

**UCSD EAST CAMPUS HEALTH  
SCIENCES NEIGHBORHOOD  
PLANNING STUDY**

**JULY 2000**

**ANSHEN+ALLEN, ARCHITECTS AND PLANNERS  
WIMMER YAMADA & CAUGHEY LANDSCAPE ARCHITECTS**

# TABLE OF CONTENTS

## **1 ILLUSTRATIVE PLAN**

## **2 EXECUTIVE SUMMARY**

2.1	Overview	2-1
2.2	Concept	2-1
2.3	Concept Elements	2-2
2.4	Implementation	2-4

## **3 INTRODUCTION TO THE STUDY**

3.1	Using This Planning Study	3-1
3.2	Study Purpose and Objectives	3-1
3.3	Neighborhood Background and History	3-2
3.4	The Planning Study Process	3-4

## **4 EXISTING CONDITIONS AND SITE INFLUENCES**

4.1	Neighborhood Location	4-1
4.2	Surrounding non-UCSD Land Uses	4-1
4.3	UCSD East Campus Land Uses	4-1
4.4	ECHS Neighborhood Land Uses	4-3
4.5	The Natural Environment	4-5
	4.5.1 Topography and Landforms	4-5
	4.5.2 Climate	4-7
	4.5.3 Open Space and Landscape	4-7
4.6	Vehicular Circulation and Parking	4-9
	4.6.1 Existing Access and Circulation	4-9
	4.6.2 Planned Access and Circulation Elements	4-10
	4.6.3 Parking	4-12
4.7	Pedestrian and Bicycle Circulation	4-13
4.8	Site and Utilities Infrastructure	4-13
4.9	Noise	4-17
4.10	Building Services	4-17
4.11	Site Influences	4-18

## **5 LAND USE AND DEVELOPMENT PROGRAM**

5.1	The Health Sciences Strategic Plan	5-1
5.2	Conceptual Space Program	5-1
5.3	Detailed Program Requirements	5-1
5.4	Functional Land Use and Zoning	5-3
	5.4.1 Proposed Land Use Categories	5-3
	5.4.2 Neighborhood Zone Overlays	5-4
5.5	Establishing Neighborhood Capacity	5-4

5.6	1989 LRDP density scenario	5-5
5.7	High Density scenario	5-8
5.8	Parking needs and capacity	5-8
5.9	ECHS Development Phasing	5-15

## **6 THE NEIGHBORHOOD PLAN CONCEPT**

6.1	Planning Philosophy	6-1
6.2	The Plan Concept	6-1
6.3	Planning Principles	6-2
6.4	The Concept Description	6-5

## **7 DESIGN STANDARDS AND GUIDELINES**

7.1	Intent	7-1
7.2	Using the Guidelines	7-1
7.3	Pedestrian Network	7-3
7.3.1	Health Sciences Walk West	7-3
7.3.2	Health Sciences Walk East	7-5
7.3.3	The Walk Along Health Sciences Drive	7-5
7.3.4	Green Corridors	7-6
7.3.5	Meadow Walks and Meander	7-8
	7.3.6 Building and Roadway Sidewalks	7-9
7.4	The Open Space Elements	7-9
7.4.1	The North and South Meadows	7-9
7.4.2	The I-5 Edge	7-11
7.4.3	Campus Point Plaza	7-11
7.4.4	The Southeast Plaza	7-12
	7.4.5 The Transit Plaza	7-12
7.5	Landscape Design Guidelines	7-13
	7.5.1 Landscape Design Standards and Philosophy	7-13
	7.5.2 Landscape Design	7-14
	7.5.3 Specific Design Features	7-16
	7.5.3.1 Health Sciences Walk	7-16
	7.5.3.2 Green Corridors	7-18
	7.5.3.3 Neighborhood Edges	7-18
	7.5.3.4 Natural Edge	7-19
	7.5.3.5 South Canyon Edge	7-20
	7.5.3.6 Roadways and Loop Road	7-20
	7.5.3.7 North Meadow	7-22
	7.5.3.8 South Meadow	7-22
	7.5.3.9 Campus Point Plaza	7-23
	7.5.3.10 Transit Plaza	7-23

7.5.3.11	Southeast Plaza	7-24
7.5.3.12	Healing Gardens	7-24
7.5.4	Proposed Plant Palette	7-25
7.5.5	Proposed Hardscape Materials	7-29
7.5.6	Site Furnishings	7-30
7.5.7	Landscape Interface with Architecture	7-30
7.5.8	Environmental Art	7-31
7.5.9	Maintenance Guidelines	7-31
7.5.10	Safety	7-31
7.6	Architectural Design Standards and Guidelines	7-32
7.6.1	Building Design Philosophy	7-32
7.6.2	Siting	7-32
7.6.3	Building Envelope	7-33
A.	Building Setback Standards	7-33
B.	Building Height Standards	7-36
C.	Floor-to-Floor Heights	7-36
7.6.4	Building Form and Massing	7-38
7.6.5	Entries	7-39
7.6.6	Colonnades, Loggias and Arcades	7-40
7.6.7	Fenestration	7-41
7.6.8	Roof Elements	7-41
7.6.9	Building Materials and Color Palette	7-42
7.6.10	Building Utilities and Systems:	
Penthouses and Enclosures		7-43
7.6.11	Miscellaneous Site Structures	7-44
7.6.12	Lighting Guidelines	7-44
7.6.13	Signage Program	7-45
7.6.14	Building Security	7-45
7.7	Vehicular Circulation	7-46
7.7.1	The Gilman Bridge	7-46
7.7.2	Campus Point Drive	7-46
7.7.3	Medical Center Drive	7-46
7.7.4	Health Sciences Drive	7-48
7.7.5	Emergency Vehicle Access	7-48
7.7.6	Building Service	7-50
7.7.7	Shuttle Buses	7-50
7.7.8	MTDB Light Rail Transit	7-51
7.8	Bicycle Circulation System	7-53
7.9	Utilities Infrastructure	7-53

## ACKNOWLEDGEMENTS

## TABLE OF TABLES

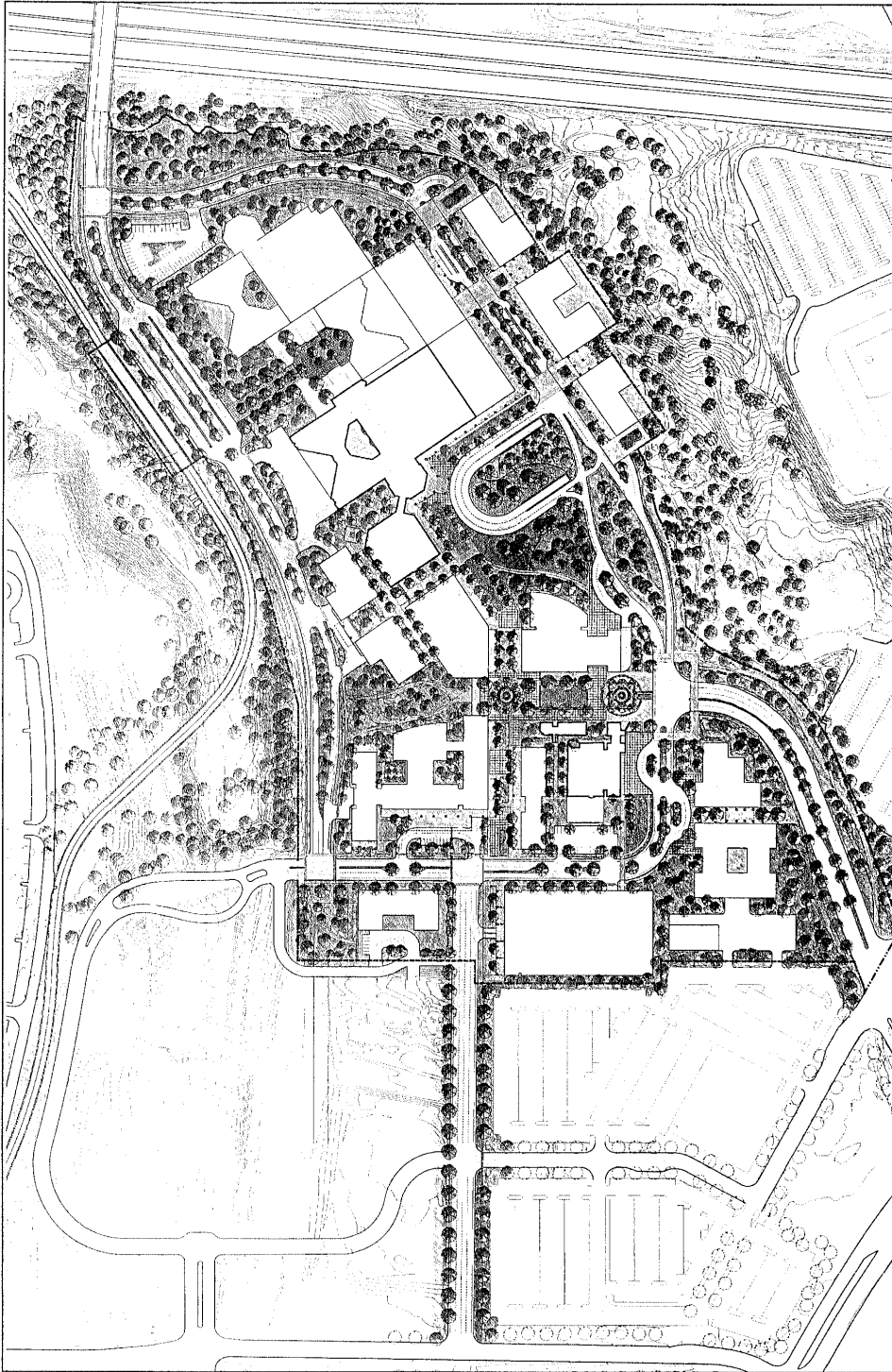
<i>Table</i>	<i>Caption</i>	<i>Page</i>
5.1	<i>LRDP Density Scenario</i>	5-7
5.2	<i>High Density Scenario</i>	5-10
5.3	<i>LRDP Parking Scenario</i>	5-12
5.4	<i>High Density Parking Scenario</i>	5-14
7.1	<i>Tree Listing</i>	7-26
7.2	<i>Building Heights</i>	7-37

## TABLE OF FIGURES

<i>Figure</i>	<i>Caption</i>	<i>Page</i>
1.1	<i>Illustrative Plan</i>	1-1
3.1	<i>East Campus location</i>	3-2
4.1	<i>ECHS neighborhood boundaries and uses surrounding East Campus</i>	4-2
4.2	<i>Existing East Campus land uses</i>	4-4
4.3	<i>Existing functional land uses</i>	4-5
4.4	<i>Natural environment</i>	4-6
4.5	<i>Existing landscape elements</i>	4-8
4.6a	<i>Existing vehicular access</i>	4-10
4.6b	<i>Proposed improvements to ECHS roadways</i>	4-11
4.7	<i>Existing pedestrian and bike paths</i>	4-14
4.8	<i>Existing site and infrastructure</i>	4-15
4.9	<i>Sources of noise</i>	4-17
4.10	<i>Pedestrian experience</i>	4-18
4.11	<i>Identity</i>	4-18
4.12	<i>Canyons</i>	4-19
4.13	<i>Courtyard</i>	4-19
5.1	<i>The 1989 LDRP Density Zoning Plan</i>	5-6
5.2	<i>High-Density zoning plan</i>	5-9
5.3	<i>Site development phasing sequence A</i>	5-17
5.4	<i>Site development phasing sequence B</i>	5-19
5.5	<i>Site development phasing sequence C</i>	5-21
5.6	<i>Site development phasing sequence D</i>	5-23
6.1	<i>The neighborhood plan concept</i>	6-2
6.2	<i>The pedestrian network</i>	6-3
6.3	<i>Open space heirarchy</i>	6-3
6.4	<i>Refine the roadway loop</i>	6-4
7.1	<i>Pedestrian network elements</i>	7-2
7.2	<i>Health Sciences Walk (HSW)</i>	7-3
7.3	<i>Building edges (HSW)</i>	7-3

## TABLE OF FIGURES

<i>Figure</i>	<i>Caption</i>	<i>Page</i>
7.4	<i>View of Health Sciences Walk East</i>	7-4
7.5	<i>Twin colonnades</i>	7-5
7.6	<i>Campus Point Plaza</i>	7-5
7.7	<i>Cancer Center Plaza</i>	7-5
7.8	<i>The Health Sciences Walk East extends to Regents Road</i>	7-6
7.9	<i>Meadow Walks and Meander</i>	7-7
7.10	<i>Campus Meander character</i>	7-8
7.11	<i>Open space elements</i>	7-10
7.12	<i>Typical section at I-5 edge</i>	7-11
7.13	<i>Gilman Bridge vista</i>	7-11
7.14	<i>Campus Point Plaza alignments</i>	7-12
7.15	<i>Southeast Plaza</i>	7-12
7.16	<i>Transit Plaza plan</i>	7-12
7.17	<i>Transit Plaza section</i>	7-13
7.18	<i>Landscape illustrative plan</i>	7-16
7.19	<i>Seat wall planters</i>	7-17
7.20	<i>Green Corridors</i>	7-18
7.21	<i>Setbacks</i>	7-34
7.22	<i>Health Sciences Walk section minimum setback</i>	7-33
7.23	<i>Health Sciences Walk section maximum setback</i>	7-33
7.24	<i>South Meadow setback "cone"</i>	7-35
7.25	<i>North Meadow setback "cone"</i>	7-35
7.26	<i>Meadow views</i>	7-35
7.27	<i>Penthouse configuration</i>	7-36
7.28	<i>North Canyon parking structure</i>	7-39
7.29	<i>Recommended building entry points</i>	7-38
7.30	<i>Colonnade</i>	7-39
7.31	<i>Arcade</i>	7-39
7.32a	<i>Center Hall elevation along Library Walk</i>	7-40
7.32b	<i>Colonnade at Center Hall</i>	7-40
7.32c	<i>Colonnade at Molecular Medicine East, School of Medicine</i>	7-40
7.32d	<i>Colonnade at Science Engineering Research Facility (SERF)</i>	7-41
7.33	<i>Loggia</i>	7-41
7.34	<i>Proposed Gilman Bridge</i>	7-46
7.35	<i>Roadway section — Medical Center Drive</i>	7-47
7.36	<i>Recommended emergency vehicle access</i>	7-49
7.37	<i>LRT station and Transit Plaza</i>	7-52
7.38	<i>Bike paths and lanes</i>	7-54



1 ILLUSTRATIVE PLAN



**UCSD East Campus Health Sciences Neighborhood Study**

Anshen + Allen Architects and Planners / Wimmer, Yamada & Caughey Landscape Architects

**High Density Scenario - Zoning Plan**

JULY 2000



## 2 EXECUTIVE SUMMARY

The loop road will also provide service and parking access to all buildings. New clinical services buildings are proposed to provide limited below grade parking for patient use, within the bounds of each development site. A major multi level, above-grade parking structure is also proposed at the eastern edge of the Clinical/Research Zone. Although surface parking lots are envisioned in intermediate stages of development, no significant surface parking is part of the final plan in the high-density scenario.

Within the consolidated Neighborhood core is an interconnected system of major and minor pathways and plazas. The primary pedestrian spine, the Health Sciences Walk, runs along the center of the site peninsula, bending in alignment with the existing canyon edges and forming the major organizing element of the plan. This Walk is both interior and exterior as it crosses the site. In addition to serving as a corridor, the walk is intended as a gathering area for faculty, students, staff, visitors and patients. Interconnected with this central east-west spine are secondary north-south pathways that lead to building entries, parking and canyon overlooks at the mesa rim. The western leg of Health Science Walk aligns with the current proposed location of the Gilman Bridge pylon structure, creating a strong visual link to the West Campus.

At key locations the walkway system is integrated into important nodes on the open space network, allowing the passerby to experience these central gathering areas and related entries to primary buildings. These nodes include more informal elements such as the North and South Meadows and related existing canyon areas, as well as more architecturally defined plazas at the entry points to the Neighborhood from the surrounding community, such as Campus Point Plaza.

The landscape development also contributes to the distinct character of each of the exterior spaces and pathways. The Meadows and Canyon Rims consist of more rustic and transitional planting with more discrete landscape development in the plazas and protected walkways.

The entry or gateway plazas in the Medical Center Zone include the Transit Plaza, located opposite the future LRT Station, in the southwest corner of the Neighborhood and a new Medical Center Plaza, north of the existing Thornton Hospital and Perlman Center. Each of these plazas is formal and focuses on primary entries to the core clinical services on the site. In the Clinical Research Zone at the intersection of Campus Point Drive with the Medical Center Drive loop road is Campus Point Plaza. This is intended as the primary ceremonial public space of the Neighborhood and is visually connected to the South Meadow and Canyon beyond. Bordering this Plaza is the proposed site for the Medical Education Center, the most public and broadly used proposed facility in the Neighborhood.

#### **2.4 IMPLEMENTATION**

The implementation of the East Campus Health Sciences Neighborhood Plan will occur over decades, driven by program needs and available resources. To consider the build-out proposed in the high-density plan will require a revision to the Long-Range Development Plan and an understanding of the effect of surrounding roadway improvements and the proposed light rail transit system.

Contributing to major progress in realizing the vision of this study is a trio of projects currently underway. The proposed new Cancer Center and the Shiley Eye Center addition, in the Clinical Research Zone, will define much of Health Sciences Walk East. Development of the Cancer Center site will also create the South Meadow landscape, eliminating a portion of Campus Point Drive from the neighborhood and thus creating a vehicle free pedestrian environment. Related to both of these projects is the first stage of construction of the new East Campus Utilities Plant.

These projects are typical of future phases where campus infrastructure, site and landscape improvements are incrementally implemented with specific building development.

### 3 INTRODUCTION TO THE STUDY

## 3 INTRODUCTION TO THE STUDY

### 3.1 USING THIS PLANNING STUDY

The East Campus Health Sciences Neighborhood Planning Study (Study) has been undertaken to provide background, planning philosophy, conceptual direction, and guidelines to assist in the development of the Neighborhood within the goals and parameters established in the Study process. It provides recommended general direction and guidance rather than specific design solutions. The Study is intended to promote creativity and inspire high quality site development, facilities, and open space by means of image-driven descriptions that evoke a sense of place, rather than a particular style, character, or aesthetic.

A key aspect of the Study and the guidelines is the emphasis of site planning as a distinct step in the design process. This critical step in the planning and design process should be clearly defined, evaluated, and a consistent direction established for each project which promotes the Study's goals and meets evaluation criteria.

Planning professionals are directed first to Section 4 for background on the Neighborhood's conditions and influences as a basis for analysis of each site. Parcel capacity and appropriate uses are defined in Section 5, and the planning requirements and design guidelines are presented in Section 7.

### 3.2 STUDY PURPOSE AND OBJECTIVES

The intent of the Study is to provide a conceptual plan and related guidelines to direct the continued development of the East Campus Health Sciences (ECHS) Neighborhood as it enters its second decade. The Neighborhood is expected to experience accelerated growth in the next five to ten years.

A specific focus is the reinforcement of the relationship to the School of Medicine neighborhood and the Natural and Life Sciences Academic Corridor, a planning principle established by the UCSD Master Plan, as the UCSD Health Sciences Strategic Plan Initiatives are implemented.

Specific objectives of the Study include:

- Analysis of the expansion capacity of the Neighborhood to its current UCSD Long Range Development Plan density

- limits with the current and projected future program, and modeling higher density and capacity scenarios to test the impact of possible higher-density future growth;
- Identify pedestrian and vehicular circulation routes as a result of changing patterns of use and traffic volumes;
  - Establish and define the Neighborhood's open space network of plazas, open space, courts, and pathways.
  - Provide design guidelines to direct the future growth and modifications to existing open space, landscape, and circulation networks for the Neighborhood.

### 3.3 NEIGHBORHOOD BACKGROUND AND HISTORY

The ECHS Study area is located to the east of the UCSD Central Campus across Interstate 5, in La Jolla, California. The approximately 42-acre site was designated in the 1981 UCSD Long Range Development Plan as a Medical Center Reserve for future development of a Satellite Medical Facility to be affiliated with the Health Sciences/UCSD School of Medicine. The City of San Diego University Community Plan, updated in 1987, has influence on the north, east, and southern areas beyond the edges of the East Campus. (Figure 3.1)

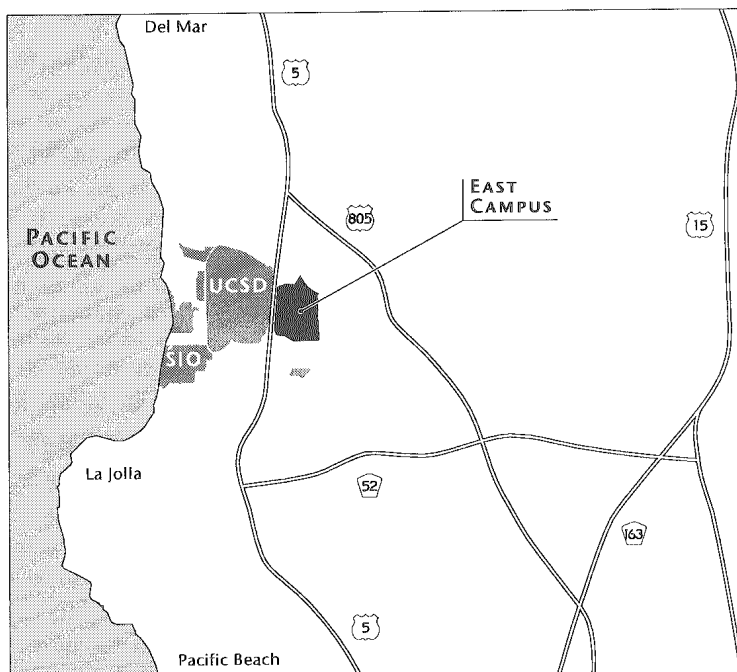


Figure 3.1

East Campus location

A subsequent 1985 study by Bobrow/Thomas and Associates (BTA) concluded that clinical facilities including a hospital, medical offices, and a skilled nursing facility should be sited on the new East Campus Health Sciences, while research and education facilities would continue to be developed on the School of Medicine and West Campus to the west of I-5. This decision reflected the direction that land in the East Campus could be developed at a more cost-efficient lower density, phased to allow planned incremental growth. The East Campus also provides ease of vehicular access, and promotes an attractive park-like setting for patient care.

A functional and space program prepared in 1987 established the initial facility phase to include a 120-bed campus hospital with diagnostic and treatment facilities, and an ambulatory care center.

The hospital and ambulatory care center were planned and designed by Stone Marracini and Patterson Architects (SMP) in 1988. A general land use plan and development program were also developed by SMP to guide the future full build-out of the East Campus Health Sciences (ECHS) neighborhood.

The 1989 UCSD Master Plan study prepared by Skidmore Owings and Merrill (SOM) and subsequent UCSD Long Range Development Plan (LRDP) established the UCSD Park preserves in the canyons flanking the East Campus mesa to the north and south.

The infrastructure system for the ECHS, including roads, utilities, parking, and major street landscaping was constructed in 1991. The Thornton Hospital and diagnostic and treatment facilities followed the campus site infrastructure development into construction and were completed in 1992. The Perlman Ambulatory Care Center was completed one year later.

During this development period the Shiley Eye Center, a research and clinical facility, and the adjacent Ratner Children's Center were planned and constructed. Recent site improvements include temporary medical faculty office and administrative space located in modular facilities adjacent to the hospital.

### 3.4 THE PLANNING STUDY PROCESS

The process and protocol for the Study has been established by the University to be under the purview of the Campus Physical Planning Office, who manage the Study process, establish the schedule, and coordinate activities among all active planning projects.

A Planning Advisory Committee (PAC) consisting of faculty, administration, clinicians, and campus departmental directors has been appointed by the Vice Chancellor of Health Sciences and Vice Chancellor Resource Management and Planning to provide detailed guidance, review, and approve the Study at each step in the process.

The Campus/Community Planning Committee (C/CPC) also provides formal guidance and reviews at appropriate intervals, and officially recommends approval of the ECHS Neighborhood Plan to the Chancellor. The C/CPC composition includes faculty, administration, students, and staff.

The UCSD Campus Design Review Board (DRB), includes prominent design professionals who periodically review the Plan. The Board provides design-related direction and makes recommendations to the C/CPC for approval. The DRB is responsible for final approval of the design guidelines.

The Study process includes the analysis of existing conditions, the preparation of planning alternatives, recommendation of a proposed direction, its refinement, and the development of design standards and guidelines to guide the implementation of the Plan.



## 4 EXISTING CONDITIONS & SITE INFLUENCES

## 4 EXISTING CONDITIONS AND SITE INFLUENCES

### 4.1 NEIGHBORHOOD LOCATION

The ECHS Neighborhood is bounded on the north by the UCSD Park canyon preserve and undeveloped land slated for recreational uses, on the east by a campus surface parking facility, and on the southeast by the Science Research Park Neighborhood.

On the south the Neighborhood is bounded by the canyon. The Interstate 5 (I-5) right-of-way forms the west boundary of the area. Figure 4.1 shows neighborhood boundaries.

### 4.2 SURROUNDING NON-UCSD LAND USES

Existing regional land uses surrounding the East Campus are shown in Figure 4.1:

- A. Mixed-Use Commercial/Office and Residential in the Genesee Avenue and La Jolla Village Drive corridors near East Campus support a high-density, mixed-use zone with mid-rise buildings, commercial and retail facilities and high-density planned development housing.
- B. Off-Campus Housing: Non-UCSD multi-unit condominiums with off-street parking.
- C. Medical Center Uses: The Scripps Medical Center supports hospital and ambulatory care uses, including emergency department and medical offices.

### 4.3 UCSD EAST CAMPUS LAND USES

Existing land uses around the ECHS Neighborhood are identified in Figure 4.2:

- A. UCSD Academic Space: The Preuss School, a 75,000-GSF middle and high school.
- B. UCSD Academic Reserve: Specific use not yet determined.
- C. UCSD Campus Parking: Permanent surface lots totaling about 2,215 spaces.

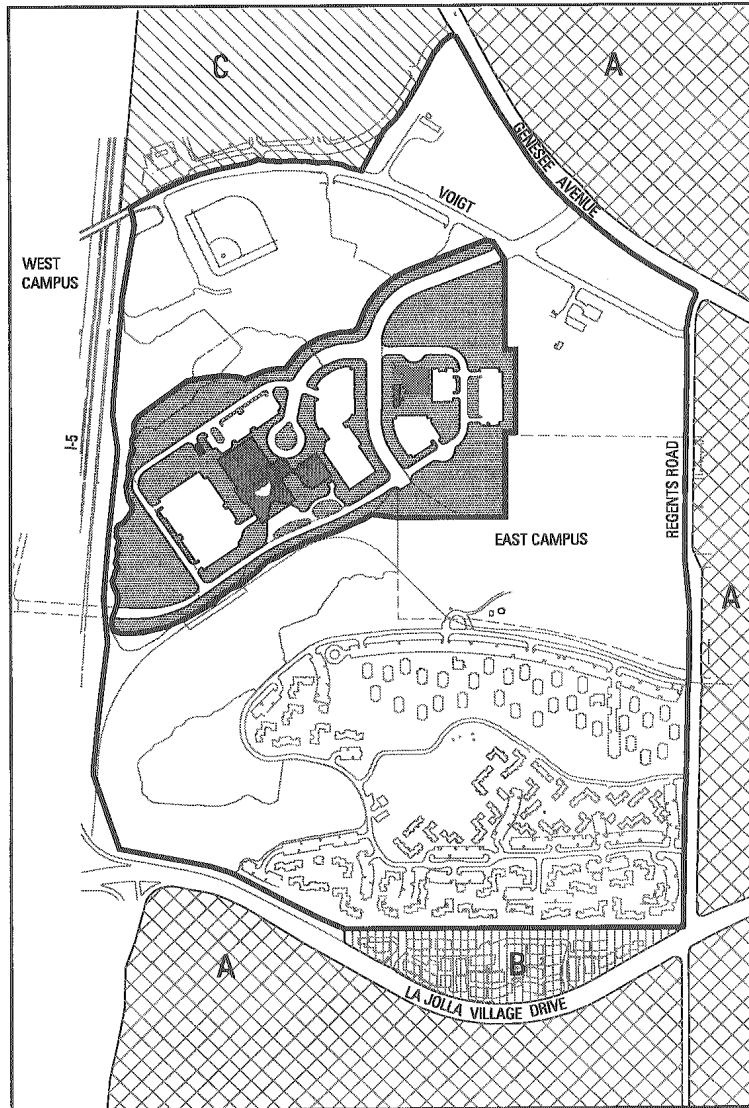


Figure 4.1 ECHS neighborhood boundaries and uses surrounding East Campus

D. UCSD Student Recreational Open Space: Programmed recreation uses, including a baseball field. A proposed playing field complex will include three soccer fields. A future Events Center building has been proposed to be located at the Voigt Drive intersection with Campus Point Drive. A portion of this land is currently occupied by a parking lot.

- E. Science Research Park (SRP): Research and development facilities proposed to include five buildings totaling approximately 550,000 gross square feet (GSF). One thousand six hundred parking spaces in surface parking and a parking structure will be provided in the ultimate build-out.
- F. UCSD Mesa Housing: Six hundred units of two and three-story apartments with approximately 900 parking spaces.
- G. UCSD Park lands.

#### **4.4 ECHS NEIGHBORHOOD LAND USES**

The existing ECHS Neighborhood is comprised of approximately 43 acres of gross site area.

The general categories of land use in the Neighborhood are defined in the 1989 LRDP as 545,000 assignable square feet (ASF) of Clinical space and 40,000 ASF of space allocated to Instruction and Research, Organized Research Units, and Academic Administration.

Current existing functional land uses are shown in Figure 4.3. They include Hospital inpatient beds and diagnostic and treatment facilities, Ambulatory Care (clinic) facilities, and surface parking.

Functional zoning on the site is organized into Medical Center, Ambulatory Care, Clinical/Research, and parking zones. The Hospital zone includes parcels directly adjacent to the north and west sides of Thornton Hospital to provide internal functional connections and a planned expansion of the public atrium space to the west. Ambulatory Care zones are located to the east and south of the Perlman Ambulatory Care Center. Clinical/Research parcels are generally in the eastern third of the neighborhood.

The existing ECHS Neighborhood development has seen little expansion since the first facilities were constructed eight years ago. Four buildings occupy approximately 9.5 acres of the site:

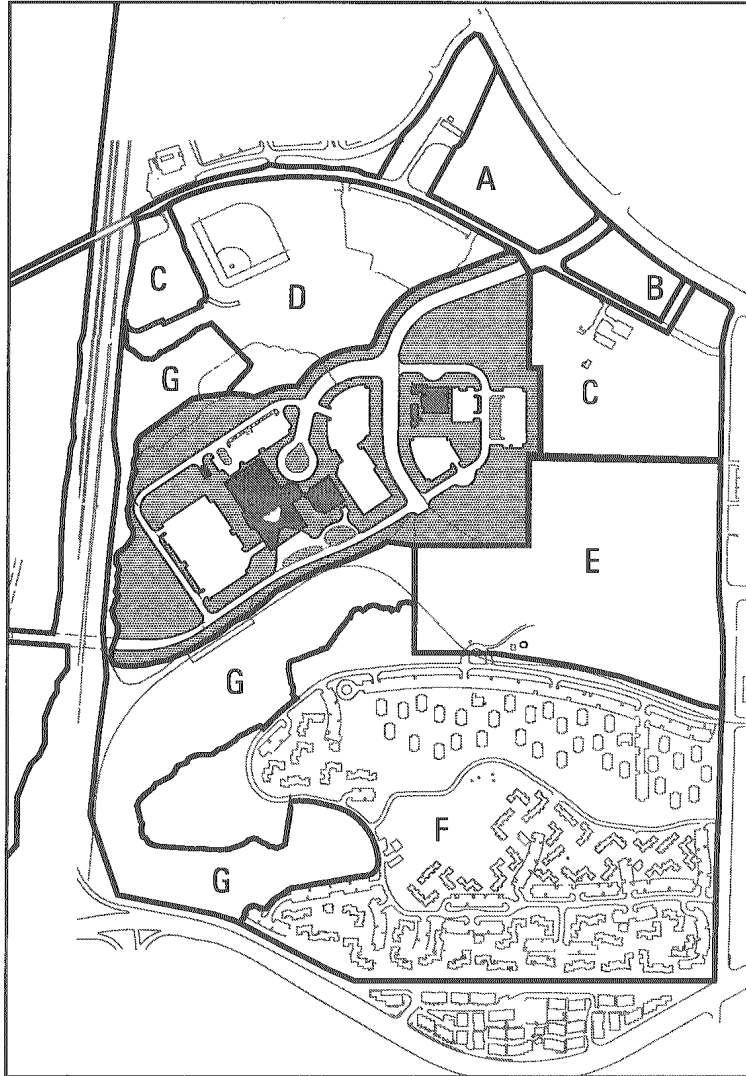


Figure 4.2

Existing East Campus land uses

1. The Thornton Hospital, 235,000 GSF/116,000 ASF, two and three floors plus partial lower level.
2. The Perlman Ambulatory Care Center, 56,000 GSF/32,000 ASF, two floors plus lower level.
3. The Shiley Eye Center, 32,000 GSF/24,000 ASF. Two and three floors.
4. The Ratner Children's Center, 3,000 GSF/2,000 ASF, one level.

