NEW CENTURY PLAN

A STRATEGIC FRAMEWORK FOR CAPITAL INVESTMENT AT UC BERKELEY

VERSION 03.1

JANUARY 2003

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Acknowledgements

This Plan represents the collaboration of many individuals and committees. The New Century Plan Advisory Committee defined the ambitious scope and goals of the Plan, and framed the issues the campus must address. A broad spectrum of campus peer reviewers, including the Design Review Committee and the Committees on Academic Planning & Resource Allocation and Space Assignments & Capital Improvements, reviewed and critiqued our three interim working papers published in fall 2000. Version 01.1 of the New Century Plan, circulated for internal review in summer 2001, drew largely on the content of these working papers, and was reviewed by both the Strategic Planning Committee and the Executive Campus Planning Committee. Version 02.1, published in summer 2002, incorporated not only the results of those reviews, but also the principles of the Strategic Academic Plan prepared by the Strategic Planning Committee. Version 02.1 was, in turn, reviewed and critiqued by the Academic Senate: refinements based on this review were incorporated into both the web version of the New Century Plan, posted on the campus website in spring 2003, and in this document. The New Century Plan is a collaborative effort of UC Berkeley Capital Projects staff and our exceptional consultants at Sasaki Associates, but it would not have been possible without the invaluable guidance and counsel of the following reviewers:

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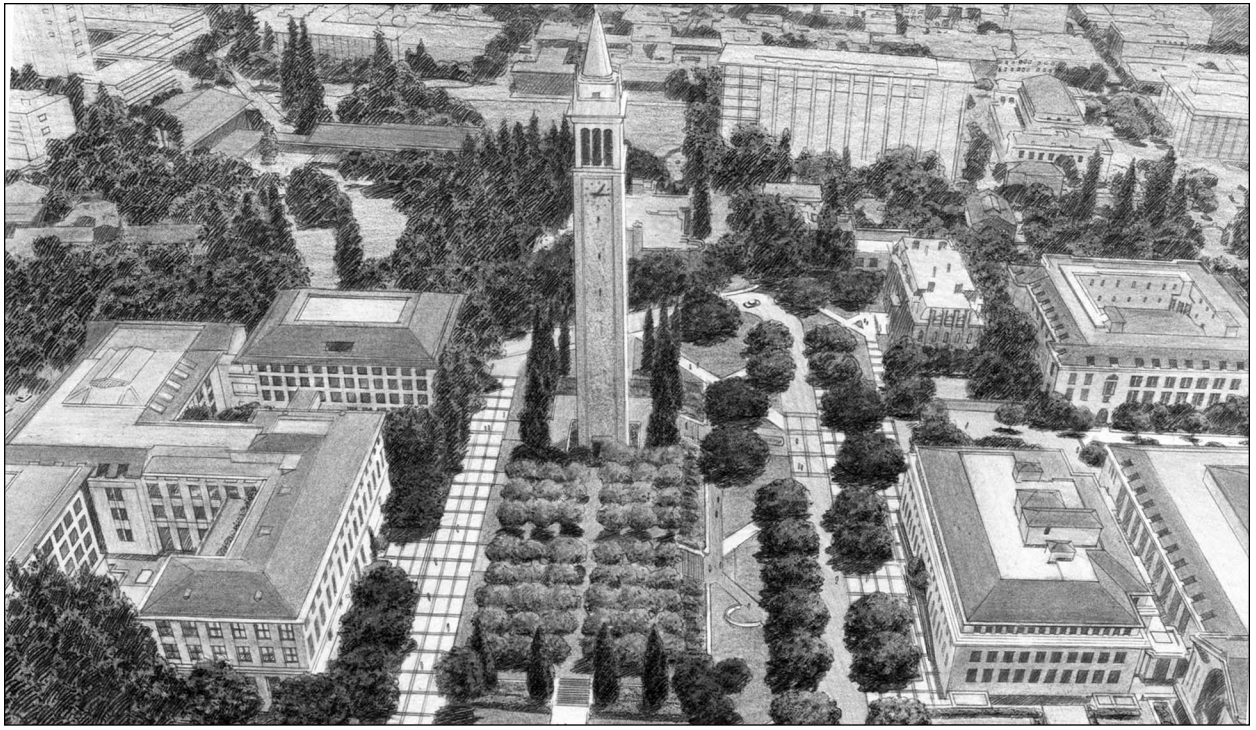

About the Plan

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PURPOSE

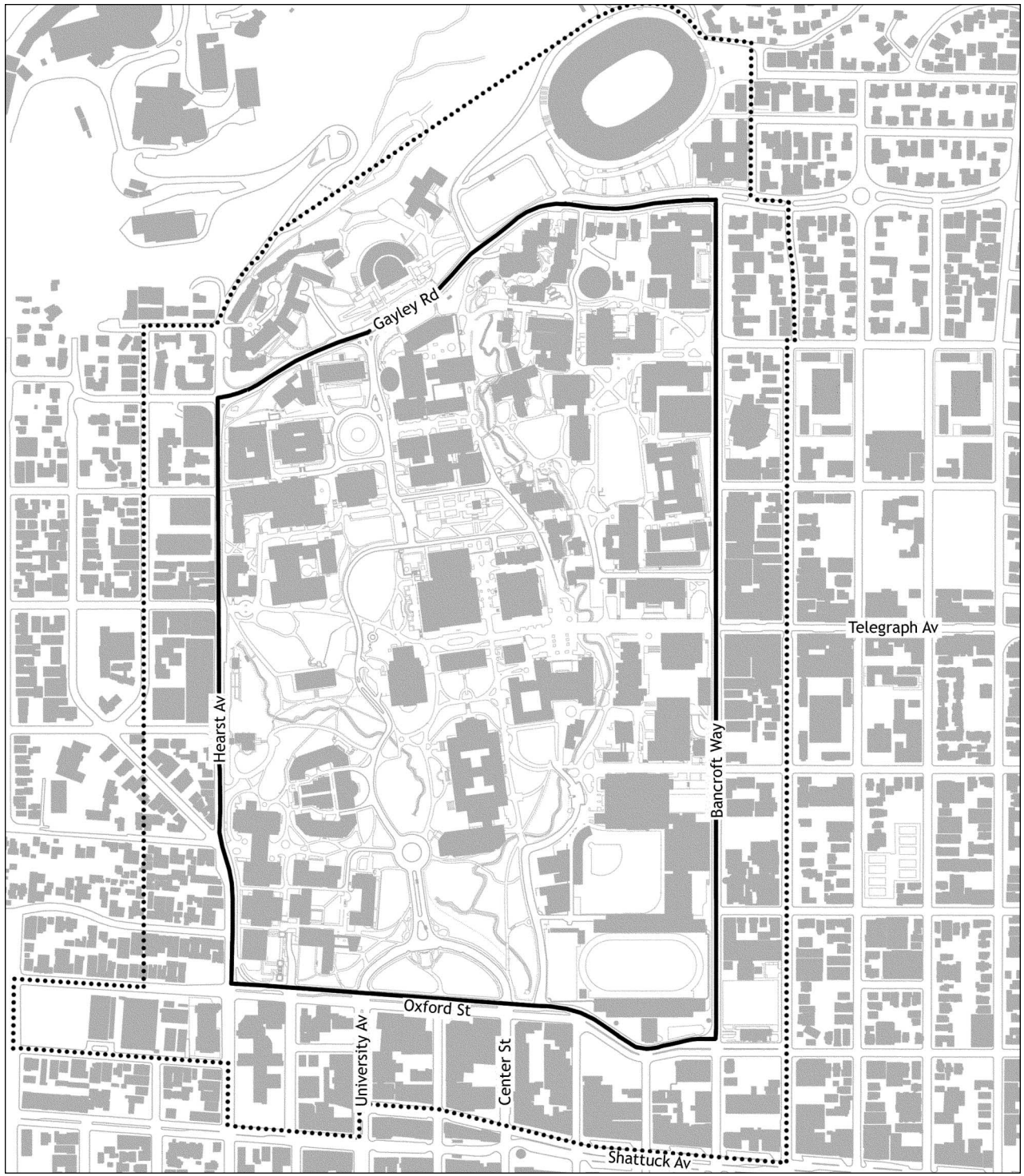
The new century finds UC Berkeley at the threshold of major physical change. The substantial capital investments required to improve the seismic safety of our buildings, and accommodate the growing number of college-age Californians, also present us with a unique opportunity to leverage those investments to renew the campus, and provide the space and infrastructure we require to maintain the Berkeley standard of excellence.

Because our resources are finite, however, we must strive to ensure each new investment:

- represents the optimal long-term use of land and capital for the campus as a whole,
- preserves and enhances our extraordinary legacy of landscape and architecture,
- provides the capacity and agility to meet future as well as current demands,
- contributes to a stronger and more vital intellectual community,
- improves the synergy of campus and community, and
- enhances the quality of campus life.

The purpose of the New Century Plan is to provide a comprehensive strategic framework for these decisions.

Figure 0.1:
Core Campus & Environs



Core campus

Adjacent blocks

The Strategic Academic Plan states future campus growth should be accommodated primarily on the core campus and adjacent blocks, a principle reflected in the Location Guidelines in this Plan.

SCOPE

The New Century Plan covers the Core Campus and environs, as shown in figure 0.1. Future versions of the Plan may broaden in scope to include:

- Hill Campus
- Clark Kerr Campus
- Richmond Field Station
- University Village
- Other university owned facilities (6701 San Pablo, 2000 Carleton, etc)

While the Hill Campus and Richmond Field Station both have potential to play a stronger complementary role to the core campus and environs, both sites also pose significant logistical and environmental constraints to more intensive use.

The Clark Kerr Campus and University Village will continue as primarily residential sites. However, both sites require significant investment programs to upgrade existing buildings, and the east portion of University Village is proposed to be redeveloped as a mixed-use housing and retail complex, in partnership with a private developer. The future use of the Clark Kerr Campus is also subject to legal covenants with both the city and neighboring property owners, which extend through 2032.

ORGANIZATION

The New Century Plan is organized around a set of **Strategic Goals**. Each deals with an aspect of the capital investment strategy, and is supported by **Policies** and **Initiatives**, which outline the specific actions the university should take to implement the Goals.

- **Policies** are measures the campus shall take to guide and shape - and in some instances limit or prohibit - new capital investment, to ensure resources are used wisely, and the quality and amenity of the campus environment is enhanced by each project.
- **Initiatives** are more proactive. Whereas the Policies enable the campus to guide and shape new projects, the Initiatives describe actions that serve the interest of the campus as a whole.

The **Project Portfolio** presents an illustrative vision of how the Policies and Initiatives might be realized on the campus. The Portfolio is followed by a section on **Project Guidelines**, which augment the Policies with more detailed criteria for Location, Space Utilization, and Design. The New Century Plan concludes with a section on **Project Approval**, which describes how the strategic elements of the Plan should be used to frame and inform investment decisions through the campus' capital projects approval process.

IMPLEMENTATION

A strategic plan is only as effective as its means of implementation. The UC Berkeley campus has been the subject of many outstanding analyses over the years, yet capital investment decisions tend to be ad hoc: not because the campus lacks sound decisionmaking principles, but because there has been no clear linkage of those principles to a practical decision sequence.

The campus has taken action to change this paradigm, by forming the Executive Campus Planning Committee and by establishing a new, clear approval process for capital projects, as described in **Project Approval**. The ECPC serves as the advisory body to the Chancellor for all capital investment decisions. **The New Century Plan serves as the strategic framework for those decisions:**

- The **Policies** and **Guidelines** in the Plan provide the foundation for the review of individual projects, to ensure capital investment decisions both optimize the use of resources and help realize the campus vision. The section on Project Approval outlines the staff and committee reviews, and ECPC actions, required at each phase of a project.
- The **Initiatives** provide a comprehensive, long-term agenda of investments to enhance the quality of campus life. They enable the campus to pursue a wide range of public and private funding sources, with the confidence each individual Initiative fits within an integrated vision for the campus as a whole.

RELATED PLANS

Strategic Academic Plan

It is a fundamental principle of the New Century Plan that our capital investment strategy should align with and promote the academic goals of the campus. Toward this end, the Chancellor formed a new campus committee in fall 2000 and charged it with preparing a Strategic Academic Plan, which has now been completed and presented to the Chancellor. The Academic Plan has, in turn, shaped the physical vision of the campus described in the New Century Plan. The Academic Plan is comprised of ten key principles, four of which address the physical campus and, together, define the parameters of future campus development:

- Limit Future Growth
- Design for Interaction
- Maintain Contiguity
- Invest in Housing

Limit Future Growth. As the demands generated by both education and research continue to intensify over the next decade and beyond, the Berkeley campus must become even more rigorous in managing the nature and magnitude of further growth.

First, UC Berkeley is a small, intensively developed urban campus. While a few building sites remain on the core campus, and a few existing buildings can be enlarged or replaced, the cumulative potential to increase core campus space is on the order of 10%-15%, as described in strategic goal 1. This is barely adequate to accommodate the growth required by 'tidal wave 2': it provides no capacity for further growth or for new academic initiatives. The university-owned sites on the blocks adjacent to the core campus could, if redeveloped, contribute as much as another 10-15%: however, these sites are also ideal for housing, for which UC Berkeley has a critical need.

Second, the ability of the city to absorb further campus growth is also limited. The city infrastructure is aging, and housing near campus, due in large part to the demand generated by the university, is both scarce and expensive: these conditions would only be exacerbated by further growth. Third, there is no assurance capital would be available to fund investments in new academic space: while we should continue to pursue such funds, the state capital program for at least the near future at UC Berkeley is composed primarily of seismic retrofits to existing buildings.

Berkeley is also the oldest campus of the university, and over half the built space on our core campus is over forty years old. Both instruction and research have undergone dramatic change during this period, in terms of both the workstyles we employ and the infrastructure we require. Many instructors and researchers struggle with spaces and systems compromised not only by age, but also by decades of underinvestment. The renewal of our facility inventory is crucial to our ability to recruit and retain exceptional individuals, and pursue new paths of inquiry and discovery.

Note: *The term 'tidal wave 2' refers to the projected growth in the numbers of college-age Californians over the next decade, which includes the children of the huge postwar generation: the original 'tidal wave'. In order to meet its obligation to the state, the University of California as a whole must increase enrollment by 63,000 students during the period 1998-2011. The Berkeley campus' share of this growth, 4,000 students, represents an increase of roughly 14% in enrollment over this period.*

To the extent land and capital are consumed by further campus growth, they become unavailable for campus renewal. Because capital is scarce, and land is both scarce and finite, we must impose a limit on future growth in order to focus our resources on the critical task of renewal. The Academic Plan recommends the campus:

- limit enrollment at UC Berkeley to no more than 33,000 students, our projected size if the entire 'tidal wave 2' increment of growth proposed for Berkeley is absorbed.

Maintain Contiguity. The breadth and quality of our academic programs are the equal of any university in the world, but UC Berkeley is more than the sum of its parts. A great research university also requires a dynamic intellectual community, one that provides exposure to a wide range of cultures and perspectives, and generates the interactions that lead to new insight and discovery. For such a community to thrive requires a campus organized and designed to foster those interactions.

Although the academic structure of the campus reflects the traditional disciplines defined over a century ago, they are no longer insular and self-contained. On the contrary, the potential for creative interaction is *everywhere*. The health sciences initiative, for example, brings together researchers from physics, biology and chemistry, while our academic programs focused on culture, gender and ethnicity draw upon both social sciences and humanities.

Because the potential for interaction is *everywhere*, and because we cannot predict where productive synergies may emerge in the future, our first principle of physical organization must be to retain and reinforce the contiguity of the academic enterprise on and around the core campus. The Academic Plan recommends the campus:

- accommodate future academic growth on the core campus and adjacent blocks.
- reserve core campus space for functions that serve and/or involve students.
- reserve adjacent blocks for research and service units that require core campus proximity.

Design for Interaction. While the compact size of the campus encourages an interactive community, its physical design does not. Buildings on the Berkeley campus provide few interior spaces conducive to informal, unstructured interaction, although the thriving cafe in Moffitt Library shows how productive such places can be.

The same is true for exterior spaces: while the campus landscape is beautiful, few places are designed and furnished to be conducive to social interaction, and even fewer have any sort of visual link to the activity within the buildings around them. This is a special dilemma for the growing numbers of students, faculty and staff who use the campus at night: after dark, exterior spaces unlit and unobserved by active interior spaces are perceived as unsafe.

Because research and instruction today are increasingly team-based and multidisciplinary, the campus must be re-envisioned to foster the interaction and information-sharing this new community demands. Leading edge companies in biotechnology, infotechnology, and creative services understand the value of places of interaction, and design for them as a matter of course: they are just as crucial to the work of the university. The Academic Plan recommends the campus:

- make spaces conducive to creative interaction a priority in new capital investment.
- create 'places of interaction' at key nodes of campus activity.
- enhance the role of the library as an intellectual commons.
- site and design interior and exterior common spaces to create a true 24-hour campus.

Invest in Housing. Even more fundamental to intellectual community than the physical design of the campus is the ability to recruit and retain outstanding faculty and students. The adequacy and quality of our facility inventory is one cause for serious concern, as described above: another is the cost and quality of housing.

Our best student and faculty candidates increasingly cite the scarcity of good, reasonably priced housing as a primary factor in their decisions whether or not to come to Berkeley. Of those who do, many find themselves living miles from campus, where the length of the commute itself becomes a disincentive to spending time on campus, at the expense of both formal and informal interaction with their colleagues.

While the problem of housing affects everyone, it is particularly acute for students. University operated student housing, and its extensive on-site support programs, presently accommodates only 20% of our students, primarily first-year undergraduates. Expanding the supply of university housing, in close proximity to campus, is necessary not only to ensure our students are adequately housed, but also to enable them to focus on their academic pursuits and immerse themselves in the rich intellectual life of the university. The Academic Plan recommends the campus:

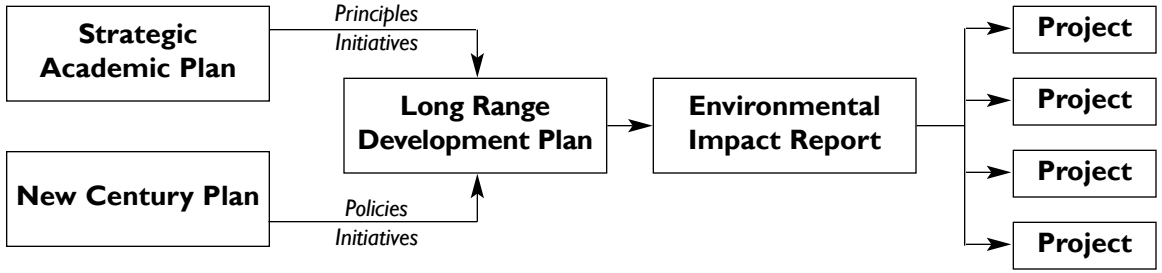
- provide two years of university housing to entering freshmen who desire it, and one year to entering transfer students who desire it.
- provide one year of university housing to entering graduate students who desire it.
- provide up to 3 years of university housing to new untenured ladder faculty who desire it.
- partner with private developers to continue to expand and improve the rental housing stock available to the campus community.

The goal for entering freshmen includes those admitted as fall extension students.

Links to the New Century Plan. The four aforementioned principles, along with other Academic Plan initiatives with implications for capital investment, inform the entire New Century Plan, but are reflected most directly in **Growth and Renewal**, the **Interactive Campus**, and the **Housing Initiatives**.

Long Range Development Plan

Together, the Strategic Academic Plan and the New Century Plan define the policy framework for an updated Long Range Development Plan. The LRDP outlines the campus investment program for a specific period of time (through 2020) and entitles this program under the California Environmental Quality Act through a comprehensive program-based environmental impact report.



Concept:

Evans Hall is replaced with a pair of new pavilions linked below grade, restoring the view from the Mining Circle to Memorial Glade and the Bay. A new oval green is created at the base of the pavilions, on axis with the Campanile, completing the east end of Memorial Glade.

STRATEGIC GOALS

CENTRAL CAMPUS & ENVIRONS

The purpose of the New Century Plan is to ensure each capital investment is optimized in terms of its benefit to the campus as a whole. The Strategic Goals, Policies and Initiatives in the next ten sections describe a physical framework for future capital investment, to ensure each individual project not only meets the needs of the academic enterprise, but also contributes to our legacy of buildings and landscape, fosters a dynamic intellectual community, and enhances the experience of campus life.

Figure 0.2: Campus Vision

*The Campus **Vision** illustrated in figure 0.2 depicts one way in which the **Policies, Initiatives** and **Guidelines** might be realized on the Berkeley campus. More detailed views of this illustrative plan, with notes on the individual projects, are presented in the **Project Portfolio.***

*Projects illustrated in the **Vision** and **Portfolio** are conceptual. New buildings are represented as prototypes, based on modular dimensions adaptable to a range of university functions. However, the buildings are configured to respect and enhance spatial and architectural relationships, and are meant to inform the design of future projects by depicting concepts consistent with the **Strategic Goals**.*

*The **Portfolio** also includes several concepts for new public realm investments in the spirit of this vision. These same concepts and others are illustrated in the perspectives located at section breaks.*

Existing buildings

Planned/potential buildings (2002)

The New Century Plan is organized around a set of **Strategic Goals**. Each deals with an aspect of the capital investment strategy, and is supported by Policies and Initiatives, which outline the specific actions the university should take to implement the Goals.

- **Policies** are measures the campus shall take to guide and shape - and in some instances limit or prohibit - new capital investment, to ensure resources are used wisely, and the quality and amenity of the campus environment is enhanced by each project.
- **Initiatives** are more proactive. Whereas the Policies enable the campus to guide and shape new projects, the Initiatives describe actions that serve the interest of the campus as a whole.

Campus Vision

While topography and landscape are the primary formgivers of the campus, buildings play a key role in framing and imparting character to campus open spaces. On our compact urban campus, where space is at a premium, each new capital investment must be designed to maximize its contribution to intellectual community by creating dynamic, interactive places.

The **Campus Vision** illustrated in figure 0.2 depicts one way in which the Policies, Initiatives and Guidelines might be realized on the Berkeley campus. More detailed views of this illustrative plan, with notes on the individual projects, are presented in the **Project Portfolio**.

Projects illustrated in the Vision and Portfolio are conceptual. New buildings are represented as prototypes, based on modular dimensions adaptable to a range of university functions. However, the prototypes are configured to respect and enhance spatial and architectural relationships, and are meant to inform the design of future projects by depicting concepts consistent with the Strategic Goals. The Portfolio also includes details of several concepts for new public realm investments in the spirit of this vision. These same concepts and others are illustrated in the perspectives located at section breaks.

Concept:

Sproul Plaza is refurbished with new paving, lighting, site furniture and signage. The existing café terrace is redesigned and enlarged, to realize its potential as a place of study and conversation at the primary student gateway to campus.

1 GROWTH & RENEWAL

The dramatic increase in college age Californians is only one of many drivers for new and improved facilities. New academic initiatives and continued growth in sponsored research also create demand for more space on and around the campus. While some of this demand can be met through strategic renewal of existing buildings, new buildings are also required, particularly to house programs that involve high performance infrastructure and other advanced features renovated space can not provide.

Strategic Goals

Capital investment shall ensure adequate capacity for campus growth and change by:

- **basing each investment decision on an objective, life cycle analysis of alternate solutions.**
- **implementing guidelines, audits and quality reviews to optimize the use of campus space.**
- **redeveloping underused sites on and adjacent to the core campus with more intensive uses.**
- **reserving core campus space for functions that serve or directly involve students, and sites on adjacent blocks for functions that require core campus proximity.**
- **developing one or more new research centers on blocks adjacent to campus.**
- **encouraging more intensive development of privately owned sites adjacent to campus.**
- **preparing campus subarea plans to align physical capacity with program needs.**

UC Berkeley is the oldest campus of the university, and over half the built space on campus is over forty years old. Both instruction and research have undergone dramatic change during this period, in terms of both the workstyles we employ and the infrastructure we require. Today, many instructors and researchers struggle with spaces and systems compromised not only by age, but also by decades of underinvestment. The renewal of our facility inventory is crucial to our ability to recruit and retain exceptional individuals, and to pursue new paths of inquiry and discovery.

Strategic Investment

Given the scarcity of both land and capital in relation to the future needs of the academic enterprise, the campus must ensure each investment decision represents the best possible use of these limited resources, and the best long-term solution for the campus as a whole.

