



University of California Riverside

# **2005 Long Range Development Plan Amendment 2**

**Prepared by**

University of California, Riverside  
Finance & Business Operations  
Capital Resource Management

November 2011





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## UC Riverside Executive Management

|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
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| Dallas L. Rabenstein  | <i>Executive Vice Chancellor &amp; Provost</i>                   |
| David F. Bocian       | <i>Vice Provost, Academic Personnel</i>                          |
| Yolanda Moses         | <i>Vice Provost, Conflict Resolution</i>                         |
| Charles F. Louis      | <i>Vice Chancellor, Research</i>                                 |
| Peter A. Hayashida    | <i>Vice Chancellor, University Advancement</i>                   |
| Gretchen Bolar        | <i>Vice Chancellor, Finance &amp; Business Operations</i>        |
| Sharon A. Duffy       | <i>Dean, University Extension</i>                                |
| James W. Sandoval     | <i>Vice Chancellor, Student Affairs</i>                          |
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| Joseph W. Childers    | <i>Graduate Division Dean</i>                                    |
| Ruth M. Jackson       | <i>University Librarian</i>                                      |
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| Reza Abbaschian       | <i>Dean, Bourns College of Engineering</i>                       |
| Stephen E. Cullenberg | <i>Dean, College of Humanities, Arts &amp; Social Sciences</i>   |
| Thomas O. Baldwin     | <i>Dean, College of Natural &amp; Agricultural Sciences</i>      |
| John S. Levin         | <i>Interim Dean, Graduate School of Education</i>                |
| G. Richard Olds       | <i>Dean, School of Medicine</i>                                  |
| Mary Gauvain          | <i>Chair, Academic Senate</i>                                    |



# **Executive Summary**



## **Executive Summary**

### Introduction

The 2005 Long Range Development Plan (LRDP) Amendment 2 is required for specific changes to the 2005 LRDP. A general update of the 2005 LRDP was not developed through this amendment. To do so would have required a new long range development plan and new environmental document that was not the intent. Some existing conditions have changed but they do not directly affect the long range development plan.

### Background

The 2005 Long Range Development Plan Amendment 2 includes written and graphic documentation of the changes to the 2005 Long Range Development Plan (LRDP) that culminated in adoption of Amendment 2 by The University of California, Board of Regents in November, 2011. The University of California, Riverside required an amendment (Amendment 2) to the 2005 LRDP to address:

### Land Use Map Changes on the West Campus as described below:

- Provide for a new land use designation - *School of Medicine* - at the northeast corner of Martin Luther King Jr. Boulevard and Iowa Avenue;
- Reconfigure *Family, Apartment Housing and Related Support* and *Open Space* to replace the *Campus Reserve* land use designation/site at the northeast corner of Martin Luther King Jr. Boulevard and Chicago Avenue;
- Replace *Family, Apartment Housing and Related Support* at the northeast corner of the Southwest Mall and Cranford Avenue with *Athletics and Recreation*;
- Reconfigure, relocate, and increase the density of the *Academic* land use;
- Reconfigure the major *Open Space* from the Grove Concept to the Gage Canal Mall Concept;
- Change the location of two West Campus parking structure locations, delete one parking structure and redistribute its capacity across the remaining structures, and update the projected parking inventory;
- Update the Circulation and Parking maps to reflect changes to the existing and future campus transit service;
- Reconfigure and expand the *Campus Support* land use west of the freeway, delete *Campus Support* north of the *Campus Reserve* site and at the northeast corner of Canyon Crest Dr. and Martin Luther King Jr. Boulevard; and

- Add 2005 LRDP Amendment 1 Land Use Restriction to an area south of Martin Luther King Jr. Boulevard.

### Land Use Map Changes on the East Campus (previously approved land use acquisitions or projects) as described below:

- Add Falkirk and Oban student housing acquisitions north and south of Linden Street on Canyon Crest Drive; and
- Add *Family, Apartment Housing and Related Support* and delete *Athletics and Recreation* land use designation on the northwest corner of Valencia Hill Drive and Big Springs Road (Glen Mor 2 project).

### Text Changes as described below:

- Extend the LRDP Horizon Year to 2020/21;
- Increase maximum square footage by 3.1 million gross square feet specifically for the medical school program;
- Add retail, commercial, and office as permitted uses within all parking structures;
- Update the Resource Conservation and Environmental Stewardship section; and
- Incorporate previously approved land use Amendment 1 (land use restriction on a former site south of Martin Luther King Jr. Boulevard in the Agricultural Operations area).



## How to Use the 2005 LRDP Amendment 2

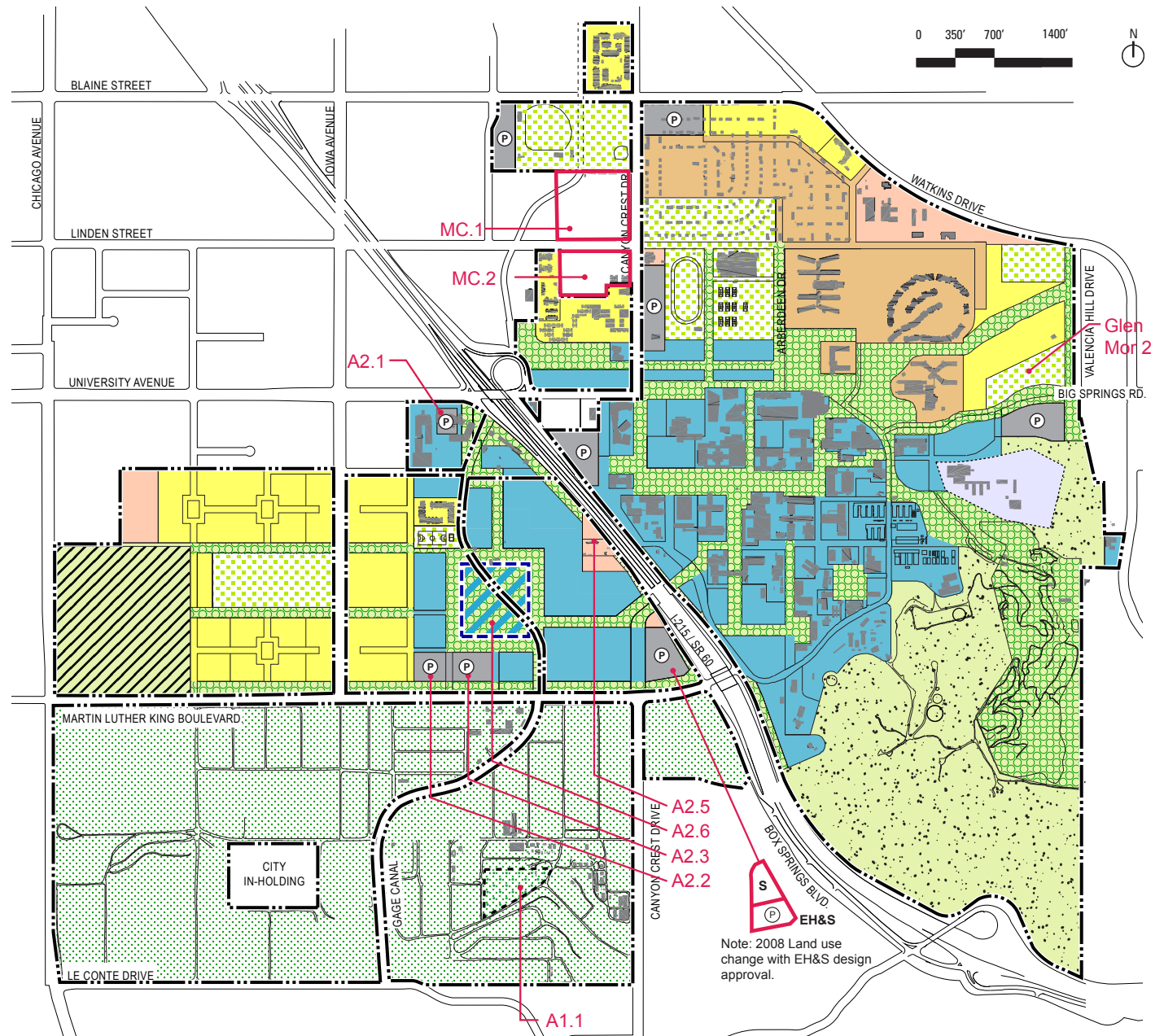
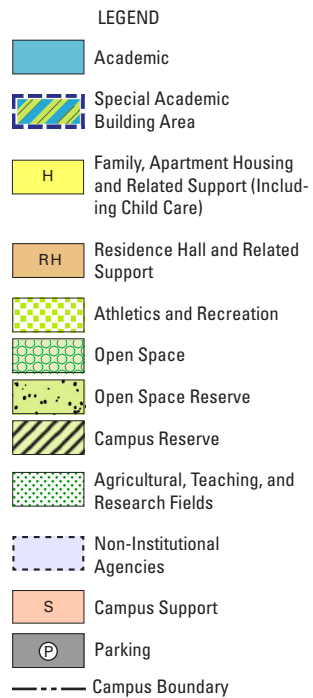
All pages that amend the 2005 LRDP (delete, replace, and new pages) are noted with the header “2005 LRDP Amendment 2” and the applicable page number. In some cases, the 2005 LRDP page is replaced by more pages with the 2005 LRDP Amendment 2. In some cases, the 2005 LRDP page is deleted and there is not a 2005 LRDP Amendment 2 replacement page.

## Summary of Proposed Text, Map and Table Changes

Changes to the 2005 LRDP are shown on the “Figure 13A: Land Use Plan” and show the locations of the “A1” Amendment 1 changes, “A2” Amendment 2 changes, and “MC” Map Changes. “Figure 13B: Land Use Plan” shows the locations of the “A2” Amendment 2 changes. Both figures identify the map locations by number that correspond to the “Matrix of Proposed Text, Map and Table Changes”. Both figures and the matrix were prepared to assist the reader to identify on a map the amended locations and find the applicable changes in this document.

For details, see Appendix F: “Matrix of Proposed Text, Map and Table Changes”, Figure 13a: Land Use Plan (with Amendment 2 notations in red), Figure 13b: Land Use Plan (with Amendment 2 notations in red), and Figure 13: Land Use Plan (2005 LRDP Amendment 2).

**Figure 13a: Land Use Plan 2005 LRDP**  
(with Amendment 2 notations in red)



Note: This plan is intended to be a graphic representation of the proposed 2005 LRDP Amendment 2 changes superimposed on Figure 13 of the 2005 LRDP. Due to updated 2007 GIS data, acreage calculations can not be compared between the 2005 and 2005 LRDP Amendment 2 land use.

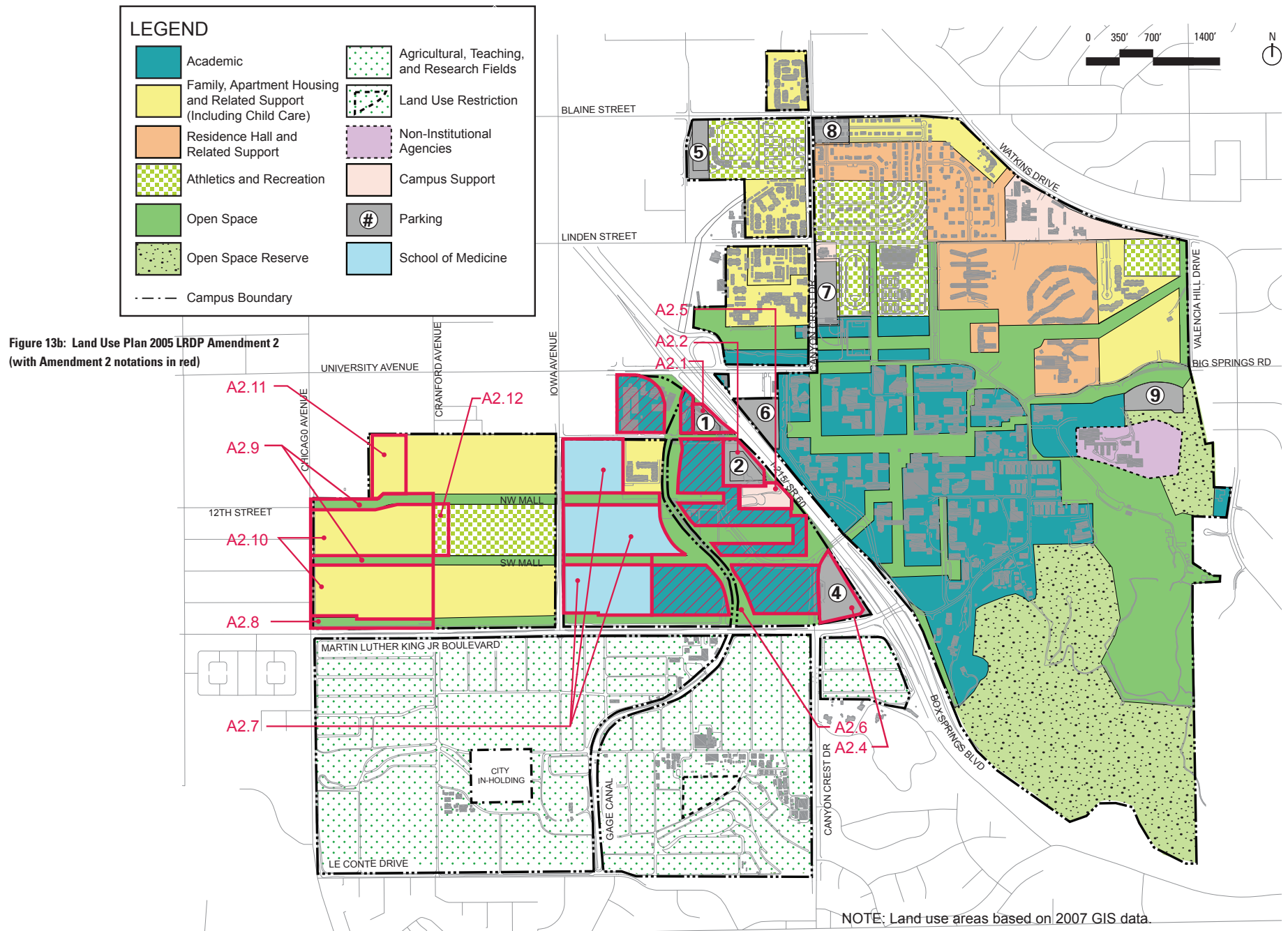
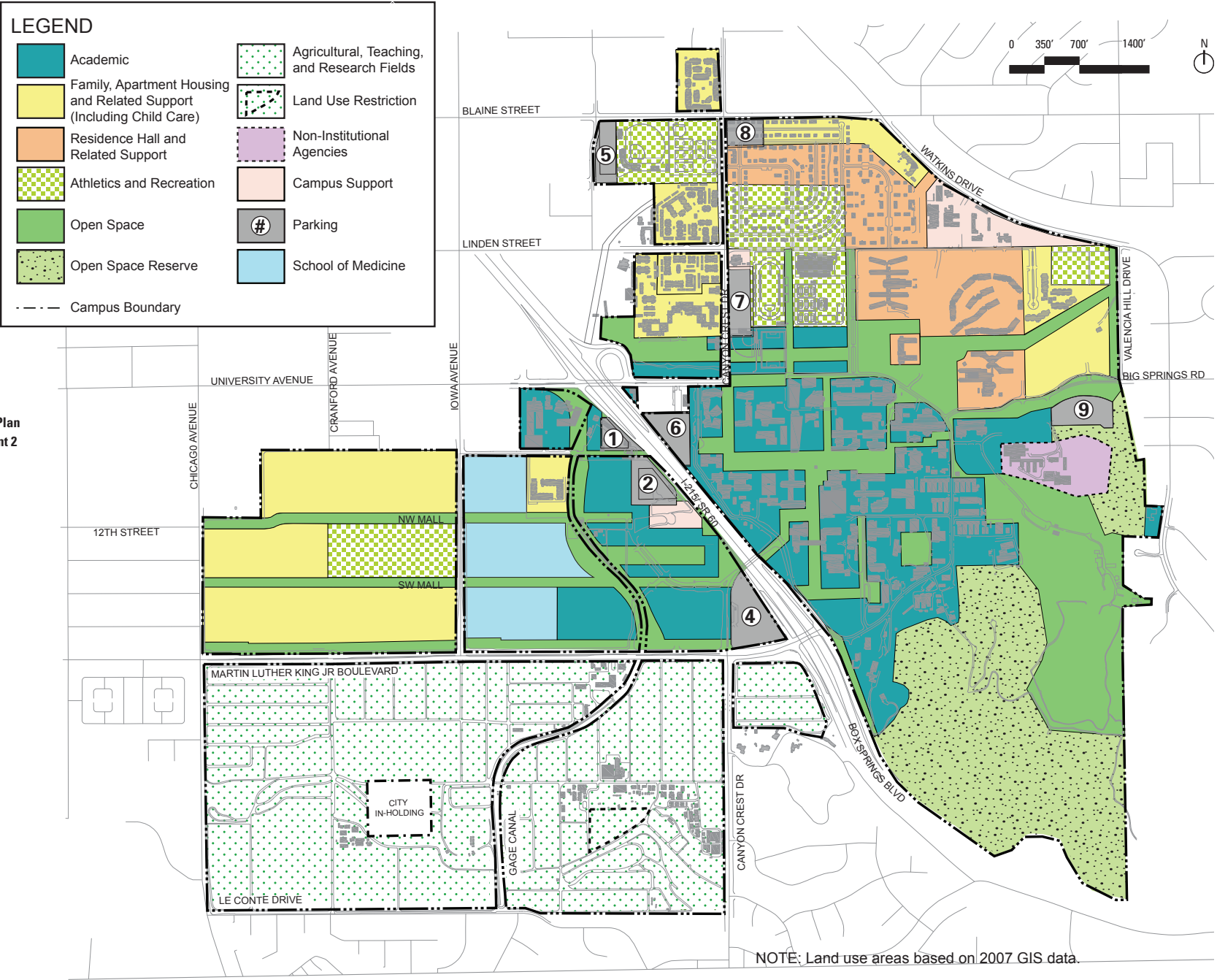


Figure 13: Land Use Plan  
2005 LRDP Amendment 2



**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13a: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                               | Title                                          | Status                                                                                           | Description                                                                                                                                                                                                                                                         | Text Changes                                                                                                                                                          | Map Changes                                                                             | Table/Figure Changes                                                                                                                                                                                              |
|-----------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Previously Approved Land Use Amendments to the 2005 LRDP</b> |                                                |                                                                                                  |                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |                                                                                         |                                                                                                                                                                                                                   |
| A1.1                                                            | Land Use Restriction                           | Approved Office of the President, July 26, 2006                                                  | Located within the Agricultural Operations area of the West Campus (WC), south of Martin Luther King Jr. Blvd. (MLK)                                                                                                                                                | Add the Land Use Restriction text "Memo to File" as an Appendix of the 2005 LRDP Amendment 2. Refer to the Appendix in the Table of Contents.                         | Land Use designation does not change. Add site boundary and add land use to the legend. | None.                                                                                                                                                                                                             |
| EH&S                                                            | 2008 Amendment to the LRDP Land Use Map        | Approved by The Regents, July 2008 with the Environmental Health & Safety (EH&S) Design Approval | Amendment to the LRDP to accommodate the EH&S facility in the northern portion of the parcel located at the northeast corner of Canyon Crest Drive and MLK. The approval changed the size of the Support and Parking acreages to accommodate the proposed facility. | 2005 LRDP: 0.80 acres of "Campus Support" and 5.21 acres of "Parking" changed to 2.81 acres of "Campus Support" and 3.18 acres of "Parking". (See A2.4).              | See A2.4 below for further change.                                                      | None.                                                                                                                                                                                                             |
| Glen Mor 2                                                      | 2008 Amendment to the LRDP Land Use Map        | Approved by The Regents, May 2011 with the Glen Mor 2 Design Approval                            | Amendment to the LRDP to delete the "Athletics and Recreation" land use proposed accompanying "Family, Apartment Housing and Related Support Including Child Care" (Housing) at the northwest corner of Big Springs Road and Valencia Hill Drive.                   | Delete "Athletics and Recreation" land use designation planned as a top deck for a parking structure for the adjacent housing and show underlying "Housing" land use. | Delete "Athletics and Recreation" land use designation and replace with "Housing"       | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan.                                                                                         |
| <b>Previously Approved Map Changes to the 2005 LRDP</b>         |                                                |                                                                                                  |                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |                                                                                         |                                                                                                                                                                                                                   |
| MC.1                                                            | Falkirk Housing (Highlander Ridge) Acquisition | Approved by Regents, March, 2007                                                                 | Acquisition of a parcel located at the northwest corner of Canyon Crest Drive and Linden Street containing 220 apartments in 18 2-story buildings for student housing                                                                                               | 416 student apartment beds                                                                                                                                            | Add land use designation "Housing" to new acquisition                                   | Land Use Chapter -- Add beds to Table 4: Projected Residential Beds and Units; change East Campus housing land use acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| MC.2                                                            | Oban Housing (Summer Ridge) Acquisition        | Approved by Regents, August, 2009                                                                | Acquisition of parcel located on the southwest corner of Canyon Crest Drive and Linden Street containing 136 apartments in nine 2-story buildings for student housing.                                                                                              | 244 student apartment beds                                                                                                                                            | Add land use designation "Housing" to new acquisition                                   | Land Use Chapter -- Add beds to Table 4: Projected Residential Beds and Units; change East Campus housing land use acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |

**Matrix Legend:****A1--Amendment 1****A2--Amendment 2****MC--Map Change**

**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                | Status      | Description                                                                                                                                                                              | Text Changes                                                                                                                                                                                                                                                                                                              | Map Changes                                                                                                                                                                            | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|--------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                      |             |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| A2.1                                                    | Parking Structure 1 Location Change  | Amendment 2 | Change the location of Parking Structure 1 on the West Campus and increase number of stalls in Structure 1, 2 and 4 to accommodate deletion of Parking Structure 3. (See A2.3).          | Changes the location of Parking Structure 1 on the west side of the Gage Canal easement south of University Avenue to the east side of the Gage Canal easement north of Everton Place. The size will change from 1.4 acres to 1.8 acres and the capacity will change from 418 spaces to 524 spaces.                       | Changes the location of Parking Structure 1 on the west side of the Gage Canal easement south of University Avenue to the east side of the Gage Canal easement north of Everton Place. | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |
| A2.2                                                    | Parking structure 2 Location Change  | Amendment 2 | Change the location of Parking Structure 2 on the West Campus and increase number of stalls in Parking Structures 1, 2 and 4 to accommodate deletion of Parking Structure 3. (See A2.3). | Changes the location of Parking Structure 2 on the west side of the Gage Canal easement and north of MLK to the east side of the Gage Canal south of Everton Place and adjacent to the I-215/SR 60 freeway. The size will change from 1.82 acres to 3.7 acres and the capacity will change from 725 spaces to 869 spaces. | Change the land use designation from "Parking" to "School of Medicine."                                                                                                                | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |
| A2.3                                                    | Parking Structure 3 Location Deleted | Amendment 2 | Delete Parking Structure 3 with deleted parking stalls reallocated to remaining Parking Structures 1, 2, and 4                                                                           | Delete Parking Structure 3. The structure will be deleted from the inventory and stalls reallocated to other Parking Structures on the West Campus.                                                                                                                                                                       | Delete Parking Structure 3                                                                                                                                                             | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |

**Matrix Legend:**

**A1--Amendment 1**

**A2--Amendment 2**

**MC--Map Change**



**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                                                                     | Status      | Description                                                                                                                                                                                                                                            | Text Changes                                                                                                                                                                                                                                                                                                                                                              | Map Changes                                                                                                         | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                                                                           |             |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| A2.4                                                    | "Campus Support" deletion at northeast corner of MLK and Canyon Crest Drive                               | Amendment 2 | Change "Campus Support" at the northeast corner of Canyon Crest Drive and MLK to "Parking"                                                                                                                                                             | Delete "Campus Support" land use designation "Previously Approved Land Use Amendments" and revert to the "Parking" land use designation for the entire parcel.                                                                                                                                                                                                            | Change parcel at the northeast corner of Canyon Crest Drive and MLK to "Parking"                                    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. Utilities and Infrastructure Chapter-- no change.                                                                               |
| A2.5                                                    | Reconfigure "Campus Support" south of relocated Parking Structure 2                                       | Amendment 2 | Reconfigure "Campus Support" south of relocated Parking Structure 2                                                                                                                                                                                    | Reconfigure the "Campus Support" site boundary from north/south orientation to east/west orientation. Removes the northernmost "Campus Support" to provide a large enough site for Parking Structure 2. Chapter location: Circulation & Parking. Minor alterations at a project level for routing utility distribution lines.                                             | Reconfigure "Campus Support" site.                                                                                  | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Utilities and Infrastructure Chapter-- no change.                                                                                                                                                                                                                                                                                                                                                                       |
| A2.6                                                    | WC "Open Space" Reconfiguration with the deletion of "The Grove" and the "Special Academic Building Area" | Amendment 2 | Delete "The Grove" as the major "Open Space" element on the WC and replace with the Gage Canal Mall and the West Campus Mall. Delete the "Special Academic Building Area" that was specific to The Grove concept and replace with "Academic" land use. | The new major open space on the West Campus will be the Gage Canal Mall and will be intersected by a major West Campus Mall anchored by two signature buildings east and west. The Gage Canal Mall will be organic in design and sustainable in landscape palette. Add text to describe the Gage Canal Mall and West Campus Mall in the Open Space and Landscape Chapter. | Change the "Open Space" configuration to accommodate the new malls and delete the "Special Academic Building Area." | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Open Space and Landscape Chapter: change Figure 22: Open Space Framework; delete Figure 23: The Grove and replace with Figure 23: Sketch of West Campus Gage Canal Mall; delete Figure 24: The Grove Edge and Adjoining Academic Buildings; delete Figure 25: Illustration of The Grove Edge; delete Figure 26: Illustration of Paths and Buildings within The Grove. Change Figure 37: Potential Public Art Locations. |

**Matrix Legend:****A1--Amendment 1****A2--Amendment 2****MC--Map Change**

**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                | Status      | Description                                                                                                                                                         | Text Changes                                                                                                                                                                                                                                                                                                                  | Map Changes                                                       | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------|------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                      |             |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                               |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                |
| A2.7                                                    | School of Medicine (SOM)                             | Amendment 2 | Located at the northeast corner of Iowa Avenue and MLK                                                                                                              | The new SOM requires relocation of "Housing", "Parking", and WC "Academic" land uses to west of Iowa (Housing), east of Gage Canal (Parking) or to develop in a higher density (Academic). Add text to describe the SOM in the Land Use Chapter. Add text to describe the SOM parking in the Circulation and Parking Chapter. | Show SOM at northeast corner of Iowa Avenue and MLK               | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Add Table SOM-1: School of Medicine Components.                                                                                                                                                                                                                                      |
| A2.8                                                    | Open Space Extension - Landscape Buffer              | Amendment 2 | Extend the 100-foot wide landscape buffer along the north side of MLK between Cranford and Chicago                                                                  | None                                                                                                                                                                                                                                                                                                                          | Change land use designation from "Campus Reserve" to "Open Space" | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Open Space and Landscape Chapter: change Figure 30: Campus Landscape Improvement Locations.                                                                                                                                                                                          |
| A2.9                                                    | Open Space Extension - Northwest and Southwest Malls | Amendment 2 | Extend the Northwest and Southwest Malls from Cranford Avenue to Chicago Avenue. Results in modifications to the Northwest and Southwest Malls east of Iowa Avenue. | None.                                                                                                                                                                                                                                                                                                                         | Change land use designation from "Campus Reserve" to "Open Space" | Open Space and Landscape Chapter -- Replace Figure 28: Northwest and Southwest Malls (West Campus). Add new Figure 27: Northwest and Southwest Malls (West of Iowa); new Figure 28-1: Northwest and Southwest Malls (immediately east of Iowa); new Figure 28-2: Northwest Mall (immediately west and east of Gage Canal); and new Figure 28-3: Southwest Mall (between academic core and Canyon Crest Drive). |
| A2.10                                                   | Delete "Campus Reserve" and Replace with "Housing"   | Amendment 2 | Replace "Campus Reserve" with "Housing" minus the "Open Space" areas located in A2.8 and A2.9                                                                       | Relocate "Housing" from east of Iowa Avenue to former "Campus Reserve" site                                                                                                                                                                                                                                                   | Change land use designation from "Campus Reserve" to "Housing"    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan.                                                                                                                                                                                                                                                                                      |

**Matrix Legend:****A1--Amendment 1****A2--Amendment 2****MC--Map Change**



**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                        | Status      | Description                                                                                                                                                     | Text Changes                                                                                                                               | Map Changes                                                                                       | Table/Figure Changes                                                                                                      |
|---------------------------------------------------------|--------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                              |             |                                                                                                                                                                 |                                                                                                                                            |                                                                                                   |                                                                                                                           |
| A2.11                                                   | Delete "Campus Support" and Replace with "Housing"           | Amendment 2 | Delete Campus Support in the northwest corner of the West Campus and expand "Housing"                                                                           | None.                                                                                                                                      | Change land use designation from "Campus Support" to "Housing"                                    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| A2.12                                                   | Delete "Housing" and Replace with "Athletics and Recreation" | Amendment 2 | "Housing" land use moved to west of Cranford Avenue.                                                                                                            | None.                                                                                                                                      | Change land use designation from "Housing" to "Athletics and Recreation"                          | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| A2.13                                                   | Transit Service and Transportation Demand Management         | Amendment 2 | Update the Circulation and Parking Chapter to reflect changes to the existing and future transit service and proposed Transportation Demand Management program. | Add a description of the existing and future transit service and add description of the proposed Transportation Demand Management program. | Change transit corridors and shuttle routes to reflect future bi-directional campus loop shuttle. | Circulation and Parking Chapter -- change Figure 20: Potential Campus Transit Corridors.                                  |

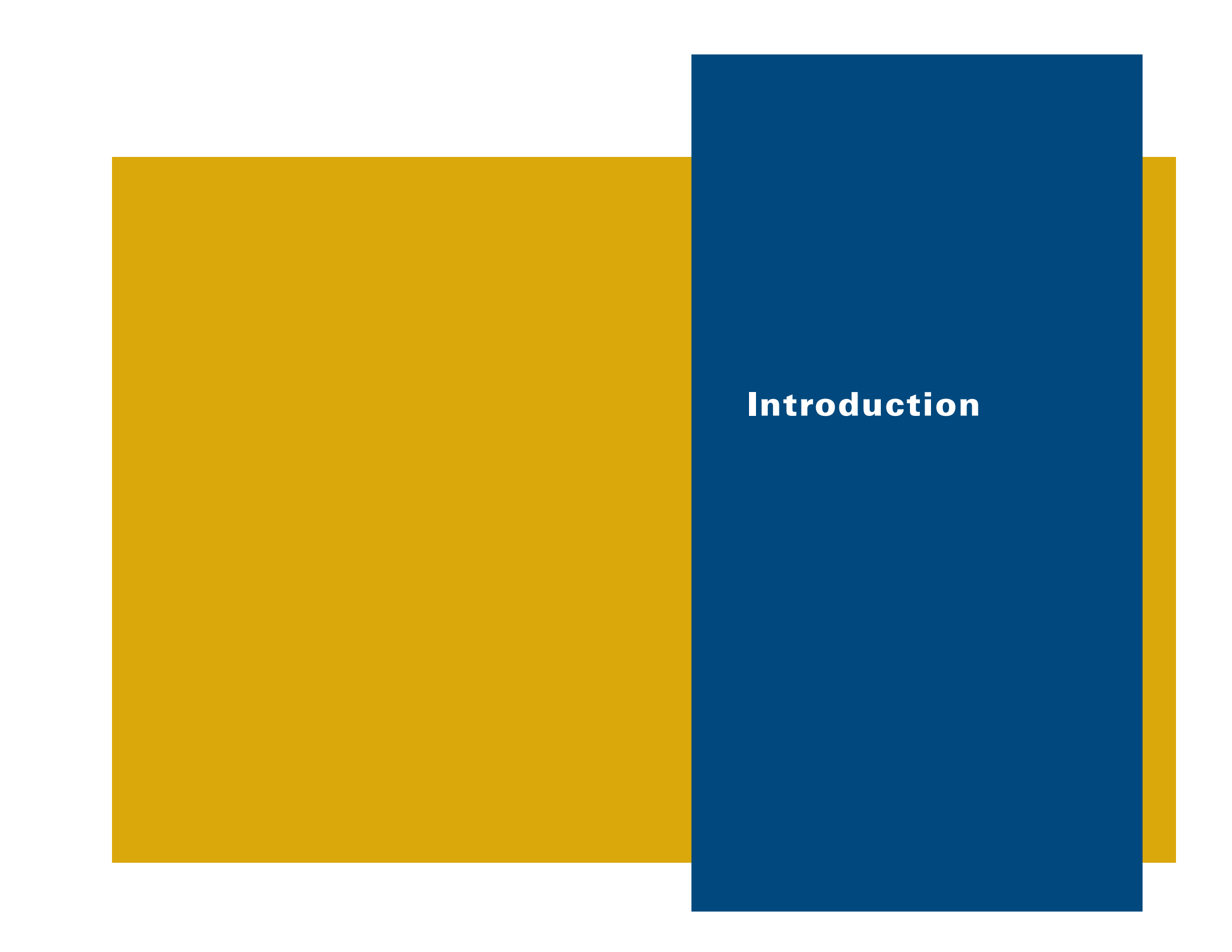
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**A1--Amendment 1**

**A2--Amendment 2**

**MC--Map Change**





# **Introduction**



## Introduction

Under the California Master Plan for Higher Education, the University of California is asked to accommodate all eligible students from among the top 12.5 percent of public high school graduates in California who choose to attend. Student enrollment demand for higher education in California is expected to significantly increase over the next ten to fifteen years due to a number of factors, including: substantial state population growth; an increase in the proportion of college-age students; and increasing per capita participation in college education spurred in part by the economic boom of the 1990s. In response to this projected enrollment demand, in January 2000 the President of the University of California asked each UC campus to consider the feasibility of accommodating additional enrollment growth over the next decade.

As a consequence, UCR is planning for an enrollment of approximately 25,000 (3 quarter average headcount) students by the year 2015. In order to meet the academic goals and objectives of the campus in light of this proposed growth in student enrollment, UCR updated the 1990 Long Range Development Plan (LRDP) which provided for growth of the campus to an enrollment of approximately 18,050 headcount in 2005-06. Amendment 2 to the 2005 LRDP would extend the threshold year from 2015-16 to 2020-2021.

The projected number of students is based on 1 FTE = 1 headcount. FTE is defined as full time equivalent, with one FTE being one student taking a full course load every quarter for a total of four years to graduate.

This plan should be reviewed regularly, and amended as needed. Any potential environmental impact with regards to the proposed amendment would be evaluated at that time.

A Long-Range Development Plan is defined as a “physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education” (Public Resources Code of the State of California §21080.09). A Long Range Development Plan is not a commitment to specific projects or to a particular implementation schedule. It is, rather, a general guide that discusses future land use patterns and development of facilities, roads, open space, and infrastructure.

In compliance with the California Environmental Quality Act (CEQA), this LRDP is accompanied by a separate Environmental Impact Report (EIR). The EIR comprises a detailed discussion of the current setting of the UCR campus and the potential environmental effects of implementing the planned campus growth. The EIR also presents mitigations to any significant unavoidable impacts to the environment as well as alternatives to the proposed project.

## Process of Preparing the 2005 LRDP

The 2005 LRDP was prepared with the participation of many campus and community constituents. Campus administration, students, faculty, and staff as well as Riverside community members and City staff have contributed considerable time in many meetings reviewing data, concepts and plans and have provided invaluable feedback.

Two committees were formed to provide input to the planning process; one, the Leadership Committee, representing campus and community leaders (deans, faculty, staff, administration, and student

and community leaders) and the Working Committee, representing key campus and city staff responsible for operations and maintenance of campus lands, facilities, and city infrastructure. Three campus-wide open meetings were held to provide an opportunity for other interested students, faculty and staff to review work-in-progress and offer comments. In addition, three open meetings were also held in the Riverside community to allow neighbors, merchants, property owners, and other interested citizens to provide their perspectives and comments on the evolving plan.

Materials concerning the preparation of this LRDP were available on the University’s web site at [www.lrdp.ucr.edu](http://www.lrdp.ucr.edu), and through articles and notices in the *UCR Highlander* (the UCR campus newspaper), the *Press Enterprise* (the regional newspaper), and the *Fiat Lux* (the UCR quarterly magazine). Notices for the 2005 LRDP Amendment 2 followed the same general process.



## **Planning Context**







(above) "Greetings From Sunny Southern California," (Courtesy of California Citrus State Historic Park).

(below) The Union Pacific Depot, Riverside, circa 1905



## Planning Context

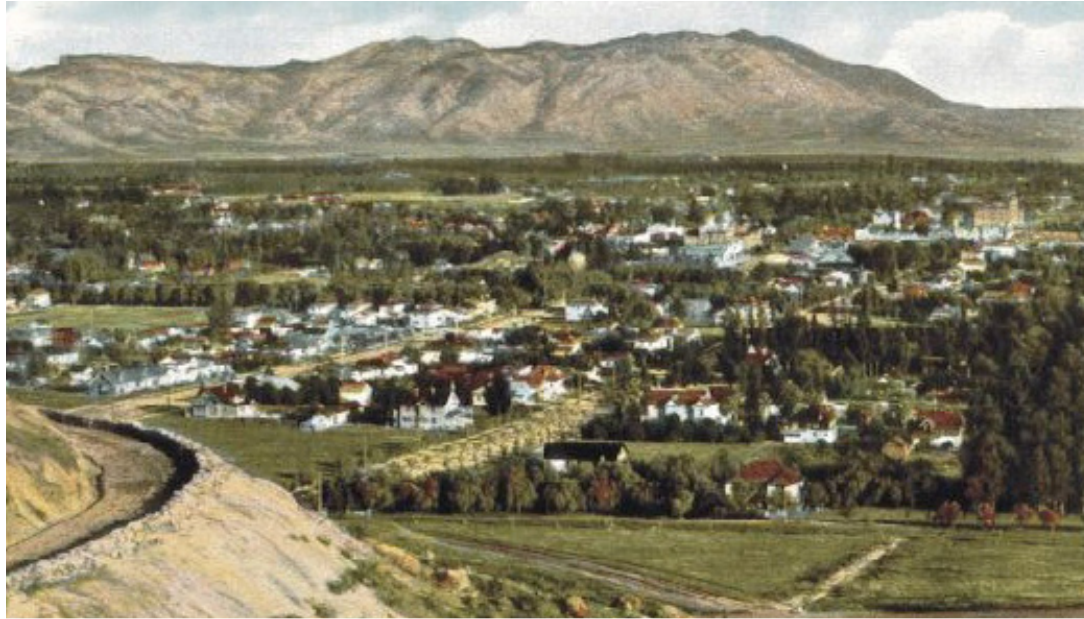
### Historical Perspective

Riverside County lies in a region where the traditional territories of three Native American groups overlapped: the Serrano of the San Bernardino Mountains, the Luiseño of the Perris-Elsinore region, and the Gabrielino of the San Gabriel Valley. The present-day Riverside area received its first European visitors during the early and mid-1770s, shortly after the beginning of Spanish colonization of Alta California in 1769. After the establishment of Mission San Gabriel in 1771, the area became one of the mission's principal rancherías, known at the time as Jurupa.

In 1871, the town of Riverside was founded in today's downtown area, followed in the next few years by two other colonies in the Arlington-La Sierra area. The three separate enterprises eventually merged in 1875, and the City of Riverside was incorporated in 1883.

During the 1870s and 1880s, amid a land boom that swept through southern California, the young community of Riverside grew rapidly. The most important boost to Riverside's early prosperity came with the introduction of the navel orange in the mid-1870s. Its instant

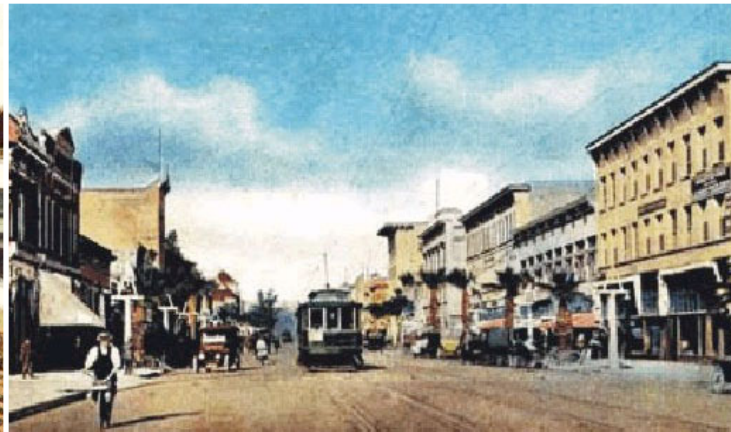
*Note:*  
This section includes excerpts from the 1990 Long Range Development Plan.



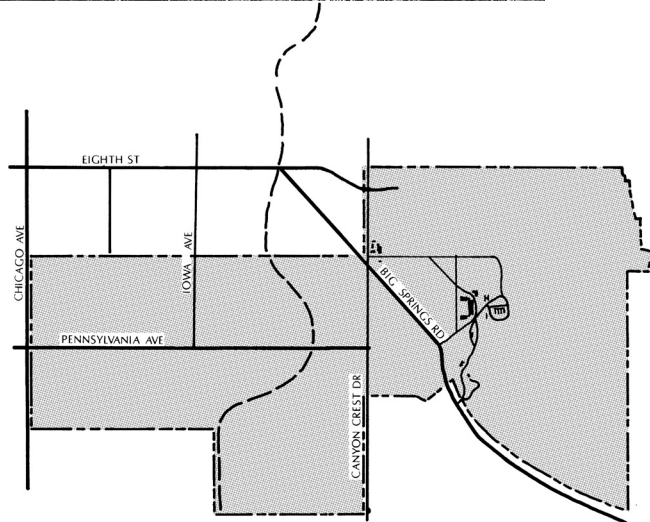
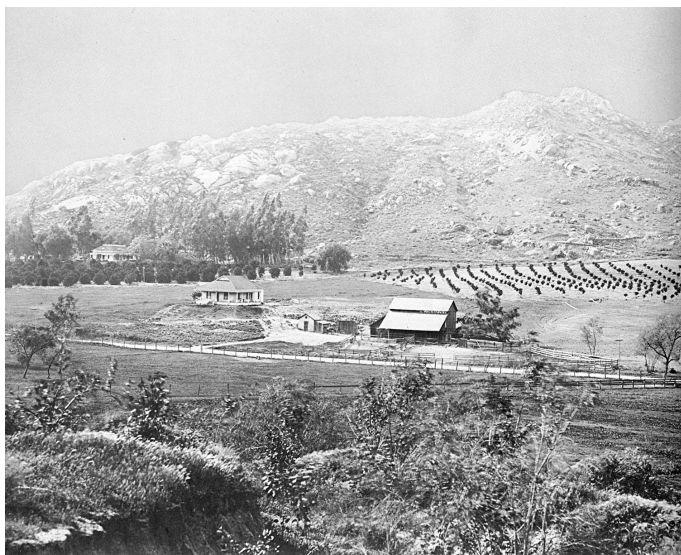
(top) **Top of Mount Rubidoux**, looking toward Box Spring Mountains circa 1900. UC Riverside is now located at base of the Box Spring Mountains toward the right, below the peak.

(bottom left) **Mission Inn, Riverside**

(bottom right) **Main Street, Riverside**, circa 1915







(top) **The Citrus Experiment Station at Mt. Rubidoux, 1907**

(bottom) **Figure 1: UC Riverside Campus** (Citrus Experiment Station), 1934

success in Riverside led to the rapid spread of citrus cultivation throughout southern California, and propelled Riverside to the forefront of the citrus industry.

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 research station where citrus, as well as other southern California crops such as walnuts and avocados, could be studied.

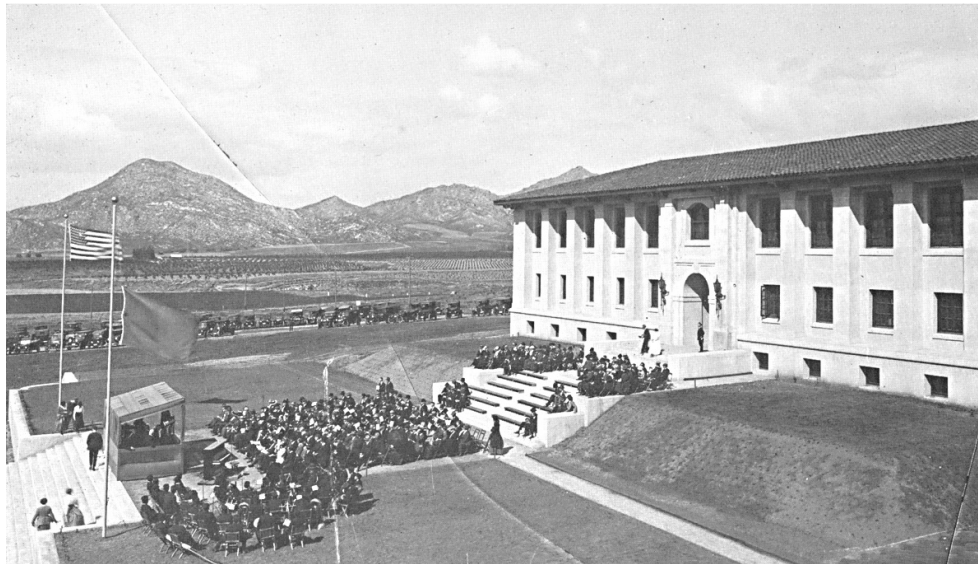
In 1917, after an extensive search, the University of California acquired 370 acres from the City of Riverside on the east side of the city with access to a reliable source of water from the Gage Canal. The first Citrus Experiment Station facilities were formally dedicated in 1918. Two interconnected structures constituted the original Citrus Experiment Station Building, which has been known variously as the Horticulture Building, Irrigation Building, and the Citrus Experiment Station. The initial complex also included the Director's and Superintendent's residences and the Barn, with the major buildings of the complex designed in a modified Mission Style with the roofs, arched doorways, and open arcades. A third building, the North Wing, now known as Chapman Hall, was added to the Citrus Experiment Station in 1931.

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

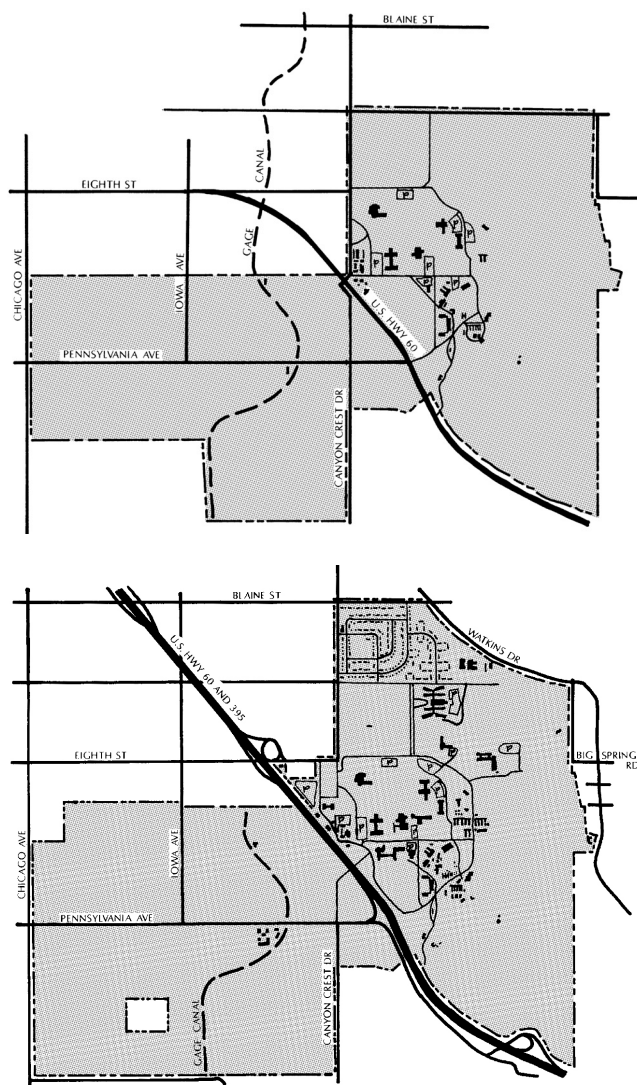
(top) **Planting at the Citrus Experiment Station** (soon after the opening of the new station in 1918)

(bottom left) **The Citrus Experiment Station and Graduate School of Tropical Agriculture** (opening ceremony on March 27, 1918)

(bottom right) **Campus Aerial Photograph, 1948**







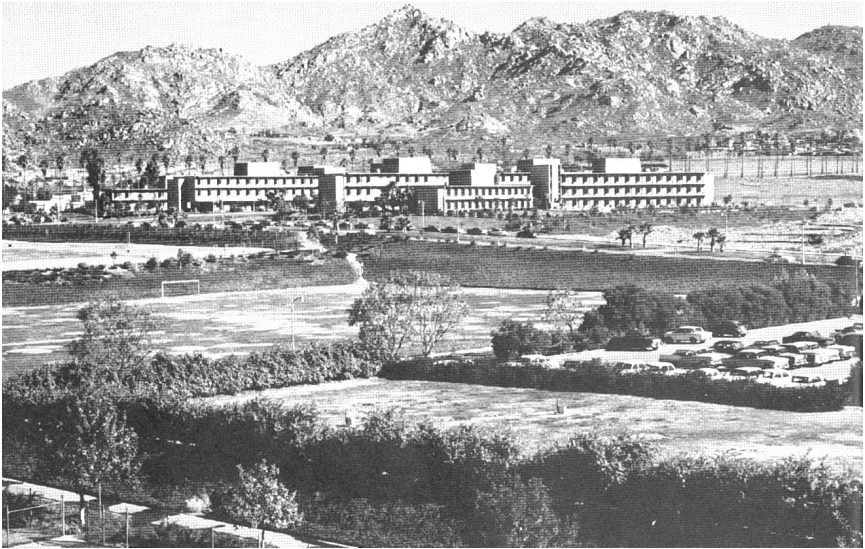
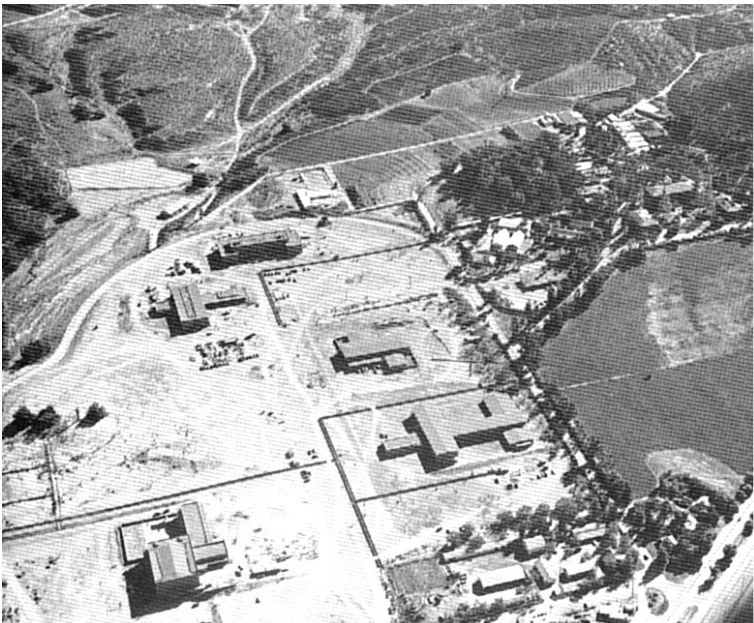
(above) **Figure 2: UC Riverside (College of Letters and Science), 1954**

(below) **Figure 3: UC Riverside (General Campus), 1964**

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 1,000 acres.

A grouping of core campus buildings was 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.

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 a Long Range Development Plan to meet the needs of a 10,000-student campus. The plan proposed a compact academic core with a perimeter road 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

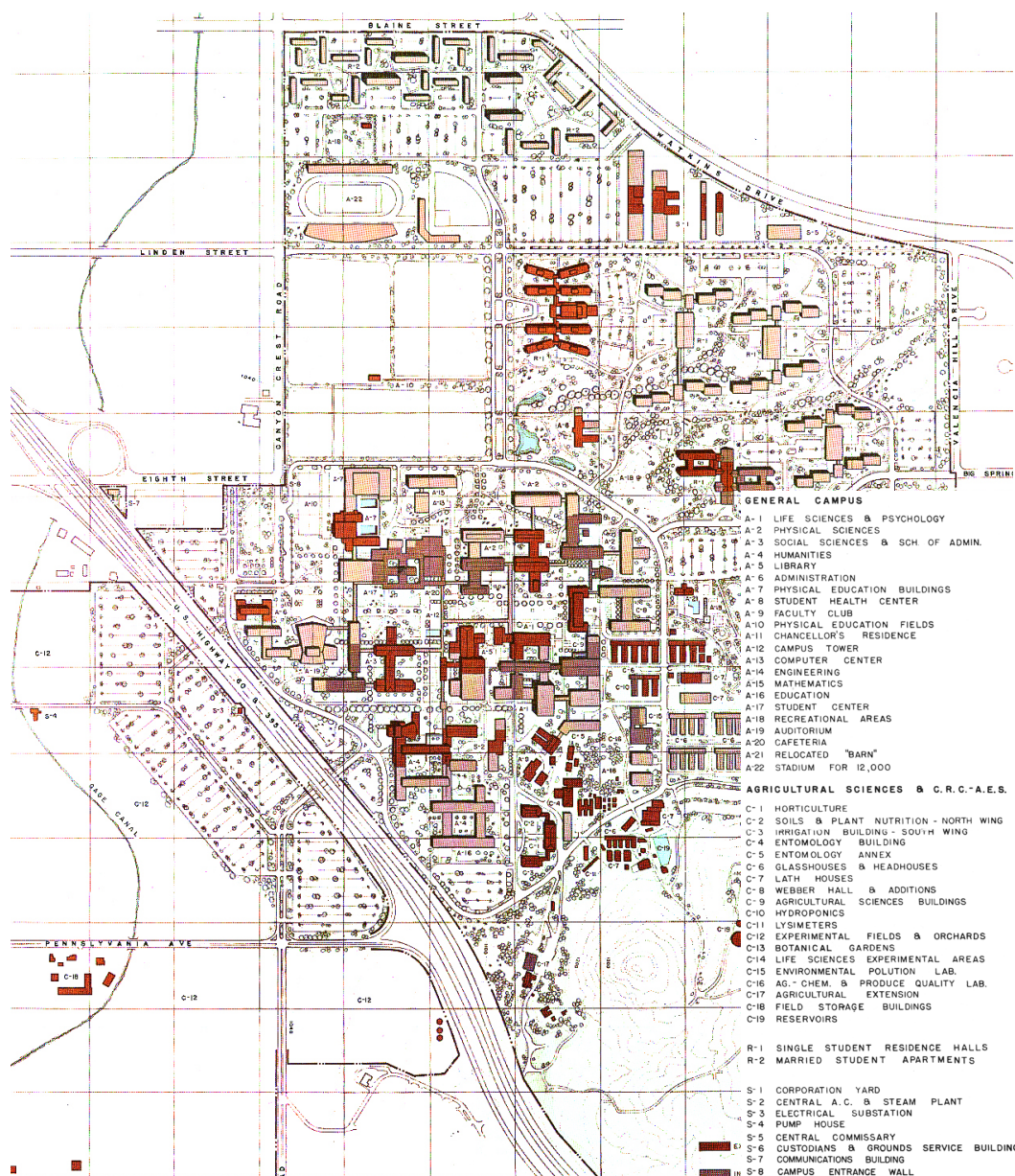


(top left) **UCR in 1953**

(top right) **The Humanities Court**

(bottom) **Aberdeen-Inverness Halls**, the first student residences, opened in 1959





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 in walls and paving, in contrast to the rich greens of lawn and shade trees.

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 Central Mall (later to be designated the Carillon Mall).

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.

The 1990 LRDP proposed approximately 10,134,000 gross square feet (gsf) of building space on campus to support a total student

Figure 4: University of California, Riverside Plan (for 10,000 students), 1964

enrollment of 18,050 students by the year 2005/06. In order to accommodate this growth, the campus was expected to spread to the west side of the freeway, while also continuing to infill remaining undeveloped portions of the east. A bridge was proposed across the freeway as an extension of the Carillon Mall to make the difficult connection between the East and West Campus areas.

The 1990 LRDP defined five principal goals:

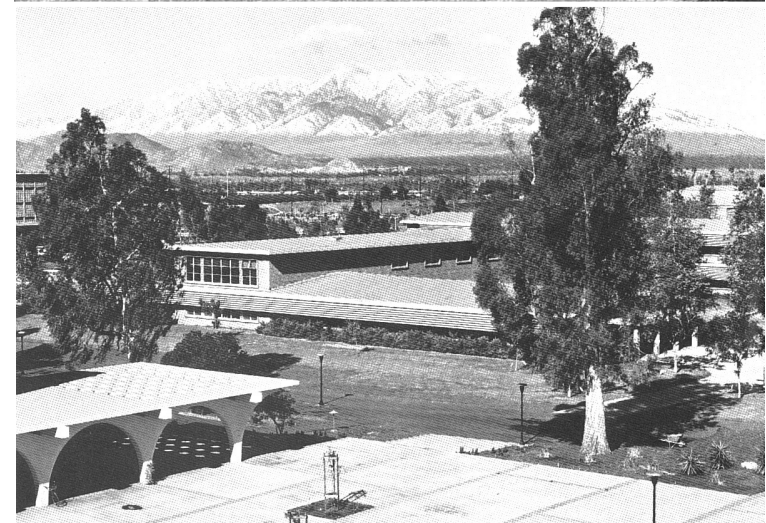
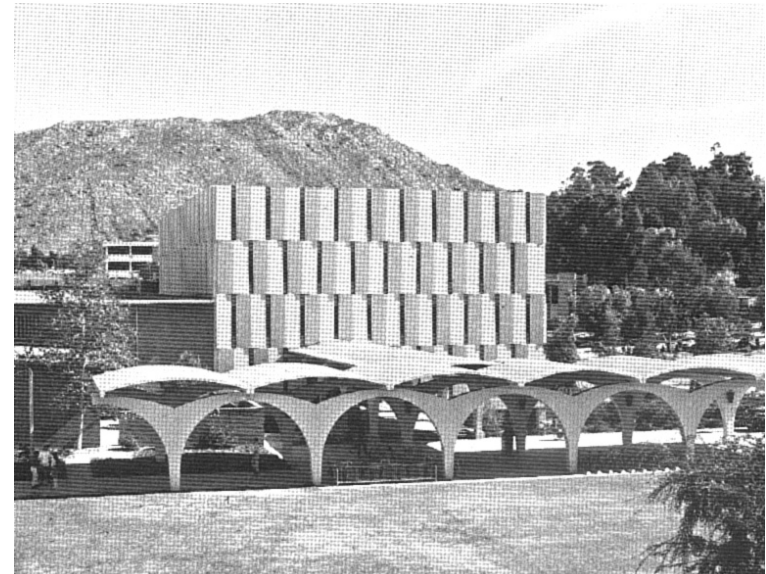
- Create a state-of-the-art plan that conveys the University's excellence;
- Develop land-use elements to strengthen academic, cultural, and social interaction;
- Preserve, enhance and restore the natural environment;
- Strengthen and clarify circulation systems; and
- Maintain planning flexibility.

The 1990 plan also identified four major planning principles:

- Open space network as the unifying element;
- Academic core on the East Campus;
- Academic precincts as organizing elements; and
- Create a strong and unique place.

*Comparison of Long Range Development Plans of 1964, 1990 and 2005*

LRDP 1964 - The LRDP prepared in 1964 proposed an enrollment of 10,000 with development largely limited to the east side of the campus, and with agricultural uses remaining throughout the area west of the I-215/SR-60. Campus growth in the 1960s was significant, and many new buildings were constructed to meet growing



(top) **Rivera Library**, original structure completed in 1953, 5-story element added in 1964  
(bottom) **Humanities Court**, looking northwest with Watkins Hall in the center.



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

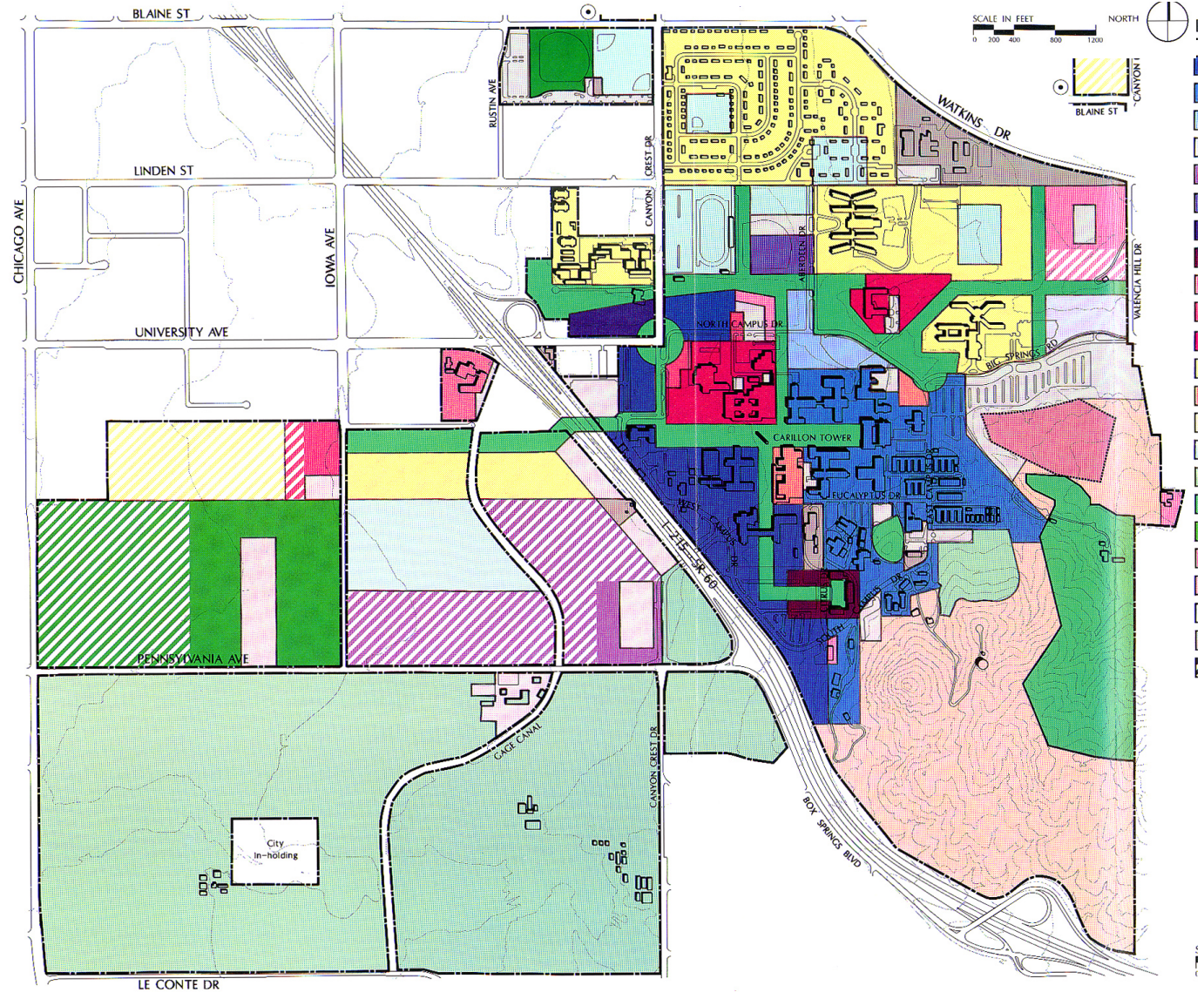


Figure 5: Land Use Plan, 1990 LRDP

demand.

LRDP 1990 - The introduction of the 1990 LRDP states that at the time of the writing of the 1990 document, UCR was experiencing the most dramatic growth in its history; from an enrollment of 4,655 in Fall 1983 to a Fall 1989 enrollment of 8,220 (UCR Academic Planning Statement – Appendix A). This equates to a 76% increase in six years.

LRDP 2005 - Fifteen years later the same magnitude of change is being projected as was in the 1990 LRDP. The campus is again experiencing dramatic growth, from a student enrollment of 12,703 (three quarter average headcount) in Fall 2000, 14,429 in Fall of 2001, and 15,934 in Fall 2002, to approximately 21,000 in 2010 and 25,000 by 2015. These enrollment numbers equate to a growth from 2000 of 65% by 2010, a period of ten years and 96% growth overall to 2015, a period of 15 years.

## Recent Planning Activities

Various planning activities have been conducted since the 1990 LRDP that have informed this 2005 LRDP. These are summarized below with an emphasis on elements that suggest a response in the physical plan of the campus.

### *Vision 2010*

This planning effort began in 1998. The first year focused on involving a broad section of the community in discussions to determine what UCR should be in 2010. Since then goals and objectives have been developed to further articulate the approach and to design strategies that will allow the university to achieve those goals and objectives. The four major themes of Vision 2010 are:

- World Leadership in Selected Areas,
- Culture of Inquiry,
- Diversity and Excellence,
- UCR's Moral Imperatives.

The following excerpts from a report entitled “Vision 2010 – From Vision to Reality” focus on the four major themes with implications for the physical plan and facilities of the campus.

### **World Leadership in Selected Areas**

*UCR's decade goal is to select a number of academic areas in which we can achieve world-class standing, areas in which UCR's name is synonymous with excellence. In order to make the resource investments necessary to achieve this level in selected areas, we must recognize that there are also areas in which we will choose not to invest.*

### **Culture of Inquiry**

It is part of our vision that UCR will have a culture such that every member of the university community, as well as visitors to the campus, will embrace and feel welcome to participate in the intellectual life of the university. Each person's participation will take different forms, but our aspiration is a culture that embodies the highest mission of a university - participation in the creation of knowledge. UCR's culture of inquiry will be fostered in many ways both within and without the formal curriculum and research enterprise.

### ***The campus as a physical layout conducive to inquiry and exchange:***

*Consideration of a building's contribution to the University's missions of teaching, research, and public service is an integral part of the planning process. Buildings are designed to fit into the overall campus environment, with physical spaces conducive to interactions consciously included. From the physical layout of the building*





(top) Humanities and Social Sciences Building  
(bottom) Science Library

to the landscape design, every attempt is made to create an atmosphere that fosters learning.

**Public art:**

The display of artwork in areas open to the public enriches the cultural environment of the campus and thereby enhances the University's role in teaching, research, and service. UCR has established a Public Art Committee (PAC) whose responsibility it is to develop policy and procedures to provide general direction for the UCR Public Art Program. The PAC has also presented a proposal for a long-term plan for the acquisition of significant public art on the UCR campus.

**Diversity and Excellence**

UCR's vision statement states that the fusion of teaching and research excellence will occur within a multicultural environment. We believe not only that it is possible for University of California excellence to occur in a diverse environment, but we further believe that we have the opportunity at UCR to prove that excellence and diversity are mutually reinforcing. Nowhere else does this opportunity exist to the degree that it does at UCR, and it is our responsibility, indeed our moral imperative, to bring this vision to reality.

**Enrichment by diversity:**

Outside the formal curriculum, UCR has programs of academic, cultural, and recreational activities that are responsive to the needs and interests of specific cultural groups. Our challenge is to create an environment in which these are enjoyed by all of our university constituents. Only then will we reap the true benefits of a diverse university.

