

Warren College
Neighborhood Planning Study
University of California, San Diego

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with

BSHA

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WARREN COLLEGE NEIGHBORHOOD PLANNING STUDY

TABLE OF CONTENTS

	<i>Page</i>
EXECUTIVE SUMMARY	i
I. PURPOSE	
The Intent of the Neighborhood Planning Study	1
Warren College	1
Initial Planning Program	4
The Stuart Collection	5
Planning and Design Approach	5
II. THE CONTEXT	
The Campus Context	7
The College Context	9
Context Analysis	15
III. CONCEPT ALTERNATIVES	
Site Development Alternatives	17
Circulation Alternatives	21
IV. NEIGHBORHOOD PLANNING STUDY ELEMENTS	
Program Refinement	25
Land Use	29
Circulation	33
Urban Form	37
Landscape and Open Space	43
V. NEIGHBORHOOD DESIGN GUIDELINES	
Purpose	49
Using the Guidelines	49
Warren College Identity	49
Site Planning Guidelines	53
Architectural Guidelines	59
Landscape Architectural Guidelines	67
Circulation Guidelines	77

	<i>Page</i>
VI. WARREN MALL SCHEMATIC DESIGN	
Significance of the Mall	81
Environmental Conditions	83
Circulation	85
Design Theme	87
Experience	95
Materials	97
Lighting	97
Cost	97
VII. IMPLEMENTATION	
Phasing and Priorities	99
Review Bodies	100

APPENDICES

1. Program Allocation
2. Plant List
3. Warren Mall Cost Estimate

ACKNOWLEDGMENTS

LIST OF FIGURES

<i>Figure</i>	<i>Title</i>	<i>Page</i>
1.	Illustrative Plan for Warren College	ii
2.	Warren College Study Area	2
3.	Campus Context	6
4.	College Context	8
5.	Warren College and the Rustic Edge	12
6.	Warren Mall	12
7.	Architectural Character, EBU II	12
8.	Development Area	16
9.	Arc Concept	18
10.	Orthogonal Grid Concept	18
11.	Diagonal Concept	18
12.	Combination Concept	18
13.	Current Loop Road Alignment	20
14.	Master Plan Road Alignment	20
15.	Perimeter Road Alignment	20
16.	Proposed Road Alignment	20
17.	Future Road Alignment	22
18.	Illustrative Plan	24
19.	Site Plan	26
20.	Academic Land Use	28
21.	Residential Land Use	30
22.	Recreational Land Use	30
23.	Vehicular Circulation	32
24.	Shuttle Service	32
25.	Service Vehicles	32
26.	Emergency Circulation	32
27.	Pedestrian Circulation	34
28.	Bicycle Circulation	34
29.	Parking	34
30.	Urban Structure	36
31.	Landscape Concept	42
32.	Academic Core Court	44
33.	Housing Cluster Court	44
34.	Corridors	46
35.	District Definition	52
36.	Setbacks	54
37.	Loop Road Section	56
38.	Potential Loop Road Overcrossing	56
39.	Volumetric Definition	58
40.	Fracture Zone Surfaces	60
41.	Corridor Surfaces	60
42.	Interior Surfaces	60
43.	Vertical Cores	60
44.	Materials	62
45.	The Rustic Landscape	66
46.	The Transitional Landscape	66
47.	The Discrete Landscape	66
48.	Transitional Zone Landscape	68
49.	Gathering Areas	70
50.	Corridors	72

<i>Figure</i>	<i>Title</i>	<i>Page</i>
51.	Warren Mall	80
52.	Warren Mall Site Analysis	82
53.	Warren Mall Cross Section	84
54.	Warren Mall Narrative Description	86
55.	Warren Mall Plan (<i>foldout</i>)	89
56.	Warren Mall Phases (<i>foldout</i>)	91
57.	Warren Mall Detail Section	96
58.	Warren Mall Construction Guidelines	96
59.	Phase I Development	98
60.	Phase II Development	98
61.	Phase III Development	98
62.	Phase IV Development	98

TABLES

<i>Table</i>	<i>Title</i>	<i>Page</i>
1.	Initial Planning Program	4
2.	Proposed Program	27

Executive Summary

WARREN COLLEGE NEIGHBORHOOD PLANNING STUDY

EXECUTIVE SUMMARY

OVERVIEW

The Warren College Neighborhood Planning Study is divided into seven sections. The initial chapter, *Purpose*, describes the intent of the study, the existing program and the planning approach. Chapter II, *The Context*, describes the urban and environmental elements of the campus and college that gave basis to the generation of planning and design concepts. The third chapter, *Concept Alternatives*, discusses possible arrangements of program and spatial allocations on the site, leading to preferred solutions. Chapter IV, *Plan Elements*, describes the land use, circulation, urban form, landscape, and open space elements of the plan. The fifth chapter, *Design Guidelines*, provides the guiding principles and criteria for future implementation. Chapter VI, *Warren Mall*, describes a schematic design for Warren Mall while the final chapter, *Implementation*, outlines the phasing and priorities for college development. This Executive Summary highlights the major points of the Neighborhood Planning Study, the full report should be reviewed to completely understand the concepts, guidelines, and design direction.

A number of issues could not be resolved within the context of this study. The academic program cannot be fully accommodated within the study area, requiring development of 40,000 to 60,000 assignable square feet (ASF) of program space outside of the Study Area. The full parking program and recreational needs cannot be achieved unless considered jointly with sports facilities outside the college. Future planning studies for Fifth College and University Center will address in more detail the interface areas of these neighborhoods with Warren College and resolve the issues of program accommodation, shared parking, and recreational facilities raised in this planning study.

PURPOSE

The intent of the Warren College Neighborhood Planning Study, as established by the UCSD Master Plan, is to define the academic, recreational, service, and residential development areas, the character of the development, and the specific guidelines for future implementation.

Warren College, in its 45 acres, will primarily house the disciplines of Physics and Engineering with 197,000 ASF of academic program and 900 beds of undergraduate housing. The college is planned to grow to a total of 653,000 ASF of academic space and 1,500 housing beds. Six building sites within the college and one site in University Center have been identified to accommodate the majority of the academic program. One 4.5 acre site has been targeted for residential expansion within the study area.

CONTEXT

Warren College is unique in its location. Its natural environment, its landscape, and its existing architecture inspire a special neighborhood character. Warren College has an emerging urban structure of edges,

(All new building plans are schematic and do not represent the final design.)

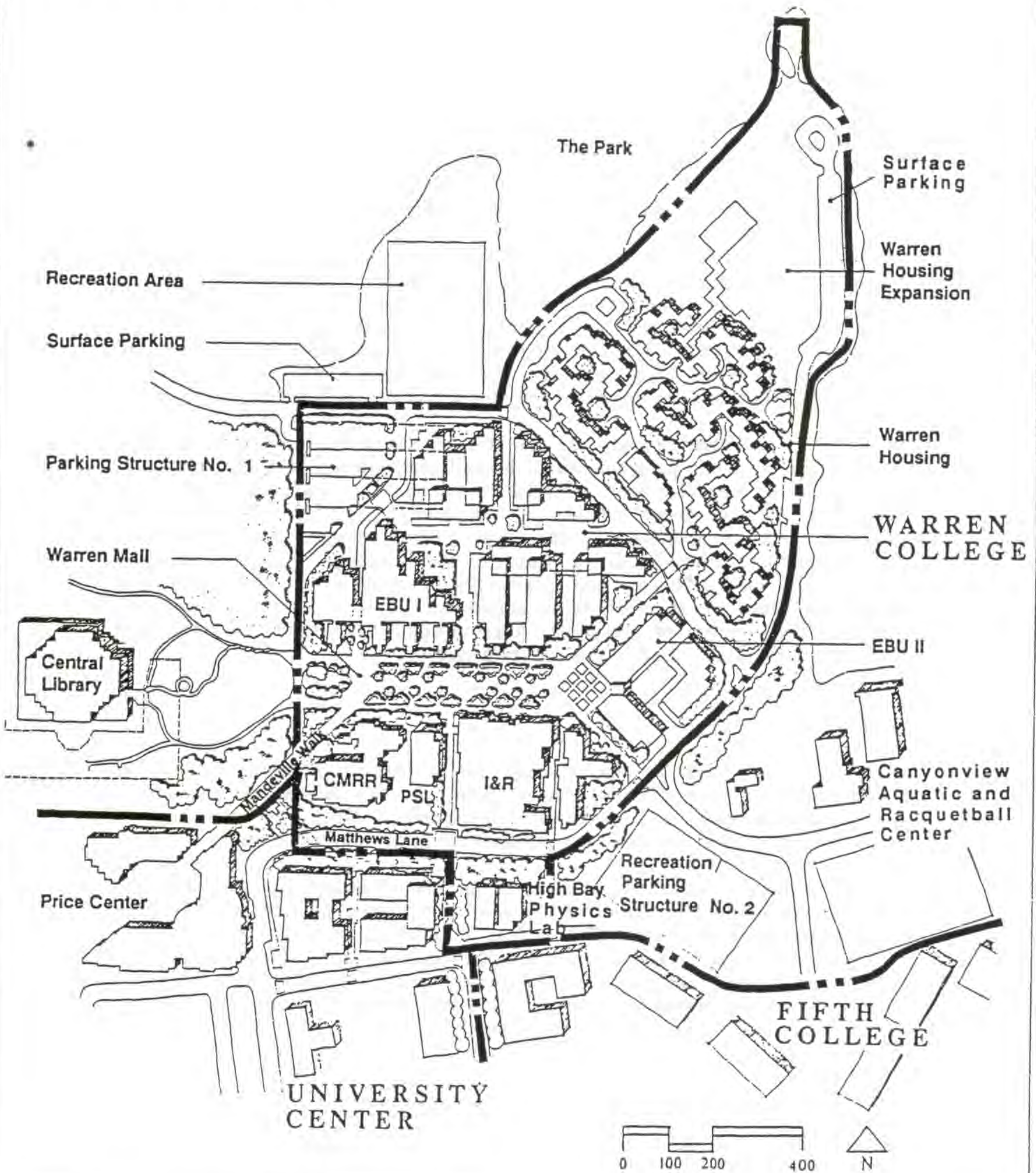


Figure 1 Illustrative Plan for Warren College

paths, nodes, gateways, and landmarks, which should be preserved and reinforced. It is furthermore the only area of campus to comprise two distinctive and contrasting grid patterns by which the buildings and paths are organized. The "Academic Grid" is established by the orthogonal pattern of existing academic development within the campus while the "Land Grid" is established by a diagonal orientation of the landform features. The developing urban form should respond directly to these grids. A strong urban structure within prescribed grid patterns should give the college the character of an organized, fitted arrangement of parts - of building masses, surfaces, landmarks and the space that binds them.

The image of the college is also dependent on the surrounding rustic and parkland landscapes. Enhancement and maintenance of these areas is viewed as critical to the development of a clear sense of identity, as is the preservation of the view of the Central Library from the adjoining canyons and Warren Mall.

CONCEPT

To develop a concept for the college, various parcelization alternatives were explored to address massing and site allocations on the development areas. Arrangements of the parcels in arcs, grids, diagonals, or the combination of both led to different development areas and circulation patterns. The campus wide loop road was analyzed for its preferred location as it corresponded to the specific planning for academic and residential areas.

A preferred plan was developed that establishes seven academic building sites following an orthogonal grid, major pedestrian routes following a diagonal grid, and the loop road between the academic and residential districts (*Figure 1*).

ELEMENTS

The initial program for the college was a total of 653,000 ASF (197,000 ASF of existing development and 456,000 ASF of new academic development). An assessment of the study area capacity during this planning study indicated that the study area was not able to accommodate the entire program. Rather, six academic sites will provide approximately 388,000 new assignable square feet within Warren College, yielding a 2.1 FAR development intensity. The site within University Center will provide a seventh site for a 60,000 ASF academic building. Additional development area, either in University Center or Fifth College, will be necessary to accommodate the remainder of the academic program, approximately 40,000 to 60,000 ASF. Approximately 500 cars will be parked in a parking structure and 100 to 150 cars in two small surface lots, leaving a deficit of 100 spaces relative to the total of 750 spaces initially proposed for Warren College. Additional parking may be provided in a shared structured facility, possibly at the interface of Fifth College. If approved, new residential development will provide 600 beds of undergraduate housing with no provision for graduate housing as shown in the Master Plan. Two recreational areas will replace Pryatel Field, one area to the north of Warren College and one area at the interface of Fifth College.

Vehicular circulation will be confined to the campus loop road and parking access roads. Service will be provided to all new academic and residential buildings off of the loop road through a system of service courts. The campus-wide shuttle will have two potential access points, located at the housing and at the north parking structure, to serve the College. Fire and emergency circulation will be provided on a minimum of three sides to every building.

Warren College is designed to be pedestrian oriented, with the internal circulation through corridors and gathering areas such as courtyards. The campus meander, at the edge of the rustic landscape, provides an informal path for additional circulation. Bicycle circulation follows the loop road around the entire perimeter of the college. Bicycle storage areas are provided at three key entries and within the housing clusters.

The urban form for Warren College can be characterized as a collection of framed linear paths and spaces regulated by two contrasting grid patterns and bounded by the rustic vegetation. Its rustic edges determine the college boundary while the districts are distinguished by their organization along either of the two underlying orthogonal and diagonal grids. Paths or "corridors" through the districts allow the pedestrian to experience the gathering areas or "nodes". Landmarks form the gateway to the college, using key buildings to demarcate the entries, such as the High Bay Physics Lab and the future building on the University Center site.

The objective of the college landscape is to raise the spatial and environmental quality of the place while expressing the college's engineering, physics, and research functions. The university-wide Master Plan calls for three landscape typologies within the campus: the Rustic, the Transitional, and the Discrete. The landscape concept for the College adheres to these types and distributes them in the neighborhood according to the proximity or distance to the scientific, research, and housing activities.

DESIGN GUIDELINES

The design guidelines for Warren College are a statement of design intent, not of design solutions. They should thus be used as an interpretive rather than prescriptive tool with which to judge future design proposals. Any specific recommendations, such as building setbacks and heights, are based on basic concerns for safety and environmental quality.

The design theme for the college is a recognized organization governing the college's urban form and contrasting with the surrounding rustic landscape. The densely sited buildings are interspersed with tree filled courts for gathering and sunny open spaces. Although large in scale, the concrete buildings will be rich in detail at the ground level for variety and interest. The landscape transitions from the flowing rustic vegetation surrounding the college to the controlled plantings in the central gathering areas. As a whole the design guidelines establish the parameters for continuing and expanding the character of Warren College.

housing courts in the discrete areas the planting, although xeric, tends to the colorful and more intricate to give visual interest. The three types give specific identity to the gathering areas, corridors and buffer areas of the college. The guidelines prescribe materials and patterns for each.

WARREN MALL

Warren Mall is designed as the college's symbolic center and major gathering area. It also functions as the main pedestrian connector from the entire campus, the Price Center, and University Center to the Warren housing. A staggered allee of eucalyptus frames the view to the library while creating amenable seating pockets under flowering canopy trees. The design permits adequate fire service to the various buildings that frame the Mall.

The design theme for the Mall is inspired by an art piece by Alexis Smith, *Snake Path*, which references the concept of Paradise Lost: man's expulsion from paradise following the temptation to eat from the "Tree of Knowledge." The Mall becomes the conveyor of knowledge from the library by which "Paradise," through scientific research and investigation, is reconstructed on its east end, opposite the library.

IMPLEMENTATION

The implementation of the Warren College Neighborhood Planning study and the proposed program will occur during the next 20 years based on demand, funding, and campus-wide growth policies. Spatial concerns also suggest priorities for phasing in order to provide a coherent structure to the college as it moves towards buildout.

The first project under the neighborhood plan will be the expansion of Warren College Housing. Improvements to the existing housing should occur simultaneously. Shortly thereafter, EBU II will begin construction, forming the terminus at Warren Mall. It is recommended that all improvements to Warren Mall be constructed at this time. Construction of additional housing and EBU II will remove most surface parking. The construction of a parking structure should occur before the third surface parking lot in Warren college is redeveloped for a recreational field.

The following chapters discuss the Warren College Neighborhood Planning Study in greater detail.

Warren College Neighborhood Planning Study

WARREN COLLEGE NEIGHBORHOOD PLANNING STUDY

I. PURPOSE

THE INTENT OF THE NEIGHBORHOOD PLANNING STUDY

The University of California, San Diego campus has been planned with five guiding principles providing the overall direction for future development. The *Neighborhood* is the distinct development cluster of related academic buildings and the housing and open space that accompanies them. The neighborhoods are theoretically connected by the *Academic Corridors*, allowing contiguity among related disciplines. At the hub of the campus is the *University Center*, the urban heart of campus and a center for much of its social and academic life. The campus neighborhoods are bound by *The Park*, the natural resources that give UCSD its special character, and threaded together by the *Connections*, the paths interconnecting the neighborhoods and tying the campus to the larger community.

Within the UCSD Master Plan, the advisory planning study that provides the basis for overall campus development, the neighborhood is defined as "...a place with common academic or campus functions...made up of related buildings and open spaces within a defined area with clear boundaries."

Each neighborhood is to have a Neighborhood Plan to detail the location of new academic and housing buildings, the character or "theme" of its architecture and open spaces, the patterns of the landscape, and the functional elements within the neighborhood, including the pathways, roads, parking, entries, services, and amenities.

The Warren College Neighborhood Planning Study addresses the character and development of Warren College, describes the design of Warren Mall, the predominant open space within the college, and presents design guidelines for future development of the architecture, landscape, and site development.

WARREN COLLEGE

Warren College is the fourth college to be developed at UCSD. Its 45 acre area is defined as the Warren College Neighborhood for this planning study. Located in the northeast corner of the central campus, east of the Central Library and north of University Center, its boundaries are formed by the canyons delineated as The Park at its northern rim, Fifth College and Canyonview Athletic Facilities to the southeast, and Matthews Lane to the south. The Central Library Addition upon its completion, will form the west boundary of Warren College. The campus loop road, Voigt Drive, bisects the college. The college is distinguished by Warren Mall, UCSD's only formal and axial spatial feature.

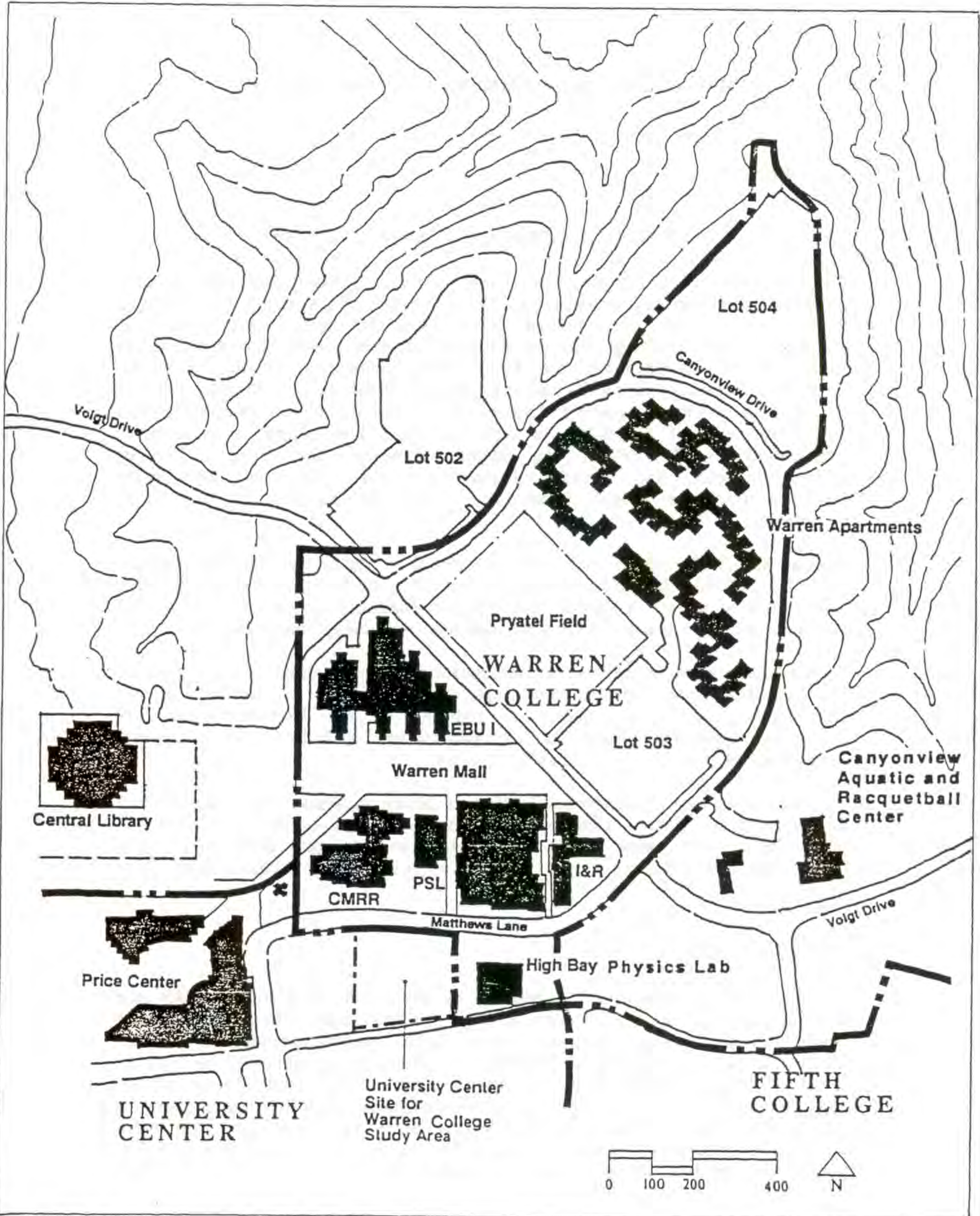


Figure 2 Warren College Study Area

The Neighborhood Planning Study area addresses the distinct college area as well as a one-acre site in the University Center area, the interface with Canyonview Recreation Complex, and the boundary with Fifth College to accommodate the proposed program (*Figure 2*).

Warren College is currently composed of 197,000 assignable square feet of academic instructional and research space, primarily housing the disciplines of Physics and Engineering. The existing academic buildings -- Engineering Building Unit I (EBU I), Instruction and Research Building (I&R), the Powell Structures Lab, and the Center for Magnetic Recording Research (CMRR) -- are located on Warren Mall. South of Matthews Lane is the High Bay Physics Laboratory at the interface of Fifth College and University Center.

The residential component of the neighborhood consists of 900 beds of undergraduate apartment housing in five- and six-story buildings. A student lounge for residents and commuter students is also provided within the housing complex. Pryatel Field, a multipurpose recreation field, currently separates the academic core from the housing. Three surface parking lots accommodating approximately 1,346 cars (Lot 502: 474 cars, Lot 503: 303 cars, and Lot 504: 569 cars) balance the remainder of the current neighborhood development.

INITIAL PLANNING PROGRAM

Over the next 20 years, the academic program is planned to increase from 197,000 assignable square feet (ASF) to 653,000 ASF. An additional 500-600 beds and a dining hall are to be provided for the undergraduate on-campus population. The new academic program of 456,000 ASF translates to approximately 750,000 gross square feet (using the ratio of .60 assignable square feet to gross square feet) to be accommodated in eight new buildings. The program does not propose any additional student support facilities, such as snack bars or sundry stores, beyond the existing lounge and future dining hall due to the proximity of the college to the Price Center.

Table 1 outlines this program, which has been used as the basis for the Warren College Neighborhood Planning Study. As the planning study was refined and tested on the available development area, the program was adjusted. A description of the program accommodations can be found in Chapter IV, Neighborhood Plan Elements (*Page 25*).

Table 1

INITIAL PLANNING PROGRAM

INSTRUCTIONAL AND RESEARCH SPACE:

	<i>OPTION 1:</i>	<i>OPTION 2:</i>
EBU II	80,000 ASF	80,000 ASF
APPLIED SCIENCE	80,000 ASF	50,000 ASF
EBU IV	50,000 ASF	75,000 ASF
PHYSICS I	100,000 ASF	100,000 ASF
PHYSICS II	46,000 ASF	71,000 ASF
SERF	60,000 ASF	40,000 ASF
ORU	<u>40,000 ASF</u>	<u>40,000 ASF</u>
<i>Subtotal:</i>	456,000 ASF	456,000 ASF

ADDITIONAL SPACE NEEDS:

Provost Office	10,000 ASF
Housing Expansion:	500 Undergraduate Beds 200 Graduate Beds
Parking:	750 Spaces (250 surface, 500 garage)
Recreational Fields: (Relocated)	2 (250' x 355')

THE STUART COLLECTION

Warren College is home to several sculptural pieces provided by the Stuart Collection, the campus-wide environmental art program. The artwork is site specific and is intended to lend character and individuality to the campus and neighborhoods. The Bruce Nauman neon sculpture, *Vices & Virtues*, is located along the top perimeter of the Structures Lab. Immediately to the west will be Alexis Smith's *Snake Path*, providing a connection from Warren Mall to the Library podium. Art has been important to Warren College as a complement to its scientific and research emphasis. Opportunity exists within the college for future pieces that express the academic functions and setting of Warren College.

PLANNING AND DESIGN APPROACH

The planning process was a collaboration of planning and design consultants, the Campus Planning Office, the Warren College Neighborhood Study Planning Advisory Committee, the Campus/Community Planning Committee, and the Design Review Board.

The goal of the Neighborhood Planning Study is to derive a form for Warren College that efficiently accommodates the academic and housing program while defining an image that is unique and appropriate to its engineering, physics, and scientific research functions. To this end, the derivation of the neighborhood plan engaged both functional and thematic design and planning issues over a five step process:

- . Analysis to determine the college's unique urban and landscape context;
- . Development of concept and plan alternatives;
- . Refinement and development of a preferred concept, and;
- . Development of design guidelines for the preferred concept that reinforces the college context and establishes a unique image for the college.
- . Development of a design plan for Warren Mall that expresses the unique college attributes and the function of the open space.

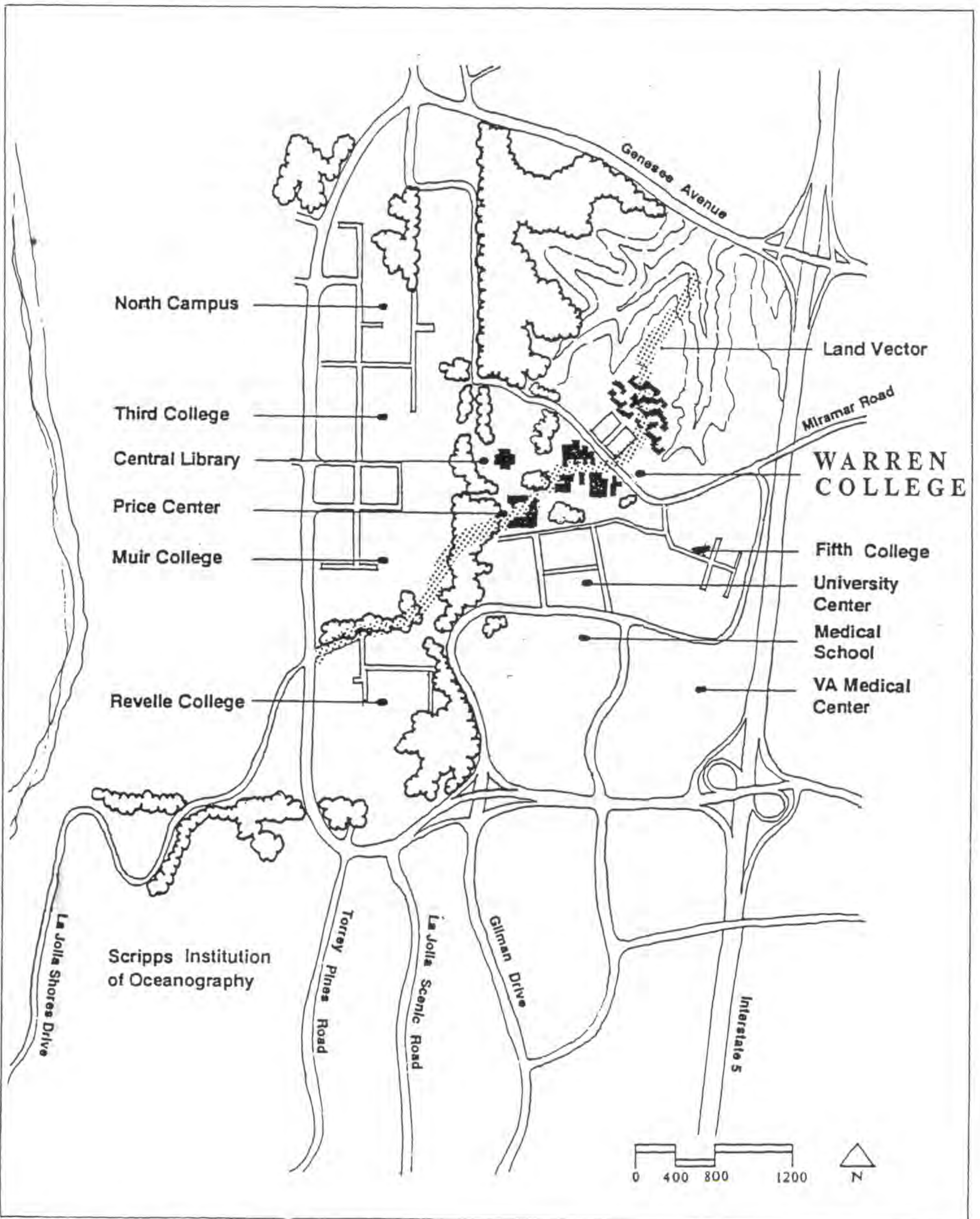


Figure 3 Campus Context

II. THE CONTEXT

THE CAMPUS CONTEXT

Published in 1963, the first UCSD Long Range Development Plan envisioned the campus as clusters of colleges. The initial colleges, Revelle and Muir, developed along a strong north-south grid following the alignment of North Torrey Pines Road. This orthogonal grid pervades much of the campus including, with a slight variation, the Matthews Academic and Administrative Complex, a remnant of the Camp Matthews military base. The eucalyptus parkland, traversing the campus from north to south, further reinforces the orthogonal grid (*Figure 3*).

Underlying this north-south grid of development is the pattern of the landform. The dominant north-south and east-west ridges and mesas have been carved by precipitation to form a network of canyons favoring a counter, diagonal orientation. Warren College is situated over a mesa along one of the more prominent of these canyons. The mesa acts as a terminus for a through-campus, diagonally-oriented circulation corridor that originates at the intersection of North Torrey Pines Road and La Jolla Shores Drive.

The predominant image of the UCSD campus is its native and naturalized landscape. The eucalyptus groves on the ridges screen development and create precincts of open space with a distinctive rustic feel. The groves limit long ground-level vistas while forcing a free-flowing, meandering circulation through them. The native vegetation, primarily Coastal Sage Scrub and related communities, follows the undisturbed slopes of the canyons. Being low in height, this vegetation allows open vistas from the promontories. The valuable native vegetation has been incorporated into The Park for study and preservation.

Warren College's exposure to the canyons' open, rustic character and diagonal orientation affords planning and design opportunities that are unique on campus.

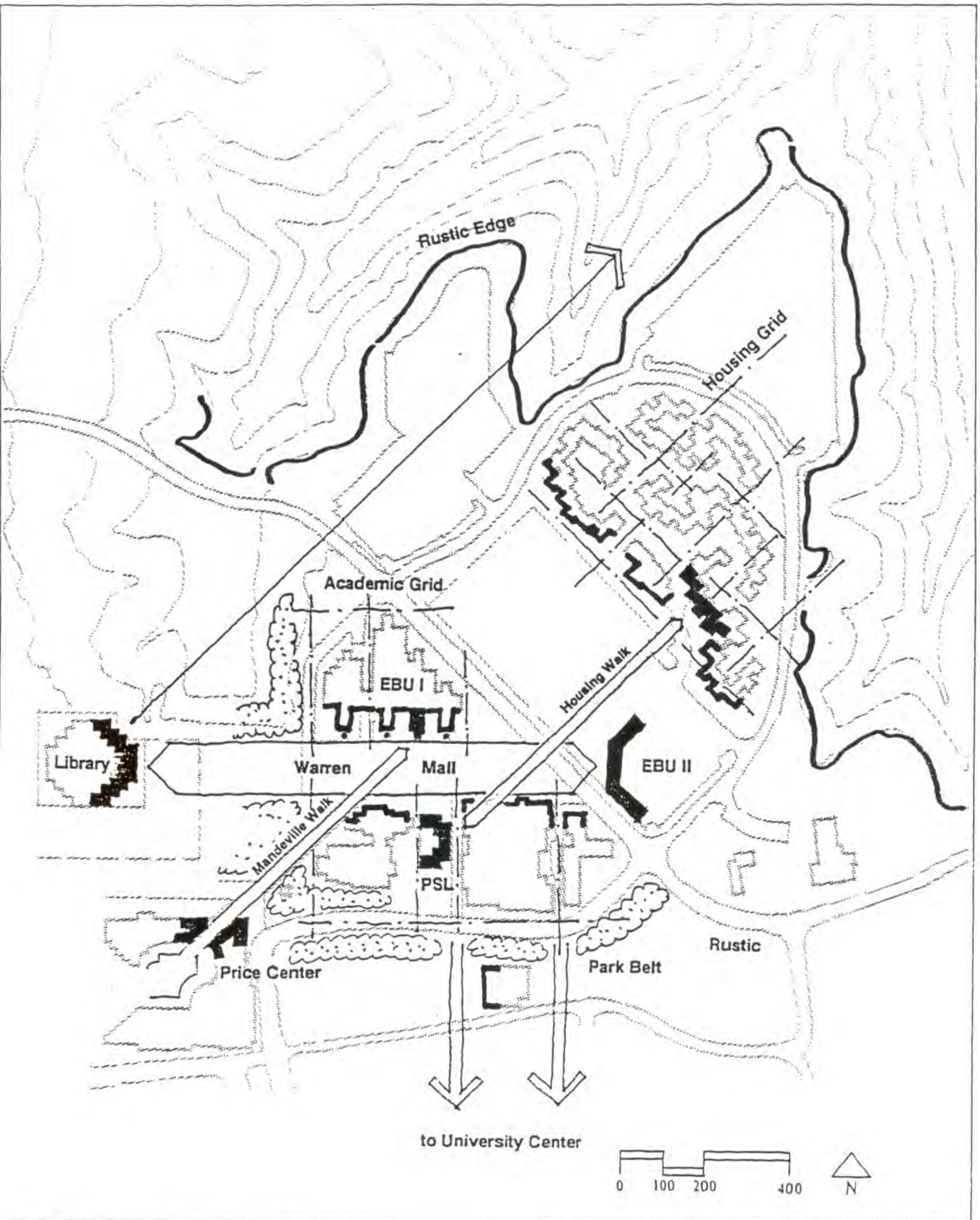


Figure 4 College Context

THE COLLEGE CONTEXT

Urban Form: Warren College is currently organized by a series of axes and terminal "events," or nodes, oriented along both the overall campus orthogonal grid and the diagonal circulation corridor. These axial paths and nodes are hierarchically arranged according to their function and spatial prominence (*Figure 4*).

Warren Mall is the principle organizing element for the orthogonal or "academic grid." Naturally all of the existing research buildings are likewise orientated on this grid. The north-south walks and vistas from Pepper Canyon and University Center extend through the core of Warren College to the open space beyond. These are perpendicular to the east-west axes of Matthews Lane, Warren Mall, and service roads and reinforce the orthogonal grid.

In contrast to the "academic" grid is the diagonal, or "land" vector, defined by Mandeville Walk and the path from the Mall to the residential complex. The former visually terminates on one of EBU I's vertical office wings while the latter points directly towards the neon sculpture atop the Structures Lab. The housing walk has the potential for continuing through the existing and new residential complexes to the tip of the mesa, thus strengthening the campus' unique diagonal corridor.

Environment: The college is shielded from the west by the central campus ridge and eucalyptus parkland. While the ridge mitigates excessive coastal winds from sweeping through the college, the mesa is nonetheless subject to sustained breezes that on cool days can become a source of discomfort for outdoor passive activities, such as group seating.

Building forms can have a significant impact on how the sun and wind either improve or diminish the level of environmental comfort. The Mall, which will be framed by buildings, will tend to channel and increase the velocity of the wind as it passes through it. However, its east-west orientation affords maximum sunlight penetration in the late fall and winter months, mitigating the wind impact. The Mall will nonetheless require further treatment to ensure that an optimum level of comfort for gathering is achieved.

The Landscape: Within the overall context of the campus landscape, Warren College is distinguished by its rustic landscape setting. To the north and east, the natural canyon, protected as The Park, forms a strong boundary (Figure 5). Views east from Warren Mall, on exceptionally clear days only, look toward the distant mountains, although much will be blocked by the construction of EBU II at the terminus of the mall. West of the college, the eucalyptus groves and ravines dominate the landscape and screen it from development to the west. Dispersed plantings of eucalyptus at the southern edge of the college do not contribute to the image of the college.

Powers Fault, a recorded geologic earthquake fault, runs through Warren College, paralleling the landform diagonal. Site specific investigations at each future building site will be necessary to determine the appropriate mitigations.