The total area of the existing facilities is 326,000 GSF/174,000 ASF.

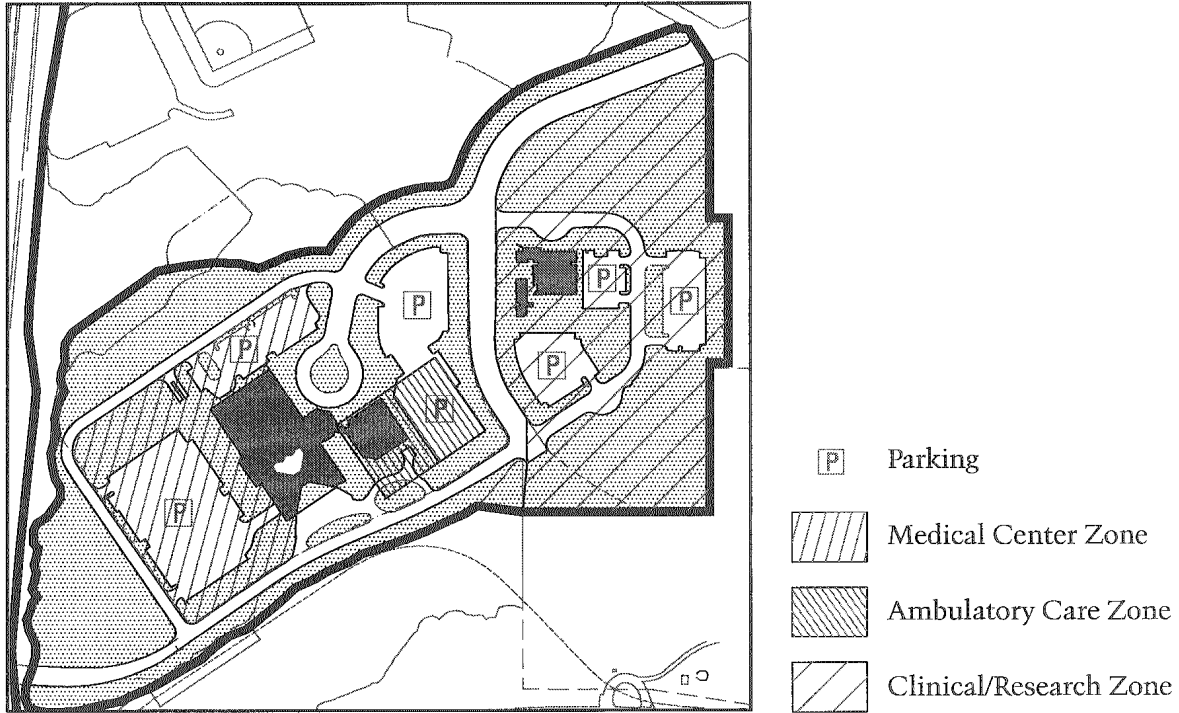


Figure 4.3

Existing functional land uses

## 4.5 THE NATURAL ENVIRONMENT

Located to the east of the UCSD central campus and about 1.5 miles east of the Pacific Ocean, the ECHS neighborhood is located within the 270-acre UCSD East Campus on a 43-acre coastal mesa. The mesa is bounded on the north and south edges by natural canyons that have been somewhat altered by the former military training facility and the construction of I-5. The mesa has been terminated at the west end by the transecting Interstate 5 right-of-way corridor that lies some 40 feet below the top of the mesa (Figure 4.4).

### 4.5.1 TOPOGRAPHY AND LANDFORMS

The canyon retains some of the indigenous natural vegetation of sage and chaparral that has been augmented by the introduction of eucalyptus trees along the edges. The eastern edges of the neighborhood gradually ascend in elevation to about 15 to 20 feet above the mesa. The canyon elevations descend from about 10 feet in the east to about 40 feet in the west as they meet the I-5 corridor.

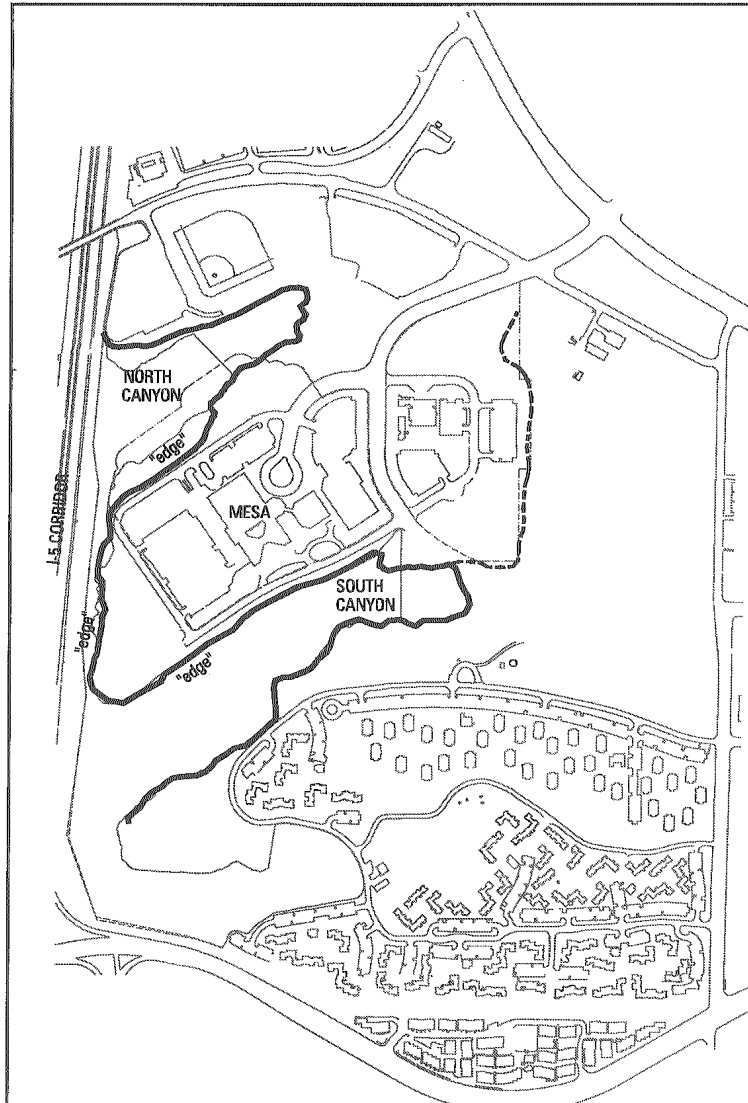


Figure 4.4

Natural environment

Canyon edge slopes vary widely from flat to 50 degrees at the north canyon transect with the I-5 corridor. The average slope along the canyon edges is about 30 percent.

Riparian wetland habitats have been established at the base elevation of the canyons and are restricted from any future alteration or development.

The strong visual character of the natural dry coastal California landscape and arroyos that surround the mesa creates the unifying image of the neighborhood environment.

#### 4.5.2 CLIMATE

The regional climate enjoyed by the site is governed by a temperate coastal influence. Waters of the coastal Pacific Ocean in the region range in the 55-70 degree F. range, mitigating the seasonal temperature swings to a range of 45-80 degrees F.

The Pacific Ocean generates near-constant breezes from the west-northwest. Occasional off-shore wind patterns known as Santa Anas, occur from mountains to the northeast of the region, and create very warm dry winds. Winter storms also generally come from the northeast.

Seasonal rainfall is low, occurring mostly November-February. Spring weather includes the "gray May" and "June gloom," when coastal low clouds and fog blanket the region each day for about two months.

#### 4.5.3 OPEN SPACE AND LANDSCAPE

Significant landscape elements have been constructed as a part of the neighborhood infrastructure in accordance with the 1993 UCSD Campus Landscape Planning Study. The concept for the Neighborhood follows the conceptual design for the West Campus, which has three main goals:

- The rustic landscape should have a cohesive character along campus edges to strengthen UCSD's visual presence in the community.
- The rustic landscape of the campus interior should exhibit more diversity to differentiate various Neighborhoods and gathering areas.
- The rustic landscape should function as an aesthetic, ecological, and educational resource.

Figure 4.5 indicates the existing landscape elements and their location.

The UCSD Campus Landscape Planning Study Guidelines define various rustic elements of the Campus. Specific design considerations for the ECHS Neighborhood include:



- **Campus Edge:** The I-5 corridor edge includes eucalyptus groves along the corridor slopes, with view corridors into canyons from I-5.
- **Secondary Entries:** 60-foot landscape setback planted with *Eucalyptus torquata* and rustic understory plantings.
- **Parking Lots:** An informal rustic planting design should be used.

The featured open space of the ECHS neighborhood is the main plaza and drop-off circle directly at the front door of Thornton Hospital. It has been planted with Sycamores as the entry feature.

The interface between the UCSD Park areas and the rustic landscape of the canyons has specific requirements to differentiate the two zones. The rustic landscape is not to be introduced into the canyons. Rather, the canyon vegetation should be incorporated into the rustic area.

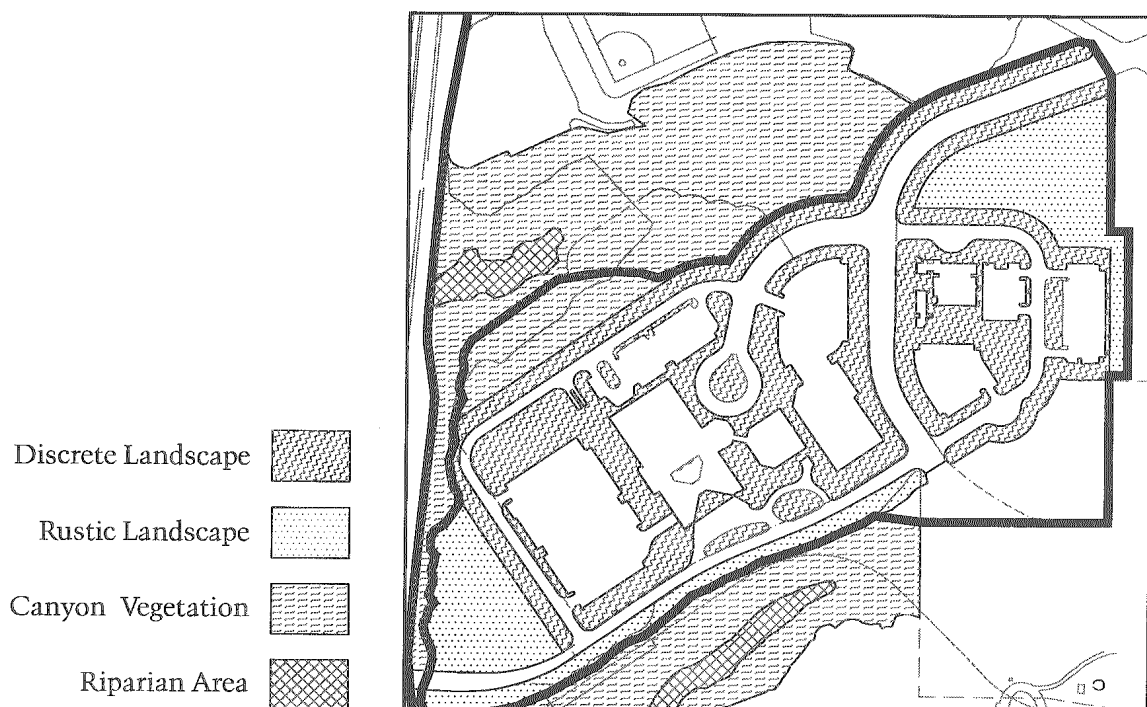


Figure 4.5

Existing landscape elements

## 4.6 VEHICULAR CIRCULATION AND PARKING

### 4.6.1 EXISTING ACCESS AND CIRCULATION

The single point of access to the ECHS Neighborhood is via Campus Point Drive at the Voigt Drive intersection (Figure 4-6a). The four-lane Campus Point Drive bisects the Neighborhood, terminating at the edge of the canyon and the south leg of the Medical Center Drive loop road. The loop road encircles the entire mesa at the canyon and I-5 edges, forming a strong vehicular boundary to the site.

Medical Center Drive terminates at the Hospital circle drop-off, however, a road segment continues along the north edge of the site. This configuration provides direct access to the Hospital, but is confusing for overall site vehicular wayfinding. Vehicular circulation onsite includes:

- **Emergency Vehicles:** Travel to the east along the north side of the site to the Hospital Emergency court. Parking for the Emergency Department is in Lot 752. A helipad for emergency response helicopter service has been previously approved on grade to the west of the Hospital, but has not been constructed. A new location will require review and approval by the FAA and regional authorities.
- **Hospital Patients and Visitors:** Arrive at the Hospital entry to drop off, or park directly to the east of the main entrance in Lot 751. When full, overflow parking occurs in Lot 755.
- **Ambulatory Care Patients:** Are expected to turn before the Hospital circle into the Parking Lot 751 area, and drop off and park at the Perlman Center entrance at the south end of the lot. The entry wayfinding for Perlman is also somewhat obscured. The Shiley/Ratner Center Lot 757 provides patient parking.
- **Staff, Faculty, Physicians and Students:** Lot 752 provides Faculty/Physician space for "A" Permit holders, while the Staff parking is in Lot 753, for "B" Permit holders. The two eastern Lots 755 and 756 are for Student "S" Permit holders and overflow parking for staff.

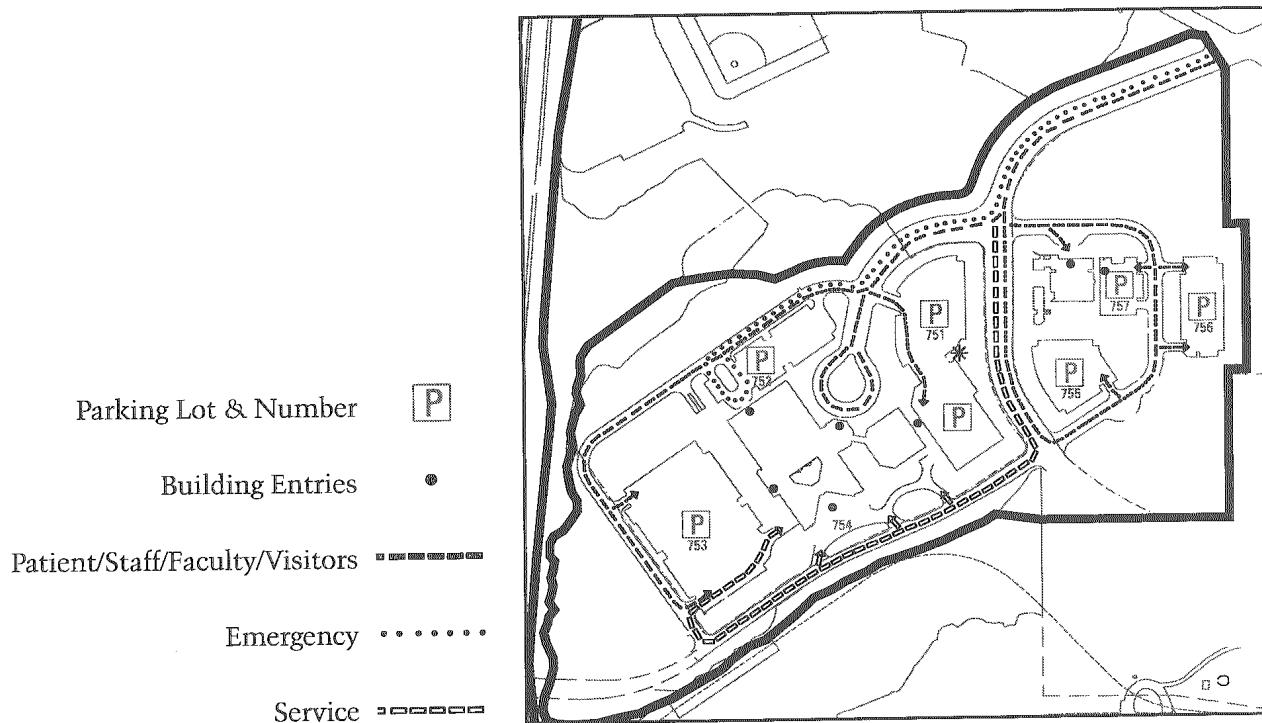


Figure 4.6a

Existing vehicular access

- **Service Access:** To the Neighborhood is also from Campus Point Drive to service bays along the south edge. The Hospital service yard is located directly south of the main Hospital facility. Future facilities to be constructed on the north side of the site will require carefully sited service facilities, as there is no separate service access available.
- **UCSD Campus Shuttle System:** Provides access to the Central Campus on 15-minute intervals to the Student Parking Lots 701 and 702 on the north edge of the Neighborhood, but does not travel near the Medical Center facilities or Shiley/Ratner Centers.
- **Public Bus Transit:** Serves the ECHS neighborhood with a stop on Campus Point Drive near the east-west pedestrian crossing.

#### 4.6.2 PLANNED ACCESS AND CIRCULATION ELEMENTS

Several important proposed projects that will dramatically alter the current access and circulation patterns in the Neighborhood are shown in Figure 4.6b.

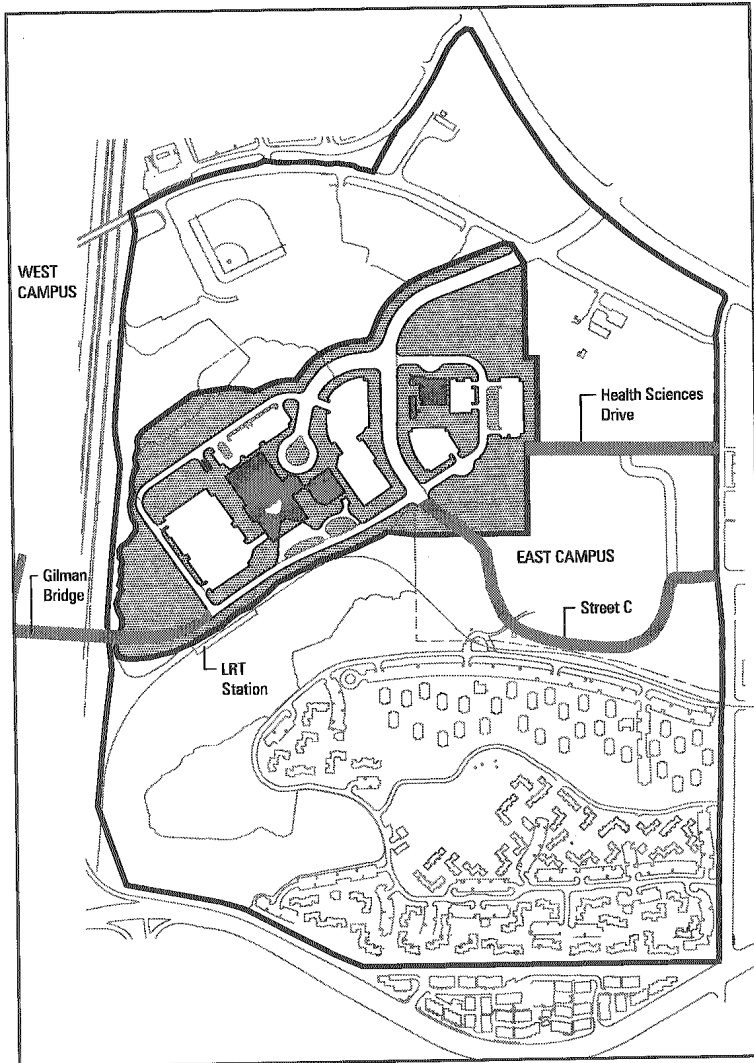


Figure 4.6b

Proposed improvements to ECHS roadways

- **Gilman Bridge:** Is proposed to span I-5 and link the east end of Gilman Drive on the West Campus to Medical Center Drive South in 2004. It will provide a direct vehicular connection to the School of Medicine and the West Campus. Pedestrian access will be a 10-15 minute walk between Thornton Hospital and the School of Medicine; bicycle travel east and west will be less than a five-minute ride. Campus shuttles will also increase the access between the East and West Campuses.

- **METROPOLITAN TRANSIT DEVELOPMENT BOARD LIGHT RAIL TRANSIT STATION (LRT):** Is proposed on the east side of the I-5 corridor which will provide an excellent location for a transit station at the west end of the ECHS Neighborhood. The proposed alignment will proceed east along the canyon edge; cross the east end of the canyon on an elevated trackway; and across the south edge of the Science Research Park. The terminus is a station proposed to be near Eastgate Mall at Executive Drive and Judicial Drive. The MTDB Executive Board is currently seeking additional ridership and cost information to ensure a sound decision regarding the location of the line.
- **ROADWAYS: Eastern Entry from Regents Road:** Health Sciences Drive is a newly constructed (1999) four-lane road with bike lanes to serve the student parking lots east of the Neighborhood boundary. It will extend into the neighborhood in the future, forming a new east gateway at the intersection with Medical Center Drive East. The Regents Road intersection will be signalized.

**STREET C:** The proposed roadway through the SRP Neighborhood will connect to Regents Road via the new SRP entry road. Access into the SRP is proposed to be designed to discourage unrelated through traffic.

#### 4.6.3 PARKING

Approximately of 15.2 acres of the site is developed into surface parking and landscaped areas. A total of 936 spaces are currently provided in the six Neighborhood parking lots. Current utilization of the parking is approaching full capacity. As of February, 1999, the UCSD Campus Parking Inventory program reported occupancies of about 91 percent.

Approximately 1,800 Campus parking spaces in surface lots have been constructed east of the Neighborhood, primarily to serve West Campus needs. The space will also be made available for ECHS staff and faculty in overflow conditions.

## 4.7 PEDESTRIAN AND BICYCLE CIRCULA-

### 4.7.1 PEDESTRIAN CIRCULATION

The ECHS currently exists as a vehicle-oriented Neighborhood, since the development has yet to reach the capacity which provides a "critical mass" of pedestrian activity. The 1988 SMP Master Plan provided several pedestrian pathways to traverse the site. Figure 4.7 illustrates the current pathways:

**Existing East-West Walk:** Originates at the easternmost surface parking lot with the Hospital entry as the destination. The path is implied through the public atrium of the Hospital, and extends to the west through the Hospital parking lot.

**Existing North-South Walks:** Intersect the major east-west path and connect perimeters of parking, Neighborhood edges, and canyon recreational pathways.

### 4.7.2 BICYCLE CIRCULATION


Bicycle lanes are located on-street in the Neighborhood, except for a pathway crossing the south canyon to the Mesa Housing on the south rim. Bike parking facilities are not currently provided in the Neighborhood. Figure 4.7 also shows current bicycle routes.

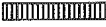
The bicycle lanes are proposed for the Gilman Bridge and east entries to the Neighborhood. Integration of bicycle paths and lanes with all existing and new streets will be required.

## 4.8 SITE AND UTILITIES INFRASTRUCTURE

The major infrastructure services in the Neighborhood are represented in Figure 4.8. These include the following services:

- **12KV Electrical Service:** Electrical service is provided from UCSD 69/12KV main east campus substation located on Voigt Drive west of the Pruess School. There are currently two 69/12 KV transformers at the substation. A third transformer will be added in the year 2001. The service is fed to building sites within the Campus Point Drive east setback and Medical Center Drive South in multiple under-

Bicycle Paths and Dedicated On-Street Lanes 

Pedestrian Pathways 

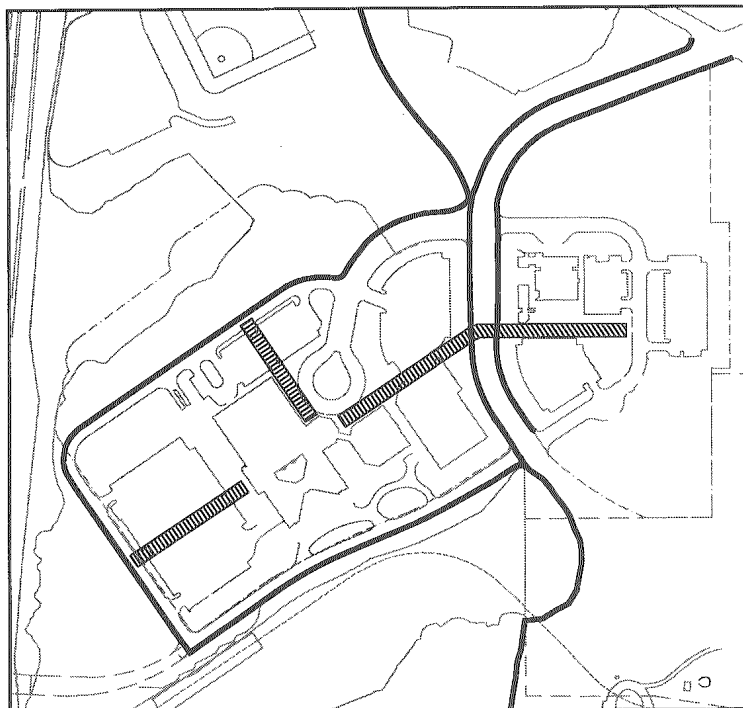


Figure 4.7

Existing pedestrian and bike paths

ground conduits. Two circuits provide power to Thornton and Perlman. Future loads due to expansion of Thornton Hospital will be connected to Thornton circuit. Two additional circuits provide power to Shiley/Ratner facilities, Preuss School, parking lots and street lighting and will provide power to future loads for Shiley Eye Center Expansion and new research buildings east of Campus Point Drive. Two spare conduits are set aside for the remainder of the site.

Capacity of the system is assumed to be in the range of the LRDP development of about 545,000 ASE, but is highly dependent upon the proportion of use between Hospital, Ambulatory Care, and Research uses. A third transformer location is reserved in the 69KV Substation and will begin construction in August 2000.

- **Domestic Water Service:** Domestic water service is provided along the Campus Point Drive and Medical Center Drive South roadways in the landscaped median, and serves the existing facilities via 8-inch mains. Capacity is estimated to be adequate for the LDRP development ca-

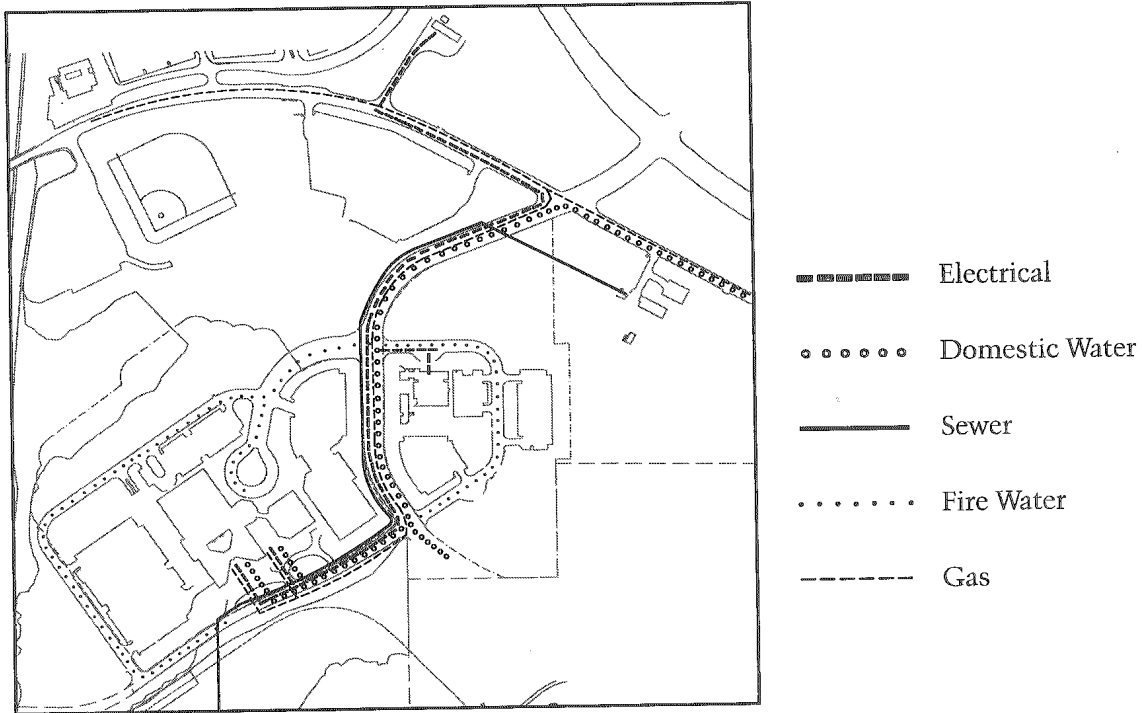


Figure 4.8 Existing site and infrastructure

capacity, but would require new analysis to determine system capacity if more extensive development occurs.

- **Fire Protection Water:** Fire protection water main is branched from the domestic service and feed each parcel along the curb of the Medical Center Drive loop, and wet and dry standpipes in the existing facilities. Hydrants are in place throughout the Neighborhood.
- **Natural Gas:** SDG&E provides natural gas services from the same utility alignment as above services, but to a lesser extent. The main extends only to the existing facilities. Capacity of mains is deemed adequate for the LDRP capacity of the site.
- **Sanitary Sewer Services:** Sanitary sewer services are also located in the same utility alignment, and extend along Medical Center Drive South to the Hospital from the offsite pumping station on Voigt Drive. A new sewer extension project has been planned by the City of San Diego to connect to the regional system traversing the I-5 corri-



dor via the south canyon. Capacity of the current system is unknown. Mains currently do not extend to the north or west parcels of the neighborhood.

- **Storm Drainage:** Stormwater collection from facilities and parking areas is sent to the regional storm drainage system located along the I-5 corridor. Capacity for future expansion of the Neighborhood is unknown.
- **Telecommunications/Information Services:** All ECHS Neighborhood telephone services originate from a node located in the lower level of Thornton Hospital. A proposed new node on the eastern side of the site will serve future facilities. The system carries Campus Security/CCTV, Fire Alarm, and other telecommunications services.
- **SMA Triton Cable Television:** SMA Triton cable television system head end is also located in Thornton Hospital, and services provide Campus cable television via dishes mounted at grade on the slope of South Canyon.
- **Fiber Optics IS Network:** An underground fiber optics network links the West Campus with the Neighborhood facilities and the Preuss School. System capacity is unknown.
- **Microwave Links:** UCSD Health operates information systems utilizing rooftop microwaves linked by a station atop Mt. Soledad to the Hillcrest campus.

Improvements to the infrastructure include a new utility connection to West Campus for 12KV electrical service, water and telecommunication lines to be located in the proposed Voigt Drive tunnel under I-5.

#### 4.9 NOISE

Noise is generated in and around the Neighborhood by several sources as shown in Figure 4.9.