**UCR's Moral Imperatives**

*There are two complementary meanings of the term "UCR's moral imperatives": first, we accept our resources in trust and also accept the obligations that accompany that trust; second, we commit as a research university to engaging the fundamental issues that face society as a whole.*

*Report of the Student Environment Master Planning Committee*

The Student Environment Master Planning Committee was formed in the spring of 2000 to address the "need for physical facilities of the campus to support and nurture full participation of faculty, students and staff in the intellectual life of the campus." Areas discussed included the 1) Learning Environment, 2) Student Services, 3) Housing, and 4) Student Life.

Guiding principles identified in this study included:

- Caring about the student;
- Fostering a sense of community and belonging among students, faculty and staff;
- Providing students with services that meet their needs through greater choice and convenience;
- Adapting to changes in instructional delivery;
- Enhancing interaction, collaboration, teamwork and communication both within the campus environment and its extended university communities.

Committee recommendations touched on a number of issues directly relevant to the campus environment:

**Technology:**

"Should be available/accessible throughout campus, including

'non-academic' indoor spaces (such as Commons), outdoor areas, and student housing . . ."

**Interactive and Gathering Spaces:**

Gathering spaces such as the Science Library, where various campus groups intersect and interact should be provided throughout campus. "A wider range of indoor and outdoor amenities should be developed. These areas would serve as magnets for all types of informal social interaction and learning . . . These areas would include public spaces within all types of buildings . . . as well as the outdoor spaces between buildings. . . Particular attention should be paid to providing shade . . ."

**Arts and Culture**

"Dispersing arts and cultural venues about the campus will enhance learning opportunities and create "buzz" or activity around these indoor and outdoor venues."

**Flexibility**

"Areas for learning, gathering, and interaction should be designed and programmed in a flexible manner, suitable for multiple purposes over the life of the plan."

**Food**

"Opportunities to access food, including informal vending and take-out, as well as more formal sit-down dining experiences, should be available throughout campus."

*Master Space Plans*

Master Space Plans have recently been completed for the College of Humanities, Arts and Social Sciences (CHASS), College of Natural and Agricultural Sciences (CNAS), and Anderson Graduate School of

Management (AGSM), Bourns College of Engineering (BCOE), and Graduate School of Education (GSOE).

The plans, along with focus group meetings, have guided the LRDP update in proposing future enrollment, programs and space needs for academic and support units on campus. The academic program section of this document describes the resulting facility program areas (see Academic Program section starting on page 35 as well as the Academic Planning Statements, Appendix A).

*Addendum to the University Community Plan (City of Riverside)*

At the same time that the campus was updating the LRDP, the City of Riverside was amending the University Community Plan. This plan covers an area of Riverside surrounding the campus and is essentially focused on the area north to Spruce Street, east to the city limits, south to Le Conte Avenue and west to Chicago Avenue. The City looked at the existing land uses in the plan area and identified potential opportunities and/or impacts that the anticipated enrollment growth of the campus might have on the plan area with respect to housing, retail, recreation, circulation, and parking.

Housing was the major issue considered. The City identified opportunities for private development, either through rezoning or redevelopment, to create mixed-use areas (housing, retail, office), utilizing existing vacant or underutilized properties in close proximity to the campus. Strategic redevelopment of these properties would provide additional housing and support services for future residents of Riverside including students, staff and faculty coming to UCR. The plan also considered methods to enhance circulation and connections between the campus and community and identified potential alternative transportation scenarios.

*Downtown Plan, Market Place Specific Plan, University Avenue Specific Plan, and Eastside Plan*

While amending the University Community Plan, the City also evaluated opportunities for revitalization of other areas near the University, capitalizing on the anticipated campus and community growth. Additional opportunities for mixed use projects (residential, retail and office) were identified.

*Office of the Chancellor*

In July 2002 UCR welcomed its seventh chancellor, France A. Córdoba. Dr. Córdoba has articulated key goals for the campus:

- Enhance the reputational ranking of UCR, its programs, and its faculty.
- Invest in areas, especially interdisciplinary areas, in which UCR had already established significant markers of excellence, with the prospect of raising these areas to international distinction.
- Increase the excellence and distinction of our curriculum and research by building on the diversity of our undergraduate student body.
- Build a faculty and graduate program that represents gender equity and reflects the diversity in our undergraduate population.
- Lay a foundation for the professional schools that the large and growing population of inland southern California requires.
- Expand the opportunities for learning and the experience of every UCR student, extending the conventional classroom to embrace the region (through research, creative arts, and public service), the state and nation (through opportunities such as UC Sacramento and UCDC, the University of California Washington Center Program), and the world (through education abroad and international research collaborations like UCR's partnership with



(top) **Figure 6: Locations of the University of California Campuses**  
(bottom) **Figure 7: UCR Regional Location**

- Forge closer ties with the community in order to achieve common objectives (e.g., improving K-12 training in math and science; boosting economic vitality by attracting industries to the region and encouraging faculty and student start up companies; and enhancing the quality of life by fostering sustainable development, development of the arts downtown, and other private-public partnerships).

## Land and Environmental Setting

### Regional and Local Setting

The City of Riverside is located within the County of Riverside, in a larger geographic area known as the Inland Empire, which is composed of western Riverside and San Bernardino Counties.

The City of Riverside has experienced significant growth in the last twenty years, with a total population increase of more than 50 percent during that time. It has a current population of 265,000, and a SCAG (Southern California Association of Governments) projected population of 315,398 by 2015 based on the 2000 Census.

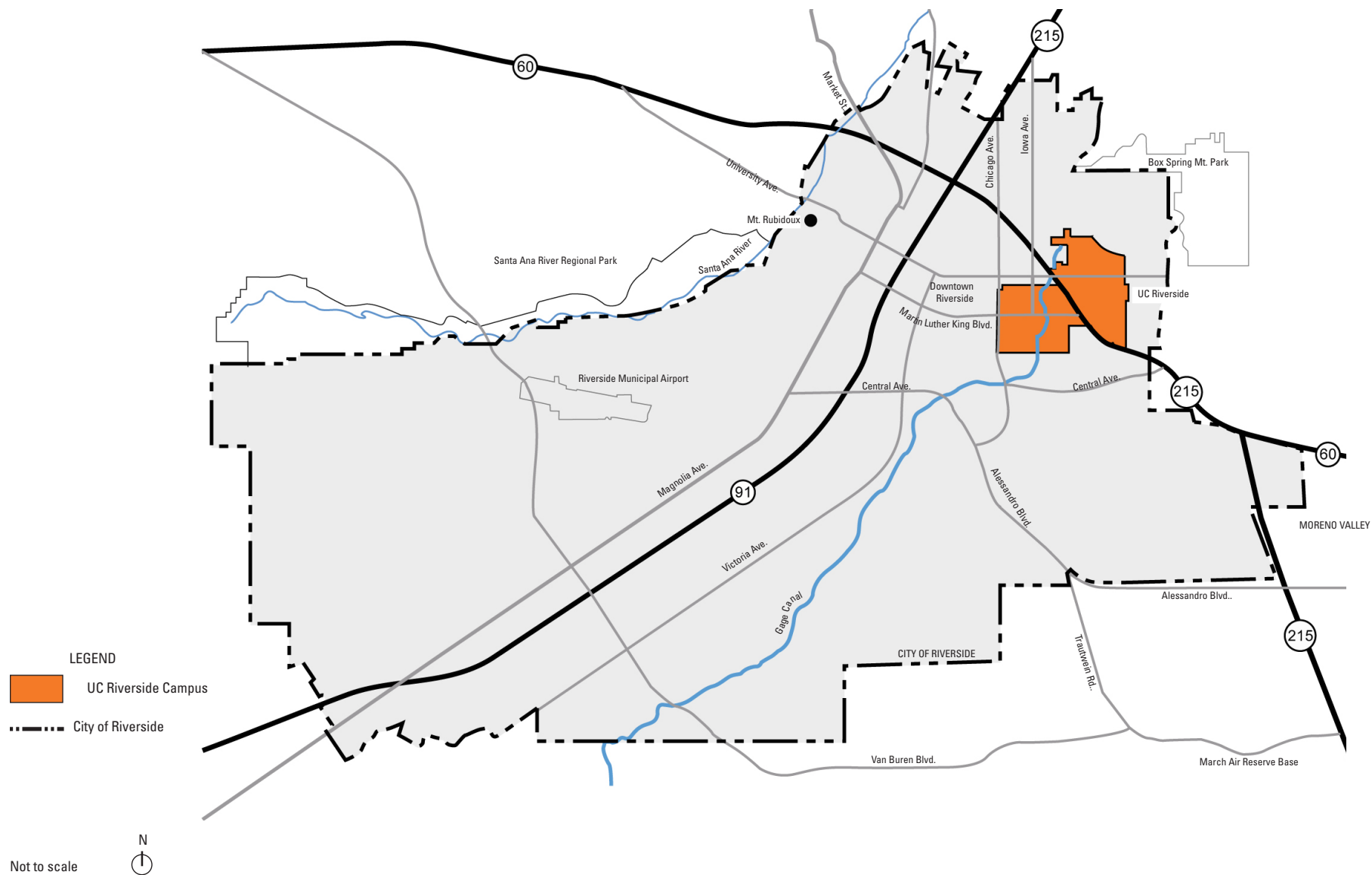
### *Campus Location and Description*

UCR is located within the City of Riverside in western Riverside County, 1.5 miles east of downtown, and comprises 1,144 acres. It generally is bounded by University Avenue and Blaine Street on the north, Valencia Hill Drive and Watkins Drive on the east, the I-215/SR-60 Freeway and Le Conte Drive on the south, and Chicago Avenue on the west.

Nearly half of the campus acreage currently is devoted to agricultural teaching and research fields, most of which are west of the



Figure 8: Location of UCR in the Riverside area



freeway. Of the 511.3 acres of UCR property on the West Campus, approximately 295 acres are agricultural teaching and research fields, used primarily by the College of Natural and Agricultural Sciences. University Extension, the United States Department of Agriculture Germplasm Repository, International Village (student housing), a large parking lot, office buildings (Human Resources and Highlander Hall), and miscellaneous small facilities are also located on the West Campus.

The East Campus, comprising approximately 600.8 acres, provides the setting for the Academic Core. Devoted primarily to teaching and research, it includes student and administrative services, the Student Commons and the Rivera and Science Libraries. Student housing is provided in the northern portion of the East Campus, with residence halls, family housing, apartment housing, and recreation facilities.

### *Land Use*

Land uses surrounding the campus are primarily residential. Limited commercial uses are found along major streets. University Avenue is the primary corridor between the campus and downtown Riverside, and is almost entirely commercial in nature. Martin Luther King Jr. Boulevard and Blaine Avenue/Third Street also provide linkages from the campus to the downtown area. East of UCR to the base of the Box Springs Mountains predominant uses are single-family residential with a minor amount of multi-family, public park, public, and commercial. The areas south of the West Campus area are single-family residential in use with some vacant/open space areas. Southwest of the campus, single and multi-family residential, vacant land and a minor amount of agricultural uses are found. North of University Avenue and west of Chicago Avenue mixed uses occur, including single and multi-family residential, industrial,

public, institutional, and commercial uses, as well as vacant land.

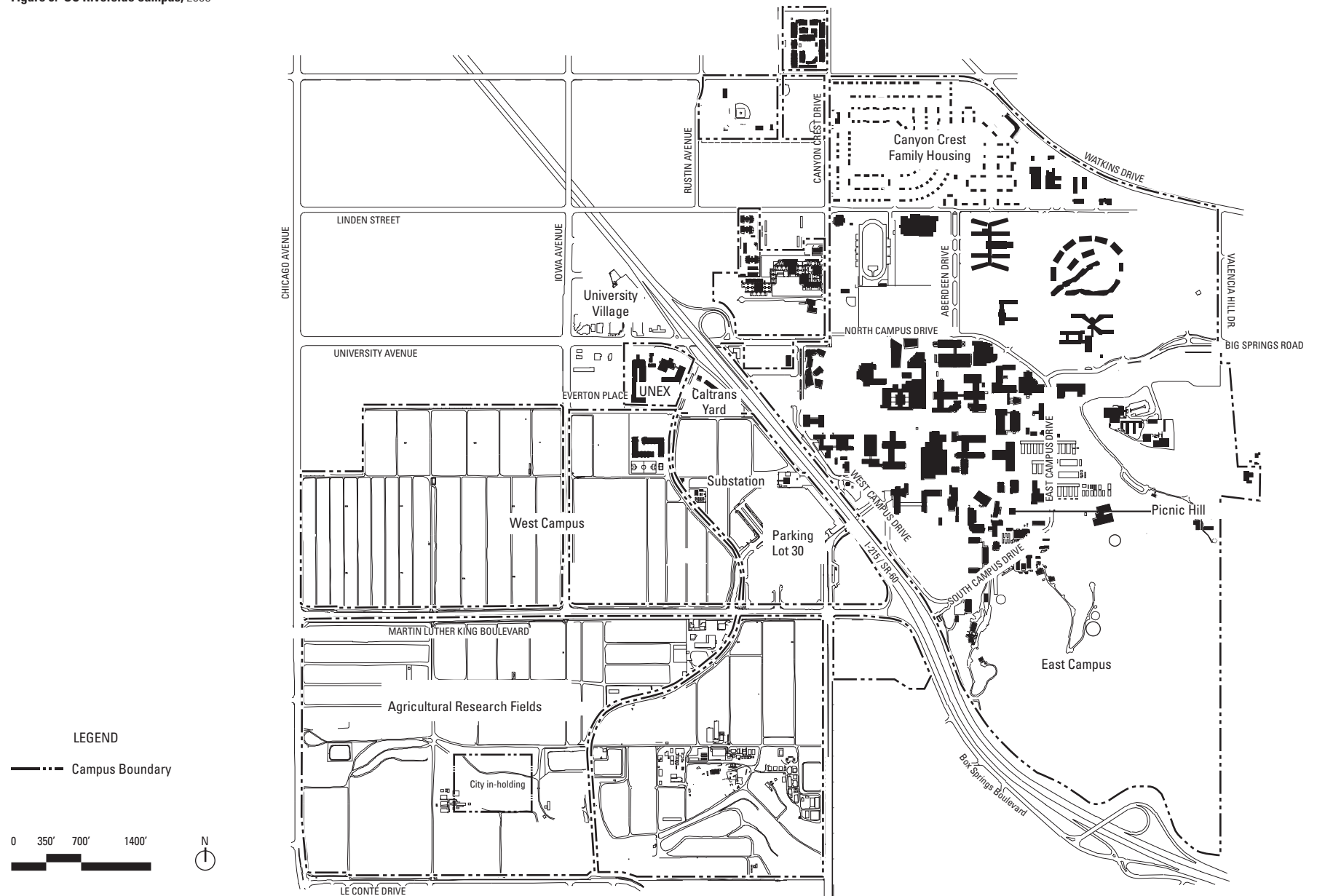
A mix of low-density uses characterizes University Avenue, including auto-oriented retail, fast food outlets, motels, restaurants and small shopping centers. Development is generally one or two stories in height. University Village is located on the north side of University, between Iowa Avenue and west of I-215/SR-60. A partnership of a private developer, the City of Riverside Redevelopment Agency and the University, it is a mixed-use development that includes theatres, restaurants, office and commercial uses, student apartments (newly constructed), a parking structure and surface parking. Three of the theatres are currently being used by the campus as lecture classrooms from 7 a.m. to 3 p.m. Monday through Friday. More urban in design than other parts of University Avenue, buildings front University and Iowa Avenues. Grand Marc, also built by a private developer, is a large student housing complex located west of University Village. It is occupied primarily by UCR students but is open to students attending any higher education institution.

### *Topography*

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 south of Martin Luther King Jr. Boulevard.

The area east of the freeway presents a greater variety in landforms. 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. Grading several hills and filling in ravines created this area. The athletic fields appear to be flat but vary in elevation as much as

**Figure 9: UC Riverside campus, 2005**



16 feet between various activity areas.

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.

### *Soils*

The campus area is generally located on soils of the Arlington, Buren, Hanford, Monserate, Cienba 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 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 north-

east), 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 ground shaking would occur in areas of unconsolidated soils, whereas less damage would be expected in bedrock or consolidated materials.

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

### *Climate*

UCR is located in a region that is semi-arid in character. Temperatures vary widely, with lows occasionally below freezing, and highs in summer often over 100 degrees Fahrenheit. Average temperatures in the summer months of July and August can be in the 90s. Pleasantly warm conditions typify the area in the spring and fall.

Rainfall averages around 10 inches per year. Prevailing winds are from the northwest; hot, dry Santa Ana winds, occurring primarily during the winter months, occasionally blow in from desert areas located northeast.

### *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, another concern, are composed of natural and man-made materials including soil, biological materials, sulfates, nitrates, organic compounds, and lead, suspended in the air. 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, natural or constructed by the City of Riverside, Caltrans, or private interests, are located within the University area watershed. Two major lines provide storm water drainage on the campus. The main line, known as the University Arroyo system, 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 north, south and east of the East Campus. A second major storm drain on campus is located in the southwest portion of the campus, east of Chicago Avenue and south of Martin Luther King Jr. Boulevard, and is known

as the Box Springs Arroyo system. It handles runoff that accumulates from the foothills near the freeway and from the UCR teaching and research fields south of Martin Luther King Jr. Boulevard.

### *Flooding*

Since the campus is partially located on the alluvial fan of the Box Springs Mountains, considerable runoff occurs during storms 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). Those two areas are the University Arroyo and the Box Springs Arroyo. Both areas trend in an east to west direction. For University Arroyo, the width of the 100-year flood plain ranges to about 400 feet, while parts of Box Springs Arroyo are over 600 feet in width.

### *Biological Resources*

The campus can be divided into four types of biological habitats, based on the mix of native and non-native plant species:

- Landscaped Habitat makes up the bulk of the East Campus and includes lawn, tree, and shrub areas that are heavily manicured. This habitat is found mainly on the central campus area and the residential units and developed areas on the West Campus.
- Agricultural Habitat areas are limited almost entirely to the West Campus; very little occurs on the East Campus.
- Natural or Native Habitat occur primarily in the hills of the Botanic Gardens and the southeast campus open space area. There are also smaller isolated pockets of natural habitat scattered on the campus including some examples of riparian habitat along the University Arroyo below the Botanic Gardens



near Parking Lot 10 and in the Gage Basin area south of Watkins House from Canyon Crest Drive to the freeway.

- Semi-Natural Habitat is generally confined to smaller scattered localities around the campus where landscaping and manicuring treatments are less rigorous.

Wildlife communities on campus can easily be divided into two types: artificially created communities, including the agricultural research and teaching fields, suitable for use only by the most tolerant of wildlife species, and semi-natural or natural communities suitable for most native species as well as those species tolerant of some human activity.

In general, the campus contains mostly artificially created communities that are of little to no use to most native wildlife species. In addition to limited food and water sources, these areas are strongly impacted by human and vehicle activity. Tree and scrub areas are used primarily by common bird species such as the northern mockingbird, house finch, house sparrow, scrub jay, and Anna's hummingbird. Amphibian species are probably absent, and reptile species would likely be limited to the side-blotched lizard and alligator lizard.

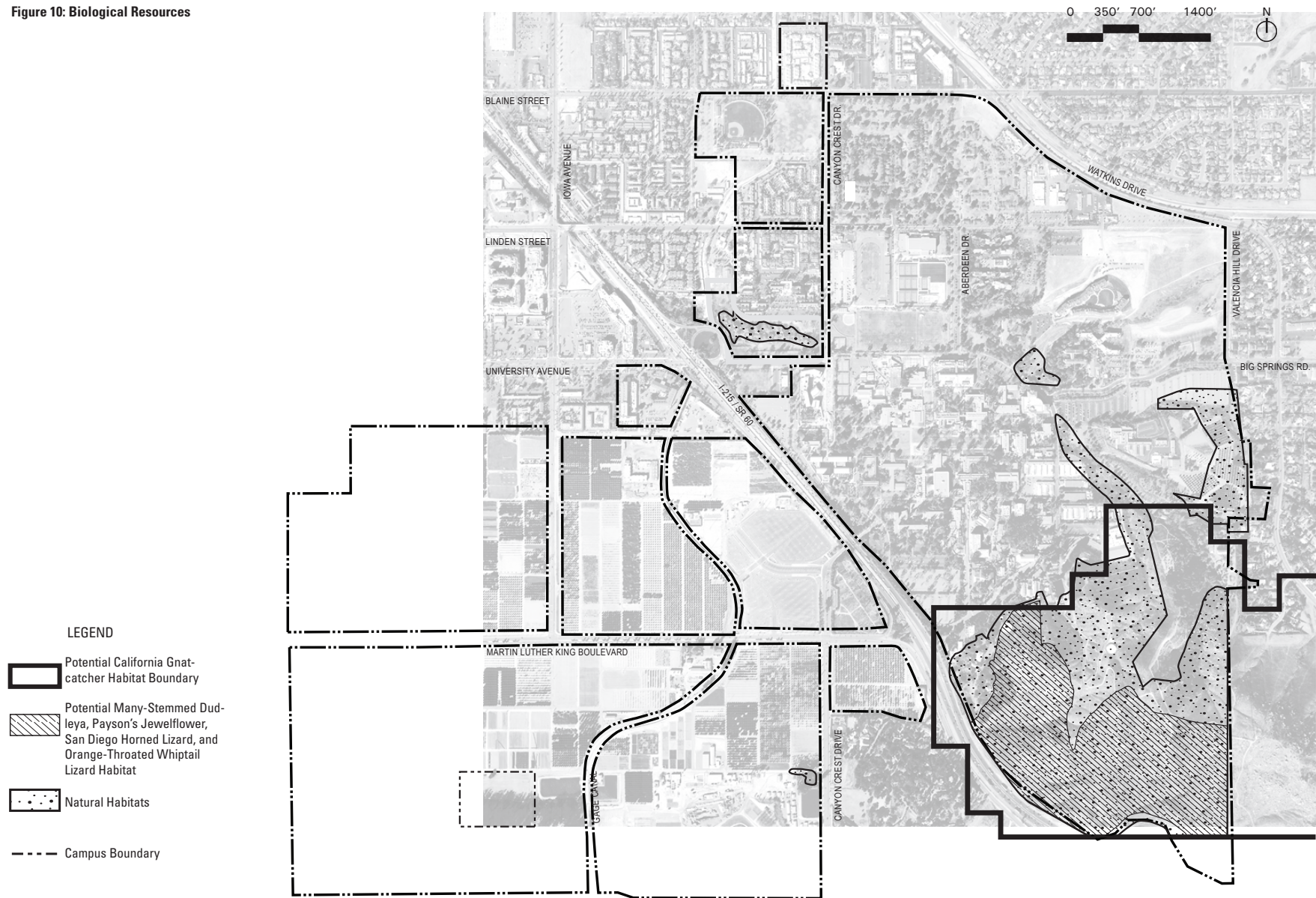
Natural or semi-natural communities include the portion of the University Arroyo drainage south of the new Alumni and Visitor Center, Watkins House and west of Bannockburn (Gage Basin), additional reaches of the University Arroyo adjacent to the residence halls, and the Botanic Garden tributary, at the Botanic Gardens, and the open space in the southeastern hills. The Gage Basin drainage provides suitable riparian foraging and nesting habitat for species groups such as warblers, sparrows, hawks, owls, and jays, as well as smaller mammals such as the opossum. The remaining drainages

provide some plant cover and a temporary source of water for birds, reptiles, and mammals species, while the associated riparian habitat also provides some cover, foraging and nesting habitat for native species. The open fields provide foraging for mourning dove, house finch, and some raptor species.

The southeast campus area, including the drainages and hills south of the Botanic Gardens, includes the largest extent of natural or native habitats on the campus. The relatively large stand of undisturbed coastal sage scrub mixed with annual grasslands provides important habitat for native wildlife, including sensitive species such as the orange-throated whiptail, burrowing owl, California gnat-catcher, and Stephens' kangaroo rat. The drainages provide water and foraging habitat for other species such as sparrows, warblers, hawks, and owls.

The UCR Botanic Gardens occupies 40 acres of rugged, hilly terrain along the eastern boundary of the campus, in the foothills of the Box Springs Mountains. A large diversity of plants is able to grow in the Gardens due to variable terrain and subtropical climate. Providing space for over 3,500 plant species in its collection, the Gardens is used for teaching, research, recreation, and wildlife habitat. In addition to mammals, reptiles, and amphibians, almost 200 bird species have been officially observed. Mammal species include Audubon cottontail, coyote, gray fox, kangaroo rat, and bobcat. Amphibians seen within the Gardens include slender salamander, Pacific tree frog, bullfrog, and the western toad and reptiles seen include the side-blotched lizard, western skink, orange throated whiptail, gopher snake, red diamond rattlesnake, and California king snake. About one-third of the Gardens' 40 acres remains unplanted. This land consists of irregularly degraded Riverside Coastal Sage

Figure 10: Biological Resources



Scrub Community and grassland.

### *Cultural Resources*

Since UCR has existed in one form or another for nearly 100 years, the campus includes a wide range of buildings from different eras, all of which contribute to UCR's unique identity.

A total of eight historic-era buildings have been previously identified and formally recorded. These include:

- **Citrus Experiment Station.** Two main buildings in the original Citrus Experiment Station complex, now fully renovated and renamed Anderson Hall, have been designated a Point of Historical Interest by the Office of Historic Preservation and a Historical Landmark by the County of Riverside. The main building of the complex, known historically as the Horticulture Building, and its south wing, known as the Irrigation Building, were designed by architects Lester H. Hibbard and H.B. Cody and constructed in 1916. A third building, the north wing, has not been renovated and is known as Chapman Hall. Previously known as the Soils and Plant Nutrition Building, it was designed by G. Stanley Wilson, and constructed in 1931.
- **The Barn Group.** Originally used as barns, stables, storage shed, and/or workshops in support of the Citrus Experiment Station agricultural operations, the three remaining buildings in this group were also designed by Hibbard and Cody and built in 1916. After the establishment of the College of Letters and Science in 1954, the Barn Group was transformed into a popular activities center.
- **The University Cottage.** Constructed in 1917 on a design by Hibbard and Cody, this building was originally known as the Teamster's Cottage, one of the earliest residences to be erected by the university at the Citrus Experiment Station. Since 1954 it

has housed various university offices. It was moved to its present location.

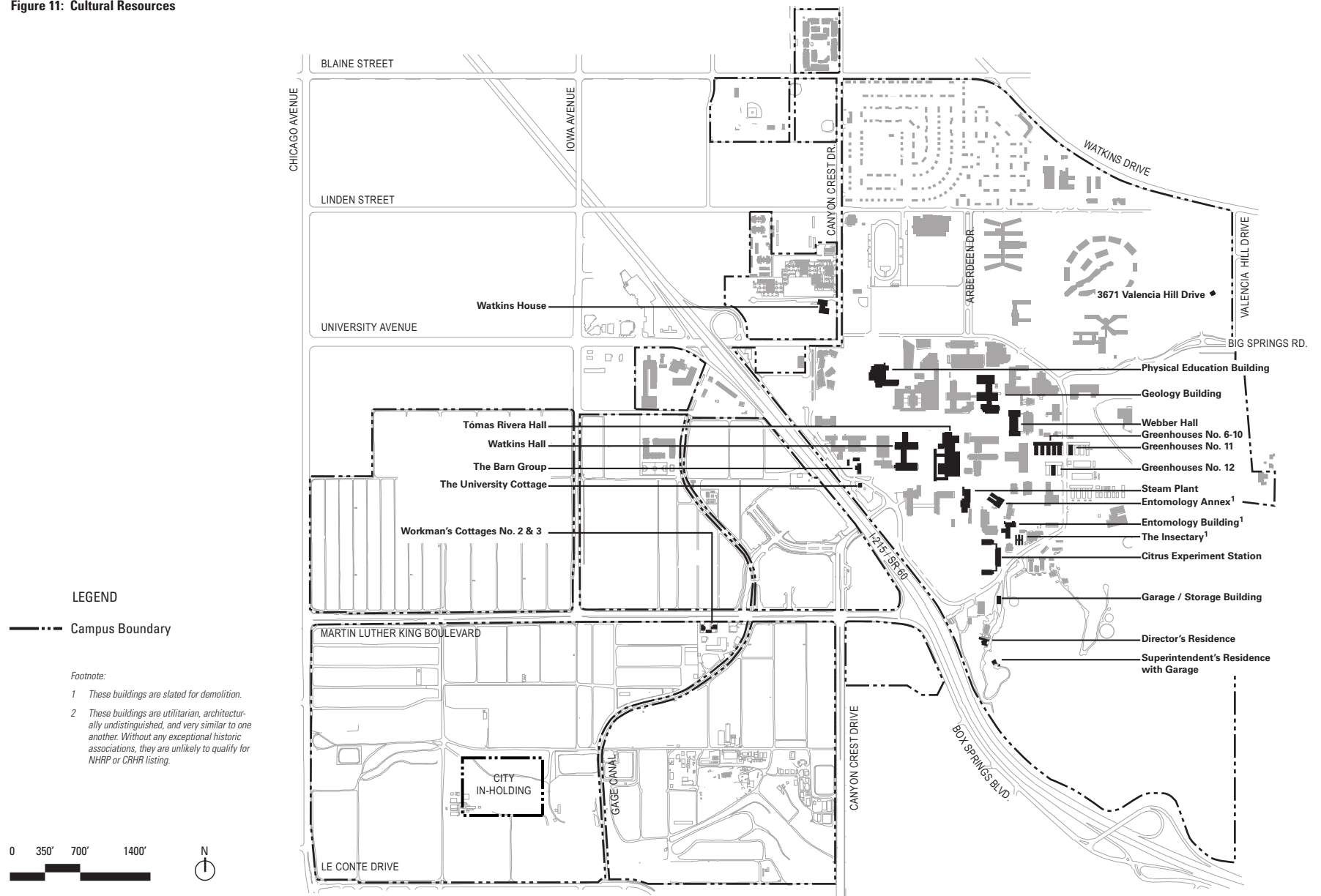
- **The Insectary.** This building was designed by G. Stanley Wilson and constructed in 1931. It was altered in 1960, but served its original purpose well into the 1990s. This building was evaluated in a historic assessment technical report in 1998 and has since been demolished.

All eight of these buildings have been evaluated as potential historical resources, and with the exception of the Insectary, seven of them have been determined to be eligible for listing in the National Register of Historic Places or at least historically significant to the UCR community.

Besides the formally recorded buildings, seven other pre-1945 buildings and a World War II vintage residential complex have been identified, but have not been recorded into any registers or inventories of potential historic resources.

- **The Director's Residence (with Garage and Garden Shed).** The original residence was designed by Hibbard and Cody and built in 1916. It is now enlarged significantly, renamed College Building South, and attached to the 1963 College Building North.
- **The Superintendant's Residence (with Garage).** Like its larger neighbor, the Director's Residence, this house was designed by Hibbard and Cody and built in 1916.
- **Garage/Storage Building.** This simple utility building was suspected to have been built around the same time as the two nearby residences listed above, with which it is "stylistically contemporaneous."
- **Entomology Building.** Together with the Soils and Plant Nutrition Building and the Insectary, the Entomology Building represents an early 1930s expansion of the Citrus Experiment Station.

Figure 11: Cultural Resources





Designed by G. Stanley Wilson, this building was completed in 1932. In 1948 it was significantly enlarged through an addition, also designed by Wilson. This building was evaluated in 1998 and has been demolished.

- Canyon Crest Family Student Complex. Located in this complex are residences developed by the U.S. military in 1941 and acquired by UCR in 1955, before construction of the first dormitory on campus. Virtually all of the buildings have been significantly altered through renovation efforts in recent years.

With the exception of the Canyon Crest Family Housing Complex and the Entomology Building all of the buildings noted may be eligible for listing in the National Register.

Several other pre-1945 buildings have been noted, but not evaluated in sufficient detail to conclude as to their historical significance. Several other buildings were built before 1957, thus making them potentially significant as well. However, age alone does not make a building significant. Follow-up studies should be undertaken to determine the significance, if any, of the individual buildings, which are noted below:

- Workman's Cottages No. 2 and 3. UCR records indicate that these were built in 1922, but may have been moved to their present location on Martin Luther King Jr. Boulevard from another location.
- Entomology Annex. This building was constructed in 1947. This building was evaluated in 1998 and is scheduled for demolition. This structure was the subject of a cultural resources evaluation in December 2008 and was found to not be a cultural resource. It was demolished in 2011 with the Glen Mor 2 project.
- Steam Plant. Built in 1949.
- Tomás Rivera Library, Watkins Hall, Physical Education Building,

Geology Building, and Webber Hall. All completed before 1954, these buildings formed the core of the newly created College of Letters and Science. The original library building was greatly expanded in 1955, and now constitutes the northern portion of present-day Tomás Rivera Library.

- Residence at 3671 Valencia Hill Drive. Built by the university in 1955. This structure was the subject of a cultural resources evaluation in December 2008 and was found to not be a cultural resource.
- Greenhouses No. 6-10, 11, 16. Constructed between 1952 and 1956, with more greenhouses of identical design added in 1957.
- Agricultural Utility Buildings. Various barns, storage sheds, field laboratories, greenhouses and other utility buildings south of Martin Luther King Jr. Boulevard date to the pre-1957 period, including three that were built in 1924.
- Watkins House. Dedicated in 1956 as the campus religious center. This structure was the subject of a cultural resources evaluation and was found to not be a cultural resource. It was demolished in 2004.

Two archaeological sites have been recorded in the study area. One is a grinding rock located in the southeast area of campus, and the other is Gage Canal, which has been significantly altered within the campus boundaries. Other bedrock milling features may occur in the undeveloped hillsides of the campus. Other types of cultural resources, such as historic landscapes, also exist on campus, for instance the tall palm trees lining Linden Street in the northeastern part of the campus, which were thought to be associated with an



(left) **West Campus**, Iowa Avenue  
looking north toward University Avenue



(right) **West Campus**, citrus groves  
with distant view of Box Spring Mountains



(left) **West Campus**, view of Gage Canal



(right) **East Campus**, recreation fields with  
Carillon Tower and mountains beyond



(left) **East Campus**, interior views in  
Carillon Mall area



(right) **East Campus**, shaded courtyard



early ranch.

### *Scenic and Visual Characteristics*

The Box Springs Mountains, below which the campus is situated, are impressively visible on clear days from a variety of locations within the campus. At some elevated locations along the eastern edge of the campus, views of Mt. Rubidoux, the western San Gabriel, and the northern San Bernardino Mountains are also possible. The lower, flatter West Campus area does not have the same panoramic views, although views east to the Box Spring Mountains are impressive.

The campus itself is a lush green environment located at the base of the rocky and generally dry-appearing Box Spring Mountains. The East Campus has been developed to include wide grassy pedestrian malls throughout the center and linking outlying portions. Shaded, planted courtyards were also generally found within buildings and building complexes, providing welcome relief from high summer temperatures. More recently newly developed portions of the East Campus have been landscaped in a more drought-tolerant, xeriscape fashion, with less area devoted to irrigated lawns and gardens in an effort to conserve water. In particularly successful examples, such as in front of the Science Library, the effect is as compelling as the grassy malls. Within the East Campus internal views are strongest along the linear malls where more distant buildings can be seen; otherwise views are of the immediate built environment.

The West Campus primarily consists of citrus groves and row crops. In areas of roads or parking, or near existing buildings such as International Village Student Housing, views of the nearby Box Springs Mountains are clear, as are views of the higher buildings on the East Campus, particularly the Carillon Tower and the Humanities Building,

which rise above the prevailing lower building heights. Within the West Campus other views are limited, blocked by dense orchards, and consisting primarily of views along major roadways, such as Iowa Avenue.

The I-215/SR-60 freeway bisects the campus and although only partially elevated, nonetheless is a visual and physical barrier. At the primary connection point between the City and the campus on University Avenue, the freeway overpass constrains views into the campus. In 2000, funded by a grant from the Gluck Foundation, murals detailing the history of UCR and the history of Riverside have been painted on both walls of the underpass area and the bridges overhead have been painted with signage announcing the City of Riverside on the east overhead panel and University of California on the west. The other underpass at Canyon Crest Drive was widened in conjunction with widening of the freeway by Caltrans, and has improved the visual connection and access between the East and West Campuses.

### *Gage Canal*

The Gage Canal was built in 1883 to provide water to irrigate the citrus groves in the then newly founded City of Riverside. Construction of this canal and others which comprised an extensive network in the region made possible the extraordinary dominance of the Riverside area in the cultivation of citrus, particularly the Washington Navel Orange. Over twenty miles in length overall, the Gage Canal is a concrete-lined viaduct carrying water to agricultural fields and groves to the south through Riverside. The canal has no habitat value. It lies within a 50-foot easement and has been covered where it passes through the northern and eastern parts of the campus, and down to where it reaches the West Campus adjacent to Highlander Hall. Areas of covered and uncovered canal occur as it winds south.



Figure 12: Aerial photo of UC  
Riverside Campus, 2002





The canal will be covered throughout the West Campus as development begins there. There currently are no plans to cover the canal within the agricultural and teaching fields south of Martin Luther King Boulevard.

## Program

### *Introduction*

While the primary purpose of the Long Range Development Plan is to articulate existing and planned uses of the University's land and other physical resources, the academic mission of the University drives the underlying principles of land use planning. While UCR's basic mission of providing high quality teaching, research, and public service will not change, the character of academic and supporting programs and services will be significantly transformed as the University prepares a learning environment that is appropriate for the 21st century. The specific characteristics of the university campus of the future are difficult to predict; however, these changes will be exemplified by key trends and factors such as:

- Increasing diversity of faculty, students, and staff that reflect the importance of the growing multi-cultural communities of the Inland Empire region;
- The need to address wide variances in the learning requirements of students who are increasingly older, and more likely to be burdened with pressures of family or work-related responsibilities in addition to their educational commitments;
- Significant impacts of advanced technologies that will be incorporated into the teaching and research environment; and
- Increasing linkages between the University and its surrounding community, including public agencies, residential neighborhoods, other educational institutions, private businesses and

corporations.

Key strategies that will drive UCR's planning for change, flexibility and the addition of new facilities, are governed by the assumption of significant enrollment growth, expected to almost double in fifteen years: from 12,703 students (three quarter average headcount) in 2000-01, to 25,000 students (three quarter average headcount) by 2020. This student enrollment translates into an anticipated total campus population of approximately 35,540, an estimate that includes students, academic employees, staff employees, and other individuals. This distribution is illustrated in the Table 1.

Preparing for these anticipated trends will require considerable flexibility in planning both the organization of future academic programs and the facilities that will house them. New buildings will have to accommodate multiple uses over time and many older existing facilities will need significant renovation or replacement to provide for reallocation of programs and services that grow and change in their requirements for infrastructure, systems, and other support. Finally, it must be assumed that the basic organizational structure of academic programs, student services, and administrative support may change over time as well.

**Table 1: Projected Campus Population**

| Headcount                               | 2000/01 Baseline | 2010/11 Enrollment | 2005 LRDP<br>2015/16<br>Projections | Revised 2020/21<br>Projections<br>with School of<br>Medicine | Net Increase 2015<br>to 2020 |
|-----------------------------------------|------------------|--------------------|-------------------------------------|--------------------------------------------------------------|------------------------------|
| Students <sup>a</sup>                   | 12,703           | 20,746             | 25,000                              | 25,000                                                       | 0                            |
| Faculty and Academic Staff <sup>b</sup> | 865              | 927                | 1,726                               | 2,714                                                        | 988                          |
| Nonacademic Staff <sup>c</sup>          | 2,877            | 4,457              | 6,190                               | 9,853                                                        | 3,663                        |
| Other Individuals <sup>d</sup>          | 1,196            | 1,836              | 2,624                               | 3,826                                                        | 1,202                        |
| <b>Total</b>                            | <b>17,641</b>    | <b>27,966</b>      | <b>35,540</b>                       | <b>41,393</b>                                                | <b>5,853</b>                 |

Source: UCR 2005 LRDP, UCR Capital and Planning, May 2003; UCR 2005 LRDP Amendment 2

<sup>a</sup> Three-quarter average headcount, including students studying abroad and medical students.

<sup>b</sup> Includes faculty, doctors, and other teaching and academic staff; excludes student employees (included in the enrolled student category)

<sup>c</sup> Includes post-doctoral scholars, principal investigators, medical offices, and ambulatory care facilities.

<sup>d</sup> Average weekday number of other individuals, including campus visitors, patients, childcare students, student family members (living on campus), daytime extension students, ASUCR, KUCR & Highlander nonstudent staff, vendors, and construction workers. Does not include evening or weekend extension students or evening or weekend visitors.

### *Academic Program*

Academic space needs were derived by using a combination of methods, including: application of UC space standards or guidelines based on anticipated enrollment targets, numbers and types of faculty, post-docs, and staff, and specific categories of space; comparative analysis of similar higher education institutions; and extensive interviews with UCR faculty, staff, and/or administrators representing each major academic or service area.

There currently are six primary academic units that form the structure around which most teaching and research takes place: College of Humanities, Arts, and Social Sciences (CHASS); College of Natural and Agricultural Sciences (CNAS); Bourns College of Engineering (BCOE); the School of Business Administration (SOBA); the Graduate School of Education (GSOE), and the Division of Biomedical

Sciences. In 2008 two additional schools were approved: medicine and public policy. Each of these major academic units is expected to experience growth that is concomitant with the total campus population growth, although there will be some modifications to curriculum offerings and departmental structures within them over time. (See Appendix A for their Academic Planning Statements.)

Over the 10 year horizon of this LRDP, it is also likely that new professional schools or colleges will emerge that will respond to the changing educational and/or research needs of the region or, in fact, the nation. While the nature of expansion or new programs cannot be predicted, this LRDP provides opportunities for new programs in its assumptions about land use to account for this possibility. As these areas develop, the need to create new organizational and physical structures to accommodate related academic activities may



be desirable. Other new professional schools could include law or public health.

Following is a brief summary of key factors or trends within each of the major academic areas that have been incorporated in the land use planning assumptions of this LRDP:

#### **College of Humanities, Arts, and Social Sciences (CHASS)**

With the largest number of UCR students in its programs, CHASS provides the center for liberal arts study on the campus. Its existing buildings and additional facilities will continue to occupy the central core of the East Campus, close to the Carillon Mall, the Rivera Library, and expanded centers for student activities. Some decentralization of programs such as performing arts, research centers, or faculty studios may be desirable, including off-campus locations for selective programs. However, the College will require significant expansion and renovation of existing facilities as well as new buildings to accommodate increased enrollment. These will include advanced technology classrooms, faculty offices, class laboratories, and collaborative learning and research centers.

#### **College of Natural and Agricultural Sciences (CNAS)**

The CNAS has its origins in the Citrus Experiment Station, which was established in 1907, on 30 acres of leased land. The present CNAS was established in 1974 and is unique in the UC system in its integration of biological, agricultural, and physical sciences within a single college.

Because of its unique programs, the CNAS will continue to require a wide variety of unique teaching and research facilities. A major commitment of land will continue to be reserved for agricultural research and teaching on the West Campus, primarily south of Martin Luther King Jr. Boulevard. Holding such land for agricultural

use for several decades is necessary because of the long timeframes needed to observe the lifecycles of plant materials of various types. Additional agricultural land will be required in more remote areas such as the Coachella Valley for specialized research.

In addition, CNAS will be characterized in the future by increased emphasis on interdisciplinary research centers that will require centralized access to high cost, high-tech equipment and technical support. Greenhouse and head house facilities, now located on the East Campus, may be re-located over time in areas south of Martin Luther King Jr. Boulevard in order to provide room on the East Campus to support higher density development. High bay (large, high ceiling, covered or enclosed space) and other specialized spaces could be located at off-campus sites where applicable. Existing older buildings are relatively small and designed for specific departmental programs. In the future, such buildings may require major expansion, renovation and possible replacement to provide more adaptability to changes in scientific research and allow for multi-disciplinary uses.

#### **Bourns College of Engineering (BCOE)**

This College anticipates significant growth in demand for its programs, and will require new emphases in both the teaching curriculum and research areas. The future may include development of programs in Civil Engineering and formation of interdisciplinary research centers. As in CNAS, centralized access to major equipment and technical support is necessary, which will mean that the location of new facilities will be largely dependent on appropriate co-location of major infrastructure elements such as electrical distribution, central utilities, service access, etc. The trend in teaching will be for more large lecture classrooms or auditoriums for lower division courses, smaller studios for upper division and graduate courses,

spaces for major group or team projects; and the need for access to project spaces on a 24-hour, 7-day/week basis.

### School of Business Administration (SOBA)

Created in 1970, SOBA (formerly the A. Gary Anderson Graduate School of Management) offers an innovative Master of Business Administration program and interdisciplinary undergraduate business programs in conjunction with the College of Humanities, Arts, and Social Sciences. In addition to conducting basic and applied research in management-related subjects, SOBA provides an increasing array of educational programs to executives and the public at large. While SOBA is currently located in the academic core of the East Campus, expansion of its programs to meet expected enrollment growth over the next 10 years anticipates new space. Because of the importance of its strong linkages to the community, the LRDP provides for the relocation and expansion of SOBA to the West Campus. There it can join additional professional schools and colleges with similar needs for higher visibility and access, and increased opportunities for collaboration, as well as the encouragement of incubator business development and related commercial enterprises.

### Graduate School of Education (GSOE)

The Graduate School of Education offers opportunities for teachers, administrators and other professionals to pursue high quality and professionally relevant advanced degrees in education. Several Ph.D. and Master's degree programs offered by the school are specifically designed to assist education practitioners in developing their professional skills through a program which reflects both academic integrity and the pertinent concerns of educators. Because of national as well as community concerns about the importance and

quality of basic education, the GSOE is especially concerned about how it is able to position its programs to best meet the needs of future generations of teachers and their students.

To facilitate the accomplishment of these goals, the LRDP recognizes the importance of the close linkages that this College must maintain with basic undergraduate programs that are provided by the two largest arts and sciences colleges, CHASS and CNAS; but must also

**Table 2: Projected Professional Schools Program**

| <i>Professional Schools</i>           | <i>Gross Square Feet</i> |
|---------------------------------------|--------------------------|
| School of Business Administration     | 180,000                  |
| School of Education                   | 120,000                  |
| Professional School A (Public Policy) | 160,000                  |
| Professional School B                 | 120,000                  |
| Professional School C                 | 120,000                  |
| <b>Total</b>                          | <b>700,000</b>           |

**Table 3: Projected Academic Programs**

| <i>Academic Programs</i>                      | <i>Gross Square Feet</i> |
|-----------------------------------------------|--------------------------|
| College of Engineering                        | 800,000                  |
| College of Humanities, Arts & Social Sciences | 1,300,000                |
| College of Natural & Agricultural Sciences    | 2,100,000                |
| Library                                       | 800,000                  |
| Other Academic Support                        | 500,000                  |
| School of Medicine *                          | 1,740,000                |
| <b>Total</b>                                  | <b>5,500,000</b>         |

Source: UCR 2005 LRDP; UCR Capital and Physical Planning July 2010; 2005 LRDP Amendment 2.

\* School of Medicine adds 1,737,815 GSF Academic, Research, Teaching, Ambulatory Care, Medical Office Buildings and Support; excludes Parking.

maintain strong professional affiliations with professional schools such as SOBA, and in the area of continuing education. Not only will there be an increased emphasis on research related to education, but closer connections in the community with K-12 schools. While some portion of these programs will be more appropriate in off-campus locations, the LRDP provides for additional space for expansion of the GSOE on the West Campus.

### **School of Medicine**

In 2008 The UC Board of Regents established a four-year School of Medicine at UCR. The medical school will serve the Inland Empire immediately surrounding the Riverside campus and improve the health of the medically underserved throughout the Inland Southern California region. The medical school intends to utilize a distributed clinical system. As such, UCR will partner with regional hospitals, clinics, and providers for its clinical programs. At maturity, the School of Medicine will enroll a total of 400 medical students, 160 graduate students, and 160 postgraduate students (i.e., resident physicians). The land use designation School of Medicine is assigned to the parcel of land that will accommodate the medical school and its related uses including teaching, research, administration, ambulatory care, medical offices, utility infrastructure, support yard, open space, circulation, parking, and support uses such as food service, waste handling, etc. A hospital is not planned as part of the School of Medicine; instead the medical school would use regional hospitals for its residency program.

### **Graduate School of Public Policy**

The UCR School of Public Policy will bring together faculty and students from a variety of disciplines to:

- Train students in rigorous policy analysis skills, allowing them to pursue careers in government and the not-for-profit sector;
- Facilitate research by multidisciplinary teams at UCR on policy

problems affecting the region, State, nation, and world; and

- Initiate and maintain a policy dialog with regional, State, and national policy makers.

### **Research**

In general, research at UCR will be characterized by increased collaboration across all disciplines. It will be important to develop opportunities for shared use of very high-tech and costly equipment that can be easily shared by diverse groups of researchers and students. Major expansion of the vivarium will be necessary and may continue to require multiple locations. Total contract and grant activity on the campus is expected to increase dramatically by 2020. Thus, there will be significant concomitant growth in the numbers of post-docs and research assistants (RAs). For example, the BCOE and CNAS are expected to require an average of 4-5 RAs and 2-3 post-docs per faculty member. Opportunities for specialized fabrication facilities will also be needed and are included in the program projections.

### **Libraries**

While the nature of the university library is changing dramatically, in large part due to the significant impact of advanced information technologies, the facilities requirements will not disappear or be reduced significantly. Libraries are expected to evolve into comprehensive learning resource centers, with the need to provide 24 hour/7 day a week access to knowledge data bases as well as traditional books and journals wherever they exist in the world. This will certainly require changes in the types and amount of space devoted to books, computing stations, individual and group study areas, and network communication capabilities. Additional satellite libraries may also be developed; for example, as part of professional school development or within residential areas.

### *Housing Program*

The creation and support of a vibrant university community is dependent upon providing adequate housing for students, particularly undergraduates, and also for graduate students and students with dependents.

The 1990 UC Riverside Long Range Development Plan established a goal of housing 35% of students in campus housing (on campus or nearby in university-controlled housing). In Fall 2002, at an enrollment of 15,882 headcount, 4,147 students (26%) were provided with university housing.

Many of the UC campuses have reassessed their housing goals upward in recent years. It is widely recognized that providing high quality, affordable student housing is essential to the educational mission of the University of California. Student retention is thought by the University to be positively correlated with the provision of housing for freshman and undergraduate transfer students. The rising cost of housing in communities throughout the State, and low vacancy rates have also driven many campuses to aggressively increase their housing stock. At Riverside, although the cost and availability of housing is not under as much pressure as in other parts of the State, increasing the proportion of on-campus housing would be beneficial and would help contribute to:

- An enhanced sense of community on campus;
- Availability of activities and amenities at all hours of the day, seven days a week;
- Increased opportunities for informal learning among students, faculty and staff; and,
- Increased socializing and socialization of students.

In order to provide a larger proportion of the students, especially undergraduates, campus life programs and outreach, UC Riverside is raising its campus housing goal from the 1990 LRDP goal of 35% to a 2005 LRDP goal of 50% of the student population housed or 12,500 students in 2020. Goals for students in on-campus or university controlled housing:

- First Year - Freshman – 75% in campus residence halls (housing is offered to all)
- Transfer (first year) – 50% in campus residence halls or apartments

As indicated in Table 4, housing for UCR students is provided in residence halls (Lothian and Aberdeen - Inverness), suite-style residence halls (Pentland Hills), in a limited number of apartment housing units (University Plaza, Bannockburn, Stonehaven, and International Village), and in older family housing comprised of duplexes and small single family units (Canyon Crest Family Housing). All of these are located on East Campus with the exception of International Village. Increasingly, students desire apartment housing, although the availability of centralized dining and other student support services remains important.

The UCR housing program will therefore target three basic types:

- Residence halls for freshmen and transfer students
- Apartments for graduate students and upper class undergraduates
- Apartment or townhouse units for students with dependents.

*Projected Residential Beds and Units*

Table 4 illustrates estimated program need based on the campus goal of housing 50% of students in university housing.

| <b>Table 4: Projected Residential Beds and Units</b> |                           |                              |                                 |                     |
|------------------------------------------------------|---------------------------|------------------------------|---------------------------------|---------------------|
|                                                      | <i>Existing Fall 2002</i> | <i>2005 LRDP Amendment 2</i> | <i>Projected Beds and Units</i> | <i>Net Increase</i> |
| Residence Halls                                      |                           |                              |                                 |                     |
| Lothian                                              | 996                       | 1036                         |                                 |                     |
| Aberdeen/Inverness                                   | 792                       | 792                          |                                 |                     |
| Pentland Hills                                       | 1,132                     | 1,132                        |                                 |                     |
| Total                                                | 2,920                     | 2,960                        | 5,906                           | 2,986               |
| Apartments                                           |                           |                              |                                 |                     |
| International Village                                | 65*                       | 65*                          |                                 |                     |
| Bannockburn                                          | 346                       | 370                          |                                 |                     |
| University Plaza                                     | 148                       | 145                          |                                 |                     |
| Stonehaven                                           | 400                       | 400                          |                                 |                     |
| Falkirk (acquired in 2008)                           | 0                         | 416                          |                                 |                     |
| Oban (acquired in 2009)                              | 0                         | 244                          |                                 |                     |
| Glen Mor 1                                           | 0                         | 504                          |                                 |                     |
| Glen Mor 2 ***                                       | 0                         | 814                          |                                 |                     |
| Total                                                | 959                       | 2,958                        | 5,880                           | 2,922               |
| Family Housing Units                                 | 268**                     | 267**                        | 714                             | 446                 |
| <b>Total</b>                                         | <b>4,147</b>              | <b>6,186</b>                 | <b>12,500</b>                   | <b>6,314</b>        |

Source: UCR 2005 LRDP; UCR Capital and Physical Planning July 2010; UCR Housing Services August 2010.

Residential Program Projections for 25,000 Enrollment (with 50% of students housed on campus).

\* 341 total beds; 65 reserved for UCR students.

\*\* To be demolished to provide land for residence halls.

\*\*\* Design Approval May 2011, occupancy July 2013.

Notes:

Lothian = Housing permanently added 40 beds.

Bannockburn = Added 24 more beds via double bedrooms.

Plaza = Reduced by 3 beds to accommodate additional staff.

Falkirk = 700 would only happen if all bedrooms were doubled. 416 is more accurate with current double rate.

Family Housing = Lost one unit to the new CDC.



In fiscal year 2000-01 based on data derived from a zip code survey, it was estimated that approximately 70% of students lived on campus or within five miles of the campus, and that the remaining 30% commuted from beyond five miles. If these proportions hold, even with the goal of housing 50% on campus a significant additional demand for student housing will need to be accommodated off campus in the City of Riverside or nearby. The University Community Plan Addendum prepared for the City of Riverside estimated that as many as 950 units of student housing could be needed in the community, assuming that the campus was reaching its 50% housing goal.

In addition, UCR will significantly increase its faculty and staff populations in parallel with its growing student enrollment. The same study estimated that between 500 and 850 additional units of housing could be needed for new faculty and staff in the community, depending on the percentage choosing to live in Riverside (estimated at 15 to 25%).

The growth of the campus population offers important opportunities for both the campus and community. In the course of preparing this LRDP, the University and City of Riverside discussed options for accommodating the significant housing demand that will be generated, and agreed that several areas of the City could be targeted (these correspond to three City of Riverside Specific Plan Areas):

- University Avenue, from I-215 to Park Avenue
- Riverside Marketplace
- Downtown Riverside.

In particular the City and University are interested in the opportunities for new residential mixed use that can be accommodated in the University Avenue area, since this development has the potential to

also provide for additional services, entertainment, dining, and other amenities that will generally enhance the community experience at UCR and facilitate revitalization of the University Avenue commercial properties. (See Campus and Community section of this LRDP.) However, opportunities for mixed use will be available in the Marketplace and the Downtown areas of Riverside as well and will be available to serve the campus population.

*Summary Projected Campus Development Program*

Table 5 summarizes the facility space in gross square feet projected to be needed to accommodate the 25,000 student enrollment. As the table illustrates, the campus will need to add significant numbers of new facilities in order to accommodate the planned enrollment increase.

| <b>Table 5: Summary of Projected Campus Development (GSF)</b> |                             |                             |                                  |                               |                                  |                                      |
|---------------------------------------------------------------|-----------------------------|-----------------------------|----------------------------------|-------------------------------|----------------------------------|--------------------------------------|
| <i>Headcount</i>                                              | <i>Baseline (Fall 2001)</i> | <i>Existing (Fall 2010)</i> | <i>Projected under 2005 LRDP</i> | <i>Net 2005 LRDP Increase</i> | <i>Proposed LRDP Amendment 2</i> | <i>Net Increase LRDP Amendment 2</i> |
| Academic Programs                                             | 2,190,947                   | 3,054,585*                  | 5,500,000                        | 3,309,053                     | 5,500,000                        | 3,309,053                            |
| Professional Schools                                          | 103,365                     | 138,328**                   | 700,000                          | 596,635                       | 700,000                          | 596,635                              |
| Administration                                                | 163,018                     | 322,499                     | 500,000                          | 336,982                       | 500,000                          | 336,982                              |
| Public Service                                                | 206,512                     | 262,443                     | 400,000                          | 193,488                       | 400,000                          | 193,488                              |
| Non-Institutional Agencies                                    | 102,181                     | 136,841                     | 102,181                          | 0                             | 102,181                          | 0                                    |
| Student Services                                              | 187,444                     | 239,389                     | 500,000                          | 312,556                       | 500,000                          | 312,556                              |
| Maintenance & Physical Plant                                  | 132,263                     | 131,726                     | 200,000                          | 67,737                        | 200,000                          | 67,737                               |
| Recreation & Athletics                                        | 98,269                      | 154,764                     | 470,000                          | 371,731                       | 470,000                          | 371,731                              |
| Housing                                                       | 1,513,017                   | 2,023,293                   | 3,430,526                        | 1,917,509                     | 3,430,526                        | 1,917,509                            |
| School of Medicine                                            | 0                           | 60,181***                   | 0                                | 0                             | 3,061,165****                    | 3,061,165                            |
| <b>Total</b>                                                  | <b>4,697,016</b>            | <b>6,552,265</b>            | <b>11,802,707</b>                | <b>7,105,691</b>              | <b>14,863,872</b>                | <b>10,166,856</b>                    |

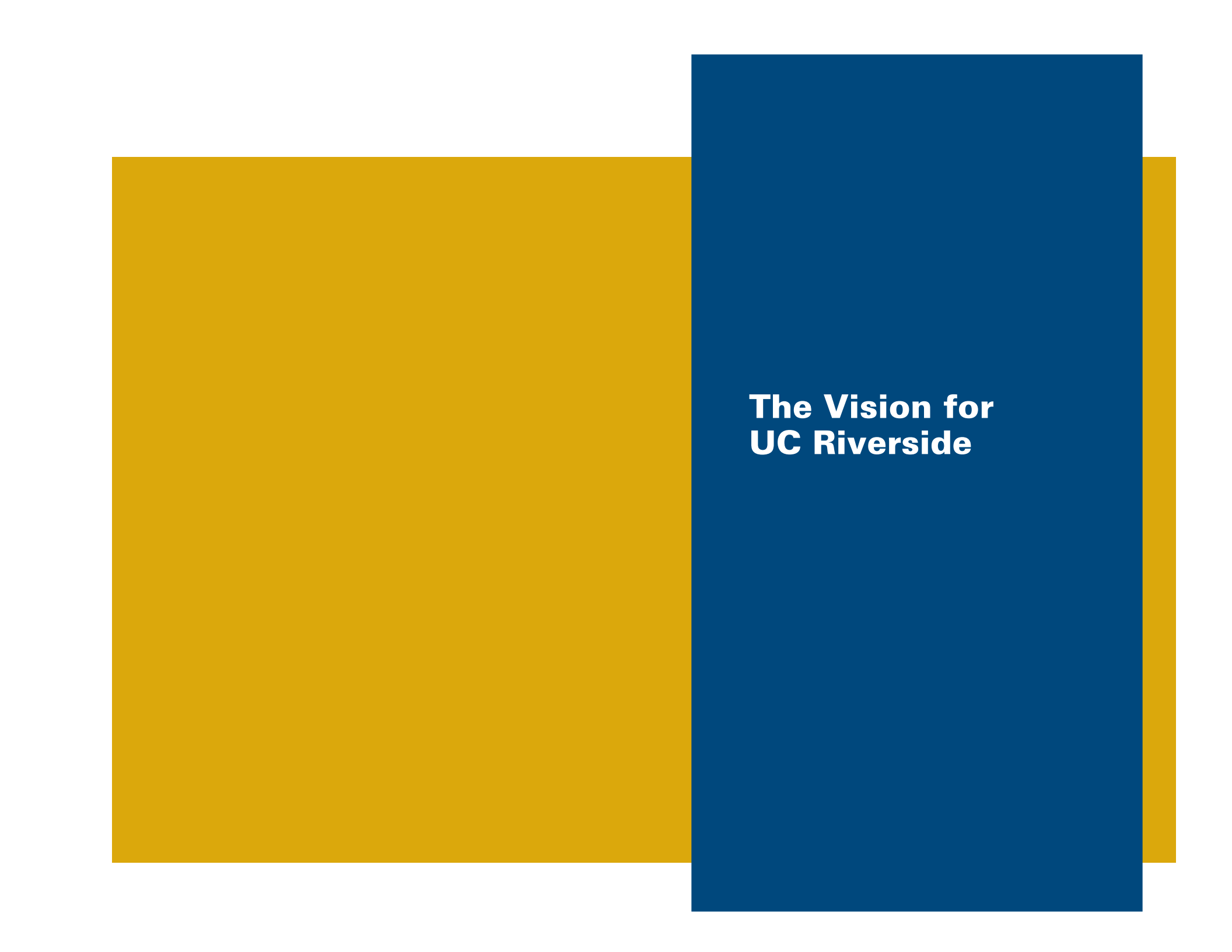
Source: UCR 2005 LRDP; UCR Capital and Physical Planning July 2010; 2005 LRDP Amendment 2 August 2010

\* Includes the MS&E Building to be completed in December 2010

\*\* Includes the Bio Medical Sciences program as indicated in the 2001 LRDP numbers but will be subsumed within the School of Medicine

\*\*\* Includes the space currently assigned to the School of Medicine Dean's office and the School of Medicine Health Sciences Research Building (formerly Health Sciences Surge Building) opened March 2011

\*\*\*\* School of Medicine adds 1,737,815 GSF Academic, Research, Teaching, Ambulatory Care, Medical Office Buildings and Support.  
School of Medicine includes 1,323,350 GSF for two parking structures to serve the School of Medicine.



# **The Vision for UC Riverside**



## **The Vision for UC Riverside**

As UCR grows from a student enrollment of over 20,000 (three quarter headcount average) in 2011 to 25,000 in 2020, it will face many challenges. Key to the process of planning for growth and change is the process of articulating a set of goals and principles that give form to a vision for the future of the campus.

The starting point for the 2005 LRDP effort was the statement of goals from the 1990 plan. These goals remain relevant today.

- 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.

However, the rapidly changing environment in which the University finds itself over thirteen years later requires revising and supplementing these goals to more specifically speak to the conditions, issues, and opportunities faced today.



## 2005 LRDP Goals

Goals of the 2005 Long Range Development Plan include:

- Enhance UCR image and identity
- Accommodate planned growth for UCR to 25,000 students while retaining flexibility for unanticipated additional needs in the future
- Recognize teaching and research change, and encourage interdisciplinary endeavors by identifying a flexible academic zone rather than individual college precincts
- Increase the size of the on-campus residential community and thereby improve opportunities for social interaction and socialization: a living/learning environment
- Improve university/town interactions and synergy; encourage new development and intensification of activity on University Avenue
- Emphasize strong connections and ease of access within campus and with the surrounding community
- Create a regional model of planning, design and environmental stewardship, protecting the natural environment and incorporating sustainable planning and design practices.

### *Goal: Enhance UCR Image and Identity*

Since its earliest days as the Citrus Experiment Station, UCR has had a unique image that derives from its location, climate, history of development, academic and research strengths, and culture. Manifested in its layout, buildings and landscape, this image or design expression can be further shaped and enhanced as the campus undertakes significant growth in coming years.

While the campus exhibits a variety of styles and design influences, large areas of the campus tend to coalesce around three strong themes or images that should guide future design and planning decisions. These are the Natural Setting, Citrus Agriculture, and Campus and Community Patterns.





(top left) **Anderson Hall**  
 (top right) **Arches at Rivera Library**  
 (bottom left) **Orbach Science Library**  
 (bottom right) **Aberdeen Drive**





### Natural Setting

UCR is sited within a powerful and memorable natural setting.

Of particular importance are the undeveloped Box Springs

Mountain slopes in the southeast corner of the campus, where the dramatic, rocky hillsides dominate views and provide a strong reminder of the natural environment that surrounded Riverside's earliest inhabitants.

The arroyos and rolling lower hillsides on the East Campus form a transition zone between natural areas and the developed, more formal campus. Most of these areas are no longer natural but many have a more natural appearance than the groomed areas of campus. The arroyos represent an important but disappearing feature of the foothill areas of Riverside and the campus, and retention of these areas will be important for drainage purposes as well as a link to the natural systems in the region.

### Citrus Agriculture

Since the mid-twentieth century, with the increasing diversification of Riverside's economic livelihood, much of Riverside's once extensive citrus acreage has given way to urban expansion. Nevertheless, the "citrus culture" that developed from the City's orange-dominated past continues to be an integral part of community identity to the present time, and is manifested in the citrus/agricultural research lands located south of Martin Luther King Jr. Boulevard. These groves are among the last remnants in the region displaying the Riverside citrus heritage. In addition, citrus research was the driving force for the establishment of the original Citrus Experiment Station, and therefore ultimately, of this campus of the University of California. The citrus groves that remain on the West



(above) **Rock Outcropping**  
(below) **Natural Planting**



West Campus Orange Groves

Campus are a powerful reminder of this heritage and create a memorable image for the University, different from any other campus.

North of Martin Luther King Jr. Boulevard the new West Campus will begin to emerge where for many years agricultural research and teaching activities have taken place. This represents an opportunity for the design of West Campus landscape and buildings to reflect the strong citrus history of the campus and region. Citrus groves will be retained in cultivation until specific tracts of land are needed for development. In addition, remnant groves can be retained, and plantings to recall early groves can be added over time. Buildings can also refer to the citrus architectural heritage of the campus and region, while also reflecting the image of a modern, 21st Century national research university.



### Campus and Community Patterns

The City of Riverside evolved over time, with initial land platting and parcelization based on the one mile square sections applied throughout the western U.S. because of the Federal Land Ordinance of 1875. This orthogonal layout, with variations, can be seen throughout the City, and extends to the area where the campus has developed. The organization of buildings and streets off campus respond to this orienting structure; variations occur where natural topography and features intervene. This orthogonal grid is also a convenient and appropriate format for residential neighborhoods, and facilitates the creation of friendly, pedestrian-oriented streets, that can diminish the importance of the automobile with development of the West Campus.

The core area of the East Campus can be described as having a traditional university campus character. As compared with the natural and naturalistic areas, a more formal landscape expression is found, with malls, quads, great lawns and plazas that have been developed over the years. In these areas buildings and landscape bear a strong resemblance to the traditional American campus model that first emerged in the eastern United States, comprised of large irrigated lawns or quads, surrounded by a formal arrangement of important buildings. At UCR this expression was clearly influenced by the modernist period in which the campus experienced its earliest growth, with low, unornamented buildings and flat relatively formal open spaces.



(bottom left) **Carillon Mall**

(bottom right) **Rivera Plaza**





*Goal: Accommodate planned growth for UCR to 25,000 students while retaining flexibility for unanticipated additional needs in the future*

UCR, in response to Statewide actual and projected enrollment growth, is planning to expand to accommodate 25,000 students, while providing adequate area for an optimum future campus population of 35,540 some time in the future. However, the pace of change in higher education is high, and the campus must maintain flexibility to respond to currently unknown factors and opportunities that may arise besides enrollment, such as educational partnerships and new research initiatives.

