

1 BUILDING ON THE PATH TO PREEMINENCE

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1.1 Vision for the Future

The physical setting of UC Riverside is an integral part of the educational experience for all those who come to live, learn, and work on campus. This relationship is vital to its students, faculty and staff. The Physical Master Plan Study articulates a vision for the physical environment of the campus to respond to its goals for future growth — potentially up to 30,000 students by 2025.

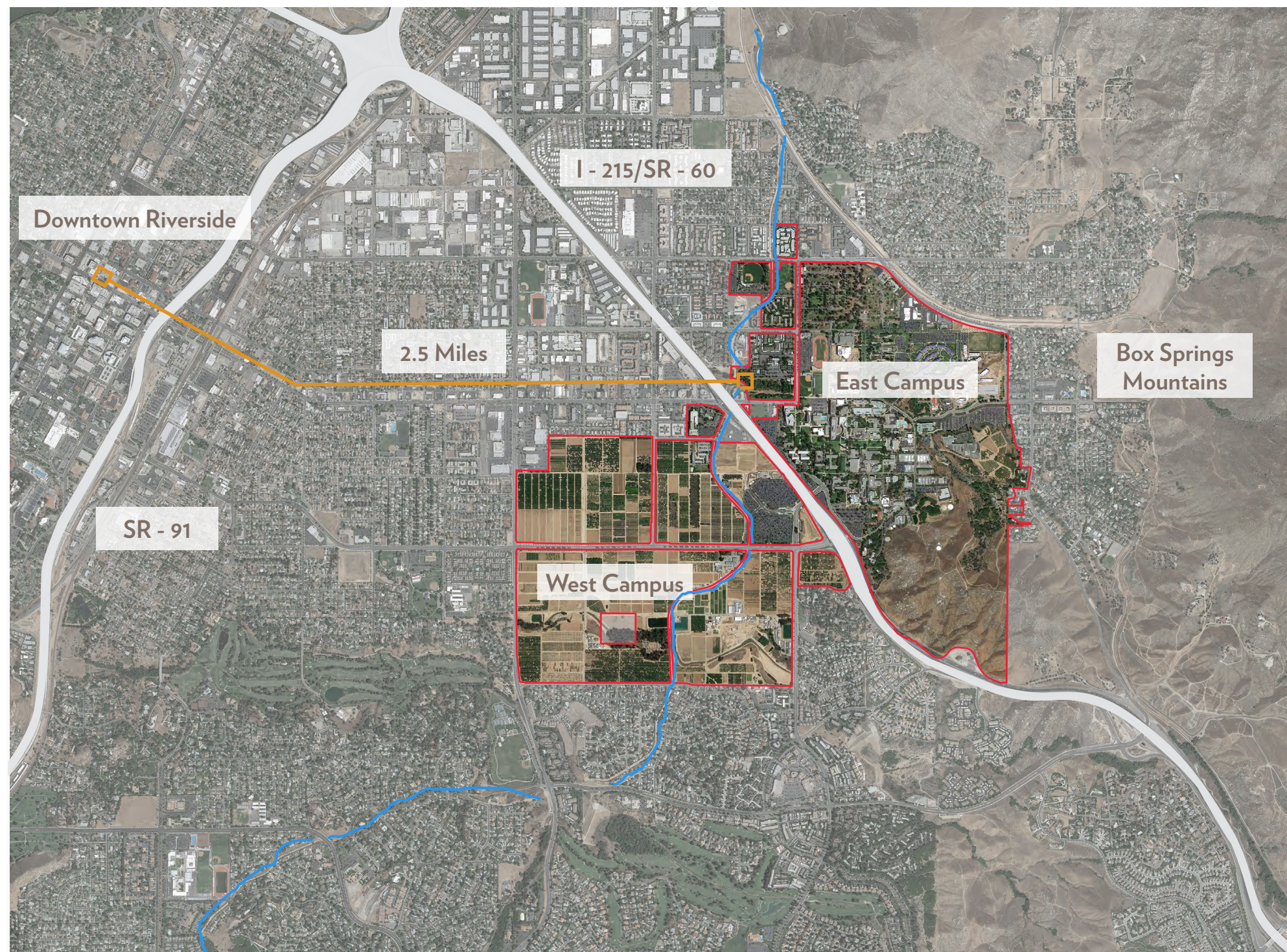
The guidance provided by this Study enables the campus to retain and enhance the best aspects of its existing character, and accommodate significant new development while balancing vital programmatic, physical, capital, and environmental priorities.

The campus is a living laboratory for the exploration of issues critical to growing communities—air, water, energy, transportation, politics, the arts, history, culture, and healthcare. UC Riverside already is a highly regarded public research university particularly noted for its achievements in the measures of educational value and accessibility in:

- Serving a high percentage of first-generation college students
- Parity in student six-year graduation rates across all ethnic and socio-economic groups.
- Enabling a high-quality education at an affordable cost
- Providing social mobility ladders that will improve lives of generations of deserving students and their families from California and around the world

Today, UC Riverside stands at a defining moment — on the path to becoming recognized as one of the nation's top-ranked research institutions — an aspiration that will be reinforced by planned growth in the scale of the campus faculty and student body.