- The I-5 corridor creates ambient noise along the western edge of the site and into canyon areas. No mitigation elements are currently required.
- Onsite traffic from service vehicles in the Hospital service court generate occasional noise. Acoustical mitigation of the adjacent patient bedrooms includes double-glazed windows.

Once the Gilman Bridge and Science Research Park are complete, traffic noise will increase along the south edge of the Neighborhood. Additionally, moderate to severe noise will be created by the Light Rail Transit as it navigates the tight radius turns of the elevated canyon track. These conditions will require mitigation for buildings on the south edge of the Neighborhood.

#### 4.10 BUILDING SERVICES

Thornton Hospital has central plant facilities that support the current Hospital, as well as the Perlman Ambulatory Care Center. The plant has the extra capacity to support a small addition to Thornton. Existing cooling towers are located at the edge of the canyon below the south wing of the Hospital.

Future expansion of the Hospital will require new central plant facilities for chilled water, domestic hot water, primary electrical service, steam, and medical gas systems. These systems must be designed to the essential structure standards of the State of California Office of Statewide Health Planning and Development (OSHPD).

The Shiley and Ratner Centers have freestanding building service systems.

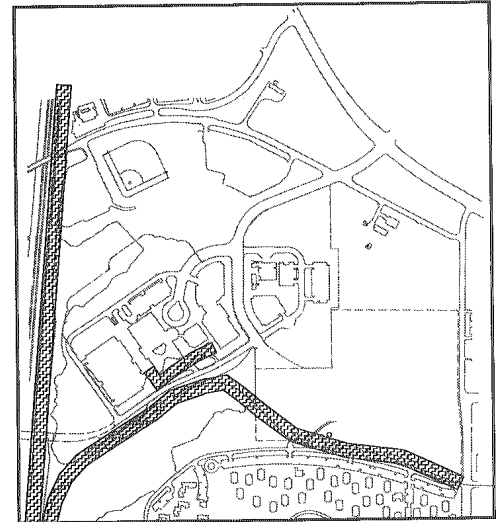


Figure 4.9

Sources of noise

#### 4.11 SITE INFLUENCES

The analysis and understanding of site conditions suggest important influences on the concept direction for the Neighborhood. These site influences have been distilled through the planning process to a set of key elements that inform and direct the plan concept development.

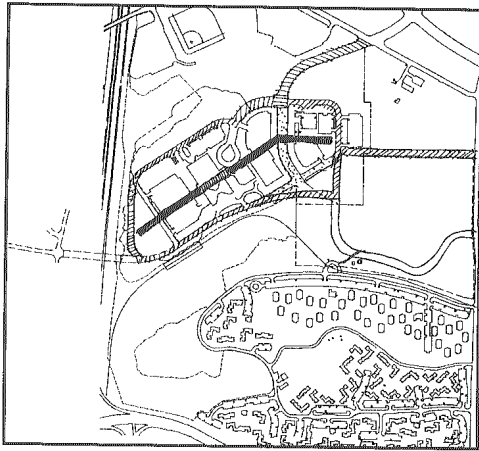


Figure 4.10

*Pedestrian experience*

- **The Pedestrian Experience:** As the Neighborhood transitions from vehicle-oriented to a pedestrian-focused environment, the pathway network must be clarified and reinforced. A strong hierarchy must provide order, clear wayfinding, and adequate separation from vehicle traffic. The network must also have clear destinations. Figure 4.10.

- **Identity:** The Health Sciences Neighborhood will be physically linked with the School of Medicine (SOM) when the Gilman Bridge is completed. The bridge will become a regional visual landmark which provides the opportunity to present the “leading-edge” image of advanced education and research that UCSD represents. The image and visibility of the Medical Center can be enhanced by the appropriate buildings orientation above I-5 on the west edge of the Neighborhood. Figure 4.11.

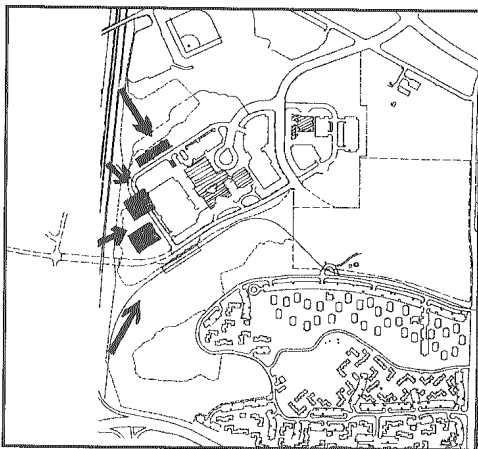


Figure 4.11

*Identity*

- **Canyons:** The Canyons provide a strong and unique edge to the Neighborhood, and a spatial organization to the entire site. The opportunity exists to establish vistas toward the canyon edge, and to integrate the natural canyon landscape and topographic character into the center of the site, creating new secondary edges or fringes that order space, views, and create building places. Figure 4.12.
- **De-emphasizing the Vehicle:** The existing roadway system currently organizes the Neighborhood, and moving around the site is dependent upon vehicles. While access is extremely important, the road network must be simplified and de-emphasized. The opportunity exists, as the Neighborhood grows and matures, to reconsider the single ground plane of roads and parking to allow greater flexibility, separation of circulation, and the enrichment of the visual and spatial experience.

- **The Courtyard as an Open Space:** As the neighborhood evolves, the multi-phase development of buildings presents an opportunity to add the courtyard to the vocabulary of the open space network. The “outdoor room” concept is highly appropriate in the climate, and the courtyard can become a feature of the pedestrian network, as well, in the form of colonnades. Figure 4.13.
- **Articulate Building Development:** Future development of the Neighborhood building sites must balance the program need for open, flexibly planned buildings for healthcare and research with discrete and articulated building scale. Building siting, scale, massing, and planning must strengthen the conceptual framework of the pedestrian network, open space and the canyons and buildings.

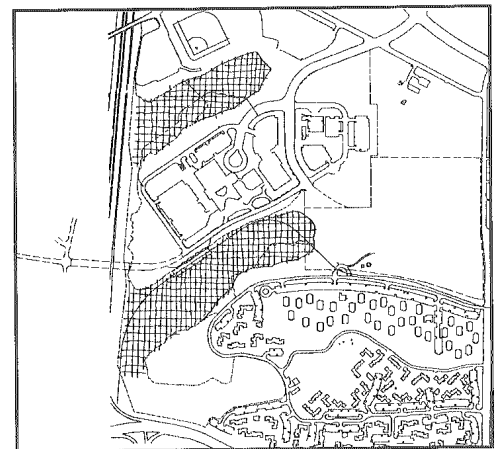


Figure 4.12

Canyons

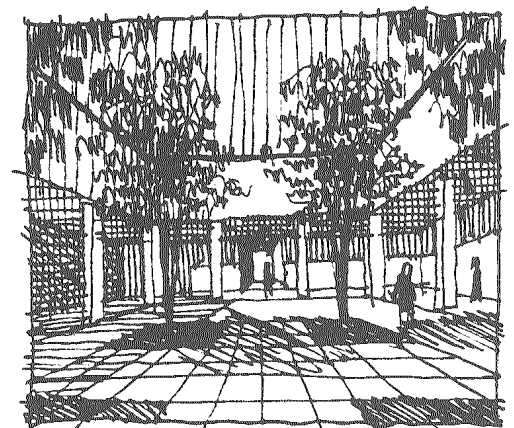


Figure 4.13

Courtyard

5 LAND USE &  
DEVELOPMENT PROGRAM

## 5 LAND USE AND DEVELOPMENT PROGRAM

### 5.1 THE HEALTH SCIENCES STRATEGIC

The UCSD Health Sciences Strategic Plan 1998-2010 was completed in April 1998. The Plan establishes the need for new facilities as key resources required to achieve the strategic goals in each of the core missions of research, education, and clinical services. In September, 1998, the Vice Chancellor for Health Sciences appointed a series of Working Groups in each core mission and initiated the preparation of a Program and Conceptual Physical Plan.

In April 1998 the East Campus Health Sciences Work Group was appointed by the Vice Chancellor of Health Sciences and the Vice Chancellor of Resource Management and Planning to review the land use plan and development capacity. The Work Group developed recommendations for building parcels and massing, setbacks, signage and parking structure siting.

### 5.2 CONCEPTUAL SPACE PROGRAM

The Health Sciences Conceptual Space Program prepared by Anshen+Allen in late 1998 reflects the Strategic Plan for Education and Research, Cancer, and Cardiovascular programs, as well as Clinical facility needs including Hospital and Ambulatory Care programs. The Program is structured into two implementation timeframes representing near term and long term needs.

### 5.3 DETAILED PROGRAM REQUIREMENTS

The Health Sciences Conceptual Space Program identifies a general range of need in each mission-based program. Specific program and building needs address the following detailed program requirements for each building function:

- **Medical Center/Hospital** includes the existing Thornton Hospital, future inpatient beds, diagnostic and treatment space, and additional administrative support space. The Concept Program has assumed an estimated range of inpatient bed need from the current capacity in Thornton Hospital of 120 beds to an ultimate capacity of 300-350 beds. Diagnostic expansion will include Emergency, Imaging, Surgery, and Invasive Imaging and Proce-

dures services. The potential program need ranges from about 120,000 to 230,000 assignable square feet (ASF) in near and long term need.

- **Ambulatory Care** needs for clinic and faculty offices is growing dramatically. Outpatient space in the Hospital must be moved to provide inpatient care space, especially Intensive care beds, Cardiology, and Pulmonary medicine space. The growing volume of outpatient surgery suggests that it be moved out of the hospital environment to a clinic location. Perlman Center has reached capacity and expansion is planned in Phase One. An estimated 120 exam rooms and 200 offices will be ultimately required for ambulatory care programs. This drives a space need in the range of 80,000 to 240,000 ASF in the long term future.
- **The Health Sciences Cancer Center (HSCC)**, now in planning, is programmed as an integrated research and clinical facility. The components of the program include research labs, faculty offices, clinics, clinical trials, prevention, and general administrative space in a two-phase development. Current program is about 140,000 ASF by 2004.
- **The Cardiovascular Clinical Research Facility** is envisioned as an integrated Cardiothoracic Specialty Research and Clinical Center. Programmatic components include clinic facilities, research space, faculty offices, and administrative space. Proposed program space is estimated in the range of 50,000 to 70,000 ASF in the near to long term.
- **Clinical/Research Facilities** include the existing Shiley/Ratner Eye Centers which serve as a model for the future of integrated clinical and research facilities, where translational research, clinical practice, clinical trials, and administration are integrated "under one roof". Research and clinical programs are not generally located in the same wing of any building. The estimated program need for these facilities (in addition to the HSCC) is anticipated to be about 50,000 to 200,000 ASF in the long term.

- **The Medical Education Center** is proposed to be a part of the School of Medicine Education program space, the center is envisioned to include auditorium, conference and reception facilities that support an academic medical center environment. The center would also provide a community meeting environment for consumer medical education and instruction. Suggested preliminary program need may be about 40,000-60,000 ASF.
- **Campus Support facilities** include the East Campus Utilities Plant and other Campus facilities required to maintain and support the ECHS neighborhood, and are expected to require about 15,000 to 20,000 gross square feet (vs. ASF) in the near future.
- **Other Uses** currently in consideration for the neighborhood include a Senior Wellness Center. Program need has not yet been established.

## **5.4 FUNCTIONAL LAND USE AND ZONING**

The general categories of land use defined in the 1989 LRDP form the basis of the Neighborhood land uses. These include clinical, research, and parking.

### **5.4.1 PROPOSED LAND USE CATEGORIES**

New uses have been identified for the site, including medical education, integrated research and clinical facilities, and campus support space. Following is a summary:

- Hospital: inpatient beds, diagnostic and treatment, clinical support facilities.
- Ambulatory Care facilities.
- Research facilities.
- Medical Education facilities.
- Campus support facilities.
- Structured and surface parking facilities.
- Transportation facilities.
- Neighborhood Open Space network and features.
- Circulation network.



#### 5.4.2 NEIGHBORHOOD ZONE OVERLAYS

Although the campus will now accommodate a wider range of uses than originally identified, for planning purposes Zone Overlays have been established for the neighborhood, that consolidates groupings of these uses and related building sites into geographic zones. These four zones are summarized as follows:

- A. The Medical Center Zone includes the existing Thornton Hospital and adjacent sites. In general this Zone is intended for inpatient and diagnostic and treatment uses. The Zoning Plan reference is MC.
- B. The North Canyon Zone is located along the edge of the site overlooking the North Canyon. This Zone is intended for a combination of Clinical and Research functions and related structured parking facility. The Zoning Plan reference is NC.
- C. The Ambulatory Zone includes the existing Perlman Center and adjacent sites. This Zone will support the program expansion of Perlman and related structured parking. The Zoning Plan reference is ACC.
- D. The Clinical/Research Zone encompasses the eastern portion of the neighborhood including the Campus Point Drive entry from the northeast. A wide range of clinical, research, education and campus support services are contained in this zone. Existing facilities include the Shiley Eye Center and the Ratner Center. The Zoning Plan reference is CR.

#### **5.5 ESTABLISHING NEIGHBORHOOD CAPACITY**

A key goal of the ECHS Study is the establishment of a range of development capacity beyond the current approved LRDP limits. The study of this "high" density development capacity is intended to begin to address future development and its impacts as the current LRDP approaches the end of the approved timeframe. The tests of capacity will serve to inform the next Long Range Development Plan, expected to begin in Fall 2000.

The primary tests for limits to the Neighborhood capacity include:

1. **The present infrastructure of roadways, utilities, networks, and systems:** Preliminary analysis by the project Traffic Consultant suggests that congestion on approach routes external to the East Campus and the Neighborhood may substantially constrain access to the site in the future. The impact of greater congestion on approach routes into the site must be addressed as higher density development occurs. The LRT access may ameliorate congestion in the future as it reduces the need for vehicular access and parking. Utilities infrastructure capacities vary by service- see Existing Conditions, Section 4.8.
2. **Buildings:** Although the ECHS Neighborhood covers only 43 acres, the building development potential at a marginally higher than current density, perhaps 2.0 FAR, suggests a capacity in the range of 1,700,000 GSF/ 1,100,000 ASF to an ultimate capacity of 2,100,000 GSF/1,400,000 ASF while maintaining most of the appropriate open space and landscape requirements and guidelines. The range is based on maximizing building areas within the setback and height guidelines. The only limitation to the ultimate built capacity of the Neighborhood is parking.
3. **Parking capacity:** The site's overall development capacity was tested with a mix of parking requirements to reflect the type of proposed uses the parking serves.

A number of development capacity scenarios were studied and tested against the above criteria. Two scenarios for capacity development emerged: a scenario that can be sustained within the 1989 LRDP, and a "High Density" Scenario. Each are summarized in Figures 5-1 and 5-2, Tables 5.1 and 5.2, and the following discussion.

### **5.6 1989 LRDP DENSITY SCENARIO**

Figure 5-1, the 1989 LRDP Density Zoning Plan, indicates the level of proposed development that can be achieved within the 1989 LRDP envelope in the configuration proposed in the Neighborhood concept plan. (See Section 6). In each zone, only a portion of the ultimate site capacity is utilized, allowing expansion flexibility, multiple building sites, and a higher

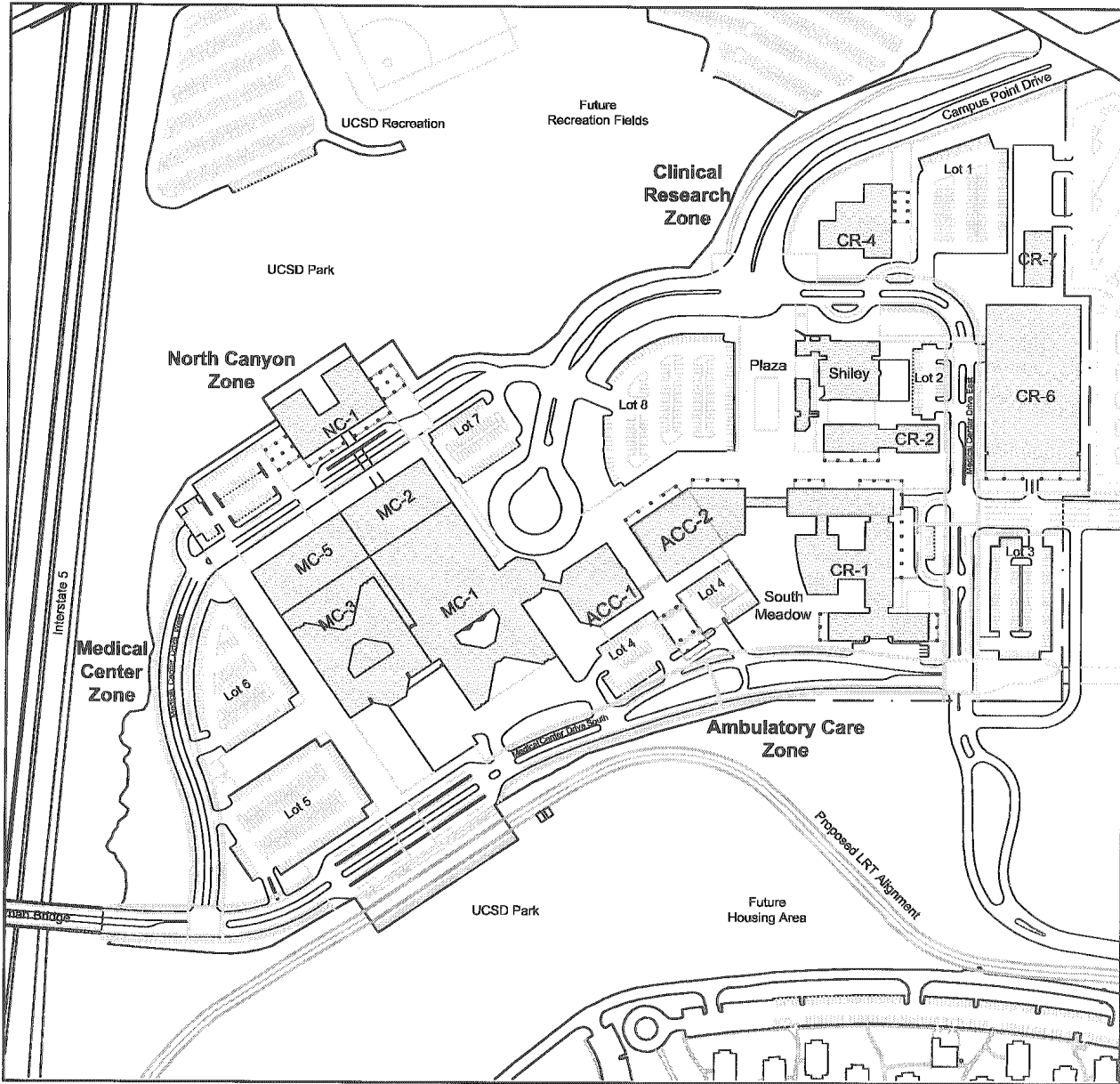


Figure 5.1

The 1989 LDRP Density Zoning Plan

Table 5.1 LRDP Density Scenario

Facilities in Neighborhood Overlay Zones	Zoning Plan Reference	Capacity		Parking Ratio [3]	Parking Required [4]	Remarks
		ASF [1]	GSF [2]			
<b>Clinical/Research (C/R)</b>						
Cancer Center	CR-1	140,000	270,000	2.25/1000	607	some parking below facility
Shiley Center		24,000	32,000	3/1,000	96	
Shiley Expansion	CR-2	14,000	26,000	2.25/1,000	58	
Ratner Center		2,000	3,000	3/1,000	9	
Clinical/Research Facility	CR-4	35,600	64,800	2.5/1,000	162	
East Campus Utilities Plant	CR-7	0	0		0	
<b>Ambulatory Care</b>						
Perlman Center	ACC-1	32,000	56,000	3/1,000	168	some parking below facility
Ambulatory Care Center	ACC-2	68,700	96,000	3/1,000	288	
<b>Medical Center</b>						
beds)	MC-1	116,000	235,000	6.1/Bed	732	
Hospital Expansion / D&T	MC-2	21,100	43,100	2.5/1,000	108	
Hospital Expansion (100 beds)	MC-3	79,300	160,800	6.1/Bed	610	
Hospital Expansion / D&T	MC-5	21,100	43,100		0	
<b>North Canyon</b>						
Clinical/Research Facility	NC-1	61,000	110,000	2.5/1,000	275	parking structure below facility
<b>ECHS Total</b>		<b>614,800</b>	<b>1,139,800</b>		<b>3,113</b>	

**Notes**

- [1] ASF-assignable square feet- is defined as the programmatic usable area of each building, excluding support space, corridors, stairs/elevators, and building systems spaces.  
The ASF is calculated as a percentage of the GSF(see definition below) based on the efficiency factor for each building type:
  - a. Research ASF is calculated at 55% efficiency.
  - b. Ambulatory Care clinics ASF are calculated at 54% efficiency.
  - c. Hospital ASF is calculated at 49% efficiency.
 The average ECHS efficiency is weighted by use: 50% Hospital use, 30% Research use, and 20% Ambulatory Care Clinics use. The average ECHS efficiency is 52%.
- [2] GSF-gross square footage- is defined as the total area of the building envelope including circulation, stairs, elevators, corridors, and building systems spaces.
- [3] Parking Ratios are calculated on UCSD standards and industry standards for academic medical centers and ambulatory care facilities:
  - a. Research Facilities: 2 spaces per 1,000 GSF. Includes, faculty, staff.
  - b. Ambulatory Care Facilities: 3 spaces per 1,000 GSF. Includes patient, staff, physicians.
  - c. Hospital: 6.1 spaces per inpatient bed, calculated 2 spaces/bed for patient and visitors, 4 spaces/bed for staff, and 1 space for each ten beds for physicians; includes D&T space.
  - d. Diagnostic & Treatment (D&T) parking not integrated with the hospital (such as MC-5 parcel) supplied in 2.5 spaces per 1,000 GSF.
  - e. Cancer Center Facilities- integrated research and ambulatory clinic space at 2.25 spaces/1,000 GSF.
  - f. Clinical/Research Facilities: 2.5 spaces per 1,000 GSF, integrated 50% each Clinical and Research.
  - g. Academic Facilities: 2.5 spaces per 1,000 GSF. Includes offsite visitors.
- [4] Includes handicapped accessible parking spaces

proportion of surface parking. (See Section 5.8 for parking capacity). Infrastructure will require upgrades to reach this capacity plateau.

**Table 5.1** LRDP Density Scenario Program summarizes the allocation of program need to the scenario. For the purposes of the Study, the Long Range Development Plan capacity remains at the level of 990,000GSF/545,000ASF.

However, in light of changing programs, to meet near term program needs, about 441,000 ASF will need to be constructed. This development density exceeds the approved LRDP capacity limit by about 70,000 ASF or 13%.

### **5.7 HIGH DENSITY SCENARIO**

Figure 5.2, the High Density Zoning Plan, illustrates the impact of increasing the neighborhood capacity to the sustainable limits of building footprints, parking, and access. The sustainable limits for the high density scenario are approximately 912,000 ASF, parking capacity, site availability, and building heights constrain growth above this threshold. Table 5.2 High Density Scenario, distributes the capacity by zone and site for buildings and parking.

### **5.8 PARKING NEEDS AND CAPACITY**

Unlike the West Campus, a large percentage of the parking need in the ECHS Neighborhood is generated by patients and visitors, rather than solely by faculty, staff and students. Two factors drive the volume and location of parking space need: walking distance and facility use.

Parking for patients must be onsite and as near to the destination facility as possible; 200-feet is considered the maximum acceptable walking distance to a building entry from a parking space for patients. The most efficient but most costly configuration for access is to locate parking in structures directly adjacent to the facility, or directly beneath. Therefore, it is expected that individual projects will need to absorb the majority of costs of developing parking within their boundaries, affecting onsite development costs.

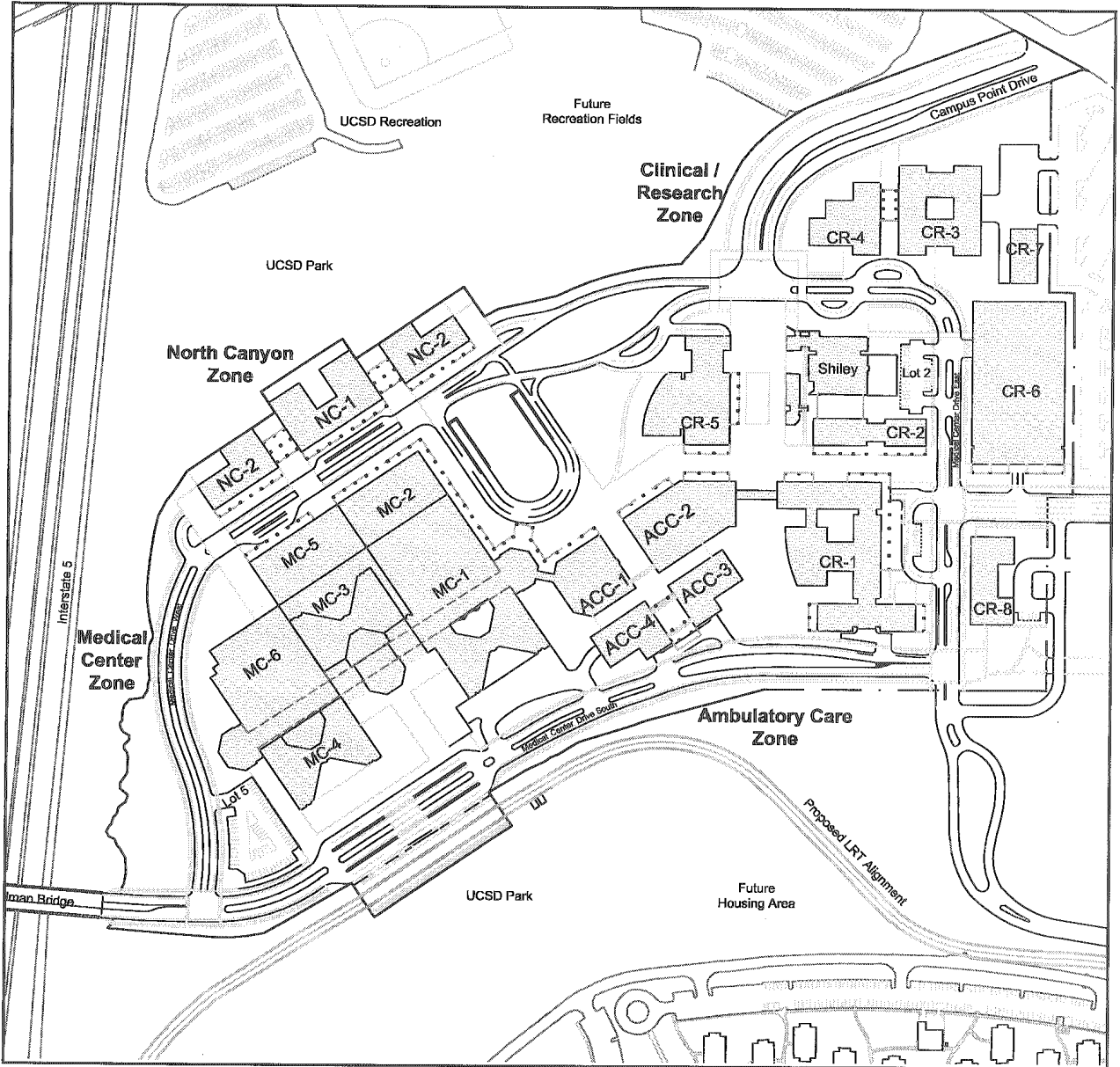


Figure 5.2

High-Density zoning plan

Table 5.2 High Density Scenario

Facilities in Neighborhood Overlay Zones	Zoning Plan Reference	Capacity		Parking Ratio [3]	Parking Required [4]	Remarks
		ASF [1]	GSF [2]			
<b>Clinical/Research (C/R)</b>						
Cancer Center	CR-1	140,000	270,000	2.25/1,000	607	some parking below facility
Shiley Center		24,000	32,000	3/1,000	96	
Shiley Expansion	CR-2	14,000	26,000	2.25/1,000	58	some parking below facility
Ratner Center		2,000	3,000	3/1,000	9	
Clinical/Research Facility	CR-3	22,000	40,000	2.5/1,000	100	some parking below facility
Clinical/Research Facility	CR-4	35,600	64,800	2.5/1,000	162	some parking below facility
Medical Education Center	CR-5	35,400	59,000	2.5/1,000	148	parking below facility and plaza
Central Power Plant	CR-7	0	0		0	
Clinical/Research Facility	CR-8	50,000	90,900	2.5/1,000	227	some parking below facility
<b>Ambulatory Care</b>						
Perlman Center	ACC-1	32,000	56,000	3/1,000	168	parking below facility
Ambulatory Care Center	ACC-2	68,700	96,000	3/1,000	288	
Ambulatory Care Center	ACC-3	20,000	37,000	3/1,000	111	
Ambulatory Care Center	ACC-4	20,000	37,000	3/1,000	111	
<b>Medical Center</b>						
Thornton Hospital / D&T (120 beds)	MC-1	116,000	235,000	6.1/Bed	732	parking below facility
Hospital Expansion / D&T	MC-2	21,100	43,100	2.5/1,000	108	
Hospital Expansion (100 beds)	MC-3	79,300	160,800	6.1/Bed	610	
Hospital Expansion (100 beds)	MC-4	79,300	160,800	6.1/Bed	610	
Hospital Expansion / D&T	MC-5	21,100	43,100		0	
Hospital Expansion / D&T	MC-6	30,000	55,600		0	
<b>North Canyon</b>						
Clinical/Research Facility	NC-1	61,000	110,000	2.5/1,000	275	parking structure below facility
Clinical/Research Facility (two wings)	NC-2	40,000	74,000	2.5/1,000	185	parking structure below facility
<b>ECHS Total</b>		<b>911,500</b>	<b>1,694,100</b>		<b>4,605</b>	

Notes

- [1] ASF-assignable square feet- is defined as the programmatic usable area of each building, excluding support space, corridors, stairs/elevators, and building systems spaces.  
The ASF is calculated as a percentage of the GSF(see definition below) based on the efficiency factor for each building type:
  - a. Research ASF is calculated at 55% efficiency.
  - b. Ambulatory Care clinics ASF are calculated at 54% efficiency.
  - c. Hospital ASF is calculated at 49% efficiency.
 The average ECHS efficiency is weighted by use: 50% Hospital use, 30% Research use, and 20% Ambulatory Care Clinics use. The average ECHS efficiency is 52%.
- [2] GSF-gross square footage- is defined as the total area of the building envelope including circulation, stairs, elevators, corridors, and building systems spaces.
- [3] Parking Ratios are calculated on UCSD standards and industry standards for academic medical centers and ambulatory care facilities:
  - a. Research Facilities: 2 spaces per 1,000 GSF. Includes, faculty, staff.
  - b. Ambulatory Care Facilities: 3 spaces per 1,000 GSF. Includes patient, staff, physicians.
  - c. Hospital: 6.1 spaces per inpatient bed, calculated 2 spaces/bed for patient and visitors, 4 spaces/bed for staff, and 1 space for each ten beds for physicians; includes D&T space.
  - d. Diagnostic & Treatment (D&T) parking not integrated with the hospital (such as MC-5 parcel) supplied in 2.5 spaces per 1,000 GSF.
  - e. Cancer Center Facilities- integrated research and ambulatory clinic space at 2.25 spaces/1,000 GSF.
  - f. Clinical/Research Facilities: 2.5 spaces per 1,000 GSF, integrated 50% each Clinical and Research.
  - g. Academic Facilities: 2.5 spaces per 1,000 GSF. Includes offsite visitors.
- [4] Includes handicapped accessible parking spaces

Development of this neighborhood plan would result in the elimination of surface parking, which would require replacement in parking structures. Financial studies that would define the financial effects and viability of implementing the parking components of this neighborhood plan have not been completed as part of this physical development study. If these improvements were funded either entirely or in large part by the UCSD Parking System, the costs to replace this parking would result in substantial fee increases to the faculty, staff, students and visitors of UCSD.