The views to the Central Library from both Interstate 5 and Genesee Avenue are considered important for campus identity and image. The viewshed passes through the northern portion of Warren College, including the northern parking lot (Lot 502) and a portion of EBU I. This viewshed also impacts approximately one acre of developable land in the academic core west of EBU I and the development potential of parking lot 502. Because of the existing mesa and canyon landform configuration, the view to the Library Forum is blocked, allowing only vistas to the main structure above. Therefore, any development in the one acre academic site must not protrude above the "hidden" zone, restricting development to below ten feet in height. The Master Plan proposes play fields on the parking lot within this viewshed rather than structures to further maintain the open views.



Figure 5 Warren College and the Rustic Edge

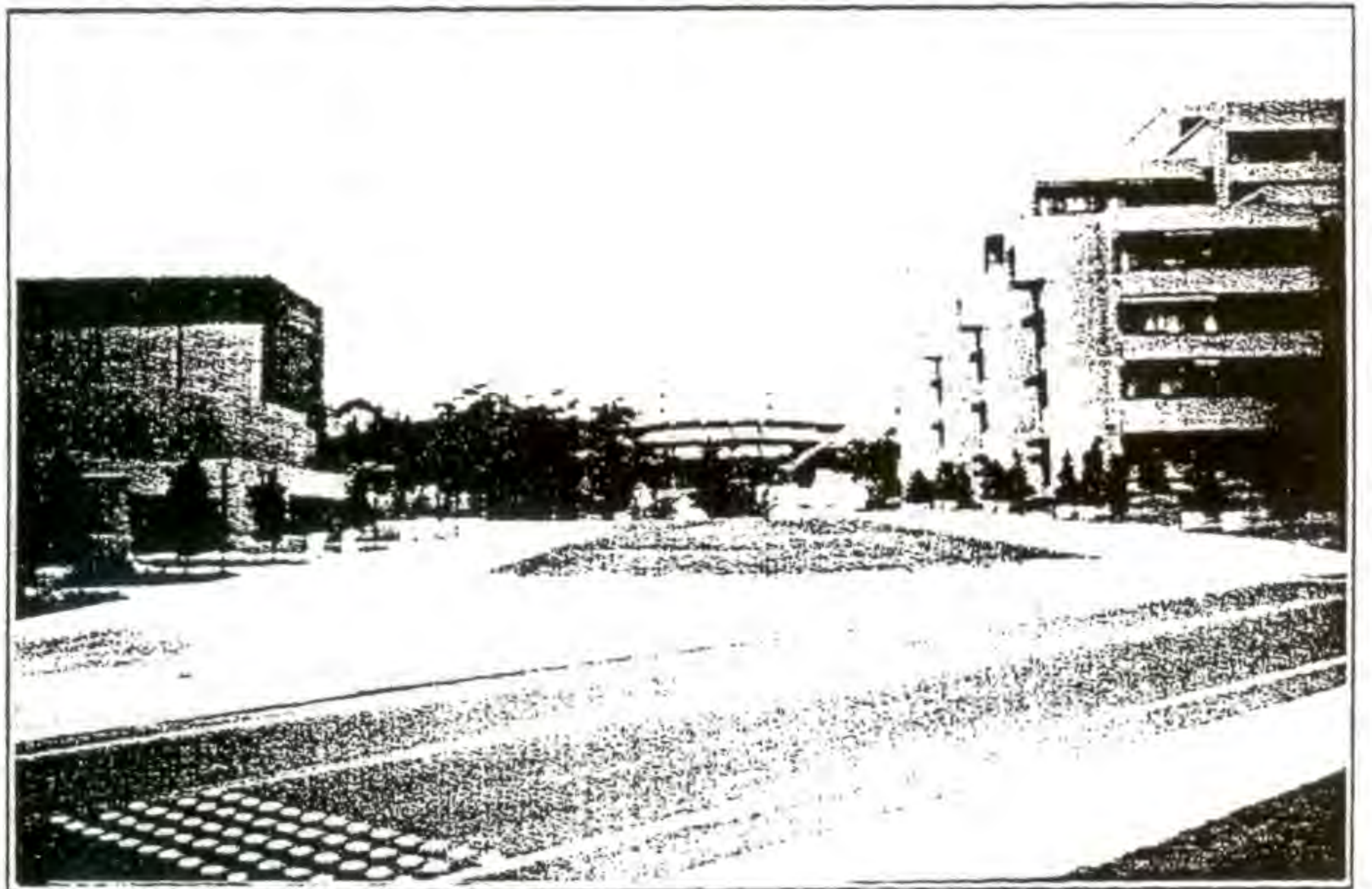


Figure 6 Warren Mall

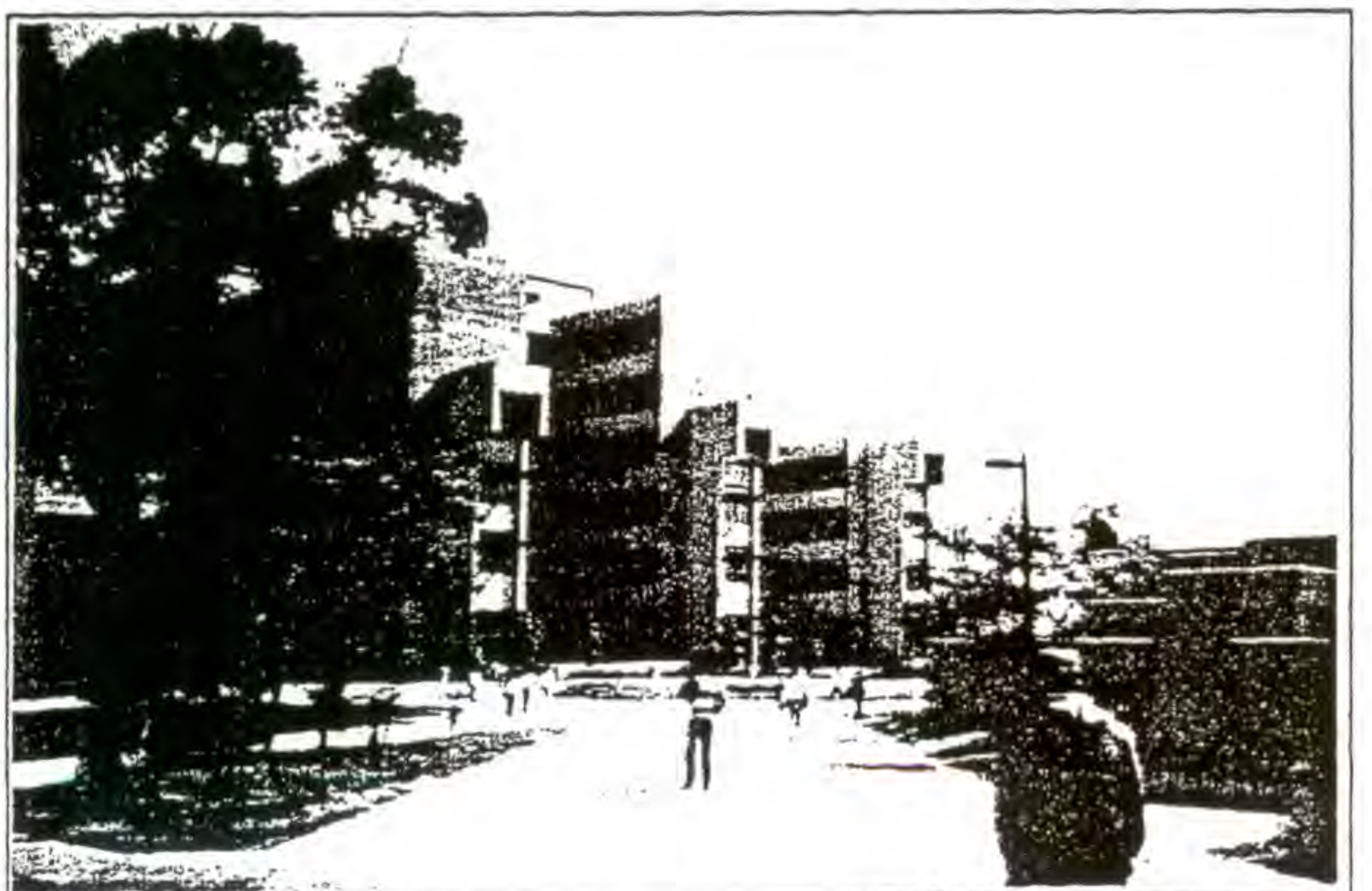


Figure 7 Architectural Character, EBU I

Architectural Form: Within Warren College, the context created by the existing buildings and spaces suggest parameters for new development. The consistent elements of the academic buildings are their frontage on Warren Mall, their building materials and color, their orthogonal expression of volumes and their systematic identification of functional parts, office wings, labs, circulation, etc.

Four existing buildings define the edges of Warren Mall: CMRR, Powell Structures Lab, and I&R on the south side, and EBU I on the north. The CMRR and I&R facilities are low-scale structures with large floor areas, each with limited windows facing onto Warren Mall. CMRR is two stories in height and expresses its entrances by overhangs and transparent walls while its mass is diminished by the stepping and recessing of its surface planes. I&R's large building area is four stories in height and divided into separate classroom and office wings. EBU I, on the north side of the Mall, is a large, seven-story facility that effectively breaks its mass by dividing the volume into smaller pieces, using glass to reflect the landscape, recessing parts of the facade, and punctuating its parapet line at circulation and entry points (*Figure 6*).

A palette of materials used on these buildings include concrete, either poured in place or precast, glass, and painted metal trims. Colors tend towards the grey and cream of concrete and the terracotta and reds of painted metals (*Figure 7*).

The existing housing at Warren College is dense and monotonous in character. The apartments are five- and six-story buildings arranged in connected clusters that focus on small courtyards. The courtyards help define private areas and mitigate against a uniform spatial experience. However, the unrelenting use of gray concrete and concrete block give the complex a massive, monotonous quality. Paint application and new landscaping is currently under consideration to improve its appearance.

CONTEXT ANALYSIS

The following is an analysis of the key contextual features that identify the college as a unique place in campus and how they should serve to generate a unique neighborhood identity

Structure: The arrangement of linear corridors focusing on architectural and art landmarks yields a clear, formal urban structure in Warren College. It suggests that a system of edges, paths and nodes organizes the place. This sense of structure should be developed further: open corridors should be framed, new corridors should be marked by visual monuments and nodes should be placed at major corridor connections. The neighborhood should feel like an organized, fitted arrangement of parts, surfaces, solids, and monuments and the space that binds them.

The Grids: Warren College is the only area of campus to comprise two distinctive and contrasting grid patterns by which buildings and paths are organized. One grid, oriented along the cardinal points of the compass, underlies the academic district of the college, while the other, on a 45 degree tilt, underlies the housing district. The urban form of the college should directly respond to these grids; they should be used, in contrast or in juxtaposition, as the basic structures that govern the placement of the "parts", as suggested above.

The Canyons: Warren College, more than any other neighborhood, is bounded by rustic landscape. It follows that the identity of the college is directly linked to the exposure and preservation of this landscape: views should be provided from inner areas of the college to the canyons and mountain views beyond; perimeter paths along the canyons should be provided; and, additional rustic vegetation should be planted where needed to establish a uniform boundary.

Districts: The College has two major land uses: academic and housing. While there should not be a physical division nor an incompatible appearance between them, each district should respond to its unique and particular form and environmental setting.

Library View: The Library is a major university and college landmark. Views to the library to and from Warren Mall and, more importantly, along the canyons to and from Genesee Avenue and I-5 should be preserved.

Warren Mall: The Mall is the college's central and major space. It is also the site where the diagonal "land" vector first encounters the academic grid and the site of two Stuart Collection pieces: *Vices & Virtues* and *Snake Path*. The design of the Mall should address and respond to these features. In addition, the Mall should become the college's primary gathering area. Considerations of wind and sun should guide the design to achieve a suitable level of comfort and amenity.

Several site plan alternatives were generated to test how the above attributes could best be respected and developed further. These are discussed in the following section.

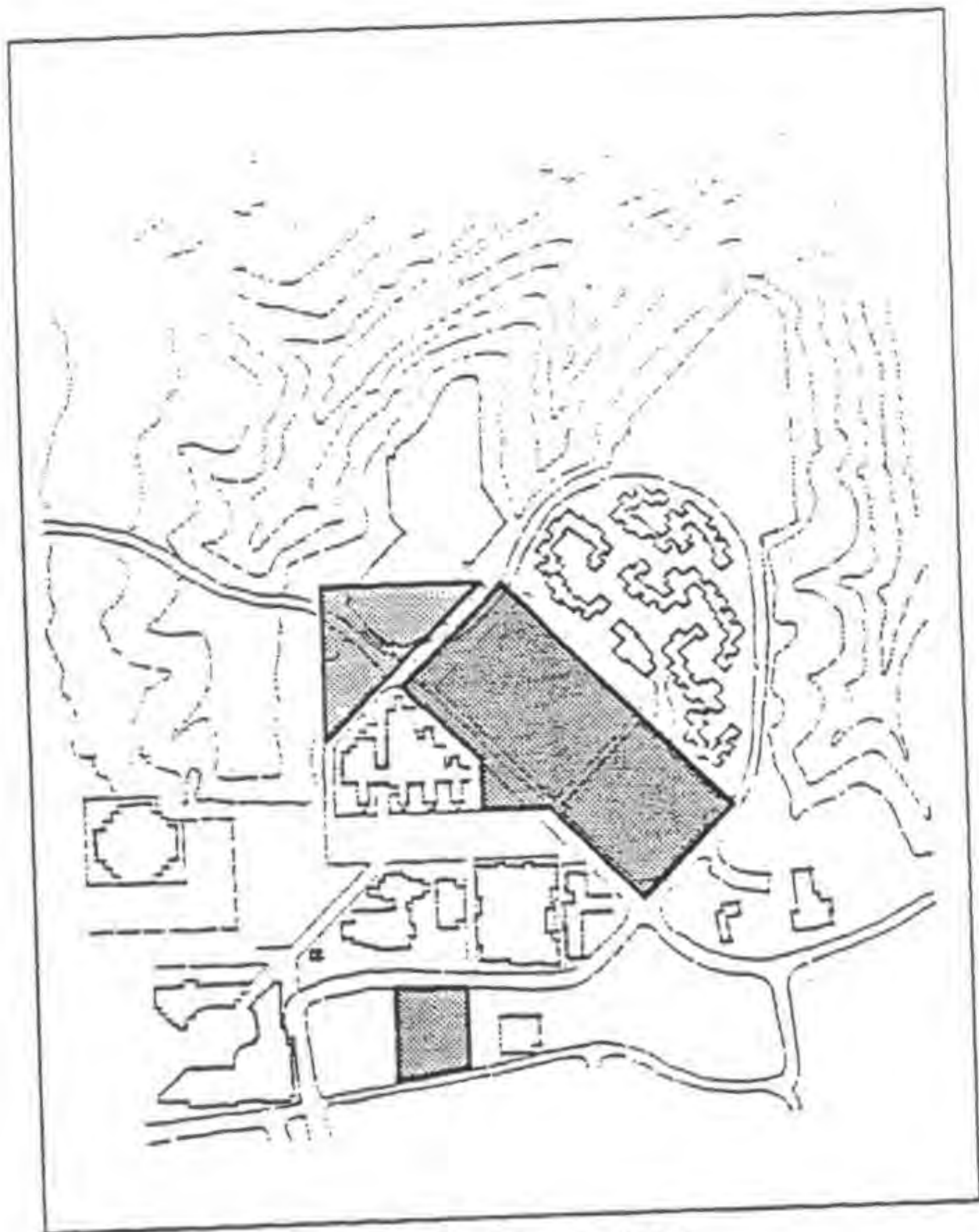


Figure 8 Development Area

III. CONCEPT ALTERNATIVES

The development of the concept plan first addressed the site massing alternatives and the circulation alternatives in order to generate the planar framework necessary to structure the three dimensional aspects of the plan. When combined, the site development and circulation recommendations presented a framework for concept refinement.

SITE DEVELOPMENT ALTERNATIVES

The academic development area of the study area totals approximately 7.5 acres and is located northeast of Warren Mall and in one site within University Center (*Figure 8*). Currently it is used for surface parking lots and Pryatel Field. Approximately 1.5 acres of this development area is impacted by the viewshed of the Central Library restricting any development to ten feet above ground level. This site is shown in the lighter tone on *Figure 8*.

Several land parcelization alternatives were generated and evaluated to determine an optimum level of program accommodation and response to the contextual attributes previously discussed.

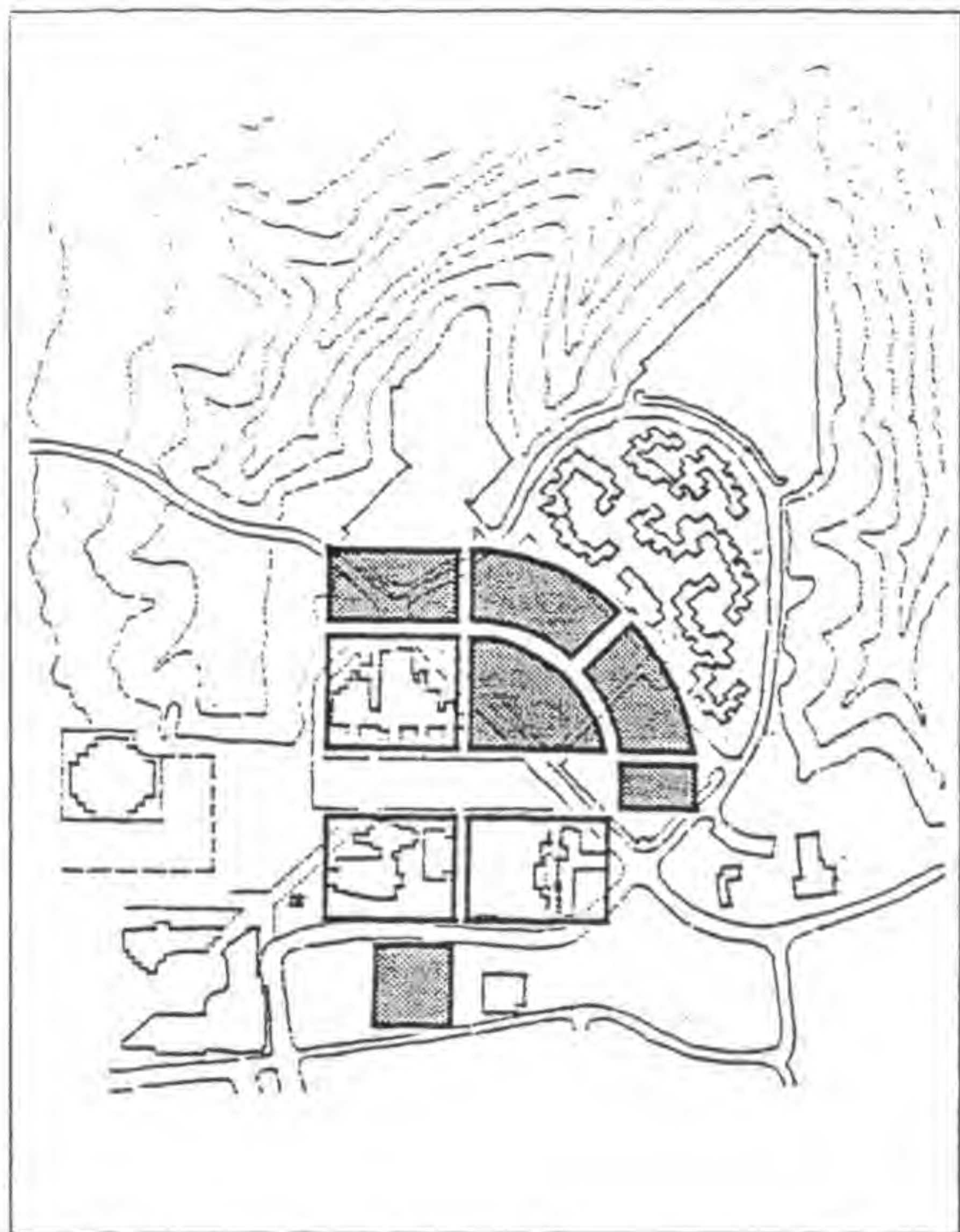


Figure 9 Arc Concept

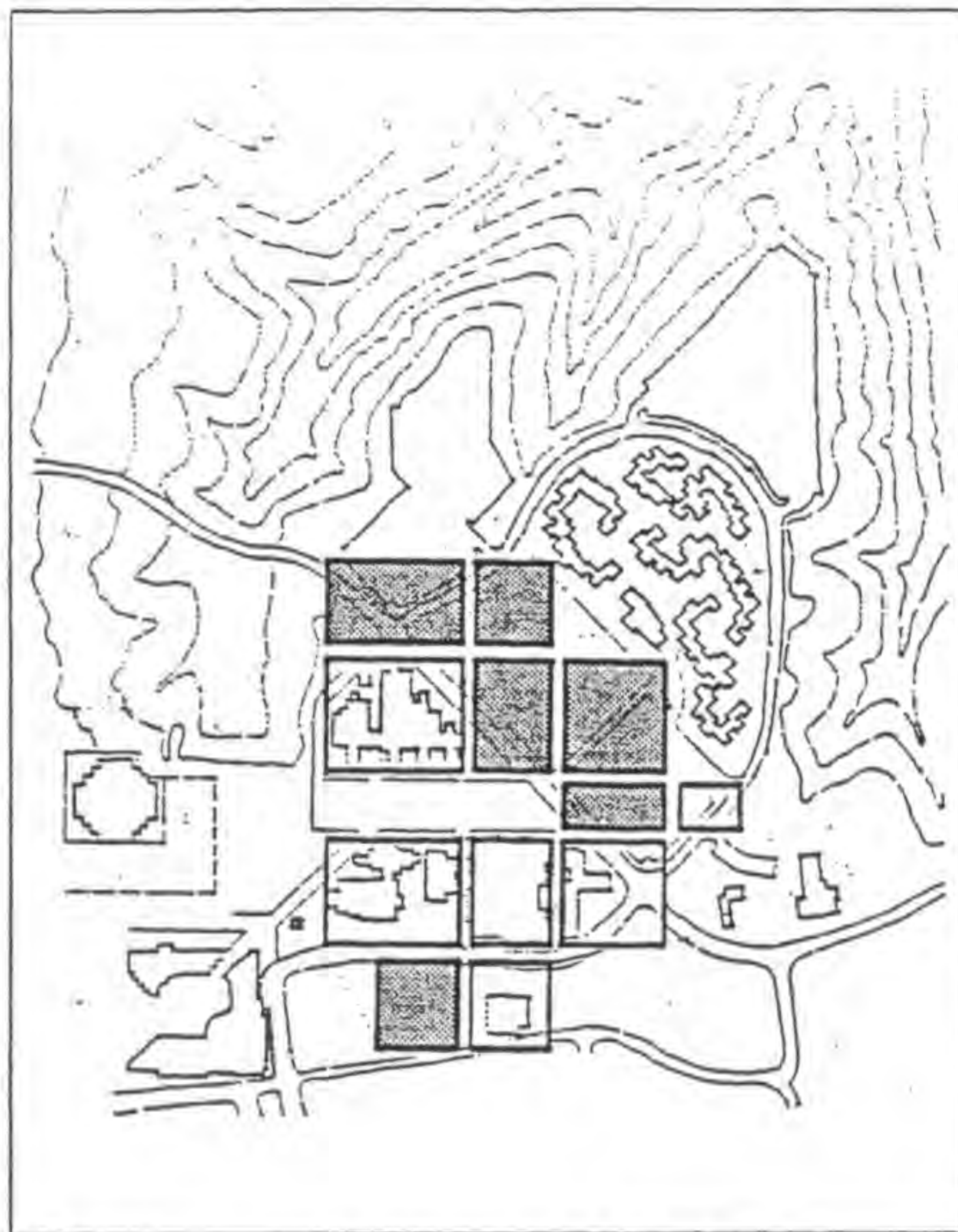


Figure 10 Orthogonal Grid Concept

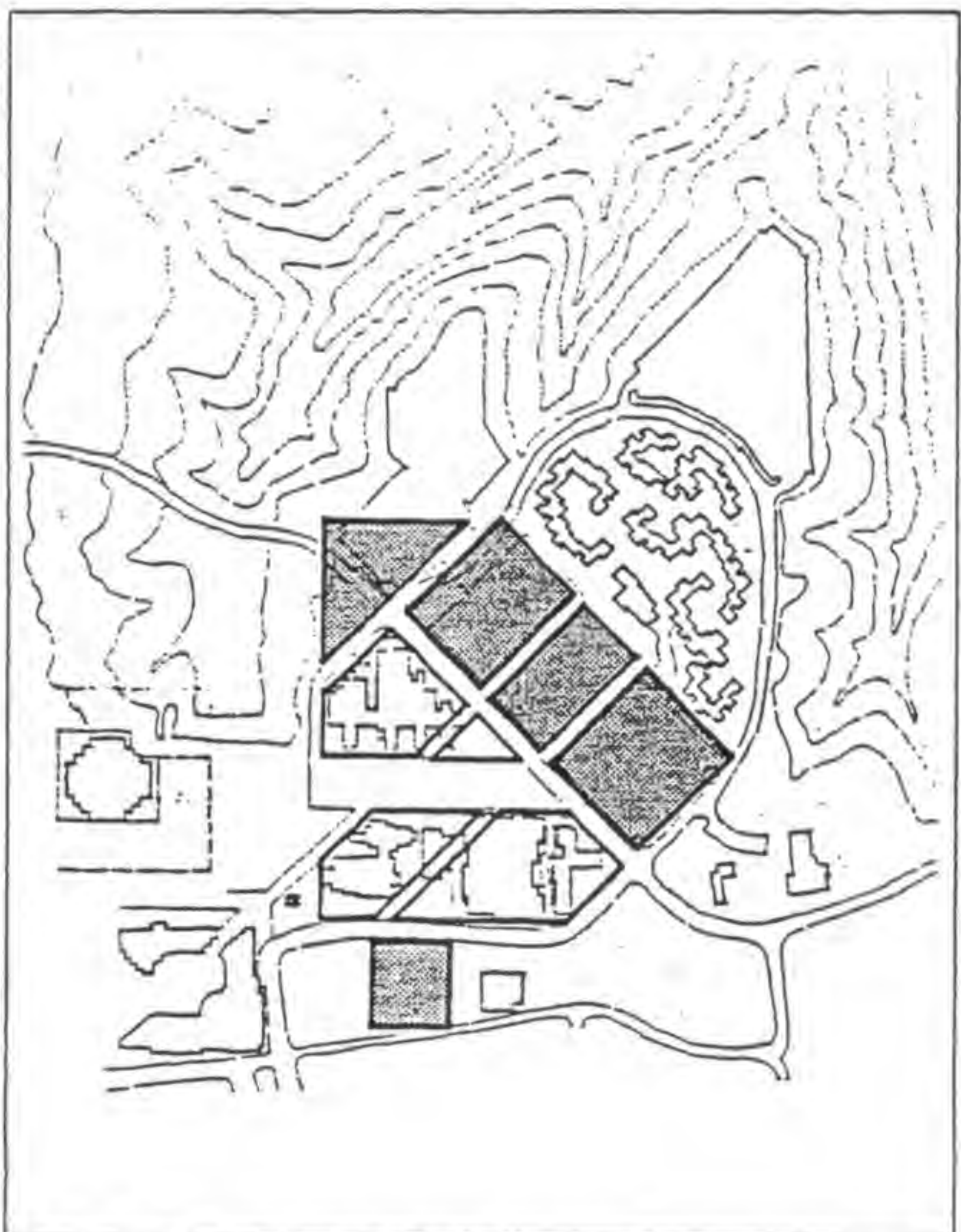


Figure 11 Diagonal Concept

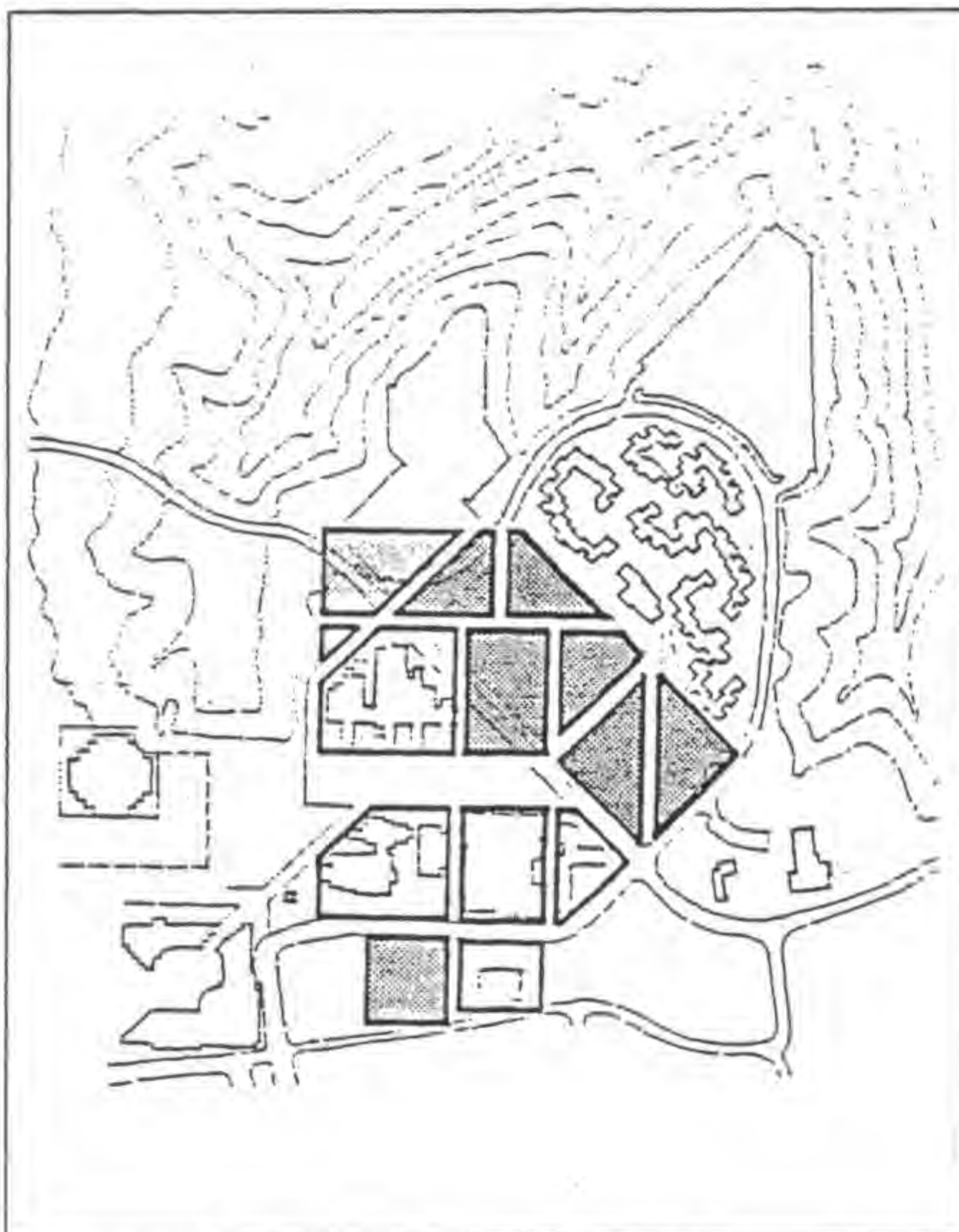


Figure 12 Combination Concept

- *Arcs:* One possible solution is a series of arcs that establish two circulation loops, an inner pedestrian loop and an outer vehicular loop. Although this geometry would give Warren College a unique form on campus, it does not relate to any of the current campus patterns or college organization structures (*Figure 9*).
- *Orthogonal:* A pure orthogonal grid when applied to the development area can divide the site into six logical parcels for buildings. Circulation, however, is not responding to the diagonal circulation and landform lines (*Figure 10*).
- *Diagonal:* A diagonal grid superimposed on the development area would structure the site into six development parcels as well, responding to the land vector and circulation routes but not addressing the academic grid already established with the buildings along Warren Mall (*Figure 11*).
- *Combination:* The combination of the orthogonal grid and the prevailing NE-SW diagonal as a form of organization offers the most flexibility in terms of development areas as well as direct circulation between the academic and residential areas. The academic buildings can be organized on the orthogonal grid while the circulation and housing both follow the land direction (*Figure 12*).

The combination plan was the recommendation of the review bodies and planning team for Warren College. It offered the order and flexibility for development parcels while it took on a unique character, special to the Warren College site in its emerging urban form.