Figure 1.1 CAMPUS CONTEXT



LEGEND — UC Riverside Property Line — Freeway — Gage Canal



Driving force is the campus strategic plan UCR 2020: Path to Preeminence



UCR's key goal is developing the profile of an Association of American Universities (AAU) member

The driving force of the Physical Master Plan Study is the campus leadership's continued support and implementation of the Strategic Plan, *UCR 2020: The Path to Preeminence*

Developed in 2010, the Strategic Plan continues to serve as the framework for planning and decision making for the next decade. UC Riverside's plans to achieve its academic objectives as outlined in the 2020 Strategic Plan are guided by its primary academic priorities and strategies as shown in the Four Pillars in Figure 1.2.

In *UCR 2020: The Path to Preeminence*, the campus holds itself to achieving the profile of an Association of American Universities (AAU) profile as a valid measure of what it is to be an academically excellent research university. Attaining the profile of an AAU institution is a guidepost for academic excellence because the organization – today comprising 63 leading public and private research universities in the U.S. and Canada—focuses on metrics of importance to research-intensive universities, including funding for research and creative activity, research policy issues, and graduate and undergraduate education.

The Association of American Universities

- Current membership of 63 leading public and private research universities in the U.S. and Canada
- Focuses on metrics of importance to research-intensive universities, including:
 - Funding for research and creative activity
 - Research policy issues
 - Graduate and undergraduate education



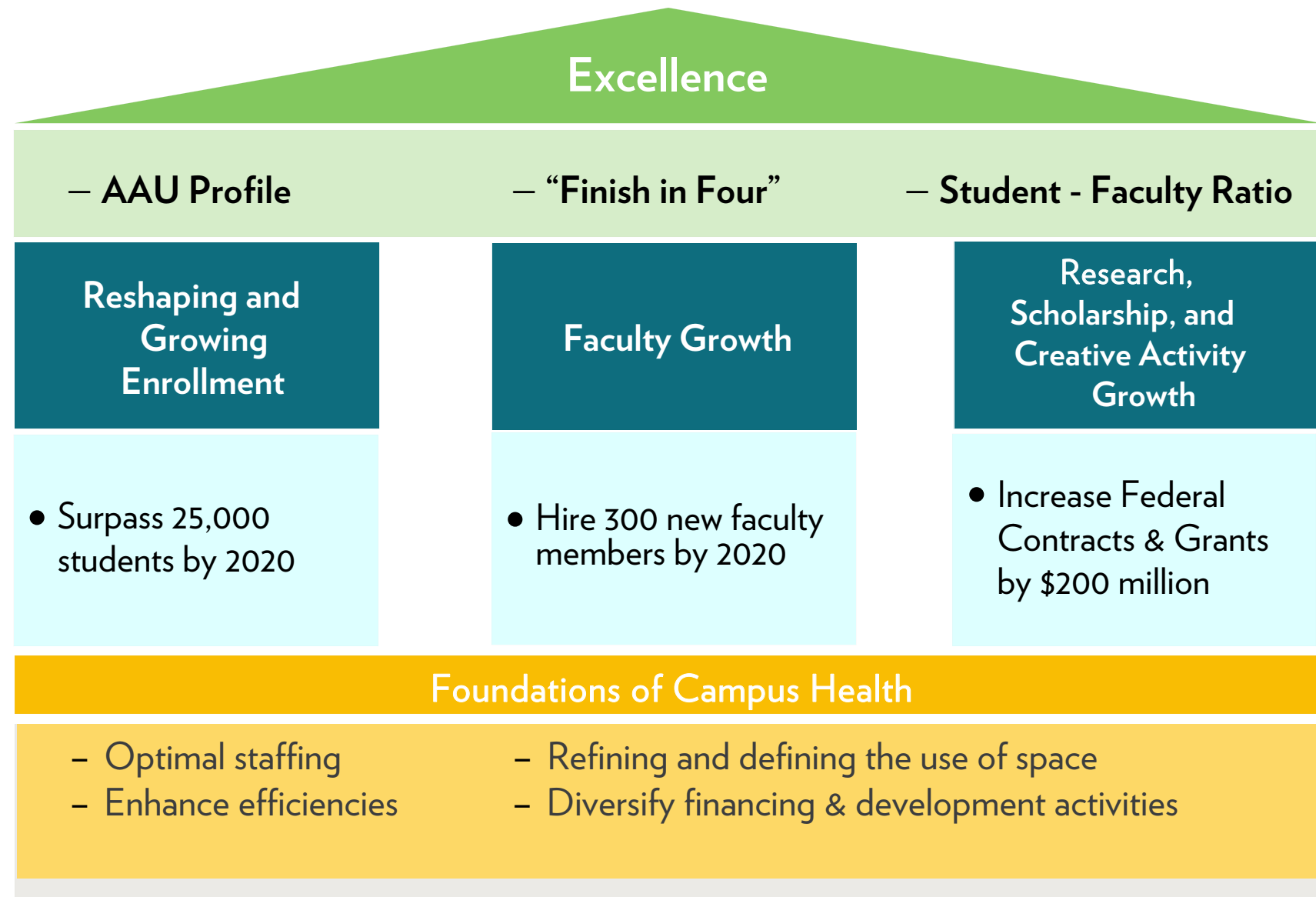
“We are transforming UCR to be a national model for academic excellence, student access, and best-in-class administration.”

The Leiden Rankings, which measure scientific and research impact on a per capita basis, place UC Riverside 17th world-wide in the natural sciences and engineering and 44th in overall scientific impact. While the University is home to significant research excellence, it is not at a scale that allows it to fully realize its potential as a preeminent research university.