Parking requirements for proposed building types are also shown in **Table 5.1** for the LRDP Density Scenario and **Table 5.2** for the High Density Scenario.

At an overall Neighborhood parking ratio of two to three spaces per 1,000 gross square feet, the range of density alternatives reached capacity at levels well under those generated for building space capacity.

Assuming a high percentage of structured parking, a substantial part of which is vertically stacked under occupied building space, the Neighborhood parking capacity is reached at a limit approaching 4,000 spaces onsite. It is assumed that about 613 spaces will be available outside the neighborhood in the adjacent campus Lot P703 to support the parking requirements for the High Density Scenario. This suggests a maximum building capacity of about 911,500 ASF or 1,694,100 GSF for the High Density Scenario.

#### **LRDP DENSITY SCENARIO PARKING**

**Table 5.1** indicates a need of 3,113 spaces for the 614,800 ASF site capacity of the LRDP scenario. **Table 5.3** indicates that 3,080 spaces are provided within the neighborhood with 2,250 spaces in structured parking and 830 spaces in surface lots. Structured parking is located below some neighborhood buildings and includes the North Canyon parking structure (NC-1), and primarily above-ground East Parking Structure, a six-story, 1,200 space facility (CR-6).



**Table 5.3 LRDP Parking Scenario**

Parking Facilities in Neighborhood Overlay Zones	Zoning Plan Reference [1]	Parking Provided		Remarks
		Surface [2]	Structure [2]	
<b>Clinical/Research (C/R)</b>				
Cancer Center	CR-1		100	1 level below facility
Clinical/Research	CR-4		50	1 level below facility
East Campus Parking Structure	CR-6		1,200	8 levels, including 1 subgrade and rooftop parking
	Lot 1	120		
	Lot 2	22		
	Lot 3	100		
<b>Ambulatory Care</b>				
Ambulatory Care Center	ACC-2		300	3 levels below facility
	Lot 4	48		
<b>Medical Center</b>				
Medical Center	Lot 5	160		
	Lot 6	160		
	Lot 7	63		
	Lot 8	157		
<b>North Canyon</b>				
Clinical/Research Facility	NC-1		600	4 levels below facility
<b>ECHS Subtotal</b>		<b>830</b>	<b>2,250</b>	
<b>ECHS Total</b>			<b>3,080</b>	

**Notes**

- [1] In some instances parking is assigned to a particular facility. In most instances parking is used by all occupants of the neighborhood.
- [2] Includes handicapped accessible parking spaces.

### **HIGH DENSITY SCENARIO PARKING**

As growth continues, new projects expand the need for onsite parking, indicated in **Table 5-2**. The Clinical/Research zone adds several new facilities, most with structured parking below them. The Medical Center expands into the last large remaining surface parking necessitating the construction of the Medical Center entry plaza parking structure with a 600-space capacity. Ambulatory Care Center expansion adds two wings, with parking below their floor plates. Finally, the North Canyon development adds a second phase of facility and parking structure space. Supporting the 911,500 ASF will require around 4,605 spaces. **Table 5.4** indicates location of 3,890 structured parking spaces and 102 surface parking spaces within the neighborhood. Additional 613 required spaces would be accommodated outside the neighborhood in the adjacent campus Lot P703.

Section 5.9 addresses the phasing recommendations to achieve the LRDP Scenario and proceed to a buildout at the High Density Scenario.

**Table 5.4 High Density Parking Scenario**

Parking Facilities in Neighborhood Overlay Zones	Zoning Plan Reference [1]	Parking Provided		Remarks
		Surface [2]	Structure [2]	
<b>Clinical/Research (C/R)</b>				
Cancer Center	CR-1		100	1 level below facility
Shiley Eye Center	CR-2	22		
Clinical/Research	CR-3		80	1 level below facility
Clinical/Research	CR-4		50	1 level below facility
Medical Education Center	CR-5		200	2 levels below facility
East Campus Parking Structure	CR-6		1,200	8 levels, including 1 subgrade and rooftop parking
East Campus Utilities Plant	CR-7	0		
Clinical/Research	CR-8		100	1 level below facility
<b>Ambulatory Care</b>				
Ambulatory Care Center	ACC-2		300	3 levels below facility
Ambulatory Care Center	ACC-4		60	2 levels below facility
<b>Medical Center</b>				
Medical Center	MC- /Entry Plaza		600	2 levels below plaza
Medical Center	Lot 5	80		
Medical Center	MC-6		300	3 level below facility
<b>North Canyon</b>				
Clinical/Research	NC-1		600	4 levels below facility
Clinical/Research Facility (two wings)	NC-2		300	4 levels below facility
<b>ECHS Subtotal</b>		<b>102</b>	<b>3,890</b>	
<b>ECHS Total</b>			<b>3,992</b>	

**Notes**

- [1] In some instances parking is assigned to a particular facility. In most instances parking is used by all occupants of the neighborhood.
- [2] Includes handicapped accessible parking spaces.

## 5.9 ECHS DEVELOPMENT PHASING

The phases of development of the ECHS over time are strongly influenced by the changing dynamics of program need, capital resources, and constraints on allocated space, site location, and timeframe.

The ECHS Neighborhood Plan phasing has been divided into four sequences; each sequence has several project elements that include roadway and infrastructure, site and building improvements.

The projects in each sequence may be developed all at the same time, or prioritized for need and developed sequentially. The intent is to balance the development in each zone to allow construction phasing, roadway and infrastructure improvements, and access to existing buildings and parking. A balance of development for each type of facility function is also desirable, and considered here.

Figures 5-3 to 5-6 illustrate the proposed phasing of the Neighborhood from the currently understood needs up to a full buildout of the High Density Scenario.

**PHASING SEQUENCE A (FIGURE 5-3):** Improvements to construct the new Health Sciences Cancer Center and expansion of Ambulatory Care Center and Shiley Eye Center include:

A-1 Relocation of site utilities and modification of Campus Point Drive south to terminate in a cul-de-sac just north of the existing pedestrian crossing;

A-2 Construction of new Medical Center Drive South east of Thornton Hospital to extension of Medical Center Drive East, and connection to Health Sciences Drive.

A-3 Cancer Center (CR-1) construction, including Health Science Walk, and temporary parking to the east;

A-4 Construction of the East Campus Utilities Plant facility CR-7, temporary parking south of Campus Point Drive;

A-5 Expansion of Shiley Eye Center.

A-6 Construction of the Ambulatory Care Center ACC-2 including a subgrade parking structure, surface parking to the south, and the south half of the adjacent Health Sciences Walk. Modifications are required to the existing parking lot P751. May be completed in sequence B.

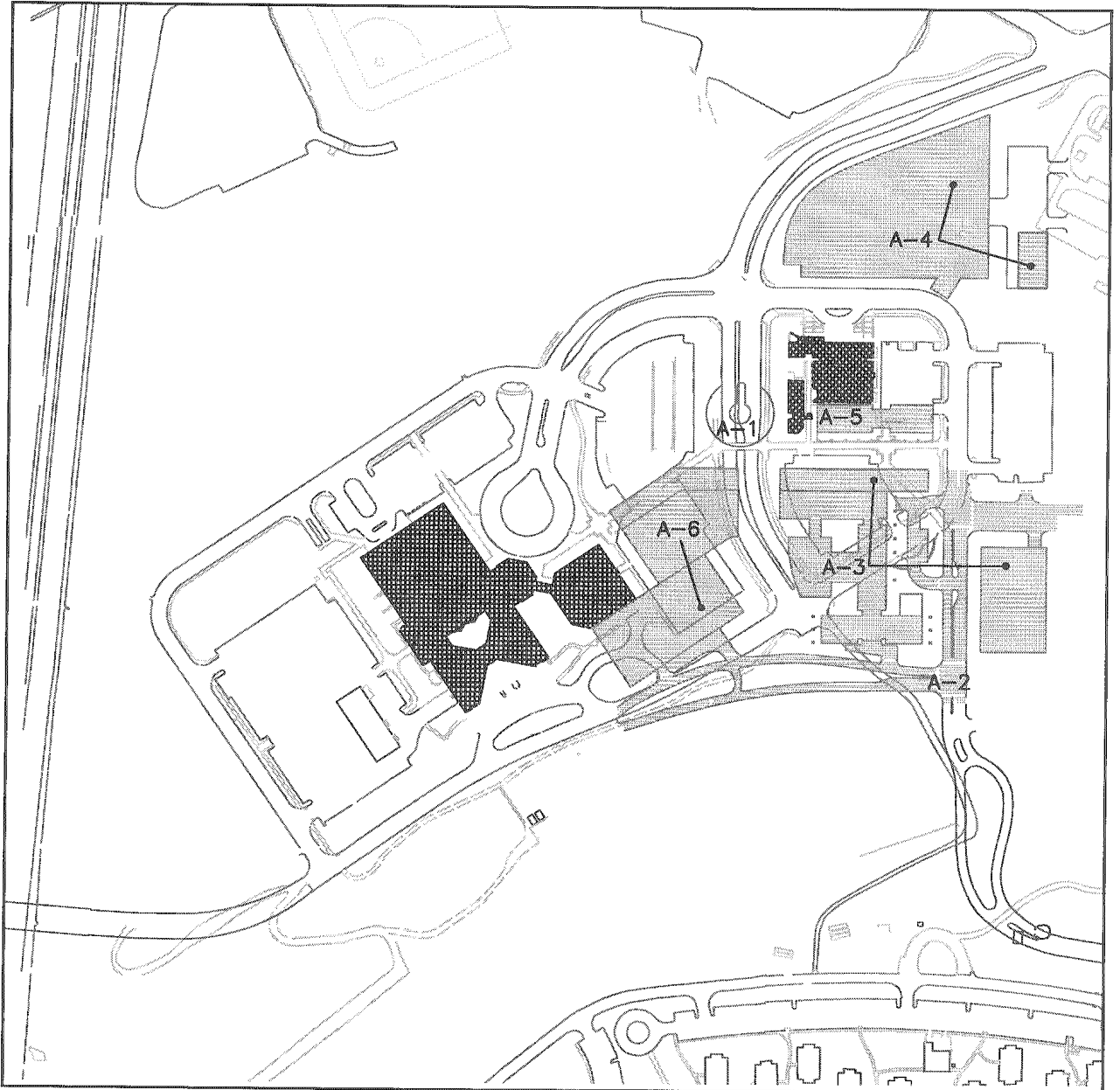


Figure 5.3

Site development phasing sequence A

**PHASING SEQUENCE B (FIGURE 5-4):** Improvements in this phase include:

**B-1** Construction of new Thornton Hospital diagnostic wing (MC-2) a segment of Medical Center Drive North, and relocation of Thornton ER entry.

**B-2** North Canyon Clinical Research facility with parking structure below (NC-1). Possible bridge connection to MC-2 could be constructed to link inpatient and clinical facilities.

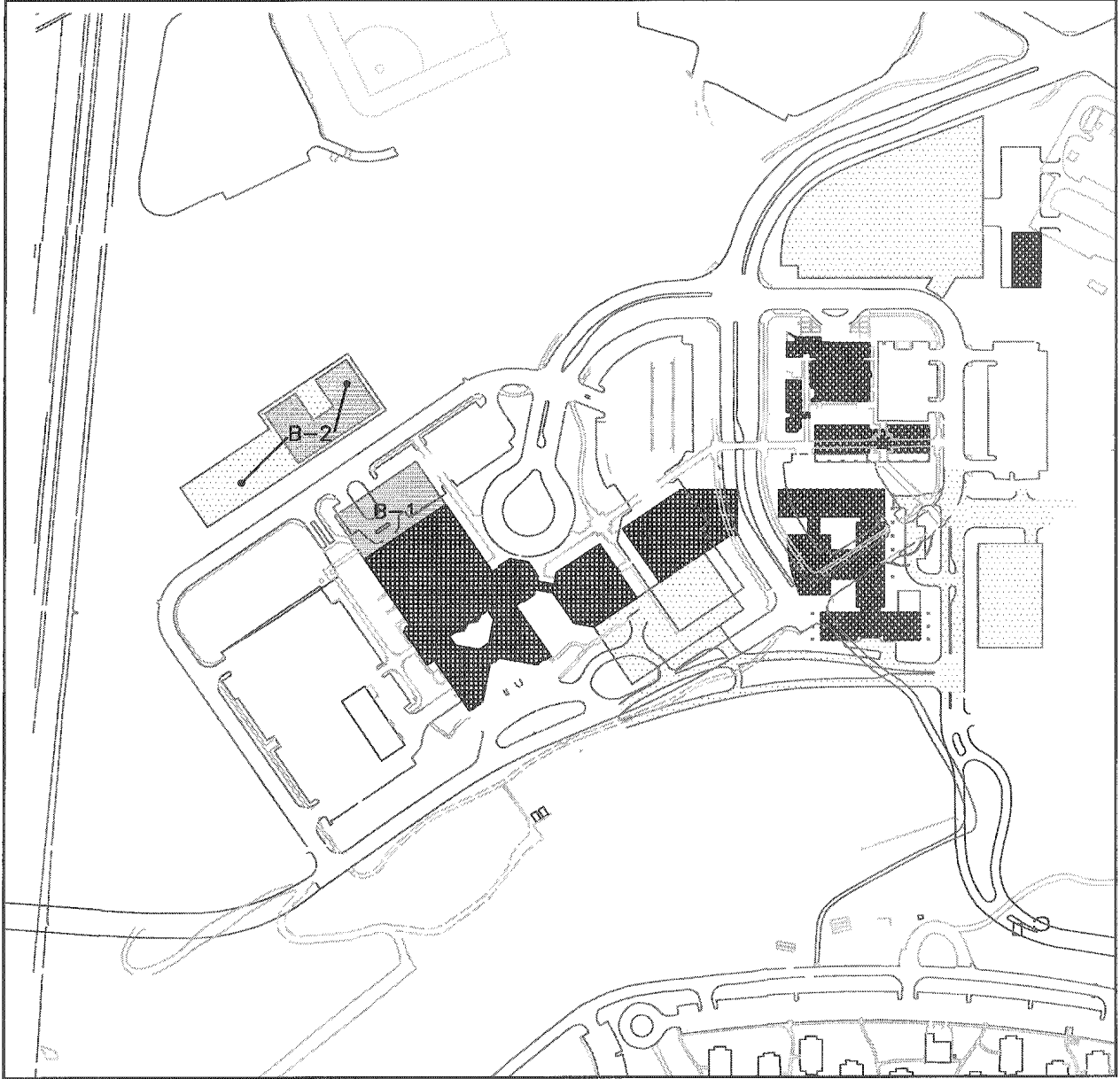


Figure 5.4

Site development phasing sequence B



**PHASING SEQUENCE C (FIGURE 5-5):** Further expansion to the Clinical/Research and Medical Center zones will require major parking improvements:

**C-1** East Parking Structure (CR-6) would be constructed, providing 1,200 spaces to the zone.

**C-2** Clinical/Research Facilities (CR-4) constructed at Campus Point Drive over subgrade parking.

**C-3** Expansion of Cancer Center over subgrade parking (CR-8) including Southwest Plaza.

**C-4** Construction of Medical Education Center (CR-5) and the completion of Campus Point Plaza.

**C-5** Clinical/Research Facility (CR-3) and improvements on Medical Center Drive North.

**C-6** Light Rail Station is constructed along Medical Center Drive South.

**C-7** Second phase of Hospital expansion (MC-3) including 100-beds and diagnostic/treatment block (MC-5).

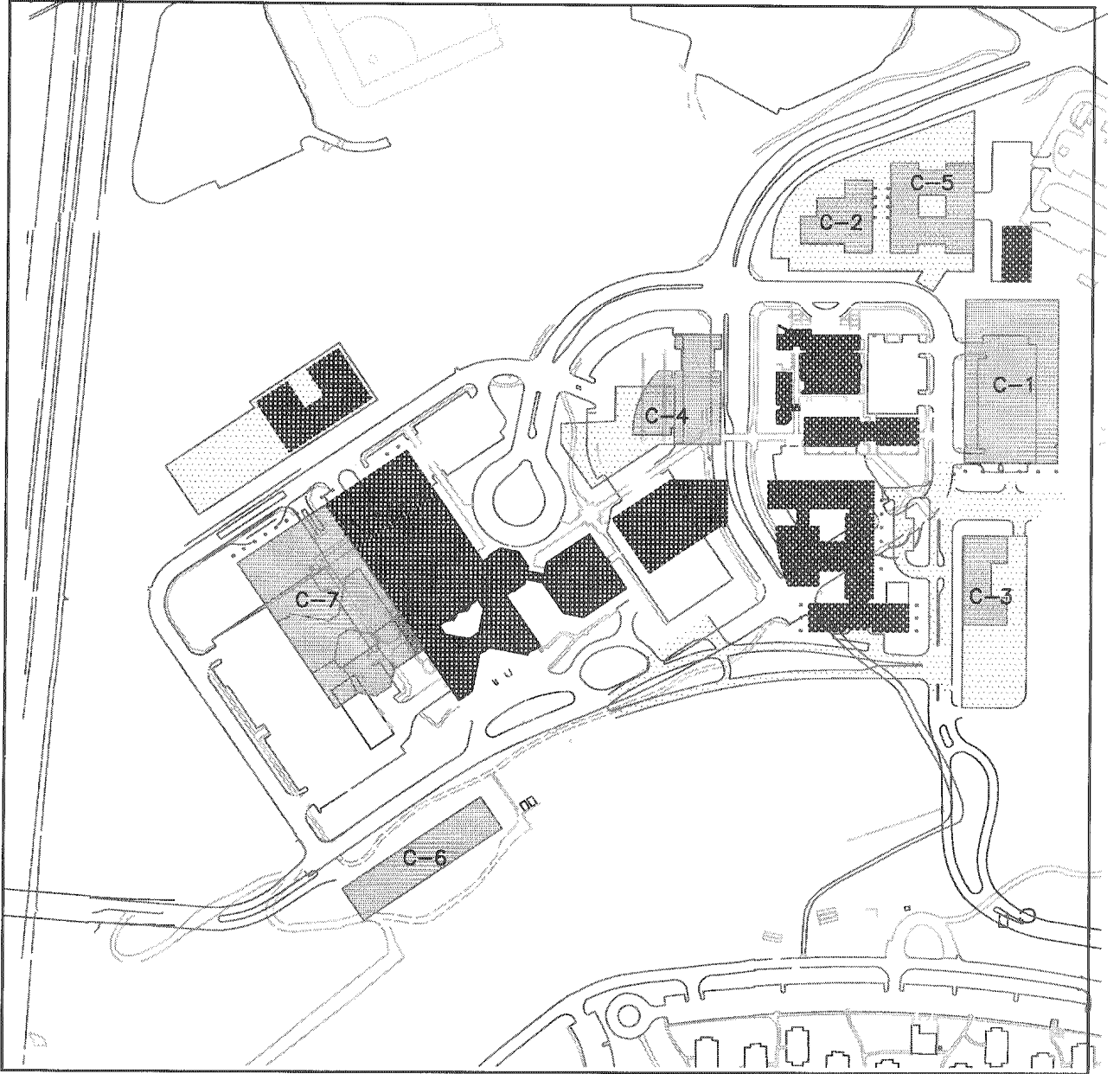


Figure 5.5

Site development phasing sequence C

**PHASING SEQUENCE D (FIGURE 5-6):** Completion of the High Density plan development in all zones:

**D-1** Ambulatory Care Center expansion ACC-3 and 4, over subgrade parking.

**D-2** Third phase of Hospital expansion, including 100-beds and diagnostic/treatment block, and adjacent Medical Center Drive West roadway realignment and improvements, new south Entry to Hospital, and Transit Plaza. Medical Center Plaza entry court and subgrade parking structure, arcades, and entry feature improvements to the Thornton entry (weather canopy). Completion of the North Meadow and adjacent roadway improvements.

**D-3** North Canyon Clinical/Research Facility 1 (NC-2) is constructed in two wings over expansion of the north canyon parking structure.

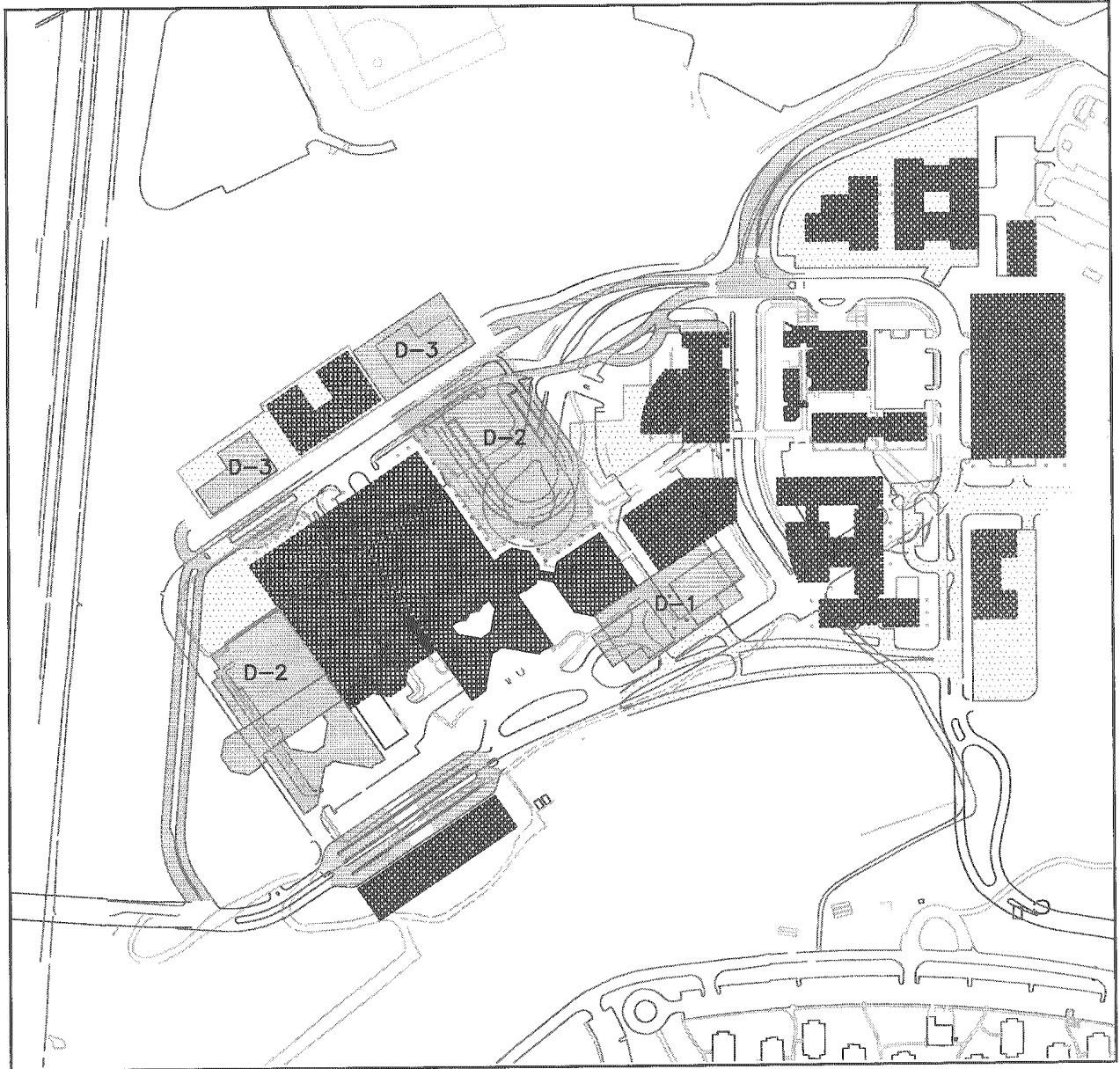


Figure 5.5

Site development phasing sequence D

## 6 THE NEIGHBORHOOD PLAN CONCEPT

## 6 THE NEIGHBORHOOD PLAN CONCEPT

### 6.1 PLANNING PHILOSOPHY

Three fundamental principles intrinsic to the UCSD Campus environment are united to form the philosophy of the ECHS Plan concept:

- Strengthen the Neighborhood identity to create a visually richer “sense of place”;
- Integrate the rustic landscape to balance and ground the “place” in its canyon-mesa context;
- Provide the Neighborhood with a sense of unity by reinforcing the pedestrian experience.

The mesa and canyon landforms that give the ECHS Neighborhood its unique spatial and physical location must inform and shape the built environment. These elements become an integral part of the open space system of the Neighborhood through their connection with a strong pedestrian network that provides linkages to the adjacent East Campus neighborhoods.

### 6.2 THE PLAN CONCEPT

The concept of the ECHS Neighborhood Plan is the expansion of an existing minor neighborhood pathway into the Health Sciences Walk (Walk), a major east-west promenade that links each zone of the Neighborhood.

The Walk is a backbone of activity, orientation, and an important connection to the canyons beyond the mesa’s edge through the North and South Canyons, and significant open spaces, pathways, and courts.

Figure 6.1 shows the Neighborhood Plan Concept.

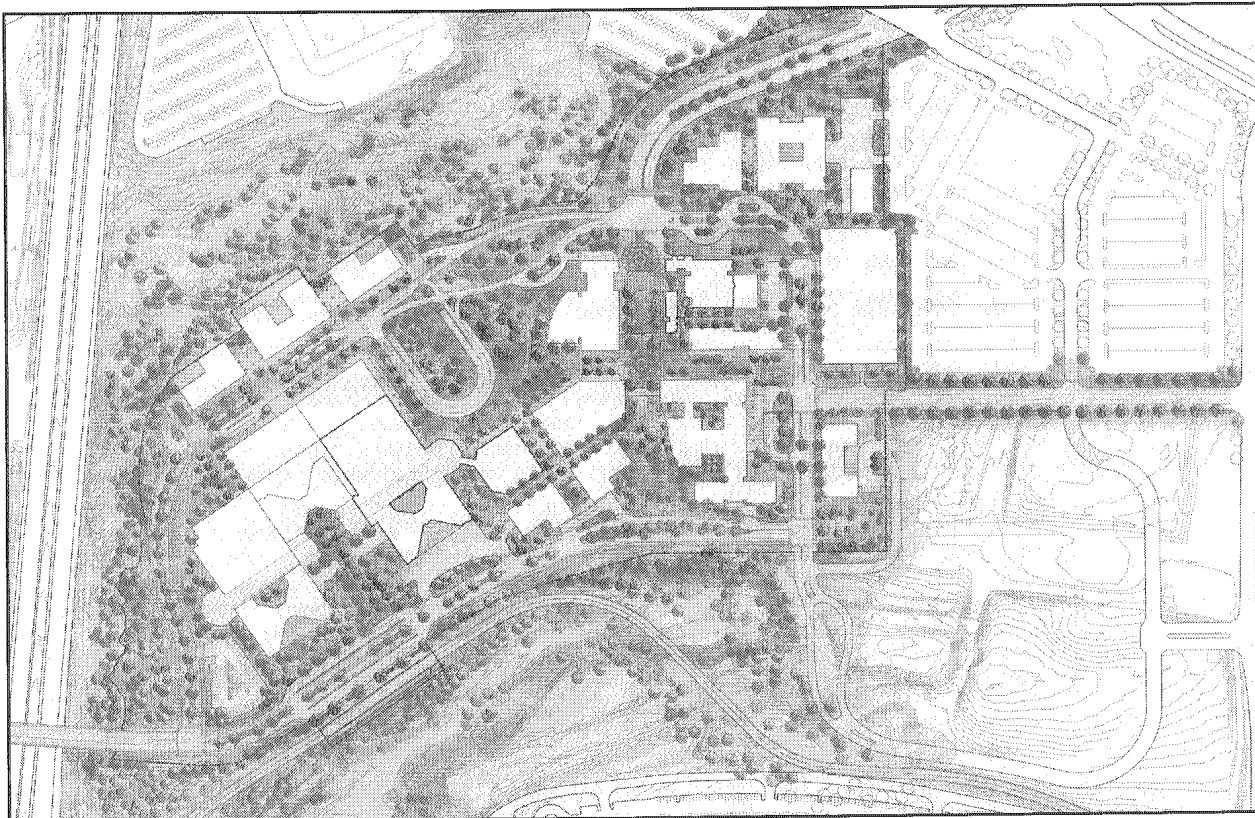


Figure 6.1

*The neighborhood plan concept*

### 6.3 PLANNING PRINCIPLES

The three fundamental planning principles united to form the Neighborhood concept can be expanded to a set of key elements that define and reinforce the concept, and form the basis for the design guidelines:

- **Establish a Site Identity**  
The site identity is generated by a visual and spatial experience rooted in the physical location, and informed by the environmental elements of the site and its relationship to the built form. The merging of building and place must always refer to the canyon landscape, and be visually and physically linked to the Health Sciences Walk network.

Diversity in form and space can promote strong identity through the juxtaposition of scale in building elements along the Walk, promoting nodes, landmarks, and destination points like the Thornton Hospital entry, the Cancer Center Plaza, and the Gilman Bridge overlook.

- **Establish the Pedestrian Network**

The Health Sciences Walk forms the primary pedestrian element on the site. Secondary north-south pathways or corridors begin at the Walk's backbone to destinations that include building entries, canyon vista overlooks, parking, the LRT Station, and offsite destinations. The network must also have a strong hierarchy of scale, orientation, landscape and hardscape treatment. Figure 6.2 shows the Pedestrian Network.

- **Preserve the Site Topography**

The canyon edge slopes strongly define the mesa on which the built form of the Neighborhood is placed. The topography of these edges should remain unchanged to enhance the vistas from the top of the mesa, maintain the separation of the rustic and the discrete landscapes, as well as promote the contrast of the North and South canyons intervention into the mesa's land form.

The North and South Canyon topography should be exaggerated in a V-shaped contour to the extent possible.

- **Establish a Hierarchy of Open Space**

The Neighborhood open space hierarchy should place the North and South Canyon elements as the primary open space. Secondary open space includes more urban plazas such as the Transit Plaza, the Medical Center, and Campus Point Plaza, and the South Canyon overlook. Tertiary open spaces would be categorized as building courts and entries. Figure 6.3 illustrates the open space hierarchy.

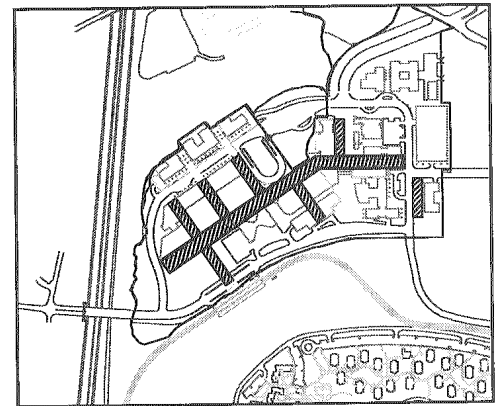


Figure 6.2

*The pedestrian network*

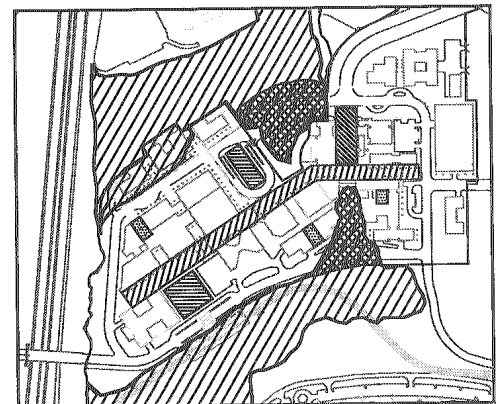


Figure 6.3

*Open space hierarchy*



- **Promote Responsive Built Form**

The form, massing, composition, and plan organization of Neighborhood buildings must sensitively respond to the topographic uniqueness of the mesa and canyons, the organization of the Health Sciences Walk and pedestrian network, rustic canyon landscape elements, and the orientation and climate of all other open space elements on the site. Devices such as colonnades and arcades should be utilized to reinforce the transition to the Walk from important interior spaces, and to form a vocabulary of spaces along the Walk system.

