Aerial View of campus site with 3D model of Mission Bay. Illustrative Example
Base model illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.

A.1 Base image courtesy of the Catellus Development Corporation.
In January 1997, The Regents of the University of California approved the 1996 Long Range Development Plan (LRDP) for the University of California, San Francisco (UCSF) and certified its accompanying Environmental Impact Report. The adoption of the LRDP culminated a seven-year planning process during which UCSF worked with faculty, staff, neighbors, the public, and three advisory groups to develop a long-range plan to guide the physical development of UCSF. The LRDP identified two ways in which UCSF would meet its current and future space needs: by reinvesting in existing sites, and by establishing a major new site capable of providing 2.65 million gross square feet (gsf) of new space for biomedical research and associated support facilities. In May 1997, The Regents of the University of California approved Mission Bay as the location for UCSF’s major new site, and in September 1997 the Regents reached agreement with the Carellos Development Corporation for the donation of 30 acres of property at Mission Bay, which, together with 13 acres from the City and County of San Francisco, comprise the 43-acre Mission Bay campus site.

In April 1998, a Preliminary Campus Development Plan (PCDP) was prepared to set forth the basic land use concepts for development of the campus site. This Draft Mission Bay Plan expands upon the information contained within the PCDP to guide the phased development of the 2.65 million gsf space program at the 43-acre Mission Bay campus site. The Master Plan is intended to provide an overall framework to guide the physical development of the new campus site, and sets forth basic principles to guide the design of individual buildings which will be designed by many different architects over time. The Master Plan is also intended to guide site grading and landscaping, as well as the phased development of infrastructure serving the site. While this Master Plan seeks to implement the broad goals set forth by the LRDP, full implementation of the Plan will be dependent upon the financial resources of the University.
Mission Bay Development

Mission Bay is a new 303-acre planned community located along the eastern edge of San Francisco, bounded by Townsend Street to the north, Seventh Street and Interstate 280 to the west, Mariposa Street to the south, and Terry A. Francois Boulevard to the east. The Plan is comprised of two distinct areas divided by the China Basin Channel: 65 acres in Mission Bay North, and 238 acres in Mission Bay South, which includes the 43-acre UCSF campus site. Owned by Carrellia Development Corporation, Mission Bay encompasses vacant rail yards and several warehouse structures. The Mission Bay Plan allows for the development of the area with 60,990 housing units, 950,800 gross square feet (gsf) of retail space, 6,616,000 gsf of research and development, light manufacturing, and other commercial space suitable for biotechnology and multimedia uses, and a 500-room hotel. Anchoring development in Mission Bay South is the UCSF campus site, containing approximately 2.65 million gsf of instruction, research, and support space on land donated by Carrellia and the City. The Mission Bay Plan also includes a total of about 49 acres of open space, including at least 8 acres of publicly accessible open space on the UCSF campus site.

The UCSF Mission Bay Campus conforms to the vara block grid of the Mission Bay Development. A vara block (275 feet wide by 412.5 feet long) is the historical unit for establishing the city block dimensions unique to San Francisco. This grid is intended to maintain traffic and transit connections to the City, as well as to preserve view corridors to the surrounding area. No buildings will be

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**Location Map & Description**

City Location Map (Base map is illustrative only)
Introduction

Mission Bay Master Plan

The campus site is bounded by 3rd Street to the east, which acts as the main arterial connection to the City; the Common, a public park to the north, which serves as a community park; Owens Street to the west; and 16th Street to the south. The only public street running through the campus is 4th Street. The eastern boundary of the site will accommodate the proposed MUNI 3rd Street Light Rail line, and the proposed route of the 22-Fillmore bus line, which will stop at the Plaza, the eastern gateway to the campus.

As a terminus to 5th Street, the Campus serves as a pedestrian corridor, linking a variety of green spaces to China Basin. The Campus is easily accessible from Interstate 280 to the west which offers direct access to campus service facilities located along Owens Street.

The campus site will also accommodate a new San Francisco Unified District School on the northwest block of the campus.

Buildings on campus are limited to heights ranging from 85' to 160' (exclusive of rooftop mechanical equipment) by the Mission Bay South Redevelopment Plan. Currently, all buildings shown in the Campus Masterplan are maintaining the lower 85' height limit.

The campus site is built within or bridge across these view corridors. See page D-4 for critical building alignments and page F-6 for assumed building dimensions.

Buildings on campus are limited to heights ranging from 85' to 160' (exclusive of rooftop mechanical equipment) by the Mission Bay South Redevelopment Plan. Currently, all buildings shown in the Campus Masterplan are maintaining the lower 85' height limit.
Purpose of the Document

Project Context
The new Mission Bay campus for the University of California San Francisco is the first of its kind in the United States. As part of one of the largest single urban development projects in this country, it is functionally different from most educational institutions. Historically, UCSF has been unique in its emphasis on graduate level studies in the health sciences, and in its close relationship with local industry. At the Mission Bay Campus, UCSF has a rare opportunity to affect the urban fabric of one of the most prominent cities in the world, and to impact the way future campuses unify their faculty, their campus community, the private-sector industries which relate to them, and the greater public and surrounding neighborhoods.

The campus project at Mission Bay is unique in the requirement for open space on the campus site: at least 8 acres of publicly accessible open space must be located on the campus as a condition of the donation of the land for the site by the City and County of San Francisco and the Catellus Development Corporation. In addition, a school to be operated by the San Francisco Unified School District is designated for Block 14, at the northwest corner of the campus site which will contain an additional 1.5 acres of open space for the school. This priority on open space is characteristic of San Francisco as a city; it offers an opportunity for the campus to interact with the surrounding neighborhoods; and it can foster a sense of community.

Competition History
In June of 1997, the Bay Area Life Sciences Alliance (BALSA), in cooperation with the University of California San Francisco and the City and County of San Francisco, sponsored an invited competition for the development of a Master Plan concept for the new UCSF Mission Bay Campus.

The joint venture team of Machado Silvetti Associates and Gordon H Chung & Partners was awarded the competition in November of 1997. The team was commissioned by BALSA to prepare the detailed Master Plan documents required to guide the phased development of the campus. This new campus is expected to reach 2.65 million GSF of research, administration, and support space, plus parking to accommodate the expected campus population of 9,100 at full build-out. Construction of the first campus building is scheduled to begin in the fall of 1999.

The ideas set forth in the competition form the basis of a conceptual Master Plan for the new campus. This concept, together with a set of design guidelines and a description of anticipated phasing of the campus development, is intended to ensure that the development of the campus over time will provide a rich quality of life for the campus users.

By creating a vision of what the campus could be in the future, it is the intent of the Master Plan to provide a long term framework for the University's evolution and realization. Such a vision recognizes the need for flexibility and change, while preserving an image of a unique state-of-the-art institution within a diverse and progressive city. As such, the campus should reflect the University and the city within which it resides.

San Francisco provides a rich urban context for the new campus. One of the primary goals of the Master Plan is to enhance the City's urban fabric and character while supporting the mission of the University. The campus must therefore strike an appropriate balance of connecting to its surrounding community while creating a collegial environment that will foster interaction among researchers and students.

The winning competition scheme, as described in this document, illustrates a vision that balances the University mission, collegiality, and urban context. It is a vision of a community of unique character, enhancing the Mission Bay Development and the city at large.
MISSION BAY CAMPUS MASTER PLAN & DESIGN GUIDELINES

INTRODUCTION

Purpose of the Document

Organization of the Master Plan & Design Guidelines

The Master Plan & Design Guidelines are organized into three basic parts, subdivided into sections:

Part I: Sections A & B - General and Conceptual Information

Part II: Sections C & D - Specific Design Guidelines: Site Design & Building Design

Part III: Sections E, F & Appendix - Supplemental Guidelines, Reference Information, Glossary

The purpose of Part I is to briefly describe the history of the Mission Bay redevelopment area and to clearly outline the four Principal Conceptual Goals of the UCSF Mission Bay Campus Master Plan: Connectivity, Collegiality, Cohesiveness & Context.

Part I also contains land use plans which describe the distribution and types of program space on the campus. These plans define the maximum building area and program for each building location.

Part II contains the Design Guidelines themselves, first as they relate to site design, which provides the spatial structure of the campus, and second to building design, which reinforces those relationships. Through both site design and building design, the principal goals/concepts of Connectivity, Collegiality, Cohesiveness & Context are supported. The Design Guidelines are presented in such a way as to provide future architects the greatest guidance and flexibility in achieving the goals of the Master Plan.

Finally, Part III contains additional supporting documentation, including phasing, a glossary of terms used throughout this document, and supplemental diagrams or technical information that may be helpful to future architects and engineers working on the campus. A list of additional key reference materials has also been provided.
INTRODUCTION

Master Plan Description

Master Plan Goals
The Master Plan envisions a concept for development that will be sustained over time and which will provide: Connectivity, Collegiality and Cohesiveness. It is through these three goals that the Master Plan strives to achieve a successful and unified campus, that serves not only the specific needs of its faculty, staff and students but also its neighboring community in Mission Bay and the larger San Francisco population.

The Grid
The site should be clearly urban. Maintaining the San Francisco street grid most efficiently integrates the campus with the fabric of the city, while providing flexibility for future growth. By reinforcing this grid in plan and section, while creating a distinct sense of place and identity for the campus, the campus will be well integrated with the surrounding urban setting.

Public Spaces
In order to structure a campus that enhances human interaction and community, three different scales of public spaces are envisioned, linked together by pedestrian routes that sequence movement through the campus. These spaces are:

City Scale: three large public open spaces at the scale of the campus and city

The Plaza: This paved urban space with retail activities is defined at its edges by an arcade and a line of trees. It is a main arrival point from public transportation, located immediately adjacent to the MUNI Third Street Light Rail stop.

The Green: This green, figured lawn constitutes the heart of the academic campus. It stretches from Fourth Street to the Campus Community Center and is edged by the clusters of research buildings to the north and south.

The Courts: This space contains athletic courts that help to foster interaction among campus users.

Block Scale: public/garden spaces at the scale of the campus block

These are garden-like spaces maximizing public interaction between a pair or trio of buildings. These gardens are diverse, ranging from an Asian garden to an herbal landscape. Each garden has an underlying historical reference to medicine, contemplative study, local ecological tradition or elements of cultural diversity.

Building Scale: semi-public spaces at the scale of the building

Most research buildings have at least one terrace, court, or "collegial room" carved from its overall mass and surrounded by offices, lounges, and academic community spaces. The image of each space is unique; some will be shaded, others open, some shaded by trellises, others capped by floors above.
INTRODUCTION

Mass

The Master Plan establishes a very pragmatic approach to building sizes and configurations. This approach allows for unprogrammed growth, because the interior spaces are kept generic and flexible.
**Sustainability**

The Master Plan encourages the development of sustainable construction that incorporates principles, techniques and materials that conserve natural resources and improve environmental quality. The idea is to create a building that offers a healthy, productive place to live and work, while using resources at the same rate (or less) than the rate at which they can be replenished. Sustainability can be achieved through the use of three principles of resource efficiency: energy efficiency, resource conservation and environmental quality.

By eliminating environmental inefficiencies, direct benefits can be realized through improved performance, improved productivity, reduced capital costs, reduced operational costs and lower maintenance costs as well as increased project value. Sustainable buildings and development also benefit our communities by furthering environmental quality, economic vitality and social equity.

The following are performance standards and guidelines for use by UCSF as goals in making decisions about sustainable building technologies, to the extent allowed by adopted University requirements and compatible with state and federal regulations.

Energy efficiency promotes efficient use of energy resources while minimizing environmental impacts and meeting economic goals.

**Performance Standard: Energy** - Plan buildings to incorporate the latest methods of energy conservation.

- Commission all buildings.
- Design an efficient building shell: Use high levels of insulation, minimize the effectiveness of the insulation by using framing techniques to minimize thermal bridging of the insulation, install high-performance windows, and tight construction.
- Design to use renewable energy: Orient building to make optimal use of passive solar heating, daylighting, natural cooling. Consider use of solar water heating, photovoltaics, and other solar technology.
- Simulate building to benefit from planned landscaping principles (e.g. trees on the east and west sides of a building can reduce cooling loads.)
- Install high-efficiency heating and cooling equipment.
- Install high-efficiency lights and appliances.

**Performance Standard: Water** - Install water fixtures that use 20% less water than standard fixtures.

**Performance Standard: Solid Waste Management** - Achieve a 50% waste reduction goal over historic amounts through a variety of systems, practices and technologies for recycling, processing and decaying waste.

**Performance Standard: Resource-Efficient Building Materials** - Specify that 20% of the building materials will contain 20% post-consumer recycled content or a minimum of 40% post-industrial recycled content. Calculate by total material cost excluding mechanical, electrical and plumbing systems, labor and overhead fees.

- Install water-efficient equipment.
- Design water-efficient, low-maintenance landscaping.
- Install water-efficient irrigation systems.
- When source becomes available, use reclaimed water.
- Install water-efficient equipment and insulation.
- Provide incentives to discourage employees from driving alone to work.
- Locate buildings to minimize environmental impacts: cluster buildings to preserve open space.
- Design for future use: make the structure adaptable to other uses or easily expandable.
- Avoid use of pesticides and other chemicals that may leach into the groundwater.

**Performance Standard: Indoor Air Quality** - Meet or exceed volatile organic chemical (VOC) limits of Regulation 8, Rule 51 of the Bay Area Air Resource Board.

- Provide adequate ventilation.
- Use non-toxic and low-toxic building materials and furnishings.
- Avoid ozone-depleting chemicals in mechanical equipment and insulation.
- Provide incentives to discourage employees from driving alone to work.
- Locate buildings to minimize environmental impacts: cluster buildings to preserve open space.
- Design for future use: make the structure adaptable to other uses or easily expandable.
- Avoid use of pesticides and other chemicals that may leach into the groundwater.

**Performance Standard: Air Emissions** - Plan and design process and die-cut facilities to meet or exceed the requirements of Title 22 of the California Code of Regulations, Chapter 3, Subchapter 8.

**Performance Standard: Transportation** - Plan and design transportation systems to reduce single-occupancy vehicle use.

- Provide convenient system for recycling paper, cans and bottles for building occupants.
- Avoid use of pesticides and other chemicals that may leach into the groundwater.
- Minimize packaging waste.
- As feasible, use salvaged building materials.
- Use durable products.
- Provide adequate ventilation.
- Use non-toxic and low-toxic building materials and furnishings.
- Avoid ozone-depleting chemicals in mechanical equipment and insulation.
- Reduce use of structural over-design.
- Provide incentives to discourage employees from driving alone to work.
- Locate buildings to minimize environmental impacts: cluster buildings to preserve open space.
- Design for future use: make the structure adaptable to other uses or easily expandable.
- Avoid use of pesticides and other chemicals that may leach into the groundwater.

**Description of Campus Image**

The UCSF Mission Bay Campus is intended to be prominent for both its research and its architecture. Located south of China Basin and the China Basin Channel, to the northwest of Central Basin and to the east of Interstate 280, its growth will be tempered by the functional and programmatic requirements of UCSF, many of which will not be known for years to come. For these reasons, the campus must be built for longevity, economy and flexibility.

To reinforce the scale and texture of its urban setting as well as the character of its neighborhood, the new Campus must convey a powerful and identifiable image: one of timelessness, simplicity and openness. These are qualities that will support an unknown future and a variety of facility typologies. It will be a campus that looks towards the future rather than the past in its ideology and its physical presence.

Through the use of simple, clean lines, practical detailing and a richness of compatible materials, the architecture will reflect this image of timelessness. The buildings will not only support a variety of interior activities, they will shape the resultant outdoor spaces. Their relationships will present an enduring quality rather than an ephemeral one. The outdoor spaces will be the unchanging structure needed to unify and support an ever-changing institution.

**Phasing**

The phasing of campus development as outlined in this Master Plan is compatible with the planned phasing of land transfer from Castellini and the city to UCSF. The intent of each phase is to build as much of the adjacent open space features as possible in order to establish a framework for future construction and a character of place that will establish campus identity prior to full buildout.
Program Summary

Master Plan Program
The UCSF Mission Bay campus will provide for graduate level study and research, with a focus on the biomedical fields. As part of UCSF’s Long Range Development Plan (LRDP), a thorough space needs assessment was conducted, which identified UCSF’s current and future space needs. This included space for decompensation to relieve excessive crowding at existing sites, space for expansion to provide new space for existing programs and new programs, and space for consolidation to reduce the current scattering of academic and administrative support uses from many dispersed sites. As a result of this analysis, the following space program has been identified for UCSF’s major new campus site at Mission Bay, totaling 2.65 million gsf.

Mission Bay Campus Space Program

Instruction
- 160,000 gsf (6%)
  Includes activities involving the transmission or dissemination of knowledge to students on a group or individual basis, including classrooms, teaching laboratories, seminar rooms, and academic offices.

Research
- 1,220,000 gsf (46%)
  Includes research conducted in laboratories and offices and their associated research support activities, such as cold rooms, glass wash and microscopy areas.

Support
- 1,270,000 gsf (48%)
  Support space consists of the following four subcategories:
  - Academic Support 265,000 gsf (10%)
    Includes activities supporting the academic enterprise such as the library and animal care.
  - Academic & Campus Admin. 475,000 gsf (18%)
    Includes all administrative activities at the department, school and campus levels, including deans’ and directors’ offices, conference rooms and coping facilities, and non-academic support activities such as police, personnel and accounting offices.
  - Campus Community 160,000 gsf (6%)
    Includes activities, amenities and spaces which provide opportunities for relaxation, enjoyment of the outdoor environment, recreation, fitness, childcare and food services.
  - Logistics 370,000 gsf (14%)
    Includes those activities devoted to the delivery of materials, and physical plant activities such as maintenance team spaces, service yards, utilities and storage.

Parking
- 4,600 spaces
  Parking is based on a ratio of 2.0 spaces per 1,000 gsf through phases 1 and 1a and 1.5 spaces per 1,000 gsf in the latter phases. Please refer to Section F: Support pages F-7 through F-9 for a complete description of parking standards.

These space categories have been utilized to help define the allocation of space and building types within the land use plan for the Master Plan. They provide general guidance and are not intended to limit the programming and design of specific buildings as proportions of space types may change over time as needs change.

Program Summary


I N T R O D U C T I O N
## Land Use Calculations

<table>
<thead>
<tr>
<th>Building #</th>
<th>Range (GSF)</th>
<th>Parking Spaces</th>
<th>Height*</th>
<th>Stories</th>
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<tbody>
<tr>
<td>Building 15 A</td>
<td>120,000 - 165,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 15 B</td>
<td>120,000 - 160,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 16 A</td>
<td>200,000 - 250,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 16 B</td>
<td>85,000 - 115,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 17 A</td>
<td>110,000 - 145,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 17 B</td>
<td>65,000 - 85,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 17 C</td>
<td>135,000 - 195,000</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Building 18 A</td>
<td>Parking 1,000</td>
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<td>7 to 8</td>
<td></td>
</tr>
<tr>
<td>Building 18 B</td>
<td>Parking 800</td>
<td>85’0”</td>
<td>7 to 8</td>
<td></td>
</tr>
<tr>
<td>Building 19 A</td>
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<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 19 B</td>
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<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 20 A</td>
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<td></td>
</tr>
<tr>
<td>Building 20 B</td>
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<td>7 to 8</td>
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<td>7 to 8</td>
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</tr>
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<td>5</td>
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</tr>
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<td>Building 23 A</td>
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</tr>
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<td>5</td>
<td></td>
</tr>
<tr>
<td>Building 25 A</td>
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<td>5</td>
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</tr>
<tr>
<td>Building 25 B</td>
<td>200,000 - 250,000</td>
<td>85’0”</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL** 2,650,000 GSF 4,600 spaces

* Excluding roof top mechanical equipment.

Land Use Matrix A.14
The campus is generally organized into the functional zones outlined in the Program Summary on page A-13. The configuration of specific program elements is intended to promote desired patterns of interaction and activity. Laboratory buildings, for example, generally occupy the center of the site and are organized around the Green, which serves as the academic center of the campus. The immediate adjacency of laboratory buildings to each other is desirable. On a smaller scale, campus retail programs line both sides of the Plaza to encourage intensive pedestrian activity. To the extent that campus market demand warrants, retail space could also be located within secondary retail zones along Third and Fourth Streets at the Plaza. To promote collegial activities, all instructional program will border the courtyard gardens of individual blocks. To the extent that programmatic requirements of individual research buildings allow, instruction space should also be oriented towards the Green so that classroom space could be used in conjunction with conference center space in the Campus Community Center if necessary. The plan currently shows the appropriate location of animal care should UCSF decide upon a centralized animal care strategy for the campus. However, the precise location is flexible enough that animal care could be distributed in multiple research buildings across campus if a decentralized strategy for animal care is chosen.

To support this amount of program, the University estimates that approximately 4,600 parking spaces will be needed at full build-out. The current Master Plan proposes the location of five parking garages on campus. Please refer to Section F: Support Diagrams.

The proposed land use plans accommodate the 2.65 million total gross square footage described in the major new site space program identified in the 1996 Long Range Development Plan. To allow for flexibility both in the phasing and in the future program requirements of the specific buildings the range of gsf that could be accommodated in each building envelope is shown, within which the 2.65 million gsf program would be developed. It should also be reiterated that the building area ranges are gross areas. When programming for specific buildings, architects must remember that the specific building elements, circulation and service must be factored into the overall allowable building area for a given building and phase.
Introduction

Three committees established to advise the campus throughout the preparation of the Long Range Development Plan (LRDP) worked collectively to draft, amend and jointly propose the Goals & Objectives. These committees included the Planning Committee for the 21st Century, a predominantly faculty-based committee appointed by the Chancellor; the University Advisory Group (UAG), a UCSF staff committee appointed by the Vice Chancellor for University Advancement and Planning; and the Community Advisory Group (CAG), appointed by the Chancellor. In addition, the community at large provided input to the Goals and Objectives document at a series of neighborhood workshops hosted by UCSF and the CAG.

The Goals and Objectives were originally developed in 1994 as a part of the University’s LRDP process, which culminated in the adoption of UCSF’s current LRDP in January, 1997. The Goals and Objectives are reprinted here in part, as they pertain to the development of this Master Plan. One of the basic tenets of the original LRDP Goals and Objectives was to guide the development of a yet unselected new major campus. They are the underlying context that has helped form this Master Plan.

Role of the Goals & Objectives

The Goals and Objectives adopted by Chancellor Joseph B. Martin on behalf of UCSF form the basis of the LRDP. The Goals and Objectives are intended to be used in two ways: as a guide to UCSF’s daily operations at existing campus sites, and in the selection and implementation of a major new campus site. This Master Plan has been developed with the intent of implementing the Goals & Objectives at the Mission Bay Campus, and the Goals and Objectives will be used to guide the design and development of individual buildings at the Mission Bay Campus over the coming years.

The Goals and Objectives describe what the campus and the community are seeking to achieve through the LRDP. The document sets forth goals on a wide range of topics, from academic programs to infrastructure development, and each broad goal is followed by a set of more specific objectives.
Academic Program

Program Quality: Maintain and enhance leadership as one of the preeminent academic health sciences institutions in the world, highly respected for the quality and scope of our educational programs, scientific activities and patient care.

- Provide adequate support to those teaching and research programs of distinction within all four schools and the graduate division.
- Enhance those programs now in development that show promise of extraordinary contribution to the advancement of health science education, scientific knowledge, clinical application or the program of health policy.
- To the extent feasible financially and programmatically, consolidate dispersed programs and minimize future dispersion of teaching and research programs.
- Continue to integrate the tools and methodologies of the basic biomedical sciences into clinical sciences research and applications.
- Provide the best possible patient care to all who seek treatment at university facilities, within the context of clinical teaching and available resources.

Program Flexibility: Build on current successes and maintain flexibility so as to respond to new opportunities and challenges as they arise.

- Plus individual sites, buildings and program areas so that it is possible to respond to future initiatives of academic merit not now contemplated.

Goals & Objectives

A.17

Mission Bay Campus Master Plan & Design Guidelines

Sproul Plaza, UC Berkeley

Amenities & Services/Public Safety

Access to Amenities and Services: Ensure convenient access for the campus community to recreational, food, commercial and support services at all of its major sites. Provide for access by the wider community to UCSF facilities.

- Provide or ensure nearby availability of recreational, food and commercial services at levels commensurate with population and demand at each site.
- To meet the challenge of child and elder care, develop affordable Family Centers and make them accessible to all members of the campus community.
- To meet the challenge of child and elder care, develop affordable Family Centers and make them accessible to all members of the campus community.
- Expand and redesign outpatient facilities to meet the needs of a changing health sciences curriculum and to better serve the patient population.
- Create new space that results in a humane environment for the campus community and those visiting or living nearby.

Campus Safety: Provide a safe environment for students, employees and visitors.

- Support local efforts to increase fire and police protection, especially in neighborhoods with high incidence of crime, and ensure that the campus safety officers are sensitive to the community.
- Strengthen existing cooperative relationships with municipal police, BART personnel, etc., as well as local authorities with public safety programs and public emergency response services at and near UCSF facilities.
- Provide adequate security methods, including exterior lighting, particularly in parking areas, in order to enhance a safe environment on all campus sites. These security methods should be designed in a manner which is sensitive to the surrounding community.

