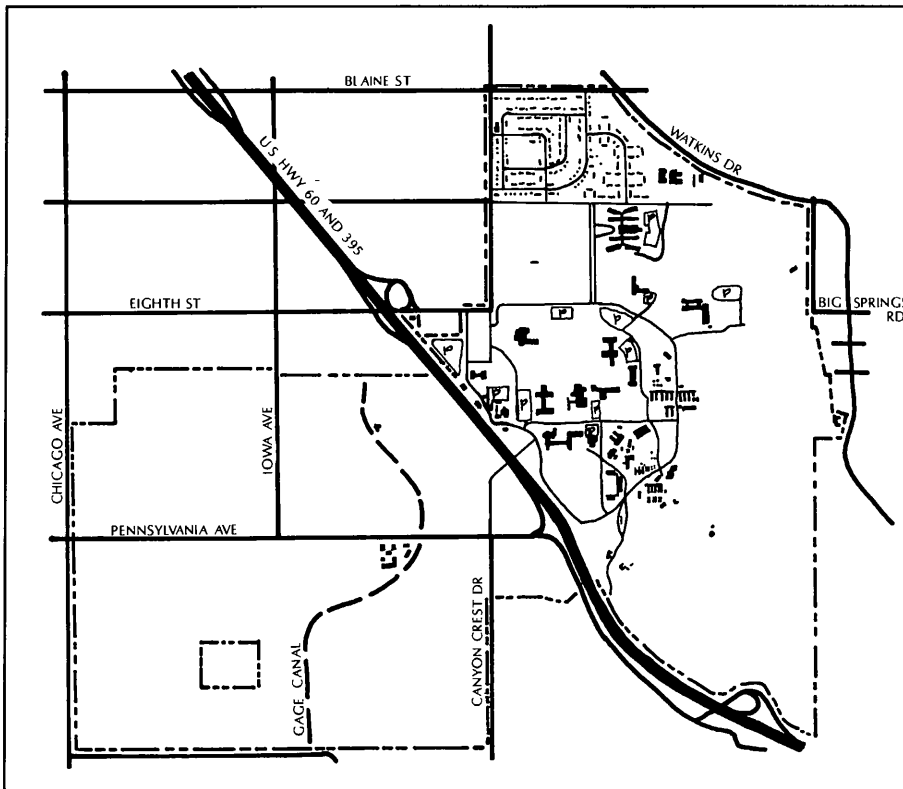


Figure 4 UCR Campus (General Campus) – 1964

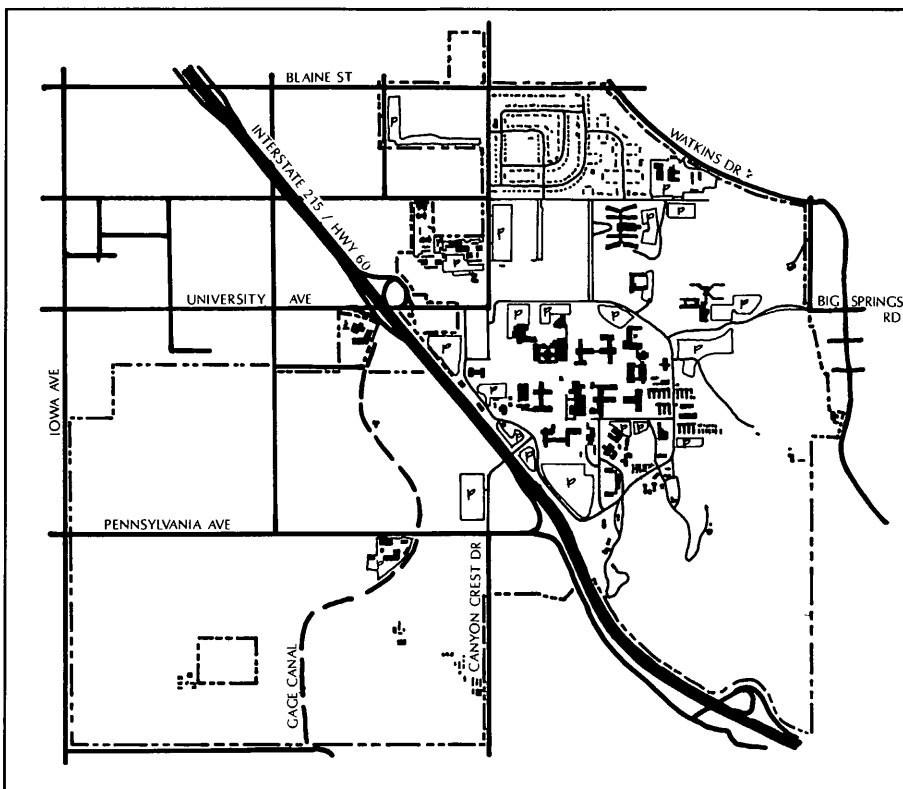
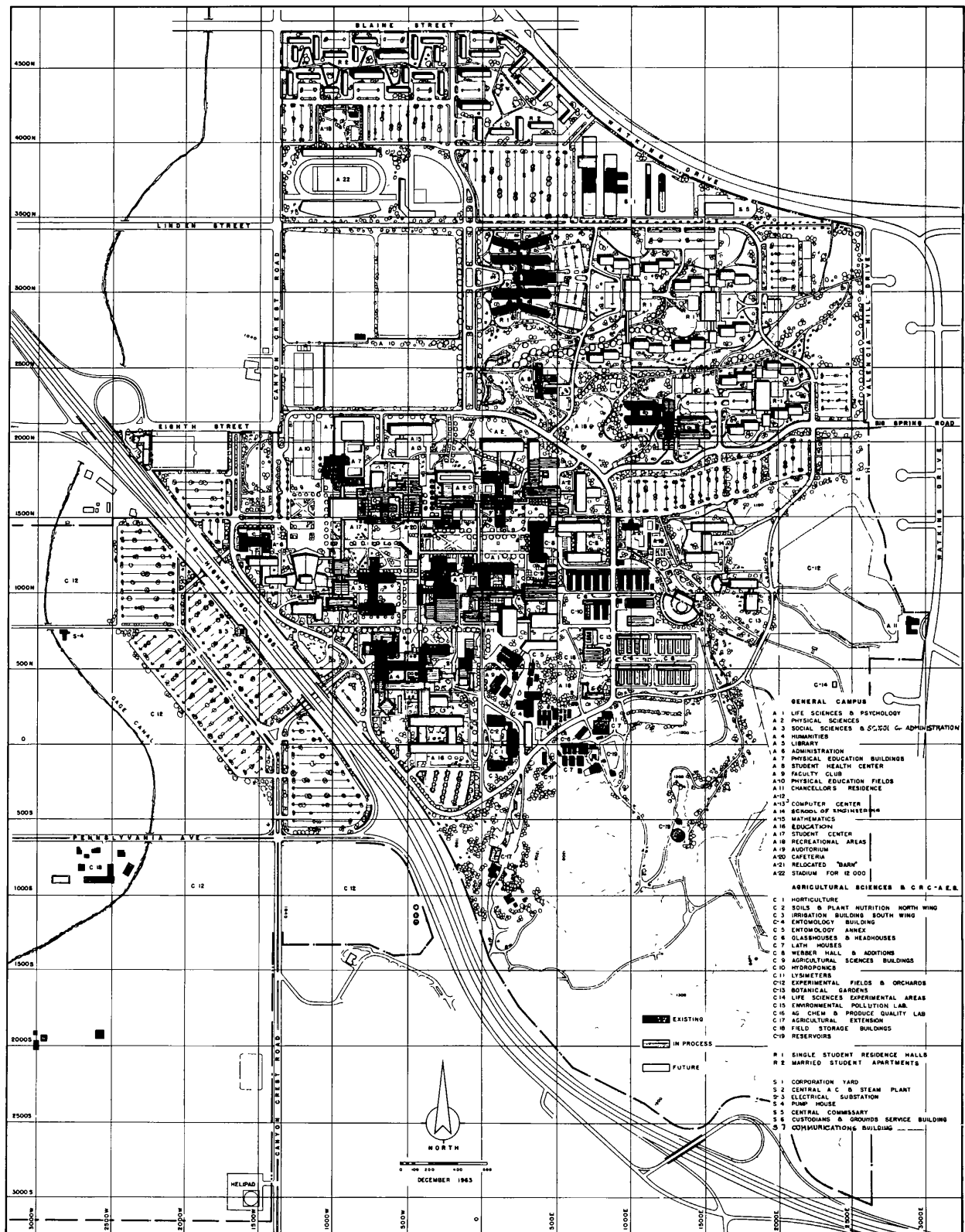


Figure 5 UCR Campus (Existing) – 1990



10,000 Student Campus Plan
Long Range Development Plan
University of California, Riverside 1964
FIGURE 6

The academic mission of UCR was expanded in 1959 when the Regents declared it to be a "General Campus," thus beginning the planning for a larger, more diversified institution. In addition to the expansion of existing programs, the new campus was eventually to provide facilities for graduate studies and professional schools. The enrollment objective was raised to 10,000 with a greatly enlarged faculty, and a corresponding increase in non-academic staff. In 1964, the campus prepared the existing LRDP to meet the needs of a 10,000 student campus. The plan proposed a compact academic core with a perimeter road that was to provide limited service access to the cafeteria, library, gym and major academic buildings. New buildings and landscaping were to act as a relief to the dominant semi-desert environment. The 1964 Plan proposed covered arcades, sun shelters, pools and fountains, a shallow lake near the Health Services building, and "rivers of green" between buildings and courtyards, from lawns to intimate gardens. The planning concept incorporated the background hills and mountains by featuring natural rock outcroppings and using rock in walls and paving, in contrast to the rich greens of lawn and shade trees. Specifically the 1964 Plan proposed:

- Principal campus entrance at University Avenue terminus
- Entrance Mall at Administration Building with lawn, trees, paving and seating
- Campus plaza bordered by Administration Building, 2500 seat Auditorium and new Student Center
- Bell and clock tower, a campus landmark, in campus plaza
- Terraces at Webber Hall, Life Sciences and Physical Sciences Buildings
- Arboretum east of academic area
- New Humanities Building at north-south mall terminus
- Professional School terminus at south end of Humanities complex
- Expansion of Life Sciences Building to four stories at edge of academic core
- New buildings for Physics, Chemistry, Agricultural Sciences and Mathematics
- Expansion of perimeter road east of academic core
- Parking on west side of campus with additional freeway crossing
- Professional programs in separate buildings for Administration, Engineering and Education
- A general recreational area southeast of campus
- New four-story residence halls to house 2,400 additional students
- Reduction in area of family and married student housing from 55 acres to 25 acres resulting in increased density to three-story buildings

After the designation of UCR as a "general campus" and the adoption of the 1964 LRDP, there was rapid and broad development in all Fine Arts, Humanities, Sciences and Social Sciences programs at both the graduate and undergraduate levels. To accommodate this growth, many new buildings were constructed during the decade of the 1960s. Many core buildings were located along the east-west mall continuing to define its structure. Additions to existing facilities, support facilities and student housing were also completed in this period of rapid development. A notable addition to the campus during this time was the Bell and Clock Tower (Carillon Tower) in the Carillon Mall.

Relationship with the Community

The 1970s and early 1980s were periods of consolidation for the campus. Student enrollment stagnated and declined resulting in the consolidation of the academic programs into two colleges: Natural and Agricultural Sciences and Humanities including the Arts. Little construction was undertaken during this period with the last major project being the construction of Webber Hall East, completed in 1974. (See *Appendix C, UC Riverside Building Program Existing Structures* for chronologic list of campus buildings.)

Demographics

As part of the statewide population growth trend, the Riverside/San Bernardino County area was the fastest growing region in the state between 1970 and 1984. An average population growth rate of 4.6% over that time period brought Riverside County's population to 757,000. In 1989, Riverside County passed 1,000,000 in population. The Southern California Association of Governments has projected continued growth at a rate of 6.2% per year through 2010. This would result in a county population of 1.96 million, an increase of 1.2 million people over the 1984 population by 2010. San Bernardino County had an estimated 1989 population of 1,335,400 and is projected to reach 2,179,400 by the year 2010.

The City of Riverside's population as of January 1, 1989, was estimated at 211,800 by the City's Planning Department. The 1989 estimate represents a 23.7% population increase over the 1980 Census figure of 170,591. It is projected to reach 258,250 by 2005.

This regional growth trend has directly affected the University of California, Riverside. Enrollment has consistently increased over the last five years to UCR's highest enrollment ever of approximately 8,200 students in Fall 1989.

City of Riverside

The City of Riverside was founded in 1870 as a real estate venture and agricultural colony. The community grew and prospered, first as a predominantly agricultural community, and since World War II as an increasingly broad-based city with major economic elements including government, light manufacturing, retailing, wholesaling and distribution, as well as professional, financial, military and educational components. Today Riverside is a dominant city of the Inland Empire.

Planning Together

During the late 1950s the interrelationship of the City and the University became clear. The City began a series of annexations that, in 1961, included the Campus and surrounding neighborhood within the corporate limits of Riverside. This annexation, supported by UCR, was immediately preceded by the creation of the University Community Master Plan prepared by the Riverside City Planning Department. That plan was developed in close cooperation with UCR officials and endorsed by the Regents. It sought to meet the projected needs of the University in terms of housing, traffic circulation and the general range of urban services needed for the campus population. The plan also sought to encourage compatible land uses around the periphery of the campus.

Present Plans and Future Projects

The cooperative relationship between the City and the University has continued to the present. The University has participated in numerous City planning projects such as the Riverside General Plan (1966-69), the comprehensive amendment of the sign ordinance (1971), the Housing Element of the General Plan (1975) and the updated University Community Plan (1986).

Over the years there has been a continuous liaison between the City Planning Department and the UCR Campus on matters of mutual interest. In turn, there has also been general citizen support and recognition of the University's importance to the community. UCR enriches this growing community with identity, prestige and a strong economic base along with providing educational and cultural opportunities for its citizens.

With continued substantial growth and change, the need for mutual cooperation between Riverside and UCR appears to be greater than ever. The pressure of increasing population, urbanization and traffic will be felt by both the City and the University.

The LRDP has been developed in the context of the surrounding community by reviewing relevant City plans, encouraging community input at public workshops, including City officials on advisory committees, and coordinating with other City planning efforts. The LRDP will accommodate UCR's many and varied educational and research functions while at the same time integrating this major self-contained community into the surrounding urban fabric.

The City will be exploring with the University the possibility of cooperatively developing new facilities to serve the joint needs of Riverside and UCR. These might include new housing, student-oriented commercial centers, a conference center, major athletic facilities, mass transit and roadway improvements.

Riverside is presently updating its general plan with a horizon year of 2010. The University will have an important advisory role in this activity with the Campus Planner serving as a member of the Citizen Advisory Committee.

University Avenue Strategic Plan

The LRDP is compatible with the University Avenue Strategic Plan being created by the City's Development Department. The Strategic Plan provides an opportunity to design and develop a high quality, innovative corridor between UCR and the Downtown.

The Strategic Plan will capitalize on UCR growth opportunities and renewed interest in the area to revitalize University Avenue and stimulate quality development. The City is working closely with UCR to formulate a plan that is mutually supported by the University Avenue community and the campus. As presently conceptualized, the primary features of the Strategic Plan would include:

- University related housing developed westward from the campus on both sides of University Avenue
- Initial focus on key public/private projects in strategic locations along the

- University Avenue Corridor to set the tone and quality for development
- A small business opportunity area between Chicago Avenue and the Riverside Marketplace, designated for smaller neighborhoods, retail, restaurants, services and office uses
- Other complementary University facilities on or near University Avenue, such as bookstores and administrative facilities
- Development of University Avenue as the major symbolic entry road to the campus

Regional Location

Location and Setting

The UCR campus is located in the City of Riverside and western portion of the County of Riverside. The campus is three miles east of downtown Riverside and is approximately 50 miles east of Los Angeles via State Route 60 (SR-60). Interstate 215 (I-215) /SR-60 divides the campus into east and west sections.

Project Location

The campus comprises approximately 1,106 acres and is generally bounded by Blaine Street on the north, Chicago Avenue to the west, a line extending east from Le Conte Drive on the south, Valencia Hills Drive and the Box Springs Mountains on the east, and Watkins Drive to the northeast.

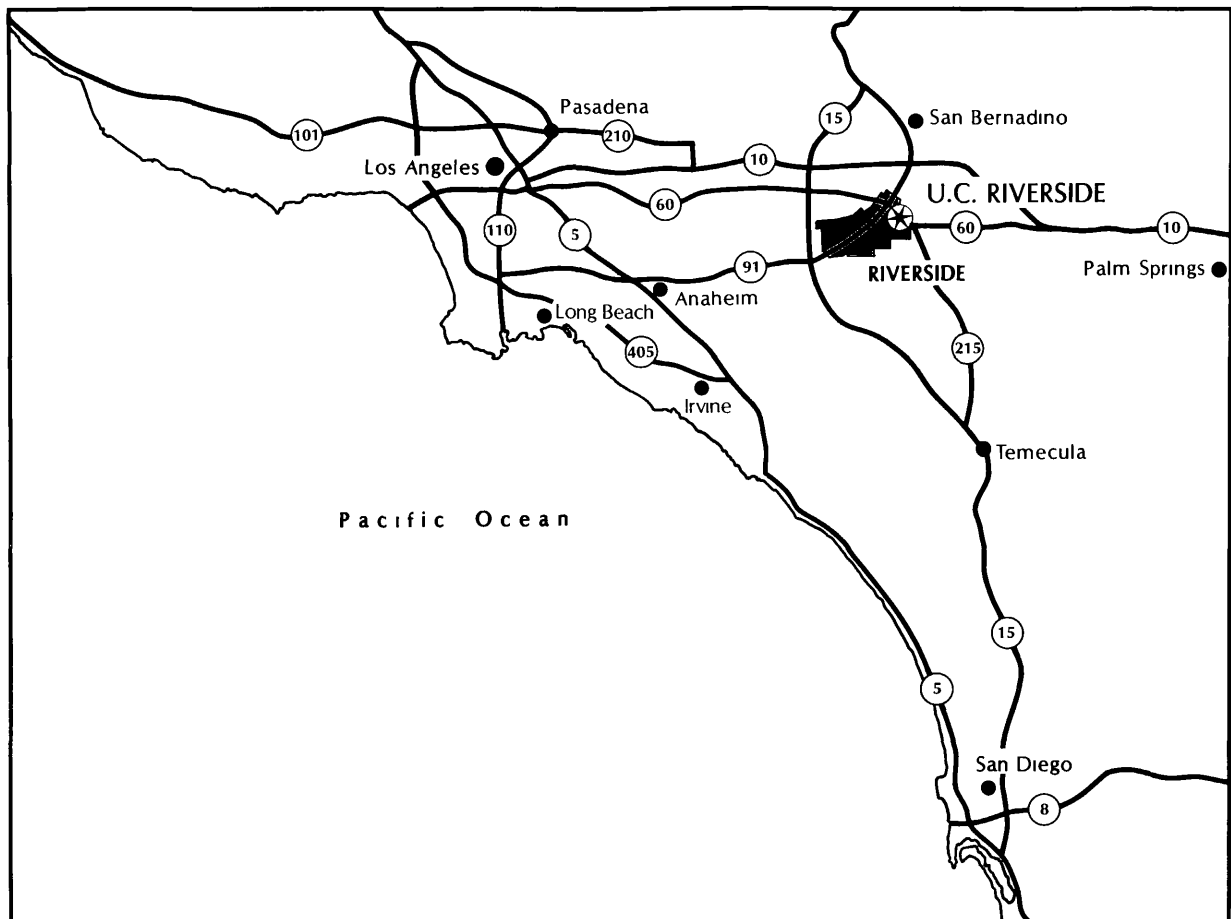


Figure 7
REGIONAL SETTING

Most academic and extracurricular activities occur within the 576 acre east campus area. The remaining 530 acres adjacent to the western side of the freeway (I-215/SR-60) are used primarily for agricultural teaching and research, although limited residential and office uses are present.

Development east of the UCR campus to the base of the Box Springs Mountains is typically single-family residential with an enclave of apartment and commercial development centered around Watkins Drive and Big Springs Road. Similarly, land to the south of the campus is largely developed with single-family residences with a large vacant area surrounding the Riverside County Sheriff's Training Center and multiple-family residential and commercial development centered around the intersection of Central Avenue and Canyon Crest Drive, known as Canyon Crest.

Surrounding Land Uses

The area west of UCR is occupied by a wide variety of land uses. Development west of Chicago Avenue and south of Twelfth Street consists of a mixture of single- and multiple-family residential uses along with vacant and agricultural property. The University Avenue frontage between the I-215/SR-60 and State Route 91 freeways, a distance of approximately two miles, is typified by commercial development, both new and old, with older structures generally

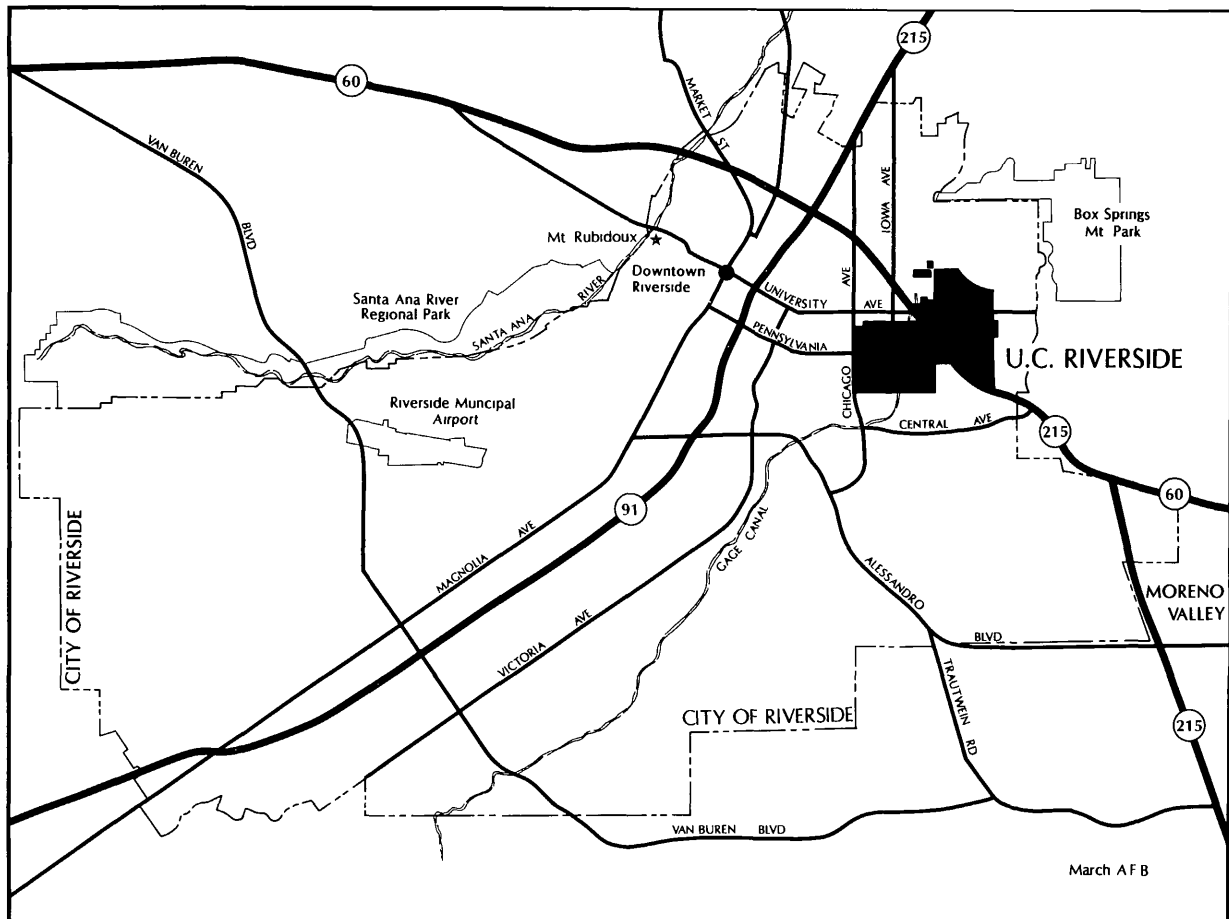


Figure 8
LOCAL SETTING

concentrated between Kansas Avenue and Park Avenue. Industrial uses are located west of Park Avenue. The remainder of the land within the study area, located generally north of University Avenue and west of Canyon Crest Drive, consists of a mixture of single-family residences, apartments, industrial uses, public and institutional facilities, commercial development and vacant land.

Topography

Physical Resources

The topography of the campus ranges from comparatively level areas to steep hills with massive rock outcroppings. The area west of the freeway is relatively flat. The Box Springs Arroyo cuts through the southernmost portion along a meandering alignment generally extending from east to west.

The area east of the freeway presents a greater variety in land forms. The developed central portions of the campus appear to be level although there is actually a 60 foot difference in elevation from east to west. This area was created by the grading of several hills and the filling of ravines. The athletic fields appear to be flat but vary in elevation as much as 16 feet between various activity areas.

The undeveloped land to the northeast consists of gently rolling topography cut by two shallow ravines forming the University Arroyo.

The southeast portion of the campus, comprising approximately 120 acres, exhibits the greatest variety in topography, ranging from limited flat plateau areas to very steep hills with large rock outcroppings, loose boulders and deep ravines.

Geology

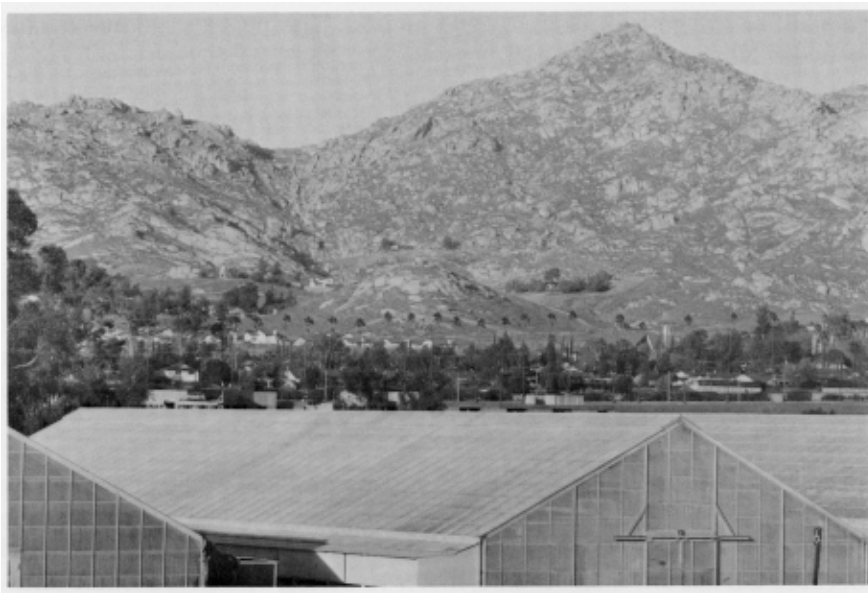
The UCR campus is located partly upon the alluvial fan of the Box Springs Mountains, constituting the southeast part of the campus. The lower elevations of the campus and surrounding area are historic floodplains for the Santa Ana River lying two miles west of the campus at its closest point.

Soils

The campus area is generally located on soils of the Arlington, Buren, Hanford, Monserate, Cienega and Vista association. In the western, northwestern and southwestern portions of the campus, where slopes are relatively flat or slightly sloped, the soils consist of silty fine to coarse sands. In the east central portion of the campus area, the soils are comprised of deep sandy loams, with slopes ranging from 8% to 15%. The northeastern part of the campus consists of well drained soils that developed in alluvium from predominantly granitic material, with slopes ranging from 0% to 15%. The southeastern area of the campus consists largely of slopes over 15%, with well drained soils developed from igneous rock.

Seismicity

The UCR campus is located in a seismically active area of Southern California. However, no active faults are known to exist on the campus and the area is not part of an Alquist-Priolo Special Studies Zone (State designated zones along active and potentially active faults) for seismic hazard.



In the Riverside area there are four major faults and a speculative minor one. The nearest active fault is the northwest trending San Jacinto Fault, located approximately seven miles to the northeast. Other major faults include the San Andreas (14 miles to the northeast), the Banning Fault (ten miles to the northeast), and the Elsinore Fault (16 miles to the southwest). A concealed fault trending in a northwesterly direction may pass at or near the junction of Watkins Drive and Valencia Hill Drive. No surface evidence of the fault is apparent and no recent activity along this fault has been recorded.

While the campus is not located within any of the active fault zones, ground shaking from any of these faults could result in considerable damage. Generally, the more adverse effects from groundshaking would occur in areas of unconsolidated soils, whereas less damage would be expected in bedrock or consolidated materials.

The potential for liquefaction is very minimal due to existing soil types (which consist of consolidated materials and bedrock), and the depth to groundwater.

Climate

The Riverside area is semi-arid in character, a factor that has influenced the physical layout of the campus as well as the design of individual buildings. Daily and seasonal temperatures are marked by extreme changes.

Temperatures recorded at the National Weather Service (on-campus station) over a period of five years between 1984 to 1988 indicate a low of 27 degrees in December 1987, to a high of 111 degrees in August, 1985. For this same five year period, the maximum average monthly temperature ranged from 65 degrees in December to 93 degrees in July and August.

Wide variations in rainfall are also indicated from records kept over time. During the ten years from 1979 to 1988 a low of 5.71 inches was recorded in 1984 and a high of 22.91 inches was recorded in 1983. The average annual

rainfall for the past 30 years is 10.3 inches. The heaviest rainfall occurs between November and March.

Prevailing winds blow from the west. However, "Santa Ana Winds" blow from the northeast primarily during the winter months. These winds, blowing from the desert areas, are marked by hot, dry gusts.

Air Quality

The South Coast Air Basin (SOCAB) includes Los Angeles County south of the San Gabriel Mountains, Orange County, and the non-desert portions of Riverside and San Bernardino Counties. Motor vehicles and other pollutant sources together with meteorological characteristics of the area contribute to severe air quality problems.

Ozone is the most severe regional air quality problem in the SOCAB. The SOCAB's intense heat and sunlight during the summer months are ideal for the formation of ozone. Problems with carbon monoxide (CO) are more localized because CO has one major source, motor vehicles. Carbon monoxide distributions closely follow the location and timing of vehicular traffic, and are strongly influenced by meteorological factors.

Suspended particulates are composed of natural and man-made materials including soil, biological materials, sulfates, nitrates, organic compounds, and lead. The area of maximum particulate concentration in the SOCAB is centered on the City of Riverside.

The greater Riverside area frequently exceeds Federal and State standards for ozone and particulates, and occasionally exceeds the eight-hour carbon monoxide (CO) standards in areas adjacent to heavily traveled roadways.

Drainage

Several existing storm drains and open channels, constructed by the City of Riverside, the Division of Highways or private interests, are located within the University area watershed. Two major lines provide stormwater drainage on the campus. The main line is located in the north-central part of the campus, and runs east to west between Valencia Hill Drive and Canyon Crest Drive. Lateral lines drain areas south and east of the campus. A storm drain in the southwest portion of the campus, east of Chicago Avenue and south of Pennsylvania Avenue, handles runoff that accumulates from the foothills near the freeway and from the UCR teaching and research fields. In addition, portions of the University Arroyo in the east campus and Box Springs Arroyo in the west campus are natural watercourses for stormwater runoff.

Flooding

Since the project site is partially located on the alluvial fan of the Box Springs Mountains, considerable runoff occurs during storm events due to the steep topography. In addition, urbanization of the once agricultural area has increased the amount of surface runoff.