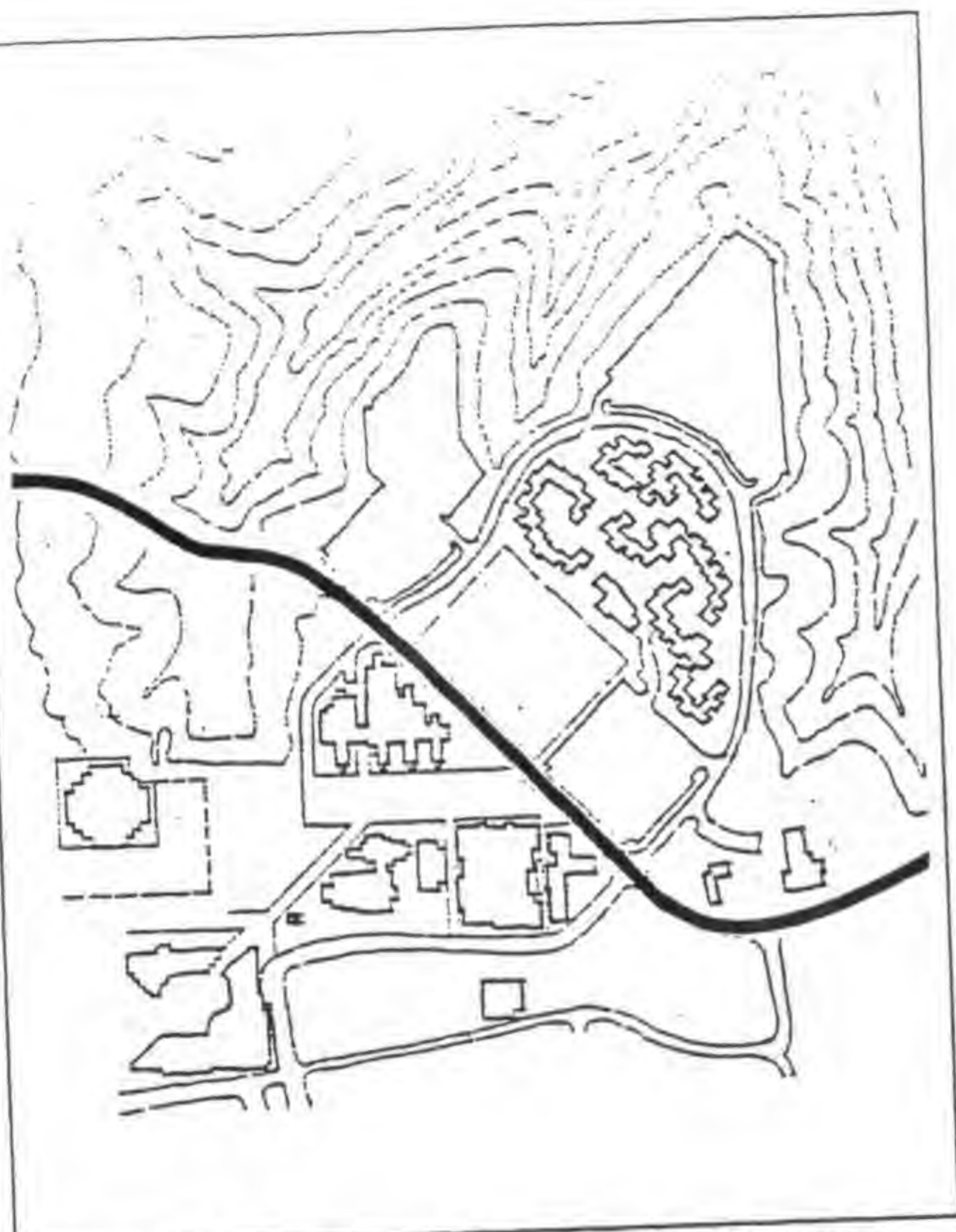


Figure 13 Current Loop Road Alignment

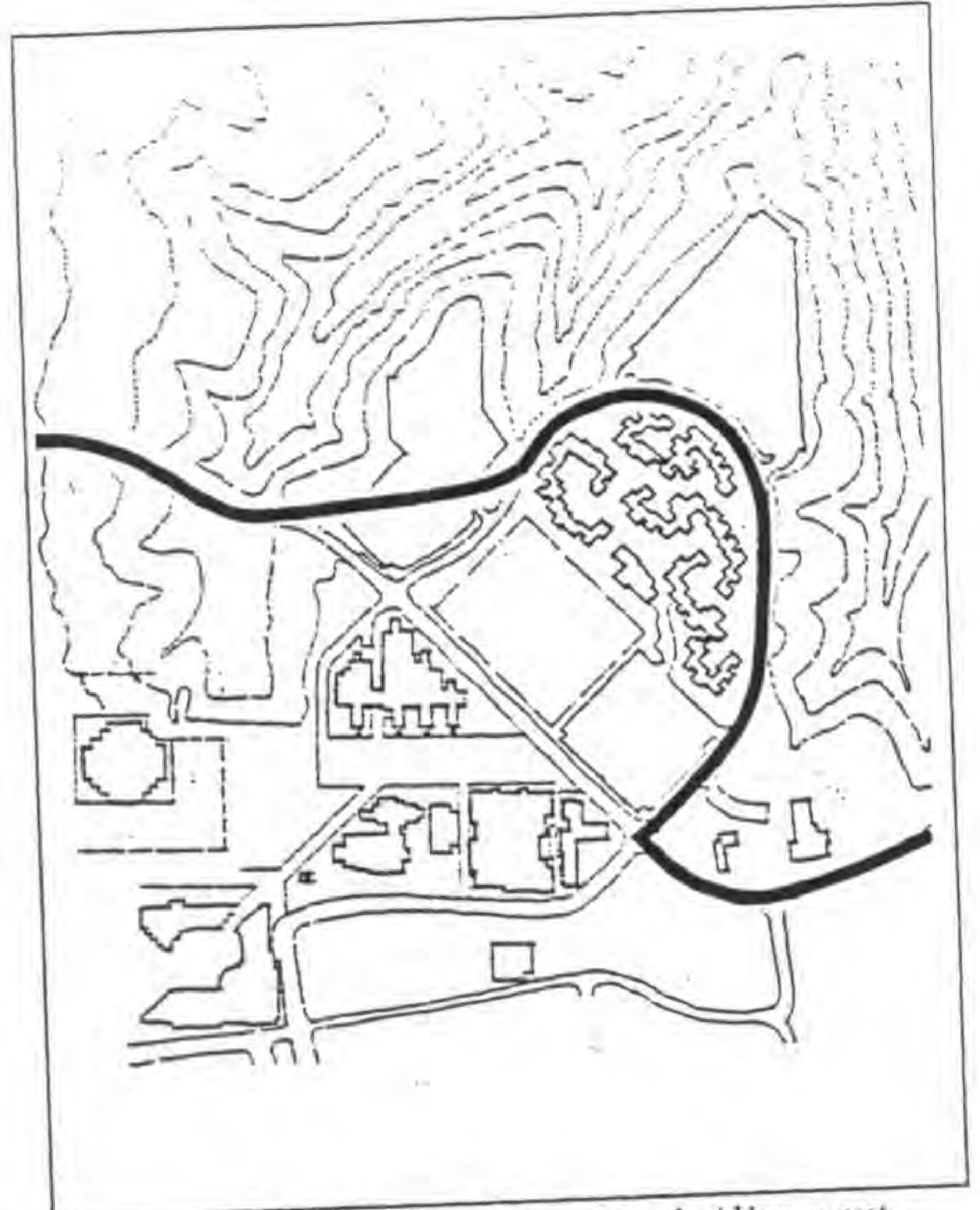


Figure 14 Master Plan Road Alignment

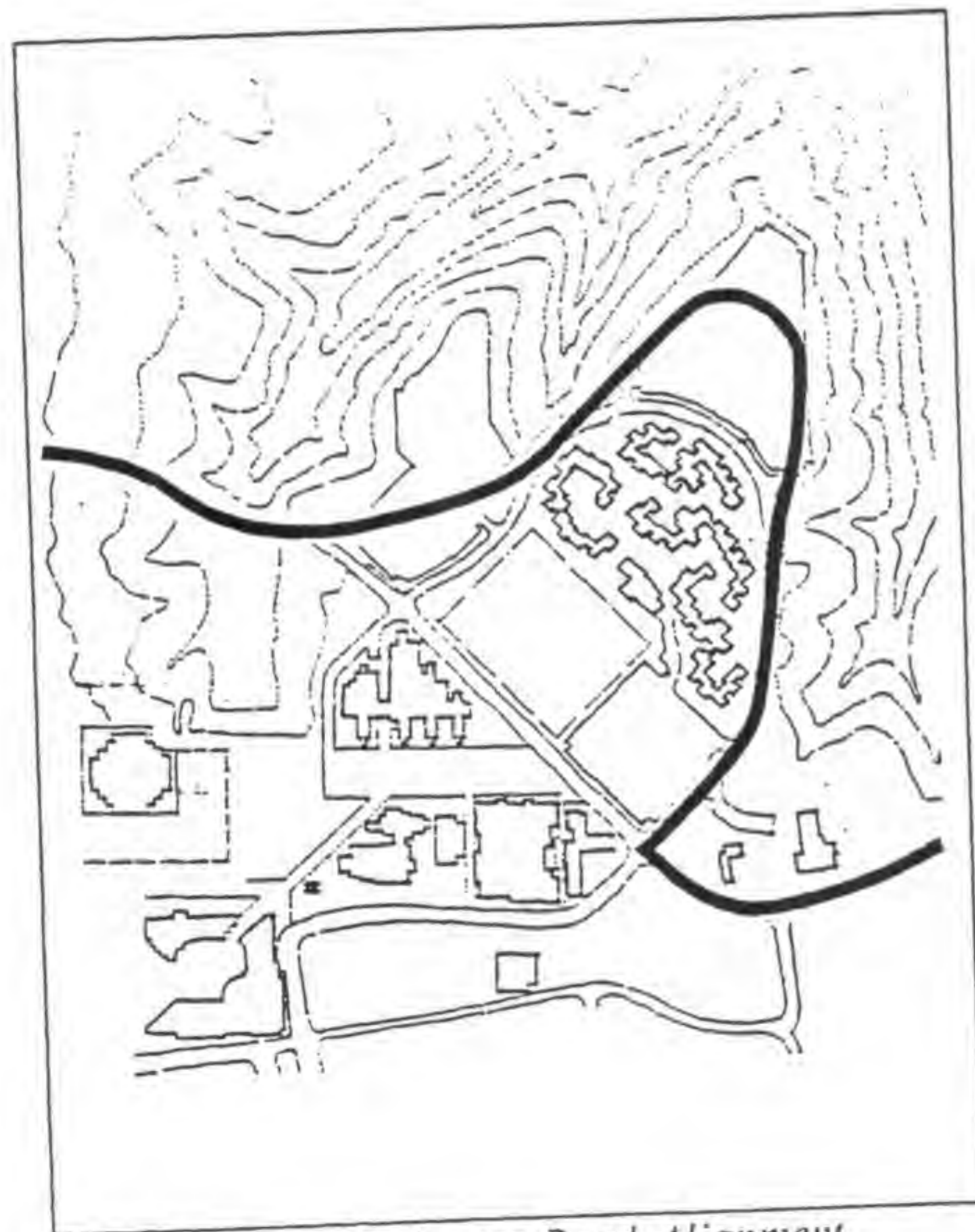


Figure 15 Perimeter Road Alignment

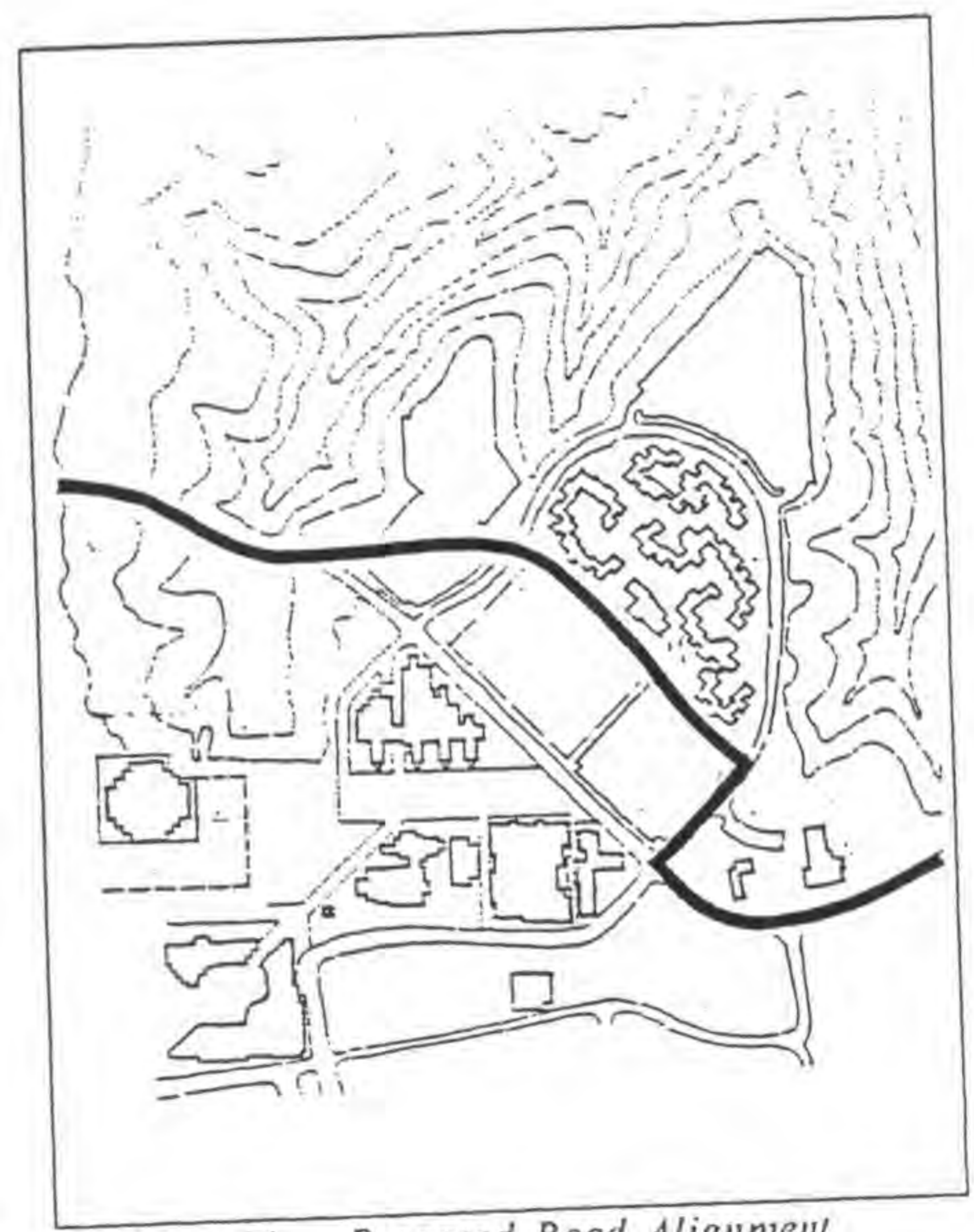


Figure 16 Proposed Road Alignment

CIRCULATION ALTERNATIVES

The campus loop road system passes through Warren College. The UCSD Master Plan delineates a route that passes to the northeast of the existing Warren Housing via Canyonview Road. As further development of planning and program refinements occurred, the neighborhood plan analyzed a variety of alternatives for connecting the loop road through Warren College. Each had different implications on land available for development and impacts on adjacent land uses.

- . *Current Alignment:* Currently the loop road passes diagonally through Warren College between EBU I and Pryatel Field (*Figure 13*). As this area becomes prime for academic development, the road would have to be depressed in order to maintain its current location. Decking or covering the roadway would allow for the continuation of Warren Mall and other pedestrian circulation routes across the top of the loop road. Unless it was completely decked, the academic development sites would also be impacted. Buildings on the deck would require additional consideration of vibration and ventilation. With preliminary cost estimates of \$3 to \$5 million, the viability of this solution appears infeasible.
- . *Master Plan Alignment:* Locating the loop road between the Warren Housing and the Housing Expansion site places the campus road in the midst of the residential area (*Figure 14*). Although this was the suggested route in the Master Plan, current program refinement and analysis suggest that this option would create a separation of the two residential areas.
- . *Perimeter Alignment:* Options exist for increasing the length of the loop road and extending it around the perimeter of the housing expansion site (*Figure 15*). In order to provide safe and efficient circulation, the perimeter routes would eliminate one to two acres of residential development areas and have some impact on the campus parkland.
- . *Proposed Alignment:* The loop road can also be located between the housing and academic core, rather than through the center of any one of these areas (*Figure 16*). This route is more efficient in terms of circulation although it reduces the academic area by approximately 1/4 acre. Because of underground utilities it is infeasible to depress the road or allow undercrossings although opportunities exist to provide overcrossings at major pedestrian connections when the traffic volumes and safety concerns dictate. Shuttle stops along the route can directly service both the academic and residential areas.

From the analysis of the circulation alternatives, the planning and review bodies accepted the proposed alignment between the academic core and the residential area. A separation of two land uses within the college was determined preferable to bisecting either of them. Noise is a concern and potential impact from any of the alternative alignments. If noise proves disruptive, a noise study should be prepared to assess the impact and recommend mitigations. Special care must also be taken during academic site design to visually buffer the housing and provide safe and efficient pedestrian and bicycle crossing.

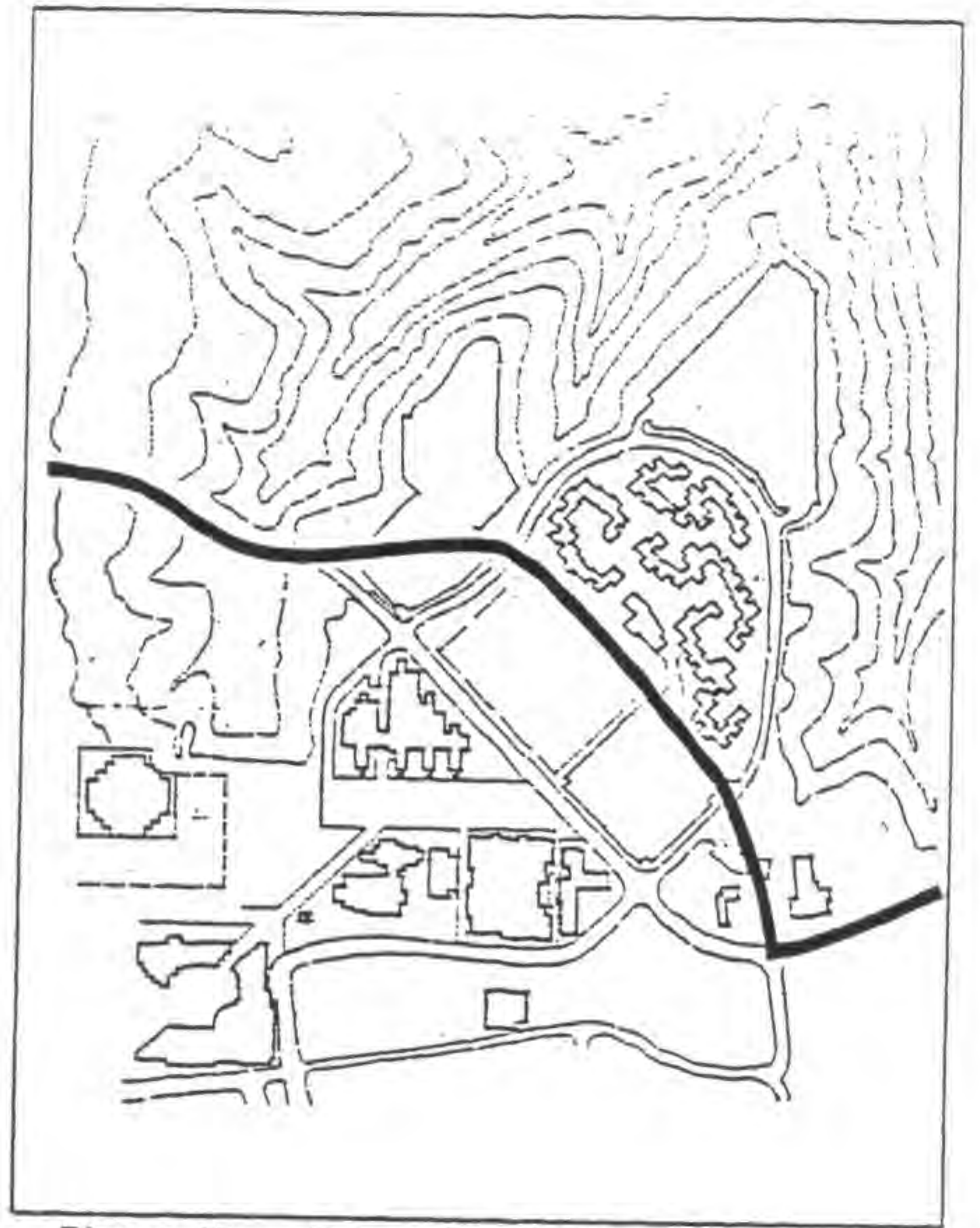


Figure 17 Future Road Alignment

(All new building plans are schematic and do not represent the final design.)

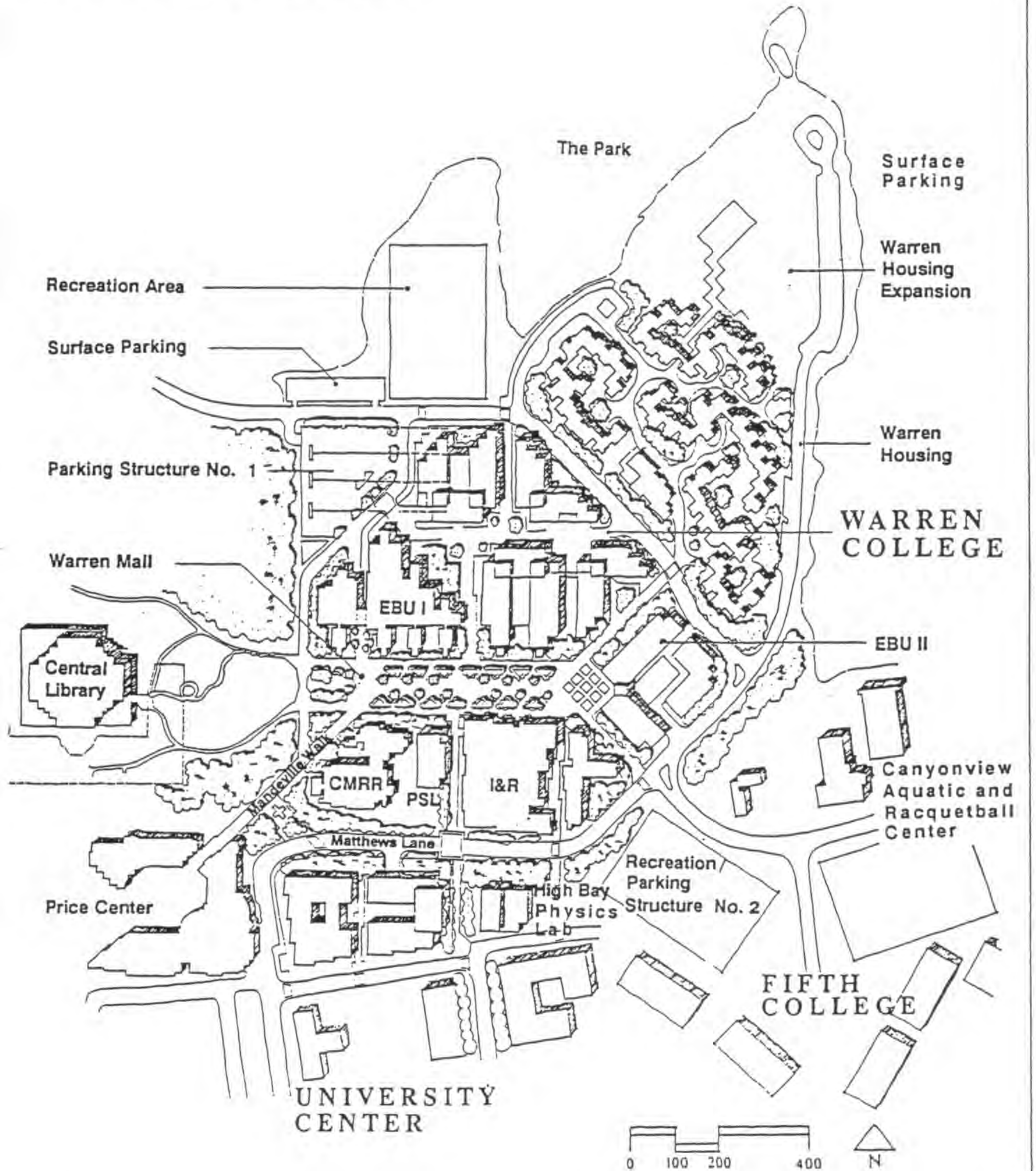


Figure 18 Illustrative Plan

IV. NEIGHBORHOOD PLANNING STUDY ELEMENTS

PROGRAM REFINEMENT

The preferred alternative and its subsequent refinement into a concept plan yielded six new academic sites within the academic core of Warren College, one academic site in University Center, a potential housing expansion northeast of the existing housing, a recreation field and small surface parking lot north of the academic core, a combination parking structure and recreation facility at the juncture of Warren and Fifth Colleges and a 500-car northern parking garage (*Figures 18 & 19*).

With the analysis of buildable areas, modifications to the initial planning program occurred (*refer to Page 4*). The academic district will be developed at a density of 2.1 FAR. This is similar to the FAR that will exist at Muir College if future development occurs there as envisioned in the Master Plan. The Warren College Neighborhood Planning Study recommends a revised program for the study area (*Table 2*).

The proposed program was based on the available building areas and siting requirements for the potential structures. One academic program element of 40,000 ASF to 60,000 ASF cannot be accommodated in the study area. Depending on the final program size, phasing, and demand, this could either be the ORU, Physics II, or EBU IV. Potential nearby sites should be explored for this facility. With the development of the Fifth College Neighborhood Plan, opportunities may exist to incorporate this academic program element at the interface of Warren and Fifth Colleges. The State Building Code currently restricts building heights to three floors for H-7 classified research laboratories. If the code is not amended, and if the H-7 classification is used in Warren College, the potential amount of academic program will be further reduced.

During EBU II's program development, a proposed 20,000 ASF computer facility was proposed for Site F, to the east of EBU II's Site E. A separate building for the Provost Office of 10,000 ASF was also not accommodated in the plan. A portion of an academic building, preferably at the ground floor on Warren Mall, is proposed for the Provost Office.

Because of viewshed restrictions on Parking Structure No. 1 and the desire to limit surface parking to a maximum of 150 cars, additional parking serving the college and the campus will be accommodated outside the study area. There is the option of replacing the southern recreational field with a combined 500-car parking structure partially below grade with top-level recreational courts. This would have greater cost implications than an above-grade structure without courts as less area would be available for parking and additional ventilation systems would be required. This option will be studied in further detail as part of the subsequent Fifth College Neighborhood Planning Study.

During the development of the Warren Housing Expansion architectural and programming tasks, refinements were made to the development area that eliminated the potential for an additional 200 beds of graduate housing on the northeastern most parcel of land. Rather, the undergraduate housing site is being readdressed to assess its capability of accommodating up to 600 beds in either dormitories or additional apartment units. This program change is subject to C/CPC approval.

(All new building plans are schematic and do not represent the final design.)

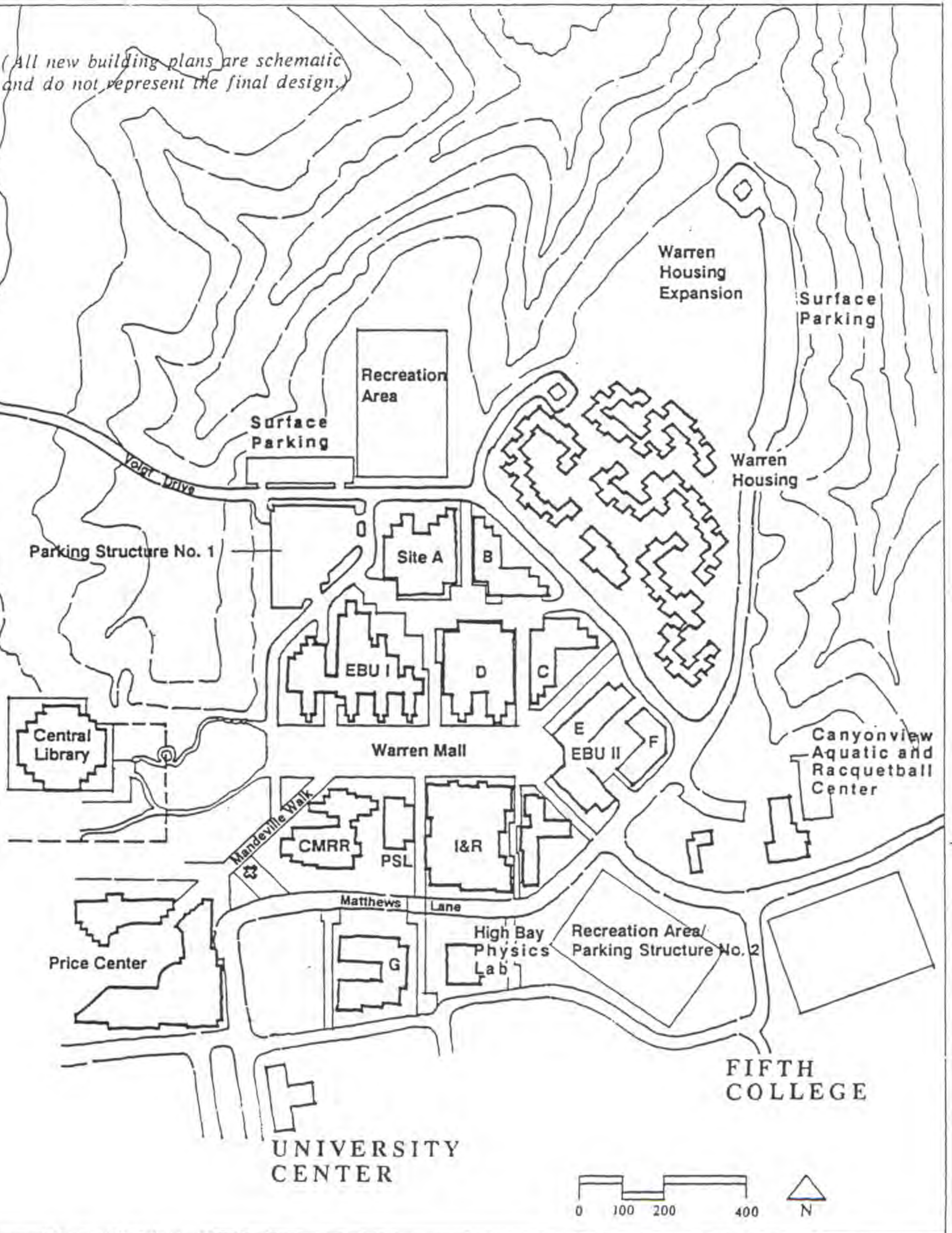


Figure 19 Site Plan

Table 2

PROPOSED PROGRAM

INSTRUCTIONAL AND RESEARCH SPACE:

<i>FACILITY</i>	<i>SPACE ALLOCATION</i>	<i>SITE</i>
EBU II	80,000 ASF	Site E
APPLIED SCIENCE	80,000 ASF	Site A
EBU IV*	50,000 ASF	Site B or C
PHYSICS I	100,000 ASF	Site D
PHYSICS II*	46,000 ASF	Site B or C
SERF	60,000 ASF	Site G
ORU*	40,000 ASF	Site B or C
Computer Facility*	<u>20,000 ASF</u>	Site F
<i>Subtotal:</i>	476,000 ASF	
 <i>ADDITIONAL SPACE NEEDS:</i>		
Provost Office	10,000 ASF	Within Physics I or other Academic building at ground level
Housing Expansion:	500-600 Beds	4.5 acre site
Parking	650 cars	100 - 150 surface stalls: 50-100 at dormitories, 50 north of academic core. Parking Structure No. 1: 500 cars north of EBU I, partially under Site A.
Shared parking**	500 cars	Parking Structure No. 2: 500 cars at southeastern corner.
Recreational Fields	1	on parking lot 502 (250' x 355')
Recreational Tennis Courts**	8-10	on Parking Structure No. 2 deck

* Study area cannot accommodate all of the proposed facilities. Approximately 40,000-60,000 ASF of program space will have to be developed outside of the Study Area, or be included in other buildings.

** Shared use of parking and recreation subject to further study.



Figure 20 Academic Land Use

LAND USE

Academic: Approximately five acres are identified for academic building sites in Warren College study area (*Figure 20*). The remainder of the 7.5 acres of developable area is used for buffers, setbacks, courtyards, and circulation paths, or is within the 1.5 acre site restricted by the library viewshed. These building sites are arranged within the orthogonal grid, with the exception of EBU II which seeks to resolve both the academic grid and the land diagonal with its siting and form. Seven academic building sites range in footprint area from 21,000 square feet to 50,000 square feet accommodating the academic buildings listed in Table 2, Proposed Program. The academic program will displace Voigt Drive, Pryatel Field, and a parking lot.

- *Site A:* Site A has approximately 36,000 square feet of buildable area, excluding the road and viewshed setbacks. It can accommodate a five floor building with a partial basement level. Two levels of parking would be below the remainder of the building. Assuming a 70 percent site coverage, Site A will provide for a building of approximately 85,000 ASF.
- *Site B:* Site B has approximately 25,500 square feet of buildable area, excluding the road setbacks. It can accommodate a building stepping in height from west to east from five floors to three floors. A basement level would be under the entire building. Assuming a 70 percent site coverage, Site B will provide for a building of approximately 53,000 ASF.
- *Site C:* Site C has approximately 21,000 square feet of buildable area, excluding the road setbacks. It can accommodate a building stepping in height from five floors to three floors, with the lower heights along the loop road. A basement level would be under the entire building. Assuming a 70 percent site coverage, Site C will provide for a building of approximately 50,000 ASF.
- *Site D:* Site D has approximately 42,000 square feet of buildable area. It can accommodate a five floor building with a full basement level. Assuming a 70 percent site coverage, Site D will provide for a building of approximately 100,000 ASF.
- *Sites E and F:* Sites E and F together total approximately 60,000 square feet of buildable area. Site E, the majority of the area, has been reserved for EBU II, an 80,000 ASF building with a height of four to five floors. Site F is suitable for the 20,000 ASF Computer Facility with a height of three to four floors. Both buildings would have basement levels.
- *Site G:* Site G, in University Center, consists of approximately 31,000 square feet of buildable area, excluding the required setbacks and buffers from Matthews Lane as stated in the University Center Design Guidelines. It can provide for a building stepping from five to three floors with a full basement. With a 70 percent site coverage, Site G will accommodate the 60,000 ASF SERF Building.

A detailed description of the program allocation based on floor levels and efficiency ratios can be found in Appendix I.

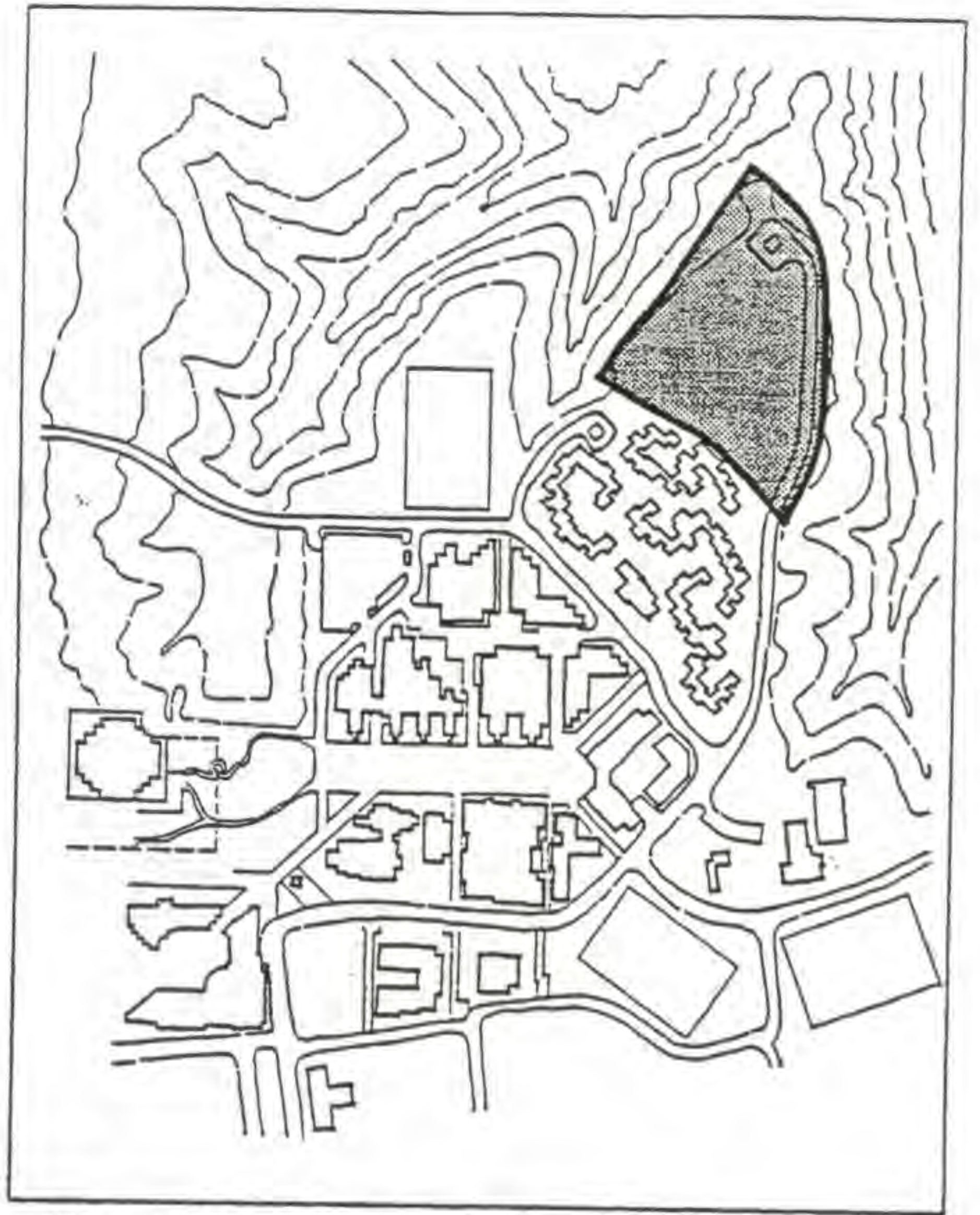


Figure 21 Residential Land Use

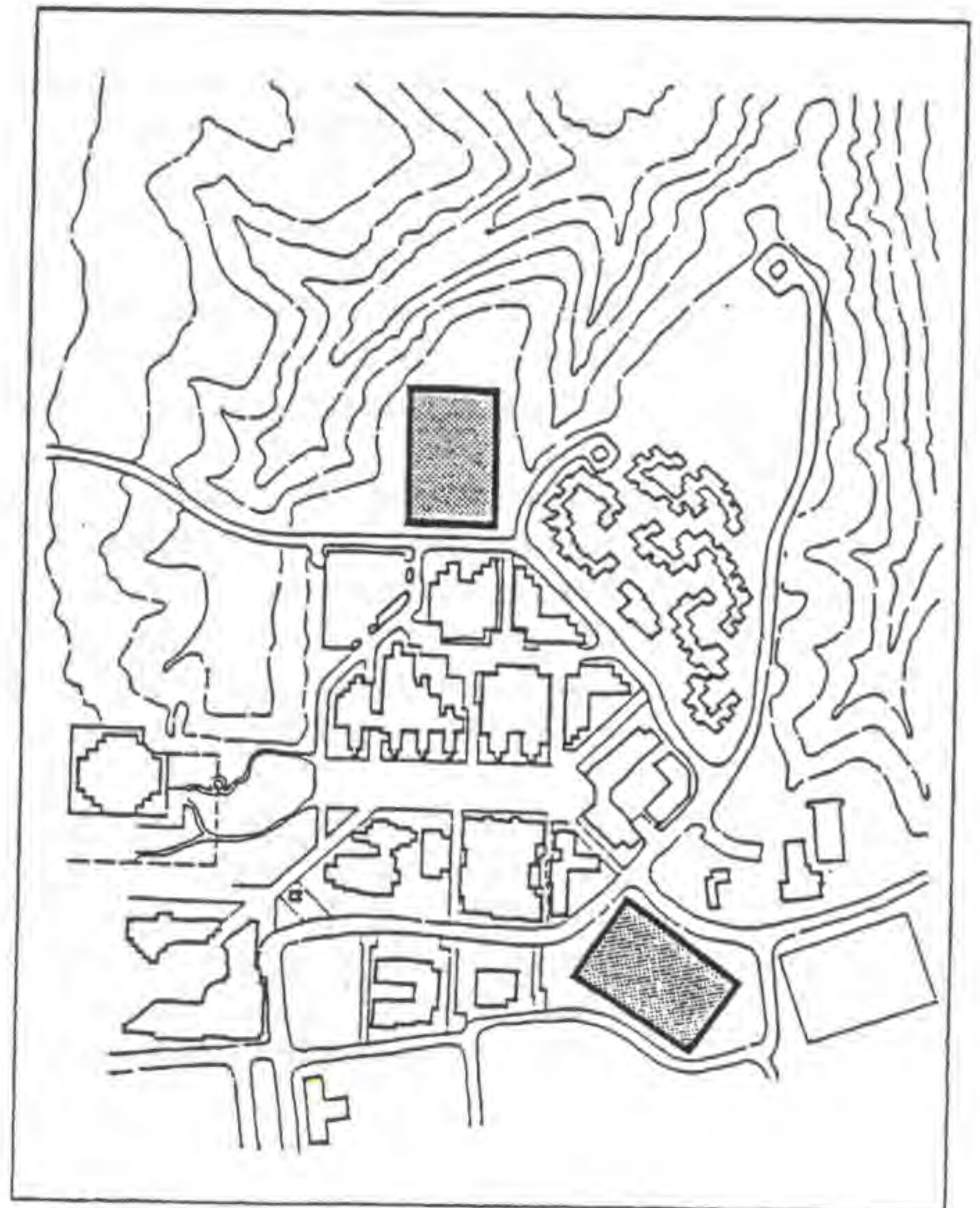


Figure 22 Recreational Land Use

Residential: Approximately 4.5 acres are to be developed as Warren College Housing expansion. The area is currently planned to accommodate between 500 and 600 beds, a dining facility, limited parking, and outdoor gathering and recreational facilities. The new housing will displace 569 cars on the existing Lot 504 (*Figure 21*).