Capital investment decisions are often made based on lowest first cost: seismic retrofits, for example, are often much cheaper than new buildings. But seismic retrofits alone do not replace old and worn out systems, nor reconfigure dysfunctional layouts, nor improve poor design. On the contrary, they perpetuate and often exacerbate them. Reversing this practice, and basing each investment decision on a full consideration of alternate solutions and a full recognition of life cycle cost, is absolutely critical to the long-term future of the facility inventory. It is also, as described in strategic goal 10, critical to the wise and responsible use of resources.

Policy 1.1 Analyze a range of alternate solutions at the feasibility phase of each major capital investment.

As a general rule, the set of options for this analysis should include retrofit, renovation, adaptive reuse, replacement, relocation and, if relevant, noncapital solutions such as reorganization. The options should consider alternate models for project delivery, as described below, and sustainable design features, as described in strategic goal 10. For new buildings, the range of options should also include structural enhancements to reduce downtime after a magnitude 7.0 earthquake to no more than 30 days.

Policy 1.2 Base the options analyses on the life cycle costs of alternate solutions, including the discounted cost of future expenditures.

For example, a given building may have not only a backlog of deferred renewal - building systems past the ends of their useful lives - but may also have other systems nearing the same point. In order to make a valid comparison with the replacement option, the retrofit and renovation options must include these known future costs.

Policy 1.3 **Explore project delivery models that include partnerships with private developers.**

Such partnerships may involve non-profit foundations or for-profit developers, and may be located on land owned by the university or the partner. While such partnerships have clear advantages in terms of leveraging university capital, advocates also cite their potential to reduce both cost and time to delivery. The advantages a well chosen partner brings to a project include extensive experience with the project type, established relationships with providers of labor, materials, and services, and state-of-the-art management.

The Academic Plan recognizes the strategic value of a broader range of delivery options, and recommends the campus establish a new office of real estate to to provide a more coherent and proactive approach to space acquisition. The initial charge of this office shall include:

- identifying potential strategic land acquisitions, particularly on the blocks adjacent to campus,
- exploring joint ventures with private developers to create new campus facilities, and
- partnering with other public and private organizations to create new facilities that benefit the campus as well as other organizations, such as a new downtown hotel/conference center.

Initiative 1.4 **Implement guidelines, audits and quality reviews to optimize the use of campus space.**

Given the age and condition of the facility inventory, and the limited land and capital available for new buildings, we must strive to optimize our use of existing campus space, and ensure our investments in maintenance and renewal are strategic rather than ad hoc. The Academic Plan recommends a comprehensive program of asset stewardship, to be implemented by the Space Assignments and Capital Improvements Committee, and to include at least the following elements:

- guidelines and required findings for location priority,
- guidelines and required findings for space utilization,
- regular space audits to verify the actual use of campus space, and
- comprehensive quality reviews of campus research and instructional space.

This plan includes proposed **Location Guidelines** for campus units. The university already prescribes general, campuswide standards for instruction and research space: the **Space Utilization Guidelines** in this plan show how these standards may be refined to provide a baseline for the space audits.

Intellectual Community

A true strategy for growth and renewal is more than a list of individual projects. A great research university also requires a dynamic intellectual community, one that provides exposure to a wide range of cultures and perspectives, and generates interactions that lead to new insight and discovery. For such a community to thrive requires a campus organized and designed to encourage those interactions.

Although the academic structure of the campus reflects the traditional disciplines defined over a century ago, they are no longer insular and self-contained. On the contrary, the potential for synergy is *everywhere*. The health sciences initiative, for example, brings together researchers from physics, biology and chemistry, while academic programs focusing on culture, gender and ethnicity integrate the social sciences and humanities.

Because the potential for synergy is *everywhere*, and because we cannot predict where productive interactions may emerge in the future, the campus must pursue a capital investment strategy that retains and reinforces the contiguity of the academic enterprise on and around the core campus. A vital intellectual community can only thrive when the entire scope of the academic enterprise is located in close proximity, in order to foster the formal and informal encounters that lead to productive interactions.

Policy 1.5 **Accommodate new and growing programs primarily through more intensive use of university-owned sites on and adjacent to the core campus, by:**

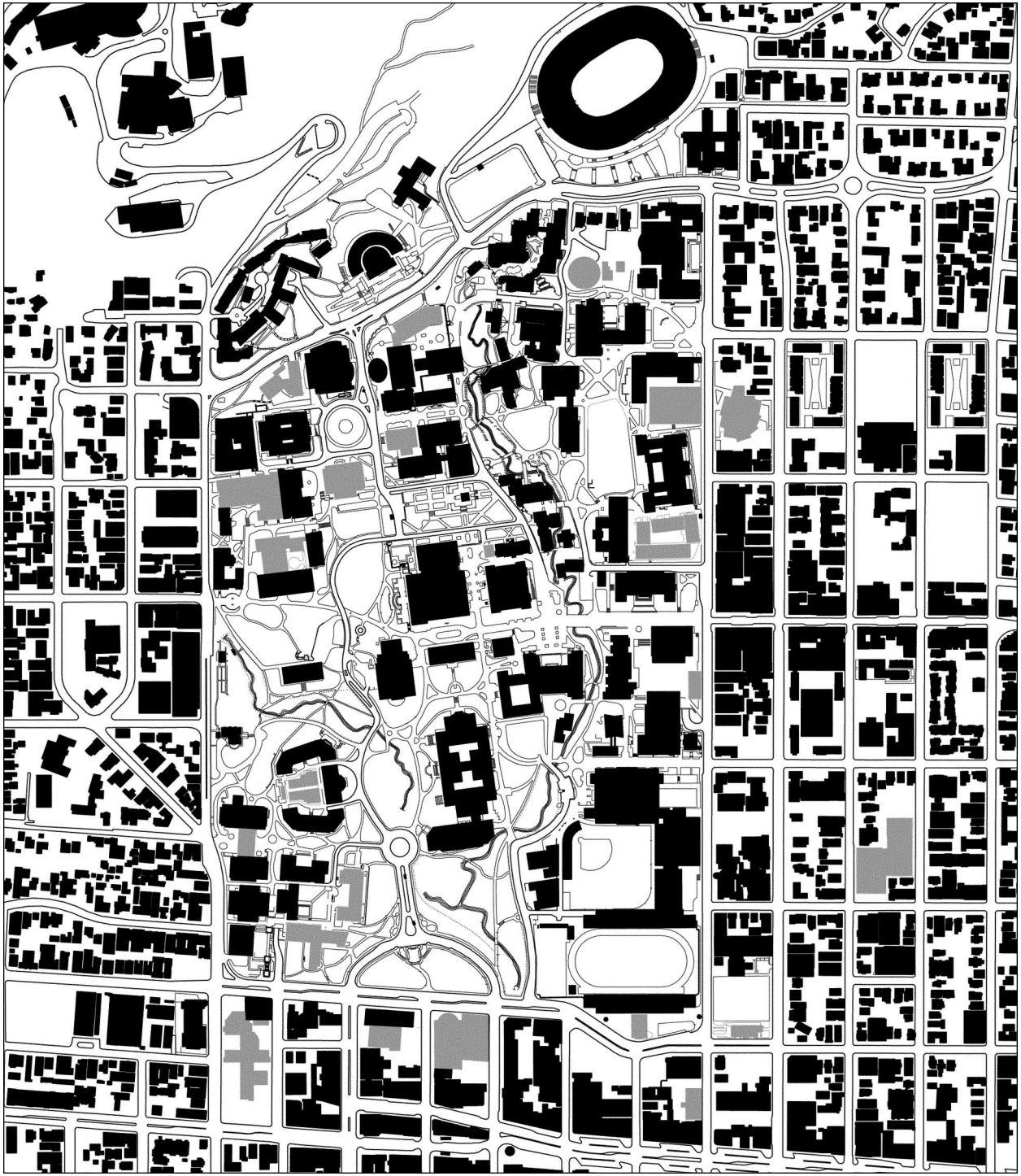
- **redeveloping parking lots and other underused sites with new academic buildings, and**
- **renovating or replacing existing academic buildings in conjunction with seismic upgrades.**

There are of course exceptions. Certain functions are incompatible with the core campus and its urban environs due to scale, service requirements, or environmental considerations. These functions should be relocated to Richmond Field Station or other, more suitable sites as prescribed in the **Location Guidelines**.

Policy 1.6 **Reserve core campus space for functions that serve or directly involve students.**

This includes research in which graduate or undergraduate students have an integral role, since the synergy of instruction and research is a critical element of a Berkeley education. It also includes spaces, both formal and informal, that serve to promote intellectual exchange among faculty and students, both graduate and undergraduate. The **Location Guidelines** prescribe criteria to ensure the optimal utilization of core campus space.

Figure 1.1: Candidate Buildings for Replacement



Existing/under construction

Replacement candidates

The actual course of action for each building shall be determined through the analysis of options described in Strategic Goal 1 and performed at the feasibility stage of the Approvals Process.

Figure 1.2:
Development Concept

Illustrative development

The projects shown in this figure represent a strategy to renew and expand the campus facility inventory by selectively redeveloping:

- *candidate buildings for replacement, as shown in figure 1.1, and*
- *other underutilized sites such as surface parking lots.*

This concept shows only projects on UC-owned land. Other projects may be pursued in collaboration with the city and the private sector.

Policy 1.7 **Prioritize sites on adjacent blocks for research, cultural and service functions that require core campus proximity.**

As defined in the **Location Guidelines**, functions that require frequent and multiple trips per day to and from the core campus should have first priority for sites on adjacent blocks. However, some of these sites may be suitable for mixed-use projects that include program space, housing, and/or retail space, particularly where such projects would also help create more active and livable streets, and a more graceful transition from campus to city. The range of options evaluated for each such site should include mixed-use as well as exclusively program space solutions.

Initiative 1.8 **Develop one or more new research centers adjacent to campus.**

Such centers should be designed to provide flexible research space for existing and new research projects which may not involve substantial student participation, but which have a demonstrable need for proximity to the core campus.

Both to encourage intellectual collaboration and to maximize synergy with the core campus, these research centers should be planned in terms of disciplinary clusters: so, for example, a center housing social science units could be located to the south of campus, while one oriented to the health and biological sciences could be located to the northwest. However, because the future directions of research cannot always be predicted, the space in these centers should be designed to be flexible and adaptable to a wide range of research programs.

Initiative 1.9 **Encourage more intensive development of privately owned sites on blocks adjacent to campus.**

Many privately owned sites on blocks adjacent to campus are now underutilized: for example, with one-story retail buildings with no significant historic value. They have the potential to accommodate significant amounts of housing or offices on the upper floors as well as ground floor retail. These sites could be redeveloped in ways to benefit both campus and community, but this requires a collaborative strategy with common objectives. The campus should take the initiative to explore such a strategy with the City and property owners.

Capacity Analysis

At the conceptual level of this Plan, estimates of capacity are necessarily rough. On a campus as diverse as UC Berkeley, each site presents a unique set of conditions that may constrain project size and configuration: for example, subsurface conditions may limit the amount of below-grade space. Program requirements may also have an impact: for example, the ratio of net or 'assignable' (ASF) space to gross (GSF) space can vary significantly with type of use.

However, a campus plan that does not explicitly address capacity is not a strategic plan. If design principles are to play a significant role in capital investment decisions, then their implications for our ability to meet the demands of the academic enterprise must be clear. This section presents a concept-level analysis of what new campus development, consistent with the **Goals**, **Policies** and **Guidelines,** might yield in terms of net growth in academic & support space, based on the concept shown in figures 0.2 and 1.1-1.2.

- **Core campus.** This category includes everything within the traditional core campus boundaries of Bancroft, Oxford, Hearst and Gayley/Piedmont.
- **Adjacent blocks near-term.** University-owned sites on adjacent blocks that do not require existing buildings to be vacated and removed.
- **Adjacent blocks long-term.** University-owned sites on adjacent blocks where existing buildings must be vacated and removed before new development can occur.
- **Parking.** As described in policy 5.7, the parking strategy is based on consolidating most campus parking into structures within walking distance of the core campus.
- **Housing.** The capacity estimates do not include university housing, since most future projects are expected to be located outside the core campus and adjacent blocks. Initiatives 8.1-8.4 describe the scope of the proposed housing program based on the Academic Plan.
- **Joint venture potential.** Some university needs may be met through private development. Given the speculative nature of these projects, we do not include them in our estimates, although their cumulative potential my be significant.

The capacity estimates are summarized in table 1.1. The GSF estimates are conservative: they are calculated using a 'design factor' of 90% of the prescribed envelope, to allow for design flexibility. ASF is estimated as an average of 60%, although 55% is a more typical ratio for laboratory buildings.

Table 1.1: Potential Development Capacity

	New Space Created		Existing Space Removed		Net New Space Created	
	GSF	ASF	GSF	ASF	GSF	ASF
Potential Additional Capacity by Area*						
Core Campus						
Buildings	1,744,200	1,046,500	(758,400)	(447,700)	985,800	598,800
Parking Spaces		680		(460)		220
Adjacent Blocks: Near Term						
Buildings	180,900	108,500	(14,400)	(5,400)	166,500	103,100
Parking Spaces		710		(380)		330
Adjacent Blocks: Long Term						
Buildings	905,500	543,300	(219,500)	(139,900)	686,000	403,400
Parking Spaces		1,320		(350)		970

* Excluding projects which already have environmental approvals

Subarea Plans

The above analysis indicates the design framework defined by the **Goals**, **Policies** and **Guidelines** can, in fact, accommodate a significant amount of growth on and around the core campus. However, the distribution of physical capacity may not always correspond precisely with actual program needs. For this reason, the New Century Plan needs to be supplemented by more detailed plans at the subarea or 'precinct' level, in which physical capacity can be aligned more closely with space demand.

The College of Engineering Master Plan, completed in 2002, is a useful prototype for future subarea plans. It first describes an organizational concept for College space based on program goals, then shows how this concept can be accommodated through a sequence of building and landscape projects consistent with the physical framework described in the New Century Plan.

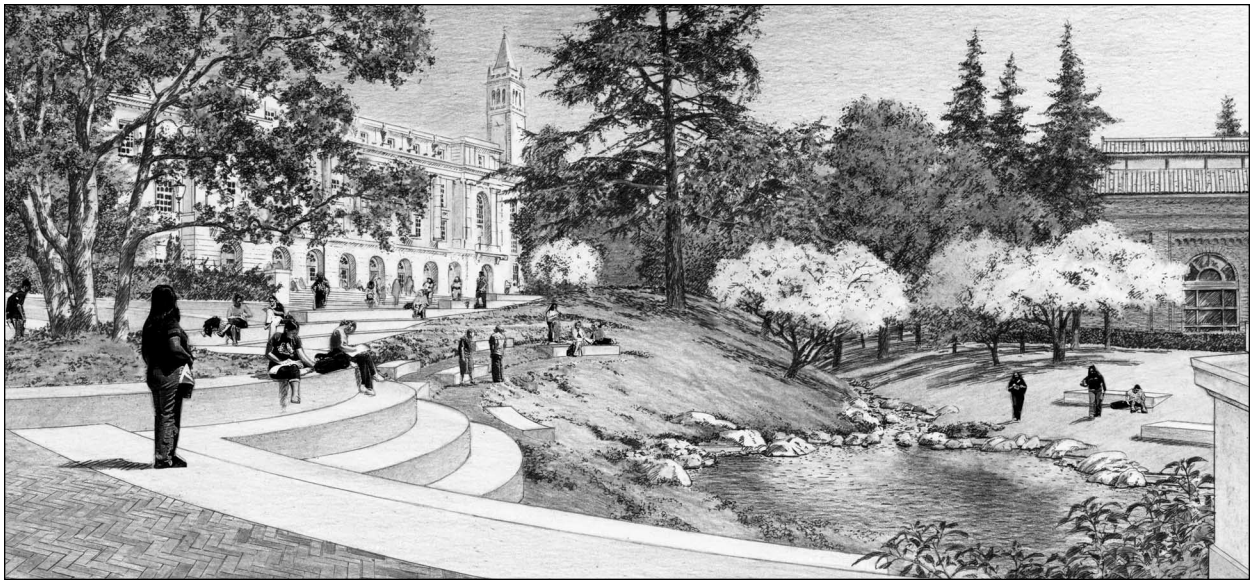
Initiative 1.10

Prepare a set of subarea plans to address future programmatic needs, consistent with the New Century Plan and Long Range Development Plan.

The definition of the subareas should reflect both physical and program considerations, although the traditional concept of proximity based on disciplinary 'precincts' should be reexamined in light of the more interdisciplinary nature of modern instruction and research.

Concept:

At Sather Gate, the swaths of asphalt north and south of the Creek are reclaimed and transformed into a new riparian glade, providing a green, peaceful complement to the sunny hardscape of Dwinelle Plaza.



2 CAMPUS LANDSCAPE

Although intensively developed, at its heart the campus remains a 'university in a park', and this park is what gives the campus its unique and memorable character. The landscape armature of the campus is comprised of four complementary elements: the natural backdrop of the hills; the shady, peaceful glens along Strawberry Creek; the broad, open lawns of the Central Glades; and the serene geometry of Campanile Way and Esplanade. Together, they provide the campus with a rich variety of open spaces, and a counterpoint to the intensity of urban life.

Strategic Goals

Capital investment shall preserve and enhance the campus landscape by:

- **protecting significant natural areas and open spaces from further development.**
- **implementing an ongoing program of landscape restoration and mature landscape renewal.**
- **preserving significant views into, within and from the campus.**
- **implementing a program of strategic investments in new and enhanced open spaces.**
- **ensuring new projects are scoped and budgeted to include adjacent landscape and open space improvements.**

Landscape Preservation

Located within the densely urbanized east bay, the campus landscape is a precious resource for both the university and the city around it. However, over the years the integrity of the landscape has been damaged by insensitively sited and designed projects. Sometimes the damage is obvious and visible, such as the siting of Evans and Moffitt within the Central Glades, while other times it is more subtle, such as the gradual and cumulative impacts of ongoing campus construction.

This Plan takes as axiomatic the principle there should be no further degradation of major campus natural areas and open spaces. The first order of the Plan, therefore, is to define those zones of the campus into which development must not intrude. As shown in figure 2.1, these preservation zones include the major elements of the campus landscape armature, as well as its most significant historic exterior spaces.

Policy 2.1 **Ensure no new projects intrude into the landscape preservation zones, as defined in the Design Guidelines.**

The campus landscape armature is a unique synergy of organic and formal elements: the organic forms of the creek and the sloping terrain contrast with the axial geometry of the historic open spaces framed and defined by buildings.

Each of the preservation zones shown in figure 2.1 is defined in the **Design Guidelines**. Except for landscape and open space improvements, no new buildings shall intrude into the preservation zones. As further defined in initiative 2.3, the preservation zone for the creek is comprised of two subzones, each with its own specific guidelines: zone 1, the natural riparian areas along the streamcourse, and zone 2, the other rustic woodlands adjacent to the riparian areas.

Landscape Restoration

To the casual observer, the mature campus landscape seems deceptively stable, but a closer look reveals the impacts of age, intensive use and misuse, and environmental stress. The beauty of the campus, often taken for granted, is in fact fragile and tenuous, particularly in light of the construction impacts it must continue to endure for at least the near future.

Many of the mature landscapes on the campus are dominated by plants that are nearing the end of their life cycles. This problem is particularly acute for the large trees and groves that serve as campus landmarks, frame key views, and mitigate insensitive architecture. The creek forks also have numerous damaged areas that threaten both their scenic quality and their ecological health.

Figure 2.1:
Preservation Zones

Natural riparian areas

Rustic campus woodlands

Rustic hill woodlands

View & openspace preservation zones

Key letters refer to individual zone descriptions in guideline D.1.

Initiative 2.2 **Define a program of investments in landscape restoration and mature landscape renewal, and a prioritized sequence of implementation.**

The campus Landscape Master Plan shall further define these investments and their relative priorities. However, the first priority for investment under this initiative should be creek preservation zone 1, as defined below. Within this zone, the damaged areas of the streamcourse should be repaired, and the management principles described in initiative 2.3 should be followed in repair and renewal.

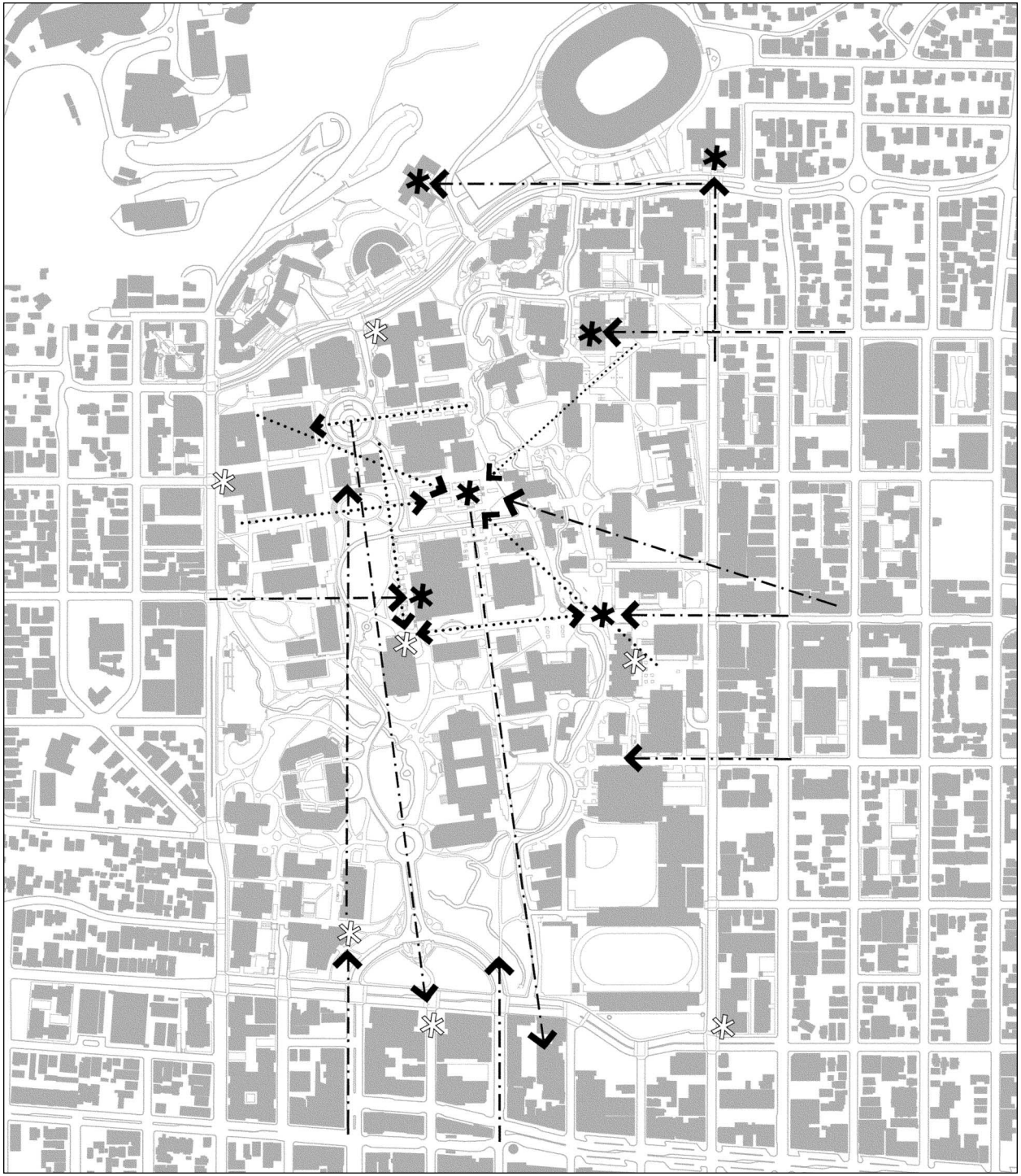
Initiative 2.3 **Develop and implement a management and phased restoration plan for Strawberry Creek and its riparian landscape.**

The creek landscape is comprised of two zones, as shown in figure 2.1. **Zone 1** is dominated by native and other naturalized plants forming dense woodlands along the streamcourse. The width of zone 1 may vary in response to local conditions, but in general should be at least 100', centered on the streamcourse.

Zone 2 includes those other rustic woodland areas adjacent to the riparian landscape, which have a strong complementary relationship to the creek, and which also often have a strong historic and symbolic identity in their own right, such as Observatory Hill or Eucalyptus Grove.

The management and renewal of zones 1 and 2 should be based on ecological principles, including replacing invasive exotic plants with native plants suited to their biotic zone, replacing unhealthy plants and plants at the ends of their natural lives, and preserving and enhancing the habitat value of the zone. While there are a few areas where existing buildings or infrastructure already intrude, no new intrusions shall occur, and new projects in or adjacent to these areas shall, where feasible, include provisions to restore the biotic integrity of the zone.