UC Riverside anticipates growing its faculty by 300 net new faculty (from the 2014 baseline of 678) and increasing enrollment to surpass 25,000 students by 2020 to be evaluated. UCR presently has one of the highest student-to-faculty ratios in the system, at 29 to 1, far higher than the system-wide average of 23 to 1. Growing faculty, a key objective of the 2020 Strategic Plan, will better serve students and enhance UC Riverside’s national and international research profile and stature. It also should be noted that more than half of UC Riverside students currently benefit from hands-on faculty-mentored research, and growing the faculty maintains this advantage even as enrollment grows.

Given that the size and quality of graduate and professional programs are an important measure of a top-tier research university, the majority of the faculty expansion and projected enrollment growth, up to 80 percent, will be in graduate students and post-doctoral scholars. This significant expansion, along with strategic investments in research infrastructure, will focus on interdisciplinary areas of research. This initiative will achieve critical mass in vital and emerging fields of scholarship, foster truly cross-disciplinary work, and further diversify the faculty at one of America’s most diverse research universities.

Figure 1.2 CAMPUS PHYSICAL ELEMENTS SUPPORT STRATEGIC GOALS



Structure of the Campus House

- UC Riverside’s top objective of **academic excellence** and related performance **metrics** create the **Roof**
- Key areas of strategic **growth** serve as **Three Pillars** supporting the roof of excellence
- The **critical support** of staffing, space, efficiencies, and diversification of activities serve as the investments we must make to provide a **strong Foundation** to sustain growth

For UC Riverside to achieve the profile of an AAU member, the campus must accelerate development of its infrastructure and facilities, in support of research and creative activity. This includes ensuring that the campus has new facilities and equipment, ranging from performance studios to laboratories, greenhouses to vivaria, and more. The costs of these critical investments will need to be met through a range of strategies – operational efficiencies, increased external funding for campus research, and expanded campus fund raising all will play a part. The Physical Master Plan Study better prepares the campus to meet these targeted future needs of infrastructure and facilities and make the right investments of its precious resources.

UC Riverside is transforming to become a national model for academic excellence, student access, and best-in-class operations. These goals require the foundation that is provided by strategic investments – in top-notch people, programs, facilities, and infrastructure – that enable success and emphasize results.

With these investments in increased efficiency, targeted renovations, construction of new facilities, and ultimately, implementation of the vision contained in this Master Plan Study, UC Riverside will have the physical infrastructure it needs to traverse the Path to Preeminence.

The Master Plan Study builds upon and articulates the following goals in response to planning objectives, regulatory requirements and environmental stewardship goals:

- Embody the strategic goals outlined in *UCR 2020: The Path to Preeminence*
- Focus academic, research, and student life program-based physical expansion on the East Campus within and immediately adjacent to the Core Campus
- Identify a long-term strategy for the West Campus area
- Reinforce campus identity along its primary entrances and community edges – including the potential to develop a primary campus gateway on University Avenue
- Showcase the University's commitment to environmental stewardship to include new stormwater management regulations and University of California system wide carbon neutrality initiatives



UC Riverside Class of 2015 graduation

1.2 Collaborative Planning Process

With the support of its multi-disciplinary consultant team, UC Riverside began the Master Plan Study “journey” with the intent of capturing the diverse range of perspectives among campus and community stakeholders about the future vision for the campus. UC Riverside’s efforts included creating an inclusive planning team; reaching out to diverse stakeholders (e.g., students, faculty, staff, administrators, community members, elected officials, and City of Riverside representatives); and hosting multiple visioning workshops and meetings on campus and in the community.

CREATING AN INCLUSIVE PLANNING TEAM

The following groups were created with the intent of directing, advising and supporting the Master Plan Study.