Approximately one acre of land was identified during the master plan study as a potential graduate student housing site. This parcel of land contains some native vegetation which should be integrated into the housing design to the extent feasible to balance the program objectives with resource preservation.

Recreation: Pryatel Field, a multipurpose recreational open space, will be displaced by academic development and relocated to two sites within the study area (*Figure 22*). The Master Plan relocates part of the recreation area north of the academic core on the existing parking Lot 502. This area is within the viewshed from Interstate 5 to the Central Library. Careful consideration must be given to detailed design of lighting standards, fencing, and grading to protect these views and the integrity of the park. This field area is proposed to be approximately 88,000 square feet (250 feet by 355 feet).

The Master Plan notes a second location for a recreational field at the southeast of Warren College at the interface with Fifth College. This location could accommodate recreational facilities on top of a parking structure; although court facilities, in particular tennis, would be the more appropriate than a field. This idea should be explored in the subsequent Fifth College Neighborhood Study.

If tennis courts were placed atop a parking structure, the structure should not be elevated more than one story (10 feet) above surrounding grade because of wind concerns. Windbreaks should be provided on the perimeter of elevated courts. A structure approximately 250 feet by 320 feet would accommodate up to ten standard tennis courts.

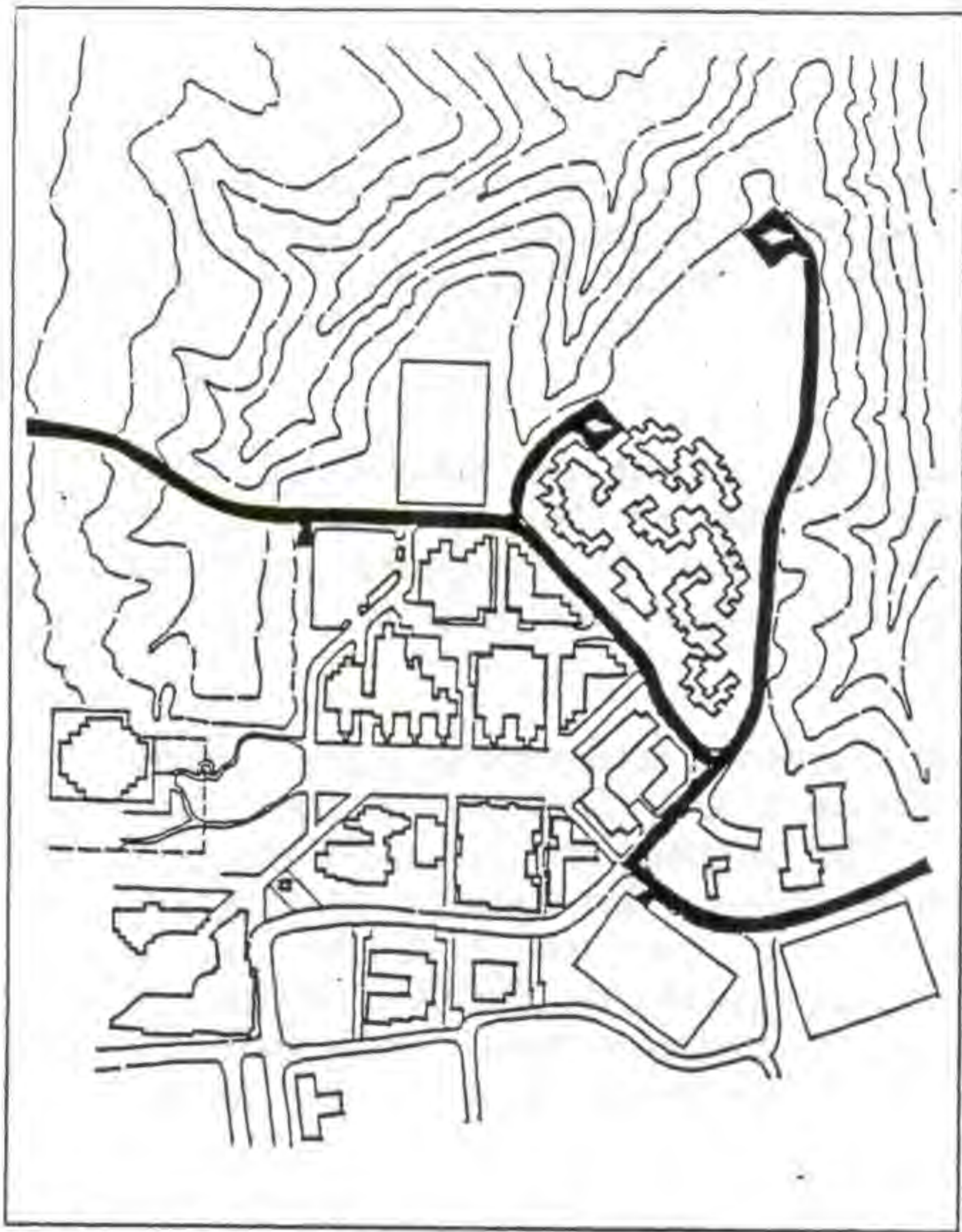


Figure 23 Vehicular Circulation

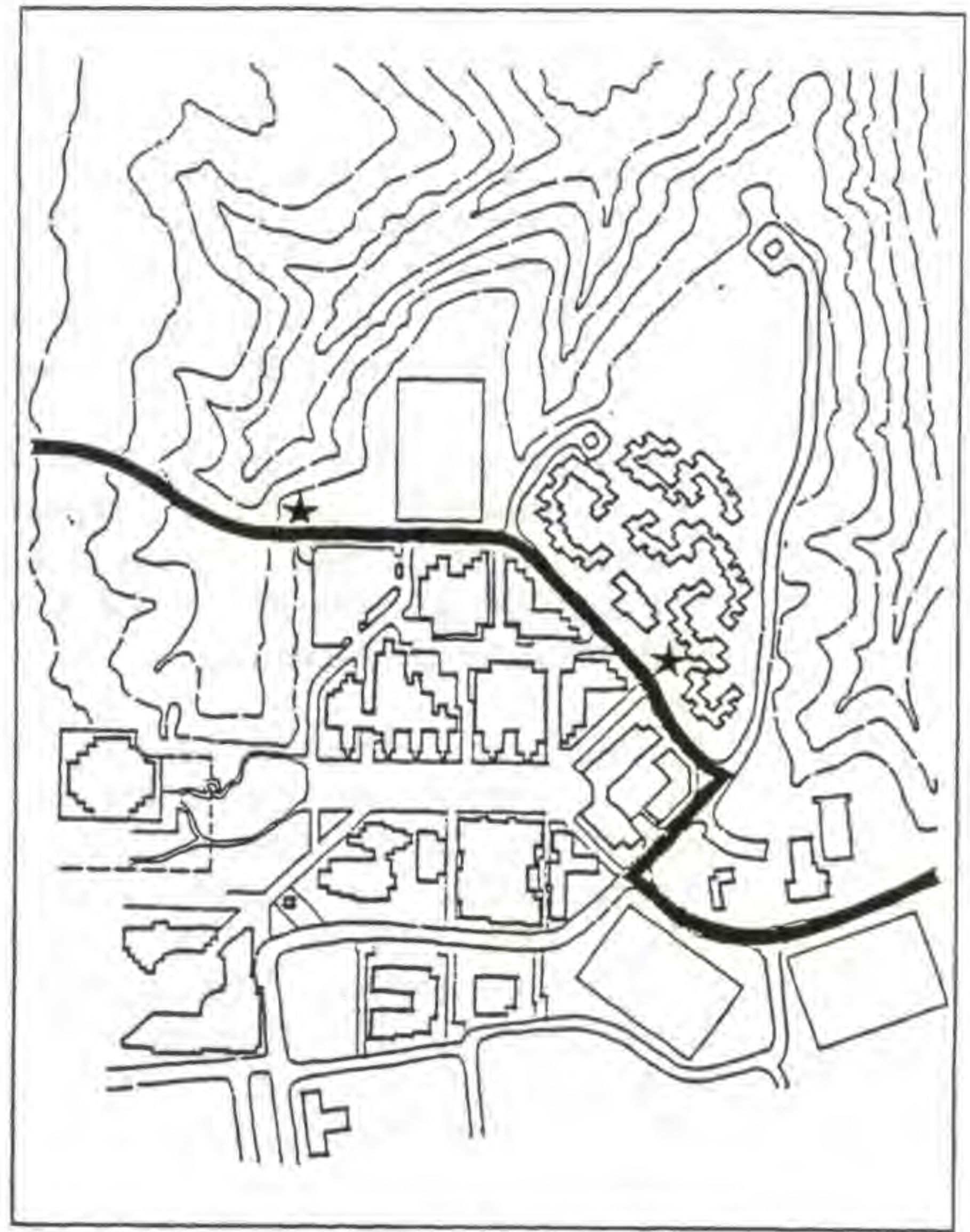


Figure 24 Shuttle Service

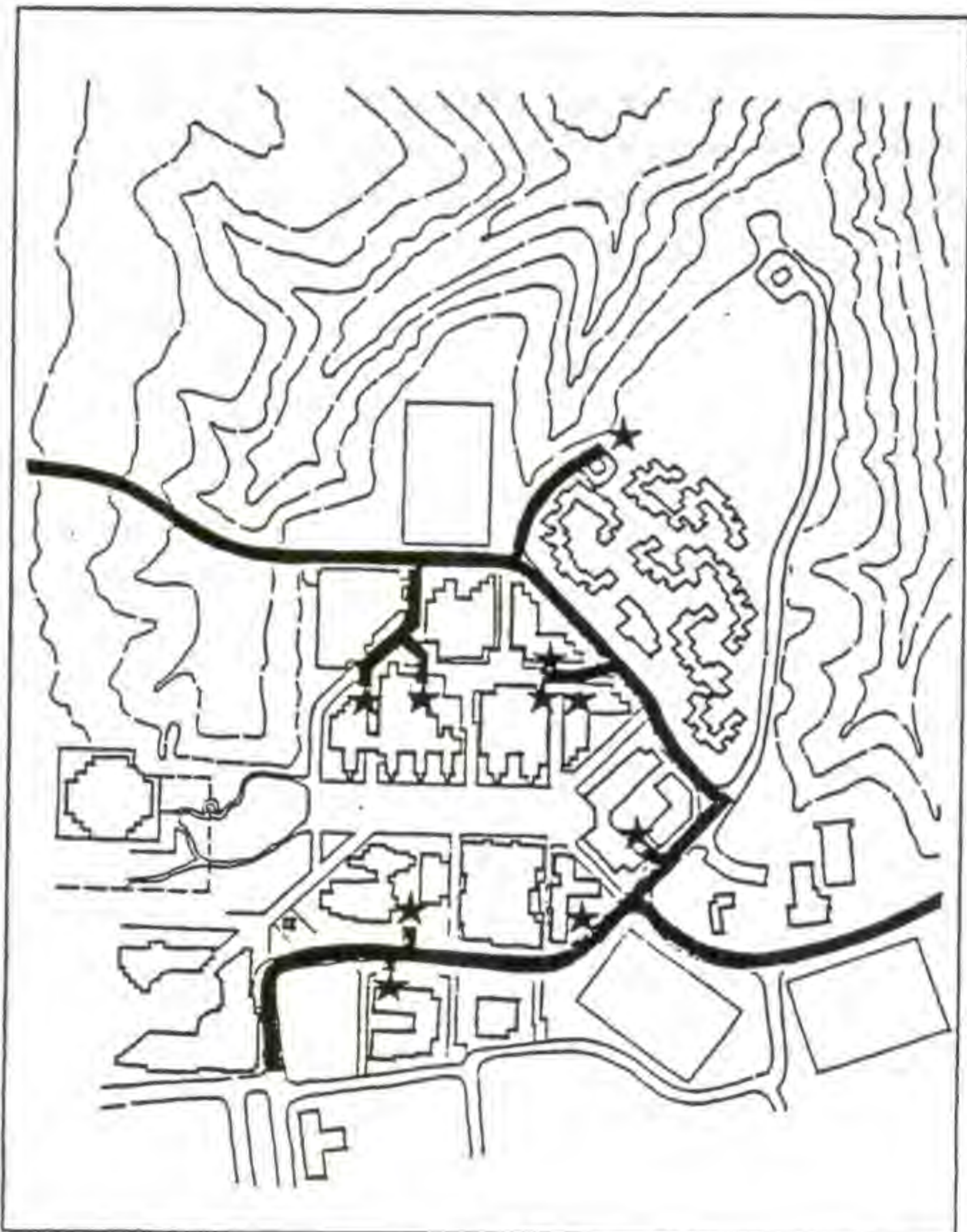


Figure 25 Service Vehicles

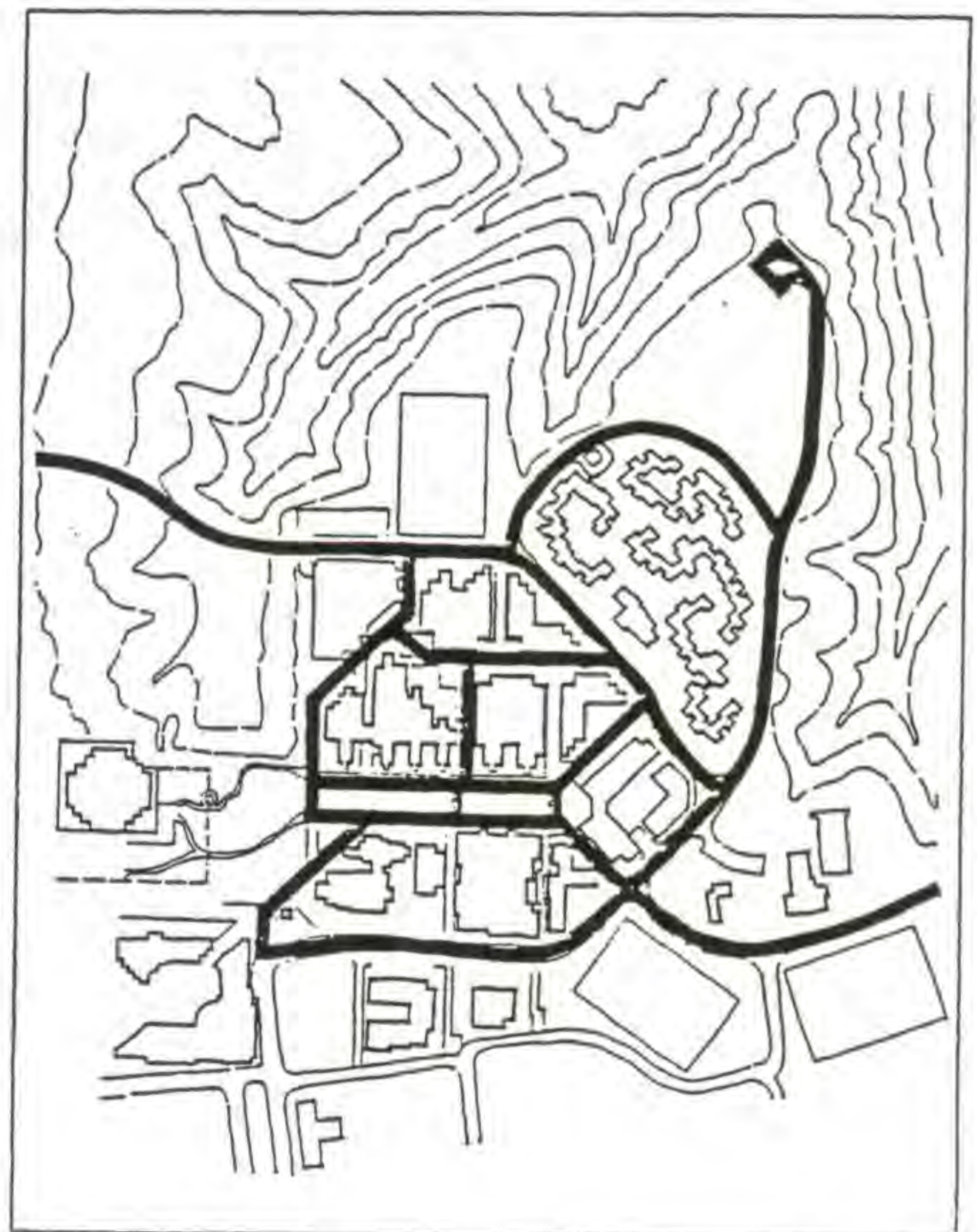


Figure 26 Emergency Circulation

CIRCULATION

The concept plan addresses vehicular, shuttle, service, emergency, pedestrian, and bicycle circulation and parking.

Vehicular Circulation: Public vehicles will be restricted to the loop road and college parking areas. No other roads will serve the general automobile traffic at Warren College (*Figure 23*).

Shuttle Service: Two access points to Warren College from the campus loop road can serve as potential shuttle stops for the University shuttle system (*Figure 24*). The entrance to Warren Housing at the crossing of the primary pedestrian spine will be a suitable stop to serve both Warren Mall, the academic buildings, and the housing. A second location is adjacent to Parking Structure No. 1 at the north end of Warren College. Each shuttle stop should be well lit, have adequate signage, and benches compatible with the campus-wide shuttle system standards. Pullouts for shuttle busses of 10 feet deep by 50 feet long should be provided wherever possible to provide safe loading and uninterrupted traffic flow.

Service Vehicles: Access for campus service vehicles will be from the perimeter of the academic core. Access will be at designated service courts provided off of the loop road and from Matthews Lane (*Figure 25*). For efficiency, service access to new buildings will be clustered in service courts that can provide adjacent laydown area and access to two or three buildings. Adequate site distance for entry and egress of large trucks must be provided during the design of future buildings. Areas within the loading dock or truck turning area that could block access should not be used as laydown areas.

Emergency Circulation: Emergency circulation and fire access is provided on a minimum of three sides to every new building. Pedestrian walkways, the loop road, parking access roads, and service roads will provide emergency circulation (*Figure 26*). Warren Mall also serves as a fire and emergency route and is designed accordingly (*Page 79*).

Pedestrian Circulation: Warren College is envisioned as a pedestrian environment. The pedestrian experience in the academic district is one of direct access through formal corridors while the experience in the housing district is one of dispersal and meandering. Both systems contain gathering areas with seating, overhead tree canopies, enhanced paving, and ground level activities. Pedestrian walks include the north-south connections into University Center, Warren Mall, the diagonal connections into Fifth College and Warren Housing, the diagonal connection from the Library to Warren Housing, and Mandeville Walk (*Figure 27*). Pedestrian crossings along the loop road should be well marked, lighted, controlled with stop signs, limited to locations with good visibility or designed as overcrossings should traffic conflicts warrant the need. As part of the design of Site C and alterations to Warren Commons the potential exists for a loop road overcrossing (*Figure 38*). Crossings at Matthews Lane (service vehicles only) will require crosswalks and special enhancement. Areas of potential pedestrian crossing in undesirable locations should be eliminated through building entry design, berming, walls, and fencing. While the majority of the connections are direct, the northern diagonal walk from the library to the housing is more circuitous, beginning at the *Snake Path*, alongside EBU 1 to the loop

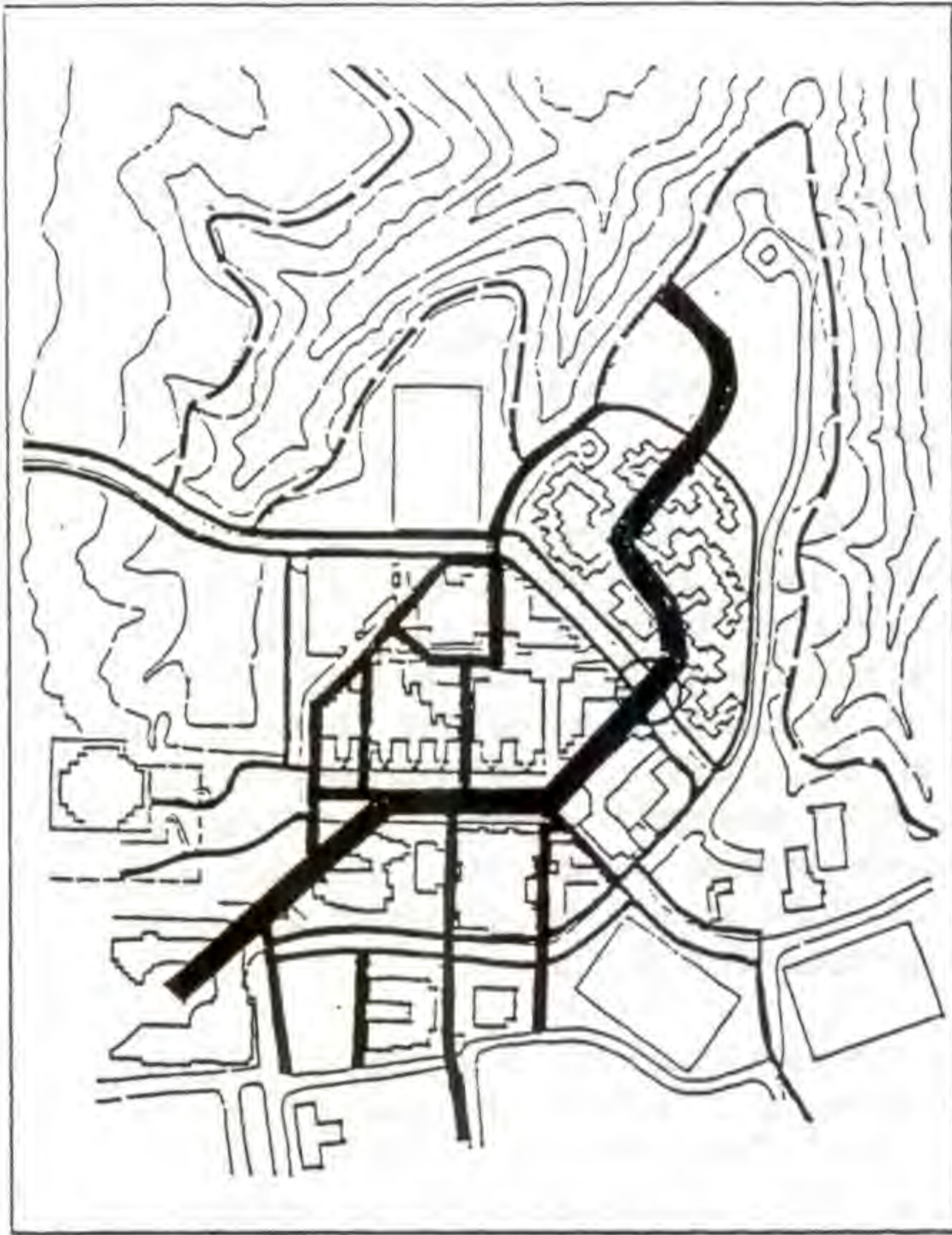







Figure 27 Pedestrian Circulation

-  "Diagonal" Corridor
-  Primary Walk
-  Secondary Walk
-  Campus Meander
-  Potential Overcrossing

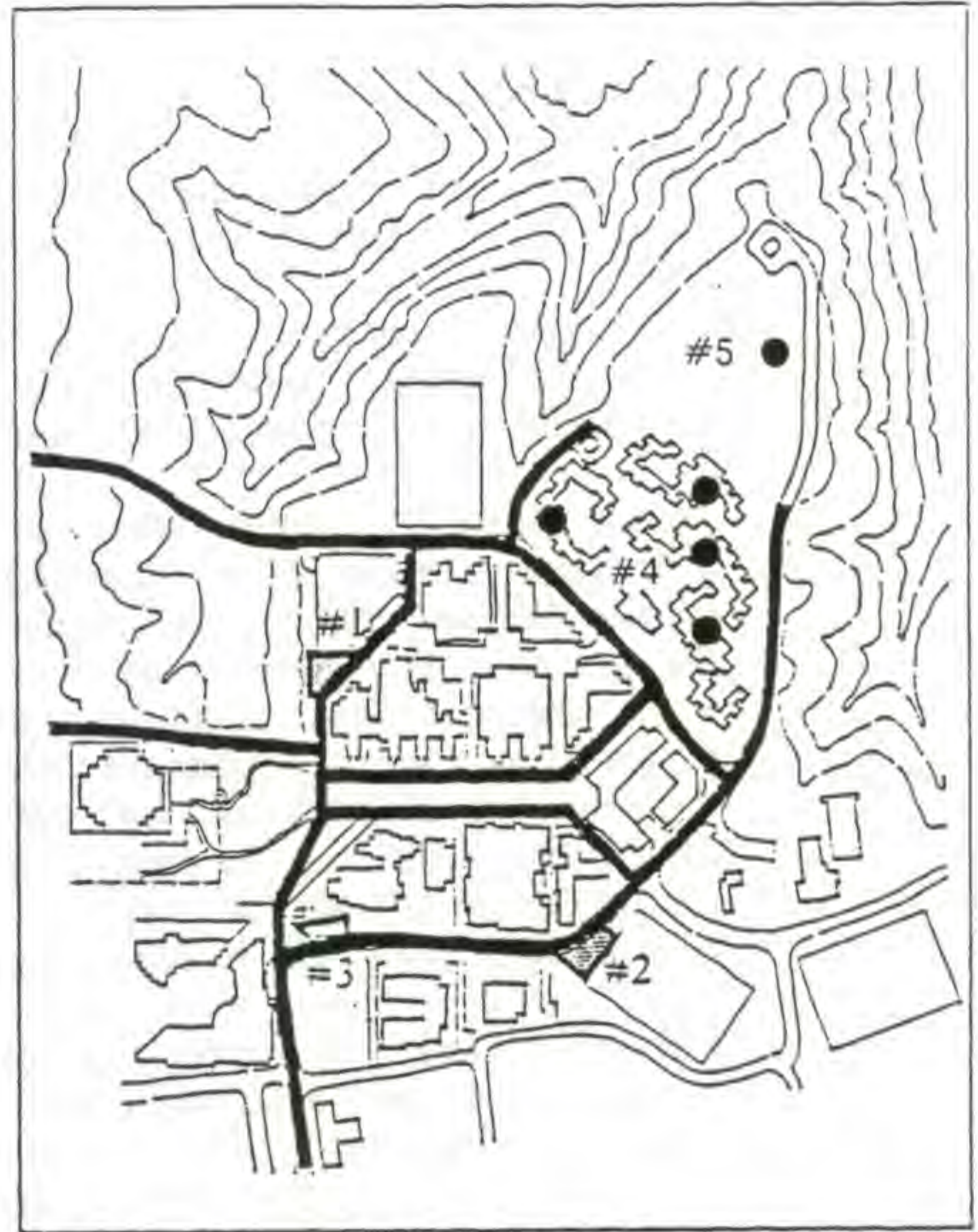


Figure 28 Bicycle Circulation

(Exact location of Area 5 to be determined with housing design.)

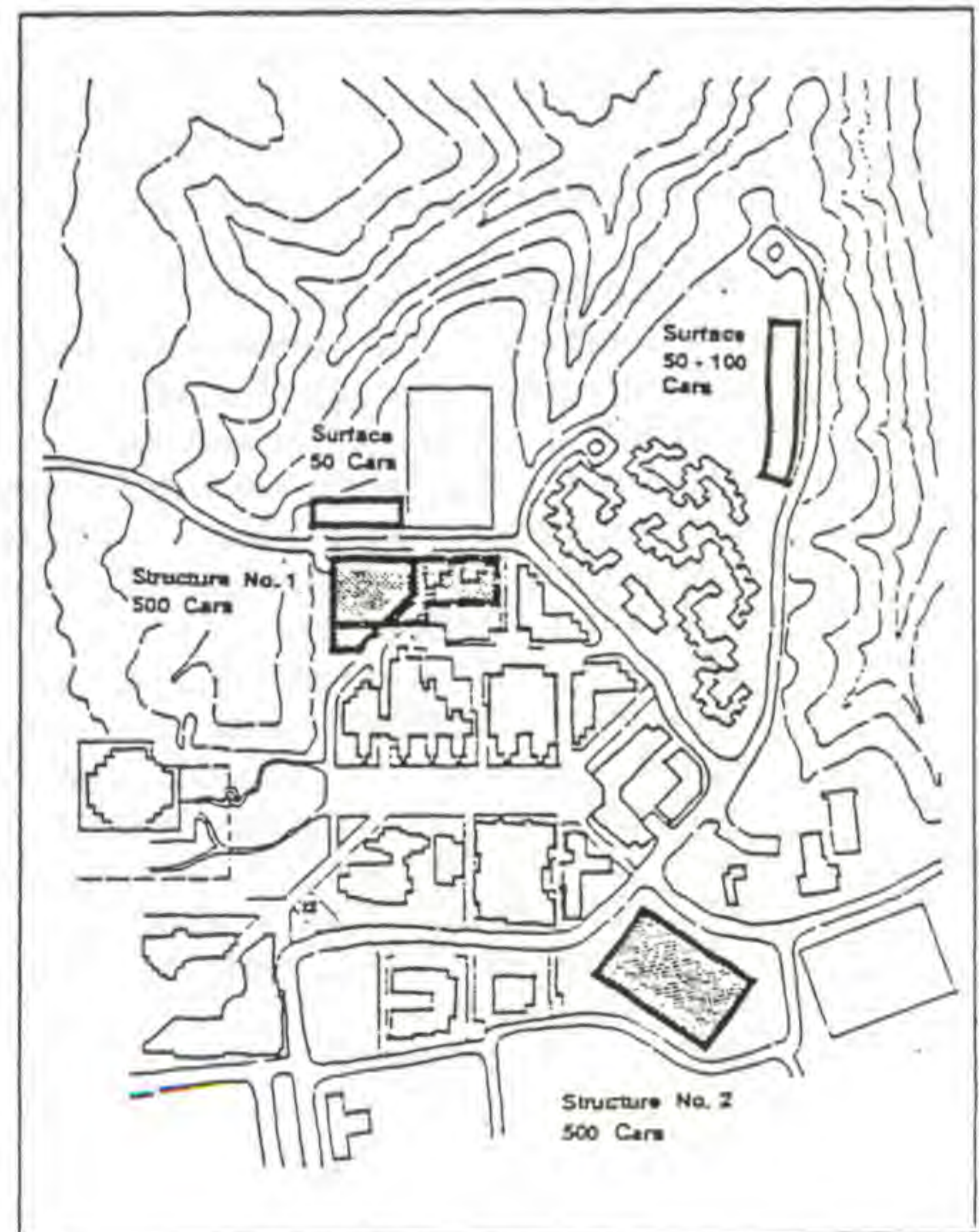


Figure 29 Parking

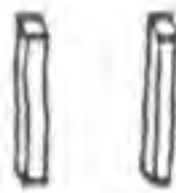



and service road sidewalks to tie to the campus meander. The campus meander, as designated in the master plan, follows the northeast perimeter of Warren College along the park.

Bicycle Circulation: Specific bicycle lanes and paths (5'-0") will be provided separated from but parallel to the loop road in each direction. Bicyclists may also use all service roads, although separate bike lanes will not be provided. Due to the density of development and intensity of pedestrian traffic, bicycle riding through the core of the academic area and the central spine of Warren Mall will be discouraged through signage and perimeter bike parking areas. Bicycle traffic on Warren Mall should be kept to the perimeter fire lanes. Future review of pedestrian and bicycle conflicts may require that bikes be walked through the Mall. Future studies will determine the final alignments of the bicycle system.

One existing area and four new areas have been set aside for bicycle parking providing spaces for over 500 bicycles: Area No. 1 at the northwest corner of EBU I, Area No. 2 at the southern corner of the college near EBU II and I&R, Area No. 3 at the western entrance along Mandeville Walk, near ATM Plaza, Area No. 4 within the existing housing (existing storage areas), and Area No. 5 within the housing expansion (*Figure 28*). Area No. 1 is approximately 5,000 square feet and could accommodate 165 bicycles each. Area No. 2 is approximately 6,000 square feet and could accommodate 200 bicycles. Area No. 3 has existing racks for 80 bicycles and can be expanded in an area of 1,800 additional square feet for 60 new bicycles. Area No. 4 is scattered throughout the existing housing area and provides 35 to 50 spaces at each location. Area No. 5 will be designed within the new housing area. These areas should be designed to accommodate group parking and should be lighted. There is the potential that these bike parking areas could be staffed and act as a locker or check-in system for additional security. This method is very successful at U.C. Davis.

Parking: Large surface parking lots have been eliminated in the neighborhood plan with the exception of surface parking adjacent to Warren Housing Expansion for up to 100 cars and a small surface lot northwest of the academic core, accommodating a maximum of 50 cars. Additional cars will be accommodated in parking structures (*Figure 29*).

One parking structure (No. 1) is sited north of EBU I. The top level of the parking structure cannot exceed 10 feet in height without intruding into the viewshed of the Central Library. Therefore, the structure will likely consist of one floor at grade and two floors below. In order to accommodate 500 cars in the limited area available, parking will be needed under the adjacent academic building at Site A. The design of both the parking structure and the academic building should mitigate any vibration impacts associated with the underground parking. The lighting and landscaping of the structure must also be carefully designed so as not to interfere with views to and from the library. A second parking structure (No. 2) is proposed in the southeast portion of the study area, at the interface of Fifth College for an additional 500 cars. This parking structure could share parking with Fifth College or University Center. The Master Plan proposes this area as a recreational area. Optimizing the two acre site with a parking structure below court facilities would accommodate both program demands. This proposal will be tested during development of a plan for the Fifth College Neighborhood.

-  Gateway
-  Corridor
-  Gathering Area
-  Tree Mass

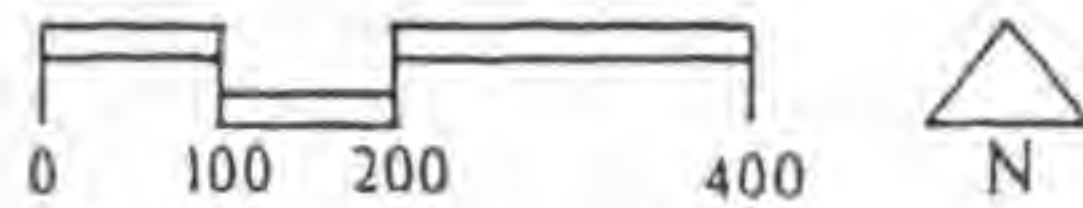
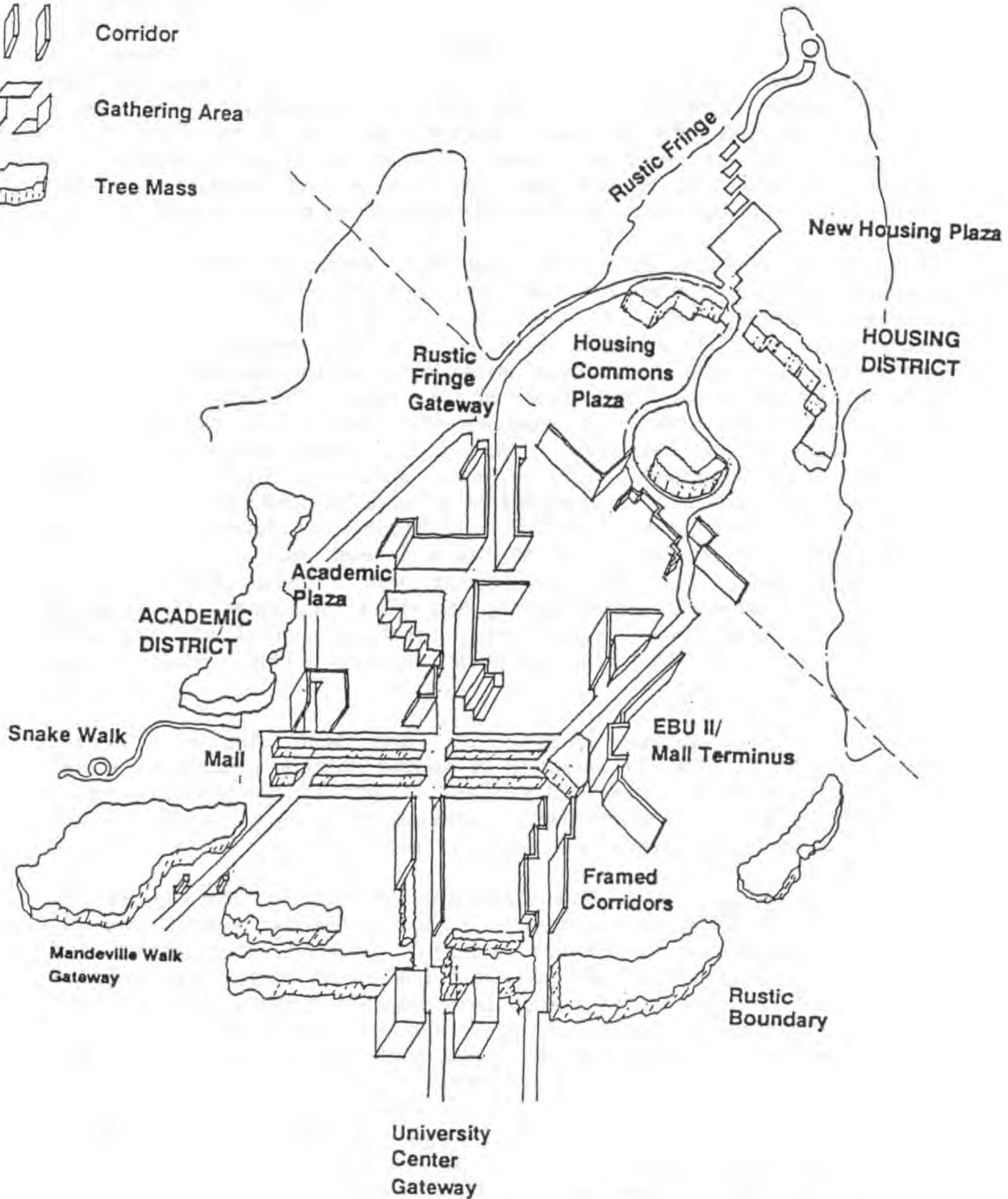


Figure 30 Urban Structure

URBAN FORM

As noted previously, the college's emerging urban form can be characterized as a collection of framed linear paths and spaces regulated by two contrasting grid patterns bounded by rustic vegetation. Most of the paths, whether on the Academic or Land Grids, focus longitudinally on a visual landmark such as Bruce Nauman's *Vices & Virtues* piece atop the Powell Structure Lab, which is on axis with the diagonal walk that connects the existing student housing with the Mall. The paths, or corridors, are straight and begin and end on wider, gathering areas. This system of segmented paths, terminal nodes and framed edges generates the perception of structure, of an organized, formal arrangement of parts. Such a structure, however, is not yet fully realized. As the primary space in this system, Warren Mall needs enclosure on its north side and a terminal event on its east end (which will be provided by the construction of EBU II). A large open space between the academic and residential areas is yet to be developed as are the paths and nodes within the cluster of academic buildings. The aim of the plan, therefore, is to reinforce the emerging form and complete the college's urban structure. The urban structure is described in terms of Edges, Districts, Paths, Nodes, and Landmarks (*Figure 30*).