Figure 2.2:
Views & Landmarks



Major views from/into campus

Major views within campus

Existing visual landmarks

Potential new 'beacons'

View Protection

Given the spectacular setting of the campus, a gentle west-facing slope at the base of the hills, views have always been defining elements of campus plans: the primary example being the alignment of the campus' historic core with the view of the Golden Gate. While many inspiring views both of and from the campus have been compromised over the years, several remain and must be protected.

Views within the campus are also important. For example, views of Sather Gate, the Campanile and Doe Library from key entrances and open spaces not only enhance the campus image but help visitors to navigate. New architectural 'beacons' at the termini of key views could both aid wayfinding and ease concerns over security after dark.

Policy 2.4 **Site and design new buildings to preserve and enhance key views into, within, and from the campus.**

Many of these key views from and within the campus are indicated in figure 2.2. However, each new project shall be analyzed for its potential to create new views, frame existing views, or improve the image of the campus from key viewpoints.

Policy 2.5 **Incorporate visual landmarks into new projects located on key view axes.**

A 'beacon' is an element designed to serve as a landmark for campus entry and navigation within the campus, as suggested in figure 2.2. It may be an architectural element of a building or a free-standing artwork. In either case, it should be lit so it is visible and recognizable at night. For example, new beacons at Moffitt Library and Lower Sproul Plaza should be combined with active, 24-hour student uses to improve the perception of security in the adjacent exterior spaces.

Open Spaces

The Berkeley campus is not only intensively developed, but also located in a densely populated city with very little public green space. The program of investments in campus buildings, therefore, should be balanced with investments in new or enhanced open spaces, to ensure the parklike character of the campus is retained and enhanced.

Few would dispute the value of places such as Sproul Plaza or Campanile Way, but because they are campuswide resources they have no core constituency of advocates, and as a result have fallen into severe disrepair. The campus must acknowledge the critical role of these places in the image and identity of the campus, and take the initiative to reverse their decline.

Initiative 2.6 **Define a program of investments in new and enhanced campus open spaces, and a prioritized sequence of implementation.**

A comprehensive scope of landscape and open space improvements for the campus is presented in conceptual form in the **Portfolio**, along with how they should be integrated with building projects. More detailed concepts for several of these improvements are presented in the **Campus Vision**. Based on this scope, the Landscape Master Plan shall define a prioritized program of open space investments, which may include:

- improvements related to specific new development projects,
- improvements of campuswide significance, and
- a stewardship fund for long term maintenance and restoration.

The concepts presented in the Portfolio shall, in turn, inform the identification of specific landscape and open space improvements to be incorporated into the scope, design and budget of individual projects, as prescribed in policy 2.7.

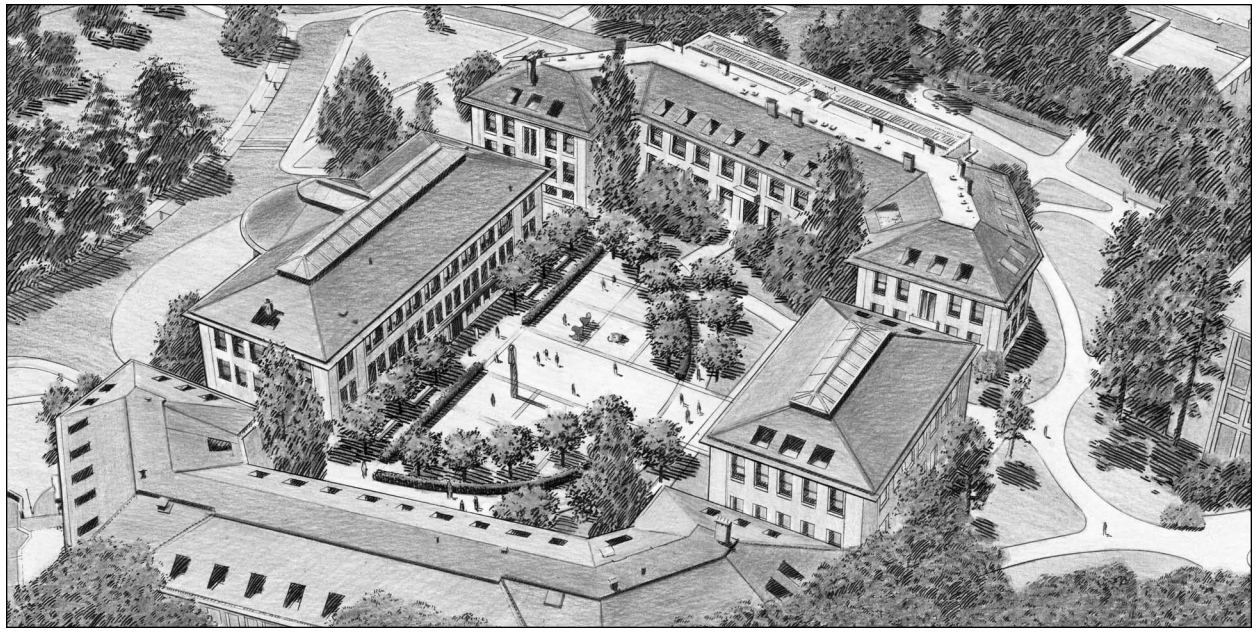
Policy 2.7 **For each new project abuting a proposed new or enhanced open space, include the open space improvements in the project scope, design and budget.**

As illustrated in the **Portfolio**, many proposed new or enhanced open spaces abut potential new building projects, and shall be timed to coincide with those projects. Adequate funds for open space improvements shall be designated in the budget for each such project, and shall not be reallocated later to other project elements.

The open space improvements to be incorporated into the project scope and budget shall be defined as part of the project-specific design guidelines prepared at the feasibility phase, as prescribed in policy 3.2. These improvements shall include funds to restore adjacent areas impacted by construction, even when no new open space improvements are proposed: this is particularly critical when such areas are used to stage multiple, sequential projects.

Concept:

The trailers are removed, and the Wellman Courtyard is transformed into a social place and sculpture garden, framed by a double arc of trees and the magnificent buildings of the Agriculture Complex.



3 CAMPUS ARCHITECTURE

While each new work of architecture should respond to its own time and place, it should also embody the grace, presence, and civic character of our historic structures. Campus buildings endure far longer than their initial contents, and should be designed to embody the spirit of the university, not merely the needs of current programs, nor ephemeral stylistic trends. They should have the quality, durability, and flexibility to serve the university well for generations.

Strategic Goals

Capital investment shall both preserve the campus' architectural legacy and improve the visual quality of the campus, by:

- **ensuring the design of each new and renovated building improves the image and experience of the campus as a whole.**
- **ensuring each new and renovated building has the quality, durability and flexibility to serve the university for generations.**
- **ensuring new buildings enhance the spatial and architectural integrity of the classical core.**
- **designating and preserving sites and buildings of cultural value, and prescribing responsible restoration and renovation practices.**

Building Design

While the Berkeley campus does not have a single, strong and coherent architectural vocabulary, it does have many buildings of great distinction, and the best of these comprise the 'classical core': the beaux-arts ensemble of buildings designed primarily by John Galen Howard, the first campus architect. The classical core represents a unique cultural resource, in terms of both its architectural merit and the character it imparts to the campus as a whole. For this reason, new projects within the classical core require more prescriptive design guidelines, to ensure the integrity of this ensemble is preserved and enhanced.

The campus also includes another, more subtle ensemble: the picturesque grouping of buildings along the forks of Strawberry Creek, which also includes a number of historic buildings. While these buildings are more diverse in style, they are united by a common approach to site, form and scale. In contrast to the formality and symmetry of the classical core, these picturesque buildings are designed as informal, highly articulated volumes that respond to the natural contours and features of the site. New projects within the areas of picturesque influence, such as the Haas School, should continue these traditions.

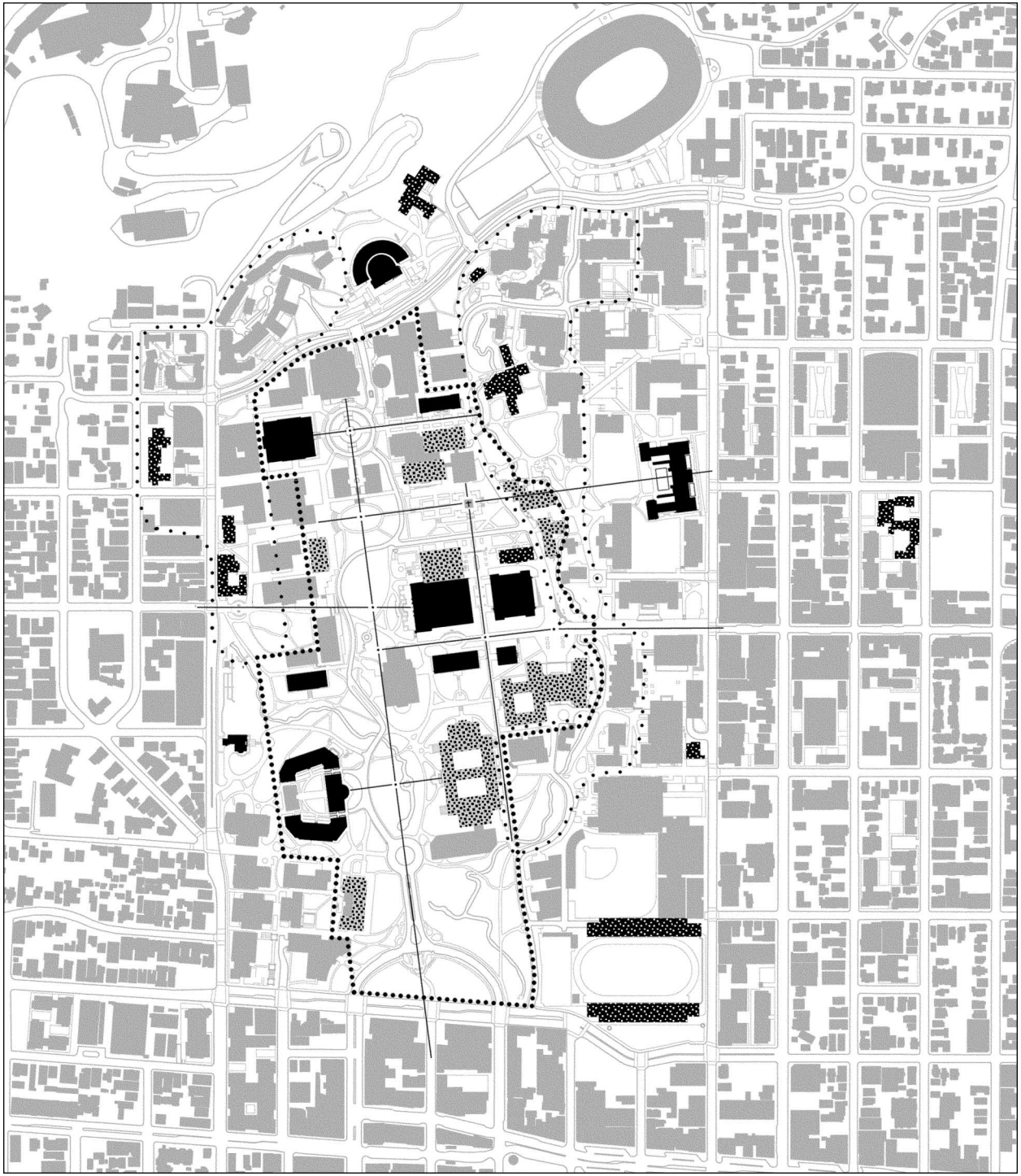
Policy 3.1 **Ensure each new project conforms to the design and program criteria in the Design Guidelines.**

The **Design Guidelines** are not meant to preclude alternate design solutions: the best solution for a site should not be rejected just because we could not imagine it in advance. However, while the architects may present a concept which departs from the Guidelines, they must also present a concept which conforms entirely. As a rule, the campus should not depart from the Guidelines except for design solutions of extraordinary quality.

The Guidelines prescribe general principles for the core campus as a whole, and also include more prescriptive criteria for several areas of the campus:

- Projects within the **Classical Core** shall enhance the integrity of this ensemble, and complement rather than compete with existing historic buildings.
- Projects at the **City Interface** shall be designed to create a graceful transition from campus to city, and enhance both the visual quality of the street and the pedestrian experience.
- Projects facing **Places of Interaction** shall shape these places, provide enclosure and security, and admit sunlight. Ground level spaces shall house uses that observe and activate the place.

Figure 3.1: Cultural & Architectural Resources



Classical core

Picturesque ensemble

National Register: classical buildings

National Register: other buildings

Contributing buildings: classical core

The classical core includes several other buildings which are not only eligible for the National Register, but which also contribute to the integrity of the ensemble as a whole in terms of both siting and design. Some are significant in their own right. Others are less significant in themselves but serve as important 'background' elements of the classical core ensemble.

Policy 3.2 **Prepare project-specific guidelines for each major new project prior to feasibility phase approval.**

Given the physical diversity of the campus, project-specific guidelines shall also be prepared for each project subject to the approvals process, to ensure the unique features of the site and environs are respected. As described in **Project Approval**, these project-specific guidelines shall be prepared at the feasibility phase.

The project-specific design guidelines shall specify the landscape and open space improvements to be incorporated into the project scope and budget, pursuant to policy 2.7.

Cultural Resources

17 sites and structures on campus were placed on the National Register of Historic Places through a 1981 campus submittal, as indicated in figure 3.1. A few other campus buildings have been advanced to the Register by citizen advocates, and the state and city maintain their own inventories. However, the process tends to be ad hoc: designations often result from a real or perceived threat of demolition, rather than objective analysis**.**

Policy 3.3 **Develop standards of historic and cultural significance for the campus, perform a resource survey to identify significant campus sites and structures, and establish guidelines for renovation.**

The cultural and architectural value represented in the sites and structures on campus is a precious resource, and future investment should be directed toward both preserving these structures and maintaining their roles in everyday campus life. A cultural resources survey is a first step toward this objective. It shall:

- define the standards of significance for sites and structures,
- identify significant cultural and architectural resources based on those standards, and
- prescribe guidelines for restoration and renovation.

Concept:

The Arts Quad is redesigned to create an active center for the arts disciplines around it, including spaces for performances and art exhibits as well as casual conversation and study.

4 INTERACTIVE CAMPUS

The work of the university today no longer fits neatly within self-contained disciplines. Research and instruction today are increasingly team-based and multidisciplinary, and the Berkeley campus must be re-envisioned to foster the interaction and information-sharing this new culture demands. Leading edge biotechnology, infotechnology, and creative services firms understand the value of places of interaction, and design for them as a matter of course: they are just as crucial to the work of the research university.

Strategic Goals

Capital investment shall foster social and intellectual community by:

- **making spaces conducive to creative interaction a priority in new projects.**
- **creating places of interaction at key nodes of campus activity.**
- **ensuring investments in the library enhance its role as an intellectual commons.**
- **establishing a strategic program of investments in the teaching infrastructure.**
- **transforming the Sproul complex into an active 24 hour center for student life and services.**
- **completing the new campus interbuilding information infrastructure.**
- **making upgrades to intrabuilding information systems a priority in new projects.**

Places of Interaction

While the compact size of the campus encourages an interactive community, its physical design does not. Buildings on the Berkeley campus provide few interior spaces conducive to informal, unstructured interaction, although the thriving cafe in Moffitt Library shows how productive such places can be.

The same is true for exterior spaces: few places are designed and furnished to be conducive to social interaction, and even fewer have any sort of visual link to the activity within the buildings around them. This is a special dilemma for the growing numbers of faculty and students who use the campus at night: exterior spaces unlit and unobserved by active interior spaces are perceived as unsafe.

Policy 4.1 **Make spaces conducive to creative interaction a priority in new capital investments.**

Each major capital investment should include careful consideration of how intellectual community can be advanced through design. The Haas School of Business has set a new standard for how campus buildings can be designed with intellectual community in mind. The new Stanley Hall, for example, will have both a student lounge and café facing the Mining Circle.

Initiative 4.2 **Define a program of investments in places of interaction, and a sequence for implementation.**

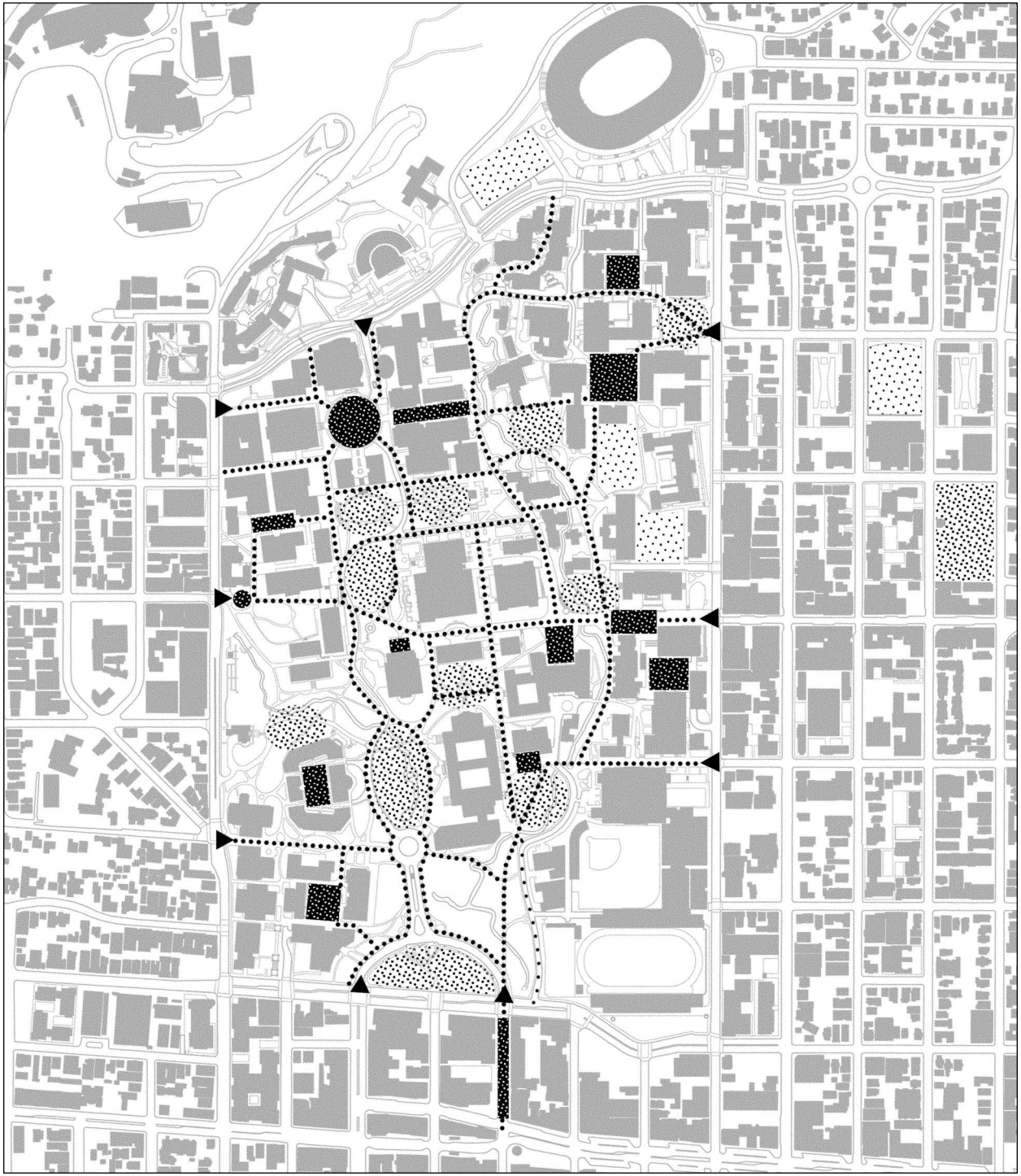
While the campus has a wide variety of open spaces, those shown in figure 4.1 have potential to be true 'places of interaction', because:

- they are located on or at the confluence of major pedestrian routes, and/or
- they are framed by multiple buildings housing a variety of academic programs.

To realize this potential, however, requires an integrated design strategy, to address the quality of the spaces themselves, and the programs and designs of the buildings around them. A comprehensive scope of landscape improvements for the campus is presented in conceptual form in the **Portfolio**: based on this scope, the Landscape Master Plan shall define a prioritized sequence of open space investments.

If the places of interaction are to become true 18- or even 24-hour centers of activity, their success depends on safe and comfortable access, particularly after dark. The Landscape Master Plan shall define standards of paving, lighting, wayfinding and furniture for major pedestrian routes.

Figure 4.1:
Places of Interaction



Places of interaction

Places of relaxation

Recreational playfields

Major pedestrian routes

Major campus entrances

Alternate night route

Policy 4.3 **Require each project facing a place of interaction to conform to the special provisions in the Design Guidelines.**

The program and design of buildings adjacent to social open spaces is as important as the design of the spaces themselves. Lower Sproul Plaza, for example, was once a far more lively and memorable place: the design of the plaza itself has not changed, but the programs housed in the buildings facing it have become more internalized.

Both interior and exterior common spaces should be designed to help make the campus a safe place to work at any hour. While we must be able to ensure the security of buildings and their contents, we should also design at least our most active common spaces so they can be open as late as demand warrants, and locate them so they observe exterior paths and places and help make them safe.

The **Design Guidelines** prescribe several key features every building facing a place of interaction should have in order to help make the place itself inviting and secure. Facades should conform to prescribed build-to lines, to frame and define the place; primary building entrances should face the place; and ground level program spaces should be transparent and active day and night.

Initiative 4.4 **Leverage new investments in the library to enhance its role as an intellectual commons.**

The library is the traditional place where students congregate to learn. In their current form, the many campus libraries offer quiet and well-equipped places for students to study, particularly those who live in group quarters where focused study is often difficult. They also provide a special kind of commons where students, although engaged in individual work, acquire the sense of being part of a community of learners that has endured for generations.

However, despite the increasingly team-based nature of both instruction and research, in general the library does not accommodate the dynamics of group study nearly as well: while rooms for groupwork are sometimes available, they are often remote from the common spaces. And of course the traditional library strongly discourages informal conversations, yet the value of the library is greatly enhanced when we include a place for them.

Several libraries are now completing or contemplating spatial reconfigurations: the campus should take advantage of these projects to demonstrate how the role of the library as an intellectual commons might be re-envisioned and enhanced. These findings should then be incorporated into future capital investments that offer the potential to relocate and/or reconfigure existing library venues.

Initiative 4.5 **Redevelop the Sproul complex as a 24 hour campus-wide center for student life and services.**

The Sproul complex - the upper and lower plazas and the buildings around them - merits special mention because it is the primary entry point for a sizable majority of students, as well as many faculty and visitors. It is also significant both to the history of the university and to 20th century state and national politics.

Not only does the complex suffer from decades of underinvestment, it also no longer functions well as a student center: some spaces are nearly deserted, while others are congested and mazelike, and some key student services are located elsewhere. The complex as a whole has a significant backlog of deferred renewal, and Eshleman Hall and King Union have seismic deficiencies. However, this need for investment also offers an opportunity to reprogram and redesign the complex, and to renew its original role as a campus-wide center for student life and services.

Because the Sproul complex is presently home to several advising, tutoring and counseling programs, the plans to redevelop it should be prepared in conjunction with the campus master plan for the teaching infrastructure described in initiative 4.6. In particular, the physical co-location of classrooms with support programs and spaces for individual and group study may offer significant advantages in terms of both program synergy and instructional technology.

Teaching Infrastructure

Teaching is the most fundamental form of interaction at the university. While the traditional lecture-section format will continue as the most suitable model for many types of coursework, in recent years instruction has become more and more interactive and team-based. The Academic Plan initiatives to enhance undergraduate education at UC Berkeley, which emphasize more direct student participation in research and more direct mentorship by faculty, are consistent with this trend.

However, the campus presently has no formal mechanism for locating or funding such venues. While new campus buildings do often include some new classrooms, these decisions are not informed by a comprehensive campuswide strategy. Meanwhile, many existing classrooms are underutilized, often because instructional technology is inadequate.

Moreover, the education of our students involves more than what goes on in the classroom. There are many other advising, tutoring, and counseling programs that support the teaching enterprise and play a critical role in our students' ability to excel. Presently, however, many of these programs are housed in spaces which are inadequate and inconveniently dispersed.

Initiative 4.6 **Prepare a master plan and program of investments in the teaching infrastructure.**

As proposed in the Academic Plan, this master plan should assess the current classroom supply, and determine how it should be renovated and/or augmented to meet the needs of the future, in terms of both the spaces themselves and the technology they provide. The master plan should also include an analysis of educational support programs, and determine how these should be housed and equipped to complement classroom instruction.