Steering Committee

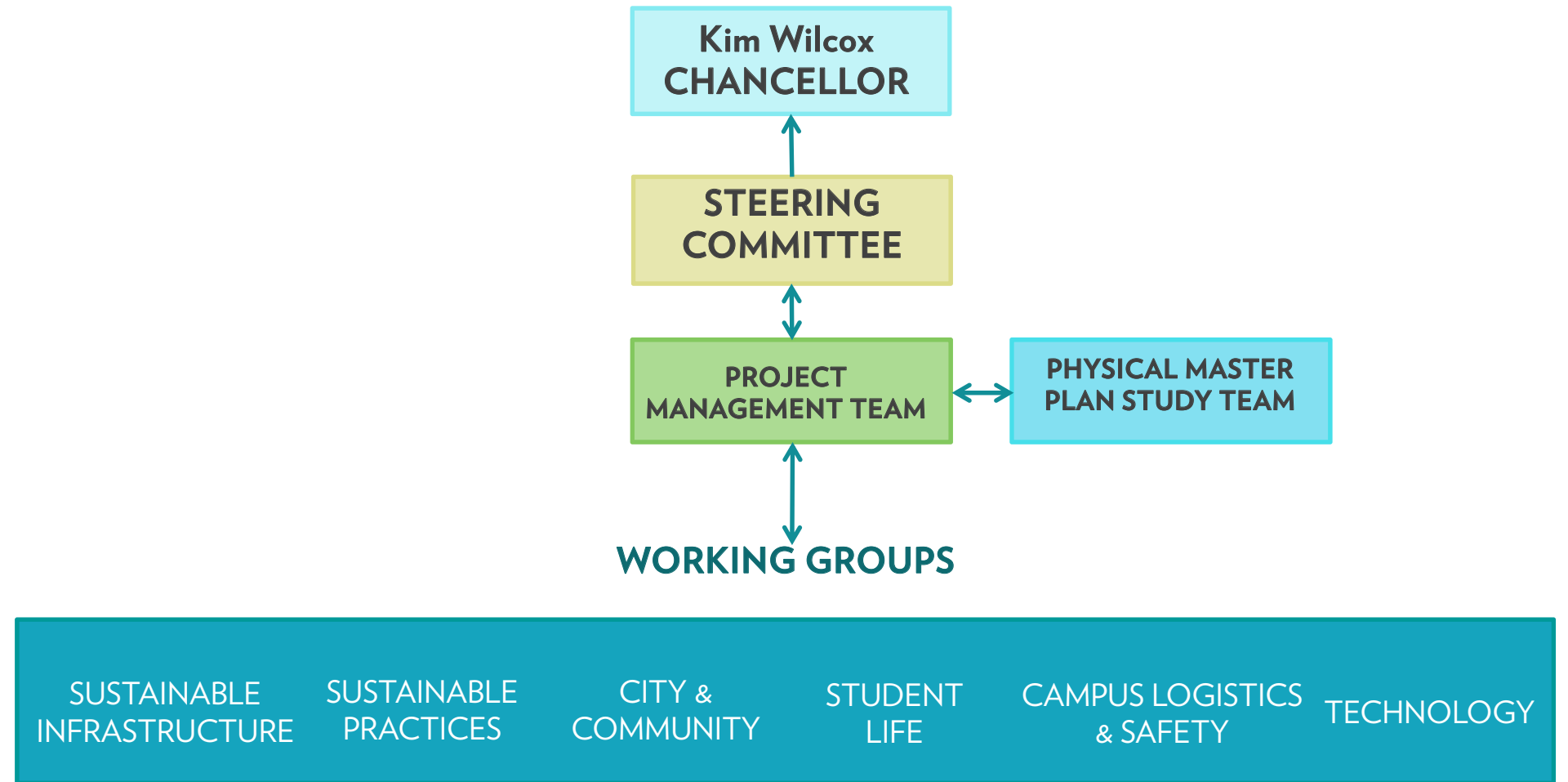
This twenty-member committee was co-chaired by the Provost and the Vice Chancellor for Planning and Budget. The Steering Committee directed the planning team throughout all phases of the visioning and planning process. Over the course of more than a year, seven Steering Committee meetings were held, providing hundreds of hours of input, review, comment, and validation of the vision, analysis, observations, findings, and recommendations arising through the study process.

Project Management Team (PMT)

This multi-disciplinary team of key campus stakeholders and subject-matter experts managed the visioning and planning process and provided staff assistance; coordinated all communications between the University and consultant team; vetted observations, findings, and recommendations; and played hands-on roles in the crafting of the final report and related materials.