On the campus, there are two areas within the 100-year floodplain. According to Federal Emergency Management Agency (FEMA) flood mapping, these

two areas are University Arroyo in the north-central part of the campus, and Box Springs Arroyo in the southwest part of the campus. Both areas trend in an east to west direction. For University Arroyo, the width of the 100-year flood area ranges up to about 400 feet, while parts of Box Springs Arroyo are over 600 feet in width.

Native Habitats

Coastal sage scrub is the dominant native habitat on the campus and occurs on the steep hillsides and drainages. This habitat is characterized by drought tolerant shrubs such as black sage, California buckwheat, California sagebrush and brittlebush. These shrubs form a low level open canopy with an understory of annual grasses and wildflowers. Most of the areas occupied by coastal sage scrub exhibit thin soils and steep slopes, although the scrub does extend into areas with deeper soils and more gentle slopes. Areas occupied by coastal sage scrub include the open space hilly area along the southeastern section of the campus, the undeveloped areas of the Botanic Gardens, and a small site just north of the Botanic Gardens, south of Parking Lot 13.

The open areas within and adjacent to the Botanic Gardens provide a large continuous block of coastal sage scrub and annual grassland habitats that is not found elsewhere on the campus. These plant communities provide habitats for a variety of wildlife species including rodents such as Pacific kangaroo rat, deer mouse, San Diego pocket mouse; rabbits such as Audubon's cottontail and black-tailed hare; carnivores such as coyote, bobcat and gray fox; and both migrant and resident bird populations

Riparian Areas

The campus riparian areas are mainly dry watercourses with plant communities generally composed of elements from the surrounding habitats, such as annual grassland and coastal sage scrub. In areas with moist or saturated soils, there are more typical riparian stands of willow, cottonwood, walnut, mulefat and elderberry.

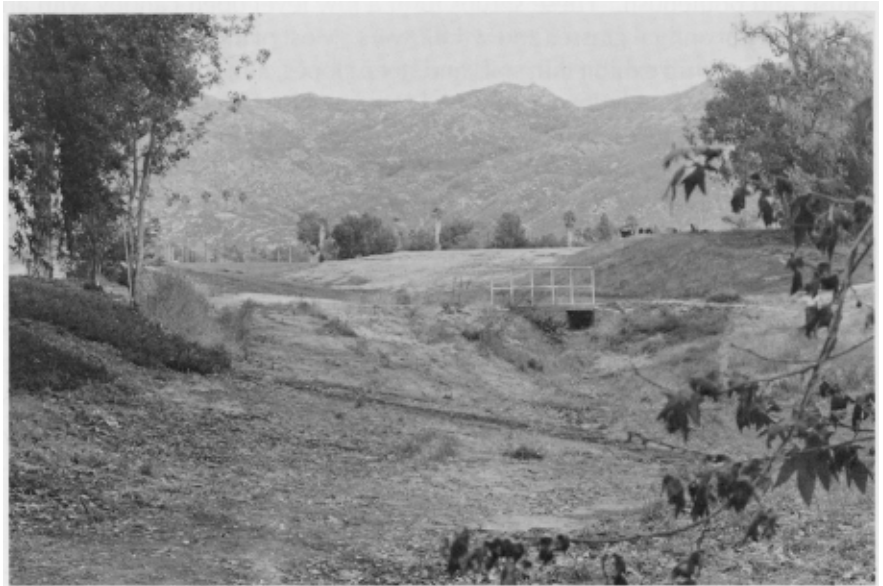
The campus has four distinct areas where drainages with water dependent species occur

- The drainage course along the Bannockburn part of the University Arroyo funnels runoff from the campus and other upstream areas into a small arroyo with running water and a dense stand of eucalyptus, willow, and walnut trees.
- A series of drainage courses, part of the University Arroyo drainage, occur around the student residence halls: several predominantly dry drainages with plants typical of disturbed areas and grassland elements; a main drainage with walnut trees and mulefat shrubs; and some combined drainages with cultivated landscape species and artificial habitats.
- Three small drainage courses, part of the University Arroyo drainage, occur at the northern end of the Botanic Gardens: a drainage from the entrance to the Botanic Gardens with mulefat at the upper end and walnut trees at the lower end; a drainage from the hill just north of the Botanic

Biological Resources

Gardens, fed by runoff from experimental fields upstream with riparian woodland species (willow and cottonwoods) and non-natives (pepper tree and common fig), and a drainage at the north end of the Botanic Gardens connects to the second drainage with similar vegetation.

- The large western drainage, Box Springs Arroyo along the southern boundary of the teaching and research fields, has been severely altered by channelizing, disking/grading and similar activities and now supports vegetation typical of disturbed areas and introduced eucalyptus windrows.



Developed Areas

The developed portions of the UCR campus represent a significant change from the more native plant communities of Riverside. Located primarily within the central campus, this largely man-made system is composed of the campus core with its buildings and ornamental landscapes and the Botanic Gardens with its collection of native and introduced flora.

Campus Core

An extensive portion of the campus reflects the habitat type typical of suburban areas. The campus core is strongly defined by the concentration of built structures and the maintained landscapes that surround them. The grounds are landscaped with large trees, broad open green areas of grass, and clusters of shrubs. The trees used in landscaping include eucalyptus, pine, and a mix of other evergreen and deciduous trees that are manicured on a regular basis. In general, these open areas are fairly sterile environments for native wildlife species and provide little habitat value because of their ornamental plant landscaping and extensive maintenance activities. Wildlife species found in these areas tend to be very tolerant of humans and human activities, and include: bird species such as northern mockingbird, scrub jay, house sparrow, house finch and Anna's hummingbird; mammal species such as Norway rat and house mouse; and reptile species such as the side-blotched lizard.

Semi-Natural Areas

Scattered throughout the campus are small enclaves of trees and shrubs that, as a result of less maintenance, provide a semi-natural habitat. These enclaves include the swale between Lothian and Aberdeen-Inverness Residence Halls, the open spaces at the base of the Veitch Student Center and the area around Picnic Hill. These areas provide cover and food for wildlife species relatively tolerant of humans and human activity. Typical species include birds requiring relatively dense shrub and tree cover not provided in the more manicured areas of the campus. These areas also attract migrating bird species



and provide roosting and perching sites for a variety of migrant species. One relatively extensive area is located adjacent to Bannockburn and contains a healthy stand of willows, walnut, eucalyptus, sedge and other plants typical of a riparian zone in this otherwise urbanized area.

Ruderal Areas

Ruderal areas are those parts of the campus where the natural vegetation has been disturbed, such as fallow fields, road edges, and the margins of developed and maintained areas. At UCR these ruderal areas include: eastern edge of Parking Lot 13, around outlying buildings, east of the student residence halls, north of Blaine Street and uncultivated fields. Plants found in these areas are mainly introduced or native weeds that are adapted to highly disturbed conditions.

Botanic Gardens

The University Botanic Gardens are an important feature of the UCR campus. From the first plantings in 1963, the Botanic Gardens have grown to encompass 39 acres of rugged hilly terrain along the eastern boundary of the campus. Due to the low rainfall the area receives, the garden requires irrigation to grow any but the most drought tolerant plants.

The greatest number of plants come from California, Australia, and southern Africa. The native California species represent desert, mountain, coastal hills and inland valley habitats. Other major collections include: *Ficus*, citrus relatives (family Rutaceae), conifers, cycads, cactus, succulents, roses, iris, lilacs, herbs, and a subtropical fruit orchard.

Agricultural Lands

Over 374 acres of cultivated lands on both the east and west campus are used for teaching and research activities by UCR. Plant species associated with the cultivated areas vary according to departmental programming of the land but encompass collections of citrus, avocados, jojoba, guayule, asparagus, figs, turf, ornamentals, Christmas trees, palms, row crops and the germplasm collection. These plants represent a valuable agricultural resource.

The fields are dominated by citrus orchards to the north of Pennsylvania Avenue and by student and faculty experimental plots to the south. Most of the northern portion of the fields undergo limited, but systematic, disturbances resulting from weed control, citrus harvesting and other activities associated with maintenance. The southern portions of the fields contain a variety of seasonal experimental plots used by students and faculty, and consequently have undergone different and irregular types of impacts. Some sections of these fields have permanent groves and crops that undergo regular maintenance, other sections have various crops planted from year to year and experimental plots that utilize these sites in different ways both within and between years. The Box Springs Arroyo runs east to west along the southern section.

With the exception of the eucalyptus stands, the teaching and research fields do not provide real wildlife habitat value. The relative lack of cover, the constant disturbance due to human presence, and the use of machinery combine to reduce wildlife values to a minimum.

The Gage Canal, a concrete lined watercourse crossing the fields from north to south, is well maintained and kept free of major wetland growth. The canal does not provide any wetland habitat value.

Historically Significant Buildings and Landmarks

Citrus horticulture has played a major role in the settlement, economy, and land use of Southern California. At the time the Citrus Experiment Station was founded early in this century, citrus horticulture was one of the dominant economic activities in the region. The Citrus Experiment Station, a landmark associated with the development of citrus agriculture in the State, is tangible evidence of the government's stake in the prosperity of the industry. The buildings which comprised that institution reflect in their scale, design and setting, the recognized importance of citrus horticulture and, as a public institution, the significant level of governmental involvement and assistance directed to that industry.

Several of the older campus buildings are potentially historically significant as defined by the National Register of Historic Places (1966). These structures include virtually all of the pre-1945 buildings. The SPN1 Building (Horticulture), the SPN2 Building (Irrigation), the Director's Residence and Director's

Residence garage/shed, the Superintendent's House, the multibay garage/storage building, the Barn and the SPN3 Building (North Wing) are potentially historically significant because they are associated with the early development of the campus.

The Box Springs Mountains, which enclose the eastern campus edge, provide a stunning backdrop with their massive rock outcroppings and separate the Riverside basin from the desert environment to the east. The campus core seems isolated as the freeway and the agricultural lands to the west separate the campus from the surrounding community. The borders are poorly defined and student housing blends with the surrounding residential character. There is no student commercial hub to interconnect with the City. The campus entries are not clearly articulated.

Visual Resources



Upon entering the campus, the contrast is striking: University Avenue, a cluttered, busy thoroughfare contrasts with the serene academic campus; the green park-like setting contrasts with the surrounding dry mountain slopes; and the campus buildings and landscaping contrast with the open agricultural fields. One gains a vivid sense of the surrounding environment, with distant views to the mountains displaying the beauty of the dry desert landscape except on hazy days when the edges of the horizon close in and it is difficult to see beyond the fringe of the immediate campus.

The freeway inhibits views into the campus from the community and blocks views between the east and west campus areas with the agricultural lands not visible from the Carillon Mall. The freeway separates the campus making the west side of campus seem distant and unconnected to the campus core.

East of the Freeway

North of the central campus, athletic facilities offer views of open playfields and recreation activity. Riparian areas to the north of University Avenue and

North Campus Drive suggest a more natural environment. The corporation yard to the northeast is visible with a predominance of buildings, asphalt, and outside storage areas.

The campus core derives much of its identity from the trees and landscaping planted during the first years of campus growth. Mature shade trees filter light, create a pleasant campus environment and unify developed areas. The parklike setting is enhanced with expansive public lawn areas: a major axis with an east/west mall from the Administration Building to Webber Hall West; and a secondary axis with a north/south mall from the Carillon Tower to the Humanities Building. In contrast to these large malls, smaller, intimate courtyards are located between buildings with pleasant seating areas. The Carillon Tower, central to student service areas, is a major campus landmark, visible from many areas within the campus. Picnic Hill and the Botanic Gardens are major landscape amenities.

The long-established landscaping provides a strong presence and overshadows the buildings which are low (two to three stories) in height. The buildings within the academic core generally exhibit an institutional character and do not contribute to a strong campus identity. Taller structures such as Webber Hall East (six stories) rise above the trees and become visually prominent. Many of the newer buildings exhibit dissimilar styles, configurations and materials. In contrast, the SPN Building recalls the early agricultural heritage of the campus and conveys a strong character and identity within the campus landscape.

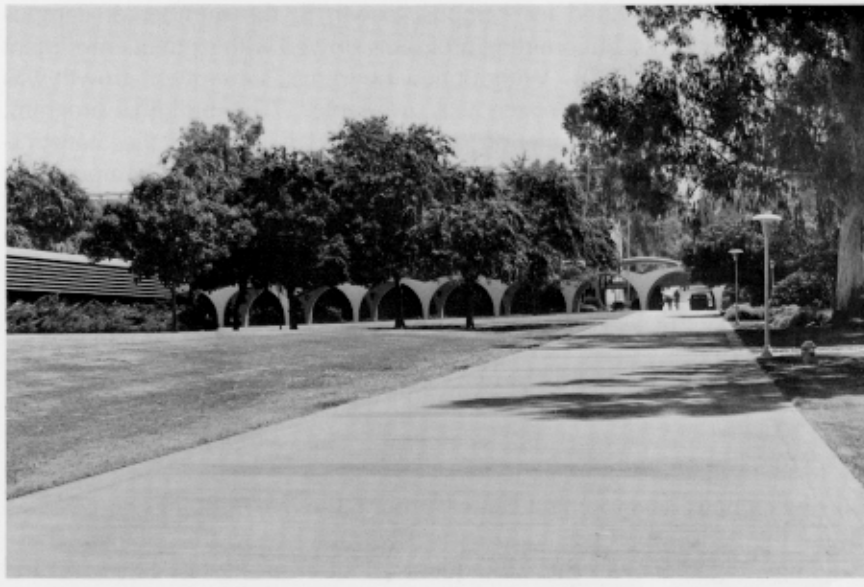
West of the Freeway

The agricultural nature of the west campus offers expansive views of open fields, with a checkerboard pattern of orchard plantings and patches of fallow earth. Small agricultural buildings, biospheres and maintenance sheds are scattered within these fields. The concrete-lined Gage Canal flows north/south providing irrigation water for the agricultural fields. Two high voltage power lines stretch out from the city sub-station located next to the freeway. Although tall, they seem unobtrusive because there is so much open space around them. Grids of orange, lemon, grapefruit and avocado trees give order to this landscape. The groves are positive landscape amenities. The roads and fences that enclose these fields do not announce the fact that these fields are an important part of UCR.

View Corridors

The campus is a green oasis nestled at the base of barren, rock strewn, hills. This green oasis on the east campus reminds you of entering the special realm of the University. The most marked architectural feature on campus is the Carillon Tower orienting and defining the center of the campus. It is seen from the agricultural fields to the west, looking down from the northeast, or peeking up through trees and buildings on campus.

From the center of campus on the Carillon Mall, views to the east can be defined as picturesque; to the west they are less clear but still pleasant. From the Carillon Tower due south, an elegant open space is defined by Chinese elms on one side and the graceful Rivera Library Arcade on the other. This



space is contained as one passes down to the Humanities Building and under its arcade. Past the arcade, poorly defined open space extends into a large parking lot (#6). This parking lot fronts the SPN Building and is an inappropriate inner campus land use as well as a missed opportunity for part of the open space network that could end with the SPN Building Terrace. The views east and west could be dramatic, honoring the origins of the UCR campus.

Another important view corridor is north along East Campus Drive looking down over a large part of the campus past residence halls and Linden Street toward a peak on the Box Springs Mountain Range.

All along the present loop road system are potential axial view corridors that could feature riparian edges or be developed with intensive street tree planting, similar to Aberdeen Drive.

A variety of interior courtyards and small plazas are outdoor spaces framing views of smaller campus areas between Physics and Webber Hall West and between Life Sciences and Batchelor Hall.

A myriad of secondary view corridors emerge and could be enhanced to contribute to an overall positive campus ambience; for example, along Eucalyptus Drive between the Rivera Library and East Campus Drive, and along Linden Street down through the existing palm trees. Picnic Hill could also be developed as a "philosopher's walk," a place for meditation with view points strategically located to frame certain areas of campus.

East/west entries into campus along University Avenue and Big Springs Road are both missed opportunities. They can be developed as ceremonial roads, lined with a double allée of trees, terminating in traffic circles capped with fountains or monuments.

Existing Land Use and Facilities

The 1964 LRDP planned for campus growth in the number of campus colleges and schools, but building programs slowed with student enrollment declines during the 1970s. Without new buildings, subsequent growth was accommodated wherever space was available. The building program, culminating with the completion of Webber Hall East and the Statistics-Computer Building, had enough capacity to accommodate a campus with 7,200 full-time equivalent students. This enrollment level was not reached until Fall 1988. During those slow growth years departments were relatively small and could not justify entire buildings for individual departments. As a result, the campus exhibits a loose structure, often with unrelated academic disciplines and uses adjacent to each other. With projected enrollment level increases and the need for accompanying new facilities, UCR is at a critical point in the development of clear relationships between campus functions.

Academic

Existing campus development centers around the five buildings constructed during the period UCR was to have been a small liberal arts college. These buildings, together with the subsequent addition of the Life Sciences and Administration Buildings, cluster around the main mall, forming the academic nucleus of the present campus. The classrooms, offices, teaching and research labs, libraries, student services, and indoor physical education facilities are all located within the present perimeter road system in an area containing approximately 101 acres. Most of the present permanent structures have been constructed in the central 60 acres of this area.

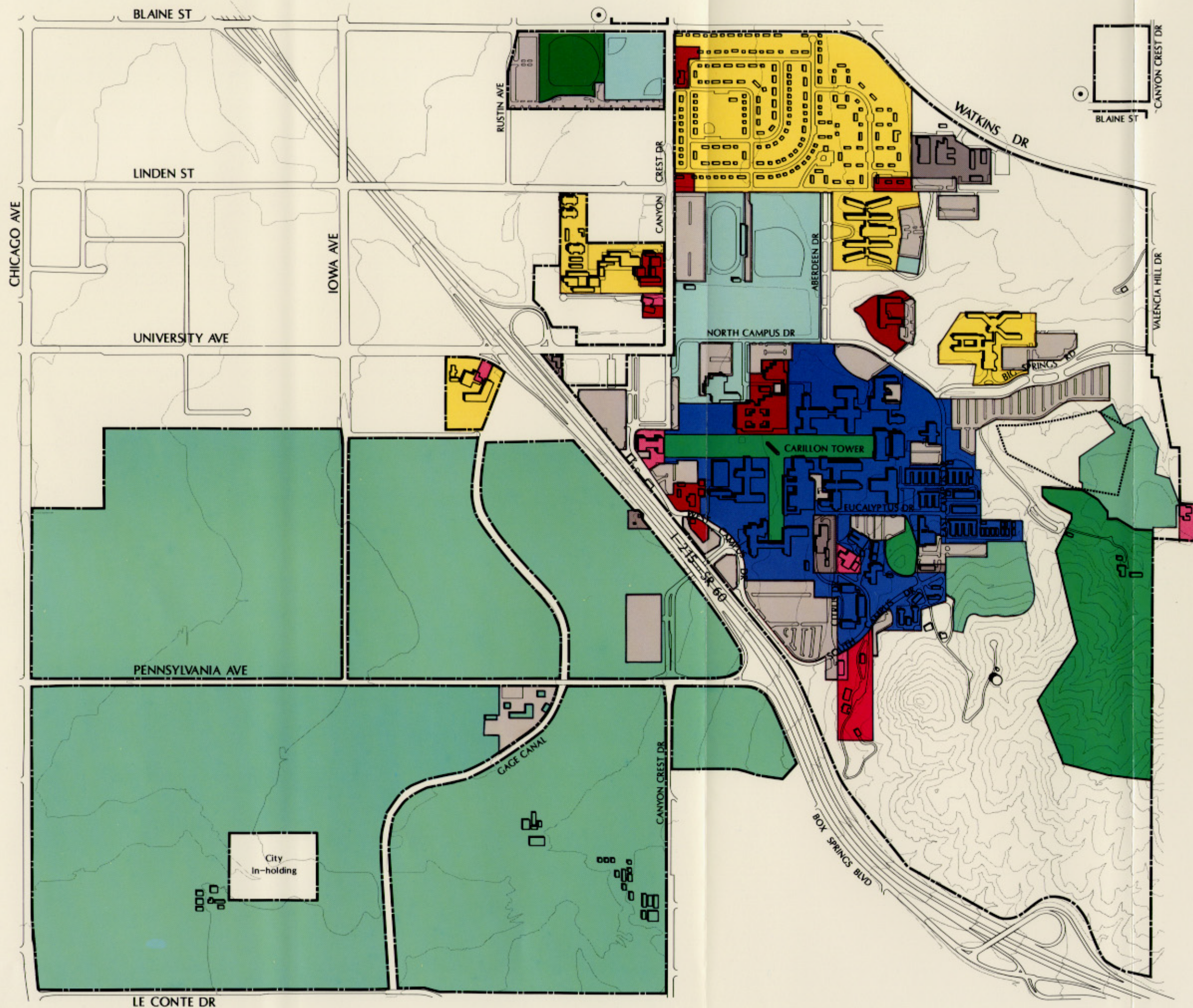
Permanent structures within the central core include the following: Administration Building, Physical Education Building, Geology Building, Physics Building, Statistics-Computer Building, Pierce Hall, Webber Hall, Batchelor Hall, University Commons, Life Sciences Building, Rivera Library, Humanities Building, Watkins Hall, Sproul Hall, and the Carillon Tower. On the fringe of the central core are Fawcett Lab, (Statewide Air Pollution Research Center Headquarters), the Entomology Buildings, Custodial and Grounds headquarters, the University Club, the Central Utility Plant, residence halls, greenhouses, and the SPN Building.

Twenty greenhouse structures are located on the east side of the freeway. Most are located in the existing campus core, with some immediately adjacent to the ring road or placed in sensitive hillside locations.

A small area south of the perimeter road contains the facilities for the Cooperative Extension Service.

Administration

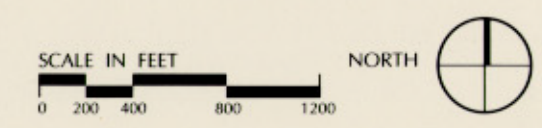
The campus administrative functions which are currently housed in the Administration Building are the offices of the Chancellor, Executive Vice Chancellor, and Vice Chancellors for Academic Personnel, Administration, Enrollment Management, Student Services, and University Relations and Development; Student Enrollment Services; Registrar; Cashier; Printing and Reprographics; Photographic Services; and the offices for University Relations, Governmental Relations, and Alumni and Parent Relations.



LEGEND

- ACADEMIC
- ADMINISTRATIVE
- PUBLIC SERVICES
- STUDENT SERVICES
- RECREATIONAL FACILITIES/OUTDOOR SPACE
- AGRICULTURAL, TEACHING, & RESEARCH FIELDS
- DESIGNATED OPEN SPACE
- INTERCOLLEGIATE ATHLETICS
- HOUSING
- PARKING
- MAINTENANCE & PHYSICAL PLANT

FIGURE 9
EXISTING CAMPUS LAND USE
UNIVERSITY OF CALIFORNIA, RIVERSIDE
LONG RANGE DEVELOPMENT PLAN



Additional administrative functions are housed on campus in separate buildings. These are the Police Department and Parking Services in the Public Safety Building, Health and Safety in the Environmental Health and Safety Facility, and Architects and Engineers in Bannockburn Village.

Due to the inadequate amount of space available in the Administration Building, some administrative functions are currently located off campus in leased facilities. These are Accounting, Administrative Budget Officer, Business and Financial Services, Campus Planning, Facilities Management Executive Officer, Human Resources Executive Officer, and Institutional Planning and Analysis.

Teaching and Research Fields

The areas on both east and west campus used for agricultural teaching and research are valuable in several ways. First, the University, established initially as the Citrus Experiment Station, is connected historically to the agricultural landscape, and the identity of the campus is, in part, derived from these extensive agricultural fields. Second, agricultural fields are important in the teaching and research activities of the Riverside campus. Third, the fields provide sites to expand some campus facilities.

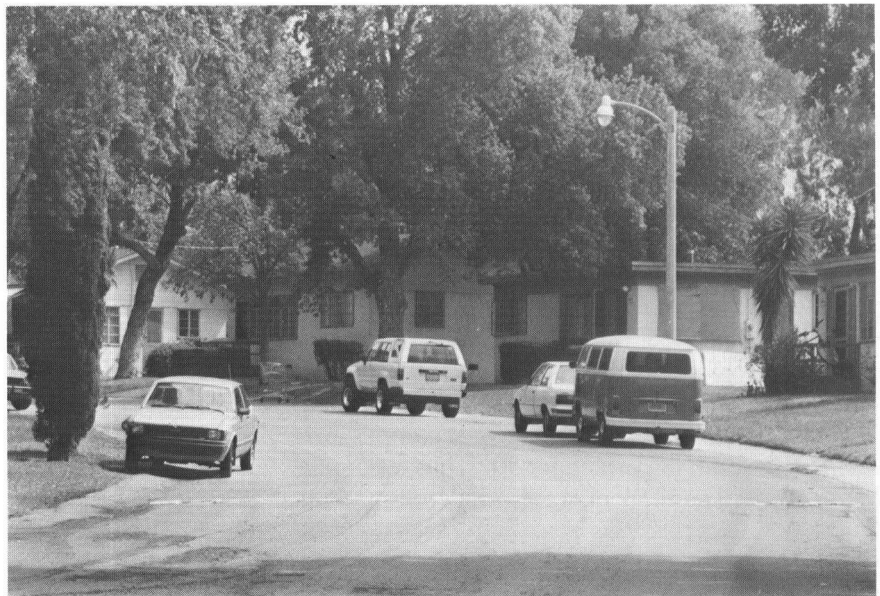
UCR owns a total of 530 acres west of the freeway. Of this total, the campus allocates approximately 514 acres for teaching and research fields. The remainder consists of 11 acres for a faculty garden parcel and the recently acquired Highlander Hall, a 5 acre area. Of the 514 acres, approximately 162 acres are used for permanent structures (buildings, equipment yards, parking lots, greenhouses, dumps, reservoirs, interior roads), and 56 acres are undeveloped lands located along the west campus arroyo and a small parcel immediately south of parking lot 30. Thus, approximately 352 acres of arable lands support permanent crops, row crops and planned crops.

On the east campus there are two fields, 20 and 21, utilized for teaching and research purposes. These are reserved for permanent crops and planned



permanent crops. Together these areas total approximately 22 acres. Field 21, located on the plateau east of the proposed Salinity Lab site, is unique because it has not had pesticides applied to it and is used for biological control research.

Permanent crops such as citrus, avocados and ornamentals constitute the largest land use, totalling approximately 273 acres. Permanent crops require less mechanized machinery with less soil disturbances. To promote a good neighbor policy, these areas are primarily located north of Pennsylvania Avenue and along the southern border. The permanent crops include the germplasm collection and the world's largest citrus collection, located south of Pennsylvania Avenue and on both sides of Canyon Crest Drive, consisting of orchards and other crops preserved for their genetic material.

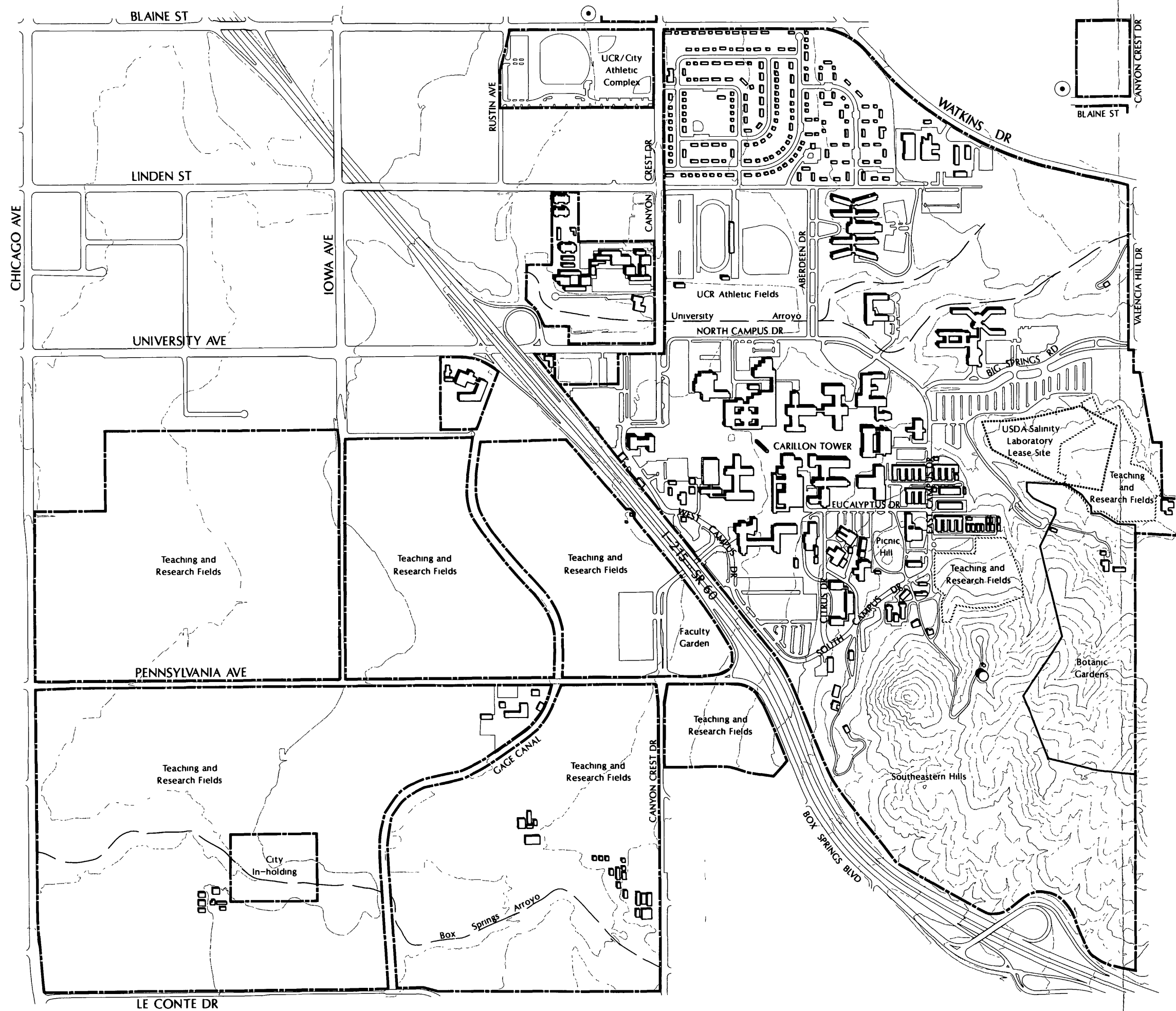


Short term uses include row crops, representing the second largest land use with 79 acres planted on a yearly or shorter rotation. These short term uses have been located south of Pennsylvania Avenue to consolidate fields cultivated one or more times a year. These areas are adjacent to the farm equipment areas thus minimizing the need for farm equipment to cross Pennsylvania Avenue. These areas are also most isolated from adjacent incompatible uses, such as the single family residential uses to the south.

Housing

The four major housing areas on campus are generally north of the central campus. With the exception of Bannockburn, University Plaza, and the current expansion of Lothian Hall, all housing is 25-45 years old. Building types and site densities vary considerably. At present, approximately 27% of all students are housed in campus-controlled housing.

Undergraduates are housed in four multi-story residence hall groups. The Aberdeen-Inverness Hall (Residence Halls 1,2, and 3 constructed in 1959)



LEGEND

- CAMPUS PROPERTY LINES
- ARROYO
- BOTANIC GARDENS
- EAST SIDE TEACHING & RESEARCH FIELDS
- USDA SALINITY LAB LEASED SITE

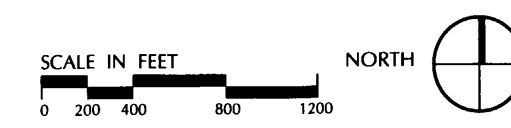
NOTE THIS FIGURE REPRESENTS THE EXISTING BUILDINGS INCLUDING PROJECTS UNDER CONSTRUCTION AS OF THE DATE OF THIS PLAN.