The plan should consider not only distributed but also centralized solutions, like the undergraduate center at the University of Washington, which combines classrooms with student services, computer labs, and spaces for individual and group study. As mentioned in initiative 4.5, this master plan should be prepared in conjunction with the plan for the redevelopment of the Sproul complex.

Information Networks

While there is no substitute for face-to-face conversation, today it is only one of the ways scholars communicate. Introduction of e-mail alone has transformed the nature of collaboration: many faculty today communicate more often with colleagues in other parts of the world than they do with those in the next office. The revolution in information technology has furnished researchers with new tools for analyzing and discovering patterns and connections in enormous sets of data, leading in turn to changes in the ways we conceptualize and approach problems.

Information technology has also begun to alter the delivery of education at UC Berkeley, although so far primarily through individual initiatives. Some instructors make their lectures available to students via the internet, and many routinely use the internet to distribute course materials and information.

Because the pace of change will only accelerate in the future, the quality of our networks is just as crucial to academic excellence as the quality of our interior and exterior spaces. Again, because the potential for creative interaction is everywhere, our first principle for information technology must be to ensure state-of-the-art connectivity for the entire campus.

Initiative 4.7 **Complete the new campus interbuilding information infrastructure.**

While nearly all campus buildings are connected to the campus information network in some way, many are linked to it through ad hoc pathways such as old utility conduits. Many of these conduits are at capacity, many others are damaged or hazardous: in both cases, such conditions limit or preclude further upgrades in capability. The construction of a common interbuilding 'backbone' to replace these ad hoc pathways, and provide capacity for future growth, began in 1985: to date, 3 of the 7 elements have been completed. The campus must continue to pursue the completion of the interbuilding system as a funding priority.

Policy 4.8 **Include upgrades to intrabuilding information systems in the scope, design and budget of major building renovations.**

The interbuilding backbone provides service to each building, but the quality of service also depends on the intrabuilding infrastructure, the quality of which varies enormously across the campus.

The campus network was built at the advent of distributed information technology, in a relatively short period of time, and before standards were in place. As a consequence, many of our intrabuilding systems have been unable to keep up with the tremendous growth in performance demand. In response, the campus has initiated the 'riser project', a phased investment program to equip each building with a modern fiber-optic infrastructure. The riser project will ultimately provide every campus user with equal access to state-of-the-art network resources.

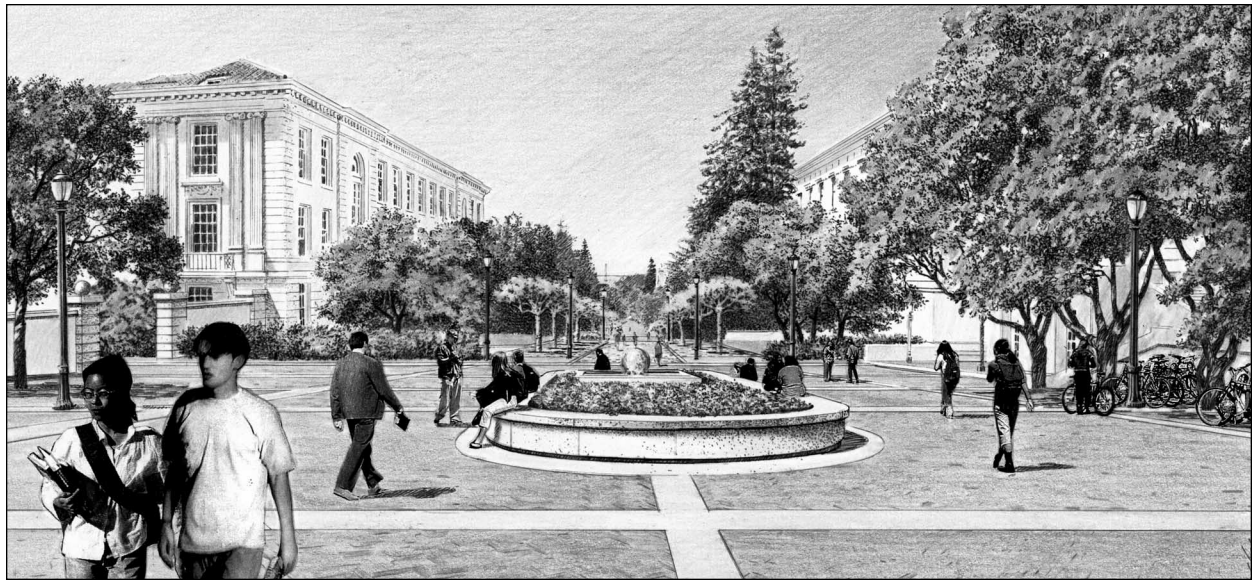
Many campus buildings require seismic improvements. Many also require extensive renovation due to the age and condition of their program spaces and systems. The campus must ensure the requisite improvements to the information infrastructure, as prescribed in the riser project, are incorporated into the budgets and undertaken in conjunction with these projects.

Policy 4.9 **Provide high-speed access to the campus information network in all new university housing.**

Strategic goal 8 describes a program to significantly increase the supply of university housing. While some of this housing may be constructed and operated directly by the campus, much of it is likely to be developed in partnership with private organizations. Whatever the delivery model, however, every new unit of university housing must be equipped with high-speed access to the campus network, as university-built units are now.

Concept:

Campanile Way is refurbished with new paving and lighting, and the historic landscape is restored. Service vehicles are removed to a walled court on the site of South Hall Annex, and Campanile Way is returned to the pedestrian.



5 PEDESTRIAN CAMPUS

Because UC Berkeley is located on a hilly site in the middle of a large and intensively developed city, access to and within the campus will always be a challenge. Strategic goal 9 describes a comprehensive and balanced program of initiatives to improve access to the campus. However, the core campus itself should remain a pedestrian environment with minimal vehicular intrusion, safe and accessible to people with both full and limited mobility.

Strategic Goals

Capital investment shall both optimize access to campus programs and resources and maintain the primacy of the pedestrian, by:

- **establishing a program of strategic investments to upgrade major pedestrian routes into and within the core campus.**
- **creating a network of campus access routes that serve users of all levels of mobility.**
- **collaborating with the City and Lawrence Berkeley Laboratory on integrated landscape and access improvement programs at the campus perimeter.**
- **restricting service and delivery vehicles to designated times and routes.**
- **consolidating core campus parking in structures outside or at the edge of the core campus.**

Safe and convenient access to campus is essential. A vital intellectual community depends as much on the casual encounters that arise from well designed patterns of access, as it does on the more structured encounters of the classroom and laboratory. The growing trend toward interdisciplinary scholarship requires a campus sufficiently compact to allow for formal and informal collaboration.

The core campus is an intensively developed environment, laced with an intricate web of circulation systems that are complex and often confusing in their purpose, hierarchy, and linkages. There is a lack of signage leading to the campus, and a lack of a legible wayfinding system within it. Staging sites for construction, expected to continue unabated for many years, often exacerbate the problem by temporarily obstructing access routes within the campus.

Pedestrians

Walking, the primary means of movement in and around the campus, should be encouraged both by upgrading major pedestrian routes to make them pleasant, comfortable, and secure day and night, and by minimizing conflicts with vehicles. A comprehensive program of investments in pedestrian access is required both within the campus and at its perimeter.

Initiative 5.1 **Define a program of investments in major pedestrian routes on campus, and a prioritized sequence of implementation.**

A comprehensive program of landscape improvements for the campus is presented in conceptual form in the **Portfolio**, along with how they should be sequenced to integrate with building and open space projects. The Landscape Master Plan shall define these improvements in more detail, including their relative priorities, and standards for paving, lighting, wayfinding and furniture. The standards shall create a clear visual hierarchy of use: so, for example, routes shared by pedestrians and vehicles are easily distinguishable from pedestrian-only routes.

Initiative 5.2 **Collaborate with the City on an integrated program of access and landscape improvements at the campus perimeter.**

Hearst, Oxford and Bancroft should be envisioned as 'seams' linking campus and community, rather than borders dividing them. The campus should take the initiative with the city to develop, and seek funding for, a joint program of investments to improve the visual quality, pedestrian safety and amenity, and transit service on these streets. Specific elements may include:

- redesigned intersections to improve pedestrian safety,
- removal of curbside parking to create wider sidewalks, enhanced landscaping and/or bike lanes,
- improvements to make transit service more convenient and comfortable,
- a coherent landscape and lighting treatment along each street, and
- improved landscaping, paving and lighting at major campus gateways.

Initiative 5.3 **Collaborate with Lawrence Berkeley National Laboratory on an integrated program of safety, access and landscape improvements to Gayley Road.**

The replacement of Stanley Hall, by a new building triple its size, is only the first of several potential major building projects at the east end of the core campus. Moreover, LBNL intends to publish a new Long Range Development Plan in the near future, under which its space inventory could increase significantly. The two access routes to LBNL from the west, Hearst Avenue and Centennial Drive, both intersect the university-owned Gayley Road.

As presently configured, the narrow roadway and sidewalks are not only congested but uncomfortable for cyclists and pedestrians. The campus should take the initiative with LBNL to develop, and seek funding for, a program of investments to improve the visual quality, pedestrian safety and amenity, and transit service on this university-owned street. Specific elements of this program may include:

- a redesigned roadway to provide bike lanes and extend the historic Piedmont medians north,
- redesigned intersections to improve safety and visual quality at campus entrances, and
- a coherent landscape treatment to preserve and enhance the rustic character of Gayley Road.

Disabled Access

As indicated in figure 4.1, a network of 'major pedestrian routes' on campus has emerged based on key destinations and historic patterns of travel. However, some of these routes include segments which are not accessible for those with impaired mobility.

Initiative 5.4 **Define a strategy to achieve a network of campus access routes that serves all campus users.**

A study to identify obstacles to disabled access to and within campus, and define initiatives required to mitigate them, is now under way. The results of this study shall be incorporated into the design of both individual projects and the program described in initiative 5.1.

Vehicles on Campus

While the core campus is often described as a 'pedestrian' environment, in fact it is crawling with a wide variety of vehicles: not just campus vehicles, but service and maintenance trucks, package service vans, construction vehicles and private cars. Not only do they pose a hazard to pedestrians, particularly on busy routes such as Sather Road and Campanile Way, they also cause paving and landscape damage which the campus has very limited funds to repair. As the campus becomes more and more congested due to both growth and construction activity, the unregulated flow of private vehicles through the core campus must be managed more assertively.

Policy 5.5 **Restrict private service and delivery vehicles to designated external and internal routes, and admit them to internal routes by permit only from 8 am to 5 pm.**

Many campus buildings can be served via short access roads directly from city streets: these are shown as 'external routes' in figure 5.1. In general, these external routes do not cause serious conflicts. Vehicles on internal routes, however, not only interfere with major pedestrian routes and places, but also degrade the serenity and historic quality of the heart of campus. Access to internal routes should be limited to two points, east and west gate, and should be by permit only from 8 to 5, to minimize vehicular movement on campus during peak times of instruction.

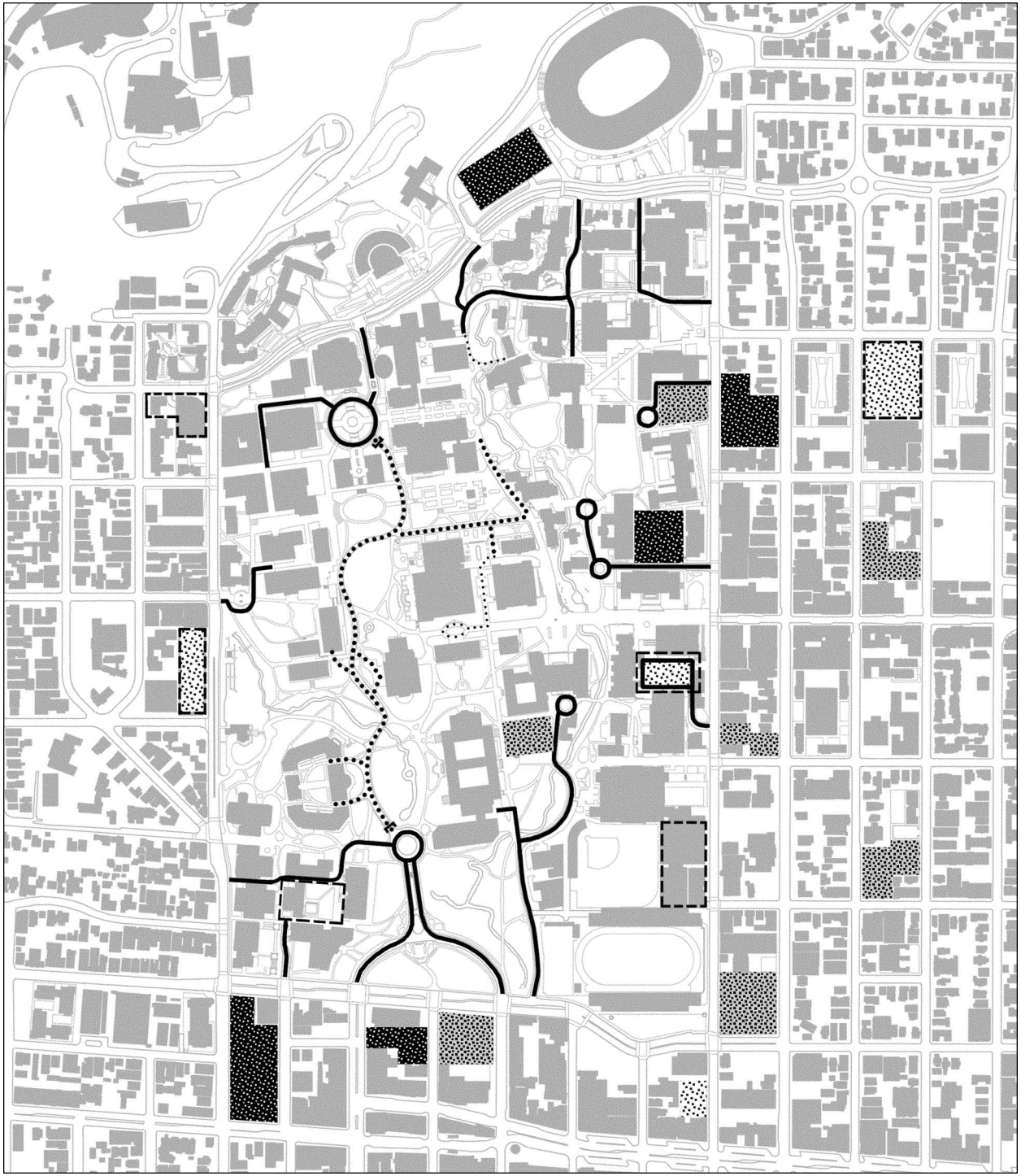
Policy 5.6 **Restrict curbside and other surface parking outside designated lots to time-limited loading and service vehicles with permits.**

In the long term, there should be no surface parking on campus for other types of vehicles. Surface parking lots on the core campus and adjacent blocks should be replaced over time by new buildings and open spaces, some of which may incorporate replacement parking below grade.

However, surface parking can not be entirely eliminated. Repair, maintenance, and specialty construction vehicles require parking near every building on campus, since the tools and supplies in their trucks must be readily available. Loading zones for both passengers and deliveries are also required, although one zone can often serve multiple buildings: but, as on city streets, those zones should have time limits.

As an interim measure, an exception to this policy should be made to accommodate blue spaces for disabled persons. However, the disabled access plan now in preparation (see above) will investigate more effective ways to provide disabled access, such as clusters of blue spaces off campus combined with van service to campus buildings.

Figure 5.1:
Vehicular Circulation



External route

Internal route

Limited access route

Major existing parking facility

Enlarge existing parking facility

New parking below grade

Replace existing parking below grade

Access gate to internal route

Policy 5.7 **Consolidate commuter and visitor parking in structures outside, but within walking distance of, the core campus.**

Parking located in the interior of the core campus not only encourages vehicular traffic on campus, it is a poor use of scarce and valuable land. In general, campus parking, except for those spaces described in policy 5.6, shall be consolidated in structures at the perimeter or within walking distance of the core campus.

Construction Access

Construction access and staging are necessary elements of the ongoing capital program. These areas and access routes must be developed in a coordinated manner, planned for continued use by multiple projects, and designed to anticipate long-term landscape and open space improvements

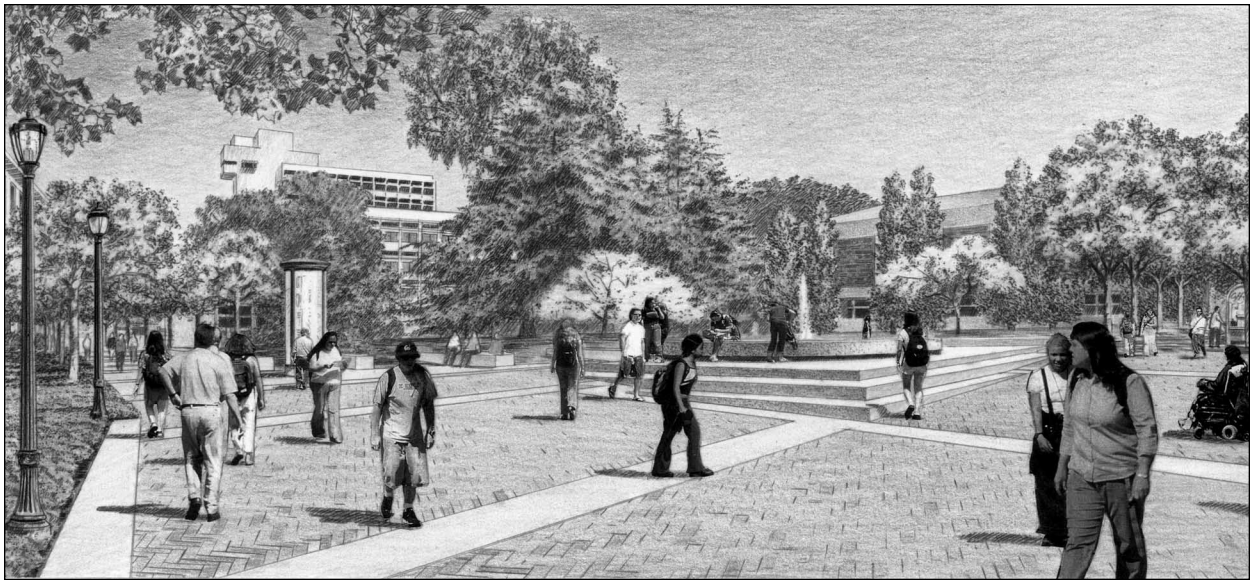
Policy 5.8 **Prepare and maintain a master plan for access and staging of projects under construction.**

The plan shall include policies regarding contractor and sub-contractor parking and designated routes and time restrictions for construction materials delivery, to be incorporated into construction contracts and information presented to prospective bidders.

Note: *This section deals with topics related to* ***circulation*** *within and around the core campus. The topic of* ***access to campus*** *is covered in strategic goal 9.*

Concept:

College Plaza is refurbished with new paving, planting, lighting and signage. A formal allee of trees frames the entry route to campus, and the fountain is redesigned as the focus of a gracious and comfortable place to meet.



6 CITY INTERFACE

First images are powerful. Prospective students, faculty and staff, conference visitors, and potential donors all form strong and lasting perceptions based on what they experience as they approach and enter the campus. Campus edges and entrances should reinforce our image as a proud and well managed university, committed to excellence in all aspects.

Strategic Goals

Capital investment shall improve the campus' image and its synergy with the city around it by:

- **ensuring future projects at the campus perimeter are compatible in both scale and use with the campus environs.**
- **establishing a program of investments to upgrade key campus entrances.**
- **developing a continuous 'green edge' to unify and beautify the campus perimeter.**

Campus edges and entrances should create a positive first image of both the campus itself and its synergy with the city around it. New buildings at the campus perimeter should create a graceful transition in scale to adjacent blocks, and new university buildings on adjacent blocks should be compatible in both scale and use with the city fabric.

Policy 6.1 **Ensure projects at the campus edge conform to the special setback, height and use criteria prescribed in the Design Guidelines.**

Projects at the city interface should be designed to enhance its visual and experiential quality, and to create a graceful transition in scale to the city environs. The **Design Guidelines** prescribe special criteria to create a campus edge more coherent in design and more responsive to its urban context: the Landscape Master Plan will define a common palette of landscape materials and typical details.

Initiative 6.2 **Define a program of investments to enhance key campus entrances, and a prioritized sequence of implementation.**

The primary entrances to the campus urgently require improvement. While the west crescent remains a grand and beautiful space, many of the other entrances, such as Sproul Plaza and East Gate, show the wear and cumulative damage from years of neglect. A comprehensive program of landscape improvements is presented in conceptual form in the **Portfolio**: the Landscape Master Plan will further define these improvements, and their relative priorities.

Initiative 6.3 **Collaborate with the city on an integrated program of access and landscape improvements to create a 'green edge' at the campus perimeter.**

Hearst, Oxford and Bancroft should be envisioned as 'seams' linking campus and community, rather than borders dividing them. The campus should take the initiative with the city to develop, and seek funding for, a program of investments to improve the visual quality, pedestrian safety and amenity, and transit service on these streets. Specific elements of this program may include:

- redesigned intersections to improve pedestrian safety,
- selective parking removal to accommodate landscaping, wider sidewalks and/or bike lanes,
- a coherent landscape and lighting treatment along each street, and
- improved landscaping, paving, lighting and transit/shuttle stops at major campus gateways.

Concept:

The university-owned site at Fulton and Bancroft is one potential location for a new research center, as proposed in initiative 1.8. The concept shown is only one possible architectural treatment for such a center, but shows how windows and shading on the north and west exposures can be designed to enhance daylighting, mitigate heat gain and reduce energy consumption.

7 CAMPUS ENVIRONS

The university does not end abruptly at the edge of the core campus. The university is an integral part of the city around it, and the campus environs are as much a part of the UC Berkeley experience as the campus itself. However, past university expansion into those environs has sometimes been insensitive to their character and livability. Future university-sponsored projects beyond the core campus shall be designed as positive and integral elements of the city fabric.

Strategic Goals

Capital investment shall enhance the campus' synergy with the city around it by:

- **ensuring new university investment in the campus environs is compatible in both scale and use with the community fabric.**
- **preserving the unique mixed-use character of the Southside and enhancing the quality of residential life.**
- **transforming the downtown blocks west of campus into a vibrant mixed-use district, including venues for the educational, cultural and public service resources of the university.**

Southside

The Southside (figure 7.1) is home to 30% of Berkeley students: students comprise over 80% of its 11,000 residents. The university also owns roughly 30% of the land in the Southside, and its properties include academic, student service, cultural, recreational, and parking facilities as well as university housing. For both reasons, the Southside has always been the area of Berkeley where a positive, shared city-campus vision is most urgently required, and the lack of such a vision most acutely felt.

In 1997 the city and the university signed a memorandum of understanding (MOU), which states 'the city and the university will jointly participate in the preparation of a Southside Plan ... the campus will acknowledge the Plan as the guide for campus developments in the Southside area'. In January 2000, the city and the campus released a draft Joint Southside Plan for public review (hereafter the 'Joint Southside Plan'), which presents a shared set of goals, objectives, policies and guidelines for future investment and development in the Southside.