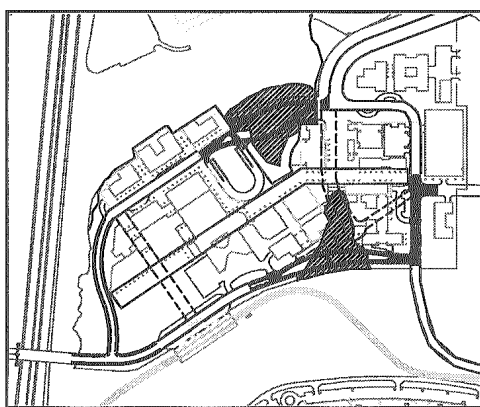


Figure 6.4

*Refine the roadway loop*

- **Refine the Roadway Loop**

The existing Medical Center Drive road forms a loop on the site, but the loop weakens and loses its organizational clarity on the north side of the Neighborhood. It is also focused solely on the Hospital entry. The roadway system should be revised to incorporate more development site areas into the “inside” of the loop, allowing pedestrian circulation without crossing roadways, except at major entry points into the Neighborhood. These entries should reinforce pedestrian movement, and control vehicle movement. The loop road should be vertically separated from the pedestrian crossings in the Transit Plaza.

The roadway scale should be downgraded with a generous landscaped median, and split at the North and South Canyon crossings to reduce the visual encroachment into the rustic landscape. Figure 6.4 illustrates refining the roadway loop.

#### **6.4 THE CONCEPT DESCRIPTION**

The ECHS Neighborhood is organized along the Health Sciences Walk East and West, a landscaped pedestrian network traversing the entire 0.4 mile east-west length of the neighborhood. The Walk connects the Gilman Bridge, Transit Plaza, and Medical Center building entries with the eastern destinations that include the Cancer Center, the East Parking Structure, Shiley and Ratner Centers, and in the future, Regents Road. The Walks are also intersected by secondary north-south pathways to destinations at building entries, parking, and canyon overlooks.

The Walk system is intersected at important points by elements of the open space network, including the North and South Canyons, Transit Plaza, Medical Center Plaza, and Campus Point Plaza.

Neighborhood Zones are organized by location, proposed facility use, and open space boundaries.

Within each Neighborhood zone, building sites and open space elements are composed as integrated compositions that include the open space network and the Health Science Walk pedestrian networks.

## 7 DESIGN STANDARDS AND GUIDELINES

## 7 DESIGN STANDARDS AND GUIDELINES

### 7.1 INTENT

The Design Standards and Guidelines (“Standards and Guidelines”) for the East Campus Health Sciences (ECHS) Neighborhood are defined and structured as a framework for future development that supports the key planning principles established for the ECHS neighborhood.

The Standards and Guidelines are intended to establish, reinforce, and augment the concept of the ECHS Neighborhood as a pedestrian-oriented system.

### 7.2 USING THE GUIDELINES

In the planning and design of ECHS sites, the Standards and Guidelines should be the basis for establishing project criteria in the beginning of the project design process, and frequently revisited for compliance with the intent throughout the development and documentation of the design.

Standards are presented as prescriptive requirements for each project in ECHS. They are considered mandatory.

Guidelines are presented below as descriptive recommendations that guide the quality of the outcome of each project. While not requirements, the Guidelines will be utilized as the basis for evaluation of the planning and design of projects in the Neighborhood.

The Standards and Guidelines are presented in a manner intended to achieve the key planning principles while providing the opportunity for the creative use of site and building materials and the enhancement of the spatial experience and orientation of the pedestrian in the ECHS is also strongly encouraged in the Guidelines.

The Standards and Guidelines are organized into two levels: Neighborhood Standards and Guidelines, and Neighborhood Overlay Zone Requirements. All projects will be subject to both levels of review.

## NEIGHBORHOOD STANDARDS AND GUIDELINES

Neighborhood Standards and Guidelines are addressed in seven general elements.

- The Pedestrian Network
- The Open Space Elements
- Landscape Design
- Architectural Design
- Circulation and Parking
- Infrastructure

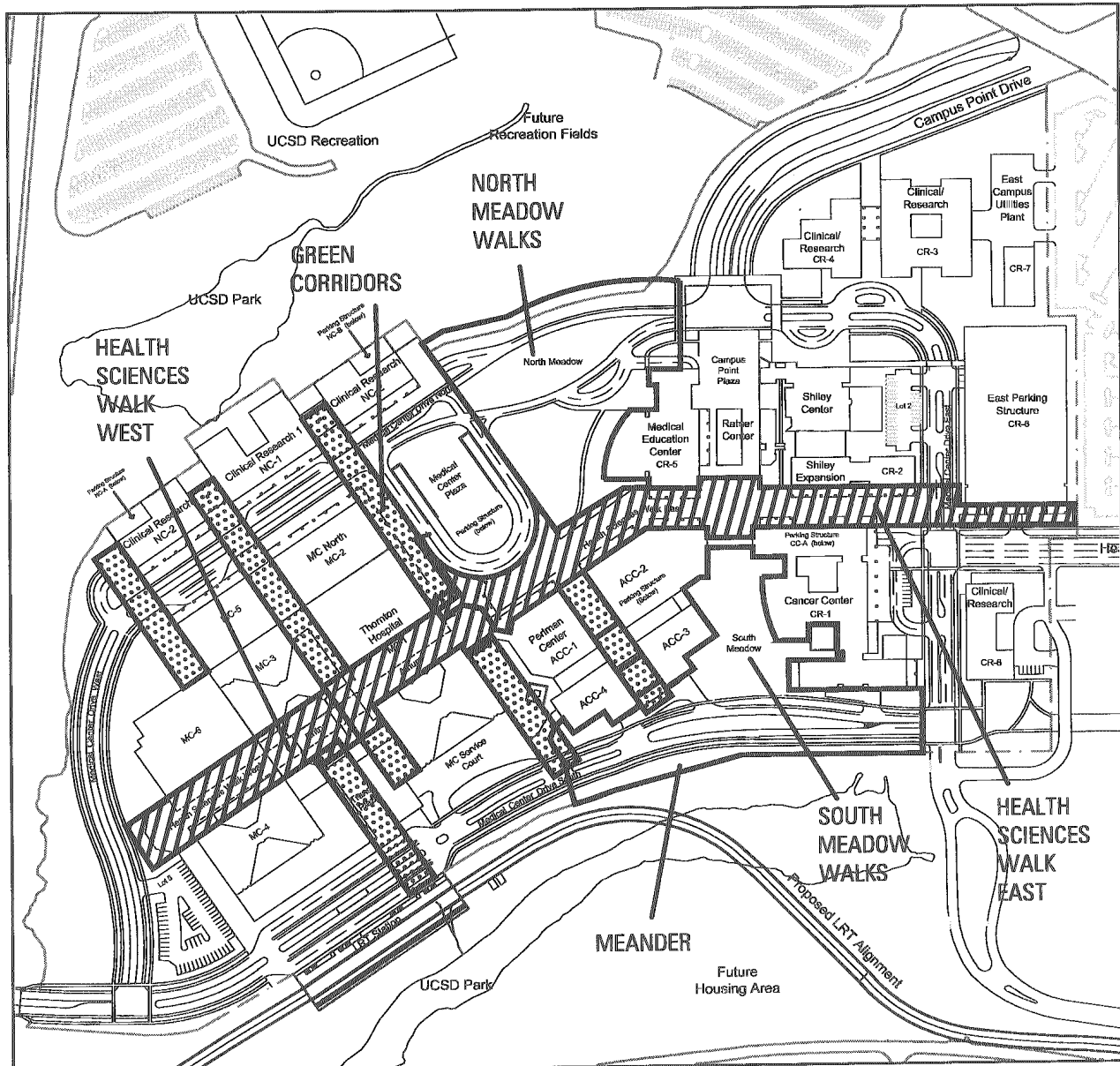


Figure 7.1

*Pedestrian network elements*

### 7.3 PEDESTRIAN NETWORK

Planning and design features will be required to enhance pedestrian experience in the ECHS neighborhood. The pedestrian network is formed by the Health Sciences Walk East and West, a central east-west spine consisting of an 80-foot wide zone that traverses the length of the entire Neighborhood, generally in parallel with the east-west orientation of the Canyons. Figure 7.1 illustrates the key components of the pedestrian network, which includes the Health Sciences Walk and the Green Corridors. All areas of the neighborhood pedestrian network will be designed to be handicapped accessible.

#### 7.3.1 HEALTH SCIENCES WALK WEST

In the Medical Center Zone, the Walk passes through the Thornton Hospital atrium, which provides visual linkage from east to west, and pedestrian access to hospital inpatient and diagnostic and treatment departments. The extension of the walk westward from the existing atrium may take the form of either interior or exterior concourses but maintain the continuity of the Walk. The west end of the West Walk is visually anchored by the dramatic cable-stayed tower of the Gilman Bridge and the West Campus in the background. A new hospital entry is located along the southern edge of this leg of the Walk.

The typical view of the Walk shown in Figure 7.2 establishes the spatial organization within the 80-foot wide envelope. The scale of the Walk is that of an intimate urban neighborhood street. Buildings facing the Walk are a minimum of 40-feet apart in a few important locations, but generally are 60-feet apart, or more to provide adequate daylight. Colonnade and arcade elements may encroach into the 80-foot envelope a maximum of 20-feet on each side. These dimensions apply to both exterior and interior (enclosed) portions of the Walk.

Buildings along the Walk edge are required to provide an arcade or colonnade along their length. These features will also provide covered pedestrian spaces as transition elements to important building entries and spatial transitions from open space to building interior spaces (Figure 7.3).

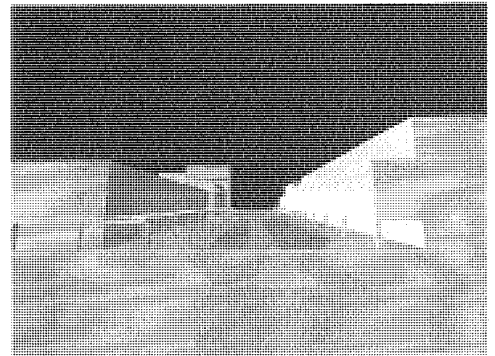


Figure 7.2 Health Sciences Walk (HSW)

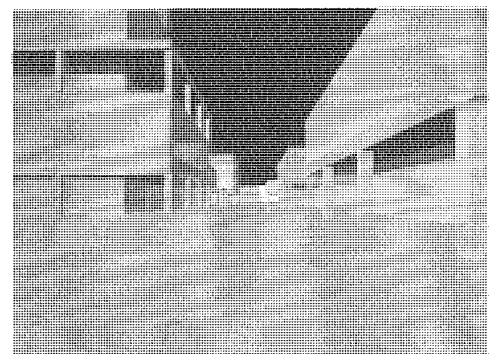


Figure 7.3 Building edges (HSW)

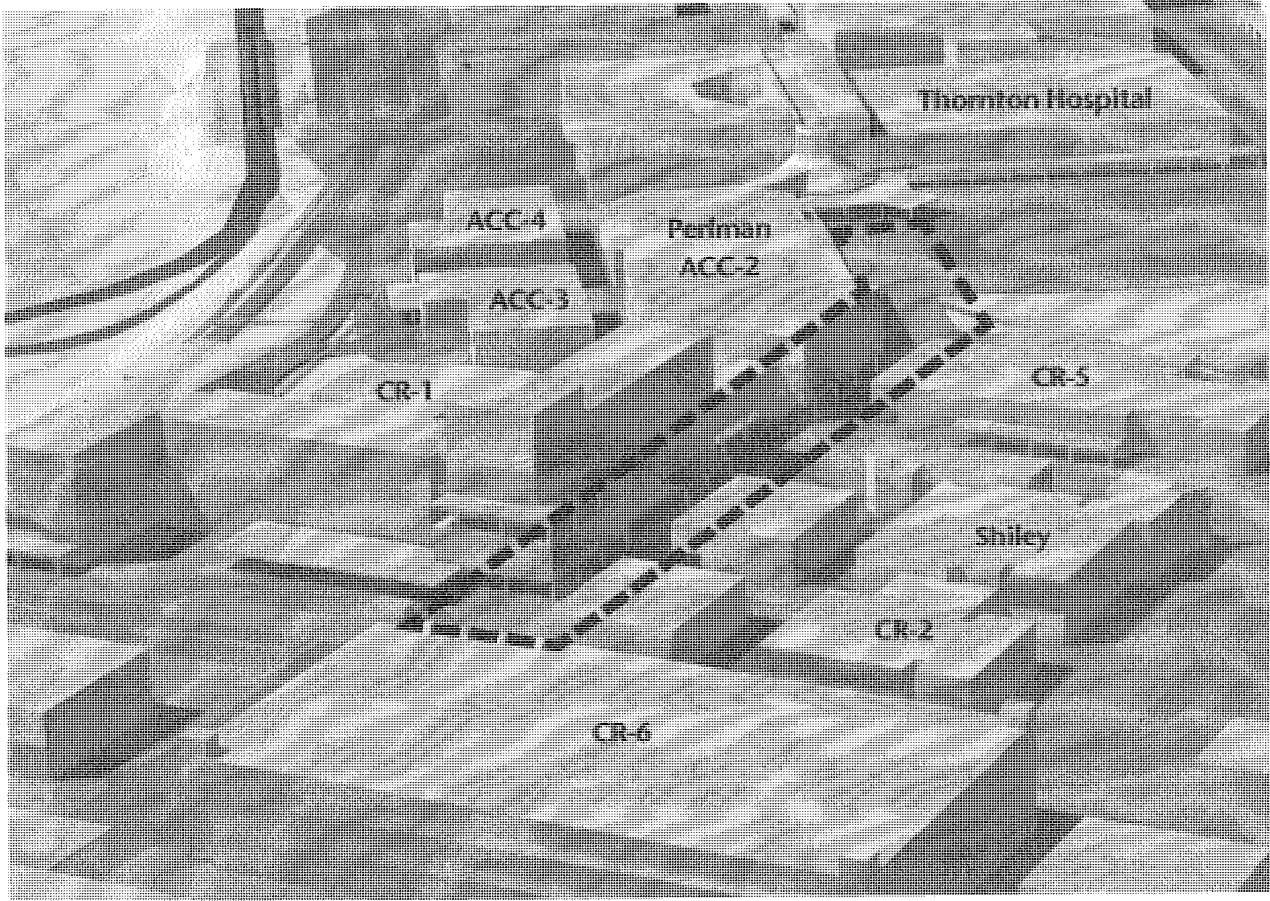


Figure 7.4

View of Health Sciences Walk East

— — — — — Health Sciences Walk East Outline

### 7.3.2 HEALTH SCIENCES WALK EAST

As the Walk exits the Thornton Hospital landmark entry lantern, it passes the Medical Center Plaza. A freestanding colonnade structure around the entry and along the north elevation of the Perlman Ambulatory Care Center will provide weather cover, and create a distinct feature on the Walk defining the edge of the Plaza (Figure 7.4).

Further east, the Walk changes direction as it passes between two important facilities, the Medical Education Center (MEC) and the Ambulatory Care Center (ACC-2) East.

Twin colonnades that serve to visually focus the space, and “funnel” the pedestrian into to the plaza beyond, highlight the transition to the Clinical/Research Zones (Figure 7.5).

Once in the plaza, the visual experience is framed by South Meadow views through the bridge/portal linking ACC-2 with the Cancer Center (CC), and opens to the north into the spacious Campus Point Plaza. An important focal point such as a sculpture or a water feature should be located at the axial center as a landmark for orientation in all four directions. Figure 7.6 suggests location and scale.

As one walks east, the CC colonnade frames the south edge of the Walk until it opens onto the CC entry plaza, an open space between the CC and Medical Center Drive East. The northeast corner of the CC building provides a strong visual landmark and important destination both within the plaza and in alignment with the west terminus of Health Sciences Drive. Figure 7.7 shows the plan detail.

### 7.3.3 THE WALK ALONG HEALTH SCIENCES DRIVE

The Walk crosses Medical Center Drive East and ascends as a terraced concourse connecting several levels of the East Parking Structure CR-6 (Figure 7.8). The Walk continues eastward as a 5-foot wide sidewalk in a 20-foot wide landscaped zone along the north edge of the street to its terminus at Regents Road.

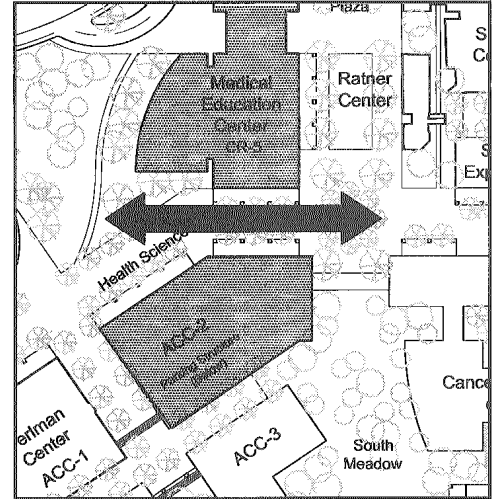


Figure 7.5

Twin colonnades

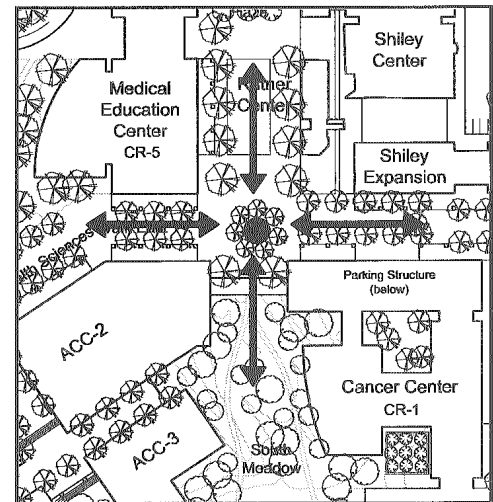


Figure 7.6

Campus Point Plaza

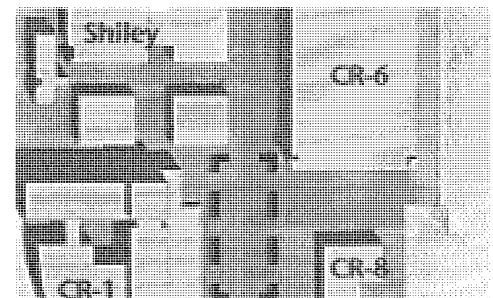


Figure 7.7

Cancer Center Plaza



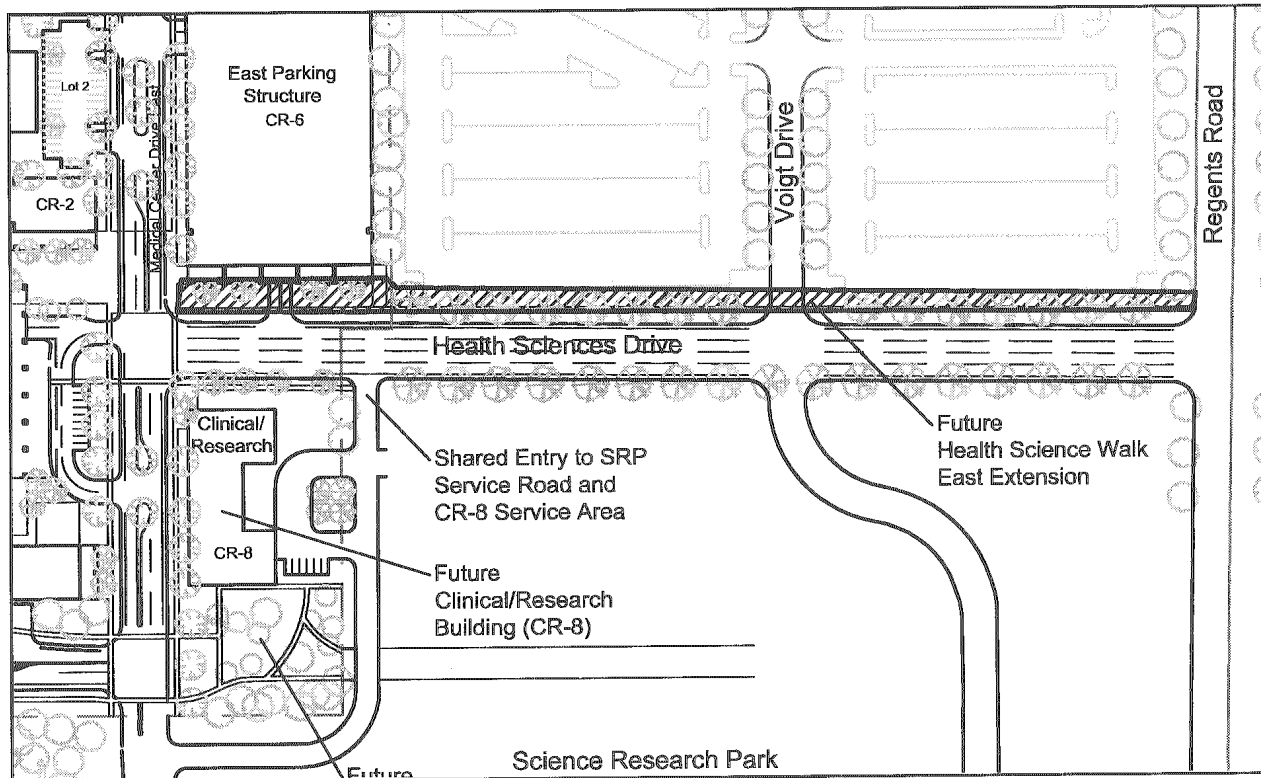


Figure 7.8

The Health Sciences Walk East extends to Regents Road

#### 7.3.4 GREEN CORRIDORS

Smaller-scale secondary path systems intersect the Health Sciences Walk in many important locations, providing a true pedestrian “street” network on the site. Each of these “Green Corridors” is linked to building entries and terminates in an open space vista.

The Green Corridors are generally 40-feet in width, and are considered to be outdoor corridors with low-scale elements, and occasionally colonnades in locations where pedestrian movement requires weather protection, and where building entries are located. The Green Corridors may also take the form of interior spaces or exterior courtyards with a vista at one end. If the Green Corridor is a required fire lane planting and site landscaping must conform to fire department regulations.

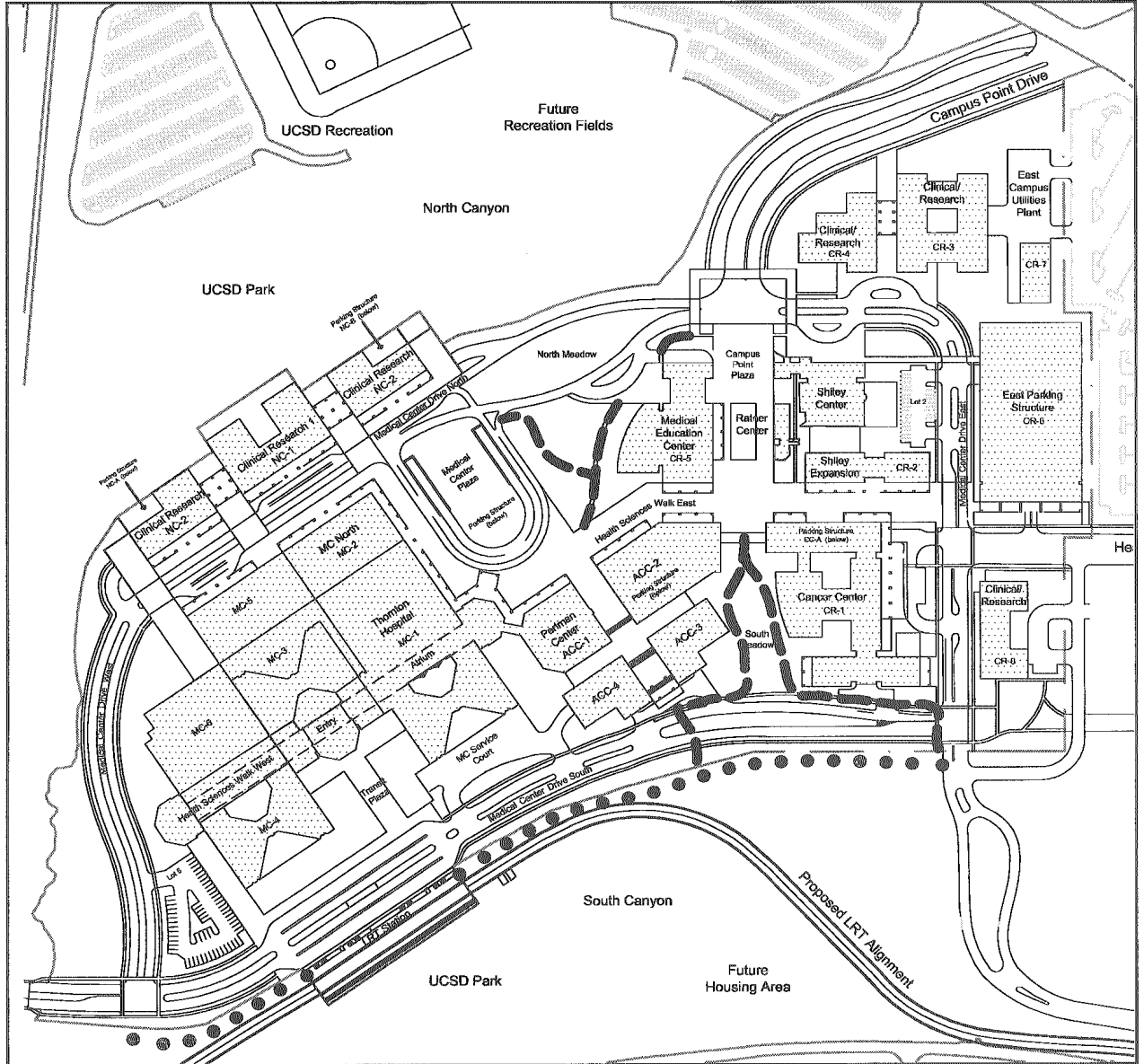




Figure 7.9

Meadow Walks and Meander

-  Neighborhood Paths
  
-  UCSD Campus Meander

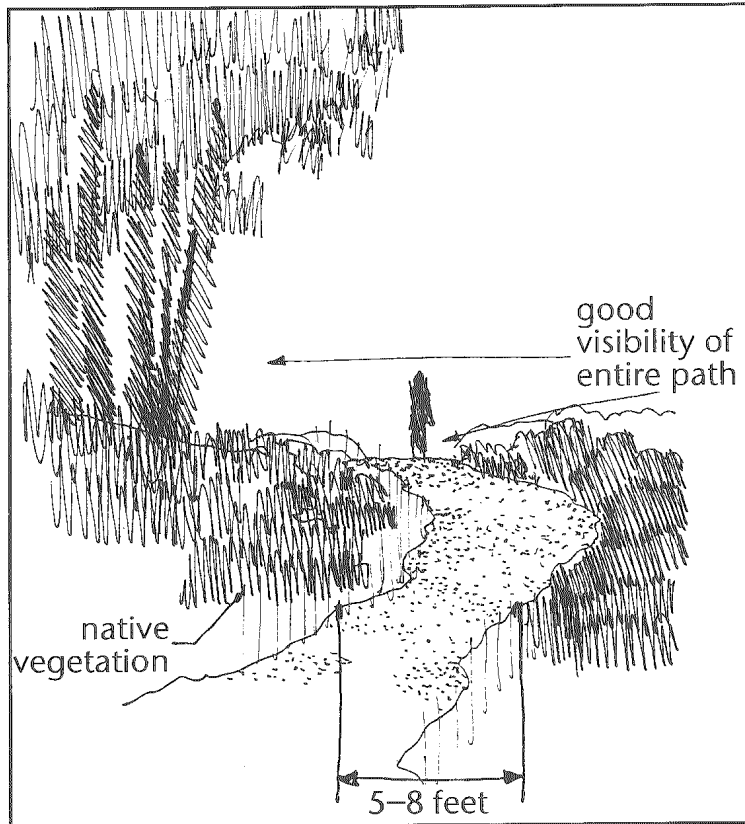


Figure 7.10

*Campus Meander character*

### 7.3.5 MEADOW WALKS AND MEANDER

A third important feature in the network is a series of informal pathways that incorporate the concept of the UCSD Campus Meander into the Neighborhood edge pathways. Neighborhood paths originate at the Walk, traverse the rustic landscape of the North and South Meadows, and connect to the South Canyon Rim Campus Meander.

Figure 7.9 locates the Neighborhood paths and the Campus Meander. The character of the meander is suggested in Figure 7.10.

### **7.3.6 BUILDING AND ROADWAY SIDEWALKS**

Building sidewalks complete the pedestrian network from the Health Sciences Walk, Green Corridors, and the Meanders to all other locations. Walks generally are 5-feet in width, unless access for vehicles is required. Building sidewalks include secondary connections between pedestrian network and building entries, access walks, and utility walks. These sidewalks should be constructed of poured-in-place concrete with varying accents of concrete pavers depending upon the prominence of the sidewalk. Roadway walks follow roadway alignment. The typical relationship of the sidewalk to roadway is shown in Figure 7.35.

## **7.4 THE OPEN SPACE ELEMENTS**

The ECHS plan interweaves the pedestrian network with open spaces. The open space elements include the North and South Meadows, plazas, and the neighborhood edges (Figure 7.11).

### **7.4.1 THE NORTH AND SOUTH MEADOWS**

The North and South Meadows extend the rustic landscape of the existing canyons surrounding the Neighborhood into its center, and link it to the Health Sciences Walk. The Meadows are to remain undeveloped except for the pedestrian paths and roadways that traverse them.

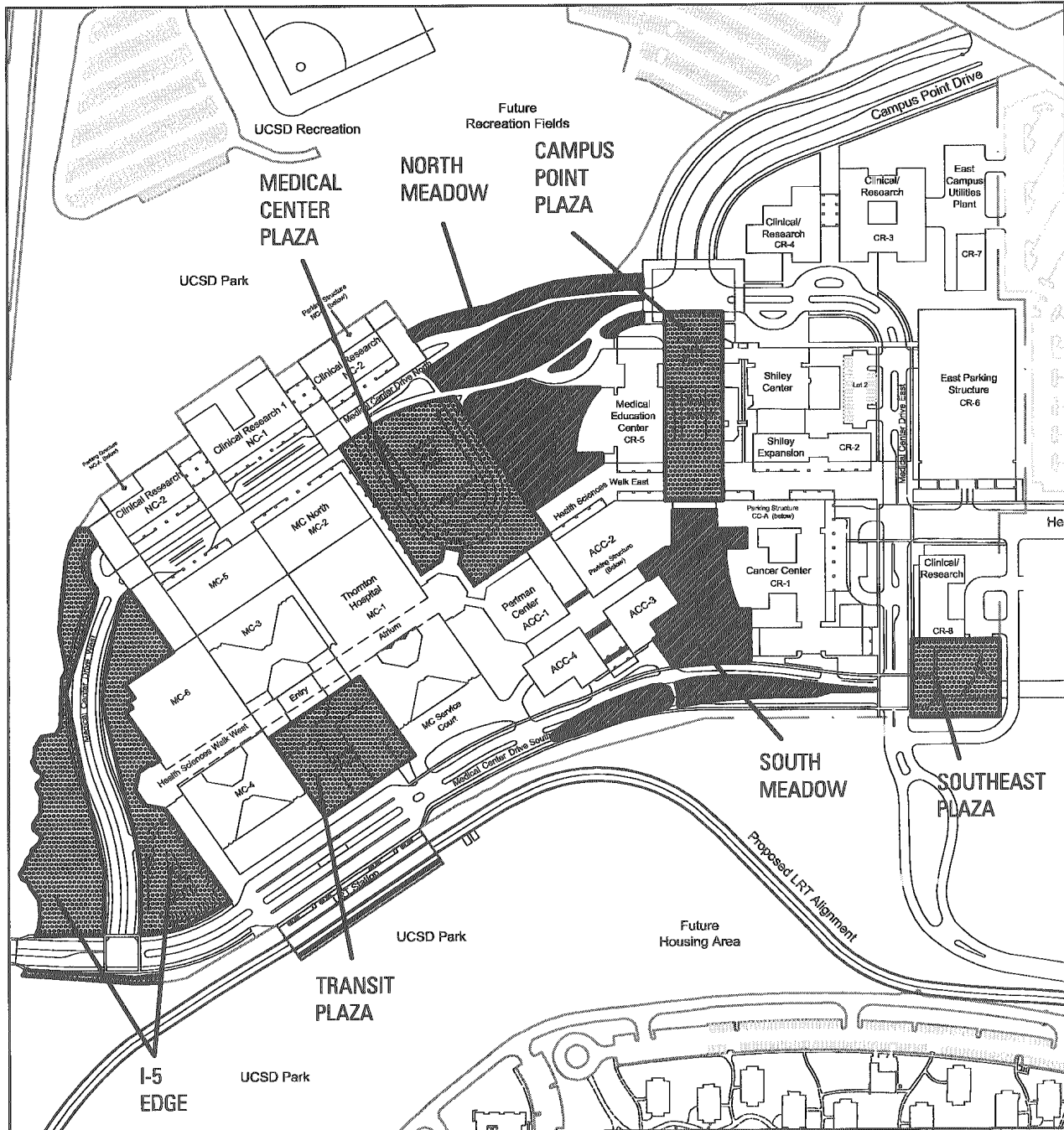


Figure 7.11

Open space elements

### 7.4.2 THE I-5 EDGE

The western edge of the Neighborhood bordering the I-5 corridor is envisaged as a landscaped buffer that extends across Medical Center Drive West to the Medical Center Zone buildings. The buffer will provide visual screening to the patient care and clinical areas in the expansion area of the Medical Center Zone. Figure 7.12 illustrates a typical section through the I-5 edge buffer and roadway.