FIGURE 10

EXISTING CONDITIONS

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN



actually constitute a single structure with common dining and lounge facilities and 820 beds. Lothian Hall (Residence Hall 4 constructed in 1963), located southeast of the Aberdeen-Inverness complex but equally distant from the central portion of the campus, provides 440 beds. The Lothian Hall (Residence Hall 5) expansion with 604 beds will be complete in 1990. Thus, in the Fall of 1990 there will be provisions for 1,864 students in residence halls.

The University also owns two apartment complexes. In 1975, the University acquired the Bannockburn complex, a 6.97 acre development with 451 beds. This acquisition represented a new type of housing stock for the university, an apartment type construction with individual kitchens and a variety of housing opportunities from loft apartments to 2 and 3 bedroom suites. Immediately after their acquisition they were remodeled for married student housing, but currently serve primarily single upper division students. In 1987, the University acquired the University Plaza apartments with 166 beds in one-bedroom and two-bedroom units.

Family and married student housing is provided in the 50-acre Canyon Crest housing area north of Linden Avenue. The 300 beds are provided in 2 and 3 bedroom single detached and duplex units. The buildings were constructed during World War II as temporary military housing and were acquired from the federal government in 1955.

Recreational Facilities/Outdoor Fields

Campus recreational facilities include structures and fields used for physical education, intramural sports, sports clubs, intercollegiate athletics and general recreation. The Physical Education building is the primary indoor recreational structure. Immediately north of the central campus are 30 acres of physical education fields for intramural sports, football, baseball and track. Campus recreational facilities also include sports fields, a track, tennis courts, basketball courts and handball courts.

The University of California/City of Riverside Athletic Complex is located on 17.7 acres on the southwest corner of Blaine Street and Canyon Crest Drive. Jointly developed in 1977 and fully operational since 1978, the complex serves as the primary baseball and recreational facility for both the campus and community. It contains a 1,000-seat stadium with one lighted baseball field and two unlighted softball fields. In 1989, approximately \$1.2 million was spent to upgrade and expand the facilities, including additional stadium seating (2,500) and a clubhouse.

Student Activities

Student Activities include African-American Student Programs, Asian Student Programs, the KUCR student radio station, Campus Activities/Resident Hall Programs, Chicano Student Programs, Native American Student Association, and Recreation and Intramurals. These activities are held within various buildings dispersed throughout the campus.

Support Services

Support Services include Apartment/Student Life, Career Planning and Placement, Counseling Center, Housing Services, International Services Center,

Learning Center, Educational Opportunity-Student Affirmative Action Support, Special Services and the Women's Resources Center. These services are offered within various buildings dispersed throughout the campus.

Student Health Service

Student Health facilities are housed in the Veitch Student Center, located midway between Aberdeen-Inverness Halls and Lothian Hall along the perimeter road. Facilities include laboratories, x-ray units, walk-in clinics, emergency treatment, and dental care.

The Bookstore

The campus bookstore is part of the Commons complex on the main mall. In the near future, the bookstore will be relocated to new and expanded facilities north of the current Commons building.

The University Library

The University Library has a collection of more than 1,500,000 bound volumes, 13,000 periodical and journal subscriptions, and more than 1,000,000 microforms, arranged and staffed to support undergraduate and graduate instruction as well as faculty and staff research. Facilities include the Tomas Rivera, Bio-Agricultural, Physical Sciences, Music, and Media Libraries. The Rupert Costo Library of the American Indian is also located in the Rivera Library. The Library offers a variety of information services including electronic access to collections and data bases. The Library supports vital campus programs, is open to the general public and participates in cooperative, reciprocal borrowing arrangements with colleges, public and special libraries, and schools throughout much of inland southern California.

Child Care

The UCR Child Development Center, located in the family and married student housing area, currently offers both full and half-day care for approximately 80 children, ages 2-1/2 to 5 years. This service is available to the children of students, faculty and staff, with priority given to low income students.

Maintenance and Physical Plant

The Central Plant provides the heating and cooling needs of the campus and is located south of the central campus below Eucalyptus Drive. Service to the majority of the academic buildings is provided through a utility tunnel system.

Corporation Yard

The Corporation Yard, located immediately east of the family and married student housing area, accommodates several functions: the physical plant providing for services such as minor alteration work, departmental equipment repair, furniture assembling and moving, set-ups for special events, and facility system repairs; Mail Services; Material Management, including Purchasing, Receiving, Storehouse, Equipment Management, and office equipment/machine service and rental; and Transportation Services providing daily and by-trip rentals of University vehicles.

UCR's existing open space is a combination of the park-like setting of the campus proper, the surrounding natural areas and the irrigated orchards and agricultural fields west of the freeway. In its entirety, the existing open space unifies the campus and gives it identity.

Existing Open Space

The formal landscaping of the academic core visibly organizes the campus, ties existing uses together, and unifies otherwise non-descript buildings. Buildings are organized around a single open space or series of spaces with malls, courtyards, and walkways. Landscaping in combination with architectural elements such as arcades and bridgeways connects buildings with shaded cool passageways. The campus has given careful thought to these outdoor spaces with secluded courtyards, attractive specimen trees, hidden parking areas, and the transition of asphalt paths to concrete walkways as one enters the campus core.



The Carillon Mall is impressive with its wide swath of grass interspersed with large shade trees creating a pleasant setting for pedestrian travel or seating. The Carillon Tower, within this Mall, is visible from many areas of campus.

The Botanic Gardens, somewhat distant from the campus core, has a wide variety of plant species from all over the world. In addition to its value as an educational resource, the Gardens contribute to the open space system by providing a unique setting for walking, sitting, or escaping the heat.

Natural areas provide another scenic aspect to the campus open space system. The arroyos, even though dry much of the year, provide an interesting change in topography, vegetation, and in the linear aspect connecting campus areas. The rocky undeveloped hillsides provide a dramatic backdrop to the campus.

The agricultural areas, both on the east and west campus, contribute to the identity and historic continuity of the campus. The grid-like form of the orange groves and the agricultural fields give a rural feeling to an otherwise suburban campus.

Existing Transportation and Circulation

UCR's circulation network accommodates vehicular, transit, bicycle, and pedestrian access throughout the campus and consists of five hierarchical elements:

- Freeway System
- City Streets
- Primary Circulation Route
- Campus Entrances
- Secondary Circulation Route

Freeway System

The regional routes, I-215 and SR-60, form a single route through campus. The freeways provide direct and convenient regional access to the perimeter of the campus core for commuters and visitors.

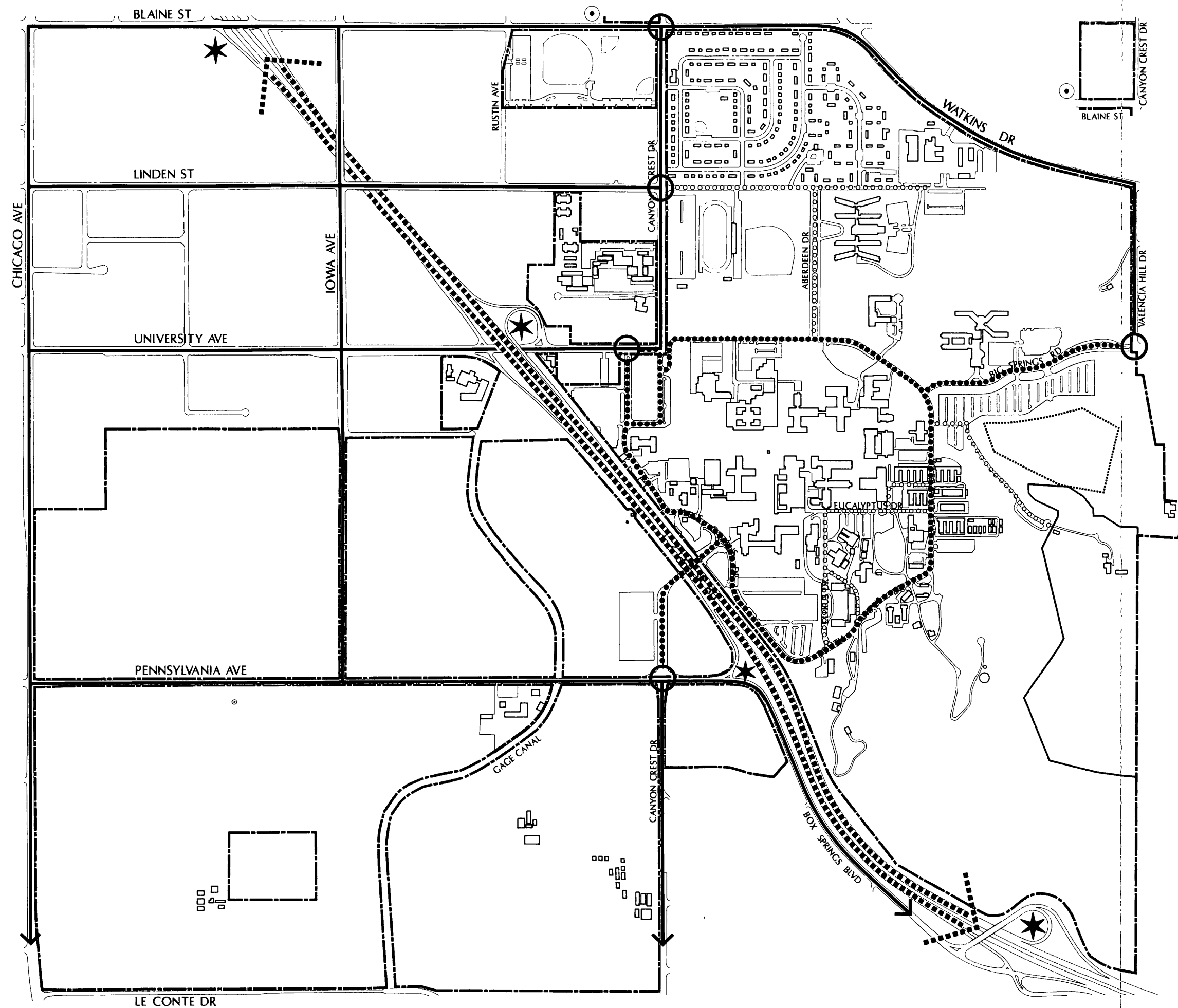
The freeway bisects the UCR campus, with the academic core on the east side of the freeway and the agricultural teaching and research fields on the west side of the freeway. Northwest of UCR, SR-60 provides regional access to the northern part of the City of Riverside, as well as Los Angeles County. East of UCR, SR-60 provides access to the City of Moreno Valley and connects with I-10 through Riverside County. South of UCR, I-215 provides access to southwestern Riverside County and connects with I-15 to San Diego County. Access to the freeway is provided via on and off ramps for both directions at Blaine Street, University Avenue, El Cerrito Drive, and Watkins Drive/Central Avenue. Eastbound traffic exiting the freeway is also accommodated via an off-ramp at Pennsylvania Avenue.

City Streets

City arterial streets provide access to all sides of the campus. The primary east/west roadways through the eastern part of the City, providing access between UCR and downtown Riverside, are University Avenue, Pennsylvania Avenue and Blaine/Third Street. University and Pennsylvania Avenues extend from the freeway on the east to downtown on the west. Blaine/Third Street provides access between downtown and the residential areas north and east of the campus. Linden Street also accesses the campus running from Kansas Avenue on the west to UCR. The north/south roadways in the vicinity of campus include Chicago Avenue, a primary route forming the western campus boundary; Iowa Avenue, which extends north from Pennsylvania Avenue; Canyon Crest Drive, a discontinuous roadway providing one of the main accesses to UCR; and Watkins Drive, forming the northeast campus boundary.

Primary Circulation Route

The Campus Drive loop road system provides the primary internal circulation for the academic core east of the freeway. The loop is made up of:



LEGEND








-  CITY STREETS
-  PRIMARY CIRCULATION ROUTE
-  SECONDARY CIRCULATION ROUTE
-  FREEWAY / I-215 & SR 60
-  FREEWAY RAMP
-  PARKING
-  CAMPUS ENTRANCES

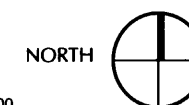
FIGURE 11

EXISTING VEHICULAR CIRCULATION & PARKING

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN

SCALE IN FEET
0 200 400 800 1200



Currently, the parking lots are designated for use by students, staff, faculty or visitors through a parking permit system. The spaces nearest to the buildings and academic core are allocated to faculty/staff and visitors, with student spaces being located farthest from the center of campus. Students who have permits for parking in the residence hall lots are precluded from using other on-campus lots during the daytime. This restriction also applies to students housed in Bannockburn Village, Canyon Crest Family and Married Student Housing and University Plaza because these housing areas are within the campus boundaries and reasonable walking distances. The student parking spaces, therefore, are only for non-resident students, regardless of their living distance from the campus. Faculty parking spaces are assigned on a seniority basis with waiting lists maintained by the Parking Services division.

Interior lots are highly desired because of their convenient locations to buildings and all receive their access off the perimeter roadway. This roadway currently experiences heavy congestion with cars queuing up for long distances behind stop signs at the major entry points during peak hours. It can be anticipated that this situation will worsen as enrollments rise and if parking continues in the present locations.

Pedestrians

The pedestrian circulation system at UCR is composed of sidewalks paralleling streets and walkways designed for the exclusive use of pedestrians. Walkways on the periphery of campus tend to parallel streets such as Eucalyptus Road, Aberdeen Drive, Citrus Drive and Campus Drive. In the academic core, walkways lead through major pedestrian areas such as the Carillon Mall, the Rivera Library arcade and the open area between the Commons and Pierce Hall. Many of these pedestrian walkways also provide access for service vehicles. Other walkways meander through open space areas such as the Botanic Gardens. Leading out of the central campus, pathways provide direct connection to major parking and housing facilities at the periphery. At street intersections, conflicts between pedestrians, bicycles, and vehicles occur, particularly during peak activity periods in the day.

Bicycles

At present, bicycles are permitted on all campus access roadways and pedestrian paths. Separate bicycle lanes are provided on some roadways and connect to City streets such as Canyon Crest Drive, Watkins Drive between Spruce Street and Valencia Hill Drive, and Big Springs Road between Valencia Hill Drive and Watkins Drive.

In general, bicycle parking occurs in designated areas throughout the central campus and adjacent to individual buildings.

Public Transportation

At present the Riverside Transit Agency (RTA) serves UCR with two bus routes crossing the campus. Route 16 on its southbound route, enters the campus at University Avenue, travels south on Campus Drive, crosses beneath the freeway and continues south along Canyon Crest Drive with a series of stops within the campus. Route 16 is estimated to carry 110,000 students annually. Route 1 enters the campus from Blaine Street, goes south on Canyon Crest

Drive past the family and married student housing, turns east on Linden Street, travels south on Aberdeen Drive, southeast on Campus Drive, then exits the campus along Big Springs Road. Route 1 is estimated to carry 26,000 students annually.

Routes 13 and 22 run north/south along Chicago Avenue at the periphery of campus.

- North Campus Drive - University Avenue to Big Springs Road
- East Campus Drive - Big Springs Road to Eucalyptus Drive
- South Campus Drive - Eucalyptus Drive to Citrus Drive
- West Campus Drive - Citrus Drive to University Avenue

Campus Drive provides two travel lanes along the perimeter of the existing academic core with direct access to adjacent parking lots. The loop road facilitates entry and access to the campus from many points along its length. Odd intersections and sometimes confused routing hamper orientation to the campus for visitors and the University community.

Campus Entrances

University Avenue, Canyon Crest Drive, Linden Street, Blaine Street and Big Springs Road constitute the campus entrances. They are poorly defined and not clearly articulated.

Secondary Circulation Routes

Citrus Drive provides access to the SPN Building and the Central Utility Plant between Eucalyptus Drive and South Campus Drive. Eucalyptus Drive provides access to the Rivera Library and the Life Sciences Complex. Aberdeen Drive extends between Linden Street and North Campus Drive, and provides access to the Aberdeen and Inverness residence halls.

Circulation Patterns

Specific circulation patterns on campus reflect a number of vehicular traffic types.

Commuters

Commuters to UCR make up the largest single component of vehicular traffic. Travel patterns relate to work or class schedules, points of entry to the campus, and destinations. During the course of the day, University staff



usually arrive and depart within a relatively short span of time that corresponds to the normal campus work day. Faculty and student commuters, having a more flexible schedule, arrive and depart campus on a more irregular basis.

Visitors

Visitors to the University comprise a relatively small component of the daily traffic on the campus. However, unlike daily commuters, visitors are typically unfamiliar with the campus and circulate on a more random basis to locate a destination and convenient parking. Although visitors travel to all parts of the campus, many visits are focused on a few specific destinations, including the Administration Building, the libraries, the residence complexes, and the Botanic Gardens.

Service

Service vehicles are a daily presence and include private and University-owned vehicles. Service vehicles usually travel directly to a specific destination on campus, often using the pedestrian-oriented Carillon Mall and surrounding spaces. Service traffic is not confined to specific schedules but generally occurs during the course of the University business day.

Current Campus Parking Facilities

UCR is served by a number of parking lots scattered in and around the academic core area, residential areas, and the teaching and research fields. In total, there are 28 different lots providing 5,459 spaces. This figure excludes restricted use spaces found at scattered locations around campus, and at various off-campus leased facilities.

Currently, there are ten parking lots located inside the perimeter roadway. Of these, four lots totalling 269 spaces are devoted to visitor parking. The remaining six lots accommodate 1,511 assigned spaces, totalling 1,780 parking spaces within the perimeter road. These 1,780 parking spaces represent 33% of the total parking spaces on campus. On the east side of the freeway, outside of the perimeter road, there are 15 lots totalling 3,130 spaces (57% of total campus parking). Of these, there are two visitor lots with a total of 152 spaces. The parking lots on the east side of the freeway all receive high usage. The parking lots used the least are west of the freeway, totalling 549 spaces and accounting for only 10% of the total on-campus parking.

Parking lot utilization is the highest for those lots most convenient and proximate to the academic core. Recent enrollment increases have resulted in development of some new usage patterns. The Canyon Crest Family and Married Student Housing area is beginning to be utilized by non-residents for campus parking purposes, and 1989-90 is the first year that the residents have received parking permits to enable enforcement of residential parking. Parking lot usage is generally highest on Mondays and Wednesdays, and between the hours of 9:00 a.m. and 2:00 p.m. on all days during the week. Student use of visitor lots has also recently been on the rise, with informal surveys reflecting up to 75% of the visitor spaces being occupied by cars with student parking stickers. Whether this is attributable to lack of available parking or greater convenience of visitor lots is not totally clear.



PLANNING DETERMINANTS

The primary purpose of the LRDP is to identify and guide the physical development needed to enable the campus to achieve its academic goals during the LRDP planning period. UCR's academic goals are outlined in the General Academic Plan and its summary, the Academic Planning Statement (*Appendix A, Academic Planning Statement*).

Introduction

Purpose

The General Academic Plan is based on the work of the UCR Task Force for Campus Planning and its subcommittees, with input from the deans and associate deans. During the 1989-90 academic year, and at least every other year thereafter, the General Academic Plan will be reviewed by the Academic Senate, designated committees, and the administration for possible revision.

The University's Mission

As one of the nine campuses of the University of California, UCR shares the tripartite mission of teaching, research and public service. The specific mission of UCR at this time is to enhance the campus' reputation as one of the premier public research university campuses in the United States. To this end, UCR will manage future growth to attain the following:

- Achievement of greater excellence in existing colleges, schools and programs
- Development of additional professional schools and programs
- Initiation of new graduate and undergraduate degree programs
- Development of additional areas of research specialization and community services

Academic Planning Goals and Objectives

Academic goals, as set by UCR in its Academic Planning Statement, provide the framework for supporting the campus's continued reputation of academic quality during a period of rapid growth. These goals drive UCR's total planning effort both academically and physically. The goals from the Academic Planning Statement are summarized below. Each goal is followed by a list of related objectives directly affecting the physical development of the campus.

- Enhance and encourage further excellence in graduate and undergraduate instruction as the campus grows (Teaching)
 - Continue to develop and implement state-of-the-art classroom and laboratory teaching facilities
 - Expand existing graduate and professional programs
 - Expand the number and type of professional programs
- Continue to expand the research efforts and recognition of its faculty (Research)
 - Continue to provide state-of-the-art equipment, space, facilities and research services
 - Retain and attract distinguished faculty with an effective support environment
 - Encourage unique and forward-looking research programs, facilities and units

- Contribute to research in the professions with additional professional schools
- Expand the scope and impact of its service to the world, the nation, the state, and the local community (Public Service)
 - Serve the adult community with continuing professional education
 - Serve the local community by becoming the center of intellectual and cultural life in the region
 - Strengthen and enhance existing library resources and facilities to serve both the campus and the community
 - Expand the resources of the campus bookstore
 - Expand the breadth and quality of the performances, exhibitions, lectures, conferences, and continuing education programs offered to the general public
 - Expand the new College of Engineering and develop additional professional schools and programs

Academic Organization

The Fall of 1989 saw a total campus enrollment of approximately 8,200 students in 48 baccalaureate programs, 20 M.A. programs, 17 M.S. programs, an M.B.A. program, 7 types of educational credential programs, the first 2 years of medical school instruction, and 29 Ph.D. programs. The academic programs are organized into a College of Humanities and Social Sciences including the Arts, a College of Natural and Agricultural Sciences, a College of Engineering, a Graduate School of Management, and a School of Education.



University Extension serves over 25,000 registrants each year with courses in continuing professional education, general interest, recreation, matters of cultural and civic significance, and English as a Second Language

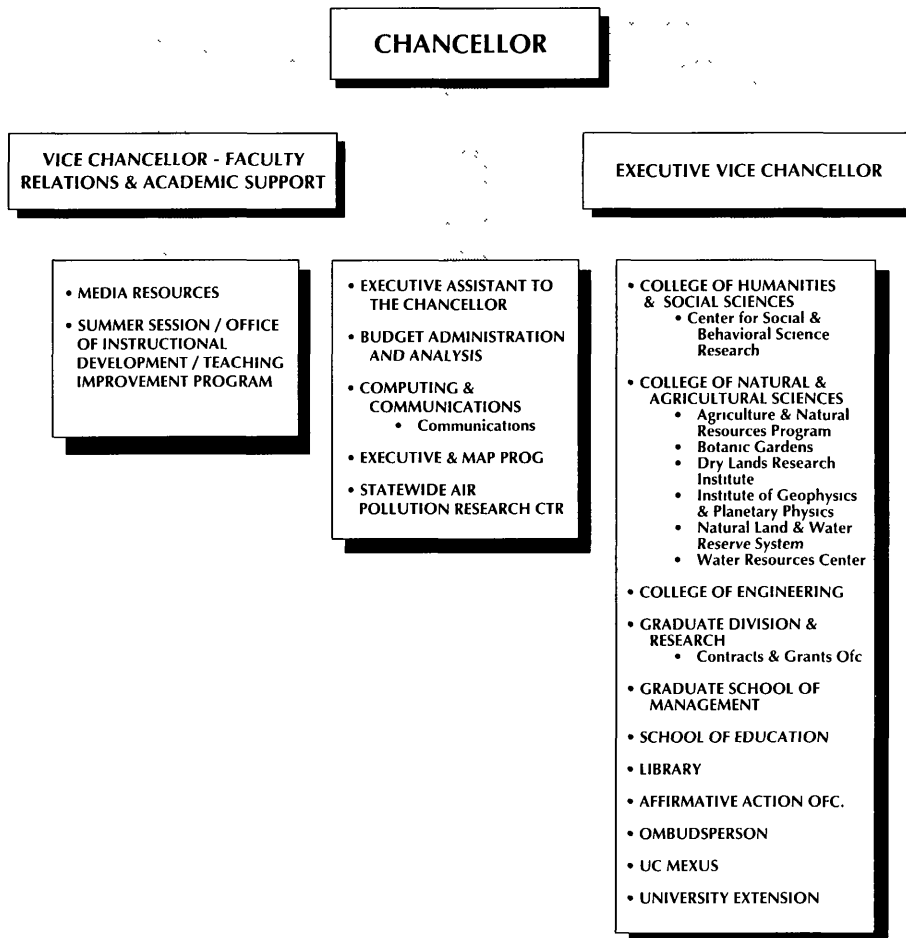
The three colleges and two schools are described briefly below. Existing and planned academic programs are also briefly described. As a broad land use and development plan, the LRDP has been developed to accommodate these programs as well as future changes in program needs.

The College of Humanities and Social Sciences, including the Arts

The College of Humanities and Social Sciences, including the Arts, is one of two major academic units at UCR offering programs in a broad range of disciplines and awarding degrees from the baccalaureate through the doctorate. Along with the College of Natural and Agricultural Sciences, the College of Humanities and Social Sciences, including the Arts, represents the core disciplines of the liberal arts and sciences. The College's faculty now includes 171 ladder-rank (tenure track) positions organized into 18 departments and programs whose students pursue baccalaureate degrees in 33 fields, masters degrees in 15 fields, and doctoral degrees in 10 fields.

Figure 12

ACADEMIC ORGANIZATION



About three-fifths of all UCR students now enroll in College of Humanities and Social Sciences programs, that are expanding and diversifying to keep pace with the University's rapid growth. The College's primary aim in planning is to assist its current core units in growing to a faculty size, programmatic range, and academic quality befitting a first-rank public research university. To this end, it will maintain and enhance its current strengths in the arts, humanities, and social sciences by increasing the quality and size of existing units; by dividing some existing units into two or more parts; and by creating entirely new units. The College plans to devote most of its resources in the first phase of growth to expanding and enhancing its core.

Additional appropriate masters and doctoral programs are needed in various areas of the College, including the Arts; and there is a strong need to enlarge their requisite specialized physical facilities, even as the organizational structure of humanities, social sciences and arts programs is being developed.

The College of Natural and Agricultural Sciences

The College of Natural and Agricultural Sciences is unique in the University of California system because it has integrated its biological, agricultural, and physical science units into one organizational framework. This merger constitutes an academic core of teaching, research, and service in the sciences that ranks the College as one of the best in the nation for its size. Many of its departments have achieved international prominence, most notably Entomology, Plant Pathology and Soil and Environmental Sciences.

The College houses several organized research units. The College has strong ties with the Statewide Air Pollution Research Center, the U.S. Department of Agriculture, U.S.D.A. Salinity Laboratory, the Forest Fire Laboratory of the Pacific Southwest Forest and Range Experiment Station, and the National Weather Service. The College provides a strong undergraduate teaching program and a graduate program in 12 academic departments with a faculty of 300. College programs receive approximately 17 million dollars of external funding annually to support their research.

In terms of physical development, the College will continue to strengthen and develop centralized service facilities with state-of-the-art equipment so that teaching and research programs can be maintained at the cutting edge of science. Existing service facilities include: an agricultural operations unit which manages research facilities and land; a regional analytical chemistry instrumentation facility; a biotechnology instrumentation facility for the study of recombinant DNA; a geographic information facility; and insect and nematode quarantine facilities. New facilities contemplated include: an immuno-technology facility; a plant tissue culture facility; an electronics design facility; and an entomological collection, teaching, and research facility.

The School of Education

The School of Education was founded in 1968 and currently offers a broad range of credential programs for educators, as well as the M.A. and Ph.D. degrees. Teaching credential programs have been offered at UCR since 1958, initially through the College of Letters and Sciences. The School has retained

its historic commitment to offering innovative regionally acclaimed teaching and administrative services credential programs. In addition, the considerable original work undertaken by its faculty has led to the School offering a Ph.D. program in Education concentrating on Special Education, Educational Psychology, Curriculum and Instruction, and Educational Administration. The School's externally funded research programs are already in excess of one million dollars annually. In 1989, the School became the site for a Comprehensive Teacher Education Institute, a focal point for continuing participation by faculty from the College of Humanities and Social Sciences and the College of Natural and Agricultural Sciences. Currently 19.60 ladder-rank Full Time Equivalent (FTE) faculty are assigned to the School of Education.

As the campus grows, the School of Education will continue to expand its teaching, research and service missions. The tremendous population growth in the inland region of southern California will require the School to contribute increasingly to preparing educational leaders for the region. Much of Education's expansion will occur within already developed programmatic areas, although new initiatives are being planned in the subfields of bilingual education, school psychology, and higher education.

The Graduate School of Management

The Graduate School of Management (GSM) provides strong professional education in its M.B.A program. The undergraduate business administration program is a select, high-quality program of business education based on a broad liberal arts undergraduate background with students enrolled in the College of Humanities and Social Sciences and instruction provided by the GSM faculty. The emphasis is on developing sound professional skills in the traditional areas of business while at the same time providing students with a well-rounded perspective on the world and on the environment in which they will live and work.

The GSM participates in an academically strong interdepartmental Ph.D. program in Economics, with concentrations in Financial Economics and Economic Theory. Other participating departments include the Department of Soil and Environmental Sciences of the College of Natural and Agricultural Sciences. Currently 28.40 ladder-rank FTE faculty are assigned to the GSM.

The GSM seeks to develop Ph.D. programs in management and additional programs in economics and to expand professional programs at the MBA and undergraduate levels. At the Ph.D. level, GSM participates in the interdepartmental Ph.D. in Economics and intends to create centers of research excellence in management and economics.

New Academic or Professional Schools

The new College of Engineering, initiated in the 1989-90 academic year, is expected to initially develop B.S. degree programs in electrical engineering, chemical engineering and environmental engineering; to add B.S. degree programs in fields such as mechanical engineering, computer science and engineering; and to develop M.S. and Ph.D. programs within the next three years.

The campus hopes to develop at least two new professional schools in response to the continued rapid development of inland Southern California and the increased needs of the region and the State.

Research Units

Existing Organized Research Units (ORUs) and Multicampus Research Units (MRUs) will be strengthened and new ORUs and MRUs initiated. Current ORUs include:

- Center for Social & Behavioral Science Research
- Citrus Research Center & Agricultural Experiment Station (CRC-AES)
- Statewide Air Pollution Research Center (SAPRC)
- Water Resources Center
- Institute of Geophysics & Planetary Physics (IGPP)
- Dry Lands Research Institute

The campus continues to support establishing the UC Consortium on Mexico and the United States (UC MEXUS) as an MRU. Other potential MRUs and ORUs will be proposed as the campus continues to grow and develop.

Enrollment Considerations

UCR's enrollment increase has been largely at the undergraduate level and primarily in the College of Humanities and Social Sciences. This increase has led to allocating 118 additional Instruction and Research (I&R) faculty positions to the campus, a 39 percent increase from the 1983-84 figure of 299.51, raising the total number of I&R faculty positions in 1989-90 to 417.51. When approximately 120 campus ladder-rank (Agricultural Experiment Station) Organized Research (OR) positions are added to the I&R positions, the ladder rank faculty positions at UCR total almost 540 in 1989-90.

During the next 15 years, the campus expects dramatic growth in enrollment, in scholarly attainment, and in extramural funding. The campus plans for enrollment to grow to 18,050 students by the year 2005-2006, with the proportion of graduate students increasing to 20 percent. The number of I&R faculty positions will at least double by that time, while the number of agricultural OR faculty positions should remain unchanged, for a combined total of over 1,100 I&R and OR faculty positions by the year 2005-2006.

Introduction

Long-Range Program Needs

The current period of high enrollment growth and significantly expanded scope in academic goals finds the campus developing critical shortages of space. The campus will see extensive construction of new facilities and the renovation of existing facilities, as well as a more concentrated use of land to achieve these goals and to accommodate the anticipated growth in students, faculty and staff.