Policy 7.1 **Ensure future university capital investment in the Southside conforms to the goals, objectives, policies and design guidelines prescribed in the 2000 Joint Southside Plan.**

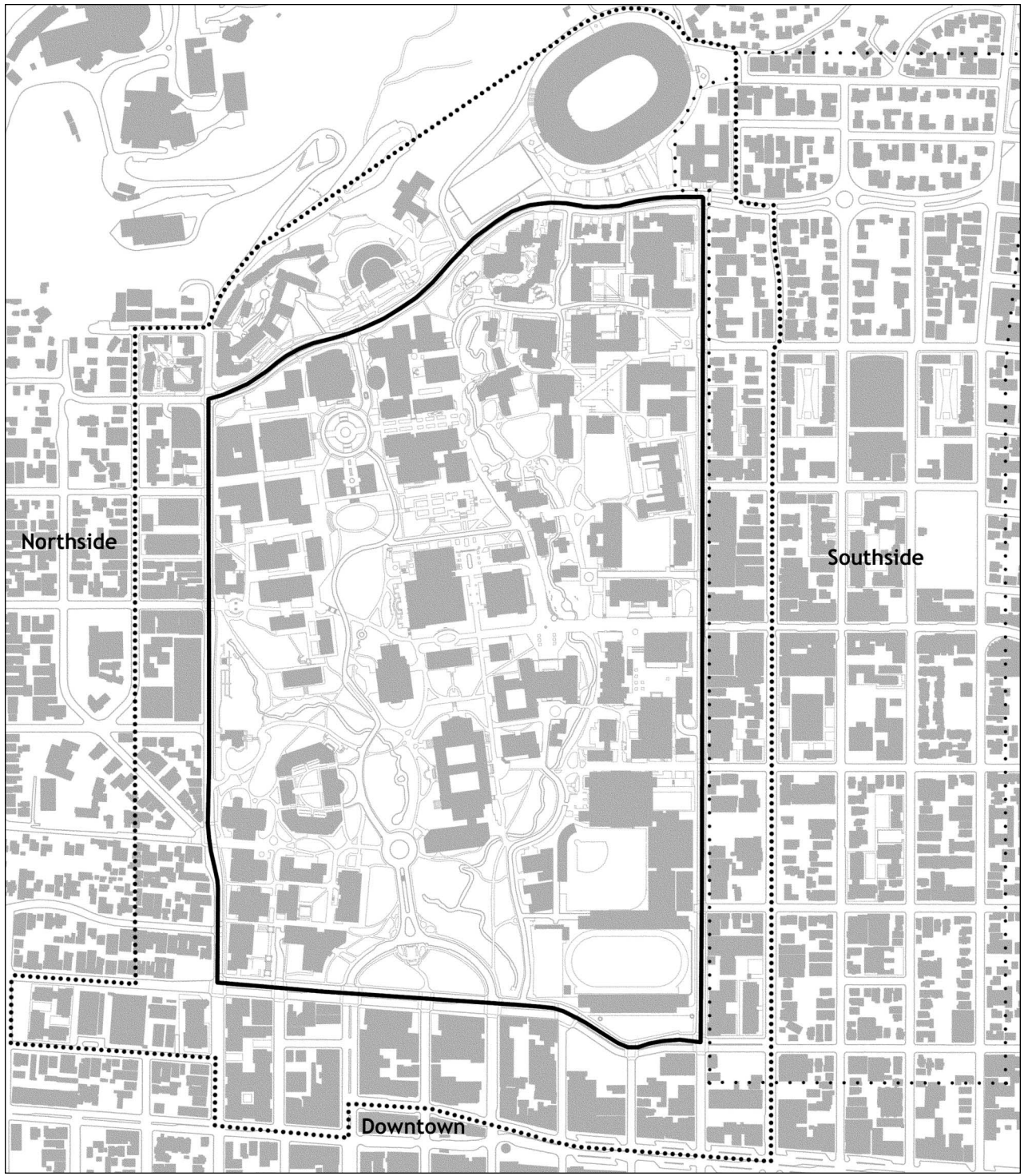
The Joint Southside Plan has as its overarching goals:

- to enhance the Southside neighborhood's unique social, cultural, and architectural character,
- to create a safe and appealing Southside neighborhood based on a comfortable and pedestrian-oriented environment, and
- to create a strong physical connection, one that is mutually supporting and beneficial, between UC Berkeley and the Southside neighborhood.

The emphasis on the term 'neighborhood' is intentional. Given the mixed-use character of the Southside and the constant influx of new student residents, it is important to remember that the Southside is, first and foremost, a place where people live. While the Joint Southside Plan recognizes there are many areas within the Southside suitable for new non-residential investment, it also recognizes such investment must be planned in ways to enhance the quality of life for all Southside residents.

Since the release of the Joint Southside Plan, the city has continued to review and refine its various provisions, toward their eventual adoption as an amendment to the city general plan and, subsequently, to the city zoning ordinance. As a state agency exempt from local regulations, the campus' obligation in the Joint Southside Plan is to use it to '...guide [our] planning and development efforts in the Southside ... [and] inform the New Century Plan.' Policy 7.1 affirms and supports this commitment.

Figure 7.1:
Core Campus & Environs



Core campus

Adjacent blocks

The Strategic Academic Plan states future campus growth should be accommodated primarily on the core campus and adjacent blocks, a principle reflected in the Location Guidelines in this Plan.

Southside

As defined in the 2000 Joint Southside Plan

Downtown/Westside

Viewed on a map, the juxtaposition of downtown Berkeley and the grand west entrance to the campus might suggest an elegant, vibrant interface of town and gown: but this potential is largely unrealized. While the downtown BART station and bus lines from the north and west ensure a steady flow of people *through* the blocks west of campus, the *visible* university presence on these blocks consists of a parking structure, the printing plant, the bus garage, and the administrative offices in University Hall.

Policies and initiatives 1.5-1.9 establish a strategic framework for future campus investment on both the core campus and adjacent blocks. Given both its superior transit access and its established commercial character, downtown should be the primary focus of future campus investment in new research, cultural and service functions that require locations near, but not on, the core campus, as described in policy 1.7.

Moreover, these future investments should be planned not merely to accommodate the program needs of the campus, but also to invigorate the downtown *and* create an inviting, exciting 'front door' to the Berkeley campus. Two projects in particular would contribute significantly to this goal:

Initiative 7.2 **Pursue construction of a downtown university museum complex and visitors' center.**

The Berkeley Art Museum, presently housed in a structure with a poor seismic rating, and the Pacific Film Archive, now in a temporary facility, would both greatly benefit from a move to a downtown site, not only for the improved visibility and transit access, but also for the synergy with other downtown cultural and retail activity, including the thriving Arts District along Addison St. The campus visitor center, now housed in University Hall, would also benefit from a location which is both more visible and more engaging.

The campus shall undertake a feasibility study of a downtown museum complex, including program options, site requirements, cost projections, and options for financing, delivering, and operating the project. A prime candidate for the museum complex is the site now occupied by the university printing plant and adjacent parking structure. The study shall include at least two alternatives: one in which the entire program, including replacement parking, is accommodated on this site, and another in which the program is accommodated partly on this site and partly on the university-owned land west of the University Hall tower.

The existing museum building could either be replaced, as illustrated in this plan, or it could be retrofit and renovated for other academic and/or cultural uses.

Initiative 7.3 **Collaborate with other public and private Berkeley organizations to encourage a downtown hotel and conference center.**

Downtown is also the logical place for a conference center, a critical and longstanding need of the campus, as well as the city and its many public and private organizations. The campus shall seek to encourage a privately developed and operated conference center: one flexible enough to serve a variety of users and events, but also large enough to meet the demand generated by both the campus and other prospective users.

Northside

In general, future campus investment in the northside is not expected to be significant, due to both the lack of developable campus land and the topography and residential character of the area. The one potential exception is the Oxford Tract: the university-owned complex of greenhouses, growing fields and small laboratory buildings north of the SRB1 site.

Initiative 7.4 **Prepare and evaluate a longterm strategy to redevelop the Oxford Tract.**

The south end of Oxford Tract is now (2002) being redeveloped with a new building to house a mix of academic and support functions. The scarcity of large, developable sites in close proximity to the core campus makes a critical analysis of options for the balance of the Oxford Tract imperative. The campus shall formulate, and assess the academic effects of, strategies to relocate the current Oxford Tract occupants and redevelop the site at a density comparable to the core campus.

Concept:

The drawing at right shows how student housing might be designed on a typical site along a transit street. The concept shown is only one possible architectural treatment for such a project, but it shows how institutional character can be overcome with articulated volumes, creative use of conventional exterior materials, and active spaces at street level.

8 HOUSING INITIATIVES

Our best student and faculty candidates increasingly cite the scarcity of good, reasonably priced housing as a primary factor in their decisions whether or not to come to UC Berkeley. Of those who do, many find themselves living miles from campus, isolated from university life and culture outside the work day. The problem is particularly acute for students: expanding the supply of student housing close to campus is necessary not only to help ensure all students are adequately housed, but also to provide the community of peers and mentors, and the access to campus resources, they need to succeed.

Strategic Goals

Capital investment shall improve the housing supply and strengthen intellectual community by:

- **assuring two years of university housing to entering freshmen who desire it, and one year to entering transfers who desire it.**
- **assuring one year of university housing to entering graduate students who desire it.**
- **maintaining the current supply of university housing suitable for student families.**
- **partnering with developers to further expand and improve the rental housing supply.**
- **providing up to 3 years of university housing to new untenured ladder faculty who desire it.**
- **assuring high quality child care for the children of students, faculty and staff.**

A UC Berkeley education is much more than what the student experiences through formal instruction. The few hours a week one spends in the classroom provides only the raw material for personal discovery. Our extraordinarily rich and diverse campus community provides the real-world 'laboratory' within which each student examines, evaluates, and incorporates the classroom experience into her own personal growth. Adequate student housing is a critical and indispensable aspect of this community.

However, in addressing this need, we should not look to the traditional residential cloisters of the liberal arts college. Students come to UC Berkeley because they seek the far more open and dynamic atmosphere of a large research university, and the social and cultural variety of a great metropolis. Rather, in our case, the role of student housing is to provide a base of educational and personal support within the stimulating, but often overwhelming, challenge of the Berkeley experience.

Lower Division

The nature of this role, however, evolves as students progress through their education. For lower-division students, who are new to both independent living and the intense demands of university coursework, group housing in close proximity to the educational resources of the core campus is the most desirable solution. As well as convenience to campus, campus-operated housing also provides its residents with a wide range of on-site counseling, mentoring and academic support programs. Research indicates campus housing has a strong positive influence on academic performance, critical thinking ability, and personal autonomy.

Initiative 8.1 **Provide two years of university housing to entering freshmen who desire it, and one year to entering transfers who desire it.**

University operated group housing, with common study and social areas, enables new students to focus on their academic endeavors, while also providing venues for integrated service programs. To ensure these new undergraduate students have the best possible access to the academic life and resources of the university, this housing should be located within a mile of the center of campus, and should provide every resident with high-speed access to the campus information infrastructure.

UC Berkeley presently assures one year of university housing to entering freshmen and transfer students. However, university housing also offers significant advantages to second-year students, many of who are not yet declared majors and, therefore, are not yet fully integrated into the on-campus academic community. For these students, the residential community continues to play a valuable role in both mentor and peer support.

New undergraduate housing should include apartments for graduate students or faculty in residence: while formal advising and guidance programs are critical, new students also benefit from the informal experience-sharing and mentoring that graduate students and faculty who live on site can provide. New undergraduate housing should also include flexible spaces for lectures and seminars, as well as for group study: these spaces and events should be open to non-resident as well as resident students.

Upper Division & Graduates

As they progress, students gravitate toward affinity groups based on their major fields of study or other shared interests. They also continue to mature and to acquire the social experience required to live as independent adults. By the third year, it is no longer necessary for the university to take as direct a role in creating a residence-based intellectual community. However, it is essential to assure these students continue to have access to suitable and reasonably priced housing.

Such housing is particularly important for first-year graduate students. Not only does the cost and scarcity of housing in this market make it more difficult for all our students to focus on and excel in their academic endeavors: in the case of first year graduate students, it also makes it far harder to recruit them in the first place. For graduate students, apartments are the right solution, not only because older students tend to prefer a less structured environment, but also because conventional apartments offer a wider range of delivery options, including partnerships with private developers.

Initiative 8.2 **Provide one year of university housing to entering graduate students who desire it.**

To ensure these new graduate students have access to the academic life and resources of the university, this housing should be located within a mile of the center of campus or within a 20 minute transit trip of campus, by campus-operated shuttle or public bus or rail. In the latter case, it should be located within a short and safe walk of the nearest transit stop. New graduate housing should provide every resident with high-speed access to the campus information infrastructure.

Initiative 8.3 **Partner with private and not for profit developers to continue to expand and improve the rental housing stock available to students.**

Our first objective in these partnerships should be to assure suitable and reasonably priced housing for all first year graduates. Because all first year graduates may not avail themselves of this option, the balance of units should be made available to other upper division and graduate students.

The ambitious goals described above for both graduates and undergraduates would have a significant positive impact on student housing, by reducing demand on the private market. However, even once these goals are achieved, we should continue to monitor market conditions in relation to demand, and seek new housing initiatives that could make a significant contribution to intellectual community and the quality of student life.

Faculty & Staff

There is substantial anecdotal evidence to indicate UC Berkeley is at a severe disadvantage in competing for the best faculty and staff candidates due to housing and child care cost. The university has already begun to address the long-term housing needs of faculty through its down payment and mortgage subsidy programs. However, these programs do not address the need for good rental housing, particularly for new faculty hires.

Initiative 8.4 **Provide up to 3 years of university housing to new untenured ladder faculty who desire it.**

This housing may be separate or co-located with the graduate student housing described above. In either case, it should be located within a mile or within a 30 minute transit trip of campus. If units remain after new faculty hires are accommodated, they should be made available to new postdocs and other staff. Longer-term housing solutions for faculty and staff, i.e. beyond 3 years, should be achieved through improved financial subsidy programs, not the direct provision of housing.

Child Care

The campus has begun to address long-term child care needs through a new 125 space facility planned for the Southside. However, this facility is only a first step: roughly 200 children were on the waiting list in 2002, and nearly half of the 200 we now accommodate are in poor facilities. The UC Task Force on Child Care Policy and Programs has surveyed both internal and external best practices, and recommends that child care programs be recognized as a key factor in recruiting, retaining, and ensuring the productivity of students, faculty and staff.

Initiative 8.5 **Include consideration of child care in future university housing projects.**

Each new university housing site should be evaluated for its potential to include a child care facility: for example, in ground floor spaces which are often less suitable than upper floors for residential use.

Near-Term Objectives

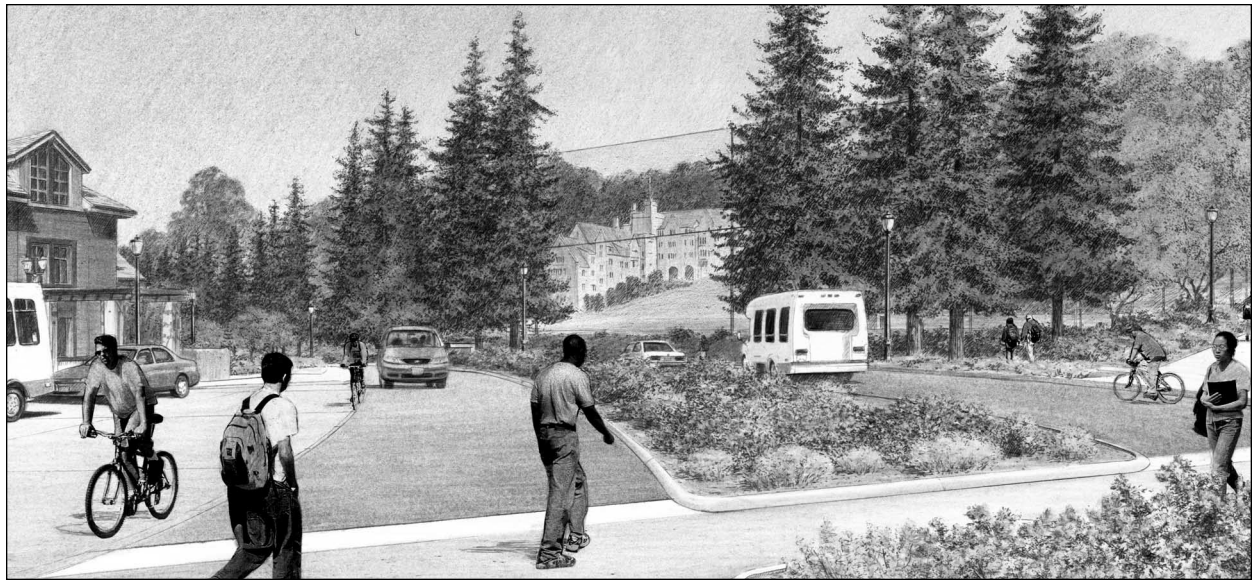
The goals described in the above initiatives are ambitious and long-term: not only do they require a substantial investment of capital, but only a fraction of the new units required can be accommodated on land presently owned by the university. While the actual pace of construction must be responsive to the dynamics of both housing demand and financial resources, the campus has endorsed in principle a set of objectives to be pursued within the timeframe of the 2020 Long Range Development Plan:

- By the end of 2020, increase the inventory of single undergraduate beds to equal 100% of entering freshmen and 50% of entering transfers and sophomores.
- By the end of 2020, increase the inventory of single graduate beds to equal 50% of entering graduate students.
- By the end of 2020, increase the inventory of faculty apartments to 300% of the average number of new untenured faculty hires per year.
- Maintain the current number of university housing units suitable for students with children.

Note: *The term 'university housing' as used in the above initiatives and objectives includes housing developed and managed by the campus, as well as housing developed and managed by others under the provisions of a campus ground lease.*

Concept:

Gayley Road north of Memorial Stadium is realigned and redesigned to accommodate wider sidewalks, bike lanes, and continuation of the historic Piedmont Avenue medians. Landscaping is rustic and informal to reinforce the role of Gayley as the seam linking the campus to the hills.



9 ACCESS INITIATIVES

Convenient access to campus is crucial to the life and culture of the university: faculty and students depend not only on the library and other resources of the campus, but also on the community of peers and mentors it provides. However, as our residential patterns have become more dispersed, and the roads more congested, the difficulty of travel to campus has become a disincentive to on-campus presence. This trend is destructive to both individual scholarship and intellectual community, and the campus must strive to reverse it.

Strategic Goals

Capital investment shall improve both the convenience and the experience of access to campus by:

- **ensuring housing and access strategies are integrated and synergetic.**
- **collaborating with the city and transit providers to improve transit service to campus.**
- **completing and implementing a campus bicycle plan to encourage bike use.**
- **achieving drive-alone rates under 50% for faculty/staff and under 10% for students.**
- **achieving a balance of parking permit holders and permit spaces through trip reduction and limited parking construction.**
- **replacing and consolidating existing parking displaced by new construction.**

Because UC Berkeley is located in a large and intensively developed city which largely predates widespread auto use, access to the campus will always be a challenge. However, while for some the automobile is the only feasible option, the university must continue to encourage and enable alternative modes of access: both to provide our students, faculty, staff and visitors with a full range of options, and to preserve the livability of the campus environs.

Walking

Over 50% of students walk to campus, as do nearly 10% of faculty and staff. However, due partly to the increasingly dispersed pattern of residence among both groups, surveys indicate walking as a primary mode of access is in decline. This is unfortunate, since walking is the mode with the least impact on the campus environs: in fact, the presence of people on the streets is beneficial to city life. But although walking itself has no cost, it does require a residence within a safe and comfortable walk of campus.

Policy 9.1 **Ensure campus housing and access programs are integrated and synergetic.**

Strategic goal 8 outlines a program of initiatives to significantly increase the supply of affordable student housing within a mile or a 20 minute bus ride of campus: surveys indicate for most students a mile is a reasonable walking distance. These housing initiatives must be linked to the campus access strategy, to ensure the resources we commit to new housing also serve to reduce the demand for drive-alone trips: for example, by prohibiting campus parking permits for residents of university housing, and by marketing new housing to the 25% of graduates and 10% of undergraduates who now live more than 5 miles from campus, and are therefore most likely to commute by car.

Transit

While cost and dependent care are often cited as reasons why people drive to work, in our 2001 faculty/staff survey only 9% and 10%, respectively, selected these reasons. Convenience at 37%, and travel time at 30%, were by far the most oft-cited reasons why faculty and staff drive rather than use transit or other alternate modes.

These findings suggest that, while the campus must ensure reasonably priced transit options exist, cost-based incentives are unlikely to yield substantial further reductions in drive-alone trips. In fact, survey data suggest two thirds of the growth in *student* transit ridership over the past five years represents commuters who formerly walked or biked to campus.

The campus shuttle system is a key element in any program to encourage transit use. BART riders in particular depend on the shuttles to get them from the downtown BART station to campus destinations. However, shuttle service - for both campus and LBNL - and transit service are challenged by the congestion and traffic conflicts on the streets around campus.

Initiative 9.2 **Collaborate with the city and transit providers on strategies to improve transit service to campus.**

If significant numbers of drivers are to be shifted to transit, convenience and travel time must be improved. However, while minor improvements might be achieved through operational measures, significant improvements require major long-term capital programs.

AC Transit is presently studying major capital investments in transit service from the south to the campus and downtown Berkeley. As a major transit destination, the campus is a key participant in this process. While several design options are presently under consideration, the eventual solution may involve realignments of traffic flow on southside streets and/or the introduction of dedicated transit lanes. The campus shall continue to collaborate with the city and AC Transit on transit improvements to optimize their benefit to the campus.

Bicycles

Bikes are a very low-impact mode of access to campus, particularly for those who live beyond walking distance, and should be strongly encouraged by both campus and city. However, a serious program requires investment in secure, well-located bike parking, well-designed and well-connected routes, and on-site amenities to support and promote bike commuting.

Policy 9.3 **Complete the comprehensive Campus Bicycle Plan, including a strategy for implementation.**

The Campus Transportation Committee is now preparing a plan to encourage bike use as a primary mode of access to campus. A draft set of policies and initiatives, now under campus review, includes:

- bike-friendly design guidelines for new and renovated facilities,
- a campus bike circulation plan to ensure both bike and pedestrian safety,
- secure and adequate bike parking convenient to all buildings,
- campus amenities to encourage bike use, such as lockers and showers,
- outreach programs to encourage bike use and promote bike safety, and
- special policies to protect natural areas from bike-related impacts.

Parking

The demand for commuter and visitor parking on and around campus is far greater than the current supply, and this demand could increase if enrollment grows. While the campus must continue to encourage alternatives to the drive-alone commute, an adequate supply of parking is critical to the mission of the university.

By California standards, the campus has an exemplary record of promoting alternatives to the automobile. The 2001 survey indicated only 51% of faculty and staff, and only 11% of students, drive alone to campus: these percentages compare to the estimate of 46% for all commuters to campus and downtown Berkeley presented in the 2001 city/university TDM study.

However, Berkeley is a densely developed city, with roadways largely designed around the eastbay's once-extensive light rail network rather than the private auto. Even these numbers of drive-alone commuters, therefore, place a severe strain on city roadways, as well as campus and other public and private parking resources.

Policy 9.4 Invest in new commuter and visitor parking as part of a comprehensive program of transportation demand management.

Given the expense of structured parking, the limited capacity of city streets to accommodate more vehicles, and the environmental and resource consequences of increased automobile use, the campus must pursue a balanced, responsible strategy of transportation management. Investments to increase parking supply should be balanced with trip reduction incentives and improved parking management.

Initiative 9.5 Achieve and maintain drive-alone rates of under 50% for faculty/staff and under 10% for students.

These percentages are slightly lower than those indicated by our most recent surveys, and represent reasonable targets given our already high levels of participation in alternate modes, and the increase in demand that could be generated if enrollment grows. Our strategy to achieve these percentages should focus on the most likely alternate modes for each submarket, based on residential location. As described in policy 9.1, the integration of this strategy with housing initiatives is critical.

Initiative 9.6 Achieve and maintain a balance of commuter and visitor permits with commuter and visitor spaces.

Presently, the campus does not limit the number of parking permits it issues to commuters and visitors. As a consequence, the number of permit holders exceeds the number of parking spaces available to them. In general, it is necessary to come to campus very early in the day to obtain a space, and it is not possible to leave during the day and expect a space to be available upon one's return. While this is not a serious constraint for those who work regular hours and spend those hours entirely on campus, it is for those, including many faculty and staff, whose work entails flexible schedules and/or multiple worksites.

Moreover, those permit holders who drive alone and are unable to find a campus parking space must park elsewhere, either in a public or private facility or on the street. While the campus can not prevent commuters from driving alone, we should at least strive to bring the demand generated by permit holders and the campus supply of permit holder spaces into balance, through a comprehensive strategy of trip reduction incentives and new parking construction.

Policy 9.7 **Replace and consolidate existing campus parking displaced by new construction.**

Initiative 9.6 can not be realized if existing campus parking is displaced without replacement. The framework for growth described in strategic goal 1 includes, and in fact depends upon, existing surface lots being replaced by new buildings and open spaces. In order to maintain the campus parking supply, these displaced spaces must be replaced on site or elsewhere, and the scope and budget for each such project shall include those replacement spaces. The strategy to replace this parking should also be designed to consolidate it, not only to improve operations but also to reduce congestion caused by multiple-lot searches for available space.

Near-Term Objectives

While the actual pace of implementation must be responsive to the dynamics of both transportation demand and financial resources, the campus has endorsed in principle a set of objectives to be pursued within the timeframe of the 2020 Long Range Development Plan:

- By the end of 2012, achieve a net increase of 1100 campus commuter and visitor spaces, including attendant spaces, over the 2002 totals.
- By the end of 2012, achieve 5% reductions in the percentages of student and faculty/staff drive-alone commuters from 2001 survey data.