*Goal: Recognize teaching and research change, and encourage interdisciplinary endeavors, by identifying a flexible academic zone rather than individual college precincts*

Whereas in 1990 the UCR colleges and schools desired a certain degree of individual identity and location, increasingly academic endeavors are crossing departmental and collegiate boundaries. Single discipline buildings and even laboratories are no longer the norm, and interdisciplinary interaction is increasingly seen as essential to progress in all areas of academic inquiry and instruction. As a consequence the academic precincts that organized the earlier plan will give way to a less differentiated, more fully integrated academic zone, where opportunities for interaction among faculty and students across varying disciplines is encouraged. Adjacencies and sharing of resources are now and will be even more in the future important considerations in siting facilities.

*Goal: Increase the size of the on-campus residential community and thereby improve opportunities for social interaction and socialization: a living/learning environment*

UCR is widely acknowledged as a campus with a strong sense of community and commitment to diversity. However, campus life remains limited, particularly on weekends and evenings. Increasing the on-campus or near-campus population of students is one way to provide opportunities for additional activities and socialization that are such an important part of a college education. This LRDP sets as a goal, therefore, to house up to 50% of students enrolled on campus or in nearby university-controlled housing. This goal goes hand-in-hand with the existing goal of offering on-campus housing to all freshman and transfer students.

(right) **Lothian Residence Hall**

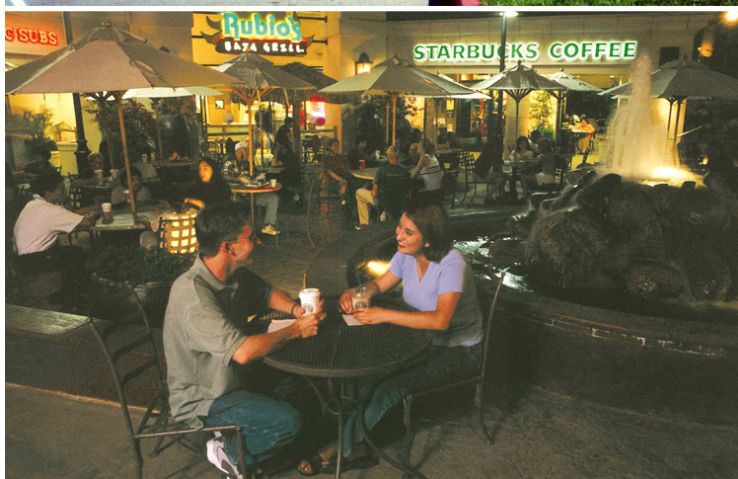


(above) **Petland Hills Residence Hall**





*Goal: Improve university/town interactions and synergy; encourage new development and intensification of activity on University Avenue*



University Village

University Avenue, aptly named, serves as the “front door” to most visitors to the campus. It also is, to a limited degree, a retail and convenience shopping area for students, faculty and staff. Until recently, however, the high activity level and diversity of uses that often characterize the “Main Streets” of many university towns and cities has been lacking. The University Village and Grand Marc developments are the first steps toward realizing this activity

corridor. The significant planned growth of the campus offers the University and the City of Riverside a unique opportunity to build on the success of the recent projects, continue to capture development and activity on University Avenue, and in the process improve the character of this town/gown area.

*Goal: Emphasize strong connections and ease of access within campus and with the surrounding community*

As UCR grows, core uses—academic, housing, parking and recreation - will necessarily be located further apart than is possible in a smaller campus environment. With the additional barrier of the I-215/SR-60 freeway bisecting the campus, connections of all kinds become particularly important. Ensuring ease of access for all transportation modes - walking, bicycling, and shuttle in particular - will help the campus continue to feel readily accessible to the campus community as well as to the surrounding Riverside residents.

*Goal: Create a regional model of planning, design and environmental stewardship, protecting the natural environment and incorporating sustainable planning and design practices*

UCR, like all of the University of California campuses, has a responsibility as a State institution to demonstrate leadership in planning and design practices as well as in education. Ongoing advances in technology, such as in building practices and in materials production and waste management, make environmental stewardship and sustainable building not only desirable but also increasingly affordable. Protecting the natural environment and systems of the campus must also be a high priority.

As an educational institution, UCR is uniquely positioned to not only implement sustainable practices through its facilities and infrastructure projects, but also to further its educational missions by raising awareness, in and out of the classroom. The campus environment can be a powerful resource in ongoing education about environmental awareness.



(right) Pierce Hall



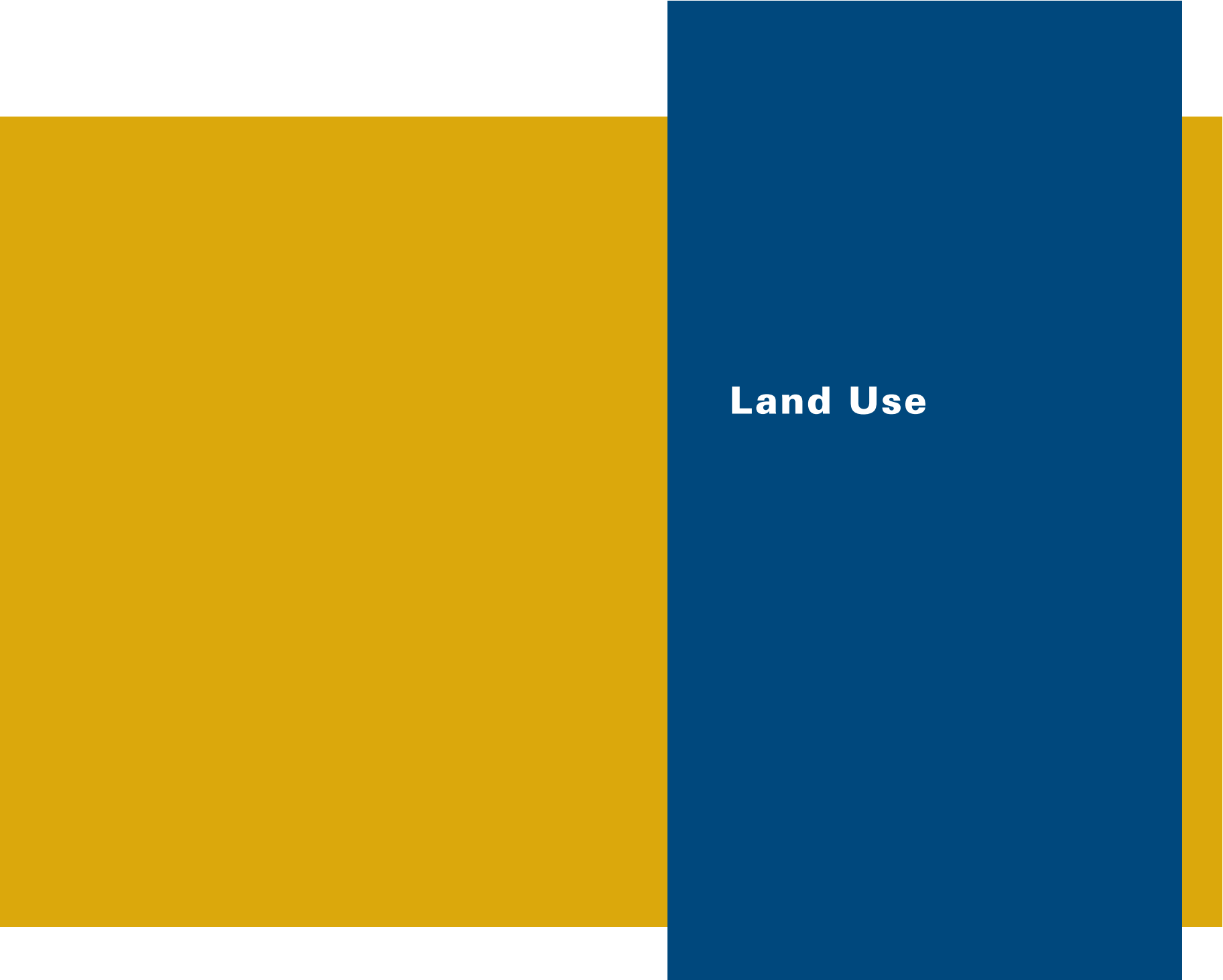


Typical Campus Environments









## **Land Use**



## **Land Use**

### Existing Conditions

UCR currently accommodates a variety of facilities on its 1,144 acre campus. Most of the built facilities are located on the East Campus, while the West Campus is currently characterized primarily by agricultural fields and support buildings. In Fall 2001 UCR had approximately 2.5 million gross square feet of academic facilities (academic, professional schools, and administration) and nearly 4.7 million gross square feet of total built space, including housing for 4,147 (26% of total) students in approximately 1.5 million gross square feet of on campus housing owned or controlled by UCR.

As noted in the Program section of this document, current program projections for UCR indicate that approximately 11.8 million square feet of building space will be needed for an enrollment of 25,000. In order to meet the housing goal of 50% of total enrollment, 12,500 total student housing beds will be needed.

This magnitude of growth is significant and will change the character of UCR. The following sections identify principles to guide facility growth on campus and the arrangement of future land uses.



## Land Use Planning Strategies

In order to achieve campus goals and to accommodate the program anticipated to be associated with an enrollment of 25,000, expansion of the campus and its facilities will be guided by the following land use planning strategies:

- Achieve academic core densities of 1.0 FAR (Floor Area Ratio)\* or higher on the East Campus and 1.6 to 1.9 FAR on the West Campus in order to achieve a balance of academic land area versus other required uses within the existing land base;
- In order to achieve a compact and contiguous academic core and desired development densities, strategies will include infill sites in the developed East Campus academic core as well as expansion to the West Campus academic zone immediately adjacent to the I-215/SR-60 freeway;
- Maintain the teaching and research fields on the West Campus south of Martin Luther King Jr. Boulevard;
- Pursue a goal of housing 50 percent of student enrollment in on campus or campus controlled housing
- Remove existing family housing units on the East Campus, and provide replacement and additional units of family housing on the West Campus;
- Provide expanded athletics and recreational facilities and fields on the East and West Campuses, adjacent to concentrations of student housing; and
- Over time, relocate parking from central campus locations to the periphery of the academic core and replace surface parking with structures, where appropriate.

## Land Use Plan

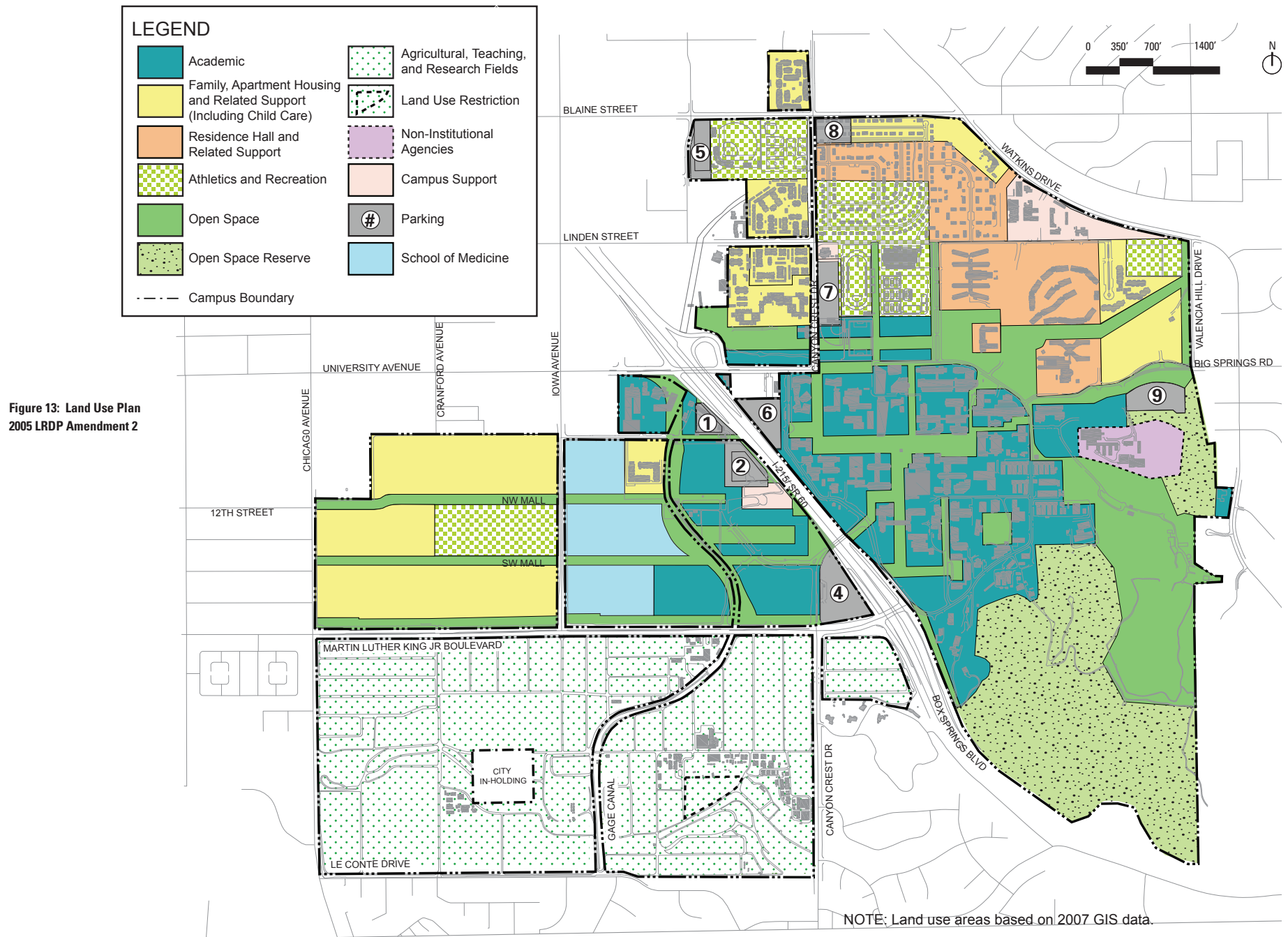
General categories of land use are illustrated on the Land Use Plan, Figure 13, and are discussed below. They include the following:

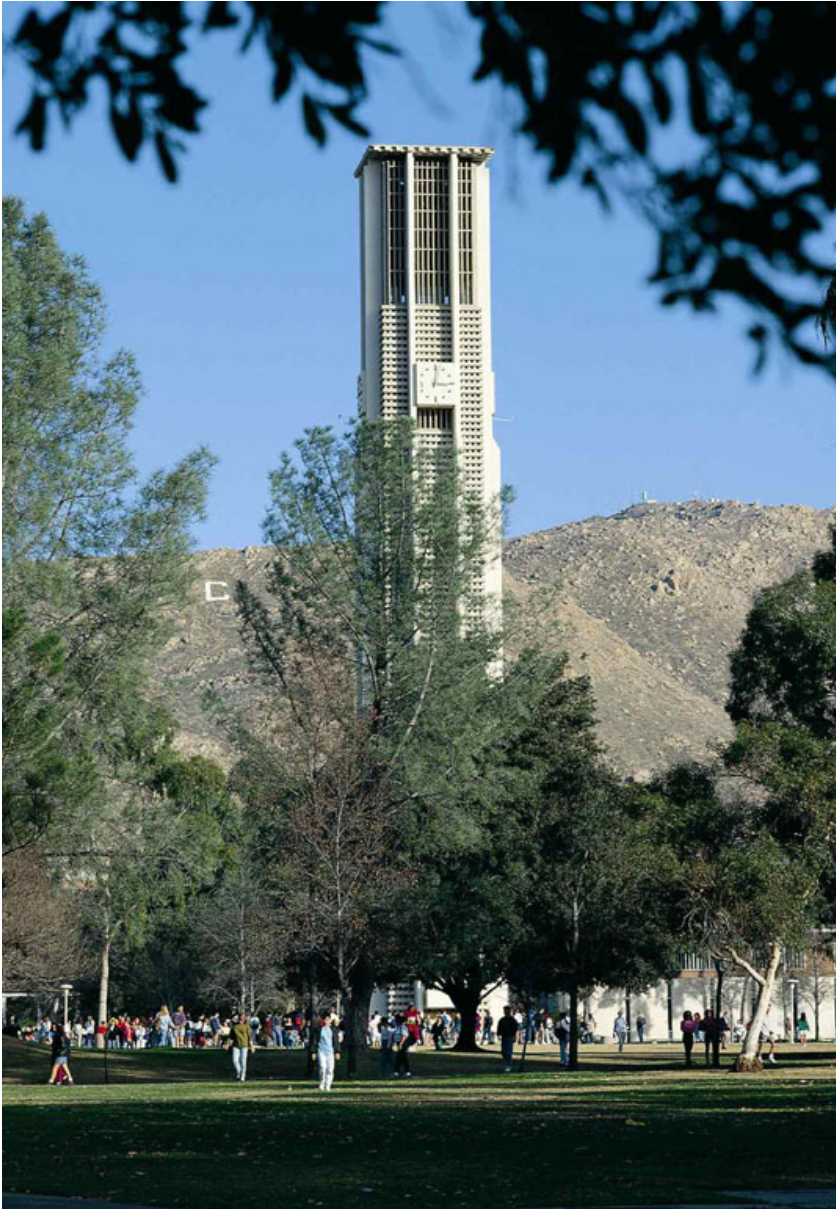
- Academic
- School of Medicine
- Family, Apartment Housing and Related Support (including Child Care)
- Residence Hall Housing and Related Support
- Athletics and Recreation
- Open Space
- Agricultural Teaching and Research Fields
- Non-institutional Agencies
- Campus Support
- Parking

### *Density of Future Development*

A central consideration in planning for growth of UCR has been to determine the density or intensity of future building development needed in order to accommodate the projected academic use program within a walkable, convenient core area. Generally a 10-minute walk is considered the outer limit of convenience in a campus environment. Therefore a circle with a radius corresponding to a ten-minute walk, or between 2,000 and 2,500 feet, is generally considered to delineate an appropriate zone for academic uses. As shown in Figure 14, overlaying the campus with this walking radius, centered at the Carillon Tower, results in a zone within which most instruction and research facilities should be located.

\* for definition of FAR, see p. 64.



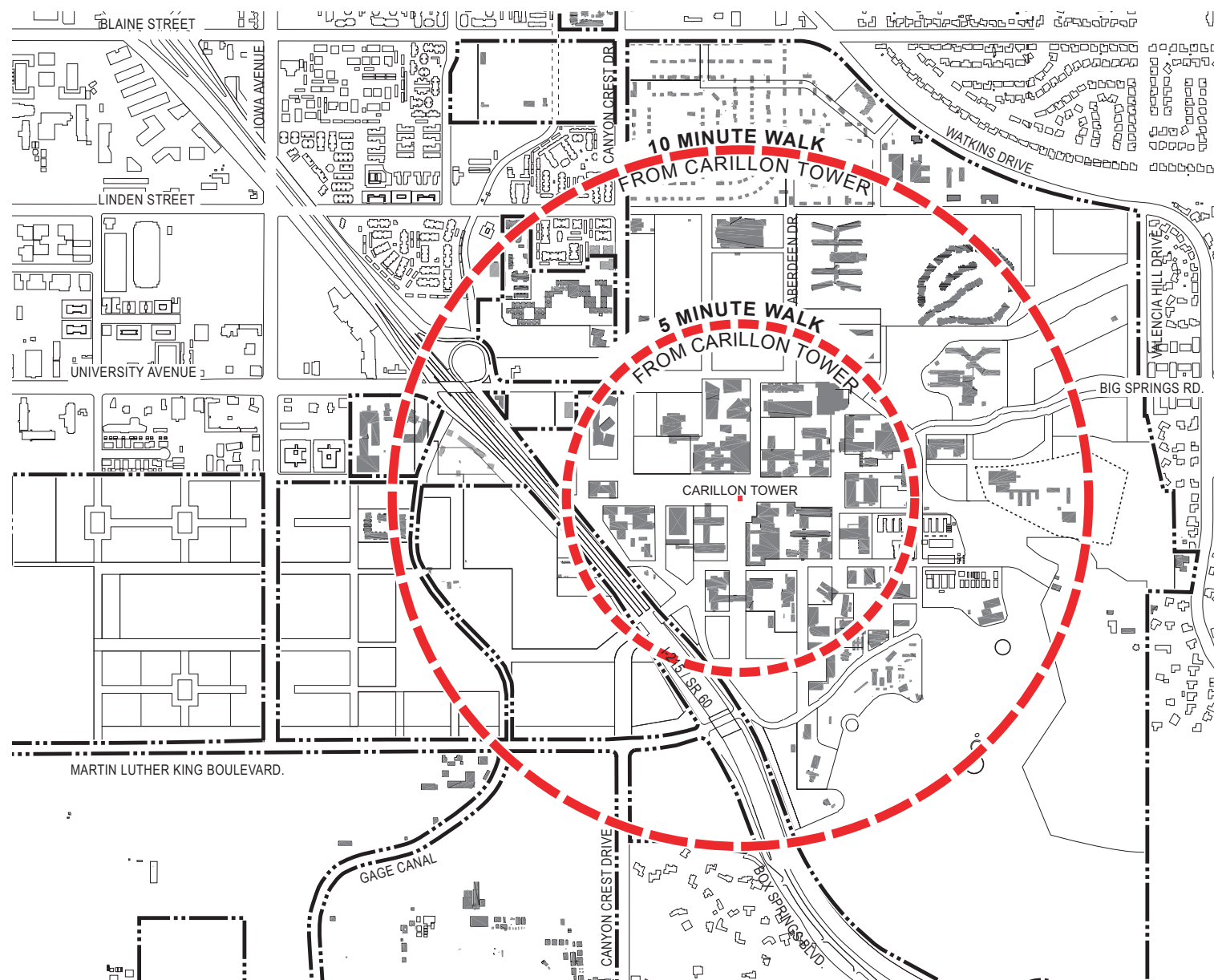


Academic uses have expanded over time at UCR, growing from a core of buildings centering on what is now the Carillon Tower and Mall. Originally, the academic buildings of UCR found in this central campus area were rather low in density or a low FAR, often only one or two stories in height, with ample courtyards and forecourts, and fronting large open malls.

To this day the average density of the Carillon Mall area of the East Campus, as delineated in Figure 15, remains relatively low despite some infill with new structures. This area can be measured as having a 0.65 floor/area ratio (FAR).

FAR is a commonly utilized measure of development density that indicates the ratio of building area gross square footage (floor) to the land area associated with the building (area). Thus a 1.0 FAR indicates a 10,000 square foot building on a 10,000 square foot site. At one story, the building occupies the entire site; at two stories the building occupies one-half of the site leaving the rest of the site for circulation and landscaping; at four stories the building occupies one quarter of the site with the rest occupied by circulation and landscaping, and so on. FAR is only one indicator of development character, but it does provide a useful benchmark of intensity of

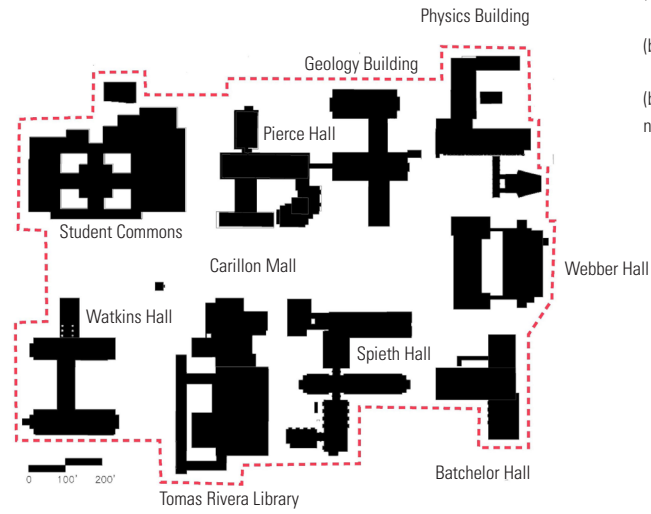
Figure 14: Walk Times in the Academic Core





building development vs. circulation and open space elements.

If the projected academic program of UCR was developed at a 0.65 FAR, the academic area of the campus will be too widely spread out to be readily walkable and would consume too much land area, reducing long term flexibility and limiting the availability of sites for other large land users such as housing and recreation. In recent years, however, new facilities have been developed at higher densities. The recent Science Library and the Bourns Engineering Buildings are notable examples of buildings that the campus has constructed in recent years that are somewhat taller and also arranged more compactly than those shown in Figure 15. As a comparison, the area of the campus that includes the Science Library, Physics, Statistics, Webber, and Boyce Halls, diagrammed in Figure 16, has an average density of 1.0 FAR.



(top left) **Figure 15: Carillon Mall Area** (.65 FAR)

(bottom left) **Carillon Mall Area**

(bottom right) **Watkins Hall**, a low scale building near Carillon Mall



Various scenarios were explored in preparation of this LRDP for the density of the academic core of the campus, the resulting academic land area, and implications for overall campus development. A capacity analysis completed as part of the development of Amendment 2 identified that the campus must continue to achieve academic core densities of 1.0 FAR or higher on the East Campus. These densities are achievable in all academic building types on the East Campus and do not require buildings higher than three to five stories, although taller buildings may be desirable in some cases. This can be achieved while creating and maintaining pleasant, pedestrian-scaled open spaces.

On the West Campus the campus must achieve densities of 1.6 to 1.9 FAR in the future in order to meet the anticipated enrollment growth and academic goals within the land base available. The density of future facilities at the medical school and West Campus academic



(above) **Figure 16: Science Library Area** (1.0 FAR)

(top right) **Science Library**, a recent example of a higher density development

(top left) **Bourns Engineering Building**

core will be increased and taller buildings will result in new relationships with key open spaces. School of Medicine buildings will be at least five stories and up to seven and eight stories with the possibility of a taller signature building at the terminus of the West Campus Central Mall, for example, to achieve a 1.9 FAR.

The Land Use Plan assumes, therefore, that remaining academic development parcels on the East Campus and all academic development on the West Campus will be accomplished at densities averaging from at least 1.0 FAR for the East Campus academic core and 1.6 to 1.9 FAR for the West Campus academic core and the School of Medicine.

Without strict adherence to these densities, there is the real possibility that UCR could limit the development potential of available land resources and run out of capacity for critical instructional, research and support uses in the future. Thus, low intensity uses such as one and two-story buildings and greenhouses will be evaluated and removed or relocated as appropriate. These existing low intensity facilities will be demolished and the uses generally will be relocated to newer facilities with a higher density or moved to the periphery of the campus. Greenhouses will be relocated to the West Campus or incorporated into new buildings in areas such as the roof where feasible.

### *Configuration and Organization of Primary Academic Uses*

In the 1990 LRDP the academic core of the campus was subdivided into academic precincts - areas of the overall academic zone that

were intended to house specific academic colleges or schools. Precincts were identified for the College of Humanities and Social Sciences, including the Arts precinct; College of Natural and Agricultural Sciences; College of Engineering; School of Business Administration; and the Graduate School of Education. Additional smaller areas were set aside for other Professional/Graduate Schools and Libraries.

Today, however, universities are experiencing enormous changes in the manner in which research and teaching are being conducted. In addition to the technological innovations evident throughout higher education, teaching and research are increasingly interdisciplinary in the university setting, with endeavors commonly involving multiple departments and faculty. Facilities that in the past were housed in buildings devoted to a particular discipline or department, such as Geology or Biology, are now commonly occupying multi-disciplinary buildings. Special research institutes and organized research units (ORUs) are also being established focusing on collaborations between disciplines.

The academic core, therefore, is no longer planned to include specific academic precincts. Rather, flexibility will be retained for siting new facilities, many of which may in the future be interdisciplinary combinations, rather than the single discipline buildings that formed the original cluster of UCR facilities. Each of the colleges will have a discernible center or focus of certain college and departmental facilities predicated on the current arrangement, but future labs, offices, and classrooms may be located nearby or in associated/affiliated areas of the campus with appropriate adjacencies.

UCR has historically placed a particular emphasis on undergraduate instruction, and on the successful integration of incoming freshman and transfer students into higher education, as well as on the intro-

duction of undergraduates to graduate study and research within the university context.

In order to further this focus, the Academic support uses with the highest activity levels should be located near the center of the academic core on both the East and West Campuses. In these locations, lecture halls, large classrooms, dining halls and cafes, computer centers, some student support services, and libraries should be located on and near primary pedestrian circulation routes and in central, accessible locations, where informal gathering and interaction can occur easily.

Academic uses as well as support will be located on both the east and west sides of the campus, and will be arranged in a compact layout wherever possible that will assure easy accessibility.

The Carillon Mall, Rivera Library and the Highlander Union Building will continue to mark the center of the academic core on the East Campus. High activity uses, such as the student commons, dining and café facilities, student government, clubs, meeting rooms, classrooms and lecture halls, some student support services, and libraries will cluster in the center of this area. Additional instructional and research sites are available, primarily on the periphery of this area, and potentially on sites currently occupied by low-density uses, such as greenhouses and one- and two-story instruction and research buildings.

The West Campus Mall, Gage Canal Mall, and School of Medicine Quad will be the signature open spaces associated with the West Campus academic core. Active uses, such as meeting rooms, classrooms, lecture halls, research laboratories, auditorium, library, dining and café facilities, and student support services, will be located in prime locations adjacent to these landmark open spaces whenever feasible.

## Academic and Support Uses

### *Academic*

Instruction and research uses comprise the vast majority of academic uses on the university campus. These uses will continue to be infilled within the East Campus academic core area.

The West Campus offers unique opportunities for the campus to develop a vital academic zone with high visibility and accessibility, and close connections to University Avenue and the City of Riverside community. Academic uses on the West Campus will occupy a zone immediately adjacent to and a direct extension of the academic uses on the East Campus.

The School of Medicine intends to utilize a distributed clinical system with academic uses including teaching, research, ambulatory care, and medical offices, as well as support uses such as administration, academic support, utilities and infrastructure, and parking. A full description of the School of Medicine is found in the School of Medicine section of this document.

While the definitive program is not known, besides typical instruction and research, academic uses on the West Campus may include:

- Professional schools, such as the existing Graduate School of Education and the School of Business Administration currently located on the East Campus and potential future additions such as Law and the School of Public Health;
- University Extension (UNEX), which currently occupies 188,657 gross square feet on University Avenue at the northern perimeter of the West Campus academic core; and a Conference Center.



*Support*

Administrative and student support uses, which are increasingly benefiting from technological advances, and many of which no longer need direct proximity to students or faculty to be effective, will likely move out of the core academic areas over time. However, some of the administrative uses are projected to remain in the East Campus Academic core, including the Chancellor's Office and senior administration, as well as student-centered uses such as Registrar and Financial Aid. Other administrative uses will still need to be near teaching and research facilities, but not necessarily occupying prime academic locations.

*Library*

The two primary libraries on the UCR campus, the Tomás Rivera Library, focusing on the Humanities, Arts and Social Science, and the newer Orbach Science Library, both located on the East Campus, will remain. Smaller library collections may be housed as appropriate in departmental or shared facilities throughout both East and West Campuses.

*Arts*

With the completion of the Arts building, the campus has anchored University Avenue and the main visitor entry to campus with this important, academic instruction, research and performance facility. This location, which provides high visibility and ease of access for both on campus and off campus attendees at events, is appropriate for this building and similar uses. A limited number of additional sites are available in proximity to the University Avenue/Canyon Crest intersection for public/campus uses.

*Public-Oriented Uses*

Public uses such as the Alumni and Visitor Center and Performing Arts Center planned in the vicinity of the University Avenue/Canyon Crest Drive intersection on the East Campus. The area may also include a home for a recital hall, art gallery and museum facility, and space for visitor-oriented activities such as campus tours and banquets.

On the West Campus ambulatory care, medical offices and outpatient facilities are planned at the School of Medicine. The School of Medicine may also include public oriented uses such as an auditorium, library, and space for visitor-oriented activities.

*University Extension*

University Extension (UNEX) occupies facilities on University Avenue west of the I-215/SR-60 freeway on the West Campus. Future expansion and/or reconfiguration of these facilities are appropriate on or near this site to reinforce its visibility to the public and convenient community access.

*Conference Center*

Any future conference center would appropriately locate on or near University Avenue on the West Campus adjacent to UNEX to capitalize on good access and visibility, and adjacencies to graduate and professional schools and some undergraduate programs.

*Housing and Affiliated Uses*

Residential uses comprise the third largest land area on the UCR campus, following Agricultural Teaching and Research Fields and Academic. As described in the Program section of this LRDP, UCR

has increased its goal of housing students in campus controlled housing from its previous level of 35% to 50%, or 12,500 students of the projected 25,000 enrollment in 2020.

Housing and housing-related uses include:

- Residence Halls
- Apartment and Family Housing
- Dining and Food Service
- Student Services
- Child Care.

### *Residence Halls*

Existing residence halls include Aberdeen - Inverness, Lothian, and Pentland Hills, all located on the East Campus. Future residence halls will be located near these existing buildings, in order to maximize efficiency with shared facilities such as student services, and to encourage socialization among new and younger students.

The land use plan designates 60.5 total acres for residence halls. The resulting required density for these facilities is approximately 120 beds per acre, comparable to the density of Pentland Hills Phase 2. It has been estimated that 2,986 new residence halls beds will be required, for a total of 5,906.

### Family, Apartment Housing and Related Support (including Child Care)

UCR currently coordinates student life programs in seven apartment housing projects: International Village on the West Campus,

Bannockburn (on Canyon Crest Drive), University Plaza (on Linden Street), Stonehaven (at the northwest corner of Blaine and Canyon Crest), Falkirk (west of Canyon Crest Drive, north of Linden), Oban (west of Canyon Crest Drive, south of Linden), and Glen Mor 1 (located south of Linden Street, west of Valencia Hill Drive). International Village and Stonehaven are third party developments on University land. International Village student housing is primarily for University Extension students with 65 beds reserved for the general campus population. UCR is planning to develop additional housing of this type in conjunction with ongoing demonstrated demand.

Apartments will be provided on the perimeter of the East Campus, adjacent to the residence halls and the recreation/athletic fields and facilities. It is expected that upper division students will occupy these apartments, enabling proximity to other students and student services. Units will typically include three or four single or double occupant bedrooms. A total of 58.5 acres of apartment housing are identified on the East Campus, and densities are assumed to be approximately 120 beds per acre. This will allow 3,858 beds in addition to 959 existing for a total of 4,752 apartment beds on the East Campus. Apartment housing also will be provided on the West Campus. It is expected that these units will be occupied primarily by graduate students. Apartment densities and unit types will be similar to those on the East Campus. Total anticipated apartment beds in 2020 will be 5,880.

Family housing units will be provided on the West Campus, replacing and augmenting the 268 units now located on the East Campus. Family housing neighborhoods will enjoy proximity to services on University and Chicago Avenues, and to Emerson Elementary School, which lies just west of Chicago Avenue, off Martin Luther King Jr. Boulevard on Ottawa Avenue. Child care facilities will be located within the areas designated for family housing.

Family housing units are planned to be townhouse- and apartment-style and will be provided at densities of approximately 30 dwelling units per acre, which will allow adequate space for playgrounds, tot lots and other amenities. Neighborhood parks will also be provided in family neighborhoods. One student is assumed to occupy each of these units. The LRDP assumed that a total of 714 units will be provided. Approximately 77.4 acres will be devoted to housing and support services on the West Campus.

It is also assumed that students will continue to live in Riverside and nearby communities. The City of Riverside recognizes that there are opportunities for additional housing in the city close to the campus, and has addressed this in the Addendum to the University Community Plan and in reviews of the University Avenue Specific Plan, the Marketplace Plan and the Downtown Plan. See also the Campus and Community section of this LRDP for additional discussion of off-campus student housing opportunities.

Parking for students housed on campus is provided within the designated residential land use areas. Residence halls will have parking lots located in proximity to the halls; apartments and family units will likely have parking provided immediately adjacent to or within buildings. (See Circulation and Parking section for further details.)

UCR has been successful in the past and will continue to explore opportunities for partnerships with private developers to construct and manage new apartment or family housing units, with campus Community Life providing residential programs as needed.

#### *Residential Dining and Food Service*

Residential dining and food services are currently provided for students in Lothian and Aberdeen - Inverness residence halls; Pentland Hills residents may use either dining facility. As new residence halls

are added on the East Campus, dining facilities will be expanded in two locations: north of the recreation center and in the vicinity of the Student Health Services Building (formerly Veitch Center). In order to provide convenient food service throughout the campus as enrollment increases, food trucks, cafes and other smaller food service outlets may be provided on both the East and West Campuses in addition to residence halls and dining in the Highlander Union Building.

#### Student Services

Student services include a range of uses that are operated to support students and student life on campus. Student services are generally located to assure proximity to students, often in housing areas but also in academic zones. Student services include uses such as:

- Highlander Union Building (dining, conference meeting rooms, student activities and organizations)
- Health Services Building
- Campus Bookstore
- Child Development Centers
- Student Counseling Center
- KUCR Radio Station
- Career Center

#### *Highlander Union Building (HUB)*

The HUB (formerly the Student Commons) was redesigned and rebuilt to expand facilities and use. It houses student organizations and clubs, meeting rooms, event space, food service and a small amount of retail. The central location of the HUB on the Carillon Mall is consistent with the overall LRDP goal of centralizing high activity uses.

### *Student Health Services Building*

The campus Health Services Building, formerly known as the Veitch Center, is located between Aberdeen-Inverness and Pentland Hills Residence Halls. It offers students a comprehensive primary care clinic including a staff of board-certified physicians, an on-site medical laboratory, a full-service pharmacy, a women's health clinic, dental services, vision care, as well as an array of resources and programming to promote wellness and healthful living practices.

### *Campus Bookstore*

The UCR Campus Bookstore is a nonprofit auxiliary service owned by the university and is self-supporting. The main bookstore is located north of the HUB. In addition, the UCR Bookstore operates the UNEX Bookstore, located in the UCR Extension facility on the south side of University Avenue just west of the I-215/SR 60 freeway. At the main bookstore, students can purchase all books needed for their classes, most necessary school supplies, as well as general interest books and merchandise items such as UCR clothing and gift items.

### *Child Care*

UCR currently operates a Child Development Center on Watkins Drive. It includes programs for children from infants to kindergarten, and is open to children of UCR students, faculty and staff, as well as the general public, depending on availability. It was recently expanded with a new facility adjacent to the first, doubling its capacity. In the long term, additional child care centers are planned for the West Campus, within the future family housing neighborhoods.

### *Counseling Center*

The Counseling Center offers professional psychological services including personal/couple/group counseling; vocational interest testing and interpretation; crisis intervention; referral to community services; faculty/staff consultation; graduate entrance exams; bio-feedback; and focused workshops.

### *UCR Radio Station (88.3 FM)*

The UCR radio station KUC operates seven days a week and includes a daily evening news magazine and innovative public affairs programs in addition to its musical offerings of rock, avant-garde, punk, reggae, Latin, industrial, soul, folk, jazz and classical programming.

### *Career Center*

The Career Center offers individual and group career counseling; employment workshops, job fairs and job listings, resume preparation and mock interviews; Career, Graduate and Professional Library; Academic Internship and Cooperative Education Placement; vocational testing; and underrepresented student career development programs.

### *West Campus Student Center*

A student center is proposed as a use within the West Campus academic core and includes a range of uses to provide support services for students and academic programs. These could include, but not be limited to, uses such as a book and retail store, student commons (activities and organizations), dining and café facilities, a potential conference center and other meeting rooms, and long term or short term hoteling and/or housing facilities for visiting faculty



and campus visitors. The center is proposed to be located at a prime location at the northeast intersection of the Gage Canal Mall and West Campus Mall.

## Athletics and Recreation

Athletics and Recreation uses at UCR will continue to include a wide range of activities and will be located near student housing. Activities include:

- Curricular offerings
- Intramural sports
- Inter-collegiate athletics
- Student, faculty and staff recreation.

Fields and indoor facilities are currently provided on the East Campus between Linden and North Campus Drive, and include fields, courts, and the Student Recreation Center. Additional fields are provided at the Riverside Sports Complex, a campus/city shared use facility located at the southwest corner of Canyon Crest Drive and Blaine Street on University land.

Significant additional field and facility space will be needed to serve the growing UCR population. Field space in particular is already inadequate to serve the student population, with fields scheduled for use late into the evening.

In the near future, fields and facilities will be added to the East Campus, as a means to continue to provide good access for students living in residence halls and for ease of maintenance and service. Over time, however, additional facilities will be added to the West Campus to provide additional capacity and to provide good access for West Campus residents, as well as the general campus population.

## Open Space

As described more fully in the Open Space and Landscaping section of this LRDP, a significant land area at UCR will be set aside for the malls, quads, plazas, courtyards, and other formal and informal gathering spaces that are so essential to campus life. Campus open space includes areas such as:

- Naturalistic open spaces, including the arroyos and their edges
- The Botanic Gardens
- Malls, which serve as the primary connections throughout campus and movement corridors for pedestrians and bicycles
- Quads and building related courtyards
- Important campus buffer areas, which provide setbacks from adjacent uses.

## Open Space Reserve

The natural, steep hillsides of the Box Springs Mountains extend into the southeastern quadrant of the campus. This area will be preserved in its natural state, protected from future development, except for the minimum required for access to, maintenance, and updating of existing uses and a limited amount of sensitively-sited infrastructure facilities.

See the Open Space and Landscaping section of this LRDP for a more complete discussion of the open space system for UCR.

## Agricultural, Teaching and Research Fields

Maintaining the ability of faculty and students to conduct field research activities on the main UCR campus is a high priority; however, competing demands for academic and other facilities require that some of the West Campus lands currently used for research

will be ultimately developed to more intensive uses north of Martin Luther King Jr. Boulevard. In addition, it is assumed that most of the field research remaining on the East Campus, consisting primarily of greenhouses, will also relocate to the west, with the exception of scattered areas like the citrus grove south of the Salinity Lab, and certain specialty facilities which must because of their use remain in close proximity to existing facilities on the East Campus.

Teaching and research fields will continue to be located on the west side of the campus south of Martin Luther King Jr. Boulevard. Some of these fields have been in cultivation for over 100 years, prior to the establishment of the Citrus Experiment Station in its current location in 1917.

Other research facilities will be located in off campus locations. Such facilities today include the 540-acre Coachella Valley Agricultural Research Station, acquired in 1991 to mitigate the anticipated loss of agricultural lands on the West Campus north of Martin Luther King Jr. Boulevard. This was first proposed in the 1990 LRDP.

### Existing Non-Institutional Uses

UCR leases sites for several non-institutional uses with which it has ongoing research relationships: the USDA Salinity Lab and the Citrus Germplasm Repository. Future partnerships with private industry or government agencies are possible to augment core instructional and research activities at UCR. Sites for these uses would be most appropriate on the West Campus where they can enjoy good access and good visibility from the improved Martin Luther King Boulevard and I-215/SR-60 interchange. Sufficiently large sites are also available in this vicinity for a range of program needs. No additional land has been reserved for these uses. They would be incorporated into the West Campus Academic core.

### Campus Support

Campus support uses include:

- Corporation Yard and Maintenance
- Grounds Maintenance
- Central Utility Plant and Satellite Plants
- Electric Substation
- Materials Management
- Fleet Services
- Environmental Health and Safety
- Transportation and Parking Services (TAPS).

#### *Corporation Yard, Maintenance and Recycling*

The corporation yard is located on Watkins Drive in the northern part of the East Campus. Some uses might need to be relocated at another site in the future to provide for expansion. A large site is provided for use as needed on the West Campus.

#### *Grounds Maintenance*

Grounds maintenance is currently located in the Academic Core on the East Campus. These uses will be relocated over time to a corporation yard site on either the East Campus or the West Campus, or may have facilities on both sides of campus.

#### *Central Utility Plant and Satellite Plants*

The existing central utility plant and the satellite chiller plant provide steam and chilled water for the East Campus, and, like Grounds,

are located within the Academic Core. They are linked via a looped system to two thermal energy storage tanks located to the east at higher elevations. Space has been dedicated next to the second tank for a third tank. All of these facilities will remain in place and will continue to serve the East Campus. The West Campus could be served from a new small central plant facility immediately west of the freeway, if needed, or by small distributed nodes and/or individual units in buildings. (See Utilities and Infrastructure section of this LRDP). Space for additional chillers has been allocated in the Satellite Chiller Plant for future East Campus facilities expansion, and older equipment may be replaced or expanded in place over time.

#### *Electric Substation*

A City electrical substation is located directly west of I-215/SR-60, just north of Parking Lot 30. The transformers and associated switchgear distribute power to the campus. As the West Campus grows, additional support, service yard, and storage uses will be added around the substation, which will serve to separate it from the nearest academic buildings. Transmission lines lead to and from this facility; these will need to be relocated adjacent to the freeway as the West Campus develops.

#### *Materials Management*

This function is currently located in the corporation yard. It could be relocated to the West Campus to improve freeway access and to minimize the impacts of large truck traffic on campus.

#### *Fleet Services*

Currently located in the corporation yard area, these facilities could be relocated to the West Campus near the Canyon Crest undercross-

ing of I-215/SR-60. Fleet parking could be accommodated in a parking lot or structure on the West Campus or in another appropriate location to provide for expansion room in the existing corporation yard.

#### *TAPS*

Transportation and Parking Services (TAPS) operates the Highlander Hauler, the campus shuttle, manages parking permitting on campus, and is responsible for transit and bicycle planning. Currently located in a small building north of the Pentlands Hills residence halls, TAPS could be relocated to the West Campus, or possibly adjacent to or in a future parking garage on Canyon Crest Drive and Blaine Street or to the parking structure envisioned on Parking Lot 24. With a location at either of these major campus entries, TAPS would have good visibility and be easily accessed by commuters and residents.

#### *Environmental Health and Safety (EH&S)*

EH&S provides safety, fire, laboratory, biological, radiation and other services in addition to environmental functions such as hazardous waste management. Transportation of hazardous materials is regulated by the federal government. As a result, EH&S will relocate to a larger site on the East Campus, based on current planning assumptions.

### *Parking*

Parking is provided for students, faculty, staff, and visitors to the University. In upcoming years, however, the manner in which this parking is provided will change dramatically. To date all parking has been provided in surface lots located throughout the campus. In the future, parking structures will begin to replace surface lots as more land is needed for academic, housing, recreation and other uses. In addition, parking will be moved from central locations on campus to more peripheral sites.

The Land Use Plan indicates the proposed ultimate locations of future commuter parking structures and lots. Additional small parking areas would be provided within the developed portions of the campus for special needs, disabled motorists, and for service, emergency and delivery vehicles. Residential parking is provided within and adjacent to the various campus residential neighborhoods. See the Access, Circulation and Parking section of this LRDP for a more complete discussion of parking strategies and plans.

### Summary of Land Use Acreages

Table 6 summarizes the total acreage by use on the East and West Campuses as shown on the Land Use Plan (see Figure 13). The total acreage indicated includes portions of the Gage Canal right-of-way which traverses University land, even though the easement is owned by the Gage Canal Company. The University will have pedestrian and bicycle access to this right-of-way once the canal is covered in conjunction with West Campus development over time.

The 2005 LRDP Amendment 2 acreages differ from the 2005 LRDP. For Amendment 2, land use areas were calculated using a more accurate 2007 GIS data base that was not available at the time of the 2005 LRDP. All base maps were derived from a 2006 campus aerial (updated 2008) from UC Riverside using EPOCH 2004 datum. West Campus acreage calculations are based on UC Riverside property lines, not public right-of-way.



## General Development Strategies

To ensure overall consistency in campus development, the following strategies will be instituted or continued:

1. Establish a design review process to provide regular review of building and landscape development on campus.
2. Review and update, as needed, the Campus Design Guidelines and the Campus Landscape Guidelines to ensure conformity with LRDP planning strategies.
3. Review other plans that may be prepared, such as district, sub-area or transportation plans, for conformity with the goals and design intent of the 2005 LRDP and 2005 LRDP Amendment 2.

Table 6: Summary of Land Use Acreages

|                                                                      | East Campus  | West Campus  | TOTAL AREA      | East Campus 2005<br>LRDP Amend-2 | West Campus 2005<br>LRDP Amend-2 | TOTAL AREA     |
|----------------------------------------------------------------------|--------------|--------------|-----------------|----------------------------------|----------------------------------|----------------|
| Academic                                                             | 132.2        | 46.2         | 178.4           | 132.2                            | 41.4                             | 173.6          |
| Special Academic Building Area                                       | 0.0          | 8.1          | 8.1             | 0.0                              | 0                                | 0.0            |
| School of Medicine                                                   | NA           | NA           | 0.0             | NA                               | 38.7                             | 38.7           |
| Family, Apartment Housing and Related Support (including child care) | 39.6         | 68.5         | 108.1           | 58.5                             | 77.4                             | 135.9          |
| Residential Halls Housing and Related Support                        | 60.5         | 0            | 60.5            | 60.5                             | 0                                | 60.5           |
| Athletics and Recreation                                             | 53.4         | 14.1         | 67.5            | 48.7                             | 15.6                             | 64.3           |
| Open Space                                                           | 144.2        | 25.2         | 169.4           | 144.2                            | 47.0                             | 191.2          |
| Open Space Reserve                                                   | 130.5        | 0            | 130.5           | 130.5                            | 0                                | 130.5          |
| Campus Reserve                                                       | 0.0          | 37.3         | 37.3            | 0                                | 0                                | 0              |
| Agricultural, Teaching and Research Fields                           | 0.0          | 294.9        | 294.9           | 0                                | 296.0                            | 296.0          |
| Non-Institutional Agencies                                           | 12.3         | 0            | 12.3            | 12.3                             | 0                                | 12.3           |
| Support                                                              | 11.0         | 9.1          | 20.1            | 11.0                             | 2.9                              | 13.9           |
| Parking                                                              | 17.1         | 7.9          | 25.0            | 16.6                             | 10.9                             | 27.5           |
| <b>Total Acres</b>                                                   | <b>600.8</b> | <b>511.3</b> | <b>=1,112.1</b> | <b>614.5</b>                     | <b>529.9</b>                     | <b>1,144.4</b> |

## Footnotes:

2005 LRDP Amendment 2 acreages differ from the 2005 LRDP. For Amendment 2, land use areas were calculated using more accurate 2007 GIS data that was not available at the time of the 2005 LRDP. All base maps were derived from a 2006 campus aerial (updated 2008) from UC Riverside using EPOCH 2004 datum. West Campus Acreage calculations are based upon UC Riverside property lines, not public right-of-way.

## East Campus

1. Land Use areas were not recalculated for Amendment 2.
2. Housing acquisition after 2005 were added to the 2005 LRDP Amendment 2 housing acreage totals.
3. Change in land use from Athletics and Recreation to Housing for the Glen Mor 2 project included with the 2005 Amendment 2.

## West Campus

1. The Gage Canal easement, 50-feet wide and approximately 2.6 acres, is included in the total West Campus land use acreage and the Open Space land use acreage even though it is owned by the Gage Canal Company, not UC Riverside.
2. The Caltrans Maintenance Yard (4.7 acres) located at the east terminus of Everton Place adjacent to the west side of the freeway has been included in the master planning of the West Campus but is not part of UCR ownership at this time. UCR would like to acquire the land in the future with the acreage as follows: Academic - 1.5, Open Space - 1.4, and Parking - 1.8 acres.
3. 2005 LRDP Amendment 2 Open Space reconfiguration with the Gage Canal Mall is 11.6 acres, including 1.4 acres in Caltrans ownership and 2.60 acres in the Gage Canal easement. Add together the Gage Canal Mall, West Campus Central Mall, Southwest Mall, Northwest Mall, 100-foot buffer north of MLK Blvd and the open space setback along the west side of the freeway results in the total West Campus Open Space of 470 acres.
4. The Campus Support yard located west of the freeway and south of the parking garage (P2) is 2.9 acres including the Substation - 0.74 acres and Campus Support - 2.16 acres. The Campus Support Yard previously sited at the northwest corner of the West Campus has been included in the School of Medicine precinct.
5. Parking acreage differs between Table 6 and Tables 7 & 8 due to the difference between the total parking land use acreage by site and the future building footprint calculated at 80% coverage in the 2005 LRDP and using more accurate 2007 GIS data in 2005 LRDP Amendment 2.





**School of Medicine**





## **School of Medicine**

### Background

In 2008 The UC Board of Regents approved the academic program for a four-year medical school at the University of California, Riverside (UCR). This action was part of the expansion of UC's medical education programs by increasing enrollments at existing medical schools and planning for at least one new UC school of medicine. The medical school will serve the area surrounding the Riverside campus and improve the health of the medically underserved throughout the inland southern California region. The UCR medical school intends to utilize a distributed clinical system. As such, UCR will partner with regional hospitals, clinics, and providers for its clinical programs and, therefore, does not include planning for a hospital facility on campus. At maturity, the medical school will enroll a total of 400 medical students, 160 graduate students, and 160 postgraduate students (i.e., resident physicians). The students are included within the 25,000 student enrollment number used for the 2005 LRDP projection.

With the approval of Amendment 2 to the 2005 LRDP by The Regents, the School of Medicine will become a new land use designation on the UCR LRDP Land Use map, see Figure 13: Land Use Plan. The School of Medicine will occupy an area on the West

Campus that has been in citrus and other agricultural cultivation for teaching and research through the UC Citrus Experiment Station that predates the campus. The approximately 38.7-acre School of Medicine site is bounded by Martin Luther King Jr. Boulevard to the south, Iowa Avenue to the west, Everton Place to the north, and the Gage Canal easement/West Campus academic core to the east.

### Land Use Designation and Permitted Uses

This section describes the School of Medicine land use designation, program, agencies, precinct design criteria, circulation, parking assumptions, and provides a broad and coherent policy framework to achieve the University of California's mission to provide education, research and public service. As a long range plan, the framework for the School of Medicine needs to be adaptable in light of potential changes in medical school programs and planning goals due to advances in technology, changes in teaching methods, etc.

Permitted uses within the School of Medicine land use designation include teaching, research, administration, ambulatory care, medical offices, support (auditorium, library, related retail, etc.), utility infrastructure, support yard, open space, circulation, and parking.

### Program Assumptions

As listed in Table SOM-1, School of Medicine Components, approximately 3.1 million gross square feet (GSF) of new building space would be associated with the proposed school based on refinements to the 2006 and 2008 School of Medicine proposals to The Regents. This development is in addition to the 11.8 million GSF identified in the 2005 LRDP to support a student enrollment of 25,000 and



Pierce Hall



Pierce Hall Addition

**Table SOM-1: School of Medicine Components**

| <i>Land Use</i>                      | <i>Area in Gross Square Feet</i> |
|--------------------------------------|----------------------------------|
| Medical Administration and Education | 144,000                          |
| Medical Research Laboratories        | 482,715                          |
| Vivarium                             | 40,100                           |
| Ambulatory Care                      | 250,000                          |
| Medical Office                       | 775,000                          |
| Support Yard                         | 46,000                           |
| Parking                              | 1,323,350 (3,781 stalls)         |
| <b>Total</b>                         | <b>3,061,165</b>                 |

Source: UCR Capital and Physical Planning, July 2010 and NelsonNygaard Consulting Associates Memo, July 2010.

Note: School of Medicine is approximately 38.7 acres including a 4.6 acre School of Medicine Support Yard.

(top) **CHASS Interdisciplinary**(bottom left) **Sproul Hall**(bottom right) **Chung Hall**

increases the total campus development potential to approximately 14.9 million GSF.

The School of Medicine is anticipated to consist of a number of new buildings that would include the following: (1) administration, teaching, research, and support space; (2) ambulatory care and out-patient facilities; (3) medical office space including research institutes; (4) potential medical-related academic programs such as pharmacy and nursing; (5) School of Medicine support uses such as support yard (maintenance, operations, utilities and infrastructure); (6) surface parking lots and/or parking structures; (7) open space; and (8) common areas. No hospital is planned as part of the School of Medicine; instead the medical school would use a network of affiliated regional and community hospitals for its residency program.

### Program Adjacencies and Precinct Organization

Based on the School of Medicine Design Guidelines discussed below the School of Medicine precinct would be subdivided by the Northwest and Southwest Malls and divided into three programmatic areas focused around the School of Medicine Quad, a major open space at the center of the precinct. In short, the central part of the precinct is bounded by Iowa Avenue, the Northwest Mall, Gage Canal Mall, and the Southwest Mall, and is proposed to accommodate the teaching, research, administrative and ambulatory care functions. The northern most area of the precinct is located east of Iowa Avenue and between Everton Place and the Northwest Mall and is proposed to include parking, medical offices, and the support yard. The southernmost area is located east of Iowa Avenue between the Southwest Mall and Martin Luther King Boulevard and west of the West Campus academic core. It is proposed to include parking and medical offices.



The Medical Administration and Education facility (MAE) is envisioned to anchor the School of Medicine precinct. It is anticipated that the building will provide space for associated teaching, research, administrative functions, and public-oriented uses. It is planned to be centrally located at the heart of the School of Medicine with medical research laboratories clustered around the MAE building to form the School of Medicine Quad. Medical research laboratories are anticipated to include support space for core facilities, imaging, and an underground vivarium with secured access.

Because of the programmatic relationship between research labs and clinical spaces, ambulatory care facilities are proposed adjacent to the medical research labs. These are envisioned along or near Iowa Avenue between the Northwest Mall and the Southwest Mall to facilitate public visibility and access.

A support yard, parking structure, and medical office uses are proposed for the northern portion of the precinct. The support yard would be located south of Everton Place near the research labs. One of the two School of Medicine parking structures is proposed to be located at the northwest corner of the site with direct access from Iowa Avenue and Everton Place.

Medical offices are proposed in the southern portion of the precinct on Martin Luther King Jr. Boulevard, south of the administration and research facilities. A parking structure at the southwest corner of the precinct with direct access from Iowa Avenue and indirect access from Martin Luther King Jr. Boulevard could serve the medical offices.



(top) **Bourns Hall**  
(bottom) **Chemical Sciences**

## Site Capacity and Density

The 38.7-acre precinct has the capacity to accommodate the anticipated School of Medicine program as proposed to The Regents. In order to provide the proposed program, however, the School of Medicine building density will need to be greater than the proposed East and West Campuses floor area ratio of 1.0 (FAR). In order to accomplish this, future buildings will need to be at least five stories to meet the School of Medicine program and to maximize the precinct's development potential.

Buildings along Martin Luther Jr. King Boulevard and surrounding the School of Medicine Quad may even be higher (up to six or seven stories) to accommodate program requirements. The School of Medicine signature building which may or not be the MEA is envisioned to potentially rise above the other buildings to reinforce its prominence, location, and importance as an icon building on the West Campus. Parking structures located at the perimeter of the precinct may be at least seven or eight stories above grade and would utilize the roof deck for parking in order to prevent underutilization of the land base.

## School of Medicine Design Guidelines

The approach to locating and designing buildings, landscape improvements, circulation, and parking within the School of Medicine is discussed briefly in the above and is informed by the following School of Medicine Design Guideline sections: Planning and Design Strategies; Architectural Guidelines; Landscape Guidelines; Sustainability Strategies; and Parking and Circulation Strategies.

The Design Guidelines describe the design intent, but allow for flexibility to meet the future needs and programs of the medical school that will evolve over time.

## Planning and Design Strategies

The School of Medicine Planning and Design Strategies are as follows:

- Locate the MAE on School of Medicine Quad. This location will reinforce the prominence of these facilities and their importance as the programmatic “heart” of the medical school.
- Allow for development of a signature medical building (which may or not be the MEA) and future icon, at the east end of the School of Medicine Quad, adjacent to the Gage Canal Mall. The building will be the tallest building on the West Campus; yet not as tall as the Carillon Tower on the East Campus.
- Locate research labs at the center of the precinct around the School of Medicine Quad to reinforce a strong programmatic relationship between the research labs and the teaching functions.
- Locate ambulatory care facilities at the center of the precinct between the public edge and the research labs to reinforce a strong programmatic relationship between the clinical spaces and labs.
- Locate medical office uses on the southern portion of the precinct in order to build in flexibility for the future growth of the School of Medicine. These facilities will likely be used the most by the public so they should be located closest to Martin Luther King Jr. Boulevard for visibility and access.
- Provide a support area at the northern portion of the School of Medicine precinct off Everton Place that is easily accessible for



campus operations and material deliveries and has adequate space to provide operational support, utility and infrastructure service to the School of Medicine. It may also serve the academic core of the West Campus as well.

- Locate parking structures at the periphery of the precinct. Provide primary, but limited, access from Martin Luther King Jr. Boulevard and Iowa Avenue, and limit private vehicular access within the core of the School of Medicine precinct.
- Develop a transit/transportation service with convenient stops to provide access from the School of Medicine precinct to the rest of the West Campus and the East Campus as well as the city.
- Develop the School of Medicine Quad as a major ceremonial open space.
- Create pedestrian connections from the School of Medicine Quad to the Gage Canal Mall with exterior walkways, breeze-ways, and interior building passageways. Pedestrian connections between the School of Medicine Quad, Gage Canal Mall, and West Campus Mall will not only link the three major West Campus open spaces, but will also support the pedestrian and bicycle friendly zone at the center of the West Campus east of Iowa Avenue.
- Maintain the 100-foot landscape buffer area on the north side of Martin Luther King Jr. Boulevard. This continues the landscape buffer (and building setback) established on Martin Luther King Jr. Boulevard between Chicago Avenue and Canyon Crest Drive.

## Architectural Guidelines

Architectural Guidelines help to create a strong presence and identity for the medical school. They also allow the school's design to complement and enhance the overall campus aesthetic. Archi-

tectural Guidelines for the following common elements will be incorporated into new buildings to help ensure that the development of the medical school is cohesive: Building Height, Precinct Core, Precinct Perimeter, and Phasing Strategies. They are described in more detail below.

### *Building Height*

The proposed School of Medicine building heights will create an identifiable presence for the medical school. The relationship between the buildings and open space (quads, malls, courtyards) will contribute to the school's sense of place and strong presence on the West Campus. Future buildings are anticipated to be at least five stories, and with exception up to seven and eight stories, with a potentially taller signature building based on the building type and location.

A medical school signature building and future icon, envisioned for the east end of the School of Medicine Quad adjacent to the Gage Canal Mall, would potentially be the tallest building on the West Campus. It will serve as a way finding element and a beacon for the medical school even though its total building height would be less than the Carillon Tower, which will continue to be the tallest structure on the UCR campus.

### *Precinct Core*

The precinct core consists of the buildings surrounding and inclusive of the School of Medicine Quad. Design Guidelines for the precinct core are as follows:

- Emphasize the medical school signature building as a future



Example of arcades, arches,  
covered walkways and bridges.





icon by designating it the tallest building on the West Campus. Accentuate its building height with vertical architectural elements and/or a distinct design that reinforces the medical school's presence, sense of place, and provides visibility from the freeway. Through the planning process, this signature building has been envisioned as up to twelve stories to maintain its prominence on the West Campus. Height considerations for the signature structure have been formulated, in part, so as to not exceed the height of the already iconic East Campus Carillon Tower.

- Provide direct pedestrian and bicycle access from the medical school signature building to the Gage Canal Mall with building entrances and a permeable ground floor. Provide passageways and entries to first-floor classrooms, auditorium and public gathering spaces. Extend the building into the School of Medicine Quad and Gage Canal Mall through the use of porches, terraces, and similar architectural features. Connect the School of Medicine Quad and Gage Canal Mall by providing an open interior breezeway/pedestrian corridor through the building.
- Provide for a School of Medicine Quad, a major West Campus open space, to serve as an organizing element for the surrounding buildings. The Quad will function as a pedestrian only open space protected and defined by the buildings that front it.
- Situate buildings around the perimeter of the School of Medicine Quad to create a strong, formal edge, reinforcing the open space at the center of the precinct and establishing the build-to-lines.
- Allow opportunities for the buildings to encroach into the Quad at ground levels emphasizing pedestrian circulation and provide shade protection as illustrated in Figure 23. These elements include a layered, transition area for porches, terraces, building entries, arcades and covered walkways to connect the buildings



(above) **Create pedestrian connections between buildings and open spaces.** Utilize porches, terraces, and similar architectural features to create a permeable ground floor.



(below) **Develop a major ceremonial open space.** Example of flexible outdoor spaces used for public gatherings and events.



(top left) **Bourns Hall**  
(bottom left) **Humanities**  
(bottom right) **Highlander Plaza**





and emphasize pedestrian circulation.

- Site the Medical Administration and Education (MAE) in a prominent position to communicate its importance to the medical school. Locate the MAE on the School of Medicine Quad to frame views and engage the building users with the adjacent open space through the use of passageways, multiple building entries and pedestrian connections to research lab. Consideration for development of the MAE to also function as the School of Medicine signature building should only be in the context of campus and School of Medicine programmatic priorities and available resources.
- Locate research lab buildings in the core of the School of Medicine precinct at least five stories and up to six or seven stories in height. These buildings will be clustered around the School of Medicine Quad framing this major open space and providing the opportunity for pedestrian connections with the building interior and the exterior through design features such as covered walkways, terraces, porches.
- Provide a hierarchy of building entries including major public entries that may need to face both the street and the interior quad or courtyard. Major public entries will be clearly expressed on the building façade, including the use of arcades, covered walkways, canopies.
- Allow multiple entries to buildings encircling the School of Medicine Quad. However, they must have at least one entrance on the School of Medicine Quad to preserve a pedestrian presence. Vehicular, shuttle, and service access, and secondary pedestrian connections should be from the Northwest and Southwest Malls.
- Develop permeable ground floors of buildings to create gathering spaces near classrooms and auditoriums to foster oppor-

tunities for interaction at academic buildings. More secure and controlled access may be required at some academic/research buildings.

- Provide opportunities for two-story arcades and covered walkways on facades surrounding the School of Medicine Quad. These arcades and covered walkways will help to clearly identify pedestrian routes, facilitate pedestrian interaction, and offer protection from the direct sun.

### *Precinct Perimeter*

- The precinct perimeter comprises the buildings in the School of Medicine land use that are outside the precinct core. This includes the areas directly south of Everton Place, adjacent to (east of) Iowa Avenue, and immediately north of Martin Luther King Jr. Boulevard. The buildings will adhere to the following design criteria:
- North of Martin Luther King Jr. Boulevard, a substantial landscape buffer will separate the buildings from the street and is part of a continuous 100-foot buffer that extends from Chicago Avenue to Canyon Crest Drive.
- Medical office buildings north of Martin Luther King Jr. Boulevard will be at least five stories and may step up to six stories due to the substantial landscape buffer that separates these buildings from the street. Vehicular access to pick up/drop off areas, surface parking, and a forecourt to these buildings will occur from interior roads off Martin Luther King Jr. Boulevard.
- A School of Medicine parking structure proposed in the vicinity of the southeast corner of Iowa Avenue and Everton Place could be approximately eight stories of above grade parking including a roof deck. This parking structure would provide the majority of required parking for research, teaching, administration, ambulatory care, and support uses at the School of Medicine.





(top) **Situate buildings around major open space quads and courtyards.** Create a strong, formal edge to establish build-to lines and engage building users with adjacent open space.

(bottom) **Emphasize pedestrian circulation and provide shade.** Elements include porches, terraces, arcades and covered walkways.