The Gilman Bridge approach extends into the buffer area. A vista to the Bridge from the Health Sciences Walk is an important orienting feature. The buffer should not be planted with trees within this alignment to allow views to the Bridge as illustrated in Figure 7.13.

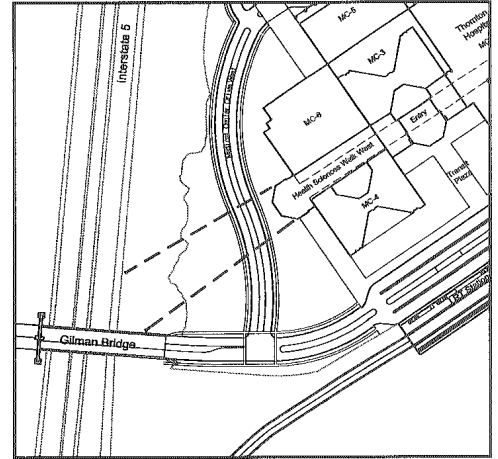


Figure 7.13

Gilman Bridge vista

### 7.4.3 CAMPUS POINT PLAZA

The central ceremonial public space of the ECHS Neighborhood is located at the terminus of Campus Point Drive at Medical Center Drive. The Plaza's south perimeter intersects the Health Sciences Walk East and visually extends into the South Meadow through the portal created by the pedestrian bridge or covered ground level passage linking the Cancer Center and the Ambulatory Care Center building groups.

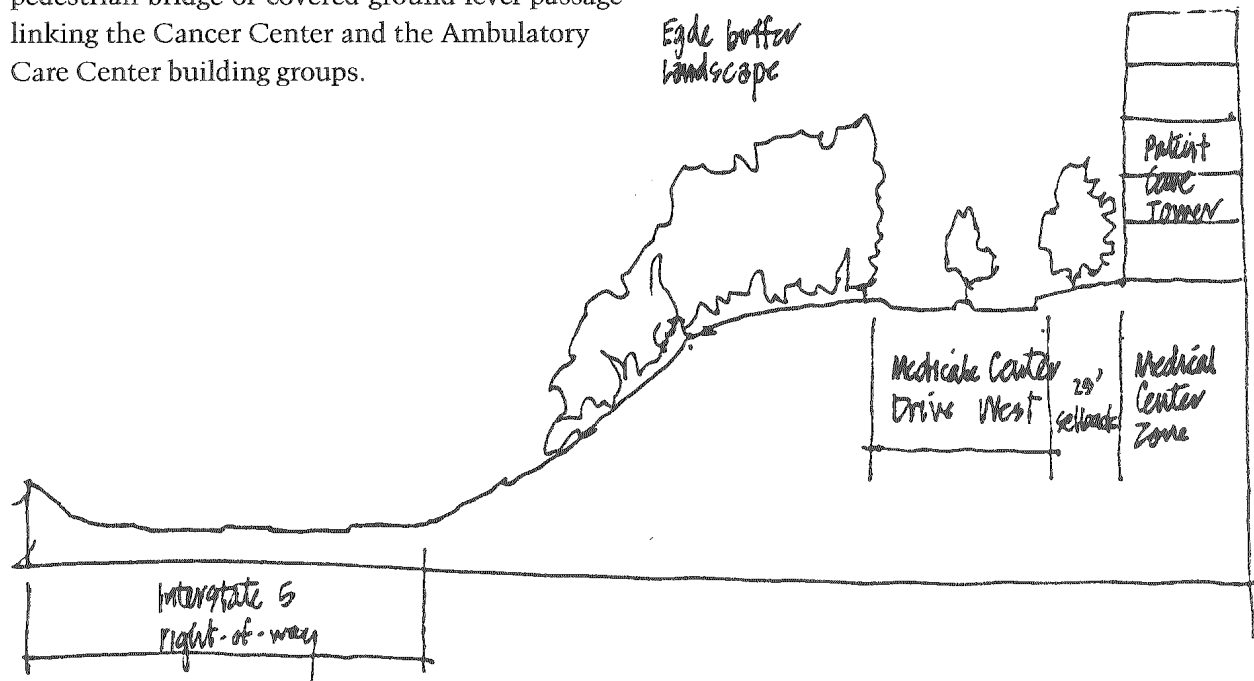


Figure 7.12

Typical section at I-5 edge



## 7.5 LANDSCAPE DESIGN GUIDELINES

### 7.5.1 LANDSCAPE DESIGN STANDARDS & PHILOSOPHY

The design of the landscape in the East Campus Health Sciences Neighborhood follows the principles established previously for the east campus area. In the late 1980s plans prepared by Skidmore Owings and Merrill and P.O.D (Process Oriented Design) for the east campus envisioned a unique neighborhood “island” surrounded by natural and preserved open space. While the west campus is dominated by existing groves of eucalyptus trees and coastal sage scrub, the east campus is less developed horticulturally with exception of the canyon areas. Within these canyon zones the natural riparian habitat is a visual connection to the west campus setting and the regional landscape.

The east campus upper mesa on which the medical complex has grown was predominately impacted by past uses including agricultural and military installation activities. The transition of landscapes and their character is incorporated into the landscape design concept for the East Campus Health Sciences Neighborhood. The open space and canyon areas are integrated into the existing and future development through a series of “bands of vegetation” and view corridors, which continually tie the neighborhood’s developed area to the natural environment. This integration of built and natural spaces provides for a restorative and therapeutic landscape, which is the basis for the design concept.

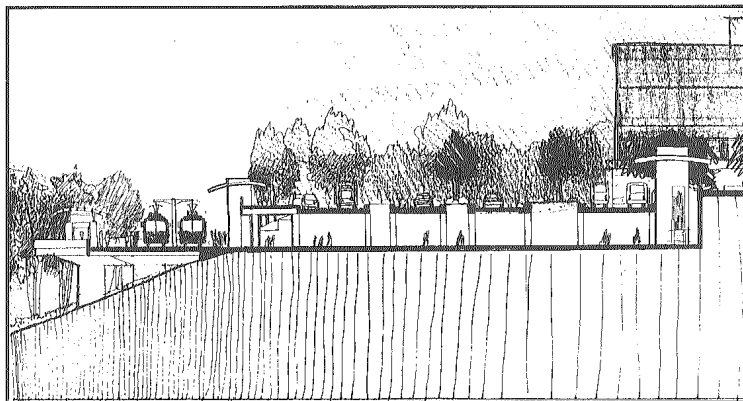


Figure 7.17

Transit Plaza section



While the periphery of the east campus medical complex consists of natural edges, the interior space is dominated by a series of pedestrian corridors, nodes or plazas and two bands of naturalized vegetation at the north and south canyons. It is intended that the landscape concept integrate the built and the natural environment through planting layout and species selection and that it strengthens the campus identity, unifies the neighborhood, promotes wayfinding, and creates a therapeutic resource for the visitors, staff, and students.

#### **7.5.2 LANDSCAPE DESIGN**

In the original development of the Thornton Hospital, Perlman Center and the Shiley Eye Center, Wimmer Yamada and Caughey provided the initial landscape master plan, the landscape design, and the current plant palette. Further development of this neighborhood will build upon the original landscape design concept established with the initial development of the health sciences area.

The overall emphasis of the East Campus Health Sciences is the development of a therapeutic and restorative landscape that complements and accentuates the proposed land uses, while integrating the overall development into the existing landscape. Through the use of plant material, lighting, texture, sound and scent, the design of nodes and plazas should allow for intimate pockets of space for patients and staff to gather and find retreat from the hospital setting. Views into and out of the site should be emphasized and accentuated to also help establish a sense of place and to allow patients and staff views from the interior of buildings.

The character of the existing landscape is based upon a simple massing of trees, shrubs, and ground covers to provide clean lines and visual interest against the backdrop of the architecture and the existing landscape. The palette within the interior corridors and plazas is more ornamental while the perimeter plantings quickly transition to naturalized species.

The landscape design emphasizes a drought tolerant palette, which conserves water. Plants should be grouped in masses to encourage movement through the pedestrian corridors

and to develop intimate spaces. The plant selections and design elements should emphasize zones or spaces, reinforcing a method of wayfinding.

With the proposed reconfiguration of the health sciences neighborhood there are a number of existing landscape areas that will be impacted. It is the intent of these guidelines to first attempt to work around the mature landscapes, if possible, in siting new buildings. When this is not feasible, the viable trees should be relocated to new landscape installation areas.

The neighborhood plan places new buildings along a defined structure of landscaped corridors, nodes, plazas and perimeter connections. The landscape within these areas should respond both to the landscape design concept as well as to the architecture of new buildings and provide continuity to the existing structures. The scale of the landscape should appropriately respond to pedestrian circulation, the building interface, and vehicular thoroughfares.

The scale of the landscape in pedestrian areas should address clear visibility of destinations and promote wayfinding. Where appropriate, the creation of retreat areas or nodes for rest and relaxation should be provided along pedestrian routes. The opportunity to orient these areas to views of the open space and natural environment should further enhance the quality of the journey through the neighborhood and reinforce the landscape concept. Enhancing views from the medical buildings into areas of open space and nodes emphasizes the restorative and therapeutic qualities of nature.

The proposed plant palette (Section 7.5.4) supports the existing landscape, defines space and landscape character, and attributes to programmed activities. This palette is meant to be a guideline. Plant material should be selected appropriate to the location and available space. The use of turfgrass is limited to areas where both visual enhancement and access is a priority. Future development should incorporate the characteristics and nature of the listed plant material into the design.

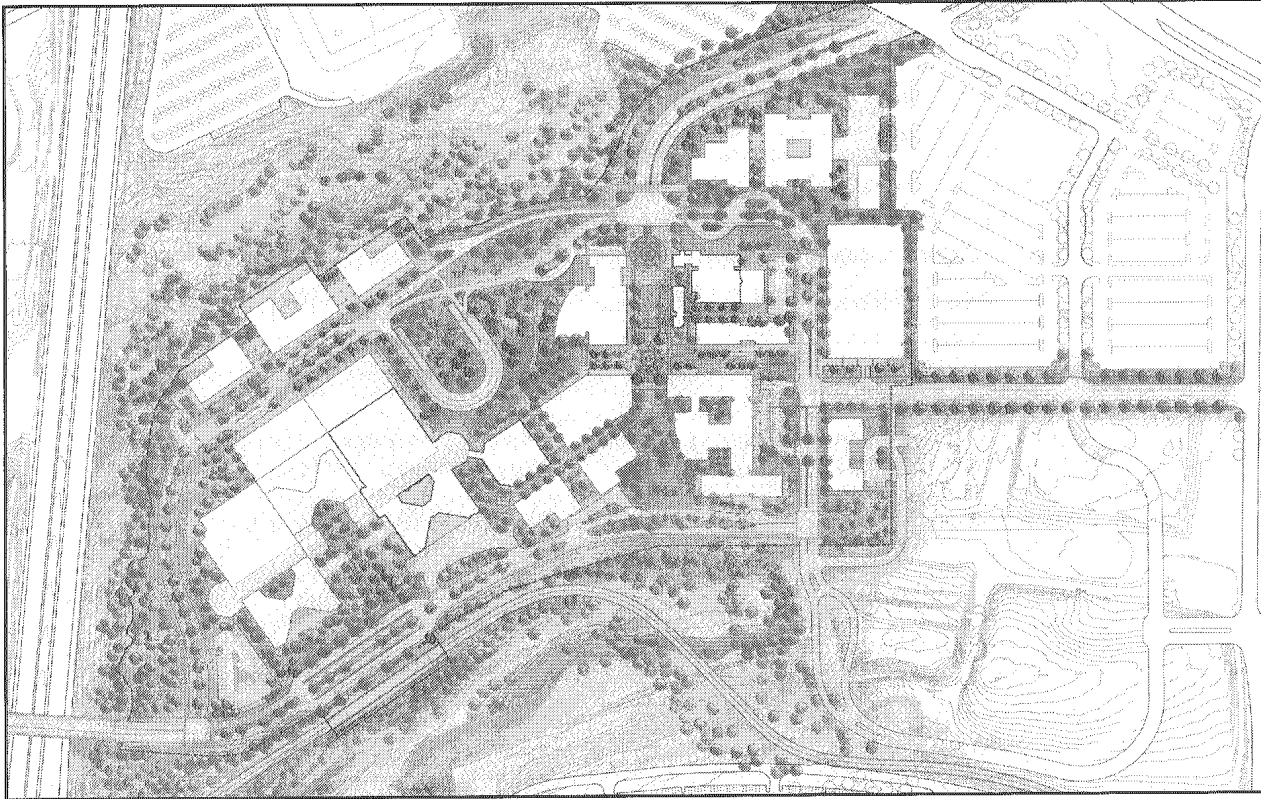


Figure 7.18

*Landscape illustrative plan*

### 7.5.3 SPECIFIC DESIGN FEATURES

The following are specific descriptions of site design elements, which will affect future development of the East Campus Health Sciences neighborhood. The categories of design elements include Health Sciences Walk, Green Corridors, Neighborhood Edges, North Meadow, South Meadow, Roadways, Plant Palette (see 7.5.4), Site Furnishings (see 7.5.6), Hardscape Materials (see 7.5.5), Environmental Art (see 7.5.8), Maintenance (see 7.5.9), and Safety (see 7.5.10).

Specific selection of plant materials for building and site landscape should take into consideration the neighborhood's color palette. Refer to the "Master Exterior Palette East Campus Health Sciences" document available at UCSD Facilities Design and Construction (FD&C).

#### 7.5.3.1 HEALTH SCIENCES WALK

The landscape design along the Health Sciences Walk is focused on the linear alignment of the main east-west pedes-

trian corridor. The design should emphasize pedestrian access and flow, and allow for small intimate spaces for patient, staff, and faculty use. The planting should be formal in nature with strong lines of trees and masses of shrubs to define the corridor and promote wayfinding. Where the corridor passes through plazas, or buildings, emphasis should be placed on developing focal points, view corridors, and allowing open areas of light between the buildings. The plant material should create areas of shade with dappled light. The walkway will be lined with smaller character semi-deciduous shade trees along both sides or single sided where building canopies occur. The variety of the trees should be consistent with the existing varieties, which occur at the front facade of Thornton Hospital.

The spacing and alignment of the trees should be mature canopy to canopy with parallel placement and setback from the adjacent walk. The ground plane will consist of rectangular ground cover panels and raised seat walls with shrub massings where fire access is not a concern.

The seat wall planters should be constructed of cast in place integral color concrete with details matching the existing seating nodes at Thornton Hospital, where appropriate. Their surface and sides can integrate the healing garden concept through the use of mosaics of medicinal plants or embedded designs or patterns. The placement of metal bench seating within the seat wall planters provide optional seating arrangements and materials. See Figure 7.19, Seat Wall Planters. The style and color of the benches should be consistent with the proposed neighborhood color palette.

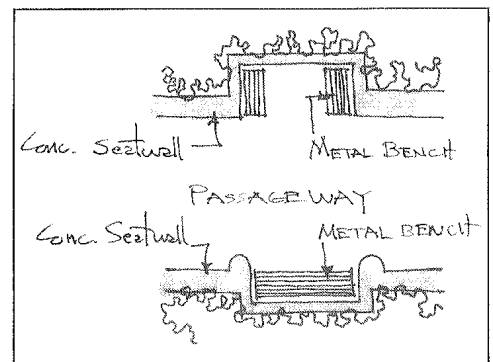


Figure 7.19

Seat wall planters

Shrubs in the seat wall planters should be massed to create plant groups and to define small intimate spaces. Using large masses of shrubs and a limited plant palette enhances and simplifies the texture, color, and forms of the corridor.

Signage within the Health Sciences Walk should be coordinated with the landscape elements to allow for clear visual display and placement.

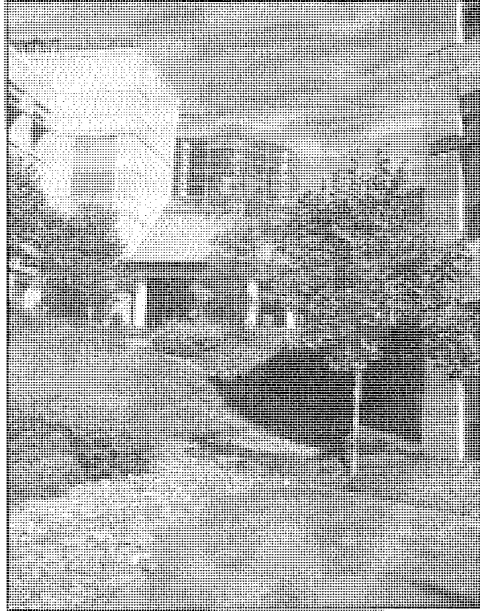


Figure 7.20

*Green Corridors*

### 7.5.3.2 GREEN CORRIDORS

The landscape design for the Green Corridors should integrate the adjacent open space areas within the folds of the buildings protecting and emphasizing views outward to the canyons. The landscape should be more natural in form and composition. Planting design should be informal with meandering shrub masses and ground covers. Trees should be planted in clusters to allow filtered sunlight. Near the terminuses abutting the canyons, incorporate naturalized plant material to integrate the built and the naturalized environment. Develop nodes at the entrances and between buildings, where appropriate to building use, creating mini plazas and patios for people to gather and rest. The opportunity to access the Green Corridors from the buildings will enhance the access to the adjacent open space areas.

The trees in this area should not block the views outward. The tree species suggested are more open in character, evergreen, and smaller in mature growth. The shrubs and ground covers are more natural in composition and selection allowing pedestrian sight lines toward adjacent canyons and open space. The locations and spacings of the ground plane plantings must take into the consideration the increased shade factor and limited widths of the corridors. Access paths for maintenance and limited pedestrian use are encouraged. See Figure 7.20 Green Corridors.

In some locations Green Corridors will need to accommodate fire access lanes. In these cases planting and site landscaping will need to conform to fire department regulations.

### 7.5.3.3 NEIGHBORHOOD EDGES

The landscape design for the neighborhood edges bordering an open space should transition from ornamental landscape located within the core area, to the perimeter characterized by naturalized plantings. The main criteria within this region is to preserve views to the north, west and south canyon areas. The plant selection and layout of the landscape should promote the view corridors as defined and provide visual continuity with the skyline.

Appropriate trees are evergreen, larger scale species, which are more vertical in form and frame both the views to the open space areas and the architecture of the adjacent buildings. The landscape design should be informal. The ground plane should consist of larger scale massings to blend with the existing open space character. The species should blend indigenous and limited ornamental varieties to provide a seamless pattern into the adjacent canyons.

#### **7.5.3.4 NATURAL EDGE – I-5 CORRIDOR**

The landscape of the west edge adjacent to the open space along I-5 is consistent with the north and south canyon rim landscape character and plant palette. The character is informal with clusters of trees and shrubs in informal groupings. Spaces between the plant groupings allow for view corridors into and out of the neighborhood. Views to the proposed Gilman Bridge connecting the UCSD east and west campuses should be protected and enhanced. See Figure 7.13. The landscape along the entrance to the bridge should contain plantings, which frame the views to east and west and provide a foreground to the natural landscape. The pedestrian access to the bridge is considered a heavy-use corridor. Special consideration should be given to pedestrian views and access.

Medical Center Drive West landscape should be consistent with the design quality and character of the I-5 corridor and UCSD West Campus. The east side of the roadway may incorporate more ornamental plantings as the landscape moves closer to the buildings.

The trees suggested for this area should be medium height with limited canopy widths to reduce the impact of the view to the bridge. The spacing and layout of the trees should be open and informal. The landscape palette should be selected to address the heavy traffic and minimize maintenance. Signage should be consistent with campus signage and should promote clear visibility yet provide a natural anchor of the signage to the natural surroundings and west campus.

#### **7.5.3.5 SOUTH CANYON EDGE**

The south canyon edge is located south of Medical Center Drive South and the Cancer Center site. The existing landscape is a blend of native and naturalized species where natural drainage flows create a dense riparian habitat. Views to the South Canyon are an important amenity for the proposed landscape concept. The future addition of a light rail transit corridor along the rim of the canyon will present challenges to the landscape. As discussed in other sections of this document the intent is to lower the rail corridor below the road grade at the rim of the canyon. In this location the view corridors will be impacted less by the electrical line supports and the trolley itself. Trees such as eucalyptus and other naturalized varieties should be planted up hill and down hill of the corridor to integrate and buffer the track, trolley and overhead wires into the surrounding landscape.

The existing meander path along the canyon rim should be maintained to allow pedestrian access to Mesa Housing and the Science Research Park. New planting along the path should incorporate naturalized species in informal planting groups. Planting should follow the guidelines in the document "A Grand Park and a Campus Meander for UCSD," Dec. 1977. The decomposed granite or asphalt path should also transition into poured concrete and paver paths used in the plazas.

#### **7.5.3.6 ROADWAYS AND LOOP ROAD**

The landscape design along the existing and proposed roadways addresses the loop road separately from the neighborhood primary entry roadways. The landscape along the loop road edges the natural open space, and is intended to complement the cross section of the open space. The existing landscape is informal and composed of naturalized plants. Trees, shrubs and ground cover massing should be placed at perpendicular alignment with the roadway. In this manner the road is traveling "through" the more natural, rustic landscape, and the natural quality of the existing landscape is emphasized along the roadways.

As discussed under the roadway alignment section, the proposed separation of the loop road lanes at two locations reinforces integration of natural landscapes into the neighborhood core. When the loop road is flanked by buildings on both sides, the landscape composition is more linear in design and respects the access points to the building entries and parking. Medians within these road sections are encouraged to soften the roadway and provide separation from opposing traffic.

The trees within these road sections are limited to evergreen varieties, taller and medium in scale, to allow clear visibility for vehicular traffic. The placement of trees should allow wider spacing to provide views to adjacent buildings. The ground plan within the right of way should be low growing ground cover to maintain visual access. The sidewalks should be set parallel to the street section. Where feasible, a minimum four-foot setback for landscape should be incorporated between the travel way and sidewalk. Trees at building and parking entries should be a unique variety with flowering or visually different characteristics to identify key access.

Health Sciences Drive, which provides an important new entry from Regents Road to the Health Sciences Neighborhood also serves as a visual connector and access to other campus developments it passes through. The cross section of this roadway will border campus parking to the north, and the Science Research Park facilities to the south. This roadway will become a key visual entry boulevard to the Health Sciences Neighborhood.

The landscape of this roadway should promote a clear and formal layout, which provides separation from the parking lot to the north, and visual access to the Science Research Park to the south.

Landscape along the north side of the roadway has been designed in conjunction with the recently completed parking lot. The tree species should be extended into the Health Sciences Neighborhood, but with spacing and placement to promote and reinforce a landscape design. Closer tree spacing and parallel placement will achieve this intent. The ground plane



should be composed with plant materials, which start from lower profile planting to taller hedge rows to screen the parking. The south side right-of-way should use the lower profile plant species, but with cutoff heights at three feet to allow visibility into the Science Research Park.

#### **7.5.3.7 NORTH MEADOW**

The landscape of the North Meadow is an extension of preserved open space within the UCSD "Park" lands, and should also relate to the South Meadow plant palette. The intent of this landscape area is enhancement of the natural character and habitat. Since Medical Center Drive North traverses the North Meadow, plant material along this roadway should be consistent with the meadow planting to provide continuity and appear as an extension of the Park. The North Meadow is flanked by the Medical Center Plaza and Medical Education Center, which provides the opportunity for planting areas to "step down" at the buildings and create a natural, rustic edge. Where possible, plant material in the North Meadow should be used to screen the parking decks under the Medical Center Plaza, while providing views to the Thornton Hospital entry for clear wayfinding. Trees should be limited to species, which are indigenous to this region and are located in patterns typical to their natural growth characteristics. Shrub and ground cover massings should be selected from naturalized species.

#### **7.5.3.8 SOUTH MEADOW**

The South Meadow is located between the Perlman ACC expansion site and the Cancer Center site. The landscape of the South Meadow is an extension of the existing south canyon character. This area should be landscaped with plant material similar to that found in the existing canyon. Pathways in the South Meadow should provide a north/south pedestrian connection to link Health Sciences Walk East to Medical Center Drive South. Pathways should be 8' wide of asphalt or stabilized decomposed granite. The north edge of the South Meadow borders on Health Sciences Walk East, which provides opportunities to view the meadow from this major pedestrian route. In addition to providing a visual amenity for the patient environment, the South Meadow also provides the necessary location for underground utility

lines, which may affect placement of large plant material, such as trees. Trees should be limited to species, which are indigenous to this region and are located in patterns typical to their natural growth characteristics. Shrub and ground cover massings should be selected from naturalized species.

#### **7.5.3.9 CAMPUS POINT PLAZA**

Campus Point Plaza is a major visual entry to the neighborhood at the intersection of Campus Point Drive and Medical Center Drive North. This plaza is visible from vehicles entering the medical center at a key decision-making intersection and should assist with wayfinding, through use of landscape, signage and lighting. The views from this plaza looking south extend across the Health Sciences Walk East to the South Meadow and existing South Canyon visible beyond the neighborhood. Given this opportunity to create a north/south view corridor that extends the width of the neighborhood, trees should be located to frame the view. This plaza should provide exterior gathering spaces for the Medical Education Center with seating areas and places for people to interact, hold classes or discussions. The plaza also provides frontage for Shiley Eye Center, Ratner Center, and a future addition to the Shiley facility. This could include interpretive gardens for site impaired, focusing on scent and texture of plants. A design feature at the intersection of the Campus Point Plaza and Health Sciences Walk East should be considered, and possibly include special paving, seating areas, a fountain or sculpture that would be appropriate and not impede fire access. This plaza may also incorporate interpretive gardens linking the landscape to the medical sciences and education, with plant material historically used in medicine.

#### **7.5.3.10 TRANSIT PLAZA**

The landscape design within the Transit Plaza and future hospital's west entry should be more urban in character and compliment the intended heavy use by pedestrian traffic. The connection to the west campus from this area promotes the more typical campus layout in plaza use similar to the Price Center plaza on the west campus. At the Transit Plaza, the interaction of medical students, faculty, staff, and visitors will require outdoor seating areas, rest nodes and access to the adjacent trolley station and other shuttle services. It is

anticipated that patients will also enter the campus from this location and will require clear and visible wayfinding to the Health Sciences Walk connection. At the Transit Plaza, the grade change between the south hospital entry and Medical Center Drive South may need to be addressed with ramps, stairs or walls, such as raised planters/seat walls.

The trees located in this plaza are designed to be composed as a series of Bosque plantings in a formal grid pattern. The suggested character of the trees proposed for this area are broad canopy deciduous trees, which will allow more solar access during the winter months. The areas beneath the trees should be composed of seating elements and paving, which promote outdoor uses. The adjacent landscape against the buildings should transition into the planting design along the Health Sciences Walk. The perimeter trees should be smaller in scale, evergreen and with medium canopy widths.

#### **7.5.3.11 SOUTHEAST PLAZA**

The Southeast Plaza connects the Health Sciences and Science Research Park (SRP) neighborhoods and is at the east terminus of Medical Center Drive South. While small in scale, this plaza will act as a meeting place between the two neighborhoods. The suggested plant palette in this area should focus on species and varieties that create an urban edge in contrast with the rustic landscape of the existing canyon to the west and the canyon extension into the SRP to the south. This plaza should be predominantly hardscape paving with trees in tree grates to provide a continuous walking surface between the neighborhoods. The Southeast Plaza should engage the Medical Center Drive East street edge, the North Walk at the SRP, as well as the future building entry to the north. Grade changes should be gradual to encourage ramps and planted slopes rather than stairs to transition between the two neighborhoods.

#### **7.5.3.12 HEALING GARDENS**

Healing gardens should be considered at appropriate locations in the Health Sciences Neighborhood. Aspects of the gardens can be incorporated throughout the main pedestrian corridors and plazas. Many of the medical facilities include patients and

visitors that would benefit from beautiful, contemplative environments to enhance their visit. The gardens could provide patients and their families peaceful and intimate spaces to gather or walk through. These gardens can also provide a visual amenity from upper building levels. Healing gardens can also be integral to building design, such as rooftop gardens and atriums.

The healing and therapeutic gardens should be designed at various scales. They should be used as a means to reduce the institutional setting and incorporate nature into the corridors and plazas, as well as into the buildings. Views into the gardens from ground floor windows and views of the trees from second story windows can provide a way to bring nature into the buildings. This approach to design should be emphasized throughout the neighborhood and not limited to select areas.

There may be opportunities in the neighborhood for other types of gardens, not intended as healing gardens. Interpretive gardens use plant materials that can educate the visitor of medicinal qualities of plants historically and currently used in medical practice. Interpretive or medicinal gardens should only be located where appropriate. Signage and botanical nameplates may be used to describe plant origins and how they are used in science and research. An outdoor area for small group discussions or classes would also promote the educational benefits of this type of garden. Paving materials, such as embedded designs or patterns, could display relevant medical research, for example DNA strands and biological profiles.

#### **7.5.4 PROPOSED PLANT PALETTE**

The intent of the plant palette is to create a guideline for future design. Landscape architects should use the palette as a starting point and develop a specific palette for the particular building and site being developed. The importance is to maintain site character and design intent, and to use the recommended plant characteristics to develop a site-specific plant palette. The plant palette is intended to be flexible and does not imply all trees indicated in one category will be used in one location.