10 SUSTAINABLE CAMPUS

As one of the world's great research universities, UC Berkeley has a special obligation to serve as a model of how creative design can both minimize resource consumption and enhance environmental quality. Each new capital investment at UC Berkeley has the potential to advance the state of the art in responsible, sustainable design, and thereby contribute to our mission of public service.

Strategic Goals

Capital investment shall embody the principles of responsible, sustainable design, including:

- **preserving and restoring the integrity and biodiversity of natural systems.**
- **minimizing energy use in travel to and within the campus.**
- **minimizing building energy use and peak energy demand.**
- **minimizing water use and maximizing on-site conservation and reuse.**
- **minimizing the use of nonrenewable energy and material resources.**
- **optimizing the use, and adaptive reuse, of existing facilities.**
- **accommodating growth on infill sites served by existing infrastructure.**
- **maximizing the productive life of new facilities through durable, flexible design.**
- **creating environments that enhance human health, comfort, and performance.**

These principles shall be achieved by:

- **addressing the principles of sustainable design in the analysis of alternate solutions**
- **ensuring this analysis reflects the true net life cycle costs of those alternate solutions, including known future costs.**
- **ensuring every new project is shaped by design and performance guidelines that incorporate the principles of sustainable design.**

The goals for sustainable design are not separate and discrete. On the contrary, they are interdependent, and require an holistic approach to design. Window size and placement, for example, affects both thermal performance and lighting requirements: whether the windows are sealed or operable affects both thermal performance and air quality. Therefore, while standard criteria can be very useful as a *framework* for analysis, sustainable design ultimately depends on the collaborative efforts of a multidisciplinary project team. This holistic approach is particularly critical during the feasibility phase of the approval process, where alternatives are evaluated and the optimal solution is defined.

Policy 10.1 Address the principles of sustainable design in the range of options analyzed at the feasibility phase.

Policy 1.1 requires the campus to consider a range of alternate solutions at the feasibility phase of the approval process. The scope of this analysis shall include alternate strategies to address the goals of sustainable design. For example, while our objective for every future campus project should be to achieve at least the equivalent of base level LEED certification (policy 10.4), certain projects may have the potential to achieve a higher level. On the other hand, for some other projects even the base level may not be feasible.

Policy 10.2 Base the options analysis on the life cycle cost of alternate solutions, including the discounted cost of future expenditures.

Sustainable design also depends on analyses based on true life-cycle costs. While the best environmental solutions often have a lower life-cycle cost, their initial capital cost is often greater. For example, building systems that are more efficient and more durable also tend to be more expensive, but they also consume less energy, require less maintenance, and have longer useful lives. Policy 1.2 requires the campus to evaluate alternate design solutions based on their life cycle costs, including the discounted costs of future expenditures: the policy is repeated here because it is critical to an effective program of sustainable design.

Moreover, it is also essential to consider initial capital cost in the context of the building as a whole, since an upgrade in one system can sometimes reduce the cost of others. For example, investing in a high-performance window system may reduce the required capacity, and thus the capital as well as the operating cost, of the HVAC system.

Policy 10.3 **Ensure each new project conforms to the criteria prescribed in the Design Guidelines.**

While the feasibility of some sustainable design features depends on the particular characteristics of the project, many have little or no cost: for example, orienting and configuring building volumes and composing building facades to optimize energy performance. The Design Guidelines include several such provisions, which shall be incorporated into the design of every campus project.

Policy 10.4 **Utilize the LEED Green Building System to rate each new building which is subject to the project approvals process.**

Establish the base level of LEED certification as the objective for each new building, but strive for higher levels where feasible.

Many institutions have adopted the LEED (Leadership in Energy & Environmental Design) system as their reference standard for sustainable design: the University of Oregon, for example, requires all new construction projects to achieve the equivalent of base level LEED certification. Other institutions have taken a more customized approach: the Minnesota Sustainable Design Guide, for example, draws upon the LEED system and other sources to create guidelines that reflect the priorities of the Minnesota region as well as general principles of sustainable design.

The LEED system offers a reference standard that is well established and well supported by the design industry. It is also generic: it does not address particular building types or physical environments. As a research university, with a wide range of laboratories and other specialized buildings, UC Berkeley may be best served in the long run by a set of performance guidelines more specific to our unique facility inventory and our temperate, semi-arid climate.

However, given the intensive pace of new construction and renovation on the Berkeley campus, it is imperative that the Berkeley campus begin now to incorporate the principles of sustainable design into every new project. The LEED system is our best option today, and the campus should adopt it as an interim reference standard while we simultaneously investigate a more customized approach.

Initiative 10.5 **Based on the campus experience with the LEED system, consider refinements to better address the specific characteristics of the facility inventory and the physical environment at UC Berkeley.**

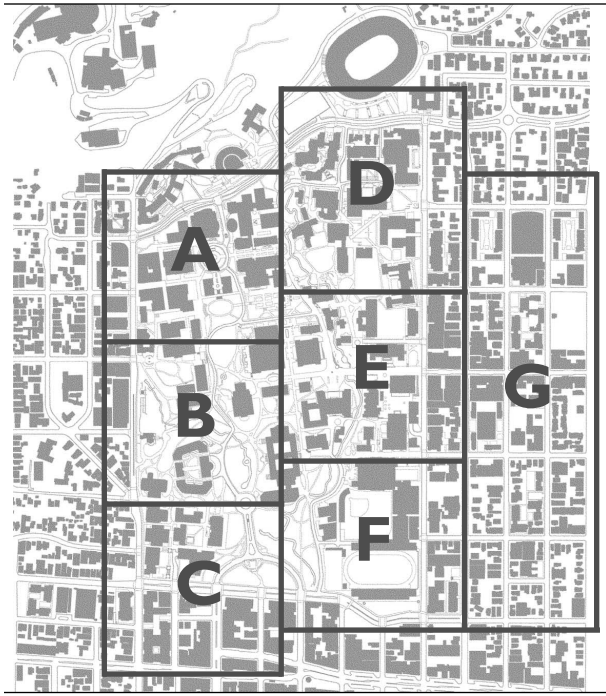
Health & Construction

The seismic improvements program, in combination with other capital investments to renew the facility inventory and accommodate new academic programs, has led to an unprecedented volume of construction on the campus. While these concerns had previously been addressed on a project by project basis, the scope of the current effort requires a campuswide strategy for the resolution and future prevention of such impacts.

Initiative 10.6 **Implement a campuswide strategy to minimize the health impacts of construction.**

The campus Health & Construction Work Group is presently preparing a set of guidelines for how such impacts should be averted or, if unavoidable, how they should be mitigated. The guidelines will address:

- relocation of building occupants during construction, including those mitigations to be undertaken when relocation space is not available,
- construction practices to minimize health-related impacts,
- improved communications to both affected occupants and the campus at large, and
- health-promoting features to consider for inclusion in new construction and renovation projects.



PROJECT PORTFOLIO

This section presents brief descriptions of each potential building and landscape/open space investment represented in figure 0.2.

The project descriptions are conceptual: the buildings shown are prototypes, based on modular dimensions adaptable to a range of university functions. However, they are configured to respect and enhance spatial and architectural relationships, and frame adjacent opens spaces and walkways, and are meant to inform the design of future projects by presenting concepts consistent with the Strategic Goals.

This portfolio is deliberately broad and ambitious. Given the limits imposed by both resources and logistics - we can only accommodate so much construction at once - the campus must be selective and realistic in formulating its capital investment plan. What is crucial, however, is that new building and landscape/open space improvements are planned together, to ensure each new investment elevates the quality of campus life.

Area A Concepts

A1 Gayley Road

Preserve and enhance the rustic character of Gayley Road as the seam linking the campus and the hills. Maintain an informal, varied setback with an average depth of at least 40'.

Consider reconstruction of the roadway to accommodate bike lanes and more generous sidewalks and landscaping.

A2 East Gate

Remove the turn lanes, and redesign East Gate to improve pedestrian safety and visual image at this major campus entry.

A3 Stanley Replacement

(Regents approval May 2002) Site and design new Stanley to frame and activate the Mining Circle, and provide both formal enclosure and human scale.

A4 Donner Replacement

In lieu of retrofit, consider replacing Donner with a new building to complement Stanley and consolidate service for both buildings.

Design both new Stanley and new Donner with an articulated edge along Gayley Road to complement the rustic landscape.

A5 Founders' Rock

Relandscape Founders' Rock to enhance its visibility. Remove the turn lane to enlarge the forecourt and improve pedestrian safety, and renovate the path into campus.

A6 Mining Circle

Restore the Mining Circle to its historic role as both open space and visual landmark. Recapture the view from the Mining Circle to the Central Glades and the Bay beyond.

A7 Davis Replacements

Replace Davis North with a new building configured to create a visual terminus at LeRoy and a gracious entry to the campus.

In lieu of retrofit, consider replacing Davis South with a new building sited and designed to create an east-west route through the Engineering complex.

A8 McLaughlin Esplanade

Redesign this north-south route through the Engineering complex as a pedestrian esplanade and place of interaction, closed to vehicles.

A9 Hesse & O'Brien Replacements

In lieu of retrofit, consider replacing Hesse and O'Brien with a new building designed to provide a more active, transparent edge along the new esplanade.

A10 Memorial Green

Create a new green to complete the east end of Memorial Glade, with views west to the Bay and south to the Campanile.

Remove the existing surface parking lot and extend Campanile Esplanade to the realigned University Drive.

A11 Evans Replacement

In lieu of retrofit, consider replacing Evans with a building comprised of a matched pair of pavilions above grade, centered on the Mining Circle, with linked contiguous floors below grade.

Design the pavilions to create a formal, active edge for the Mining Circle, but to also provide a view through to the Glades and the Bay.

Incorporate a pedestrian loggia on the west frontage, to create a continuous ADA route linking Campanile and McLaughlin Esplanades.

A12 Campbell Replacement

Replace Campbell with a new building similar in form and scale to the existing building and Tan Hall, to reinforce the formal composition of Gilman Esplanade and the Mining Circle.

Incorporate a new entrance to the Physical Sciences complex on University Drive and consolidated service access on South Drive.

A13 Gilman Esplanade

Relandscape the north-south route through the Chemistry and Physical Sciences complexes as a pedestrian esplanade and place of interaction, closed to vehicles.

A14 South Drive

Close South Drive to private vehicles between the Chemistry and Physical Sciences service docks, except for preauthorized service and delivery trips to the Faculty Club.

A15 Lewis Replacement

In lieu of retrofit, consider replacing Lewis with a new building designed to create a more formal enclosure of the Chemistry quad, with a more articulated edge along Gayley to complement the rustic landscape.

Area B Concepts

B1 North Gate

Preserve the unobstructed view of Doe Library from Observatory Hill.

Repave and refurnish the entire length of Sather Road in materials commensurate with its role as the primary route through campus.

B2/3 Observatory Hill

Consider a new building composed of a matched pair of pavilions above grade, with contiguous linked floors below grade.

Design the new pavilion facing the Central Glades to reinforce and enhance the architectural and spatial integrity of the classical core.

Provide consolidated service access to the buildings from University Drive.

B4 Strawberry Creek Renewal

Develop and implement a management and phased restoration program for the creek and its riparian landscape, based on ecological principles.

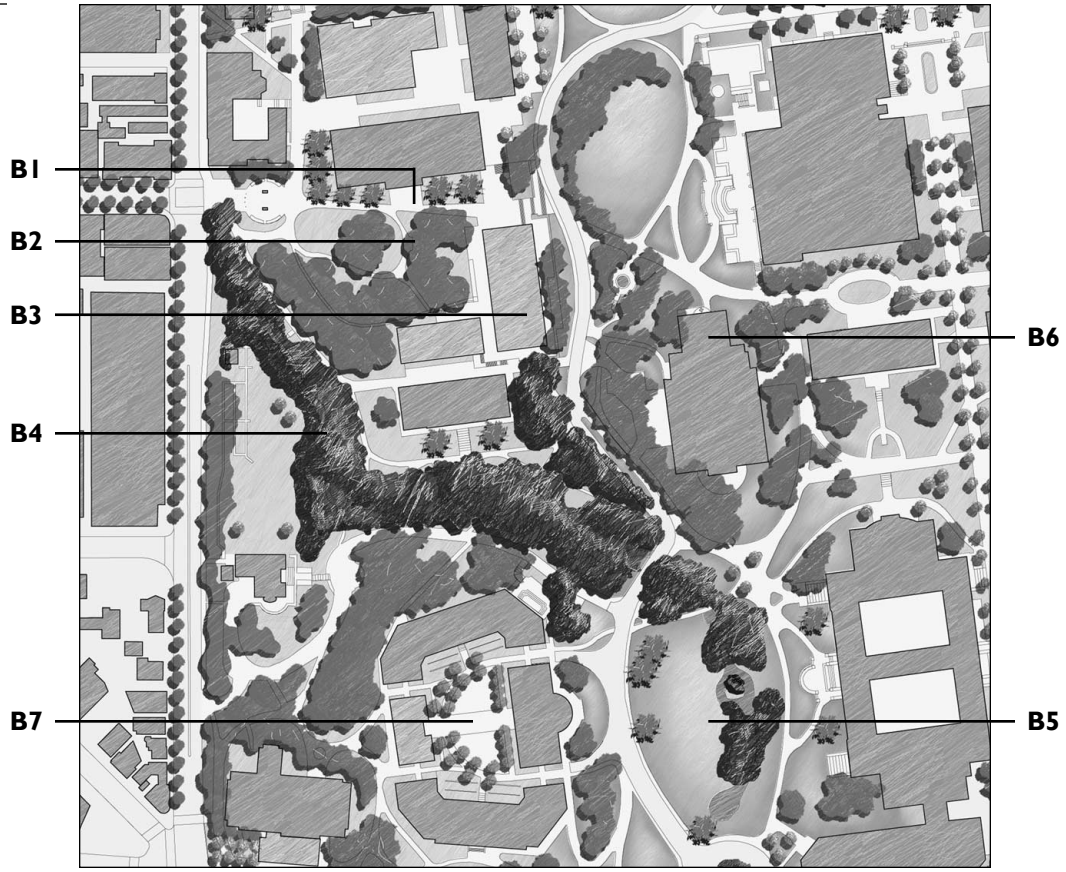
B5 West Oval Glade

Relandscape the section of creek within the Glade with native riparian plants, and widen the streamcourse.

B6 Moffitt Terrace

Redevelop the east terrace of Moffitt Library as an active, day and night place for study and social interaction.

Incorporate an architectural 'beacon' on axis with Sather Road and East Gate.



B7 Wellman Courtyard

Remove the temporary structures, and relandscape the courtyard as a casual social place and sculpture garden.

Consider developing a new building at the north end, compatible in style and scale with the existing buildings.

Area C Concepts

C1 Tolman Renovation & Plaza

Upgrade the plaza with new planting, lighting and paving to enhance its identity as a major campus entrance. Continue the improvements along the route into campus to West Circle.

In conjunction with retrofit, consider removing the center of the 'bridge' to frame the gateway to campus.

C2 Mulford Renovation & Extension

In conjunction with retrofit, consider renovating and expanding Mulford with an extension into the service court, designed both to add space and improve the functionality of internal layouts.

Design the extension to include a forecourt at grade with the quad. Incorporate building services into the renovation so they are not visible from the quad.

C3 Hearst Frontage

Collaborate with the city on landscape improvements, including:

Removing the parking lane to provide a generous sidewalk with a landscaped parkway and pedestrian-scale lighting.

Eliminating the free right turn lane at the corner of Hearst and Oxford to improve pedestrian safety and comfort.

C4 Warren Replacement

Replace Warren Hall with a new building of a quality commensurate with this key site at the visual terminus of University Avenue.

Site and design new Warren to frame and activate the Biomed Quad, and to provide the Quad with both formal enclosure and human scale.

Incorporate an inviting public entry to the Quad from the West Crescent, while preserving the clusters of mature oaks.

C5 Health Services Site

Continue to pursue acquisition of the State Department of Health Services site. Consider redevelopment of the site as a mixed-use project with parking below grade, to include academic space and/or housing, with retail along the Shattuck frontage.

C6 Barker Extension

Consider an extension to Barker Hall, to enclose the service entrance and provide an architectural presence at this visible corner.

C7 Printing Plant Site

Pursue redevelopment of the printing plant site, and the adjacent parking structure, as a university museum complex, with parking below grade.

C8 University Hall West

Consider replacing the low-rise University Hall annex and parking lot with a mixed-use project with parking below grade, to include academic space and/or housing.

Integrate the designs of projects C7 and C8 - the buildings and the facing corner plazas - to create a visual terminus for the view axis through the historic Central Glades.

Area D Concepts

D1 Kleeberger Field & Memorial Stadium

Consider reconstructing Kleeberger as an artificial turf playfield over two levels of parking. Site the new playfield to conform to the landscape setback along Gayley Road.

Replace the existing surface parking lot east of Kleeberger with a new entry plaza and service access for Memorial Stadium.

D2 Calvin Replacement

Consider replacing Calvin Lab, 2241/2243 College, and the surface parking lot north of Boalt with two new academic buildings.

Site and design the new buildings to frame a new green that terraces down to College Way and Wurster Courtyard.

D3 Arts Quad

Redesign and relandscape the quad to create an active gathering place for the arts disciplines around it. Incorporate spaces suitable for displays and informal performances.

D4 Music Library

Site and design the library to face and frame the quad, with active, transparent spaces.

D5 Art Museum Site

Once the museum and film archive relocate downtown, consider redeveloping the existing site with academic space facing Bancroft, and housing facing Durant, with parking below grade as shown.

Alternatively, the existing museum facility could be renovated in conjunction with seismic retrofit to house other campus units.

D6 Kroeber Annex

Consider replacing the parking lot and tennis deck with a new academic building, with parking below grade.

Site and design this new building so its Bancroft frontage aligns with Kroeber, and landscape the two setbacks in the same style.

D7 College Plaza

Upgrade the plaza with new planting, lighting and paving to enhance its identity as a major campus entrance.

D8 Piedmont Avenue

Collaborate with the city to renovate the historic Piedmont Avenue medians.

Area E Concepts

E1 Strawberry Creek Renewal

Develop and implement a management and phased restoration program for the creek and its riparian landscape, based on ecological principles.

E2 Wheeler Glade

Create a new creekside glade at the Sather Gate bridge, with gently sloping lawn on the south side and a terraced amphitheater form on the north.

E3 Dwinelle & Wheeler Plazas

Refurbish Dwinelle Plaza with improved seating, planting and paving. Continue the paving treatment east through Wheeler Plaza to South Hall.

E4 Campanile Way

Upgrade paving and lighting along Campanile Way and restore the continuity of the rows of plane trees. Create a forecourt at the south center entrance to VLSB.

Remove South Hall Annex and create a semi-enclosed service court, to replace service vehicle parking on Campanile Way.

Close Campanile Way to private vehicles, except for preauthorized service and delivery trips to California and Durant Halls.

E5 Live Oak Glade

Consider replacing the parking lot west of Dwinelle with a new academic building, with replacement parking below grade.

Site and design the new building to frame Campanile Way on the north and a new green open space to the west.

E6 Hearst Field West

Reconstruct Hearst Field West as an artificial turf playfield over two levels of parking, accessed from Barrow Lane.

Consider a new building at the west end of the field along Bancroft, with retail or active university uses at street level.

E7 Sproul Plaza & Sather Road

Repave and refurnish Sproul Plaza and Sather Road in materials commensurate with their role as the primary route through campus.

Expand the cafe terrace, and extend the cafe hours, to create an active social place and help make the plaza feel safer at night.

E8 Stiles Lot

Consider replacing the existing parking lot with a new student services building or, as shown above, a combination of student services on Bancroft and housing on Durant. Provide replacement parking below grade.

E9 Lower Sproul Plaza

In collaboration with student representatives, reprogram and redevelop Lower Sproul as a campuswide center for student services, conferences and organizations.

In lieu of retrofit, consider replacing Eshleman Hall with a lower and more transparent building, with active day-night uses at the plaza level.

Consider renovating Chavez Center as an open, welcoming center for student services, with active day and night uses facing the plaza.

In conjunction with retrofit and renovation of King Student Union, consider:

Creating a spacious transit plaza in place of the existing 'pit' along the Bancroft frontage, or

Expanding the upper and lower plaza levels with two-story extensions to the west and south, to create a larger, more flexible center for conferences, group work and rehearsals.

Area F Concepts

F1 RSF Frontage

Consider replacing the blank frontage of the existing RSF with a more transparent extension housing active program spaces, both to make the RSF more welcoming and to improve security along the street.

Create a consistent and pedestrian friendly landscape treatment along the Bancroft frontage. Consider removing the wall and planter in front of RSF in order to widen and landscape the sidewalk.

F2 RSF Annex

Consider a new building adjacent to RSF, designed as a transparent 'beacon' to house active recreation and service programs.

F3 Tang Lot

Redevelop 2200 Bancroft and the adjacent surface parking lot with a mix of academic and/or service functions facing Bancroft, housing facing Durant, and parking below grade.

F4 Edwards Green

Remove 2223 Fulton and relandscape the site west of Edwards as a green in the picturesque style of the West Crescent.

Eliminate the turn lane at the corner of Bancroft and Oxford to improve pedestrian safety and comfort.

Consider renovating the upper portion of Edwards Stadium west as program space, in conjunction with seismic retrofit.

Area G Concepts

G1 College-Durant Housing

Redevelop the existing surface parking lot with new student apartments.

G2 Units 1 and 2 Infill Housing

Demolish the existing dining facilities *(to be replaced by project G4)*, but retain and renovate the program spaces below grade. Construct a mix of student apartments and residence halls in four new mid-rise buildings at the perimeters of both sites.

Redesign the interior open spaces framed by the existing and new buildings as landscaped courtyards for the use of unit residents.

G3 Underhill Parking Facility

Develop a new 1000-space parking structure on the existing surface parking lot, with a turf recreational field at street level.

G4 Dining Commons

Remove the existing temporary buildings, and replace the existing dining facilities in units 1 and 2 with a new consolidated dining commons serving both units, along with administrative offices for campus auxiliary units.

G5 Channing-Bowditch Housing

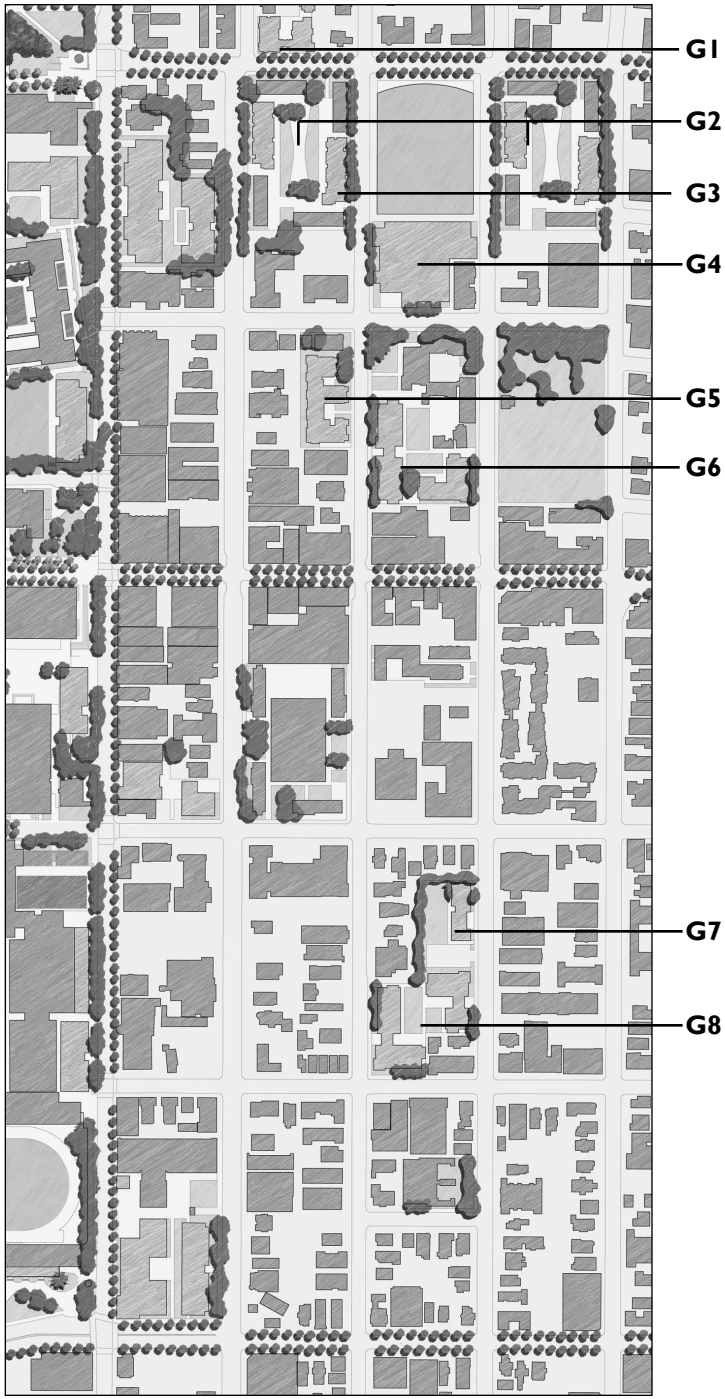
Remove the existing temporary buildings and redevelop the site with new student apartments, compatible in form, scale and style with the historic Anna Head complex across the street.