- A School of Medicine parking structure proposed at the north-east corner of Iowa Avenue and Martin Luther King Jr. Boulevard could be approximately seven stories of above grade parking including a roof deck. This parking structure would provide the parking for medical office buildings and the remainder of the required parking for ambulatory care facilities, research, teaching, administration, and support uses. Parking structure facades will be designed to screen parked cars while allowing natural light and ventilation in the structure. Other uses, such as office, retail, and support, are permitted within parking structures.
- Create a strong, formal edge with building facades along Iowa Avenue.
- Provide a hierarchy of building entries including major public entries that may need to face both the street and the interior quad or courtyard. Major public entries will be clearly expressed on the building façade, through the use of elements such as arcades, covered walkways, and canopies.
- Locate ambulatory care and medical office buildings along Iowa Avenue at least five stories tall. The setback of the ambulatory care buildings between the Northwest and Southwest Malls along Iowa Avenue will be 75 feet, which is greater than the 25 foot wide setback of other buildings along Iowa Avenue. The larger setback will help emphasize the importance of the primary entries to the medical school from the Northwest and Southwest Malls. Vehicular access to pick up/drop off areas, surface parking, and a forecourt to these buildings will occur from interior roads off Iowa Avenue. Surface parking could occur in the setback area.
- Maintain a pedestrian scale along the street edge of the ambulatory care buildings by emphasizing the first and second story height. Consider architectural techniques to visually break up and help reduce the overall massing along the public edge such as articulating the walls below the first floor and above the fourth floor to define a base, middle, and top of building.
- The ambulatory care and medical office building facades will be layered with planting, arcades, trellises and other shade producing built structures to create “patio” forecourts to the buildings. In contrast to the formal School of Medicine Quad, these courtyards should be informal and each could be unique in character.
- Orient ambulatory care and medical office buildings so that patient pick-up/drop-off, surface parking, and service entries are all accessed from interior streets that are not used by the shuttle service, pedestrians, and bicyclists.
- At patient care, ambulatory care and medical office buildings, direct way finding, private entries, and, in some instances, a singular point of entry may be required.
- Cluster ambulatory care and medical office buildings in a way that creates opportunities for interior courtyards and shaded walkways. Use these courtyards and walkways as informal gathering places that provide shade and offer relief from the direct sun.

### *Phasing Strategy vs. New Programs*

Phased development of the medical school will depend on enrollment growth, programmatic needs, and funding. Should the need for programs such as nursing, dentistry, or pharmacy occur, or if the University concludes the need for more ambulatory and/or research space, it is recommended that these uses be considered for the

medical office building area in the southern portion of the School of Medicine adjacent to the future West Campus academic core.

## Landscape Guidelines

The School of Medicine Landscape Guidelines describe the medical school landscape character and set forth design criteria in addition to those identified in the Open Space and Landscape section of this document.

The primary components of the School of Medicine landscape framework consist of: the School of Medicine Quad, Building Related Landscaping, and Landscape Buffer Area.

### *School of Medicine Quad Concept*

The School of Medicine Quad Concept is a significant and unique open space that is a permitted use in the *School of Medicine* land use. The School of Medicine Quad should not be labeled as an *Open Space* on the LRDP land use plan as it is a permitted use within the *School of Medicine* land use. The School of Medicine Quad Concept and the character of this open space are described in the School of Medicine precinct design criteria and the Open Space and Landscape chapter of this document.

The School of Medicine Quad is the organizing open space in the School of Medicine precinct. It is envisioned to consist of formal landscape plantings as illustrated in Figure 26: School of Medicine Quad. The design criteria for the Quad are as follows:

- It will serve as an organizing element for the surrounding medical school buildings. It will be a pedestrian only area.

- Envisioned as: a ceremonial green, the School of Medicine Quad is intended for graduation ceremonies, events, and social gatherings; providing a minimum of 220-foot by 300-foot wide open area designed with a walkable surface, including turf, and paved areas for arrangements of tables and/or chairs, stage, etc.; and supporting pedestrian and leisure use, such as outdoor study, formal and informal gatherings, recreation, and similar activities.
- The perimeter of the School of Medicine Quad, from the building-face to building-face, will create an approximately 300-foot by 380-foot wide area.
- Along the perimeter of the School of Medicine Quad it is envisioned that a double row of shade trees would frame the Quad perimeter walkway and provide comfort for pedestrians (see Open Space and Landscape section, Figure 26).
- The edge between the building-face and the central area will be layered with opportunities for arcades, porches, stepped courtyards, covered walkways, and building entries that connect the buildings to the outdoor spaces of the School of Medicine Quad.
- The plant palette for the School of Medicine Quad should be similar to the West Campus Mall, helping to unify the two areas. The palette will be chosen from the UCR Design Guidelines which identify a large selection of low water requiring species, planting themes and options depending on activity level of the spaces.
- Opportunities for buildings around the School of Medicine Quad could to be linked with covered walkways to emphasize pedestrian circulation while creating shade protection.





**(left) Rows of trees, can reinforce an open space mall or a strong building edge.**

**(below) Courtyards should have their own unique character.** For example, thematic gardens, medicinal plantings, citrus groves that mimic UCR's agricultural heritage.





### *Building Related Landscaping*

The building related landscaping will include the following:

- Along Iowa Avenue provide a formal landscape planting, including rows of trees along the street that will reinforce the strong building edge and provide a visual screen of trees between the avenue and buildings. Utilize wider building setbacks adjacent to out-patient buildings to create multiple layers of landscape planting. Small surface parking lots could be located within the set back areas if desired.
- Courtyard spaces between buildings should have their own unique character. Courtyards may contain a combination of hardscape and softscape for variety. These courtyards will serve as the forecourt to the building and may include vehicular pick-up and drop-off areas where appropriate, shared service access, and limited areas of surface parking for disabled or loading.
- Courtyards are encouraged to use thematic gardens with an opportunity for education (e.g., medicinal plantings and/or UCR's agricultural heritage, healing gardens, small citrus groves mimicking the former teaching and research fields, etc.). The landscape should create a character that supports the research, ambulatory care, medical education, academic, and/or patient care functions of the School of Medicine.
- Landscape plantings may be a combination of formal and informal groupings of trees to provide shade and moderate UCR's hot, dry summer temperatures.

### *Landscape Buffer Area*

The landscape buffer area will include the following:

- On the north side of Martin Luther King Jr. Boulevard a 100-foot

wide landscape buffer between buildings and the street will provide a positive image to the surrounding community. The buffer will also be an important component of the stormwater management system for the West Campus and will accommodate peak stormwater flows.

- This landscape buffer area continues the character established along Martin Luther King Jr. Boulevard east and west of the medical school as described later in the Open Space and Landscape section of this document. This buffer area will be landscaped in several layers and provide a dense visual screen of trees and shrubs in a naturalistic pattern. It could provide a meandering bicycle and pedestrian pathway in a park like fashion in concert with the drainage system.

### *Sustainability Strategies*

New buildings shall meet or exceed the UC Policy on Sustainability, as well as the campus Sustainability Action Plan. Each building program and site design should address their means of contributing to the highest possible sustainable design, construction, operations and maintenance standards as appropriate. The project should address: energy and climate protection measures; reduction of water and other resources; and protection of stormwater quality. Each project will assess: how to limit site disturbance; contribute to overall campus transportation strategies that reduce fuel consumption; promote recycling and waste management; and support sustainable procurement. When developing building programs, designing facilities, and site development the architects, planners and engineers will respond to the UC and campus Sustainability Plans and Policies, the campus Design Guidelines, and any campus green building programs.

## School of Medicine Parking and Circulation Strategies

This section describes the Parking and Circulation strategies for the School of Medicine. These are in addition to the strategies set forth in the Circulation and Parking section of this document for the campus-wide vehicular circulation, parking, transit services, pedestrian and bicycle circulation, and parking management programs.

As a medical school precinct, the School of Medicine will have not only university faculty, staff, commuter students, and resident students, but medical office employees as well as patients, visitors and vendors. The medical school is located at a site that is easily accessible from public roads and transit. Easy access along Iowa Avenue and University Avenue, Martin Luther King Boulevard and the I-215/SR 60 freeway via automobiles, as well as public/campus bus and public transit and Metrolink serving UCR and medical school venues and facilities is important.

Two parking structures are envisioned to serve the medical school. In order to determine the number of parking spaces that will be needed, an analysis based on the anticipated teaching, research, administrative, and medical uses at full build-out was considered. It was assumed that all parking at the School of Medicine will be shared among user groups, such as faculty, commuter students, staff, employees and visitors.

The School of Medicine has programs that do not exist elsewhere on the campus. For each use that will be located at the School of Medicine a parking ratio was developed based on data from UCR as well as other University of California medical schools. Listed below are the parking ratios by use as well the unit of measurement used to approximate the School of Medicine demand:

- Medical research laboratories and support space, administrative and teaching uses require 0.48 parking spaces per faculty, staff, or visitors, and 0.36 spaces per student
- Medical office buildings require 2.52 spaces per 1,000 gross square feet (GSF) of facility space
- Ambulatory care facilities require 3.12 spaces per 1,000 gross square feet (GSF).<sup>1</sup>

Each potential School of Medicine use (e.g. ambulatory care, medical office building, etc.) has fluctuating parking demand across the day. However, since parking will be shared between uses, it is necessary to establish a peak hour parking demand rate.<sup>2</sup> This varying demand is expressed as a percentage of spaces allocated for a particular land use that are likely to be used at any given time. The total demand for parking is the sum of the usage for all uses. The analysis shows that at full build-out, total demand at the School of Medicine land use will reach 3,231 parking spaces.

This section also includes a parking demand analysis that excludes medical office buildings, given that they are market driven. The medical office use constitutes a significant portion of the total parking demand at 1,950 spaces. Without the presence of medical offices, at full build-out of the School of Medicine, demand will reach 1,281 parking spaces.

### Footnotes:

1 Both building office building and ambulatory care facility ratios include a 15% employee transportation demand management reduction.

2 For research labs, support, and ambulatory care, the Institute of Transportation Engineer's (ITE) Clinic land use daily distribution is used. For the medical education building, ITE's University daily distribution is used. For the medical office building, ITE's Medical-Dental Office Building distribution is used.

3 The approximate parking structure sizes, based on the garage footprint and number of levels, are as follows: a parking structure proposed at Iowa Avenue and Everton Place approximately 525,350 gross square feet (GSF) with 1,501 spaces; and a parking structure proposed at Martin Luther King Boulevard and Iowa Avenue approximately 798,000 gross square feet (GSF) with 2,280 spaces for a total capacity of 3,781 spaces (using 350 GSF per structured parking space).

These totals were then adjusted to account for the “effective parking supply factor”; the total number of parking spaces in a lot, less the percentage of spaces that the parking operator wishes to have vacant even at the typical peak hour. A 90% ratio was used for this analysis, resulting in an approximate School of Medicine and medical office parking supply of 3,590 spaces at full build-out and 1,423 spaces for the School of Medicine if the medical offices are not present.

It is anticipated that each structured space will require an average of 350 square feet. Using this figure, there will be an available supply of 1,501 spaces in the parking structure proposed at Iowa Avenue and Everton Place, with 2,280 spaces in the parking structure proposed at Martin Luther King Jr. Boulevard and Iowa Avenue.<sup>3</sup> At full-build out the proposed parking supply will be adjusted and monitored to ensure the supply meets future demand.

### *Parking Strategies*

Parking supply at the medical school will be addressed by the following strategies:

**Surface Parking** - Initially, surface parking lots will be constructed to serve the School of Medicine. Over time, the majority of the parking supply will be relocated to parking structures. Only pockets of surface parking located near buildings will remain for short-term parking, ADA, reserved spaces, transit stops, etc.

**Structured Parking** – In the long term, parking structures will be required to support the School of Medicine program. Strategies for the location and development of the structures are identified below:

- Immediate supply will be provided in surface lots until demand requires construction of parking structures, which will be

phased concurrent with the supply needed to serve the School of Medicine demand over time.

- Structures will be located at major streets and intersections for easy visibility and access and to limit private vehicles from needing to be on interior streets in the School of Medicine precinct.
- It is anticipated that a structure located near Iowa Avenue in the northern section of the School of Medicine precinct will be accessed from Iowa Avenue via the Northwest Mall or Everton Place. This structure will address medical research, administration, teaching, and may include ambulatory care parking demand.
- Accessed from Iowa Avenue and internal streets that ultimately may connect in limited numbers to Martin Luther King Boulevard, a parking structure proposed for the northeast corner of Martin Luther King Jr. Boulevard and Iowa Avenue will address demand of out-patient care, including medical office buildings, specialized institutes, and future program expansion.<sup>3</sup>

**Patient and Visitor Parking** - It is anticipated that a range of parking types will serve the patient care facilities with patient drop off/pick up available at building entries. Visitor parking will be no more than ½ mile away from the facilities.

**Disabled Parking** - Disabled parking and access (path-of-travel) to the building entry is required to every building in the School of Medicine precinct (as well as the rest of the campus), and will comply with the Americans with Disabilities Act (ADA).

**Medical Office Building Parking** - These facilities will either contribute to the School of Medicine shared parking facilities or build stand-alone parking to serve their own programs. The stand-alone parking could be in small surface lots.

### *Circulation Strategies*

**Public Roadways and Local Access** - The medical school will be located on the West Campus on the east side of Iowa Avenue, north of Martin Luther King Boulevard and south of Everton Place. As part of the development of West Campus, the campus will be constructing a number of new internal streets and/or service roads to provide access to the interior of the West Campus and to facilitate pedestrian, bicycle, public/campus bus, and public transit within and between the East and West Campuses. The new streets and/or roads will provide the following:

- Access and entry from the city of Riverside will be provided from Iowa Avenue with key entry points at Everton Place, and the Northwest and Southwest Mall corridors. The majority of the Northwest and Southwest Mall corridors will be for pedestrian, bicycle, and shuttle use only. Vehicle access on the Northwest Mall will be limited to the eastern edge of the School of Medicine Support Yard to Iowa. Vehicle access on the Southwest Mall will terminate east of the parking structure and ambulatory care buildings and have a north-west connection to the Northwest Mall on the east side of the those buildings between them and the medical research buildings. The suggested cross sections for the Northwest Mall and Southwest Mall east of Iowa Avenue (see Figures 28-1, 28-2, 28-3), address the landscape and circulation design guidelines.

**Service and Delivery Access** - Public roadways and limited internal access roads in the School of Medicine precinct will be used to provide service and delivery access. Once internal roads that serve surface parking lots are eliminated, these routes may become

access-controlled for pedestrians, bicyclists, service/emergency and shuttle/bus only. The following criteria will be applied:

- Service areas (such as loading docks) will be integrated within the building footprint to provide secured access. Landscape and walls may be used to provide a visual screen to the service areas from a road or pedestrian pathway.
- Utility corridors, including underground tunnel access, may be used to handle and transport infrastructure/utilities and materials.

**Emergency Access** - Public roadways and internal access circulation in the School of Medicine precinct will be used to provide emergency access. Direct, unobstructed access and clear wayfinding signs to every building in the School of Medicine is required and will be guided by the UCR Campus Sign Program.

**Pedestrian Circulation** - Provide strong pedestrian connections within the School of Medicine precinct and along its public edges to promote walking, bicycling and transit use as follows:

- The interior areas of the precinct, specifically the School of Medicine Quad are envisioned as a pedestrian only environment;
- A majority of the Southwest Mall will be exclusive for pedestrian and bicycles, with limited shuttle and emergency access; and
- A portion of the Northwest Mall will be exclusive for pedestrians and bicycles, with emergency access.



**Campus Transit Service/Public Transit** - The West Campus is currently served by the Riverside Transit Agency (RTA). The campus and RTA will partner to offer transit service on the West Campus to connect the East Campus and West Campus, provide service to the School of Medicine and the rest of the West Campus. Transit routes and schedules will be adjusted to meet the needs of the West Campus population and programs through the following strategies:

- **Campus Shuttles** – It is anticipated that the campus would provide easy access and frequent shuttles. The campus shuttles would operate on limited access streets between the East Campus and the West Campus. Shuttle stops would be provided with pedestrian amenities, such as seating, shade canopies, etc.
- **Public Transit** - The UC Riverside campus is currently served by RTA routes that provides both local service and commuter service from areas in Riverside and the region in addition to connecting with Metrolink in downtown Riverside. Public transit is also provided between the campus and the city of Montclair Transcenter, and the cities of Temecula, Banning, and Hemet. RTA routes operate directly adjacent to the future School of Medicine precinct. The campus does and will continue to work with the RTA to establish stops along these routes that are easily accessible from the School of Medicine and the rest of the West Campus.

**Alternative Transportation** - The School of Medicine will take advantage of UCR's existing Transportation Demand Management

(TDM) program which provides incentives, services, and infrastructure support to offer a wider variety of mode choices to campus constituents. The following programs are currently in place and anticipated to be offered in the future by UCR's Transportation and Parking Services in support of development on the West Campus including the School of Medicine. The programs are as follows:

- Continue to provide the UPASS program to cover School of Medicine/campus constituents at a 100% subsidy;
- Continue to adjust parking rates to cover the full cost of providing parking spaces;
- Expand the current car sharing service to the School of Medicine which is available to students, faculty, and staff;
- Modify transit/shuttle service to provide quick and direct access between the School of Medicine and the West and East Campus academic cores;
- Provide bicycle facilities, including bicycle racks, lockers as well as shower facilities; and
- Establish preferential parking spaces for carpool and vanpool vehicles.





## **Circulation and Parking**





## **Circulation and Parking**

### Existing Conditions

The UC Riverside campus is located about 1.5 miles east of downtown Riverside. The campus is served and divided by the Interstate 215 / State Highway 60 freeway (I-215/SR60), which provides access to the campus environs via several ramp systems: Blaine Street, University Avenue, Martin Luther King Jr. Boulevard and Watkins Avenue / Central Avenue. The core of the campus is currently located on the east side of the freeway, with links to the west side uses (agricultural research, the University Extension, University Village) via the University Avenue and Canyon Crest Drive undercrossings.

The following sections describe the systems and services provided for automobile, transit, bicycle and pedestrian circulation, and parking.

### *Existing Vehicular Circulation*

The campus is served by a hierarchy of roadways, including:

- Freeways
- Arterial roadways
- A campus loop road
- Local access and service roads

The following describes the key facilities serving the campus area.

#### **Freeways**

I-215/SR60 - a six-lane freeway which connects to State Route 91 and the separate I-215 and SR60 legs about three miles north of campus, and to the separate I-215 and SR60 legs about two miles south of campus. Caltrans plans a phased improvement project that will bring additional lanes and improved ramp systems to this section of I-215/SR60. In the immediate campus vicinity, the improvements will include: new northbound and southbound carpool lanes; a full-access interchange at Martin Luther King Jr. Boulevard replacing the partial-access interchanges at Martin Luther King Jr. Boulevard and El Cerrito Drive; and a widened Canyon Crest undercrossing, providing four travel lanes plus raised and thus separated pedestrian paths and bicycle lanes on both sides of the undercrossing. There will not, however, be a direct Martin Luther King Jr. Boulevard undercrossing of the freeway – access east to west will continue to be via the Canyon Crest undercrossing. This indirect crossing will help deter regional traffic from using UCR roads for through access.

#### **Arterial Roadways**

East/west roadways are listed first, from north to south. North/south roadways are listed second, from west to east.

Blaine Street/Watkins Drive - a four-lane, east/west roadway with turn pockets, connects to Watkins Drive to the east and Third Street to the west. Blaine Street provides access to I-215/SR 60 via a diamond ramp interchange located approximately one-half mile northwest of the University Avenue interchange.

University Avenue - a four-lane, east/west roadway with turn pockets and sections of two-way left-turn lane connects UCR at Canyon Crest Drive to downtown Riverside. University Avenue provides access to I-215/SR 60 interchange west of the core campus.

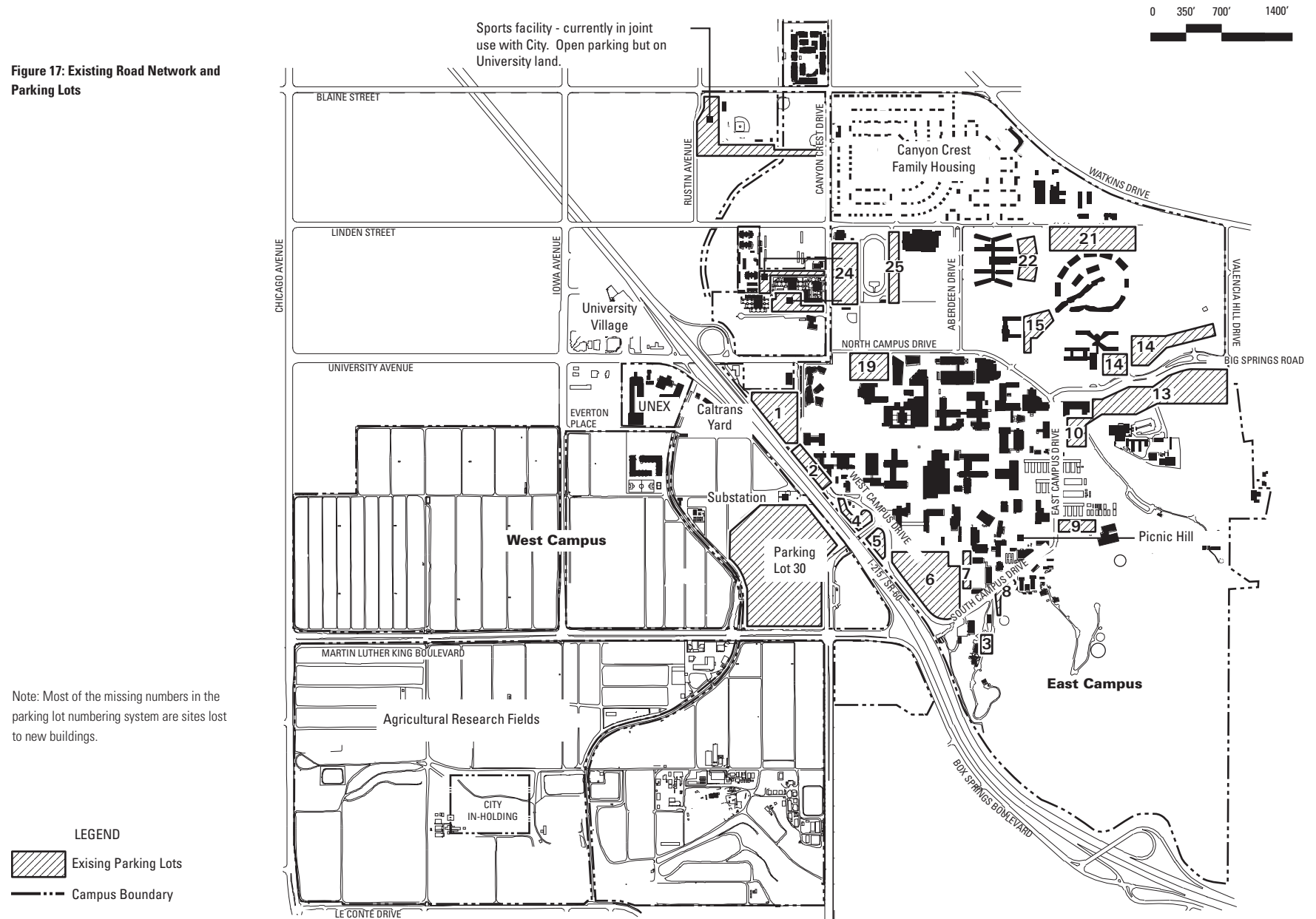
Martin Luther King Jr. Boulevard - a four-lane, east/west roadway with turn pockets, connects to I-215/SR 60 to the east and SR 91 and 14th Street to the west.

Central Avenue – is an east-west four-lane divided arterial serving central Riverside. The roadway is discontinuous, with the southern section connecting Watkins Drive to Chicago Avenue, and the central/western section connecting Alessandro Boulevard to Van Buren Boulevard. The east-west connection to the two segments is provided via Chicago – Alessandro. At the Watkins Drive connection, Central Avenue provides access to I-215/SR-60 via a modified diamond ramp interchange.

Chicago Avenue - a four-lane, north/south roadway with turn pockets, connects to Alessandro Boulevard to the southwest and to Columbia Avenue to the north.

Iowa Avenue - a two-to-four-lane north-south roadway, connects Martin Luther King Jr. Boulevard to the south and to Center Street to the north. The two-lane section of Iowa Avenue is adjacent to University agricultural lands between Everton Place and Martin Luther King Jr. Boulevard.

**Figure 17: Existing Road Network and Parking Lots**



Canyon Crest Drive - a generally four-lane, north/south roadway which is separated by the campus into two sections: the north section connects University Avenue to Blaine Street; the south section connects the campus loop road to Central Avenue.

Valencia Hill Drive – a two lane local road provides access around the most eastern extent of the campus connecting Watkins Drive and Big Springs Road. Valencia Hills Drive also serves the residential neighborhoods directly east of campus.

Watkins Drive is a north-south, two to four-lane roadway which runs between Spruce Street north of the University and the I-215/SR-60 ramps at Central Avenue south of the University. Although sized and originally configured as a four-lane arterial roadway, to reduce traffic speeds Watkins Drive is currently striped as a two-lane roadway with bike lanes and parking on both sides.

### **Campus Loop Road**

The campus loop road, along with several other streets, provides circulation around the campus academic core area, including circulation to and from most of the major parking lots. While the campus loop road in the past formed a continuous ring around the central academic core area, recently the loop was severed between the intersection of Canyon Crest Drive and University Avenue and the Surge Building. As a consequence today the loop includes (proceeding clockwise from the intersection of West Campus Drive and University Avenue): Canyon Crest Drive north to Linden Street; Linden Street east to Aberdeen Drive; Aberdeen Drive south to North Campus Drive; East Campus Drive around campus becoming South Campus Drive and then West Campus Drive back to University Avenue. This change brings somewhat more of the campus into the largely pedestrian and bicycle-oriented core area of the East Campus. The campus loop road is predominately a two-lane

roadway with sidewalks along some, but not all, of its length. The roadway is a signed bicycle route and marked lanes are provided.

### **Local Access / Service Roadways**

The primary circulation system of the campus is supplemented by internal roadways. These provide access to small parking lots serving specific buildings and also provide service access to buildings. Of these roadways, only Citrus Drive and Eucalyptus Drive are open to general traffic. The remaining network of service roadways is access-controlled through the use of magnetically-coded cards, signs or bollards.

### *Existing Bicycle Circulation*

Most of the external routes to and from campus, and certain internal roadways, have Class II bicycle lanes, including: Aberdeen Drive, Canyon Crest Drive (north and south), Martin Luther King Jr. Boulevard, University Avenue, Linden Street, Blaine Street, Watkins Drive, and Big Springs Road. Bicycles are currently allowed to use all campus roadways and pedestrian paths; however, the campus does not have a separate system of bicycle paths. Bicycle racks are generally located in small areas near building entries and generally do not impede pedestrian circulation.

Bicycle use is not as prevalent as might be expected, given the campus area has relatively flat terrain and a mild local climate. It is generally thought that two factors are most responsible for this:

- (1) An internal campus environment that can be difficult for bicyclists to negotiate, due to the lack of separated paths, high pedestrian volumes, and periodically high traffic volumes along



the loop road; and

- (2) The off-campus obstacles presented by the University Avenue and Canyon Crest Drive undercrossings, which can be uncomfortable for casual bicyclists. The completed Caltrans I-215/SR 60 improvement project improved the Canyon Crest Drive undercrossing to include separate sidewalks and bicycle paths raised above the street level. At the University Avenue undercrossing, sub-standard bike lane widths, heavy traffic volumes, and the presence of large-radius freeway ramp intersections are challenging to bicyclists.

#### *Existing Pedestrian Circulation*

The pedestrian circulation system at UCR consists of a network of roadside sidewalks and dedicated paths within and bordering campus, connecting to continuous sidewalks, mostly only on one side, along most of the roadways that provide access to campus. Internal and adjacent roadways with sidewalks include Aberdeen Drive, Canyon Crest Drive, Linden Street (south side), Big Springs Road, University Avenue (no sidewalk northeast of the freeway), portions of Iowa Avenue (only the developed areas adjacent to University Avenue), Chicago Avenue (only adjacent to the developed areas), and portions of the campus loop road. Sidewalks are not provided on Martin Luther King Jr. Boulevard. Internal pathways serve various functions, including mobility throughout the core campus, connection to the residential areas to the northeast of campus, and recreational uses of the open space areas such as the Botanic Garden and Picnic Hill. Many of the core area pathways are also used by service and emergency vehicles and by bicycles.

Most of the areas within the campus loop road are quite walkable. Conflicts with bicyclists and service vehicles are minimal due to low vehicle volumes. However, congestion and vehicle/pedestrian conflicts regularly occur at the primary pedestrian gateways to the academic core area - near Canyon Crest/University, and at the intersections of the campus loop road with Aberdeen, the Veitch Driveway, Big Springs Road, Science Library cross walks, and at Canyon Crest Drive and the campus loop road (West Campus Drive) adjacent to the Canyon Crest under-crossing.

#### *Existing Transit Service*

There are 11 transit lines (Lines 1, 10, 13, 14, 16, 22, 25, 51, 53, 204, 208, and 210) which operate in the project study area. The lines are operated by Riverside Transit Agency (RTA), which provides service within Riverside County. RTA offers both traditional bus routes and "CommuterLink" routes, the latter of which operate during peak commute periods and terminate at major transit hubs.

RTA and UCR partner to offer "UPASS" to the campus's currently enrolled students and to current faculty and staff employees. Via UPASS, students, faculty and staff may ride on any RTA route at any time for free by swiping their UCR ID card when boarding. RTA records the card number, boarding date and time and the bus route boarded, forwarding the data monthly to UCR. The campus reimburses RTA the boarding costs at a negotiated rate. The UPASS Agreement and rate structure are reviewed and renewed annually.

Metrolink operates a commuter rail service within southern California. There is a Metrolink station in downtown Riverside, approximately 1.5 miles from UCR. RTA provides service between the train station and the campus. RTA lines also provide service to Metrolink Stations in Corona and Montclair. Additionally, Amtrak

trains also stop at this station. In FY 2009-10 approximately 8,500 UCR faculty, staff, and students made more than 280,000 trips on RTA buses.

### *Campus Transit Service*

In addition to UPASS, UCR contracts with RTA to provide two routes that serve the campus and nearby community. Route 51, named the Crest Cruiser, and Route 53, called the Bear Runner, and are operated during the fall, winter and spring academic quarters when classes are in session. Students, faculty and staff may ride the two routes for free. The Routes carry mostly students who live in nearby apartment and condominium communities that are privately or UCR-owned. The Crest Cruiser enters UCR along Canyon Crest and Blaine traveling south. The Route continues by turning south on to West Campus Drive, and exits UCR traveling south on Canyon Crest at Martin Luther King Jr. Boulevard. Headways for the Crest Cruiser are 40-minutes and the route runs Monday through Friday. The Bear Runner travels the campus loop road from Aberdeen Drive to Canyon Crest, and stopping at Lot 30, north of Martin Luther King Jr. Boulevard. The Bear Runner's headways are 32-Minutes and the route is in service Monday through Thursday.

### *Existing Parking*

Parking is provided throughout the campus in surface lots. These lots are located within the academic, housing and support zones. Service and disabled parking is generally provided close to buildings. As of June, 2011, 9,559 total spaces were provided on campus per Transportation and Parking Services (TAPS) parking inventory (see Parking Strategy Section).

## Circulation and Parking Planning Strategies

The overall goal of this circulation and parking element is to ensure that the campus transportation system allows safe and efficient travel by the full variety of modes listed above and promotes the use of alternatives to the automobile. To that end, a primary element of the campus circulation plan is diversity: the accommodation of multiple modes of travel.

Planning for the growth and evolution of the UCR circulation system focuses on integrating land use and transportation to minimize reliance on the automobile and impacts to adjoining land uses, while maintaining high levels of accessibility and personal mobility. There are a number of established policies, trends, and plans that present an opportunity to design and manage the growing campus for less automobile travel than would ordinarily occur. However, the success of this will derive from transportation planning and programming that promotes a non-motorized and transit-oriented "culture" throughout the evolution of the campus. Creating this culture will depend on ongoing investment in bicycle, pedestrian, and transit systems and amenities, as well as land use plans that anticipate and provide for high levels of pedestrian, bicycle, and transit travel.

The following strategies will guide the growth of the UCR circulation and parking systems:

- Develop an integrated multi-modal transportation plan to encourage walking, biking and transit use.
- Expand transit service connecting major parking lots and campus destinations, linking the East and West Campuses. Coordinate this system with RTA routes and schedules.
- Provide a continuous network of bicycle lanes and paths

throughout the campus, connecting to off-campus bicycle routes.

- Over time, limit general vehicular circulation in the central campus, but allow transit, service, and emergency vehicle access, and provide access for persons with mobility impairments.
- Provide bicycle parking at convenient locations.
- Implement parking management measures that may include
  - Restricted permit availability
  - Restricted permit mobility
  - Differential permit parking (price determined by proximity to facilities/buildings).

The following sections describe the LRDP circulation and parking systems.

## Vehicular Circulation System

### *Primary and Secondary Vehicular Circulation*

The primary circulation system is planned to expand to form a larger-radius “loop” around the campus as a whole (east and west of the freeway). As shown in Figure 18, the loop is formed by Iowa Avenue, Martin Luther King Jr. Boulevard, Canyon Crest Drive, Campus Drive, Big Springs Road, Watkins Drive, and Blaine Street to Canyon Crest Drive, University Avenue east and west of the freeway and Chicago Avenue. Enlarging the loop will:

- Allow the East Campus academic core to intensify, and linkages between uses to develop, without the intrusion of traffic;
- Support a pedestrian, bicycle, and transit-oriented campus by minimizing the need for traffic intrusion inside the loop.
- Allow the peak traffic volumes associated with large parking facilities to make use of the highest-capacity roadway system,

thus avoiding overloading local roadways such as Campus Drive.

- Facilitate better circulation between the East and West Campus for all modes of travel, by ensuring that the substantial traffic growth does not overwhelm the critical University Avenue and Canyon Crest Drive undercrossings.

The primary circulation system will serve as the main access and egress route for regular campus users (students, faculty, staff, vendors) and, to a lesser extent, visitors. This preserves capacity on University Avenue and the I-215/University Avenue ramps for visitor trips, in keeping with the vision of University Avenue as the “front door” to campus. To this end, most parking growth is planned for sites adjacent to the primary system, and most of the future parking supply will be as conveniently or more conveniently accessed from the Blaine Street or Martin Luther King Boulevard freeway interchanges.

The secondary vehicular circulation system includes three roadways that are currently considered primary routes: University Avenue east of Chicago, Canyon Crest Drive between Blaine Avenue and University Avenue, and Iowa Avenue. All three of these roads will experience intensive pedestrian and bicycle activity, both crossing them and along their lengths. While these will remain important vehicular connections and will provide access and wayfinding for visitors, and access to parking and public destinations, they must be treated as pedestrian and bicycle priority routes to minimize pedestrian/vehicular conflicts.

The primary circulation system is designed to serve the campus when it attains its projected enrollment of 25,000. However, many of the changes and improvements on which the circulation system depends will evolve over time, such as the construction of new

parking facilities near the primary freeway access gateways, and the improved access from I-215/SR-60 at Martin Luther King Jr. Boulevard. Thus, a phased implementation plan will be necessary, to ensure that congestion can be managed and traffic can be directed to the appropriate routes in the interim years. For example, in the near and mid-term, it may be necessary to implement access control on portions of Campus Drive, when travel demand would otherwise overwhelm the roadway (as it currently does at peak times). Access control can take several forms, from driver-identification devices to pass, to peak hour turn restrictions, to retractable barriers to be used during peak times. Once the bulk of the parking supply has shifted away from the East Campus core and the eastern side of campus at Big Springs Road, access control may be dropped as demand for cross-campus vehicular travel diminishes.

#### *Local Access – Unrestricted and Restricted*

The local access circulation system is a network of campus access roads that will provide intra-campus mobility, and accommodate service, disabled, delivery and emergency vehicles, as well as campus shuttles.

Important local access routes include a variety of residential-serving streets on the East and West Campuses. Unrestricted local access to the residence halls and apartments (and their associated parking) on the East Campus will be via a major entry on Watkins Drive and another entry on Blaine Street. On the West Campus, access to the residential areas of family and apartment housing would primarily be from Iowa Avenue and Chicago Avenue.

The other principal unrestricted local access route is on the East Campus: East Campus Drive from Big Springs Road and the future Parking Structure #9 to the Canyon Crest undercrossing. This road

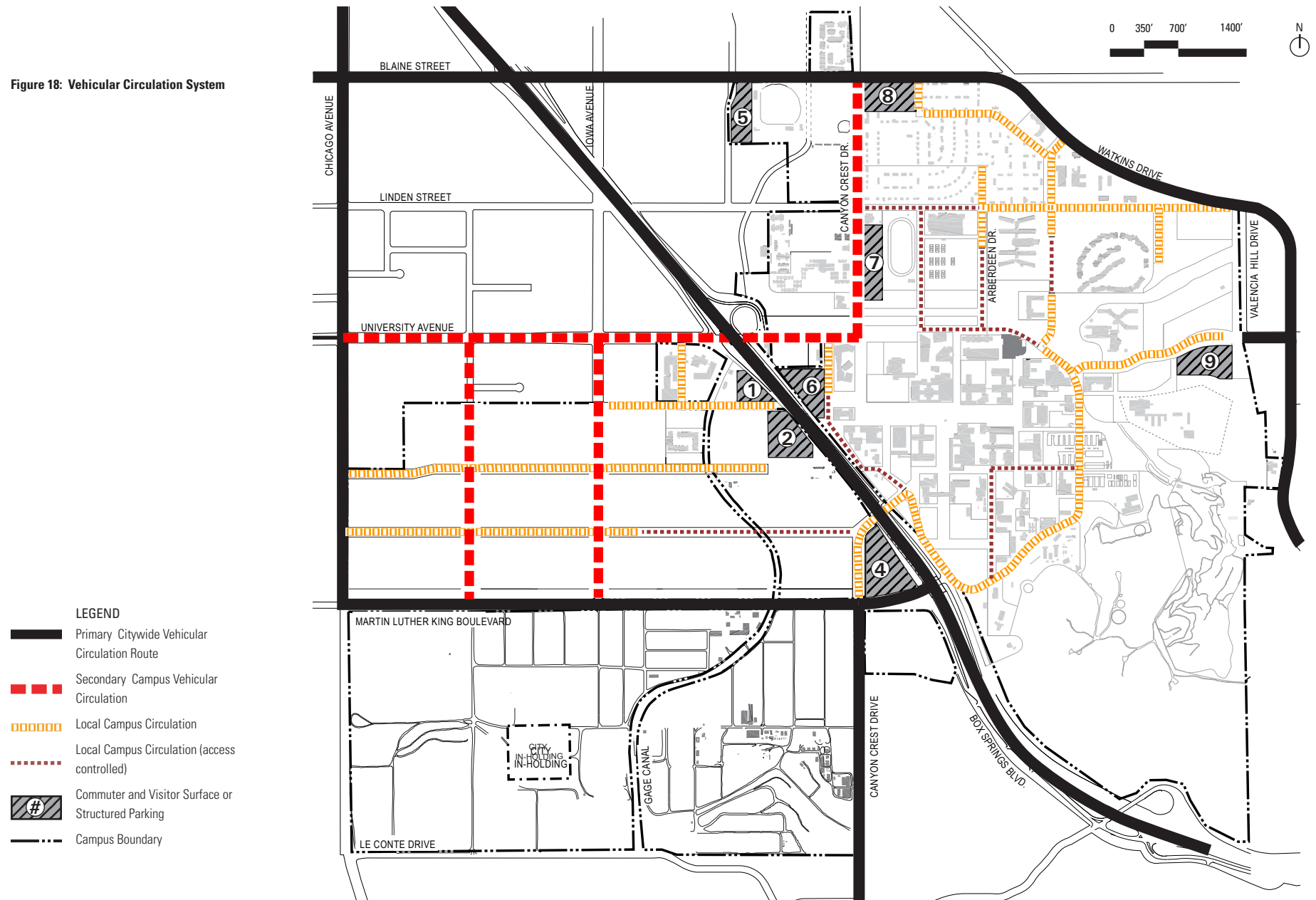
currently carries high levels of traffic at peak hours entering and exiting the campus. In the future, commuting traffic will be drawn to the primary road network, and this will cease to be a necessary link in that primary system. With decreased vehicular traffic, this road can be an important bicycle and pedestrian route and can accommodate campus shuttles.

The goal on all unrestricted local access routes is to minimize traffic by means of: the migration of most parking out of the primary campus gateways at Blaine Avenue and Martin Luther King Jr. Boulevard; parking structures access/egress controls (i.e. turn restrictions); wayfinding and regulatory signs; and roadway design improvements emphasizing pedestrian, bicycle and transit modes of travel. Achieving this goal will have the following benefits: improving the environment for pedestrian and bicycle use, reducing congestion along the campus loop road and at University Avenue/ Canyon Crest Drive at peak times; and improving access for campus transit, emergency and service vehicles, which currently are subject to unacceptable delays due to congestion.

The local access system also has access-controlled zones, where access will be highly limited in order to minimize vehicular/ pedestrian conflicts in the active core areas of the campus. In some cases these are roads that currently have unrestricted access, but as the campus grows will experience much higher levels of pedestrian and bicycle activity and would become highly congested without controls. Access controlled routes can be managed to allow access for special events or certain periods (such as for the Recreation Center, with access via Linden Avenue). Access-controlled routes include:

- Aberdeen Drive south of the Aberdeen-Inverness residence halls
- Linden Street from Canyon Crest Drive to Aberdeen Drive

Figure 18: Vehicular Circulation System





- Eucalyptus Drive and Citrus Drive
- North Campus Drive from west of the Vietch Center
- West Campus Drive from Canyon Crest Drive and Parking Lot 1
- Various service, delivery and emergency routes within the East and West Campus academic zones.

These areas of controlled access will protect the growing eastern academic core from excessive auto traffic, while permitting access for those who have valid needs, and likewise will protect the West Campus as it develops from unnecessary through traffic.

#### *Service, Disabled and Delivery Access*

Service, disabled and delivery access is required to virtually every building on campus, with disabled access required to be provided from the vehicle to the building entry. The local access circulation system is planned to provide connections to the edges of the most highly developed areas of the campus – the academic cores. From these points, controlled access service driveways would provide continuing access directly to building service areas and the small amounts of disabled, service and special permit parking. As the campus develops, adequate service access and disabled parking will need to be provided with each building project or be grouped with adequate access to all buildings.

Deliveries are made both by outside vendors (external) and various campus staff (intra-campus). The local access system and service driveway system is available for both types of deliveries. In the future, expansion of the central receiving function to regulate more of the external deliveries that the campus receives on a daily basis, and supplementing this service on the West Campus, may be considered. The transfer of materials from the central receiving facility to the various campus destinations would allow

better control over delivery routes (avoiding congested locations or pedestrian / bicycle-heavy routes) and it is recommended that delivery schedules be timed to avoid peak traffic congestion. Central receiving, located currently in the Corporation Yard, over time could be relocated to the West Campus with good access via Chicago Avenue and Martin Luther King Boulevard to the freeway.

#### *Emergency Access*

More than any other roadway user, emergency service providers depend on congestion-free roads, a well-connected roadway network, and adequate wayfinding signs to perform their function. As the campus grows in size and density, the combined circulation system - primary, secondary, local access, service access drives, and the malls - must provide the following elements:

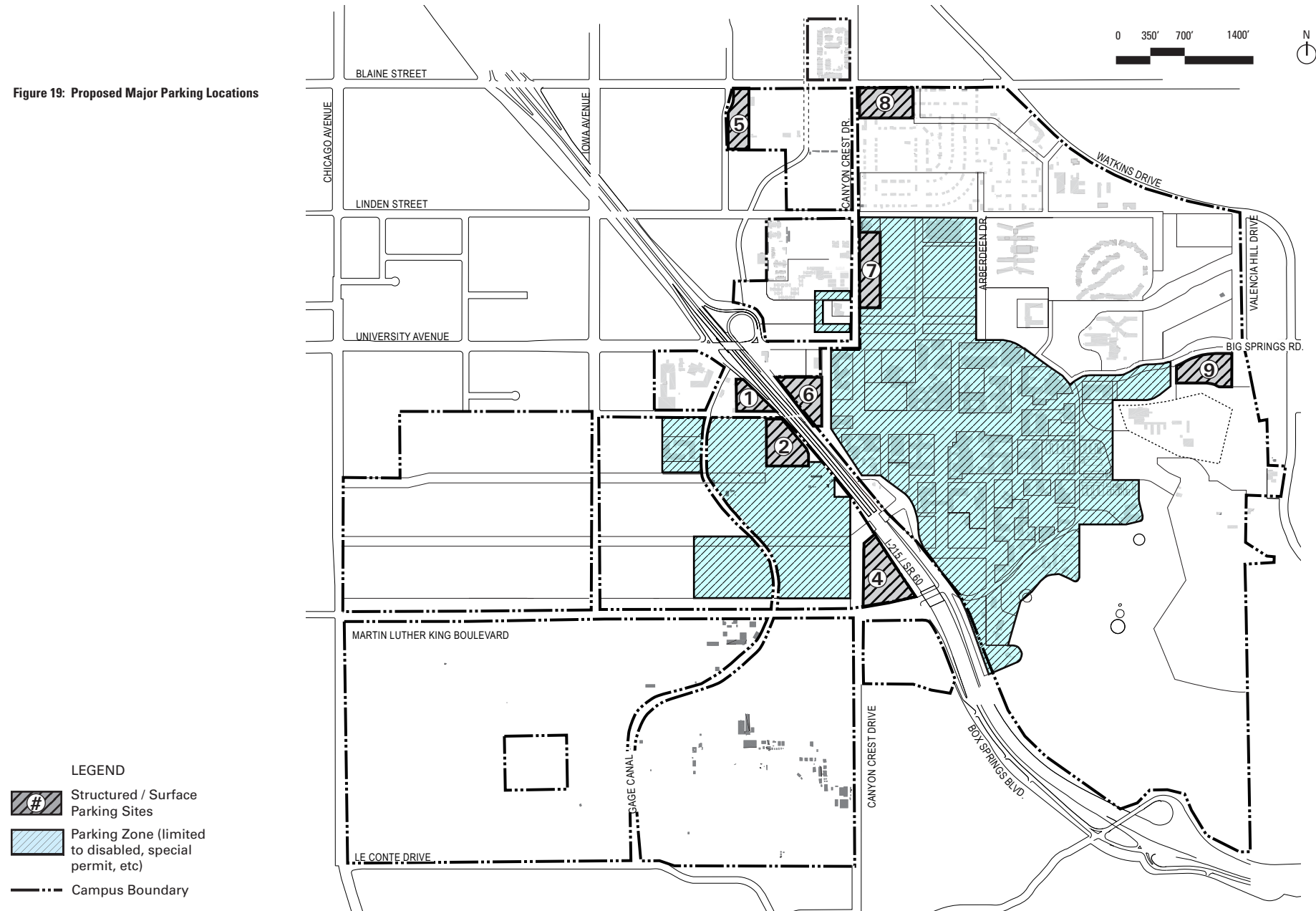
- Direct, unobstructed access to every campus building, with emergency overrides of any access-controlled roadways and clear areas near building entrances;
- Adequate wayfinding signs to and on buildings;
- Congestion management measures as needed during interim years to keep roadways passable for emergency vehicles (see discussion under Primary and Secondary Circulation System).

#### *Parking Strategy*

##### *Commuter and Visitor Parking Demand*

The 2005 LRDP commuter parking plan contains two key elements: the amount of parking needed and the locations for lots and structures. Both of these elements are targets that are likely to change over the life of the LRDP; however, the LRDP lays out the

Figure 19: Proposed Major Parking Locations



best estimates as a starting point for ongoing planning.

### Commuter Students / Faculty and Staff Parking Demand

The future commuter students, faculty and staff parking demand was estimated in consultation with Transportation and Parking Services (TAPS), based on the current campus parking usage, while considering several factors that may change usage in the future:

- The proportion of future students that will be housed on campus is planned to increase. As of Fall 2002, the campus housed about 26% of its student body on-campus, leaving 74% to commute (by auto or other mode). The LRDP sets a new goal of housing of 50% on campus.
- Parking space turnover may decrease from that currently assumed in the campus parking projection i.e., the number of occupied spaces mid-day, relative to the number of permits sold, may go up. This is based on the expectation that as the campus grows to 25,000 students by 2020, there will be more students attending Monday through Friday, relative to the current attendance patterns that indicate many partial-day and partial-week students. The current turnover ratio of one occupied space for every three permits sold (1:3) was increased to one occupied space for every 2 permits sold (1:2), as a conservative estimate.
- Vehicle occupancy may decrease from that currently assumed in the campus parking projections. While the LRDP seeks to aggressively promote carpooling, it is also the case that current parking provision calculations assume a vehicle occupancy of 1.5 persons per vehicle for students, and 1.3 persons per vehicle for faculty or staff. If these assumptions are high, then the future parking estimates should be adjusted to reflect a more realistic expectation. Lower ratios of 1.3 (for students) and 1.2 (for faculty and staff) were used as a conservative estimate.
- Based on parking occupancy counts conducted in 2008, the cur-

rent peak permit parking rate is 0.45 for commuter students and 0.77 for faculty and staff. The peak permit parking rate for both groups combined is 0.57.

Using the above considerations, in combination with population growth estimates, future parking demand can be calculated. By 2020, the overall peak parking demand ratio is anticipated to rise from 0.28 to 0.50. This translates to a total peak-period demand that is expected to rise from the current demand of 4,855 parking spaces to 7,549 spaces. It should be noted that these figures are based on current parking demand rates, and do not take into account changes in parking behavior due to permit price increases or highly incentivized transportation demand management measures. By applying a 5% "cushion" in 2020, the campus estimates the

**Table 7: Approximate Parking Structure Capacity**

| <i>Parking Structure #</i> | <i>Acres</i> | <i>Parking Levels</i> | <i>Site Coverage</i> | <i>Approximate Spaces</i> |
|----------------------------|--------------|-----------------------|----------------------|---------------------------|
| 1                          | 1.80         | 4                     | 80%                  | 524                       |
| 2                          | 3.70         | 5                     | 80%                  | 869                       |
| 3                          | --           | --                    | --                   | --                        |
| 4                          | 5.40         | 7                     | 80%                  | 1,691                     |
| 5                          | 2.70         | 4                     | 80%                  | 1,075                     |
| 6                          | 3.20         | 4                     | 80%                  | 1,274                     |
| 7                          | 3.70         | 4                     | 80%                  | 1,474                     |
| 8                          | 3.80         | 4                     | 80%                  | 1,513                     |
| 9                          | 3.20         | 3                     | 80%                  | 956                       |
| <b>Total</b>               | <b>27.50</b> |                       |                      | <b>9,376</b>              |

Footnotes: Parking Structure 3 deleted with Amendment 2 and spaces reapportioned to Parking Structures 1, 2, and 4. Assumes the parking structure footprint is approximately 80% site coverage of the total acres. It is anticipated that each structured space will require an average of 350 gross square feet.

amount of necessary total parking to be 7,946 spaces of which 3,131 parking spaces would be for commuter students and visitors, and 4,815 would be for faculty and staff. This cushion also allows for unanticipated variations in parking activity as well as the temporary loss of spaces due to improperly parked vehicles, construction, and other factors. The parking inventory assumes secondary uses such as retail, office, etc. will be permitted in any new parking structure. The parking June 2011 parking space supply distributed through out the campus is 9,559 spaces.

The parking supply is not projected to double, as the campus population is expected to, largely because of the goal to house a

substantially larger proportion of students on-campus.

### Commuter and Visitor Parking Lot and Structure Locations

The parking plan provides parking at locations adjacent to the primary circulation system, and to the I-215/SR60 interchanges at Blaine Street and Martin Luther King Jr. Boulevard. In addition, the parking plan aims to provide parking on the east and west sides of campus in roughly a similar proportion as the distribution of academic uses, with a somewhat higher proportion on the East Campus. However, because of the intense need for academic space on the East Campus, some of the east-side parking demand will be met through parking structure(s) somewhat west of I-215/SR-60. Figure 19 illustrates the proposed major parking locations. Most of

**Table 8: Projected Parking Inventory Summary**

| <i>Parking Spaces</i>          | <i>Existing Spaces</i> | <i>Projected Spaces</i> | <i>Current/Interim Configuration</i> | <i>Ultimate Configuration</i>  |
|--------------------------------|------------------------|-------------------------|--------------------------------------|--------------------------------|
| Daytime Population             |                        |                         |                                      |                                |
| Commuter Students and Visitors | 3,025                  | 3,131                   | Surface Lots                         | Primarily Parking Structures   |
| Faculty / Staff                | 3,633                  | 4,815                   | Surface Lots                         | Primarily Parking Structures   |
| School of Medicine             | 0                      | 3,781                   | --                                   | Primarily Parking Structures   |
| Residential Population         |                        |                         |                                      |                                |
| Residential                    |                        |                         |                                      |                                |
| Residence Halls                | 880                    | 1,477                   | Surface Lots                         | Primarily Surface Lots         |
| Apartments                     | 494                    | 2,940                   | Surface Lots                         | In Buildings/On Street/Surface |
| Family Housing                 | 268                    | 1,071                   | On Street                            | In Buildings/On Street/Surface |
| Subtotal - resident parking    | 1,642                  | 5,488                   |                                      |                                |
| <b>Total Parking</b>           | <b>8,300</b>           | <b>17,215</b>           |                                      |                                |

these sites would require structures to accommodate the required parking on the footprint shown. However, many of the sites may operate as surface lots on an interim basis. Table 7 indicates the parking capacity and underlying assumptions for the proposed sites.

Some visitor parking will be provided at all of the major parking sites, but the bulk of the visitor spaces will be provided near the campus gateways, i.e. near University Avenue / Campus Drive, and near Canyon Crest / Martin Luther King Jr. Boulevard.

In addition to the major parking sites, approximately 5% of the total parking supply, or 500 spaces, will be dispersed in small lots within the core academic areas. These spaces will serve special permits, disabled drivers, and those with special needs.

#### *Service / Delivery Parking*

Additional parking is provided throughout campus near buildings and within support service areas for campus service, disabled and delivery trucks and campus vehicles. These parking spaces are generally planned and constructed in concert with new buildings or building complexes. It is estimated that the numbers of these spaces will approximately double, resulting in an additional 40 spaces throughout campus.

#### *Residential Parking*

The 2005 LRDP provides for the following parking ratios for the three types of student housing:

|                  |                                 |
|------------------|---------------------------------|
| Residence Halls: | One space per four beds.        |
| Apartments:      | One Space per two Beds          |
| Family Housing:  | One and one-half space per unit |

Residential parking utilization will be monitored to determine if less parking is needed for future residential projects. Currently on-campus residential parking permits restrict parking in commuter lots from 7:00 AM to 4:00 PM.

Residential parking will generally be provided within or adjacent to housing complexes. If 50% of enrolled students are housed on campus, approximately 5,488 parking spaces will need to be provided based on type of housing and number of beds proposed.

#### *Disabled Parking*

Parking for disabled persons should be provided convenient to buildings throughout the campus, so as to allow access to building entries. The amount and locations of disabled parking will be determined on a project by project basis.

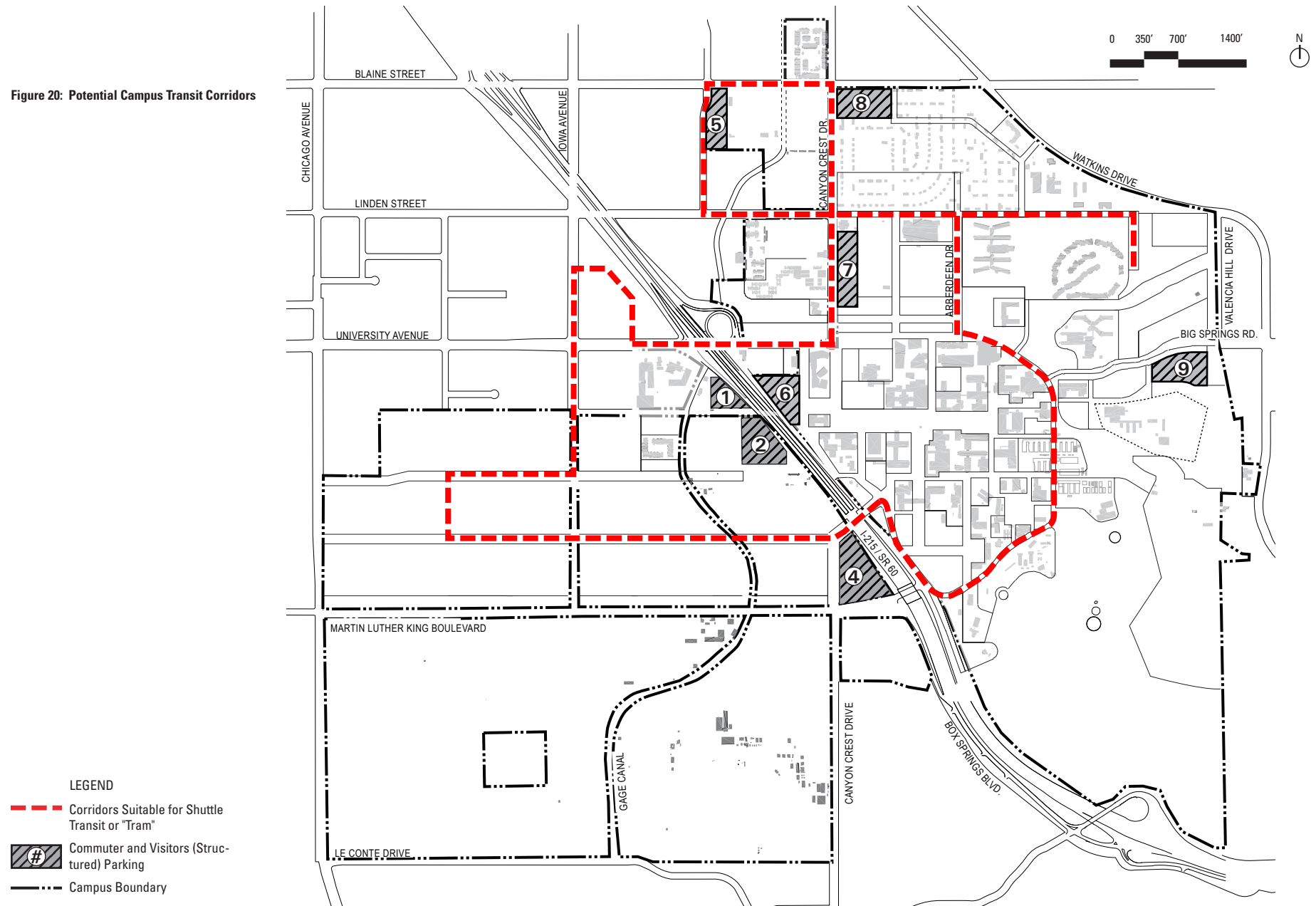
#### Transit Services

As the campus grows integrated transit services will be important to connect the East and West Campus cores as well as connect UCR to downtown Riverside and the region. Riverside Transit Agency (RTA) and UCR will continue to partner to offer students, faculty, and staff employees transportation and transit service options. The substantial increase in the physical size of the campus, along with the need to manage traffic congestion by pulling parking away from the core areas, necessitate transit services that provide more strategic routes and greater frequency of service during peak times.

Figure 20 shows the potential campus transit corridors which would allow convenient travel between major parking facilities, residential areas, the East and West Campus cores, and recreational / entertainment destinations including University Village, and the University Avenue corridor. These routes would have only a handful



Figure 20: Potential Campus Transit Corridors



of stops, in order to achieve the desired frequency during peak times (up to 5-minute headways). The stops would allow passengers to disembark within a five-minute walk of any campus destination.

The LRDP envisions coordination of campus shuttle routes with the RTA routes at several envisioned “Transportation Hubs” at the campus gateways. These hubs would facilitate transfers, and would also have transportation information, bicycle parking/lockers, and other amenities to encourage the use of alternative transportation modes. With the integration of the RTA and UCR transit routes, stops, and schedules, redundant service can be avoided, and convenient travel via transit from points throughout the City to the campus can be achieved. This integration may extend to a joint-service project along a mutually beneficial route, similar to the former Orange Blossom Express that connected the Riverside campus to downtown Riverside

In order to help provide a fully integrated transportation system, with transfers between modes made as convenient as possible, it would also be appropriate for all campus transportation service and RTA vehicles to be equipped with bicycle racks.

## Pedestrian and Bicycle Circulation

The LRDP envisions a number of key changes to the pedestrian and bicycle systems at UCR, to provide more connectivity within the campus as it grows and to promote walking and bicycling as attractive alternatives to driving. The key issues to be addressed are:

- While the current pedestrian pathway / sidewalk system is well used by pedestrians and is open to bicyclists, it is not designed to accommodate large volumes of both.
- The current connections between the East and West campus

areas are poor, due to narrow sidewalks, non-existent bike lanes, high traffic volumes, narrow sidewalks and narrow bike lanes.

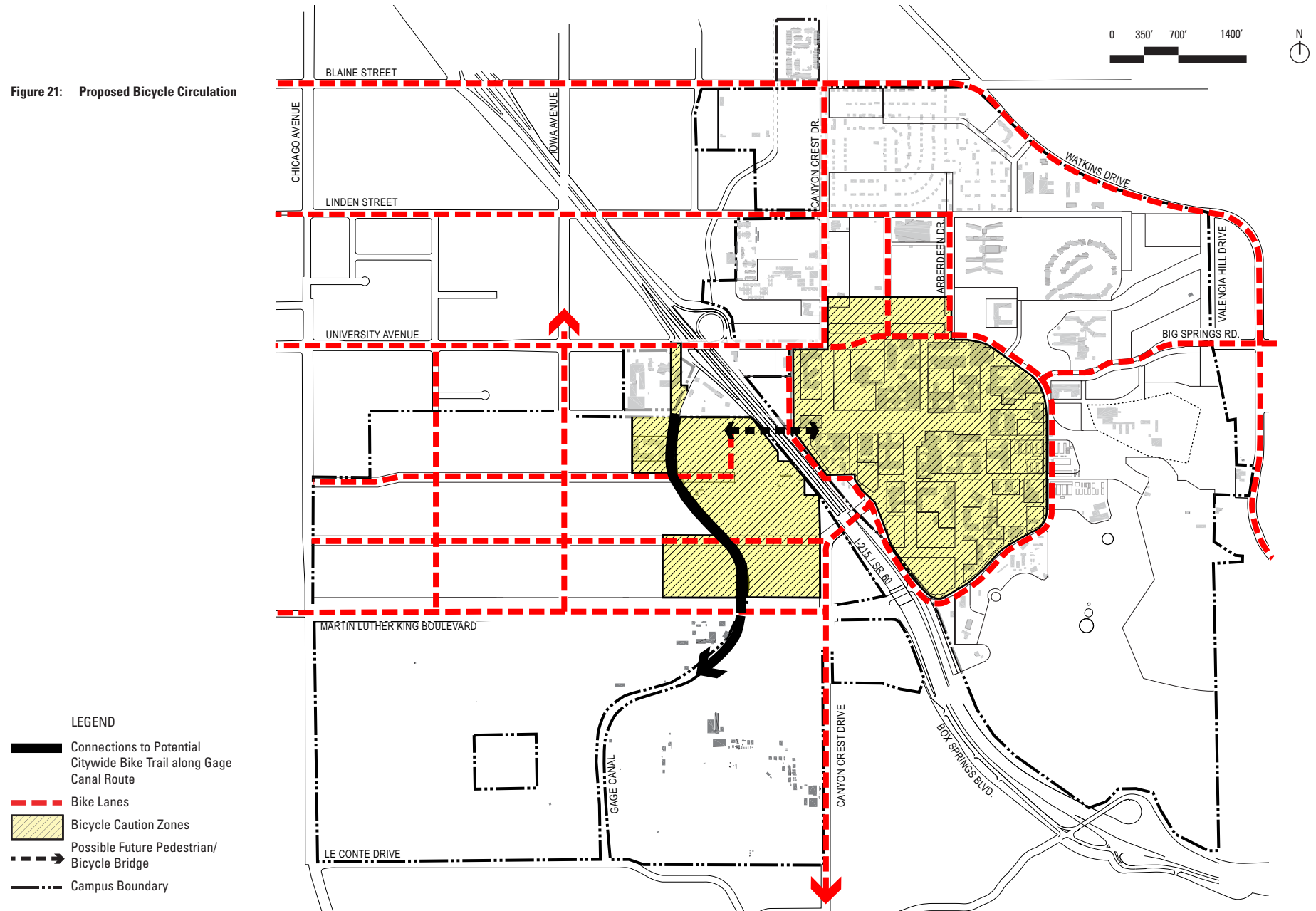
- The distances involved in traversing the expanded campus necessitate making walking and bicycling as comfortable as possible.

The circulation improvements described earlier, especially limitations of general vehicular circulation to routes outside of the high intensity campus core areas, are in large part planned to greatly improve pedestrian and bicycle safety and ease of movement on campus. Limitations on general vehicular access from roads such as the campus loop and Aberdeen Drive will open up significant new routes to much higher volumes of bicycle use; crossings by pedestrians will also be greatly enhanced as a result.

In parallel with the removal of traffic from many campus roads, the system of pedestrian malls will be extended and will form the backbone pedestrian circulation system. East Campus malls will be extended throughout the academic core and north and northeast to expanding residential and recreation areas. In the West Campus, malls will be extended from University Avenue and the Canyon Crest undercrossings, throughout the academic core and then west into the residential neighborhoods. As illustrated further in the open space sections, malls are typically planned to be 100-200 feet in width with ample space for pedestrian and bicycle movement. In the residential neighborhoods of the campus generous sidewalks will be provided.

Certain roads that carry significant volume of both vehicular and pedestrian traffic will need to be improved to provide a better pedestrian environment. In particular:

Figure 21: Proposed Bicycle Circulation



- Canyon Crest Drive, north of University Avenue should have widened sidewalks, shade trees, and narrowed crosswalks to facilitate crossing movements
- University Avenue should be improved from Canyon Crest Drive to the UNEX building west of the freeway to provide more generous pedestrian sidewalks. The freeway on-ramps should also be narrowed with the free right turn eliminated in order to make a more safe pedestrian crossing on the south side of the street
- Iowa Avenue should be designed with a narrow cross-section and traffic calming devices to facilitate pedestrian and bicycle crossings within the West Campus
- A freeway overcrossing for pedestrians and bicycles could be provided just north of Hinderaker Hall

The bicycle circulation system on campus will build upon the existing and expanded system of malls and other corridors. The bicycle system consists of:

- A linkage to the proposed regional bicycle trail system via Gage Canal. The canal will be covered and improvements to accommodate pedestrian and bicycles will be added (see Open Space and Landscape section)
- Primary roads will include striped and signed bicycle lanes. This will facilitate longer trips from outside the campus
- All local access roads on campus will be designed to allow bicycle use within the road right-of-way. Local access roads will be designed to minimize through traffic and speeds
- Controlled local access roads and service road and driveways will generally be available for bicycle use.

In addition to the system noted above, the malls of the campus will also be available for bicycle use. Usage of the malls will need to be

monitored over time to assess the degree of pedestrian and bicycle conflicts occurring. If conflicts become severe, it may be necessary to provide striped bicycle lanes on specific malls, and to prohibit riding in certain particularly high activity zones. It may ultimately be necessary to designate zones within which it is required that bicycles be walked, not ridden.

Other specific recommended improvements include:

- Improvement of the University Avenue undercrossing to have four foot minimum bicycle lanes (and more wherever possible) on each side of the street, or a 12-foot minimum multi-use tow-way path along the south side of the street, from Campus Drive to at least the UNEX facility (this would require cooperation with the City of Riverside and Caltrans)
- Provision of ample bicycle parking and bicycle lockers near primary building entrances, or in large bike “corrals” easily accessed around the campus
- Provision of potential amenities such as bicycle lockers at major parking facilities, to allow auto commuters to easily get around campus without their cars
- Implementation of an aggressive bicycle promotion program, including distribution of information on the bicycle system and bicycle retailers in the area; periodic presentation of bicycle safety seminars; a bicycle registration program; a bike rental program; provision of a bicycle repair shop on campus; and other measures designed to raise awareness of the benefits of bicycling to and on campus.