Space projections provide the long-range context for developing the UCR campus. The projections provide the basic data from which are determined building footprints and densities, and related circulation and parking.

For UCR, those academic space requirement projections that are largely State-funded are based primarily upon:

- Academic goals of the campus
- Program needs related to enrollment levels
- Contingency factor for unforeseeable programs

Space projections are the basis for land planning for the LRDP. These projections will be monitored and evaluated in response to actual enrollment and specific facility needs.

Planning Assumptions for Facility Needs

The plan proposes that most new construction will take place on the campus east of the freeway. In preparing the plan, several assumptions were made for all academic, support and functional areas:

- The need for a more efficient use of land requires relocating or demolishing obsolete or inefficient structures as an area becomes needed (e.g., old green-houses, relocatable or temporary structures, older one-story structures, low-density obsolete housing)
- Existing structures will be renovated where fiscally and programmatically possible to accommodate new uses
- While density of land uses will increase, large open landscaped areas will be retained
- Structures will be strategically located to fit within the terrain, layout, and scale of campus
- Most on-campus parking will be redistributed to satellite lots and the use of alternative modes of transportation will be encouraged
- Existing low-lying intramural fields will be converted to buildable sites while mitigating 100 year flood waters



Academic , Library, Administrative, Public and Student Services

The plan assumes there will be significant growth in the academic, administrative, and support area space needs. From the present situation to needs generated by an enrollment of 18,050, approximately 4,967,327 gross square feet (GSF) of additional space is projected. These additional space requirements are based on the following factors:

- Space deficiencies as the campus population grows
- Growth in graduate and professional programs through expansion and addition
- Expansion of administrative and support entities as the campus population grows
- Growth in Organized Research programs
- Consolidation of current off-campus operations back onto campus
- Incorporation of a planning flexibility factor

The space needs are summarized by the following table. Academic areas include all instruction and research-related space, organized research units, performance and gallery facilities, and teaching and research fields facilities.

TABLE 1 Area Space Need Projections		
Program	Existing (GSF)	18,050 Enroll. (GSF)
Academic (includes Teaching & Research Field Facilities)	1,316,138	4,672,553
Libraries	247,850	651,580
Administrative	213,127	513,683
Public Service/Non-Institutional (includes Conference Center)	69,994	789,872
Student Services	<u>171,860</u>	<u>358,608</u>
TOTAL:	2,018,969	6,986,296

Housing

The housing goal for the projected future enrollment is to house 35% of UCR students in University-controlled housing. A subset of this goal is to house 75% of freshmen and “first-time” students in residence halls. Those spaces in residence halls not taken by freshmen and first-time students will be made available to returning sophomore, junior, senior and graduate students. The remaining students to be housed in meeting the 35% goal would be assigned to apartments and family and married student housing under the ratio of 2/3 in apartments and 1/3 in family and married student housing.

The housing needs were based on applying the housing goal to the future enrollment projection.

The housing square footage for future enrollment was determined by multiplying the number of students housed by the current square footage per student for each type of housing:

Residence Halls	230 GSF/student
Apartments	381 GSF/student
Family & Married-Student Housing	769 GSF/student

TABLE 2 Housing Population Projections			
	Existing	18,050 Enroll.	Deficit
Residence Halls	1,864 students*	3,375 (75% of Freshmen and first-time students)	1,511 students
Apartment	617 students	1,942 students (2/3 of remaining)	1,325 students
Family & Married Student Housing	300 students	1,001 students (1/3 of remaining)	701 students
TOTAL:	2,781 Students	6,318 students	2,537 students

The space needs are summarized as follows:

TABLE 3 Housing Area Requirement Projections			
	Existing (GSF)	18,050 Enroll. (GSF)	Deficit (GSF)
Residence Halls	457,436*	776,250	318,814
Apartments	285,210	739,902	454,692
Family & Married Student Housing	229,391	769,769	540,378
TOTAL:	972,037	2,285,921	1,313,884

The plan assumes that current residence hall areas will expand and the area will increase in density with additional residence hall facilities. It also assumes that over time the existing Canyon Crest family and married student housing units will be replaced incrementally with more dense family housing and recreational outdoor fields. The existing Bannockburn Village and University

*Includes Fall 1990 completion of 604 bed Residence Hall V

Plaza Apartments will remain, with new housing being built west of the freeway. It is also the intent of the plan to encourage construction of apartments along the University Avenue corridor by the private sector or possibly by joint venture development.

The increase in new housing on campus is dependent upon several factors, but primarily on financial feasibility. The Regents require that student housing must be self-supporting. Therefore, any new construction on campus will be somewhat dependent upon the housing market off campus. An increase in housing is also dependent upon achieving the student housing mix goals of this plan.

Physical Education/Recreation Facilities

The plan assumes that a portion of the existing intramural playing fields will be relocated and recreational and athletic facilities will be significantly increased. A portion of the existing facilities will be replaced and the current space of 181,127 GSF will increase to 480,000 GSF for the 18,050 enrollment. Specific assumptions are:

- A minimum of 40 acres for intramural fields, located near housing
- Any new intercollegiate activities such as fields, stadium or fieldhouse would be located west of the freeway, north of Pennsylvania Avenue, and east of Iowa Avenue on the existing agriculture lands

Maintenance and Physical Plant

The plan assumes that the existing corporation yard/central utility plant will continue to expand as required and a new utility plant will be added to total 279,156 GSF.

Special Projects

The plan assumes there will be a number of special projects built within the core campus and west of the freeway.

On the core campus east of the freeway, it is anticipated that a performing/visual arts and cultural center, and an alumni/visitor center will be constructed. The performing/visual arts and cultural center would be located on University Circle and would eventually include over 300,000 GSF of theater, gallery, museum and support spaces, with underground parking.

On the west side of the freeway, it is anticipated that a conference center of approximately 260,000 GSF would be constructed, including meeting, dining, housing and support facilities.



LONG RANGE DEVELOPMENT PLAN

UCR has entered into the most dramatic growth period in its history. The LRDP provides the University community with the unparalleled opportunity of defining the first official guidelines for campus growth since 1964. Expansion will occur in concert with the needs of the academic and local communities, and the natural environment.

Introduction

The overwhelming impression upon entering UCR's campus is of generous open space; the feeling of being within a park with buildings subordinate to the landscape. This impression forms the basis for the UCR LRDP. The plan's basic premise is to preserve the open feeling of the present campus. This objective will be accomplished by creating a number of additional campus malls, each a minimum of 100 feet in width, wider where possible. The malls will extend the ambience of the existing Carillon Mall and will become the structure tying together all campus land uses and academic precincts.

The key decision made during the LRDP process has been to concentrate the academic core on the east side of the freeway. The issue really is one of perception, with the goal being an academic core that is perceived as unified and cohesive, one with enough areas of intensity and interaction to give the campus a high level of activity. The decision to focus academics east of the freeway has the virtue of allowing UCR to turn its academic back to the freeway and to respect the historic beginning and current importance of agricultural research and teaching lands to the University.

The freeway, while a dominant part of any UCR land use plan, can be mitigated for the ground level observer by use of sound attenuating walls and visual barriers. The east and west campuses can be connected by well designed pedestrian overcrossings of the freeway. Parking structures paralleling the freeway can also act as sound barriers. The fact is that there is an east and west campus. However, certain land uses can be sited in peripheral locations: Professional/Graduate School Reserve; Intercollegiate Athletics; quasi-public uses: Conference Center and University Extension; and housing as support for the new University Avenue Strategic Plan commercial/housing village. In this way, the plan creates a concentrated academic core, protects a majority of agricultural teaching and research fields, and still presents a strong connection to the City of Riverside.

An opportunities and constraints analysis undertaken as part of this planning process determined that 486 acres of land is available to accommodate UCR's expansion needs. Of the total UCR acreage (1,106 acres), key agricultural lands, the riparian areas of campus, the Botanic Gardens, the Salinity Lab site, and the steep hills on the southeast campus were eliminated from development consideration.

Two important planning goals should guide development of the academic core. First, the campus should be developed as a series of academic precincts thereby recognizing the functional adjacency requirements of related academic departments and minimizing walking distance between classes. The idea is to provide rational campus growth but not to isolate students and faculty by class (undergraduate or graduate) or discipline. Toward this end, multi-disciplinary classroom buildings will be located at the boundaries between two or more precincts and will be integrated with food service and plaza space to encourage the intermingling of students and faculty during

breaks in their class schedule. Second, the open feeling of the campus and the lush appearance of the present campus core should be maintained while increasing the density of development. The present low building coverage of 14% of total land area will increase to a still open 26%. The average building height will increase to 3.5 to 4 stories. With a few exceptions, taller buildings will be located back from mall edges. In all cases, buildings immediately adjacent to the malls will not exceed the 50 foot height of existing trees on the Carillon Mall, thus maintaining the desired green feeling of the campus.

Goals of Physical Development

Goals for physical development of the campus evolved with input from the LRDP Committee, the LRDP Steering Committee, students, faculty, staff and the public. Five primary goals will guide the growth and physical development of the campus to the target enrollment level of 18,050 by the year 2005-06 and beyond:

Create a State-of-the-Art Plan that Conveys the University's Excellence

The academic plan sets goals for UCR's continued development of academic excellence in teaching, research and public service. A concurrent goal of the LRDP planning process is to formulate a plan that facilitates achievement of these goals.

Develop Land Use Elements to Strengthen Academic, Cultural and Social Interaction

The academic campus as it now exists has at its core the Carillon Tower and the Rivera Library. These central elements and the east/west Carillon Mall, the north Commons Mall and the south Library Mall form a pinwheel of space. The existing academic buildings move out in a decreasing density from center to edges and are arranged in two basic academic precincts; Humanities and Social Sciences and Natural and Agricultural Sciences with the beginnings of new academic precincts (Education, GSM, Engineering) located within and adjacent to their boundaries.

The LRDP acknowledges this basic spatial and land use arrangement, builds upon it and strengthens it. Specifically, the LRDP designates sites for the total complement of academic, support, residential, and infrastructure facilities needed to:

- provide for anticipated facility space needs
- enhance existing programs and provide for new academic programs
- provide space for state-of-the-art facilities
- accommodate new professional/graduate schools
- provide for new facilities such as a conference center, University Extension, Alumni Center, etc.
- accommodate new students

Preserve, Enhance and Restore the Natural Environment

From its inception as a Citrus Experiment Station, UCR has had close ties to the natural environment. Over the past 83 years this relationship has been strengthened as the University has developed programs in the natural and physical sciences as well as in agricultural sciences.

The University has become both an important preserve for remnant natural habitats and a valuable community resource with a park-like setting. In this respect the LRDP serves to preserve, enhance and restore the natural environment as follows:

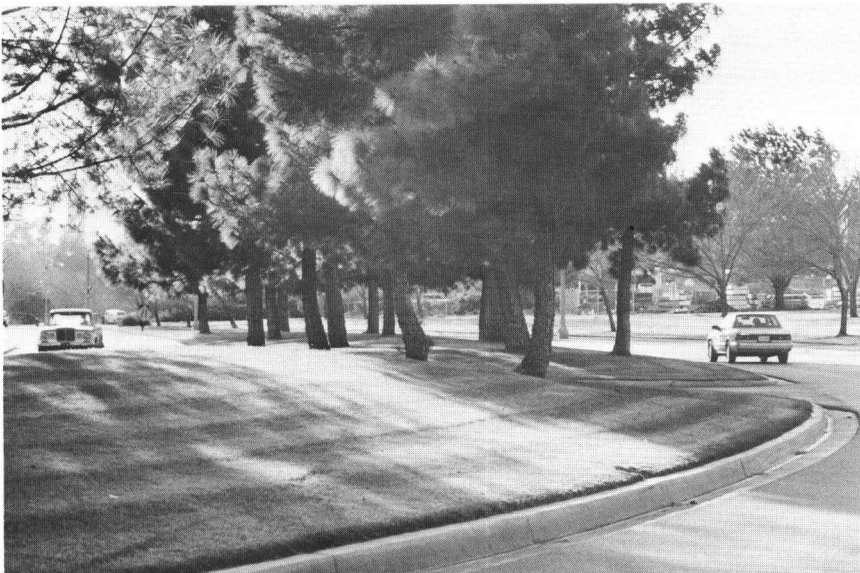
- preserve, enhance and restore riparian areas
- preserve and enhance the Botanic Gardens and Picnic Hill
- preserve and enhance agricultural lands
- preserve and enhance the landscaped, shaded park-like atmosphere of campus
- preserve existing trees
- preserve hillsides
- preserve vistas

Strengthen and Clarify Circulation Systems

The 1964 LRDP outlined a plan for growth including limited vehicle access within the campus core. Even with this foresight, the past 26 years have brought major impacts to the campus as a result of vehicular traffic. These impacts have resulted from the increasing amount of traffic from the freeway; the traffic crossing the campus to reach off-campus destinations; increasing student ownership of cars; people's increased acceptance of commuting long distances; and surrounding development making UCR more accessible within the community.

Expanding UCR over the next 15 years offers an opportunity to clarify and strengthen circulation as follows:

- improve all entrances to campus
- design one primary ceremonial entrance to campus
- improve regional access to campus
- avoid pedestrian/bicycle/vehicle conflicts
- coordinate vehicular, bicycle, and pedestrian circulation patterns
- reduce dependence on automobiles
- minimize vehicular traffic through campus



Maintain Planning Flexibility

Changing circumstances may affect campus development. The LRDP must be flexible in order to guide campus growth through 2005-6 and accommodating growth beyond the target enrollment of 18,050, and yet be able to function as a viable plan in case population growth beyond this level does not materialize. Proposed campus growth will require choices of land and facilities allocation and necessitate planning for future and unanticipated campus development during and beyond the life of the plan. The LRDP will maintain planning flexibility as follows:

- incorporate flexibility in space estimates for unforeseen changes and opportunities
- provide reserve and expansion areas in the campus plan
- provide a means to evaluate, update and review the plan on a periodic basis

Planning Principles

The LRDP has evolved in response to the above goals and substantial campus and community input. In developing the LRDP, several planning principles with implications for the physical plan directed the overall design concept. These principles address both the natural and built environment of the campus. Each principle is intended to further the primary goal to preserve the natural environment and strengthen the physical framework of the campus while accommodating future growth of the University.

Open Space Network as the Unifying Element

An open space network will provide the primary structure to the LRDP and unify all land use elements. Over the years, substantial landscaping has become a primary feature of campus development—the large shade trees and expansive green malls are a signature element of the campus. A strong open space system will provide the opportunity to enhance the character established by over 30 years of plant growth. Open space will establish the parameters for precinct development by defining precinct locations and connecting precincts with malls, walkways, courtyards and plazas. In the course of continued campus development, open space will unify different architectural styles and create a campus image with prominent entrances, vibrant plazas and spacious malls.

Open space will define the campus image by preserving riparian areas, restoring the arroyos, and providing views to the surrounding mountains. An open space connection will be the means to unite the academic core to the east of the freeway with housing, parking, intercollegiate athletics and Professional/Graduate School Reserve to the west. An open space network will interconnect present open space areas and establish new connections between existing and future development and will maintain the desired ambience of existing landscaping, courtyards and the general park-like setting.

Academic Core on East Campus

UCR's historic response to the freeway has been to site agricultural teaching and research fields to the west of the freeway with the academic core to the east. In recent years, regional development has greatly increased freeway use and thus it has become an even more divisive element to the campus. At the

same time, projected campus growth required evaluating opportunities for expanding the campus. A major decision in the LRDP process related to crossing the freeway to extend academic uses or accommodating campus growth on the east. The LRDPSC and LRDPSC meetings along with campus and public workshops were a valuable forum for this discussion, resulting in a decision to maintain the academic core on the east.

The LRDP concentrates academic expansion on the east campus with continued agricultural teaching and research fields, housing, parking, a conference center, intercollegiate athletics, University Extension and Professional/Graduate School Reserve to the west. Planning for academic expansion on the east creates a unified, cohesive campus undivided by the swath of the freeway. Maintaining and strengthening the present academic core encourages both the interaction of graduate and undergraduate students, faculty and staff, and the sharing of facilities such as libraries and classrooms. A strong academic core provides the potential for interaction between disciplines and creates the vitality necessary for campus life. Concentrating academic uses to the east provides an opportunity for UCR to de-emphasize the freeway with landscape buffers, and architectural designs fronting on the campus proper, with service and parking structures facing the freeway. Academic expansion to the east respects the historical continuity of the campus by preserving key agricultural lands. Maintaining the academic core on the east campus permits a mixing of graduate and undergraduate programs and allows the appropriate relationship between precincts and departmental programs.

Academic Precincts as Organizing Element

UCR's early development centered around the growth of agricultural research. During the early 1950s, as the University expanded with a College of Letters and Sciences, the campus grew in relation to defined academic areas such as Life Sciences, Social Sciences and Humanities. This LRDP defines these academic areas as academic precincts, the land area within which all research, teaching and office space for each college or school will be provided.

The LRDP utilizes academic precincts as an organizing feature of the campus plan. Academic precincts enable the campus to integrate academic programs and to locate colleges/schools, and thus departments, in the appropriate functional relationship to each other. With academic precincts, colleges/schools and departments can plan for their own growth within a defined campus area. Academic precincts allow for rational growth for the entire campus. A campus plan based on academic precincts is understandable for the students, the faculty, staff and visitors. The use of academic precincts minimizes the walking distance between classes, laboratories, offices and libraries. In utilizing the academic precincts, the professional schools will be dispersed within the academic core to provide a mix of graduates and undergraduates. To encourage interaction of students and faculty from different disciplines, classrooms will be clustered in two or three locations at the boundaries of precincts with adjacent food service.

Create a Strong and Unique Place

The image of UCR conveyed to both the campus and the community is comprised of many visual impressions. UCR's historic image is based on its

agricultural beginnings and continues with the greenhouses and expansive agricultural teaching and research lands of the west campus. Low buildings, mature shade trees and expansive lawn areas create the park-like environment that defines the campus image on the east campus.

A primary intent of the LRDP is to preserve UCR's park-like atmosphere and to create a strong and unique place, an image befitting a major university. The design of the campus entries and gateways along with landscaping and signage will convey a strong sense of place and communicate the UCR identity. In keeping with a pedestrian-oriented campus, a ceremonial entrance off University Avenue with a traffic circle will provide a major entry and limit through-traffic. Clear attractive campus entries will identify the University and define circulation patterns. Preserving the "human-scale" of the campus with low buildings and clear pedestrian walkways will continue the desired park-like ambience. Incorporating existing natural patterns such as the drainage patterns and the arroyo into the overall design will provide the campus an identity within the natural environment. Retaining campus landmarks such as the Carillon Tower, the SPN Building, and Picnic Hill will contribute to the historic continuity of UCR's image. The campus' identity within the regional setting will be strengthened by respecting the hillside areas with minimal development on slopes over 15% and by preserving views. UCR's image as a vibrant campus will be enhanced by clustering buildings to improve interaction between programs and by providing more gathering places for students and faculty with courtyards and plazas.

Landscape and Open Space

The proposed open space network provides the primary structure to the campus plan, unifying all the land use elements by establishing the boundaries for precincts, connecting destinations, and strengthening the existing open space system. The Open Space component of the LRDP is comprised of three elements: the formal landscape of the central core and developed areas of campus; the natural landscape associated with the hillsides, the dry washes and the Botanic Gardens; and the agricultural landscape, located primarily in the west campus area. Detailed landscape decisions will be made when designing and siting specific development and improvement projects. These decisions will be consistent with the plan.

Formal Landscape

The formal campus landscape with its mature trees, open space areas and ornamental plantings, is an important component of the campus open space network. The formal landscape defines campus entries and connects precincts by use of malls, plazas, courtyards and terraces.

Entries

Prominent entrances will be an important element of the open space network and welcome campus visitors, faculty and students. They convey an appropriate campus image to the community while giving information and directions. Two ceremonial entries, landscaped with tall palms and visible throughout the campus, will be located at University Avenue and Big Springs Road.

LEGEND

-  RESTORED ARROYO
-  MALLS
-  PLAZAS, TERRACES, & COURTYARDS
-  WALKS
-  ENTRANCE CIRCLES

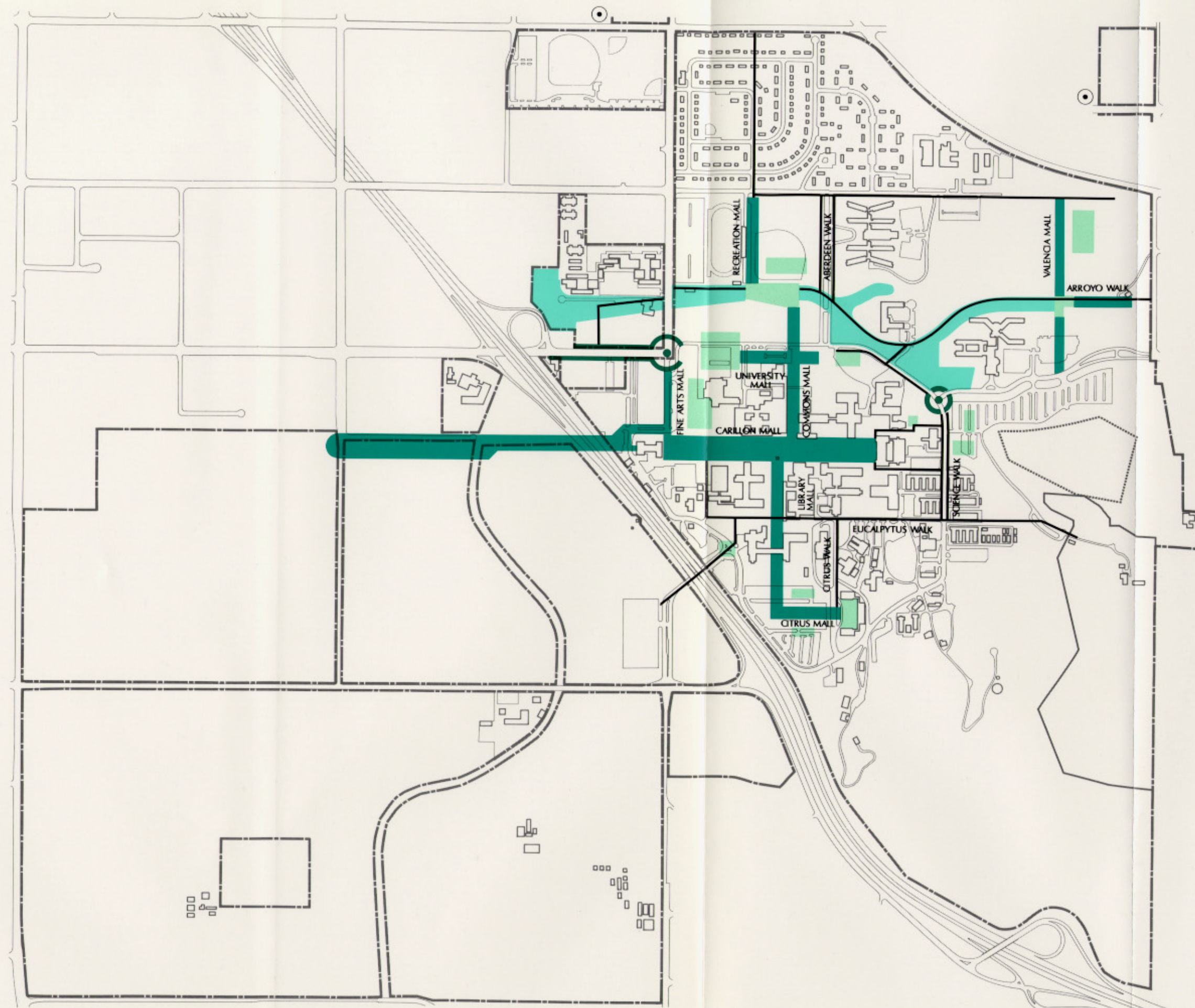
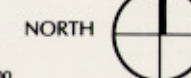
FIGURE 13

LANDSCAPE FRAMEWORK

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN

SCALE IN FEET
0 200 400 800 1200



- University Circle, a campus entry turning circle, will be located at the terminus of University Avenue, at Canyon Crest Drive. University Avenue, lined with an alleé of citrus trees and a series of palms, will terminate with the turning circle and a fountain or other focal element. The turning circle will slow traffic, provide a generous area for transit drop-off, focus views toward the campus foreground, and give importance to this major entry.
- The Science Library Circle, at the intersection of Big Springs Road and East and North Campus Drive, will serve as a drop-off for the library as well as an entrance to the east campus. This entry, encircled with palms, will be smaller in scale than University Circle and may also have a fountain.



Malls

Key locations and focal points will be connected by landscaped pedestrian malls that form the backbone of the campus plan. The Carillon Mall will be approximately 200 feet wide, while the secondary malls will be at least 100 feet wide.

- The Carillon Mall, including the Carillon Tower, will be the primary campus mall running east/west from Webber Hall West to the Administration Building. The proposed extension of this mall will cross the freeway and connect the east campus to the apartments, University Extension, the Conference Center, and University Avenue development on the west side of the freeway.
- The Library Mall will run south from the Carillon Tower, past the Rivera Library, and connect to the Citrus Mall.
- The Citrus Mall will run west from the Graduate School of Management building terrace, an historic landmark, to the south end of the Library Mall. This Mall could be expanded across the freeway at a later stage to handle pedestrian traffic from housing and parking structures.

- The Commons Mall will run north/south from the Carillon Mall to the Highlander Plaza, south of the Education precinct.
- The Fine Arts Mall will run south from University Circle to the Carillon Mall.
- The Recreation Mall will run north from Arroyo Plaza to Linden Street.
- The Valencia Mall will run north/south, from Big Springs Road to Linden Street, past Administration and the reserve Professional/Graduate School precinct.

Additional generous pedestrian-ways will connect the main and secondary malls with other campus destinations. These include: Aberdeen Walk, paralleling Aberdeen Drive; Science Walk, connecting Picnic Hill with the Joint Sciences Library; Eucalyptus Walk, replacing Eucalyptus Drive and extending from the freeway east, past Rivera Library South and to the entrance of the Botanic Gardens; Webber Walk North and Webber Walk South, extending the Carillon Mall around Webber Hall to Science Walk and the Joint Sciences Library Plaza; and Arroyo Walk North and Arroyo Walk South, informal tree-lined pathways on both sides of the arroyo's total length connecting with Highlander Plaza.



Plazas, Terraces and Courtyards

Plazas will be located at the confluence of pedestrian malls as major focal points and gathering places.

- The University Plaza will be a pedestrian extension of University Avenue, running east from University Circle to the Commons Mall and the Engineering precinct.

- Arroyo Plaza, located to the east of the campus core, will front the Professional/Graduate School Reserve Precinct and Administrative Support. This plaza, as a focal point, will signify the beginning of the campus arroyo as water rises in a fountain, flows through a long channel, and cascades downslope to begin flowing west through campus.
- Highlander Plaza will signify the meeting of four major pedestrian ways: the Recreation Mall south from Linden, the Commons Mall north from the Carillon Mall, and Arroyo Walks North and South. The plaza will span the arroyo and will create a foreground for the Chancellor's Office, the Education precinct and the Engineering precinct.
- Joint Sciences Library Plaza will be the west entry to the library.
- Engineering Plaza will be at the end of Aberdeen Walk at the center of the Engineering Precinct.
- Secondary plazas will be appropriate at the south entry to the Joint Sciences Library and at the entries from the west campus.

Courtyards and terraces will function as outdoor rooms for individual buildings where people naturally gather and near active areas such as entries. The character of each space should relate to the specific building or entry and should provide seating and shelter from winter winds and summer sun. Interior spaces could also offer areas for more quiet, individual activities such as reading or study. All new building footprints will incorporate courtyards or terraces. The open space system will continue existing patterns, such as the Graduate School of Management Building Terraces.

Campus Boundaries

Campus boundaries, or edges, define the University and contribute to its public image. Due to the campus size and variety of land uses, there are several distinctive edge conditions such as the freeway, residential neighborhoods, commercial areas, open space and agriculture. Land uses and buildings in scale with surrounding neighborhoods will assist in portraying an appropriate campus image. The northern and eastern edges of the campus should be maintained as a landscaped buffer complementing the residential uses of the surrounding community. Buildings of an appropriate scale should be at these edges only to mark the various campus entrances. The southern edge of the east campus will continue to be defined by the steep topography of the Box Springs Mountains. The edges of the west campus will include landscaped buffers along the primary vehicular circulation route and developed areas, and feature the agricultural character of the balance.

Views into the campus are an important complement to strong edges. These views can take the form of wide, unimpeded vistas or windows, or narrow, focused glimpses occurring randomly. Landscape treatments of edges will make them distinctive and attractive and will provide opportunities for views into the campus.

Natural Landscapes

The second element of the open space network, the natural landscape, will consist primarily of the remnant riparian communities and the dry washes, the prominent rocky hillside to the southeast of campus, and the Botanic Gardens.

Hillsides

Due to the possibility of erosion and the importance of natural habitats, the hillside slopes over 15% will be designated as open space reserve and be part of the visual backdrop for the campus setting. The Open Space Reserve will be designated to protect existing lands that have open space and natural habitat value. All land uses designated in the LRDP, including Open Space Reserve, indicate the University's preferred land use through the LRDP horizon year. Any alternative land uses for this area would be limited to low intensity activities that would be sensitive to existing open space and natural habitat values.

Arroyo/Riparian Areas

The LRDP proposes to extend and develop riparian areas into the existing dry washes. This watercourse will utilize the existing natural drainage system and existing riparian areas, as well as a recreated arroyo, to create a more natural, linear connection in the open space network. Extensive landscaping will create a shady riparian habitat. Pedestrian walkways, bicycle paths and bridges will connect these riparian areas to the rest of the campus.

Botanic Gardens

As the campus grows, the Botanic Gardens will continue to provide an open space and teaching resource to the campus and the regional community. The Botanic Gardens will also provide an important link in the open space network. The Botanic Gardens will remain in the present location with improved access as discussed in Transportation and Circulation.