Figure 1.3 PROJECT TEAM STRUCTURE

Integrated Multiple Disciplines



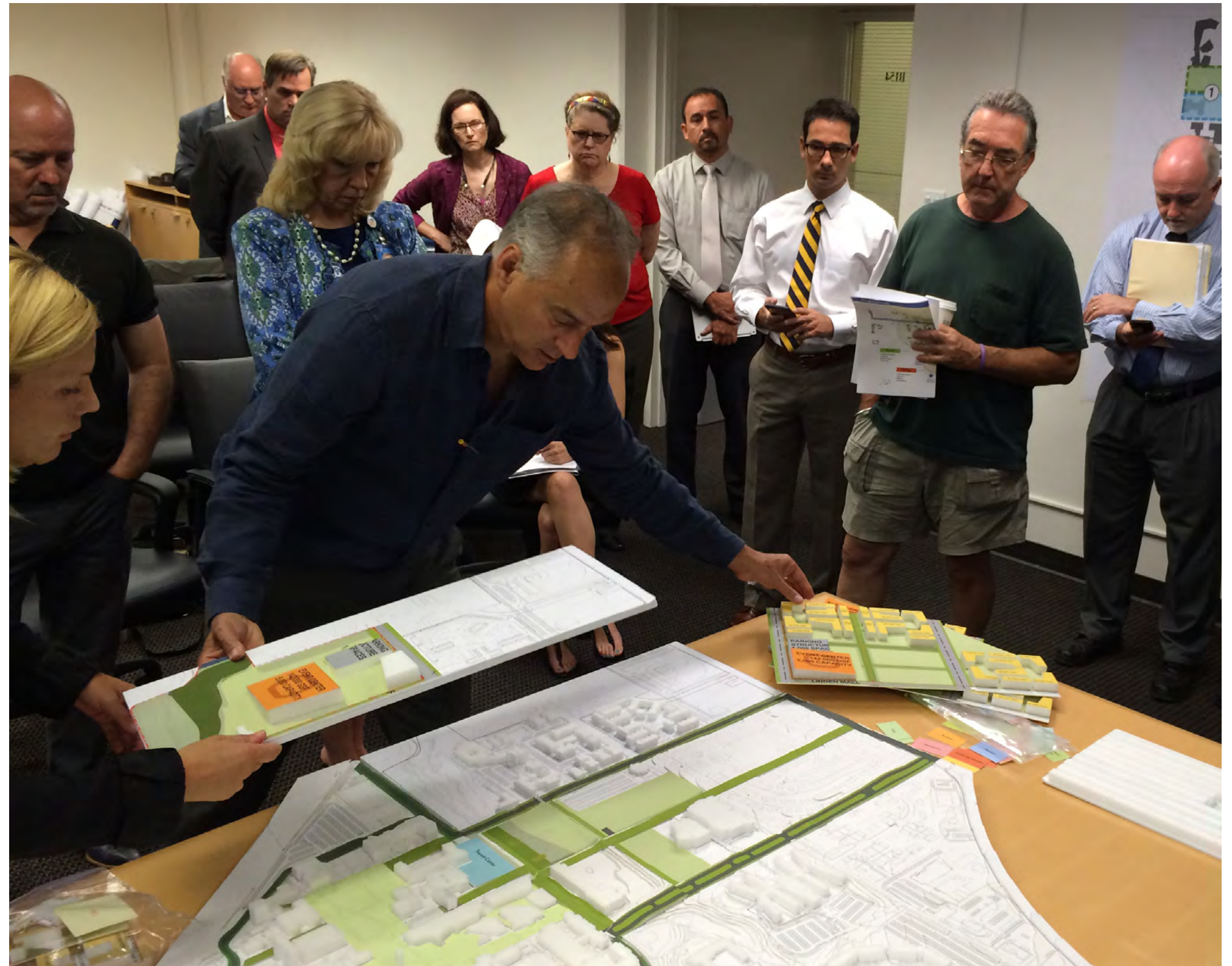
Working Groups

A total of six specialized working groups supported the visioning and planning process with detailed input specific to their areas of focus. These six working groups were comprised of sixty-four subject matter experts and stakeholders across campus and in the community.

Working Groups Brought Diverse Perspectives and Expertise

- **Campus Logistics & Safety:** Focused on efforts to improve campus safety and security and improvements to enable the campus to function in a cohesive, efficient, and safe manner
- **City & Community:** Provided a forum to engage with city and community constituents on campus planning issues, to facilitate a singular vision of the campus informed by neighborhood and City perspectives
- **Student Life:** Identified opportunities to enhance the quality of student experience within the built environment (interior and exterior space) and explore avenues to improve the campus environment
- **Sustainable Infrastructure:** Supported the master plan study with the development of an integrated stormwater management plan and to consider strategies to become carbon neutral in operations by 2025
- **Sustainable Practices:** Explored aspects of broader campus operations such as landscape planting, irrigation water use, edible landscapes and edible landscapes that influence the larger campus physical environs for opportunities to realize greater efficiencies of resource use and expression of commitment to environmental stewardship
- **Technology:** Helped identify how evolving technologies could potentially transform the physical makeup of campus and project how technology will influence the campus of the future

The ideas and opportunities documented in this report reflect the combined efforts of each of the above referenced groups working collaboratively with the consultant team. A full list of committee members, groups and individuals involved in the study can be found in the preface to this report.



Interactive work session at a Steering Committee meeting

1.3 Space Strategies for Growth

ENROLLMENT MODELS

The Master Plan Study has been informed by the Strategic Plan and LRDP which calls for UC Riverside to grow to 25,000 by 2020. A potential option for UC Riverside is to continue this rate of growth and reach 30,000 by 2025. As such, the Planning Team worked collaboratively with institutional research to test a variety of enrollment projections using detailed program level enrollment models that ranged from 27,100 (likely model) to 29,900 (30k model) students.

Each of these models have a direct impact on student housing, dining, and Transportation Demand Management (TDM). Recognizing the inherent variability of the multitude of these models, student housing is modeled as a range of capacities given the potential for the private sector to moderate demand. The models project parking capacity increases that correspond to the “30k model” to test an extreme scenario. Academic and support space demand are modeled per a straight-line projection as described in the following section.

Figure 1.4 EXISTING SPACE INVENTORY

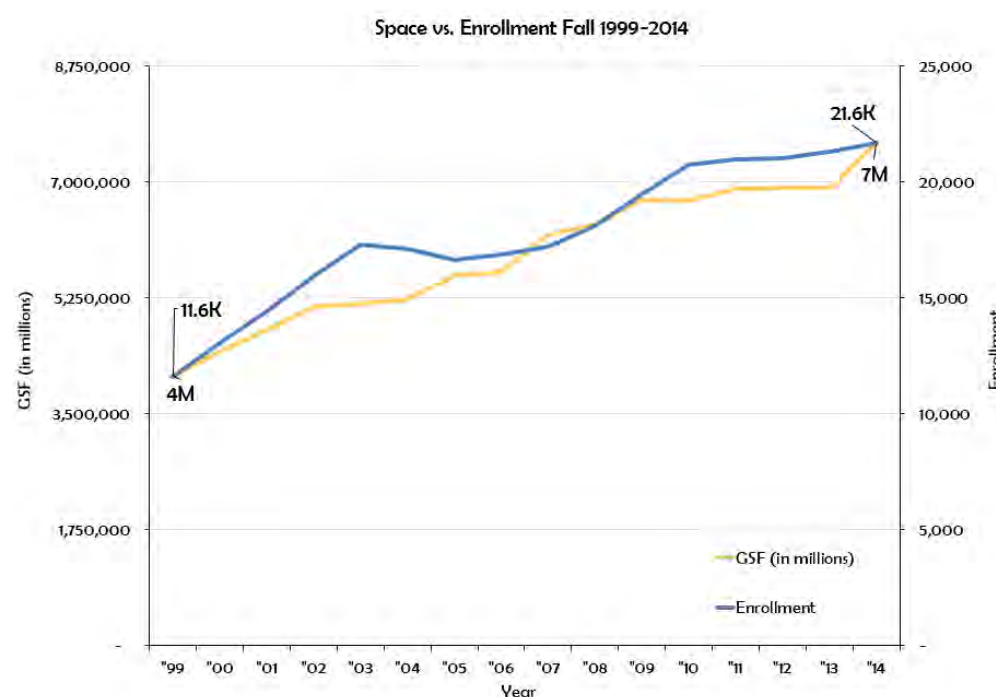
Academic and Support Space	Existing ASF
Athletics / Recreation	118,000
Campus Support	246,000
Clinic	2,000
Community	29,000
Institutional Support	635,000
Instruction	939,000
Student Support	224,000
Research	991,000
Total	3,184,000