As existing pedestrian / bicycle pathways are enhanced or extended, and new pathways, some shared use, some exclusively for pedestrians or bicyclists, are developed, the pathway network must be designed to minimize the potential for pedestrian / bicycle

conflicts. Some suggestions include:

- Clearly designating the appropriate use(s) of each path
- Designing adequate widths to accommodate the expected volume and type of pedestrian and/or bicycle traffic
- Providing appropriate right-of-way and wayfinding signage at pathway intersections
- Providing controlled crossings (traffic lights or stop signs), whenever feasible, at roadways carrying auto traffic
- Enforcing right-of-way compliance for pedestrians and bicyclists

## Transportation Demand Management

As UCR enrollment grows to almost double its current size, it must attempt to minimize traffic growth to ensure that both on- and off-campus roadways are able to accommodate peak traffic volumes. Transportation Demand Management (TDM) is a term used to describe a variety of measures that can help achieve the goal of minimizing automobile traffic. UCR offers vanpool and carpool programs as part of its TDM program. Summarizing these measures, UCR will adopt measures such as:

- Increase the on-campus housing target to 50% of all students
- Expand the external campus shuttle system and provide connections with RTA routes at transportation hubs, to promote transit use for commuters
- Develop an on-campus shuttle system to loop campus and provide access to interior of East and West Campus areas
- Provide bike racks, bike lockers, bike corrals, etc. to provide security for bicycle “storage”
- Create a comprehensive campus bicycle circulation system that

connects to off-campus bike routes, and supports bicycling as a feasible commute option

- Implement a bicycle promotion program to educate the campus community on the bicycle system and the benefits of bicycling.

## Parking Management

To efficiently manage the commuter parking supply and minimize traffic congestion, a parking management plan more specific than the Transportation Demand Management Plan will be developed.

The following components are recommended:

- Continuation of the current policy that prohibits students residing within a three-mile radius from purchasing commuter permits
- Lot-specific permitting during peak usage hours (such as 7:00 AM to 6:00 PM), to avoid cross-campus trips and promote bicycle, shuttle and walking trips, and to manage congestion by matching permit-holder residences with lot assignment so as to minimize the impact of commute trips on campus roadways
- Permit pricing which charges the full cost of parking (i.e. construction and maintenance costs), to the extent possible, for premium lots / structures; lower-cost pricing for outlying or remote lots / structures
- Parking usage monitoring to ensure that parking supply is not overbuilt (promoting driving) nor under built (promoting off-campus parking impacts)
- Frequently scheduled shuttle and/or tram service from outlying areas and remove parking lots to the academic cores of both the East and West Campus and an internal shuttle or tram system on campus to provide an alternative for those going from one end of the campus to the other.



The success of the Parking Management and Transportation Demand Management Plans depend on the development and implementation of a comprehensive campus transit system, to allow quick and convenient transfers between the parking sites and key campus destinations and an integrated bicycle plan (pathways, lockers and bike racks, showers and other amenities) and multi-modal linkages to off-campus sites and destinations.



# **Open Space and Landscape**



## Open Space and Landscape

Open space and landscape play a significant role in defining the character and quality of the UCR campus. Open space consists of the large open areas that do not contain buildings, and on a university campus, is the largest component of the “public environment” or places that the entire campus population shares and utilizes every day. On many campuses major quads or malls constitute the primary open space and the most memorable images of the campus. Open space also includes a wide variety of spaces such as other greens, plazas, commons and park-like spaces, walkways and other connections throughout the campus, and even the small courtyards associated with individual buildings.

As illustrated on Figure 22 Open Space Framework, the extensive system of malls and linear open spaces will include:

### East Campus Malls (north-south)

- Recreation Mall
- Aberdeen Walk
- Housing Mall
- Pentland Way
- Arts Mall
- Commons Mall

- Science Mall
- Barn Walk
- Library Mall

#### East Campus Malls (east-west)

- Linden Mall
  - North Mall
  - Eucalyptus Walk
  - Citrus Mall
- #### West Campus Malls (north-south)
- University Mall

#### West Campus Malls (east-west)

- West Campus Mall
- Northwest Mall
- Southwest Mall
- Buffer Area Landscaping on Martin Luther King Boulevard

#### West Campus Malls (north - south)

- School of Medicine Quad
- Gage Canal Mall

Closely associated with campus open space, and together comprising the public environment, are the streets that, in addition to accommodating vehicular traffic, carry high volumes of pedestrian and bicycle traffic. Campus open space, combined with the streets and their pedestrian circulation, powerfully communicate the character and image of the campus. This open space and movement system creates a fabric of outdoor rooms, spaces and pathways that connect all areas of the campus.

Landscape encompasses the variety of plantings and associated elements found within the major open spaces, on streets, and on individual building sites. Landscape elements include plant materials (trees, shrubs, and grasses), lighting, site furnishings (benches, drinking fountains, information kiosks, bike racks), paving, and signage. While the open space system establishes the scale of the outdoor environment, landscape contributes to the particular image and character of the campus. Together the open space system, landscape, and the design of buildings comprise the physical image of the university campus.

While not technically an element of the landscape, public art is a particularly important component of campus open space and a visible program element in the outdoors.

The open space system presents a sometimes overlooked opportunity for education: natural areas and themed gardens are among elements of open space that can be specifically designed and utilized as a part of the curriculum, or signed with information, more informally, in parts of the campus.

Because the Long Range Development Plan is a general land use plan, it does not include detailed guidelines for all open spaces and landscaped areas of the campus, or for the design of buildings.

However, as UCR undertakes significant growth, as the East Campus is more fully developed, and the West Campus begins development, the quality and character of new open space and landscape will be particularly important. This section discusses the key components of the open space system, and the approach to landscaping large or particularly significant parts of the campus.



## Existing Conditions

The open space and landscaping of the UCR campus is diverse, ranging from the natural, rugged southeast hills at the foot of the Box Spring Mountains, to the lushly landscaped courtyards of the East Campus academic core buildings. The agricultural fields, primarily citrus groves, that occupy most of the West Campus area, discussed in the Land Use section of this document, are also elements of the overall campus open space system, giving a particular character to the campus image, while playing a particularly important academic and research role.

The growth of the campus will significantly alter the landscape of the campus, and will provide an opportunity to define new open spaces and landscapes to mature in the future. Described below are the principles that will guide future open space and landscape planning, the open space framework and its elements, and other landscape elements of the campus.

## Open Space and Landscape Planning Strategies

The approach to locating and designing open space and landscape improvements at UCR will be informed by several key strategies:

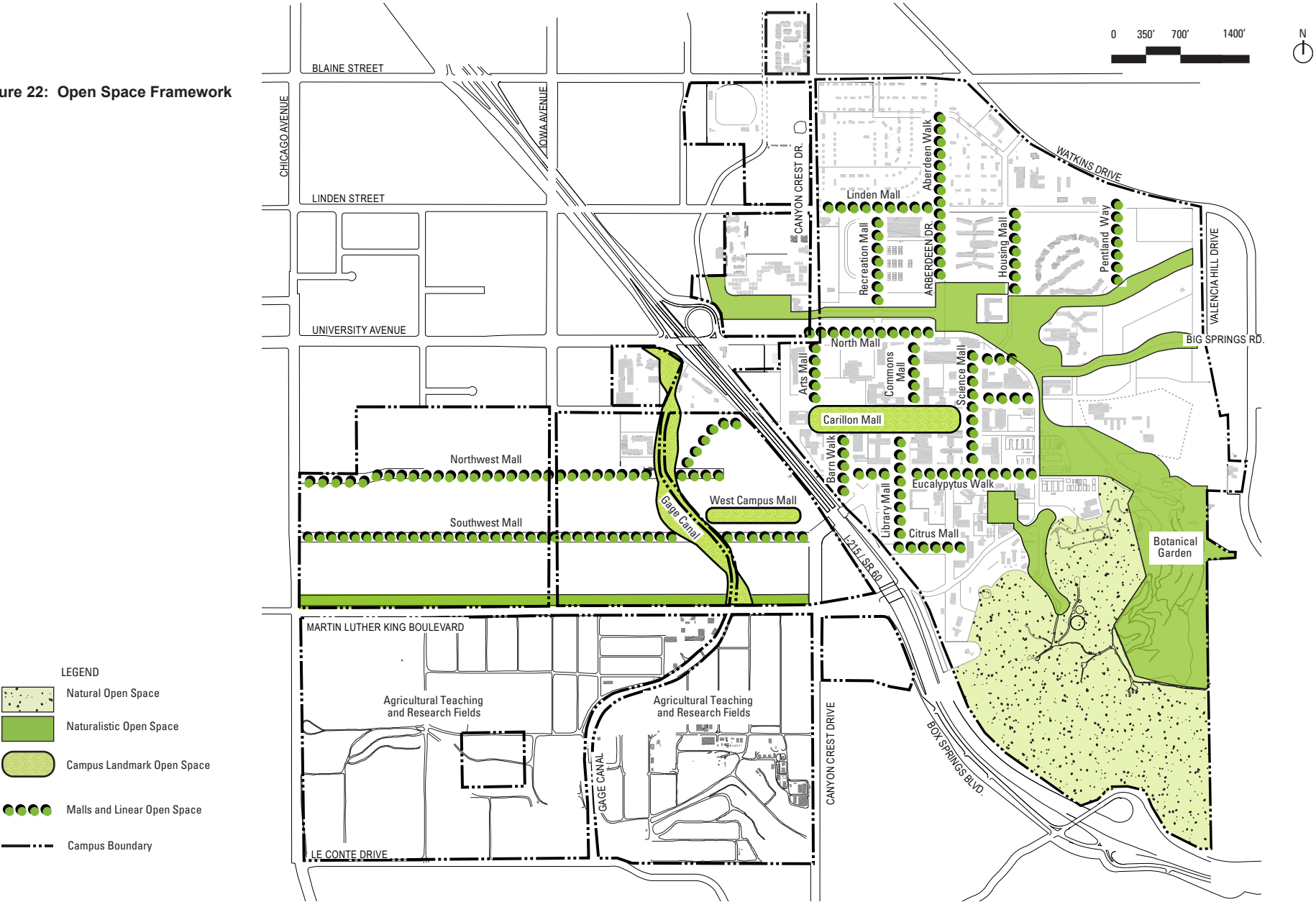
- Protect the steep and natural southeast hillsides designated as a natural Open Space Reserve, to protect wildlife habitat, to provide a visual backdrop to the campus, and protect against erosion.
- Within the natural Open Space Reserve, no major facilities will be allowed (except for sensitively sited utility projects), vehicular and pedestrian access will be limited, and native plant



(above) **Campus Natural Areas on Box Springs Mountains**

(below) **Campus Natural Areas**

Figure 22: Open Space Framework



(left) **University Arroyo**  
 (center) **Picnic Hill**  
 (right) **Naturalistic plantings on the East Campus**



materials will be used, where needed, for erosion, screening, and restoration.

- In Naturalistic Open Space areas, where arroyos and other natural features exist, preserve wherever possible, existing landforms, native plant materials, and trees. Where appropriate, restore habitat value.
- Provide landscaped Open Space buffers and setbacks along campus edges, such as Valencia Hills Drive and its extension south of Big Springs Road, Martin Luther King Jr. Boulevard, and the I-215/SR-60 freeway
- Retain the Carillon Mall as a major Campus Landmark Open Space, respecting its existing dominant width of approximately 200 feet throughout its length. Other “named” East Campus malls and walks will be 100 feet wide.

- Provide new Campus Landmark Open Space on the West Campus, the Gage Canal Mall, with additional major Open Space elements such as the West Campus malls and School of Medicine Quad.
- Provide neighborhood parks and tot lots in the family housing areas as neighborhood Open Space opportunities.

## Open Space Framework

The Open Space framework is comprised of five elements:

- Natural Open Spaces
- Naturalistic Open Spaces
- Campus Landmark Open Spaces
- Malls and Linear Open Spaces
- Neighborhood Parks



The campus Open Space is illustrated on the Open Space Framework drawing (Figure 22) and is described in the sections that follow.

### *Natural Open Space*

Natural open space consists primarily of the prominent undeveloped mountain hillside of the Box Springs Mountain foothills in the southeast portion of the campus. This area is designated as the campus Open Space Reserve in recognition of its environmental sensitivity and visual prominence (see Land Use section of this document). The campus has only limited facilities such as water tanks in the hillside zone. This natural area will be preserved, the primary purposes being to:

- Protect wildlife habitat
- Provide an attractive visual backdrop to the campus - with linkages to the semi-desert environment of the adjacent foothills
- Protect against erosion.

No significant buildings are planned in these natural open space areas. At most only modest expansions to existing facilities will be allowed. Vehicular and pedestrian access will be limited essentially to existing roads and trails.

There will be plantings of native plant materials only where needed for screening, erosion control and restoration.

### *Naturalistic Open Space*

Naturalistic open spaces are areas that look and feel natural. They no longer retain the true natural or native characteristics that were historically found in the region. Nevertheless, they provide an attractive and functional transition from the natural hillsides to the more verdant, formal open spaces of the campus, and also provide habitat for wildlife. Included within the naturalistic open space designation are:



**Carillon Tower and Mall**

(left) **Citrus trees on the West Campus**

(right) **A grove** (in this case olives) configured with outdoor dining and event space



- University Arroyo System
  - Botanic Garden and Arroyo
  - The arroyo between Pentland Hills and Lothian residential halls, extending towards the University Arroyo
  - The Glade surrounding the Student Health Center
  - Gage Basin south of the Alumni and Visitors Center, north of University Avenue and east of the I-215/SR-60 freeway
- Picnic Hill

In the naturalistic areas, landscaping is intended to be informal in character and compatible with the natural systems (such as the undeveloped hillsides and arroyos) that are strongly apparent around the campus.

In areas where arroyos and natural drainages have already been displaced (such as the lower portion of the athletic fields east of

Canyon Crest Drive), new facility development should include naturalistic landscape improvements that are expressive of the arroyo that would pass through if not piped underground in this area. This “naturalistic” arroyo will provide a connection from the Glade to Canyon Crest Drive and the Gage Basin.

In other areas where natural systems remain, the naturalistic character of the arroyo should be maintained and enhanced. A variety of planting treatments are possible and can be:

- “Semi-desert landscape” in character - This can include succulents, pines, palms and palm-like plants, ornamental grasses, willows (associated with arroyos)
- Low water use (xeriscape)
- Informal planting patterns
- Responsive to the topographic and environmental patterns of the site area (i.e., arroyos and hillsides)



(left) **Fine Arts Mall**(right) **Rivera Plaza - west end of Carillon Mall**

### *Campus Landmark Open Spaces*

The East Campus derives much of its character from the Carillon Mall that includes the most important campus landmark - Carillon Tower. The largest and most memorable developed open space on the East Campus, Carillon Mall is located at the original heart of UCR, and is surrounded by early UCR buildings and important uses such as the Highlander Union Building and Rivera Library. Carillon Mall hosts a variety of informal uses, and has adequate space for special events such as convocations and graduation ceremonies.

Both Carillon Mall and the buildings that surround it are reflective of traditional American campus planning, which is often characterized by wide grassy malls or quads, surrounded by various academic buildings. These academic spaces are typically lush, intensively planted, and are the core to which other linking malls, walkways and courtyards are connected. The Carillon Mall will remain with very little change as the primary landmark open space of the East Campus. Its generous width, approximately 200 feet on average,

should be maintained.

As the campus grows, the West Campus will emerge as a new center of activity and identity for UCR. It will also require landmark open space as both a focus of activity and to establish an image for the West Campus. Occupying lands that have been in citrus cultivation for teaching and research for many years, the West Campus has a history that suggests a different approach to the planning and design of a major open space. Rather than being characterized by the grassy malls of the East Campus, the West Campus will have a sinuous open space counterpoint, following the alignment of the Gage Canal. This feature will evoke an arroyo or dry and be complimented by a series of "braided" pedestrian and bicycle paths. A series of formal malls, quads and courtyards framed by academic buildings will link the meandering Gage Canal Mall landscape to the rest of the West Campus open space system. By incorporating a grid of buildings and streets evocative of a citrus grove, the West Campus will celebrate the role of citrus agriculture in the cultural

history of the Riverside region, and in the teaching and research legacy of UCR.

Landscape improvements in the Carillon Mall on the East Campus will be limited to maintenance and replanting where necessary. The general landscape character of the Mall should be retained. The Mall should continue to provide a balance between intensive plantings that provide shade and cooling, and open areas for sun and to allow long distance views to the nearby hillsides.

On the West Campus, three landmark open space areas -- the Gage Canal Mall, the West Campus Mall, and the School of Medicine Quad Concept -- will each have a unique landscape planting approach.

### **Gage Canal Mall**

The Gage Canal is a local irrigation water distribution system operated by the Gage Canal Company. The 2,900 foot section of the canal that traverses the West Campus is currently an open-water above-ground canal. However, for operational reasons the Gage Canal Company requires the canal to be piped and placed underground as part of any development proximate to the canal. The company also strictly limits the installation of landscape, hardscape, and structures in the vicinity of the canal and its 50 foot easement.

As such, UCR's Gage Canal Mall is envisioned as a naturalistic open space that will serve a number of low impact roles, providing a range of gathering spaces, curving pedestrian and bicycle spines, and an organic counterpoint to the formal grid of buildings, streets, malls, and quads on the West Campus. The Gage Canal Mall is illustrated in the sketch (Figure 23) and cross-section drawing (Figure 24) as well as described in the sections that follow.

UCR's Gage Canal Mall extends along the alignment of the Gage Canal, roughly from University Avenue on the north to Martin Luther King Boulevard on the south. It ranges in width from approximately 70-feet to 250-feet. The Gage Canal Mall open space concept (Figure 23) better utilizes the land base and provides opportunities for sustainable planting scenarios in the form of a linear botanical garden or sustainable landscape demonstration gardens.

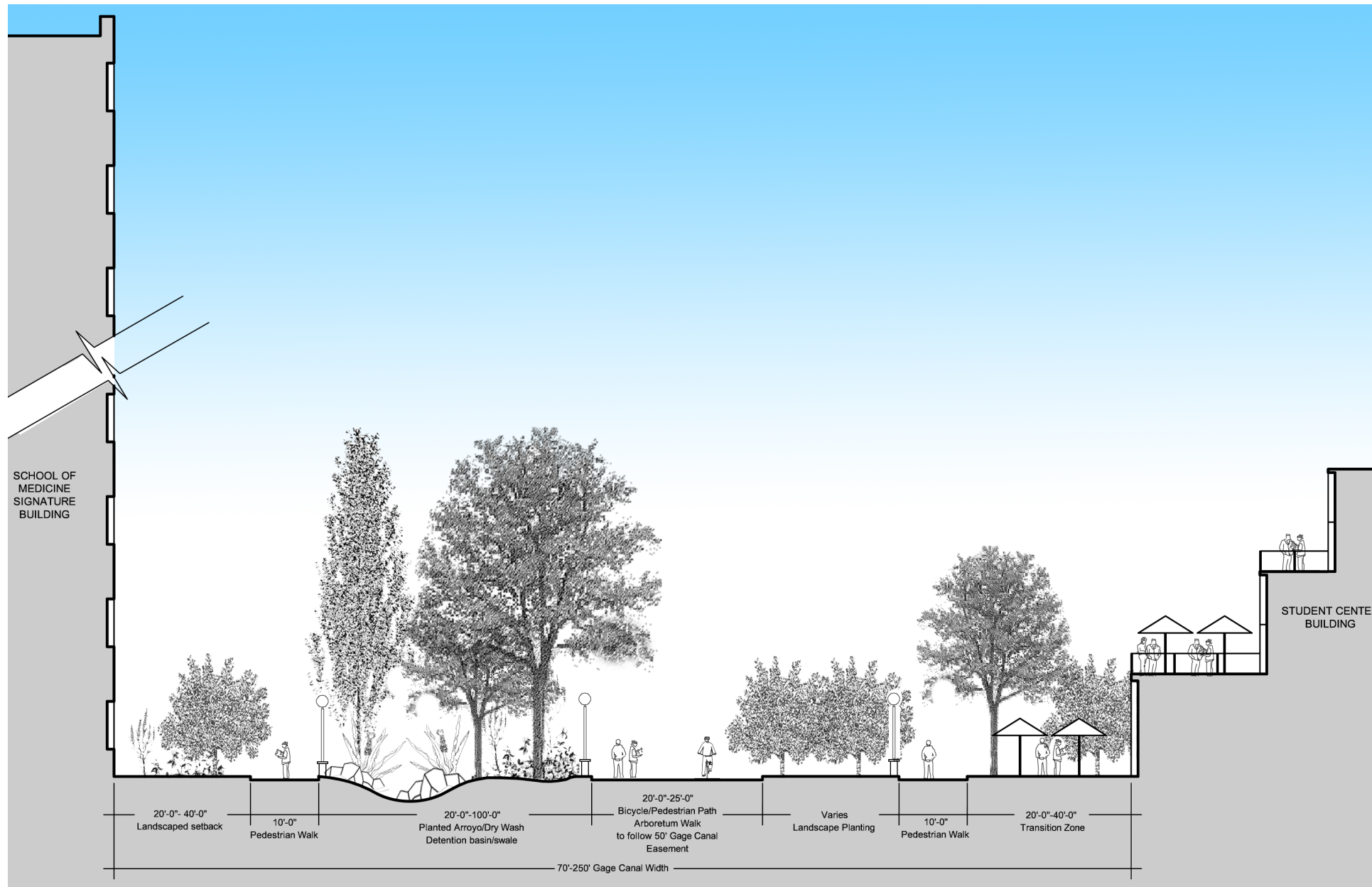
Gage Canal Mall will be developed over time as a major West Campus open space. Indigenous and low water requiring plants from the Campus Design Guidelines Plant Palette would provide informal plantings and groups of trees which could contribute to the educational and teaching potential of this open space. The Gage Canal Mall would not have water flowing in it; instead boulders and rock outcroppings will be encouraged evocative of an "arroyo" or "dry wash" similar to the dry creek beds found in Riverside County. Pedestrian bridges and pathways over and/or through the Mall and/or a dry creek bed could connect the east and west side of the Mall as well as provide interesting view opportunities down the central spine. Water is anticipated to be present in the creek bed only during storm events and would act as a detention basin with bioswales allowing the water to percolate into the soil in place. Both malls should have limited use of turf except at high activity areas.

The illustrative sketch in Figure 23 and the cross section in Figure 24 suggest the character of the West Campus Mall intersecting the meander of the Gage Canal Mall with future signature buildings located at the intersection of these malls. Careful consideration by architects, landscape architects, and campus planners should be given to the siting and design of both malls and the adjacent buildings. The tallest building in the School of Medicine is proposed to be located on the west side of the Gage Canal Mall at the intersection with the western terminus of the West Campus Mall. North of





Figure 23: Illustrative Sketch of Gage Canal Mall and West Campus Mall.

**Figure 24: Gage Canal Mall Suggested Cross Section**



the West Campus Mall on the east side of the Gage Canal Mall is the planned location of a proposed student services facility to serve the West Campus and the School of Medicine. The building could step up from both malls with plazas, courtyards, terraces and provide pedestrian entries to activities and food/dining service. Given the range of services and mix of program uses, permeable ground floors that foster a high level of interaction between the users and the adjacent open spaces would be an important component of this proposed facility.

### **West Campus Mall**

The rectangular, open space character and width of the West Campus Mall is distinct, yet it emulates the Carillon Mall. This linear mall would intersect the meander of the Gage Canal Mall and it will provide an organizing feature for academic buildings on the West Campus. The orthogonal relationship between the Mall and adjacent buildings would frame pedestrian views that are important for the future development of the West Campus. This mall will terminate at a signature building on its eastern end as well as the School of Medicine signature building on the west.

The cross section (Figure 25) illustrating the West Campus Mall and Adjoining Academic Buildings shows the open space dimensions and build-to lines for future buildings. Buildings situated around the perimeter of the West Campus Mall will create a strong, formal edge, reinforcing the open space at the center of the West Campus academic core. The West Campus Mall is planned at 170-feet wide from building-face to building-face framed by six to eight story buildings. At the ground level all buildings located around the Mall should allow opportunities for encroachment into a “layered, transition area” approximately 25-feet wide. Within this area porches, terraces, building entries, arcades, covered walkways, and pedestrian paths

could occur to activate the space and provide shade. Such penetrations into the Mall may occur in the transition area adjacent to the build-to line, but buildings may not encroach into the 100-foot wide central, green open space. The central, green will contain informal landscape planting and pedestrian paths that cross the Mall to provide access between building entries and access to pedestrian paths that connect destinations at the Mall to areas beyond. Outside the 100-foot wide central, green will be a continuous 10-foot wide pedestrian walkway that connects the interior of the Mall around its perimeter.

### **School of Medicine Quad Concept**

The School of Medicine Quad Concept is a significant and unique open space that is a permitted use in the *School of Medicine* land use. The School of Medicine Quad should not be labeled as an *Open Space* on the LRDP land use plan as it is a permitted use within the *School of Medicine* land use. The School of Medicine Quad Concept and the character of this open space are described in the School of Medicine precinct design criteria and the Open Space and Landscape chapter of this document.

The School of Medicine Quad Concept, a pedestrian only open space, will be a formal, “ceremonial green” for graduation, social gatherings, fundraising events, etc., with a minimum dimension of 220-feet by 300-feet of clear area at the center for functions (rows of chairs, tables and chairs, stage, etc.). The proposed Quad open space is illustrated on the School of Medicine Quad Concept drawing (Figure 26) and described in both this section and the School of Medicine section of this document that contains additional planning strategies and design guidelines.



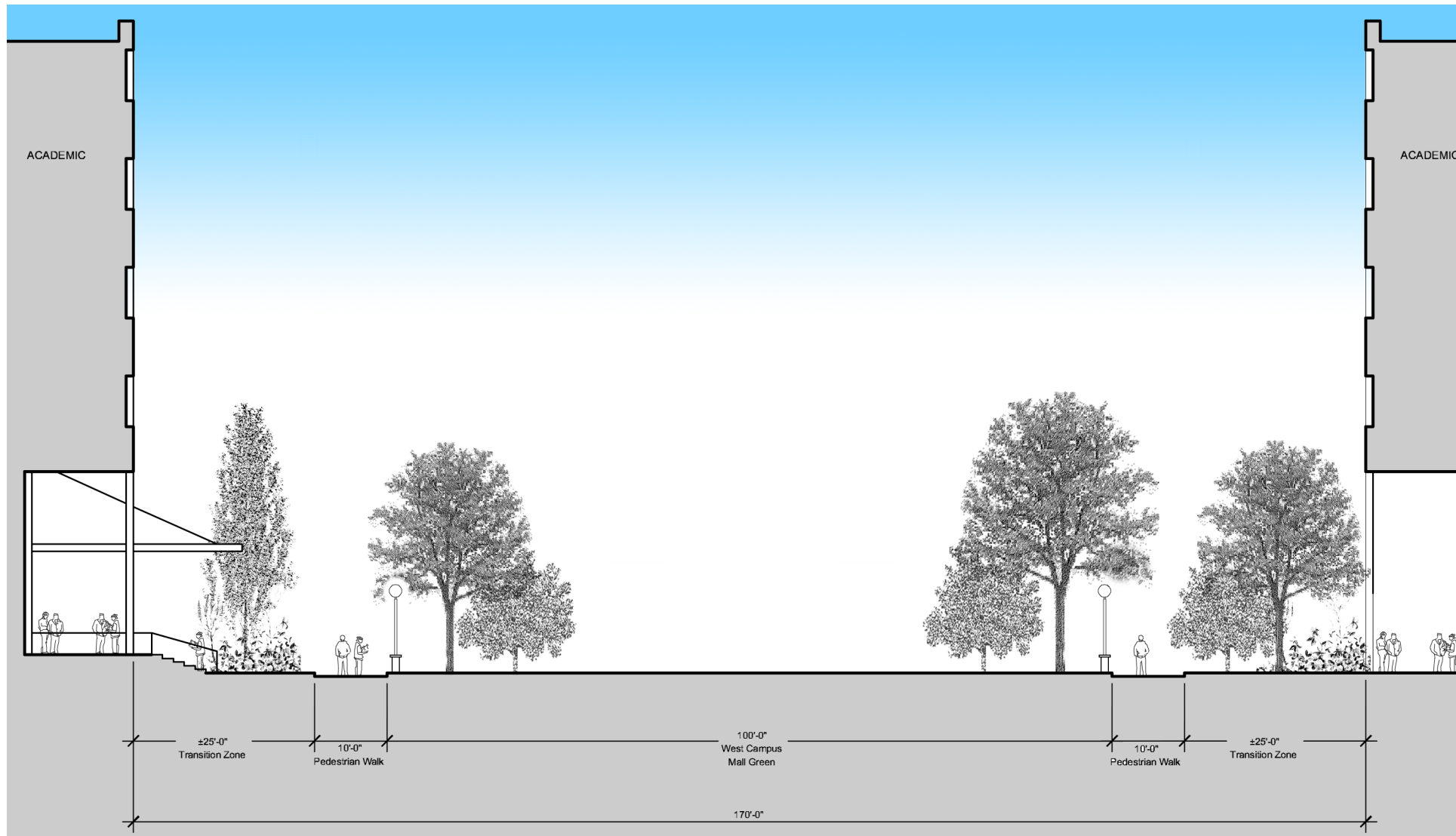
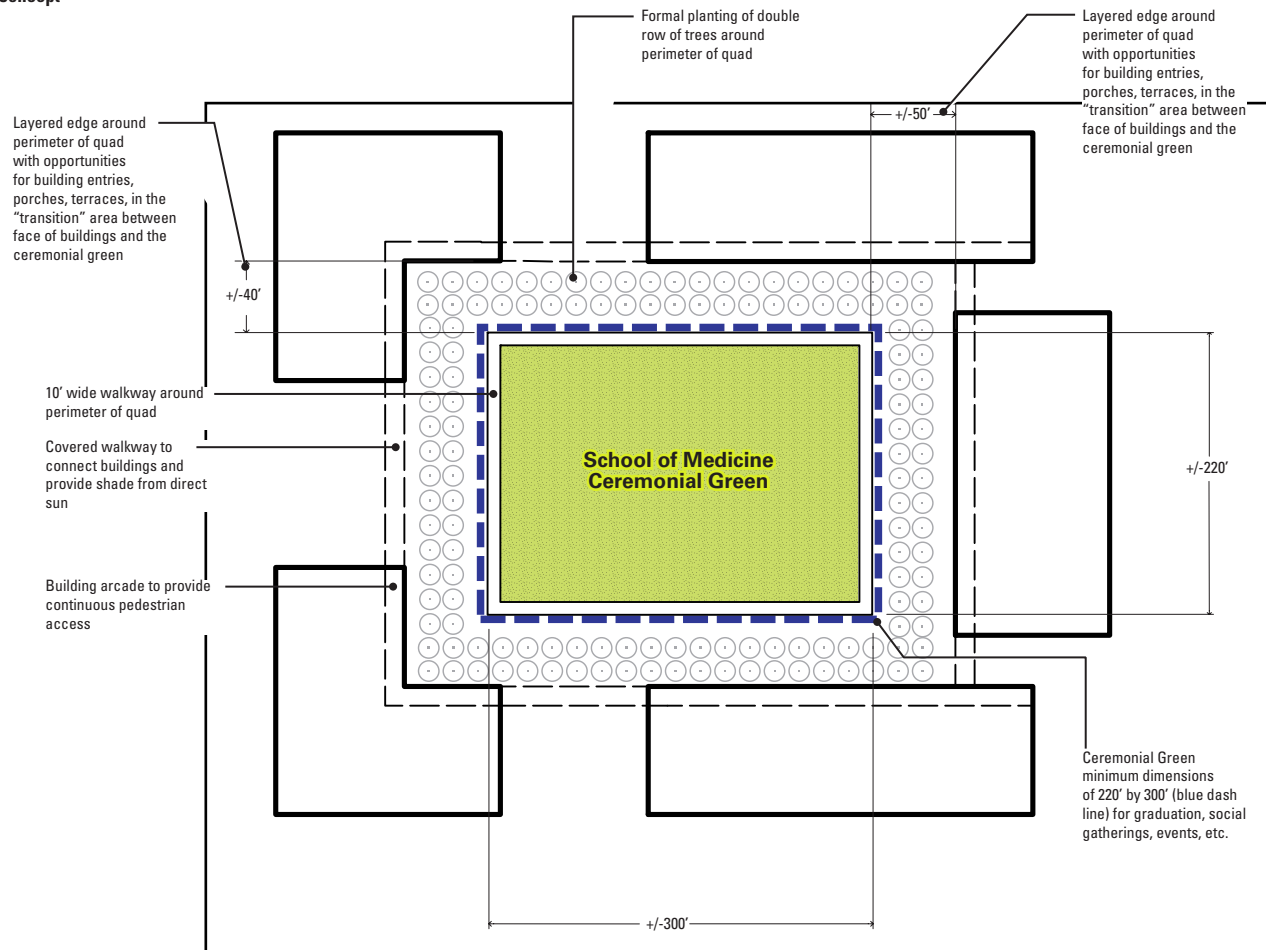
**Figure 25: West Campus Mall and Adjoining Academic Buildings** Suggested Cross Section

Figure 26: School of Medicine Quad Concept



The green open area of the School of Medicine Quad will have a “strong, layered edge” ranging from approximately 40 to 50-feet wide around the green with a 10-foot wide walkway within and around the perimeter of the green and opportunities for porches, stepped courtyards, covered walkways, etc., primarily at the building entries. On either side of the walkway a formal planting with a double row of trees will provide shade in this “transition area” between the building face and the central open space. Opportunities for buildings around the Quad to be linked with arcades and covered walkways will reinforce the edge of the Quad and provide pedestrian connections between buildings.

## Malls and Linear Open Spaces

These important zones of the campus provide an interconnected system of linked open spaces throughout the developed areas of the campus. In the future as the campus grows, more and better pedestrian and bicycle connections will be required to allow convenient and efficient movement throughout campus, particularly from outlying residential areas to the inner academic core. In some cases these connections will be accomplished with pedestrian malls where only emergency and service vehicles will be allowed. In other cases, vehicular access will be allowed, but significant pedestrian improvements, such as the Gage Canal Mall and West Campus Mall, will ensure that pedestrians will have relatively unimpeded movement.

As illustrated on the Open Space Framework drawing (Figure 22), connections between the West Campus and East Campus will be provided at three key locations: two existing freeway underpasses and a future pedestrian bridge over the freeway. The Northwest Mall, located between Chicago Avenue and immediately east of the

Gage Canal Mall, will be divided into segments with circulation and landscape specific to each area and are depicted in Figure 27, Figure 28-1, and Figure 28-2. The Southwest Mall, located between Chicago Avenue and Canyon Crest Drive, will be divided into segments with circulation and landscape specific to each area as depicted in Figure 27, Figure 28-1, and Figure 28-3.

The Southwest Mall will provide pedestrian, bicycle, and dedicated two-way campus shuttle service between the East Campus and West Campus; it will connect to the freeway underpass on Canyon Crest Drive. The Southwest Mall extends from Canyon Crest Drive to Chicago Avenue linking the West Campus Academic, School of Medicine, Housing and Athletics and Recreation land uses. At the freeway underpass on University Avenue, the northern terminus of the Gage Canal Mall connects to the University Avenue sidewalk. The third connection is proposed on the west side of a future pedestrian bridge that will connect the East Campus to West Campus over the freeway between parking structures on either side. A 20 to 25-foot wide diagonal path will start at Everton Place from the lower level of the northwestern corner of Parking Structure #2 connecting the elevated pedestrian bridge to the Northwest Mall.

### Northwest and Southwest Malls

These two east/west malls are the circulation framework for the West Campus. These approximately 120-foot to 130-foot wide malls (building face to building face) will accommodate pedestrian, bicycle, transit (campus shuttle), and vehicular access.

Between Chicago Avenue and Iowa Avenue the Northwest and Southwest Malls will be approximately 130-feet wide with a 90-foot right-of-way. A 40-foot wide planted median will double as a drainage swale. One-way travel lanes on either side will provide general

Figure 27: Northwest and Southwest Malls (West Campus - West of Iowa) Suggested Cross-Section

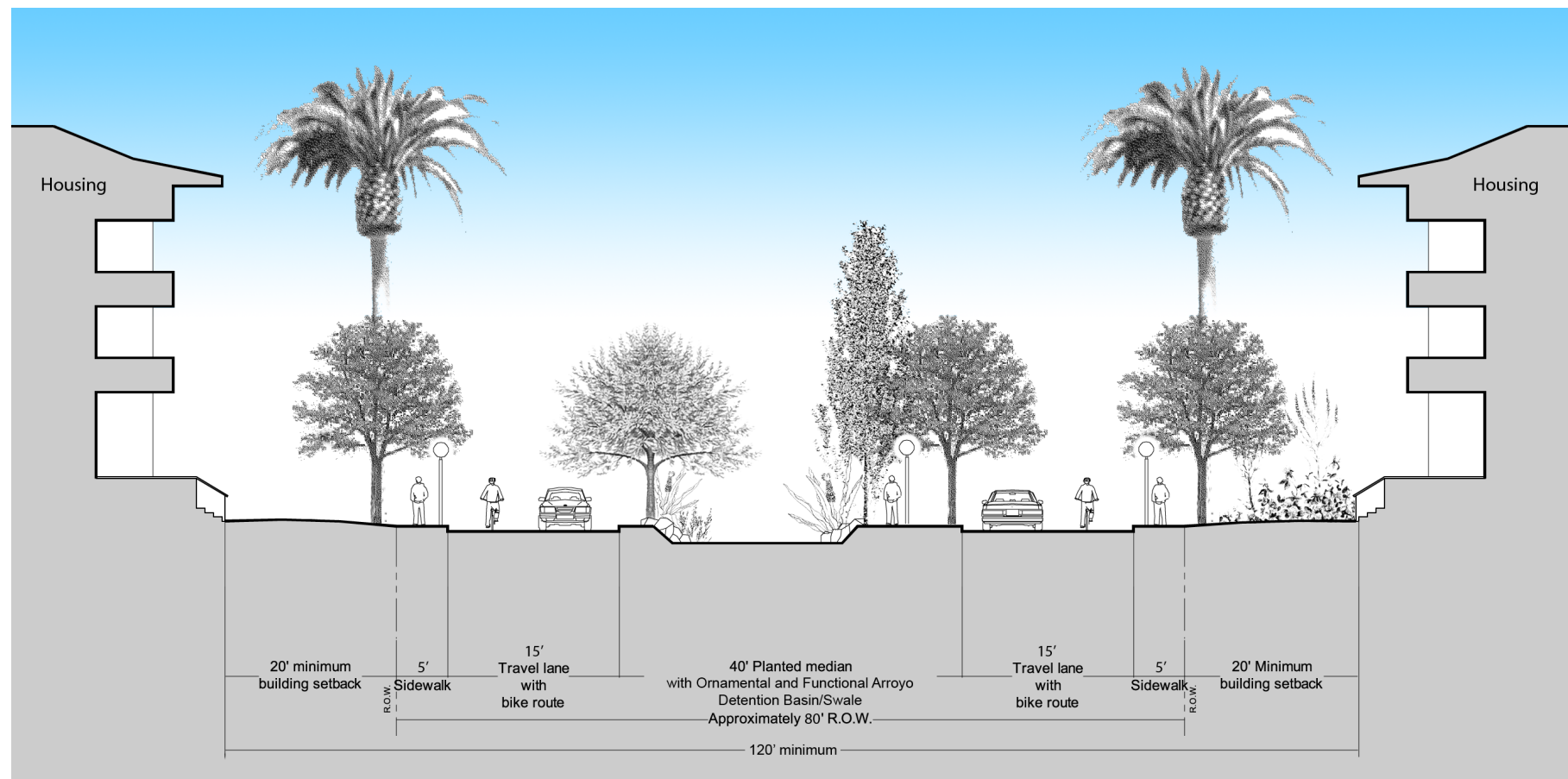


Figure 28-1: Northwest and Southwest Malls (West Campus - East of Iowa) Suggested Cross-Section

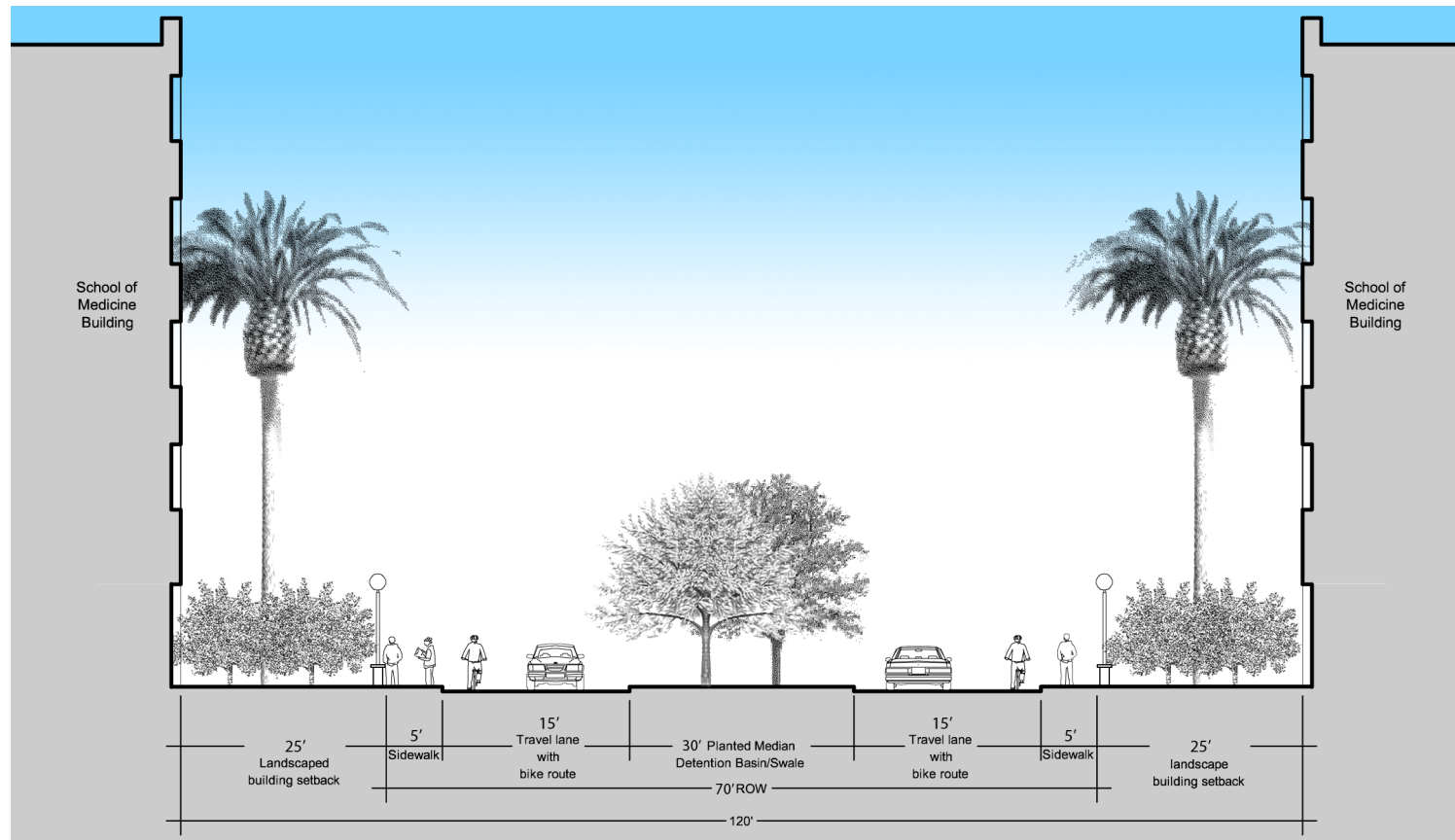




Figure 28-2: Northwest Mall (West Campus - East of Iowa) Suggested Cross-Section

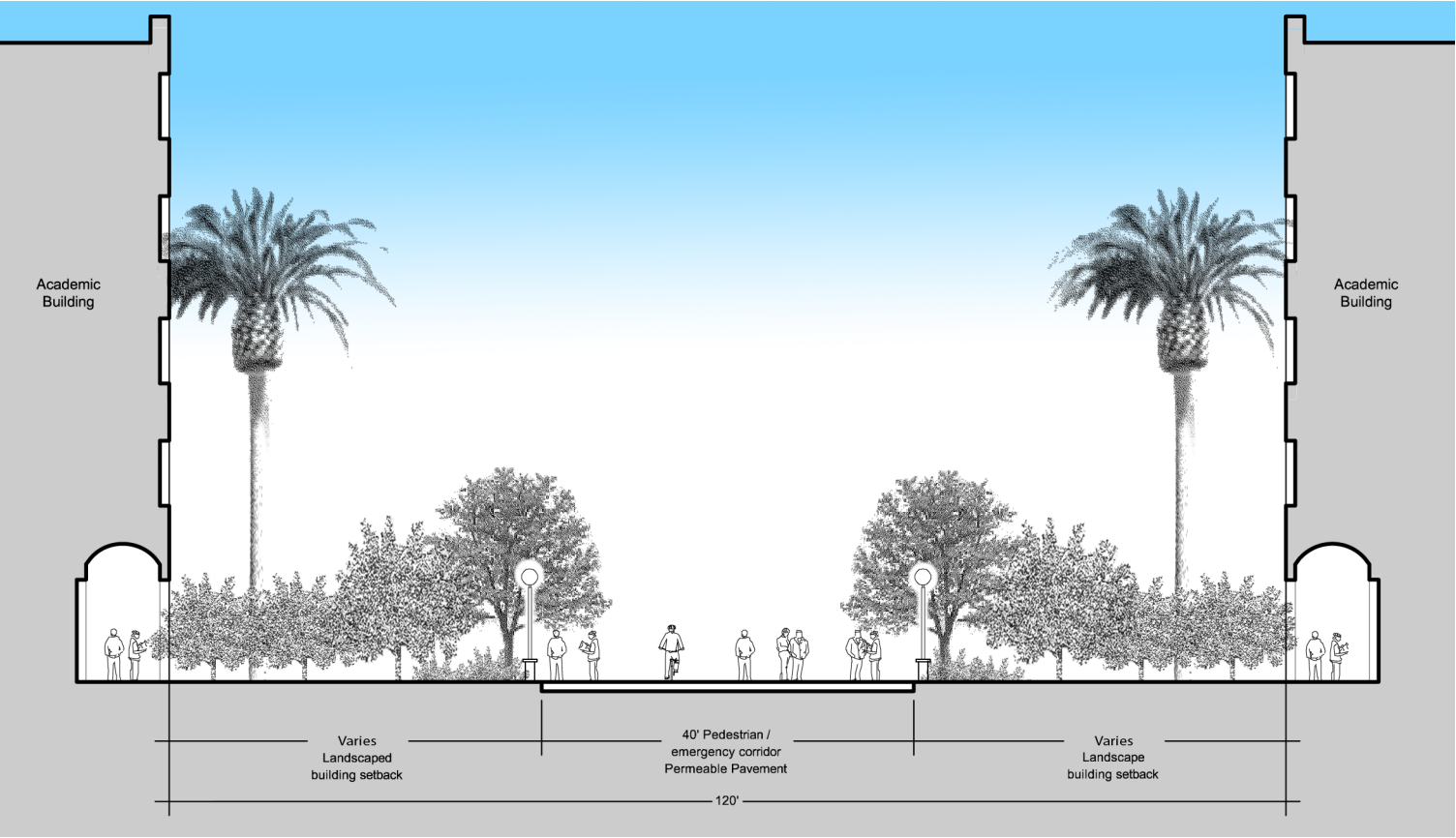
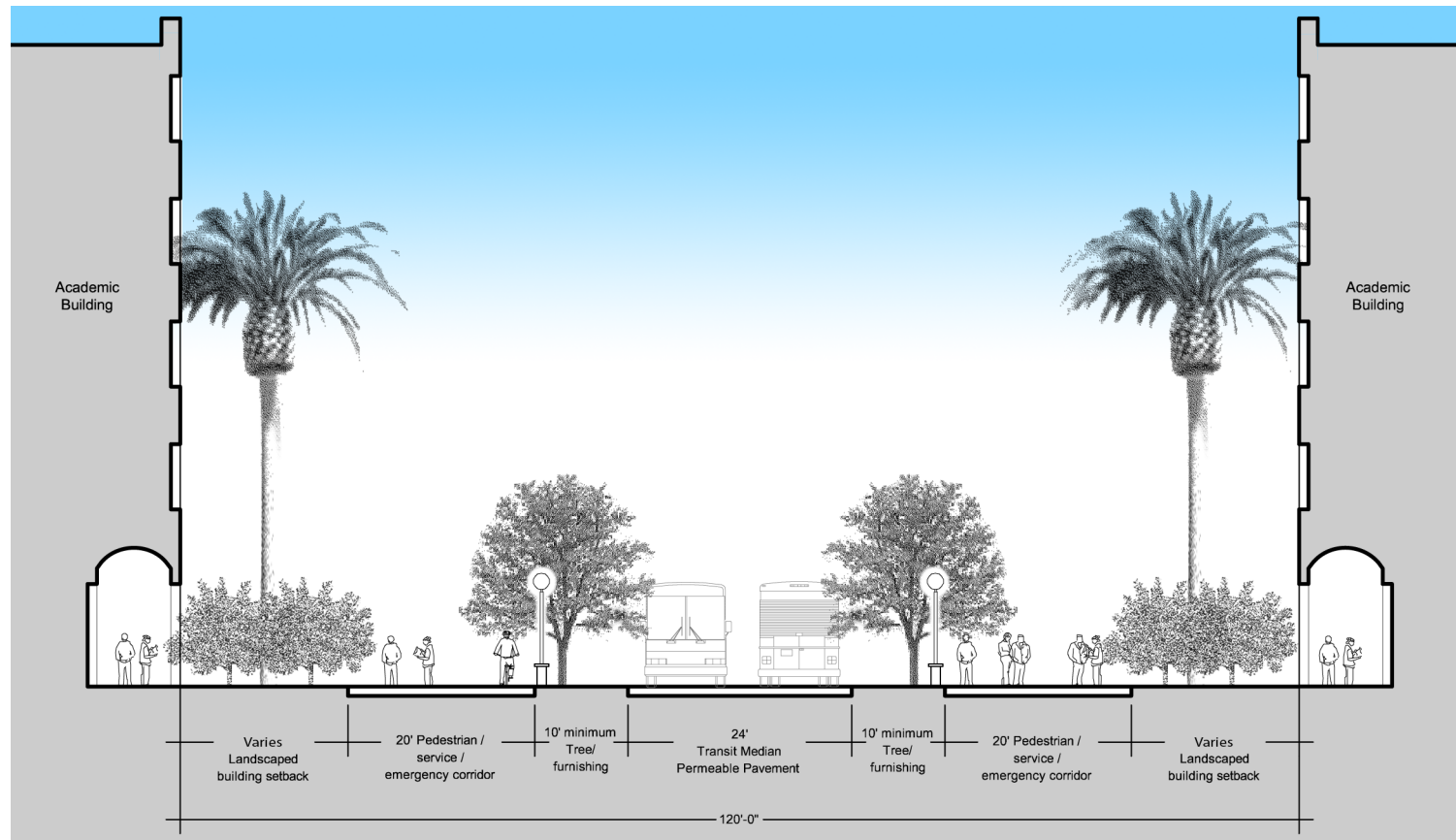


Figure 28-3: Southwest Mall with Shuttle Lane (West Campus-East of Iowa) Suggested Cross-Section



vehicular, emergency, and shuttle access to the West Campus. A contiguous 6-foot wide sidewalk outside the travel lanes and a 20-foot minimum landscape setback between the sidewalk and buildings will also be provided as illustrated in the suggested cross section (Figure 27).

#### **Northwest Mall – East of Iowa Avenue**

The segment of the Northwest Mall immediately east of Iowa Avenue will be approximately 120-feet wide with a 24-foot wide planted median to be used as a drainage swale for storm water management. It will have one-way travel lanes and bicycle routes on either side of the median. Travel lanes will provide vehicular and emergency access to the School of Medicine. A contiguous 6-foot wide sidewalk outside the travel lanes and a 20-foot minimum landscape setback between the sidewalk and buildings will be provided as illustrated in the suggested cross section Figure 28-1. The segment through the Gage Canal Mall to the east terminus of the Northwest Mall will be used for pedestrian, bicycle, and emergency vehicle access only. A landscape setback, with varied widths, would occur between the road and the buildings as illustrated in the suggested cross section Figure 28-2.

#### **Southwest Mall – East of Iowa Avenue**

The segment of the Southwest Mall immediately east of Iowa Avenue and just west of the West Campus Academic core and will be approximately 120-feet wide with a 24-foot wide planted median to be used as a drainage swale. It will have one-way travel lanes and bicycle routes on either side of the median. Travel lanes will provide vehicular and emergency access to the School of Medicine. A contiguous 6-foot wide sidewalk outside the travel lanes and a 20-foot minimum landscape setback between the sidewalk and buildings

will be provided as illustrated in the suggested Southwest Mall Cross Section (West Campus – East of Iowa) Figure 28-1.

The segment of the Southwest Mall, from the west side of the academic core to Canyon Crest Drive, will be restricted to pedestrians, bicycles, campus shuttles, and emergency access. A 40-foot wide “shuttle transit median” will run the length of this portion of the Southwest Mall as part of the bi-directional campus shuttle loop. The paved median will be a minimum 10-foot wide with an adjacent “tree/site furnishing strip” with landscape planting, lighting, seating, and other site furnishings for transit riders. Outside the “tree/site furnishing” strip there will be a 20-foot wide paved area for pedestrian, bicycles, and emergency vehicles, separate from the campus shuttle route. Between this paved area and the buildings facing the Southwest Mall there will be a landscape setback, its width varies, as illustrated in Southwest Mall with Shuttle Lane Cross Section (West Campus – East of Iowa) Figure 28-3.

The landscape design character for the East Campus malls is largely already established. Viewed in the larger context the malls constitute a “contained landscape” surrounded by buildings much like the walled gardens typical of the desert urban areas around the world. The contrast between the surrounding native semi-desert areas of the Box Springs Mountains is striking and contributes to the unique feel of the core of the campus.

This contained garden approach with tropical and subtropical plantings will be extended throughout the East Campus core to points where it will be terminated by the surrounding crescent of the naturalistic landscape zone. The palette of plant material should be similar throughout the malls of the East Campus, helping to unify

the area.

In contrast to the East Campus core, the West Campus will have a different approach; informed by the presence of the Gage Canal and by the agricultural and citrus heritage, as well as by the need to conserve water resources and landscape in a sustainable manner. The Gage Canal Mall, West Campus Mall, and the School of Medicine Quad Concept are the landmark open spaces on the West Campus with distinct features that continue the campus tradition of generous, distinctive open space areas. Specific landscape opportunities with formal and informal tree plantings will clearly define these

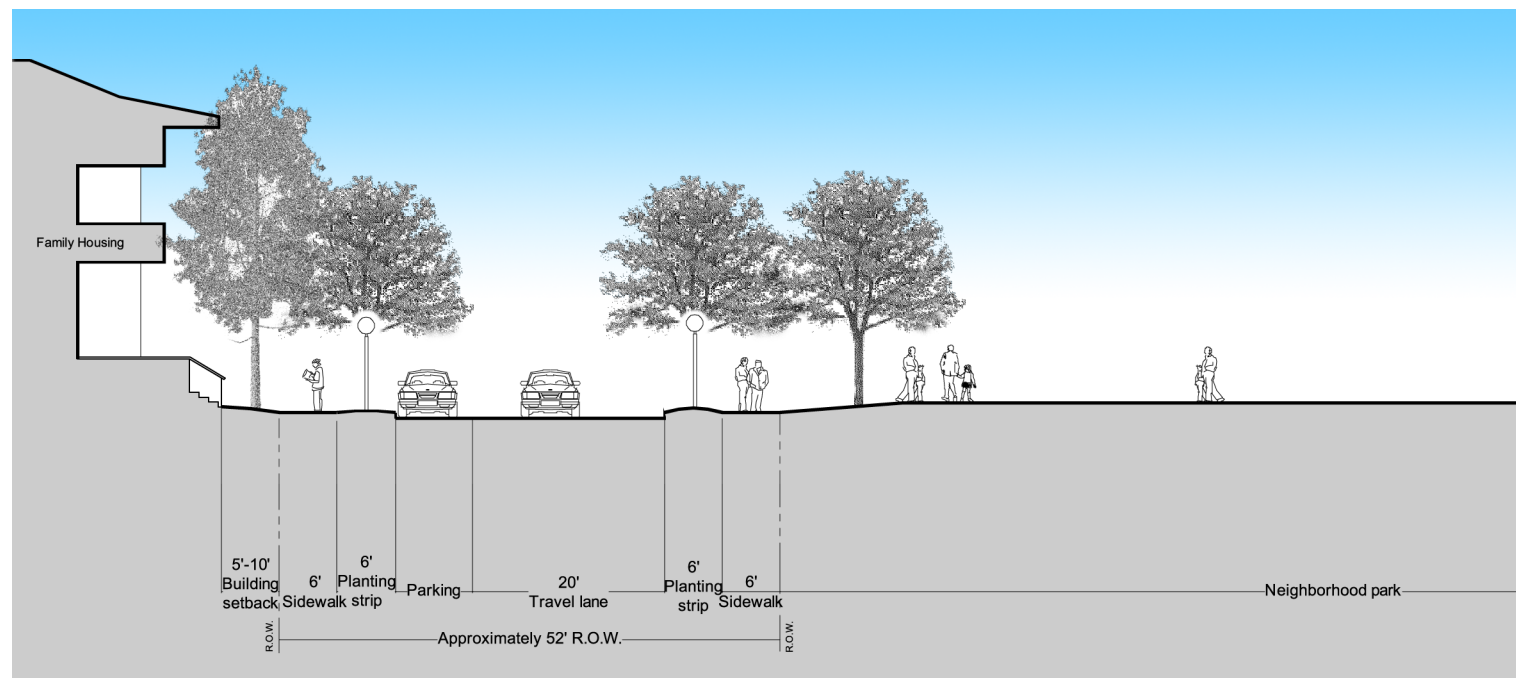


Figure 29: Neighborhood Parks Suggested Cross-Section

West Campus malls and quads, as well as connect them to other campus destinations. Low water requiring plantings as identified in the Campus Design Guidelines “Plant Palette” will dominate the planting schemes. Due to the width of these spaces there is an opportunity to plant smaller groves of citrus, ornamental species, or lawn substitutes within the larger walking surface.

### *Neighborhood Parks*

Neighborhood parks are planned in the family housing area of the West Campus. These parks will serve as local open space for residents of family housing.

Since children will be living in these areas and using these parks, they will be improved as simple turf areas for active play. The streets surrounding the parks will be bordered with shade trees, pedestrian-scaled lighting, benches and other amenities.

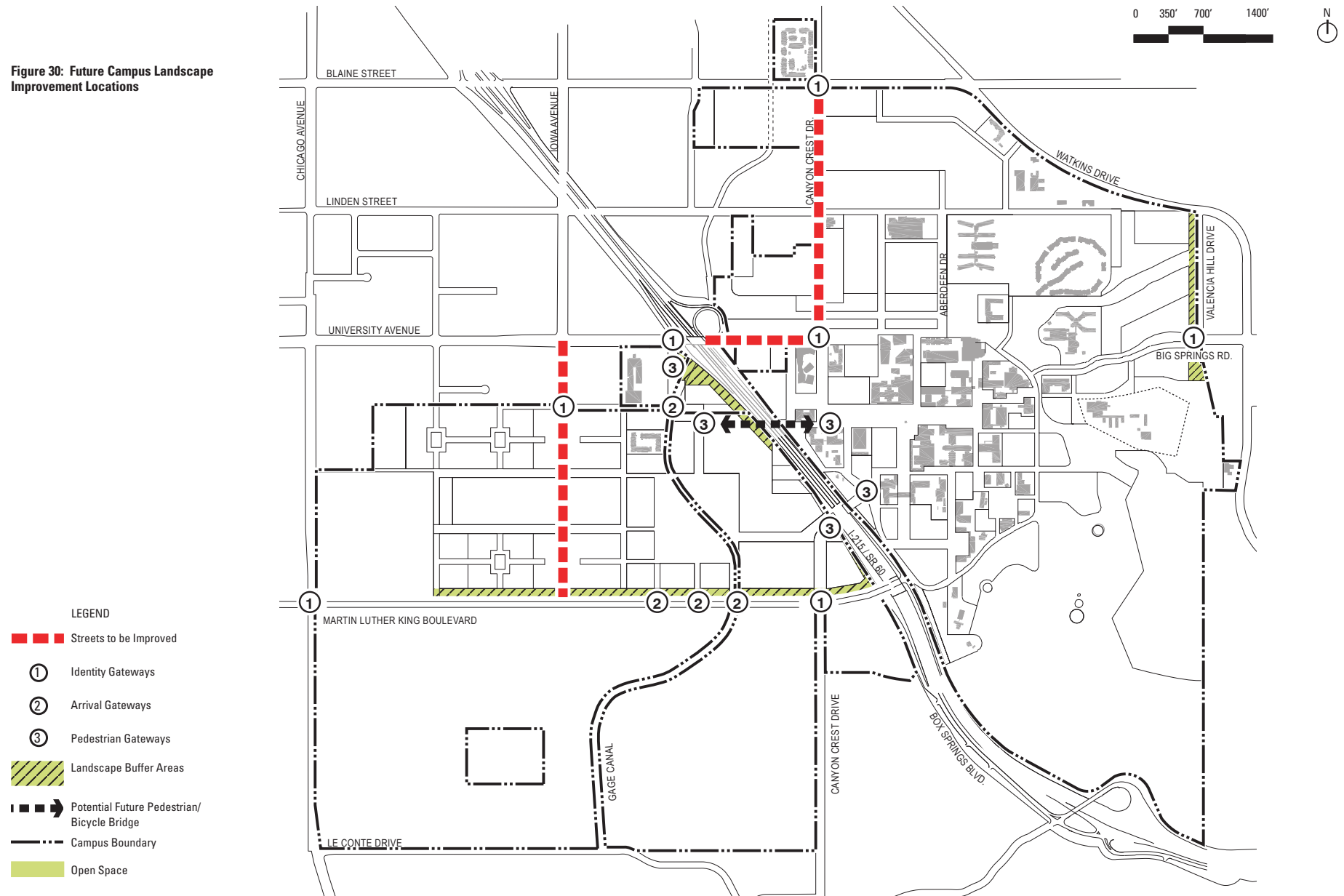
### Campus Landscape Improvements

In addition to the provision of major open spaces throughout the campus that contribute to the quality of life and character of UCR, other landscape improvements will improve the appearance and image of UCR. The general categories of landscape improvements include:

- Streetscape Improvements to Campus Roadways
- Gateway Landscape Improvements
- Buffer Area Landscaping
- Building Related Landscaping.



**Figure 30: Future Campus Landscape Improvement Locations**



### *Streetscape Improvements to Campus Roadways*

While the streets and vehicular movement corridors provide an important circulation function for the campus and surrounding community, they are also an important element of public space. Designed well, streets contribute to the image of the campus, provide attractive places for pedestrians, and contribute to the landscape character of the place.

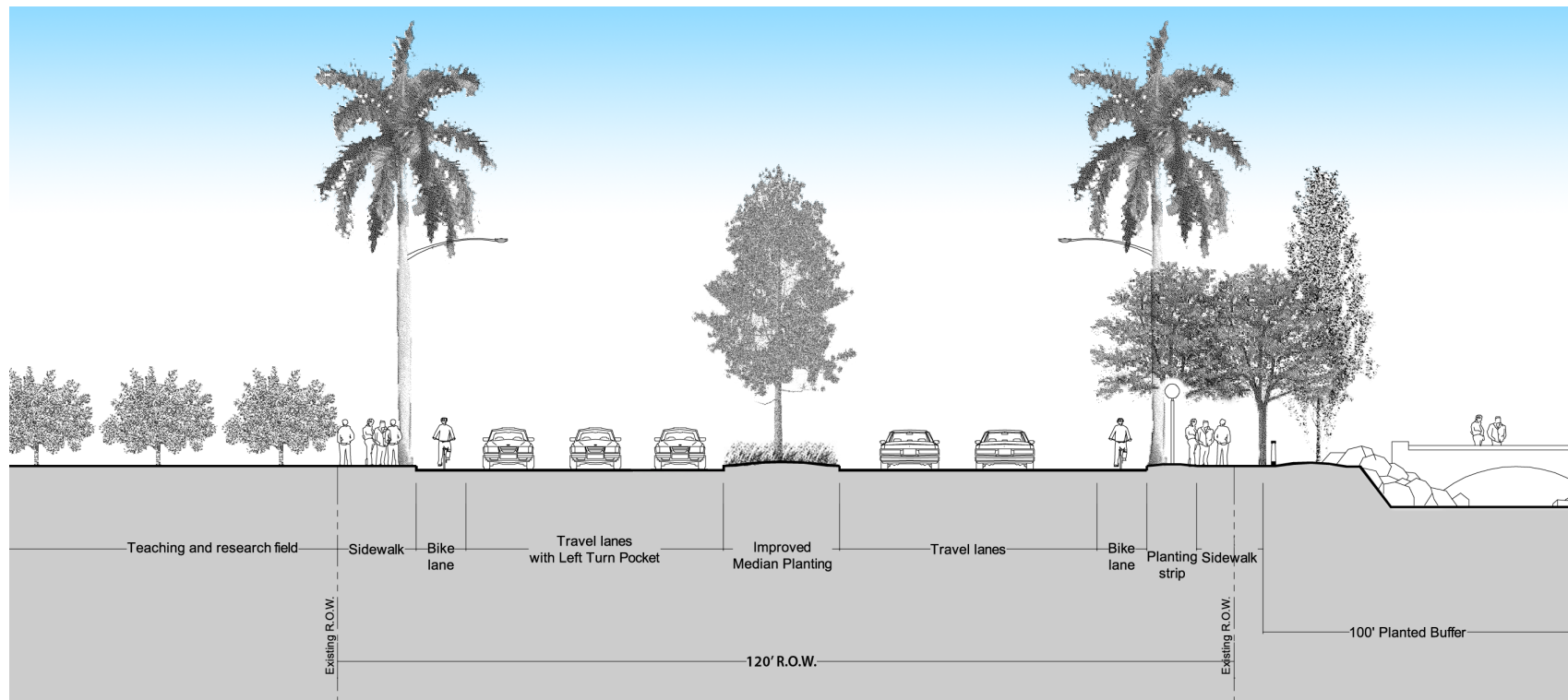
This section of the LRDP describes the recommended streetscape improvements to key campus streets, as illustrated in Figure 30.

While they have an important traffic function, these streets must also be designed to consider their other roles. In particular they must be designed to be attractive and accommodating of pedestrians and bicycles. The most important of these streets are the following:

#### **Martin Luther King Jr. Boulevard**

- Positive image as major open space with citrus plantings that recall the special heritage and nature of the campus and region
- In the future will provide good access to development of the West Campus

**Figure 31: Martin Luther King Jr. Boulevard looking west** Suggested Cross-Section



**Figure 32: University Avenue, east of I-215/SR-60** Suggested Cross-Section

- Required to carry large volumes of traffic.