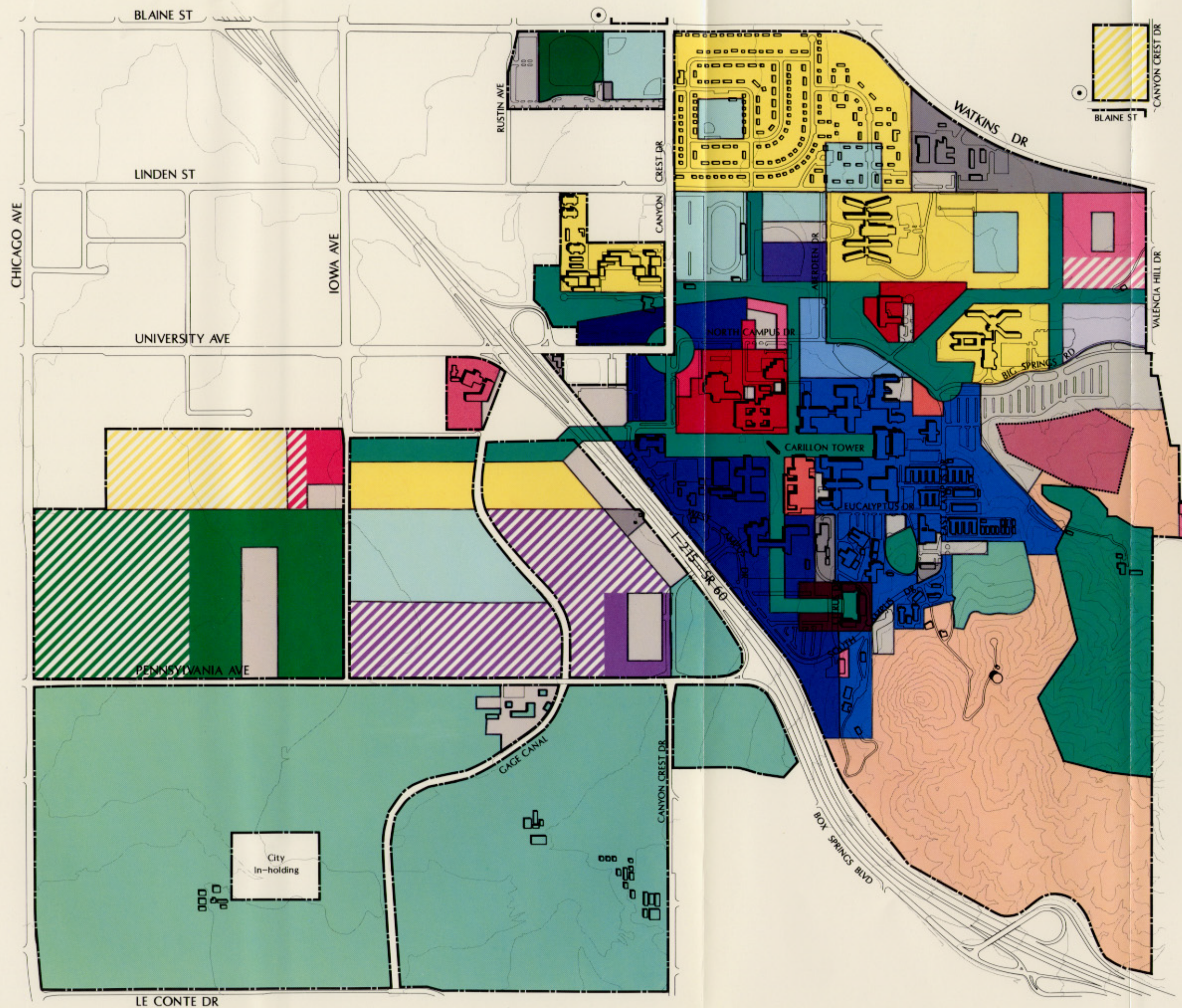
Agricultural Landscapes

The third element of the open space network, the agricultural landscape, will include those field, orchard, and other research and teaching areas that are located primarily in the west campus. This landscape is a man-made, highly controlled environment and differs greatly in use from the formal landscapes of the developed areas of campus. It is a visual reminder of the great importance of UCR's agricultural teaching and research programs.

The fields and orchard plantings will be integral components of the campus open space system. The teaching and research fields will be retained south of Pennsylvania Avenue. Areas north of Pennsylvania Avenue will continue in agricultural uses until the proposed land uses are needed to further the academic goals of the campus.

Land Use

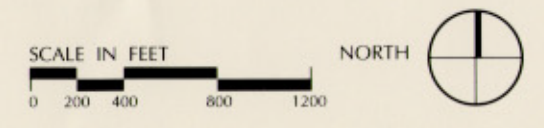
In order to accommodate the expected growth of UCR, major expansion of academic and support facilities within the central campus is required to accommodate campus academic program needs. Specifically, the plan assumes 6,809,274 gross square feet (GSF) of new building space will be



LEGEND

- COLLEGE OF HUMANITIES & SOCIAL SCIENCES INCLUDING THE ARTS
- COLLEGE OF NATURAL & AGRICULTURAL SCIENCES
- COLLEGE OF ENGINEERING
- PROFESSIONAL GRADUATE SCHOOL RESERVE
- PROFESSIONAL GRADUATE SCHOOL RESERVE
- SCHOOL OF EDUCATION
- PROFESSIONAL GRADUATE SCHOOL RESERVE
- GRADUATE SCHOOL OF MANAGEMENT
- ADMINISTRATIVE
- PUBLIC SERVICES
- STUDENT SERVICES
- HOUSING
- LIBRARIES
- OPEN SPACE RESERVE
- RECREATIONAL FACILITIES/ OUTDOOR FIELDS
- AGRICULTURAL, TEACHING, & RESEARCH FIELDS
- DESIGNATED OPEN SPACE
- INTERCOLLEGIATE ATHLETICS
- CONFERENCE CENTER
- NON-INSTITUTIONAL AGENCIES
- PARKING
- MAINTENANCE & PHYSICAL PLANT
- EXPANSION

FIGURE 14
 CAMPUS LAND USE/PRECINCT PLAN
 UNIVERSITY OF CALIFORNIA, RIVERSIDE
 LONG RANGE DEVELOPMENT PLAN



required to meet campus program needs. This GSF projection is derived from a combination of space standards* and the addition of a flexibility factor ranging from 20-60%. Flexibility is essential to this land use planning process to:

- accommodate unforeseen growth within or beyond the life of the plan
- add needed facilities within precincts beyond the horizon of the LRDP to avoid dispersing related uses
- allow for site use inefficiencies as the plan becomes reality
- allow for some precincts to grow faster than others, depending on future program needs
- allow for changes in State standards

The campus will expand by intensifying development where feasible and by building in areas that have as yet seen only limited development. In general, the mall along the west side of the Rivera Library most closely approximates the scale and character of development appropriate to the academic core.

Academic buildings (including classrooms, research and teaching laboratories, and faculty offices) and student services buildings (including student registration, student financial aid, advising, and Bookstore) will be located in the core of the campus. Other support uses like recreation and student housing will be located in peripheral areas.

On the east side of the campus, within the academic core, the siting of new buildings with increased density and an average height of 3-1/2 to 4 stories (average height of the present campus is 2-1/2 stories) will maintain about 25-28% building coverage (amount of building footprint that covers a specific area of land), and will retain academic facilities within reasonable walking distances of one another. This relationship will assure adjacencies conducive to faculty interaction and reasonable walking time between classes for students.

Academic

New buildings will be sited to reinforce existing and proposed open space axes and to frame major open spaces such as the new Arroyo Plaza, University Circle and Citrus Mall, the existing Carillon Mall and Big Springs Road entrance. The plan also will create opportunities for grouping buildings that enhance existing precincts or give form to new precincts.

College of Humanities and Social Sciences, including the Arts Precinct

The Humanities and Social Sciences, including the Arts precinct expands along the freeway to eventually create a connection between the Professional/Graduate School Reserve and the Graduate School of Management.

The present Administration Building is incorporated into this precinct but at present is a weak terminus to the campus' Carillon Mall. A Humanities and Social Sciences or Fine Arts Building should be considered for a site east of the existing Administration Plaza. The anticipated arrangement of departmental groups within the precinct suggests Humanities to the center, Social Sciences

*California Postsecondary Education Commission (CPEC) Standards

in the southern part of the precinct, and Fine Arts to the north with a strong pedestrian connection to Performing Arts northeast of University Circle.

Because the Humanities and Social Sciences including the Arts precinct is located adjacent to the I-215/SR-60 freeway, it will form the gateway from west campus to east for pedestrians arriving from housing and other west campus land uses. The major pedestrian connection will parallel University Avenue and connect the Conference Center and new apartments to the Student Commons precinct via the existing Administration Building. A secondary access point will occur at the existing Canyon Crest undercrossing.

This precinct will need to expand to 803,190 GSF to meet projected space requirements, an increase of 188 percent over the 1989-1990 level of 279,248 GSF.

The Fine Arts area of the precinct will expand to 469,290 GSF (a 2,185 percent increase over the 1989-1990 level of 20,535 GSF). A Performing-Visual Arts and Cultural Center (111,890 GSF), adjacent to University Circle, the main entry to campus, will have museums of history and anthropology, galleries, rehearsal halls and instrument storage. The Arts Center will have a strong connection to the community.

College of Natural and Agricultural Sciences Precinct

The College of Natural and Agricultural Sciences (NAS) precinct will infill its present location and expand to the northeast. It will adjoin both a new Joint Sciences Library and the Engineering precinct while also sharing a border and potential classroom space with the Humanities and Social Sciences, including Fine Arts.

This precinct will maintain present and future classrooms, teaching laboratories and faculty offices within the academic core. At 18,050 students, 25% of existing and proposed greenhouses now on the east campus will be located on the west side of campus or be sensitively sited in the southeastern hills. The remaining 75% will be in the NAS precinct.

Space projections for 2005-06 in this precinct total 1,988,375 GSF, a 137 percent increase over the 1989-90 level of 837,642 GSF.

College of Engineering Precinct

The new College of Engineering, currently located in temporary facilities, will be located in its own precinct with the completion of the Engineering Building, Phase I. The precinct will be located south of the recreated University arroyo. This precinct is projected to grow to 621,191 GSF to meet its space requirements by the academic year 2005-06.

Graduate School of Management Precinct

The Graduate School of Management's (GSM) location at the south end of Humanities and Social Sciences acknowledges the strong tie between these two precincts. GSM will occupy the renovated SPN Building and expand west toward the freeway.

TABLE 4

UCR-EXISTING LAND USE ALLOCATION - 1990

Category	Existing Land Use Acres		
	East	West	% of Total
Academics (including Library)	76.60	---	6.90
Administration	3.88	.36	.38
Agricultural Teaching & Research Fields	16.52	517.31	48.26
Student Services	13.62	---	1.23
Designated Open Space	11.00	---	.99
Botanic Garden	37.80	---	3.40
Picnic Hill	1.86	---	.17
Housing (includes parking)	79.61	4.63	7.60
Housing Expansion	---	---	---
Outdoor Fields/Recreational Facilities	40.90	---	3.60
Intercollegiate Athletics	6.44	---	.58
Intercollegiate Athletics Expansion	---	---	---
Maintenance & Physical Plant	7.16	.38	.68
Parking (surface acres)	56.09	7.32	5.70
Conference	---	---	---
Academic Reserve	---	---	---
Non-institutional Agency	---	---	---
Undeveloped Land	224.52	---	20.30
Subtotal	576 ac.	530 ac.	100%
TOTAL	1106 ac.		

Note:

- Roads are incorporated as part of land use categories.
- Acreage counts based on LRDP Land Use Maps, see Figures 9 and 14.

TABLE 5
UCR-LRDP LAND USE ALLOCATION - 2005-06

CATEGORY	Total Project Land Use Acres		
	East	West	% of Total
ACADEMICS			
• Education	4.55	---	.41
• Graduate School of Management	3.78	---	.34
• Humanities and Social Sciences, including the Arts	41.51	---	3.75
• Engineering	7.02	---	.64
• Natural and Agricultural Sciences	56.92	---	5.20
PROFESSIONAL/GRADUATE SCHOOL RESERVES	11.92	4.60	.41
PROFESSIONAL/GRADUATE SCHOOL RESERVE EXPANSION	---	45.40	4.10
ADMINISTRATION	15.35	---	1.39
AGRICULTURAL, TEACHING & RESEARCH FIELDS	7.70	299.27	27.75
STUDENT SERVICES	17.95	---	1.62
DESIGNATED OPEN SPACE (Includes Botanic Garden, Picnic Hill)	85.20	6.02	8.25
HOUSING (Includes Parking)	100.58	18.96	10.80
HOUSING EXPANSION (Includes Parking)	7.20	22.42	2.68
OUTDOOR FIELDS/RECREATIONAL FACILITIES	21.71	23.19	4.06
INTERCOLLEGIATE ATHLETICS	6.41	35.27	3.77
INTERCOLLEGIATE ATHLETICS EXPANSION	---	38.75	3.50
MAINTENANCE & PHYSICAL PLANT	15.66	1.02	1.52
PARKING (surface acres)	37.66	26.01	5.76
CONFERENCE	---	3.57	.32
NON-INSTITUTIONAL AGENCY	11.45	---	1.04
OPEN SPACE RESERVE	117.33	---	10.61
PUBLIC SERVICE	2.20	3.36	.50
PUBLIC SERVICE EXPANSION	---	2.15	.19
LIBRARIES	3.90	---	.35
Subtotal	576.0	530.0	100%
Total Acres	1106		

Note: • Roads are incorporated as part of land use categories.
• Acreage counts based on LRDP Land Use Maps, see Figures 9 and 14.

The SPN Building is both an historic and picturesque part of the campus. Its arrangement of wings surrounding a semi-formal entry court will be featured as the east terminus of the new Citrus Mall, connecting to the north/south Library Mall and the Carillon Tower.

Space in this precinct is projected to increase to 177,621 GSF by 2005-06, an increase of 433 percent over the 1989-90 level of 33,338 GSF. This precinct is flanked on the west by Humanities and to the east by Natural and Agricultural Sciences and the open space area of Picnic Hill.

School of Education Precinct

Within close proximity to both Rivera Library and the Humanities and Social Sciences precinct, and accessible by the many commuters who attend this school, this precinct will accommodate an estimated 179,057 GSF by 2005-06, representing a 321 percent increase over the 1989-90 level of 42,548 GSF. This precinct relocates north of Arroyo Plaza and replaces some of the recreational outdoor fields.

Its major buildings should orient to the south and Arroyo Plaza, possibly incorporating the plaza design and a featured campus symbol.

Other Professional/Graduate School Precincts:

Reserves have been set aside to accommodate the future needs for new professional and graduate schools during the planning horizon. Two reserve sites are located east of the freeway and one west of the freeway.

One of the Professional/Graduate School Reserves is proposed east of the freeway north of University Avenue and west of University Circle with the arroyo separating it from Bannockburn Village and the University Plaza apartments. This location would set a school apart as a fairly independent entity with UCR, yet could provide an opportunity for a connection to the College of Humanities and Social Sciences for a discipline requiring that relationship. This site can accommodate a non-laboratory based school of approximately 150,000 GSF and its design should be coordinated with Fine Arts, the Student Commons and the Performing-Visual Arts and Cultural Center as part of the UCR entry statement.

A second Professional/Graduate School Reserve is proposed east of the freeway north of Big Springs Road and west of Valencia Hill Drive. This provides a distinct location at the eastern entrance to UCR allowing the school to establish a unique identity through its design. The location provides convenient access to major parking facilities and could accommodate a discipline with a high enrollment of commuting students.

The third Professional/Graduate School Reserve is proposed west of the freeway near Canyon Crest Drive north of Pennsylvania Avenue, replacing portions of the existing agricultural teaching and research fields. The location provides an opportunity to accommodate a biological science-related, laboratory-based discipline generating higher volumes of traffic and community interaction than general academic units. The site can accommodate a school of approximately 220,000 GSF within the planning horizon.

Library Precincts

The Rivera Library will continue to be the Library for Humanities and Social Sciences, including the Arts. With major renovation, it will accommodate expansion from 216,400 GSF to 487,540 GSF. It, along with the Student Commons and central administration, will remain as the hub of the campus.

A new Joint Sciences Library (164,040 GSF) will be located west of the Big Springs Road entry circle. This location provides a prominent entry to the easterly part of campus and excellent connections to both Natural and Agricultural Sciences and Engineering.

Teaching and Research Fields

Teaching and Research Field support facilities (buildings) will increase from 102,838 GSF in 1989 to 166,667 GSF by 2005-06.

UCR presently accommodates substantial agricultural field teaching and research on campus. Most of the present agricultural lands are west of the freeway. This plan seeks to assure that the campus retains the land necessary to continue providing such agricultural laboratories in proximity to the central campus.

New development west of the freeway is planned to minimize the impact on agricultural research lands. Consolidating new facilities will take advantage of existing infrastructure systems and reduce the impact of increased human activity on the agricultural lands. Clustering of new facilities will limit random development on the west, preserving valuable field areas and vistas.

The plan proposes the eventual removal of 25% of the greenhouses from the central campus. These facilities would be relocated to the west campus or sensitively sited in the southeastern hills.



Administration

Campus administration functions are presently housed in the Administration Building with some functions located off campus in leased facilities. The LRDP anticipates accommodating all administrative functions on campus in two areas. In addition, planning efforts being undertaken by the City and University suggest that some focused administrative functions could be located on University Avenue, west of the freeway. Potential sites and administrative functions are being further studied. The LRDP proposes to locate the Central Administration and the student enrollment services administrative functions toward the end of University Mall and east of the Performing Arts Center Building, to form the south edge of Highlander Plaza; administrative support functions will be located near Watkins Drive and Valencia Hill Drive.

Administrative staff is predicted to grow from its current size of 1,863 (Fall 1989) to 2,988 in 2005-06, generating an ultimate need for approximately 513,683 GSF of administrative space.

Student Services

Student services can be categorized as student activities, student support services, student health, the bookstore and child care. The Student Commons will expand to 156,445 GSF from 80,780 GSF, an increase of 94 percent. Presently occupying 25% of Carillon Mall frontage at the heart of the campus, it is projected to remain at its present location, surrounded on four sides by malls, and to become a part of the UCR ceremonial entry. The Commons could include space for food services, student organizations and activities, lounge areas, recreational activities, student services offices, conference and meeting facilities, and the bookstore.

Student services, other than those that will be in the Commons, will increase to 202,160 GSF from the existing 91,080 GSF, a 122 percent increase. The Veitch Student Center, including the student health facilities, will remain in the present location near Aberdeen Drive, and expand to accommodate future demand in 2005-06.

UCR currently operates a child development center offering programs for children ages 2-1/2 to 5 years. The child care service, however, goes beyond students to include faculty and staff. A total of approximately 80 child care spaces are available. These facilities are non-State-funded and must give priority to low income students, but are available to other students, staff and faculty on a space-available basis. These facilities will be expanded to meet increased enrollment and the subsequent increased demands of students, faculty and staff. Additional child care capability will be provided by expanding the existing facility, developing new stand-alone child care facilities, as well as incorporating child care facilities into the new family and married student housing and commercial developments.

Housing

Existing housing stock will be upgraded and with new housing will achieve the goal of housing 35% of all students including 75% of freshmen and first-time students in University-controlled units. The University will work with

the City of Riverside to encourage additional housing in the vicinity of University Avenue.

All University-controlled housing will be designed to be integrated with generous open spaces and all complexes will be near the intramural fields. New multi-story residence halls will be located east and north of the existing residence halls enlarging to 776,250 GSF from the existing 457,436 GSF, an increase of 70 percent, and adding 1,511 additional beds for a total of 3,375 beds.

New apartments will provide 739,902 GSF from the existing 285,210 GSF, an increase of 159 percent, with 1,325 additional beds, for a total of 1,942 beds. These units will be located west of the freeway and east of Iowa Avenue, along the northern campus boundary. The apartments will be sited in a village arrangement, oriented to pedestrians, focused internally, featuring greenways, screening perimeter parking, sharing intramural fields and a small community center, and providing a pedestrian connection to University Avenue.

New family and married student housing will be enlarged to 769,769 GSF from the existing 229,391 GSF, an increase of 236 percent, and located on the site of the existing Canyon Crest family and married student housing. Existing student family and married student housing will be replaced incrementally with two and three story apartments to accommodate 701 additional students, for a total of 1,001 students on the same site. A community center with convenience services, childcare and other student related services will be at the interface of family and married student housing and the intramural fields.

Recreational Facilities/Outdoor Space

Recreational facilities will expand to 480,000 GSF from 181,127 GSF, a 165 percent increase. A new recreation building will be located north of the existing fields parallel to Linden Avenue. Facilities may include a gym, weight room, multi-purpose rooms, racquetball courts, shower and locker rooms, and offices.

Lighted intramural fields will be dispersed close to proposed housing on the east side with 9 acres near the apartments, 8.4 acres near family and married student housing, 3.6 acres near residence halls, and remaining acreage in existing fields to equal a total of 40 acres on the west side. The existing campus track and ballfields will remain.

Intercollegiate Athletics

Intercollegiate athletic facilities are proposed for a 40 acre area located west of Iowa Avenue and north of Pennsylvania Avenue.

Conference Center

A meeting facility that will accommodate up to 300 people for a conference will be located on University Avenue near the ceremonial campus entrance. It will be an important and visible center, the only use on UCR property occurring both on University Avenue and west of the freeway. It is also easily accessible to the City for those arriving by vehicle and is within easy walking

distance to all parts of the academic core. The conference center will incorporate 260,000 GSF and will include housing, meeting rooms, general assembly rooms and parking.

Public Service - University Extension

University Extension offers degree credit, postgraduate continuing education credit and noncredit programs for pursuit of intellectual and cultural interests, professional and career advancement, and examination of topical thinking on public affairs and urban problems. The program offers a variety of courses, lectures, conferences and special activities each quarter. Concurrent enrollment in regular UCR courses is also available. Current enrollment is approximately 23,000 in 1,200 classes. With a 10-15% growth rate each year, program needs will require a 93,666 GSF facility, a 222 percent increase from the present 29,168 GSF facility. University Extension will be located on Iowa Avenue, a primary road, with easy access to the community.

Alumni/Visitor Center

The Alumni/Visitor Center will serve as a facility where alumni and other University support groups can obtain information and attend meetings, events and other activities. It would house the offices of the Alumni Association, Parents' Association, Student Alumni Association, and Alumni Relations. The facility could include a lobby and reception area, board/reception room, administrative offices, meeting rooms, catering kitchen, library to house books, publications and memorabilia about UCR, and storage space.

The Center (83,000 GSF) will be located at the terminus of University Avenue at the University Circle entrance plaza.

Maintenance and Physical Plant

Maintenance and Physical Plant facilities will expand to 279,156 GSF from 152,793 GSF, an 83 percent increase.

Corporation Yard and Maintenance

The Corporation Yard will remain in the northeast area of campus along Watkins Drive. This area has the least impact to surrounding residences, is near major roads, and is ideally located to reach most parts of the campus with a minimum of travel.

Central Utility Plant

The existing Central Utility Plant providing steam and chilled water will remain in the present location to serve portions of east campus. A new Utility Plant to be located in the vicinity of the Corporation Yard will serve remaining areas in the east campus, including development in the north and northeast.

The primary LRDP goals affecting the circulation plan are to clarify campus circulation and entries while providing a pedestrian campus. The LRDP circulation plan strives to maintain as much convenience as possible while having as a primary focus the creation of a vehicle-free academic core. Toward this end, the following are recommended:

Transportation and Circulation

Primary Circulation

The present circulation system permits local traffic to use campus roadways as a circuitous approach to the freeway on-ramps and other off-campus destinations. If not corrected, the impact on local campus traffic as the student population reaches 18,050 and beyond would be significant. Therefore, a ring of primary circulation roads, four lanes in width, will be established. This series of roads, illustrated in Figure 16, will encompass the majority of the academic core, all on-campus housing, and all other campus uses except for the agricultural fields south of Pennsylvania Avenue and the land uses west of Iowa Avenue. It also will encompass those residential portions of the City north of University Avenue and east of Iowa Avenue. The primary circulation route will use City streets for the most part, and alleviate through-traffic on University Avenue. Its function will be first, to transport people to the campus and to secondary circulation routes that access parking and second, to allow traffic desiring to travel through the campus to do so with minimum impact to campus daily life.

The primary circulation route starting at its northwest corner and travelling counter-clockwise will go south on Iowa Avenue to Pennsylvania Avenue, east on Pennsylvania Avenue crossing over the freeway to the on-campus Pennsylvania Avenue Extension, east and north on the Pennsylvania Avenue Extension to a 'T' intersection with Watkins Drive, west on Watkins Drive to Blaine Street, and west on Blaine Street to Iowa Avenue.

The Pennsylvania Avenue Extension will start at Canyon Crest Drive and travel east over the freeway to connect with the existing South Campus Drive. It is anticipated that the Pennsylvania Avenue Extension will provide more convenient community access, visibility and identification to the Botanic Gardens, especially for visitors unfamiliar to the campus. The current route to the Botanic Gardens is circuitous and difficult to find. It is also anticipated that the freeway overpass will be required at 14,000 students and that the extension will need to expand from an initial two lanes to a divided four-lane road at about 16,000 students.

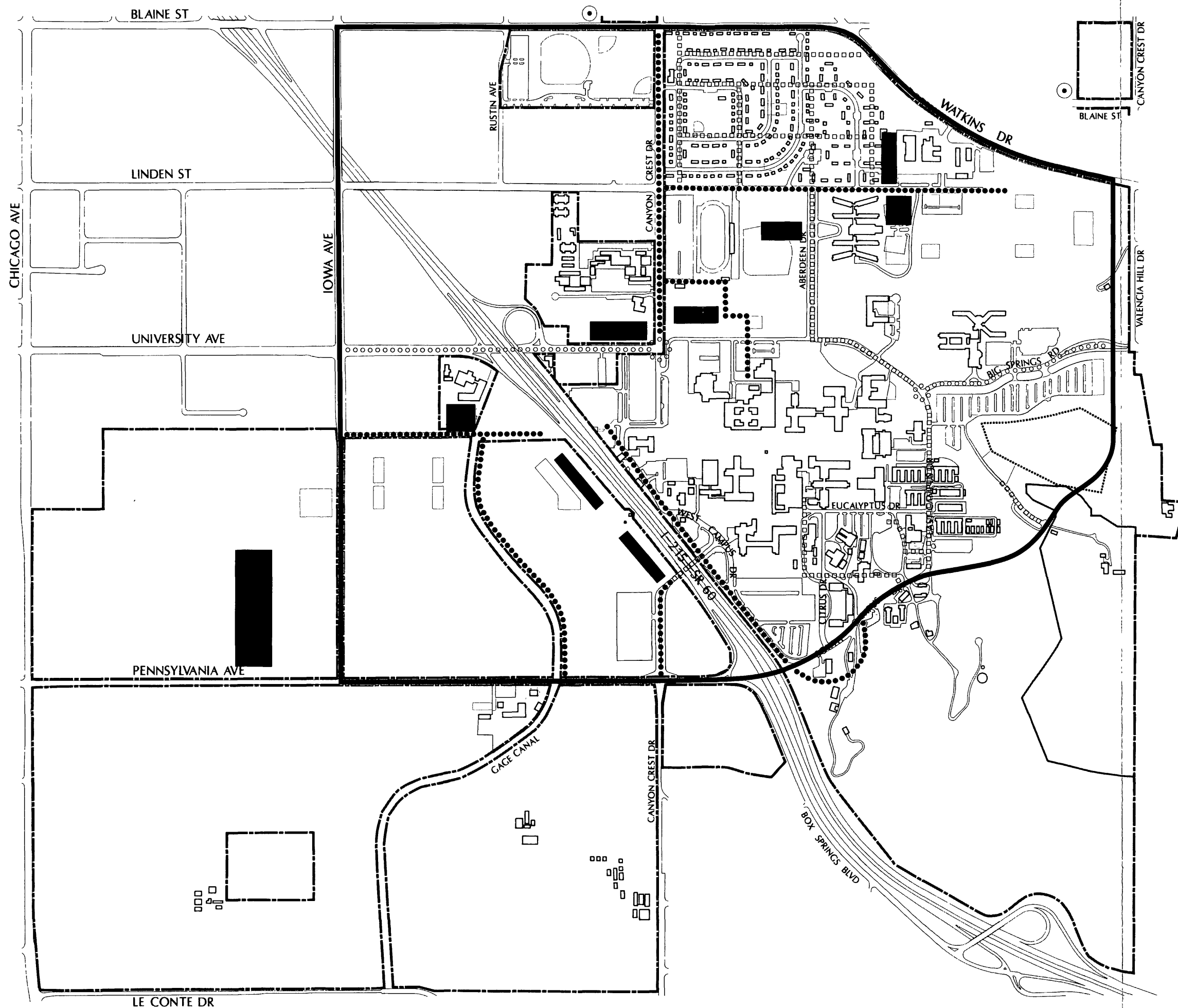
The goal to incorporate all of the academic core within the campus perimeter road has led to a desire to locate a 4-lane road along the north slope of the hillside south of its present location. However, preliminary study of both expanding the existing South Campus Road and a southern realignment indicates that the exact alignment of the road should be determined after further engineering and environmental studies.

All existing elements of the primary circulation system (except for the Pennsylvania Avenue Extension) are public rights-of-way.

Access to the primary campus road will be via existing public rights-of-way including the freeway, Box Springs Boulevard from El Cerrito Drive, Chicago and Iowa Avenues, Watkins Drive and Pennsylvania Avenue.

Secondary Circulation

The secondary circulation elements will provide access to the main destination points of the UCR campus including peripheral parking facilities. No campus related street, with the exception of the primary circulation route



LEGEND

- PRIMARY VEHICULAR CIRCULATION
- SECONDARY VEHICULAR CIRCULATION
- LIMITED ACCESS
- CEREMONIAL ENTRANCE DRIVE
- SURFACE PARKING
- PARKING STRUCTURE
- UNDERGROUND PARKING

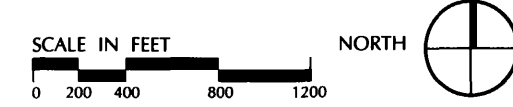
NOTE: FINAL LOCATION OF PARKING WITHIN STUDENT HOUSING AREAS WILL BE DETERMINED AT TIME OF DESIGN.

FIGURE 15

VEHICULAR CIRCULATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE

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outlined above and the University Avenue/Canyon Crest Drive-North combination, will provide free flow of through traffic.

University Avenue will remain a four-lane access to the freeway and will become a ceremonial road entrance to campus. The second ceremonial campus entrance penetrating into the campus is Big Springs Road from the east terminating at Library Circle in front of the site designated for the new Joint Sciences Library. Big Springs Road will access the present Campus Drive (proposed to be a limited access road) at the Joint Sciences Library.

The Aberdeen Drive entrance to campus will become the access to the new recreation building and Education Precinct, as well as to the western residence halls and Veitch Student Center. The crossing of the arroyo to Engineering will be for pedestrians and emergency access. The Canyon Crest Drive - South entrance to campus will be used to access the parking structures paralleling the freeway and will be closed to all but pedestrians and emergency traffic at the freeway.

Linden Street will provide access east from Canyon Crest Drive to campus residential areas and provide a link to Aberdeen Drive.

Limited Access Roads

East Campus Drive and North Campus Drive/Aberdeen Drive to Linden Street will provide through access only to the campus shuttle, emergency and service vehicles.

Other secondary campus roads for limited vehicular access are used to access parking lots and interior campus destinations but are closed to day-to-day through-vehicular traffic. East Campus Drive, North Campus Drive and Linden Street will be broken by major pedestrian crossings defined by gates. These gates can be card or electronically operated by the campus shuttle to create the most efficient shuttle system possible. These roadways are not intended for general use by the public, but rather to provide access on a permit basis, as well as to serve as emergency access and delivery access roadways.

Parking

Parking will be provided to meet the needs of the UCR community. Given present use patterns, the estimated future demand for on-campus parking is approximately 9,446 spaces, an addition of 3,987 parking spaces. Strategically placed parking areas, as shown in Figure 15 - Vehicular Circulation, and as detailed in Table 5, in combination with stringent parking policies will contribute to efficient circulation and a vehicle-free campus.

Location of Facilities

Parking will be provided in both parking structures and lots. Parking structures will be limited to three to four levels to maintain a compatible scale with academic and residential structures. On the west side, two structures will be located along the freeway with a third structure located along Pennsylvania Avenue for shared intercollegiate and campus use. On the east side of the freeway, a structure will be located between the Education Precinct and the recreation facilities with a smaller structure between Aberdeen-Inverness

Halls and the proposed residence halls. Small dispersed surface parking areas within the central campus will serve special permit, service, and handicapped parking. The remote lot on the west campus will occupy a ten-acre site adjacent to the intercollegiate athletic facility where it can be shared for special evening and weekend events.

Commuters will be assigned to a parking lot and are expected to use the primary circulation route to the secondary roads giving them easiest access to their assigned parking lot.

- Faculty, staff and commuting students (30 percent of total student population) will park in on-campus lots peripheral to the academic core at a ratio of 1.4 people per car.
- On-campus student residents will park at their place of residence at the following ratios:

Residence halls	4 students per car
Apartments	2 students per car
Family & Married	
Student housing	1 student per car

- Students living within a 2-3 mile "resident zone" will park at their place of residence and will be required to use alternative modes of transportation.