Edges: A singular element of the college's urban form is its rustic and parkland edge. The plan proposes to strengthen the edge as much as possible by infilling the bare areas of the grove with eucalyptus and by restricting the encroachment of land uses and non-indigenous vegetation into the native areas.

Districts: To distinguish the academic and residential areas as distinctive districts within the neighborhood, the plan proposes to organize the academic area strictly in the north-south orientation, while the residential area is organized in a diagonal northeast-southwest orientation. Each district is further defined by its perimeter landscape: predominantly native and naturalized vegetation in the residential district, predominately eucalyptus groves in the academic district.

Paths: Mandeville Walk, as the principal diagonal corridor throughout campus leading from Mandeville Center through the Price Center to Warren Mall, is continued at the east end of the Mall towards the Warren College residential complex. At the complex the walkway becomes curvilinear, joining a network of sinuous paths that "filter" the pedestrian through it. A current housing study is evaluating the possibility of preserving and reinforcing the meandering quality of the housing paths by widening, regrading and reconfiguring some of them. A ground level apartment on Building No. 2 could also be removed to further improve passage through the complex. A plaza in the core of the new dormitory housing expansion is proposed as the terminus of the walk, much like the Price Center Plaza functions at the opposite end.

A secondary diagonal corridor is established at the northwest edge of the college, connecting the new dining hall with the core of the academic areas, and beyond to the library. This path utilizes the campus meander along the rustic canyon, crosses along the northwest diagonal behind the core buildings, and connects to the *Snake Path* and Warren Mall.

The existing north-south path to the east of Powell Structures Lab functions as the main path connecting Warren College with the core of the University Center neighborhood. The plan extends this path through Warren Mall to the college's academic core and beyond to the northern athletic field and the new dining hall. Between the two I&R structures, a secondary north-south connection will be made to Fifth College and University Center. Additionally a pedestrian walk should be sited on the west side of Site G to provide a second connection to the heart of University Center, allowing diffused access from Warren College (*Figure 30*).

Nodes: Nodes or events, in the form of gathering areas, are proposed as "landings" to each path segment. These landings are hierarchically organized according to their function and level of use. Warren Mall is the principal node and major gathering area in the college. Secondary nodes are proposed at the intersection of major circulation corridors: at Matthews Lane and the University Center pedestrian corridor, functioning as a gateway plaza; in the academic core, functioning as a forecourt to three research buildings; and at the main entrances to the housing complex, functioning as a transition plaza.

Landmarks: To reinforce the existing system of landmarks, the plan proposes the placement of prominent landscape, art, or architectural features on axis with each path segment. Major gateways are proposed along the various entrances. A landscape gateway of eucalyptus groves will mark the entry from the Price Center. At the entry from University Center and Fifth College, a structure with a matching high element is envisioned west of the high bay building (on Site G) to define the neighborhood entrance from Matthews Quadrangle. Design of this gateway building, however, will follow guidelines set out in the University Center Guidelines. A similar complementary element in the architecture is envisioned at the entries from the housing district to the north of the academic core. EBU II's facade and forecourt facing on Warren Mall will also serve as a landmark for Warren College, much like the Library does at the western terminus of the Mall.

Site specific art from the Stuart Collection is appropriate at these landmarks and nodes such as on the facade of EBU II or at the college entries. Signage should be placed at the entries to Warren College to enhance the landmark and College identity.

The Experience: Approaching the college from the Price Center along Mandeville Walk, the pedestrian will pass through a dense grove of eucalyptus. The contrasting landscape will serve as a visual gateway to the pedestrian before arriving at the college's urban and landscape signature: Warren Mall. The first indication that a different neighborhood has been entered will be observed at this point. The Mall's extensive size and deliberate geometric pattern is unique to Warren College and will come to be visually remembered as a central space on campus. In a fall or spring afternoon, as students return to Warren housing, this experience will be dramatized as the filtering shadows of the eucalyptus grove yield to the oblique sunlight bathing the Mall. Every volumetric and textural nuance on the buildings that frame the Mall's north side will be exposed and accentuated, giving the pedestrian a heightened realization of the surrounding buildings. At first glance, the Mall will offer clear choices for circulation and gathering. The perimeter circulation, with its simplified paving and clear definition from canopy planting, indicates the functional route to the building entrances. The center spine is much more attractive to those not hurrying through the space. With its flowering tree canopy, dappled shade, adjacent benches, and detailed paving, the pedestrian is invited to sit, read, relax, and watch the passing parade. From this vantage point, the Mall offers much more to the astute observer. The library is the focus of the view to the west, with the *Snake Path* descending from it. The eucalyptus trees giving shade to the seating frame this view and diminish the surrounding academic buildings and allow the observer to help recreate the story of "Paradise Lost."

As the pedestrian further navigates through the college, the neighborhood's basic urban elements reoccur like a fractal creation: narrow, straight, shaded paths lead to open, framed, sunny spaces patterned in bold geometrics. These repeated experiences will remind the pedestrian of other Warren College paths and aid in establishing an identity to the college. As additional buildings are constructed, one major difference from the existing college experience will be apparent: new buildings will invite attention to their scientific research and investigation activities. Ground floors will be open, revealing through glass and/or fences the laboratory equipment and research at work. Currently only the Structure's Lab approaches such a level of visual invitation.

Further into the housing district, the pedestrian will begin to see the surrounding rustic open space in more detail. Rather than man-made landmarks, the corridors should present increasing views of the native vegetation, hills, mountain views, and sky that distinguishes the college's setting. Along the way, two eucalyptus groves will "recall" the grove that once occupied much of the college mesa. In this manner, the college experience is balanced between the highly structured environment embodying the activity of scientific research and investigation and the historic natural and commercial landscapes that contribute to the college's unique identity.

"Discrete" Gathering Area

1. Warren Mall
2. Academic Court
3. Housing Commons Court
4. Housing Terminal Court
5. Housing Cluster Courts

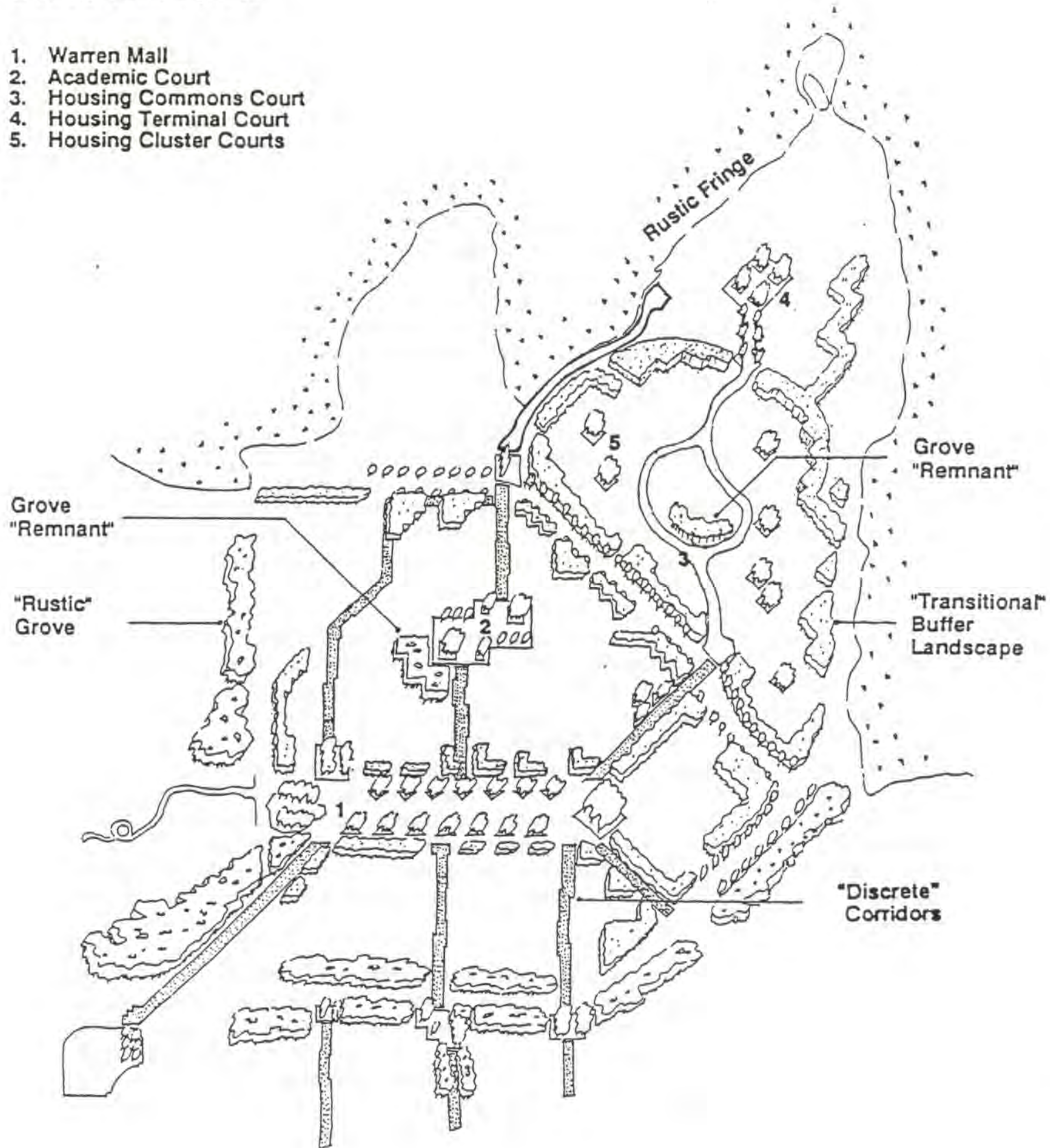


Figure 31 Landscape Concept

LANDSCAPE AND OPEN SPACE

To the pedestrian, Warren College is currently an open, windy, uninviting environment. The large scale of the buildings coupled with expansive, scantily vegetated spaces that surround them contribute to the feeling of barrenness and isolation. Curiously, spatial intimacy and environmental comfort are found in the narrow through-passages between the buildings, where richer plantings and broken planter and paving surfaces lend human scale to the space. The objective of the landscape element is to raise the spatial and environmental experience of the college and to provide amenities and visual interest. It also aims to express the college's engineering, physics and research functions.

The university-wide Master Plan calls for a threefold landscape typology within the campus: the Rustic, the Transitional and the Discrete. In general terms, the rustic is closest to the natural landscape while the discrete is closest to the ornamental. The landscape concept for the College adheres to these types and distributes them in the neighborhood according to the proximity or distance to development as experienced by pedestrians: the landscape areas farthest from these activities are the more rustic while the landscape areas closest to them are the more discrete (*Figure 31*). The transitional mediates between the two areas, containing elements of each according to its location and function. The systematic application of the three landscape types allows the open space and structured landscape to be clearly understood. A detailed characterization of the various landscape elements and types is provided in the Landscape Architectural Guidelines (*Page 67*).

Warren Mall: The Mall is, potentially, one of the major gathering spaces on campus as well as a unique narrative landscape, focusing on the symbolic center of the university -- the library. It suffers at present from a poorly defined sense of enclosure and from the absence of comfortable seating areas. It is both desolate and windswept, but sunny throughout the majority of the day.

A detailed design for the Mall is proposed and summarized in Chapter VI (*Page 81*). In brief, the design calls for a double allee of *Eucalyptus citriodora* along its longitudinal axis, formally framing the view to and from the library while helping reduce the impact of the wind. Smaller, flowering trees are proposed around several seating areas along the Mall, with the terminus at EBU II planted with flowering and accent trees. The vegetation is organized according to a rigid geometry derived from the interplay between the academic and land grids that overlay the college. Its design allows sunny seating areas and enhanced gathering spaces for students, faculty, and staff (*Figure 55, Page 89*).

The links from the Mall to the housing (northeast) and to Fifth College (southeast) should follow the Corridor design guidelines (*Page 71 and Figure 50*). Mandeville Walk into Warren Mall should be enhanced with additional eucalyptus at the rustic edge.

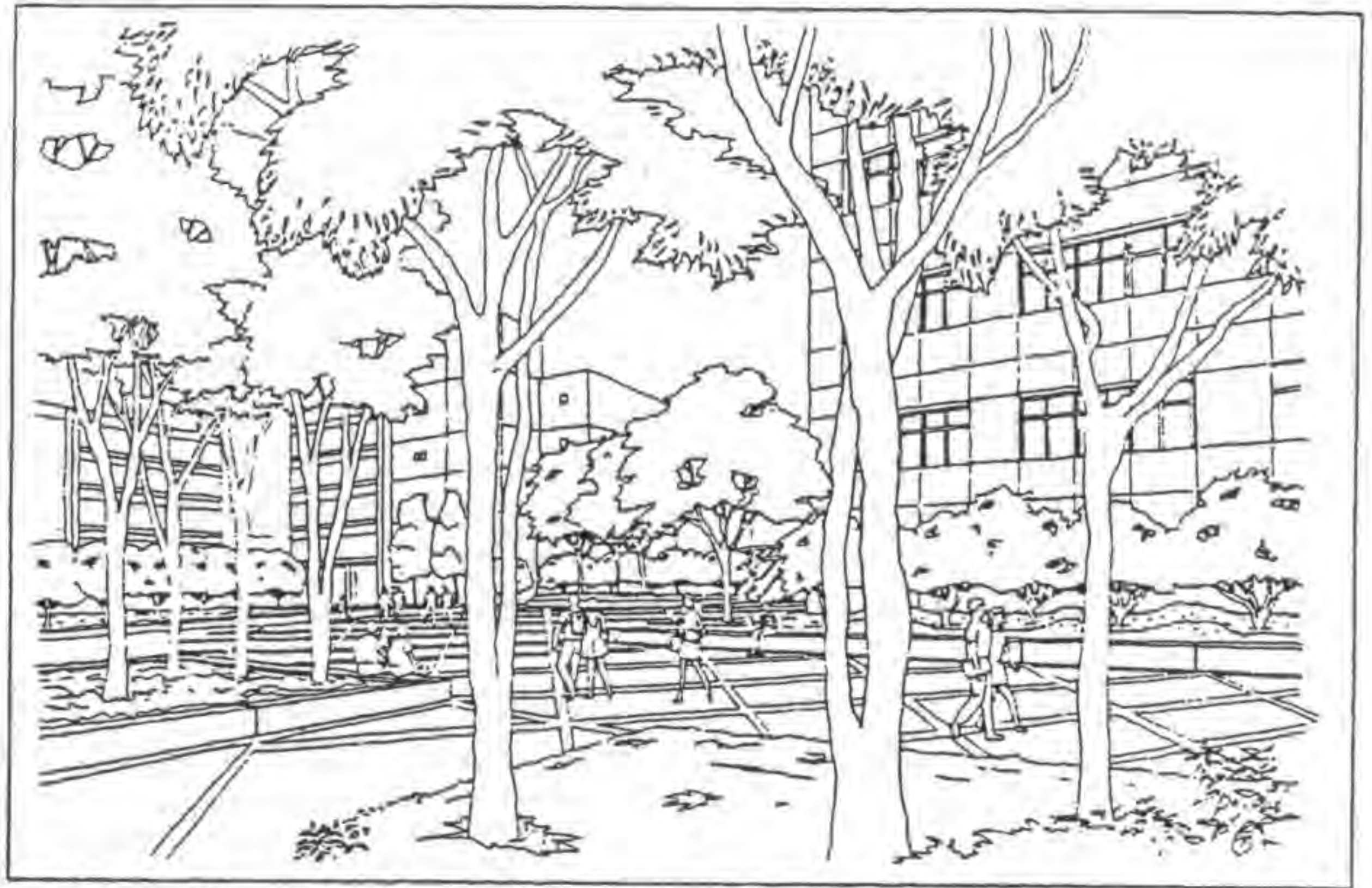


Figure 32 Academic Core Court

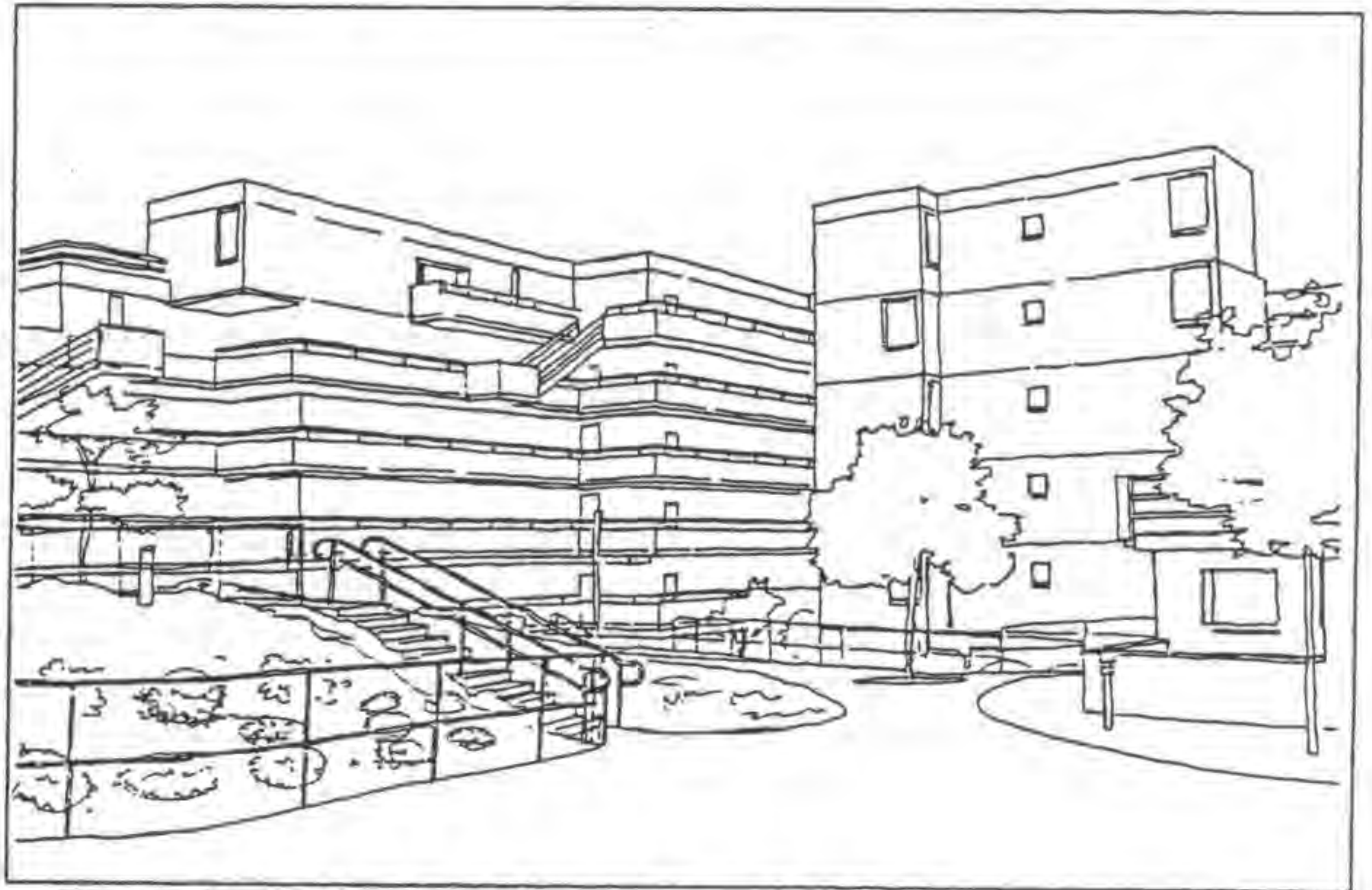


Figure 33 Housing Cluster Court (Before)

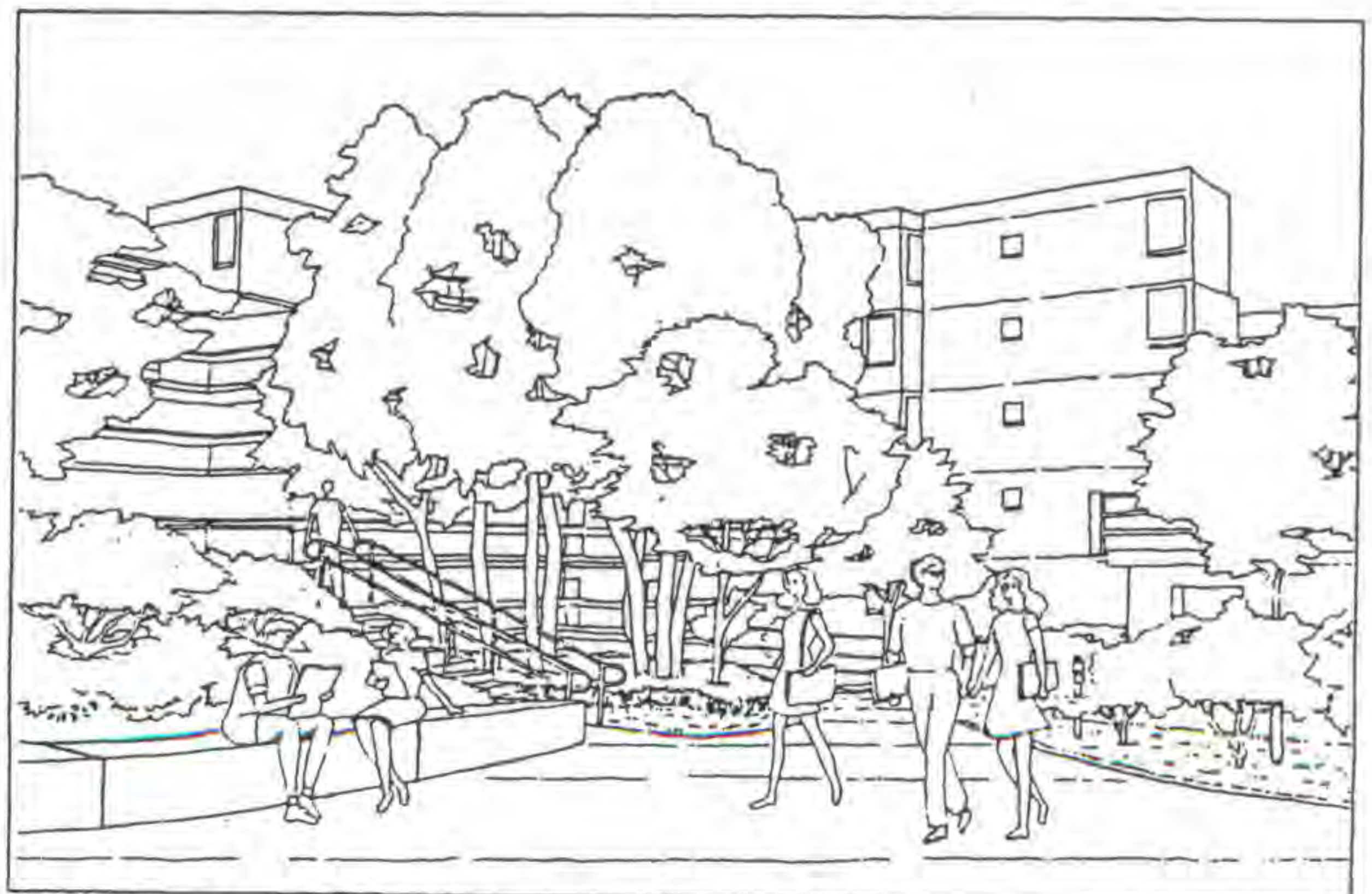


Figure 33 Housing Cluster Court (After)

Gathering Areas: Gathering areas within the college are designed as the people places of campus, the public areas that reflect the life and energy of learning. The San Diego coastal climate, while considered benign, still requires enhancement to afford optimum comfort for gathering and seating. Cool breezes are a dominant feature of the local campus environment and are only mitigated by an equal measure of filtered sunlight in combination with adequate wind breaks in the form of vegetation or structures.

Four major gathering areas, not including the Mall, are proposed: one in the academic core, another facing the housing complex commons building, the third as cluster courts within the housing, and a fourth as a central space in the proposed housing expansion. All the areas are envisioned as sunbathed, wind-shielded seating courts. Specific design guidelines for the gathering areas are described in Chapter V (*Page 71*).

- **Academic Core Court :** The Academic Core Court is a node at the intersection of the corridors, functioning as a common entrance court to the adjacent new academic buildings. This will concentrate activities in the area and enliven the space with pedestrian activity. Its location at the intersection guarantees a constant flow of traffic and a visual "theater" to the observer. The court, approximately 60 feet by 200 feet, is planned to be used by students, staff, and faculty, with the possibility of small class gatherings. While framed by five-story buildings on three sides, it is open towards the southwest for optimum sunlight penetration through late fall. The landscape guidelines call for raised planters to encourage seating and gathering. Additionally, turf areas can be provided within the planters under the tree canopy for a more relaxed and intimate lounging area. A grove of eucalyptus at the open end of the court will provide the required sunlight filter. Wind control is partially achieved by offsetting the through passages. Additional measures integral to the architecture, like baffles that span the circulation corridors, may be necessary. Such baffles could also function as portals to the court, doubling also as the axial landmark features previously described (*Figure 32*).
- **Residential Commons Court:** The court space (approximately 60 feet by 100 feet) is already well framed by the housing and commons building and is adequately sunlit and shielded from the wind. It is an optimum gathering area for commuter students and residents of Warren College. To improve the space it is only in need of visual buffering to the residential apartments and a better definition of its surface boundaries. The plan proposes a grove of tall, deciduous trees facing the commons building that can shield the apartments while allowing filtered sunlight through their limbs and foliage. The grassy area beneath the trees will provide areas for lounging and sitting. Additional benches adjacent to the commons building will provide more structured seating. Pending availability of financing, new paving should be provided to define the court area and diminish the current appearance of the space as a walkthrough space.

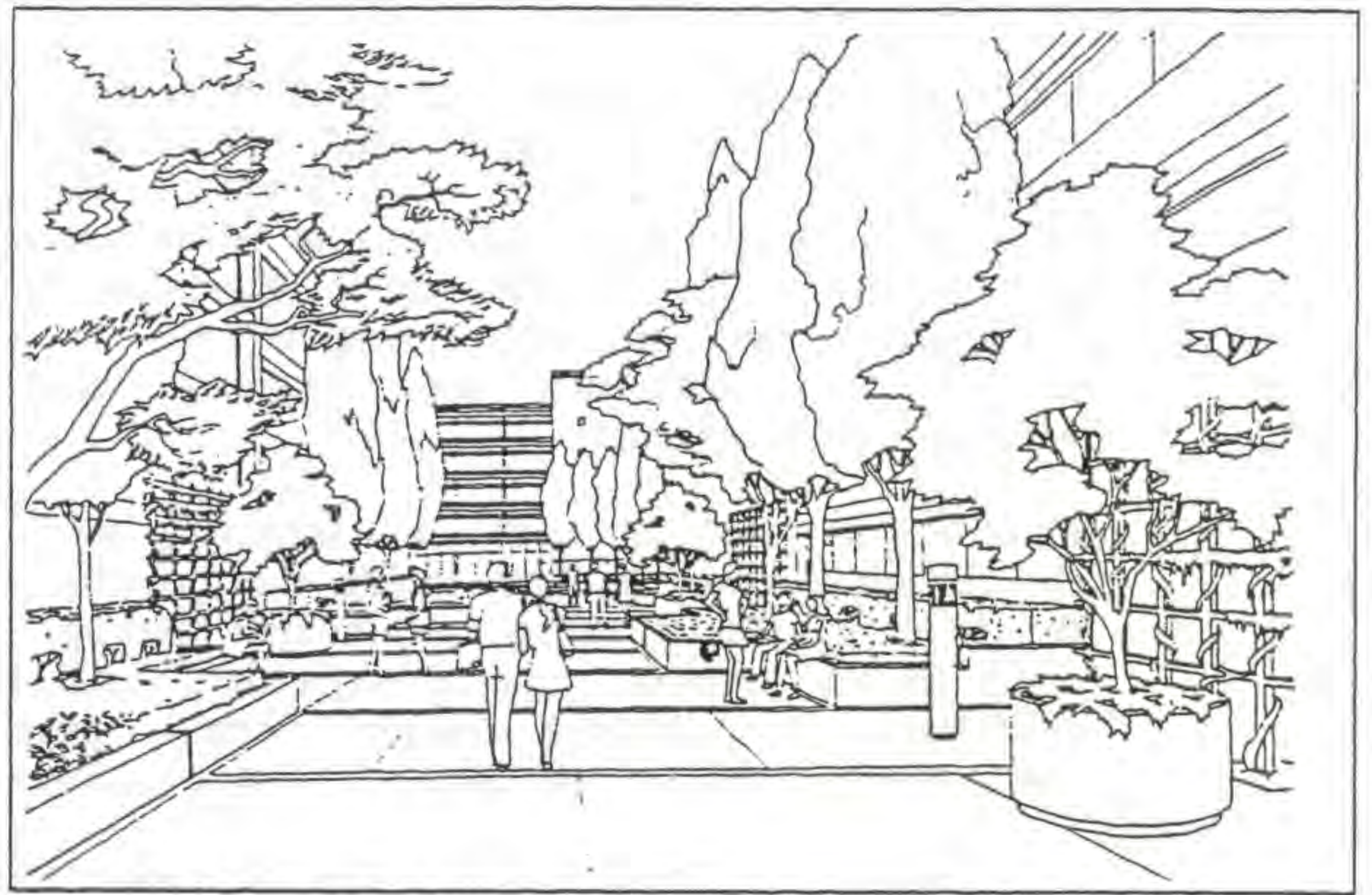


Figure 34 *Corridors*

- **Cluster Courts:** As a measure to reduce the appearance of mass and monotonous surface treatment of the apartment complex, the plan proposes clusters of distinctive shade and flowering trees in each cluster court (*Figure 33*). The planter walls are to provide seating areas at the perimeter for outdoor study and relaxation.
- **New Housing Court:** This court functions as the terminus of Mandeville Walk. In the planning of the new housing, consideration should be given to the provision of optimal sunlight and wind protection. The area should be designed for seating as well as group events. While it appears necessary to place the court within the complex and surrounded by the dormitories and the dining hall, the provision of an exterior view, towards the mesa and canyon should be considered. This will maintain the overall theme of the college, where the corridors terminate at the rustic edge.

Corridors: The corridors are proposed as framed pedestrian passages between the gathering areas providing entries into the college and termini at the rustic belt. The plan emphasizes either the diagonal or North-South orientation of the corridors. These orientations minimize the cooling effect of the prevailing East-West wind pattern of the region.

More important than realizing optimum climate control, however, is ensuring that the corridors are visually and spatially amenable, particularly that they do not appear excessively lengthy nor canyon-like. For this reason the plan proposes to offset the corridors between the gathering areas, which minimizes their perceived length and affords more opportunities for visual landmarks. In addition, it is proposed that the corridors be generously planted and given as much surface and volumetric diversity as possible (*Figure 34*).

Grove Remnants: As a device to recall the eucalyptus groves that covered much of the college land, the plan proposes the planting of two, new small groves: one on the west side of the academic court, the other by the housing commons court. Each of the districts in the college will therefore contain a grove remnant. The groves will provide needed scale transition from the surrounding buildings as well as mark each district's pedestrian centers.

The Rustic Edge: The plan proposes to preserve and enhance the rustic and parkland zones to the greatest extent possible. The native vegetation at the tip of the housing site should be protected to the extent feasible.

A 60-foot building setback is proposed along Matthews Lane to allow the planting and continuation of the eucalyptus parkland. The plan suggests continuing the setback and planting towards the Canyonview Recreation Center to encircle the neighborhood with either the rustic or parkland landscape.

V. WARREN COLLEGE NEIGHBORHOOD DESIGN GUIDELINES

PURPOSE

The goal of the design guidelines is to define a unique image for Warren College blending the scientific research emphasis with a strong collegiate atmosphere. To this end, the guidelines address both functional and thematic design issues and recommend site planning, landscape architectural, and architectural parameters with which to guide implementation of future expansions to the College's academic, housing, open space, recreation, and circulation elements.

USING THE GUIDELINES

The design guidelines are a statement of design intent, not of design solutions. They should thus be used as an interpretive rather than prescriptive tool with which to judge future design proposals. Any specific recommendations, such as building setbacks and heights, are based on basic concerns for safety and environmental quality.

WARREN COLLEGE IDENTITY

At the core of the identity of Warren College lies the activity of scientific research. The majority of the nearly one-half million square feet of assignable building area at buildout will be devoted to this activity and its support functions. On the broad, coarse conceptual level, the design guidelines aim to establish a design framework by which the activity of scientific research and investigation can leap out beyond the confines of the laboratory and find expression in the college's built form. Such an aim begs the question: what about scientific research can - or should - inspire a designer? While there is no single and simple answer, three aspects of scientific research have influenced the overall design direction for Warren College: the structured nature of research; the search for technological innovations, particularly in the field of materials; and the underlying humanitarian aim of science.

In addition to capturing the spirit of science, of equal importance to the identity of Warren College is the establishment of a "collegiate" atmosphere: of shaded walkways and open plazas that bind every building, of places to inhabit for informal meetings and conversation and of walls and surfaces that do not dwarf but enhance the human scale. The combination of a science-inspired aesthetic coupled with a genial, pedestrian-oriented environment can distinguish Warren College as a unique campus neighborhood.

1. The Nature of Research.

The first source of inspiration has been the very nature of research as a human enterprise, which presumes a structured, reasoned, and systematic approach to observing and recording physical phenomena. Capturing the spirit of research in the built form suggests that the college should feel and be perceived as having clear sense of structure, that every part has

been "reasoned" into place and fitted according to a prescribed and predictable function.

The above interpretation led to the derivation of the college plan along grid overlays, with segmented axial corridors and terminal open nodes acting as the static elements that hold it in place. It also led to the notion that every part within the college's physical structure, be it a paving panel or a building entrance, should be seen as a distinctive element, not fused with its neighbors but rather jointed or assembled into place.

Given the density prescribed for the college, the "assemblage of parts", as described above, will engender a strong sense of "urban" structure, meaning that the volumes, voids, surfaces and objects in the college will be regularly placed and bear a relationship to one another. The perception will be one of closely packed buildings resting over a mostly paved yet densely planted and richly textured ground apron. This vision should apply with equal vigor to both the academic facilities and the existing and proposed residential compounds. What will distinguish Warren College from University Center is its predominant pedestrian orientation and the rhythmic progression of spaces from the large to the small, open to enclosed and from rustic to the discrete. At University Center, by contrast, the spaces are more regularly structured, creating corridors and courtyards that are shared by vehicles and pedestrians alike.

2. The Study of Materials.

The second influencing aspect of the College's academic thrust has been Materials Science, which is a specific and very prominent area of investigation. A recently established graduate program in materials science emphasizes the "experimental investigation and theoretical modelling of the mechanical response, failure modes of advanced materials at ultrahigh strain rates, and the electronic, superconducting, magnetic and optical properties of materials for advanced applications" (*excerpt from "New Degree Program in Materials Science Established," UCSD Engineering, Fall 1989*).