*Recommended Landscape Improvements:*

- Planted buffer on north side to continue attractive image of street and provide noise and visual attenuation

### University Avenue

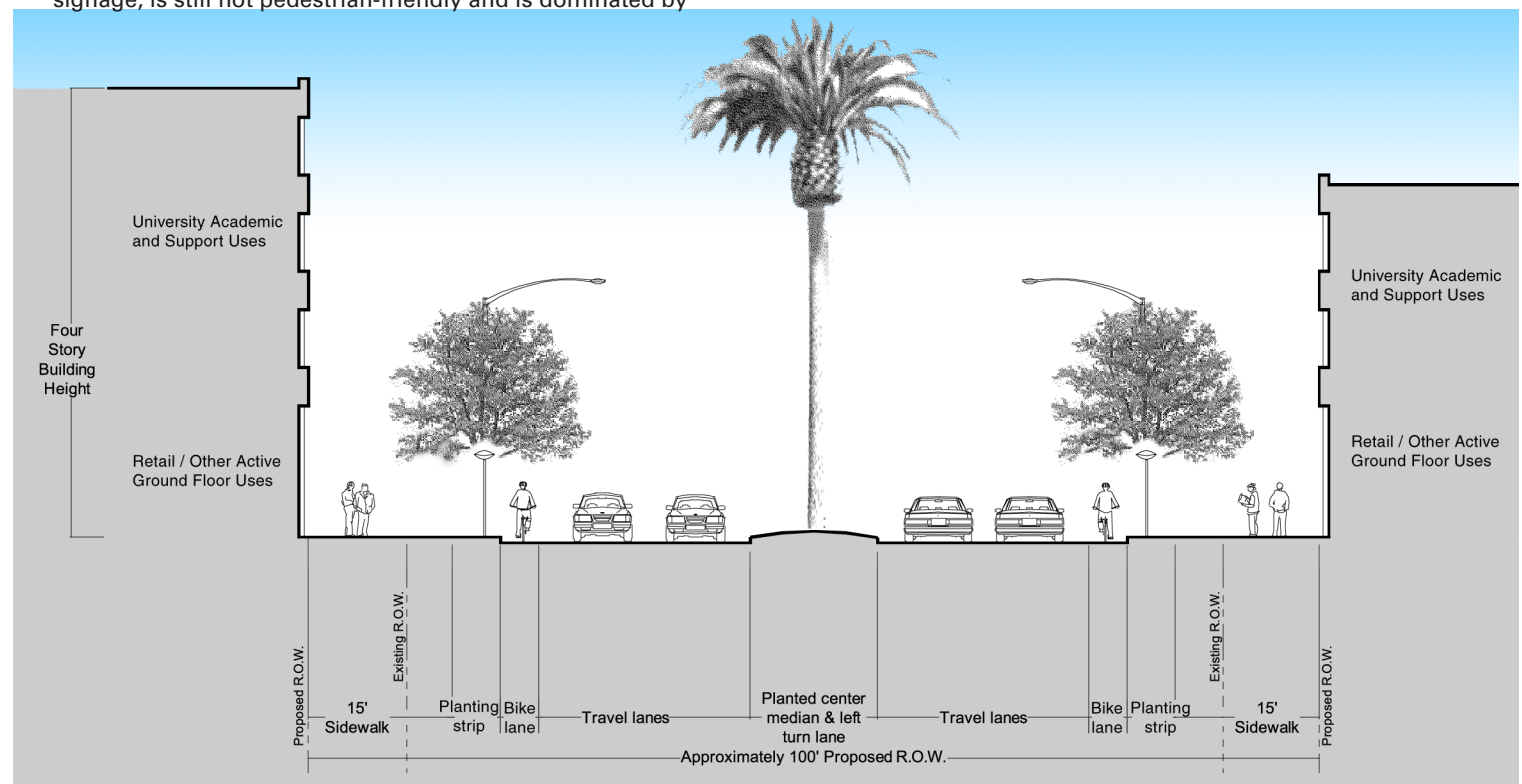
- Gateway and main visitor arrival to the campus
- Important pedestrian link between East and West Campus
- Connection under freeway, while improved with murals and signage, is still not pedestrian-friendly and is dominated by

automobile traffic

- East of the freeway the street has no median and a sidewalk only on the south side
- West of the freeway the city has improved University with a landscaped median and some sidewalk plantings.

*Recommended Landscape Improvements (both east and west of the freeway):*

- Improved and widened sidewalks on both sides of the street from Canyon Crest Drive to Iowa Avenue
- Continuous street trees and pedestrian lighting

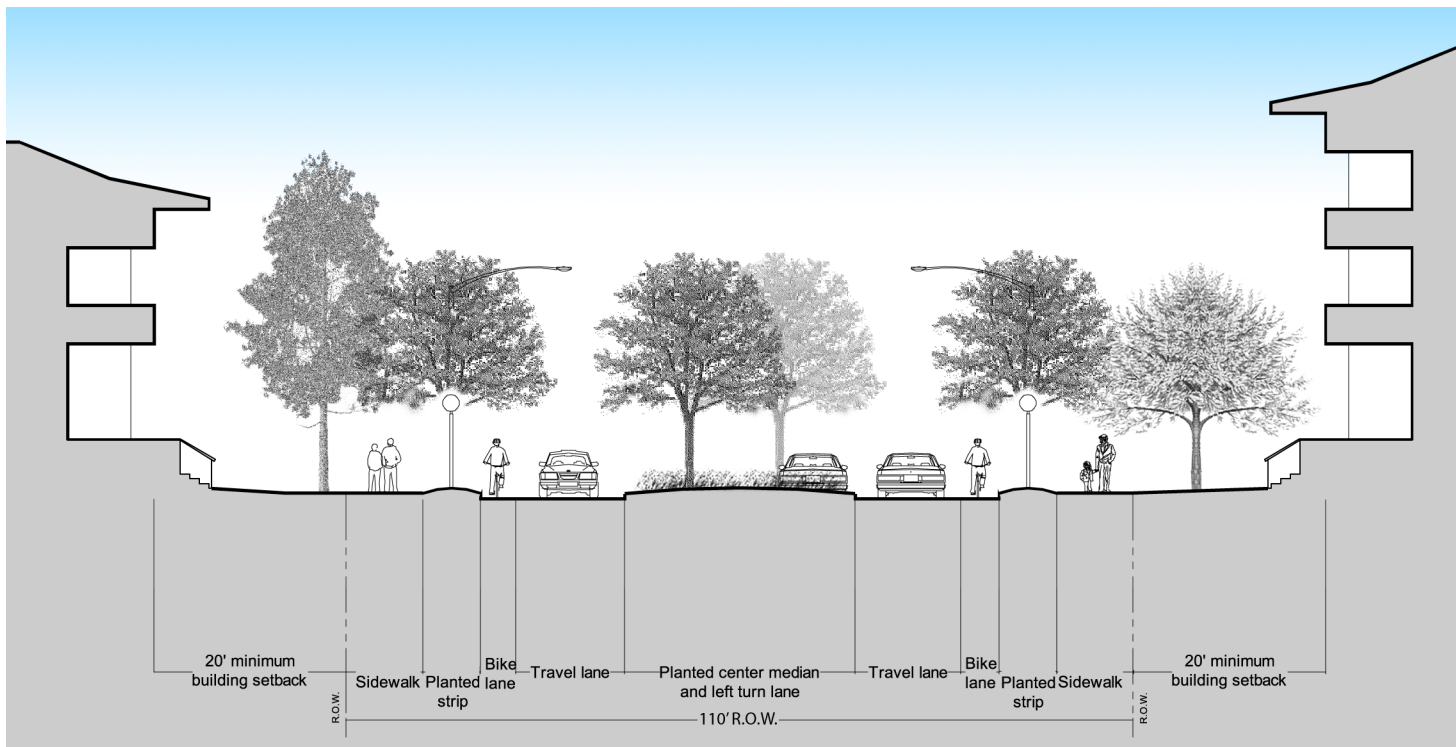


- New building development on both sides of freeway to include active ground floor uses
- Modified I-215/SR-60 freeway on- and off-ramps to favor pedestrian movements
- West of the undercrossing replace auto-related uses with retail and other active pedestrian uses
- Improve pedestrian linkages to University Extension and West Campus, including improving the north/south corridor on the west side of University Extension and using the Gage Canal right-of-way as a pedestrian/bicycle linkage to the interior of the West Campus.

### Iowa Avenue

- Most important secondary street of the West Campus
- Connects to areas of Riverside north and south of University Avenue
- Will provide important access to the West Campus
- Currently a two-lane roadway
- Bisects West Campus development zones
- Residential uses are planned on the west side of the roadway
- Could attract high traffic volumes (due to direct connection to Martin Luther King Jr. Boulevard and University Avenue, which will require mitigating design (noted below).

**Figure 33: Iowa Avenue**  
Suggested Cross-Section



**Figure 34; Canyon Crest Drive between Blaine Street and University Street**  
Suggested Cross-Section

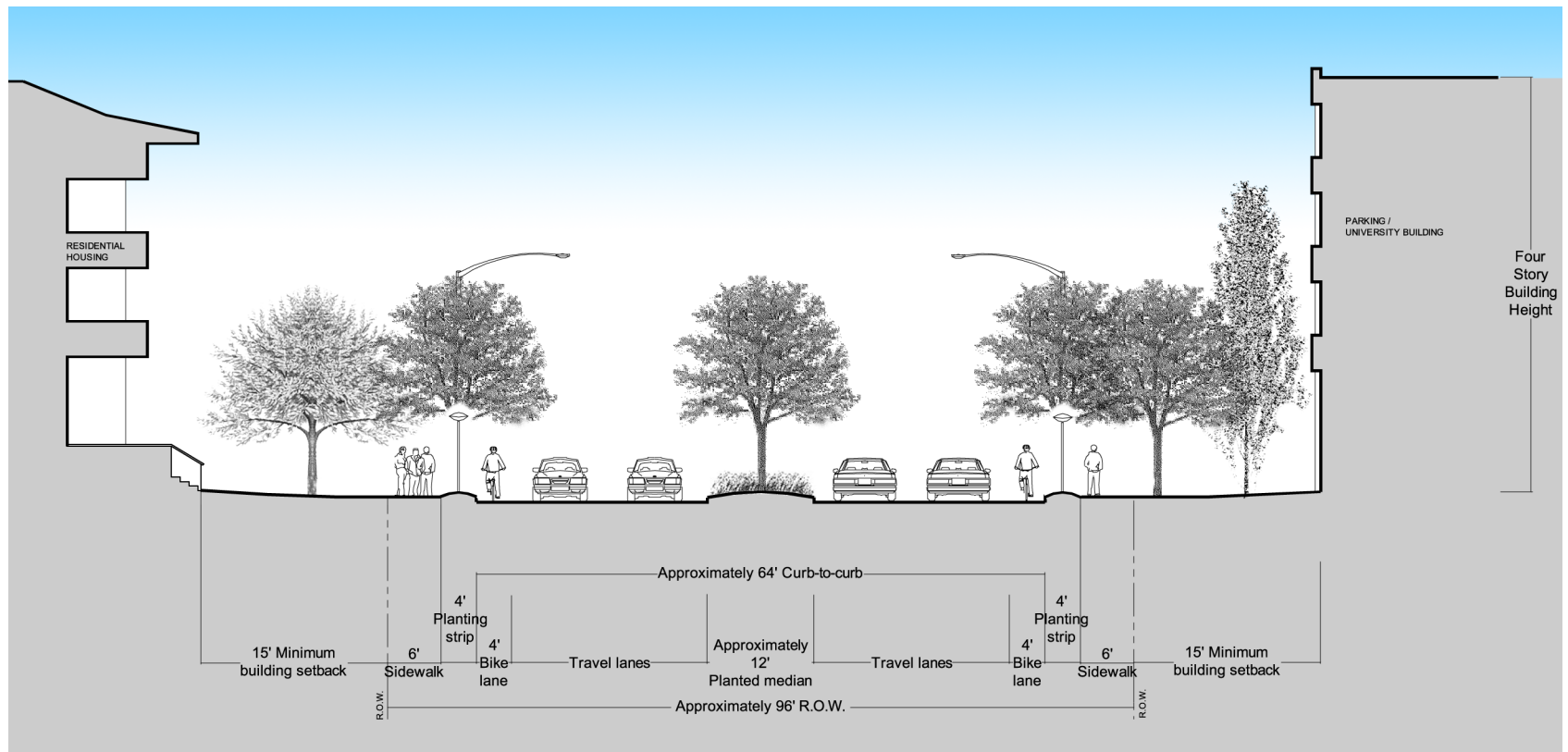
*Recommended Landscape Improvements:*

- Traffic mitigation measures north of University Avenue to reduce demand for Iowa Avenue through traffic (will require coordination with the City)
- Three lane cross section (one lane each direction with planted median and left turn pockets)
- Wide, planted median to provide attractive campus image and pedestrian crossing refuge

- Class II bicycle lanes
- Wide sidewalks, tree plantings and pedestrian lighting
- Minimum 20 foot landscaped building setbacks from the right-of-way to enhance campus setting
- Multiple controlled intersections to facilitate pedestrian crossing and calm traffic.

**Canyon Crest Drive between Blaine Street and University Avenue Improvements**

- Arrival gateway to the East Campus from the north



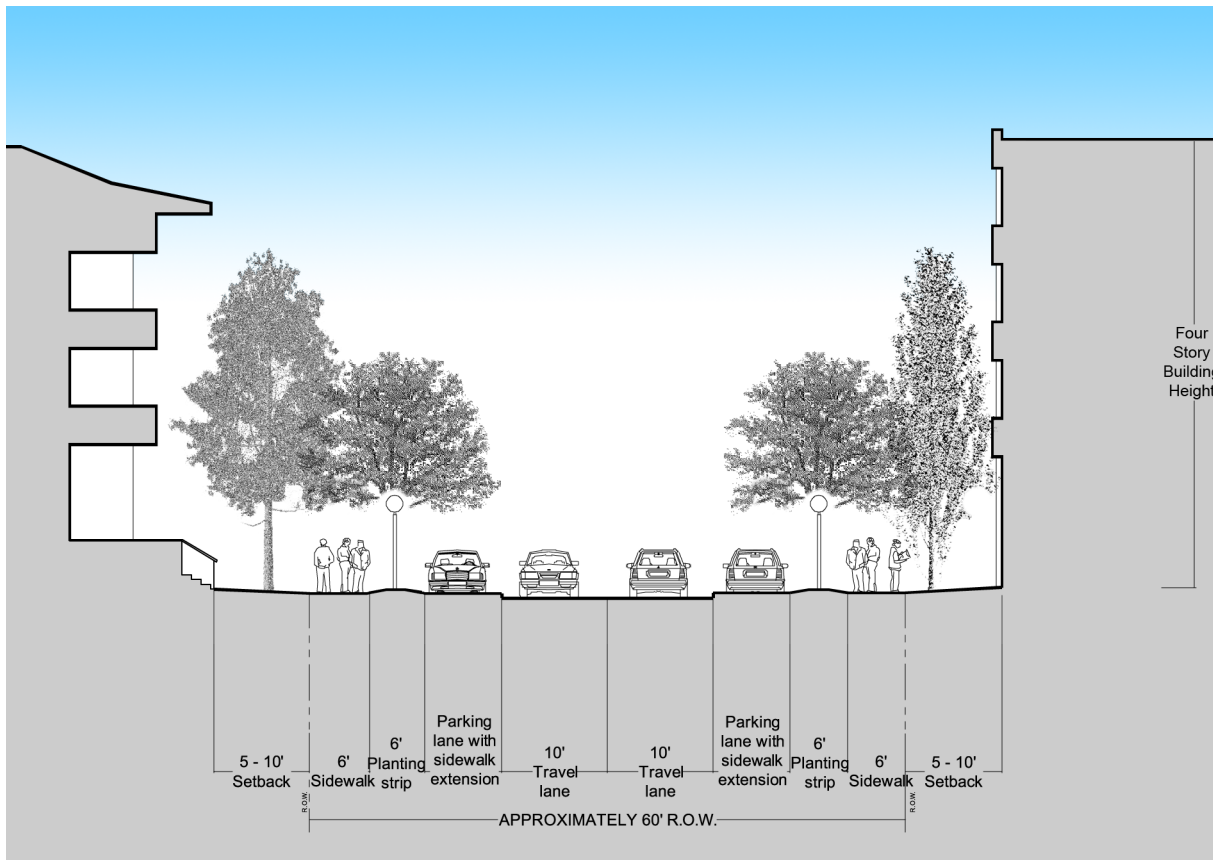


- Four vehicular travel lanes, bicycle lanes on both sides, no parking
- Provides clear and easy access to planned parking structure south of Linden Street and north of University Avenue
- Important pedestrian link between northern residential areas and East Campus academic core
- Poor image and few pedestrian amenities, sidewalk obstructions exist in some areas that reduce the path of travel below

ADA standards. In addition there are no street trees, however, there are bicycle lands.

*Recommended Landscape Improvements:*

- Widen sidewalks
- Reduce travel lane widths and add planted median
- Add street trees and pedestrian lighting
- Preserve bicycle lanes
- Remove parking.



**Figure 35** Local Access Streets Suggested Cross-Section

### Local Access Streets

These streets are intended to carry minor vehicular traffic volumes for direct access to interior campus destinations only. Some, such as South, East and North Campus Drive already exist. However, their functional and aesthetic character should be enhanced. Others are new streets that may have a variety of design treatments. These streets are intended to provide an attractive environment and give the pedestrian priority over vehicles.

All local access streets share similar characteristics and will be treated in similar ways. The general design character of these streets is as follows:

- Narrow cross section
- With/without parking (parallel) depending on location
- Slow vehicle speeds, stop signs, speed humps and other traffic calming measures as needed
- Sidewalks, street trees, pedestrian lighting
- Corner sidewalk extensions or bulb-outs.

### Gateway Landscape Improvements

There are several key gateway arrival points to the campus that provide visitors and members of the campus community with a sense of arrival and orientation, as illustrated in Figure 30: Campus Landscape Improvement Locations and described below. Not all of these points are equal. Some are simply points of announcement on entering the campus; others are key destinations.

All require significant landscape improvements such as signage, landscape and amenities. Gateways include:

### Identity Gateways

Identity gateways are the primary entries to the campus for visitors; the most important is the planned University Circle at the intersection of University and Canyon Crest.

Plans have been developed for improvements at this location and their implementation should be given high priority. Suggested improvements will include installation of a traffic circle, fountain, and additional landscaping. Signage should direct visitors to an information kiosk and visitor parking near this entrance.

Landscaping at identity gateways should be dramatic and highly visible, including potentially tall trees such as palms or poplars, to facilitate location of these entries by first time visitors. Signage should direct visitors to an information kiosk and visitor parking near the entry.

### Arrival Gateways

Arrival gateways are found at the major vehicular entries to the campus, such as Martin Luther King Jr. at Canyon Crest, a gateway to West Campus academic areas and professional schools. This is a major commuter destination which will enjoy immediate adjacency to the freeway interchange and Parking Structure #4. Future parking structures on or near Iowa Avenue to serve the School of Medicine and will be major arrival gateways for the medical school. At the east end of Everton Place future Parking Structure #2 will be a parking destination for the West Campus as it also provides parking within a short walk to the East Campus over the proposed pedestrian bridge across the freeway.

### **Pedestrian Gateways**

Pedestrian gateways occur on major pedestrian circulation routes. An example is the planned new gateway into the West Campus at University Avenue, just west of the freeway corridor.

There will be three key pedestrian arrival points on the West Campus: first, on the west side of the freeway at the connection of the Gage Canal Mall northern terminus with University Avenue; second, from the pedestrian bridge to the northwest corner of the Parking Structure #2; and third, the east terminus of the Southwest Mall at Canyon Crest Drive. Gateways are important to emphasize pedestrian way finding, safe pedestrian crossings, and pedestrian amenities such as transit stops, seating, lighting, shade trees, and signage. Pedestrian connections from the East Campus to West Campus are illustrated on Figure 30

A new 20 to 25-foot wide diagonal pedestrian and bicycle walkway (shown on Figure 22 and Figure 30) is proposed from the northwest corner of Parking Structure #2 extending to a potential future student center and the proposed Gage Canal Mall open space to the southwest.

These gateways will be designed to provide an attractive entry with various pedestrian amenities such as lighting, benches and shade trees. In addition, active uses including cafes and classrooms will be located near pedestrian gateways to enhance their activity levels.

### *Buffer Area Landscaping*

Certain major streets around and through the campus are important edges relating to the surrounding community. Thousands of people pass along these corridors every day, and the campus is highly visible at these points.

In some cases these edges and corridors already present a positive image, such as along Martin Luther King Jr. Boulevard where it passes through citrus groves and agricultural fields. In other cases the edge of the campus is ill defined with no clear sense that one of the State's most important teaching and research institutions is located here.

There are three important proposed landscape buffers on campus. Following is a brief description of the role and landscape character of each of these buffers, and an illustration of an approach to one of these locations.

### **Valencia Hill Drive Landscape Buffer Area**

Valencia Hill Drive divides the University from its neighbors in the Valencia Hills residential neighborhoods. In the future UCR will develop additional student housing and recreation fields to the west of Valencia Hill Drive.

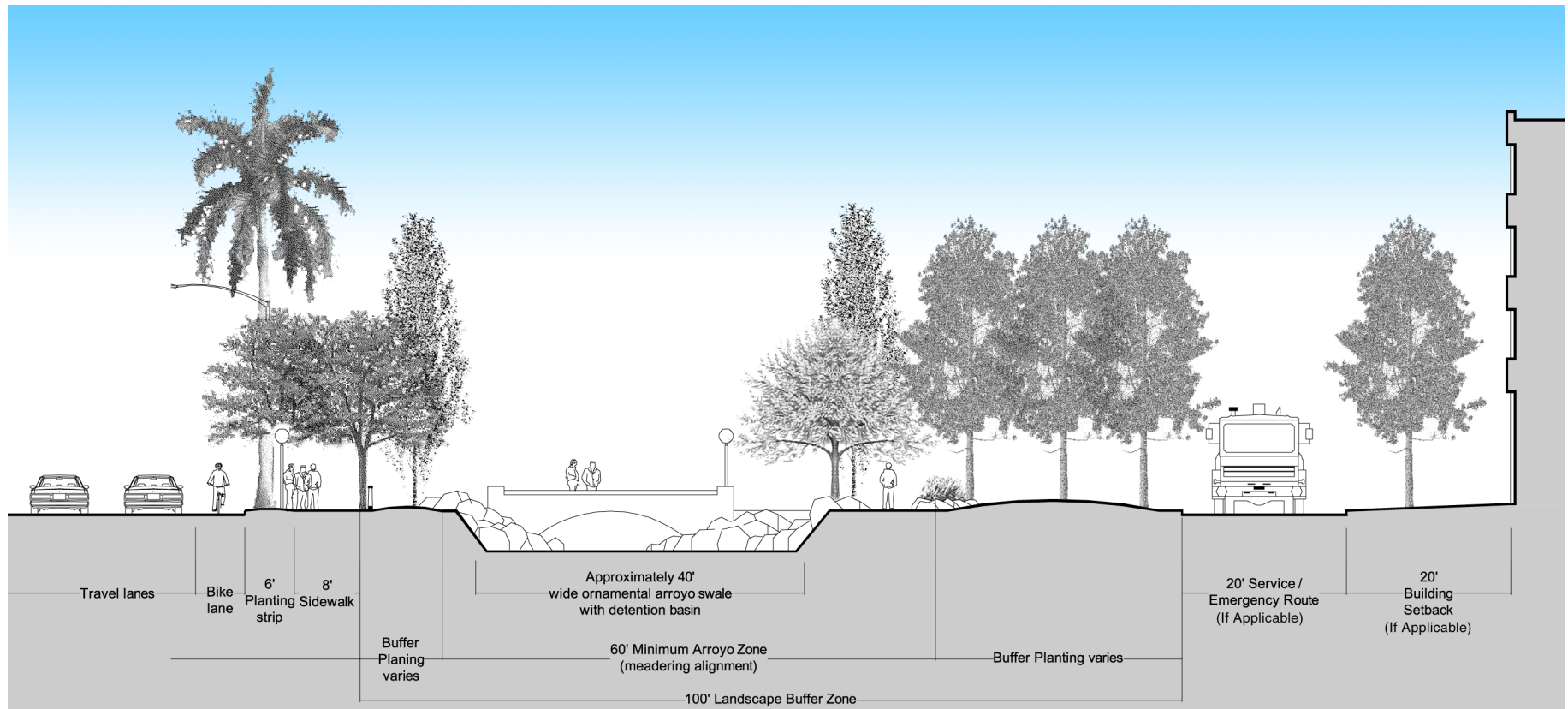
Campus facilities will be separated from Valencia Hill Drive by a landscape buffer area approximately 100 feet in width. This will provide ample space for dense evergreen plantings and/or berms to visually screen the campus and buffer noise and lights.

### **I-215/SR-60 Landscape Buffer Area**

Both the East and West Campuses share a significant frontage along the I-215/SR-60 freeway, which acts as a physical and visual barrier between the two sides of the campus and that contributes traffic noise to the campus environment.

The negative visual and noise effects of the freeway can be mitigated with evergreen plantings along this corridor on both sides of the freeway. Plantings will help screen passing cars and trucks from view, but will be low enough to allow taller buildings on campus

Figure 36: Martin Luther King Jr. Boulevard Landscape Buffer Area Typical Cross-Section



to be seen from a distance, helping to visually link the two portions of the campus. In the long term as the West Campus is developed, construction of a sound wall will be explored with Caltrans. A sound wall for the East Campus was constructed in conjunction with improvements by Caltrans to the Canyon Crest undercrossing. These improvements were part of a much larger improvement project of I-215/SR-60 from the intersection with SR-91 north of the campus and Moreno Valley to the southeast.

### **Martin Luther King Jr. Boulevard Landscape Buffer Area**

As the campus grows and following reconstruction of the Martin Luther King Jr. Boulevard – I-215/SR-60 freeway interchange, this corridor will take on additional importance as a major campus edge, entry to the West Campus, and a key interface with the region.

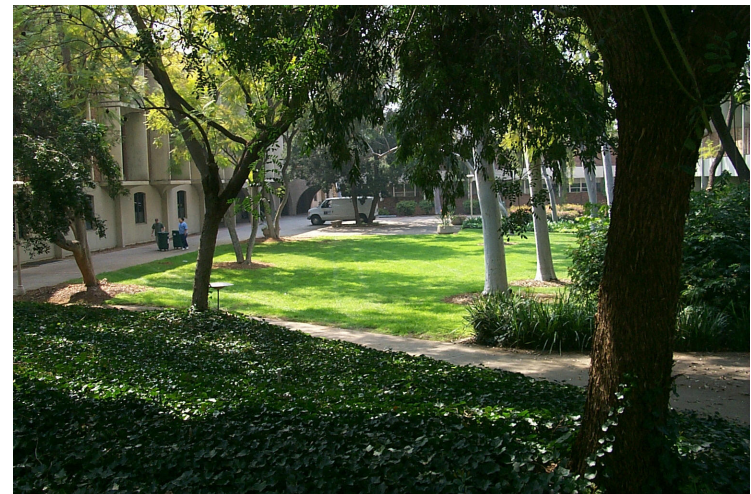
On the north side of Martin Luther King Jr. Boulevard, future development will be set back to allow a corridor over 100 feet wide between buildings and the street. This corridor will be an attractively landscaped buffer as well as an important part of the storm drainage system for the West Campus. This buffer area will be landscaped in several layers including a strong streetscape edge along Martin Luther King Jr. Boulevard, a naturalistic arroyo to accommodate peak stormwater drainage flows, and a dense visual screen of trees and shrubs in a naturalistic pattern.

### **Building Related Landscaping**

Beyond the pattern of major open spaces, streets, and gateways of the campus, there are other landscape and small open space elements that contribute significantly to the character of the campus. These include the open space and landscape improvements associated with buildings, including the spaces between buildings and courtyards associated with academic or residential facilities.

On the East Campus building-related open space historically was designed with significant areas of turf and planting. These landscapes were relatively water-intensive, but created cool and shady places particularly prized in the hotter months of the year. In recent years, more landscapes have been added that have characteristics of xeriscape, or drought-tolerant plant materials, in many cases reflective of the semi-arid landscape of the region.

No significant developed landscaping exists on the West Campus at this time, except within and adjacent to Parking Lot 30.



**East Campus building courtyards provide lush, cool environments**





(above right) **Intensive xeriscape and plantings representative of the semi-arid landscape can create a lush, garden-like environment**

(above left) **The open space at the Humanities Building utilizes arcades and building mass to create shade**

(left) **Courtyard open space at Bourns Engineering includes shade trees**

Future development at UCR should continue to utilize building form and landscaping to mitigate the occasionally harsh spring, summer and fall temperatures. Clustering buildings with courtyards, arcades and other built shade elements can contribute. Landscaping should reinforce this strategy. While utilizing drought-tolerant materials, landscaping should provide shade and coolness.

On the West Campus internal, shaded courtyards are important public spaces. Opportunities to connect buildings with covered walkways will provide shade, direct pedestrian circulation, and define the edge of buildings located on quads and courtyards. Hardscape, paved plazas should be placed near important building entries and in high-traffic areas such as class rooms, auditorium, meeting rooms, and outdoor dining facilities. Academic building-related landscaping will be “classic”; pedestrian-oriented quads and courtyards, with the opportunity to have grove-type landscape (rows of trees including citrus varieties), use of landscape planting “themes”, walkways, porches, covered walkways, stepped terraces, etc. These ancillary spaces should be accounted for in the design of new buildings and will require careful attention when interfacing directly with signature open spaces and circulation systems.

## Public Art

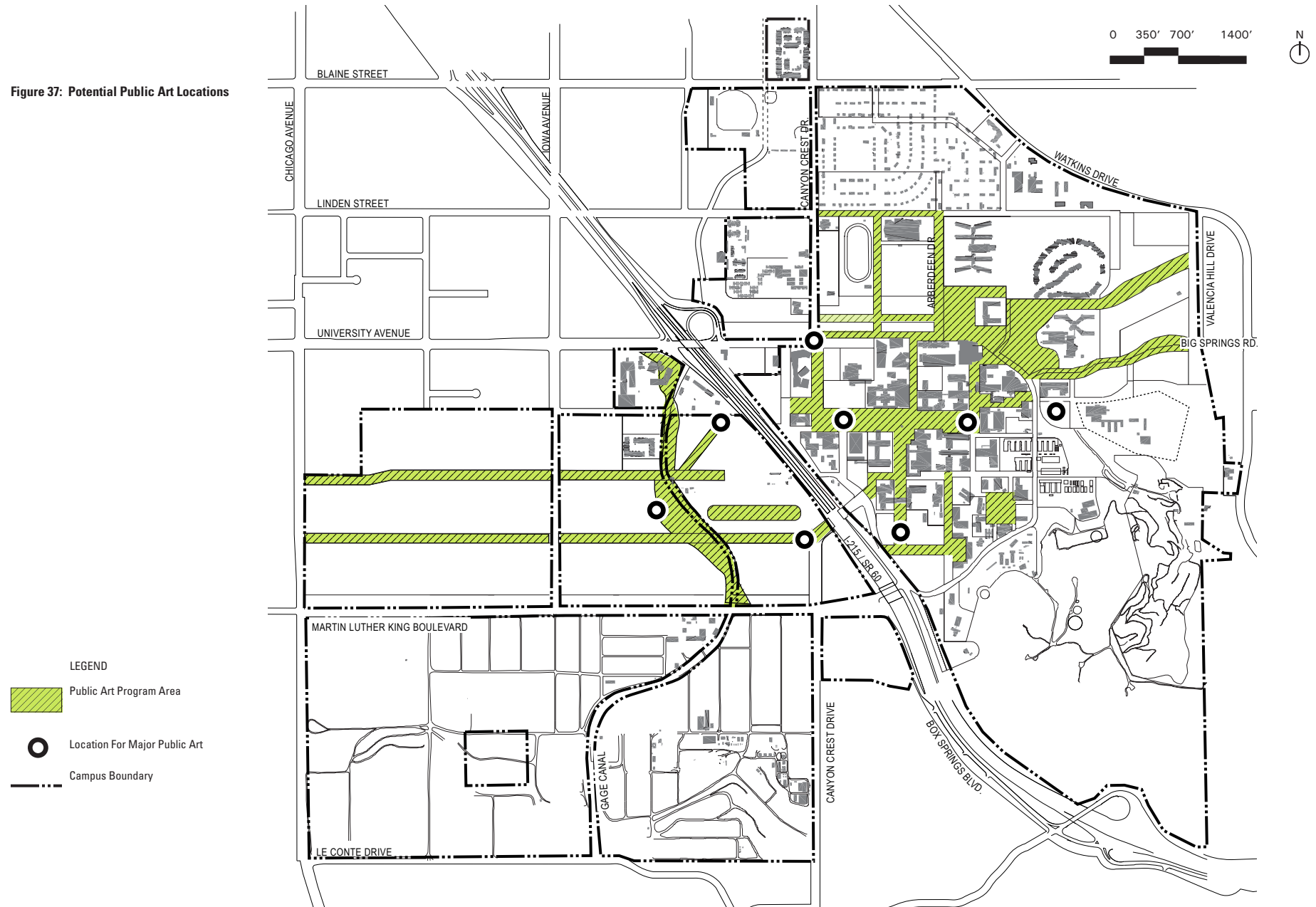
UCR has recently developed a Public Art Program and policies to direct the acquisition and display of art in the public environment. Public art has the potential to enrich the public environment and enhance the teaching, research and service missions of UCR; a primary purpose of the Public Art Program is to increase awareness of and sensitivity to the environment. As the campus grows there will be many opportunities to incorporate art in new building and open

space projects.

A Public Art Committee has been identified and will be involved in the acquisition, commissioning, or acceptance of art, and in its placement. These activities should be closely coordinated with building and infrastructure improvements throughout the campus to ensure that art placement is compatible with and enhances other open space and landscape elements, and that it does not detract from pedestrian, bicycle or transit operations.

The following diagram(Figure 37) illustrates conceptual locations for the placement of public art. Major pieces are planned to be located on important open spaces such as the Carillon Mall, Gage Canal Mall, or the east terminus of the Southwest Mall, at the junction of pedestrian walkways, and on visual axes. These locations represent opportunities for public art that is visually pleasing and can accommodate large campus sculptures complimented with special landscape treatment. Public art could assist with marking major pedestrian arrival, decision points, and way finding for other locations as shown on the diagram. Many additional locations for public art will be found throughout the open space environment of the campus.

Figure 37: Potential Public Art Locations







## **Utilities and Infrastructure**





## Utilities and Infrastructure

Utilities and infrastructure improvements will be implemented to serve the additional facilities necessitated by the anticipated enrollment growth at UCR. Significant new systems will be required to service the West Campus, since it has been in agricultural cultivation for teaching and research and has few existing utilities or infrastructure.

The following systems are described:

- Chilled Water
- Steam Supply/Condensate Return
- Natural Gas
- Electrical
- Water
- Sanitary Sewer
- Storm Drainage.

Wherever possible, LRDP proposals for utilities and infrastructure improvements have been formulated to embody sustainable prac-

tices. For instance, energy and resource use considered for near term development of UC Riverside are based on current consumption patterns; mid and long term consumption take into account more stringent State energy codes and goals. Implementation of the LRDP Land Use Plan should be staged in logical increments and patterns so as to allow efficient and economic use of resources. See the Resource Conservation and Environmental Stewardship section for further information.

## Sustainability

The system wide UC Policy on Sustainable Practices is a comprehensive policy that contains guidelines and goals in the areas of Sustainable Transportation, Climate Protection Practices, Sustainable Operations and Maintenance, Waste Reduction and Recycling, Environmentally Preferable Purchasing, Sustainable Foodservice, Clean Energy, and Green Building.

In addition to complying with this policy, the campus has been incorporating policies to conserve energy and water into the planning and design of new facilities and retrofitting many of the maintenance, operations, and utilities system policies to support a more sustainable campus. In addition, UCR has developed a Sustainability Action Plan (SAP) to address the goals of campus sustainability and provide a detailed road map for implementation.

## Chilled Water

### *Existing Chilled Water System*

#### **East Campus**

The East Campus academic core is served by a central chilled water system consisting of a central chiller plant, a 2,000,000 gallon

Table 9: Chilled Water System Demand

| 2001 Demand        |                   | Estimated 2020 Demand,<br>including School of Medicine |
|--------------------|-------------------|--------------------------------------------------------|
| East Campus        | 8,600 Tons        | 14,562 Tons                                            |
| West Campus        | NA                | 4,000 Tons                                             |
| School of Medicine | NA                | 4,876 Tons                                             |
| <b>Total</b>       | <b>8,600 Tons</b> | <b>23,438 Tons</b>                                     |

Source: Based on 2005 LRDP estimates accounting for 3.1 million square feet and using 2010 UCR projected data.

thermal energy storage (TES) tank, and a distribution network that pumps chilled water to most of the buildings within the core. The central chiller plant houses five electric centrifugal chillers with a total output capacity of 4,600 tons (five chillers run at any given time with one chiller for redundancy). The chilled water diagram (see Figure 38) shows the extent of the existing chilled water system on the East Campus.

The 24,000 ton-hour TES Tank 1 is located on the hill southeast of the East Campus academic core to provide for pumped flow to the academic buildings. The TES tank currently operates in partial storage mode, as additional capacity is required to meet campus demand. The total campus capacity is 7,150 tons in discharge mode.

Following an agreement with the City of Riverside Public Utilities (CRPU) the chiller/TES tank system now operates in full storage since summer 2002 in concert with an additional 2.7 million gallon TES tank that was subsequently added. The second tank (TES 2) is located at the same elevation as Tank 1 above Parking Lot #9 but further north. Both are looped into the distribution network with the existing chillers. TES 2 has added 30,000 ton hours of thermal storage to the system. It is anticipated that during peak electrical hours (6 hours, from 12 PM to 6 PM) the electric chillers will be turned off

and campus demand for chilled water will be fed entirely from the TES tanks to take advantage of more favorable energy costs during off-peak times. A satellite chiller plant has been added and has increased the chilling capacity by 4,000 tons with room to add an additional 4,000 tons. A site just west of TES Tank 2 has been identified in conjunction with an infrastructure upgrade project for the East Campus for implementation of a third TES tank.

#### **West Campus**

The existing facilities located on the West Campus north of Martin Luther King Boulevard, including UNEX, International Village student housing, Highlander Hall, and Human Resources are served by individual building systems unrelated to East Campus systems.

#### *Proposed Chilled Water System*

##### **East Campus**

By 2020 the East Campus chilled water demand is projected to grow to a total diversified peak demand of 14,562 tons and a corresponding flow of 21,000 gallons per minute (GPM). The dense pattern of academic facility development – particularly research facilities – on the East Campus will optimize central plant efficiency.

The chilled water piping network requires expansion to carry the projected flow of 21,000 GPM. The new chiller expansion is located north of the Computing and Communications Building (C&C) with Tank 2 (and future TES Tank 3) to the south of the C&C building. Construction of the satellite plant was accompanied by the creation of a campus chilled water loop which will increase redundancy and minimize pumping imbalances. The extent of the pipe work expansion is shown on the chilled water plan (see Figure 38).

The residence halls and apartments proposed at the northeast portion of the campus will not be served by the chilled water system. They will have self-contained units as do the existing residential facilities on campus.

#### **West Campus**

Future West Campus chilled water demand is estimated at 8,876 tons which includes build out of the School of Medicine. The geographic separation of the west side loads is great both from the east side (up to 1 mile) and between different sectors on the west. The distance from the East Campus, as well as the difficulty and expense that would be required to run lines under the freeway, preclude extension of the East Campus system to the west.

As a consequence, West Campus cooling load requirements will be addressed on a project-by-project basis. Where local densities are favorable, chilled water systems can be developed to serve groups of buildings. This approach also will allow buildings to employ emerging technologies for efficiencies in cooling, and avoid the need for a central chilled water system with high pumping head.

Electrically generated cooling will be used for the West Campus and has been incorporated in the electrical infrastructure requirements.

#### *Steam Supply/Condensate Return Existing Steam System*

##### **East Campus**

The existing steam plant has a total capacity of 132,000 lbs/hr and current demand is 55,000 lbs/hr. The elimination of steam driven chillers has increased available capacity for space and process heating. However, the steam plant boilers range from 30 to 35 years old.

and will need to be replaced before the end of the decade with modern and more efficient boilers. Replacement pumps of larger size will be required and larger diameter pipes may be needed.

### West Campus

The existing buildings on the West Campus north of Martin Luther King Boulevard have self-contained heating units.

### *Proposed Steam System*

#### East Campus

The steam distribution system on the East Campus is essentially a star network and new buildings are connected either to an existing spur or a new spur is created as required. The steam network on the East Campus will require modification to connect to new buildings, however there appears to be adequate steam capacity to provide the campus needs well into the future beyond a student enrollment of 25,000.

#### West Campus

Based on the proposed total consumption on the East Campus, the West Campus steam demand is estimated at 121,220 lb/hr (including the School of Medicine) and the existing central steam plant has potential capacity to meet this demand.

For the same reasons that the chilled water system will not be extended from the East Campus – long distances and the need to run the piping under the freeway – it is not envisioned that the steam system for the West Campus be connected to the East Campus either.

Table 10: Hot Water/Steam Demand

|                                                               | 2001 Demand         | Estimated 2020 Demand,<br>including School of Medicine | Total Capacity       |
|---------------------------------------------------------------|---------------------|--------------------------------------------------------|----------------------|
| <b>Total Campus,<br/>including<br/>School of<br/>Medicine</b> | <b>55,000 lb/hr</b> | <b>121,220 lb/hr</b>                                   | <b>310,000 lb/hr</b> |

Source: Based on 2005 LRDP estimates accounting for 3.1 million square feet and using 2010 UCR projected data.

### Natural Gas

#### *Existing Natural Gas System*

#### East Campus

Natural gas is provided to the East Campus by Southern California Gas Company (SCG). Three high-pressure connections are currently available on the east side. A main point of connection at South Campus Drive connects to the central plant and is distributed to various buildings on the East Campus. Secondary incoming lines are located on Watkins Drive and at the junction of Canyon Crest Drive and University Avenue (See Figure 39).

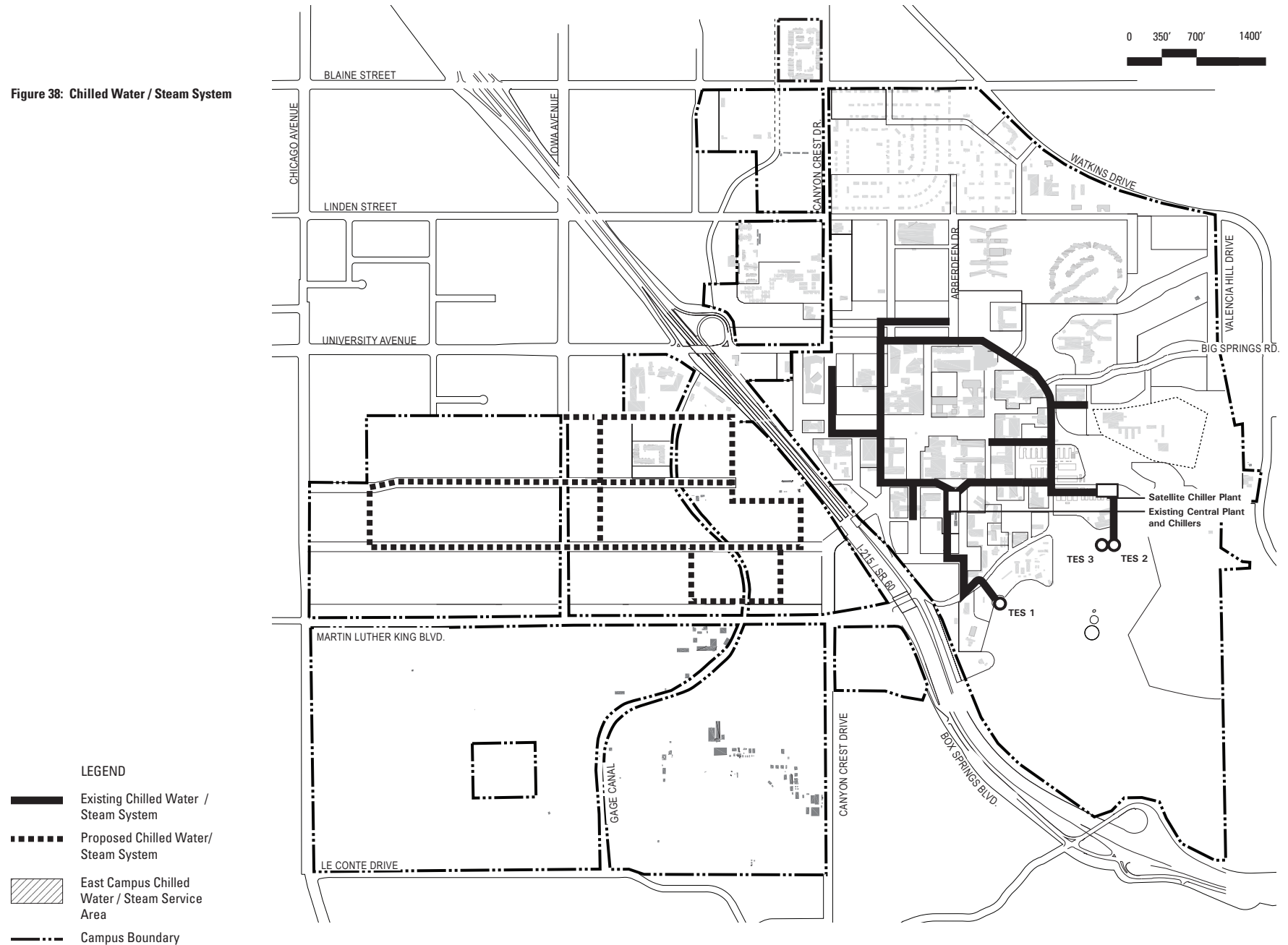
Current gas demand is 12,000 Therms/day.

#### West Campus

There is no gas service to the undeveloped areas of the West Campus north of Martin Luther King Jr. Boulevard at this time. Existing buildings along University Avenue and International Village student housing are served by existing lines in University Avenue. An additional potential point of connection exists south of Martin Luther King Jr. Boulevard at Canyon Crest Drive.



Figure 38: Chilled Water / Steam System



### *Proposed Natural Gas System*

#### **East Campus**

Modifications and extensions will be required as the proposed residential facilities are constructed on the East Campus. Projected demand is 20,000 therms per day. SCG has indicated they have sufficient gas supplies to serve both East and West Campus at the anticipated enrollment of 25,000 students.

#### **West Campus**

The projected gas demand of the West Campus is 16,000 therms/day. The School of Medicine will require 9,458 therms/day. The demand will be met by phased expansion of the SGC gas infrastructure from Martin Luther King Boulevard and University Avenue.

### Electrical

#### *Existing Electrical System*

#### **East Campus**

The campus electrical distribution system is currently a combination of two systems. Two 27 megavolt ampere (MVA) transformers and associated switchgear located at the substation just west of the freeway on the West Campus distribute power to the campus at 12.47 kilovolt (kV). Currently the load on these transformers is low enough that if either transformer experiences a power failure, the entire 12kV campus load can be transferred to the remaining transformer. UCR would like to maintain as much of this redundancy as possible, but will have to balance the need for redundancy against the significant costs of expansion. All new buildings on campus (East and West) will be served by the 12kV dual-radial distribution system.

An older 5kV radial system also exists on the East Campus. The 5kV transformers and switchgear are also located at the substation

Table 11: Natural Gas Demand

| 2001 Demand        |                          | Estimated 2020 Demand,<br>including School of Medicine |
|--------------------|--------------------------|--------------------------------------------------------|
| East Campus        | 12,000 therms/day        | 20,000 therms/day                                      |
| West Campus        | N/A                      | 16,000 therms/day                                      |
| School of Medicine | NA                       | 9,458 therms/day                                       |
| <b>Total</b>       | <b>12,000 therms/day</b> | <b>45,458 therms/day</b>                               |

Source: Based on 2005 LRDP estimates accounting for 3.1 million square feet and using 2010 UCR projected data.

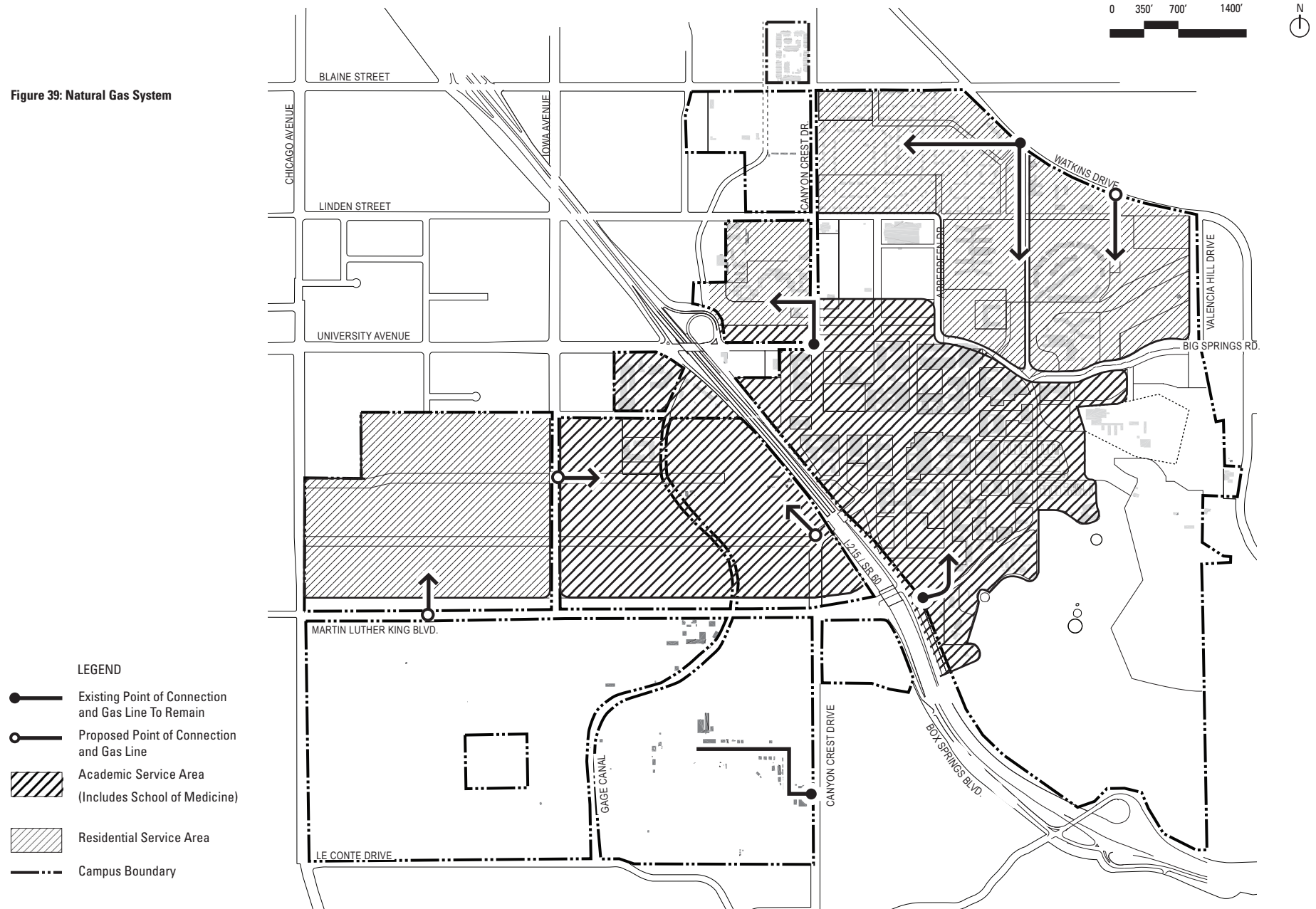
west of the freeway. Some buildings originally on the 5kV system have been transitioned to the 12kV system, but many remain on the 5kV system. UCR plans to continue the gradual replacement of 5kV distribution lines and transformers over the next few years in order to transition the entire campus to the 12kV system. The steam plant is the only existing 5kV load that is planned to remain at 5kV. A total capacity of 4MVA at 5kV will remain to serve the steam plant load.

Current peak power loads are approximately 5 MVA on the 5kV system and 11 MVA on the 12kV system, for a total of 16 MVA. Since the majority of the 5kV system will transition to 12kV, the assessment for the forecasted electrical growth on campus will take into account both the existing 5kV loads as well as existing and proposed loads for the 12kV system.

#### **West Campus**

Although the campus substation is located just west of the freeway, the West Campus has no campus electrical infrastructure. The development on University Avenue, International Village, and Parking Lot 30 are currently served by local city lines.

Figure 39: Natural Gas System



There are above-ground, high voltage transmission lines traversing a portion of the West Campus area. These lines will have to be relocated to an alignment along the freeway. The University will negotiate the placement of these transmission lines with the utility.

### *Proposed Electrical System*

Assuming conventional design (Title 24 energy criteria) and using an overall average unit demand of 3.9 watts per assignable square footage, power demand is estimated to grow to 49 MVA by year 2020, including the increase required by the School of Medicine. The total capacity of the existing 12kV sub station is 54 MVA.

The campus is committed to continue implementing energy saving strategies as well as to developing appropriate, sustainable design standards for new buildings. With the adoption of these strategies, the power demand will be less than that estimated above. As a result, the substation would accommodate growth without losing the full redundancy of the dual transformer system for a longer time period, but in the final stages of projected development the load will be large enough that full redundancy will be lost.

### **East Campus**

The East Campus distribution infrastructure is already well developed. The addition of the proposed 12kV Circuit 4A-B, in combination with the three existing 12kV circuits will provide sufficient capacity for East Campus growth. After the expansion and addition of Circuit 4A-B, it is unlikely that any spare conduits will be available in the East Campus duct bank for further development, but it is anticipated that there is sufficient capacity in the four circuits to sustain the projected East Campus growth.

### **West Campus**

Additional distribution circuits will need to be routed in the West Campus as it develops. The proposed routing of these circuits is shown in Figure 40. The proposed infrastructure is shown as a dual-radial distribution with both feeders enclosed in the same duct bank, identical to the existing distribution scheme of the East Campus.

### **Water**

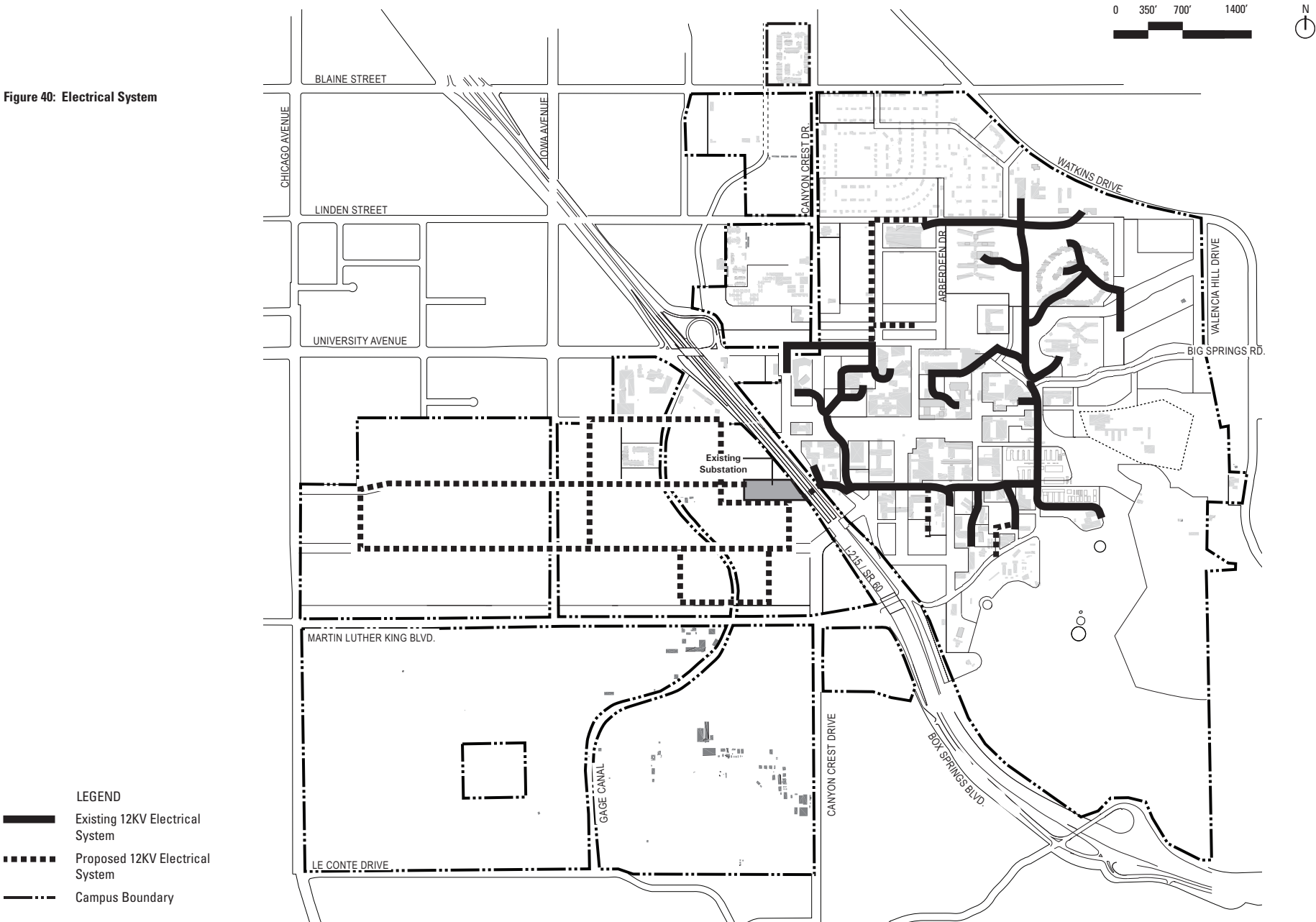
#### *Existing Water Systems*

UCR receives potable water service from the City of Riverside. The City obtains all but a small portion of its potable water from ground-water basins in the San Bernardino/Riverside area. A small amount of water is imported during emergencies when peak demands during a few hot summer days cannot be satisfied with water from groundwater supplies. That water is obtained from Western Municipal Water District. The East Campus water system is independent from the West Campus and comprises almost the entire current potable University water consumption at this time.

### **East Campus**

The 2001-2002 UCR East Campus average daily water consumption, including domestic and landscape irrigation uses, was approximately 2.5 MGD. Potable water for East Campus domestic, landscape irrigation, and fire protection uses is provided by the City of Riverside through two connections. The primary source is the five million gallon (MG) reservoir located adjacent to University Avenue, immediately east of I-215/SR-60 shown in Figure 41. The reservoir is owned and operated by the City, which pumps the potable water by means of UCR-owned pumps to two inter-connected UCR-owned storage tanks located in the southeast corner of the campus. The one million and 50,000-gallon capacity storage tanks are located approximately 200 feet above the East Campus mean elevation.

Figure 40: Electrical System





The secondary potable water source is a City water main located at the intersection of Linden and Florida Streets. This secondary connection is only used for emergency fire protection and as a fail-safe backup to the five MG reservoir connection.

The storage capacity provided by the two existing University storage tanks is currently adequate to meet UCR domestic water needs. This system can also meet fire flow demand as long as the storage tanks are supplemented by the second connection on Linden and the booster pumping station drawing water from the City's 5 MG reservoir. This system does not, however, provide the storage or the emergency flow capacity required to meet future demands.

### **West Campus**

The West Campus is not connected to the East Campus water system except for Parking Lot 30 (see below). There are existing City lines running east-west in University Avenue, Everton Place, and Martin Luther King Jr. Boulevard and north-south lines in Chicago Avenue, Iowa Avenue and the Cranford Avenue alignment (see Figure 41). International Village receives water from a City service line extending south in Iowa Avenue from University Avenue and turning east in Everton Place. UNEX, the Human Resources Building, and Highlander Hall receive potable water from service connections in the University Avenue main line.

The agricultural lands of the West Campus are irrigated with water from the Gage Canal. Landscape irrigation for the large parking lot is supplied from the UCR East Campus system via a pipe under the freeway.

### *Proposed Water System*

Future water demands were estimated using the 2001 UCR water consumption rate and sustainability factors that promote water con-

servation in future buildings. Projected water demands used for the 2005 LRDP were therefore less than previously projected in the 1990 LRDP and also less than City of Riverside recorded water use.

Additionally, future buildings will have lower fire water demands than the older buildings on campus, due to use of fire retardant building construction materials, adherence to updated fire codes, and installation of updated fire sprinkler system technology.

Landscape irrigation has historically comprised 60% of total potable water demand, and this ratio is used to project future irrigation demand. Agricultural lands on the West Campus will continue to be irrigated with water from the Gage Canal.

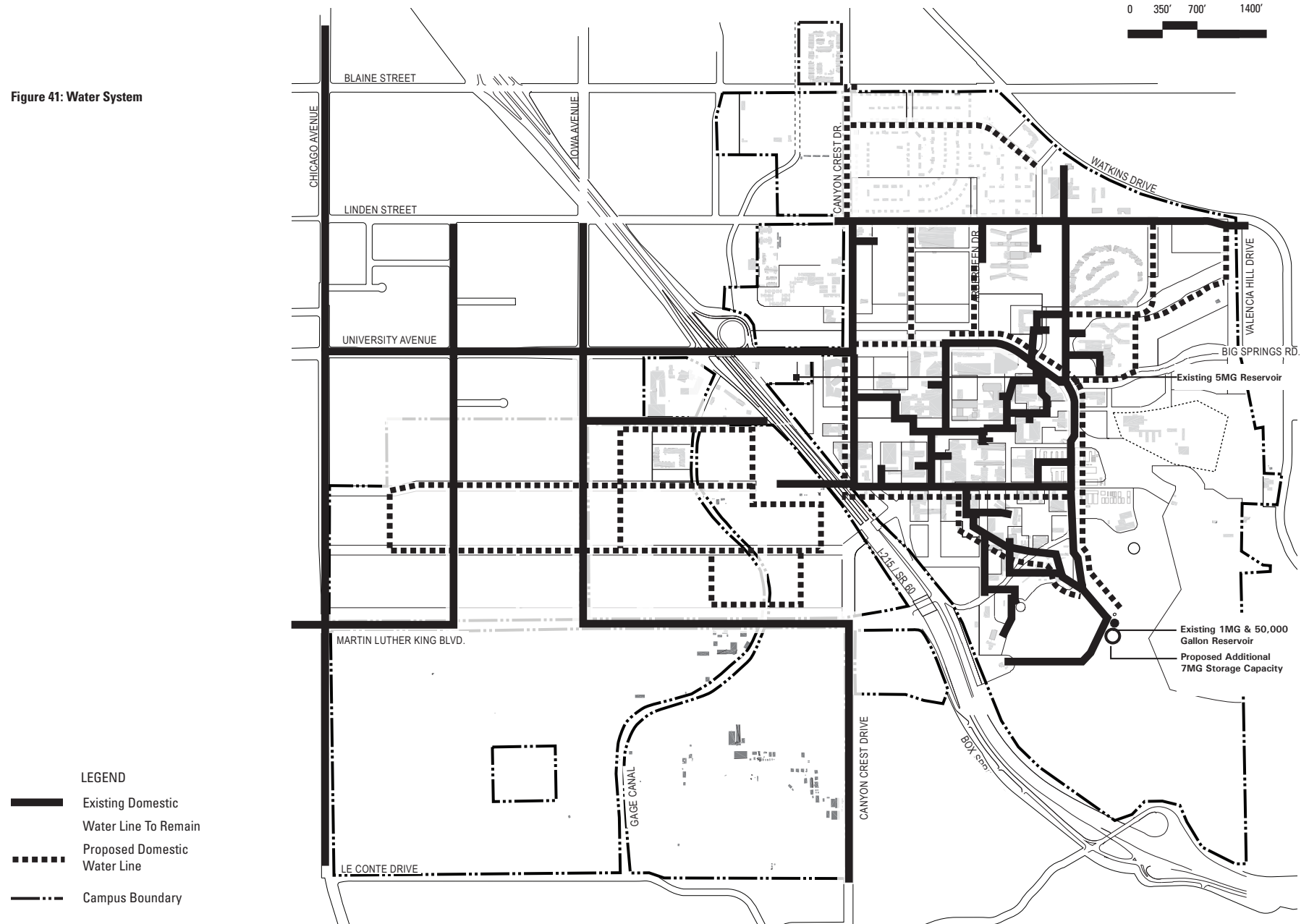
### **East Campus**

Water for the East Campus will continue to be supplied by the existing booster pumps and UCR storage tanks elevated above the East Campus.

Nearly 5,000 new housing beds are planned for the northern area of the East Campus. Academic building inventory will also be added, requiring new lateral services specific to each project. Projected demands for this future construction will use sustainable water use factors: for the resident population the factor is 70 gallons per day (gpd) and for the remaining population the factor is 20 gpd.

The resulting average domestic and irrigation water demand is 2.5 million gallons per day (MGD) for the East Campus. East Campus projections were determined from a combination of current demands from existing facilities and future demands based on sustainability factors for future facilities.

Figure 41: Water System



The water storage capacity on the East Campus will need to be increased to approximately 8 MG from the existing 1 MG. The 8 MG water storage capacity provides a factor of safety independent of booster pumps or any additional secondary water sources. This future storage capacity was determined from the maximum day demand plus four hours of fire flow at 8,000 gpm. This assumes emergency storage will be provided by the existing 5 MG reservoir. The system will also have additional main lines delivering water from the storage tanks to the East Campus. These will be sized to accommodate maximum day demands plus fire flow.

### West Campus

The future West Campus will consist of newly constructed buildings, and therefore the projected domestic water use is based on sustainable water use practices and policies. Using sustainable water use numbers of 70 gpd for on-campus students and 20 gpd for off-campus students, faculty, staff, and visitors; the West Campus domestic and irrigation water demand is approximately 1.2 MGD. The School of Medicine will require 1.1 MGD. The estimated 2020 demand for the campus is 5.3 MGD. Lines should be sized to accommodate maximum day demands plus fire flow.

The West Campus will not be connected to the East Campus water infrastructure, but will receive water service directly from City water mains. Connecting the West Campus to the East Campus infrastructure would require considerable expansion of the East Campus water infrastructure and would result in greater storage capacity requirements and significant head loss due to the long pipe reaches required.

As the West Campus develops north of Martin Luther King Boulevard, new domestic water supply connections will be made to the City's system. Use of Gage Canal water will continue for agricul-

tural lands north of Martin Luther King Boulevard while these fields remain. New landscaped areas north of Martin Luther King Boulevard will be irrigated from the City water supply. Gage Canal water is not suitable for domestic consumption after it has been exposed to the environment through the open channel sections of the canal. Future utilization of Gage Canal water for landscape irrigation in the developed areas north of Martin Luther King Jr. Boulevard would require either a dual water delivery system, or the installation of infrastructure to divert, store and possibly pump the water for use with the City supplied water.

### Sanitary Sewer

#### *Existing Sewer System*

The existing sanitary sewer infrastructure shown in Figure 42 is primarily located on the East Campus with the exception of two collection lines, one in the northeast corner of the West Campus and the other in Martin Luther King Jr. Boulevard and Chicago Avenue. A 15-inch City owned trunk sewer line services the East Campus west from Valencia Hill Drive following the general alignment of Big Springs Road, North Campus Drive, and University Avenue.

The City of Riverside Regional Water Quality Control Plant (RRWQCP) provides treatment of all campus-generated wastewa-

Table 12: Water Use

|                    | Current Demand    | Estimated 2020 Demand,<br>including School of Medicine |
|--------------------|-------------------|--------------------------------------------------------|
| East Campus        | 2.5 MGD           | 3.0 MGD                                                |
| West Campus        | less than 0.2 MGD | 1.2 MGD                                                |
| School of Medicine | NA                | 1.1 MGD                                                |
| <b>Total</b>       | <b>2.5 MGD</b>    | <b>5.3 MGD</b>                                         |

Source: Based on 2005 LRDP estimates accounting for 3.1 million square feet and using 2010 UCR projected data.

ter, with UCR operating its own collection system. The RRWQCP currently treats 32 MGD and has a capacity of 40 MGD. The City of Riverside has indicated that they do not anticipate any problems in accommodating future UCR growth at the RRWQCP.

#### **East Campus**

UCR currently discharges approximately 1 MGD of wastewater into the 15-inch City trunk line in University Avenue as measured during a monitoring event in November/December 2001. This wastewater discharge is higher than flows that would be expected based on sustainable water use factors. This is not surprising, considering that the East Campus was constructed before sustainable water use practices and policies were implemented. As a side note, areas of the City east of the campus discharge into this line as well.

The City and UCR have a sewer discharge agreement that allows the campus to discharge 1.55 cfs, (approximately one MGD) into the portion of the 15-inch City trunk sewer within the East Campus between Valencia Hill Drive and Canyon Crest Drive. Approximately sixty percent of the current sewer flow of 1 MGD, or approximately 0.6 MGD, discharges into this portion of the trunk line; therefore there is additional sewer capacity based on the agreement.