- Expand community participation in fitness and recreation programs.
- Provide opportunities at each site to support health education and screening activities in the surrounding community.
- Provide adequate meeting facilities at major new sites, making them accessible and affordable to the campus community and public.
- Consolidate dispersed administrative support services such as police, facilities management, material management, etc., to a central location to achieve greater efficiency.

Program Quality: Maintain and enhance leadership as one of the preeminent academic health sciences institutions in the world, highly respected for the quality and scope of our educational programs, scientific activities and patient care.

- Provide for flexibility in the assignment and utilization of space in the future.
- Assume integration of technological innovation in research, instruction, clinical care, information processing and other activities of the programs.

Faculty Recruitment: Recruit and retain a diverse faculty who are creative scholars, innovative teachers and outstanding clinicians.

- Provide the means to strengthen faculty recruitment and retention through periods of budget stringency.
- Provide strong ties between faculty within each campus site and among sites, with special emphasis on linking all the major sites to the Parnassus Heights site.
- As the scientific enterprise proceeds to cross traditional boundaries of disciplines, continue to support and create new interdisciplinary and multi-school programs.

Physical Environment: Remain competitive by providing a physical environment which matches the intellectual richness and vigor of students, faculty and staff.

- Provide or ensure nearby availability of recreational, food and commercial services at levels commensurate with population and demand at each site.
- To meet the challenge of child and elder care, develop affordable Family Centers and make them accessible to all members of the campus community. These centers will address the multiple issues of child care before and after school, coverage during vacations, emergency backup care, elder care, and community referral services.
- Seek to enrich the quality of life in the community by extending services, facilities, and activities to the wider community as well, including child care, public safety, meeting and event space, recreation, and other support activities appropriate to the goals of UCSF and the community.
  a. Work with local non-profit agencies and organizations to achieve the most efficient and effective human services.
Building Design

Building Design: Design buildings which are distinctive and attractive, yet functional and cost effective.

- Plan buildings to incorporate the latest methods of energy conservation.
- Use size, materials and design elements in designing a building to reflect its function and convey an image of UCSF’s mission.
- Site and design buildings to take full advantage of view corridors.
- Design entries that are appropriate to and serve the function of the area or building which it fronts (e.g., the patient care zone should have clearly defined entries with space for easy drop-offs by cars).

Flexibility: Design buildings to be flexible and adaptable for present and future programs.

- Plan location and layout of buildings so that it will be feasible to expand them.
- Design building utilities so that they can be readily accessed for incremental expansion or modifications.

Compatibility: Design buildings which are responsive to building scale and character in the surrounding areas.

- Design buildings to be compatible with local zoning requirements in height, bulk and setbacks.
- Use materials and design elements to make new buildings compatible with other buildings on the site or in the surrounding neighborhood.

Reuse of Existing Buildings: Where feasible and cost effective, utilize existing buildings by making the necessary improvements to support UCSF’s uses on potential new sites.

- Renovate existing buildings to conform to fire and safety codes.
- Investigate restoration of historically significant buildings.

Community

Community Mission: Serve the community at large, in partnership with local agencies, through educational and service programs that address community needs and take advantage of the knowledge and skills of UCSF faculty, staff, and students.

Community Health and Education: Expand access to UCSF’s medical services and educational programs at least in proportion to growth, and improve communication to the public about available services.

- Working with diverse communities in a culturally sensitive manner, enhance the community’s familiarity and comfort in utilizing the health care resources and services available at UCSF.
- Maintain and enhance cooperative working relationships between UCSF health care services and community-based non-profit health care providers.
- Maintain and enhance the cooperative relationship between UCSF and the San Francisco Department of Public Health to improve the availability and delivery of public health services.

- Serve to provide community health care services and outreach to diverse and underserved segments of the community.
- Publicize the Science and Health Education Partnership (program run by UCSF wherein UCSF faculty members train San Francisco Unified School District teachers and work with students to make learning science in school more productive and fun).
- Expanding on the Science and Health Education Partnership program, encourage faculty, staff, and students to get involved as role models and mentors for teens in health-related areas, in order to expand access to a variety of health service careers.
- UCSF should work with other health service organizations and educational institutions to exert leadership in efforts to recognize and utilize the skills of immigrant health professionals in serving the community.
- Continue progress that bring the community to the campus for other than medical reasons so they can better understand the role of hospitals and research and their ability to utilize the services.

Community Participation: In order to build a partnership between the community and UCSF, provide effective, well organized and meaningful processes for education and dialogue between the community and UCSF regarding their respective needs and plans.

- Establish an ongoing process for receiving and disseminating information about community needs, with outreach by UCSF to neighborhood organizations.
- Create an ongoing community advisory board with a cross-section of representation from all community interests which will monitor the implementation of these goals and objectives.
- Conduct major community meetings and workshops, such as discussions regarding the use of animals in research, on a regular basis in order to continue ongoing dialogue on specific issues.
- Involve the community in ongoing dialogue on key health policy issues that would affect the local as well as broader communities.
- Continue to provide sensitivity training and education to the entire university community relating to the diversity of the people served.
- Continue to expand participation in preventive health care activities for the community including ongoing screenings, forums and health fairs.

Environmental Planning and Safety

Mitigation of Environmental Impacts: Avoid or reduce potential adverse environmental impacts associated with UCSF’s development or building projects, through appropriate mitigation measures.

- Plan, locate, design, build and maintain facilities to meet or exceed standards that buildings compatible with other buildings on the site or in the surrounding neighborhood.
- Use materials and design elements to make new buildings seismically safe.
- Plan and design a new research laboratory, clinical and other facilities to meet or exceed standards that...
regulate air emissions posing a health risk to the
 campus community or adjacent neighbors.

• Reduce the amount of all types of waste produced.

Environmental Safety: Provide campus facilities which are environmentally safe for all users.

• Mitigate detrimental air emissions stemming from activities in nearby neighborhoods.

• Provide necessary safety measures in the design of infrastructure in new facilities.

• Assess the environmental health and safety characteristics of the existing sites, including the need and responsibility for any clean-up or alteration before acquisition or construction.

Hazardous Material Management: Enhance the existing systems for managing potentially hazardous material that protects the campus and surrounding communities, in a cost-effective manner, consistent with legal requirements, scientific findings and prudent practice.

• Operate a safe system of transport and disposal of hazardous and non-hazardous waste, in accordance with State transportation regulations, including a bill of lading within the transportation vehicle.

• Locate facilities for receiving, processing and storing hazardous materials and waste at major UCSF sites where the materials are used in locations that will not impact residential areas.

• Minimize waste volumes through a variety of systems, practices and technologies for recycling, processing and decaying waste.

• Provide information to the community about UCSF’s hazardous materials management system that will address community concerns, including:
  a. cumulative effects of toxic waste
  b. UCSF fire safety and seismic safety plans
  c. how a fume hood operates
  d. comparison of UCSF waste to household and industrial wastes
  e. types and quantities of chemicals used in research and patient care
  f. how UCSF monitors researchers and the chemicals that they use
  g. radiation health and safety and disposal of radioactive waste

Finance and Operations

Facilities: Provide high-quality technical facilities in a cost-effective manner.

• Develop space in a feasible and affordable manner.

• Develop utilities serving a site in a feasible and affordable manner.

Financial Feasibility: Prepare a development plan which is financially feasible to implement.

• Develop space in phases which are feasible and affordable to the University.

• Use creative funding mechanisms and financial

armures which do not place unreasonable demands on the University’s debt capacity.

• Locate and develop space in such a way as to not place unreasonable burdens on operating costs.

• Develop funding for programs at new sites that does not drain funds from Parnassus Heights.

Timing of Development: Schedule acquisition and phasing of site development to respond to program needs.

Housing

Student and Junior Faculty Housing: Ensure adequate housing for junior faculty and students.

• Identify appropriate locations for housing junior faculty within reasonable proximity to major academic sites.

• Provide and maintain a variety of housing types for students and junior faculty.

• Consider the access and affordability of both existing and new housing.

Housing Stock: Maintain decent, attractive university-controlled housing stock.

• Vacate and dispose of existing housing that is deteriorating or remotely located from existing or potential new sites.

• Renovate and maintain Aldea family housing.

Housing Impacts: Ensure that UCSF expansion will not adversely affect the availability and affordability of housing.

• Address the need for student and junior faculty housing by additions to the existing housing stock, while respecting existing neighborhood character.

• Adopt a housing mitigation program which requires UCSF to address the housing need generated by the expansion.

• If no alternative to displacement can be found and displacement occurs, suitable and affordable housing to which the displaced can relocate, must be established, wherever possible in the same neighborhood, prior to displacement.

• Identify a mechanism for monitoring the housing mitigation program in consultation with community advisors. This mechanism should be patterned after the methods for monitoring used by other public agencies.

Financial: Provide housing for students and junior faculty that is reasonably affordable.

• Provide assistance to students and faculty in securing appropriate housing.

• Investigate methods of financing development of campus housing for students and junior faculty.

• Work with developers to develop affordable housing for students and junior faculty.
Human Resources and Economic Improvement

Personnel Practices: Hire, train and retain talented, motivated and qualified personnel.

- Identify and work with other entities to develop a pool of trained applicants which can be tapped for employment opportunities.
- Continue to plan for human resources for both permanent and temporary construction employment, consistent with state and federal regulations.
- Plan programs/policies for retraining and/or retaining employees who are displaced.

Diversity in the Work Force: Maintain and promote diversity in the UCSF work force.

- Recruit and retain diverse faculty and staff.
- Assure diversity in hiring, promotional and retention practices.
- Develop a strong, results-oriented Affirmative Action program which includes:
  a. promoting purchasing from and contracting with minority- and woman-owned, and disadvantaged businesses;
  b. hiring and contracting with community residents;
  c. promoting diversity in UCSF's faculty, students and staff;
  d. publishing information on UCSF's affirmative action programs.
- Coordinate hiring programs with community employment and job training programs, labor unions, and local high schools and colleges, work with community agencies to monitor job placements to ensure success.

Neighborhood Impact: Manage the expansion of UCSF's programs and sites to optimize economic benefits for local residents and businesses, those neighborhoods most impacted by the University, and the local economy at large. Promote affirmative action through minority- and woman-owned business enterprises programs and minority hiring; target jobs and job training for areas with high unemployment.

- Negative impacts on existing jobs and business must be avoided.
- Develop sites that will have a positive economic effect on nearby areas of need. While employment opportunities should benefit areas of high unemployment, there should be a special effort to provide economic and social advantages to the immediate neighborhood.
- Purchase products and services from neighborhood businesses, consistent with prudent economic practices.
- Avoid the displacement of small businesses. If such displacement must occur, suitable and affordable space to which the displaced business can relocate must be established in the same neighborhood wherever possible prior to displacement.
- Involve the community as an equal partner in community meetings which can facilitate community input into employment partnerships with community organizations.
- Coordinate hiring programs to ensure that all neighborhoods in the greater UCSF community have access to UCSF jobs.

Training: Provide job training in health, research and related fields.

- Assess and respond to trends in recruitment and employment patterns.
- Promote relationships with local communities for employment, training and instruction. Work with local community-based agencies whose primary purpose is to provide training and employment placements.
- Develop relationships with local colleges, high schools and other employment pathways.

Information Technology

- Develop and use interactive multi-media on a broad basis application in support of teaching, research and clinical activities.
- Improve campus ability to access campus and worldwide databases as the systems mature.
- Provide facilities and means for worldwide teleconferencing communication.
- Develop technology to provide for continuing education needs.

Infrastructure: Expand and improve communications infrastructure to support current and future demands, including telecommunications.

- Develop remote diagnosis and consultation linkages with other medical centers nationwide.
- Develop linkage between academic and administrative databases, e.g., student records, financial data.
- Develop comprehensive central administration databases linked to local school and department systems via electronic networks.
- Provide easy-to-use graphic user interfaces for access to centrally provided technical applications.
- Accommodate communications infrastructure and computer/desktop workstations in new facilities.
- Make Internet available, on a low priority, to community members for a reasonable fee.

Instruction: Provide better computerized instructional technology to students.

- Use educational technology which is as current as possible.
- Explore the potential use of teleconferencing in seminar instruction.

Infrastructure / Technology

Utility Master Plan: Develop a utility master plan for each site.

- Where the site so warrants, UCSF should build a central utility plant facility to supply its own steam and emergency power.
• Consolidate and centralize boilers, chillers, emergency generators and primary electrical service in one location at each site.

**Expansion:** Plan the utility systems at each site so that they can be expanded incrementally as needed.

- Provide capability of incremental expansion in the site utilities systems by developing a utility corridor system.
- Acurate if public utility service systems are or will be adequate to supply needs and at what cost.

**Utility Network:** Provide for a flexible utility network that can support the facilities at each site.

- Centralize utility management systems to provide for campus control and monitoring, efficient expansion capabilities and minimal personnel.
- Coordinate with municipal agencies and/or developers to plan for sanitary sewer and storm drainage systems.

**Redundancy:** Plan for redundancy of critical utilities.

- Provide backup systems in the event of failure.
- Plan for critical building utilities to be shut off for maintenance and repair without affecting ongoing operations.

### Instructional Facilities

**Teaching Facilities:** Provide adequate teaching facilities and consolidate them for similar types of instruction by different departments and schools as much as possible.

- Provide direct access to instructional support activities at all major academic sites.
- Provide graduate student teaching facilities at sites where basic science research takes place.
- Accommodate resident and intern teaching in clinical facilities.

**Interaction Between Faculty and Students:**

- Promote interaction between students and faculty.
- Provide for informal interaction and group meetings outside or near classrooms/labs in teaching facilities.

**Teaching Program Support:**

- Design new teaching facilities to be flexible and accommodate changing technologies.
- Provide more small group teaching facilities at major academic sites.

### Land Use

**Site Characteristics:** Locate programs and activities at sites which are suitable and desirable for them and which do not now contain conflicting uses.

**Land Use:**

- Arrange sites to reinforce academic and operational relationships.
- Locate functionally related programs near each other.
- Consolidate activities with similar physical requirements in the same zone.
- Plan for growth and renovation consistent with city planning and zoning codes, all applicable land use plans, and mitigation approaches, while respecting specific neighborhood plans and concerns.

**Compatibility with Surroundings:**

- Plan the utility systems at each site so that they can be expanded incrementally as needed.
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### Site Development and Campus Design

**Major New Site:**

- Plan for growth at a major new academic site, which will accommodate existing programs, new programs and as yet unprogrammed growth, and which is suitable, flexible, safe and attractive to its occupants.

- Ensure that a major new site has sufficient capacity (e.g., at least 3 million square feet) and can be flexibly developed to support the programs to be located there.
- Locate new academic facilities in a setting which is attractive and safe for UCSF’s faculty, staff and students.
- Acquire and develop a major new site or large satellites in an expedient manner.
- Ensure that site developments can be phased for ready occupancy by those programs locating there, providing for a critical mass of programs at the outset.
- Consider opportunities for inclusion of related bioscience industries at or near the site.

**Site Utilization:**

- Optimize design, placement and relationship of buildings on all sites to meet UCSF’s program needs in the best way possible.
- Utilize the physical features of a site to allow for efficient and attractive configuration of buildings.
- Preserve and create open space.
- Locate housing for students, faculty, and staff on the periphery of the selected sites.

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INTRODUCTION

Campus Identity: Create and reinforce a UCSF campus identity.
- Create clear entries and edges at campus sites.
- Create connections and a sense of unity among campus sites.
- Design should preserve existing UCSF identifiers and reflect campus functions.

Physical Environment: Create a physical environment at each site that provides pleasant surroundings for users.
- Provide student housing or access to housing at or near new academic sites.
- Provide student housing or access to housing at or near new academic sites.
- Provide access to amenities for students at all sites.
- Develop a Student Affairs Plan that will make effective student services possible.
- Provide efficient student services located in a central place at major campus sites.

Space Plan

Adequacy of Space: Plan for development of sufficient amounts of space in suitable types of facilities, delivered in a timely fashion, which will respond to the demand expressed by teaching, research and patient care programs, and associated support activities.
- Locate new facilities at sites which can support the types of uses and programs to be housed in such facilities.
- Organize UCSF activities so that related programs and functions are collocated; dispersion is minimized and movement within and between sites is efficient.

Space for Growth, Consolidation and Decompression: Provide space for growth, consolidation and decompression as driven by program needs.
- Ensure that existing and new sites have the physical capacity to support an additional 3.5 million gross square feet.
- Reduce and offset density in space and population at all existing sites.
- Consolidate non-clinical programs at either a new major campus or at satellite locations. In doing so, sufficient notice should be given in the release of leased space.

Student Life

Student Housing: Provide student housing or access to housing at or near new academic sites.
- Provide access to affordable housing near teaching and research programs at new sites.
- Provide sleeping quarters for residents and interns.
- Enhance family life for on-campus students’ families.

Amenities: Provide access to amenities for students at all sites.
- Provide access to amenities for students at all sites.
- Provide access to amenities for students at all sites.
- Provide effective student services to all students.
- Develop a Student Affairs Plan that will make effective student services possible.
- Provide efficient student services located in a central place at major campus sites.

Transportation, Circulation and Parking

Access and Circulation: Ensure that access to and circulation within UCSF sites is safe, direct and efficient.
- Sites should be easily accessible by freeways, major streets and public transportation, both UCSF and non-UCSF operated.
- Plan for internal circulation systems which minimize conflicts between pedestrians and vehicles.
- Lessen traffic congestion at and on the perimeter of the site.
- Provide easy access for the disabled and elderly.
- Provide efficient intercampus transportation as needed.
- Seek a safe commute for faculty, students, staff, patients and visitors.

Alternatives: Emphasize transportation alternatives that will lessen auto traffic in and around campus sites.
- Promote car pools, van pools, public and private transit, ridesharing, bicyclists, and other alternatives to single passenger automobiles; provide adequate parking, waiting or loading areas to accommodate these means of transport. The campus should consider flexible work schedules to reduce traffic and transportation impacts.
- Develop electronic alternatives to transit.
- Consolidate sites to limit need for transport between sites.
- Provide a convenient, efficient inter-site transportation service, exploring possibilities for joint efforts with the City and County of San Francisco.
- Sites should be easily accessible by public transportation. Maximize accessible public transportation to main campus locations.
- Provide incentives to discourage employees from driving alone to work.

Parking: Provide adequate parking to serve patients,
visitors, faculty, staff, and students, while promoting use
of public transit and alternative forms of transportation to
single-passenger vehicles.

• Provide adequate parking convenient to the area or
site it serves, when the site can accommodate it.
• Locate satellite or remote parking facilities to
accommodate parking demand, especially for
commuters.
• Develop parking for specific user groups including
short term visitors, outpatients, students, emergency
vehicles, employees, and service vehicles.
• Give priority in parking to patients, visitors and
emergency and service vehicles over faculty, students
and staff.
• Continue to make UCSF parking facilities available
for community use during off-peak hours at reduced
rates.

Neighborhood Impacts: Minimize impact on local traffic
congestion and parking shortages in a manner consistent
with local government plans. Locate facilities to optimize
access to public transit, and encourage transportation
alternatives to single-passenger automobile travel.

• Support local government transportation policies,
including Transit First.
• Consolidate sites to limit the need for extensive
movement of people and materials between sites.
• Emphasize transportation alternatives, including
public transit, carpools, bicycling, and walking.
• Explore remote parking with shuttle service.
• Explore all means of financing future parking
development including recovery of those development
costs through parking fees while giving consideration
to the impacts of the cost of parking on patient
convenience and faculty recruitment and staff needs.
• Develop off-street parking to divert employees,
visitors, and construction vehicles from parking in
nearby neighborhoods.

Material Handling: Provide an efficient campus
material handling system.

• Campus material operations should be
accommodated within the central service facilities
located to serve all sites effectively.
• Provide adequate material delivery facilities at each
site.
• Locate material receiving and distribution areas where
there is optimum access and where the location does
not create circulation conflicts.

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Design Principles

There are four primary design principles that govern the organization and character of open spaces and buildings on the campus: Connectivity, Collegiality, Cohesiveness, and Context. These four principles establish consistency, and create a unique identity, throughout the development of the campus.

Connectivity. Both physical and visual connections are encouraged on campus to facilitate movement across campus and to foster a sense of campus unity. A network of interconnecting open spaces, including quadrangles, gardens and interconnecting passageways, serve to physically link buildings throughout the campus. This predominately pedestrian landscape is an alternative to sidewalk circulation on vercial streets, and offers visual relief to the consistency of the Mission Bay street grid. Connectivity is also achieved by establishing a matrix of sightlines that visually link landmarks and focal points throughout the campus. Wherever possible, artwork should be incorporated as or within these landmarks and focal points and should be consistent with the character of their surrounding spaces.

Collegiality. The Master Plan supports a hierarchy of communal spaces that encourage interaction among campus personnel. These spaces are organized around specific program clusters, re-orienting individuals in laboratories and offices to larger communities within their respective campus neighborhoods. These communal spaces, in turn, are visually and physically connected to larger, more collective campus spaces. These communal spaces also provide a favorable image of university academic life to the surrounding Mission Bay area.

Cohesiveness. Cohesiveness aims to promote visual consistency among campus architecture and landscape over the course of the development of the campus. Collectively, adjacent buildings maintain similarity by abiding to a prescribed masonry and basic vertical organization. All buildings conform to a range of specified materials and colors as well as a particular method of surface articulation. The campus landscape maintains cohesiveness through the consistent use of specific planting types, paving materials and lighting. Cohesiveness among campus buildings and open spaces enhances the legibility and identity of the campus.
View of the Courts from Block 15 towards The Green and the Campus Community Center: Illustrative Example
Connectivity

The physical and visual linking of buildings and open spaces creates a cohesive campus landscape and offers a favorable environment for a variety of collegial activities. Connectivity may be achieved in a variety of ways. For example, individual buildings may be connected to adjacent buildings within a single block by bridges at upper levels, facilitating interaction between occupants and adding to the efficiency of floor plates. At ground level, continuous arcades surround interior block gardens and link adjacent buildings, providing covered connections and adding architectural consistency to different buildings.

Whereas bridges and arcades connect individual buildings within a single block, connective passageways between buildings link buildings on different blocks. Passageways also connect the variety of open spaces offered on campus, including gateways, individual gardens, and the Plaza, the Green, and the Courts. The consistent use of specific trees, plantings, particular paving and lighting standards, add to the collective campus image, and visually enhance connectivity throughout the campus.

The establishment of particular sightlines and focal points on campus also conveys connectivity. Pedestrian streets and connective passageways between blocks offer continuous visual pathways that reveal the campus landscape. Similarly, the locations of campus landmarks, landscape features, and site accessories, such as furniture and information kiosks, serve to orient pedestrians to specific campus destinations, and make visual connections to adjacent areas. The placement of primary building entrances and visible interior communal spaces called collegial rooms at the end of visual axes provides a focal destination to pedestrians and adds visual interest to facades.
The campus is organized into a hierarchy of public spaces that are designed to promote interaction among occupants of the same building as well as occupants from different buildings. These spaces are arranged sequentially, gathering individuals from private offices and laboratories and orienting them toward increasingly larger collective spaces on campus.

The smallest of these spaces are the collegial rooms, which collect colleagues within a building and orient them toward the outdoor gardens. Gardens, in turn, gather individuals together from adjacent buildings on the same block. The major open spaces, largest in the hierarchy of communal spaces on campus, collect activity from an association of blocks.

The distribution of program activities on the campus supports this hierarchy of collective spaces by concentrating similar disciplines in specific areas. Offices and laboratories, for example, are located adjacent to collegial rooms. These rooms vary in use from study lounges to conference areas, eating areas and open stair atriums, all of which provide opportunities for interface among colleagues. Gardens gather activity from surrounding ground level classrooms and lecture halls. Similarly, each of the three major open spaces derives its character from the program that surrounds it. For example, the intense pedestrian activity of the Plaza is generated from surrounding retail program, administration buildings and adjacent parking garages. The Green, on the other hand, serves as the academic center of campus and the main focus of the research buildings organized around it. Lastly, the Courts are the recreational center and are supported by an adjacency to the Campus Community Center.

The focus of specific program around certain spaces increases opportunities for interface among colleagues and makes campus life visible to the surrounding community.
Although the Master Plan encourages diversity in the design of campus buildings and landscapes, several general guidelines attempt to assure visual consistency over the course of development. These guidelines are aimed at creating a basic level of cohesiveness between adjacent buildings and landscapes, and ultimately contribute to the overall legibility of the campus.

The campus landscape maintains cohesiveness through the consistent use of specific materials, site furnishings and plantings. Comprehensive paving, planting and lighting schemes establish clear landscaping themes throughout campus during interim phases of development as well as after campus completion.