**PROPOSED PLANT PALETTE**

TREE LISTING	Health Sciences Walk	Green Corridor	North Meadow	South Meadow	Transit Plaza	Parking Lot	I-5 Edge	South Canyon Edge	Health Sciences Drive	Loop Road	Campus Point Plaza	Southeast Plaza	Healing Gardens
Cupaniopsis anacardioides, Carrot Wood	X	X			X						X	X	
Eucalyptus cladocalyx, Sugar Gum			X	X			X	X					
Eucalyptus deglupta, Mindanao Gum			X	X			X	X					
Eucalyptus ficifolia, Red Flowering Gum			X	X			X	X	X	X			
Eucalyptus torquata, Coral Gum			X	X					X	X			X
Eucalyptus torwood, Torwood Gum			X	X			X	X					
Jacaranda mimosifolia, Jacaranda	X										X	X	X
Melaleuca quinquenervia, Cajeput							X	X				X	X
Olea europaea, Olive			X	X							X	X	X
Pinus canariensis, Canary Island Pine	X	X					X				X	X	
Pinus halepensis, Aleppo Pine		X											
Pinus torreyana, Torrey Pine	X								X	X	X		X
Platanus racemosa, California Sycamore			X	X			X	X					
Pyrus kawakamii, Evergreen Pear	X	X											
Quercus, Oak Species			X	X									
Robinia 'Purple Crown', Locust		X			X						X	X	
Tabebuia chrysotricha, Golden Trumpet Tree	X	X											X
Tipuana tipu, Tipu Tree					X				X	X	X		X
Tristania conferta, Brisbane Box		X											
Ulmus parvifolia, Chinese Evergreen Elm		X			X		X				X	X	

Table 7.1

Proposed plant palette

TREES	MIN. SIZE
Cupaniopsis anacardioides, Carrot Wood	24" box
Eucalyptus deglupta, Mindanao Gum	15 gal
Eucalyptus cladocalyx, Sugar Gum	15 gal
Eucalyptus ficifolia, Red Flowering Gum	15 gal
Eucalyptus torquata, Coral Gum	15 gal
Eucalyptus torwood, Torwood Gum	15 gal
Jacaranda mimosifolia, Jacaranda	24" box
Melaleuca quinquenervia, Cajeput	"
Olea europea, Olive	"
Pinus canariensis, Canary Island Pine	"
Pinus halepensis, Aleppo Pine	"
Pinus torreyana, Torrey Pine	"
Platanus racemosa, California Sycamore	"
Pyrus kawakamii, Evergreen Pear	"
Quercus agrifolia, Oak	"
Robinia 'Purple Crown', Locust	"
Tabebuia chrysotricha, Golden Trumpet Tree	"
Tipuana tipu, Tipu Tree	"
Tristania conferta, Brisbane Box	"
Ulmus parvifolia, Chinese Evergreen Elm	"

SHRUBS	MIN. SIZE
Acacia 'Desert Carpet', Acacia	5 gal
Acacia redolens	"
Aloe marlothii	"
Arbutus unedo, Strawberry Tree	"
Baccharis pilularis 'Centennial', Coyote Bush	1 gal
Bougainvillea 'La Jolla'	5 gal
Ceanothus 'Concha', California lilac	"
Coprosma kirkii, Creeping Coprosma	"
Dicksonia antarctica, Tasmanian Tree Fern	"
Echium fastuosum, Pride of Madeira	5 gal
Encelia californica, California Encelia	"
Eucalyptus forrestiana, Fuchsia Eucalyptus	"
Heteromeles arbutifolia, Toyon, California Holly	"
Leptospermum scoparium, New Zealand Tea Tree	"
Melaleuca nesophila, Pink Melaleuca	"
Nandina domestica 'Gulf Stream', Heavenly Bamboo	"
Phormium tenax 'bronze', New Zealand Flax	"
Pittosporum 'wheeleri'	"
Pittosporum tobira 'variegata'	"

<b>SHRUBS (CONTINUED)</b>	<b>MIN. SIZE</b>
Rhapiolepis indica 'Clara', India Hawthorne	5 gal
Rhus integrifolia, Lemonade Berry	"
Ribes speciosum fuchsia, Flowering Gooseberry	"
Rosmarinus officinalis, Rosemary	"
Sambucus, Elderberry	"
Xylosma congestum 'compacta'	"

<b>GROUND COVERS</b>	<b>MIN. SIZE</b>
Agapanthus africanus, Lily of the Nile	1 gal
Ceanothus griseus 'horizontalis', Carmel Creeper	"
Gazania splendens	"
Hemerocallis spp., Daylily	"
Lantana montevidensis 'gold mound', Lantana	"
Lantana montevidensis 'purple', Lantana	"
Lantana 'spreading sunset', Lantana	"
Myoporum parvifolium	"
Salvia greggi, Autumn Sage	"
Salvia leucophylla, Purple Sage	"
Trachelospermum jasminoides, Star Jasmine	"

<b>OTHER</b>	
Bark Mulch	Min. 3" depth
Hydroseed Mix with Shrubs	as specified
Hydroseed Mix with Trees	as specified
Turf	Limit use to areas of informal seating and access
Grasscrete, Turfblock	Limit use to access and fire lanes

#### **7.5.5 PROPOSED HARDSCAPE MATERIALS**

##### **1. Paving materials and colors**

Create interest in the ground plane with the use of a variety of paving materials and colors. Colors and materials should follow the guidelines in the “Master Exterior Palette East Campus Health Sciences” document available at FD&C. Paving in patient environments should be selected that does not create a glare. Specific pedestrian walks and plazas can be defined by the use of paving materials and help the wayfinding for visitors and patients. Paving variations can also help define a transition between specific areas of the campus. Keep all paving patterns and materials to a pedestrian scale which is appropriate to the adjacent land use.

##### **2. Cast walls, stairs and ramps**

All pedestrian access must adhere to handicap accessible design standards. Design layout and placement as well as material color and texture can add interest and accent to the site design. Concrete seat walls can become the backdrop for art features, or mosaics, adding to the quality of the environment.

##### **3. Fencing**

Fencing color and style (decorative and functional) should remain consistent with the architecture and the neighborhood color palette. Decorative screens or fences may be provided to secure outdoor patient environments. Fencing can provide a means of wayfinding with its style and color, help screen utilitarian aspects of buildings and the site, direct access through the site and create a backdrop for the planting design. Fencing should not interfere with views into and out of the pedestrian corridors and open spaces.

##### **4. Overhead structures & trellis arbors**

Overhead structures and trellises can distinguish specific sites within the campus. Consideration should be given to maintain views, design structures that complement the architecture and that help define and shade outdoor space. Style and colors should remain consistent with the overall neighborhood color palette and site design concepts.



## **5. Vehicular enhanced paving areas**

Accentuate the nodes and transitions between land uses and at pedestrian crossings throughout the campus with paving patterns and colors. This can help the traveler locate themselves on the campus, as well as alert drivers of pedestrian crossings.

## **6. Water features**

The sound of water in the landscape is an integral part of the healing landscape. With consideration for water conservation, and safety, use and design of water features should be allocated to areas of contemplation within or near the health facilities, or in focal points in plazas and along Health Sciences Walk.

### **7.5.6 SITE FURNISHINGS**

The existing facility has an established family of site furnishings, which may be continued with new development. Changes in the style and selection of the elements will be based on availability, level of maintenance and relevance to uses anticipated with new development. All elements should be coordinated within the neighborhood design concept and specific site design, such as:

1. Seating, including benches, tables and chairs
2. Trash, recycling and ash urn containers
3. Light bollards, up lighting and accent lighting, and street light fixtures
4. Planter containers
5. Bicycle racks
6. Drinking fountains
7. Kiosks and newspaper racks
8. Signage monuments, interpretive signage and related wayfinding fixtures

### **7.5.7 LANDSCAPE INTERFACE WITH ARCHITECTURE**

New buildings and adjacent urban spaces should be designed to continue the fabric of the landscape including plantings and hardscape elements. The new landscape should also screen and buffer those areas where the structures are more utilitarian in function and do not offer pleasing views. The entrances to new buildings should offer a landscape setting

that clearly defines the location of the entry and promotes the particular building's purpose. Views from the buildings into the landscape should be encouraged and maintained to enforce the restorative and therapeutic qualities of nature.

#### **7.5.8 ENVIRONMENTAL ART**

The reputation of UCSD and public art displays has a long and successful history in the local region. The Stuart Collection is a premiere model of how a college campus can promote thought, emotion, and ideas through the use of environmental art. The opportunity for the expression of art in the landscape should be encouraged for the East Campus Health Sciences neighborhood. This can be accomplished with sculpture, and details in the site elements, such as fountains, paving and seat walls, as well as other interpretive art installations.

#### **7.5.9 MAINTENANCE GUIDELINES**

These guidelines strive to maintain the landscape character of the UCSD East Campus Health Sciences Neighborhood, as it is now.

A high level of effort should be given to maintain the new facilities and landscape in a manner that promotes the importance of the land uses and the reputation of a high caliber research and health care facility.

The east campus uses reclaimed water and planting design around buildings should take into consideration the fluctuations in the salinity of the water supply. Use of pesticides should be discouraged in patient environments. Also care and consideration should be given to existing tree plantings. Building and facility locations should take into consideration conservation of mature vegetation. Where appropriate, relate existing trees to new planting areas.

#### **7.5.10 SAFETY**

Consideration should be given to ensure the safety of all people who visit or work in the neighborhood. Plant selection and placement should take into consideration views and safety concerns for pedestrians and vehicular traffic. Site lines into plazas and walkways should be well lit and accessible by police and emergency vehicles.

Specific designs proposing landscape screening around parking structures will require coordination with a landscape architect and security consultant to ensure that security issues are properly considered.

## **7.6 ARCHITECTURAL DESIGN STANDARDS AND GUIDELINES**

### **7.6.1 BUILDING DESIGN PHILOSOPHY**

The design of buildings in the ECHS follows the principles established for the Neighborhood concept:

#### **STRENGTHEN THE NEIGHBORHOOD IDENTITY TO CREATE A VISUALLY RICHER "SENSE OF PLACE"**

Participate and relate to other buildings visually without necessarily adopting existing form and materials of other buildings. Visual richness of form, materials, and color is encouraged.

#### **INTEGRATE THE RUSTIC LANDSCAPE TO BALANCE AND GROUND THE "PLACE" IN ITS CANYON-MESA CONTEXT**

Buildings should integrate with the site and landscape context as "emerging out of the site," rather than imposed upon it. Hardscape, planters, and other architectural elements should be used to enhance this integration.

#### **PROVIDE THE NEIGHBORHOOD WITH A SENSE OF UNITY BY REINFORCING THE PEDESTRIAN EXPERIENCE**

Buildings should be designed as an integral part of the Neighborhood pedestrian experience. The "place" that they create and define is a highly important design element.

### **7.6.2 SITING**

Buildings may be sited in any location within the setback requirements in Section 7.6.3 below. In addition, the following recommendations are encouraged:

- Encourage both foreground views and background vistas to the Meadow areas and views onto the Health Sciences Walk, Green Corridors, and other open spaces from all buildings, as suggested in Figure 7.26.

- Building orientation should generally follow the grid established by the Health Sciences Walk and Green Corridors to reinforce the edges of the pedestrian network. Building frontages on Meadows edges, however, are encouraged to alter the orientation to promote a more informal and diffused edge.
- Access to sunlight is of strong importance in the integration of the landscape and the built environment. Sunlight should be maximized in all exterior spaces by the careful modeling of roof forms, building floor setbacks, and through composition of the building program components to minimize large expanses of shaded ground plane. Daylight is especially important in Ambulatory Care and Medical Center Zones where care for patients occurs.

### 7.6.3 BUILDING ENVELOPE

#### A. BUILDING SETBACK STANDARDS

The ECHS Neighborhood building setbacks are established by the perimeters of the Health Sciences Walk, the Green Corridors, Meadow edges, and the roadway systems in the Neighborhood. These project site boundaries provide the necessary landscaped open space, regulatory separations, and visual and spatial control of the environment. Setbacks established for the Neighborhood are indicated in Figure 7.21.

#### HEALTH SCIENCES WALK

All buildings facing the Health Sciences Walk will maintain a minimum 20-foot setback from the centerline of the Walk, this includes the colonnade elements of those buildings, and certain other important design features of the building discussed in Sections 7.6.6 and 7.6.7. Figure 7.22 illustrates the minimum setback along the Health Sciences Walk, Figure 7.23 illustrates the maximum setback along Health Sciences Walk.

The minimum 20 foot setback is maintained for the entire length of the building along the Walk edge.

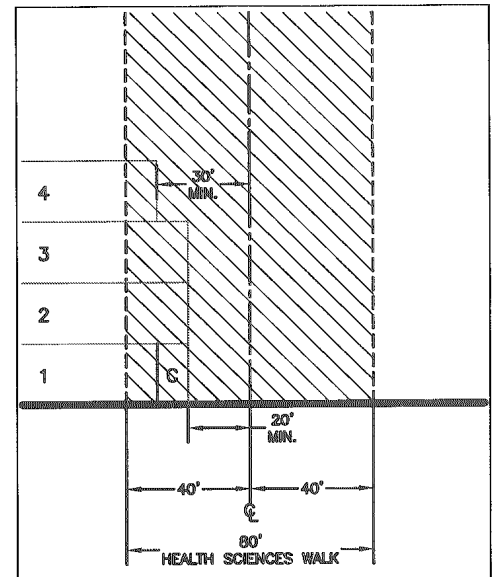


Figure 7.22

*Health Sciences Walk section minimum setback*

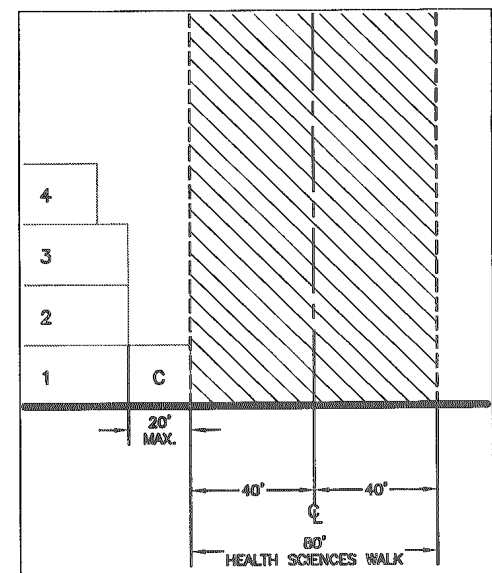


Figure 7.23

*Health Sciences Walk section maximum setback*

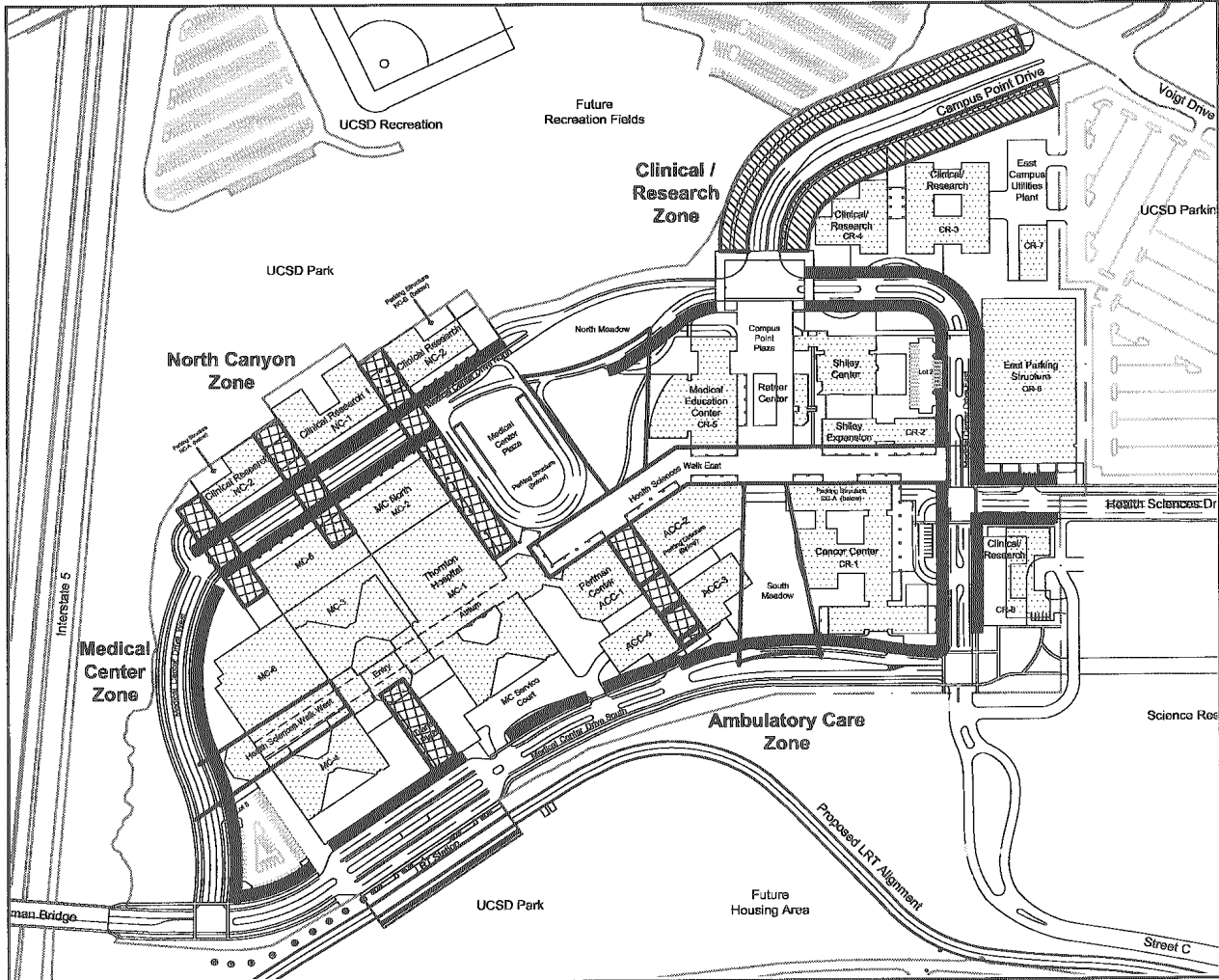






Figure 7.21

Setbacks

-  25-foot Setback Medical Center Drive
-  60-foot Setback Campus Point Drive
-  20-foot Minimum Setback from center line of Health Sciences Walk
-  40-foot Green Corridor Minimum

### CAMPUS POINT DRIVE

The existing minimum 60-foot setback from Campus Point Drive curb will be maintained. No encroachments into the setback are permitted.

### MEDICAL CENTER DRIVE

A minimum 25-foot setback from the curb of the roadway to the building is required for all building elevations along the Medical Center Drive loop. Encroachments for building entry features such as canopies, porte cocheres, or overhangs providing weather cover may be permitted at the discretion of the University.

### HEALTH SCIENCES DRIVE

A minimum 25-foot setback from the curb of the roadway to the building is required for all building elevations along Health Sciences Drive. Encroachments for building entry features such as canopies or overhangs providing weather cover may be permitted at the discretion of the University.

### NORTH AND SOUTH MEADOW EDGES

Refer to Figures 7.24 and 7.25 for required building setback "cone" in the Meadows. The intent of the "cone" is to allow building elements to step away along the descending elevations, enhancing views into the open space and encouraging articulation of building facades and wings along the Meadow edges, as diagrammed in 7.26.

Buildings may encroach into the "cone" for no more than 20 percent of the overall length of the elevation. Encroachment depth must be less than 20-feet. Buildings may have cantilevered elements that overhang into the Meadow "cone," but are also limited to the above dimensional constraints.

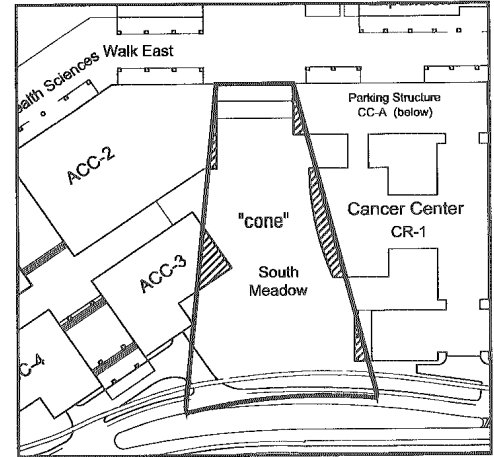


Figure 7.24 South Meadow setback "cone"

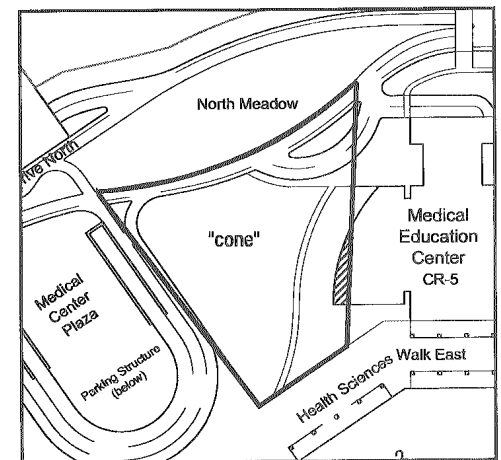


Figure 7.25 North Meadow setback "cone"

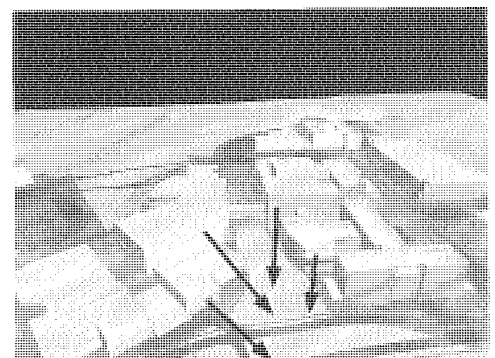


Figure 7.26 Meadow views

## B. BUILDING HEIGHT STANDARDS

The height of buildings in the ECHS Neighborhood is a product of several factors: building function, location in the Neighborhood and Overlay Zone, and adjacency to the Health Sciences Walk. Refer to Table 7.2.

In general, the intent of the Plan is to maintain a 60-foot height limit along the Health Sciences Walk to allow afternoon sun to fall into the Walk. The actual height of each building may vary depending upon the floor to floor height dictated by the functional requirement (refer to following item C). This limitation is intended to support the pedestrian scale of the spaces along the Walk, and to avoid the "canyon effect" of multistory elevations on both sides of the Walk.

Building heights exclude basements or other below grade floors unless those floors are visible from grade, such as along the south side of the Neighborhood in the Clinical/Research, Ambulatory Care, and Medical Center zones. Also excluded are roof parapets 3 feet or lower.

Building heights include rooftop mechanical penthouses if they cover more than 50 per cent of the area of the floor below, or are aligned with the face of an elevation of the building for more than 25 per cent of the length of the elevation. See Figure 7.27 for heights of buildings with rooftop mechanical penthouses.

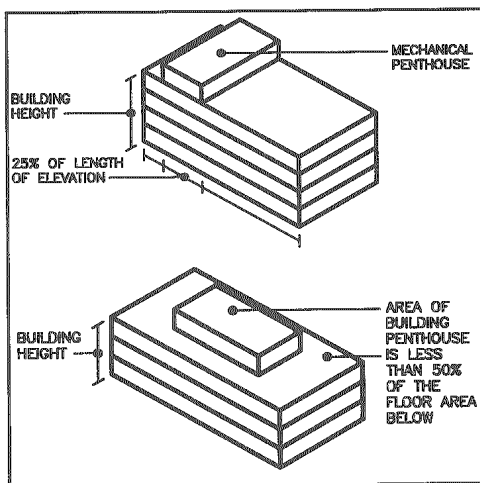


Figure 7.27 Penthouse configuration

## C. FLOOR-TO-FLOOR HEIGHTS

Building function is a determinant of the floor-to-floor height of each building. Hospital expansion buildings are assumed to align with the existing Thornton Hospital floor heights at 18-feet 9-inches. ECHS research buildings, including the Cancer Center are assumed to have a 16-foot floor to floor height, and Ambulatory Care Zone facilities are proposed to align with the existing Perlman Ambulatory Care Center's floor to floor heights of 15 feet.

**Table 7.2 Building Heights**

<b>Neighborhood Overlay Zone</b>	<b>Zoning Plan Reference</b>	<b>Building Stories Above Grade</b>
<b>Clinical/Research</b>		
Cancer Center	CR-1	2-5
Shiley Center		2-3
Shiley Expansion	CR-2	2-3
Ratner Center		1
Clinical/Research Facility	CR-3	3-4
Clinical/Research Facility	CR-4	2-3
Medical Education Center	CR-5	2-3
East Parking Structure	CR-6	6*
Central Power Plant	CR-7	1
Clinical/Research Facility	CR-8	3-4
<b>Ambulatory Care</b>		
Perlman Center	ACC-1	2-3
Ambulatory Care Center	ACC-2	3-4
Ambulatory Care Center	ACC-3	2-3
Ambulatory Care Center	ACC-4	2-3
<b>Medical Center</b>		
Thornton Hospital	MC-1	2-3
Hospital Expansion	MC-2	2-3
Hospital Expansion	MC-3	4-6
Hospital Expansion	MC-4	4-6
Hospital Expansion	MC-5	2-3
Hospital Expansion	MC-6	2-3
<b>North Canyon</b>		
Clinical/Research Facility	NC-1	2-3
Clinical/Research Facility (2 wings)	NC-2	2-3

\*Six Story Building above grade with one basement level plus rooftop level

Table 7.2

*ECHS Building Heights by Overlay Zone*



#### 7.6.4 BUILDING FORM AND MASSING

The building envelopes in the Neighborhood suggest a more horizontal massing orientation, rather than vertical. This orientation is consistent with the flat plane of the mesa landform.

New buildings in the ECHS should generally conform to this horizontal massing. Significant building features may be composed to be more vertically oriented, providing a visual counterpoint. Fenestration organized vertically through placement of windows or repetitive smaller vertical massing elements, as part of the overall horizontal massing, is consistent with this orientation. Section 7.6.7 discusses Fenestration in more detail.

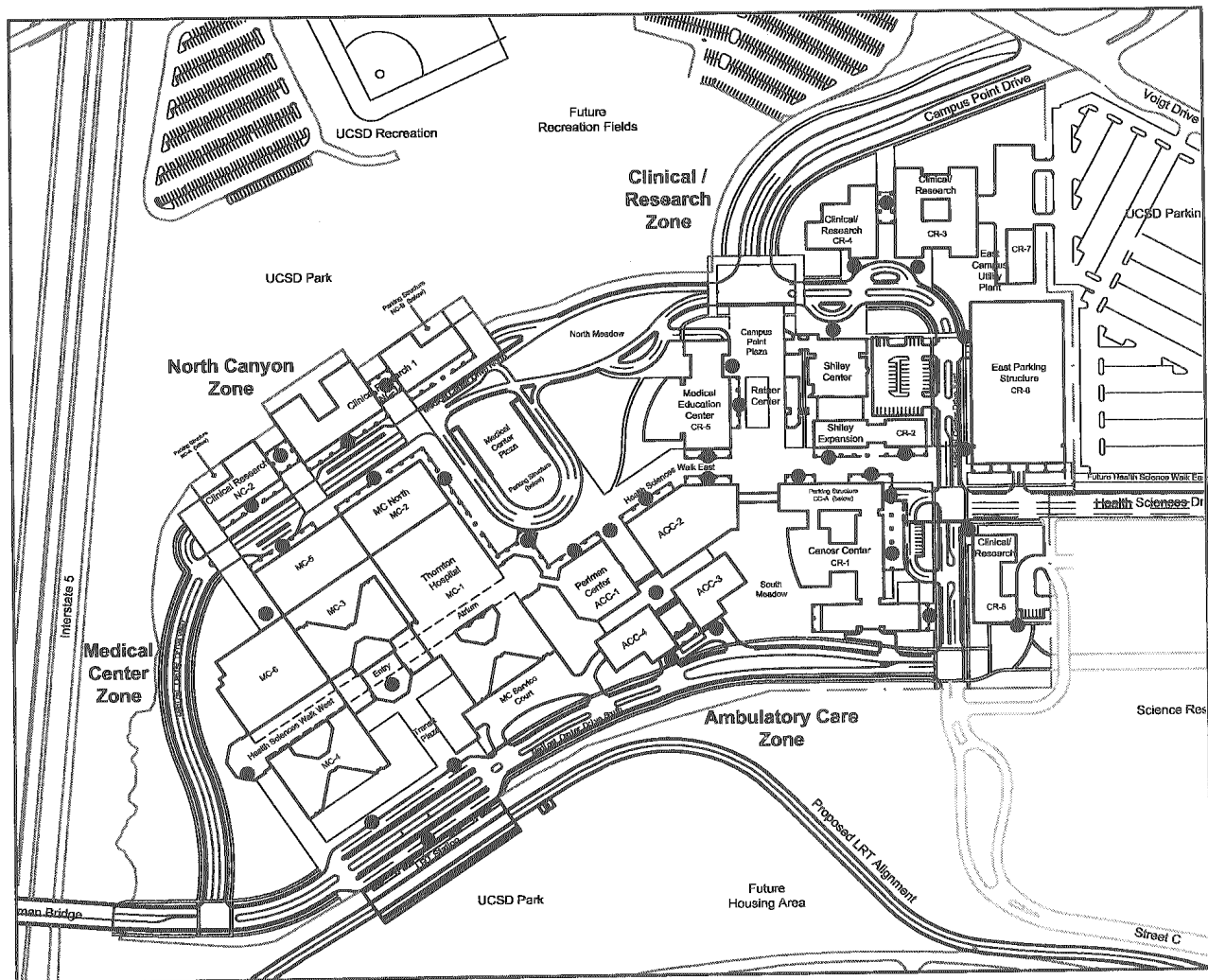


Figure 7.29

Recommended building entry points

Vertically oriented buildings are encouraged in two locations:

- The Medical Center Zone building sites MC-3 and -4 are proposed to be inpatient 4 story bed wings over 2 levels of diagnostic services. These buildings are located along the Health Sciences Walk West alignment and form a landmark entry on the south facing Transit Plaza bordered by Medical Center Drive South and the future LRT Station. This new plaza and landmark entry create a major new gateway into the Health Sciences Campus from the West Campus via the Gilman Bridge.
- The Cancer Center will be a vertical visual landmark on the east end of the Health Sciences Walk.

Terraced or horizontally stepped building massing should be considered for the North Canyon Zone buildings to mitigate the shade impact on the natural habitat on the Canyon floor, and visually reduce the mass of the building as it rests on the North Canyon parking structure (Figure 7.28).

The architectural image or “signature” of the building should come from the detail rather than its overall mass and form. Buildings should frame and reinforce the mesa landscape, rather than obscure it.

Dramatic “statements” in building form are to be carefully balanced in their context.

#### 7.6.5 ENTRIES

Entry features are encouraged to strengthen and clarify wayfinding. Entry elements for individual buildings should be scaled to be seen from both roadways and the primary pedestrian network serving each building.

Encroachments into street setbacks for building entry features such as canopies or overhangs providing weather cover may be permitted at the discretion of the University.

Many building sites encourage entry from two sides, or even multiple entries. Program requirements suggest that many buildings may have multiple occupants, each requiring some identity at the entry.

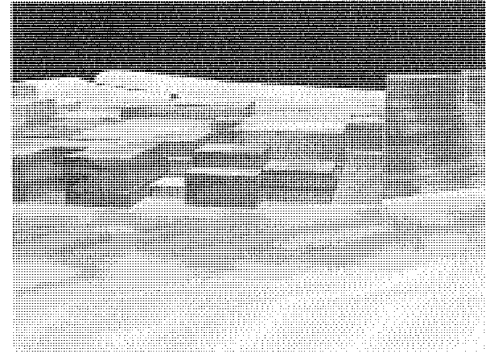


Figure 7.28 North Canyon parking structure



Figure 7.30 Colonnade

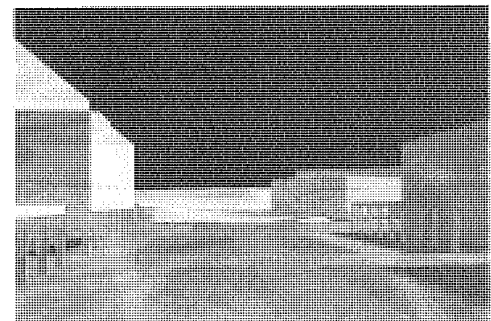


Figure 7.31 Arcade



Figure 7.32a

*Center Hall elevation along Library Walk*



7.32c

*Colonnade at Molecular Medicine East, School of Medicine*

Key entry features should be identified for all buildings facing the Health Sciences Walk. Figure 7.29 indicates recommended entry points in the ECHS Neighborhood.