Additional East Campus sewer collection systems run southward from the north and northward from the south and connect directly to the City trunk line on University Avenue at the intersection of Canyon Crest Drive. The University does have additional sewer capacity in an eight-inch line located in University Avenue running parallel to the 15-inch line beginning on the corner of University Avenue and Canyon Crest.

#### **West Campus**

The West Campus primarily consists of agricultural land, and has only two existing sewer lines. One line services the International Village housing complex. This line is City owned and gravity flows west on Everton Place and North on Iowa Avenue connecting to the University Avenue trunk line. The other line is University owned and services an agricultural operations building south of Martin Luther King Jr. Boulevard near the Gage Canal. This line gravity flows west in the south shoulder of Martin Luther King Jr. Boulevard and turns north on Chicago connecting to the University Avenue trunk line. The UNEX, Human Resources and Highlander Hall facilities are serviced from sewer laterals extending from the trunk line in University Avenue.

#### *Proposed Sewer System*

The projected long range development population of approximately 41,393 people (student enrollment of 25,000 plus faculty, support staff, School of Medicine employees and patients, and visitors) is projected to generate a total average flow of 2.4 MGD for the East and West Campus's, including the School of Medicine. The East and West Campus sewer flows were developed based on the current sewer flow as measured by PBS&J in 2001 and application of a 40% factor times the projected sustainable domestic water use for future UCR expansion.

#### **East Campus**

The East Campus will have new sewer infrastructure to accommodate future student apartments and residence halls on the north where the Crest Family Housing tract currently exists. This area's existing sewer infrastructure will be removed and replaced with a new system to accommodate the higher density of future student housing facilities. There are two campus sewer lines flowing west

on Linden Street and the City sewer line on Canyon Crest Drive between Linden Street and University Avenue are all downstream of the new housing development. These sewer lines may require an additional parallel line or replacement with a larger sewer line depending on the actual number of beds in this phase of construction.

Information provided from the East Campus Infrastructure Master Plan 2001 calls for the replacement of some older existing sewer service lines. Additionally, there are specific project driven sewer improvements as phased construction progresses. The remaining sewer infrastructure on the East Campus is adequately sized to accommodate future campus growth.

West Campus

The West Campus concept for the future sewer system will be a gravity flow system connecting to the City system at two locations; one in University Avenue and the second in Martin Luther King Jr. Boulevard accommodating a total flow of 0.5 MGD. New University housing north of Martin Luther King Boulevard towards the west, the School of Medicine, and new academic buildings on the east will utilize the existing University owned sewer line on the south side of Martin Luther King Jr. Boulevard. The remaining West Campus development will use the existing City owned line in Everton Place and Iowa Avenue and three plus new lines running primarily south to north connecting to the University Avenue trunk line.

Table 13 shows 2001 estimated sewage discharge and estimated demand at an enrollment of 25,000 students.

Storm Drainage

Existing Storm Drain

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. UCR is divided into two watersheds separated by I-215/SR-60 as shown in Figure 43; the University Arroyo to the northeast and Box Springs Arroyo to the southwest. Offsite and onsite storm water is collected and discharged through overland flow, underground storm drains, and natural channels/arroyos.

East Campus

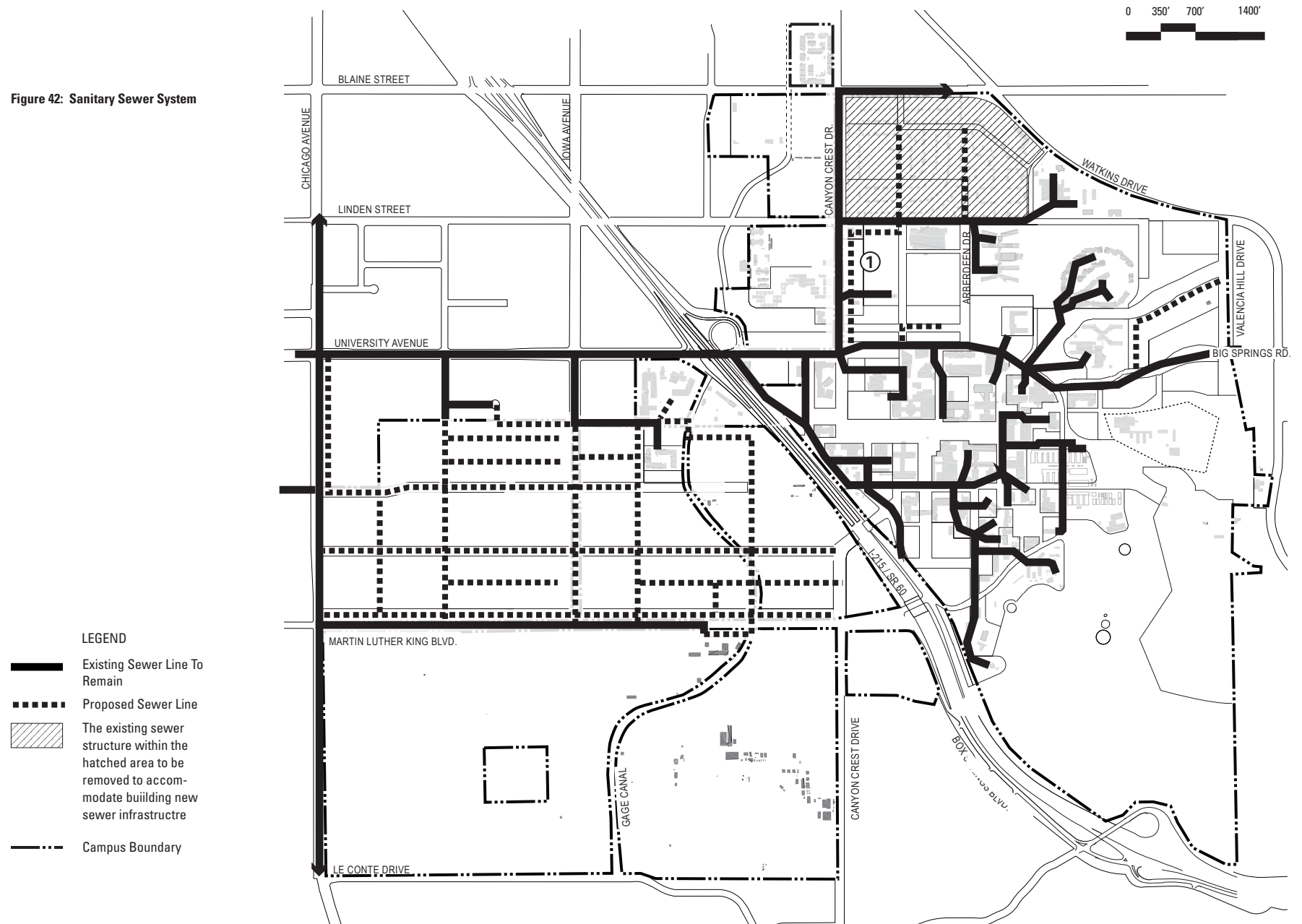
Portions of the East Campus located within the University Arroyo watershed are subject to flooding during a 100-yr flood event. The primary storm water runoff coming from the east is collected as surface runoff near Valencia Hill Drive and Big Springs Road by an inlet structure. During a 100-year storm event excess flows spill over the drain into an above ground, man-made channel paralleling Big Springs Road as well as filling up the road, often without filling the 72-inch pipe, causing localized flooding on campus.

| Table 13: Sewer Discharge |                   |                                                      |
|---------------------------|-------------------|------------------------------------------------------|
|                           | 2009-10 Rate      | Estimated 2020 Rate,<br>including School of Medicine |
| East Campus               | 1.1 MGD           | 1.5 MGD                                              |
| West Campus               | less than 0.1 MGD | 0.5 MGD                                              |
| School of Medicine        | NA                | 0.4 MGD                                              |
| <b>Total</b>              | <b>1.2 MGD</b>    | <b>2.4 MGD</b>                                       |

Source: Based on 2005 LRDP estimates accounting for 3.1 million square feet and using 2010 UCR projected data.



Figure 42: Sanitary Sewer System



The below ground 72-inch pipe follows the general alignment of University Avenue through the East Campus and discharges into the Gage Detention Basin north of University Avenue at Canyon Crest. The excess flow from the above ground, man-made channel follows the same alignment overland but discharges into the Glade Detention Basin at Aberdeen Drive. There is an inlet structure at the Glade Detention Basin, which drains into the Gage Detention Basin via a 39-inch underground pipe paralleling the 72-inch pipe across the athletic fields. In addition, athletic fields to the west of the Glade flood periodically.

The Botanical Garden Tributary collects additional storm water runoff flows in the southeast corner of the East Campus. The tributary connects to the 72-inch storm drain on Big Springs road and East Campus Drive via a natural channel and 48-inch storm drain-pipe.

### **West Campus**

The West Campus, which is located in the Box Springs Arroyo watershed, currently consists of agricultural land used for agricultural research and teaching. The UCR West Campus storm drain infrastructure is undeveloped. There are 42-inch and 66-inch City storm drain pipes located in Martin Luther King Jr. Boulevard and Cranford Avenue, respectively.

### *Proposed Storm Drainage*

The campus will comply with the Federal Emergency Management Agency requirements for all structures proposed within the 100-year University Arroyo Flood Plain. No residential structures are proposed. In other areas of the East Campus, the development will comply with new stormwater regulations.

The West Campus storm drainage system is undeveloped with the exception of existing City storm trunk lines in Martin Luther King Jr. Boulevard and the Cranford Avenue street alignment. The storm drain system will be developed as needed on a project specific basis during long range development.

Each new project or developed area will be required to control the storm water flow rate from the proposed development area in compliance with new regulations and with Riverside County Flood Control and Water Conservation District's design criteria based on existing storm water piping capacities in Martin Luther King Jr. Boulevard and Cranford Avenue. Accomplishing this control is anticipated to be through the use of localized detention swales and system piping as new areas are converted from agricultural to housing or academic use.

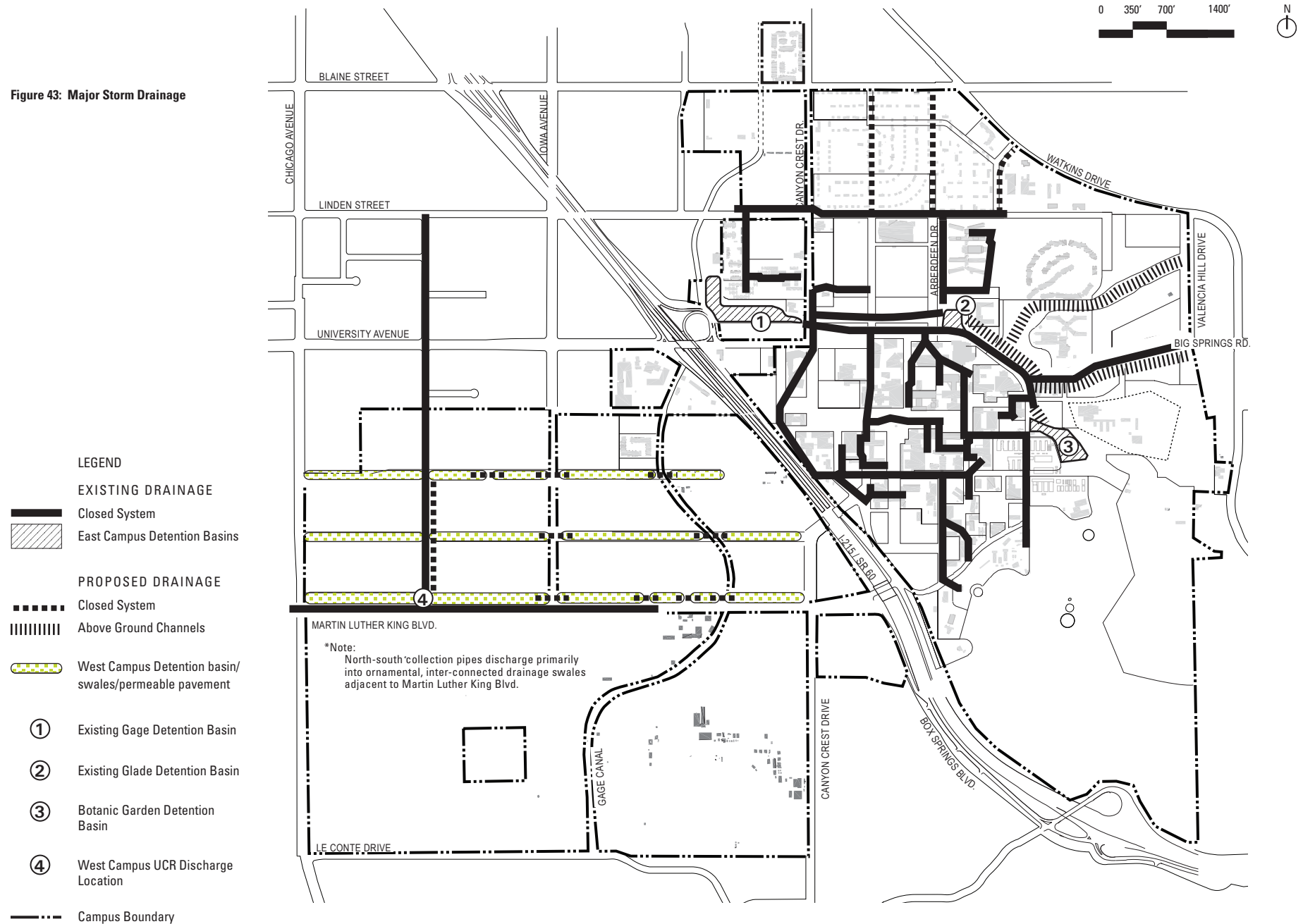
### **East Campus**

The campus has completed the University Arroyo Flood Control and Enhancement Project to reduce the extent of the 100-year flood plain as the University Arroyo flows from east to west across the East Campus as a campus area solution. As a consequence, the 100-year flood plain has been reduced to overflow on the street only with the bulk of the stormwater captured in detention basins and/or above-ground or underground culverts.

### **West Campus**

The proposed West Campus storm drain system will be a gravity conveyance system that generally overland flows to the south discharging into ornamental drainage swales located in east-west streets (Northwest and Southwest Malls) and the landscape buffer north of Martin Luther King Jr. Boulevard. A portion of the West Campus west of Iowa flows to the northwest corner of the campus. A combination of detention basins, swales, and permeable pave-

Figure 43: Major Storm Drainage



ment will contribute to the storm drain system. The ornamental drainage swales will be interconnected with north-south collection pipes and will provide for a controlled final discharge in the southwest corner of the West Campus to the existing Martin Luther King Jr. Boulevard City storm drain.

Future projects will be required to retain flow from their respective sites. The retention basin will discharge controlled flows into the existing City storm drain system in Martin Luther King Jr. Boulevard.

Campus development will need to comply with the Riverside County Water Quality Management Plan for Urban Runoff (WQMP) dated July 24, 2006. The WQMP outlines both the stormwater quality and stormwater quantity requirements for new developments. While most stormwater quality requirements can be incorporated in various Low Impact Development (LID) design features throughout the West Campus, the stormwater quantity requirements make likely require a combination of LID design features as well as peak flow attenuation via onsite detention/retention. A combination of offsite detention, pipeline improvements, flow re-rerouting, and additional onsite detention, as illustrated in Figure 43, will be used to alleviate potential flooding under a 10-year design condition and 100-year design condition.



**Campus and  
Community**





## **Campus and Community**

The anticipated enrollment growth of UCR provides unique opportunities for the campus and for the City of Riverside to guide the character of the campus environs, especially in the areas of housing, retail and service, and recreation. With those opportunities, however, also come concerns about traffic and potential loss of affordable housing in the area. The growth will lead to new and redeveloped housing and commercial facilities, improved roads and new recreation opportunities. Campus growth will also present important opportunities to foster stronger connections between the campus and the community in public service and economic partnerships.

University Avenue will be an important component of campus and community interaction. Today there are properties along University Avenue that are vacant and underutilized; there are also a number of uses such as fast food restaurants and motels that are set back from the street and have a preponderance of parking and vehicular circulation on site. Most development along University Avenue is one story in height. The significant exception and a model for future development is University Village. This two-story project includes retail at the ground level (restaurants, theatres and services), with office uses above.

The portion of University Avenue between the campus and Chicago Avenue has the potential to be significantly intensified with new and infill development, at even higher intensities than University Village. This will create a campus/city “Main Street,” with high levels of pedestrian activity day and night and with shopping, entertainment and dining of many types. It also has the opportunity to evolve into a mixed-use zone with housing or office uses above retail, in a much more urban, street-oriented format than the auto- and parking-dominated pattern that currently exists.

In the course of preparing the 2005 LRDP, a number of discussions were held with the City of Riverside. Concurrent with preparation of the LRDP the City prepared an addendum to the University Community Plan (originally adopted by the City in 1986) that specifically addresses housing, retail, recreation, and circulation and parking issues and opportunities.

In these conversations and in the deliberations regarding the LRDP itself, a number of principles emerged regarding the campus and its surrounding community:

## Planning Principles

### *Campus*

- Provide sensitive land use transitions and landscaped buffers where residential neighborhoods might experience noise or light from UCR activities.
- Encourage a “permeable” edge with the community where interaction is desirable, especially along University Avenue and in areas where a high proportion of students live in close proximity to the campus.
- Discourage vehicular traffic originating off campus from moving through campus as a short cut.



(above) **University Village**

(below) **Example of mixed use development with office over retail**



(above) **Redevelopment with higher density mixed use**  
Ground level retail and sidewalk improvements will create a more interesting pedestrian environment



(below) **Example of mixed use**  
Residential or office over retail

- Provide strong connections within the campus and its edges to promote walking, bicycling and transit use, rather than vehicular traffic.
- Continue to improve campus signage and wayfinding to provide easy access for visitors and to discourage impacts in neighboring residential areas.
- Locate public-oriented uses, such as performance facilities, galleries and major sports venues, where they can be easily accessed and where they can contribute to the vitality and economic health of businesses along University Avenue.

#### *University Avenue*

- Work cooperatively with the City of Riverside to effect the redevelopment of University Avenue between the campus and Chicago Avenue as a high intensity mixed use district, with an abundance of campus/community serving businesses and uses
- Explore the opportunity for student housing in a mixed use configuration along University Avenue

#### *Housing*

- Strongly encourage private developers to provide a variety of housing types that target both current and future needs of the overall community and the campus.
- Use City/UCR/RCC enhancement of Downtown cultural, arts and entertainment resources and the campus need for off-campus housing as the foundation of a revitalization program.
- Coordinate Block Grant, Redevelopment set-aside and other funds for the upgrading of Neighborhood Reinvestment Areas adjacent to University Avenue.
- Support the City in creating design guidelines for community, student, faculty, staff and visitor housing along University Avenue that has a friendly street presence.

- Support the City in amending the Eastside Community Plan to update housing strategies and action plans for rehabilitation of existing housing stock and new construction. This should be done in conjunction with modifications to the University Avenue Specific Plan.

#### *Retail*

- Support the City in creating a “town/gown square” at the southwest corner of the intersection of University and Chicago Avenues to provide retail and services for the community and campus.
- Support the City in developing design guidelines for mixed use housing and retail along University Avenue.
- Partner with the City to create a Riverside/UCR Entrepreneurial Program at the “town/gown square” related to minority business opportunities in the University Avenue and Hunter Business Park areas.

#### *Open Space*

- Encourage the City to link the open spaces of UCR, University Avenue, the Marketplace and the Downtown with enhanced streetscape treatments for University to Market and from Market to Santa Fe Street along Mission Inn Avenue/7th Street.
- Work with the City to link the open spaces of UCR with the City-wide Trail Network.
- Work with the City to develop streetscape concepts with banners, lighting, street furniture and public art that celebrate the linkages between the University and Downtown. Banners should highlight cultural and artistic events in Downtown and at UCR when appropriate.



*Circulation and Parking*

- Work with the City to evaluate the conversion of University Avenue from Iowa Avenue to the I-215/SR 60 freeway from an auto emphasis street to a biking, pedestrian, transit street with localized auto access. Consider Martin Luther King Boulevard/14th Street and Blaine/3rd Street as primary freeway connecting streets.
- Work with the City to emphasize University Avenue as the link between the UCR campus and Downtown rather than as the link to the freeways.
- Work with the City to link the open spaces of UCR with the City-wide Trail Network.
- Work with the City to encourage bicycle and pedestrian use and safety, including minimizing the number of curb cuts for residential and retail development along University Avenue to Chicago Avenue and then to the Downtown.



(above) **Street furnishings**

(benches, trash receptacles, tree grates) provide pedestrian amenities

(below) **Widened sidewalks**

allow sidewalk dining and similar activities while still providing ample room for shoppers





**Resource  
Conservation  
and Environmental  
Stewardship**



## **Resource Conservation and Environmental Stewardship**

### Background

For the last several decades UCR has been retrofitting many of the campus utilities systems and maintenance and operations practices on campus including energy and water conserving design and programs, to be more sustainable. Since the LRDP was adopted in 2005 substantial efforts in resource conservation, green design and sustainable practices in other areas have become the norm within the UCR campus and the University of California system. Newly adopted UCR policies reflect current legislation within the State of California as well as best practices initiated on campus. In 2007, the UCR administration established the Chancellor's Committee on Sustainability to further proactive responses to environmental stewardship, and UCR became a signatory of the American College and University Presidents Climate Commitment (ACUPCC).

### *State of California Global Warming Solutions Act of 2006*

The State of California adopted the Global Warming Solutions Act of 2006 (AB 32) in an effort to reduce greenhouse gas (GHG) emissions



to 1990 levels by the year 2020. UCR's Climate Action Plan (CAP) has been formulated in a manner to align with AB 32 and associated University of California policy targets for GHG emission reduction. The CAP will be a "living document" subject to review and update periodically as new technology and best practices are identified.

### *UC Policy on Sustainable Practices*

The UC Board of Regents issued sustainability policy principles in July 2003. In June 2004, the UC President formally issued the Presidential Policy on Green Building Design and Clean Energy Standards. This policy has since been expanded, revised, and renamed as the Policy on Sustainable Practices. The comprehensive policy, which applies to all UC campuses including UCR, contains guidelines and goals in the areas of Sustainable Transportation, Climate Protection Practices, Sustainable Operations and Maintenance, Waste Reduction and Recycling, Environmentally Preferable Purchasing, Sustainable Foodservice, Clean Energy, and Green Building.

### *UCR Sustainability Action Plan*

UCR has prepared a draft Sustainability Action Plan (SAP) to address the goals of campus sustainability and provide a detailed and actionable road map to sustainability. The SAP builds on campus successes and develops new initiatives to further its objectives. Nine focus areas are addressed, which respond to UCOP targets and are intentionally complimentary and interconnected due to the interdisciplinary aspects of sustainability issues. The draft Sustainability Action Plan can be found at the following website: <http://sustainability.ucr.edu/publications/sustainabilityplan.pdf>. The plan includes:

1. **Built Environment** – Develop exemplary facilities within which to learn, live and work which provide healthy environments that integrate the highest possible sustainable design, construction, operations and maintenance standards:

- Meet or exceed the UC policy that all new buildings (with the exception of laboratory and acute care facilities) must meet the minimum standard of LEED® Silver, and encouraged to be LEED® Gold ;
- Meet or exceed the UC Policy that all new laboratories must meet the minimum standard of LEED® Silver and Labs 21 Environmental Performance Criteria;
- Meet or exceed the UC Policy that all renovation projects (over \$5 million) must meet the minimum standard of LEED® Silver for Commercial Interiors and register with the Savings by Design Program, if eligible; and
- Meet or exceed the UC Policy to outperform California Energy Code Title 24 by at least 20%.

2. **Energy & Climate Protection** - Strive to achieve campus-wide climate neutrality through energy conservation and efficiency, on-site generation when and where appropriate, procurement of clean and renewable energy while ensuring supporting policies and resources:

- Meet or exceed the emissions reduction targets by reaching 2000 levels by year 2014 and 1990 levels by year 2020; and
- Maintain and revisit the Campus Climate Action Plan on a regular basis.

3. **Water** - Reduce imported water demands through indoor water use reduction, conservation and re-use measures, and outdoor conversions to low water requiring landscapes or weather-

based irrigation systems where appropriate:

- Reduce demand on potable water through: reduction in irrigation needs; conservation in buildings and fixtures; and conservation education; and
- Monitor consumption and progress towards conservation.

4. **Sites** - Enhance natural resource and watershed functioning through protection of open space; design and maintain landscapes to enhance ecological function; implement Low Impact Development practices; and, design infrastructure to promote a sustainable campus environment:

- Limit impact to natural and/or built sites, through the guidance of the UCR Design Guidelines and other related campus planning documents as appropriate;
- Update the draft Stormwater Management Plan (SMP) for the campus; and
- Employ Low Impact Design (LID) measures to contribute to water quality enhancement.

5. **Transportation** - Implement transportation strategies to reduce fuel consumption, air pollution and carbon dioxide and other toxic emissions while furthering alternative transportation programs and infrastructure:

- Support alternative transportation programs to reduce vehicle miles traveled per person; and
- Monitor employee travel to campus to ensure that UCR meets or exceeds a 1.5 AVR per the SCAQMD mandate.

6. **Recycling & Waste Management** - Achieve a net zero waste campus through front-end consumption reduction programs and back-end waste stream diversion practices to close loops on all campus inputs and outputs:

- Meet or exceed the UC Policy for 75% waste diversion by 2012 and zero waste by 2020.

7. **Procurement** - Achieve cradle to cradle certification or similar for all product purchases to ensure source location, raw materials, manufacturing process, packaging and disposal life-cycle phases promote sustainability.

- Meet or exceed the UC Policy: for preferential purchase of: Energy Star rated appliances and office equipment; Green-seal certified cleaning materials; EPEAT Bronze registered computer equipment; and phase out the purchase of virgin paper.

8. **Food** - Increase consumption of locally grown and organic foods while applying sustainable practices to food procurement. Provide for sustainable preparation, service and disposal of: food, related systems, equipment and facilities.

- Meet or exceed the campus objective to purchase 20% of the food products by 2020 served in all dining and retail operations.

9. **Academics & Research** - Promote integration and awareness of the triple-bottom line (environmental stewardship, social justice and economic prosperity) impacts into educational and research activities.

- Continue to expand the critical thinking regarding sustainability issues and solutions within the academic and research environments.
- Collaborate, outreach and increasingly integrate sustainability through all disciplines.

The UCR Sustainability Action Plan is intended to be a living document and a roadmap for achieving the campus sustainability goals and will be updated when appropriate to report progress and achievements.



**Appendix  
2005 LRDP**





## **Appendix A**

### University of California, Riverside Academic Planning Statement

Spring, 2004

#### *UC Riverside*

UC Riverside is one of the finest mid-sized, 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 Barbara and Art Culver Center of the Arts both located in downtown Riverside, the Heckman Center for Entrepreneurial Management in Palm Desert and the emergence of the campus libraries to include the addition of the new Science Library as the most comprehensive system 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 public service.

The campus has entered a period of rapid enrollment growth, which is supporting its transformation into one of the premier public research university campuses in the United States. The campus had a total enrollment of 17,296 students (headcount) in Fall 2003 enrolled in: 82 baccalaureate programs, 19 M.A. programs, 24 M.S. programs, an M.B.A. program, a M.Ed. program, 3 M.F.A programs, six types of educational credential programs, the first two years of medical school instruction, and 39 Ph.D. programs. The agricultural programs are integrated with the general campus programs in biological and physical sciences through the College of Natural and Agricultural Sciences (CNAS); the balance of the campus is organized into a College of Humanities, Arts and Social Sciences (CHASS), Bourns College of Engineering (BCOE), A. Gary Anderson Graduate School of Management (AGSM), a Graduate School of Education (GSOE), and a Biomedical Sciences Division. University Extension served 30,896 registrants during the 2001-02 academic year through courses in continuing professional education, general interest, recreation, matters of cultural and civic significance, and

English as a Second Language. An additional 26,298 adults attended meetings and conferences held at the University Extension Center, and Summer Sessions served 5,381 individuals. In total, 62,575 people from across the State, nation and globe utilized University Extension and Summer Sessions services during the 2001-02 academic year.

It is anticipated that the campus and its surrounding community can accommodate an enrollment of 25,000 students (headcount), with a ladder-rank faculty of approximately 1,184 FTE (full time equivalent) in 2015. 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 college, 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*

##### **Students**

Total Enrollment - UC Riverside has grown rapidly over the last four years as general campus headcount enrollment increased 46% from a Fall 1997 headcount enrollment of 9,898 to a Fall 2001 enrollment of 14,429. The enrollment increase has been largely at the undergraduate level and primarily in the Bourns College of Engineering (150% increase) and the College of Humanities, Arts and Social Sciences (57% increase) during that time period.

The future will continue to bring enrollment growth to UCR. Enrollment for 2010-11 is projected at 21,000 students (headcount). The ultimate size of the campus is anticipated at 25,000 students

in 2015 with an optimum potential of 30,000 long into the future. The 2005 Long Range Development Plan (LRDP) and Environmental Impact Report (EIR) will consider an anticipated student enrollment of 25,000 students at the threshold year 2015.

Graduate Students - In Fall 1997, graduate student enrollment numbered 1,517. That was 15% of the total enrollment. By Fall 2001, that number reached 1,715 but decreased to 12% of the total student enrollment because of the very rapid undergraduate expansion that is taking place. A system wide goal is to have graduate students at 20% of the total student enrollment.

#### **Faculty**

The increase in enrollment between 1997-98 and 2001-02 resulted in the addition of 183 FTE (full time equivalent) Instruction and Research (I&R) faculty positions for a total of 613 FTE in 2001-02 from 430 FTE in 1997-98. This is a 43% increase. UCR projects a need for 1,084 faculty by 2010-11. This represents a 77% increase over 2001-02 numbers.

#### **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 the community, the university 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.

#### **Current Academic Strengths at UC Riverside**

UCR is in a period of aggressive growth that will last through the end of the present decade. Anticipating this, In 1998-2000 the campus conducted a comprehensive planning process called UCR

Vision 2010. The academic units were charged to develop three-year academic plans.

#### *Plan for College of Humanities, Arts, and Social Sciences*

The College of Humanities, Arts, and Social Sciences (CHASS) has achieved a national and international reputation for excellence - a reputation that rests on the faculty's recognized quality, creativity, and productivity as researchers and teachers. The combination of the arts, humanities, and social sciences within a single college is unique within the UC system. This structure provides a fertile environment for the interdisciplinary collaboration and innovative programs that are distinctive characteristics of CHASS. During the period of unprecedented growth that began in 1999, a 38% increase in undergraduate and graduate student enrollment has driven faculty growth to 18%. Growth in CHASS has exceeded the overall campus rate and has accounted for 42% of campus growth since 1995-96. Through 2010, the campus projects ongoing undergraduate enrollment increases in CHASS, which will continue to serve the intellectual needs of the majority of students who matriculate at UCR. The College is poised to maximize the opportunities for programmatic innovation, distinction, and expansion that can be realized in a rapid-growth period. Key departments are within striking distance of national prominence; new and distinctive programs are being developed. And CHASS is succeeding in attracting the best candidates to its faculty ranks.

The significant challenge faced by the College is maintaining and increasing the quality of education and research and to mitigate the negative impacts of growth during a period when personnel, financial, and physical resources are severely strained. Therefore, CHASS has identified the following issues as its most important priorities for action and investment over the next three years.

- **Faculty Hiring** - Rapid growth brings the opportunity for faculty renewal and programmatic expansion. The college has advanced its academic initiatives in a number of important areas with excellent hires. Critical needs continue in new programmatic areas, in rapidly expanding and technically evolving areas, and in some small departments. Faculty growth is directed strategically across the college in accordance with criteria that reflect the college's instructional and research vision and address workload factors. The positions requested by the college reflect both current strengths and developing areas. Currently, the fields that capture the main energies of the faculty are: Globalization and International Relations; New Area Studies; Cultural Studies; and Policy Studies. With this in mind, CHASS requested 69 new faculty positions over a three year (2002-05) period.
- **Graduate Education** -The college is working to increase the enrollment of high-quality graduate students through development of new graduate programs; strengthening of existing programs; improvement of financial support for graduate students at all stages of their graduate careers; creation of greater opportunities for graduate student research; and enhancement of placement efforts. In this plan, CHASS advised the revision of graduate student enrollment models for the college and the campus and presented needs for additional graduate student support funds from campus and extramural sources. The campus responded with an interim allocation of substantial additional funds for graduate student fellowship support for 2002-03 that will assist CHASS in achieving its goals of quality graduate enrollment growth. In addition, the college requested significant new resources in teaching assistant FTE to reduce the high student to TA ratio.
- **Undergraduate Education** - UCR's faculty is dedicated and they are gifted teachers. In addition they assign a high priority to maintaining the quality of undergraduate education at UCR. They are working to enhance the intellectual quality of the undergraduate experience through improvement of the pedagogical environment, instructional innovation, curricular development, diversity of offerings, and opportunities to engage in research. More attention needs to be paid to improvement of critical measures of student success, including student progress and graduation rates and retention. This plan recommends examination on the part of the Academic Senate and the campus administration of the general assumptions for undergraduate education: revision of remedial education programs to meet the needs of current students; evaluation of the structures that serve and advise undergraduates in general and freshmen in particular; and continuing improvement of the curriculum.
- **Research** - CHASS faculty have achieved strong reputations for research quality and productivity. Further increasing the strength and distinctiveness of research is a core element of departmental and college growth plans. Interdisciplinary, collaborative research is fostered across departments and supported through an array of formally established and developing centers. Interdisciplinary research foci include aesthetics and difference, globalization, Chicano social and policy issues, health policy and health culture, family studies, Mayan studies, environmental studies, biotechnology, and Asian Pacific America. While the college has recently increased its total extramural funding, significant improvement is needed in developing a stable and growing external support base in support of research and graduate programs. The college has undertaken, often in cooperation with the Office of Research Affairs, a variety of

programs to encourage extramural proposal activity and to increase indirect cost recovery.

The 2002-2005 CHASS Academic Plan focuses on sustaining and increasing the quality of faculty hiring, graduate and undergraduate education, and research while strengthening the essential infrastructures necessary to support the college's teaching, research, and service missions. Substantial amounts of new resources are required to meet the college's short-term objectives and to advance toward its long-term vision.

*Plan for College of Natural and Agricultural Sciences (CNAS)*

The College of Natural and Agricultural Sciences seeks to be a premier college of science and agriculture. This will be achieved in a number of ways:

- By maintaining and enhancing a strong foundation in the fundamental sciences and mathematics
- By partnerships with the other colleges and programs at UCR involving interdisciplinary initiatives
- By recruiting and retaining a world-class faculty to lead high quality research and graduate programs and top-notch undergraduate education
- By exploiting the "Riverside Advantage" which is our unique combination of agriculture, biological and physical sciences, and mathematics
- By aggressively addressing our challenges
- By investing in selected areas in which CNAS has a competitive advantage.

The academic plan for CNAS calls for investments in three key areas: ongoing initiatives in which it already has strength; potential new initiatives in which it sees opportunity; and the basic sciences that

provide the underpinnings for scientific innovation in teaching and research.

*Ongoing Areas of Investment and Strength:*

- The Basic Sciences are a priority area for investment. CNAS must invest in the basic sciences that form the foundation for its teaching programs and future major initiatives. Primary among these are the Departments of Biology, Chemistry, Mathematics, and Physics. In addition, there is the opportunity to enhance Earth Sciences programs, particularly in conjunction with the Institute for Geophysics and Planetary Physics. A combination of both new and replacement positions will be used to meet the programmatic goals of these programs.
- Genomics/Biotechnology has recently been identified as one of the first major cross-campus initiatives. The UCR Genomics Institute has been launched, along with the Biotechnology Impacts Center and the Center for Plant Cell Biology. The initiative is truly multi-disciplinary, involving every major school and college. A strategic investment of new FTE is needed to continue to build the program.
- Pest and Disease Sciences is an area in which UCR has long been recognized for its preeminence. The recent construction of the state-of-the-art Insectary and Quarantine Facility and Pest Management, Phase I, will substantially enhance CNAS programs. To fully realize potential in this area requires the construction of Pest Management, Phase II, a top CNAS facility and campaign priority that would bring together faculty in Entomology, Plant Pathology, and Nematology. In addition, new and replacement positions are being requested by the college to build strength in pest and disease management and to enhance complementary programs in such areas as genomics, evolution and ecology, and conservation biology.



- Environmental Sciences was selected as a major cross-campus initiative; it is also an area in which CNAS holds an exceptional breadth of expertise. The college has provided leadership for the Interdepartmental Graduate Program, and holds expertise in eight departments, the interdepartmental program in Environmental Toxicology, and four centers or facilities. Within CNAS, particular areas of expertise include resource economics, a program that has been rebuilt and will continue to support; water, the likely source of the state's next "energy" crisis; air, which continues to be a major concern for southern California; and soil sciences, the mainstay of the Department of Environmental Sciences. A combination of new and replacement positions will maintain and build strengths in these areas.
- Conservation Biology is a relatively new, but highly successful, initiative for CNAS. The recently formed Center has been successful in attracting significant grant funding and in becoming a regional resource for policy makers. Ultimately, it is anticipated that Conservation Biology will come under the umbrella of the Environmental Sciences initiative and have strong ties to the program in Evolution and Ecology. Because the Center has no "home" department, it endorses a number of positions across several CNAS units. These are important investments because of their application to multiple programs.
- Molecular Structure of Material/Materials Science and Nanotechnology is a priority area for both CNAS and BCOE. Jointly, the colleges have moved forward in their efforts to develop a program in material science and nanotechnology by hiring a Director for the proposed Center for Nanoscale Science and Engineering. Each college has committed to hire five faculty members. The five CNAS hires are proposed to be in Physics with additional hires in Chemistry.
- Evolution and Ecology is an area that has long been a strength for the Department of Biology. In recent years, however, other

departments in the biological sciences as well as the Agricultural Experiment Station have begun to invest in this area. While not a part of the 1999 academic plan, CNAS feels that it has achieved a level of importance in CNAS to be recognized as an ongoing strength upon which to build.

#### *Potential New Initiatives*

- Mammalian-Based Biology would be a joint program with Biomedical Sciences, which would require development of a comprehensive academic plan and investment of significant faculty and facilities resources.
- A Structural Biology program would complement the initiatives in genomics and mammalian biology, and will impact research throughout the life sciences. It would require costly investment in facilities and personnel to achieve the stature desired.
- Modeling and Simulation. Rapid advances in computing have made modeling and simulation a field that impacts all areas of science. A specific action plan must be developed, based on step-wise development and strategic investment.

Undergraduate Instruction - In the area of undergraduate instruction, enrollment growth experienced in recent years has put considerable pressure upon CNAS teaching resources. Of particular concern are class laboratory space, classroom space for discussion sections and lectures, obsolete instructional equipment and the instructional load in Mathematics. The academic plan calls for investment in these areas, as well as for funding to support retention efforts, including enhancements in the area of academic advising. The college endorses the current proposal to establish the position of a campus-wide Dean of Undergraduate Education. This position would take responsibility for and supervision of programs and departments

such as the Learning Center, Testing Services, Remedial Education programs, Health Professions Advising, and related functions.

**Graduate Program** - In order to meet the needs of a research-active faculty who seek to train and collaborate with graduate students, CNAS must “grow” enrollments in the graduate programs at an aggressive rate. These students also play a key role in the undergraduate program by serving as Teaching Assistants. The CNAS academic plan calls for an augmentation in the resource base for centrally funded fellowships for first year students, coupled with a shift of advanced graduate student support to grant activities/ funding. CNAS hopes to stretch its resources as far as possible to recruit the best and brightest graduate students by developing graduate student support packages that are competitive, yet cost effective. CNAS will focus on achieving a balanced mix of international, domestic resident and domestic non-resident students.

**Challenges Facing the College** - The success of CNAS in meeting its goals largely depend on its ability to aggressively address its challenges. It is important that CNAS continues to work with the central administration to identify creative ways of leveraging CNAS and campus resources to the fullest extent possible, to continue to capitalize on the advances the college has made in the immediate past. The greatest challenges faced by CNAS fall into six major areas:

- Recruitment and retention of top quality faculty
- Funding for renovations and recruitment packages
- Quality and quantity of space
- Staff personnel resources/workload
- Facilities management/space planning
- Development program

- Equipment and facilities to support research.

*The Plan for the Bourns College of Engineering (BCOE)*

This five-year plan outlines the college’s strategy to progress towards a goal of achieving the profile of a Top-25 engineering school. A five-year period provides the opportunity to set longer-term objectives, establish a strategic approach to meet them, and be consistent with the theme of UCR’s Vision 2010. The faculty and staff developed the vision and mission statements for BCOE two years ago. During the preparation of this plan, the statements were revalidated.

This plan identified three “key success factors”: (1) hiring the highest quality faculty, (2) attracting high quality graduate and undergraduate students, and (3) achieving exceptional external funding.

The college selected twelve strategic goals to be achieved by the end of the five-year period. In addition, BCOE developed seven elements of strategy as the means by which its objectives would be met. They constitute the overall approach for allocating resources and provide the guidelines for establishing specific action items. During the past several years the college has achieved a number of major accomplishments. It exceeded projected student enrollment and faculty hiring goals. The college currently has almost 60 faculty and almost 2000 students. The Engineering Accreditation Commission of the Accreditation Board of Engineering and Technology (ABET) has reaccredited all the existing programs for the maximum period. Computer Engineering, a new joint program between the departments of Electrical Engineering and Computer Science and Engineering, was accredited on the first attempt. Another joint program between Computer Science and

Engineering and the Graduate School of Management, leading to a B.S. in Information Systems, was approved. All departments now have a graduate program. The research expenditures increased to over \$19M. The Center for Nanoscale Science and Engineering, a joint activity with the College of Natural and Agricultural Sciences was initiated. The Council of Advisors, composed of senior industry representatives, was established and each department set up its own Advisory Board of mid-level technical managers. Industry Day has become an annual tradition in the college.

Specific elements of this five-year plan are contained in the sixteen actions that have been codified. The establishment of specific milestones, which are major measurement points toward achieving the objectives, accompanies these. These are identified for each year of the plan.

The major thrust of the plan is to integrate the multidisciplinary technologies of each department with synergistic activities from other efforts on campus to address five selected areas requiring engineering focus: (1) nanotechnology, (2) intelligent systems, (3) environment, (4) communication networks, and (5) bio-engineering. Three of these areas already have multidisciplinary centers associated with them and the college plans on developing the remaining two in the next several years. The college's proposed research and education directions in the next five years are multidisciplinary and support the cross-campus initiatives intent of Vision 2010.

The plan identifies the resources needed to ensure success. Resources include faculty lines, graduate student support, instructional equipment, staff, teaching assistant support, and external research and gifts. The plan closes with a summary of the intended results. By the end of the five-year period, the college

anticipates having over 2300 undergraduates and 120 faculty FTE. It should have 430 graduate students and be graduating 25 PhDs each year. During this period it will initiate new graduate programs in Digital Arts, Material Science and Engineering, Bioengineering, and Engineering Management. All of these programs will be joint programs with other colleges on campus. The college also intends to start an undergraduate Bioengineering track within Chemical Engineering. The college should raise almost \$40M of gifts during this time and increase its research expenditures to over \$30M per year by 2006-07. That is an average of \$350K per faculty. At least half of its students will have had an internship and/or research experience before they graduate. It will occupy the remainder of the space in Bourns Hall and move into the new Engineering 2 building. By the 2006-07 academic year, the college envisions being ranked in the top 50 PhD granting engineering schools by the U.S. News and World Report survey.

#### *Plan for The Graduate School of Education (GSOE)*

Plan 2002-05 for the Graduate School of Education (GSOE) aims to sustain growth activities that began three years ago, and to position the School for growth toward preeminence by the end of the decade. The School's vision is, by the end of the decade, to have achieved stature as a premier institution within the University of California. Attaining this goal will entail growth in faculty, in graduate programs, and in credential activities, as well as the establishment of new programs that take advantage of significant opportunities.

A special challenge confronting the School is the establishment of balance among graduate, undergraduate, and credential activities. The School's distinctive mission is the conduct of cutting-edge research that addresses the daunting issues in its domain, and

the concomitant preparation of graduate students to provide leadership in furthering this effort. The School's standing also rests on the maintenance of exemplary credential programs, which for a variety of reasons (e.g., the Blended Program), also engages it in undergraduate education.

The School presently sustains distinguished research and doctoral preparation programs in several areas, but these do not reach critical mass in most instances, relying instead on exceptional individual contributions. The School's teacher preparation program, one of the largest in the UC system, is widely recognized for quality and innovation, and is currently on a trajectory that will double its size by the end of the decade. The School's growth plans are consonant with the demographics of the Inland Empire, one of the fastest growing and most diverse regions in the United States; the regional school population has increased by 41% in the last decade, of which 61% are students of color. Threading throughout these programs is the concept of leadership for diversity, the notion that the School's research will provide cutting edge insight into educational issues, and provide significant direction for professional practice.

The GSOE faculty has recently approved a proposal for establishment of a Joint Doctorate in Education for Leadership with California State Universities at Dominguez Hills, Long Beach, Los Angeles, and San Bernardino. Assuming full approval of this program by the various campuses and the two systems, the immediate aim is to collaborate with the CSU partners to prepare administrative leaders for the K-12 system, to fill the various needs in community colleges, and to produce a targeted group of prospective faculty for comprehensive universities.

- **Action Plan Priorities and Resources:** The School's priorities and resource requests parallel the preceding organization. It has

managed substantial growth during the past several years, but the next few years promise even more substantial changes, building on foundational efforts that are just beginning to produce results.

- **Current Graduate Programs:** The maintenance and expansion of the School's current programs through additional student enrollment are primary goals. As explained above, the GSOE continues to work on improving faculty workload. The current Ph.D. and M.A. programs have established a pattern of student enrollment growth in the last three years that the GSOE predicts will continue through the planning period. These programs are not scheduled to receive additional faculty FTE in the planning period, and the School will not request any new positions, although it does plan on replacing faculty positions that open through departures or retirements.
- **The Teacher Education Program** is a different matter. Its enrollments will grow because of the recently (2001) approved and implemented Masters Degree in Education Program. Current Teacher Education Supervisor FTE allocations support about 120 students, yet the School's 2002-03 enrollment is approximately 170 students. The school supports them with faculty FTE granted in 2000. By 2005, the program will add at least 40 additional enrollments. It plans to pay for additional Teacher Supervisors with funds already received from the University of California Office of the President (UCOP). At this time the School is not requesting additional permanently funded campus resources for the Teacher Education Program.
- **The Joint Doctorate Program**, to be conducted by UCR in collaboration with four CSU institutions, was approved by the GSOE's faculty on January 16, 2002, and will move through the campus and state approval processes. Meanwhile, the GSOE will complete planning details and establish the necessary infrastructure.

- **Administrative Support Services:** The rationalization of the GSOE support staff has resulted in a leaner, more efficient staff.

The School's faculty has completed several years of constant growth and development, and fulfillment of Plan 2002-2005 promises to continue a high level of activity. Among the actions that will receive attention by the Dean's office are (a) developing junior faculty, who constitute a significant proportion of the unit; (b) sustaining outreach activities, including the transitional arrangements for the California Educational Research Cooperative (CERC); and (c) completing plans for a self-supporting Masters of Advanced Studies program.

#### *A. Gary Anderson Graduate School of Management*

The A. Gary Anderson Graduate School of Management ("School") offers a professional graduate program leading to the Master of Business Administration ("MBA") degree. The program is targeted to individuals who may not have significant work experience as compared to other institutions. The program provides management education steeped in the strong research tradition of the University of California and tempered by the knowledge that management education must be of strong practical value.

The School and the College of Humanities, Arts, and Social Sciences (CHASS) jointly offer an upper-division major in Business Administration intended for students who seek a professional education in the functional fields of management. Students who elect the pre-major are advised in the CHASS during their freshman and sophomore years; after admission to the major, the School advises students. In addition to administering the program, the School also teaches courses in the functional areas of management such as finance, accounting, production management, human resources management, marketing, and management information

systems. Due to administrative convenience, the CHASS awards the Bachelor of Science degree in Business Administration.

Since 1999, the campus and the School experienced unprecedented growth in undergraduate student enrollment. In Fall 2002, the School had 41.58 full time equivalent faculty positions, of which 30.5 were held by tenure-track faculty, 3.0 by full time visiting faculty and 8.0 by part time lecturers. During the Fall 2002 Quarter, 137 students were enrolled in the MBA program and 3,394 students were enrolled in various stages of the undergraduate business administration degree program, which the School jointly offers with the College of Humanities, Arts, and Social Sciences.

In Fall 1999, the School had 25.58 full time equivalent faculty positions with 150 students enrolled in the MBA program and 2,120 students enrolled in the undergraduate degree programs that are jointly offered with CHASS.

The unprecedented undergraduate student growth from 1999 to 2002 of 60% has increased the need for faculty full time equivalent positions by 63% and added additional administrative and instructional support needs.

School growth has exceeded the overall campus growth rate and is projected to continue to grow through 2010. The School is seeking to attract the best faculty candidates to support the research, programmatic, and student enhancement goals of the School.

#### **Mission Statement**

The A. Gary Anderson Graduate School of Management is dedicated to the pursuit of excellence in substantive scholarly research enhancing the world's base of knowledge about organizations, their



environments, and their management, and to the transmission of this knowledge through quality educational programs to students, alumni, business managers and the public. The vision of the AGSM is to be recognized as a premier research and management education center.

### **Goals and Objectives**

As part of campus three-year academic planning process, the School develops its strategic goals (i.e., broad statements) to set the direction for the School to realize its mission and close the gap between where it is today and where it wants to be in the future.

These goals are as follows:

- To develop sufficient academically and professionally qualified faculty
- To teach its students to deliver high quality educational programs based on knowledge derived from high-quality research and first-class teaching
- To educate students in management to be productive and socially responsible corporate leaders and public citizens in a global economy
- To meet the demand for new knowledge and well-educated constituents by engaging the community through quality external business education programs.

#### ***Goal #1: Faculty Composition and Development***

Academically and professionally qualified full-time tenured and tenure-track faculty will teach at least 60 percent of the student credit hours in each discipline. At least 80 percent of faculty will be engaged in continuing intellectual development activities.

#### ***Goal #2: High Quality Educational Programs***

- Faculty will devote substantial time to scholarly research in the fields in which they teach

- Faculty will publish the results of their research in refereed scholarly journals
- Teaching loads will be maintained to encourage excellence in teaching and research
- Classroom performance will continue to be evaluated by student evaluation
- Master Syllabi will be adhered to for all required core BSAD and MBA courses
- Alumni feedback of curriculum will be sought for continuous improvement.

#### ***Goal #3: Student Practical Experience***

- Provide quality internship opportunities for the students within the business community
- Provide School sponsored career development activities to prepare students for recruitment and placement.

#### ***Goal #4: Community Business Education***

- Improve the quality and participation of the external community in the School's special conferences and events by offering high quality speakers and topics of relevance to attendees
- Provide executive education programs, which meet the needs of the professional business manager by providing them with exposure to the most recent trends, ideas, and techniques in the field of management.

The academic plan for AGSM focuses on investment of the School resources in three key areas: recruiting and retaining the best academically and professionally qualified tenure track faculty, funding to support scholarly research, and funding to support administrative, instructional and student services support needs necessitated by the student growth projected for the next three years.

*Division of Biomedical Sciences***Academic Revision of Program: Legislative Mandate**

The Division of Biomedical Sciences is undergoing a marked and near complete revision of its undergraduate as well as the medical portion of the curriculum. Pursuant to Legislative Item 6440-001-001 of the 2002-03 State Budget and Item 6440-001-001 of the Supplemental Report ("It is the intent of the Legislature that the UCR/UCLA Biomedical Sciences Program be reconfigured...."), the Biomedical Sciences Program will be implementing a series of significant changes in the next few years.

The substance of these changes is designed to increase accessibility of all students to the 24 medical student seats ultimately graduating from the UCLA School of Medicine. The alterations in the structure of the Program are designed to bring about these changes and the implementation of the Division's new mission have been accomplished during the past academic year following a considerable amount of effort by the Division as well as other faculty and administration on campus. However, there remains an enormous amount of effort and work yet to be done.

Pursuant to satisfying the State Legislature requirements, as well as providing for educationally viable and excellent new programs in Biomedical Sciences, the Division has established a new committee entitled the Dean's Council on Fulfilling the Mission of the Division of Biomedical Sciences. The new mission, pursuant to legislature requests, is to produce a Biomedical Sciences Program with increased accessibility and one that would increase the likelihood of graduates with their medical degrees serving the medically underserved communities in the State of California. The Division has taken this challenge seriously and must develop and implement a plan to achieve this objective. Part of this plan will be to identify,

recruit, and select individuals from disadvantaged backgrounds and from underserved areas in the State of California for education, training, and admission into UCR. The Division intends to develop a system whereby it can provide counseling, advising, mentoring, and other services designed to assist such individuals to compete successfully for the 24 medical student seats in the UCR program. Thus, the Division must come up with an approach to increase the numbers of these students enrolling into UCR, as well as increase their rate of success for being accepted as competitive medical students.

**New Medical Curriculum**

The Division of Biomedical Sciences, in conjunction with the UCLA School of Medicine, will be implementing a totally new and unique state-of-the-art medical curriculum. This is a human disease based integrative curriculum that relies to a significant degree on what is called active learning involving both problem based learning and small group sessions. This block based curriculum is designed to increase the integration of normal human biology with disease processes and clinical skills from the first week of instruction in medical school onward throughout the entire two years of basic medical science instruction to be delivered here at UCR. The hallmark of the new curriculum is the markedly increased use of active learning with a particular emphasis on problem based learning in small groups. Instruction is to be driven by clinical case studies and accomplished through lectures, a maximum of two hours per day, small group discussions, laboratories, and conferences. Students will be expected to build upon and extend information on their own. There is a big emphasis on teamwork and the procedures and skills that are involved will develop a lifelong learning process with an analysis of real world problems that they will face in clinical medicine with a high degree of integration across the medical disciplines.

This curriculum must be implemented by UCR and the Division of Biomedical Sciences in order to maintain accreditation by the Capital Liaison Committee on Medical Education (LCME). While this is a highly innovative and highly academic sound curriculum, the Division has no choice in whether or not it chooses to implement this curriculum if it wishes to stay affiliated with the UCLA School of Medicine (which offers the degree) in order for them to stay accredited with the LCME. Implementation of this curriculum beginning in August of 2004 will require a major amount of effort by the faculty in the Division of Biomedical Sciences. The teaching load for the faculty will more than double and they will no longer teach any of the courses which they are teaching now. The faculty will have to develop completely new lectures and become integrated into the small group learning sessions in preparation for delivering this curriculum beginning August 2004. A significant degree of planning will accompany this implementation. In addition, the Division must recruit additional community based physicians to become involved in the first year medical school curriculum (There are now 80 to 100 community based physicians primarily involved in the second year of the two-year medical curriculum). In addition during the transition year the Division must offer the first year of the new curriculum plus the second year of the previous medical curriculum at the same time. This presents additional challenges in terms of meeting manpower needs.

#### **Development of a Medical School at UCR**

The Division has essentially redefined the Biomedical Sciences program as the Legislature has required. The program will be reviewed by the Legislature yearly and funding will be contingent upon successful yearly evaluation of the Division's accomplishments. The new program and mission have been reformulated to produce medical graduates which will be likely to

serve underserved communities in the State of California. This is a major concern of the State Legislature in relation to funding all UC medical schools. Unfortunately few of the UC Medical School graduates desire to practice in areas of the State other than forty to fifty miles from the coast of California. Should UCR be successful in redesigning the biomedical program, it will be in an excellent position to consider the establishment of a four-year medical school here at Riverside.

The Division will continue to develop the idea of a research institute/community based hospital medical school. In this model the University does not own a hospital but affiliates with a major regional hospital such the Riverside County Regional Medical Center. A major research institute would be established by the University that would focus on the basic and clinical research of diseases of high incidence in medically underserved communities. The establishment of a four-year medical school with a research institute may be the most likely approach to stabilize for the long-term program in Biomedical Sciences.

#### **Research and Faculty Retention**

The largest and most significant problem for the Division of Biomedical Sciences since its inception has been the retention of faculty. At one point it was calculated that the Division of Biomedical Sciences had the lowest faculty retention rate of virtually any academic unit in the University of California system. The Division has consistently hired good assistant professors, who progress through the professor rank, at which point they leave before reaching tenure or, once achieving tenure, leave as full professors. The perceived reason for this has been the general lack of mammalian molecular research on the UCR campus. While the biomedical faculty are excellent in their own rights, the number of colleagues who are doing similar or related research has been

minimal throughout the twenty-six year existence of the program at UCR. This problem has begun to change in recent years, with the hiring of greater numbers of faculty in the Departments of Biochemistry and Cell and Developmental Biology, but still remains a significant issue. The Division hopes to take a broader view of faculty hiring and if it receives increased numbers of FTE in the future, intends to work with other departments and faculty such as in the Departments of Biochemistry, Cell and Developmental Biology, and Neuroscience, where common research areas could help develop a strategic plan to increase the molecular mammalian (“NIH-fundable”) research at UCR.

In addition to the difficulty in faculty retention, one of the most significant problems facing the Division is the lack of a state-of-the-art vivarium space. The National Institutes of Health (NIH) in the post genomic era now require that virtually all fundable research from the NIH have a significant animal component. Thus the campus needs to facilitate the continued development of high quality animal facilities, to develop in-house transgenic mouse facilities, and to provide well animal imaging facilities in order for investigators at UCR to stay competitive in receiving grants from the NIH. The Division intends to work closely with the Office of Research Affairs and other departments and the administration to facilitate this end in the ensuing years.

*Plan for University Extension (UNEX)*

University Extension, in keeping with the long established tradition of the public land grant institutions of higher learning, is charged with the responsibility of providing instruction and public service programs.

UNEX’s International Education Programs (IEP), offering instruction in Teaching English to Speakers of Other Languages (TESOL), is known as the largest program of its kind in the University of California system and is ranked among the top ten largest and most distinguished programs throughout the United States. Many of its domestic programs are likewise renowned for their superior quality and have achieved numerous awards of excellence from both continuing education and professional organizations.

UNEX seeks to promote, through its diverse programs, the lifelong learning process of education for learners of all ages. While maintaining UC academic standards, UNEX serves the broadest audience possible, from youth and college students to professionals and others in the Inland Empire and from around the world.

Additionally, UNEX seeks to further, through its employment of approximately 600 instructors from the University and community at large, the University’s commitment to being active and “engaged,” both regionally and globally. Specifically, UNEX serves as the comprehensive outreach element of the University and provides a unique engagement platform dedicated to the transfer and discussion of practical knowledge based on theory and research – an important link between campus faculty, students, professionals and the global community.

UNEX’s vision of promoting lifelong learning and furthering the University’s commitment to engagement, is guided by several fundamental values:

- **LIFELONG ACCESS** – UNEX seeks to be available to people of all ages, at any time and at their convenience, with educational programs that meet their diverse needs

- **COMMITMENT TO EXCELLENCE** – UNEX is dedicated to providing the best instruction and the best possible educational experience
- **LEARNER CENTERED** – UNEX measures its success by what students have learned - by the knowledge and skills that can improve students' quality of life and competitive position in the workplace.

#### *University Libraries*

The University libraries have a collection of more than two million volumes, 12,500 journal subscriptions, and more than 1.6 million microforms, arranged and staffed to support undergraduate and graduate instruction as well as faculty and staff research. Internet-based technological innovations include SCOTTY, the catalog of UC Riverside; MELVYL, which links the catalogues of all nine UC campuses; and the INFOMINE system, an index and search engine that links users to information worldwide. Linkages are also provided to the California Digital Library, a UC consortium for purchasing electronic journals. Facilities include the Tomás Rivera Library, Science Library, Music Library and Music Collections, and Media Library. In addition to the primary mission of supporting vital campus programs, the libraries are open to the general public and participate in cooperative, reciprocal borrowing arrangements with college, public and special libraries, and schools throughout much of inland southern California. Currently a staff of 28.5 FTE professional librarians and 94.8 FTE support staff are assigned to the University libraries.

#### **Campus Libraries**

- Tomás Rivera Library - houses extensive book and periodical collections supporting the social sciences, business, education, humanities and fine arts

- Science Library - emphasis on the College of Natural and Agricultural Sciences, the Division of Biomedical Sciences and the College of Engineering
- Music Library and Music Collections Library - collections for the study of music in three facilities
- Media Library houses films, audio and video-cassettes, video discs, and other media formats.

#### **Collections**

- Government Publications - serves as a major depository library for United States and California State government publications
- Map Collection - sheet maps, atlases, gazetteers, aerial photographs, and digital spatial data
- Special Collections - houses many excellent collections, including books, manuscripts, photographs, videotapes, broadsides, and other media, covering a wide range of special subject areas
- Special Collections - provides the security for valuable or vulnerable books by controlling access to them
- Textbook/Non-Book/Juvenile Collection - a resource center for various types of instructional and learning materials.

#### *Implementation Procedures*

#### **Allocating Faculty Positions**

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.

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, 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.

### **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. 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 could be provided, and or, by leasing or even purchasing existing structures in the vicinity of the 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 25,000 students anticipated by the year 2015. A high priority will be to complete seismic upgrades to identified existing buildings and insure future safety standards for 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 units will develop. If new efforts fail to develop as projected, the resources will likely be redirected to more promising projects.

The campus hopes to develop at least two, possibly three, 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 the health sciences. The campus will continue to consider the possible establishment of other professional programs and schools.

**The College of Humanities, Arts and Social Sciences** proposes to continue concentrating energies in the following: Globalization and International Relations; New Area Studies; Cultural Studies; and Policy Studies. The college will continue to increase the enrollment of high-quality graduate students through: the development of new graduate programs; strengthening of existing programs; improvement of financial support for graduate students; creation of greater opportunities for graduate student research; and enhancement of placement efforts. The college will continue efforts to reduce the high student to teaching assistant ratio, and will work to enhance the intellectual quality of the undergraduate experience.

**The College of Natural and Agricultural Sciences** calls for investments in three key areas: ongoing initiatives in which it already has strength; potential new initiatives in which it sees opportunity such as mammalian based biology, structural biology, and modeling and simulation; and the basic sciences that provide the underpinnings for scientific innovation in teaching and research. The college will support development of additional teaching facilities including classroom, class laboratories and instructional equipment, and support retention efforts including enhancements in the area of academic advising. The college hopes to stretch its resources as far as possible to recruit the best and brightest graduate students.

**The Bourns College of Engineering** proposes the following: initiation of new graduate programs in Digital Arts, Material Science and Engineering, Bio-Engineering, and Engineering Management as joint programs with other colleges on campus; commence an undergraduate Bio-Engineering track within Chemical Engineering; increase extramural funding; provide at least half of the students internship and/or research experience before graduation; and increase ranking to top 50 PhD granting engineering schools by the U.S. News and World Report survey.

**The Graduate School of Education** proposes the following: establishment of a Joint Doctorate in Education for Leadership, along with selected California State University campuses, to provide cutting edge insight into educational issues and provide significant direction for professional practice; completing plans for a self-supporting Masters of Advanced Studies program ; and additional enrollments in the Teacher Education Program.

**The A. Gary Anderson Graduate School of Management** proposes investments in three key areas: funding to support recruitment and retention of faculty for the target goal of 60% of the student credit hours being taught by academically and professionally qualified full time tenured faculty; funding to support administrative, instructional and student service support needs necessitated by the student growth projected for the next three years; and external funding to support the planning, implementation and design costs of new executive education programs such as a Fully Employed Master of Business Administration Program; an Executive Master of Business Administration Program; a Master of Science in various functional disciplines of management and other quality executive education programs to meet the needs of the local business community.

**The Biomedical Sciences Division** proposes the following: to position the Division for the eventual development of a health science school or a medical center; to strengthen and build a collaborative mammalian molecular biology program; and to develop a strategic curricular plan that will change the manner in which undergraduates from UCR enter the UCR/UCLA medical program.