Visitor and handicapped parking will be located throughout the campus as necessary and as required.

Table 6 - Parking Allocation

	<u>Cars</u>
Faculty and staff (3,867 @ 1.4 per car)	2,762
Commuter students - 30 % of total	
Student population (5,415 @ 1.4 per car)	<u>3,868</u>
Subtotal - Cars on campus outside of UCR housing:	6,630
On campus residents (35% of 6,318 students)	
Residence Halls: 3,375 @ 4 per car = 844	
Apartments: 1,942 @ 2 per car = 971	
Family & Married	
Student Housing: 1,001 @ 1 per car = 1,001	<u>2,816</u>
GRAND TOTAL OF CARS PARKED ON CAMPUS	9,446
Number of spaces as a percentage of total campus population	43%*

*Total campus population in 2005-06 is projected at 21,917

Resident Zone

The two to three mile radius resident zone will represent a reasonable walking/biking/shuttle distance to campus. The goal for the resident zone is that it will house 35% of the total student population. This student population goal for the resident zone is above and beyond the stated UCR goal of housing 35% of the total student population in University-controlled housing and will mean that 70% of all students will be housed within 3 miles of campus.

Parking Management

A permit system will be developed to provide effective control and efficient use of University parking facilities. The permit system will control the allocation of parking on campus through prioritizing and differential pricing. Permit prices for close-in parking will reflect the privilege of parking near academic and University facilities. Preferential parking for car pool vehicles in close-in parking areas could encourage ride-sharing, thereby promoting efforts to reduce vehicular traffic to campus.

Outside the academic core, parking will serve commuters and campus residents. These facilities will be priced to reflect the distance from the core of the campus.

Visitor parking will be accommodated at, or adjacent to, the two entry circles and at key visitor destinations such as the libraries, theaters and the Carillon Mall/Student Commons.

Monitoring Parking Need

Proposed parking rates are based on current UCR parking conditions. Changes in demographics, housing locations, and transit service may result in changes in overall parking demand. As the campus is built out, the relationship of parking demand and supply should be monitored in order to adjust parking supply, location of parking lots and/ or access to parking.



Pedestrian and Bicycle Circulation

The plan proposes to continue University efforts to expand the existing bicycle system. Enlarging the vehicle-free zone within the academic core will allow bicycles free access to more campus areas.

Bicyclists will be provided routes to campus via bike lanes on the primary circulation route. When on campus, they will be able to use secondary roads and central campus pedestrian routes. Pedestrian-ways will be sized based on their expected intensity of use. The Carillon Mall and secondary malls will have generous walkways, sufficient for pedestrians and bicyclists, and be constructed to allow service and emergency vehicle access. Designated campus walks will allow service and emergency vehicular access as needed while walks along interior campus roads will be smaller in width. Figure 17 illustrates the primary pedestrian and bicycle routes on campus.

The University will join with the City of Riverside to promote bicycle use by providing campus and city bicycle linkages. An increase in University bicycle use will require continuing efforts for control of bicycle and vehicular circulation, particularly at street crossings and intersections.

New bicycle parking areas will be designated and existing ones expanded where appropriate as bicycle use increases.

Public Transportation - Riverside Transit Agency

Public bus service with the Riverside Transit Agency (RTA) will continue as at present with some route changes as necessitated by changes in the campus Circulation Plan. UCR will encourage development of a cooperative effort with RTA to:

- Coordinate RTA bus routes through UCR (locations of stops, routes, etc.)
- Develop faculty, staff and student subsidies to encourage transit usage
- Provide adequate local information regarding use of transit (information kiosks, pamphlets, etc.)

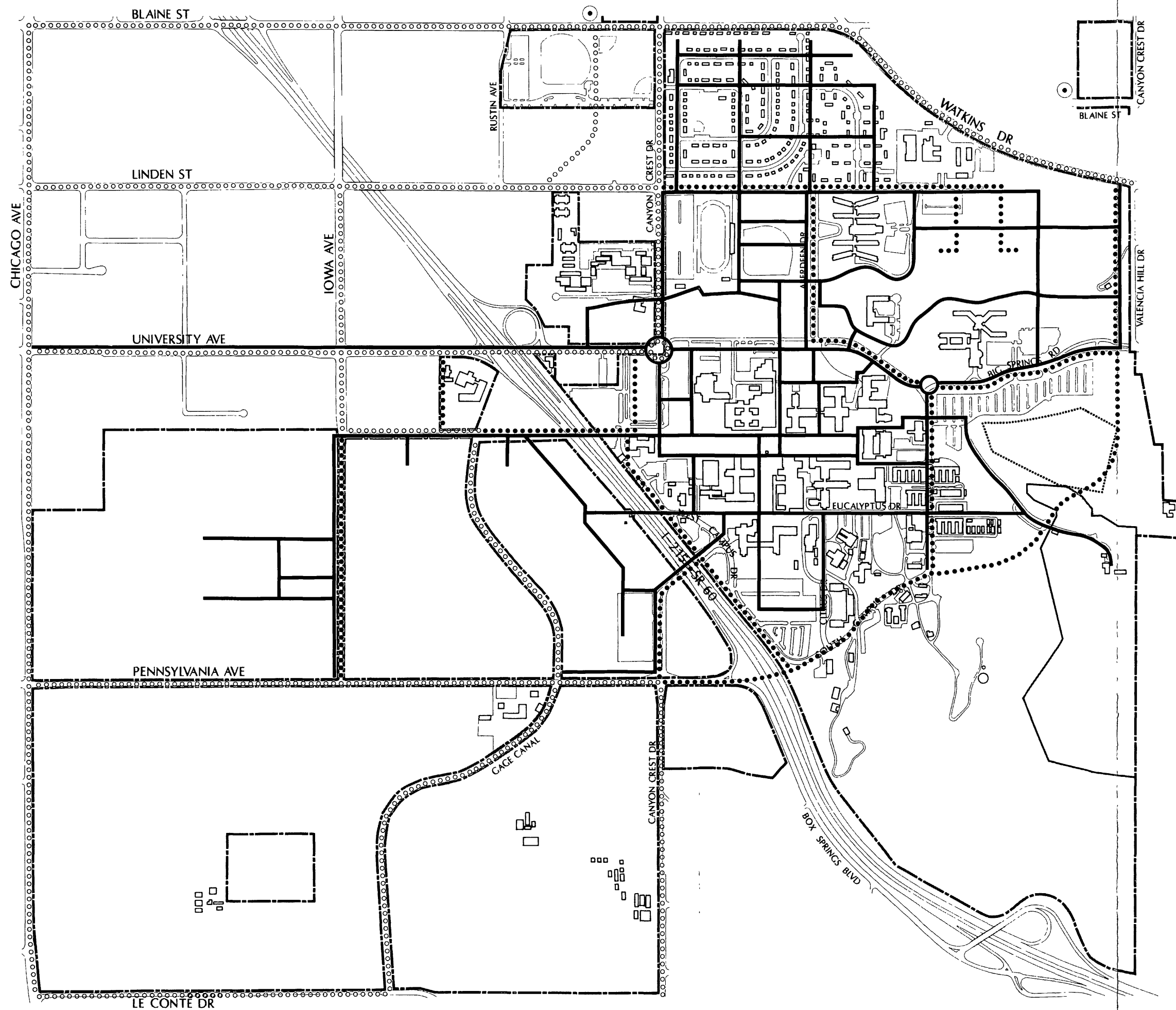
Campus Shuttle

A campus shuttle will transport residents within the resident zone (including the University Avenue Village) to campus, as well as transport faculty, staff and students within the campus. The shuttle will provide service within the central campus and link academic, administrative, transit and parking facilities on convenient routes. The shuttle will also provide service and access to remote parking areas and outlying facilities.

The campus shuttle system should be expanded incrementally as the campus grows. Routes can be modified over time as new facilities on campus are constructed and desired travel routes evolve. The campus shuttle will be crucial in encouraging alternative modes of transportation and in reducing the impact of autos in the academic core.

Ridesharing

Ridesharing will become increasingly important in reducing the number of vehicles at UCR. Ridesharing complements the RTA service in providing an



LEGEND

- PEDESTRIAN CIRCULATION
- CITY BICYCLE LANES
- CAMPUS BICYCLE LANES

FIGURE 16

PEDESTRIAN & BICYCLE CIRCULATION

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SCALE IN FEET
0 200 400 800 1200

NORTH



alternative mode of transportation to campus for those who live outside the regular transit service areas.

Rail Transit

In recent years, acknowledging rapid growth and increasing traffic, several studies have explored the feasibility of rail transit in the vicinity of Riverside. For UCR the most significant feature of these studies is the potential to make the campus more accessible to the region and the local community.

On a regional basis, *The Riverside-Orange County Commuter Rail Service Feasibility Assessment* (November 1988), assesses the feasibility of using existing railroad facilities to operate a commuter rail service between Riverside and the Orange County communities of Anaheim, Placentia, Fullerton, Orange, Santa Ana, Tustin and Irvine. The *Perris Rail Extension Study* (February 1989), investigates the technical feasibility of establishing rail passenger service on an existing Santa Fe Railway line from Riverside approximately 20 miles south to the community of Perris.

For the local community, *A Review of the Potential for Light Rail Transit in the City of Riverside* (February 1990), identifies several possible routes for light rail transit (LRT) including travel corridors to UCR. University Avenue is the most direct approach from the central city area. A second route proceeds north from downtown via Main Street into the emerging business park to Spruce, east to Iowa Street and then south to Blaine and into UCR. A third route is Main Street to Third/Blaine Street and then east to UCR. The report acknowledges that these alignments could link the downtown with two employment centers, the Hunter Business Park and the University, as well as some residential areas north and east of downtown. In the LRDP, the design flexibility for the University Avenue entrance to UCR could incorporate a Light Rail Transit System.

Transportation Systems Management Strategies

Recognizing the importance of reducing motor vehicle use, the LRDP includes the following Transportation Systems Management (TSM) and Transportation Demand Management (TDM) strategies:

- Increase percentage of students housed in University-controlled housing
- Encourage student housing within a two to three mile resident zone in order to reduce vehicle trips to campus
- Initiate a campus shuttle to reduce vehicle trips to and within the campus
- Mark bikeways to promote alternative modes of travel to and around campus
- Improve pedestrian linkages between campus uses
- Coordinate and cooperate with public transit agencies as to routes and use

Additional strategies could entail initiation of a marketing/education program to raise student, faculty and staff consciousness regarding the benefits of TSM/TDM measures, such as reduced pollutant emissions and reduced fuel consumption. Academic classes could be scheduled, particularly larger classes, during non-peak periods to minimize peak hour traffic impacts. Staggered work hours or flex-time for University employees could minimize

peak hour traffic impacts. Finally, the campus could monitor campus day care facilities to determine if facilities are meeting the demand for day care by students, faculty and staff with children. Adequate provision of on-site day care can reduce the number of vehicle trips.

Utilities

The campus utilities network will be expanded to serve a larger campus population with accompanying new facilities. Existing water, sewer, storm drainage, power and communication lines will be extended in conjunction with expanded roadways, bicycle and pedestrian routes, to serve new development

Unless otherwise noted, the discussions below of the various utility systems serving the University focus on the campus systems. The off-campus utility providers that the University must interface with include the City of Riverside - power, water and sewer; Southern California Gas Company - natural gas; and Pacific Telephone - data and telephone communications. In addition, drainage and flood control issues must be coordinated with the Riverside County Flood Control and Water Conservation District, the City of Riverside and the Army Corps of Engineers.

Existing Sewer Systems

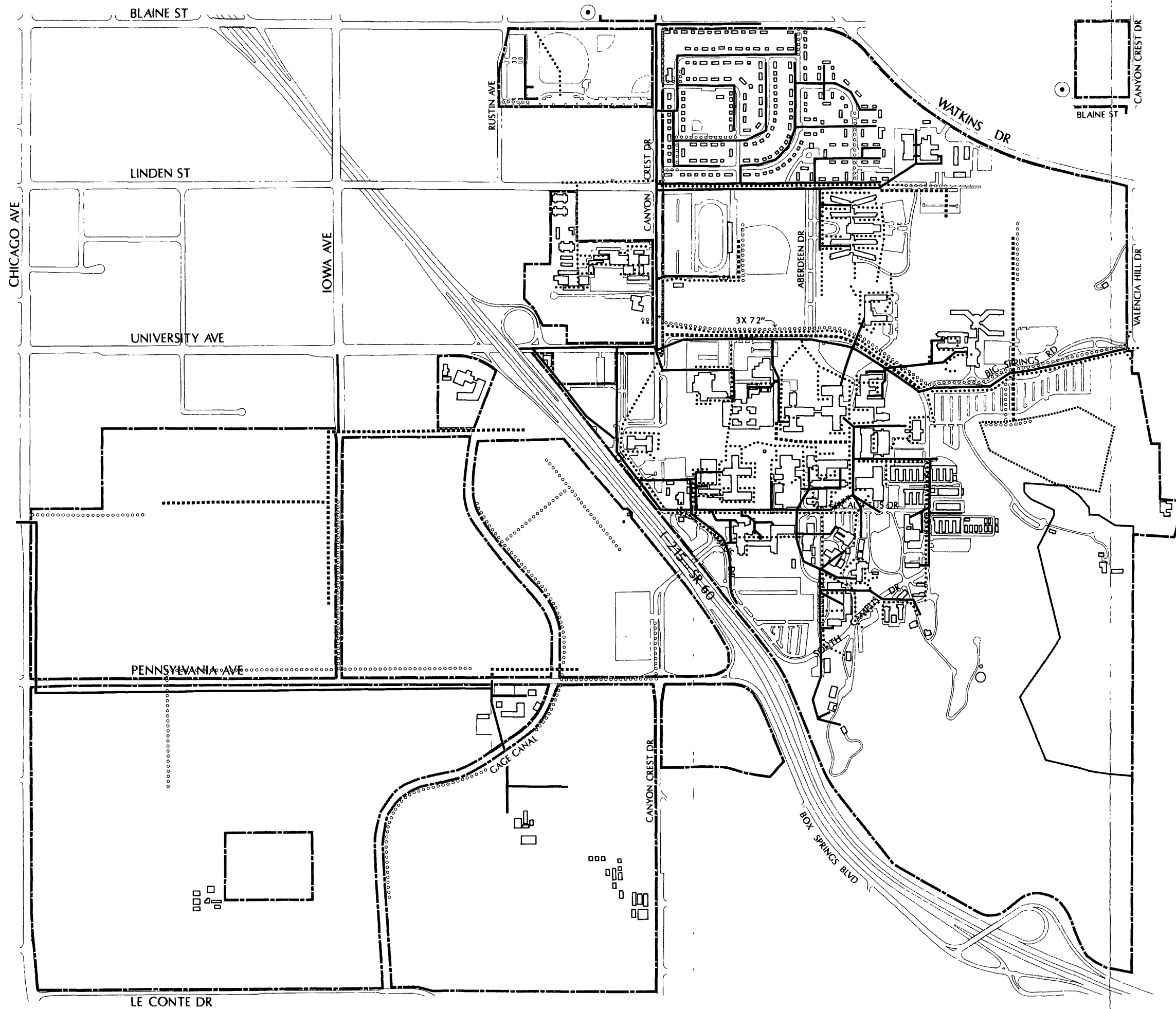
The City of Riverside Regional Water Quality Control Plant provides treatment of campus generated wastewater. The City's sewer trunk and interceptor lines provide service to the University, with the University operating its own collection system. The campus discharges a total of less than one million gallons per day (mgd) of wastewater to the City sewer system.

A City sewer line runs through the campus from Valencia Hill Drive to University Avenue, following the general alignment of North Campus Drive and Big Springs Road, and serves the campus as well as offsite development to the east with a maximum wastewater capacity equivalent to a maximum sewage flow of 2.26 mgd. Campus lines connect to this sewer line in three places. Additional gravity sewer lines flow northward and eastward and connect directly to City sewer lines located in Canyon Crest Drive and University Avenue.

Proposed Sewer Systems

In order to accommodate a student enrollment of 18,050, attempts were made to utilize existing sewer line corridors and to follow designated open space and transportation corridors. Flows were developed from each academic precinct and other land uses (e.g., Administration) based on projected building square footage resulting in an estimated average daily flow of approximately 4.05 mgd.

The conceptual sewer line corridors are shown in Figure 18. In some cases, existing sewer lines will have to be replaced with larger diameter sewers to provide sufficient capacity. The existing Linden Street sewer corridor will be extended to serve the Residence Halls, the Maintenance and Physical Plant, and the Student Services areas. The corridor serving the existing Intramural Field restroom will be extended to serve the School of Education Precinct.



LEGEND

- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING UNDERGROUND STORM DRAIN
- PROPOSED UNDERGROUND STORM DRAIN
- ABANDONED EXISTING LINE

FIGURE 17

SANITARY SEWER & STORM DRAIN DISTRIBUTION

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SCALE IN FEET
0 200 400 800 1200



South of the University Arroyo, three existing sewer corridors will be extended to serve the precincts. The corridor following the Big Springs Road alignment to both the north and south will be extended to serve the Administration and Non-Institutional Agencies areas. The corridor serving Student Services and the College of Engineering will be extended to serve the College of Natural and Agricultural Sciences. Additional sewer capacity will be required in the corridor following the alignments of University Avenue and Big Springs Road.

The west campus requires several major sewer corridors comprised of new sewer lines to serve the proposed land uses: housing, Professional/ Graduate School Reserve, University Extension and the Intercollegiate Athletic Facilities.

Existing Storm Drain System

The Riverside County Flood Control and Water Conservation District, in conjunction with the City of Riverside Public Works Department, is responsible for implementing flood control projects within the City. Generally, the District accepts existing and increased flows in District facilities which result from all approved development.

Two campus areas are subject to inundation in a 100-year frequency storm. One flood plain area, University Arroyo, runs through the east campus from the Big Springs Road area and Valencia Hill Drive, to north of University Avenue at Canyon Crest Drive. The second flood plain area, Box Springs Arroyo, drains across the southern portion of the western half of the campus from Canyon Crest Drive through the existing agricultural teaching and research fields to Chicago Avenue.

On the east campus, two existing storm drains parallel portions of University Arroyo. These storm drains have a combined capacity of 560 cubic feet per second (cfs) or 35.0 per cent of the total estimated 1,600 cfs that flows through this point of the campus during storm runoff conditions with a 100-year recurrence interval. Storm runoff exceeding the capacity of the two existing pipelines flows through University Arroyo creating localized flooding conditions.

Storm water runoff from the east campus is collected in a surface runoff system and discharges through storm drains directly to University Arroyo, or to the existing storm drain lines paralleling University Arroyo, or to City-owned storm drain lines.

Box Springs Arroyo, passing through the west campus teaching and research fields, is nearly devoid of flood control improvements. This portion of the west campus is located in the Riverside County Flood Control and Water Conservation District Box Springs Area Master Drainage Plan. The western portion of the arroyo serves as a detention facility to restrict downstream flows.

Proposed Storm Drain System

The LRDP proposes the addition of three pipes paralleling one of the existing pipes in the University Arroyo area of the east campus and recommends abandoning the other existing storm drain pipeline. The four parallel pipes

will provide sufficient capacity to carry the estimated 100-year storm flows of 1,600 cfs in University Arroyo underground through the campus. The proposed arroyo directing water from east to west in the northern area of campus will also serve to channel local runoff from the northern portion of the east campus to University Arroyo, west of Canyon Crest Drive. Proposed extensions to the City storm drain line in Linden Avenue will collect runoff from the housing area. (See Figure 18).

On the west campus, proposed storm drain corridors will provide routes for collected runoff to be discharged to Box Springs Arroyo. One major storm drain corridor parallels Gage Canal. It will collect runoff from University property between the canal and the freeway, conveying it to Box Springs Arroyo. Another major storm drain corridor running along Iowa Avenue and Pennsylvania Avenue will carry runoff from portions of the campus west of the canal and discharge to Box Springs Arroyo west of Chicago Avenue. A third storm drain will collect runoff from the northwest portion of the west campus and discharge to existing storm drain facilities in Chicago Avenue.

Existing Water Systems

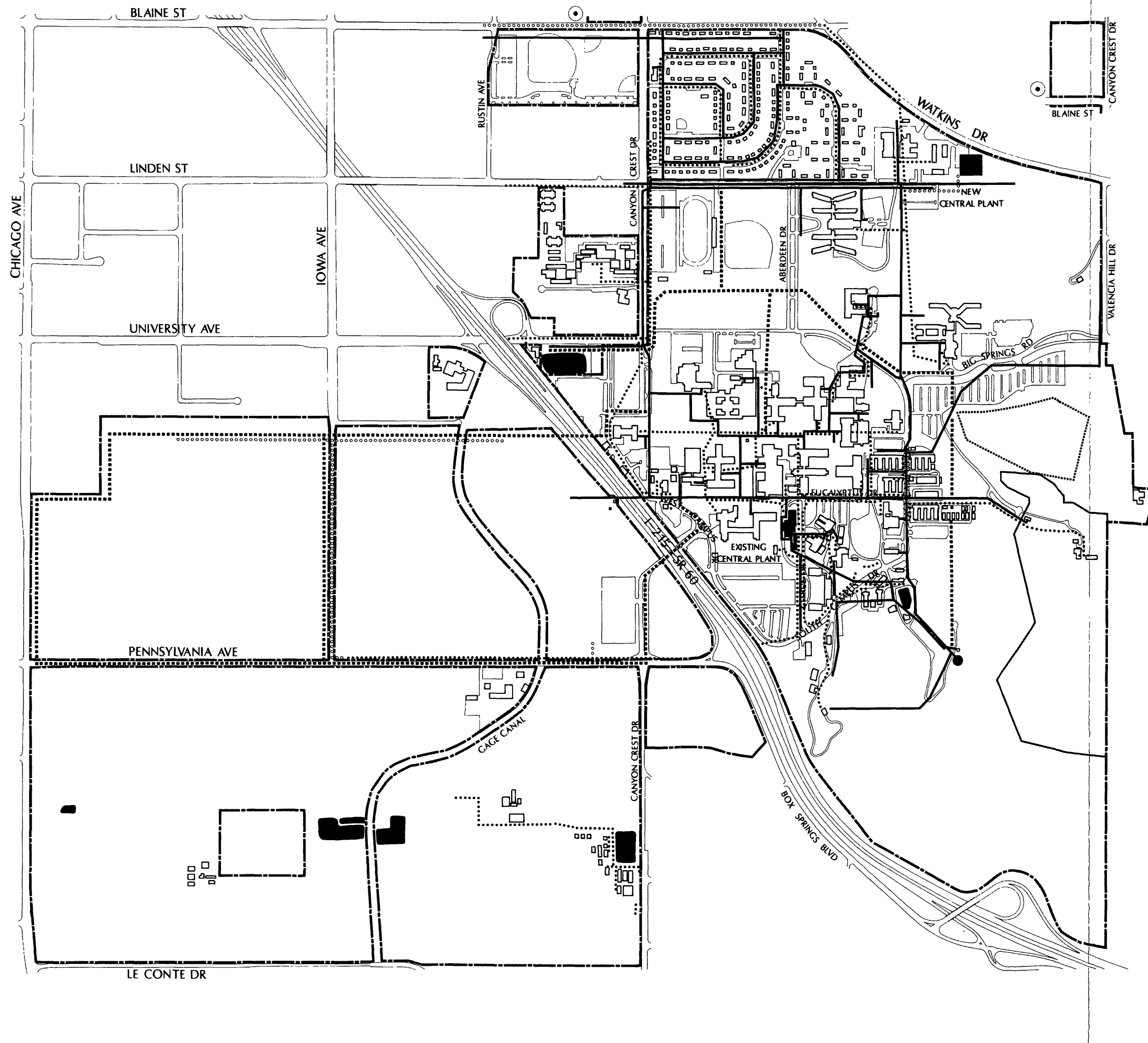
The University domestic water system distributes treated water (disinfected groundwater) provided by the City of Riverside primarily from the Bunker Hill groundwater basin for potable uses and landscape irrigation. The domestic water distribution system receives water from two connection points to the City's water system. A concrete pipeline provides water from the City of Riverside's 5-million gallon reservoir located south of University Avenue near the campus entrance at University Avenue and Canyon Crest Drive. This pipeline is the primary source of treated water for the University's distribution system. A water distribution main owned and operated by the City of Riverside provides a second point of connection to the University's water distribution system. The connection to the University's distribution system is located along Linden Street between Canyon Crest Drive and Aberdeen Drive, north of the main campus.

Water is pumped into the University's distribution system and to reservoirs located at a higher elevation from a below grade pumping station located at University Avenue and Canyon Crest Drive. Engineering and design for expansion of this pumping station is currently being done by University staff engineers. Two reservoirs (1-million gallon capacity and 50,000 gallon capacity), located southeast of the campus at higher elevations, provide storage for peak hour and fire fighting water demands.

Proposed Water Systems

Existing domestic and landscape irrigation water consumption figures were applied to projected gross square footage of building areas, in conjunction with acres of landscaped and paved areas, in order to determine domestic water demand and landscape irrigation water demand. Based on a future campus population of 18,050 students the future average day water demand would be approximately 6.1 million gallons per day.

Water distribution facilities including water supply pumping stations should be designed to provide for maximum day water demands, and storage facilities should be designed to provide for peak hour water demands and fire flow and



LEGEND

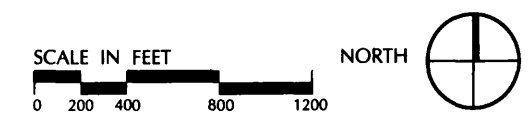
- EXISTING DOMESTIC WATER
- PROPOSED DOMESTIC WATER
- EXISTING GAS
- PROPOSED GAS
- RESERVOIR
- CENTRAL PLANTS

FIGURE 18

WATER & GAS DISTRIBUTION

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN



emergency demands. The proposed development could result in a maximum day water demand of 12.2 million gallons (8,500 gallons per minute) and a peak hour demand of 22.0 million gallons per day (15,300 gallons per minute). The pumping station at University Avenue and Canyon Crest Drive will need to be improved to increase capacity.

In order to increase storage capacity, the University should construct either one or two reservoirs to provide an additional 4.9 million gallons in treated water storage for the distribution system. The additional storage will provide operational storage, fire flow storage, and emergency storage.

The distribution system will need to be improved to distribute water from the pumping station and the reservoirs to new development in the main campus. The distribution system will also need to be improved to meet additional water demands west of the freeway (see Figure19).

Existing Irrigation Water

Agricultural lands west and east of the freeway are irrigated by groundwater conveyed to the University via the Gage Canal meandering north-south through the west campus. Goundwater sources are the Bunker Hill Basin and the Highgrove well. Five reservoirs are employed to meet the irrigation demands; one of the five is used to store agricultural drainage blended with Gage Canal water for reapplication. In fiscal year 1988/89, approximately 1,980 acre feet of Gage Canal water were applied to 374 acres, representing an average application rate of 5.3 acre feet per year.

Proposed Irrigation Water

The LRDP proposes to remove approximately 101* acres of land from agricultural teaching and research uses on the west campus and 22 acres on the east campus. For purposes of this discussion, if all of this acreage was under irrigation, its removal from agricultural activities would result in a decrease in Gage Canal water use of 652 acre feet per year.

Proposed development will have little or no impact on the backbone distribution main system on the west campus. Some of this main system may require relocation or protection in place from new construction. Four of the five reservoirs should not be affected by the project, however, should the fifth reservoir on east campus be modified or eliminated, provisions must be made to accommodate system pressure requirements as this is the reservoir providing pressure for the entire system.

* Based on total acres of current agricultural teaching and research fields north of Pennsylvania Avenue (less Highlander Hall)

<u>Acres</u>		
	228 56	
less	10 94	(Faculty garden)
less	6 00	(Lot 30)
less	<u>110 27</u>	(Expansion areas left in agriculture at 18,050)
	101 35	

Distilled Water, Compressed Air and Vacuum Systems

Distilled water, compressed air and vacuum systems are currently employed in several buildings. The addition of buildings such as laboratories will create increased demands that can be satisfied by installing local systems where needed.

Existing Natural Gas

Natural gas is provided to the campus by the Southern California Gas Company (SCG). A high pressure gas distribution system owned and maintained by SCG provides natural gas to the Central Utility Plant as well as many individual buildings on campus (see Figure 19). From the Central Utility Plant the University distributes natural gas to various buildings through its tunnel system and by direct burial pipeline.

Proposed Natural Gas

SCG has indicated that they have sufficient gas supplies and distribution piping capacity surrounding the east and west campus areas to provide natural gas to meet demands of the 18,050 student enrollment.

Existing Electrical System

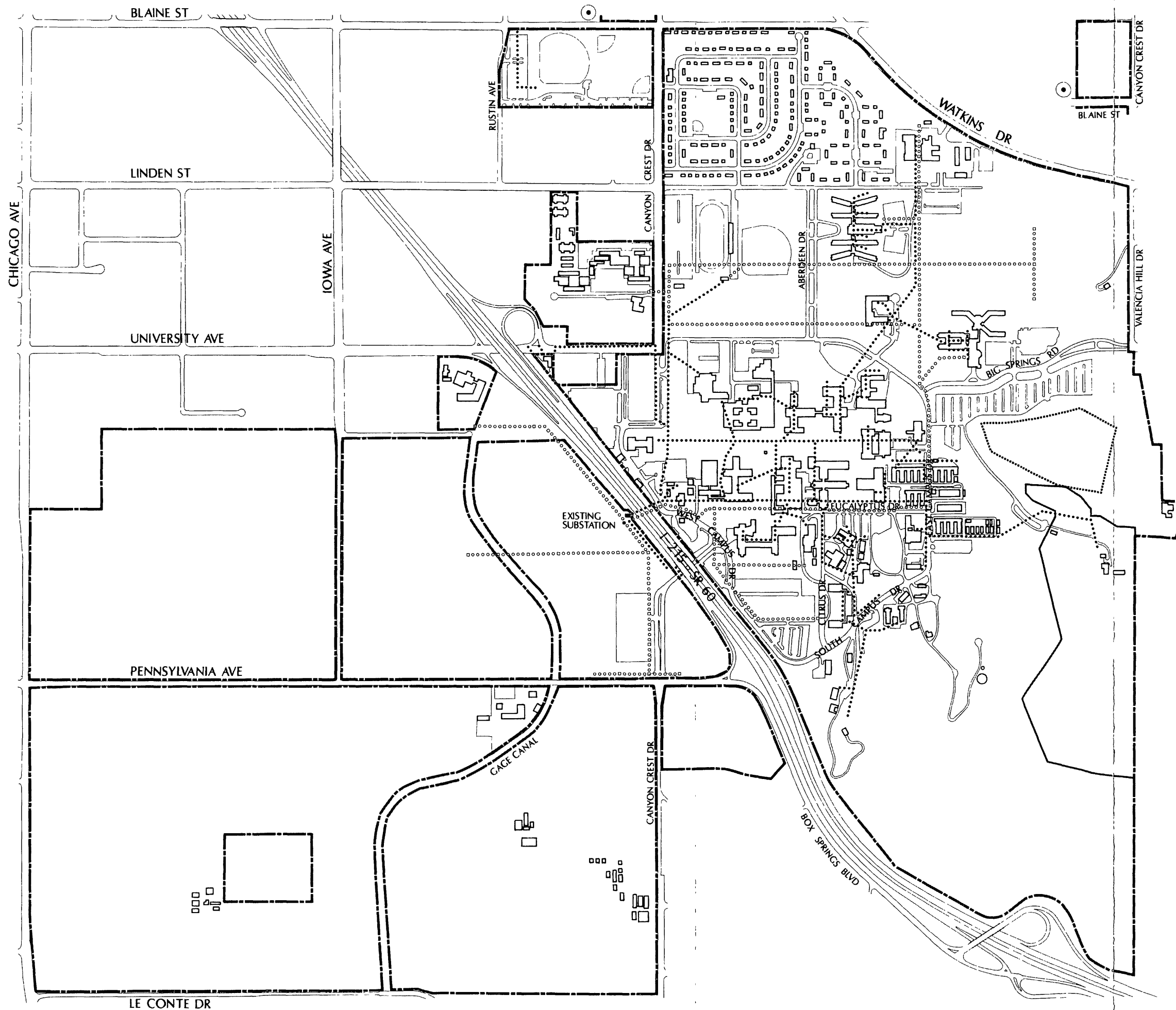
The University electrical distribution system is currently being expanded and renovated. The current substation site west of the freeway is being enlarged to accommodate two new transformers and associated outdoor switchgear to distribute power to the campus at 12.47 kilovolts (kv) (scheduled to be partially operating by 1991). Existing city-owned primary transformers are severely overloaded, as is the existing campus 4,160 volt distribution system. Existing 4,160 volt distribution lines and building transformers will be gradually replaced over the next few years. The new city-owned substation will be a dual transformer system with each transformer powered from a different 69 kv utility station. Normally, half of the campus load is served by each transformer through a 12.47 kv loop distribution system. Should either transformer experience a power failure, the entire campus load could be transferred to the transformer remaining in service. For this reason, the capacity of the sub-station will be 25 mega volt amps (mva) versus the 50 mva installed rating of the two transformers (see Figure 20).