Cohesiveness among campus buildings is maintained through a prescribed massing, a consistent vertical organization and surface articulation, and a shared palette of building materials and colors. Building massing is characterized by simple volumes and aligned building heights. These guidelines lend clarity to outdoor spaces and streets, and promote consistency among a variety of building designs and styles. Similarly, the typical expression of a base, body and roofscape to all campus buildings assures continuity of building lines such as roof edges. The repeated use of arcades and an expressive roofscape reinforces consistency among campus buildings.
The UCSF Mission Bay Campus will be part of the broader Mission Bay South Redevelopment area. Being at the heart of this new community both in its function and location, one of the most important concepts of the Campus Master Plan is its appropriate integration into the neighboring context and the context of downtown San Francisco to the north.

The Master Plan seeks to achieve this harmony and integration by three primary means of design: Urban, Architectural & Site.

Urban

On an urban level, the Campus Master Plan, in keeping with the Mission Bay Plan developed by Johnson Fain Partners and SMWM for the Catellus Corporation, seeks to preserve the view corridors established by the original city grid blocks. The Master Plan ensures this through its approach to building-to-lines, as described on page D-4, and to the planting of street trees, as described throughout Section C: Site Design. While the actual spacing of the trees will be dependent upon the species selected upon the final design of the campus streetscape, it is the intention of the Master Plan that trees be placed no less than 85' apart across a view corridor on pedestrian streets. Formal tree spacing should also take into account the mature growth of a tree such that canopies do not overlap one another at maturity, thereby causing maintenance and security concerns and possibly obscuring the views along a street.

Another intention of the Master Plan, from an urban perspective, is to activate the pedestrian level zones on campus. In addition to encouraging secondary retail functions along the more active public streets such as 3rd & 4th Streets, the Master Plan also encourages the development of visually interesting and integrated building base elements as referenced in Section D: Building Design. Such an attention to the base of the buildings, their materials, colors, how they meet the ground plan and their relationship to the landscape is crucial to the pedestrian life of the campus and its surrounding neighborhood and will reinforce the guidelines set forth in the Mission Bay South Redevelopment Plan.

Architectural

From an architectural perspective, the Campus Master Plan also tries to address issues of massing, articulation and building language similar to the goals expressed in the Mission Bay South Plan (MBSP). In keeping with the MBSP, the Campus Master Plan advocates a more traditional and hierarchical approach to building division through the use of a base, body & top. Given the size of the buildings on campus, typically five stories, it is important to address the issues of proportion, scale and orientation to achieve visual interest while respecting the public perimeter of campus.

The Campus Master Plan suggests two primary ways of addressing visual interest. The first is by maintaining a constant cornice line height of 85' as a way of distinguishing the campus from its surrounding fabric, which varies from 65'-100'. The second is through its playful and sculptural treatment of rooftop elements. These elements not only lend character to the campus buildings, but they are specifically designed to screen the rooftop mechanical equipment required for laboratory buildings. As noted in the MBSP Design Guidelines, "skyline character" is an important goal for the new development. Wherever possible, on buildings that do not require substantial rooftop mechanical systems, outdoor roof gardens are encouraged as a means of supporting the MBSP goal for rooftop recreation and community centers.

Another means by which the architecture supports the goal of the MBSP Plan is by locating certain program functions to promote pedestrian and communal. By recommending retail zones at primary campus parking structures, buffers will be created between the parking and the public open spaces that they front. A similar attention to how loading and service zones are screened is also an important goal of the Campus Master Plan and its ability to enrich the pedestrian atmosphere. Refer to pages F-4 through F-5 for typical land use plans, pages F-7 through F-9 for parking guidelines and page F-11 for service & loading guidelines. Refer also to pages 104, 105 and 107 in the MBSP Design Guidelines.

Site

The site design of the Campus Master Plan is viewed as the primary defining element for the campus. In addition to focusing on the physical and visual continuity of open spaces, it is also the goal of the plan to create a consistent connective fabric of paving, lighting and planting to help reinforce these connections across campus and through to the MBSP development. This connection of the campus open spaces to the network of parks in Mission Bay South will ultimately tie the UCSF Campus to the rest of the community. In this plan, paving types, lighting families and tree species have been recommended as a guide to the University and are being developed in advance of the Mission Bay South Streetscape Plan development. It is the goal of this Master Plan that all final streetscape designs are coordinated with both the Mission Bay Streetscape Plan and the City. The City will be responsible for the maintenance of the public streets.

While there will be specific treatments at the campus Gateways, and higher grade paving or special lighting will be used on the interior of campus, this Master Plan advocates the importance of an overall streetscape approach that is consistent throughout Mission Bay.

Conclusion

The campus design guidelines set forth in this booklet advocate an approach to space making. The guidelines are not prescriptive in their definition of absolute proportions or what constitutes visual interest; rather they require that these issues be addressed with thoughtfulness and care in keeping with the Mission Bay South Design Guidelines that govern the broader development. Instead of a set of rules, these guidelines are intended to allow the architects as much flexibility as possible to achieve the ultimate goals and concepts described, herein.

While most references to "context" are intended to address the neighboring development of Mission Bay South and the existing downtown of San Francisco, it is important to remember that the phased construction of the campus itself will provide a context for future buildings. Campus construction of buildings will likely span several decades. By adhering to the key principles outlined in this Master Plan, the campus should develop, over time, a strong contextual tie to its surroundings.
While the Mission Bay street grid effectively integrates the campus with the surrounding communities, it contributes to the nondescript nature of the site. In order to establish a distinct identity for the campus, the Master Plan proposes a contiguous network of pedestrian spaces as an alternative to the surrounding grid of vehicular and service traffic. This pedestrian landscape is composed of a hierarchy of open spaces, linked together by passageways that structure pedestrian movement through campus.

The campus landscape consists of a variety of open spaces, each differing in size and character. Three major quadrangles represent the largest open spaces on campus, serving as a collection of surrounding buildings, and linked by a central pedestrian corridor. A series of smaller gardens provides more intimate gathering spots for buildings on individual blocks. These gardens connect to other open spaces through a network of pedestrian passageways that facilitate movement and add cohesiveness to the overall campus landscape.

Gateways and streets are also components in the network of open spaces, and accommodate a variety of traffic. Gateways acknowledge primary access points for pedestrian and vehicular traffic, and provide space for commuters waiting at transit stops. Campus streets are differentiated between pedestrian traffic, limited access ways, and public vehicular traffic.

Each type of open space on campus is distinguished by a specific landscape strategy, and is differentiated by materials, paving patterns, lighting standards and planting themes. This establishes a unique sense of place on campus and contributes to the richness of the overall context.

As a condition of the land transfer agreement with Catellus, UCSF is providing a minimum of eight (8) acres of publicly accessible open space as part of the campus plan. These spaces are summarized in the table and diagram to the right.

It is important to note that the following plans and sections describing the site design are purely illustrative and conceptual in nature. The actual spacing of trees will be dependent upon the species selected during the final design of the campus streetscape; however, it is the intention of the Master Plan that trees be placed no less than 34'-feet apart across pedestrian street view corridors. Final tree spacing should also take into account the anticipated growth of a species such that canopies do not overlap one another at maturity. Keeping trees free and clear from each other, exterior lighting and building facades will reduce maintenance concerns and enhance emergency access and security. In addition, an attention to the specific spacing of a species will ensure the preservation of the view corridors over time.
SITE DESIGN

Overall Landscape Illustrative
Base map illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.
Organization of Open Spaces

Major Open Spaces
The campus is organized around three major open spaces, each of which differs in character according to its use and surrounding context. The Plaza, the Green and the Courts represent the largest scale in the hierarchy of open spaces on campus. The Plaza acts as the primary arrival area to the campus from the city, and is enlivened by pedestrian traffic from adjacent transit stops and parking structures, as well as an arcade of shops. The Plaza is linked to the Green, which serves as a center for academic life, and is adjacent to the Courts, the third major open space, which supports campus recreational activities and is adjacent to the Campus Community Center.

The specificity of the design of each open space is intended to establish intent and character. Details are not defined because each space must be coordinated with the specific design of adjoining buildings. Initially, space will be defined by only partial completion of surrounding construction. The intent of the plan, however, is to complete to the fullest extent possible the open space areas as soon as practical and as adjoining buildings are completed. Refer to pages C-6 through C-13.

Gardens
A network of gardens on campus provides open space for clusters of buildings on individual blocks. These gardens are designed to gather pedestrian activity within adjacent buildings, encouraging interaction and creating a favorable image for campus life. A specific landscape theme is proposed for each garden to establish block identity, and to contribute to the richness of the overall campus context. The gardens are connected to other open spaces on campus through the pedestrian passageways, enhancing interaction and a sense of community. Refer to pages C-14 through C-19.

Gateways
As a commuter/research campus, gateways for the Mission Bay campus distinguish primary access points for pedestrian, vehicular and transit traffic at the periphery of the site. Five major gateways serve the north, south, east and west edges of campus, and several secondary pedestrian entrances are dispersed along the campus perimeter. Specific landscape and architectural strategies mark the gateways, enhancing their legibility to campus traffic as well as to the surrounding community. Refer to pages C-21 through C-23.

Connective Passageways
Connective passageways between buildings collect pedestrian traffic on campus, offering alternative paths of travel to street sidewalks. The passageways are intended to physically and visually link neighboring gardens and open spaces. Whenever possible, building entrances, collegial rooms, information kiosks and other campus landmarks should be located at the terminus to these axes, or along their length, encouraging movement and visibility among the various spaces within the campus. Refer to page C-25.

Campus Streets
The campus uses the grid of streets established by the Mission Bay Master Plan in order to preserve views to the Bay, the city, and the surrounding community. The character of the campus streets is defined by their adjacency to campus buildings, open spaces and services. There are two types of streets on campus: Public Streets (4th Street and perimeter streets) and Private Streets (all others). Each street type is defined by the type of traffic it serves, but it is also differentiated by specific surface materials, paving patterns, and lighting. Each street is further defined by a distinct species of tree. Refer to pages C-26 through C-35.
The consistent use of specific paving materials and colors for walkways and open space patterns on campus enhance campus identity and promote visual consistency during interim phases of development, and at ultimate buildout.

Paving schemes reinforce the hierarchy and variety of open space on campus, emphasizing the relative significance and use of each space. Six primary paving types are represented on campus: specialty pavement, internal walkway pavement, campus walkway pavement, public pavement, court-specific pavement and garden-specific pavement. Individual paving design solutions differ according to the intended character, vehicular versus pedestrian use and cost. See the paving diagrams in Section F for more information.

While 6th Street is considered a campus street, a dedicated drop-off for the school will be located on 6th Street as opposed to 13th to avoid conflicts with access to and egress from the parking garage in building 18A.

The approach to planting, by using specific species to define spaces, enhances a sense of campus cohesiveness, and assures that various phases of campus development will be visually compatible.

Planting schemes on campus are generally employed in three ways: to emphasize connectivity across campus and facilitate movement through it, to enclose and define outdoor spaces, and to create a unique character for individual spaces. Perimeter streets, internal campus streets and connective passageways employ a variety of tree types arranged linearly to emphasize continuous movement and enhance sightlines. Individual gardens and gateways have planting schemes that lend unique character to individual spaces. Lastly, open spaces such as the Courts and the Green use plantings to create a sense of enclosure. Refer to Section F planting diagrams for more information.

Similar to paving and planting schemes, campus lighting reinforces the hierarchy and use of each open space. Each type of open space or pedestrian walkway has a specific, recognizable lighting scheme that differs in scale and character. Collectively, the variety of lighting types enhances connectivity on campus and adds visual interest to its landscape. Moreover, lighting along perimeter streets and Fourth Street is consistent with the Mission Bay development, reinforcing connectivity to the surrounding community. Refer to Section F campus lighting diagrams for more information.
The three major open spaces include the Plaza, the Green and the Courts and collectively serve to structure the distribution of all open spaces on campus. The physical and visual interconnectivity of these spaces necessitates that they be considered simultaneously. The salient concepts for these spaces are outlined below to guide designers in their development.

**Connective Spine:**
The Fourteenth Street view corridor serves as the primary east-west pedestrian pathway across campus and serves as a connective spine for the three major open spaces. This spine maintains four major functions:

- **It connects the campus to the city.** Its terminus at the East Plaza Gateway serves as a primary point of arrival to campus from the Third Street parking structures and the proposed MUNI Light Rail line. To the west, the spine connects the campus to Owens Street and the adjacent biomedical research and development industries. Placement of trees and other landscape elements will be coordinated with the overall Mission Bay Streetscape Plan.

- **It connects and organizes the three major open spaces on campus.** The physical and visual linking of the three spaces is essential to achieving connectivity and cohesiveness on campus. By dedicating this view corridor as a primary means of campus circulation, pedestrians are constantly oriented toward the surrounding Mission Bay area as well as distant horizons.

- **It preserves an open view corridor looking towards Mission Bay.** In compliance with the larger Mission Bay development, the spine maintains continuous views to the Bay from campus. By dedicating this view corridor as a primary means of campus circulation, pedestrians are constantly oriented toward the surrounding Mission Bay area as well as distant horizons.

- **It provides limited service and emergency access to critical campus locations.** By maintaining a 24'-0" emergency access lane down the center of the view corridor, framed by rows of trees on either side, service and emergency access is accommodated without jeopardizing the appearance of a pedestrian landscape. This distance simultaneously allows for two fire trucks to pass one another while maintaining views toward the Bay and supporting a variety of pedestrian activities along the spine.

**Spatial Character**
Each of the major open spaces reflects a unique character, in part due to the adjacent program spaces that support them. In addition, scale, material, plant types and topography also contribute to their specific character. The organization of "wrapper" trees, rows of flowering trees that line the interior of the open spaces and which in addition to street trees, further serves to define the different character of each space. Likewise, the spatial division of these areas is a means of orienting a space or affecting movement through a space to define its character. With regard to topography, the Green could be developed with some topographic variation. However, the specific design of this space will be dependent upon its program requirements and those of the adjacent Campus Community Center.

- **The Plaza.** As a point of arrival to campus and the primary connection to the city, the character of the Plaza is inherently more "urban" and is rendered predominately in hardscape. Trees are organized linearly to emphasize movement through the Plaza to other locations on campus. Other landscape elements and supporting programs along the edges of the Plaza support a variety of urban activities and pedestrian events. Program functions surrounding the Plaza include parking structures and retail, both of which serve commuters.

- **The Green.** The largest of the major open spaces, the Green serves as the academic heart of the campus. It is anchored by the Campus Community Center to the west and an administration building to the east. Academic buildings border its north and south edges. Contrary to the Plaza, its character is defined within the tradition of campus quadrangles, replete with lawns, supporting landscape features and trees that wrap around its perimeter, encompassing a variety of student activities.

- **The Courts.** The Courts support a variety of sports and recreational activities. Landscape strategies focus on creating a sense of containment for these activities, such as surrounding lines of "wrapper" trees and planting beds.
Spatial Division

Wrapper Tree Diagram

Focal Points

Unique landscape features and designated building elements are employed as focal points to reinforce the network of connectivity and to encourage movement along the spine. Focal points also add programmatic and visual interest to campus open spaces.

- The Plaza. Potential focal points within the Plaza could include a café located in a freestanding element serving to greet and collect commuters arriving at the east end of the Plaza, and at the west end of the Plaza, a fountain which serves to anchor the visual connection that runs diagonally across the Green to the southeast corner of the Campus Community Center.
- The Green. The convergence of paths at the southwest corner of the Green serves to focus pedestrian movement across the length of the Green, activating that area and reinforcing a diagonal connection to the Plaza.
- The Courts. A freestanding café and gathering area serves to activate pedestrian movement along Thirteenth Street. It also reinforces a visual connection diagonally across to the Green and a linear connection to the Campus Community Center.

To ensure further connectivity and coherence with the neighboring context of the Mission Bay South Redevelopment, the final campus landscape design is to be coordinated with the Mission Bay Streetscape Plan, when it becomes available.
The Plaza: Character

The Plaza serves as the primary receiving area for staff, faculty and students arriving via public transit including the Third Street Muni Light Rail line and those that arrive by car and park in the garages at the east end of the Plaza. It is paved in order to accommodate a concentration of pedestrian traffic and activities. Campus retail activities will edge the plaza on both sides. These retail activities, such as cafes and flower shops, will be encouraged to spill outdoors into the space, enlivening the edges. Specialty pavement will ensure that the space is handsome when empty, and will endure throughout the life of the institution.

The trees will reinforce the directionality of movement from Third Street to The Green. A row of flowering trees will serve to further reinforce the directionality of movement and will contribute to the quality of the space. In addition to reinforcing the connection between the two primary spaces, the trees have been placed on the south side of the plaza, an area typically in shade, leaving the arced north edge of the plaza open to the sun.

Two possible elements within the plaza are a cafe and the pool/fountain. A cafe would help activate the urban plaza while a pool could provide a more contemplative resting spot. The pool is oriented toward the Green and could help direct movement through the Plaza. Refer to page F-29 for more information.

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Christian Science Church Plaza, Boston
A linear row of trees reinforces the path of movement through this space.

Plaza Location Diagram

UCLA, Los Angeles
Pedestrian scale spaces are created by closely spaced plantings.

Plaza Section A-A Looking North: Illustrative Example

Plaza Lighting beyond
The Plaza: Plan

C.22
C.23
C.24

Plaza activities located in the Plaza will be available to pedestrians.

Steps serve as a natural seating and gathering spot in this public space.
The Green is the heart of the campus and all paths are directed toward this centrally located open space. It is the primary open space that will establish the character of the campus and will be the space that provides the lingering memory of the UCSF campus, in a fashion similar to the Main Quad at Stanford University, or The Lawns at the University of Virginia. Qualities that contribute to memorability and sense of place include clarity of definition, generosity, quality of materials, boldness and simplicity.

The scale of the Green is nearly identical to Union Square. Like Union Square, the Green is the place for people to move through, linger, or congregate for ceremonial occasions. Pedestrian activities will dominate the green, with the most generous path leading from the plaza. This path affords the opportunity for ceremonial activities such as graduations. Paths cross the green only in key locations with the express purpose of maximizing contiguous lawn area, yet are frequent enough to reinforce the concept of connectivity.

The paths along the north and south sides are social edges, lined with tall backed benches set within rich herbaceous and understory plantings facing toward the Green.

The rows of trees reinforce the interconnectivity of the campus as well as provide a definite edge to the open space. An inner wrapper of flowering trees further defines the space on three sides and reinforces the eastward topographic orientation of the space. The informal orchard of cherry trees at the southeast portion of the Green provides a strong edge to the main path and an opportunity for seating amidst the cherries, in contrast to the open lawn in the northwest portion of the Green. Refer to pages F-28 and F-29 for more information.
The primary concepts shown in this scheme maintain the pedestrian connection between the major open spaces. Topographic interest provides a way of differentiating spaces within the Green and establishes a more ceremonial approach to the Campus Community Center for use during official events and graduations; but specific locations of topographic variation have not yet been determined.
The Courts: Character

The Courts are the heart of campus recreational activity. They are oriented toward the city and are adjacent to the northern edge of the Campus Community Center. A viewing area between the Campus Community Center and the courts could serve as an interface between these two uses and provide both views and a social area. This edge could be reinforced with amphitheater-like treatment stepping down to the courts. Locker and shower facilities serving the courts would be located in the adjacent Campus Community Center.

Even though bisected by a pedestrian street, the space is held together and defined by flowering trees planted on all four sides of the courts. Street trees and passageway trees beyond reinforce the enclosure of the space.

Alternative court layouts are presented on the following pages. The actual scheme ultimately chosen for this area will be one which meets the programmatic needs of the campus and will depend on the needs of the users. Community life and recreation amenities should be designed to accommodate families and users of all age ranges. Courts should be arranged to encourage, rather than hinder circulation, and should be laid out to leave ample space for viewing, adding tables, chairs, and a café.

Plans should be evaluated for their efficient use of space, organization, and their ability to reinforce pedestrian circulation across campus. For example, soccer and softball fields in the southern location would disrupt this goal by impeding circulation. Available public recreation resources that may exist in the greater Mission Bay area at the time that the courts are ultimately programmed should be considered as well, so as not to duplicate resources. Finally, courts oriented in a north-south direction are traditionally preferred so that sun angles do not interfere with players’ vision. However, an east-west orientation of courts could be desirable so that spectators could view games from a viewing area at the base of the Campus Community Center. These are among the issues that will have to be considered when the layout of the courts is ultimately programmed. Note that the final layout should consider orientation as well as shade from adjacent buildings and wind effects. Refer to page F-29 for more information.
The Courts: Plan

Potential Program Components

- Tennis
- Volleyball
- Basketball
- Cafe
- Mini Soccer & Running Track
- Amphitheater (Terraced Steps)
The Courts: Program

The ultimate design of the courts will be coordinated with the design of the Campus Community Center. Because the courts will not be built for several years, it is anticipated that the desired uses could change, and are therefore seen as being extremely flexible at this time.

The program elements depicted here have been collected by UCSF through meetings of various campus committees, and represent a shopping list of potential desires.

Potential program elements include the following:

- 2 - Basketball Courts - Full size (82x120 feet)
- 4 - Tennis Courts
- 2 - Sand Volleyball Courts
- 1 - Mini Soccer field - (70x30 yards)
- 1 - Softball Field
- Putting Greens
- Golf Cages
- Putt Course
- Bicycle/walking paths
- Bicycle racks

Running Lanes
- 1 - Outdoor Pool (Optional)
- Amphitheater seating for 100
- Outdoor dining/meeting areas for 20 4-person tables

These diagrams depict the relative sizes of the various elements, as well as alternative relationships when courts are grouped. A full size soccer field as well as a 400 meter running track have been included for the purpose of comparison only, as these items could not fit within the dimensions of the Courts. An illustrative scheme has been depicted along with four alternative layouts pending final program definition.
Alternative 1

- 4-Tennis
- 2-Volleyball
- 2-Basketball
- 1-Mini-Soccer & Running Track

Alternative 2

- 2-Tennis
- 2-Volleyball
- 1-Basketball
- 1-Pool & Pool House
- 1-Mini-Soccer & Running Track
- 1-Amphitheater

Alternative 3

- 4-Tennis
- 2-Volleyball
- 2-Basketball
- 1-Mini-Soccer
- 1-Amphitheater

Alternative 4

- 2-Tennis
- 2-Basketball
- 1-Mini-Soccer
- 1-Softball
- 1-Amphitheater

The Courts: Alternate Schemes

Alternative layouts show that certain elements cannot be accommodated, such as the par golf course. Elements contained in the Courts will be coordinated with the programming of the Campus Community Center.
The Gardens: Planting & Design Criteria

Introduction

The gardens shown in the following plans represent suggested themes only. The genesis of the themes is the stature and medicinal focus of the institution, as well as cultural influences within the region. Garden themes have been arranged around the contribution of plants to the history of medicine and the highest standards of research and thinking for which this institution is known with the biomedical field. In addition, the themes are also intended to reflect the cultural influences within California and the unique characteristics of the native Bay Area ecology, and individual gardens could represent elements of cultural diversity reflective of UCSF and the Bay Area. The tree species proposed were selected for the San Francisco climate. In addition, a list of alternate species with their description and character is provided in Section F: Support Diagrams.

The potential exists within each garden to enhance the themes through planned cultural activities. These activities would be a means to not only program and activate each space, but also to serve as a vehicle for integrating the public into university life.

<table>
<thead>
<tr>
<th>Site Variables</th>
<th>Medicinal Garden</th>
<th>Bo-Tree Garden</th>
<th>Cloud-Tree Garden</th>
<th>English Garden</th>
<th>Mediterranean Garden</th>
<th>Asian Garden</th>
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LEGEND

★ = Most Suitable
O = Suitable
The Mediterranean Garden is an evergreen garden and pays homage to Mediterranean roots. It is comprised of a rich palette of evergreen plant material (Stone Pines, Irish Yews, Incense Cedars) used to make hedges, walls and canopies. These plants originate or are widely grown in the Mediterranean region. Any additional plants used in this garden should also be indigenous to the region. A few splashes of color are added with plants set in pots. The water basin is shallow and narrow and provides a focal gathering point for the garden. Appropriate maintenance of plant heights in this garden should be planned and coordinated with Campus Security. Refer to pages F-30 and F-31 for more information.
Bo Tree Garden

This garden pays homage to the "Bo" tree that the Buddha sat under to seek enlightenment.

A simple garden with fine paving, it contains a very large tree placed asymmetrically within the space. A raised, stepped planter provides places to set tables and chairs as well as edges for sitting. This garden could be a meditative space where students, faculty and staff could seek quiet and solitude under the spreading branches of the tree.

This garden, because of its minimal planting, could be successfully located on a raised podium. Refer to page F-30 for more information.
A rich palette of material, mostly herbaceous and shrubs, with windswept conifers, grows along coastal California. Bold, billowy puffs of monospecific coastal plants are proposed for these curved and vertically rounded planters. Low maintenance plants, capable of surviving coastal extremes, undulate through the garden. Trees with appropriate character are clustered to provide shade and further evoke the coastal environment. Appropriate maintenance of plant heights in this garden should be planned and coordinated with Campus Security. Refer to pages F-30 and F-31 for more information.
The Asian Garden is inspired by components of some Asian gardens, and the simplicity apparent within them.