In 2015, as part of UC’s budget agreement with the State of California, its ten campuses will be accepting 5,000 additional in-state undergraduates in 2016-17 and 2,500 additional in 2017-18 and 2018-19, as compared to 2014-15. The percentage of this growth absorbed by each campus was determined through discussions between the campuses and UC Office of the President regarding available or potential capacity in resource areas such as on-campus housing and classroom space. In 2016-17, UC Riverside will accept approximately 750 of these additional in-state undergraduates from the 2014-15 base. This share is based on a combination of UC Riverside’s potential capacity and the characteristics of its typical applicant pool. This growth is in alignment with UC Riverside’s Strategic Plan and is covered by the current LRDP and LRDP Environmental Impact Report. At the time of writing, future shares beyond 2016-16 had not been determined by the Office of the President, however, it is assumed future growth will continue to be in alignment with the University’s future growth plans.

ACADEMIC & SUPPORT SPACES

In the year 2015, UC Riverside’s space inventory in support of its academic and research mission was approximately 7.5 million Gross Square Feet (GSF). Space on East Campus can be broadly classified as described in Figure 1.4

Figure 1.5 ENROLLMENT GROWTH AND SPACE INCREASE



Additionally, the campus owns or leases 350,000 GSF of space in different properties within the City of Riverside and Riverside County. The Master Plan Study did not analyze off-campus spaces. Nonetheless, the Master Plan Study acknowledges that some of those uses are located off-campus owing to the lack of available space on the main campus and recommends that future projects seek to find the means to integrate those uses back to campus as and when possible.

Space on campus has continued to grow in response to increases in the student population, research activity and the addition of newer academic programs, the newest being the School of Medicine and the School of Public Policy. As the next step, in order to develop a broad understanding of future needs, the campus conducted a space study. The analysis was conducted using three different models for comparison:

- Council of Educational Facility Planners International (CEFPI)
- Texas Higher Education Coordinating Board
- Straight-Line Method (space increase based on enrollment growth ratio)

It was determined that the straight-line method was the preferred model to adopt as the basis of the program for the Master Plan Study. As part of the space study, the campus also evaluated available space. Key outcomes of this evaluation are:

- A vast majority of buildings on campus are greater than 40 years old and are, by default, inefficient in the use of available space within, and therefore lack the ability to be configured optimally. This is especially true of laboratory spaces.
- Historical space assignments to some campus units do not reflect present-day space needs.
- Available space is oftentimes used inefficiently.

Based on the findings of the space analysis it was evident that there was potential to “find” additional space within the current inventory.

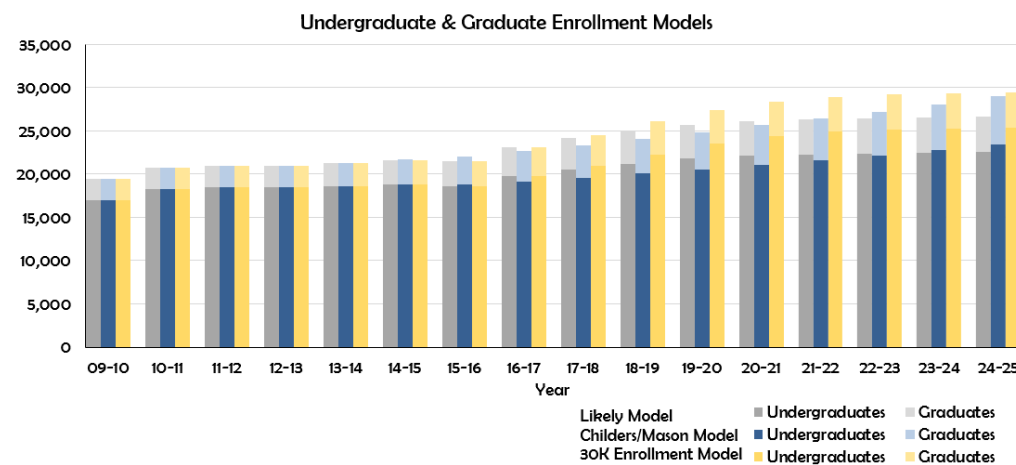
Supporting strategies include:

- Consolidating spaces, right-sizing offices, sharing more office and support spaces, and eliminating duplicate offices where practical.
- Increasing classroom utilization by changing operating parameters such as time of day, day of week, and better aligning actual enrollment to seating capacities, etc.
- Reassigning research space based on level of research activity and revenue generated.