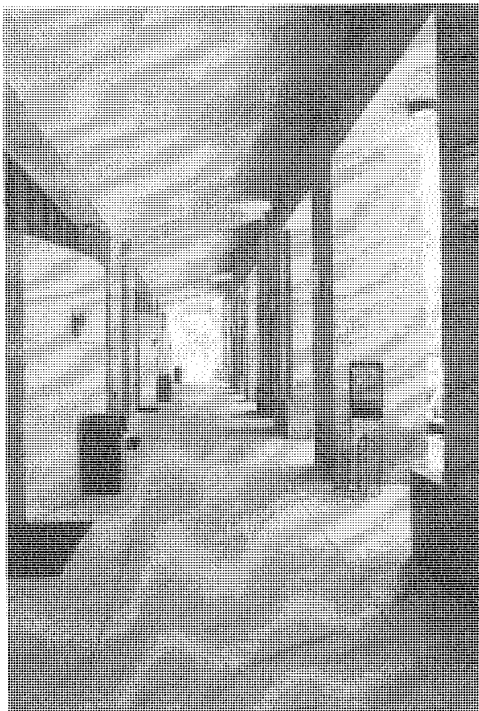
#### 7.6.6 COLONNADES, LOGGIAS, AND ARCADES

Architectural elements form the vocabulary required to be integrated into the design of all building elevations on the Health Sciences Walk at grade level. Colonnade or arcade elements are required for the entire length of the Walk elevation. These elements may be interrupted.

Colonnades are an integral part of the building and are defined as an open exterior space at the ground level, formed by a row of columns at the outermost edge (Figure 7.30).

Arcades are defined as a freestanding colonnade, detached but visually integrated into the building behind it. (Figure 7.31).

Colonnades and arcades may encroach into the 40-foot setback along the Health Sciences Walk, no more than 20-feet in depth. Arcades may also be a freestanding element such as a landscape structure, tensile fabric structure, or other colonnaded structure.



7.32b

*Colonnade at Center Hall*

A loggia is a colonnade at the upper levels of a building, suggested in Figure 7.32a and 7.33. Its use as a feature above a colonnade is encouraged to provide visual interest to the Health Sciences Walk elevation.

#### 7.6.7 FENESTRATION

The architectural expression of building facades should be referential to the building form, the function of the building, and express the hierarchy of entry, horizontal and vertical circulation, and symbolic interior spaces.

Fenestration should relate to the context of the building, and strike a balance between complexity and simple volumetric planes and forms. Detailed expression should relate to the treatment of openings, environmental control, and to the play of light and color, shadow and interior lighting.

Ground-level fenestration at colonnades, arcades, and building entries should be as large and open as practically possible to emphasize indoor/outdoor relationships and open space connections.

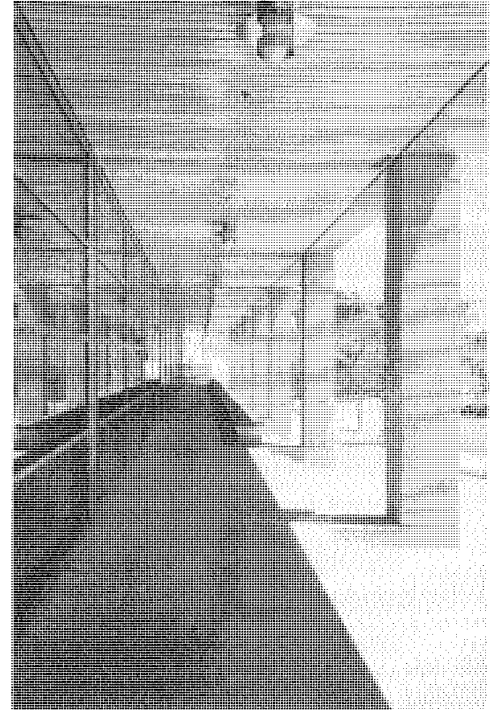
#### 7.6.8 ROOF ELEMENTS

The design of roofs should be considered of equal importance to that of elevations of the building. Most roof planes in the ECHS will be visible from both on- and offsite, and roof profile has a strong impact on building form and design. Rooftop equipment that could be seen from the ground or adjacent structures should be consolidated into uniform massing(s), painted and screened in a form that integrates with the overall building.

Roof forms should be balanced with the overall building composition, fenestration, and building details. Special roof features such as overhangs, gables, cupolas and skylights should be in scale with the overall building form and massing.

Continuous, uninterrupted horizontal roof forms such as flat roofs with parapets are to be avoided.

Landscaped rooftop terraces and features are encouraged.



7.32d

*Colonnade at Science Engineering Research Facility (SERF)*

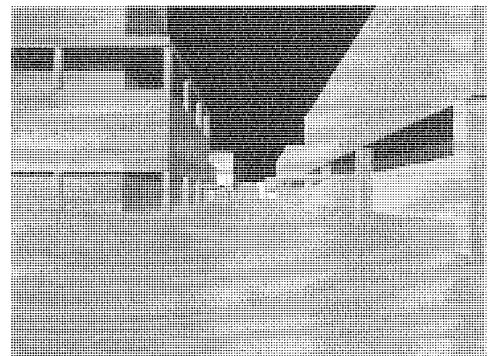


Figure 7.33

*Loggia*

#### 7.6.9 BUILDING MATERIALS AND COLOR PALETTE

The design of buildings in the ECHS follows the principles established for the Neighborhood concept that strengthen the Neighborhood identity to create a visually richer "sense of place":

The visual richness of materials and color is encouraged in the ECHS. The materials palette is intended to subordinate to and be harmonious with the natural landscape and its muted character.

The following materials are considered appropriate for use in the ECHS:

1. Exposed Concrete: Cast-in-place concrete, concrete panels, and "hybrid" panel systems such as fiberglass and composite concrete (GFRC). Color admixtures, aggregates, and finishes that enhance the warm natural site colors are encouraged.
2. Metal Panel Cladding Systems: Systems incorporating metal panels should avoid highly polished surfaces and large expanses of uninterrupted panels. Reflective finishes are prohibited, except as accent materials.
3. Cement Plaster: Burned or burnished, ground, heavy textures, and integral color finishes are encouraged over traditional painted cement plaster. Detailing systems should be designed to appear as panelized, rather than large continuous areas of finish material.
4. Wood: Where allowed by code and building occupancy, wood finishes should appear naturally-finished, as opposed to machine finishes, opaque paint, and composite wood materials.
5. Stone: Where cost-efficiently applied, stone finishes should appear as natural as possible. Flamed or honed finishes are preferable to highly polished finishes.
6. Glass Curtain Wall Systems: Metal-framed glass and structural glass wall systems should be sensitively incorporated into building form and exterior materials design which includes other materials. The use of these systems over the entire exterior envelope of the building is prohibited.

The use of other materials not included in this study may be allowed at the discretion of the University. All color selections should follow the specific guidelines of the Master Exterior Palette East Campus Health Sciences (1999) document available at FD&C.

#### **7.6.10 BUILDING UTILITIES AND SYSTEMS: CENTRAL PLANT, PENTHOUSES AND ENCLOSURES**

The Neighborhood Plan anticipates the early construction and phase in of the East Campus Utilities Plant (Site CR-7) to serve all non-hospital facilities in the neighborhood. This facility is intended to free the individual building sites of the burden of accommodating large mechanical and electrical equipment. The development of the Plant is also intended to improve energy efficiency, maintainability and flexibility over stand-alone solutions.

Building systems include all mechanical, electrical, plumbing, and drainage supply and distribution systems and their related components.

Where required, at the discretion of the University, equipment and systems may be located on the site or building exterior. However, they must be screened from view in the following manner:

- On-grade site locations must be fully screened by an architectural enclosure or a landscape screen feature. Architectural enclosures should be designed as an extension of the building form and massing, rather than freestanding buildings. They should be constructed of the same materials and color palette used on the building. The use of fencing materials is prohibited. Landscape screening is addressed in Section 7.5.7.
- Building locations: Building systems equipment and distribution systems must be housed in an enclosure which is integrated with the overall composition of the building and its materials and color palette, rather than an "attachment" or "penthouse." Exposed piping, vent hoods, risers, and other building systems elements that are required to penetrate above roof and equipment enclosures should be carefully composed and constructed of permanent materials.

#### **7.6.11 MISCELLANEOUS SITE STRUCTURES**

Miscellaneous freestanding site structures required for parking control, physical plant services, Campus security, or other uses are subject to all guidelines and Standards in this Section.

#### **7.6.12 LIGHTING GUIDELINES**

Building and site lighting standards and guidelines should conform to the UCSD Campus Outdoor Lighting Policy and Outdoor Lighting Design Guidelines.

New street lights along the periphery of the ECHS neighborhood should match the West Campus standards and the existing street lights in this area should be repainted.

The objective of exterior illumination of the buildings is to comply with all requirements while maintaining minimum allowable lighting levels. This serves to reduce the visual impact of spectral pollution of the nighttime sky on research activities.

The illumination of ECHS building exteriors serves the following functions:

- **Wayfinding:** A hierarchy of building lighting types and levels of illumination should reinforce the location of building access and entries; generally higher illumination levels should be used at entry points.
- **Safety and Security:** Building entry and exterior circulation in colonnades, arcades, parking structures, service bays, and other exterior building elements must comply with the UCSD requirements for illumination levels, fixture types and locations, and lamp types.
- **Aesthetics:** The design of exterior lighting enhances the experience of the building, creates a sense of place, and reinforces the perceptual understanding of its spaces.

Building lighting design should reinforce the overall form, massing, and spatial characteristics of the building, rather than to create a “statement” about a particular feature of the building. Exterior and interior lighting features should be integrated to provide a visual understanding of the building’s composition and function.

The following guidelines support this approach:

- Illuminate space and planar elements, rather than particular features. Avoid the “spotlighting” of major building features.
- Reserve feature lighting fixtures for important building elements such as entries.
- Favor the use of diffuse lighting systems over those generating a strong, point-source of lighting.
- Enhance the visibility of interior building lighting to the exterior, giving a sense of light “emanating” from the building.
- Avoid dramatic changes of illumination levels, which can produce glare and disorientation.
- Provide higher levels of illumination in Clinical and Hospital Patient Care areas and their related parking structures.
- Enhance the illumination of landscape features.

#### **7.6.13 SIGNAGE PROGRAM**

The ECHS Neighborhood has a unique set of standards for exterior directional signage as well as internal building signage. It is intended that the style and standard currently in place remain. The UCSD Comprehensive Signage Program for the West Campus should be utilized for the periphery of the ECHS Neighborhood and approaches from the Gilman Bridge and Regents Road.

#### **7.6.14 BUILDING SECURITY**

The ECHS Neighborhood is within the jurisdiction of the UCSD Campus Security Department. Campus Security mandates the site and building design requirements to promote building security. Security should be addressed for exterior areas in use 24 hours/day.



## 7.7 VEHICULAR CIRCULATION

Proposed modifications to the existing ECHS Neighborhood roadways include several important projects that will expand the current single access roadway at Campus Point Drive to three major neighborhood connections:

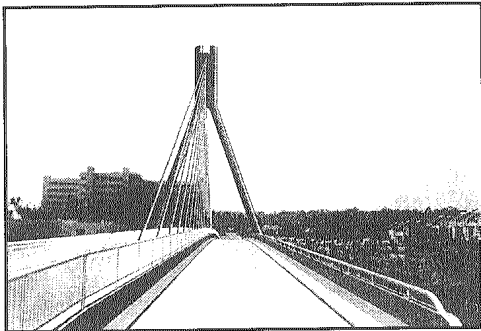


Figure 7.34

*Proposed Gilman Bridge*

### 7.7.1 THE GILMAN BRIDGE

The Bridge (Figure 7.34) will link the east end of Gilman Drive on the West Campus to Medical Center Drive South. It will provide a direct connection to the School of Medicine and other West Campus facilities. One 12-foot vehicle lane and one 8-foot bicycle lane will be provided in each direction, as well as a 4-foot pedestrian sidewalk. Pedestrian access to the West Campus will be a 10-minute walk, and bike travel will be less than a five-minute ride.

### 7.7.2 CAMPUS POINT DRIVE

The existing Campus Point Drive (CPD) alignment at the intersection with Medical Center Drive North will be moved approximately 25-feet to the east to align with the new Campus Point Plaza, the visual entry to the Neighborhood. The existing lane configuration will be retained in the new alignment.

The CPD will be terminated at the Plaza, and the segment south of the intersection will be removed to be replaced by the Plaza and the new South Meadow environment. The two "halves" of the Neighborhood once bisected by the CPD will become a unified campus environment without barriers to pedestrian circulation.

### 7.7.3 MEDICAL CENTER DRIVE

Medical Center Drive (MCD) forms a partial loop around the existing neighborhood at its edges, and with the removal of the CPD, the MCD is reinforced as a true Neighborhood loop system. MCD is segmented into four cardinal segments that relate to the edges of the Neighborhood.

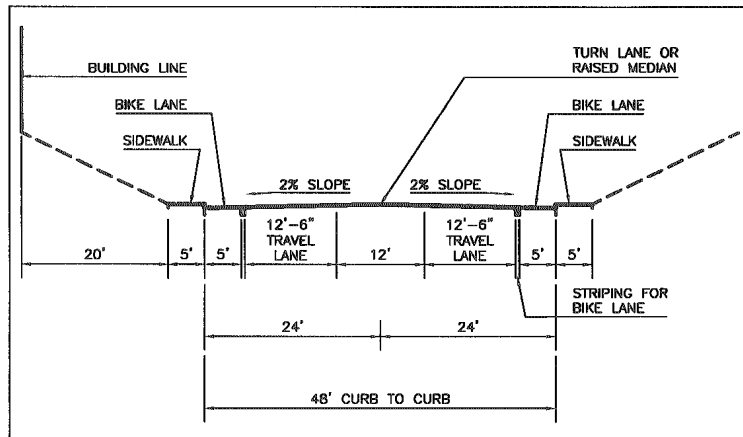


Figure 7.35 Roadway section – Medical Center Drive

The typical section of the MDC (the Drive) is one 13-foot wide vehicle and 5-foot wide bicycle lane in each direction separated by a 12-foot landscape median, from which an 8-foot left turn pocket is taken. Total width of the roadway is 48-foot curb to curb. See Figure 7.35.

Modifications to each include:

- **MCD North:** From the CPD intersection, the Drive is realigned and split by the North Meadow landscape element, and rejoins the existing roadway near the northeast corner of Thornton Hospital. A new 125-foot long left-turn lane accesses the new Medical Center Plaza and subgrade parking. The existing roadway north of the Shiley Eye Center will be widened to the north shoulder, holding the existing curb to the south.
- **MCD West:** As the Drive turns south, it is realigned to parallel the edge of the I-5 corridor, increasing the buildable site area in the Medical Center Zone. The Drive turns southeast to provide a 150-foot approach to the eastern landing of the Gilman Bridge. A 100-foot left turn lane allows access to the south leg of the Drive.
- **MCD South:** This segment begins at the Gilman Bridge and traverses the southern edge of the site. The Drive serves the north and south lanes of the shuttle drop-off at the Transit Plaza, allowing a right turn into the two-lane

drop-off areas in both directions. The LRT Station will be located one level below the Drive, allowing pedestrian access to the Station by the ramps, stairs and a tunnel.

The existing Drive will be modified to split as it crosses the South Meadow. The existing roadway will be removed, and rebuilt to follow the southern edge of the Meadow to a new intersection with the Science Research Park's Street C.

This realignment forms a larger site to accommodate the Cancer Center. Two crossovers from the eastbound lane give access to the Hospital Service court and the Ambulatory Care Center drop-off and parking structure ramp. At the east terminus of Medical Center Drive South traffic will turn left onto Medical Center Drive East to exit campus via Health Sciences Drive. This will reduce traffic from the West Campus traversing the Science Research Park to reach Regents Road.

- **MCD East:** The eastern segment of the drive passing to the east of the Shiley Eye Center will be extended south to the new intersection with MCD South. The existing curb line bordering the Shiley Eye Center site is to remain. Expansion or widening of the roadway should occur toward the east. A new intersection with Health Sciences Drive will form the eastern entry to the Neighborhood from Regents Road. Left turn pocket access to the Cancer Center drop-off is from the south at the Health Sciences Drive intersection.

#### **7.7.4 HEALTH SCIENCES DRIVE**

This street is a 2-lane plus one bicycle lane in each direction, with no center median. Total width is 58 feet.

#### **7.7.5 EMERGENCY VEHICLE ACCESS**

Both vehicle and helicopter emergency transport capability to the Hospital Emergency Department is anticipated in the future. The recommended path through the Neighborhood is shown in Figure 7.36.

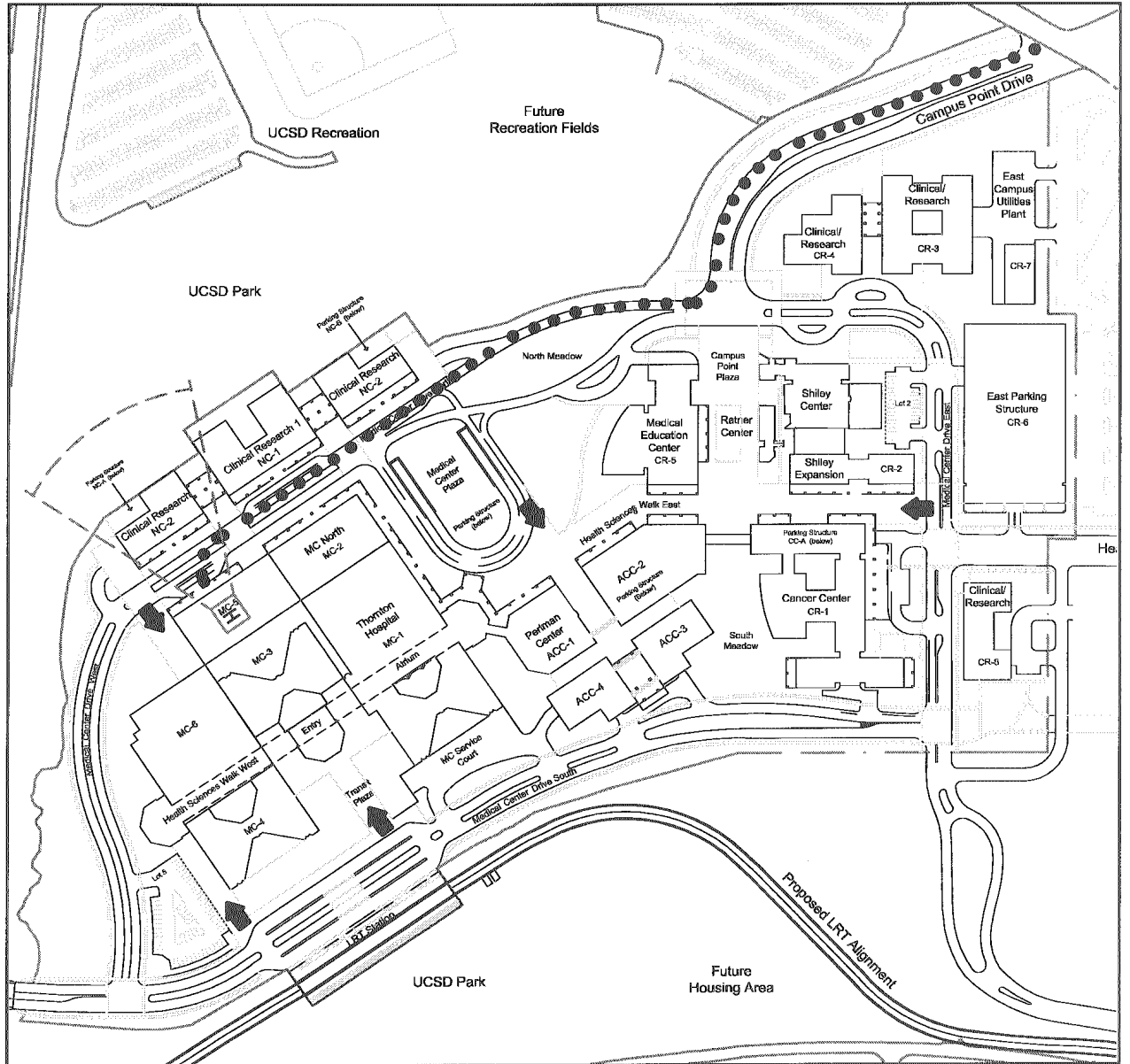
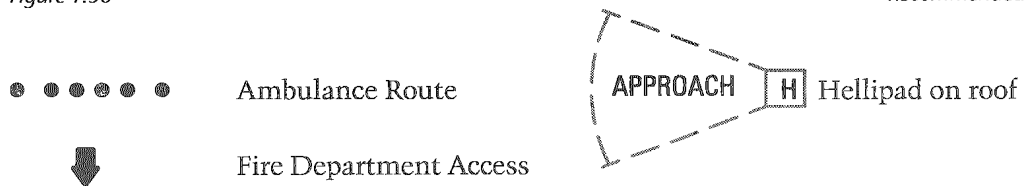


Figure 7.36

Recommended emergency vehicle access



The final helipad location is dependent on the Federal Aviation Administration permit approved for the original Thornton Hospital. It has not yet been constructed. It is expected that the approach envelope will be from the Canyon to the north.

Various segments of the Health Sciences Walk may serve to accommodate emergency fire vehicles. The emergency access width will depend on the type of equipment to be used.

#### **7.7.6 BUILDING SERVICE**

Each site in the ECHS Neighborhood is required to have a service bay for materials delivery and trash removal, as well as space for recycling, truck loading, and limited service vehicle parking. In addition some separated and dedicated service zones may be necessary at research buildings, depending upon program requirements.

#### **7.7.7 SHUTTLE BUSES**

The existing Campus Shuttle Bus route will be modified to serve new pickup and drop-off points in the ECHS, including the LRT Station, and the Medical Center Plaza. A limited number of private shuttle buses from neighboring residential, commercial, and institutional developments will also enter the ECHS to pick up and drop off passengers at the LRT Station. The final locations of these stops are subject to review and approval by the University.

### **7.7.8 THE METROPOLITAN TRANSIT DEVELOPMENT BOARD (MTDB) LIGHT RAIL TRANSIT (LRT)**

The proposed realignment of the LRT University City Extension line from west to east of the I-5 corridor will provide an excellent location for a transit station on the southwest end of the Neighborhood. The proposed alignment will proceed east along the South Canyon edge, cross the east end of the Canyon on an elevated trackway, and across the south edge of the Science Research Park. It will then align with Miramar Street, cross Regents Road, and continue on Executive Drive. The terminus is proposed to be east of Genesee Avenue at Town Center Drive.

The ECHS Neighborhood Plan proposes the development of a station that is one level below the elevation of Medical Center Drive South, with a tunnel pedestrian crossing at the Drive. Elevators and stairs or escalators would be provided at the Plaza to change levels up to the Drive or shuttle transit (Figure 7.38).

The result of separating the platform and the Drive serves to reduce the height of the elevated trackway, and lower it below the visual field of the buildings facing the canyon edge.

The LRT trackways, platform, and station will be planned, designed, and constructed by the MTDB. Close planning coordination between the LRT and the University improvements within the ECHS neighborhood will be required.

The MTDB Executive Committee supports the proposed realignment and is currently seeking additional ridership and cost information to ensure a sound decision regarding the location of the line.

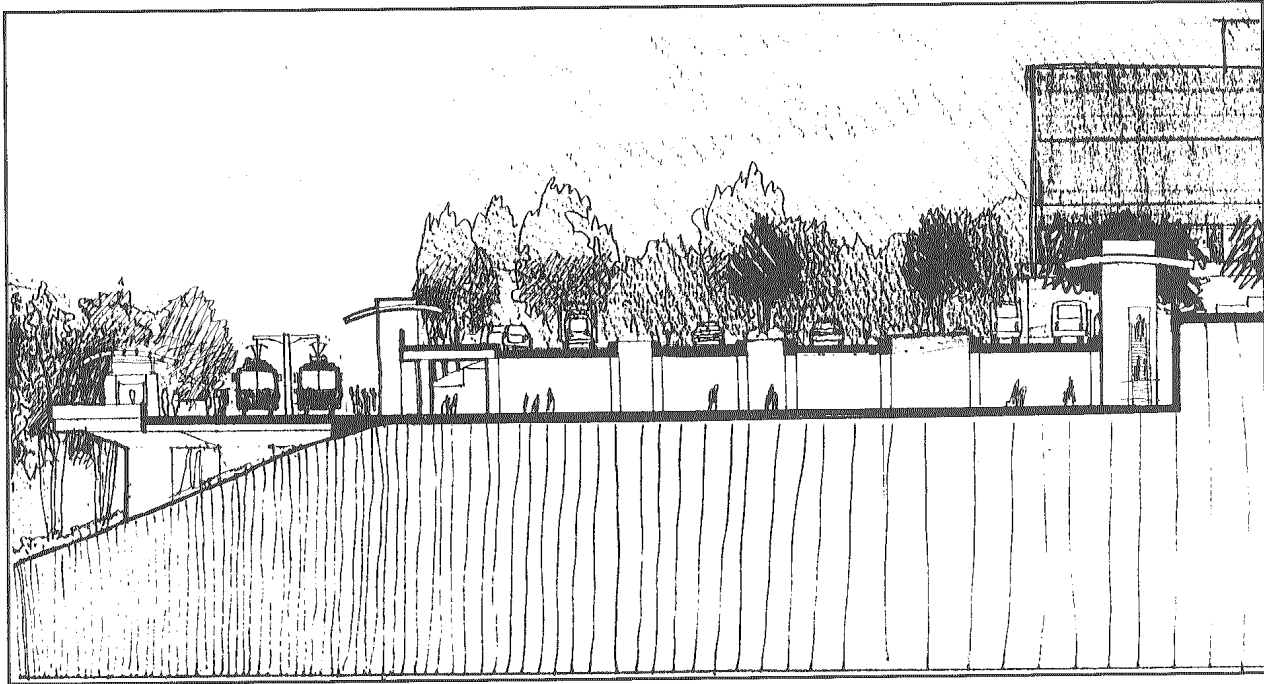


Figure 7.37

LRT station and Transit Plaza

## 7.8 BICYCLE CIRCULATION SYSTEM

The existing UCSD system will be expanded to provide access to all destinations in the Neighborhood. Figure 7.39 illustrates the new dedicated bicycle lanes at the edges of both sides of all major roads in the neighborhood. A new north/south path will connect Medical Center Drive South to Medical Center Drive North through Campus Point Plaza and the South Meadow.

The existing off-street bike path in the UCSD Meander that traverses the South Canyon will be modified to include the future Light Rail Transit Station on Medical Center Drive South. The path will connect to the on-street lanes and drop-off lanes for the Transit Station, as well as bypass the station.

## 7.9 UTILITIES INFRASTRUCTURE

To support future development, new central plant facilities will be required. Two alternatives were considered:

- 1. Split Plants in a Single Location Onsite:** Two plants would be constructed adjacent to one another on a site that is most efficient for both hospital and non-hospital facilities. This option is more efficient from a utility source point perspective, but would likely site the plant at some distance from the Hospital, the largest consumer of utilities.
- 2. Separate Plants:** Two plants would be constructed in separate locations most adjacent to the consuming facilities. This is a more flexible option for several reasons:
  - The Hospital expansion could incorporate its plant in a lower level at the same time it is expanded vs. built-out when non-hospital facilities require their own plant.
  - Most of the infrastructure connects directly to the Hospital, and while it requires added capacity, would not be affected by constructing a new facility upstream.
  - The non-Hospital plant could be incorporated into another building, or housed in a freestanding building, such as indicated in Figures 5.1 and 5.2 under the CR-7 reference.



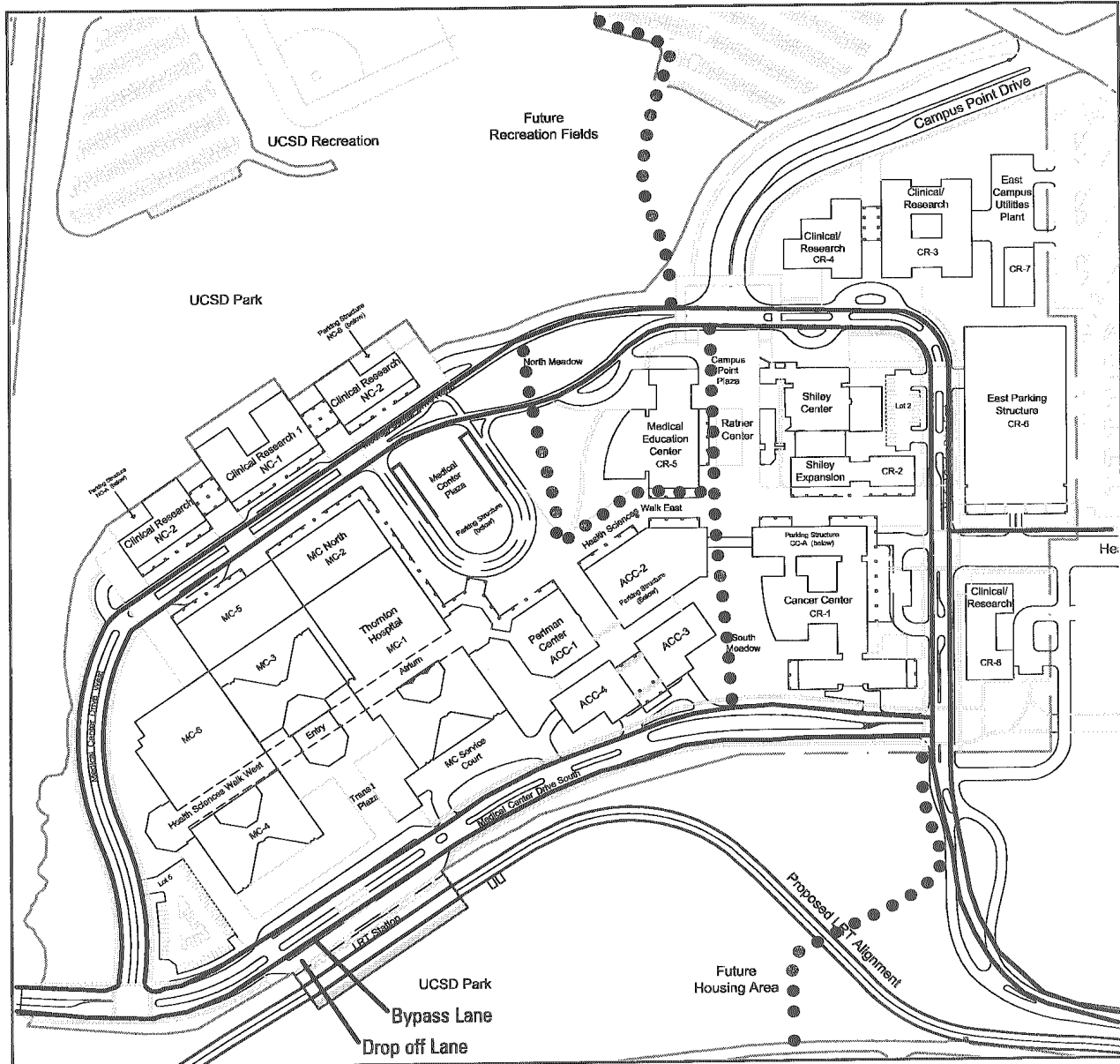


Figure 7.38

Bike paths and lanes

———— ECHS On-Street Bike Lanes

● ● ● ● ● ● Bike Path

## ACKNOWLEDGMENTS

### UCSD

Campus/Community Planning Committee  
Design Review Board  
ECHS Neighborhood Planning Advisory Committee  
Campus Planning Office  
    Nada Borsa, Project Manager  
    Sue Peerson, Senior Planner

### CONSULTANTS

Anshen + Allen, Architects  
    Keith M. Millay, Principal-in-Charge  
    Marty Waldron, Project Manager  
    Victor Fong, Associate

Wimmer Yamada Caughey, Landscape Architects  
    Pat Caughey

Color Consultant, Conover & Associates  
    Celia Conover

Kimley-Horn, Traffic Consultant  
    Herman Basmacıyan