This garden includes decomposed granite, simple elevated wood decks and benches, Mayten trees emerging from the wood decks, and a large water basin, within which are set lotus planted in pots. Detailing is intended to be simple and elegant. Refer to page F-31 for more information.
The Anglo immigrants brought East Coast and English plants to the West Coast. Traditional components of their gardens include lawn, trellis or pergolas, perennials, shrubs and trees.

The English Garden would be compatible with an adjacency to the Child Care Center. A simple palette and arrangement, combined with a lawn panel for play, and a trellis to act as a foil for play equipment set in soft material, make this an ideal children’s garden. Orienting the play equipment in an east-west direction within the courtyards ensures that some portion of the play equipment will remain in the sun throughout the day. Sections of the plant beds can be dedicated as areas for the children to plant flowers and vegetables for educational purposes.

There is ample room for benches set within the flower beds. A security fence can contain the garden and provide the necessary security for child care facilities.
Medicinal Garden

This outdoor room contains a collection of historically useful medicinal plants, inspired by herb gardens in clusters and peristyles in classical and medieval times. Often a water well and ornamental flower beds would be mixed with orchards. The garden, while derived from historic inspiration, and utilizing the components of an herbal garden, is decidedly modern in its arrangement in plan (both plants and pavement), and in the techniques for displaying plants.

An excellent southern exposure is a prime location for growing sun loving herbal plants, vines and fruit trees. The selection of medicinal plants available for consideration is extensive. Following is a sample list:

**Walls:**
Climbing Roses were used in Roman times for the bites of rabid dogs and continued as an official medicine prescribed for sore throats well into the 1930’s. Today, it is an important oil used in aromatherapy.

**Trees in pots:**
Citrus Spp. - The orange has centuries of medicinal use. The fruit stimulates digestion and acts as an expectorant for coughs.

**The Orchard Trees:**
Punica granatum - Pomegranate: Historically, in Palestine, both the blossoms and the juice have been used as a stomach remedy. The flowers, fruit and bark of this tree are an astringent.

**The Herbs**
Herbs should be planted in bold, full swaths.
Lavandula - Lavender: In Arab medicine, Lavender is used as an expectorant and antispasmodic. In European folk tradition, it is used as a wound herb and wound medicine for children.
Echinacea - Purple Cone Flower: Native Americans used the Coneflower to treat snakebites, fevers and wounds. Early settlers used the plant as a home remedy for colds and influenza. In the past 50 years, it has achieved fame for its antiviral, antifungal and antibacterial properties.
Salvia - Sage: Sage has a reputation for restoring failing memory in the elderly. The leaves are used for mouthwash and as a digestive stimulant.

This garden contains a variety of medicinal herbs and trees.
Cloud Tree Garden

The Cloud Tree of Buddha is the mystical sacred tree of wisdom covered with flowers made of gems. The tree is often depicted as growing in the midst of flowers and streams on a steep mountain.

This garden utilizes white flowering plants both vertically and horizontally. The outdoor room is dominated by vine walls planted in shady areas with the white flowering, shade tolerant vine, Evergreen Clematis and in sunny areas the White Wisteria. The terrace is planted with one large, white flowering tree.

Benches made of stone and planter, slightly elevated planters are arranged in a manner suggestive, but not imitative of a stream. The pattern is to reinforce access to significant doorways.
There are five primary arrival points for pedestrians and vehicles on the UCSF campus: the Plaza, North and South Gateways on Fourth Street, the Fifth Street Gateway and the Owens Street Gateway.

The consistent landscape components that comprise the gateways are a common paving palette that extends from the sidewalk across the access, a repetition of the use of one tree (the Plaza excluded) and an integrated system of kiosks, campus maps, and signage.

To preserve the view corridors on campus, trees are to be placed no closer than 34'-feet apart across a pedestrian street.
The Fourth Street North and South Gateways are mirror images of one another and serve as the primary vehicular entrances. Groves of tall evergreens, set back from the corners, announce the entrances. The specialty pavement from the entry plazas extends across the street and into the crosswalks across South Commons and 16th Street respectively. All lighting is to be coordinated with the Mission Bay Streetscape Plan. Signs, bus shelters and kiosks developed from a consistent vocabulary are artfully arranged and strategically placed within the plazas. Refer to page F-34 for more information.

View from 16th Street Looking at the South Gateway: Illustrative Example

C.78

Plan of North Gateway: Illustrative Example

C.77

4th Street
North and South Gateway

North and South Gateway Location Diagram
C.76
The Fifth Street Gateway is a pedestrian and limited vehicular emergency access connecting the campus with South Commons, the residential district to the north of the campus, and the Fifth Street pedestrian bridge across China Basin Channel. The components are to be similar to those of the other campus gateways, but because of its relatively less prominent role as a gateway, the gestures are reduced in scale. Refer to page F-34 for more information.
The Owens Street Gateway is a mixed vehicular, UCSF shuttle, and pedestrian entry. It will serve as the primary pedestrian access from the research complexes on the western side of Owens Street, and as a UCSF shuttle stop location. This gate connects directly to the main spine of the campus linking the Courts, the Green, and the Plaza. Paving and trees cross Sixth Street to connect and reinforce the primary spine of the campus. Materials are consistent with those of the other gateways, including a grove of tall evergreen trees, paving, signage, and kiosks. Refer to page F-34 for more information.
Connective passageways between buildings increase pedestrian traffic on campus offering alternative paths of travel to street sidewalks. The passageways are intended to physically and visually link neighboring gardens and open spaces; collegial rooms, information kiosks and other campus landmarks should be located at the terminus of their axes, or along their length, to encourage movement and visibility among the various spaces within the campus.
These passageways, as alternative pedestrian routes through the campus, are to be a minimum of twenty-five feet wide and sized with consideration for the maintenance needs of adjacent buildings. The width suggests a contiguous single row of upright trees to be coordinated with the rhythm of adjacent arcades and a wall of vines where there is an opposing building face.

Consistency of plant material and pavement will reinforce connectivity throughout the campus. Plant material should not differ along the length of the passageway, although it can vary along its width. Material is to be selected from the proposed list of upright trees and shade loving vines. Because passageways are only 25’ wide, it is important to place these trees close to the buildings on one side or the other and that they are kept well-pruned to allow for adequate passage and to prevent them from dominating the space. Refer to page F-32 and F-33 for more information.
The public streets surrounding the perimeter of campus will be consistent and coordinated with the character of the overall Mission Bay Streetscape and Lighting Plan. Likewise, 4th Street, the one public street running through campus, will also need to be consistent with the larger Mission Bay context; however, it is the goal of the University to enhance the character of this portion of the street in such a way that it does not unduly bisect the western and eastern portions of the campus, is safe for pedestrians, and feels as if it were a part of the University.

By definition, public streets are a public right-of-way, and as such, the maintenance of paving and lighting within the right-of-way is the responsibility of the city.

In general, with the exception of South Commons, the streets surrounding the campus are broad and receive substantial volumes of traffic. Every effort must be made to separate the pedestrian from this traffic with an unbroken, and appropriately spaced, row of street trees and lights.

The exact spacing of trees on each street will be determined in the detailed design of each street, and will depend upon the species and characteristic spread of the selected trees. Final spacing will be such that some sunlight will reach the sidewalks between the trees, even at maturity.

Note:
All public streets shown in this section are representations only and will be coordinated with the city and county of San Francisco and the Mission Bay South Redevelopment Area Plan.
Third Street has a very wide zone devoted to traffic, accommodating both vehicular traffic, the 22-Fillmore MUNI bus line and the MUNI Third Street Light Rail Line, resulting in a 12’ sidewalk. For safety reasons, no left turns will be permitted on Third Street, with the exception of a left turn lane at the intersection of Owens, where there is no MUNI station platform. For detailed information on curb configurations and overhead line heights at the Third Street Light Rail, refer to the EIS/EIR on that project.

Proposed tree species will be coordinated with those in the overall Mission Bay plan. The trees, when spaced closely together, with street light fixtures, will act as a linear screen enclosing the street and protecting the pedestrian from rapidly moving traffic.

Pavement must be coordinated with the overall Mission Bay plan. Pavement from the Plaza could extend across 3rd Street as a finger of the campus reaching into, and connecting with, the surrounding neighborhood; this would require coordination between the University and the City. Refer to page F-35 for more information.
4th Street is a public vehicular street through the campus. Although the building face to building face dimension is narrower than 3rd Street, the sidewalk dimensions are identical (12’). Utilizing tall upright trees spaced closely together, as on 3rd Street, will reinforce the space, lend a pedestrian scale and help to separate the pedestrian from the vehicular traffic. It should be noted that 4th Street may have a tow-away zone in the parking lane during peak hours in the peak traffic flow direction. During these peak hours, bicycles may also use these curb lanes. The section to the right illustrates the street during non-peak hours. Refer to page F-35 for more information.
South Commons forms the northern boundary to the campus and consists of a one-way, single lane for vehicles and bicyclists to share, parking and a 12’-foot sidewalk. No trees are proposed for this edge. The overall Mission Bay plan envisions planting within the central green space of the common itself and not on the opposite edges of the bordering streets, similar in concept to a London park.

Pavement is to be coordinated with the overall Mission Bay plan, with the exception of the gateways. Consistent with all gateways, the 5th Street and 4th Street gateways are finished with specialty pavement.
Owens Street

Owens Street is a seam between the campus and the private research and development zone west of Owens Street. The campus buildings are set back a minimum of 20 feet from the edge of the sidewalk. The scale of the street and the setback suggest trees that are tall and spreading.

The setback areas and crenulations are filled with tall billowy trees, typically associated with California. Understory trees, shrubs and groundcover comprise the remainder of the setback planting. Any service yards or loading areas along this edge must be screened behind solid walls of a height tall enough to mitigate the presence of large delivery vehicles at the pedestrian level.

The Owens Street gateway interrupts the rhythm of the street with gateway trees and pavement extending to the curb line. Refer to pages F-36 and F-37 for more information.
Sixteenth Street is one of only two outlets from the campus to the west, so it functions as a major traffic carrier. It also provides bicycle lanes and serves as a formal bicycle connection to the west. The MUNI 22-Fillmore buses travel in both directions along Sixteenth Street. A left turn lane in the southbound direction will allow for a more smooth flow of traffic.

The 4th Street South Gateway interrupts the rhythm of the street pavements and planting, announcing the entry point and connecting the campus across 16th Street with specialty pavement at the crosswalks. Refer to pages F-36 and F-37 for more information.
The remaining campus streets are private University streets. In addition to maintaining these streets, the University is also responsible for the activities which occur on them. Over time, the University may assign other names to these internal campus streets. Wherever these private streets meet public streets, it is the goal of the University to provide logical and complimentary use of materials to ease the transition at intersections.

The campus streets have almost as many different characters as there are streets, primarily attributed to the function they serve, but reinforced by the treatment of paving and planting. Internal campus streets are comprised of three categories: Pedestrian only (5th Street), Pedestrian with limited vehicular access (15th West), and Vehicular (4th, 6th, 13th East, 15th East). All streets will accommodate emergency vehicles. Typically, the building face-to-building-face dimension of these streets ranges from 64' - 78', in contrast to the perimeter streets which range from 88' - 116'.

Vehicular streets will be asphalt, but both pedestrian and pedestrian/limited vehicular access will have a contrasting paving surface to differentiate its use and to reinforce the pedestrian scale of the street.

Trees are used to reinforce the circulation and city grid, and to lend a more intimate scale to the walkway. The use of evergreen trees should be limited to north-south streets, to avoid having an evergreen tree in an environment almost always in shade. Refer to page P-34 for more information on specific tree species.

The most trafficked vehicular public street through the campus is 4th Street. The eastern portions of 13th and 15th function as private vehicular streets, primarily servicing campus parking garages. 13th Street, west of 14th Street, receives limited vehicular access by the campus shuttle, service to the base of building 19B, and emergency vehicles. 5th Street is the primary pedestrian access from the north, with only service and emergency vehicles permitted. 6th Street will likely have a dedicated drop-off zone for the San Francisco Unified School District site.

During the day, the highest concentration of pedestrian activity will occur on the Green, and on 14th and 15th streets around the Green. These streets are thought of as primarily pedestrian in nature, though they will support emergency vehicles.
5th Street is a pedestrian street with only service and emergency vehicles permitted. Because of the generous 22-foot sidewalk, and the north/south orientation, a broad, tall, evergreen tree is appropriate.

Pavement on the sidewalk and street will be similar, utilizing a unit paver within the street, and a similar, but larger unit on the sidewalk. Refer to pages F-38 and F-39 for more information.
13th Street West will have the character of 5th Street, with the primary difference being the presence of the campus shuttle. Generous sidewalks and an east/west orientation suggest a broad deciduous tree. Pavement treatment will be identical to 5th Street. Refer to pages F-38 and F-39 for more information.
13th and 15th Streets East are vehicular and used primarily to access and egress the perimeter parking garages. Therefore, final street configurations must be designed to accommodate parking garage queing as well as loading and drop-off operations. Their 14 foot sidewalks and east/west orientation make these streets ideal for a more upright (not fastigiate) deciduous tree. Refer to pages F-38 and F-39 for more information.
Sixth Street is vehicular and is a part of the Owens Street Gateway. This street forms part of the campus shuttle route, and is used to access the parking garages and future San Francisco Unified School District site on Block 14. A dedicated drop-off for the school will be located on 6th Street, as opposed to 18th Street, to avoid conflicts with access to and egress from the parking garage in Building 18A.

The overall width of Sixth Street will widen below block 18 to accommodate an additional turn lane at the intersection of Owens. The total width of the southern portion of Sixth Street is anticipated to be no more than 58’-0”-a 15’-0” sidewalk, a 14’-0” south travel lane, a 10’-0” south turn lane, a 14’-0” north travel lane and a 15’-0” sidewalk. Final internal campus street designs to be coordinated with Fehr & Peep traffic engineers and the Mission Bay Streetscape Plan.

Generous sidewalks and the north/south orientation make this an ideal street for a broad spreading evergreen tree. Refer to pages F-38 and F-39 for more information.
SECTION D: BUILDING DESIGN
Overall Building Design Strategy

The buildings on this campus will both define the spatial character of the open spaces on campus and the architectural image of the campus. The design guidelines outlined for buildings will allow a variety of functional and architectural solutions while maintaining a cohesive campus image.

The guidelines intend to ensure similarities among various campus buildings by proposing a basic level of visual consistency between them. This is achieved by prescribing a basic massing, general building organization, articulation, and material and color palette for campus buildings. Although these guidelines permit a range of possible architectural solutions, they aim to promote a level of consistency among the variety of possible building designs and styles.

Building massing is defined by simple volumes and consistent building heights. The expression of simple volumes encourages likeness among adjacent buildings and lends clarity to abutting outdoor spaces. Similarly, consistent building heights contribute to architectural cohesiveness and campus identity within the diversity of the surrounding Mission Bay community. Moreover, the establishment of critical building alignments and boundaries assure that adjacent buildings align, creating definitive edges along campus streets and open spaces.

Building massing is also organized to be compatible with the anticipated massing of buildings surrounding the campus site. For example, buildings along the northern edge of the campus require a 30-foot setback above 55 feet South Commons to reduce shading on the Commons identical to the setback requirements for other buildings bordering the Commons off of the campus site.

Individual buildings will also share a basic organization and articulation, and should conform to three general architectural strategies. First, the consistent expression of a building base, body and roofscape assures that among various designs, adjacent buildings will maintain continuous facade lines at their base and parapets. Second, building facades should acknowledge the types of open spaces they front such that a facade along a street edge may be different than one along a garden. This strategy enriches the sense of place created within the variety of open spaces. Lastly, buildings should be articulated by ‘subtractive’ means whenever possible, creating openings such as windows and entrances by carving from the mass rather than adding to it. This approach preserves the simplicity of the building volumes and discourages excessive ornamentation and over-design.

Within individual buildings, however, designated building elements should receive specific design attention.

The individual articulation of primary building entrances, collegial rooms, bridges and rooftops creates a network of recognizable focal points across campus and encourages visual connectivity among buildings.

Lastly, color and materials also play a significant role in creating a cohesive image for the campus. The Master Plan recommends a palette of natural building materials and colors to guide the construction of campus buildings. This palette includes primarily light colors which complement other buildings in the proposed Mission Bay community as well as in the existing San Francisco context. The limited use of more intense colors and materials is reserved for areas of specific articulation and architectural accents.

Museum of Modern Art Addition, Houston, TX

The carved entry and windows, flush detailing and use of secondary colors and materials help to provide visual interest and proportional scale to the simple massing along the street facade.

Children’s Hospital, Boston, MA

A continuous cornice line, base and facade alignment unify this medical office building and parking structure.
### Site Summary

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<th>Height*</th>
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**TOTAL**: 2,650,000 GSF, 4,600 spaces

*Excluding roof top mechanical equipment.*
A network of established building lines determines the physical siting of buildings on campus. These building lines assure that open spaces on campus are maintained during the course of development, and that the predetermined grid of view corridors and streets is preserved. The alignment of building edges contributes to the creation of a cohesive campus environment.

Each block maintains perimeter building lines which determine the absolute limits for buildings located on that block. The Master Plan advocates that buildings along block perimeters strictly observe the building lines in order to create definitive edges along campus streets and open spaces, and assure that adjacent buildings align throughout development. At several locations on campus, established setback lines further limit the extent of construction on individual blocks. These lines contribute to the formation of campus open spaces such as the North and South Gateways and the Plaza, as well as street and massing setbacks established by the Mission Bay community at the campus perimeter. For buildings along the northern boundary of the campus site, building setbacks of 30 feet for portions of the building above 55 feet are required along the north face of those buildings to reduce shadows on the Mission Bay Commons, a major public open space area immediately north of the campus site, consistent with the requirements of the Mission Bay South Redevelopment Plan for private development fronting the Commons to the east of the campus site.

Whereas building mass should strictly adhere to perimeter block lines, building edges that fall within the block interior maintain some flexibility to accommodate unanticipated programmatic needs. These zones of dimensional flexibility occur along the edges of interior block gardens and connective passageways. Refer to page F-6 for assumed building dimensions.

Legend

- Open Space Setback
- Campus Perimeter Setback
- Zone of Building Face Flexibility
- Center Line
- MTW Corridor Edge

Building Sites & Alignments Diagram
The massing of campus buildings is defined by the expression of simple volumes. Simple building volumes promote a basic level of conformity among adjacent buildings while accommodating a range of possible architectural solutions and building types. This approach also offers flexibility to accommodate unanticipated modifications in individual building programs and functions. Moreover, the clearly delineated edges of simple building volumes contribute to the formation of campus streets and cohesive open spaces.

The standards suggested by the Master Plan for building footprints and massing are based upon the basic functional requirements for each building type. The suggested size and location of research buildings, for example, meet the basic height and width requirements for multiple story laboratory buildings. These standards are subject to some variation, and change may be accommodated within specific zones on each block.
Building Heights.

The establishment of a consistent datum that limits the height of the substantial mass of buildings contributes to the cohesive appearance of the campus. Set within the architectural diversity of the surrounding Mission Bay community, this datum provides a measure of consistency and campus identity.

While some buildings up to 160 feet are permitted by the conditions of the land donation by Catellus to the University, the Master Plan envisions that the main body of campus buildings will be built to a consistent 85’ height, marked by a definitive edge or cornice line. This 85’ mass is exclusive of rooftop mechanical equipment and exhaust systems which occur above the datum and are set back from its edges and screened.

The 85’ height accommodates a variety of dimensional conditions for different building types. The following descriptions suggest how different floor-to-floor heights for different building types operate within the 85’ height limit:

1. **Parking Structures**
   Parking structures on campus assume a 12’-6” floor-to-floor height at ground level and subsequent stories of 10’-6”, including an uncovered rooftop parking level. Corner stair towers may exceed the 85’ height restriction as required. If service facilities such as a central utility plant and/or central electric substation are integrated with parking structures on campus, rooftop mechanical equipment for those facilities would comply with guidelines outlined later in this section.

2. **Campus Community Center**
   Unlike other campus buildings, the Campus Community Center includes a variety of programs, including parking, public assembly spaces, offices and recreational spaces. Each of these components maintains varying sectional requirements and floor-to-floor heights depending on specific programmatic needs. It is assumed, however, that the ground level will maintain a 20’ floor height to align with other buildings on campus, unless an interstitial mechanical space is employed, in which case a 25’ floor height would be set. An 85’ height is assumed. The placement of rooftop mechanical equipment is defined later in this section.

3. **Administration Buildings**
   Administration buildings assume a 13’-4” floor-to-floor height for six floors. The placement of rooftop mechanical equipment is defined later in this section.

4. **Animal Care Facilities**
   Animal care facilities assume a 20’ floor-to-floor height. A centralized animal care building would therefore consist of four 20’ stories or, if an interstitial mechanical space is employed for supply air, a ground floor of 25’. Similar to research buildings, rooftop mechanical equipment would be set back from the main building body.

5. **Research Buildings**
   Campus research buildings assume a 20’ ground level floor height with four 15’ upper laboratory stories. A 25’ ground floor height may also be employed to accommodate an interstitial mechanical space for supply air. Rooftop mechanical equipment occurs above the 85’ datum, and is set back from it, as outlined later in this section.

6. **Service Facilities**
   Floor-to-floor heights for service facilities such as a central utility plant and central electric substation are subject to specific space requirements for equipment. Nonetheless, it may be assumed that service facilities maintain a 25’ floor-to-floor height at ground level and 21’ floor-to-floor heights at subsequent levels. Service facilities may be integrated into designated parking structures as required. Rooftop mechanical equipment will be outlined later in this section.
The Master Plan advocates that campus buildings share three basic architectural zones that help organize the facade. The consistent expression of a building base, body, and top assures that demarcations at the base and parapet will visually connect adjacent buildings, while providing a framework for a variety of architectural expressions. Whereas the base and body will be consistent for most campus buildings, rooftop heights will vary according to individual requirements.

In the absence of a prescribed architectural language for all campus buildings, the general expression of base, body and top will serve to unify a variety of building designs on campus and is in keeping with the Mission Bay South Redevelopment Plan for the surrounding area. Each building, with the exception of parking structures and freestanding service facilities, will have consistent demarcations of these three zones, visually linking the campus together. Architectural guidelines for parking structures are addressed more specifically on pages F-7 through F-9. Service facilities guidelines are described on pages F-10 & F-11.

**Base**

The base zone occurs from the ground level to a height of 20’, where it is marked with a change of material or shadow line. The base line does not necessarily correspond to the ground floor height. This zone should include elements that foster pedestrian activity, such as arcades along open spaces and integrated site furniture. Moreover, the base should be articulated with the highest quality materials and, when appropriate, accent materials and colors to articulate its importance.

The base zone should also respond to the character of the open space that it abuts, emphasizing the continuity of the pedestrian landscape from outside to inside. This can be done by avoiding windowless walls for ground floor functions and encouraging transparency and articulation where appropriate.

**Body**

The body of the building rests on top of the base and comprises the substantial mass of the building, extending to the 85’ height parapet line. This zone houses the main functions of the building and is intended to reflect its program to the surrounding community. The body should receive a consistent expression with a minimum of projections or setbacks, except for the pronounced articulation of collegial rooms as outlined later in this section. At the top of the body, the parapet line should be capped with a definitive edge such as a cornice line or edge plate.

**Top**

The top occurs above the parapet line and is composed of rooftop exhaust stacks and mechanical equipment penthouses which are set back from the edges of the building body. The exhaust stacks should be clustered and composed in a variety of sculptural forms as specified later in this section. This articulation adds an element of visual relief to the simple massing of campus buildings, screens mechanical equipment, and provides some visual interest for adjacent communities such as Potrero Hill which look down onto the site.

The base of this research building is clearly defined by a change in material and a shadow line and is a consistent height around the building.
Hastings Law School, San Francisco
This building utilizes several body expressions which respond to different interior functional needs for daylight and view.

Chiron, Emeryville
The rooftop mechanical equipment for this research building is screened and contained within sculptural forms.

San Francisco Art Institute, San Francisco
These sculptural skylight forms are representative of the desired rooftop screening forms for research buildings.
Buildings on campus will collectively create and define open spaces with edges and facades. Individual building facades, in turn, should reflect the different types of open spaces they face, if any. In this sense, a facade along a major open space may be different than one along a garden or a street. This strategy enriches the character of individual spaces within the network of campus open spaces.

There are three significant open space conditions on campus that impact buildings along their edges: campus gateways, major open spaces and gardens. A consistent building treatment around these spaces will help unify the character of the open space and add visual cohesiveness to the larger campus. Additionally, the remaining public perimeter edges of campus should reflect a consistent treatment of pedestrian friendly articulation to unify the public "face" of the campus.

**Campus Gateway Edges**

Building facades which frame campus gateways represent the primary physical and visual arrival points for the campus. These building edges should reflect some signature for campus identity through their articulation. This may be achieved by rendering wall surfaces with signage, special materials and color to announce the campus to the surrounding community.

**Major Open Space Edges**

The three major open spaces are the largest outdoor spaces on campus and provide the primary spatial organization for the campus. The building edges that front them should be articulated with a strong sense of boundary and depth, creating definitive edges to these spaces. Individual facades should further recognize the differences in use and character between the three major open spaces.