A means to project such a research program unto the college environment is to treat buildings and landscape alike as showcase for the innovative and imaginative use of materials. Because of the predominant use of concrete, glass, and steel in the existing buildings, along with the mostly quadrangular volumes and surfaces they generate, the guidelines prescribe that these materials and forms remain dominant. In keeping with the "reasoned" approach to the college design, the guidelines also prescribe a logical approach to their use and function, based on their proximity to or from their natural state.

However, nothing should preclude the creative use of concrete, glass, and steel to reflect technical advancements in their manufacturing and processing, to express ingenuity in their application or, simply, to generate much needed visual diversity and animation. In this light, the place should feel like a giant experiment, of beams, bolts, panels, wires, and mechanical devices seemingly at work to yield measured progress in the quest for scientific knowledge. One visit inside the Powell Structures Laboratory already delivers such a vision. Perhaps every prospective designer should be required to visit the PSL as well as every other lab to gain an aesthetic insight into the spirit of the college.

3. The Purpose of Research.

A third source of inspiration has been the presumed social benefit accruing from the college's scientific enterprises. It is hoped, if not expected, that scientific research will yield increased efficiency in the use of materials and, therefore, increased efficiency in the use of the planet's resources. As Lea Rudee, Dean of Engineering, has stated, "It is we who have the scientific and engineering knowledge from which efficient new technologies will derive". This he wrote in connection with the growing degradation of the earth's environment and the role of engineering in redressing this trend (see "From the Dean", UCSD Engineering, Fall 1989).

The design of the college responds in two ways to the humanitarian role of science. First, in that the aim of science is viewed as reaching out to all humanity to help improve our lot, the research activities in the college should likewise "reach out" into the college environment and invite attention and contemplation. For this reason the plan contains discrete gathering areas around building entrances and in strategic vantage points from where views "into the labs" can be gained. Such areas should be designed for carefree lounging in grass 'medallions and/or for seating around planted islands. The guidelines further suggest that building forms and surfaces, particularly within pedestrian circulation areas, be human-scaled, accessible and friendly, not imposing, monumental and obscure. Landscape features intended to attract habitation should dominate the outdoor spaces over hard, austere, inaccessible walls. These considerations are essential to achieve the collegiate quality previously described.

Secondly, in that the natural environment will also improve as a result of increased efficiency in the use of its resources, the college should showcase the sensitivity with which urban development can take place, both by preserving valuable resources and mitigating adverse impact. It is fortuitous that Warren College is enveloped by coastal scrub vegetation and eucalyptus groves. The guidelines prescribe the preservation and enhancement of these landscapes as well as the generous use of new plantings so that the landscape acts as a strong counterpoint to the built environment, providing human shelter along circulation and gathering areas and allowing the buildings to recede to secondary visual planes.

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The above discussion summarizes the attempt by the design team to draw from the college and for the college a unique and meaningful physical image. The following pages describe in more detail how this image is orchestrated through site planning, architecture, landscape, and circulation design recommendations.



Figure 35 District Definition

SITE PLANNING GUIDELINES

Intent: The Neighborhood Planning Study delineates a development plan for Warren College at program buildout. The intent of the plan, beyond the accommodation of the program, is for the urban elements - districts, paths, nodes, edges, landmarks and its landscape - to project a clear sense of organization or structure, that a system of fitted parts is at work. Such a structure is based on the development of segmented circulation corridors, connecting a series of intimate, formal gathering nodes, and on the preservation and enhancement of a rustic and parkland ring that frame the College.

The geometric foundation for the College structure is the interplay between the two grids that overlay it: the North/South-East/West (NSEW) Academic Grid, which pervades, with minor variations, the entire campus; and the Land Grid, rotated about 45 degrees from the Academic Grid, derived from a diagonal "land vector" that traverses the campus from North Torrey Pines Road to the tip of the Warren College mesa. (*see Figures 3 & 4, Section II.*) Only in Warren College are both grids self-evident. Therefore, resolution of the site plan following a rigorous play between the academic and the land grids offers the potential to establish for the College a unique urban signature.

Three other considerations should govern the development of the college: preservation of the view to and from the Library through its northern canyon; reinforcement of Warren Mall as a major formal pedestrian circulation and gathering space; and safe, generous passage between the academic and the housing districts within the college.

District Definition

- A. The academic area of the College shall be aligned predominantly along the NSEW grid (*Figure 35*).
 - . Buildings, paths and edges within the academic area shall be orthogonally oriented along the four cardinal points.
 - . Exception: As the terminus of Warren Mall, EBU II should engage both grids as an expression of the reconstruction of both the orthogonal academic (knowledge) and the diagonal land (nature) grids (*see Section IV, Warren Mall, Page 81*).
- B. The housing area of the college shall primarily be aligned along the diagonal grid (*Figure 35*).
 - . New buildings, paths and edges within the housing area shall generally be oriented orthogonally along the Land Grid.
- C. The loop road and housing access driveways shall follow optimum alignments as dictated by normal considerations of topography, safety, and engineering. Its alignment should also correspond with the district grid or diagonal orientation as feasible.

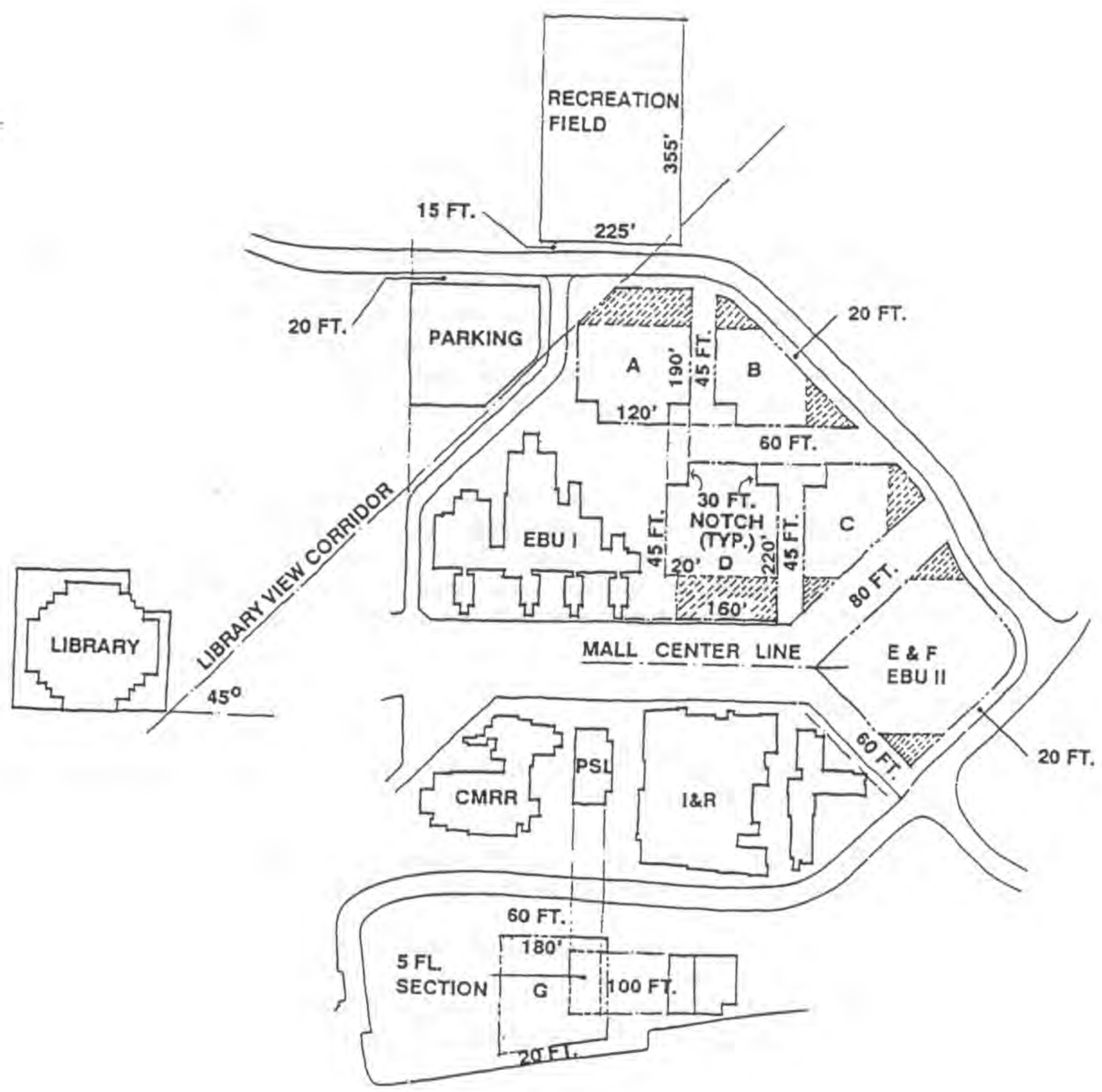


Figure 36 Setbacks

Building Lines and Setbacks

- A. No structure or appurtenance higher than 10 feet from existing grade should be erected within the library view corridor (*Figure 36*).
- B. To the greatest extent possible, new buildings should reinforce the spatial closure of the north side of Warren Mall.
 - . The EBU I rhythm of alcoves and pods that interface with the Mall should be retained as permitted by the functional requirements of the new buildings.
- C. To lessen the bulk and mass of the academic buildings at the Mall and the college perimeter, the building volumes shall be broken down within the "Fracture" zone. Within this zone it is encouraged that surfaces be stepped or recessed, punched and jointed so that the main body of the buildings appear to gently "fade" out of its mass (*Figure 36*).
- D. Placement of a building at Site G within University Center shall be guided by building heights and design standards as stipulated in the University Center Design Guidelines. Consideration should be made to integrating an element in this future building that will complement the volumetric projections from the Powell Structures Laboratory and the adjacent High Bay facility. The intent is to create a building "trilogy", with the two southern elements acting as a gateway into and out of Warren College.
- E. The minimum setback from the Academic Buildings to the window face of the existing housing shall be 86 feet. This setback is necessary to maintain adequate solar access to the residential units (*Figure 37*).
- F. Unless otherwise noted on Figure 36, the minimum separation between buildings shall be 45 feet. This minimum separation is required for adequate fire emergency service.
- G. Academic buildings should be offset along the corridors to avoid long narrow chambers and wind tunnels.
- H. The minimum building setback to any service, access drive, or the loop road shall be 20 feet.

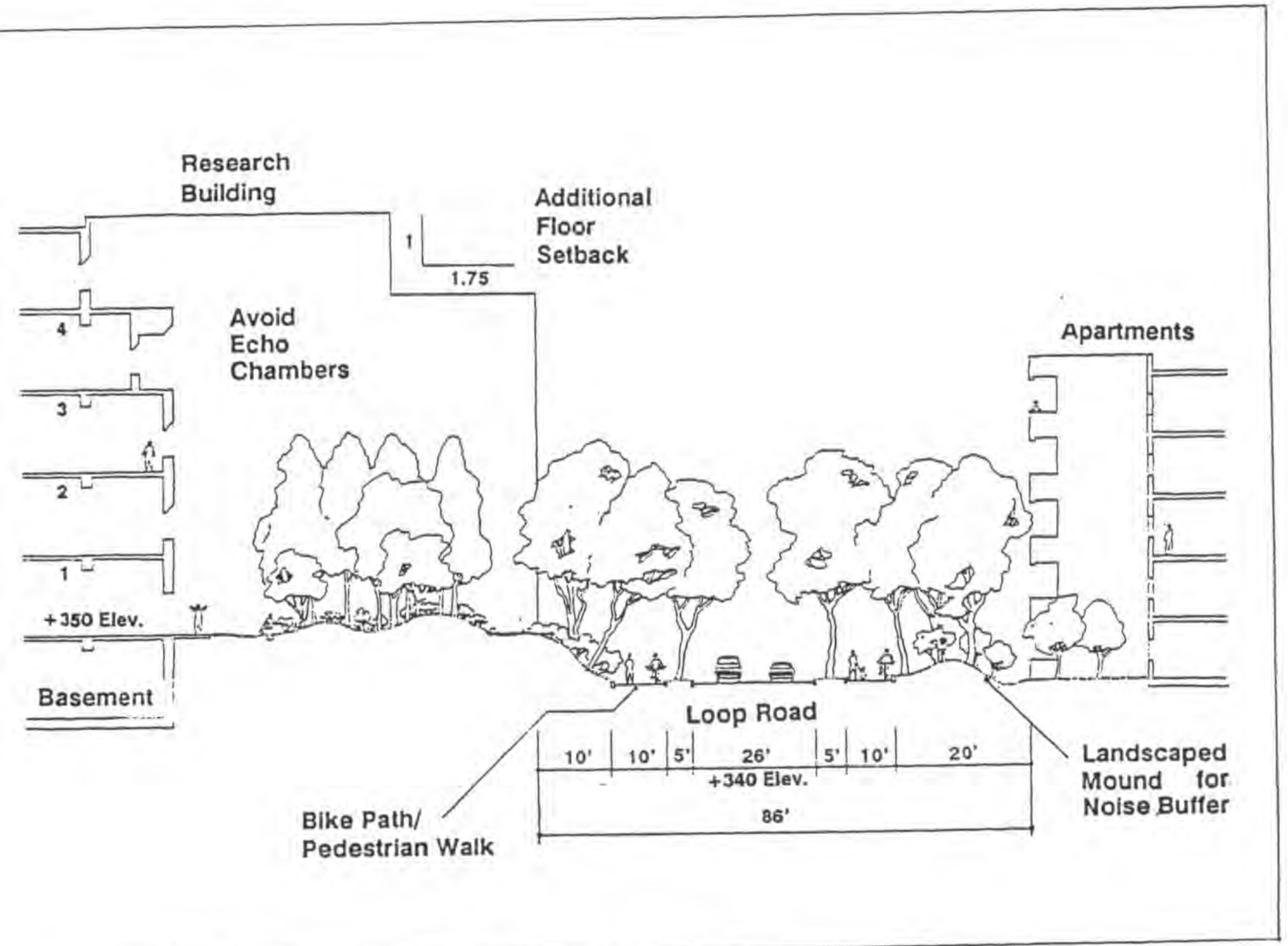


Figure 37 Loop Road Section

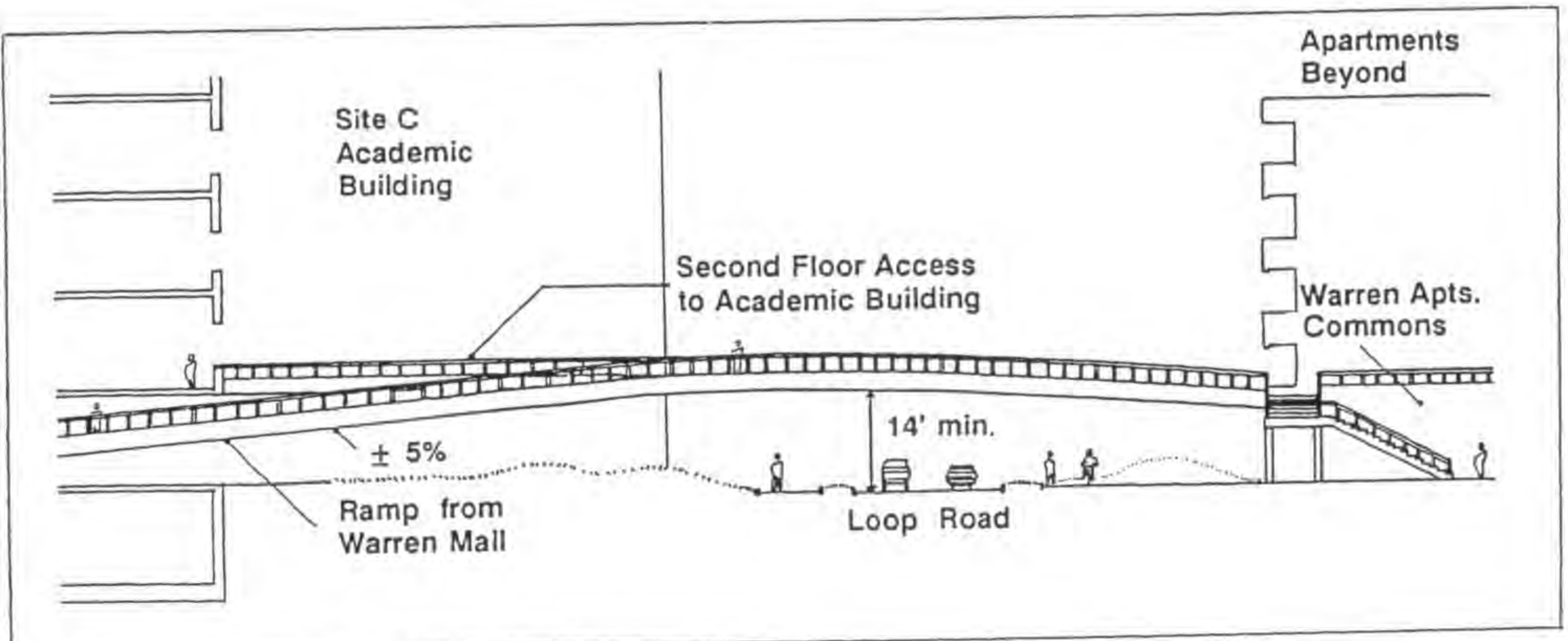
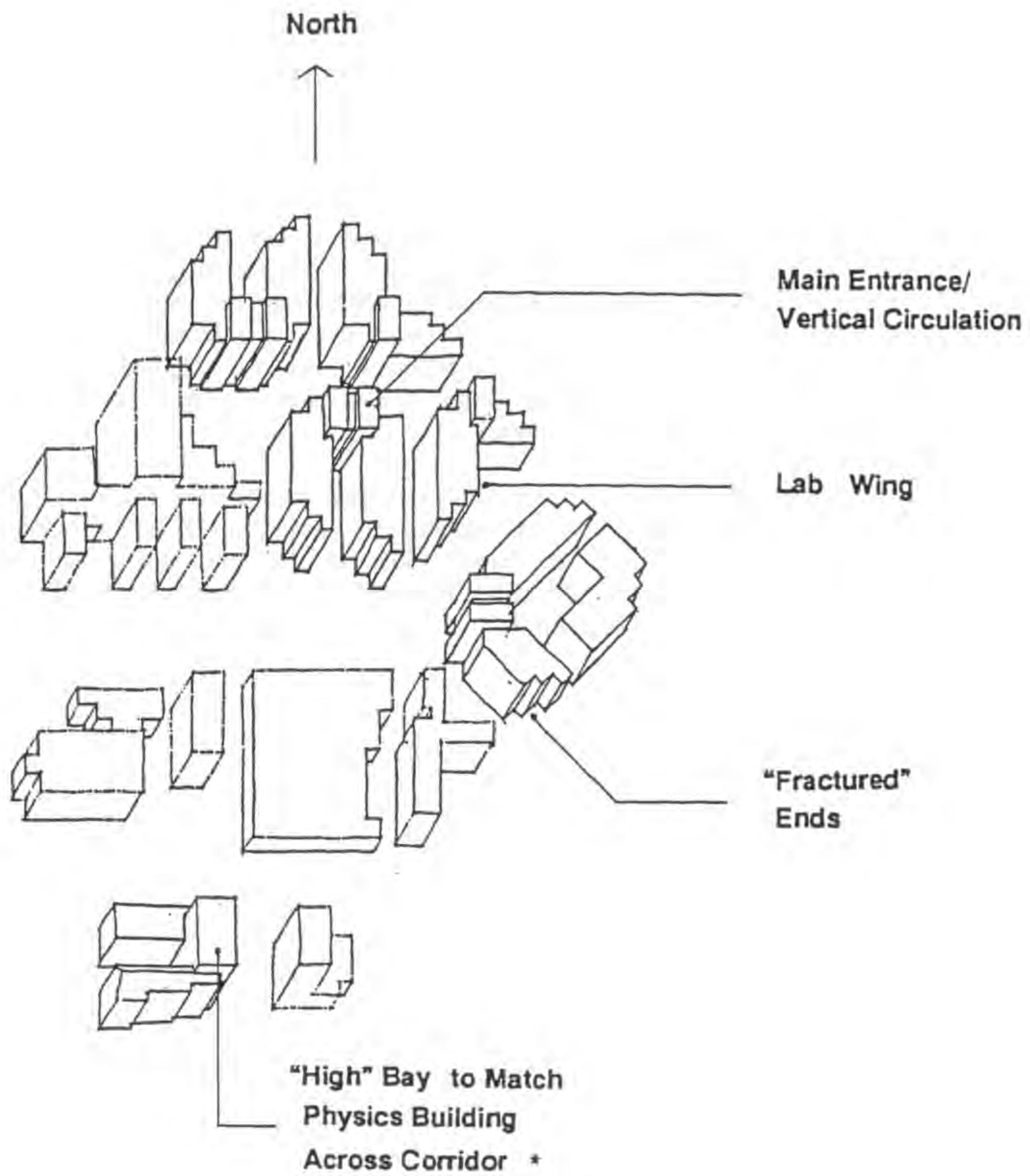


Figure 38 Potential Loop Road Overcrossing

Building Heights

Building heights are defined by the number of floors from existing grade, with an average floor to floor dimension of 16 feet in laboratory spaces and 12 feet in office spaces within academic buildings, 12 feet for residential buildings. Parapets, rooftop equipment, screening and vertical circulation cores are not included in the determination of overall building height.

- A. Along the loop road and/or within the building "fracture" zones, buildings shall not exceed four floors from existing grade. Additional floors are permitted if recessed from the setback line at a 1:1.75 ratio (*Figure 37*).
- B. Academic buildings shall not exceed 6 floors from existing grade (5 floors may be a practical limit depending on the vibration sensitivity of research equipment that may be housed in them and 3 floors where hazardous materials are in use). The variation in floor heights should be integrated into a logical massing of the building, stepping down from the highest masses in the core to the lower masses at the perimeter.
- C. The heights of the dormitory housing expansion buildings should step down from the existing apartment heights (5 to 6 floors) to the canyon edge. Two to three floors is the maximum residential height along the canyon. Building masses and heights should be arranged to take advantage of the views out over the canyons.



* Subject to approval of University Center Design Guideline Revision

Figure 39 Volumetric Definition

ARCHITECTURAL GUIDELINES

Intent: To the casual observer, Warren College should look like a system of parts, fitted with precision and consistency according to the site's visual, spatial, and environmental structure. Therefore, the parts that comprise the buildings -- the exterior and interior facades, circulation corridors and cores, mechanical equipment, ground plane interface, entrances, etc. -- should be expressed as discrete and distinctive elements within a composition that promotes openness, friendliness, and accessibility.

Within this framework, the architectural guidelines intend to build-upon the existing character of the college by respecting the basic materials and volumetric definition of the existing buildings while allowing for ingenuity and individuality in the new ones.

Functional Definition

- A. Each functional area of the building should be expressed in volume, material and texture as a discrete, distinctive part. For example, in exterior appearance, offices should not be confused with laboratory areas; or stairwells with other vertical conveyance spaces.

Volumes

Academic and Research Facilities:

The existing structures could be broadly described as an assemblage of stacked or butted quadrangular volumes, with their longer dimension generally oriented perpendicular to the mall. Therefore, to maintain a coherent spatial quality within the academic core area, the following guidelines for new buildings are recommended. (*Figure 39*):

- A. The building mass should be divided into several clearly perceived volumes, the assemblage of which retains a predominant North-South orientation.
- B. Volumes should generally be orthogonal to the Academic Grid on the horizontal plane and predominately flat-topped on the vertical plane.
- C. Along the Mall and other north-south building faces, the volumes should have a predominant vertical orientation; on the east-west faces the volumes should be balanced between the vertical and horizontal.

Housing:

- A. Volumes should generally be orthogonal to the Land Grid on the horizontal plane and primarily flat-topped on the vertical plane.
- B. The rhythm and modulation of the new housing should reference the volumetric and planar definition of the existing housing. However,

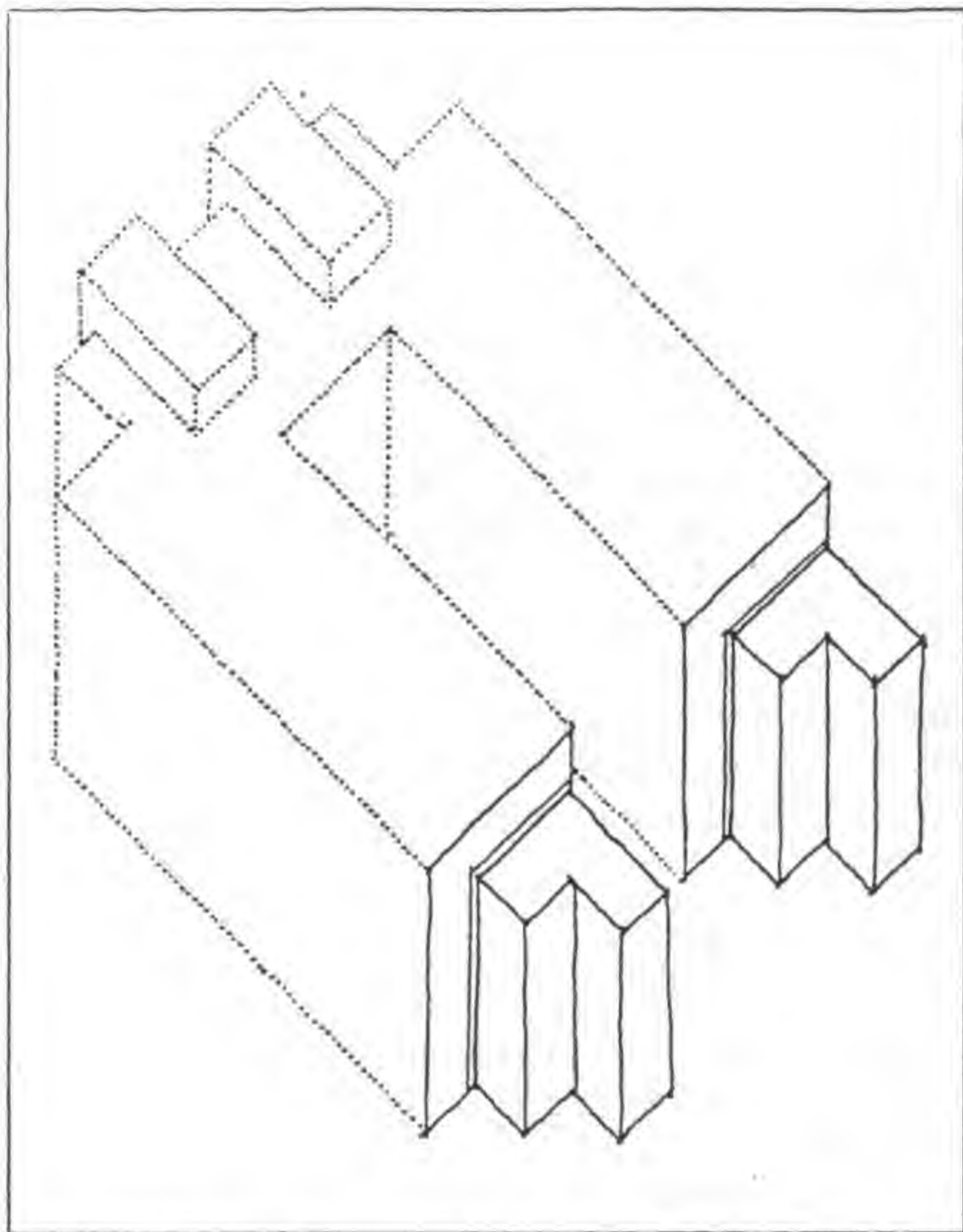


Figure 40 Fracture Zone Surfaces

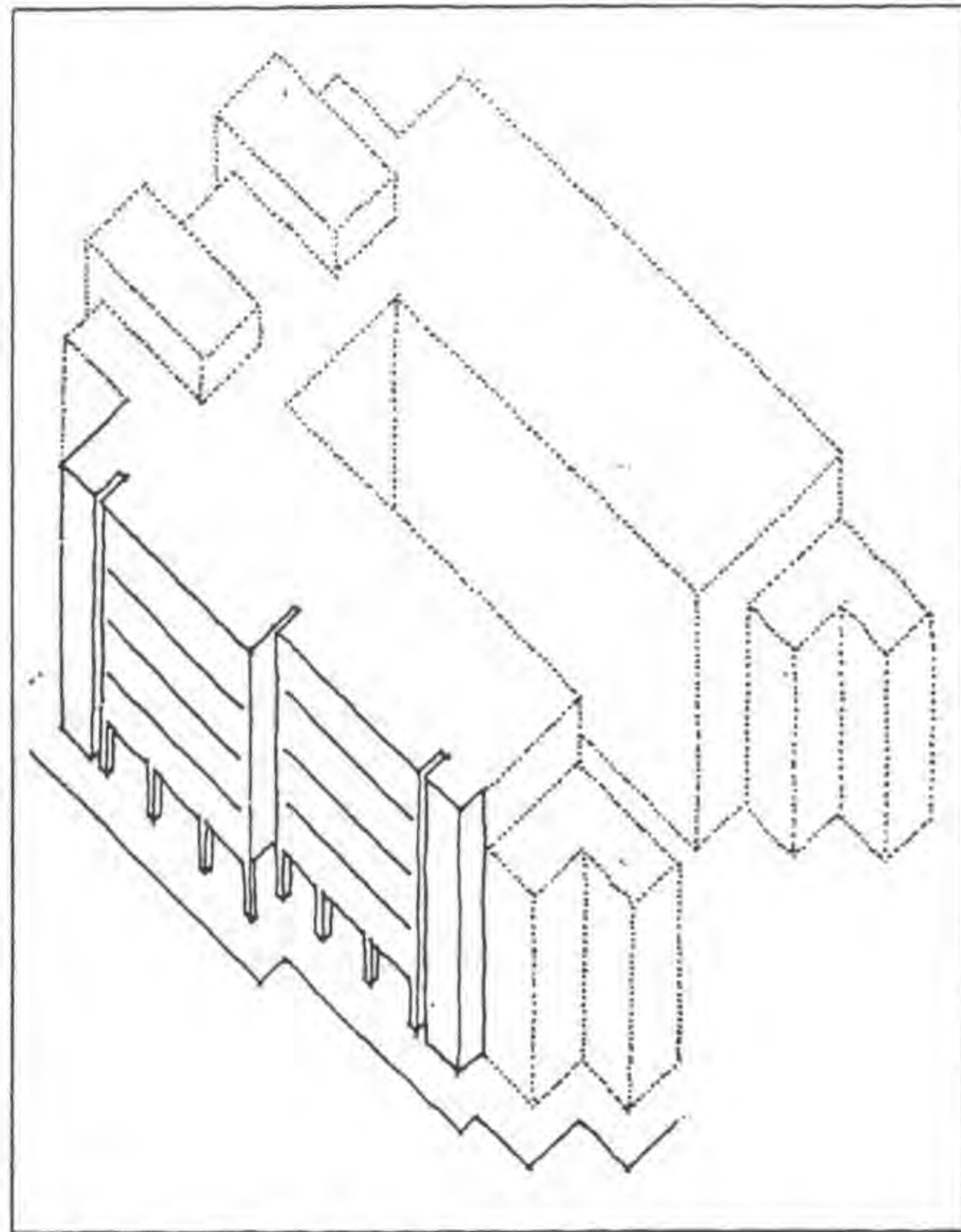


Figure 41 Corridor Surfaces

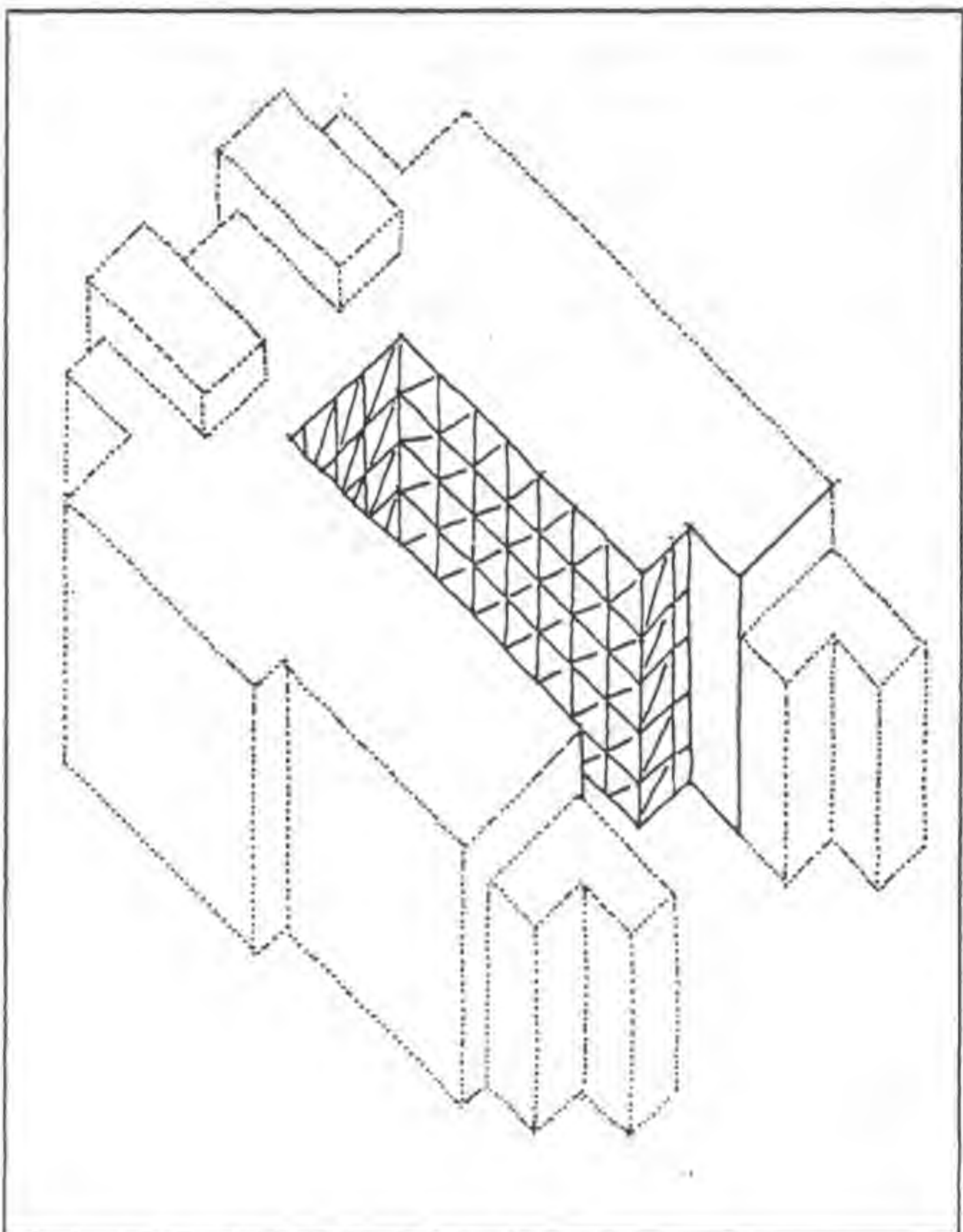


Figure 42 Interior Surfaces

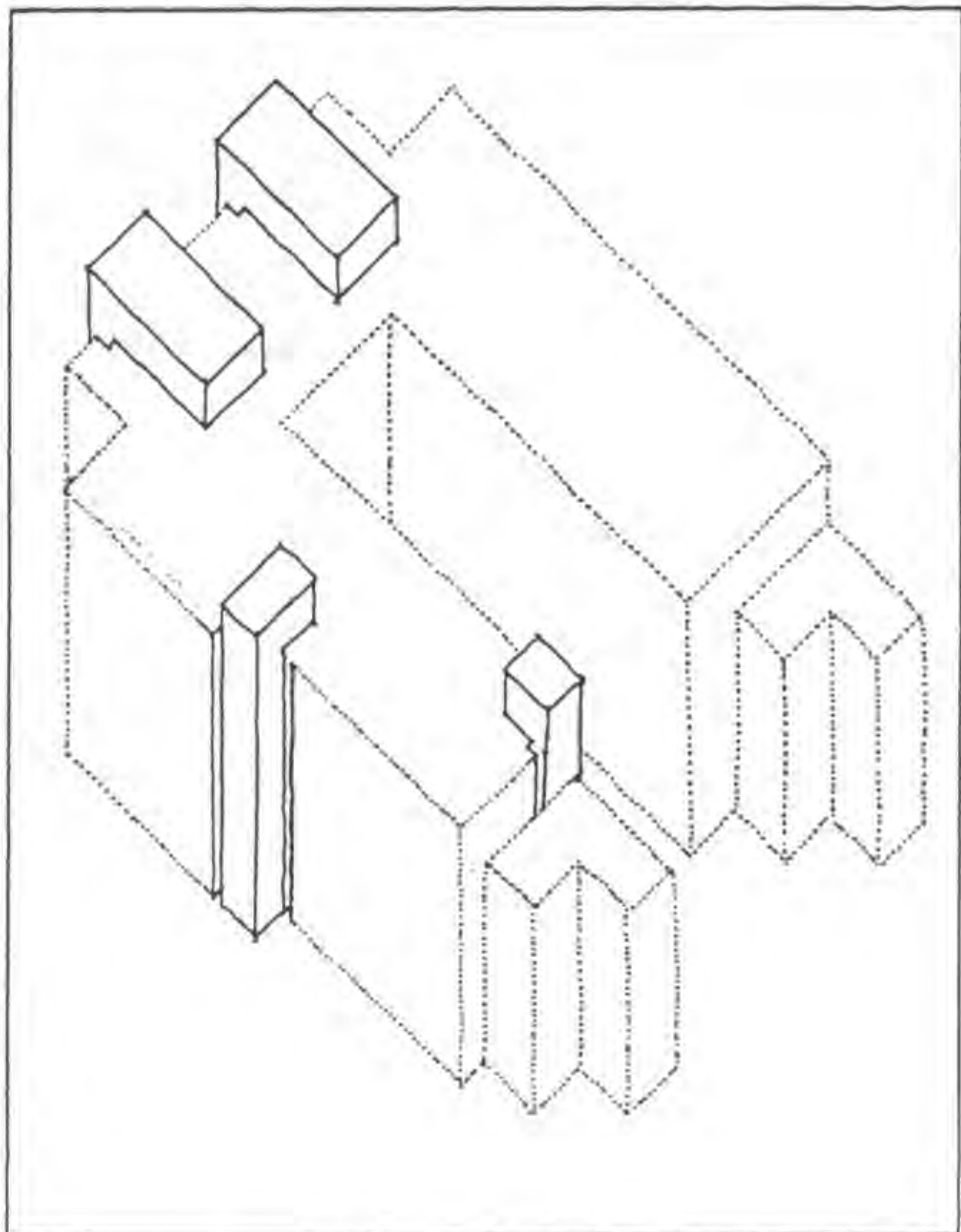


Figure 43 Vertical Cores

care should be exercised to avoid visual monotony and massiveness. In particular, the new housing should capture and respect the site's landscape. Volumes should be divided enough to permit views through the complex to the surrounding rustic canyons, hills and distant mountains.