## **Appendix B**

UC Riverside Property Located off the  
Main Campus





**UC Riverside Property Located off the Main Campus**

| NAME                                             | LOCATION                                                                    | PURPOSE                                                                | SIZE         |
|--------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------|--------------|
| Box Springs Reserve                              | Riverside County<br>1 mile east of campus                                   | Natural Reserve System                                                 | 160 acres    |
| Philip L. Boyd Deep Canyon                       | Riverside County<br>5 miles southwest of Palm Desert                        | Natural Reserve System                                                 | 16,873 acres |
| Coachella Valley Agricultural Research Station   | Riverside County<br>City of Thermal, 80 miles southeast of campus           | Agricultural Research                                                  | 540 acres    |
| Barbara and Art Culver Center of the Arts        | Riverside County<br>Downtown, City of Riverside                             | Teaching and Research                                                  | 0.78 acre    |
| Emerson Oaks Reserve                             | Riverside County<br>5 miles southeast of Temecula                           | Teaching and Research                                                  | 255 acres    |
| Heckmann Center                                  | Riverside County<br>City of Palm Desert                                     | Teaching                                                               | 20 acres     |
| James San Jacinto Mountain Reserve               | Riverside County<br>9 miles north of Idyllwild                              | Natural Reserve System                                                 | 29 acres     |
| Oasis de los Osos                                | Riverside County<br>North of Palm Springs                                   | Natural Reserve System – Satellite of James Reserve                    | 160 acres    |
| Motte Rimrock Reserve                            | Riverside County<br>13 miles south of campus,<br>1 mile northwest of Perris | Natural Reserve System                                                 | 644 acres    |
| Museum of Photography                            | Riverside County<br>Downtown, City of Riverside                             | Teaching and Research                                                  | 0.16 acres   |
| Mt. Rubidoux Center for Water Resources          | Riverside County<br>City of Riverside                                       | Organized Research Units                                               | 2.86 acres   |
| Sweeney Granite Mountains Desert Research Center | San Bernardino County<br>80 miles east of Barstow                           | Natural Reserve System                                                 | 9000 acres   |
| Sacramento Mountains Reserve                     | San Bernardino County<br>16 miles west of City of Needles                   | Natural Reserve System - Satellite of Granite Mountain Reserve         | 591 acres    |
| 1111 Tahquitz Canyon Way                         | Riverside County<br>City of Palm Springs                                    | University Extension (UNEX) Teaching<br>Portion of facility sub-leased | 0.22 acre    |
| Warehouse<br>2100 Atlantic Avenue                | Riverside County<br>City of Riverside                                       | Printing and Reprographics facility                                    | 1.42 acres   |



## **Appendix C**

UC Riverside Buildings as of Spring  
2011



| <b>University of California, Riverside</b>                               |              |                         |                      |                 |
|--------------------------------------------------------------------------|--------------|-------------------------|----------------------|-----------------|
| UCR Buildings as of Spring 2011 (small storage facilities, etc. deleted) |              |                         |                      |                 |
| <i>Building Name</i>                                                     | <i>CAAN*</i> | <i>Year Constructed</i> | <i>Year Occupied</i> | <i>Gross SF</i> |
| A. Gary Anderson Hall 2                                                  | P5357        | 1916                    | 1916                 | 11,519          |
| Barn Stable                                                              | P5271        | 1916                    | 1916                 | 1,622           |
| College Building South                                                   | P5231        | 1916                    | 1916                 | 8,719           |
| Growth Chamber Building                                                  | P5350        | 1916                    | 1916                 | 964             |
| Storage Shed #5                                                          | P5268        | 1916                    | 1916                 | 1,093           |
| Superintendent's Cottage                                                 | P5360        | 1916                    | 1916                 | 1,630           |
| A. Gary Anderson Hall 1                                                  | P5325        | 1917                    | 1917                 | 27,915          |
| Workman's Cottage #2                                                     | P5219        | 1922                    | 1922                 | 1,270           |
| Workman's Cottage #3                                                     | P5220        | 1922                    | 1922                 | 1,270           |
| Garage & Storage Shed                                                    | P5463        | 1924                    | 1924                 | 1,605           |
| Homer D. Chapman Hall                                                    | P5215        | 1931                    | 1931                 | 13,002          |
| <i>Entomology (Old) Demolished in 2008</i>                               | <i>P5240</i> | <i>1932</i>             | <i>1932</i>          | <i>32,444</i>   |
| Farm Group E Warehouse #1                                                | P5349        | 1932                    | 1932                 | 2,880           |
| Glasshouse Field 16 #45                                                  | P5258        | 1933                    | 1933                 | 1,213           |
| Glasshouse #3 Plastic Coverd Field 16                                    | P5542        | 1933                    | 1933                 | 2,088           |
| Glasshouse #1 Plastic Covered                                            | P5540        | 1933                    | 1933                 | 1,152           |
| Glasshouse #2 Plastic Covered                                            | P5541        | 1933                    | 1933                 | 1,152           |
| Greenhouse #2a                                                           | P5259        | 1934                    | 1934                 | 2,128           |
| Glasshouse Field 16 #46                                                  | P5260        | 1935                    | 1935                 | 1,207           |
| Vegetable Crops Storehouse                                               | P5500        | 1938                    | 1938                 | 2,741           |
| Glasshouse #5 Plastic Covered                                            | P5544        | 1941                    | 1941                 | 1,350           |
| Storage Shed #2                                                          | P5410        | 1930                    | 1941                 | 1,198           |
| <i>Entomology Annex: Demolished in 2004</i>                              | <i>P5303</i> | <i>1947</i>             | <i>1947</i>          | <i>16,664</i>   |
| Theatre Workshop                                                         | P5251        | 1951                    | 1951                 | 1,651           |
| Warehouse #2                                                             | P5348        | 1951                    | 1951                 | 4,000           |
| Botany & Plant Science Fieldhouse Field 15A                              | P5255        | 1952                    | 1952                 | 1,936           |
| Greenhouse #6                                                            | P5275        | 1952                    | 1952                 | 4,831           |

\* **CAAN: Capital Asset Account Number**



|                                             |              |             |             |              |
|---------------------------------------------|--------------|-------------|-------------|--------------|
| Greenhouse #7                               | P5276        | 1952        | 1952        | 5,094        |
| Athletics and Dance Building                | P5334        | 1953        | 1953        | 68,607       |
| Central Utility Pllant                      | P5295        | 1953        | 1953        | 22,018       |
| Geology Building                            | P5335        | 1953        | 1953        | 96,890       |
| Telephone Building                          | P5532        | 1953        | 1953        | 3,955        |
| Gordon S. Watkins Hall                      | P5354        | 1953        | 1953        | 63,737       |
| Herbert John Webber Hall                    | P5342        | 1953        | 1953        | 50,015       |
| Greenhouse #9                               | P5200        | 1954        | 1954        | 4,928        |
| Lathhouse Life Sciences Experimental Area   | P5528        | 1954        | 1954        | 1,272        |
| Canyon Crest Housing                        | P5001-5185   | 1941        | 1955        | 144,208      |
| Farm A                                      | P5489        | 1955        | 1955        | 2,859        |
| Farm B                                      | P5490        | 1955        | 1955        | 4,522        |
| Greenhouse #8                               | P5277        | 1955        | 1955        | 4,665        |
| Greenhouse #10                              | P5278        | 1955        | 1955        | 5,138        |
| Greenhouse #11                              | P5279        | 1955        | 1955        | 4,940        |
| Residence Valencia Hill Drive               | P5384        | 1955        | 1955        | 2,289        |
| Greenhouse #16                              | P5284        | 1956        | 1956        | 4,886        |
| Headhouse Storage Building                  | P5426        | 1956        | 1956        | 3,022        |
| Plant Drying Building                       | P5363        | 1956        | 1956        | 1,594        |
| Storage Shed #1                             | P5409        | 1930        | 1956        | 1,753        |
| The Barn                                    | P5358        | 1916        | 1957        | 5,175        |
| Greenhouse #12                              | P5280        | 1957        | 1957        | 4,919        |
| Greenhouse #13                              | P5281        | 1957        | 1957        | 4,938        |
| Greenhouse #14                              | P5481        | 1957        | 1957        | 4,623        |
| Greenhouse #17                              | P5483        | 1957        | 1957        | 4,886        |
| Greenhouse #21                              | P5282        | 1957        | 1957        | 4,940        |
| <i>Watkins House: Demolished in 2006</i>    | <i>P5257</i> | <i>1956</i> | <i>1957</i> | <i>6,237</i> |
| Lathhouse #1                                | P5242        | 1958        | 1958        | 1,223        |
| Lathhouse #3                                | P5425        | 1958        | 1958        | 10,234       |
| Lathhouse #4                                | P5318        | 1958        | 1958        | 3,357        |
| Lathhouse #8                                | P5424        | 1958        | 1958        | 2,245        |
| <i>Lathhouse Botany: Demolished in 2005</i> | <i>P5313</i> | <i>1958</i> | <i>1958</i> | <i>1,250</i> |

|                                      |              |             |             |              |
|--------------------------------------|--------------|-------------|-------------|--------------|
| Life Sciences                        | P5316        | 1958        | 1958        | 47,314       |
| Screenhouse Botany                   | P5355        | 1958        | 1958        | 1,250        |
| Stored Products Insecticide Building | P5305        | 1958        | 1958        | 2,515        |
| Herman T. Spieth Hall                | P5323        | 1958        | 1958        | 102,735      |
| Aberdeen-Inverness Residence Hall    | P5343        | 1959        | 1959        | 195,186      |
| Chancellor's Residence               | P5488        | 1959        | 1959        | 6,663        |
| Corporation Yard A                   | P5487        | 1959        | 1959        | 24,015       |
| Corporation Yard B                   | P5486        | 1959        | 1959        | 19,466       |
| Corporation Yard C                   | P5485        | 1959        | 1959        | 5,898        |
| <i>Insectary: Demolished in 2008</i> | <i>P5301</i> | <i>1959</i> | <i>1959</i> | <i>8,783</i> |
| Verley Barn                          | P5469        | 1959        | 1959        | 3,000        |
| Agricultural Engineering Shop        | P5518        | 1960        | 1960        | 4,057        |
| The Cottage                          | P5218        | 1916        | 1960        | 1,089        |
| Ivan Hinderaker Hall                 | P5480        | 1960        | 1960        | 45,164       |
| Physical Education Utility Building  | P5496        | 1960        | 1960        | 2,829        |
| Tomas Rivera Library                 | P5322        | 1960        | 1960        | 234,429      |
| Patrick Boyden Laboratory            | P5482        | 1960        | 1961        | 6,434        |
| Health Service Building              | P5495        | 1961        | 1961        | 23,363       |
| College Building North               | P5517        | 1963        | 1963        | 10,096       |
| Howard Samuel Fawcett Laboratory     | P5503        | 1963        | 1963        | 21,788       |
| Humanities Building                  | P5498        | 1963        | 1963        | 31,596       |
| Lothian Residence Hall               | P5502        | 1963        | 1963        | 254,511      |
| John W. Olmsted Hall                 | P5497        | 1963        | 1963        | 93,971       |
| Glasshouse #6 Plastic Covered        | P5545        | 1964        | 1964        | 1,152        |
| Trailer #7 Air Pollution             | P5509        | 1963        | 1964        | 1,212        |
| Cold Boxes Roof Building             | P5506        | 1965        | 1965        | 1,233        |
| Custodial & Grounds Building         | P5507        | 1965        | 1965        | 7,269        |
| Greenhouse #18                       | P5513        | 1965        | 1965        | 4,939        |
| Greenhouse #19                       | P5514        | 1965        | 1965        | 4,902        |
| Greenhouse #20                       | P5515        | 1965        | 1965        | 4,906        |
| Lathhouse B                          | P5535        | 1965        | 1965        | 12,316       |
| Physics Building                     | P5504        | 1965        | 1965        | 93,908       |

|                                                            |              |             |             |               |
|------------------------------------------------------------|--------------|-------------|-------------|---------------|
| Agronomy Field Headquarters Building                       | P5539        | 1966        | 1966        | 1,920         |
| Belltower                                                  | P5530        | 1966        | 1966        | 4,774         |
| Jeanette and Rupert Costo Hall                             | P5311        | 1965        | 1966        | 20,775        |
| Glasshouse #7 Plastic Covered                              | P5546        | 1966        | 1966        | 1,152         |
| Glasshouse #8 Plastic Covered                              | P5547        | 1966        | 1966        | 1,152         |
| W. Conway Pierce Hall                                      | P5508        | 1966        | 1966        | 142,353       |
| <i>University Commons: Demolished in 2007</i>              | <i>P5510</i> | <i>1965</i> | <i>1966</i> | <i>53,390</i> |
| Leon Dexter Batchelor Hall                                 | P5501        | 1965        | 1967        | 110,549       |
| Robert Gordon Sproul Hall                                  | P5523        | 1965        | 1967        | 80,988        |
| Glasshouse Field 16 #21                                    | P5499        | 1970        | 1970        | 3,126         |
| Headhouse Botanic Gardens                                  | P5568        | 1970        | 1970        | 864           |
| Insecticide Compounding & Storage Building                 | P5304        | 1972        | 1972        | 6,752         |
| <i>Art Annex: Demolished in 2006</i>                       | <i>P5574</i> | <i>1973</i> | <i>1973</i> | <i>2,645</i>  |
| Alfred M. Boyce Hall                                       | P5341        | 1974        | 1974        | 125,905       |
| Glasshouse Field 16 #25                                    | P5293        | 1974        | 1974        | 2,240         |
| School of Medicine-Education Building                      | P5588        | 1974        | 1974        | 41,939        |
| Bannockburn Village                                        | P5550-5611   | 1970        | 1975        | 191,572       |
| Mail Building                                              | P5253        | 1976        | 1976        | 3,095         |
| Restrooms and Ticket Booth Building                        | P5285        | 1977        | 1977        | 1,340         |
| <i>Biological Control Culture Bldg: Demolished in 2008</i> | <i>P5262</i> | <i>1978</i> | <i>1978</i> | <i>1,200</i>  |
| Greenhouse Botanic Gardens                                 | P5565        | 1978        | 1978        | 3,369         |
| Nematology Microplot Storage Building Field 15A            | P5288        | 1978        | 1978        | 1,369         |
| Greenhouse Field 16 #9                                     | P5296        | 1979        | 1979        | 2,880         |
| Greenhouse 16 #23                                          | P5297        | 1980        | 1980        | 4,032         |
| Multipurpose Building Botanic Garden                       | P5534        | 1980        | 1980        | 1,600         |
| Botany & Plant Science Storage Facility                    | P5549        | 1981        | 1981        | 800           |
| Botany & Plant Science Greenhouse-Poly                     | P5562        | 1981        | 1981        | 1,440         |
| Metal Research Building                                    | P5571        | 1982        | 1982        | 2,400         |
| Glasshouse 16 #10                                          | P5299        | 1985        | 1985        | 1,440         |
| Glasshouse 16 #11                                          | P5300        | 1985        | 1985        | 1,440         |
| Glasshouse 16 #22                                          | P5273        | 1985        | 1985        | 3,528         |
| Glasshouse 16 #26                                          | P5267        | 1985        | 1985        | 3,528         |

|                                                    |              |             |             |              |
|----------------------------------------------------|--------------|-------------|-------------|--------------|
| Glasshouse 16 #27                                  | P5269        | 1985        | 1985        | 3,528        |
| Greenhouse #15                                     | P5210        | 1985        | 1985        | 5,295        |
| Trailer 14                                         | P5493        | 1979        | 1985        | 1,392        |
| Geodesic Dome Botanic Gardens                      | P5505        | 1986        | 1986        | 1,705        |
| USDA Clonal Germplasm Repository                   | P5994        | 1987        | 1987        | 35,381       |
| University Plaza Apartments                        | P5715        | 1987        | 1987        | 72,544       |
| Environmental Health And Safety Building           | P5241        | 1988        | 1988        | 6,425        |
| Greenhouse #1 Research                             | P5374        | 1988        | 1988        | 4,977        |
| Greenhouse #3 Research                             | P5378        | 1988        | 1988        | 4,977        |
| Insect Laboratory #39                              | P5353        | 1965        | 1988        | 1,054        |
| Insect Laboratory #44                              | P5361        | 1965        | 1988        | 2,180        |
| Restroom/Maintenance                               | P5386        | 1988        | 1988        | 1,468        |
| South Lockerroom & Concession Stand                | P5308        | 1988        | 1988        | 3,573        |
| Storage Shed #49                                   | P5324        | 1965        | 1988        | 1,224        |
| West Lockerroom & Clubhouse Concession Stand       | P5310        | 1988        | 1988        | 3,973        |
| Highlander Hall                                    | P5716        | 1964        | 1989        | 57,166       |
| Human Resources Building                           | P5788        | 1978        | 1989        | 8,699        |
| Physical Plant Storage Unit                        | P5217        | 1989        | 1989        | 2,040        |
| <i>Commons (Terrace Rooms): Demolished in 2005</i> | <i>P5223</i> | <i>1991</i> | <i>1991</i> | <i>4,880</i> |
| University Office Building                         | P5205        | 1991        | 1991        | 20,288       |
| University Bookstore                               | P5224        | 1991        | 1992        | 33,137       |
| UC Riverside University Extension Center           | P5722        | 1968        | 1992        | 196,641      |
| Entomology Museum                                  | P5256        | 1993        | 1993        | 9,303        |
| Parking Services                                   | P5272        | 1993        | 1993        | 5,784        |
| USDA Salinity Laboratory                           | P5986        | 1994        | 1994        | 81,553       |
| Student Recreation Center                          | P5511        | 1994        | 1994        | 86,141       |
| University Laboratory Building                     | P5263        | 1994        | 1994        | 13,432       |
| Marlan & Rosemary Bourns Hall                      | P5261        | 1995        | 1995        | 167,444      |
| Botanic Gardens House                              | P5421        | 1960        | 1996        | 2,713        |
| UCR Child Development South                        | P5396        | 1996        | 1996        | 12,866       |
| School Of Education Clinic                         | P5397        | 1996        | 1996        | 1,070        |
| Glasshouse Field 16 #50                            | P5434        | 1996        | 1996        | 1,700        |

|                                               |       |      |      |         |
|-----------------------------------------------|-------|------|------|---------|
| Humanities & Social Sciences                  | P5307 | 1996 | 1996 | 114,755 |
| Trailer Biomedical Sciences #1                | P5385 | 1996 | 1996 | 2,160   |
| Biomedical Sciences Unit 2 Trailer            | P5561 | 1997 | 1997 | 2,160   |
| Housing Administration                        | P5581 | 1978 | 1998 | 5,305   |
| Raymond L. Orbach Science Library             | P5418 | 1998 | 1998 | 176,066 |
| Police Building                               | P5566 | 1998 | 1998 | 9,415   |
| Lathhouse Building B                          | P5187 | 1998 | 1999 | 914     |
| EH&S Triple Wide Trailer                      | P5386 | 1999 | 1999 | 2,406   |
| Vivaria Trailer                               | P5387 | 1999 | 1999 | 1,938   |
| Computing & Communications Center             | P5381 | 2000 | 2000 | 21,990  |
| Pentland Hills Residence Hall-1               | P5365 | 2000 | 2000 | 145,390 |
| Stonehaven Apartments                         | P5991 | 2000 | 2000 | 158,511 |
| Student Recreation Annex                      | P5537 | 2000 | 2000 | 800     |
| Arts Building, Fine Arts Seismic Facility     | P5411 | 2001 | 2001 | 111,976 |
| Campus Surge                                  | P5380 | 2001 | 2001 | 74,459  |
| East Campus Insectary and Quarantine Facility | P5289 | 2001 | 2001 | 30,443  |
| International Village (UNEX)                  | P5998 | 2001 | 2001 | 103,000 |
| University Lecture Hall                       | P5383 | 2001 | 2001 | 11, 539 |
| Corporation Yard Physical Plant Warehouse     | P5364 | 2002 | 2002 | 9,280   |
| Entomology Building Seismic Replacement       | P5417 | 2002 | 2002 | 69,850  |
| Entomology Greenhouse 16A                     | P5408 | 2002 | 2002 | 2,284   |
| Entomology Greenhouse 16B                     | P5412 | 2002 | 2002 | 2,284   |
| Entomology Greenhouse 16C                     | P5413 | 2002 | 2002 | 3,107   |
| Entomology Greenhouse 16D                     | P5419 | 2002 | 2002 | 2,855   |
| Entomology Greenhouse 16E                     | P5420 | 2002 | 2002 | 2,284   |
| Herbarium                                     | P5319 | 2002 | 2002 | 4,177   |
| Pentland Hills Residence Hall-2               | P5369 | 2002 | 2002 | 185,002 |
| Plant Transformation Facility                 | P5190 | 2002 | 2002 | 3,834   |
| Science Laboratories 1                        | P5416 | 2003 | 2003 | 45,349  |
| Plant Transformation Facility                 | P5190 | 2002 | 2002 | 3,834   |
| Trailer Anthropology                          | P5476 | 2002 | 2002 | 1,377   |
| Trailer CNAS (Surge Trailer)                  | P5376 | 2002 | 2002 | 1,377   |



|                                                         |            |      |      |         |
|---------------------------------------------------------|------------|------|------|---------|
| Satellite Chiller Plant                                 | P5367      | 2003 | 2003 | 16,796  |
| Science Laboratories 1                                  | P5416      | 2003 | 2003 | 45,472  |
| Chemical Sciences                                       | P5414      | 2003 | 2003 | 137,258 |
| Engineering Building Unit 2                             | P5194      | 2005 | 2005 | 160,930 |
| Richard J Heckmann Intl Center for Entrepreneurial Mgmt | P5467      | 2005 | 2005 | 26,022  |
| Heckmann Center Complex, Ph 2                           | P5468      | 2005 | 2005 | 36,561  |
| Biological Sciences                                     | P5186      | 2006 | 2006 | 53,035  |
| Alumni & Visitors Center                                | P5197      | 2007 | 2007 | 13,865  |
| Chass Interdisciplinary North                           | P5403      | 2007 | 2007 | 55,642  |
| Chass Interdisciplinary South                           | P5372      | 2007 | 2007 | 70,934  |
| Falkirk Apartments                                      | P5671-5679 | 1985 | 2007 | 212,730 |
| Glen Mor Housing                                        | P5470-5474 | 2007 | 2007 | 197,288 |
| Highlander Union Building                               | P5404      | 2007 | 2007 | 123,928 |
| Housing Modular                                         | P5457      | 2008 | 2008 | 1,440   |
| Psychology Building                                     | P5373      | 2008 | 2008 | 67,771  |
| Student Support Services Building                       | P5614      | 2008 | 2008 | 58,140  |
| UCR Child Development Center North                      | P5198      | 2009 | 2009 | 14,570  |
| Genomics Building                                       | P5196      | 2008 | 2009 | 106,996 |
| Highlander Union 2, Activity Center                     | P5199      | 2009 | 2009 | 15,140  |
| Highlander Union Coffee Pavilion                        | P5405      | 2009 | 2009 | 2,236   |
| Oban Apartments                                         | P5661-5670 | 1985 | 2009 | 106,840 |
| Genomics Shed                                           | P5449      | 2010 | 2010 | 1,800   |
| Materials Science and Engineering                       | P5195      | 2008 | 2011 | 134,000 |
| School of Medicine Research Building                    | P5406      | 2009 | 2011 | 58,379  |



## **Appendix D**

### University of California Policy on Green Building Design and Clean Energy Standards

Resource sustainability is critically important to the University of California, the State of California, and the nation. Efficient energy use is central to this objective, and renewable energy and energy-conservation projects provide a means to stabilize campus budgets, increase environmental awareness, reduce the environmental consequences of University activities, and provide educational leadership for the 21st century.

On July 17, 2003, The Regents of the University expressed their support for a Presidential policy to promote "...the principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and decommissioning of facilities and infrastructure to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements."

The University of California is committed to improving the University's effect on the environment and reducing the University's dependence on non-renewable energy. Guidelines for implementing practices in support of Green Building

Design and Clean Energy Standards are explained in detail in the following plan for achieving these goals.

I. Green Building Design

a. Given the importance of energy efficiency to Green Building design, the University has set a goal for all new building projects, other than acute-care facilities, to outperform the required provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. Standards for energy efficiency for acute care facilities will be developed in consultation with campuses and medical centers.

b. The University of California will design and build all new buildings, except for laboratory and acute care facilities, to a minimum standard equivalent to a LEED™ 2.1 “Certified” rating.

c. Campuses will strive to achieve a standard equivalent to a LEED™ “Silver” rating or higher, whenever possible within the constraints of program needs and standard budget parameters.

d. Given the importance of specifically addressing sustainability in laboratory facilities, the University of California will design and build all new laboratory buildings to a minimum standard equivalent to a LEED™ 2.1 “Certified” rating and the Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC), as appropriate. The design process will include attention to energy efficiency for systems not addressed by the California Energy Code (Title 24).

e. Any proposed exception from the above standards may be requested administratively during preparation of the PPG. Any exception proposed after approval of the PPG will be treated as a scope change and processed in accordance with standard University

procedures.

f. Further study will be conducted before a similar sustainable design policy for new acute-care facilities is adopted.

g. Any significant renovation projects involving existing buildings will also apply sustainability principles to the systems, components and portions of the building being renovated.

h. In consultation with the campuses, the Office of the President will develop an internal evaluation and certification standard based on the LEED™ and Labs21 measures.

i. Campuses may choose to pursue external certification through the LEED™ process, augmented with Labs21 criteria as appropriate for laboratory systems, in lieu of the internal process for a given project.

j. The measures required by this policy will be incorporated into all new building projects, other than acute care facilities, submitted for first formal scope and budget approval as of July 1, 2004

k. To the extent feasible within approved funding, campuses are encouraged to apply sustainability principles to all projects currently in design.

l. The University planning and design process will include explicit consideration of lifecycle cost along with other factors in the project planning and design process, recognizing the importance of long-term operations and maintenance in the performance of University facilities.

m. For existing buildings, the University will explore the development of a standard methodology for sustainable policies and

standards for facilities management, including assessing the LEED™ Existing Building (LEED™ EB) evaluation tool being developed for this purpose. These policies and standards will address aspects of building cleaning, maintenance, and operation to include factors such as chemical usage, indoor air quality, utilities, and recycling programs.

n. The University will work closely with the U.S. Green Building Council, Labs21, the Department of Energy, the U.S. Environmental Protection Agency, State government, and other organizations to facilitate the improvement of evaluation methodologies to better address University requirements. Additionally, the University will work with the U.S. Green Building Council to develop a self-certification tool for University use.

o. The University will use its purchasing power to promote the availability of products that are resource-efficient, energy-efficient, water-efficient, and of recycled and rapidly renewable content for building materials, subsystems, components, equipment, and supplies.

p. The University will work with regulatory agencies and other entities to speed the development, approval, and implementation of products and technologies that improve energy efficiency and support sustainable design, construction, and operating practices.

q. The University will develop a program for sharing of best practices.

r. The University will incorporate the Green Building Design policy into existing facilities-related training programs, with the aim of promoting and maintaining the goals of the policy.

II. Clean Energy Standard

a. The University will implement a systemwide portfolio approach to reduce consumption of non-renewable energy. The portfolio will include a combination of energy efficiency projects, the incorporation of local renewable power measures for existing and new facilities, green power purchases from the electrical grid, and other energy measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. The appropriate mix of measures to be adopted within the portfolio will be determined by each campus. Since each campus's capacity to adopt these measures is driven by technological and economic factors, the campus will need to reevaluate their energy measures mix on a regular basis. The portfolio approach will provide valuable analytical information for improving energy efficiency, resulting in an overall improvement in the University's impact on the environment and reduced reliance on fossil fuels during the next decade of capital program growth.

b. The University will strive to achieve a level of grid-provided electricity purchases from renewable sources that will be similar to the State's Renewable Portfolio Standard, which sets a goal of procuring 20 percent of its electricity needs from renewable sources by 2017. The University will initiate progress towards this objective in 2004 by purchasing 10 percent of grid-supplied electricity from renewable sources, subject to funding availability, and will track progress annually toward achievement of the year 2017 goal.

c. With a goal of providing up to 10 megawatts of local renewable power by 2014, the University will develop a strategic plan for siting renewable power projects in existing and new facilities. The plan will include demonstration projects for photovoltaic systems and other renewable energy systems, such as landfill gas fueled electricity generation or thermal energy production. The strategic plan will include criteria for evaluating the feasibility of



a variety of projects, such as incorporating photovoltaic systems in replacement roofing projects and in new buildings, as well as forecasting the accommodations necessary for eventual installation of photovoltaic systems. The University will assess the progress of renewable energy technology improvements, both in terms of cost and technical efficiency. To achieve the renewable power goal, the University will maximize the use of available subsidies and negotiate pricing reductions in the marketplace, and will develop funding sources for financing the costs of renewable energy measures.

d. With a goal of reducing systemwide non-renewable energy consumption, the University will develop a strategic plan for implementing energy efficiency projects for existing buildings and infrastructure to include operational changes and the integration of best practices. The plan will identify opportunities to incorporate energy retrofit projects into major building renovations as funding is available, and to initiate standalone retrofit projects as justified by future energy savings. The University will monitor industry progress in energy retrofits and implement technical improvements as they become available. As with renewable energy projects, the University will develop funding sources and establish a program for financing retrofit projects. The initial goal for energy efficiency retrofit projects will be to reduce systemwide growth-adjusted energy consumption by 10 percent or more by 2014 from the year 2000 base consumption level. The University will strive to achieve even greater savings as additional potential is identified and funding becomes available.

e. The University will continuously evaluate the feasibility of other energy-saving measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. In particular, campuses will evaluate transportation services, including fleet vehicles, Transportation Demand Management (TDM) programs,

public transit, and on-campus housing goals.

f. The University will develop a variety of funding sources and financing alternatives for energy efficiency, renewable energy, and clean energy projects that will enable campuses to be flexible in addressing their energy needs.

g. The University will pursue marketing of emissions credits as a means to bridge the cost-feasibility gap for green power projects.

### III. Authority and Report Schedule

The Regents have delegated authority to the President for promulgating policy regarding capital projects and existing University facilities. The President has delegated authority to the Senior Vice President -- Business and Finance for further definition of measures to implement University policy regarding sustainability. Chancellors are responsible for implementation in the context of individual building projects and facilities operations.

On an annual basis, the President will provide a report to The Regents that details the impact of the University's sustainability efforts on the overall capital program and University operating costs. The University's sustainability guidelines will be subject to continuous review. The guidelines will be reexamined every three years, with the intent of developing and strengthening implementation provisions and assessing the influence of the guidelines on facilities capital and operating costs. The University will provide the means for the ongoing active participation of students, faculty, administrators, and external representatives in further development and implementation of this policy.



**Appendix  
2005 LRDP  
Amendment 2**



## **Appendix E**

**2005 Amendment 1  
Land Use Restriction,  
Memo to File, July 26, 2006**

2005 UCR LONG RANGE DEVELOPMENT PLAN Amendment #1  
July 26, 2006

Regarding: Deed restrictions on the Pesticide Pits area

This item was approved by the Office of the President as a "Covenant to Restrict Use of Property Environmental Restriction" and includes an "Agreement/Operations and Maintenance" to be the responsibility of the Director of UCR Environmental Health and Safety, however this restriction has been noted as Amendment #1 to the 2005 UCR Long Range Development Plan (LRDP) and will be included as a land use designation in further LRDP Land Use Maps. The Property is approximately 3.25 acres in size and is located within the Agricultural Operations area of the West Campus, south of Martin Luther King Boulevard.

With the recordation of the Covenant to Restrict Use of Property which took place on July 26, 2006, this amendment is complete.

The following uses and activities are restricted on the site:

Prohibited Uses - The Property shall not be used for any of the following purposes:

- A residence, including any mobile home or factory-built housing
- A hospital for humans
- Indoor classroom for persons under 18 years of age
- A day care center for children

Prohibited Activities - The following activities shall not be conducted at the Property:

- Raising of food for human or animal consumption
- Drilling for water, oil, or gas leaving exposed soil at the site which may migrate to other locations by weather or human action
- Extraction of groundwater for purposes other than site remediation or construction dewatering
- Classroom activities for persons under the age of 18
- As the site is within the 100 year flood plain for the Box Springs Arroyo, additional restrictions apply pertinent to the flood plain and would entail additional review.

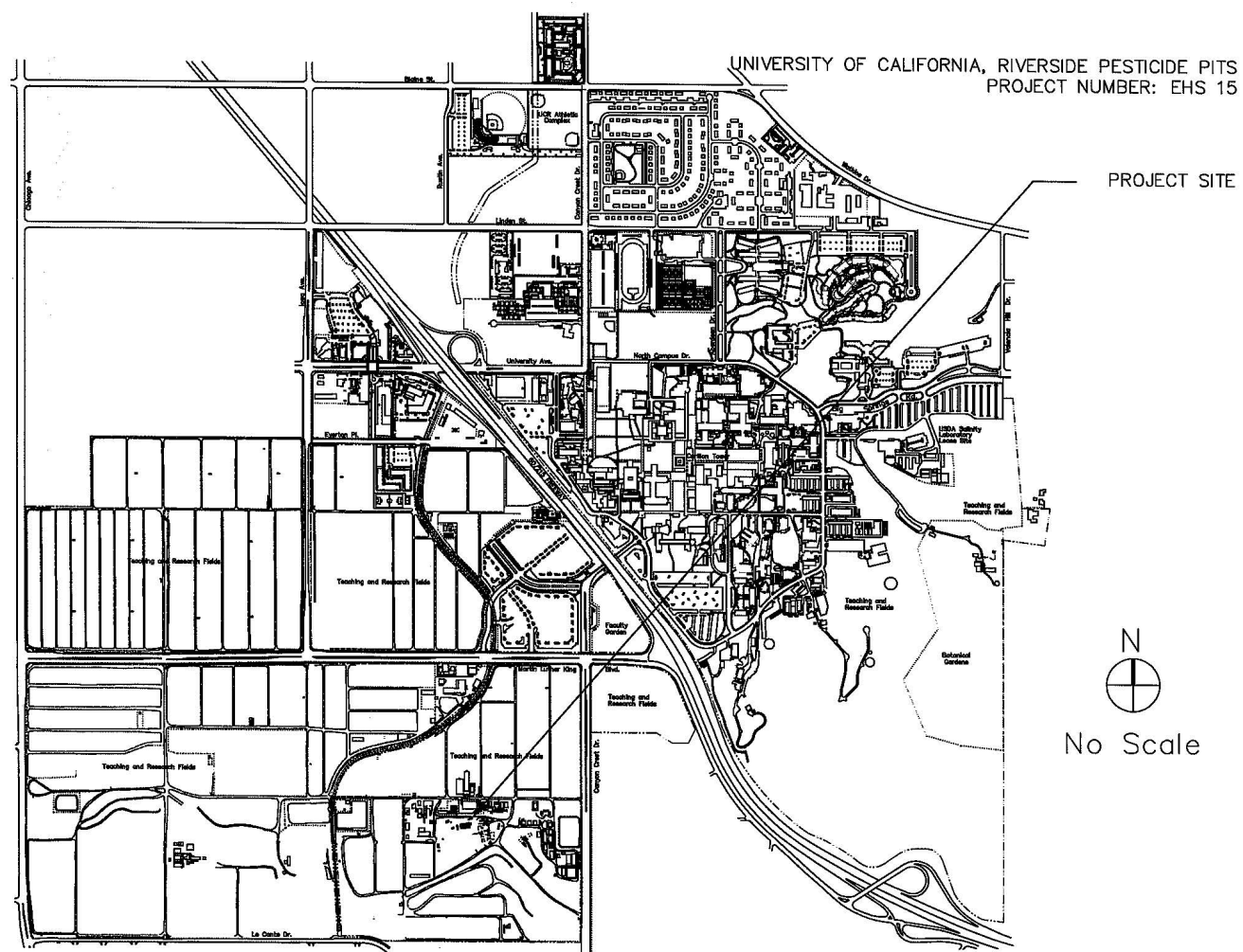
Attached: LRDP Land Use Map, Amendment #1  
Covenant to Restrict Use of Property  
Agreement/Operation and Maintenance

Signed: \_\_\_\_\_

Juanita W. Bullock  
Campus Physical Planner

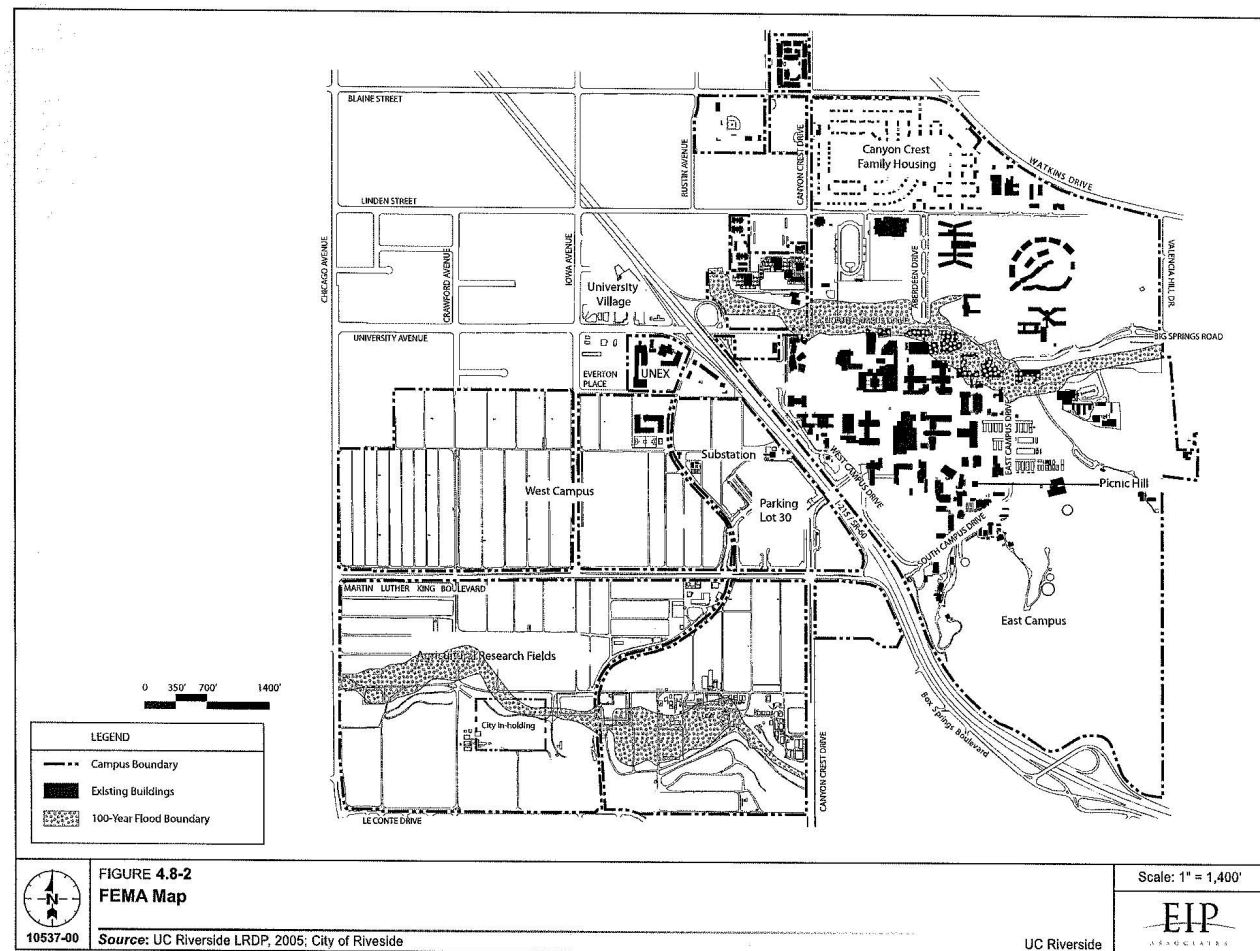
Date: \_\_\_\_\_

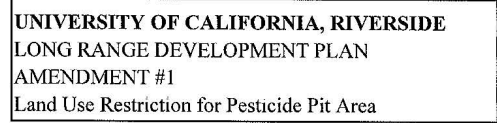
7/26/06











- Soil Management Requirements
- Prohibited Activities
  - o Raising food for human or animal consumption
  - o Drilling for water, oil, or gas leaving exposed soil at the site which may migrate to other locations by weather or human action
  - o Extraction of groundwater for purposes other than site remediation or construction dewatering
  - o Classroom activities for persons under the age of 18
- Access for DISC
- Access for Implementing Operations and Maintenance
- Non-Interference with Groundwater Monitoring Wells

#### **Environmental Impact Summary**

A Negative Declaration was adopted for the remediation project which included the requirement for the covenant. The recordation of the covenant and Amendment #1 to the 2005 UCR LRDP as a Land Use Map Overlay and addition to the LRDP text is considered to be a discretionary act and is therefore subject to the California Environmental Quality Act (CEQA). However, they fall within the Section 15305 of the Categorical Exemption Section of CEQA under Class 5 - Minor alterations in land use limitations.

#### **Findings**

Recordation of the "Covenant to Restrict Use of Property", the creation of an overlay on the LRDP Land Use Map as Amendment #1 to indicate the area of limitation, and the addition of the covenant to the 2005 UCR LRDP to explain the restrictions have been determined not to have a significant effect on the environment and shall, therefore be exempt from the provisions of CEQA. No further environmental documentation is required..

Attachments: Figure 1 - 2005 UCR LRDP Land Use Map Overlay Amendment #1

- Figure 2 FEMA Map
- Covenant to Restrict Use of Property (Environmental Restriction) Environmental Impact Classification
- Vicinity Map
- Survey Map Showing Limits of Subject Area with Line

April 10, 2006

Office of the President

Drafted by: J. Bullock

Coordinated with: M. Soudei

Reviewed by: L. Hjulberg

#### **ITEM FOR ACTION**

#### **2005 UCR LONG RANGE DEVELOPMENT PLAN AMENDMENT #1 FOR LAND USE RESTRICTION FOR PESTICIDE PITS SITE**

It is recommended that, upon review and consideration of the environmental consequences of the proposed land use restriction as indicated in the "Covenant to Restrict Use of Property" (covenant) document for the University of California, Riverside (UCR) Pesticide Pit site, the Senior Vice President will:

1. Approve the Land Use Restriction Overlay Map (see Figure 1), and
2. Amend the UCR 2005 Long Range Development Plan to include the "Covenant to Restrict Use of Property", the document identifying the land use restrictions on the Pesticide Pits site.

**Introduction:**

The Pesticide Pit area (Site) encompasses an area of approximately 125 acres and is identified as Riverside County Assessor's Parcel No.. 235-090-008-5. It is located within the UCR agricultural research and teaching fields south of Martin Luther King Jr. Boulevard approximately 3/4 of a mile southwest of the UCR East Campus academic core. The academic core is located on the east side of the 1-215/S R 60 freeway; the Site is on the west side of the freeway.. Past practices for disposal of toxic substances used in agricultural and other research by the university resulted in burial of such on the Site. The Site was identified as a California Superfund site.. Investigation of type and impacts of 'the toxic substances disposed of and subsequent remediation activities at the Site have been implemented with Department of Toxic Substances Control, Region 4 (DTSC) guidance and approval under an enforceable agreement dated November 6, 1989.

After remediation of the toxic substances which included removal and/or' remediation of contaminated soil, a "Site Remediation and Closure Report" was prepared in accordance with the "Remedial Action Plan" (RAP) for the project and other supporting documents. DISC circulated the draft RAP, which contained a Final Health Risk Assessment, as well as a draft Negative Declaration pursuant to the California Environmental Quality Act. The RAP required that a deed restriction on certain uses would be required as part of the Site remediation. Per the RAP, DISC and UCR prepared a covenant which limits development of certain uses on the Site. The limits or restrictions are the subject of' the Amendment #1 - "Land Use Restriction Overlay" to the 2005 UCR LRDP Land Use Map and accompanying text within the 2005 UCR LRDP document.

**Background**

Agricultural research has been conducted at university laboratories, greenhouses, and small field plots since the Citrus Experiment Station was developed on the current campus site three miles east of downtown Riverside in 1917. Prior to 1972, some of the waste generated during research was discarded in the pesticide pits as identified above.. There were and are no written records of the disposal practices that took place at the Site, however, information regarding the type and location of waste buried at the site was gathered based on interviews with UCR employees with knowledge of the Site.. Disposal activities at the Site reportedly consisted of the excavation and filling of various pits and trenches with a variety of organic and inorganic wastes, including agricultural plant wastes, plant containers, pesticides, chemical containers, and miscellaneous small laboratory apparatus-type equipment. An area located in the southwestern portion of the Site was reportedly used to burn agricultural green waste (e.g , trees, brush, and other plant material).. The Site lies within the 100-year flood plain as defined by the Federal Emergency Management Agency (FEMA) which has additional land use restrictions (see Figure 2).

Under the regulatory oversight of the California Environmental Protection Agency, Department of Toxic Substances Control, Region 4 (DISC) and overall direction of UCR's Environmental Health and Safety Department, the Site underwent remediation through removal of containers and soil treatment of the Site from about June, 1997 until February 2002

**Land Use Amendment**

The DTSC has determined that the covenant is reasonably necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous

materials as defined in Health and Safety Code ("H&SC") Section 25260. The covenant will be recorded on the parcel with the County of Riverside pertinent to the Site (attached). It has been developed pursuant to Civil Code Section 1471(c) General Provisions within the covenant provide the land use restrictions and requirements pertaining to the Site. They are as follows:

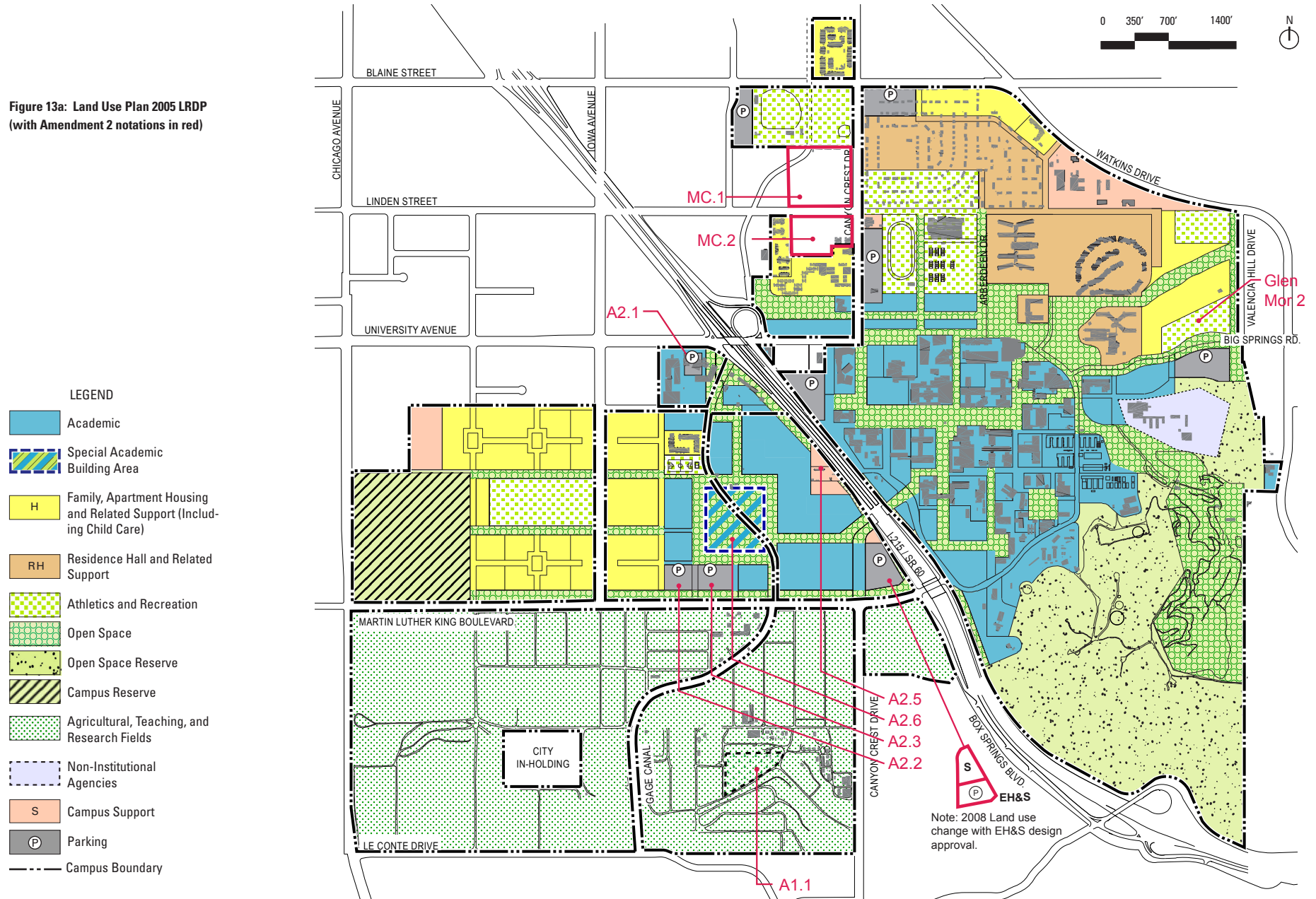
- Restrictions to Run with the Land
- Binding upon Owners/Occupants
- Written Notice of the Presence of Hazardous Substances
- Incorporation into Deeds and Leases
- Conveyance of Property Notification to DT SC
- Prohibited Uses
  - o Residential (including mobile home, factory-built or constructed)
  - o Hospital for humans
  - o Indoor classroom for persons under 18 years of age or Day care center for children



**Appendix F**

**2005 LRDP Amendment 2**  
**Matrix of Proposed Text,**  
**Map, and Table Changes**  
**Figure 13, 13a, 13b: Land Use Plan**

**Figure 13a: Land Use Plan 2005 LRDP  
(with Amendment 2 notations in red)**



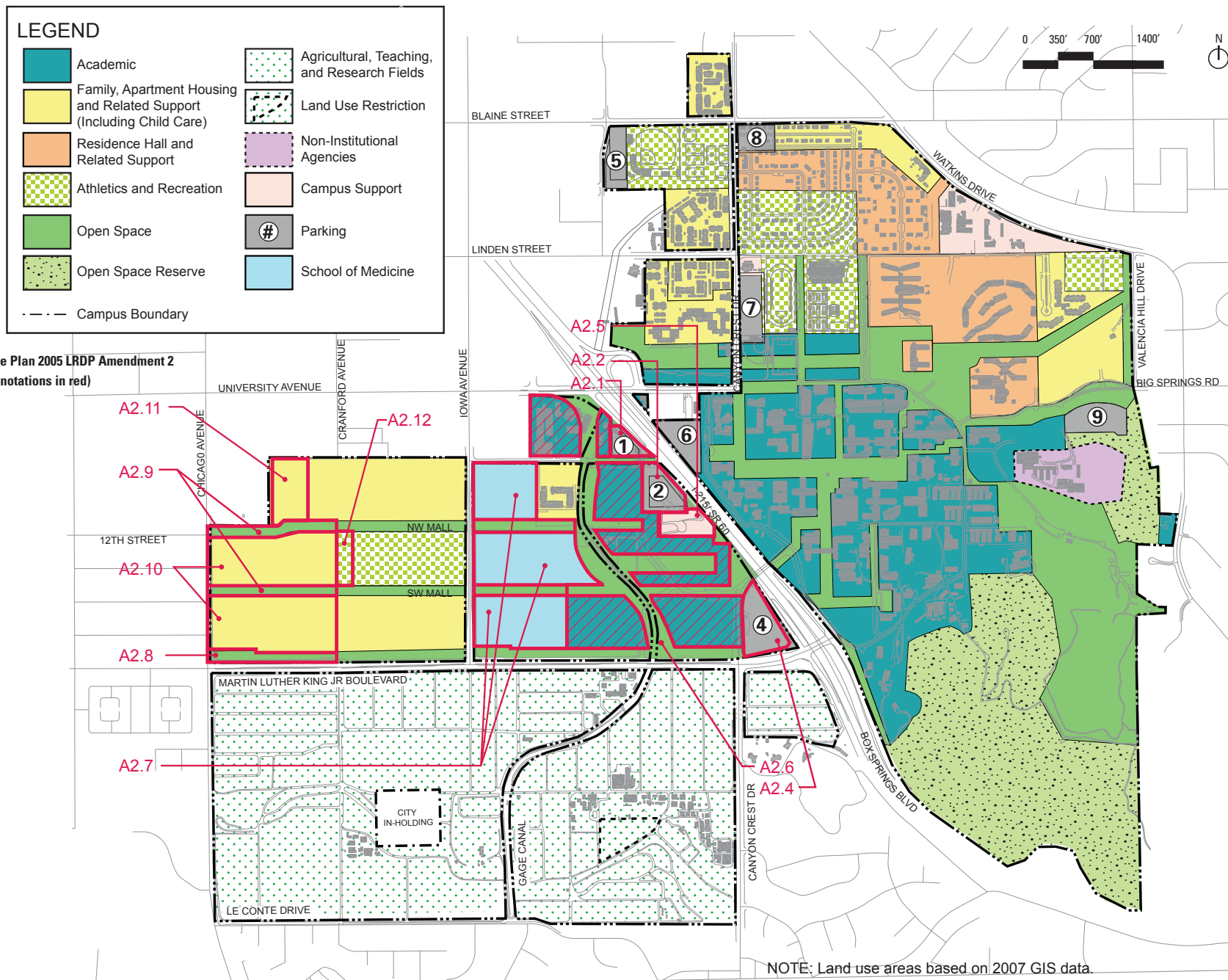
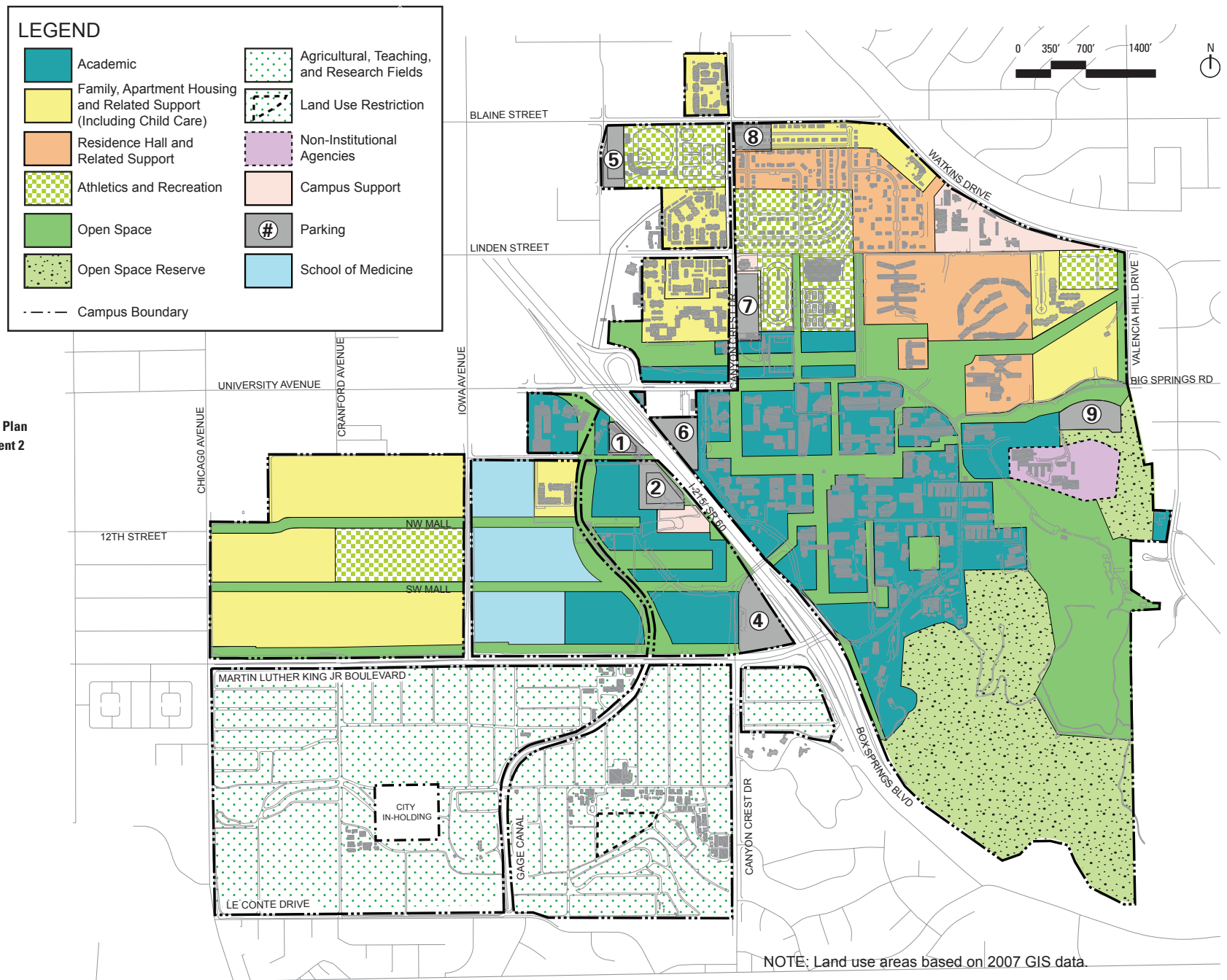


Figure 13: Land Use Plan  
2005 LRDP Amendment 2



**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                               | Title                                          | Status                                                                                           | Description                                                                                                                                                                                                                                                         | Text Changes                                                                                                                                                          | Map Changes                                                                             | Table/Figure Changes                                                                                                                                                                                              |
|-----------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Previously Approved Land Use Amendments to the 2005 LRDP</b> |                                                |                                                                                                  |                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |                                                                                         |                                                                                                                                                                                                                   |
| A1.1                                                            | Land Use Restriction                           | Approved Office of the President, July 26, 2006                                                  | Located within the Agricultural Operations area of the West Campus (WC), south of Martin Luther King Jr. Blvd. (MLK)                                                                                                                                                | Add the Land Use Restriction text "Memo to File" as an Appendix of the 2005 LRDP Amendment 2. Refer to the Appendix in the Table of Contents.                         | Land Use designation does not change. Add site boundary and add land use to the legend. | None.                                                                                                                                                                                                             |
| EH&S                                                            | 2008 Amendment to the LRDP Land Use Map        | Approved by The Regents, July 2008 with the Environmental Health & Safety (EH&S) Design Approval | Amendment to the LRDP to accommodate the EH&S facility in the northern portion of the parcel located at the northeast corner of Canyon Crest Drive and MLK. The approval changed the size of the Support and Parking acreages to accommodate the proposed facility. | 2005 LRDP: 0.80 acres of "Campus Support" and 5.21 acres of "Parking" changed to 2.81 acres of "Campus Support" and 3.18 acres of "Parking". (See A2.4).              | See A2.4 below for further change.                                                      | None.                                                                                                                                                                                                             |
| Glen Mor 2                                                      | 2008 Amendment to the LRDP Land Use Map        | Approved by The Regents, May 2011 with the Glen Mor 2 Design Approval                            | Amendment to the LRDP to delete the "Athletics and Recreation" land use proposed accompanying "Family, Apartment Housing and Related Support Including Child Care" (Housing) at the northwest corner of Big Springs Road and Valencia Hill Drive.                   | Delete "Athletics and Recreation" land use designation planned as a top deck for a parking structure for the adjacent housing and show underlying "Housing" land use. | Delete "Athletics and Recreation" land use designation and replace with "Housing"       | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages.; change land use in Figure 13: Land Use Plan.                                                                                        |
| <b>Previously Approved Map Changes to the 2005 LRDP</b>         |                                                |                                                                                                  |                                                                                                                                                                                                                                                                     |                                                                                                                                                                       |                                                                                         |                                                                                                                                                                                                                   |
| MC.1                                                            | Falkirk Housing (Highlander Ridge) Acquisition | Approved by Regents, March, 2007                                                                 | Acquisition of a parcel located at the northwest corner of Canyon Crest Drive and Linden Street containing 220 apartments in 18 2-story buildings for student housing                                                                                               | 416 student apartment beds                                                                                                                                            | Add land use designation "Housing" to new acquisition                                   | Land Use Chapter -- Add beds to Table 4: Projected Residential Beds and Units; change East Campus housing land use acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| MC.2                                                            | Oban Housing (Summer Ridge) Acquisition        | Approved by Regents, August, 2009                                                                | Acquisition of parcel located on the southwest corner of Canyon Crest Drive and Linden Street containing 136 apartments in nine 2-story buildings for student housing.                                                                                              | 244 student apartment beds                                                                                                                                            | Add land use designation "Housing" to new acquisition                                   | Land Use Chapter -- Add beds to Table 4: Projected Residential Beds and Units; change East Campus housing land use acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |

**Matrix Legend:**

**A1--Amendment 1**

**A2--Amendment 2**

**MC--Map Change**

**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                | Status      | Description                                                                                                                                                                              | Text Changes                                                                                                                                                                                                                                                                                                              | Map Changes                                                                                                                                                                            | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|--------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                      |             |                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                   |
| A2.1                                                    | Parking Structure 1 Location Change  | Amendment 2 | Change the location of Parking Structure 1 on the West Campus and increase number of stalls in Structure 1, 2 and 4 to accommodate deletion of Parking Structure 3. (See A2.3).          | Changes the location of Parking Structure 1 on the west side of the Gage Canal easement south of University Avenue to the east side of the Gage Canal easement north of Everton Place. The size will change from 1.4 acres to 1.8 acres and the capacity will change from 418 spaces to 524 spaces.                       | Changes the location of Parking Structure 1 on the west side of the Gage Canal easement south of University Avenue to the east side of the Gage Canal easement north of Everton Place. | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |
| A2.2                                                    | Parking structure 2 Location Change  | Amendment 2 | Change the location of Parking Structure 2 on the West Campus and increase number of stalls in Parking Structures 1, 2 and 4 to accommodate deletion of Parking Structure 3. (See A2.3). | Changes the location of Parking Structure 2 on the west side of the Gage Canal easement and north of MLK to the east side of the Gage Canal south of Everton Place and adjacent to the I-215/SR 60 freeway. The size will change from 1.82 acres to 3.7 acres and the capacity will change from 725 spaces to 869 spaces. | Change the land use designation from "Parking" to "School of Medicine."                                                                                                                | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |
| A2.3                                                    | Parking Structure 3 Location Deleted | Amendment 2 | Delete Parking Structure 3 with deleted parking stalls reallocated to remaining Parking Structures 1, 2, and 4                                                                           | Delete Parking Structure 3. The structure will be deleted from the inventory and stalls reallocated to other Parking Structures on the West Campus.                                                                                                                                                                       | Delete Parking Structure 3                                                                                                                                                             | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. |

**Matrix Legend:****A1--Amendment 1****A2--Amendment 2****MC--Map Change**



**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                                                                     | Status      | Description                                                                                                                                                                                                                                            | Text Changes                                                                                                                                                                                                                                                                                                                                                              | Map Changes                                                                                                         | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                                                                           |             |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| A2.4                                                    | "Campus Support" deletion at northeast corner of MLK and Canyon Crest Drive                               | Amendment 2 | Change "Campus Support" at the northeast corner of Canyon Crest Drive and MLK to "Parking"                                                                                                                                                             | Delete "Campus Support" land use designation "Previously Approved Land Use Amendments" and revert to the "Parking" land use designation for the entire parcel.                                                                                                                                                                                                            | Change parcel at the northeast corner of Canyon Crest Drive and MLK to "Parking"                                    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Circulation and Parking Chapter -- makes changes to Figure 18: Vehicular Circulation System; Figure 19: Proposed Major Parking Locations; Table 7: Approximate Parking Structure capacity; Table 8: Projected Parking Inventory Summary; Figure 20: Potential Campus Transit Corridors. Utilities and Infrastructure Chapter-- no change.                                                                               |
| A2.5                                                    | Reconfigure "Campus Support" south of relocated Parking Structure 2                                       | Amendment 2 | Reconfigure "Campus Support" south of relocated Parking Structure 2                                                                                                                                                                                    | Reconfigure the "Campus Support" site boundary from north/south orientation to east/west orientation. Removes the northernmost "Campus Support" to provide a large enough site for Parking Structure 2. Chapter location: Circulation & Parking. Minor alterations at a project level for routing utility distribution lines.                                             | Reconfigure "Campus Support" site.                                                                                  | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Utilities and Infrastructure Chapter-- no change.                                                                                                                                                                                                                                                                                                                                                                       |
| A2.6                                                    | WC "Open Space" Reconfiguration with the deletion of "The Grove" and the "Special Academic Building Area" | Amendment 2 | Delete "The Grove" as the major "Open Space" element on the WC and replace with the Gage Canal Mall and the West Campus Mall. Delete the "Special Academic Building Area" that was specific to The Grove concept and replace with "Academic" land use. | The new major open space on the West Campus will be the Gage Canal Mall and will be intersected by a major West Campus Mall anchored by two signature buildings east and west. The Gage Canal Mall will be organic in design and sustainable in landscape palette. Add text to describe the Gage Canal Mall and West Campus Mall in the Open Space and Landscape Chapter. | Change the "Open Space" configuration to accommodate the new malls and delete the "Special Academic Building Area." | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Open Space and Landscape Chapter: change Figure 22: Open Space Framework; delete Figure 23: The Grove and replace with Figure 23: Sketch of West Campus Gage Canal Mall; delete Figure 24: The Grove Edge and Adjoining Academic Buildings; delete Figure 25: Illustration of The Grove Edge; delete Figure 26: Illustration of Paths and Buildings within The Grove. Change Figure 37: Potential Public Art Locations. |

**Matrix Legend:**

**A1--Amendment 1**

**A2--Amendment 2**

**MC--Map Change**

**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13a: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                | Status      | Description                                                                                                                                                         | Text Changes                                                                                                                                                                                                                                                                                                                  | Map Changes                                                       | Table/Figure Changes                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------|------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                      |             |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                               |                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                |
| A2.7                                                    | School of Medicine (SOM)                             | Amendment 2 | Located at the northeast corner of Iowa Avenue and MLK                                                                                                              | The new SOM requires relocation of "Housing", "Parking", and WC "Academic" land uses to west of Iowa (Housing), east of Gage Canal (Parking) or to develop in a higher density (Academic). Add text to describe the SOM in the Land Use Chapter. Add text to describe the SOM parking in the Circulation and Parking Chapter. | Show SOM at northeast corner of Iowa Avenue and MLK               | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Add Table SOM-1: School of Medicine Components.                                                                                                                                                                                                                                      |
| A2.8                                                    | Open Space Extension - Landscape Buffer              | Amendment 2 | Extend the 100-foot wide landscape buffer along the north side of MLK between Cranford and Chicago                                                                  | None                                                                                                                                                                                                                                                                                                                          | Change land use designation from "Campus Reserve" to "Open Space" | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. Open Space and Landscape Chapter: change Figure 30: Campus Landscape Improvement Locations.                                                                                                                                                                                          |
| A2.9                                                    | Open Space Extension - Northwest and Southwest Malls | Amendment 2 | Extend the Northwest and Southwest Malls from Cranford Avenue to Chicago Avenue. Results in modifications to the Northwest and Southwest Malls east of Iowa Avenue. | None.                                                                                                                                                                                                                                                                                                                         | Change land use designation from "Campus Reserve" to "Open Space" | Open Space and Landscape Chapter -- Replace Figure 28: Northwest and Southwest Malls (West Campus). Add new Figure 27: Northwest and Southwest Malls (West of Iowa); new Figure 28-1: Northwest and Southwest Malls (immediately east of Iowa); new Figure 28-2: Northwest Mall (immediately west and east of Gage Canal); and new Figure 28-3: Southwest Mall (between academic core and Canyon Crest Drive). |
| A2.10                                                   | Delete "Campus Reserve" and Replace with "Housing"   | Amendment 2 | Replace "Campus Reserve" with "Housing" minus the "Open Space" areas located in A2.8 and A2.9                                                                       | Relocate "Housing" from east of Iowa Avenue to former "Campus Reserve" site                                                                                                                                                                                                                                                   | Change land use designation from "Campus Reserve" to "Housing"    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan.                                                                                                                                                                                                                                                                                      |

**Matrix Legend:****A1--Amendment 1****A2--Amendment 2****MC--Map Change**

**UC RIVERSIDE 2005 LONG RANGE DEVELOPMENT PLAN (LRDP) AMENDMENT 2 -- MATRIX OF PROPOSED TEXT, MAP, AND TABLE/FIGURE CHANGES**  
**REFER TO FIGURE 13A: LAND USE PLAN 2005 LRDP AND REFER TO FIGURE 13b: LAND USE PLAN 2005 LRDP AMENDMENT 2**

| #                                                       | Title                                                        | Status      | Description                                                                                                                                                     | Text Changes                                                                                                                               | Map Changes                                                                                       | Table/Figure Changes                                                                                                      |
|---------------------------------------------------------|--------------------------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <b>Proposed Changes to the 2005 LRDP by Amendment 2</b> |                                                              |             |                                                                                                                                                                 |                                                                                                                                            |                                                                                                   |                                                                                                                           |
| A2.11                                                   | Delete "Campus Support" and Replace with "Housing"           | Amendment 2 | Delete Campus Support in the northwest corner of the West Campus and expand "Housing"                                                                           | None.                                                                                                                                      | Change land use designation from "Campus Support" to "Housing"                                    | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| A2.12                                                   | Delete "Housing" and Replace with "Athletics and Recreation" | Amendment 2 | "Housing" land use moved to west of Cranford Avenue.                                                                                                            | None.                                                                                                                                      | Change land use designation from "Housing" to "Athletics and Recreation"                          | Land Use Chapter -- Change acreage in Table 6: Summary of Land Use Acreages; change land use in Figure 13: Land Use Plan. |
| A2.13                                                   | Transit Service and Transportation Demand Management         | Amendment 2 | Update the Circulation and Parking Chapter to reflect changes to the existing and future transit service and proposed Transportation Demand Management program. | Add a description of the existing and future transit service and add description of the proposed Transportation Demand Management program. | Change transit corridors and shuttle routes to reflect future bi-directional campus loop shuttle. | Circulation and Parking Chapter -- change Figure 20: Potential Campus Transit Corridors.                                  |

**Matrix Legend:**

**A1--Amendment 1**

**A2--Amendment 2**

**MC--Map Change**

**Appendix G**  
**Acknowledgements**

## Acknowledgements

### **UC Riverside Executive Management**

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| Timothy P. White      | Chancellor                                                 |
| Dallas L. Rabenstein  | Executive Vice Chancellor & Provost                        |
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| Yolanda Moses         | Associate Vice Chancellor, Diversity Excellence and Equity |
| Charles F. Louis      | Vice Chancellor, Research                                  |
| Peter A. Hayashida    | Vice Chancellor, University Advancement                    |
| Gretchen Bolar        | Vice Chancellor, Finance & Business Operations             |
| Sharon A. Duffy       | Dean, University Extension                                 |
| James W. Sandoval     | Vice Chancellor, Student Affairs                           |
| David H. Fairris      | Vice Provost, Undergraduate Education                      |
| Joseph W. Childers    | Dean, Graduate Division                                    |
| Ruth M. Jackson       | University Librarian                                       |
| Charles J. Rowley     | Associate Vice Chancellor, Computing & Communications      |
| David W. Stewart      | Dean, School of Business Administration                    |
| Reza Abbaschian       | Dean, Bourns College of Engineering                        |
| Stephen E. Cullenberg | Dean, College of Humanities, Arts & Social Sciences        |
| Thomas O. Baldwin     | Dean, College of Natural & Agricultural Sciences           |
| John S. Levin         | Interim Dean, Graduate School of Education                 |
| G. Richard Olds       | Dean, School of Medicine                                   |
| Mary Gauvain          | Chair, Academic Senate                                     |

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