Existing space is a valuable asset the campus must strive to use in an optimal manner. Even a modest 10% optimization in the use of current space translates into a yield of 470,000 GSF campus wide and a saving of valuable capital that could be targeted to investment in other critical and transformative priorities. For the purposes of a program for the Master Plan Study a 10% optimization strategy is assumed to be applied to existing space on campus as a baseline. Eventually new space will be needed even with improved utilization, and this future need is modeled.

A straight-line projection applied to the different types of space yields the following table. However, research space projections are based on maintaining an average of 1,200 Assignable Square Feet (ASF) of space per principal investigator (PI), for approximately 900 PIs.

Figure 1.6 ENROLLMENT GROWTH MODELS



Furthermore, the straight-line projection represents a space need based on present-day models of space utilization. Pedagogical models and space requirements for research continue to evolve, and the standards for space needs, actual space utilization and metrics can change in the years to come. As UC Riverside continues to grow its enrollment, faculty size and program offerings, future investments in space will be informed by detailed, project-specific data.

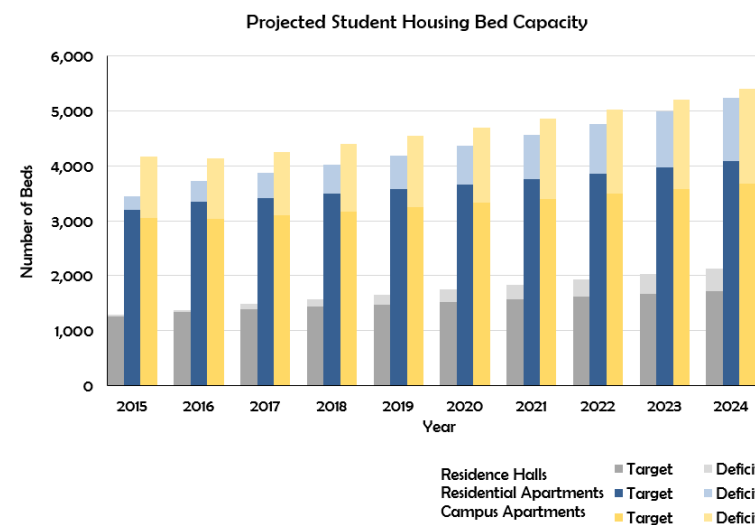
The program for the Master Plan Study should be used as a planning tool and not as an expression of need.

CAMPUS HOUSING

For Fall 2015, the campus was home to more than 6,700 on-campus resident students. These on-campus students are housed across ten residential complexes that are either residence halls, campus apartments or family housing units. UC Riverside does not require any class of students to live in campus-owned or controlled housing and therefore the campus resident student population can vary depending on demand.

Typically freshmen and sophomore students live in the residence halls and have meal plans that give them access to either of the dining halls or other dining facilities on campus. Juniors, seniors and graduate students are assigned apartment style housing. Because they are more independent in comparison and oftentimes opt not to have meal plans, they have not been a consideration for dining hall capacity to date.

Figure 1.7 PROJECTED STUDENT HOUSING BED CAPACITY DEFICIT



Specific to future expansion in housing capacity, the Master Plan Study uses past indicators of absorption to model future expansion that is responsive to enrollment growth. In the years preceding, an average of one out of every three enrolled students typically is estimated to live on campus. Another third of the enrolled students are estimated to live in

the surrounding community within a three mile radius of campus, and the remaining are assumed to commute. UC Riverside Housing Services projects needing to increase bed capacity by at least 3,700 to maintain current ratios of resident students to the overall campus population, as outlined in Fig 1.7.

A key change to the portfolio of current housing options is the planned redevelopment of the Crest Family Housing site to integrate additional Event Center project. Additionally, the Bannockburn Hall complex, owing to its age, is projected to be removed within the next decade. Between the two locations is also a potential redevelopment of the Lot 24 site and the police station building at the southeast corner of Linden Street and Canyon Crest Drive. These sites support a range of housing expansion options that can be pursued as the opportunities present themselves. These future developments are expected to absorb the majority of housing expansion within the current planning horizon.