**Garden Edges**

Campus gardens represent more intimately-scaled spaces, sharing a direct relationship with the cluster of buildings that surround them. Facades along gardens should promote a strong visual relationship between activity within the building and activity outside. Building facades facing gardens, therefore, should be articulated with glass whenever possible to foster a high degree of visibility to the activities within the Gardens.

**Public Perimeter Edges**

Those building facades facing public perimeter streets and spaces represent the public image of the campus. These facades should be articulated with pedestrian friendly features including secondary entrances to buildings, transparency and human scale and proportions.

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**Building Articulation: Building Edges**

- **Gateway Facades Location Diagram**
- **Color Treatment**
- **Gateway Façades Location Diagram**
- **Yawkey Laboratories, Boston**

This facade uses color and simple massing to identify and define a special entry to the research campus.
This large open space is edged with building facades that provide a definitive boundary to the space.

The facades facing this courtyard are transparent and glassy, creating visual connection between the inside and outside of buildings.
Building Articulation: Subtractive Approach

Among the variety of anticipated building designs on campus, the cohesiveness of the campus image will further be enhanced through a consistent approach to building articulation. Within the simple mass of each building type, openings such as windows and entrances should be articulated by a "subtractive" or "carving" method. This approach will result in a collection of buildings that retain recognizable surfaces and coherent edges to streets and open spaces. It also limits and discourages "additive" forms such as projections, overhangs and excessive ornamentation that go beyond the outer envelope of the building and detract from the simplicity of the building volumes.

Subtractive articulation permits a variety of possible solutions for building design. Six scenarios are illustrated here as examples of building elements which may be articulated through "carving," including the base, arcades, window openings, sun screening devices, cornice lines and stair towers.

- Simple Geometric Form (D.25): Each building mass begins with a simple, geometric volume that may be articulated through "subtractive" means.
- Base (D.26): A shadow line scribed into the mass may articulate the base of a building. This line may also serve to differentiate between two materials.
- Arcade (D.27): The building base could also be articulated with an arcade along gardens or major open spaces. Single or double height arcades are carved from the building mass, creating zones for pedestrian activity.
- 101 California Street Plaza, San Francisco, CA (D.28): An arcade at the base of this building helps define the base and provides a pedestrian scale environment along adjacent open spaces.
- Children’s Hospital, Boston, MA (D.29): A change in materials differentiates the base from the body of this building.

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BUILDING DESIGN

UNIVERSITY OF CALIFORNIA SAN FRANCISCO

D-12
Openings
Windows and openings may be articulated as horizontal bands, punched openings, or multiple-storied openings with insets of glass curtain wall.

J.F.K. Library, Boston, MA
Curved openings in the wall surface add a favorable depth to this building’s facades and lend a feeling of permanence to the wall.

Screening
Solar or visual screening devices should be integrated into the overall surface of the wall.

Joslin Diabetes Center, Longwood Medical Center Boston, MA
Sunscreens are made to feel an integral part of the overall wall surface in this example.

Comice
A shadow line scribed into the mass or a change in plane may articulate the cornice line of a building. The material above and below the cornice should be the same.

Parking Structure @ Mission and Embarcadero San Francisco, CA
The articulation of this stair tower is integrated with the overall image of the parking structure.
Primary entrances are those points of access into buildings from the interior of campus; namely, from the gardens and large open spaces. Another group of entrances, secondary entrances, are those that occur on the public perimeter edges or other edges of buildings and is discussed later in this section. As with all other building elements, location, scale, specific articulation and character must be taken into consideration when designing primary entrances, to ensure their support of the principal concepts of connectivity, collegiality and cohesiveness.

What is most important to the location of primary entrances is their prominence and visibility from various points on and off campus. For this reason, the primary entrances are intended to be located along either view corridors or circulation paths to reinforce connectivity across campus. Whenever possible, garden-side entries to different buildings within a block should be visible from each other to reinforce pedestrian interface and collegiality. When garden spaces face one another across a larger open space, visibility of entries between different blocks are also encouraged.

In terms of scale, the primary entrances must respond to the scale of the spaces to which they connect the various buildings. For example, an entrance off of a large open space, such as the Green, will need to be of a larger scale than an entrance off of a garden space. The width, height and depth can all be manipulated to achieve different scales. It is important, however, to maintain a proper proportion in order to prevent dark and uninviting spaces.

The specific articulation of the entrances should be achieved through ‘carving’, which is in keeping with the overall Master Plan approach to space-making and will help bring coherence to the architectural language of the campus. In addition, the entrances should also be integrated into the building base in a coherent manner. Other possible means of integrating a primary entrance into the building massing are through arcades and stair towers, which are described in the following sections. Breaking the line of the base is permitted as a means of emphasis for those entries where a larger scale is appropriate to the outdoor space it serves.

Location, scale and articulation define the character of a given entry, but material and color are also important elements to consider. Use of accent colors and/or materials are permitted as long as they are complimentary and responsive to the rest of the building and adjacent site finishes. Refer to the following section for a list of acceptable primary and accent materials and colors.

Secondary entrances are encouraged along the public perimeter edges of buildings. These entrances should be scaled appropriately for their neighboring context. This will help create a pedestrian-friendly image along campus perimeter public streets and help draw people into the campus.
Collegial Rooms are flexible program spaces intended for a variety of uses. By enabling a variety of spontaneous social and academic activities, these spaces will play an active role in creating an atmosphere of collegiality throughout the campus. Conceptually, the Collegial Rooms are intended as transitional spaces that connect the outdoor spaces, the gardens, with the indoor spaces, the Research areas. As such, the Collegial Rooms are intended to be of a scale that is more closely tied to the outdoors spaces, but which must respond to the requirements of their determined function. Some of the possible functions of Collegial Rooms include gardens, balconies, conference rooms, study lounges, open stair atriums, cafés and reading rooms.

As with the primary entrances, location, scale, specific articulation and character of the Collegial Rooms must be considered with respect to each individual building and its supporting outdoor space. Like the entrances, the Collegial Rooms should be located along view corridors and circulation paths whenever possible to reinforce connectivity across campus. While it is not essential for the Collegial Rooms to align with the primary entrances off of the Gardens, Courts or the Green, their relationship should be considered thoughtfully to ensure a coherent façade design and a logical visual relationship when viewed from afar. Scale should also be reflective of this relationship of the interior to its supporting exterior space.

Articulation of the Collegial Rooms can vary depending on their program and function. They can be conceived of as a single space or as a series of smaller stacked spaces of a similar function. In all cases, they are an opportunity to provide visual relief to the façade, and architects are encouraged to make them focal points to enhance their visibility.

As a means of reinforcing visual connectivity, the Collegial Rooms should be as open and transparent as possible. Like entrances, Collegial Rooms are intended to be focal points. The individual character of these ‘rooms’, as shaped by their location, scale and articulation should be responsive to their adjacent functions and materials.
Arcades are ground level spaces that are carved from building edges to effectively engage the building with its surrounding landscape and invite people to its edges. Arcades offer opportunities for pedestrian interface, and should be of a scale and character which supports collective interaction.

The Master Plan designates specific locations for arcades on campus. These locations include the edges of gardens and select areas of the major open spaces, such as along the north edge of the Plaza. Continuous arcades around these designated spaces will help to integrate adjacent buildings, visually connecting one building to another. Moreover, the consistent expression of arcades throughout campus fosters cohesiveness and strengthens the campus image.

The campus land-use plan designates specific program uses for arcade areas. Garden areas which service research buildings, for example, use arcades to collect faculty and students around classrooms and lecture halls, which occur around the perimeter of the garden and encourage collegial interaction. The arcades along the edge of the Plaza enliven the row of retail shops at the ground floor of the buildings facing the Plaza.

Arcades along garden edges should be coordinated with the continuous 20’ high base established for typical campus buildings. Arcade areas along the Plaza and Campus Community Center, however, may be taller to reflect the larger scale of the open space. Arcades may also utilize accent materials and colors to draw attention to them. The character of these spaces should encourage and enliven interaction on campus by being inviting social spaces.
Whereas arcades link adjacent buildings at ground level by providing covered passage, bridges connect the upper levels of buildings on the same block, facilitating interaction among occupants and improving the efficiency of floor plates. In this sense, the physical linking of buildings is an extension of the contiguous network of campus open spaces.

Bridges are located above connective passageways, connecting clusters of research buildings on individual blocks. Bridges are primarily transitional spaces, providing passage from one building to another, while maintaining a strong visual connection with adjacent open spaces. Bridges are not permitted between buildings on different blocks.

Transparency is a critical component to bridge design, not only to create views within buildings, but to minimize the impact on connective passageways. Similarly, bridges should be as thin as possible to minimize mass and increase transparency. Only utilities necessary for heating or cooling the bridges themselves should be routed through them; connective bridges should not be used for utility or communication trunks between buildings. Connected buildings must have compatible HVAC and control systems to ensure consistent operation and coordination between buildings.
Building Elements

Within individual buildings, there are select elements that should receive specific design attention. These building elements include primary entrances, collegial rooms, arcades, bridges and rooftops. The individual design of these elements may be articulated through the specialized use of accent materials and colors, creating recognizable focal points for each building. The collection of these focal points creates a network of visible elements throughout campus, facilitating wayfinding and adding visual interest to the campus.

Roofscape

Rooftop mechanical equipment for a typical research building can add up to an additional one-third to the overall height of the building. Despite required setbacks that decrease the visible mass of the rooftop equipment, the visual impact of the exhaust stacks is undeniable. In order to minimize the visibility of mechanical equipment, the Master Plan advocates that exhaust stacks should be clustered whenever possible and collectively screened within a series of sculptural forms.

This approach adds visual interest to building tops from points on campus and the surrounding Mission Bay community. These sculptural forms also can serve as a means of identifying the campus in views from elevated neighborhoods such as Potrero Hill as well as Highway 280.

Although research and animal care facilities require the greatest amount of rooftop equipment, all campus buildings have some mechanical requirements. Administrative buildings, campus community buildings and service buildings all maintain varying rooftop mechanical requirements according to their specific function. Parking structures typically do not require rooftop equipment since they are naturally ventilated. However, if service facilities are integrated with parking structures, then some rooftop area would be allocated for equipment placement.

Each building should have an organized and screened appearance for all rooftop equipment from prominent viewing angles, resulting in a collection of sculptural rooftop forms.
Rooftop Mechanical Screening: Strategies

Cubic Combined: Illustrative Example

Conical Symmetrical: Illustrative Example

Conical Combined: Illustrative Example
Rooftop mechanical equipment is generally divided into two zones stacked one on top of another. The lower, singular volume includes supply air handling equipment and serves as a base for a series of smaller, sculptural volumes which house clustered exhaust stacks above.

Both the lower equipment volume and the upper sculptural forms for the exhaust stacks should be constructed to screen the majority of equipment. This screening must provide direct rainfall protection for all rooftop mechanical equipment. Additionally, all air handling equipment and exhaust stacks shall be designed and located to maximize proper aerodynamic flow and airstream quality.

All rooftop mechanical equipment, exhaust stacks, elevator penthouses, and other equipment should be screened or incorporated within an architectural expression. There should be no exposed exterior ductwork on the roofs of buildings, and connecting bridges should not have any rooftop mechanical equipment.
Research and Animal Care Buildings

Research and animal care facilities require extensive exhaust systems. Exhaust stacks should be clustered together to improve exhaust plume air stream performance and minimize the number of visible exhaust elements on the roof. Each individual exhaust cluster should be visually screened by a single shape and arranged to form a series of cluster shapes as illustrated. The establishment of a series of sculptural forms reduces the overall mass of the rooftop equipment by avoiding a singular, linear form.

Supply air is shown on the roof as a base to the exhaust screen forms. Alternatively, depending on the programmatic requirements of the buildings, interstitial mechanical space within the lower stories of the building could be utilized for supply air to reduce the overall height of the roofscape.

Administrative and Community Buildings

Unlike the extensive exhaust requirements for research and animal care facilities, administrative and campus community buildings may house supply and exhaust systems within a single screened enclosure. As an alternative, interstitial mechanical space within the building could be utilized for supply air to reduce the overall mass of the roofscape.

Service Buildings

Campus service facilities will ultimately reside within a parking structure and will require rooftop equipment. This equipment should be screened and integrated with the aesthetic of the parking structure.
Color and Materials

Color and materials play a significant role in creating a cohesive image for the campus. A palette of acceptable colors and materials has been developed from the existing San Francisco context as well as the design guidelines established for the overall Mission Bay development. The use of accent colors and materials are reserved for areas of specific articulation.
Color

Color on the campus is derived from the natural or given state of a particular material, employing a variety of shades of light grays, sand colors or whites as well as a variety of accent shades. The predominant use of light shades of materials and earth tones will visually connect the campus to the overall coloration of the city of San Francisco and surrounding communities.

Materials and colors should be applied in coordination with the expression of the typical building organization. Light and natural colors and materials should be consistently utilized for expressing the body and top portions of buildings. The base, on the other hand, should be reserved for richer, natural materials to articulate the importance of the pedestrian zone at the ground level. Similarly, special areas such as campus gateways and the Campus Community Center should be articulated with high quality materials with significant visual interest.

Materials

Building materials on campus comprise three basic categories including primary, secondary and accent materials. Primary materials are those materials that form the majority of building surfaces, whereas secondary materials are employed as infill surfaces. Glass would considered a secondary material. Transparency through the use of glass is encouraged at courtyards, entrances and collegial rooms. When work spaces are adjacent to glazed areas, screening through the use of patterned or frosted glass is encouraged to reduce the visibility of interior clutter. Reflective glass will not be used as a building material. Accent materials may be used in smaller quantities and in specific locations.

Building elements such as primary entrances, collegial rooms and bridges should be articulated with accent materials to draw attention and create visual interest in the facade.

The following list of materials includes recommended primary and secondary materials:

Primary Building Materials
- Natural stone
- Precast stone
- Precast concrete panels
- Cast-in-place concrete
- GFRC panels / GFRG panels
- Metal panel infill

Secondary Building Materials
- Metal
- Glass
- Wood
- Specialized concrete masonry
- Stucco

Accent Building Materials
- Terra Cotta
- Brick

Building materials and wall systems should be designed with an 80-year life span. The selection of high-durability, low-maintenance materials and finishes for each individual wall system will contribute greatly to the life span of a building. Exterior materials and finishes should also be graffiti-resistant.
Conceptual Phasing
Summary

The UCSF Mission Bay Campus is projected to be complete by approximately the year 2020. Buildings will be constructed as program dictates and funding becomes available. Following is a conceptual phasing scenario developed in conjunction with anticipated plans for the development of new infrastructure in the area. This sequence of construction is divided into three separate phases. In the most rapid completion scenario, the first phase could occur within a five to eight year period, with each successive phase being completed within additional five to eight year increments.

The following phasing diagrams show a possible future growth scenario for the campus. Included on the diagrams are proposed building phasing, associated interim requirements for parking and landscaping, infrastructure and grading. It is important to note that the coordination of building phasing with the phasing of infrastructure will be critical to the success of the campus development.

The first building will occur on Block 24 and is located for easy access to existing utilities along 16th street. The remaining buildings in Phases 1 and 2 are located to create the heart of the campus, specifically the Green, as early as possible. Phase 3 will ultimately replace surface parking with structured parking, and complete the campus as a whole.
### Phasing Summary

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Building</th>
<th>Square Footage (GSF)</th>
<th>Target Phase GSF</th>
<th>Cumulative GSF</th>
<th>Parking Spaces Required per Building (130 cars/acre)</th>
<th>Parking Area (1.000 sf Building Area)</th>
<th>Total Cars Provided</th>
<th>Cars/1000 sf Building Area</th>
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Phasing Summary Table
Phase 1 consists of the first research building - 24 A/ B, the Campus Community Center - 21B and an additional research building - 19B. The Green is completed in this phase establishing the “heart” of the campus. A connection to Third Street is also established with a portion of the Plaza to provide access to the MUNI Third Street Light Rail stop. A portion of Owens Street and Fourth Street are completed in this phase. All parking is provided on the surface lots shown in the diagram, and it should be noted that the proposed driveway cuts on 3rd Street will be restricted to right-turn in and right-turn out only.

Summary:
- Target Phase GSF: 740,000
- Total Surface Parking Spaces: 1,500
Phase 1A consists of two additional research buildings on Block 17 - 17A and 17B. Fourth Street is extended to South Common which connects with Third Street. All parking is provided on the surface lots shown in the diagram, and it should be noted that the proposed driveway cuts on 3rd Street will be restricted to right-turn in and right-turn out only.

**Summary:**
- Target Phase GSF: 205,000
- Cumulative GSF: 945,000
- Total Surface Parking Spaces: 1,890
Phase 2 completes the development of the Greens by surrounding this major open space with more research and administrative buildings including the library and child care center in building 23A. Building 17C completes the development on Block 17 and the first parking structure is completed on Block 21. All remaining parking is provided on the surface lots shown in the diagram.

**Summary:**

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<td>Target Phase GSF</td>
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<td>Total Parking Spaces</td>
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Phase 3 represents the remaining construction of the campus including six research buildings, one administrative building and four parking structures. The Plaza and the Courts are completed in this phase as well. South Common and Owens Street are connected at the Roundabout. All parking is now provided in the five parking structures shown.

Summary:
- Target Phase GSF: 1,065,000
- Cumulative GSF: 2,650,000
- Total Parking Spaces: 4,600
Infrastructure Plan

The utilities needed to support the campus will consist of public infrastructure (constructed around the perimeter of the campus and within Fourth Street) and campus infrastructure (constructed within the vara block easements and possibly Fourth Street). The following four drawings show the anticipated locations and phasing of the public and campus infrastructure, which are described below.

Public Infrastructure

Three new public streets will be constructed around or through the campus: Owens, South Common, and Fourth. These streets will contain new underground utilities to support both the campus and the surrounding area. Existing Sixth and Third Streets border the campus to the south and east. New underground utilities will also be constructed within these streets as needed to support the campus and surrounding redevelopment area. In addition, an interim street will be constructed between new Owens Street and existing Sixth Street to maintain vehicle access and utility service to the businesses along Sixth Street through Phase 2 of the campus development.

Owens Street

Owens Street will be constructed along the west side of the campus and will contain the following utilities: separate sanitary sewer and storm drains, low pressure water, reclaimed water, high pressure water and joint trench dry utilities. A pump station and a force main will be constructed north of South Common to pump sanitary and storm flows from Fourth Street to the existing combined sewer in Third Street. The pump station may be removed when additional infrastructure is constructed to the north of the campus.

South Common

South Common will be constructed along the north side of the campus and will contain the following utilities: separate sanitary sewer and storm drains, low pressure water, reclaimed water, high pressure water and joint trench dry utilities. A pump station and a force main will be constructed north of South Common to pump sanitary and storm flows from Fourth Street to the existing combined sewer in Third Street. The pump station may be removed when additional infrastructure is constructed to the north of the campus.

Third Street

Third Street is located to the east of the campus and contains some existing utilities. The dry utilities are currently located above ground. New reclaimed water, joint trench, and separated sanitary sewer and storm drain lines will be constructed within Third Street as needed.

Interim Street

The construction of building 24A/B will remove the existing Sixth Street connection to 16th Street. Therefore, an interim road will be constructed to connect the remaining portion of Sixth Street to the new Owens Street. Temporary utilities will also be installed within the interim road to maintain services to existing businesses along Sixth Street. It is anticipated that the following temporary utilities will be installed: combined sanitary/storm sewer, low pressure water, power, gas, telephone and cable TV.

Campus Infrastructure

As the campus is constructed in phases, initially buildings will be connected directly to Public Infrastructure in Fourth Street and in the perimeter public streets. However, it is anticipated that all buildings will be designed for eventual connection to a centralized utility system for the campus. The centralized system may include electrical power, emergency power, communications, alarm and data transfer utilities. The centralized system may also include chilled water and steam if a central plant is constructed. It is anticipated that the central distribution center/central plant would be located in either building 18A, 18B or 20B, although an exact location has not yet been determined.

Utility Corridor

A central utility corridor will be constructed within the vara block easements within the campus to distribute the centralized utilities. In addition, a centralized utility corridor may be necessary along Fourth Street in order to provide the necessary looping. The utilities may be buried directly in the ground or located within a utility vault. The utility corridors will be installed as each permanent campus street is constructed, although the central plant or central distribution center would not be built until it is financially desirable to do so. When the central utility corridor is active, buildings that were initially directly connected to public infrastructure will be reconnected to the centralized distribution system.

Storm Drains and Sanitary Sewer

Campus storm drains and sanitary sewer lines will be installed within the vara block easements and connected to the public infrastructure. In addition, overland flow stormwater will drain to public streets for discharge beyond the limits of the campus. Buildings located around the perimeter of the campus will generally be directly connected to the storm drains and sanitary sewers within adjacent public streets. However, roof runoff from some buildings will be directed away from Owens Street to reduce water flows within the street (see page 1-16).
Conceptual Grading Plans

As the campus is developed, site grades will include a mix of (1) finished elevations and ground slopes, where permanent building and street construction has taken place, and (2) interim elevations and slopes, where temporary land uses occur, such as interim parking lots. The accompanying conceptual grading plans indicate the general nature of the site grading anticipated for each phase of campus development. Each plan indicates the approximate grading requirements and desires of UCSF, Catellus and the City and County of San Francisco, and include other requirements contained in the Subsequent Environmental Impact Report (SEIR) for the overall Mission Bay development area.

Generally a minimum grade of 0.5% has been used for all concrete (or similar) hardscaped surfaces (e.g., street pavements) with a minimum grade of 1% on all asphalt concrete surfaces (e.g., interim parking lots). These grades are intended to provide positive drainage away from structures and to adequately shed water from paved surfaces. These relatively flat minimum slopes are considered to be sufficient because stormwater will be done for most streets and large open areas prior to construction to reduce long-term ground settlements.

Stormwater detention basins have been shown in several locations for interim parking lots throughout the development. These basins have been sized to detain 5-year rainfall in excess of 1 inch per hour intensity. This is a requirement of the SEIR that is intended to reduce direct rainfall runoff to the China Basin Channel that could result from the limited capacity of the existing city combined sewage and stormwater collection system. To further reduce runoff from interim parking areas, infiltration basins and areas will be considered in the design of parking lots and detention areas.

**Phase 1**

Phase 1 will include the construction of buildings 19B, 21B and 24A/B, Block 22 (The Green) and a portion of Fourth Street, Owens Street and several internal streets. The grading for this phase reflects final grades for permanent construction. The temporary surface parking areas will be graded in such a way as to provide detention for surface drainage prior to discharging stormwater to the streets and/or the storm drainage system.

**Phase 1a**

Phase 1A will add buildings 17A and 17B and complete the construction of Fourth Street and the initial portion of South Common near Third Street, as well as additional parking lots on the north side of the campus. The grading for this phase will add stormwater detention areas to the additional parking areas.

**Phase 2**

Phase 2 adds building 17C, 19A, 21A and 23A, additional campus streets and more interim parking in the northern and northeastern portion of the campus. The new parking areas will be provided with onsite detention basins for stormwater storage prior to discharge from the site.

**Phase 3**

Phase 3 completes the campus development. By this time all surface parking will be replaced by parking structures and there will be no onsite detention basins. Final grades of the campus will reflect general movement of stormwater flows from south to north via campus and public streets.

Risk Management Plan

Development of the UCSF Mission Bay Campus must comply with the requirements of the Risk Management Plan (RMP) now being prepared for the entire Mission Bay Redevelopment Project. The final RMP will be approved by the California Regional Water Quality Control Board.

The purpose of the RMP will be to provide a decision framework for managing contaminants in soil and groundwater in a manner which is protective of human health and the ecological environment and is consistent with planned future land uses. The RMP will specify measures to be implemented before, during and after construction of interim and final campus facilities and associated public infrastructure. The RMP measures will control potential exposures determined to be unacceptable to human health or the environment. Such soil or groundwater remedial actions or other responses specified in the RMP may include soil capping, onsite construction of a soil or vapor barrier; removal, containment, or treatment of soil and extraction, containment or monitoring of groundwater. Additional requirements and implementation of health and safety plans, dust control measures, and site access restrictions. It is anticipated that RMP will also address site mitigation plan requirements of the San Francisco Public Works Code Article 20 (Maher Ordinance).

In general, the agreement between Catellus and UCSF calls for Catellus to be responsible for implementing the approved RMP measures for all existing land uses and for the construction of permanent improvements. UCSF will be responsible for implementing RMP measures for all interim facilities and land uses, such as temporary parking lots. It is anticipated that RMP measures will be implemented on a site-by-site basis as the campus is developed.
Phase 1a
Grading

Legend
- PHASE 1/1a+ STREETS
- PHASE 1/1a+ INTERIM PARKING
- EX EXISTING
- FG FINISH GRADE
- FL FLOWLINE
- GB GRADE BREAK
- HP HIGH POINT
- FLOWLINE
SECTION F: SUPPORT
Land Use Plans provide an illustrative layout for the basic distribution of major programmatic elements. This layout accommodates the 2.65 million gsf major new site space program described in the 1996 Long Range Development Plan and shown in the Program Summary on page A-13 of this document.