- C. **Retrofitting:** The existing housing complex appears massive and monotonous, owing in part to the predominant use of two similar materials -- concrete and concrete block -- which visually fuses all parts of the complex. Painting a limited number of surfaces to "lift" the residential pods out from the overall building mass should be considered. The blank walls can also be considered as a "canvas" for an artist. Other means to achieve visual diversity should be explored, including new materials (like tile applications) and planting. The new housing design should also suggest ways in which the existing housing could be enhanced, not only to break its monotony but also to visually tie both projects. The Facilities Design & Construction Office, Design Review Board, and Physical Plant Services should be consulted on the retrofitting possibilities.

Surfaces

- A. **Monolithic surfaces are discouraged.** Without excessive ornamentation, surfaces should appear as an assemblage of parts, with a deliberate expression of the joints and mechanisms of assemblage.
- . **Fracture zones:** Surface should be uniform; fenestration, openings, or joint patterns should not detract from the required volumetric verticality (*Figure 40*).
 - . **East-west surfaces and surfaces facing pedestrian corridors:** surfaces should express a balanced play of horizontal and vertical patterns (uniform curtain walls or continuous, uninterrupted window rows are discouraged); the corridor-facing planes should be vertically broken wherever possible to lessen visual monotony along the corridor; ground level floors: maximum visual penetration into the building is encouraged; corridor planters should echo the rhythm of the building facade. (*Figure 41*).
 - . **Interior surfaces:** Curtain wall systems are suitable; reflective glass is encouraged to diminish the excessive appearance of mass. Care should be exercised to avoid concentrated solar reflection on gathering areas (*Figure 42*).
 - . **Roof Surfaces:** Visible rooftops should be sensitively designed as architectural elevations so that they will be attractive when viewed from a higher level.
 - . **Vertical cores and mechanical shafts:** Cores and shafts should be expressed as distinctive elements, wherever possible visible on the exterior planes (*Figure 43*).

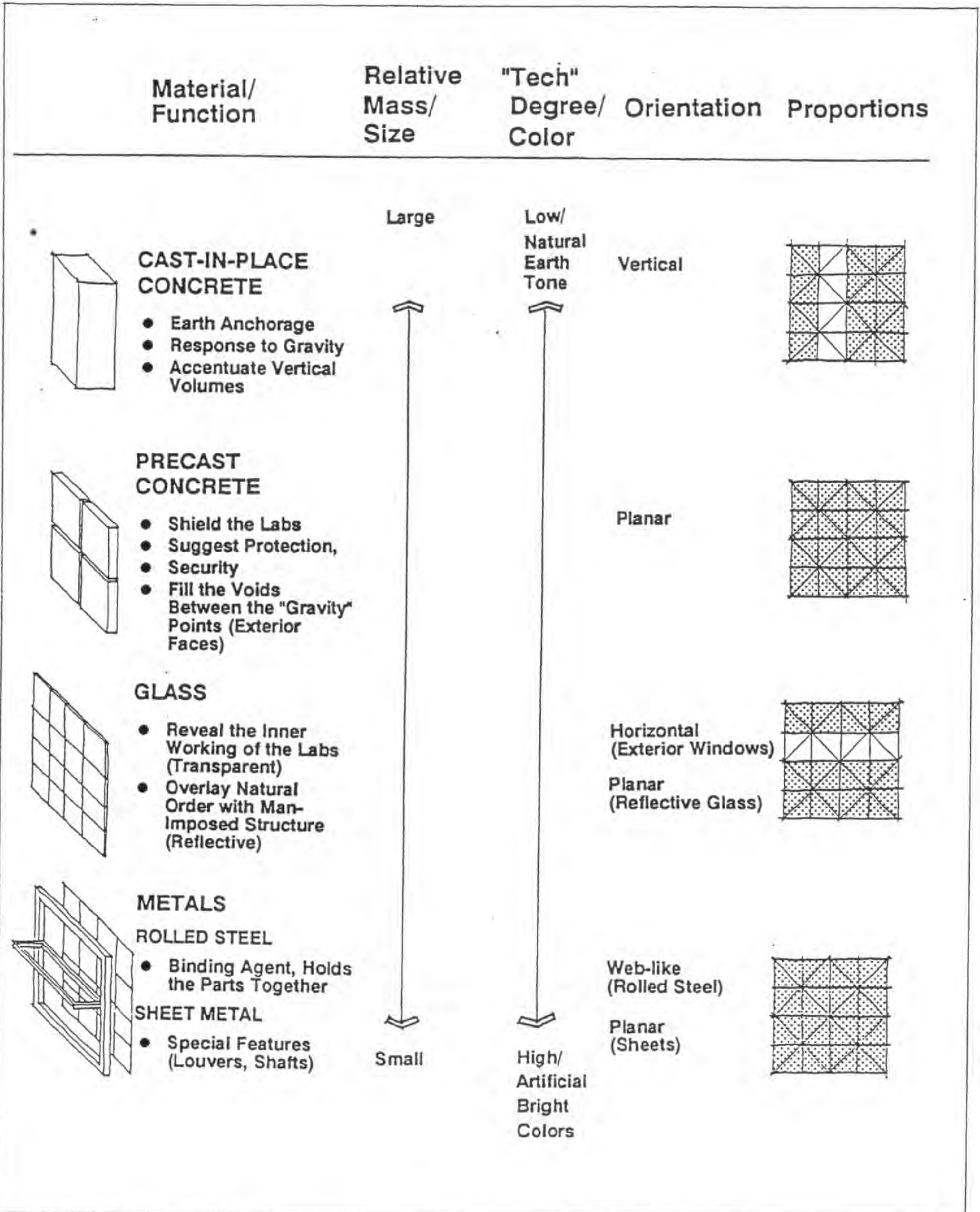


Figure 44 Materials

Materials and Color

Following the overall intent that the College is perceived as having a "reasoned" form, a logic should apply for where and how materials and colors are employed in the buildings. The following is proposed: like the landscape, which transitions from the rustic to the very ornamental or discrete, materials and their color should likewise subscribe to a gradient, according to the degree to which they are processed or transformed from its natural state.

In general terms, material that are the least processed, like poured in place concrete, should assume the largest relative volumetric or planar dimension and left in its natural color; by contrast, extruded metals should assume the smallest dimensions and be brightly colored.

Figure 44 summarizes the criteria for the use, function and character of the materials and color. This chart should be used as a general guide. It is a starting point with which to generate unique expressions tailored to each structure within the established approach.

Academic and Research Facilities:

- A. The predominant materials in the existing academic buildings are reinforced concrete, precast concrete (including concrete block, GFRC, and CMU) and glass and metal (rolled, sheet or extruded steel and aluminum). Concrete and precast concrete with glass and metal should remain dominant in the new academic structures.
- B. Colors should be restricted to the light and natural hues in concrete. Glass should be clear or blue in hue. Metal accents should be in the existing red/terracotta color found within Warren College, with the addition of limited primary colors to give individual identity to each building.

Housing:

- A. The materials and color of the existing housing should continue on the new housing: concrete, concrete block, painted rails and miscellaneous metals. However, their use should not induce the appearance of massiveness or monotony. New materials may be considered so long as they contribute to enhance the overall visual interest and coherence of the residential complex. The use of limited bright or primary colors is encouraged, particularly on metal trims, railings and other metal surfaces.

Ground Plane Interface

- A. The ground floor exterior walls facing pedestrian circulation or gathering areas shall be treated as a discreet functional part intended to soften and enliven the outdoor spaces. Recessing walls to expand the exterior space, adding ornamentation to the exterior ground floor walls and using clear glazing to reveal interior research activity (to the degree that it is practical) are encouraged.

Mechanical and Service Systems

- A. Major mechanical systems, equipment, service, and screening, where appropriate, should be expressed as a discrete building part or screened. As highly processed and manufactured elements, such equipment should follow the overall materials guidelines for color.

Environmental Response

- A. Non-laboratory space should be naturally ventilated to the greatest extent possible. Ventilation for laboratories should not allow pollutants to disperse over housing or gathering areas.
- B. Passive solar responsiveness is encouraged. Passive solar features should be treated as a distinctive building elements, not integral to the wall systems.
- C. Buildings along the loop road should be constructed to avoid echo chambers. Future increased traffic volumes on the loop road are anticipated to occur primarily during daytime hours when the adjacent housing facilities are not heavily utilized; however, a noise study should be undertaken to address impacts and potential mitigation, if traffic proves to be disruptive.
- D. Winds tunnels should be prevented through offset building masses, elimination of long corridors, or screening.



Figure 45 The Rustic Landscape

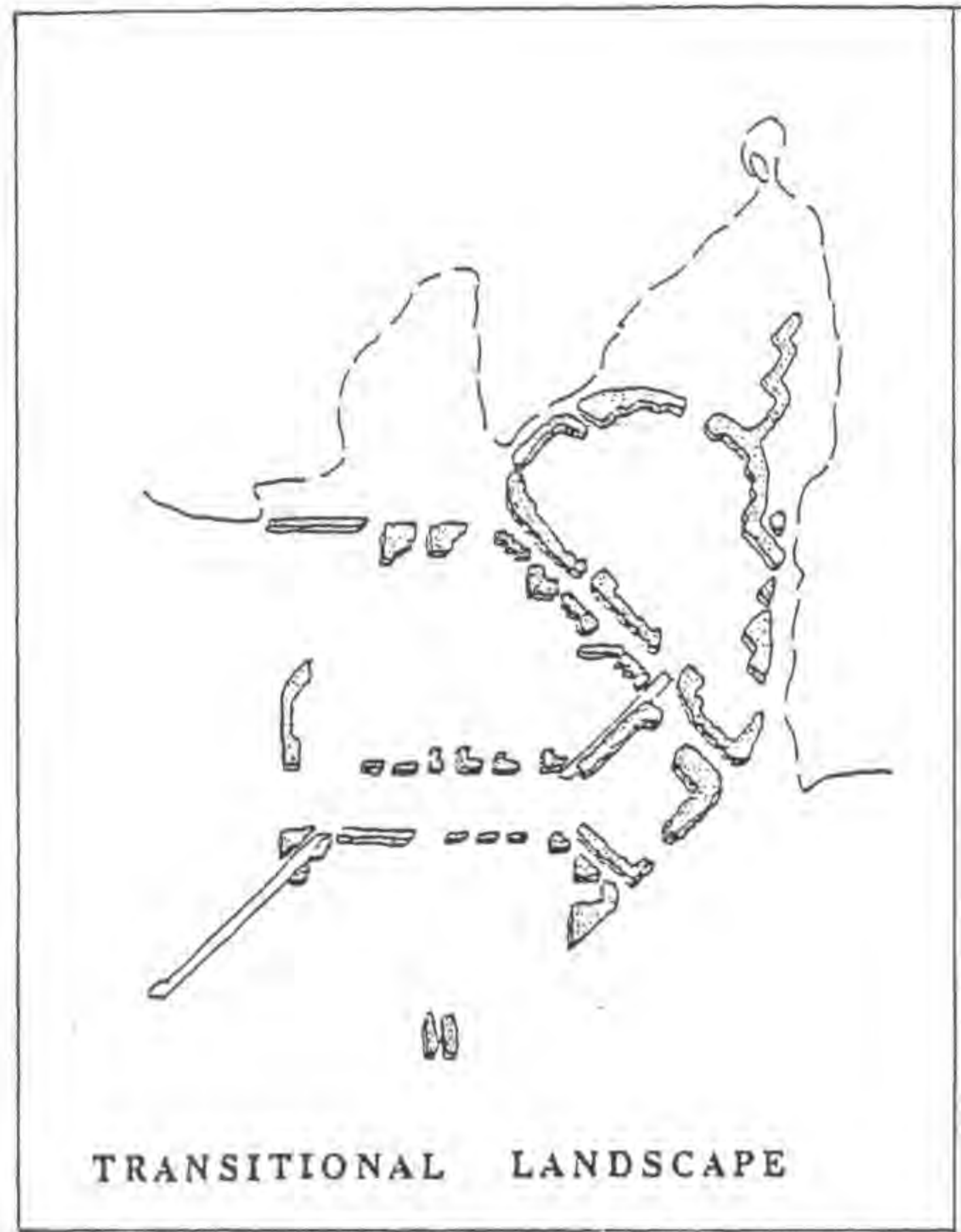


Figure 46 The Transitional Landscape

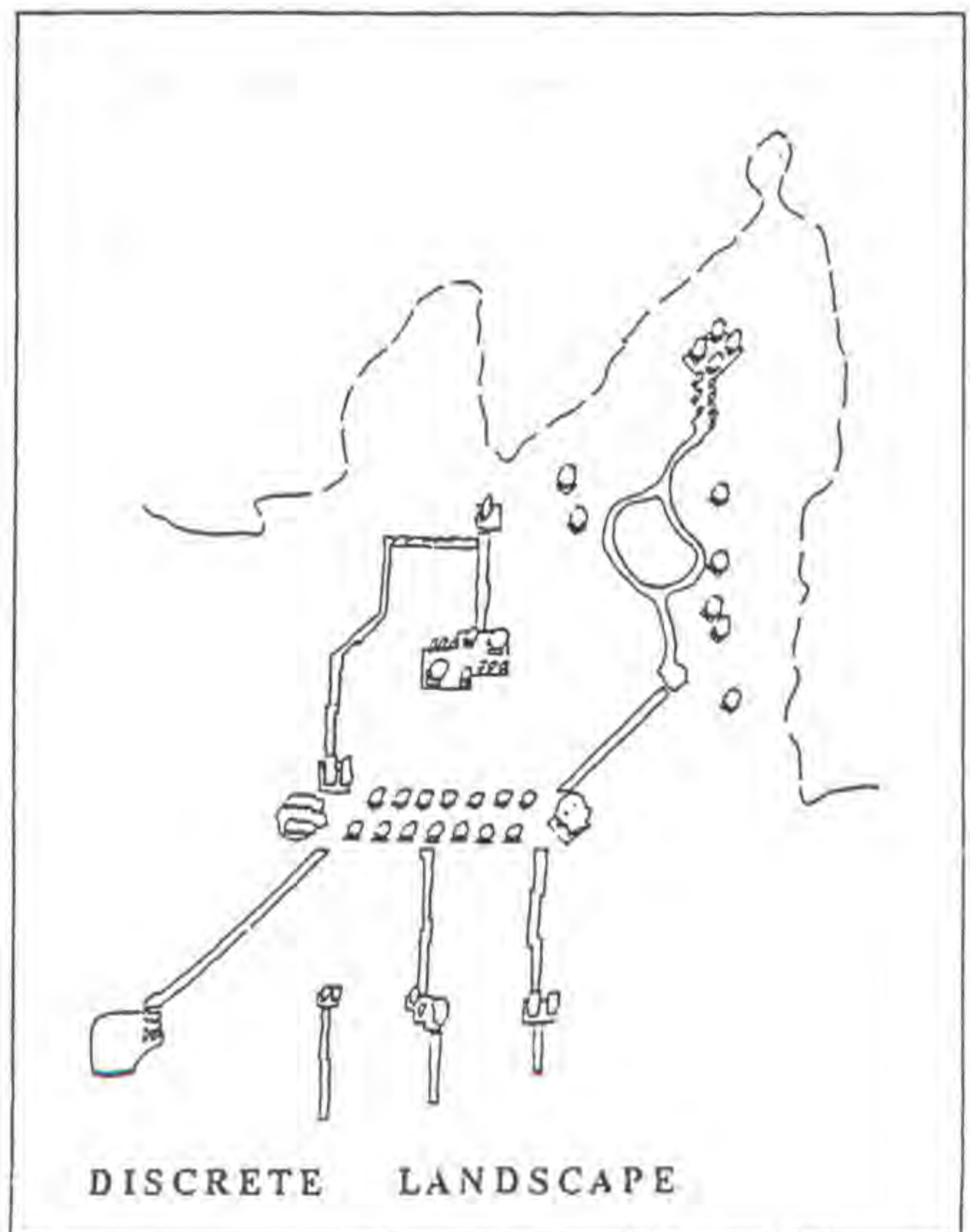


Figure 47 The Discrete Landscape

LANDSCAPE ARCHITECTURAL GUIDELINES

Intent: The college landscape, as does the architecture, serves both functional and thematic roles. The functional role of the landscape is to filter and frame views, screen and soften edges, create and delineate amenity zones and gathering areas, enhance micro-climate and block winds, define edges and paths, provide color, texture, smell, and the sense of seasons, provide visual interest within the college, and reinforce the adjacency to the natural landscape. The guidelines prescribe the criteria by which these functional requirements should be addressed.

In its thematic role, the landscape should serve to heighten the site's unique rustic setting at the perimeter and reinforce the college's overall sense of structure and organization within the interior. The activity of scientific research may be characterized as the study of nature, taking apart its component parts, observing their behavior under controlled conditions and drawing proof of predictable behavior. The "taking apart" of nature, of studying its discrete parts, suggests for Warren College the presentation of the various elements of the landscape as an assemblage of discrete parts fitting within a structure.

In contrast to such a structured landscape is the rustic and parkland areas that envelope the college, which manifest both the coastal sage scrub wilderness and the eucalyptus grove that replaced the scrub in much of the campus. The interplay between both extremes - the uncontrolled, rustic on the one hand and the controlled, discrete on the other - offers rich design possibilities while maintaining the xeric character for water conservation. The intent of the guidelines is to express this latent, inherent richness and therefore generate a unique setting for the college.

Figure 31 summarizes the landscape elements for Warren College as a whole, Figures 45, 46, and 47 show the three landscape types: Rustic, Transitional, Discrete, and Appendix 2 contains a suggested plant list.

The Rustic/Parkland Zone (*Figure 45*)

- A. This zone rings the college. It should be reinforced wherever possible in the perimeter areas, particularly on Matthews Lane towards the Price Center.
 - . Eucalyptus species should be infilled along Mandeville Walk to create a stronger presence and eliminate dying trees.
 - . Existing eucalyptus along Matthews Lane should be treated with care during future construction to prevent their removal. Additional eucalyptus should be added at the buffer between Warren, Fifth College, and University Center along Matthews Lane. Infill of new trees should occur at approximately 20'-0" on center spacing. The pavement of Matthews Lane could be narrowed to 26'-0" provide additional landscape area and maintain service access.

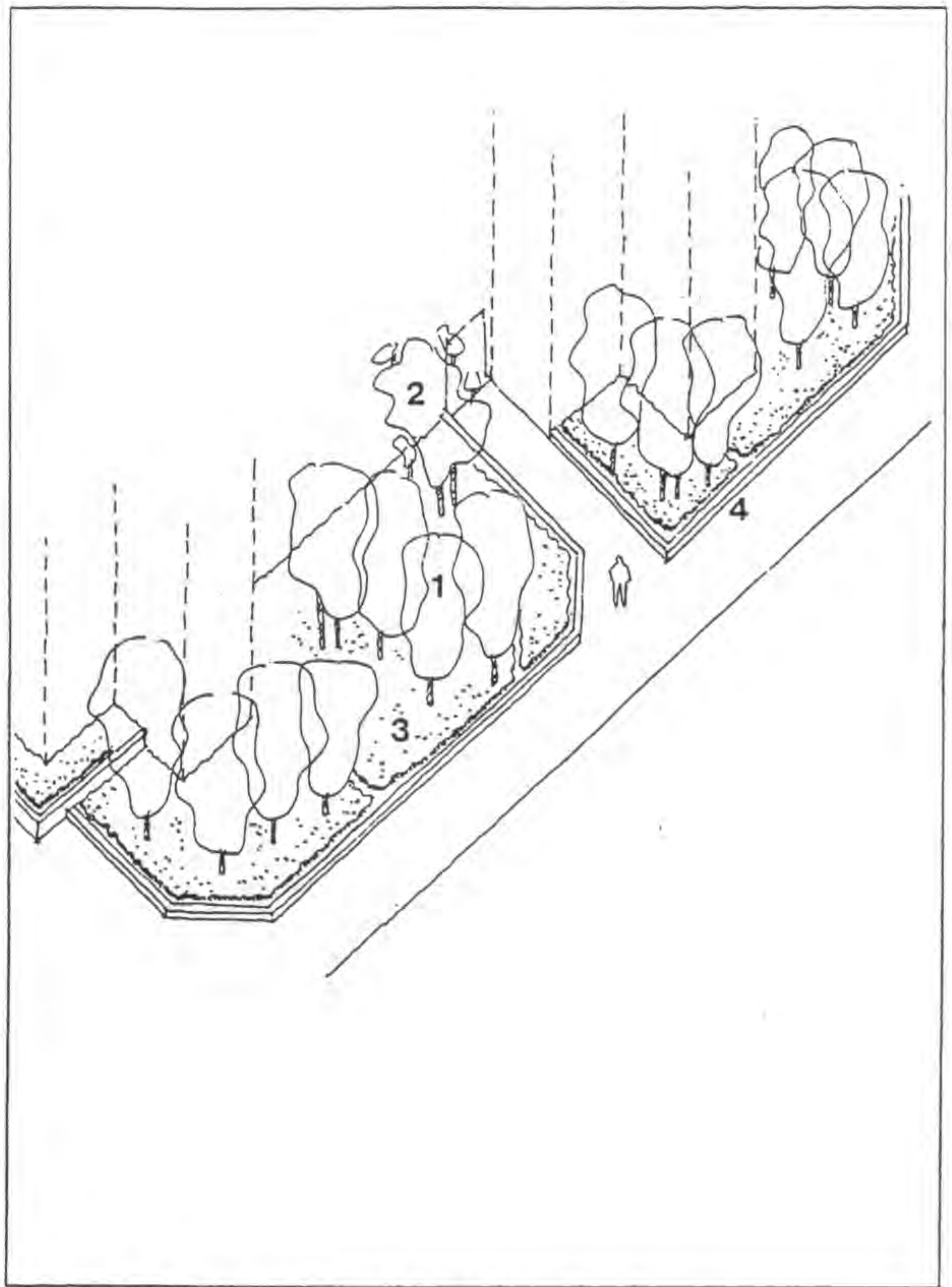


Figure 48 Transitional Zone

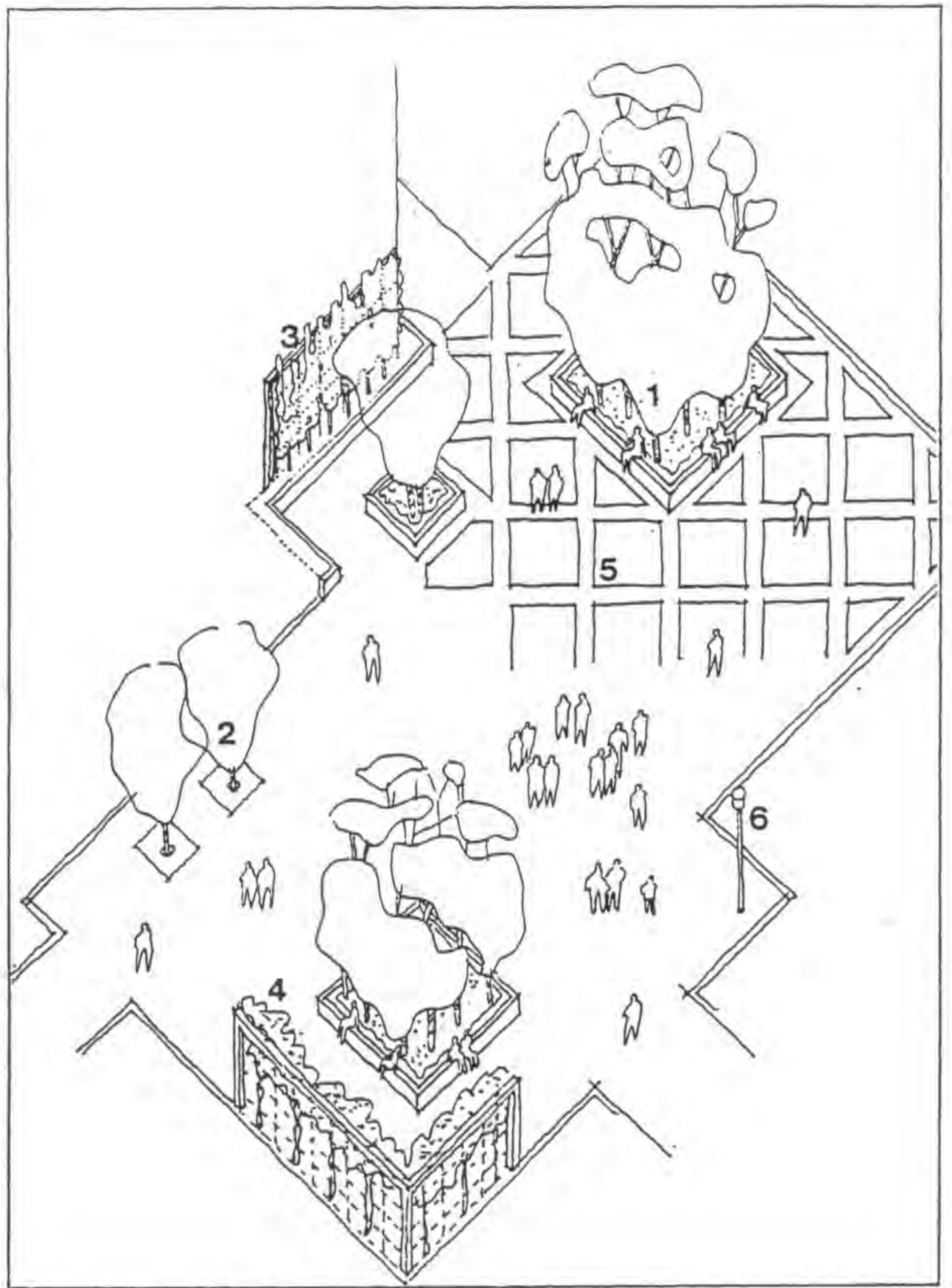


Figure 49 Gathering Areas

The Discrete Zone

The discrete zone includes the gathering areas, corridors, and Warren Mall (*Figure 47*).

Gathering Areas: Located at crossroads and by clusters of building entries, gathering areas are intended to function as major pedestrian activity nodes, providing enclosure, shade and a variety of seating arrangements to facilitate group meetings or individual rest. The landscape features within them should be formally integrated into a cohesive structure, allowing each element to be clearly expressed. (*Figure 49*).

- A. Planting, as is practical, should occur within raised planters containing massings of trees, preferably of a single species and a limited number of shrubs or ground covers (*Figure 49, No. 1*). Grassy areas for lounging should be included to offer a diversity of seating types. The planter size should be not less than 400 square feet based on a pit depth of 4 feet. The planter enclosure should be suitable for seating.
- B. If the design calls for individual trees in a paved area, the use of grates or low curbing defining the tree well is encouraged. Adequate provisions for healthy root growth should be made (*Figure 49, No. 2*).
- C. The use of vines on trellises are proposed adjacent to buildings (*Figure 49, No. 3*) to help identify the pedestrian domain from other spaces and building areas. Vines should be trained on a trellis, minimally 2'-0" away from the building to provide for easy maintenance and to prevent vines from attaching to building wall.
- D. On open sides of the gathering areas, planting screens, trellises, vine structures, etc. are proposed to reinforce the gathering area boundary (*Figure 49, No. 4*).
- E. The ground plane should be paved with modular units with a minimum size of 4" and a maximum of 24", or, if monolithically installed, patterned and jointed to suggest modularity within a diagonal pattern (*Figure 49, No. 5*). The intent is twofold: to identify the ground plane of the gathering areas as a unique and distinctive surface from surrounding or abutting circulation areas; and to reinforce the concept of "fitted" parts within a structure.
 - The planters and other landscape elements within the gathering area should bear a relationship to the paving pattern.
 - The location of planters and other appurtenances should respect fire and emergency access clearances.
- F. Lighting should be provided by pedestrian-scale pole fixtures (*Figure 49, No. 6*). A 0.6 footcandle minimum illumination level should be maintained. All lighting levels and type should correspond with the campus wide "Dark Sky" policy, and the future Campus Lighting Study.

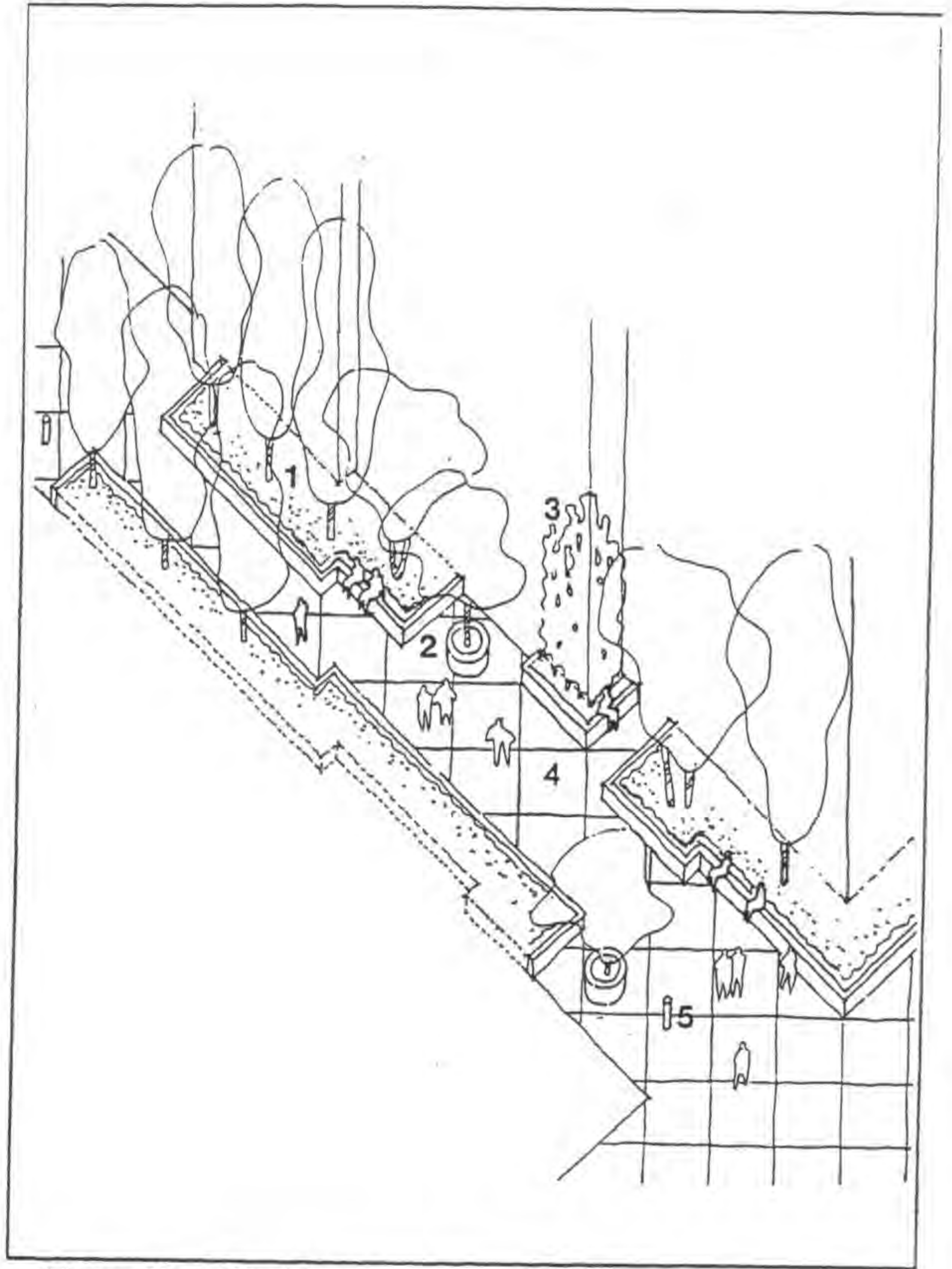


Figure 50 Corridors

Corridors: The corridors are the thread that bind the three landscape zones: the rustic, the intermediate, and the discrete. These corridors (*Figure 31*) include the north-south connections from University Center, Mandeville Walk, the diagonal connections from Warren Mall, and the diagonal connection from the Central Library to Warren Housing. While each of these corridors are unique in orientation and form, they should receive a consistent treatment, primarily aimed at reducing their appearance as long, narrow, and enclosed spaces (*Figure 50*).

- A. The corridors should be predominantly oriented north-south so that maximum sunlight can penetrate the space during the midday hours.
- B. Visually prominent landscape or architectural features should be placed on axis with the corridors to emphasize their orientation and pace the travel through them.
- C. Profuse, varied groundplane planting in raised planters is encouraged (*Figure 50, No. 1*). The variety of plant types used should be controlled to reflect the scale of the space. The intent is to create as much visual interest at eye level as is feasible without producing a chaotic palette; mitigate against possible wind drafts; and obscure the building/ground plane edge to minimize the impact of building mass.
- D. The planter's linearity should be broken to reduce the perception of length along the corridor. The planters should be modulated in accordance with building wall breaks. Raising the planters (not less than 12") will accentuate these breaks and further reduce the perception of length along the corridor. At locations comfortable for small seating areas, planter walls should be raised to 18" to facilitate seating. Single planter features may be considered as counterpoint to the linear planters (*Figure 50, No. 2*).
- E. Vines on trellis work removed from the face of the building is proposed at entry or confined areas. (*Figure 50, No. 3*).
- F. Paving should be the principal unifying element of all the corridors. It should echo the patterns of the Mall and gathering areas to establish continuity throughout the neighborhood. Paving should be modular or monolithic and be jointed, scored or patterned on a diagonal orientation from the predominant building lines. The pattern's dominant lines should approximate 4'-0" on center and be equally spaced (*Figure 50, No. 4*).
- G. The paving in the corridor connecting Warren Mall to Warren Housing should continue elements of the Warren Mall paving, including the field stone and exposed aggregate paving that reflect the "Land Vector." Seating clusters should be designed along this important pedestrian spine. Gradual grade changes along this corridor can allow for a future overcrossing at its intersection with the loop road.
- H. Mandeville Walk pierces the rustic belt around Warren College and should be planted with eucalyptus trees rather than discrete plantings to reinforce that edge. The special paving of Warren Mall should be initiated on Mandeville Walk (*Figure 55*).

- I. Corridors should have special treatment where they cross the loop road or service roads for both safety and aesthetic concerns. If traffic volumes warrant, pedestrian bridges could be incorporated into these crossings. Crossings should be well marked, lit, and have enhanced paving, signage, and traffic controls.
- J. Lighting on corridors is recommended to be provided by bollard-type fixtures (*Figure 50, No. 5*). However, final lighting design should be consistent with the Campus Lighting Study, which is currently in progress.
- K. Existing corridors should be retrofitted to provide continuity with the overall design plan. The most effective would be to infill tree planting along the corridors in an irregular spacing wherever they are currently in an axial, regular pattern. During regular replacement maintenance, species used should correspond with these guidelines.
 - The corridor to the west of I&R should be interspersed with additional trees of the same species in a irregular pattern.
 - Along Warren Mall in the existing planted area adjacent to the buildings, infill planting of additional trees of the same species should be installed to create an irregular pattern.

Warren Mall: Because of the function of the Mall as the central space in Warren College and potentially one of the major gathering areas on Campus, no other space in Warren College should replicate or otherwise convey a similar landscape experience. A specific design for Warren Mall has been prepared and is summarized further in Section VI, page 79. The principal anticipated features of the Mall - tree allees or regularly spaced trees, diagonal grass jointed patterns, field stone strips, or the dominant tree species, *Eucalyptus citriodora*, should not be considered elsewhere in Warren College.

The perimeter of Warren Mall should be retrofitted to correspond to these design guidelines and the design plan for Warren Mall (*Page 81*). Recommendations include:

- Standardizing light fixtures;
- Infilling of the formal tree planting in the area between the fire lanes and building face with new trees of varied sizes from the "Filter" plant palette (*Appendix 2*) on an irregular spacing pattern;
- Replacing unused turf areas with drought tolerant ground covers.