Proposed Electrical System

Power demand is estimated to rise to 23,000 kilowatts at a student population level of 18,050 based on a unit demand of 3.02 watts per gross square foot of building. The capacity of the new sub-station will exceed the estimated power demand by 2 mva. Unit power demand could increase as the University expands activities in engineering and applied sciences along with the demands of a modernizing campus.

Existing Chilled Water and Steam System

The Central Utility Plant, comprised of a steam plant and a chilled water plant, provides steam to heat most of the buildings on campus, operates two steam turbine drive centrifugal refrigeration machines for building cooling with chilled water, and provides a heat source for various processes, such



LEGEND

- EXISTING ELECTRICAL
- PROPOSED ELECTRICAL

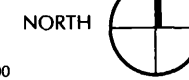
FIGURE 19

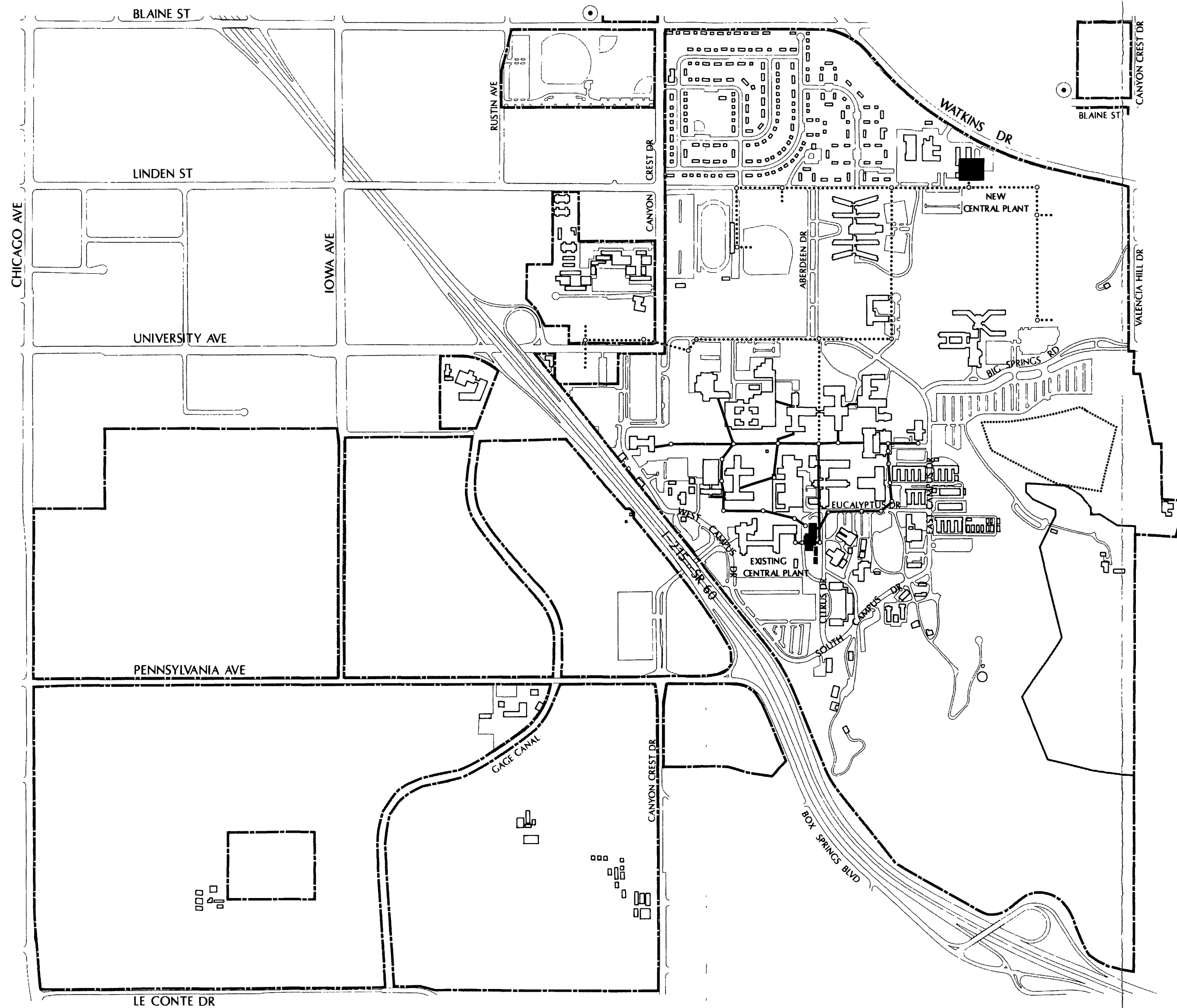
ELECTRICAL DISTRIBUTION

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN

SCALE IN FEET
0 200 400 800 1200





LEGEND

- EXISTING
- PROPOSED

FIGURE 20

STEAM & CHILLED WATER DISTRIBUTION

UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN

SCALE IN FEET
0 200 400 800 1200



as soil sterilization. Two additional centrifugal refrigeration machines for building cooling are electric motor driven. Buildings not served by the Central Utility Plant are heated and cooled by building-specific systems.

The existing steam plant has an output capability of 138,000 pounds of steam per hour (lbs/hr), and the existing chilled water plant has the capability of producing 3,500 tons of refrigeration per hour. Implementing improvements to the chilled water system, as recommended in a recent thermal energy storage report (1989), could increase the capabilities of the chilled water plant to 5,250 tons of refrigeration per hour.

Steam and chilled water are currently distributed to buildings throughout the campus east of the freeway through a network of piping installed within distribution tunnels. Residence halls and other types of housing are not served by the central steam and chilled water system. (See Figure 21.)

Proposed Chilled Water and Steam System

Based upon current demands for chilled water and using the projected gross building square footage required to support an 18,050 student enrollment, 13,808 tons of refrigeration will be required. To meet this cooling load, a future cooling plant containing 8,625 tons of refrigeration will be required.

Based upon current demands for steam, the estimated demand of a 18,050 student enrollment scenario is 182,959 lbs/hr. This represents a shortfall between the current steam generating capacity of the Central Utility Plant and the steam demand of a 18,050 student population. A new steam plant capable of generating 50,000 lbs/hr of steam will be required.

The proposed location for the new central heating and cooling plant is in the vicinity of the existing Corporation and Maintenance Yard adjacent to Watkins Drive. This location will provide reasonable proximity to the planned new construction within the existing campus as well as the planned construction north of the campus core. The steam, steam condensate, and chilled water systems can easily be cross-connected from this proposed plant location.

The planned new construction west of the freeway will be heated and cooled by building-specific systems and are not included in central plant heating and cooling loads.

Existing Communications Systems

The existing communications systems consist of three discrete components: the telecommunications (telephone) system; the data communications system (broadband network); and the emergency system (emergency call boxes in parking areas).

The telecommunications system is centered in the Telephone Building, located south of University Avenue, adjacent to the freeway. This building has a 5,100 line switch capable of handling data communication but is used only for telecommunication in order to avoid decreasing capacity of voice-dedicated circuits. The existing cable configuration is a constraint in the telecommunications system. As phone use moves further to the campus periphery, the cable capacity limitations will increase.

The data communications system is centered in the Statistics-Computer Building. An Ungermann-Bass broadband network is currently extended through the utility tunnels to eight buildings at the campus core. A program is underway to extend this network to six other buildings. This network is also capable of carrying video transmission.

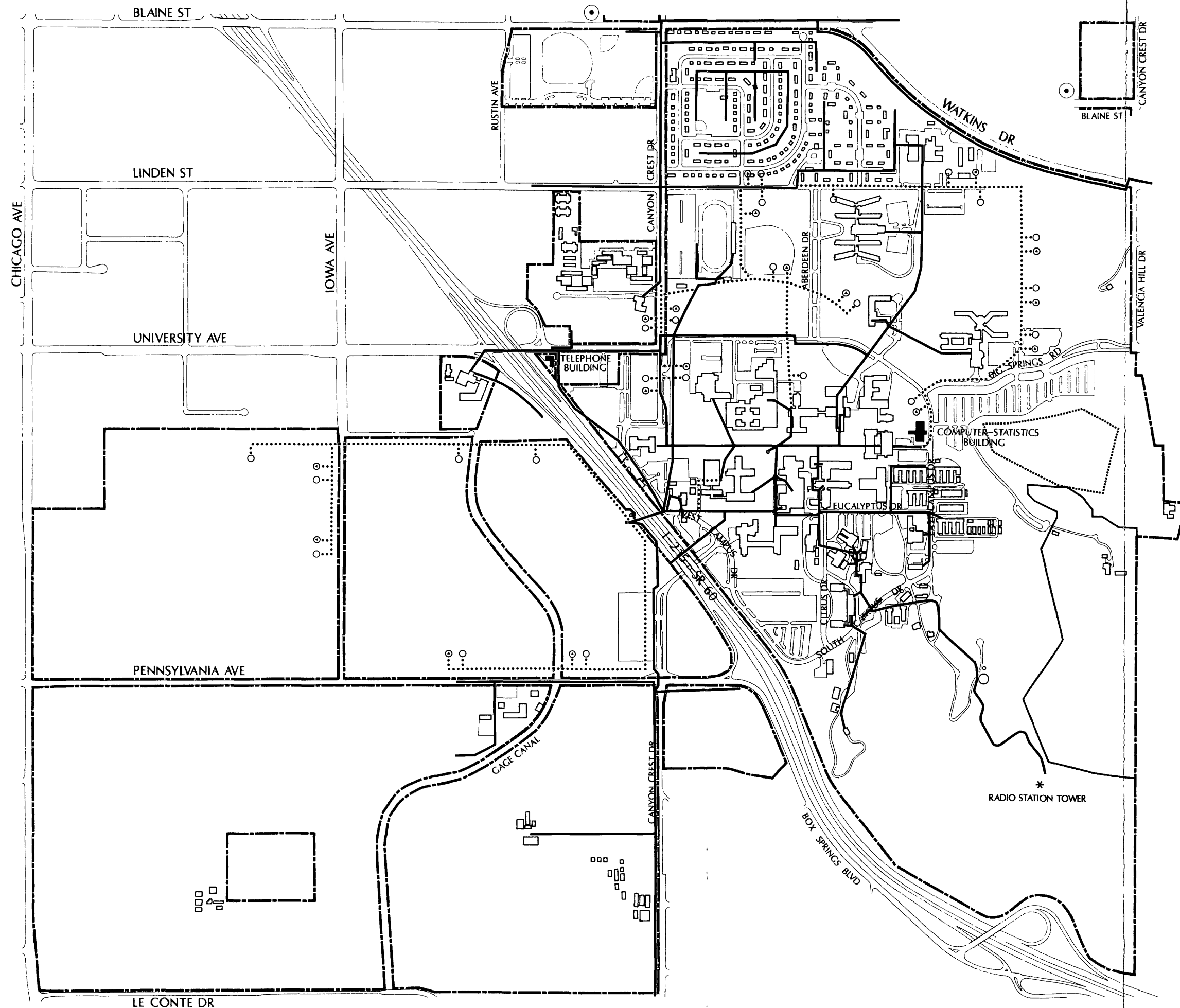
The emergency call box system is not considered a part of the communications infrastructure at this time. These units are distributed throughout the parking areas, and are maintained by the Parking Services group.

Proposed Communications Systems

Suggested extensions to the telecommunications and data communications systems are shown in Figure 22. Due to the capacity limitations at the periphery of the current telecommunications system, fiberoptic feeders could be extended from the Telephone Building to the various precincts.

Extensions to the data communications system are also shown on Figure 22. In the early phases of growth, under an approved LRDP, this system would probably be extended to the existing Ungermann-Bass broadband network. However, in order to provide the level of services called for in a recent draft report of the University's Computing and Communications Planning Committee, and to meet the demands of the 18,050 student enrollment level the system should be converted to ISDN (Integrated Services Digital Network) technology. For this reason, the data communications system is not shown extended into housing or residence halls. It is assumed that by the time that level of service is reached, the system will be converted to ISDN technology and the data and telecommunications networks will be common.

Although additions to the emergency call box system have not been shown, system additions could be made through the telecommunication system or, alternatively, through cellular technology.



LEGEND





-  EXISTING DISTRIBUTION
-  PROPOSED DISTRIBUTION
-  PROPOSED DATA COMMUNICATION
-  PROPOSED TELECOMMUNICATION

FIGURE 21

TELECOMMUNICATIONS & DATA

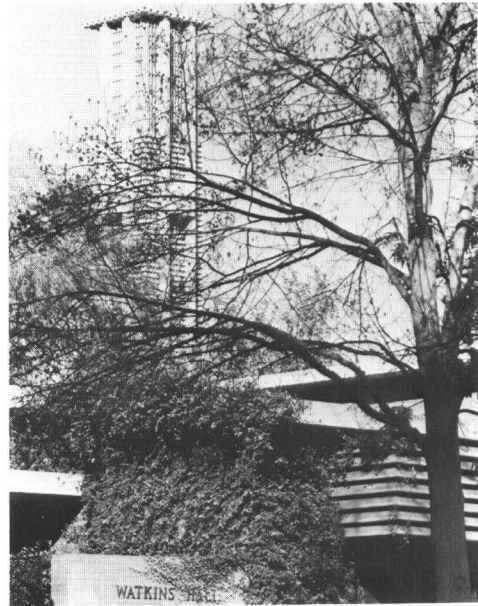
UNIVERSITY OF CALIFORNIA, RIVERSIDE

LONG RANGE DEVELOPMENT PLAN

SCALE IN FEET
0 200 400 800 1200

NORTH





APPENDICES

UC RIVERSIDE ACADEMIC PLANNING STATEMENT

February 20, 1990

DISTINCTIVE FEATURES OF UC RIVERSIDE

UC Riverside is one of the finest small, public comprehensive research university campuses in the United States. Its emphasis on high quality undergraduate instruction began when the University of California established a College of Letters and Science at Riverside in 1954 as a small undergraduate liberal arts college. The campus was modeled in purpose and quality after the best private institutions in the East. Formal graduate instruction of a similar order began when UC Riverside was established in 1960 as a general campus of the University and authorized to offer graduate degrees. The origin of UC Riverside's commitment to high quality research and public service dates from the establishment of the Citrus Experiment Station in 1907, which developed into the Citrus Research Center and Agricultural Experiment Station.

The research productivity of faculty in all fields expanded and diversified with the initiation of graduate instruction, yielding a strong level of extramural support per faculty member. Over time the public service role of UC Riverside as a land-grant institution has expanded through the efforts of Cooperative Extension and the establishment of University Extension's life-long learning programs, as well as through the increased research productivity and reputation of the faculty, the further development of the fine and performing arts, the establishment of the California Museum of Photography, and the emergence of the campus libraries as the most comprehensive in the inland area of Southern California. The quality and dedication of the non-academic staff are significant campus assets supporting the missions of teaching, research and service.

The campus is entering a new period of rapid enrollment growth, which will allow its transformation into one of the premier public research university campuses in the United States. The campus had a total enrollment (including health sciences) of 8,220 students in Fall 1989, enrolled in 48 baccalaureate programs, twenty M.A. programs, seventeen M.S. programs, an M.B.A. program, seven types of educational credential programs, the first two years of medical school instruction, and 29 Ph.D. programs. The programs in agriculture have been integrated with the general campus programs in biological and physical sciences through the establishment of the College of Natural and Agricultural Sciences; the balance of the campus is organized into a College of Humanities and Social Sciences, a College of Engineering, a Graduate School of Management, and a School of Education. University Extension serves over 25,000 registrants each year through courses in continuing professional education, general interest, recreation, matters of cultural and civic significance, and English as a Second Language.

The campus and its surrounding community can readily accommodate an ultimate enrollment of 25,000 to 30,000 students, with a ladder-rank faculty of approximately 1,500. The Academic Planning Statement summarizes the ways in which the campus plans to manage future growth as it encourages the achievement of greater excellence in existing colleges, schools and programs, including the arts, humanities, social sciences, natural sciences, and agriculture; develops additional professional schools; initiates new graduate and undergraduate degree programs; and develops additional areas of research specialization and community service.

ENROLLMENT AT UC RIVERSIDE

UC Riverside has grown rapidly over the last six years as general campus enrollment increased 76 percent from a Fall 1983 enrollment of 4,655 to a Fall 1989 enrollment of 8,220. The enrollment increase has been largely at the undergraduate level and primarily in the College of Humanities and Social Sciences. This increase has led to the allocation of 118 additional Instruction and Research (I&R) faculty positions to the campus, a 39 percent increase from the 1983-84 figure of 299.51, raising the total number of I&R faculty positions in 1989-90 to 417.51. When approximately 120 campus ladder-rank [Agricultural Experiment Station] Organized Research (OR) positions are added to the I&R positions, the ladder-rank faculty positions at UC Riverside total almost 540 in 1989-90.

APPENDIX A

The next fifteen years will bring UC Riverside dramatic growth in enrollment, in scholarly attainment, and in extramural funding. The campus plans for enrollment to grow to at least 18,050 students by the year 2005-2006, with the percentage of graduate students increasing to 20 percent. The number of I&R faculty positions will at least double by that time, while the number of agricultural OR positions will be unchanged, for a combined total of over 1,100 I&R and OR faculty positions by the year 2005-2006. The ultimate size of the campus will be 25,000 to 30,000 students, and the Long-Range Development Plan and Environmental Impact Report are being prepared with this ultimate size in mind.

CAMPUS GOAL AND OBJECTIVES: TEACHING

UC Riverside has a well-deserved reputation for excellence in its teaching program, especially at the undergraduate level. Its undergraduate and graduate students are of high quality. A high percentage of its undergraduates go on to graduate school and complete the Ph.D. degree. The faculty are firmly committed to providing excellent instruction at the undergraduate and graduate levels. Many faculty involve undergraduate as well as graduate students in their laboratory and other research programs.

THE CAMPUS GOAL FOR TEACHING IS TO ENHANCE AND ENCOURAGE FURTHER EXCELLENCE IN GRADUATE AND UNDERGRADUATE INSTRUCTION AS THE CAMPUS GROWS.

A number of objectives will be achieved in support of this goal. In particular, UC Riverside will:

- attempt to maximize the opportunity for undergraduate students to interact with ladder-rank faculty, through such mechanisms as special seminars and opportunities for undergraduates to participate with faculty in research and creative activities.
- integrate into the curriculum the honors program being developed with the assistance of a grant from the Ford Foundation.
- continue to develop and implement state-of-the-art classroom and laboratory teaching facilities, including providing instructional media support, computer linkages and networks, and other support systems and materials.
- enlarge and continue to develop programs that encourage and assist students who are in the transition from high school or community college to the university level of study, including the programs in the Learning Center and the Special Services Office.
- refine our application of admissions criteria, paying particular attention to UC Riverside's commitment to provide access to minority and women students, especially in those areas in which they have been underrepresented in the past.
- increase the number and quality of our graduate students, especially at the Ph.D. level, to help meet the expected shortfall in Ph.D. recipients needed to fill projected faculty, industrial, and public service vacancies in the country over the next fifteen years.
- expand our existing graduate and professional programs.
- increase directly the level of support for graduate students through expanded fellowship awards and indirectly through improved extramural funding of faculty research, development of special training grant programs, and increased fund raising.
- continue our aggressive outreach programs to potential graduate students, especially among groups not traditionally represented in specific disciplines.
- develop new graduate programs that take advantage of campus strengths and meet current and future needs for graduate instruction.
- expand the number and type of professional programs at the post-baccalaureate level.

CAMPUS GOAL AND OBJECTIVES: RESEARCH

Many UC Riverside departments have established strong research reputations, in spite of the fact that the average size of a campus department is only thirteen faculty. As the Riverside campus grows and diversifies, its research visibility will equal that of the larger UC campuses. As the size of each department increases, the campus will be able to expand the range of specialized fields within and between departments. The campus will also continue to build on its excellent reputation in agriculture: the President of the University and the Vice President of Agriculture and Natural Resources have determined that agricultural research programs will continue to be an important dimension of UC Riverside, although they, similar to agricultural programs in higher education nationwide, are not anticipated to grow significantly in the immediate future.

THE CAMPUS GOAL FOR RESEARCH IS TO CONTINUE TO EXPAND THE RESEARCH EFFORTS AND RECOGNITION OF ITS FACULTY.

A number of objectives will be achieved in support of this goal. In particular, UC Riverside will:

- continue to be of the finest public land-grant university campus of its size in the nation as it grows over the coming years and will become a major research institution (level Research I in the Carnegie Foundation classification).
- continue to provide state-of-the-art equipment, space, computing and other facilities, library materials and other resources, and research services in support of the research efforts of its high quality faculty.
- retain its most distinguished faculty by providing them with the most effective support environment.
- recruit the most promising and distinguished faculty, paying particular attention to the challenge of increasing the numbers of women and minorities among the faculty.
- provide matching funds where possible to assist faculty in obtaining extramural funding support, through such mechanisms as general fund raising efforts, research park development, and allocation of discretionary funds.
- encourage the grass-roots development of unique and forward-looking research programs, facilities, and units.
- provide seed money where possible for initial support of promising new research foci and graduate instructional programs.
- quadruple the number of endowed chairs from the current six to 24 by the academic year 2005-2006.
- increase its contribution to research in the professions through the establishment of additional professional schools.

CAMPUS GOAL AND OBJECTIVES: SERVICE

The campus has a fine reputation for service: to specific scholarly fields worldwide through the research achievements of its faculty; to public education in the state and nation through its credential, masters, and doctoral degree programs; to business, industry, and government through academic consulting and advice and library services; to the general public through University Extension; to our world-wide community through ecological and resource management research; to agriculture in all of Southern California through Cooperative Extension; and to the intellectual and cultural needs of the region and state through its libraries, the California Museum of Photography and other museums, and performance programs. The campus has melded its interests with school district needs through establishment of the innovative California Educational Research Cooperative program. Both the service opportunities and demands for the campus are changing and increasing as the state and nation face the

APPENDIX A

challenge of international competition and as the local area becomes rapidly urbanized. Because of the quality of UC Riverside programs and the commitment of the campus to service, the surrounding community is extremely supportive of the further growth of the campus and is contributing significantly to the UCR Foundation, having tripled the amount of its annual giving over the the last two years.

THE CAMPUS GOAL FOR SERVICE IS TO EXPAND THE SCOPE AND IMPACT OF ITS SERVICE TO THE WORLD, THE NATION, THE STATE, AND THE LOCAL COMMUNITY.

A number of objectives will be achieved in support of this goal. In particular, UC Riverside will:

- serve the world, the nation, and the state by achieving the campus goal of increasing the research efforts and visibility of its faculty: it is through faculty research that the campus will have one of its most lasting effects on the world at large.
- assist those faculty who reach out in direct service to the world, the nation, and the state
- participate vigorously in the statewide efforts to focus special Cooperative Extension efforts on urban problems and needs.
- serve the adult community with continuing professional education so necessary in our rapidly changing technological society.
- serve the local community by becoming the center of intellectual and cultural life in its region, working with community planning groups to develop more extensive cultural facilities and attracting new industry to the community and the region through the University-affiliated research park now being developed.
- strengthen and enhance existing library resources and facilities to serve better the campus and the greater community.
- expand the resources of the campus bookstore to provide a regional intellectual center for scholarly books and publications.
- expand the breadth, number, and quality of the performances, exhibitions, lectures, conferences, and continuing education programs offered to the general public.
- expand its new College of Engineering and develop additional professional schools and programs, in such possible areas as law and health professional schools, thereby providing educational opportunities for students and supplying needed professionals to the rapidly developing state and local communities.

CAMPUS COMMITMENT TO INCREASING DIVERSITY

The campus is committed to increasing the diversity of its faculty, staff, and students as it seeks to create a more pluralistic society. When minorities, women, handicapped, and other underrepresented groups are more fully represented in our community, we can train future leaders more effectively, address the pressing issues of diversity in the state and nation more completely, and explore more directly the advantages inherent in pluralism. The goals and objectives discussed above include specific ways in which diversity may be increased on the campus. Increasing the diversity of the campus continues to be a key element in campus planning and policy development.

CURRENT ACADEMIC STRENGTHS AT UC RIVERSIDE

The **College of Humanities and Social Sciences** is one of two major academic units at UC Riverside offering programs in a broad range of disciplines from the baccalaureate through the doctorate; along with the College of Natural and Agricultural Sciences, the College of Humanities and Social Sciences represents the core disciplines of the liberal arts and sciences. The College's faculty now includes 171 ladder positions organized in eighteen departments and programs whose students pursue baccalaureate degrees in 33 fields, master's degrees in fifteen fields, and doctoral degrees in ten fields.

Departments and programs of the College with faculty appointments are: Anthropology, Art, Art History, Creative Writing, Dance, Economics, English, Ethnic Studies, History, Literatures and Languages, Music, Philosophy, Physical Education, Political Science, Psychology, Religious Studies, Sociology, and Theatre. Other units of the College without faculty appointments include the Center for Social and Behavioral Sciences, the California Museum of Photography, the Art Gallery, the Archaeological Research Unit, and the Theatre Facilities Unit. About three-fifths of all UC Riverside students now enroll in College programs, which are expanding and diversifying in keeping with the University's rapid growth. The College's primary aim in planning is to assist its current core units in growing to a faculty size, programmatic range, and academic quality befitting a first-rank public research university of fifteen to twenty-five thousand students. To this end, it will maintain and enhance its current strengths in the arts, humanities, and social sciences: first, by increasing the quality and size of existing units; second, by dividing some existing units into two or more parts; and third, by creating entirely new units. In other words, the College plans to devote most of its resources in the first phase of growth to expanding and enhancing its core.

The **College of Natural and Agricultural Sciences** is unique in the University of California system and perhaps among major universities in the United States because it has integrated its biological, agricultural, and physical science units into one organizational framework. This merger constitutes an academic core of teaching, research, and service in the sciences that rank the College as one of the best in the nation for its size. Many of its departments have achieved international prominence. The roots of the College date back to the establishment of the Citrus Experiment Station in Riverside in 1907. The College houses the following organized research units: the Citrus Research Center and Agricultural Experiment Station, the Institute of Geophysics and Planetary Physics, and the Dry Lands Research Institute. The College also has strong ties with the Statewide Air Pollution Research Center, the U.S.D.A. Salinity Laboratory, the Forest Fire Laboratory of the Pacific Southwest Forest and Range Experiment Station, and the U.S. Weather Service. The College provides a strong undergraduate teaching program for the B.S. and A.B. degrees and a strong graduate program for the M.S., M.A., and Ph.D. degrees in twelve academic departments with faculty of 300. In the agricultural and biological sciences there are programmatic emphases in biomedical sciences, ecosystem/ecology/population biology, environmental sciences/natural resource management, environmental toxicology, evolutionary/developmental biology, genetics/molecular biology, microbiology/immunology, neurobiology, plant pest and disease sciences, and plant sciences/productivity. The Biomedical Sciences Program provides an innovative approach to medical education whereby undergraduate students have an opportunity to obtain an M.D. degree in seven years instead of eight. The programmatic emphases in the physical sciences include analytical, organic and physical chemistry; geological sciences; mathematics; computer science; statistics; astrophysics; high energy or particle physics; and condensed matter physics. College programs receive approximately seventeen million dollars of external funding annually to support their research.

The **School of Education** was founded in 1968 and currently offers a broad range of credential programs for educators, as well as the M.A. and Ph.D. degrees. Teaching credential programs have been offered at UC Riverside since 1958, initially through the College of Letters and Sciences. Although the School has retained its historical commitment to offering innovative and regionally acclaimed teaching and administrative services credential programs, the considerable original work undertaken by its faculty has led to the School offering a Ph.D. program in Education, concentrating on Special Education, Educational Psychology, Curriculum and Instruction, and Educational Administration. The School's externally funded research programs are already in excess of one million dollars annually. Building on its strong and nationally recognized research base in the areas of special education and children and families at risk, in 1988 the School was able to initiate, with strong support from the campus and regional public school community, a unique, cooperatively funded, research center for studying a broad range of important educational and policy questions identified by California public school leaders. Known as the California Educational Research Cooperative, this new consortium includes 21 school districts and two county offices of education. Most recently, in 1989, the School became the first--and to this date the only--University of California site for a Comprehensive Teacher Education Institute, a program funded by the State Department of Education. The Institute will become the focal point for continuing participation by faculty from the College of Humanities and Social Sciences and the College of Natural and Agricultural Sciences. Currently 19.60 ladder-rank FTE are assigned to the School of Education.

APPENDIX A

The **Graduate School of Management** (GSM) provides a strong professional education in its MBA program, which places emphasis on well-developed analytical skills across the functional areas of finance, marketing, accounting, as well as information and decision sciences, while at the same time responding to the broader behavioral management issues of strategy and organization. It also has a strong global component. The program provides a learning environment which not only encourages the development of the basic analytical, behavioral, and leadership skills for management, but also stimulates the potential for continuous growth under uncertain and changing world-wide conditions. The undergraduate business administration program is a select, high-quality program of business education based on a broad liberal arts undergraduate background. The emphasis is on developing sound professional skills in the traditional areas of business while at the same time providing students with a well-rounded perspective on the world and on the environment in which they will live and work. GSM participates in an academically strong interdepartmental Ph.D. program in Economics, with concentrations in Financial Economics and Economic Theory. Other participating departments include the Department of Economics of the College of Humanities and Social Sciences and the Department of Soil and Environmental Sciences of the College of Natural and Agricultural Sciences. Currently 28.40 ladder-rank FTE are assigned to GSM.

The **University Library** has a collection of more than 1,500,000 bound volumes, 13,000 periodical and journal subscriptions, and more than 1,000,000 microforms, arranged and staffed to support undergraduate and graduate instruction as well as faculty and staff research. Facilities include the Tomas Rivera, Bio-Agricultural, Physical Sciences, Music, and Media Libraries. The Rupert Costo Library of the American Indian is also located in the Rivera Library. In addition to its primary mission of supporting vital campus programs, the Library is open to the general public and participates in cooperative, reciprocal borrowing arrangements with colleges, public and special libraries, and schools throughout much of inland Southern California. Currently a staff of 34.5 FTE professional librarians and 100 FTC support staff are assigned to the University Library.