The campus is organized into programmatic zones, including research, administration, instruction, logistics and campus community zones. The distribution of these zones generally corresponds to the arrangement of campus open spaces, which in turn structures the overall organization of the campus. By relating specific program zones to open spaces, desired patterns of interaction and activity are encouraged throughout the campus.

Laboratory buildings, for example, generally occupy the center of the site and are organized around the Green, which serves as the academic center of the campus. The close proximity of one laboratory building to another serves to facilitate connections and promote interaction among scientists.
On the ground level, classrooms and lecture halls are dispersed within instruction zones along the edges of gardens of individual blocks to encourage student and faculty interaction. To the extent that programmatic requirements of individual research buildings allow, instruction space should also be oriented towards the Green so that classroom space could be used in conjunction with Conference Center space in the Campus Community Center if necessary. Similarly, the Plaza is lined with administration facilities, parking structures, and campus retail programs at ground level to encourage favorable pedestrian activity. The ground floor of individual buildings will also contain some mechanical and service space associated with each building. To the extent that campus market demand warrants, retail space could also be located within secondary retail zones along Third Street and Fourth Street at the Plaza.

The distribution of animal care facilities proposed by the Land Use Plans represents one possible solution, although the Master Plan maintains the flexibility to accommodate other solutions depending on the desired relationship between specific laboratories, service access and planning needs.
The Second Floor Plan reiterates the programmatic organization established on the ground floor. The distribution of classrooms and lecture halls within instruction zones on the second floor accommodates overflow from the ground floor, maintaining its orientation towards the gardens.

The retail program that lines both sides of the Plaza and other areas, on the other hand, occupies only the ground level. On upper levels, administrative and parking programs are extended to the perimeter of the building.

The distribution of animal care facilities on the second floor suggests that such a program is not necessarily confined to the ground level. Animal care may occupy upper stories by way of elevator access and bridge connections to adjacent buildings. A variety of solutions are possible according to specific conditions and animal care needs.
The Upper Floor Plan represents the majority of the research and administration program. Specific spatial configurations and program layouts are not prescribed in order to maintain flexibility to accommodate a variety of options.

Within laboratory buildings, light lines indicate small rectangles oriented towards the gardens which represent "collegial rooms" described on page D-15. The rooms represent a variety of possible social spaces and programs that encourage collegial interaction among occupants in adjacent buildings and on different floors. Similarly, bridge connections at upper levels facilitate connections and increase opportunities for interaction among scientists and students in different buildings.
Assumed Master Plan
Building Dimensions

Building Dimension Diagram
Campus circulation is designed to minimize conflict between pedestrians and vehicles. Public vehicular access is limited to perimeter streets as well as to Fourth Street, Sixth Street and to the sections of Thirteenth and Fifteenth Streets which are located between Third and Fourth Streets. Among these streets, the specific design of each street creates a hierarchy of desired traffic flow.

To minimize the visual impact of vehicular parking on campus, most parking is contained within structured lots located along the periphery of the site. To ease circulation, parking on campus streets is generally limited to white, yellow and green zones for drop-offs and loading operations, and blue zones for handicapped parking. In general, parking structures are placed to facilitate the phased development of the site, and are located within reasonable walking distance of all campus buildings. The largest parking structures are located along the Plaza in order to develop it as the primary place of arrival from the city. With traffic arriving from the MUNI Third Street Light Rail, the Plaza supports concentrated pedestrian activities, food services and retail programs dispersed along its edges. Because of the presence of the light rail tracks in the center of Third Street, traffic at the intersections of 13th and 15th Streets, and at the entries to parking structures 20B and 23B will be limited to right-turn in and right-turn out only.

As a means of further easing the transition from vehicular to pedestrian circulation, several established drop-off points will be provided on campus. A drop-off point will be located near the Campus Community Center off of Owens Street, and a dedicated drop-off for the Child Care Center on Block 23 will be located on 15th Street between 5th and 6th Streets. A dedicated drop-off for the school site could be located on 6th Street (rather than 13th Street) to avoid conflicts with access egress to the parking garage in building 18A. Additional shuttle drop-offs will be located as shown on the Public & Campus Transit Diagram on page F-12.

The following pages describe how the amount of parking was determined by the University as well as specific guidelines for the design of the five structures. Please refer to Section E: Phasing for planned construction of the parking structures and for interim parking locations during the various phases of build-out.
Access, Circulation and Parking Guidelines

Amount of Parking Proposed for Mission Bay Campus Site

The 1996 Long Range Development Plan proposes a planning factor of 2 spaces per 1,000 gsf of program space for the Mission Bay campus site, which was developed based on an analysis of existing parking and commuting data for UCSF personnel. For the 2,655 million gsf space program for the Mission Bay campus, the 2 spaces per 1,000 gsf factor yields a planning estimate of 5,300 parking spaces.

Since the adoption of the LRDP, new information on Caretta’s current proposal for development of the overall Mission Bay area has become available, and a more detailed analysis of potential parking needs for the Mission Bay campus site was undertaken. That analysis indicates that parking demand at the site will likely change over time, as public transit is phased into the Mission Bay area in accordance with the current proposal for Mission Bay. Because there will be relatively less public transit available to the campus site in the early phases, the Master Plan proposes surface parking at a ratio of 2 spaces per 1,000 gsf during initial development, in acknowledgment of the current lack of transit options. However, because it is anticipated that over time, Third Street Light Rail, the 22-Fillmore bus, and the 80-Stockton or 45-Union bus lines will be extended into the project area, the Master Plan proposes that the latter phases use a ratio of 1.5 spaces per 1,000 gsf. In the latter phases, surface parking will be replaced by structured parking, as surface parking lots are developed with research buildings and open space. Including a standard operational efficiency factor for structured parking, this approach yields an overall planning estimate of 4,600 parking spaces at buildout, which is reflected in this Master Plan.

The fundamental rationale of the analysis is to provide adequate parking to contain UCSF’s parking impacts on the campus site as much as possible, while not providing so much parking that persons who would otherwise take transit are encouraged to drive to the site instead. The key to successful implementation of this approach will be to monitor actual parking occupancy and the success of UCSF’s Transportation Demand Management (TDM) program as the Mission Bay campus site is incrementally developed over time, and to adjust the planning factors as necessary to achieve these objectives.

Access and Circulation

In keeping with the LRDP Goals for Access and Parking, the following requirements should be met:

- Provide alternative transportation modes by emphasizing their visibility within the campus, by operating an aggressive transportation demand management program similar to other UCSF sites and by charging for parking.
- Provide only as much parking as is necessary and maintain flexibility throughout the phased development of the campus by adjusting the ultimate parking supply.
- Create prominent transit linkages within the site in order to enhance the attractiveness of the transit mode and encourage the use of UCSF shuttles for inter-campus trips.
- Provide enhanced pedestrian and bicycle parking, showers, changing rooms and other support facilities in order to encourage bicycling. Refer to page F-13 for Pedestrian & Bicycle Circulation Diagram.
- Design an internal circulation system which minimizes conflicts between pedestrians and vehicles; where conflicts cannot be avoided, channel pedestrians to safe and convenient crossing locations.
- Lessen traffic on internal roadways by strategically locating parking garages to capture vehicular traffic at the perimeter of the site.
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Parking Structures

There are five parking structures proposed to handle the estimated 4,600 car parking demand for the campus. These structures are located at the perimeter of the campus at two primary locations in order to minimize vehicular traffic on interior campus streets. Two parking structures are adjacent to the Plaza along Third Street to serve the east side of campus, and the remaining three structures are located near the Sixth Street and Owens Street intersection to serve the west side of campus.

Exterior Facades and Massing

It is the intent of this Master Plan that all parking structures should be visually integrated with the other types of buildings on campus. This requires that special attention to facade treatment and massing be given to parking structures to ensure that they do not visually dominate any particular open space or street edge. Careful consideration should be given to the design of all parking structure facades with regard to proportion, rhythm and human scale. Specifically, there are four components of the exterior design of parking structures that should be addressed. They are the base condition, the visual screening of vehicles, the integration of vertical circulation into the overall mass, and the appropriate response of parking structure edges to key open spaces. In general, the design of parking structures should also follow the principles outlined on pages D-2 to D-23.

Firstly, the base condition refers to the 20' height zone established at the first floor level of buildings on campus. The articulation of the base of parking structures should employ arcades and canopies as well as landscaping to be as pedestrian-friendly as possible.
Access, Circulation and Parking Guidelines

Way-Finding/Signage
A complete graphics and signage program will be required for the project, including site, directional, building exterior, garage entry, parking level and directional signs, pedestrian orientation, life safety and accessibility signage.
All signage must be in compliance with UCSF Signage Standards. Sufficient graphics should be provided so as to direct and identify the most convenient means of vehicular, bicycle and pedestrian access and egress. Signs indicating direction to pedestrian exits and elevators will be provided.
Graphics will be used on each floor of parking structures to provide color coding and numbering to assist in identification of parking locations. Floor levels will be numbered and/or color coded (use corresponding colors and color coding in the elevator cabs) to aid the driver and/or pedestrian.
Signs will be incorporated at all points of decision to provide driver destination choices to available parking or vehicle exits. Minimum vertical clearance signs may be used without the necessary traffic studies and the approval of the University.

Interim Surface Parking
Interim parking should be secured with a decorative fence no less than 7'-0" in height and screen planting should surround the entire parking area. Screening may be achieved through hedges or vines and is to be temporary in nature. The development of strategies where fence and plant material can be reused is encouraged. Streets that are built out and planted with street trees are to have the screening and fencing on the interior side of the sidewalk.

Striping and painted directional arrows on the driving deck will also be provided.

Parking Circulation
Due to the need for the maximum efficiency of parking spaces within parking structures, it is recommended that all parking structures use one of the following ramp configurations:
• 2-sided parking ramp
• Single-sided parking ramp
• Split-level with speed ramps
As these are the most cost-effective and space efficient options for construction, use of one-way circulation or dedicated exit ramps may not be used without the necessary traffic studies and the approval of the University.

Medford City Center Retail/Parking Facility, Medford, OR Lighting and treatment of primary entries enhances the pedestrian edge and provides added security.

Lastly, individual edges of parking structures should respond appropriately to the types of space surrounding the structure. For example, the Gateway edges of the two parking structures fronting Third Street at the Plaza should be articulated differently from the edges that face either a garden or an internal campus street. This approach to façade design will help ensure that parking structures aesthetically fit within the overall campus. Refer to pages D-10 to D-11 for more information.

Entrances
Both vehicular and pedestrian entrances to parking structures should be clearly defined and recognizable on the structure’s exterior façades. This may be achieved through the use of color and materials and/or a change in massing or scale at key entry points. Signage, as discussed later, should also be integrated into the design of entrances. Refer to page D-14 for more information on defining primary entrances and page F-7 for more information on vehicular entrance locations.
Pedestrian entrances should be located directly adjacent to stairs and elevators within the parking structures and should also be located to provide easy access to the surrounding open spaces like the Plaza, gardens, campus streets and public perimeter streets.

Key Dimensions and Requirements
Per UCSF parking standards, all parking stalls shall be 17-feet minimum in depth with a 2-foot maximum overhang at planted areas. The minimum width of parking stalls shall be 8-feet. Designated handicap accessible stalls shall conform to State Title 24 requirements for size, number and location. All parking shall be 90 degrees with two-way circulation for the most efficient use of space.
All entry drives, ramps and traffic aisles shall have a turning radius of 45-feet minimum.
All Parking Structures shall measure 12'-6" from finish Ground Floor to top of First Floor finish. All subsequent floors shall have a minimum floor to floor height of 10'-3".
The typical structural bay for parking structures shall be 62-feet clear, minimum.
The cornice line established at 85’ above first floor elevation should be recognized and articulated in all parking structures.

Parking Structures shall measure 12'-6" from finish Ground Floor to top of First Floor finish. All subsequent floors shall have a minimum floor to floor height of 10'-3".

The typical structural bay for parking structures shall be 62-feet clear, minimum.
The cornice line established at 85’ above first floor elevation should be recognized and articulated in all parking structures.

In addition, retail functions may be integrated at the first floor level of the two parking structures along the Plaza to further enhance the pedestrian friendliness of the base of these buildings and to provide a buffer zone between the open spaces and the parking garages at street level. Refer to pages D-12 and D-16 for more information.

Next, the design of parking structures should provide sufficient exterior visual screening of all vehicles contained within the structure, while still allowing for adequate natural ventilation. This may be achieved through the use of sufficient height opaque walls at each floor level, massing setbacks, mesh-like materials that obscure the view of cars from the exterior, landscaping or a combination of all of these approaches. The overall intent is that vehicles should not dominate the visual image of parking structures and that using these methods may help to break up the overall mass and surface of large areas of façade. Refer to page D-13 for more information.

Thirdly, vertical elements like stairs and elevators should be integrated into the overall massing of the parking structures as opposed to being freestanding or highly articulated elements. This will help maintain a consistent appearance between the different types of buildings on campus. Refer to page D-15 for more information.

Lastly, individual edges of parking structures should respond appropriately to the types of space surrounding the structure. For example, the Gateway edges of the two parking structures fronting Third Street at the Plaza should be articulated differently from the edges that face either a garden or an internal campus street. This approach to façade design will help ensure that parking structures aesthetically fit within the overall campus. Refer to pages D-10 to D-11 for more information.

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Service, Loading and Security

Security

Police Services for the Mission Bay site are the responsibility of the University of California San Francisco Police Department, a full-service 24-hour law enforcement agency. University police officers will patrol the campus site and respond to all calls for police services.

Campus emergency call boxes throughout the campus site will be connected to the UCSF Police Department. Emergency call boxes would be located near all major open spaces and within the block view corridors between buildings. In general, an emergency call box should be located every 200 feet.

Individual buildings and spaces on campus should be designed with consideration for "defensible space": that is, spaces which provide for the personal safety of users, to address security and safety issues. An electronic access control system will be installed throughout Mission Bay buildings to increase safety and security for all users as well as to reduce unauthorized access to building areas. Identification cards, which will also be the access control card, will be issued and required to be retained by all users.

As part of the access control program, on-site police/security personnel will be stationed to monitor ingress and egress to facilities. As Mission Bay grows, police/security presence will be increased to meet the needs of the expanding population.

The Campus Parking Garages shall be designed to provide an optimum level of safety and security for visitors, students, faculty and staff. Garage security shall be in accordance with UCSF Security Standards and shall consist of passive and active components. Visibility from surrounding property, walkways, streets, etc. and clear lines of sight within garages shall be provided to the maximum extent possible.

Garage design shall incorporate features that maximize passive security such as increased lighting levels, visibility, elimination of dark corners and confined spaces, vandal and graffiti resistant finishes and deterrent graphics and signage. A vertical screen system shall be provided for security purposes at the ground level of parking structures. The screen shall be continuous and secure around the perimeter of the garage.

Loading and Service Areas

Due to the special servicing needs of the campus research facilities, each building must be able to accommodate storage and pick-up functions. Loading docks need to be designed for traffic receptacles, recycling bins as well as drop-off and pick-up of materials as required by UCSF Facilities Management and the UCSF Animal Care Facilities standard. To reduce the impact of this universal approach to service, animal care and hazardous material loading facilities should be planned for the first building to be constructed on each block. By designing the first loading dock on the block to accommodate the bulk of the servicing needs for that block, the overall area required for loading will be reduced. In addition, this approach will improve safety by preventing the transfer of hazardous materials across active campuses.

To mitigate the visual impact of providing a loading dock at every building, an effort should be made to recess all loading docks within the building mass. This will preserve the critical alignments established by the master plan as shown on Sheet D-4, and in keeping with the principles of building articulation as outlined on pages D-12 and D-13.

It should also be a goal to keep curb cut opening widths for loading access to a maximum of 24’-0”. Per UCSF standards, loading docks must be a minimum of 3’-0” deep. For additional requirements on capacity and turning radii, please refer to the UCSF Facilities Design Guidelines listed on page G-4 in the Appendix. As loading needs will change over time, it is essential that each building address the specific needs of Facilities Management during the final design process.

As it is a goal of the University to preserve the pedestrian character of their internal campus streets, access to loading areas by service vehicles should not penetrate beyond the first buildings off of 3rd, 4th, 5th and 6th Streets (refer to diagram on page F-11). No loading docks may face the campus perimeter streets, with the exception of buildings 24A/B and 21A which are required to be treated with special screening walls along Owens street.

The proposed animal care service areas are based on assumptions outlined in the Land Use Plans. A variety of possible service locations and solutions exists for alternative servicing schemes.

EH&S facilities will likely be stand-alone facilities during initial development (for example, in Buildings 24A/B and 19B), but over time, as campus development reaches a sufficient critical mass, EH&S activities should be consolidated into one or two central locations.

Outside vendors, when required by contract, are restricted to public street access, while campus service vehicles and emergency vehicles may use internal, limited-access campus streets.

Screening of Loading and Service Areas

Service and loading areas will occur on every building in some form, and to that end, these areas should be properly addressed to limit their detrimental visual impact on the campus and the surrounding Mission Bay development. Exterior loading docks are strongly discouraged. Two methods to reduce the amount of loading area visible on campus are discussed here.

First, screening of service areas at the pedestrian ground level is necessary throughout the campus and particularly along Owens Street, where service areas are adjacent to the 20’ setback area, in order to preserve the pedestrian character of these spaces. Screenwall concepts could range from the use of solid, opaque walls to translucent or mesh-like walls that allow for varying degrees of visibility through them. Chain link fencing is not a suitable material. All such strategies should integrate landscaping as a way to mitigate the scale of screenwalls and to help obscure direct views into service zones. Screenwalls may be a maximum height of 10’. Use of softer landscaping materials and canopies is encouraged to screen views of service areas from upper levels of buildings.

Another means of reducing service area visibility is by an efficient configuration of the loading zone that minimizes the amount of curb cut. This in turn will minimize the loss of street trees from the street edge, which will preserve an effective means of screening these areas from direct view.
Emergency & Service Access
Base map illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.

Service, Loading and Emergency Vehicle Access

Legend

- **Building Loading Dock Location**
- **Outdoor Maintenance Storage**
- **Emergency Vehicle Access**

**Museum of Modern Art (MOMA), San Francisco**

This service dock is recessed into the overall massing of the building, which minimizes clutter on the building exterior and provides for secure temporary storage before and after pick-up.
Public & Campus Transit

The use of public transportation to the campus is encouraged to lessen the impact of excessive vehicular traffic. Campus gateways are aligned with transit stops to facilitate commuter access to campus, including the East Gateway at the Plaza which provides access from the 3rd Street Muni Light Rail stop and the 22 Fillmore bus stop. Similarly, the South Gateway provides access from an additional public bus stop on 16th Street.

In addition, campus-operated shuttles link the Mission Bay campus with other UCSF campus sites throughout the city and offer several convenient drop-off and pick-up points on campus.

It should also be noted that the planned location for a dedicated drop-off for the San Francisco Unified School District site is on 6th Street, as opposed to 13th Street. This will avoid traffic conflicts with access and egress to the parking structure currently shown as Building 18A.
Pedestrian & Bicycle Circulation

Pedestrian circulation on campus is clearly defined by a contiguous network of open spaces and connective passageways with minimal interruptions by vehicular streets. The pedestrian system is intentionally detached from the Mission Bay vehicular street grid whenever possible to avoid vehicular activity and to enhance a sense of collegiality and campus identity. Pedestrian ways are designed to maximize exposure to outdoor spaces and public building fronts, avoiding service zones and loading areas.

The setbacks of Owens and 16th Streets will include a dedicated pedestrian and jogging trail consistent with the Mission Bay South Design for Development document.

All streets will be open to bicycle circulation. Sixteenth Street will have separate dedicated bicycle lanes, and Fourth Street and the Commons will have extra-wide lanes to facilitate bicycle traffic as described in the Mission Bay South Redevelopment Plan. Campus routes are intended to feed into the existing Citywide bicycle routes on Seventh and 16th Streets west of Seventh.

Bicycle parking facilities will be provided at various locations throughout the site. Such parking could include designated areas within individual buildings, parking garages, exterior areas and at the Campus Community Center. Specific locations for bicycle parking, as well as indoor changing and showering facilities and lockers, will be considered as part of the planning for individual building projects.
Grading

In general, the topography of the Mission Bay area is relatively flat. Overall drainage patterns are directed toward the Bay and north to China Basin Channel. The proposed grading plan must tie into the Catellus grading plan for the Mission Bay South Redevelopment Area.

All streets within the campus will have a minimum longitudinal grade of 0.5%. This grade is considered to be the minimum desirable to provide positive drainage away from structures and to adequately shed water from paved surfaces. A larger minimum grade is normally preferred but would require greater volumes of site fills and cause increased ground settlement. A smaller minimum grade would require special drainage provisions within the streets and walkways, such as frequent catch basins, continuous drain inlets, or higher curbs.

The proposed grading plan will result in final ground elevations as much as 6' feet above existing levels. The high point on campus will be west of the intersection of 4th and 15th Streets, adjacent to Building 24A/B. Campus grades will generally meet existing grades on the south and east, along 16th and 3rd Streets, respectively. On the west and north, campus grades will match the initial construction grades of Owens Street and South Commons planned by Catellus.

Legend

- TO: Top of Curb
- BC: Bottom of Curb
- HP: High Point

Base map illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.
The Campus site lies primarily within the Central/Bay designated drainage basin. This area, along with the Mariposa Basin to the south, drains towards the north and east to the China Basin Channel and the Bay, respectively. Campus drainage, as indicated by the accompanying Hydrology Plan, will convey stormwater runoff from the south to north as planned for the Mission Bay South Redevelopment Area.

The Campus storm drain system will be designed to carry runoff from landscaped areas, streets and other paved surfaces, and building roofs for a 5-year design storm (as specified by the City). Excess water from more intense rainfall events, to as great as 100-year design storms (as specified by the City), will be carried as surface flows on Campus and Public Streets. Within the Campus, including Fourth Street, storm flows greater than the design 5-year event will be contained within the street curbs, which will be a maximum of 6 inches high. Around the perimeter of the Campus storm flows up to the 100-year design event may also extend to the back edges of sidewalks, because of the relatively flat longitudinal grades (less than 0.5%). This will particularly be true towards the north end of Owens Street, which must carry runoff from development areas south of the Campus.

To reduce storm flows carried by Owens Street so that curb heights can be kept between 6 and 8 inches, the Campus development will have to respect the hydrologic boundaries shown on the Hydrology Plan. In particular, roofing flows for several buildings along Owens Street must be directed to the north and east sides of the buildings and away from Owens Street.
The Mission Bay area was originally a shallow inlet of the larger San Francisco Bay until the mid-1800s when land reclamation activity began. The filling of Mission Bay continued until approximately 1915. The fill that covers the campus site ranges from approximately 5 to 23 feet thick. The fill soils are underlain by a thick layer of generally soft and saturated marine clays and silts, known locally as bay mud. The relatively weak and compressible bay mud varies in thickness from approximately 20 to 80 feet, with greatest thicknesses in the northeast portion of the campus site.

The existing site fills have probably settled as much as several feet from consolidation of the underlying bay mud. Because of the age of the fills, the majority of consolidation settlements have already occurred. However, the thicker bay mud soils, as in the northeastern portion of the site, may still be consolidating and future settlements of the existing ground surface of more than 6 inches can be anticipated over the next 50 years in these areas. Where new site grading fills are placed (up to six feet thick) substantial ground settlements (as much as 20 inches) may be expected over a 50 year period.

Ground settlements caused by consolidation of bay mud under existing and new fills could lead to unacceptable non-uniform settlement of the ground surface, pavements, and buried utilities. The ground settlements are likely to be most noticeable around building perimeters because the structures will be pile-supported and not expected to settle appreciably. Ground settlement could also result in poor surface drainage, cracked walkways and pavements, insufficient slopes to sewer and storm drains, and abrupt differential displacements of utility connections between buildings and adjacent campus or public infrastructure.
Post-construction settlements of the ground surface can be reduced to acceptable amounts by a number of design alternatives:

- Surcharging in advance of permanent construction to preconsolidate the bay mud layer,
- Avoiding the placement of fill soils within building areas to reduce ground settlements around the perimeter of the buildings,
- Using light-weight earth fill materials, which weigh about one-half as much as normal earth fills and therefore cause only about one-half as much settlement, and
- Using ultra lightweight manufactured materials (similar to Styrofoam) that only weigh about one pound per cubic foot and will essentially not cause any ground settlement.

**Surcharging**

Because of its cost effectiveness, surcharging will be used as a means to reduce post-construction ground settlements to tolerable amounts. The accompanying Surcharging Plan indicates those areas of the site that are anticipated to be surcharged as part of the campus development. These areas include:

- Most streets within the campus, including Fourth Street, where storm drains and sewers will be located and which depend upon minimum slopes for adequate drainage and self-cleaning.
- Large open areas, such as the Plaza and the Courts, where paved surfaces must be kept free from cracks that are unsightly and/or a safety hazard.
- The Green, where significant fills (as much as 6-foot thick) will be placed to support major landscaping and pedestrian walkway elements.