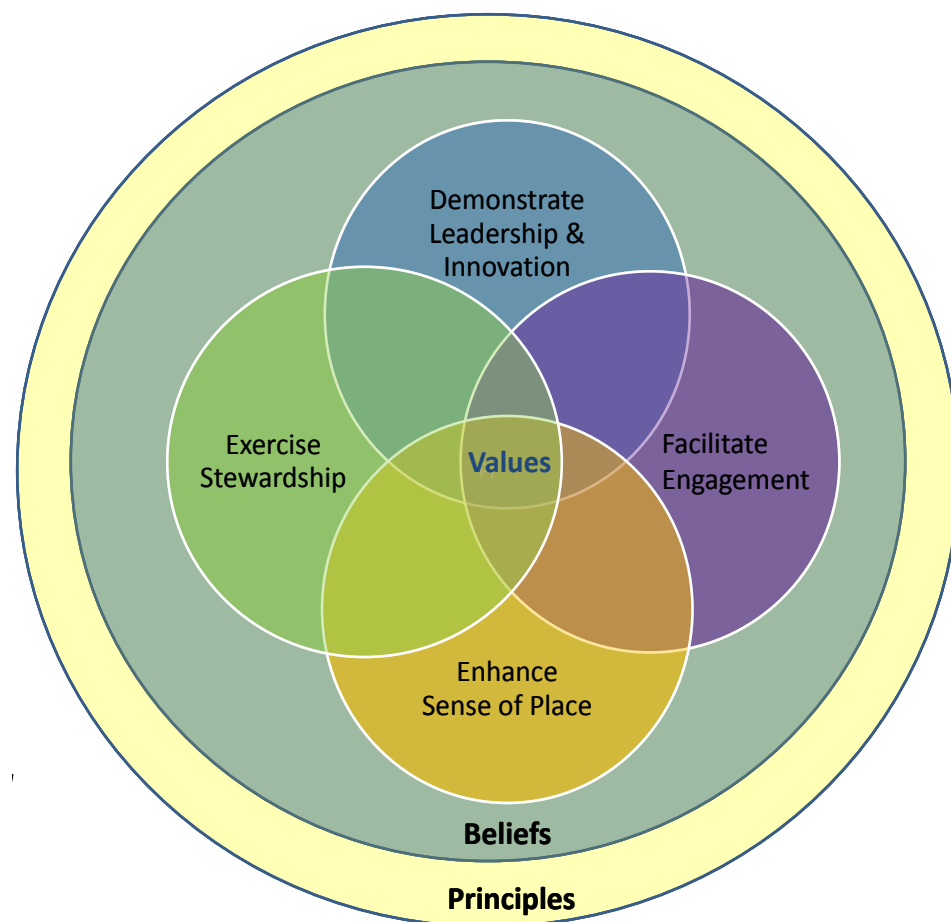
Space is a finite yet global campus resource. Effective space management by the campus can leverage both campus-wide and off-campus opportunities to provide the right quantities and types of space to meet current and future needs.



Student residential apartments at Glen Mor

1.4 Planning Values, Beliefs, and Principles

The Master Plan Study has been informed by a set of Values, Beliefs and Principles developed by the University's Campus and Study leadership, including the Chancellor, Steering Committee and Project Management Team. These high-level principles have profoundly informed the four "Essential Elements" that serve as key themes in the study.



IDENTITY

Honor, reinforce and enhance UC Riverside's unique identity as a thriving place for academic excellence and civic engagement amid beautiful surroundings.

- Incorporate the existing natural setting and open spaces as key elements of the campus physical planning framework.
- Enhance a strong sense of place, provide welcoming points of arrival, and build physical connections to and across campus.
- Convey the rich human and agricultural history of UC Riverside and the region, including the citrus legacy and leadership.
- Strengthen connections to the surrounding natural environment, including the arroyos and the Box Spring Mountains.
- Follow the overall aspiration of "creating simple buildings in a dramatic landscape".
- Increase the visibility of the campus by reinforcing a sense of cohesion among campus buildings and showcasing landscape and view sheds.
- Develop a cohesive landscape fabric that connects the campus with its naturalistic setting to maintain sense of place.



COMMUNITY

Create connections across campus and to the community with diverse gathering spaces in the public realm to foster a vibrant, healthy, and interactive living and learning community.

- Support a 24/7 interactive campus that is a cultural resource for the community, the region, and beyond.
- Provide mobility options and circulation strategies that support safe passage for all – pedestrians, bicycle riders, and drivers.
- Reinforce and clarify the "heart" of the campus.
- Celebrate and leverage the unique characteristics of the campus districts.
- Enhance connectivity and optimize the use of the public realm across campus.
- Promote pedestrian orientation and use of alternative transportation modes by increasing student housing and reducing commuter traffic.
- Develop multi-modal strategies to optimize efficient transportation, parking, and service networks, including a transit and welcoming center at the "heart" of the campus.



STEWARDSHIP

Serve as a living laboratory for innovative solutions that accommodate growth while building a more environmentally conscious, healthy, and vibrant campus community.

- Develop flexible strategies to accommodate growth and innovation while embracing the natural environment of the campus.
- Pursue best practices for stormwater management, energy and water efficiency, and carbon neutrality.
- Recognize that stewardship is an environmental, physical, educational, and fiscal imperative.
- Enhance the value of UC Riverside's capital investments by leveraging synergies in infrastructure systems, buildings, and other campus elements.
- Leverage the design of buildings and open spaces to serve multiple aspirations and functions.
- Serve as a living laboratory for solutions that build a more sustainable, healthy, inclusive, and vibrant campus community.



DENSITY

Embrace density to achieve synergies and capacity for critical campus growth. Create a new model for how a great public research university can refine and redefine the use of space to optimize the returns on the University's capital investments.

- Leverage the need to expand while promoting beneficial synergies between communities, departments, open spaces, buildings, and program requirements.
- Consolidate academic development on East Campus to leverage existing assets and promote greater collaboration, interaction, and shared identity.
- Manage the valuable university land and research resources on West Campus as strategic assets to sustain the University's excellence long into the future.
- Provide contiguous multi-disciplinary research and classroom spaces for enhanced engagement and efficiency.
- Design building density and height standards to also create a lively pedestrian-oriented space that increases connectivity and ease of movement throughout campus.