G6 Anna Head Housing

Redeveloping the existing surface parking lot with new student housing, compatible in form, scale and style with the adjacent Anna Head complex.

G7/8 Channing-Ellsworth Child Care and Housing

Redevelop the existing parking and tennis court structure with a new child care facility and student apartments.



Concept:

The Mining Circle returns as the crossroads of the northeast campus and a grand forecourt to the magnificent Hearst Memorial Mining Building. Replacement of Evans Hall by new twin pavilions restores the historic view to the Golden Gate.

PROJECT GUIDELINES

CORE CAMPUS
DESIGN GUIDELINES

LOCATION GUIDELINES

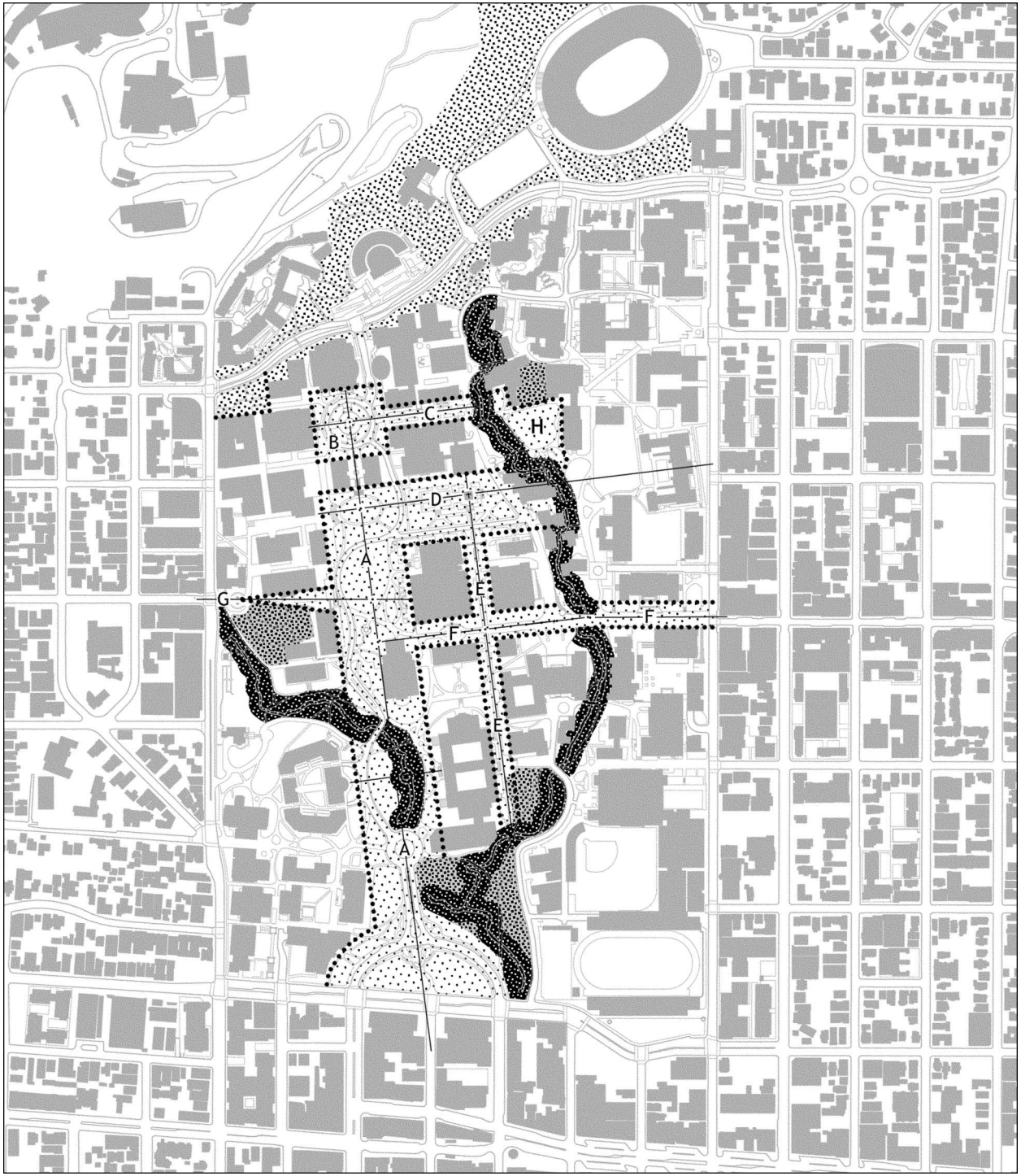
SPACE UTILIZATION GUIDELINES

CORE CAMPUS **DESIGN GUIDELINES**

This section includes general Design Guidelines for the core campus as a whole, as well as for certain specific types of places on campus with particular design conditions. However, as prescribed in policy 3.2, each major project also requires project-specific guidelines, to ensure the unique features of the site and environs are respected, and the project scope includes the site and landscape improvements described in the **Portfolio.**

The use of the word 'shall' in the Guidelines is not meant to entirely preclude alternate design solutions. The best solution for a site should not be rejected just because we could not imagine it in advance. However, while the project architects may present a concept which departs from the Guidelines, they must **also** present a concept which conforms entirely to the Guidelines. As a rule, the campus shall not depart from the Guidelines except for solutions of extraordinary quality.

Figure D.1: Preservation Zones



Natural riparian areas

Rustic campus woodlands

Rustic hill woodlands

View & openspace preservation zones

Key letters refer to individual zone descriptions in guideline D.1.

Figures 2.1 and D.1 are identical: the figure is duplicated here for easy reference to the guidelines.

Design Guidelines

Campus design has always been diverse. John Galen Howard himself broke with the classical vocabulary of his first several campus buildings to design the gothic-inspired Stephens Union; and the classical buildings themselves were departures from the earlier Victorian styles of North and South Halls. However, while the design of each building should reflect its own time and place, it should also reflect the enduring values of elegance, quality and durability, and form a coherent and memorable identity for the campus as a whole.

Moreover, there are several specific locations on campus where more prescriptive guidelines are required:

- New construction and renovation within the Classical Core shall enhance the integrity of this ensemble, and complement rather than compete with existing historic buildings.
- New buildings facing Places of Interaction shall be designed to shape these places, provide enclosure and security, and admit sunlight. Ground level spaces within these buildings shall house uses that observe and activate the place.
- Buildings at the City Interface shall be designed to create a graceful transition from campus to city, and enhance both the visual quality of the street and the pedestrian experience.

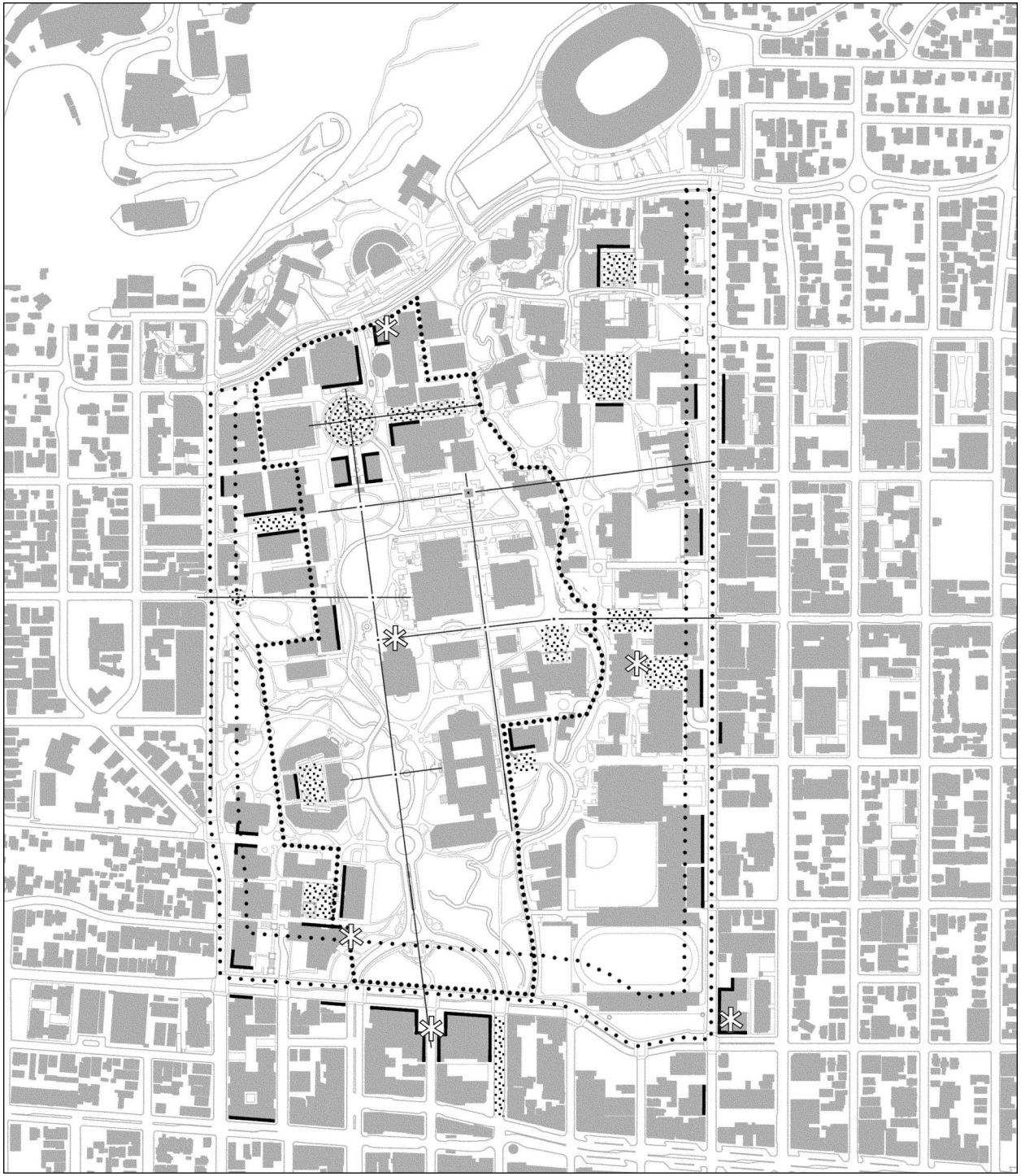
Guideline D.1 Preservation Zones

The preservation zones described below and in figure D.1 protect the major elements of the campus landscape armature, as well as its most significant historic exterior spaces. No new buildings shall intrude into the preservation zones.

Natural Preserves. The natural landscape along the two forks of the creek requires careful ecological management, as described in initiative 2.3, as well as protection from development and the impacts of adjacent development. The natural preserves are comprised of two subzones: zone 1, the riparian areas along the streamcourse, and zone 2, the other rustic woodlands adjacent to the riparian areas.

- Zone 1 is dominated by native and naturalized plants forming dense woodlands along the streamcourse. The width of this zone may vary in response to local conditions, but in general shall be at least 100', centered on the streamcourse.
- Zone 2 includes those other rustic woodland areas adjacent to the riparian landscape, which have a strong complementary relationship to the creek, and which also often have a strong historic and symbolic identity in their own right, such as Observatory Hill or Eucalyptus Grove.

Figure D.2: Design Controls



Classical core

City interface

New buildings in these locations shall conform to the frontage and height provisions in guidelines D.5 and D.8.

Places of interaction

New buildings facing these places shall conform to the frontage and height provisions in guidelines D.5 and D.8.

Key build-to lines

New buildings in these locations shall conform to the build-to provisions in guidelines D.1 and D.3.

Potential beacons

Hill Woodlands. While the woodlands east of Gayley Road are comprised primarily of introduced species, they provide a forested backdrop to the campus, and a graceful transition to the hills. Those woodlands that remain west of LBNL should be maintained as a preservation zone, to retain the unique rustic character they impart to the student residences, the Greek Theatre, and Gayley Road.

Central Glades (A) The preservation zone for the Central Glades reflects the axial geometry of the classical ensemble of buildings that frame and define them. No building to the north or south shall intrude within 180' of the east-west axis of the Glades: these setbacks coincide with the facades of Doe Library and McLaughlin Hall. The east edge of the preservation zone coincides with the east edge of Campanile Esplanade, below. At the west end of campus, the preservation zone widens to an arc 100' from the curbline of the West Crescent.

Mining Circle (B) The preservation zone is defined as a square 360' by 360' centered on the Circle. In order to reinforce the formal character of the Mining Circle as an outdoor room framed and defined by buildings, at least 75% of any new building facade shall lie on the setback line.

Gilman Esplanade (C) The preservation zone is defined as 50' on either side of the north-south axis centered on the Mining Circle and extending to the creek zone. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Campanile Esplanade (D) The preservation zone for Campanile Esplanade reflects the formal geometry defined by the north-south axis of Sather Tower, and is defined as 100' east and 200' west of this axis: these setbacks coincide with the facades of Birge Hall and Bancroft Library. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Campanile Way (E) The preservation setback is defined as 50' on either side of the east-west axis centered on Sather Tower and extending to the creek zone. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Sproul Plaza and **Sather Road** (F) This 120' wide zone preserves the primary north-south route through campus as a gracious, generous space with unobstructed views of Sather Gate. The zone is defined by the facades of Doe Library, Wheeler and Sproul Halls on the east and King Union, Durant and California Halls on the west.

North Gate (G) This zone is defined as a view cone originating at the center of the North Gate circle, with the east and west sides aligned with the corners of the north facade of Doe Library.

Faculty Glade (H) The preservation zone for Faculty Glade is defined by the Strawberry Creek natural preserve to the north and west, Morrison Hall to the south, and Hertz Hall and Faculty Club to the east.

Guideline D.2 Perimeter Setbacks

Campus edges and entrances should create a positive first image of both the campus itself and its synergy with the city around it. New buildings at the core campus perimeter should be sited and designed to accommodate a more coherent and unifying landscape treatment.

Hearst & Bancroft Frontages. Buildings shall be set back at least 20' from the curbline to accommodate a formal, urban, but generous landscape treatment along both frontages. The Landscape Master Plan shall define a palette of planting and paving materials and typical details for these setbacks.

Oxford Frontage. The majority of the Oxford frontage is comprised of green open space: the Crescent, the Creek, and the proposed Edwards Green. In order to create a more coherent landscape treatment in the picturesque style along this frontage, new buildings along Oxford shall be set back a minimum of 60' from the curbline.

Gayley Road. One of the most memorable aspects of the campus is its setting at the base of the eastbay hills, and Gayley Road should be reinforced as the 'seam' linking the campus with the hill landscape. Each building shall be set back an average of 40' from the curbline to accommodate an informal landscape treatment along both sides of the roadway. While building edges should be articulated to vary the setback depth, no portion of a building shall be closer than 20' to the curbline.

Individual perimeter sites may have spatial relationships that require wider setbacks: for example, to align facades with neighboring buildings. These shall be prescribed in the project-specific guidelines.

Note: The setbacks prescribed in Guidelines D.1 and D.2 apply to all above-grade structures. Below-grade structures may extend into the setbacks, but only if they are invisible at the surface; provide soil depth adequate to support landscaping at grade; and do not compromise the integrity of sensitive landscapes. Any elements of below-grade structures that project above grade, such as vents, entry pavilions, or skylights shall be sited outside the setback.

Guideline D.3 Build-To Lines

Guideline D.1 prescribes build-to lines for certain historic campus open spaces. There are also certain other places on campus where build-to lines are desirable to shape, frame and activate streets and open spaces, and/or to relate positively to existing buildings. Figure D.2 designates critical build-to lines for potential building sites. While some variation is desirable to allow for entrances and facade articulation, at least 75% of the facade shall lie on the build-to line.

Guideline D.4 Orientation & Exposure

Each new building shall be oriented and designed to take advantage of solar angles and wind direction to reduce energy consumption. The design shall include consideration of shading options on south and west exposures to reduce heat gain in summer but admit natural light in winter. Shading options shall include landscape elements, such as deciduous trees, as well as architectural elements.

The design shall also include consideration of facade treatments that respond to the characteristics of each exposure with respect to heat, light and ventilation. For example: more glass on the north and east exposures, less glass and greater thermal mass on the south and west, and vents and operable windows located and designed to optimize natural airflow.

Classical Core. Within the classical core the axial, orthogonal relationships of the historic ensemble shall take precedence in determining building orientation.

Guideline D.5 Active Frontages

Places of Interaction. Ground level spaces in each building facing a place of interaction shall house functions with a high frequency of human presence and public activity, such as lounges, libraries, cafes, display spaces, and walk-up services. The main building entrance shall be located in the facade facing the place of interaction.

City Interface. In the city General Plan, several sections of blocks adjacent to campus are designated 'commercial': ground level spaces in university buildings within those areas shall include retail and/or storefront services at ground level. Other university buildings at the campus perimeter or on adjacent blocks shall house functions with a high frequency of human presence and activity at ground level.

Guideline D.6 Entry Plazas & Terraces

Each new building shall be sited and designed to create a plaza or terrace at the main entrance, to serve as a casual gathering place for its users. The plaza or terrace shall be distinguished as a place by design treatment - paving, lighting, furnishings - and shall incorporate provisions for disabled access.

Guideline D.7 Services

All bulk trash containers and building equipment shall be concealed within enclosures designed as integral elements of the architecture. Loading docks shall be concealed and secured when not in use.

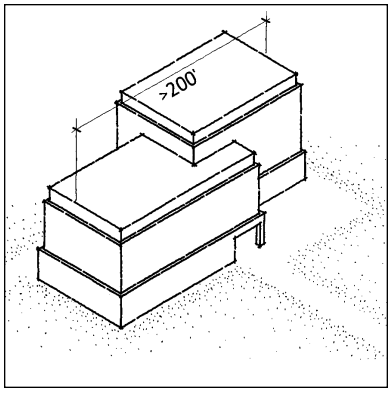
Guideline D.8 Height

Places of Interaction. Buildings facing places of interaction shall be scaled to admit sunlight to the place and impart a comfortable human scale. As shown in figure D.5, buildings shall be no greater than 65' in height within 75' of the build-to line. Beyond this distance, height may increase 1' for every 1.5' of distance from the build-to line.

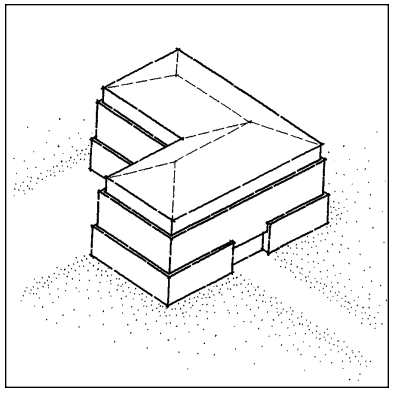
Individual sites may present spatial relationships that require lower heights along the build-to line: for example, to align cornice lines in order to create a more formal sense of enclosure. These shall be specified in the project-specific guidelines.

City Interface. Buildings at the campus edge shall be designed to create a graceful transition in scale from campus to city. Along the Hearst and Bancroft frontages of the core campus, buildings shall be no greater than 65' in height within 100' of the curbline. On sloping sites, parts of the building may be greater than 65' but not over 80' in height, but the average height within the 100' wide zone shall be no greater than 65'.

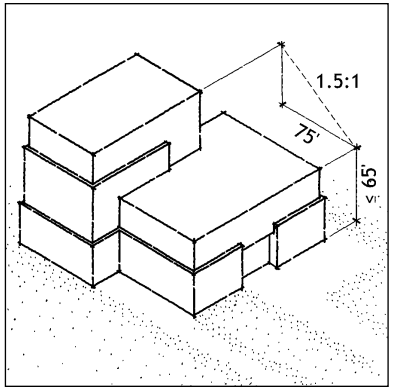
Along the Oxford frontage, buildings shall be no greater than 95' in height within 200' of the curbline. On sloping sites, parts of the building may be greater than 95' but not over 110' in height, but the average height within the 200' wide zone shall be no greater than 95'.



D.3 Variations in plane and height in long buildings.



D.4 Articulated base and top. (Pitched roof form required only within the classical core.)



D.5 Heights of buildings facing places of interaction.

Guideline D.9 Composition

Large buildings shall be designed to reduce their perceived mass and impart a human scale to the campus. Each building with a horizontal dimension greater than 200' shall incorporate changes in both facade plane and vertical height to reduce its perceived scale and bulk, as shown in figure D.3.

Each building over 3 stories shall have both an articulated base and an articulated top, as shown in figure D.4. Flamboyant architectural gestures are discouraged: rather, the top should create a simple and graceful terminus for the building.

Classical Core. Each new building within the classical core shall be composed of elements orthogonal in plan and composition, and sited to reinforce the axial relationships of the historic core buildings and the Central Glades.

Guideline D.10 Roof Forms

Roof top equipment shall be enclosed and concealed in every new building, and the enclosure shall be designed as an integral element of the building architecture. In new buildings, the design shall include consideration of roof forms that accommodate passive and active solar energy devices as elements integral to the building architecture.

Classical Core. Each new building within the classical core shall have a hip or gable roof, with a pitch similar to existing historic core buildings.

Guideline D.11 Facades

Each building shall be a coherent architectural composition, and shall employ a single, unifying vocabulary of forms, details and materials on all building facades.

In each new building, facades shall be composed primarily of solid planes with punched windows. While metal and glass wall systems may be employed as special architectural features, in general the pattern of solid and transparent elements shall respect the structural grid.

Classical Core. Each new building within the classical core shall be fenestrated exclusively with individual punched windows, having a greater vertical than horizontal dimension. Windows and doors shall be inset at least 6" from the exterior wall surface. Windows may be large and paned, but shall not span structural elements.

Guideline D.12 Architectural Materials

Exterior materials shall be selected to convey an image of quality and durability. Suitable primary exterior materials include granite, concrete and true plaster. Metal and glass wall systems may be used sparingly as special architectural features; however, dark, opaque or reflective glass is prohibited.

Visual interest shall be created by the articulation of planes and volumes, not by arbitrary changes in materials. Changes in materials shall occur only at the inside corners of changes in surface plane.

Classical Core. Each new building within the classical core shall utilize the following materials palette:

- Roofs: unglazed red clay mission tile.
- Walls: light grey granite or architectural concrete, sand finish.
- Windows: clear or lightly tinted glass, copper or bronze frames.
- Skylights: copper or bronze frames.

Guideline D.13 Site and Landscape Materials

The Landscape Master Plan, building on the Policies & Initiatives in this framework, will prescribe more detailed palettes of site and landscape materials for the campus.

Plant Materials. Landscapes within creek preservation zones 1 and 2 shall follow the guidelines prescribed in initiative 2.3 for plant selection. Elsewhere, plant materials shall be selected to fit the desired structural form and function, while also contributing to a campuswide landscape which is both diverse and well suited to its site, climate, and intensive use.

In general, plants with similar water and maintenance needs shall be grouped into zones to optimize both water use and maintenance. High maintenance zones shall be limited to building entrances and other heavily used places.

Site Materials. Presently nearly all routes on the central campus are surfaced with asphalt. While this material is suitable for vehicular roads and narrow, secondary pathways, major plazas and pedestrian routes deserve better: not only to improve their visual quality, but also to clarify the hierarchy of routes and the primacy of the pedestrian.

Suitable paving materials for major plazas and primary pedestrian routes include brick, cast and natural stone, and concrete. Paving materials, lighting and furnishings shall be selected with care to ensure the identity and continuity of pedestrian routes are clearly discernable. Paving materials shall also be selected to maximize the amount of pervious surface. Paving materials that allow water infiltration are encouraged, particularly for secondary paths and roads.

Program Guidelines

Campus buildings endure far longer than their initial contents, and should be designed to maximize their flexibility and adaptability. Although the future is unpredictable, a few basic conventions should be followed in the design of all new buildings to ensure these major investments have a long and productive life.

Guideline D.14 Ground Floor Spaces

Guideline D.5 prescribes specific programming for buildings facing Places of Interaction and at the City Interface. However, the program of every new building on campus shall seek to optimize its contribution to the quality of campus life. The ground level spaces of each building shall be reserved for its most public functions, and those spaces facing public areas shall be as transparent as the program allows. Main entry lobbies shall be designed as inviting places for waiting and engagement, with features commensurate with the scale and functions of the building.