Surcharging is not generally planned for the following areas of the campus:

- Beneath buildings, which will be pile supported with unreinforced footings, and where site grades will not be raised.
- Immediately north of Buildings 24A and 24B, because the early development of these buildings will not allow enough time for surcharging to take place in advance of construction.

- In the western portion of the campus, including the new Sixth Street, where site grades will not be raised (may even be lowered) and future ground settlements are expected to be less than two inches.
- In public streets around the perimeter of the campus where final grades are planned to generally match existing grades and no significant long-term ground settlements are expected. An exception to this plan may be South Common, east of Sixth Street, where some filling will be done and it may be desirable to limit the amount of ground settlement that may result.

Surcharging will be planned and designed in such a way as to reduce long-term settlements of the site, while protecting permanent construction (including utilities) already in place. The following guidelines are based on preliminary calculations and will be confirmed or modified as needed when more detailed site investigations and geotechnical analyses are performed during campus development.

**Height and Lateral Extent of Surchage Fills**

The required height and width of surcharge fills will vary depending upon many factors including:

- Thickness, compressibility and degree of preconsolidation of bay mud layer,
- Thickness and weight of permanent fills placed to raise site grades,
- Depth to groundwater and means employed for drainage of water “squeezed” out of the bay mud during consolidation,
- Progressive buoyancy of the existing fill walls as they settle with respect to the groundwater level,
- Use of land adjacent to surcharged areas, particularly whether the adjacent ground will be raised by filling before or after the surcharge period,
- Height limitations on the surcharge, based on aesthetics whether the adjacent ground will be raised by filling before or after the surcharge period,
- Amount of settlement reduction desired, and
- Time available for surcharging.

In general, surcharge fill heights are anticipated to range from 5 to 15 feet above the level of the site grading fill. The surcharging will typically be designed to eliminate 100% of the anticipated consolidation settlement and subsequent secondary compression settlement that would be expected to occur in 50 years had surcharging not been employed.

Where the site will be filled at least temporarily adjacent to surcharged areas (such as for interim parking lots), the surcharges will typically be 10 to 15 feet high. The surcharges will extend 50 feet beyond the limits of the areas requiring surcharging (measured to the toe of the surcharge fill slope, 8:1 Hv). Wick drains (to hasten consolidation of the bay mud) will only be installed within the limits of the areas requiring surcharging and not beneath the surcharge fill “extensions”. A horizontal drainage layer below the surcharge fill will connect the wicks. Water from the wicks will discharge into the drainage layer, which will contain collector pipes leading to sumps at the perimeters of the surcharge fill. The water will be pumped from the sumps to a city sewer.

**Setbacks near Existing and New Permanent Facilities**

- The toe of all surcharge fill slopes will be kept 40 to 90 feet away from any existing or new permanent structures, roadways or utilities that are sensitive to settlement. The setback distances will depend on the depth to the bottom of the bay mud layer, which typically increase from South to North across the campus.
- Along the campus perimeter near the existing Third and 16 Streets, site grading fills are planned to be minimal and to match Catellus’ planned initial (i.e., overbuilt) elevation at the intersection of Fourth Street and South Common. Therefore, settlements in the surcharge setback “gap” will either be small and tolerable, or reduced by using lightweight fill materials.
- Along the north side of the campus, UCSF development will precede Catellus’ street and utility construction in South Common. Thus no surcharge setbacks are generally anticipated in this location.

**Phasing and Overlapping of Surchage Fills**

Because of the phased funding and development of the campus, surcharging will in general be performed within a 12-month period just prior to construction of permanent facilities. This will require that surcharged areas overlap to be fully effective. Overlapping will be accomplished by:

- Extending wick drains and surcharge fills 60 to 110 feet laterally beyond the limits of the initial surcharge into the area that will be surcharged at a later date (measured to the toe of the surcharge fill slope). The larger distances will be required where the bay mud is deepest in the north part of the campus site.
- Searing the toe of the fill slope for the subsequent surcharge about 20 feet inside of the former limits of the initial surcharge fill slope. This will provide the required surcharge overlap, but will respect the setback needed to protect permanent construction already completed within the initial surcharge area.

**Transition Zone between Campus and Catellus Development to the North**

In areas along South Common on the north side of the campus, there will need to be transition zones and perhaps special connections between (1) the generally non-settling streets and utilities built within the campus, and (2) the off-site streets and utilities constructed by Catellus under a plan of overbuilding to allow for settlements that are predicted to occur within 50 years (i.e., no surcharging).

The approach to this issue can be demonstrated by reference to the current plans for Fourth Street:

- The site grading plan calls for Fourth Street grades to match Catellus’ planned initial (i.e., overbuilt) elevation at the intersection of Fourth Street and South Common.
- Construction elevations and slopes of sewer lines and storm drains along Fourth Street will also be designed on the basis of meeting the initial elevations of these lines (when constructed) at the intersection of Fourth and South Common.
- Surcharging of Fourth Street will be accomplished in two phases from south to north. Permanent streets and utility construction will follow each phase of surcharging.
- All surcharging along Fourth Street will include appropriate overlaps and setbacks, as described above, both along the streets and laterally beyond into campus blocks/streets as needed.

At South Common, the severity of differential settlement (angular rotation), which will occur over time in a south-to-north direction along Fourth Street, will be reduced by tapering the surcharge fill height to zero over an appropriate distance along Fourth Street - either from the south to the north of the South Common intersection. The distance over which the tapering is accomplished will depend on the flexibility of the sewer line and storm drain joints and on the maximum grade break desired for the Fourth Street pavement.

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**Support**

**University of California San Francisco**
Introduction

Vision is a primary means by which we gather information about our surroundings. Variations in color, texture, and brightness make up our visual world and form our perception of our environment. Light is the medium that renders our visual environment and shapes our perceptions, and as such, it is an important design element. To develop a design that is inspiring yet practical and economical, the lighting design guidelines build upon and reinforce the concept goals of connectivity, cohesiveness, and collegiality. This section illustrates how these concepts can be realized using a family of fixtures that is responsive to the character of each open space and the functional criteria.
Lighting Family Diagram

Base map illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.
MISSION BAY CAMPUS MASTER PLAN & DESIGN GUIDELINES

Campus Lighting: Design Criteria

Functional Criteria
The primary goals of most exterior lighting systems are functional: provide adequate light for safety and security. A comprehensive lighting design for a project such as the UCSF Mission Bay Campus must also establish a night-time identity, facilitate vehicular and pedestrian way-finding, and simplify maintenance. In addition, lighting around the perimeter of the campus must be designed to minimize off-site spill lighting and glare, including spill lighting from parking areas.

Safety and Security
Given the level of diversity and scale of open spaces on the UCSF campus, it is necessary to have a primary layer of the site lighting system for creating a sense of safety and security within each of the open spaces. Special attention is to be paid to the transition areas between them. All final lighting designs must be coordinated with Campus Security and should address their specific concerns about nightlighting.

Night-time Identity
One important function of the lighting system will be to provide consistency and unity throughout the campus. While each open space has its own set of lighting criteria, the use of common effects, sources, and equipment among separate areas will strengthen the visual identity of the overall campus.

Establishing a hierarchy of illuminated site features where brightness, color, and coverage can indicate degree of significance and focus creates a strong night-time identity. Use of larger scale lighting/architectural/signage elements at key site locations such as the open spaces and Gateways unifies distinct areas of the site as these elements act as lighthouse-type markers that facilitate wayfinding.

Way-finding
After dark, many of the visual cues that direct daytime visitors around the site are less visible, and site lighting must be utilized to compensate for this deficiency. Effective illumination of Gateway signage, path and roadway intersections, and site “landmarks” facilitates way-finding and reinforces a sense of safety and security. Illumination of vertical surfaces against darker backgrounds is an effective way to create a visual context at night. Lighting systems that enhance or are integrated with signage are especially important for way-finding.

Maintenance
Maintenance issues that must be addressed include standardizing lamp types as much as possible, maximizing accessibility of fixtures for repair and re-lamping; optimizing lamp life, cost and energy efficiency, and minimizing opportunities for vandalism. By carefully selecting fixtures that serve dual purposes, providing light for safety as well as night-time identity for example, fixture quantities can be reduced resulting in reduced maintenance as well as first cost and energy savings. All final lighting designs must be coordinated with UCSF Facilities Maintenance.

Design Criteria and Approach
The Campus is a series of inter-connected open spaces with unique design characters to be enhanced by the lighting. Utilizing a family of fixtures and overall design goals including hierarchies of brightness and quality of light that are responsive to each space will achieve this goal.

The scale, form, color, and spacing of the lighting fixtures should be cohesive and compatible with the modern, simple, and timeless design of other site elements. Fixtures must be cohesive throughout the site for connectivity and versatile enough to be responsive to the character of each space.

Light levels at the ground, vertical surface luminances, spill light from building interiors, and facade lighting also contribute to our perception of brightness. Color and color rendition of light are important design factors since the color of light can act as a visual cue to delineate areas of different function.

The Plaza
Lighting for the Plaza should be active and welcoming, with a procession of lighting - from large feature light fixtures to smaller lighting elements - drawing pedestrians through the public space and into the campus. The composition of light could include the following elements:

- facade lighting on the major north and south facades defining the boundaries of the Plaza and establishing an illuminated nighttime environment
- lighting of the two-story building arcades to activate the pedestrian space and encourage pedestrians to enter the retail shops

- feature light fixtures consistent with the volume of the Plaza and the mass of the surrounding buildings
- pedestrian scale pathway lighting which begins the pedestrian circulation spine continuing from the Third Street gateway through the "wrapper trees" to the Green.

Additionally, site feature lighting of the proposed fountain and cafe kiosk will provide focal points for visual interest and indicate nodes of higher activity. The brightest elements in the Green should be the fountains, the circulation below the arcades, the proposed café and fountain, and the building entries. The general light levels in the open plaza and the circulation spine should be of lower intensity and should serve as a transition from the brighter areas to the lower illumination levels of Third Street, Fourth Street, and the connective passageways.

The Green
The Green is the center of campus activity as well as the physical circulation hub where lighting fixtures should be sensitively selected and placed with respect to the overall composition. The brightest light levels should direct attention to the facades, arcades, entries, and the site features. At a second ary level, the lighting of the 14th Street circulation spine and the central pathway should emphasize these paths. The pedestrian scale fixtures within the ‘wrapper trees’ will provide connectivity to the Plaza and the Courts and should continue in the trees along the west and south perimeter. Primary facade lighting of the Campus Community Center and secondary facade lighting on other buildings will create a luminous environment and define the boundaries of the space.
Campus Lighting: Design Criteria

The Courts

For the Courts, lighting is defined primarily by the technical requirements of the sport activities. Floodlighting should be well shielded to avoid light trespass into adjoining buildings, unmounted glair, and interference with views. Additional pedestrian scale lighting should be provided as a second layer to light pathways when the sports fields are not illuminated.

Gateways

Gateways are the connections to outside pedestrian, vehicular and transit traffic and the lighting should assist in way-finding by providing visual cues of major circulation while creating a sense of identity for the campus. Slightly higher light levels than surrounding sidewalks and pathways will elevate the perceived level of activity and should be carefully implemented to provide comfortable transitions to the lower light levels of surrounding perimeters, primary, secondary, and tertiary streets as well as walkways and connective passageways. Specific lighting techniques such as illuminated graphics, facade lighting, and unique light fixtures would serve as nighttime beacons to enhance the landscape and architectural strategies used to define the Gateways.

Gardens

Lighting for the Gardens should be compatible with each theme and should be consistent with their use as a node for the circulation under surrounding building arcades and connective pedestrian passageways. Within the proposed hierarchy of brightness for the Gardens, building arcades, entries, and featured plantings, there should be illumination with higher levels of light, reserving lower intensities for general lighting in the Gardens.

Connective Passageways

Connective Passageways provide alternative pedestrian paths and the lighting should be comfortable and encourage movement between various campus spaces. The lighting must also provide visual links between the landmarks in the open areas at each terminus of the passageway and should clearly communicate the destination and length of the passageway.

Campus Streets

Lighting for campus streets can be defined by the estimated amount and type of vehicular and pedestrian use. The potential for moderately heavy nighttime pedestrian activity classifies the campus as an intermediate land use area. To establish campus identity and serve as a primary inter-campus street, Fourth Street may have fixtures from the "family of fixtures" on approximately 18" to 20" poles. Secondary vehicular, limited access and pedestrian-only streets such as Fifth, Sixth, Fifteenth, and Sixteenth provide direct access to the campus and do not typically carry through traffic thus classifying them as Local Roads and indicating lower light levels. Sufficient vertical illumination should be provided on adjacent sidewalks for identification of pedestrians and fixtures should be placed between trees to minimize light blockage. Within the hierarchy of brightness of the entire Campus, the intensity of roadway lighting should not compete with facade lighting, site features, main circulation spines and other more important elements of the nighttime composition.

It should be noted that all lighting within the public right-of-way of streets will be coordinated with the Mission Bay Streetscape Plan.

Technical Criteria

While many of the criteria presented in this section are based on the illuminance guidelines established by the Illuminating Engineering Society (IES), illuminance levels are not the only aspect of a successful lighting design. The recommended quantities of light, defined as illuminance, are not difficult to achieve in most cases. Other metrics of quality such as uniformity, composition, cohesiveness, connectivity, visual interest, and texture must also be incorporated. Too much light in the nighttime environment can be more harmful than too little light, by restraining the eye’s ability to adapt to the proper nighttime level. Careful fixture selection will minimize light trespass into adjoining neighborhoods.

Summary

The UCSF Mission Bay Campus site is a complex project with a variety of functions, building types, and traffic patterns. Accordingly, the lighting system for this site should act as a unifying element that is coordinated and integrated with signage, landscaping, and architectural elements. This will not only unify the site but also contribute to the safety and enjoyment of nighttime visitors to the campus.

The table on the following page summarizes the technical criteria.
### Campus Lighting: Design Criteria

<table>
<thead>
<tr>
<th>AREA TYPE &amp; ILLUMINANCE CRITERIA</th>
<th>Footcandle</th>
<th>THE PLAZA</th>
<th>THE GREEN</th>
<th>THE COURTS</th>
<th>GARDENS</th>
<th>GATEWAYS</th>
<th>CONNECTIVE PASSAGEWAYS</th>
<th>3RD STREET</th>
<th>4TH</th>
<th>5TH</th>
<th>6TH</th>
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<td>Family Type B &amp; Family Type C @ Processional Path</td>
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**Lighting Criteria Matrix**

F.18
**Paving Strategy**

The paving material diagram arranges the campus around a system that reinforces the relative significance of each space and is consistent with a relative degree of cost. The goals are to select pavements that are beautiful and that reinforce the connectivity and cohesiveness of the campus. Toward that goal, the types of paving systems, finishes, and colors should be kept to a minimum. Variation should only occur in response to a hierarchy of space or a functional requirement such as the need to accommodate vehicular traffic.

Pavement colors should be consistent with the range of proposed building colors outlined in Section D, pages D-22 and D-23. The lightest ranges should be avoided, as they are subject to excessive reflection of light, as well as staining, especially within vehicular areas. Rich earthen tones, including grays, are appropriate.

Additional considerations include non-slip surfaces for safety and overall durability for both pedestrian and vehicular zones. Vehicular zone pavement systems must be designed to withstand excessive weight. Pavement systems must also be responsive to the susceptibility of the pavement to settlement due to the soils, unless adequately surcharged. Consideration must also be given to cost, maintenance, and requirements for utility access.

The paving material types are as follows:

**Specialty Pavement - Quality 1:**

This is the highest quality pavement on the campus. Its use has been reserved for the most significant public spaces including the Plaza, the entry sequences for the Green, Fourth Street sidewalks, and the pedestrian crossings on Third and Fourth Streets.

The majority of the pavement will need to be designed to accommodate vehicular traffic suggesting the use of a unit paver such as precast concrete or granite sets. This pavement can be combined with stone or high-quality precast for pedestrian-only zones.

**Internal Pavement - Quality 2:**

This material will be utilized on pedestrian ways throughout the campus including Fifth and Thirteenth Streets. The majority of traffic will be pedestrian, the streets will receive substantial vehicular traffic from shuttle bus, campus service and outside delivery in limited areas. The scale of the paver is similar to that of Specialty Pavement. The color must be dark enough to resist revealing stains.

Pavement for interconnecting paths through passageways, leading to courtyards, across the Green, and sidewalks, should be of the same type to reinforce the connectivity of the scheme and the nature of the campus as one place. Because this pavement is ubiquitous, it must be beautiful, yet practical and economical.

**External Pavement - Quality 3:**

The paving selected for the perimeter streets will be consistent with the Mission Bay street detail. It is assumed that curbs will be granite and sidewalks will be a high-quality concrete with sawn joints. Trees and street furnishings will be placed in a cobbled edge or tree grates. 4 x 4 granite sets will be used at trees only.

Garden Specific Pavement:

Materials should be consistent with the design intent of each garden, including a range of options such as stone, decomposed granite, plantation-grown hardwoods, and precast pavers.

Court Specific Pavement:

The Courts will receive pavements consistent with the program including, but not limited to, running surfaces, turf, composition and sand.
Signage

The signage development for the campus will require a thorough master plan effort; however, at this time, it is known that the gateways, transit stops and perimeter street corners will be required and logical locations for UCSF identification.

Signage standards will address an identifiable UCSF image and reinforce a clear system of wayfinding. Standards will also eliminate competing types of signage and reinforce the primary concept of cohesiveness across the campus.

Signage will be limited to a maximum height of 45'.

Furnishings

Campus furnishings will include benches, trash receptacles and recycling containers, bollards, bicycle racks and tree guards.

As with pavement and lighting, benches should, in some instances, reflect a hierarchy or be responsive to the overall surrounding space and its character. For instance, while a standard bench should be selected, this would not preclude the use of a special bench around the Green or utilizing chairs and tables on the Plaza distinct from those of the Courts. In a similar fashion, use of a standard bollard should not preclude a creative and scale-appropriate use of a bollard within the Plaza. Items such as trash receptacles, bicycle racks and tree guards are best if standardized and are designed to be as unobtrusive as possible.

Both durability and beauty are critical for signage and site furnishings as well as coordinating the design with the Mission Bay Streetscape and Lighting plan.
Street trees for public streets must be consistent with the overall Mission Bay Streetscape and Lighting Plan.

The trees proposed for each open space possess a form and character complimentary to the scale and anticipated quality of that space. Gateway trees are tall marker trees that strongly contrast in form with the other campus trees and have a stature capable of announcing a sense of entry. Street trees are the largest trees reinforcing the urban grid and the overall sense of cohesiveness and connectivity within the campus and the broader urban environment. In addition to defining the Quadrangles with large canopy trees, the Plaza, the Green and the Courts are further enhanced with Wrapper Trees, a smaller tree with a showy flowering display. These trees will add reinforcement to the orientation and the memorable quality of the space. The Green has yet another layer of memory and scale associated with it, the Cherry trees, marking the procesional path to the Campus Community Center and providing the potential for a more intimately scaled space.

Lastly, the trees recommended for each Garden are intended to reinforce the individual themes for each space.

The following pages contain proposed tree species to be utilized on the UCSF Campus. Before identifying the final selection of trees for a given location, species availability must be addressed. Additionally, microclimatic conditions, including sun, shade and wind must be evaluated, as well as potential security concerns in the placement and selection of landscaping elements.
**Major Open Spaces:**

**Cherry Trees**

Cherry trees form the southern arced edge of the Green which is intended to be imbued with memory and to be an extraordinarily beautiful heart to the academic campus. Using a tree familiar to many and full of strong associations, the cherry has been planted in a loose non-gridded orchard, reinforcing the movement to the Campus Community Center. A traditional harbinger of spring, the cherry trees will bloom earlier than other trees, including the Wrangler Trees. The horizontal branching of nearly all of the species and often multi trunked nature of the cherry trees lends an additional formal contrast to the surrounding trees. The orchard will offer the opportunity for a contrasting environment to the open lawn and will be a pleasant filter to pass through or linger within. Habitat benefits include attractiveness to songbirds.

The preferred species, the Prunus yedoensis, offers a delicate fragrance. However, the potential for selectively integrating additional species should be carefully evaluated.

Alternate species not depicted:
- Prunus serrulata 'kwanzan' - Kwanzan Cherry
- Prunus serrulata 'mt.fuji' ('Shirotae') - Mt. Fuji Cherry
- Prunus subhirtella autumnalis - Higan Cherry

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**Prunus serrulata** 'kwanzan' - Kwanzan Cherry

- **Form:** Umbrella, graceful, open
- **Height:** 25’
- **Width:** 35’
- **Highlights:** Double white or pinkish white flowers.
- **Maint:** Drain soil well, prune after flower, pH adaptable. Spray for insects when necessary. Prune out crossing and inward growing branches. Check trunk at and just below ground level for peach tree borer. Spray with Sevin and Diazinon when necessary.
- **Spacing:** 15’-20’ maximum recommended.

**Prunus serrulata** 'mt.fuji' ('Shirotae') - Mt. Fuji Cherry

- **Form:** Umbrella, graceful, open
- **Height:** 25’
- **Width:** 35’
- **Highlights:** Double white or pinkish white flowers.
- **Maint:** Drain soil well, prune after flower, pH adaptable. Spray for insects when necessary. Prune out crossing and inward growing branches. Check trunk at and just below ground level for peach tree borer. Spray with Sevin and Diazinon when necessary.
- **Spacing:** 15’-20’ maximum recommended.

**Prunus subhirtella autumnalis** - Higan Cherry

- **Form:** Umbrella, graceful, open
- **Height:** 25’
- **Width:** 35’
- **Highlights:** Double white or pinkish white flowers.
- **Maint:** Drain soil well, prune after flower, pH adaptable. Spray for insects when necessary. Prune out crossing and inward growing branches. Check trunk at and just below ground level for peach tree borer. Spray with Sevin and Diazinon when necessary.
- **Spacing:** 15’-20’ maximum recommended.
Major Open Spaces: “Wrapper Trees”

Flowering Edge Trees

Consistent with the general strategy of reserving the largest trees for pedestrian walkways, the quadrangles typically will have some of the largest trees surrounding these spaces. The Plaza, the Green, and the Courts are additionally reinforced with the use of a contrasting, but complimentary smaller flowering tree, designated a “Wrapper Tree.” The tree literally wraps the form of each space much like a ribbon does a package, thereby enhancing the linearity of the Plaza, the orientation and scale of the Green, and the enclosure of the courts. By its seasonal and flowering nature, this tree is intended to lend a striking and memorable character to each of these spaces.

The Jacaranda mimosifolia has been designated the recommended species for several reasons: the beautiful flower display and timing of that display, usually blooming in late spring; the fairly open habit and finely textured leaves which maximize the amount of sunlight penetrating the canopy; and the often sculptural form and branching of the tree. While utilizing one species of Wrapper Tree for each quadrangle is desirable, it is also conceivable to consider using a Wrapper Tree that is unique to each space. Although careful consideration must be given to the adjacent canopy trees with which each Wrapper Tree is paired, as well as to the growing conditions for each individual species of tree, one possible scenario would be as follows: Koelreuteria bipinnata in the Plaza, Jacaranda mimosifolia in the Green and the Aesculus x carnea “Briotii” in the Courts. The Koelreuteria has a finely textured leaf (although not as fine as the Jacaranda) which allows light through the canopy. The Koelreuteria flowers with a showy fragrant yellow bloom in the summer and fruits with a showy orange capsule in the fall. Because the Plaza is the most public quadrangle, with numerous people arriving throughout the year, selecting a tree with multiseasonal interest is desirable. The Jacaranda is appropriate to the Green as this will be the space where people will linger most frequently. The tree has a lighter canopy and will flower around the time of graduation. Additionally, the Jacaranda will be a complimentary color to most of the Cherries that have been recommended. The relative density of the Asclepius will be beneficial to providing screening around the courts helping to mask the requisite fencing on three sides. In addition, the Aesculus has a crimson flower display in late spring.

Aesculus x carnea ‘Briotii’

Red Horse Chestnut

Medium Deciduous Flowering Tree

Form: Round, compact, broadly ovate with medium coarse texture.
Height: 35’-50’
Width: 30’-40’
Highlights: Showy rosy crimson flowers.
Maint: Needs summer water. Leaf, twig and fruit litter can be a problem.
Spacing: 20’-30’ maximum recommended.

Jacaranda mimosifolia (Recommended Species)

Jacaranda

Medium Deciduous Flowering Tree

Form: Vase, open, rounded and spreading.
Height: 30’ - 40’
Width: 40’ - 45’
Highlights: Showy lavender flowers spring through summer.
Maint: Needs regular but not frequent irrigation.
Spacing: 25’-35’ maximum recommended.

Koelreuteria bipinnata

Chinese Flame Tree

Medium Deciduous Flowering Tree

Form: Umbrella, rounded, spreading dense form, eventually becoming flat topped.
Height: 20’ - 40’
Width: 30’ - 40’
Highlights: Yellow fragrant flower in summer, and showy red-orange capsules in late summer and fall.
Maint: Water soil moderately, drain soil well. Trouble-free except for being weak wooded.
Spacing: 20’-30’ maximum recommended.
Garden Trees

Trees proposed for the gardens are intended to reinforce the concept of each garden space. Species have been selected to be consistent with a region or idea, such as for the Mediterranean Garden, the Medicinal Garden, and the English Garden, to reinforce an environment, as in the Coastal Garden; or to approximate a tree that resembles the tree providing the inspiration for the theme of the garden, as seen in the Bo Tree Garden, Willow Garden, and Cloud Tree Garden.