IMPLEMENTATION PROCEDURES

Allocating Faculty Positions

The allocation of additional faculty positions and other resources associated with growth in enrollment provides the campus with a unique opportunity to build on existing strengths and to develop new programs. As the average size of departments doubles or triples from the current level of thirteen faculty per department, greater depth will develop in particular fields in each department. Increased numbers of faculty will inevitably result in greater breadth, as well. The faculty will develop greater worldwide visibility in a much larger number of fields.

The Executive Vice Chancellor allocates faculty positions to the schools and colleges of the campus, in response to requests from the deans on behalf of their departments and programs. Decisions are made in consultation with the divisional Academic Senate Committee on Planning and Budget and upon approval of the Chancellor. The allocation of faculty positions is determined in part by enrollment, in part by the strength of the academic units, in part by the potential to establish and develop new programs and disciplines, and in part by consideration of intercollegiate and campus-wide issues and perspectives. The Target of Opportunity Program for faculty diversity augments the strong campus commitment to increase the numbers of women and minority faculty in fields in which they are underrepresented. Within this general allocation framework each of the schools and colleges determines, to a large extent, the degree to which its resources will be used to build on existing excellence, to strengthen areas that need strengthening, and to develop new programs and areas.

Space Planning

Campus space planning for each Instruction and Research unit is based on projected enrollment over the next six years and a comparison of the space currently assigned to the unit with that justified on the basis of state space assignment guidelines for each discipline. Space planning for units that are not part of the Instruction and Research function is less standardized, but involves consideration of prevailing criteria for research universities. Plans for new programs and units are included in the overall analyses. Spaces needs and concerns are considered by the Campus Space Review Committee, which is headed by the Executive Vice Chancellor and composed of deans, vice chancellors, the Chair

of the Divisional Academic Senate Physical Resources Planning Committee, and the University Librarian; the Committee is advisory to the Chancellor.

Critical shortages of space are developing as the campus grows rapidly, and they present a particular challenge in the recruitment of new faculty. Short-term solutions to space problems involve reassigning space, remodeling currently assigned space, and creating new, temporary space. Long-term solutions involve constructing new buildings through the University's capital improvement program and leasing or purchasing existing structures in the vicinity of the campus. The latter approach has been used to provide additional residence space for students as well as to move certain service units off-campus, providing space for growth of academic units on campus.

The campus is about to begin a period of extensive construction of new campus facilities and renovation of existing facilities to accommodate the further rapid growth in numbers of students, faculty, and staff. The Long-Range Development Plan will chart this process to at least the year 2005-2006. A high priority will be given to meeting the highest seismic safety standards for existing , as well as new, campus buildings. Every effort will be made to ensure high quality in all new buildings, in order to provide a sense of pride of place for both the campus and the region.

THE DEVELOPMENT OF NEW PROGRAMS AT UC RIVERSIDE

As the campus matures, resources will be made available for new programs and research efforts. New undergraduate majors and new graduate programs will be proposed as a result of strong faculty interest and demand for the program on the part of students and society; new organized research units will be proposed as a result of strong faculty interest, potential contribution to the advancement of knowledge, and the potential for extramural support. New resources will be allocated to new programs and potential research units with explicit agreements about the rate and manner in which the programs and units will develop. If new efforts fail to develop as projected, the resources will likely be redirected to more promising projects.

As mentioned above, the **College of Humanities and Social Sciences** understands that growth at UC Riverside cannot mean simply the expansion of the University's organizational state as of 1989, but it also recognizes that its current programmatic and personnel base is the only point from which it can grow--the point, therefore, on which most of its energies in the initial stages of growth must focus. In its effort to plan a future with due respect for the past and present, the College has already begun to make a number of changes and to add new academic strengths. Its Department of Literatures and Languages plans to divide into several parts, the first new unit being a Spanish Department. Another new unit needed in the College is a Department of East Asian Languages. International Studies is of great interest to many faculty, as are related initiatives, new and old, in the study of Mexico, Central America, and South America. The Ethnic Studies faculty is growing rapidly to meet new curricular and research obligations, growth that will bring organizational change. Women's Studies will doubtless require an autonomous unit at some point. Additional appropriate masters and doctoral programs are needed in the arts; and there is a strong need to enlarge their requisite specialized physical facilities, even as the organizational structure of the arts is being developed. Neuroscience and Linguistics are exciting opportunities for UC Riverside which will entail collaboration among the colleges and professional schools. Such cooperation will also promote other initiatives in which College faculty have expressed varying degrees of interest. Urban and Population Studies, for example, is obviously critical in Southern California. Regional as well as national and international support should be available for research in such areas as Preservation Technology and Sustainable Development. New Centers for [Ideas and Society--exact title to be determined later] and Bibliographical Studies are emerging to enhance the College's abilities in collaborative research and extramural funding.

The **College of Natural and Agricultural Sciences** will continue to build on its disciplinary strengths by supporting centers of eminence in each department. In addition, there will be a continuation of the strengthening of interdisciplinary and interdepartmental programs such as has occurred in genetics, environmental toxicology, and neurosciences. Such new programs will address contemporary issues such a biotechnology, biological control, microbiology, health sciences, applied biochemistry, geothermal resources development, sustainable/natural resource development, water quality, global carrying capacity, land use planning, urban/agricultural/natural resource planning, space biology, and computer graphics/information systems. The College will continue to strengthen and develop

APPENDIX A

centralized service facilities with state-of-the-art equipment so that teaching and research programs can be maintained at the cutting edge of science. Existing service facilities include an agricultural operations unit which manages 1,400 acres of research facilities and land, a regional analytical chemistry instrumentation facility that has no equal on the west coast, a biotechnology instrumentation facility for the study of recombinant DNA, a geographic information facility, and insect and nematode quarantine facilities. New facilities contemplated include an immunotechnology facility; a plant tissue culture facility; an electronics design facility; and an entomological collection, teaching, and research facility. New organized research units under discussion include an exotic materials research center, an international geothermal center, a space biology center, an institute for biological control, and a center for particle physics and cosmology. The Division of Biomedical Sciences is planning to develop into a School of Biomedical Sciences, leading possible to other health professional schools.

The **School of Education** will continue to expand its teaching, research, and service missions as the campus grows. The unusually heavy population growth in the inland region of Southern California will require us to contribute increasingly to the preparation of educational leaders for the region. Much of Education's expansion will occur within already developed programmatic areas, albeit new initiatives are being planning in the subfields of bilingual education, school psychology, and higher education. Initially, as part of UC Riverside's contribution to intersegmental cooperation, the emphasis in higher education is projected to focus on the preparation of administrators for community colleges.

The **Graduate School of Management (GSM)** will take its place among the stronger business schools in the country by developing Ph.D. programs in management and additional programs in economics and expanding professional programs at the MBA and undergraduate levels based on solid, rigorous quantitative and qualitative analytical approaches to the fields of management and economics with a global/international perspective. At the Ph.D. level GSM intends to create centers of excellence through conducting research at the cutting edges in the various fields of management and economics. GSM's goal is the preparation of future scholars to undertake the theoretical and applied research that will be at the core of business and commerce inquiry in the twenty-first century. In addition to current participation in the interdepartmental Ph.D. in Economics, especially the concentrations in Financial Economics and Economic Theory, GSM is studying the development of a Ph.D. program in the near future. Majors in this program being contemplated include finance, decision science, marketing, accounting, and organizational behavior and human relations.

The new **College of Engineering**, initiated in the 1989-90 academic year, is expected to develop rapidly its initial B.S. degrees in electrical engineering, chemical engineering, and environmental engineering; to add B.S. degrees in additional fields, such as mechanical engineering and computer science and engineering; and to develop M.S. and Ph.D. degrees within at least the next three years.

Existing Organized and Multicampus Research Units (ORUs and MRUs) will be strengthened and new ORUs and MRUs initiated. The campus continues to support the establishment of UC MEXUS as an MRU. Other potential MRUs and ORUs will be proposed as the campus continues to grow and develop. The campus will continue to encourage faculty initiatives in promising areas.

The campus hopes to develop at least two new professional schools, in response to the continued rapid development of inland Southern California and the increased needs of the region and the state. The campus planning process includes considering the feasibility of possible professional schools in law and medicine and/or other health professional schools. The campus will continue to consider the possible establishment of other professional programs and schools, both within and outside of the health sciences.

CURRENT ACADEMIC PLANNING AT UC RIVERSIDE

The current academic planning process started with the preparation of the Western Association of Schools and Colleges Self-Study Report of January 15, 1988. Volume Two of that report contains college, school, and departmental self-evaluations of research, teaching, and service accomplishments and plans.

The Self-Study Report was issued while the campus was in its fourth year of significant recent enrollment growth. There was a clear need to establish comprehensive academic plans and land use plans to guide the campus through current and future periods of growth.

APPENDIX A

In consultation with the Divisional Academic Senate, Chancellor Schraer appointed the UC Riverside Task Force for Campus Planning in May, 1988, composed of eleven ladder-rank faculty, five administrators, one librarian, one graduate student, and one undergraduate student. The Task Force met frequently and was joined by ten additional deans and associate deans for a planning retreat and subsequent wrap-up session.

The Task Force accomplished most of its work through the establishment of a series of 24 subcommittees, chosen to address strategic planning issues as well as disciplinary planning issues. A total of 195 persons in addition to Task Force members served on the subcommittees, including 101 ladder-rank faculty, 42 non-academic staff, 27 administrators, 24 students, and eleven non-Senate academic employees. Most subcommittees submitted their reports to the Task Force by November, 1988, and the reports were the focus of the planning retreat in December, 1988, and the wrap-up session in January, 1989.

A draft UC Riverside General Academic Plan was issued on March 29, 1989, based on the studies conducted by the Task Force for Campus Planning and its subcommittees. Refinement of the UC Riverside General Academic Plan and the day-to-day making of campus decisions depend on the regular review processes of the Academic Senate and the administration as they function through the shared governance system of the University of California. It is through effective use of these processes that priorities are affirmed, conflicts are resolved, and difficult decisions are made.

This UC Riverside Academic Planning Statement is derived from the March 29, 1989 draft of the UC Riverside General Academic Plan and the comments received regarding it. The Statement provides the academic framework for our Long-Range Development Plan.

UCR PROPERTY LOCATED OFF THE MAIN CAMPUS

Area	Location	Primary Use	Acreage
Box Springs Reserve	Riverside County, 1 mile east of campus	Natural Reserve System	160 ac.
Philip L. Boyd Deep Canyon Desert Research Center	Riverside County, 15 mi. southwest of Palm Springs	Natural Reserve System	16,700 ac.
Emerson Wildlife Preserve	Riverside County, 5 mi. east of Temecula	Teaching & Research	185 ac.
Granite Mountains Reserve	San Bernardino County, 78 mi. east of Barstow	Natural Reserve System	8,920 ac.
James San Jacinto Mountains Reserve	Riverside County, 15 mi. southeast of Banning	Natural Reserve System	29 ac.
Motte Rimrock Reserve	Riverside County, 13 mi. south of UCR campus	Natural Reserve System	472 ac.
Sacramento Mountains Reserve	San Bernardino County, 16 mi. west of Needles	Natural Reserve System	591 ac.
Moreno Valley Field Station	Riverside County, 13 mi. southeast of campus	Agricultural Teaching & Research Fields	840 ac.
Mt. Rubidoux	Riverside County, 5 mi. west of campus	Organized Research Units	3 ac.

**UC RIVERSIDE BUILDING PROGRAM
EXISTING STRUCTURES**

Year Completed	Structure	Approx. Gross Sq. Ft.
1916	Horticulture Building	23,562
1916	Irrigation Building	9,720
1916	Director's Residence	5,338
1916	Superintendent's House	1,494
1916	Barn and Later Additions	4,893
1931	Soils and Plant Nutrition Building (North Wing)	11,360
1931	Insectary Building	4,080
1932	Entomology Building	17,345
1932-41	Glasshouses and Headhouses 1, 2, 3, 4 and 5 (Demolished)	14,188
1948	Faculty Club	4,900
1948	Heating Plant and Shops	6,230
1948	Entomology Annex	16,693
1950	Temporary Laboratory	2,600
1952	Glasshouses and Headhouses No. 6 & 7	9,060
1953	Library	38,871
1953	Physical Sciences Building	44,467
1953	Physical Education Building	45,830
1953	Social Sciences Building	58,590
1954	Webber Hall	44,510
1954	Insecticide Compounding and Storage Building	3,100
1954	Glasshouse and Headhouse No. 9	5,000
1955	Headhouse Storage Building	2,760
1955	Canyon Crest Housing	197,266
1955	Domestic Water Reservoir (1,000,000 gals.)	
1955	Glasshouses and Headhouses No. 8, 10 and 11	15,000
1956	Glasshouses and Headhouse No. 16	5,000
1956	Physical Education Building Addition	14,050
1957	Glasshouses and Headhouses 12, 13, 14 and 2A	17,255
1958	Stored Products Insects Building	2,000
1959	Life Sciences Building	48,884
1959	Heating Plant Addition	2,904
1959	Residence Halls 1, 2 and 3	188,000
1959	University House	7,000
1960	Insectary Building Addition	3,890
1960	Corporation Yard	32,790
1960	Farm Group	9,690
1960	Entomology Building Addition	8,920
1960	Administration Building	41,000

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Year Completed	Structure	Approx. Gross Sq. Ft.
1960	Physical Education Utility Building	2,336
1961	Physical Sciences Building Addition	46,440
1961	Boyden Entomological Laboratory	6,544
1961	Glasshouse and Headhouse 16A	2,525
1961	Health Service Building	12,125
1963	Humanities Building	101,020
1963	Residence Hall, Unit 4	90,957
1963	Purchasing Department Facility	2,589
1964	Library, Unit 2	61,490
1965	Physical Sciences, Unit 3	92,521
1965	Agricultural Extension	10,033
1965	Fawcett Lab	20,031
1965	Custodial and Grounds Headquarters Building	7,446
1965	Telephone Building	2,584
1965	Glasshouse and Headhouse 18, 19 and 20	14,790
1965	Corporation Yard, Step 2	7,660
1966	Agricultural Engineering Shops	4,474
1966	Physical Sciences, Unit 4	80,861
1966	Bell and Clock Tower	2,601
1966	Handball Courts	3,383
1967	Batchelor Hall	83,840
1967	Cafeteria-Commons	72,498
1967	Sproul Hall	76,505
1967	Faculty Club Addition	12,757
1968	Central Heating Plant #2	6,185
1968	Physical Science Unit 4 Addition	24,165
1969	Health Service, Unit 2	11,100
1969	Life Sciences, Unit 2	86,788
1969	Life Sciences, Unit 2 Addition	9,970
1969	Agricultural Sciences, Unit 2	18,023
1970	Library, Unit 3	123,875
1970	Rivera Library, South Wing	123,875
1974	Statistics-Computer Building	42,096
1974	Webber Hall East	105,838
1975	Bannockburn Housing acquisition	178,366
1987	University Plaza Apartments acquisition	72,544
1988	Greenhouses I	4,950
1988	Greenhouses III	4,950
1989	Environmental Health & Safety Facility	6,108
1989	Highlander Hall (Park Inn) acquisition	54,655

UCR CAPITAL IMPROVEMENTS PROGRAM*
PROPOSED MAJOR PROJECTS
1990-2005/06

PROJECT NAME	Projected Occupancy
Approved and funded	
Residence Hall V	1990-91
Bookstore Expansion	1990-91
Commons Expansion, Phase 1	1990-91
Soils & Plant Nutrition Building 1 & 2	1992-93
Engineering Science Building, Unit 1	1993-94
Pending Approval	
Interim Facilities, Phase 1	1990-91
Entomology Museum	1990-91
Interim Facilities, Phase 2	1991-92
Child Development Center	1991-92
Cluster Housing, Phase 1	1993-94
Student Recreation Building, Phase 1	1993-94
Extension Building	1993-94
Humanities & Social Sciences, Unit 1	1994-95
Alumni/Visitor Center	1994-95
Residence Hall VI	1995-96
Engineering Science, Unit 2	1995-96
Cluster Housing, Phase 2	1996-97
Joint Sciences Library	1996-97
Campus Conference Center	1996-97
Humanities & Social Sciences, Unit 2	1997-98
Physical Science Laboratories	1997-98
Commons Expansion, Phase 2	1997-98
Satellite Food Service Facility	1998-99
Recreation Building, Phase 2	1998-99
Administrative Support Building 1	1998-99
University Club Replacement	1998-99
Fine Arts Facilities, Phase 1	1999-00
Residence Hall VII	2000-01
Institutes Complex	2000-01
Engineering Sciences, Unit 3	2000-01
Telecommunications Building	2001-02
Fine Arts Facilities, Phase 2	2002-03
Library Unit 5/Rivera Library	2002-03
School of Education	2002-03
Administration Building, Phase 1	2003-04
Museum Complex	2003-04
Apartments, Phase 1	2003-04
Geology Building Renovation	2003-04
Humanities & Social Sciences, Unit 3	2003-04
Administration Building, Phase 2	2003-04
Corporation Yard Expansion	2004-05
Apartments, Phase 2	2005-06
Administrative Support Building 2	2005-06

APPENDIX D

INFRASTRUCTURE PROJECTS

Electrical Distribution System, Phase 1	1990-91
Central Utility Plant Boiler	1991-92
Voice/Data Trunk Line 1	1991-92
Electrical Distribution System, Phase 2	1992-93
Parking Structure 1	1993-94
Chiller Plant Capacity Expansion	1994-95
Parking Structure 2	1997-98
Voice/Data Trunk Line 2	1997-98
Campus Roadways, Phase 1	1998-99
Campus Roadways, Phase 2	2001-02
Utilities Distribution System, Phase 1	2003-04

*This is a partial list and approximate timetable. Approval of the LRDP does not constitute approval of this list, whole or in part. Capital planning is done in five-year increments.

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Projected Square Footage Requirements Chart

FACILITIES	EXISTING 1989	18,050 ENROLL.
College of Natural & Agricultural Sciences (1A)		
College ASF	364,605	652,594
% Classroom ASF	(34%) 12,370	(29%) 42,756
Biological Environments	70,140	100,000
Existing Other	55,470	
Flexibility Factor @ 50%		397,675
TOTAL ASF	502,585	1,193,025
TOTAL GSF	837,642	1,988,375
College of Humanities & Social Sciences		
College ASF	105,229	259,356
% Classroom ASF	(47%) 17,100	(42%) 61,920
Existing Other	45,220	
Flexibility Factor @ 50%		160,638
SUBTOTAL ASF	167,549	481,914
SUBTOTAL GSF	279,248	803,190
Fine Arts Program ASF	-0-	108,920
% Fine Arts Classroom ASF	-0-	(8%) 11,796
Performing Arts Facilities	12,321	67,000
Existing Other	-0-	
Flexibility Factor @ 50%		93,858
SUBTOTAL ASF	12,321	281,574
SUBTOTAL GSF	20,535	469,290
TOTAL ASF	179,870	763,488
TOTAL GSF	299,783	1,272,480

APPENDIX E

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Projected Square Footage Requirements Chart

FACILITIES	EXISTING 1989	18,050 ENROLL.
College of Engineering		
TOTAL GSF	20,535	469,290
College ASF	-0-	298,798
% Classroom ASF	-0-	(8%) 11,796
Existing Other	-0-	
Flexibility Factor @20%		62,120
TOTAL ASF	-0-	372,714
TOTAL GSF	-0-	621,191
School of Education		
School ASF	16,509	80,690
% Classroom ASF	(6%) 2,180	(6%) 8,844
Existing Other	6,840	
Flexibility Factor @ 20%		17,900
TOTAL ASF	25,529	107,434
TOTAL GSF	42,548	179,057
Graduate School of Management		
School ASF	10,613	70,183
% Classroom ASF	(6%) 2,550	(8%) 11,796
Existing Other	6,840	
Flexibility Factor @30%		24,593
TOTAL ASF	20,003	106,572
TOTAL GSF	33,338	177,621
Professional/Graduate School (Non-laboratory based) (1B)		
School ASF	-0-	50,000
School Library	-0-	25,000
Existing Other	-0-	
Flexibility Factor @ 20%		15,000
TOTAL ASF	-0-	90,000
TOTAL GSF	-0-	150,000

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Projected Square Footage Requirements Chart

FACILITIES	EXISTING 1989	18,050 ENROLL.
Professional/Graduate School (Biological science-related laboratory based) (1C)		
TOTAL ASF	-0-	110,000
TOTAL GSF	-0-	220,000
Rivera Library		
TOTAL ASF	129,840	292,524
TOTAL GSF	216,400	487,540
Science Library		
TOTAL ASF	18,870	98,424
TOTAL GSF	31,450	164,040
Administration		
Admin. Offices ASF	101,236	200,000
Computer Center ASF	26,640	58,210
TOTAL ASF	127,876	258,210
TOTAL GSF	213,127	430,350
Public Service		
Univ./Co-op ExtensionASF	38,350	86,202
Alumni/Visitor Centers ASF	-0-	50,000
Flexibility Factor @ 60%		51,721
TOTAL ASF	38,350	187,923
TOTAL GSF	63,917	313,205
Non-Institutional Agencies		
TOTAL ASF	3,646	180,000
TOTAL GSF	6,077	300,000

APPENDIX E

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Projected Square Footage Requirements Chart

FACILITIES	EXISTING 1989	18,050 ENROLL.
Student Services (2)		
Commons/Student Union ASF	48,469	93,866
Other ASF	54,647	121,298
TOTAL ASF	103,116	215,164
TOTAL GSF	171,860	358,608
Maintenance & University Physical Plant		
TOTAL ASF	91,676	167,493
TOTAL GSF	152,793	279,156
Recreation and Athletics Facilities		
Recreation Facilities ASF	6,914	105,000
Athletics Facilities ASF	128,931	255,000
TOTAL ASF	135,845	360,000
(@ 75% Efficiency) TOTAL GSF	181,127	480,000
Residence Halls (3)		
TOTAL ASF	273,914	465,750
TOTAL GSF	457,436	776,250
Apartments (3)		
TOTAL ASF	228,168	591,921
(@ 80% Efficiency) TOTAL GSF	285,210	739,902
Family & Married-Student Housing (3)		
TOTAL ASF	183,513	615,815
(@ 80% Efficiency) TOTAL GSF	229,391	769,769

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Projected Square Footage Requirements Chart

FACILITIES	EXISTING 1989	18,050 ENROLL.
Conference Center (4)		
Campus Facility ASF	-0-	130,000
Flexibility Factor @20%		26,000
TOTAL ASF	-0-	156,000
TOTAL GSF	-0-	260,000
Teaching and Research Fields Facilities (5)		
TOTAL ASF	61,703	100,000
TOTAL GSF	102,838	166,667
GRAND TOTAL ASF	2,124,504	6,432,457
GRAND TOTAL GSF	3,324,937	10,134,211

APPENDIX E

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Assumptions and Referenced Documents

REFERENCED FACILITIES	REMARKS AND REFERENCED UCR DOCUMENTS
General	<ul style="list-style-type: none"> The gross square footages (GSF) were based on a 60% efficiency factor, unless noted otherwise.
(1A) College of Natural & Agricultural Sciences	<ul style="list-style-type: none"> Existing ORUs and Non-Capacity space are added together and noted under "Existing Other" for Existing Space - 1989. The Flexibility Factors for the three future projections incorporate ORUs, Non-Capacity space, unanticipated future growth, and expected impacts of the forthcoming CPEC recommendations. The "Biological Environments" item includes vivaria, greenhouses, and biospheres. The LRDP assumes that 25% of the "Biological Environments" and 25% of the Flexibility Factor (accounting for possible ORUs) would take place on property west of the freeway.
(1B) Professional/ Graduate School (Non-laboratory based)	<ul style="list-style-type: none"> The school ASF assumed to include a classroom space dedicated to the school. Square footage requirements were determined through use of a model based on a non-laboratory based Professional/Graduate School.
(1C) Professional/ Graduate School (Laboratory-based)	<ul style="list-style-type: none"> Development assumed at the 18,050-student enrollment level. Square footage requirements were determined through use of a model based on a biological science-related laboratory-based Professional/Graduate School. The square footage figures may represent buildings that would include: <ul style="list-style-type: none"> ♦ classrooms ♦ teaching and research labs ♦ other labs ♦ administrative space ♦ professional offices ♦ library
(2) University Support & Recreation Facilities	<ul style="list-style-type: none"> The area designated for Student Services' "Commons/Student Union" includes square footage for the bookstore and the coffee shop.

APPENDIX E

PROJECTED SQUARE FOOTAGE REQUIREMENTS

Assumptions and Referenced Documents

REFERENCED FACILITIES	REMARKS AND REFERENCED UCR DOCUMENTS
(3) Housing	<ul style="list-style-type: none">The housing goal for the projected future enrollment is to house 35% of UC Riverside students in University-controlled housing. A subset of this goal is to house 75% of freshmen and first-time students in residence halls. Those spaces in residence halls not taken by freshmen and first-time students will be made available to returning sophomore, junior, senior and graduate students. The remaining students to be housed in meeting the 35% goal would be housed in apartments and family housing under the ratio of 2/3 in apartments and 1/3 in family and married-student housing.The gross square footage (GSF) for residence halls was based on a 60% efficiency factor, and for apartments and family and married-student housing an 80% efficiency factor was used.
(4) Conference Center	<ul style="list-style-type: none">The square footages were based on having the following areas included: Meeting Area Dining Room Kitchen and Service Housing (100 Rooms) Admin. and Support
(5) Teaching & Research Fields	<ul style="list-style-type: none">It was assumed that these activities will take place outside the academic core.

LRDP COMMITTEES**Long Range Development Planning Committee (LRDPC):**

Everly Fleischer	Executive Vice Chancellor (Chair)
Christopher Adams	University of California, Office of the President
Dilip Anketell	Director, Office of Campus Planning
Virginia Burgess	City Council Ward 2 Representative
Brian Copenhaver	Dean, College of Humanities and Social Sciences
James Erickson	Vice Chancellor, University Relations and Development
Merle Gardner	Planning Director, City of Riverside
Margueretta (Maggie) Gulati	Development Director, City of Riverside
Susan Hackwood	Dean, College of Engineering
Irving Hendrick	Dean, School of Education
Kyle Hoffman	Director, Alumni and Parent Relations
Stepan Karamardian	Dean, Graduate School of Management
Louis Leo	Vice Chancellor, Student Services
John Letey	Chair, Academic Senate Physical Resources Planning Committee
Drew L'Esperance	Graduate Student Association (GSA) Representative
Salvatore Martino	Executive Officer, Facilities Management
Thomas Nycum	Vice Chancellor, Administration
Elmer Ross	Superintendent, Physical Plant
Richard Rust	Director, Architects and Engineers
Larry Sautter	Assistant Vice Chancellor, Computing & Communications
Leland Shannon	Dean, Graduate Division and Research Office
James Thompson	University Librarian
Irwin Ting	Academic Senate Representative
Seymour Van Gundy	Dean, College of Natural and Agricultural Sciences
Darrell Walker	Associated Students (ASUCR) Representative
Paul Wilson	Academic Senate Representative

Long Range Development Plan Steering Committee (LRDPSC):

Thomas Nycum	Vice Chancellor Administration (Chair)
Dilip Anketell	Director, Office of Campus Planning
Everly Fleischer	Executive Vice Chancellor
Merle Gardner	Planning Director, City of Riverside
John Letey	Chair, Academic Senate Physical Resources Planning Committee
Salvatore Martino	Executive Officer, Facilities Management
Richard Rust	Director, Architects and Engineers
Leland Shannon	Dean, Graduate Division and Research Office

ACKNOWLEDGMENTS

Executive Administration

Rosemary S. J. Schraer	Chancellor
Everly B. Fleischer	Executive Vice Chancellor
Brian P. Copenhagen	Dean, College of Humanities and Social Sciences
Susan Hackwood	Dean, College of Engineering
James Hartley	Dean, University Extension
Irving Hendrick	Dean, School of Education
Stepan Karamardian	Dean, Graduate School of Management
Leland Shannon	Dean, Graduate Division and Research Office
Seymour Van Gundy	Dean, College of Natural and Agricultural Sciences
James C. Thompson	University Librarian
James C. Erickson	Vice Chancellor, University Relations and Development
Louis J. Leo	Vice Chancellor, Student Services
Thomas G. Nycum	Vice Chancellor, Administration
John B. Vickery	Vice Chancellor, Faculty Relations
R. Fred Zuker	Vice Chancellor, Enrollment Management
Larry Sautter	Assistant Vice Chancellor, Computing and Communications
John Anderson	Executive Officer, Human Resources
Jay D. Hughes	Executive Officer, Business and Financial Services
Salvatore F. Martino	Executive Officer, Facilities Management
Jacqueline Mimms	Director of the Budget
Robert Gill	Executive Assistant to the Chancellor

Office of Campus Planning Staff

Dilip M. Anketell	Director
Lisa Molidor Peloquin	Senior Educational Facility Planner
Allan B. Chung	Educational Facility Planner
Frederic R. Hinshaw	Associate Planner
Tricia D. Thrasher	Associate Planner
Micki Cruz Magee	Administrative Assistant
Flavia G. Ramey	Senior Clerk

Vice Chancellor Administration

Jan Martin	Executive Assistant
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Publications

Victoria Chamness	Senior Artist
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APPENDIX G

Office of the President

Elaine Bild	Director, Long Range Development and Environmental Planning
Christopher Adams	Associate Director, Long Range Development and Environmental Planning

Office of the General Counsel

Steven Drown	University Counsel
Dallas Holmes	Best, Best and Krieger
Scott Smith	Best, Best and Krieger

Academic Senate

Marvin Nachman	Chair, Riverside Division, Academic Senate
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Physical Resources Planning Committee
Planning and Budget Committee

Contributing Campus Units

Academic Department/Program Chairs
Agricultural Operations
Architects and Engineers
Environmental Health and Safety
Governmental and Community Relations
Housing and Food Services
Institutional Planning and Analysis
Parking Services
Physical Plant - Facilities Management
Printing and Reprographics
Student Services

Contributing City of Riverside Staff

Douglas Weiford	City Manager, (Retired)
Robert Wales	Acting City Manager
Merle Gardner	Director, Planning Department
Bob Mease	Principal Planner, Planning Department
Margueretta (Maggie) Gulati	Director, Development Department
William Vasquez	Redevelopment Project Manager, Development Department
Barry Beck	Director, Public Works Department
Douglas Greene	Fire Chief
Linford "Sonny" Richardson	Police Chief

Consultant Team:**Royston Hanamoto Alley & Abey**

Robert S. Sena, ASLA	Principal, Project Coordinator
Asa Hanamoto, FASLA	Principal
Robert Royston, FASLA	Principal
Laura J. Lafler, ASLA	Associate, Project Manager
T. C. Moore	Project Designer and Graphics
Robert Rumsey	Graphics
Barrie Stebbings	Administrative Assistant

LSA

Rob Balen	Principal
Mike Laybourn	Assistant Project Manager
Kevin Fincher	Project Manager, Traffic

Reid & Tarics Associates

Kiyoshi Matsuo, AIA	Principal
Mike Beam, AIA	Senior Associate

Kennedy/Jenks/Chilton

Steven R. Liming	Project Manager
Don Barazza	Civil Engineer
Lonnie Curtis	Civil Engineer
Steve Hinman	Electrical Engineer
Richard A. Kirby	Electrical Engineer
Maury Laks	Mechanical Engineer
Don McFadden	Civil Engineer
Harold B. Tennant	Chief Engineer

Moore Iacofano Goltsman (MIG)

Daniel Iacofano	Principal
Jim Oswald	Associate
Mimi Vreeland	Associate
Tim Gilbert	Associate
Donica Mensing	Associate
Nana Kirk	Associate