Guideline D.15 Floor Heights

Each new building on the core campus shall have a floor-to-floor height of at least 15', in order to accommodate a wide range of instruction and research functions and the infrastructure they require. A greater height on the ground floor may be desirable to accommodate larger public and assembly spaces, such as libraries or lecture halls.

Guideline D.16 Floor Configuration

Each new building shall be configured to accommodate a broad range of functions. The need to provide for a specific program in the near term must be balanced against the rapid pace of cultural and technological change, and the long lives of campus buildings. In general, a building width of 75-80' can accommodate a variety of office, lab and classroom layouts.

Guideline D.17 Internal Partitions

Each new building shall be designed to consolidate fixed, immovable elements at the core and perimeter. and minimize or eliminate such elements elsewhere. Spaces shall be demised with easily reconfigurable partitions.

Guideline D.18 Top Floor Spaces

In tall buildings, particularly those with a view to the west, at least some top floor space with views should be reserved for conference/event rooms available for use by the entire campus. This is an emerging campus tradition, begun in Barrows and continuing through Wurster, Tan and Haas, and should be encouraged as a way to foster intellectual collaboration.

LOCATION GUIDELINES

The contiguity of the core campus as a guiding principle of future campus growth is established in the Academic Plan, and reflected in the framework for growth described in strategic goal 1. But because core campus land is a scarce and finite resource, and the potential of the core campus to accommodate further growth is therefore limited, it is neither feasible nor desirable to house every university function on campus. Some units do not require physical campus proximity, while others are unsuitable for the campus and its urban environs due to scale, service requirements, or environmental considerations.

As prescribed in policies 1.5-1.7, the Location Guidelines in this section shall ensure the use of space on and around the core campus follows the goals articulated in the Academic Plan:

- to accommodate future academic growth on the core campus and adjacent blocks,
- to reserve core campus space for functions that serve and/or involve students, and
- to reserve adjacent blocks for research, cultural and service units that require core campus proximity.

Table L.1: Campus Location Guidelines

Use	Priority	Definition	Location	
Instruction & Research	1	Classrooms and class labs	Core Campus	
	1	Faculty office, research and conference spaces	Core Campus	
Academic Support	1	Libraries, computer labs, student workspaces	Core Campus	
	1	Deans and chairs, academic advisors, academic senate	Core Campus	
Research Units	1	Primarily shared departmental research facilities and primarily faculty and student participation	Core Campus	
	2	Primarily dedicated sponsored research facilities and/or primarily staff and postdoctoral participation	Adjacent Blocks	B
	3	Facilities incompatible with campus location due to scale, service demands, or environmental impact	Urban Eastbay	C
Institutional Support	1	Chancellor and individuals and groups who require frequent, direct interaction with the Chancellor	Core Campus	
	1	Critical on-site plant operations services	Core Campus	
	2	Visitor-intensive: frequent visitors from outside campus	Adjacent Blocks	B
	2	Service-intensive: frequent visits to/from core campus units	Adjacent Blocks	B
	3	Process-intensive: primarily document-based or computer-based functions rather than face to face interactions	Urban Eastbay	C
	3	Computer and telcom centers, industrial production, materials handling and storage, plant administration	Urban Eastbay	C
Student Services	1	Student organizations	Student Center	A
	1	Walk up information and transaction services	Student Center	A
	2	Counseling and health services	Student Center	A
	2	Student programs administration	Student Center	A
	2	Auxiliary programs administration	Adjacent Blocks	B
Public Services	2	Museums, performance venues	Adjacent Blocks	B
	3	University extension	Urban Eastbay	C
University Housing	-	Lower division and first year transfer students	One mile radius of Doe Library	
	-	Upper division and graduate students	20 min transit trip to core campus	
	-	Faculty and staff	30 min transit trip to core campus	

A *Student Center includes those buildings fronting on Sproul and Lower Sproul Plazas, plus Bancroft frontages from Barrow Lane to Oxford. Locate priority 1 functions on sites within the core campus, and priority 2 functions on sites on adjacent blocks.*

B *Adjacent Blocks include the area defined in Figure 0.1.*

C *Urban Eastbay includes cities of Oakland, Berkeley, Emeryville, Albany, El Cerrito and Richmond*

SPACE UTILIZATION GUIDELINES

Given the physical limits to the capacity of the central campus, and the scarcity of capital for new facilities, UC Berkeley must optimize the use of existing assets. Reasonable and credible space utilization guidelines can serve as an objective baseline to:

- evaluate space requests for new or growing functions,
- project space demand for new projects, and
- ensure each campus unit is adequately and equitably housed.

Because campus units are not charged for the space they use, the tendency in any new project is to maximize the program. For its future tenants, who may have spent many frustrating years in substandard facilities, this is understandable. It is not, however, in the interest of the campus as a whole. Each dollar spent on unnecessary space is one less dollar available for durable and sustainable materials, adequate common spaces, and decent landscaping. Campus buildings endure far longer than their initial contents, and must be designed for the ages.

Table U.1: Academic Space Guidelines

Space Type	Research Space Description	Position	Ofc ASF	Res ASF	Total ASF
A	Office-based research: team project/conference spaces.	Faculty	225	50	275
		Grad Instructor	150		150
		Postdoc/Researcher	150	50	200
		Grad Student		50	50
B	Combination office and lab-based research: labs, project & observation rooms often shared by several teams.	Faculty	225	150	375
		Grad Instructor	150		150
		Postdoc/Researcher	150	100	250
		Grad Student		100	100
C	Individual or team studios for rehearsal or production. Moderate service/support, some special equipment.	Faculty	225	150	375
		Grad Instructor	150		150
		Postdoc/Researcher	150	150	300
		Grad Student		150	150
D	Laboratories with moderate infrastructure and environmental controls. Core space and equipment shared among research teams. Service/support 10-25% of lab space.	Faculty	225	350	575
		Grad Instructor	150		150
		Postdoc/Researcher	150	180	330
		Grad Student		180	180
E	Large individual studios for creative activity. Special service/support required, often for equipment-based activity such as fabrication, editing and production.	Faculty	225	500	725
		Grad Instructor	150		150
		Postdoc/Researcher	150	250	400
		Grad Student		250	250
F	Complex team-based laboratories: high demand for utility infrastructure, environmental controls, and built-in and movable equipment. Service/support 25-50% of lab space.	Faculty	225	500	725
		Grad Instructor	150		150
		Postdoc/Researcher	150	250	400
		Grad Student		250	250

Precise campus standards for space utilization are elusive, due to the enormous variety and complexity of research space: but precision is not the point. What UC Berkeley requires is a simple and objective, but flexible, set of guidelines to ensure space is responsibly used and equitably distributed.

By far the most significant users of space on campus are the office and research functions of academic programs: they comprise over half of all core campus space. Until now, the nearest thing to space utilization guidelines UC Berkeley has had are the standards developed in 1990 by the California Postsecondary Education Commission, based on a massive nationwide study. The CPEC standards prescribed typical asf/person ratios for academic office and research space. Office standards are uniform, and include allowances for support space. Research standards, on the other hand, vary by discipline: CPEC defined six categories, with a typical standard for each.

Office Space

Since 1990, two major trends have influenced office space design: the growth in demand for conference and other interactive work spaces, and the expansion of the personal computer to every desktop. In light of these trends, table U.1 reflects several adjustments to the CPEC standards:

- **Individual workspaces.** 150 asf for faculty and 75 asf for postdocs and graduate instructors. Postdocs and instructors do not require workspaces as large as faculty: the typical workspace for these positions now is half of a shared 150 asf office.
- **Conference space, including informal team workspaces.** 10 asf per person, based on the average person spending a third of his or her workday in some form of interactive activity, and on conference spaces averaging 30 asf per seat.
- **Workspace for support staff.** The ratio of academic staff to support staff at UC Berkeley varies by discipline, from roughly 1.5:1 to 3:1. A reasonable individual workspace for support staff is 100 asf: using the midpoint ratio of 2.25 yields an allowance of approximately 45 asf of support staff space per academic staff.
- **Service and storage space.** A typical ratio for service and storage is 10% of all individual and group workspace, or roughly 20 asf per person.

Research Space

Research space is a more complex problem. Changes over the past decade have no doubt been even more profound for research space than office space: but those changes are unique to each discipline, and to identify and characterize them would be a significant project in itself, on the scale of the original CPEC study.

However, the original CPEC taxonomy remains valid in terms of the basic types of research space. While specific factors may need to be recalibrated – for example, to reflect the increased use of simulation rather than field experiments – this may be done iteratively, as new program data become available from actual projects.

Implementation

The basic methodology for space guidelines is already in place at UC Berkeley. The designations of research space categories for each department are already used to prepare our yearly reports of campuswide space utilization to UCOP. In order to make the guidelines in table U.1 practical tools for space management, the campus should consider the following protocols:

- **No capital investment should raise the asf of a college, division or school more than 10% above its guideline.** While the guidelines should allow exceptions for unique circumstances, such exceptions should be granted only if the campus finds:

  the guideline can not be met at reasonable cost,
  the historic or architectural quality of a building must be significantly compromised for the guideline to be met, *or*
  the program requires equipment or modes of work not anticipated in the guidelines.

- **Space guidelines should be enforced only at the level of college, division or school.** The guidelines for individual departments shall be summed to yield a figure for the college, division or school as a whole. As long as this figure conforms to the 110% limit prescribed above, deans should have the discretion to allocate space among their departments.

- **Space guidelines should apply only to the core campus and environs.** As an incentive to relocate priority 3 functions to more remote sites, any space located outside the core campus and environs, as defined in figure 0.1, should be exempt from the guidelines calculations.

- **Special types of space unique to particular disciplines should not count against the guidelines.** However, if the guidelines are to be credible, the campus must minimize these special designations; otherwise, units would simply reclassify their space to meet the guidelines. Presently, each such designation requires both campus and UCOP approval: the campus should continue to hold such requests to a rigorous standard.

- **The guidelines should be augmented to cover other types of core campus space as required.** For example, the guidelines for academic office space could serve as a basis for similar guidelines for administrative offices.

PROJECT APPROVAL

A strategic plan is only as effective as its means of implementation. The Berkeley campus has been the subject of many outstanding analyses over the years, yet decisions on individual projects tend to be ad hoc: not because the campus lacks sound decisionmaking principles, but because there has been no clear linkage of those principles to a practical decision sequence.

The campus has already taken the first steps to change this paradigm, by forming the Executive Campus Planning Committee (ECPC) and by establishing a new, clear approval process for capital projects. This section describes how the policies and guidelines articulated in this Plan shall be integrated into the approval process, to ensure investment decisions both optimize the use of resources and help to realize the campus vision.

The capital projects approval process is a sequence of seven phases, as described on the following pages. However, the scale, form and character of a project is defined in the first three phases: Concept Review, Feasibility Analysis, and Program Development.

Phase 1: Concept Review. In this phase, Capital Projects manages the **Policy Review** of the concept proposed by the sponsor, which includes a review of its alignment with the strategic goals, policies, guidelines and initiatives in the New Century Plan. Space Management & Capital Programs collaborates with Capital Projects on those strategic goals which fall within its expertise and authority. Capital Projects also consults with other campus units and committees in their respective areas of interest and expertise. The **Policy Review** provides the basis for the analysis and recommendation presented to the Executive Campus Planning Committee (ECPC).

Phase 2: Feasibility Analysis. In this phase, based on a preliminary space program developed with the Preprogram Committee, Capital Projects identifies a range of options, or alternate solutions. As a rule, the set of options should include retrofit and systems renewal; renovation; replacement; and, if relevant, noncapital solutions such as physical reorganization. As described in strategic goals 1 and 10, the options should also include alternate models for project delivery as well as sustainable design features.

Capital Projects then manages a **Policy Review** of the set of options, to ensure their conformance with the New Century Plan, followed by an **Options Analysis** leading to a proposed solution. Capital Projects then prepares design guidelines, manages the **Campus Review** of the proposed solution, and prepares and presents its recommendation to ECPC.

Phase 3: Program Development. The sequence in this phase is similar to the previous two. Based on a detailed program and design concept prepared by the Architect and Program Committee, Capital Projects manages a **Project Review**, including a preliminary environmental analysis as well as an analysis of surge requirements. It then manages the **Campus Review** of the program and design concept, and prepares and presents its recommendation to ECPC.

Phases 4-7. Capital Projects continues to monitor project quality and manage campus reviews as the project proceeds through the design and construction sequence.

***Note**: the process described on the following pages applies to projects over $1 million. For smaller projects, a more streamlined process is available, as described at the end of this section.*

Phase 1: Concept Review *(projects over $1 million)*

1.1 Sponsor submits proposal with VC signature, including funding strategy

1.2 Capital Projects meets with Sponsor to explain process

1.3 Sponsor prepares abstract of proposal: objectives, justification, alternatives considered, and funding strategy: Capital Projects consults on range of alternatives.

1.4 Capital Projects reviews abstract for adequacy of information: may require revision by Sponsor

1.5 Capital Projects manages **Policy Review**

- 1.5a Capital Projects reviews for conformance with New Century Plan strategic goals, in collaboration with Space Management & Capital Programs.
- 1.5b Committee on Academic Planning & Resource Allocation reviews for academic implications
- 1.5c University Relations and Community Relations review for communications implications
- 1.5d University Relations and Budget & Finance confirm funding strategy

1.6 Capital Projects manages **Technical Review**: technical implications and preliminary cost projection

1.7 Capital Projects compiles reviews, prepares **Concept Analysis** and recommendation

1.8 VC Capital Projects reviews analysis, confirms recommendation

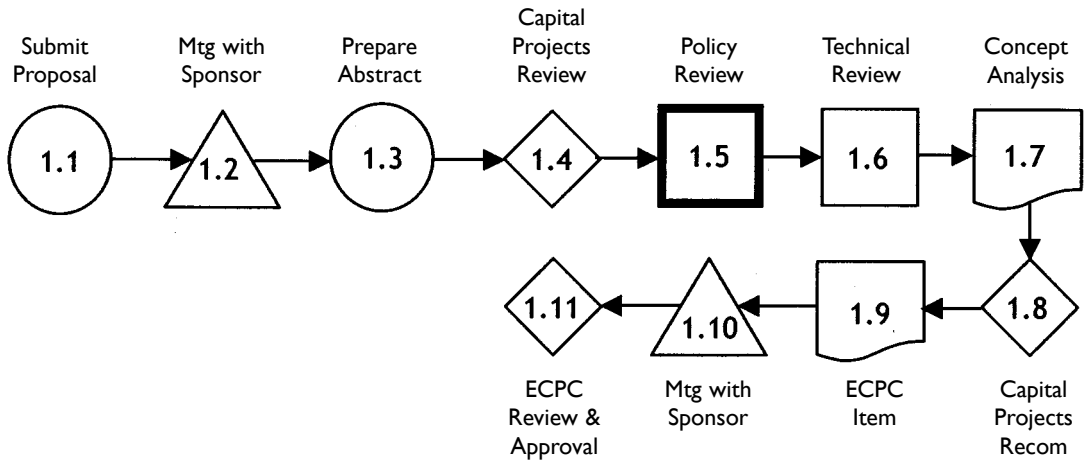
1.9 Capital Projects prepares draft ECPC item

1.10 Capital Projects reviews draft ECPC item with Sponsor

1.11 ECPC recommendation and Chancellor approval

(projects under $5 million may be delegated to Vice Chancellors' Administrative Council)

1.12 Funds allocated to cover phases 2 and 3

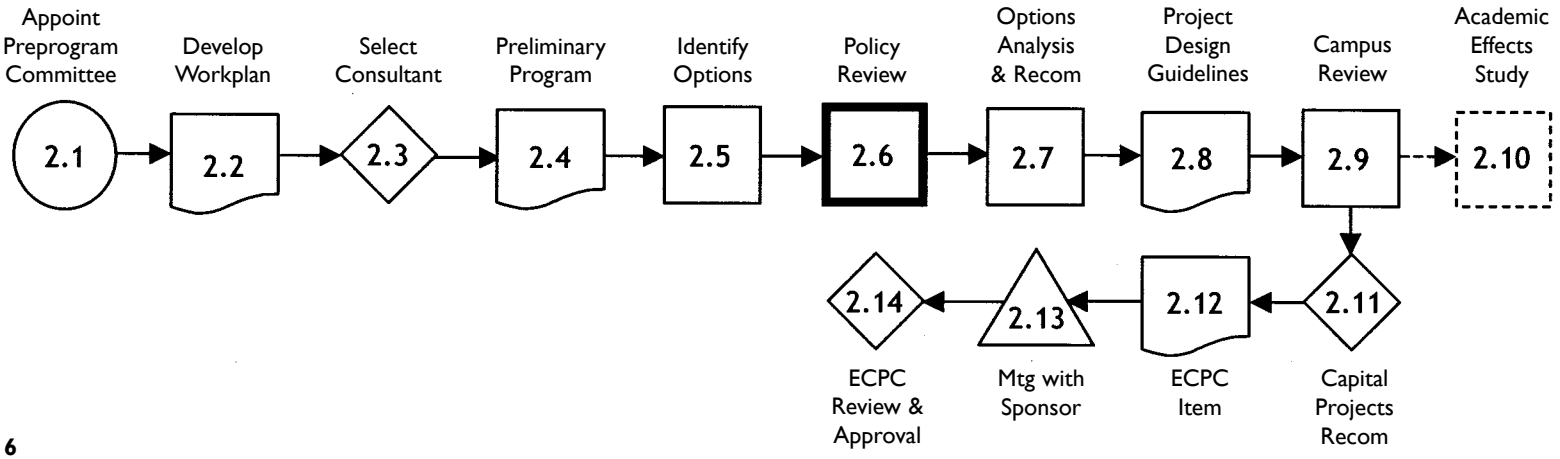


Phase 2: Feasibility Analysis *(projects over $1 million)*

2.1 Sponsoring VC appoints Preprogram Committee
2.2 Capital Projects prepares workplan for phase 2: scope, timeline, staff budget and, if required, consultant budget
2.3 If required: Capital Projects prepares scope of consultant services, identifies prospective consultants, obtains and reviews proposals, and recommends selection to Preprogram Committee
2.4 Capital Projects or Consultant develops preliminary space program and diagrams
2.5 Capital Projects identifies options: range of alternate solutions plus 'no action' option
2.6 Capital Projects manages **Policy Review** of options
- 2.6a Capital Projects reviews for conformance with New Century Plan strategic goals, in collaboration with Space Management & Capital Programs
- 2.6b Capital Projects identifies environmental implications of options

2.7 Capital Projects prepares **Options Analysis** and proposed solution
2.8 Capital Projects prepares project design guidelines for proposed solution
2.9 Capital Projects manages **Campus Review**
- 2.9a University Relations and Community Relations
- 2.9b Design Review Committee
- 2.9c Space Assignment & Capital Improvements Committee
- 2.9d Committee on Academic Planning & Resource Allocation

2.10 SMCP prepares Academic Effects Study, to be completed prior to start of phase 3
2.11 VC Capital Projects confirms proposed solution
2.12 Capital Projects prepares draft ECPC item
2.13 Capital Projects reviews draft ECPC item with Sponsor
2.14 ECPC recommendation and Chancellor approval

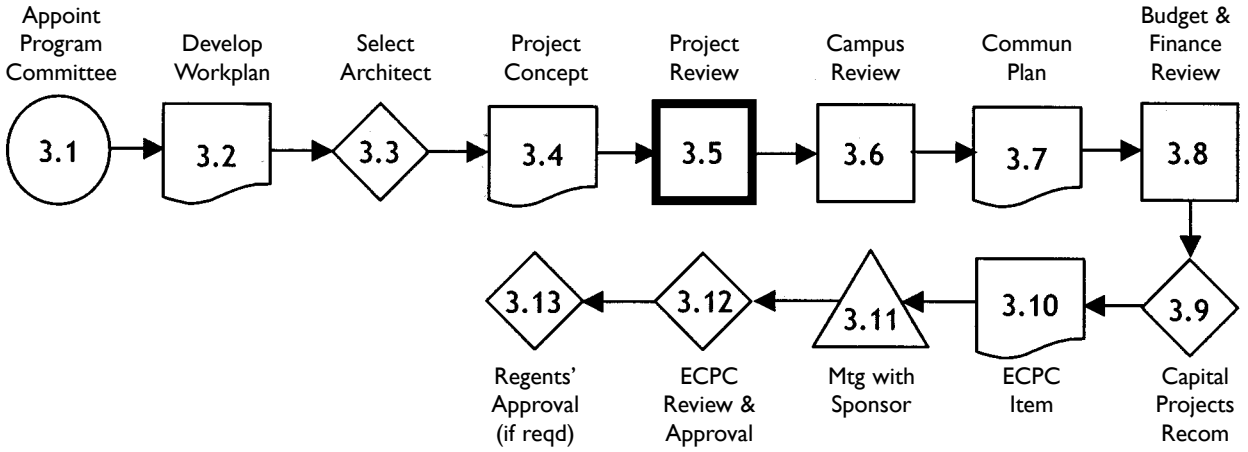


Phase 3: Program Development *(projects over $1 million)*

3.1 EVC/Provost appoints Program Committee
3.2 Capital Projects prepares workplan for phase 3: scope, timeline, staff and consultant budget
3.3 Capital Projects selects architect for project
3.4 Architect and Program Committee prepare program and design concept: space program, conceptual site plan, conceptual floor plans, conceptual massing, proposed budget and schedule
3.5 Capital Projects manages **Project Review** of program and design concept
- 3.5a Capital Projects reviews for conformance with design guidelines
- 3.5b Capital Projects prepares preliminary environmental analysis/initial study
- 3.5c Capital Projects prepares surge analysis

3.6 Capital Projects manages **Campus Review**
- 3.6a University Relations and Community Relations
- 3.6b Design Review Committee
- 3.6c Space Assignments & Capital Improvements Committee
- 3.6d Committee on Academic Planning & Resource Allocation

3.7 University Relations and Community Relations prepare communications plan
3.8 Budget & Finance reviews project in relation to capital budget
3.9 VC Capital Projects confirms program and design concept, budget and schedule
3.10 Capital Projects prepares draft ECPC item
3.11 Capital Projects reviews draft ECPC item with Sponsor
3.12 ECPC recommendation and Chancellor approval
3.13 UCOP and Regents' approval of budget/capital improvement program amendment for projects over $5 million
(extent of UCOP and Regents' review depends on size of project budget)
3.14 Funds allocated to cover phase 4



Phase 4: Schematic Design *(projects over $1 million)*

4.1 Architect completes schematic design
4.2 Capital Projects reviews for conformance with project design guidelines
4.3 Capital Projects manages **Campus Review**
- 4.3a Design Review Committee
- 4.3b Seismic Review Committee
- 4.3c Committee on Removal of Architectural Barriers
- 4.3d Program Committee *(if changes to scope/budget/schedule)*
- 4.3e Space Assignments & Capital Improvements Committee *(if changes to scope/budget/schedule)*

4.4 Capital Projects presents schematic design to ECPC, plus any scope/budget/schedule changes
4.5 ECPC recommendation and Chancellor approval
4.6 Regents' design approval for projects over $5 million
4.7 Sources for 85% of project funds must be identified before starting phase 5

Phase 5: Design Development *(projects over $1 million)*
Phase 6: Working Drawings *(projects over $1 million)*
same sequence in both phases

5.1/6.1 Architect completes design development (phase 5) or working drawings (phase 6)
5.2/6.2 Capital Projects reviews for conformance with project design guidelines and schematic design
5.3/6.3 Capital Projects manages **Campus Review**
- 5.3a/6.3a Design Review Committee *(if changes to exterior design)*
- 5.3b/6.3b Seismic Review Committee *(if changes to structural design)*
- 5.3c/6.3c Program Committee *(if changes to scope/budget/schedule)*
- 5.3d/6.3d Space Assignments & Capital Improvements Committee *(if changes to scope/budget/schedule)*

5.4/6.4 ECPC review *(if changes to exterior design or scope/budget/schedule)* and Chancellor approval
6.5 100% of funds must be in place before awarding construction contract

Phase 7: Bid and Construction *(projects over $1 million)*

7.1 Budget augmentations require review and recommendation by Vice Chancellors' Administrative Council
7.2 Augmentation requests must identify source of additional funds
7.3 Chancellor approval

Projects $1 - 5 million may be delegated to the Vice Chancellors' Administrative Council (VCAC) following Concept Review approval.

Projects Under $1 million are reviewed by VCAC: they may proceed directly from Concept Review approval to a combined Program and Design phase, and then to Bid and Construction.