Additional species not depicted:

Bo Tree Garden:
- Quercus agrifolia - Coast Live Oak

Asian Garden:
- Acer palmatum - Japanese Maple

Medicinal Herbal Garden:
- Punica granatum - Pomegranate

Cloud Tree Garden:
- Magnolia - Various species of Magnolia are available with white flowers and intense fragrance. Selection to be made when microclimatic considerations are known.
- Prunus - Various species of cherries are available. Selection should be limited to white flowering.

Cupressus sempervirens

Italian Cypress

Large Evergreen Tree

Form: Elliptical, tall, upright, columnar habit
Height: 40’ - 60’
Width: 10’ - 15’
Maint: Spray to control spider mites.
Spacing: Per Garden Design

Pinus pinea (Recommended Species)

Italian Stone Pine

Evergreen Tree

Form: Umbrella, tall, arching canopy with spreading branches at top.
Height: 30’ - 60’
Width: 40’
Maint: Takes heat and drought well when established. Needs well drained soil.
Spacing: Per Garden Design

Taxus baccata 'Stricta'

Irish yew

Evergreen Tree

Form: Elliptical, upright, columnar habit
Height: 25’ - 40’
Width: 5’ - 15’
Maint: Needs well drained soil. Insect and mite problems are common but can be controlled. Most parts of this plant are poisonous to warm blooded animals.
Spacing: Per Garden Design
Olea europa (Recommended Species)
Olive
Medium Evergreen Tree
Form: Round, single or multi-trunk, spreading canopy
Height: 25’ - 35’
Width: 25’ - 35’
Highlights: Creamy yellow flowers in mid-spring;
Maint: Use non-fertile varieties as fruit can stain pavement or spray with fruit control
hormones, insects can be a problem but can be controlled.
Spacing: Per Garden Design

Cinnamomum camphora
Camphor Tree
Large Evergreen Tree
Form: Umbrellas, pright, spreading canopy
Height: 50’
Width: 50’
Highlights: Beautiful structure.
Maint: Not bothered by insects but subject to root rot. Plant in well drained soils.
Spacing: Single Tree

Maytenus boaria
Mayten Tree
Medium Evergreen Tree
Form: Umbrellas, pendulous branches
Height: 50’ - 60’
Width: 25’ - 45’
Highlights: Character of smaller scale Weeping Willow;
Maint: Good drainage required.
Spacing: Per Garden Design

Citrus spp.
Orange
Medium Evergreen Tree
Form: Rounded to spreading canopy
Height: 20’ - 30’
Width: 20’
Highlights: Attractive and edible fruit;
Maint: Needs moist soil with fast drainage. May get pests and diseases but can be controlled.
Spacing: Per Garden Design

Oleae europa (Recommended Species)
Olive
Medium Evergreen Tree
Form: Round, single-or multi-trunk, spreading canopy
Height: 25’ - 35’
Width: 25’ - 35’
Highlights: Creamy yellow flowers in mid-spring;
Maint: Use non-fertile varieties as fruit can stain pavement or spray with fruit control
hormones, insects can be a problem but can be controlled.
Spacing: Per Garden Design
Connective Passageways: Trees

The connective passageways are ribbons of paths between buildings bisecting the grid of the campus and providing alternative means of pedestrian movement through the campus. These walks must read strongly and continuously within the campus and as such, the trees selected must reinforce this objective. Additionally, the connective passageways are typically narrow. Due to the potential of the walkways being no greater than 25’ across and nearly nonexistent building shadows, formally clean, vertical trees without a canopy have been proposed to line one side of the walk. The opposite side utilizes the vertical building face for a growing surface creating a high green or seasonally flowering wall. Repeating the same tree and vine across blocks within a north south passageway will reinforce the connectivity of the plan.

Both of the recommended species, the Calocedrus decurrens and the Clematis armandii, were selected as the species best suited to reinforce the design concept. The Clematis has the additional benefit of providing fragrance. When making the final selection for both the trees and the vines, however, a light and wind analysis should be performed to determine the most suitable species for each location. Vines must be selected to be compatible with the building material and any additional supports for the vines will need to be coordinated with each building architect.

Calocedrus decurrens (Recommended Species)

Incense Cedar

Tall Evergreen Tree

- Form: Elliptical, oval/upright, tall, dense pyramidal form
- Height: 40’ - 80’
- Width: 20’ - 30’
- Maint: Relatively trouble-free once established and in a good site.
- Spacing: 15’-20’ maximum recommended, or rhythmic with arcade spacing

Clematis armandii (Recommended Species)

Evergreen Clematis

Evergreen Vine

- Character: Fast growing to 20’. Leaves are divided into three glossy, dark green leaflets that droop downward. Fragrant white flowers in large clusters March to April.
- Maint: Top pruning may be necessary to ensure its effectiveness as a screen. Aphids may be a problem but can be controlled if necessary.

Clytostoma callistegiodes

Violet Trumpet Vine

Evergreen Vine

- Character: Leaves divided into two glossy, dark green leaflets. Flowers in the late spring to fall with violet/lavender or pale purple trumpet flowers.
- Maint: Prune in late winter to discipline growth and prevent tangling. Very rapid growth.
**Thuya plicata**

**Western Red Cedar**

*Large Evergreen Tree*

- **Form:** Elliptical, neat symmetrical cone
- **Height:** in the wild, over 200'; smaller in gardens, 50'-75'
- **Width:** 15'-25'
- **Highlights:** Lustrous, rich, dark green foliage.
- **Maint:** Subject to several diseases and insect pests. Some might require control when infestations occur. Prefers cool, moist soil.
- **Spacing:** 15'-20' maximum recommended, or rhythmic with arcade column spacing

---

**Ginkgo biloba 'Fastigiata'**

*Princeton Sentry Upright Ginko (Male Only)*

*Large Deciduous Tree*

- **Form:** Pyramid, upright, open canopy
- **Height:** 35' - 50'
- **Width:** 25' - 30'
- **Highlights:** Bright yellow fall color
- **Maint:** Seldom, if ever, requires pruning. Use male plants only, as female specimen fruits constitute a problem. Relatively free of insect and disease problems.
- **Spacing:** 20'-30' maximum recommended, or rhythmic with arcade column spacing

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**Ficus pumila**

*Creeping Fig*

*Evergreen Vine*

- **Character:** Attaches itself to almost anything and has quite an aggressive growth. Leaves are heart shaped and have a delicate tracery.
- **Maint:** Use on concrete, stone and metal surfaces, as this vine will damage wood or painted surfaces if allowed to cling to them.
- **Highlights:** Leaves are heart shaped and have a delicate tracery.
- **Spacing:** 15'-20' maximum recommended, or rhythmic with arcade column spacing
Gateway Trees

The Gateways are the significant pedestrian and vehicular entrances to the campus and require markers that announce them as entries. The entries at the UCSF campus should be urban, recognizable, and stately. The planting palette is one component which can be used to reinforce an entrance. For this reason, a tall needle-leaved evergreen tree was selected. By planting them in groves, they will present tall cathedral-like plantings at all of the significant gateways, with the exception of the Plaza. In addition, the north south streets through the Commons will be accented with tall evergreen trees, further reinforcing the concept of Gateway into the University.

The Pinus canariensis has been designated the recommended species due to its ability to withstand planting within pavement as well as its ability to thrive in urban environments. Use of the Sequoia sempervirens will necessitate planting within a plane of ground cover.

<table>
<thead>
<tr>
<th>Pinus canariensis (Recommended Species)</th>
<th>Sequoia sempervirens</th>
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<tbody>
<tr>
<td>Canary Island Pine</td>
<td>Coast Redwood</td>
</tr>
<tr>
<td>Large Evergreen Tree</td>
<td>Large Evergreen Tree</td>
</tr>
<tr>
<td>Form:</td>
<td>Form:</td>
</tr>
<tr>
<td>Height: 60' - 80'</td>
<td>Height: 70' - 90'</td>
</tr>
<tr>
<td>Width: 15' - 30'</td>
<td>Width: 15' - 30'</td>
</tr>
<tr>
<td>Maint: Takes heat and drought well</td>
<td>Maint: Needle blight and canker disease can pose problems but can be mitigated. Will perform best if planted in a planted as opposed to tree pits within pavement.</td>
</tr>
<tr>
<td>Spacing: 20'-25' tight grove, maximum</td>
<td>Spacing: 15'-25' tight grove, maximum recommended</td>
</tr>
<tr>
<td>recommended</td>
<td></td>
</tr>
</tbody>
</table>

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Public Street Trees: 3rd & 4th Street

3rd & 4th Street Trees

Street and sidewalk widths were established by the Mission Bay Plan and the adopted Environmental Impact Report of 1998. Considering these given parameters, street trees for both pedestrian and vehicular streets are typically the tallest and most substantial trees for the purposes of providing a scale consistent with the buildings and adjacent open spaces, and for providing a strong overall framework in which the individual buildings sit. In general, streets with wide sidewalks or streets that are predominantly pedestrian will contain the more stately and spreading trees. More upright trees are proposed for streets with narrower sidewalks.

Both 3rd and 4th Streets are two public streets that require coordination with the Mission Bay Street Tree Plan, under development. Both streets have a narrow 12’ wide sidewalk with no additional setback that requires the use of a tall, narrow, fastigate (upright) tree. The draft Mission Bay Street Tree Plan recommends additional species for consideration along 3rd Street, but at this time, the list is too preliminary for inclusion in this report. The Alnus rhombifolia is the preferred species for use along 4th Street. This street will be one of the first streets to be built, and the Alnus will achieve a substantial presence within a fairly short period lending a more complete vision to the most significant vehicular street.

### Alnus rhombifolia (Recommended Species)
**White Alder (California Alder)**
- **Large Deciduous Tree**
- **Form:** Pyramid, tall and conical
- **Height:** 50’ - 75’
- **Width:** 40’
- **Maint:** Needs large amounts of deep watering to control root. Very tolerant of heat and wind.
- **Spacing:** 20’ maximum recommended

### Corylus colurna
**Turkish Filbert**
- **Large Deciduous Tree**
- **Form:** Pyramid, symmetrically conical and medium textured
- **Height:** 45’ - 60’
- **Width:** 25’ - 35’
- **Maint:** Relatively trouble-free but damaged by Sapsuckers in some areas. Average water requirements.
- **Spacing:** 20’ maximum recommended

### Liquidambar styraciflua ‘confettii’
**Confetti Swamp Gum**
- **Large Deciduous Tree**
- **Form:** Elliptical, conical changing to ovate with medium texture
- **Height:** 50’ - 75’
- **Width:** 20’ - 25’
- **Maint:** Relatively trouble-free and requires little maintenance. Larger specimens are often more difficult to transplant. Use male plants only.
- **Spacing:** 18’ - 24’ maximum recommended
Public Perimeter Streets:
Setback of Owens & 16th Street

Owens & 16th Street Setback Trees

Both Owens and 16th Streets have 12’ sidewalks with generous 20’ setback areas. Two options exist for planting within the setback areas and are under study with the Mission Bay Street Tree Plan. The species depicted on this page, as well as the plan within this book, suggest the use of tall trees, typically associated with California, planted in loose clusters, forming a strong full edge. A regional jogging path would weave through the setback area.

Alternatively, the setback could be planted with an inner row of trees spaced similarly to the outer row of street trees. These trees could either be the same as or complimentary to the proposed street trees. If this option is accepted, the sidewalk would be off set from the curb line by approximately seven feet. The sidewalk would also serve as the jogging path. Further coordination with the Mission Bay Street Tree Plan is required.

Eucalyptus nichollii
Willow-Leafed Peppermint
Medium Evergreen Tree

Form: Umbrella, weeping, soft textured appearance, spreading crown.
Height: 30’ - 40’
Width: 20’ - 30’
Highlight: Crushed leaves smell like peppermint.
Maint: Drought tolerant. Notorious host to aphids.
Spacing: 20’-30’ maximum recommended

Quercus agrifolia
Coast Live Oak
Large Evergreen Tree

Form: Round, round-headed, wide spreading.
Height: 20’ - 70’
Width: 30’ - 80’
Highlight: Handsome tree with slightly glossy leaves.
Maint: After established, needs no watering.
Spacing: 30’-50’ maximum recommended

Rhus lancia
African Sumac
Medium Evergreen Tree

Form: Round, open, spreading habit
Height: 25’
Width: -
Highlight: Glossy leaves.
Maint: Can be pruned to have one or more trunks.
Spacing: 20’+/- maximum recommended

Photo courtesy of Steve Mullany
The trees depicted on this page for consideration are large spreading canopy trees that are consistent with the street and sidewalk/setback widths. The selection of the specific tree will be made within the Mission Bay Street Tree Plan in coordination with the UCSF Master Plan.

Alternate tree not depicted:
Quercus ilex (Holly Oak)
Large Evergreen tree
Form: Equal spread
Height: 40' - 70'
Width: 30' - 50'

Platanus x acerifolia
London Plane Tree
Large Deciduous Tree
Form: Oval, tall open habit.
Height: 40' - 70'
Width: 30' - 40'
Highlights: Cream to olive colored bark
Maint: Leaf, twig and fruit litter may pose a problem. Subject to Cankerstain which can kill the tree.
Spacing: 30'-36' maximum recommended

Ulmus parvifolia
Chinese Elm (Lacebark Elm)
Medium Semi-December Tree
Form: Umbrellla, broad rounded head with long, arching, eventually weeping branches.
Height: 40' - 60'
Width: 50' - 70'
Highlights: Showy, exfoliating bark which shows hues of gray, green, brown and orange.
Maint: Somewhat prone to breakage by wind. Pruning is needed for initial training.
Spacing: 32'-38' maximum recommended

Zelkova serrata
Japanese Zelkova
Medium Deciduous Tree
Form: Vase, medium texture.
Height: 40' - 70'
Width: 25' - 40'
Highlights: Yellow, golden-brown and reddish purple fall color.
Maint: Usually free of serious problems.
Spacing: 28'-34' maximum recommended


**Campus Streets**

**Campus Street Trees**

The interior of the campus is an environment that is distinct from, yet connected to the surrounding urban fabric. The trees planted on the interior of the campus should be coordinated with, but not necessarily identical to the adjacent trees within the Mission Bay Street Tree Plan.

Campus streets are comprised of three categories: vehicular (4th, 6th, 13th East, 15th East), pedestrian with limited vehicular access (13th West), and pedestrian only (5th). Typically, buildings to building face dimension of these streets ranges from 64 feet to 78 feet, which is in contrast to the perimeter streets which range from 88 feet to 116 feet. Please refer to page C-36 for a general description of the campus street character.

In general, the trees that have been recommended as a palette from which to select are trees that will effectively reinforce the urban grid around which the campus is oriented. Each street is to have a different tree. Evergreen trees should be limited to use on the north/south streets to ensure that maximum light reaches the east/west streets, typically the shadier environments. The largest trees should be reserved for pedestrian environments and those streets that pass through or adjacent to open spaces.

Suggestions for guidelines in selecting species of trees for individual streets are as follows:

**15th and 14th Streets:**

Trees are to be selected that will effectively reinforce the structure of the Greens year-round. Recommended species are the Pachira chinensis for 14th Street and either the Zelkova serrata or the Ginko biloba for 15th Street.

**13th Street:**

Recommended species include Fraxinus oxycarpa ‘Raywood’, Ginko biloba or the Ulmus parvifolia. These trees will be successful in the street that has both pedestrian and vehicular components.

**5th and 6th Streets:**

These are the two north/south streets on the campus with 5th being pedestrian and 6th being vehicular. There is an opportunity to use evergreen trees on these streets, although their use is not required. Recommended species include Fraxinus uhdei on 5th Street, due to the wide sidewalks, and Metrosideros excelsa on 6th Street, due to an interesting form and limited sidewalk areas.

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**Fraxinus oxycarpa 'Raywood'**

*Raywood Ash*

*Large Deciduous Tree*

- **Form:** Oval, compact oval to rounded head
- **Height:** 40’ - 60’
- **Width:** 25’
- **Highlights:** Purple red fall color
- **Maint:** Winged fruit may pose litter problem.
- **Spacing:** 30’ maximum recommended

---

**Fraxinus uhdei**

*Evergreen Ash*

*Large Evergreen Tree*

- **Form:** Oval, tall, open, spreading canopy
- **Height:** 70’ - 80’
- **Width:** 35’ - 40’
- **Maint:** Foliage may burn if subject to hot winds. Shallow rooted. Prune out weak branching. Winged fruit litter may be a problem.
- **Spacing:** 34’-40’ maximum recommended

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**Ginko biloba**

*Ginko*

*Large Deciduous Tree*

- **Form:** Pyramid, tall, open canopy
- **Height:** 35’ - 50’
- **Width:** Variable spread
- **Highlights:** Yellow, fall color
- **Maint:** Well adapted to most city conditions. Free of insect and disease problems. Fruit from female cause litter and color problems.
- **Spacing:** 30’-50’ recommended

---

Photo courtesy of Steve Mullany
Zelkova serrata
Japanese Zelkova
Tall Evergreen Tree
Form: Vase shaped, medium texture
Height: 40' - 70'
Width: 25' - 40'
Highlights: Yellow, golden bronze and reddish purple fall color.
Maint: Usually free of serious problems.
Spacing: 28' - 34' maximum recommended

Pistacia chinensis
Chinese Pistache
Large Deciduous Tree
Form: Round, dense, and shapely
Height: 60'
Width: 50'
Highlights: Scarlet, crimson, orange foliage colors in fall.
Maint: Requires little or no maintenance.
Relatively salt tolerant and resistant to extreme heat and drought.
Spacing: 35' - 40' maximum recommended

Ulmus parvifolia
Chinese Elm
Medium Semi-December Tree
Form: Broad rounded head with long, arching and eventually weeping branches.
Height: 40' - 60'
Width: 50' - 70'
Highlights: Showy, exfoliating bark which shows hues of gray, green, brown and orange.
Maint: Somewhat prone to breakage by wind. Pruning is needed for initial training.
Spacing: 32' - 38' maximum recommended

Metrosideros excelsus
New Zealand Christmas Tree
Medium Evergreen Flowering Tree
Form: Vase, spreading and shapely canopy
Height: 20' - 30'
Width: 25'
Highlights: Showy clusters of red flowers
Maint: Requires pruning to bring tree into form. Can break sidewalks if grown in narrow strip.
Spacing: 22' - 25' maximum recommended

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Activity Zones: Areas where specific programs are concentrated to promote desired patterns of instruction and activity.

Applied Ornamentation: Elements that add the humanity of buildings for visual effect and do not contain any specific functions.

Articulation: The process of giving buildings specific definitions according to design intent.

Base: The lower 20% section of a building that connects with the ground, determined by a line or change in material.

Body: The substantial mass of a building that rises from the top of the base to the parapet line at 85%.

Bellard: A concrete or masonry element used to define walkways, screen vehicular traffic, and/or protect pedestrian from vehicular areas.

Carving Strategy: The process of forming openings and building texture by carving into the surface rather than adding to it.

Columnarism: A concept that maintains physical or visual continuity among adjacent elements.

Collegiate Zone: A space or collection of spaces that collect campuses from within the main buildings or adjacent buildings to promote interaction.

Collegiality: A concept that organizes space in order to promote interaction among occupants of adjacent spaces.

Commons, the: A public park in the Mission Bay South Redevelopment Area that sits on the northern edge of campus from Ocean to the bay.

Connectivity: A concept that lends an association of physical or visual elements that are linked together.

Corridor: A definition that indicates the top of an institutional body.

Court, the: A major open space that maintains a collection of institutional contrived activity.

Critical Alignment: Site lines established to ensure that adjacent buildings align with one another.

Design Guidelines: A collection of restrictions and suggestions that guide the development of the built environment.

Edges: The line at which the surfaces of a building or landscape ends.

Facade Organization: Basic design rules to which the facades of buildings must be generally subject to internal divisions of a building, namely the basic, body and top.

Fascia: Another word for verge.

Gardens: Outdoor courted spaces in the interior of individual blocks that serve a course of buildings.

Gateway: Outdoor space at the perimeter of campus that acknowledge the primary entrance to campus.

Green, the: The central open space on campus that serves as the academic and commercial center for campus activities.

Infrastructure: The basic functional and support facilities of a building, collection of buildings or overall site.

Imminent Space: A narrow zone of space designated for mechanical equipment within a building.

Master Plan: A conceptual design intended for development that conforms to campus vision and positions a general character and identity for buildings and space spans.

Monolith: The expression of a single, singular volume.

Ornamentation: Elements added to buildings to enhance their appearance.

Perimeter Building Lines: Site lines that define the edges of individual blocks, limiting the spread of buildings and preserving the grid of predetermined Van Ness block view corridors.

Plaza, the: The major open space which serves pedestrian traffic from adjacent transit stops, parking structures and shops at the eastern end of the site.

Setscape: Lines that form the building mass for the purpose of maintaining open space views, rights of ways and limiting shadows.

Screening: Metal-like material which provides enclosure and protection from the weather while permitting the movement of air.

Street treats: Tissues arranged in lines that follow the length of vehicular streets between pedestrian corridors.

Subtractive Approach: The process of forming openings and building texture by carving into the surface rather than adding to it.

Surcharging (RA's provide definition)

Timeline: Phasing that provides a particular style associated with a particular period, including current trends and contemporary design styles.

Tray: The upper section of a building that maintains the roof up mechanical equipment, set back from the main body of the building.

Van Block: Historical units for establishing city blocks that are unique to San Francisco, maintaining a length of 412.5 feet and a width of 225 feet.

Wrapper Treats: Row of rows that line the interior of open spaces to create a sense of enclosure.
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Summary of Campus Site Conditions, Covenants and Restrictions (CC&R’s)

The following is a brief summary of the Design Standards and Design Guidelines contained in the Conditions, Covenants and Restrictions (CC&R’s), which govern development at the UCSF Mission Bay campus site. The full CC&R’s contain additional detail, and are part of the Agreement for Contribution of Real Property between The Regents and Caruth Development Corporation.

Design Standards

- Screening: Mechanical equipment, loading docks, service areas, and other collection areas shall be screened from public view.
- Utility Undergrounding: All permanent utilities shall be placed underground.
- View Corridors: No building or portion thereof shall block a view corridor as defined by the vara block configuration.

Design Guidelines

- Access: The streets for the Campus Site shall conform to the Vara Block System.
- Open Space: At least eight acres of publicly accessible open space shall be provided on the campus site.
- Building Heights: Buildings heights shall not exceed the following: 70% of Campus Site area up to 85’, including parking mechanical equipment, 25% up to 100’, and 15% up to 1000’.
- Building Setbacks: A five’ setback is required along 5th Street, and a 20’ setback is required along 5th and Ocean Streets.
- Signs: Billboards, hanging signs, moving signs and roof signs are not permitted. No signs are permitted above the line 15 feet of building height.
- Lighting: Lighting shall be designed to minimize off-site glare and spilt lighting.
- Perimeter Edge Definition: Views to the China Basin Channel and the San Francisco Bay shall be emphasized through elements such as street walls and open spaces. The Vara Block Frameworks and site entries and edges shall be created along the perimeter of the Campus Site.
- Building Form and Design: Extensive bulk and massing design shall be reduced by appropriate design devices such as wall massing, modulation, and variations of facade planes and roof lines.
- Engineering and structural appearance shall be detailed through facade articulation and through the use of multiple materials and colors.
- Major building entries accessible from the street and from parking areas shall be articulated and clearly indicated.
- Elevation shall be designed so that they are appropriate to the function of the building.
- The size, materials and design elements of a building shall reflect its building function.
- Building mass, scale, proportion and the location of signs and setbacks for each development site shall be respectful of adjacent uses.
- Parking Requirements: Parking for the Campus Site shall not exceed the maximum area provided for Mission Bay in the UCSF Long Range Development Plan.
- Parking Structures: Major parking structures generally shall be located at the campus site perimeter or along 5th Street.
- Placement of parking structures shall be located so that they are screened with buildings, open spaces and landscaping, and do not create a monotonous visual effect on any single street.
- Parking shall be designed with the same care as the buildings that they serve and compatible colors and materials shall be encouraged.
- Apparent design devices such as facade articulation and landscaping elements shall be used to better screen parking structures.
- Lighting shall be designed for vehicle and pedestrian safety with a minimum of light spillage on adjacent uses.
- Landscaping: The campus site shall be aesthetically and mile-aged landscape.
SUMMARY MASTER PLAN DRAWINGS
Ground Floor Land Use

Legend:
- Research
- Animal Care
- Campus Community Center / Environmental Health & Safety
- Child Care
- Instruction Zone
- Retail Zone
- Potential Secondary Retail Zone
- Administration / Logistics
- Parking
- Parking / Central Utility Plant

Base map illustrations contain depictions of buildings outside of the Campus Site, which are illustrative only and subject to change.