Environmental Response

- A. Leaf blowers are discouraged in all landscape areas within the college because of their noise.
- B. Drought tolerant or xeric plant materials are encouraged to reduce water consumption.
- C. Turf should be limited to areas where pedestrians will congregate and sit in sunny locations. The widespread use of irrigated grasses is discouraged.

CIRCULATION GUIDELINES

Intent: The principal objective of the circulation for Warren College is the efficient, safe movement for pedestrians, bicyclists, automobiles, service and shuttle vehicles, and emergency equipment. The guidelines correspond with campus-wide design, engineering, and safety policies and are provided for vehicular circulation, pedestrian circulation, bicycle circulation, service routes, emergency access, and parking design.

Vehicular Circulation

- A. The campus loop road should be constructed per campus standards, which includes two travel lanes (12'-0" each) and a concrete curb and gutter. In addition, 6'-0" wide sidewalks and 5'-0" bike paths should be provided parallel to the road on each side separate from the curb (*Figure 37*).
- B. A fence along the loop road adjacent to the Warren Commons will be necessary to restrict pedestrian crossing to the controlled crosswalks. The fence should be open to allow views, massed with shrubs, and a maximum of 4'-0" high.
- C. Vehicular access roads to parking, service, or housing should be 26'-0" width with two 12'-0" travel lanes. Service roads are permitted to have asphalt curbs. Sidewalks (5'-0" to 8'-0") should be provided where they provide a direct pedestrian connection and adjacent to all roadways. The exception would be along the rustic edge of the college where a parallel circulation path, the Campus Meander, is provided.
- D. Future increased traffic volumes on the loop road are anticipated to occur during daytime hours when the adjacent housing facilities are not heavily utilized. If noise proves to be disruptive a noise study should be undertaken to address impacts and mitigations.

Shuttle Stops

- A. Pullouts for shuttle stops should be provided along the loop road in the areas suggested on *Figure 24*. The pull out should be a minimum of 10 feet deep by 50 feet long.
- B. Shuttle stops should have adequate signage and benches, be well lit, and provide emergency telephones. All graphics and furniture should correspond to the campus wide shuttle system.

Service Vehicle Access

- A. Service lanes shall be a minimum of 26'-0" width with minimum curve radii of 45'-0" to allow for truck access into service bays.
- B. The minimum size of a service court is 60'-0" by 60'-0". Service loading docks for various adjacent buildings should be clustered to allow for shared facilities. These loading docks should be recessed 20'-0" into the building to screen dock land diminish service court vehicular blockage.

- C. Adequate laydown area for materials should be provided near the service bay, at a size appropriate for the uses within the facility, and not blocking any truck turning areas or access points.
- D. Screen walls or planters should not interfere with service access or turning sight lines.

Emergency Vehicle Circulation

- A. All fire lanes should be in compliance with the State Fire Marshal requirements. All fire lanes should be 26'-0" wide to allow for passing trucks unless an exemption is approved by the Campus Fire Marshal. If divided as a couplet, fire lanes may be 16'-0" wide provided there is a 12'-0" passing lane between them. This standard has been approved by the Campus Fire Marshal for Warren Mall.
- B. Fire lanes should be 15'-0" minimum from face of building to allow for apparatus access.
- C. Vegetation, control boxes, and permanent fixtures shall not block emergency standpipes, valves, or fire connections.
- D. All minimum dimensions are *clear* dimensions, excluding building protrusions or blockages.

Pedestrian Circulation

- A. Pedestrian circulation in the academic district should be direct and geometric while the routes in the housing district should be more meandering and filtering.
- B. Handicap accessibility, designed to meet Title 24 specifications, should be provided on all pedestrian circulation routes, including curb cuts and ramps at level changes.
- C. The Diagonal Spine should be a minimum of 20 feet wide or as required for fire safety (*Figure 27*).
- D. Major paths and sidewalks should be concrete, either poured in place or unit pavers, with a width of 10 to 15 feet. Road crossings should be clearly delineated.
- E. Secondary paths and sidewalks should be 5'-0" to 8'-0" wide and made of concrete, unless at a gateway, crosswalk, or special feature area where they may be textured concrete, unit pavers, or other impervious material associated with the adjacent building design. Asphalt should not be used for primary sidewalks unless they are adjacent to asphalt curbs or in rustic areas.
- F. Sidewalks should be provided adjacent to Matthews Lane to eliminate conflict with bicycles and service vehicles.
- G. Sidewalks or paths, such as the Campus Meander, that are removed from the building or roadway zone and bounded by the rustic or transitional landscape may be asphalt, decomposed granite, or compacted gravel in order to allow compatibility with the rustic

environment. Potential traffic volumes, handicap accessibility, erosion potential, and drainage requirements should determine the specific materials.

- H. Loop road crossovers or pedestrian bridges can be provided at the major intersections when traffic volumes warrant. A bridge could be incorporated into the designs of the north pedestrian corridor from Warren Mall, the building at Site C, and the future addition to the Warren Commons. With grade changes, this can be accomplished with minimum stairs (*Figure 38*). At the northern intersection, a bridge with stairs would be necessary. Current underground utilities prevent undercrossings or depressing the road.

Bicycle Circulation

- A. Bicycle lanes, when on roadways, should be striped and marked. The majority of the bicycle paths will be off street. The minimum width for both bike lanes and paths is 5'-0" wide for each travel direction (*Figure 37*). Identification and regulatory signs should be provided to inform both bicyclists and motorists.
- B. Centralized bicycle parking areas should be designed to provide safe, convenient storage adjacent to the academic core. These should be well lighted and secured. All parking areas should have racks for locking bicycles. Individual bicycle racks are discouraged from building entries.
- C. Bicycle racks should correspond to the campus standard, known as the "mini-wave" rack. Each rack is approximately 1 foot wide and locks two bicycles. When used in rows, there should be approximately 9 feet clear between racks and 3 - 4 feet clear from a wall.

Parking Structures and Lots

- A. Parking structures should be designed to express their function and utilization maintaining the architectural vocabulary of the college.
- B. Parking structures should be setback 20'-0" from roadways to allow for screening, using both berming and vegetation.
- C. Parking structures should be no more than one level (10 feet) above grade to minimize visual intrusion and bulk. Parking Structure No. 1 should not be greater than ten feet in height to minimize impact into the Library view corridor. Parking Structure No. 2's top deck could be used for court sports, if the increased costs associated with the design are feasible. If Parking Structure No. 2 is used for court facilities it too should be no more than one level above grade to minimize wind on the courts.
- D. Surface parking lots should be planted with canopy trees (*Eucalyptus nicholii*) at a maximum of 50'-0" on center (every six stalls). Trees may be planted in pits with a minimum of 400 cubic feet area (based on a 4-foot planting depth) depending on the efficient layout of the parking lot.
- E. Handicap parking spaces should be provided in parking lots and structures at the closest point to building entry.

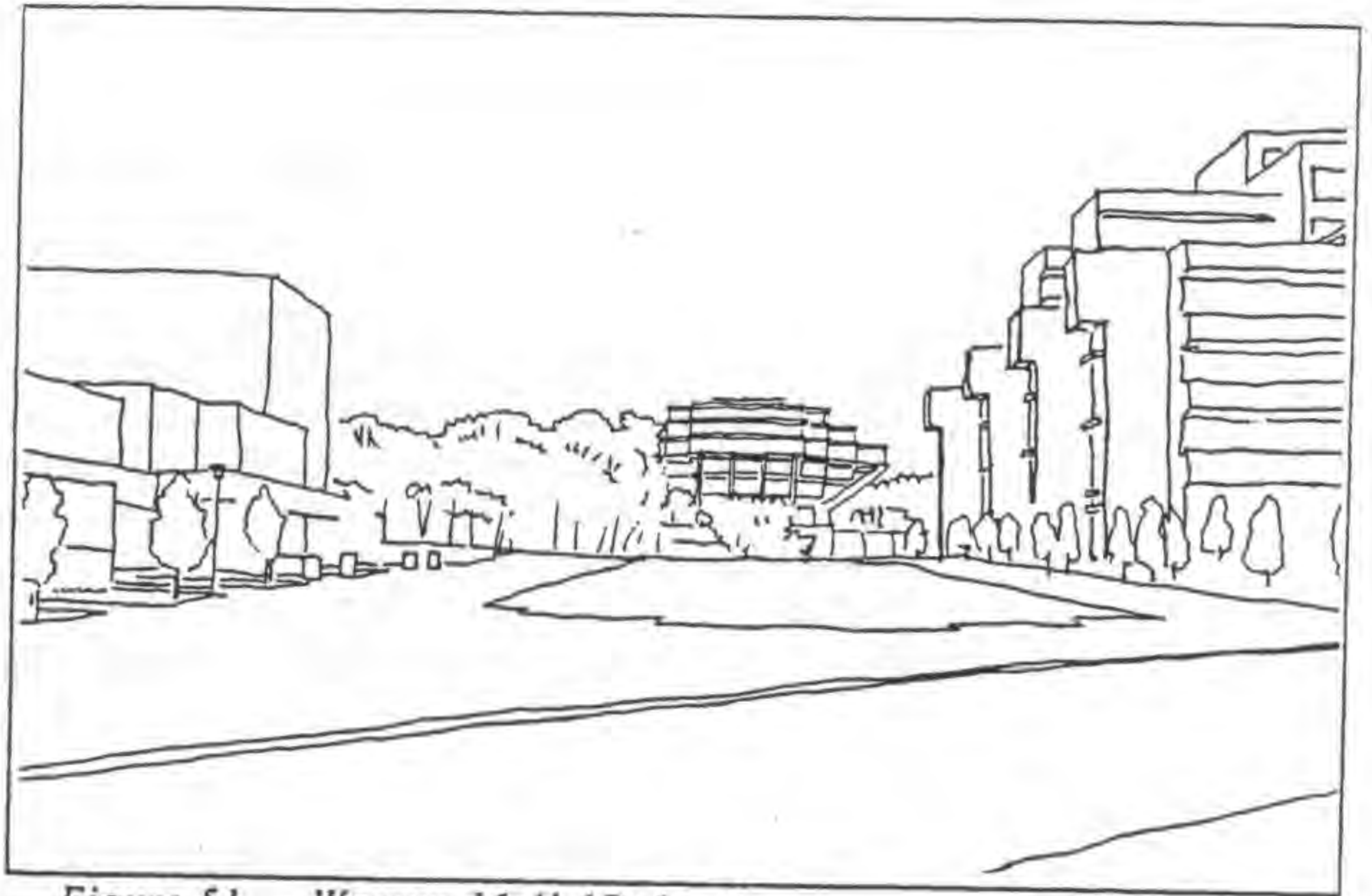


Figure 51 Warren Mall (Before)

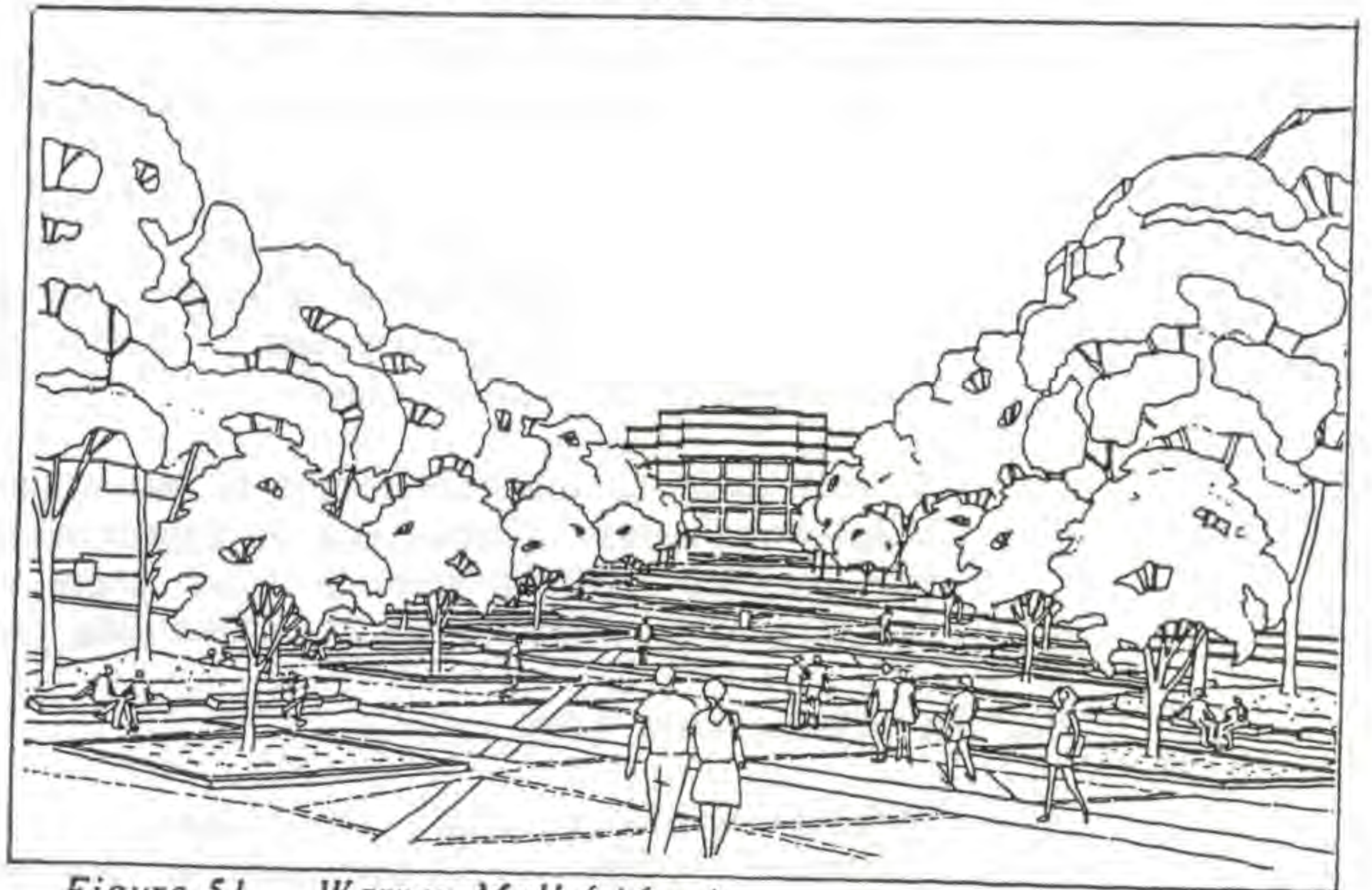


Figure 51 Warren Mall (After)

VI. WARREN MALL

SIGNIFICANCE OF THE MALL

The UCSD campus contains many "formal" spaces, rectangular or square spaces enclosed by buildings or tree masses. Of these, Warren Mall is the largest in area and the longest, measuring approximately 140 x 700 feet, excluding the rise to the library (*Figure 51*).

The library anchors the west end of the space, an attribute that is magnified by the Stuart Collection piece "*Snake Path*" by Alexis Smith, which is situated at the base of the library. The piece consists of a walkway rising from the Mall to the library in the form of a serpent, allegorically referencing the path of temptation to the "Tree of Knowledge", which, by biblical implication, led to man's expulsion from Paradise. A coil in the snake contains vegetation "remnants" from Eden while excerpts from Milton's "*Paradise Lost*" are inscribed along the path in a vertical stone slab resembling a book.

Another unique feature of the Mall is its interface with Mandeville Walk. The walk is part of the diagonal pedestrian corridor that traverses campus from North Torrey Pines Road to the tip of the Warren College mesa. It enters the Mall on its southwest corner and exits on the northeast corner dividing the Mall into a middle circulation zone and two residual end zones. No other formal space on campus is met and crossed by this corridor.

The unique geometric interface with the diagonal corridor and the siting of Alexis Smith's art piece on its west end affords for Warren Mall a unique design opportunity.

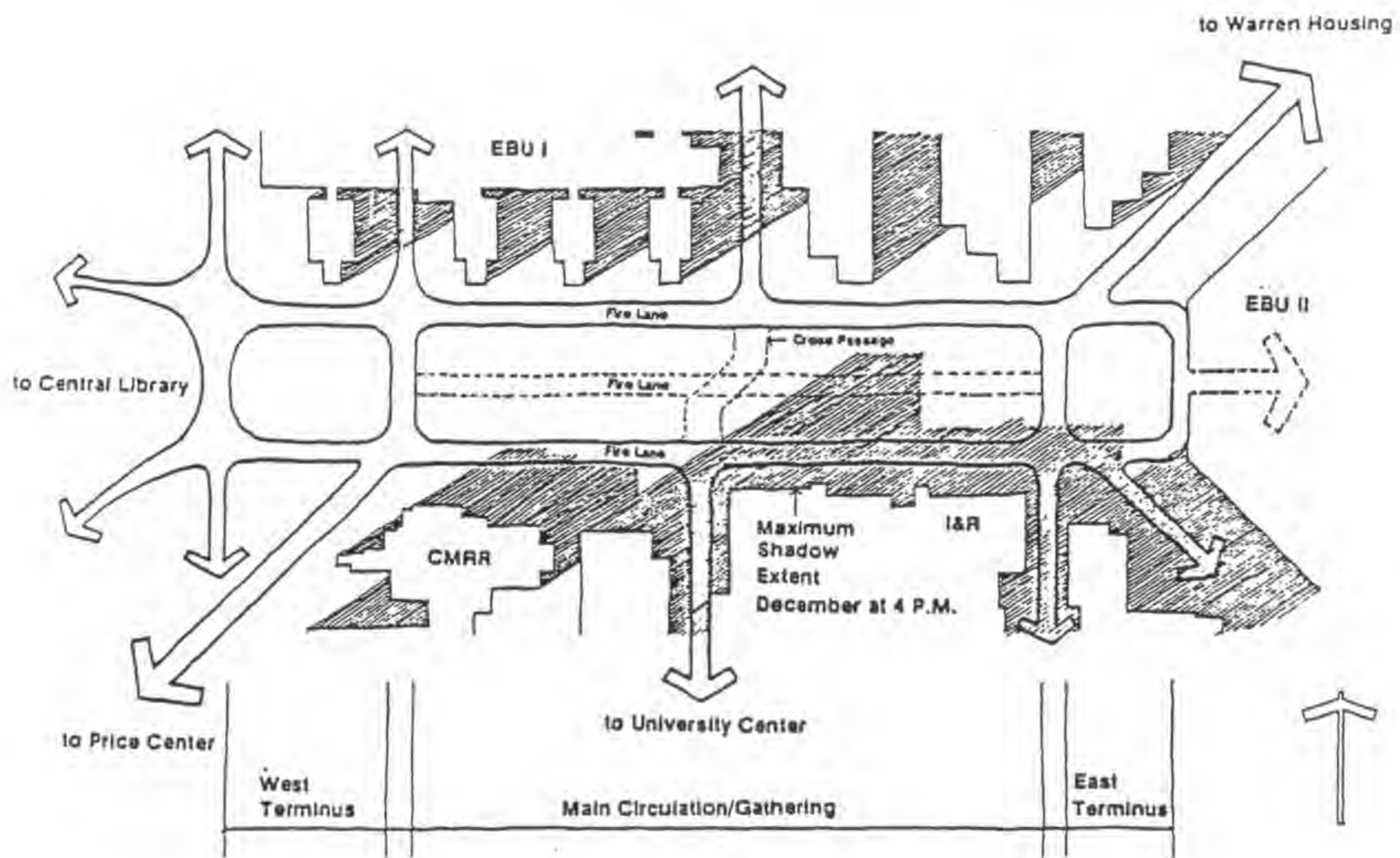


Figure 52 Warren Mall Site Analysis

ENVIRONMENTAL CONDITIONS

(Figure 52)

Barrenness and a broken enclosure characterize the Mall at present. Not a single tree occupies the Mall within its paved edges, a width of about 125 feet, while the existing buildings that frame the space vary greatly in height, setback, and overall form. The north side is dominated by EBU I, a massive but well articulated building, while the south side is defined by four buildings ranging from two to five stories each with a different setback to the edge of the Mall. In addition to creating an uninviting, windswept environment, these conditions diffuse and confuse the axial view to and from the library, diluting the Mall's formal qualities.

To improve the environment, the design proposes a double-lined allee of *Eucalyptus citriodora* as the major vegetation element. The tall, robust yet graceful trees, while helping reduce the impact of the wind, will establish a stronger edge to the Mall, help scale-down the buildings and enhance the axial view to the library. To further enhance the quality of the mall, the use of leaf blowers and other loud machinery is discouraged.

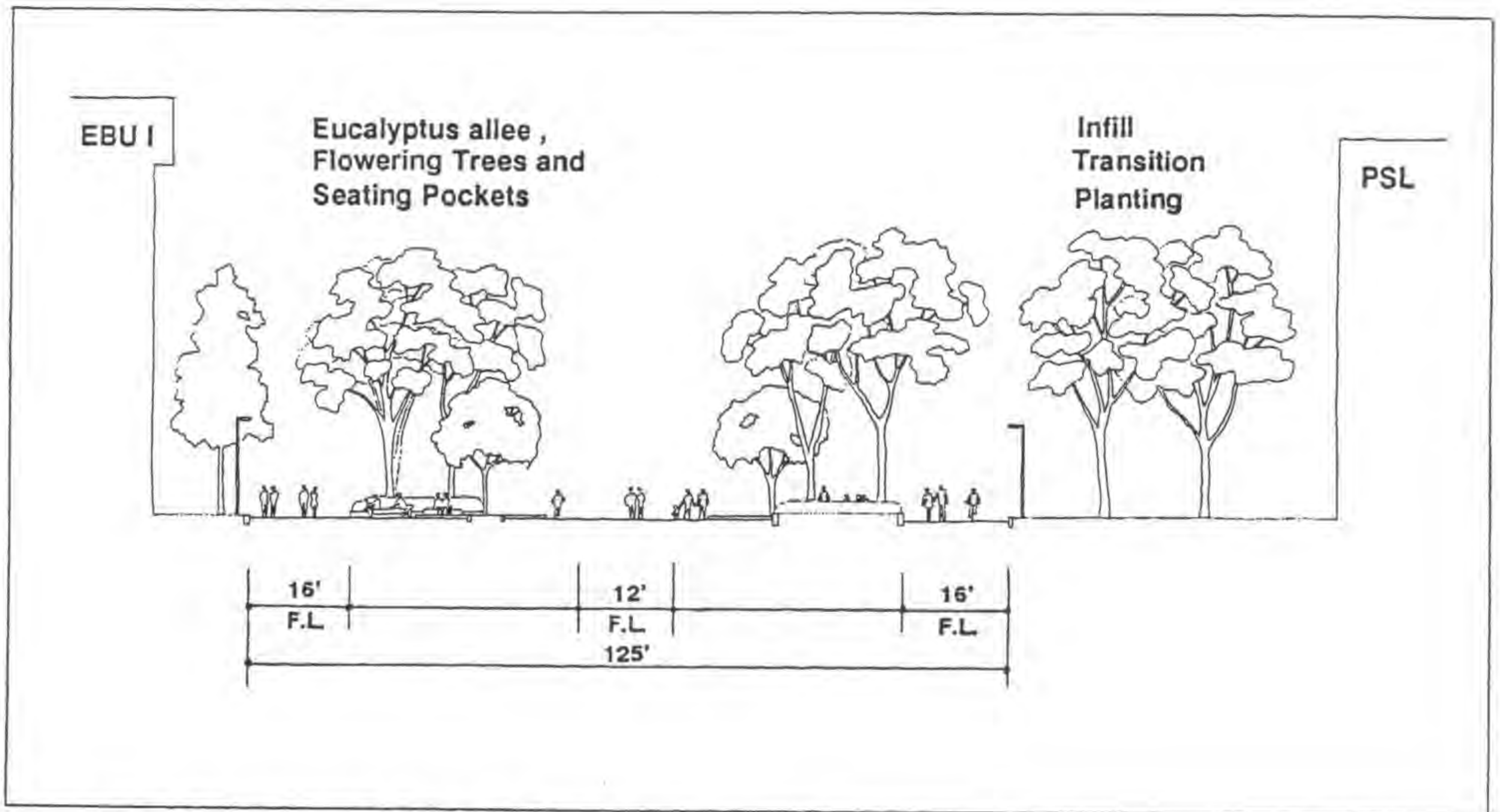


Figure 53 Warren Mall Cross Section

CIRCULATION

Warren Mall functions as part of the main pedestrian circulation corridor that connects the residential apartments to the Price Center and beyond to Revelle College. It is also a major node in the North-South corridor that connects Warren College with University Center. In addition, the Mall serves as a fire prevention corridor to the buildings that face it. While the Mall should provide the amenity to encourage gathering and seating, its overall circulation and fire prevention functions must be maintained (*Figure 53*).

The minimum fire prevention standards are as follows:

- One 16 foot-wide lane at each side facing the buildings, varying from not less than 15 feet to not more than 25 feet from building face. Because three fire access lanes are provided, this standard deviates from the emergency circulation guidelines (*Page 78 -- per Chuck Stone, Environmental Health and Safety*);
- One 12 foot-wide lane running along the center of the Mall;
- End loops connecting the side lanes with minimum 45 feet radius;
- 25 foot-wide outlets at each end of the Mall, leading to the loop road and/or a service driveway (Matthews Lane)

The above has been incorporated in the Mall's design.

At each end of the Mall are residual areas lying outside the main pedestrian thoroughfares. These areas lend themselves for special treatment. The West area acknowledges and is sensitive to the "Snake Path" art piece which it faces, while the East area acts as the forecourt to EBU II.

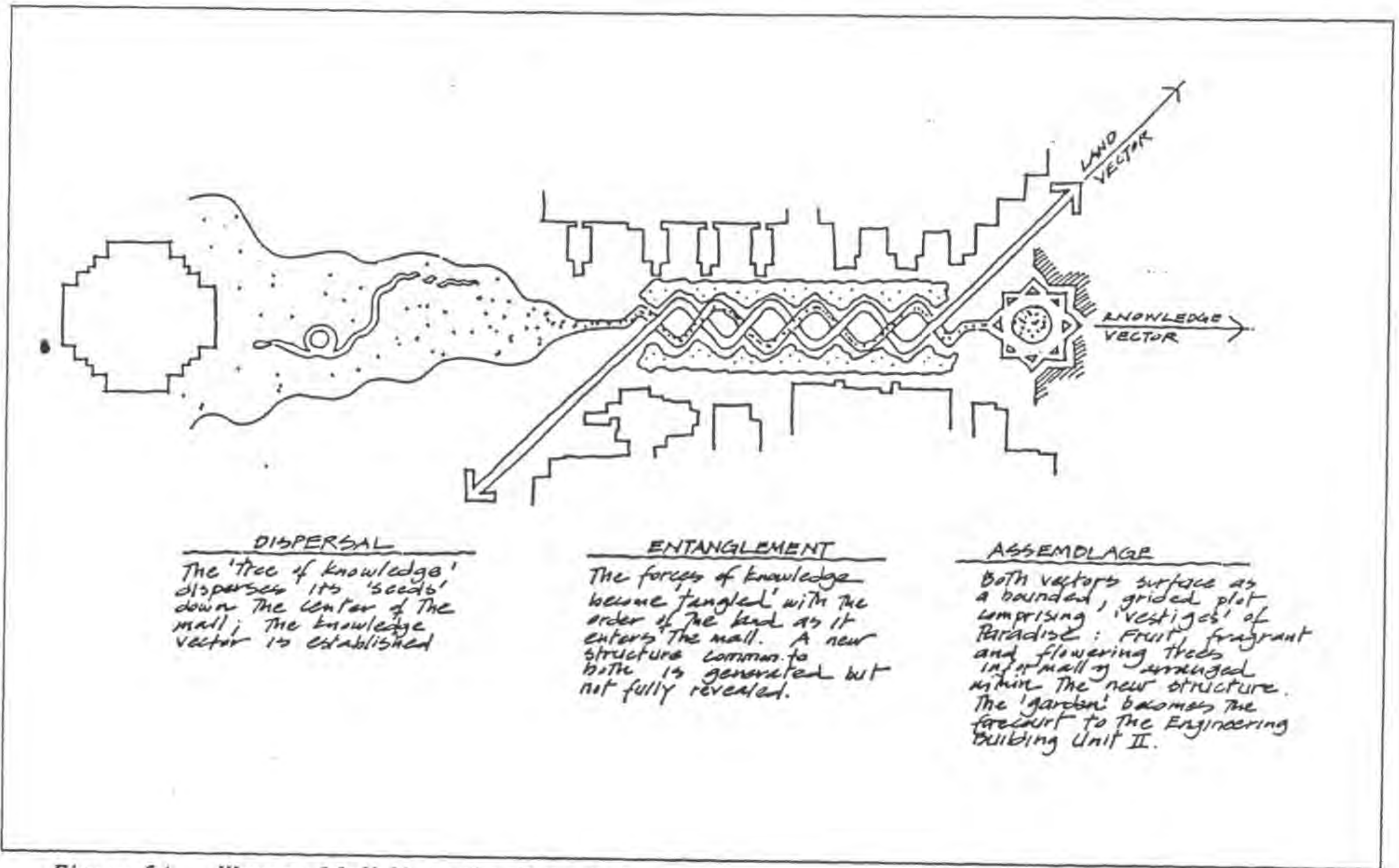


Figure 54 Warren Mall Narrative Description

DESIGN THEME

Any design effort for the Mall must address the narrative implications of the "Paradise Lost" art concept. The questions arise: how should the Mall respond to it and how can the activities of scientific research and investigation be integrated into the story?

The proposed design concept (*Figure 54*) offers one possible answer:

If temptation led us to eat from the "Tree of Knowledge," which precipitated our expulsion from Paradise, perhaps it is through research and investigation -- of nature -- that it can be reconstructed.

While the reconstruction of Paradise is, of course, an unattainable goal, it has not deterred over 2,000 years of "paradisical" garden making, as manifested by the early Middle Eastern, Persian, Greek and Roman, Moghul, Western Medieval, Renaissance, Baroque and Spanish Colonial gardens, whose heritage is enjoyed throughout California. This "Latin" tradition, as defined by the late Catalan landscape architect, Jose M. Rubio y Tuduri, espouses the geometric partitioning of the land into small garden plots where informal plantings of aromatic, flowering, fruit-bearing, or medicinal plants occur. Normally these gardens are enclosed and contain a central focal feature like a palm tree, fountain, or shelter.

Warren Mall incorporates this tradition by having:

- A strong visual boundary
- Geometric partitioning of the groundplane
- An informal arrangement of subcanopy flowering trees
- A focal feature at the east end: the forecourt of EBU II

"Paradise Reconstructed," as the concept may be called, is divided in three phases. Each phase is expressed in distinctive but integrated landscape forms along the Mall:

1. Dispersal (of knowledge from the tree);
2. Entanglement (of knowledge with the land); and
3. Assemblage (of the land, through knowledge, of the Paradise Garden).

The interplay between both the academic grid and the diagonal corridor are structured geometrically according to the interplay of the academic grid (the knowledge vector) and the diagonal corridor (the land vector).

DISPERSAL

Wildflower Meadow

Flowering Tree; Various Species

Concrete Paved Fire Lane

3' Stone Strip

13.5' x 13.5' Textured Concrete Panels

ENTANGLEMENT

6' Raised Planter with Flowering Ground Cover

Cut Stone Grates

8" Exposed Aggregate Strip

ASSEMBLAGE

Eucalyptus citriodora on 12" raised planter with low shrubs. Planter contains stone benches.

Flowering Tree; Various Species

Date Palm

Sod Apron

Score Line

3' Stone Strip

6' Raised Planter with Flowering Ground Cover

Figure 56 Warren Mall Phase 3

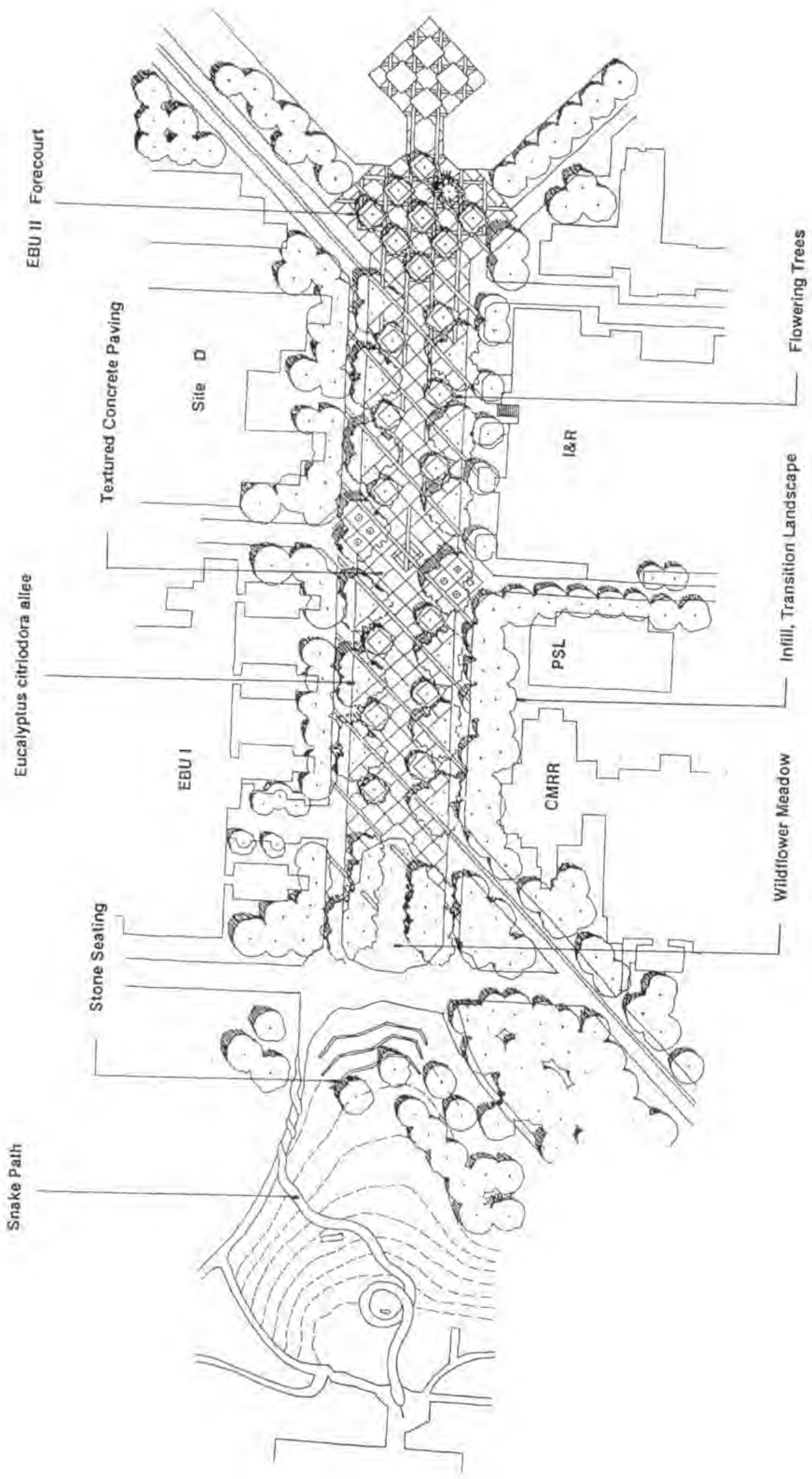


Figure 55 Warren Mall Plan

1. *Dispersal:*

As the "Tree of Knowledge," the library exerts a symbolic pressure over the Mall: to manifest the pursuit and acquisition of knowledge. Such a pressure is envisioned as an axial force emanating from the Library and traveling the length of the Mall to EBU II. This force is termed the "knowledge vector."

By the Library, the knowledge vector is raw, natural, not yet engaged by scientific research and investigation; it exists as a "seed" to be dispersed and harnessed. This gestating phase of knowledge is embodied in the landscape by the apron of wildflowers that will eventually cover the sloping base of the new library addition. Wildflowers, more than most other association of plants, symbolize nature's biological ability to disperse seeds and colonize new territory.

Thus the Mall's west "residual" area is kept in a soft, unstructured form that "carries" the seeds eastward. Planting in this zone is restricted to wildflowers and selected flowering trees that begin to recall the Paradise Garden (*Figure 56*).

2. *The Entanglement:*

This phase corresponds to the main body of the Mall between the diagonal corridor entry points. Because it follows in the college the orientation of the mesa, canyons, and main mountain views, the diagonal corridor is defined as the "Land Vector" (*Figure 56*).

This zone is envisioned as the interplay of the knowledge and land vectors. As they encounter each other on the Mall, a new grid is generated containing both vector orientations in symmetrical harmony: a square and its crossing diagonals. However, the new underlying grid, while regulating all features of the Mall, remains nonetheless "hidden" and reserved for appearance only in the east end by EBU II.

Elements particular to both vectors are present in this area of the Mall. The principal "land" element comprises the allee of the *Eucalyptus citriodora*, placed in groups of three in triangular, raised planters that "slide" across the Mall along diagonal stone strips. The strips are the only elements that directly reference the land vector (*Figure 58*).

The eucalyptus planters visually define the edge of the Mall while offering discrete seating areas which are diagonally oriented to the Mall to afford an optimum viewing angle. Where the University Center corridor crosses Warren Mall, eucalyptus are planted in flush stone grates to allow room for pedestrian circulation.

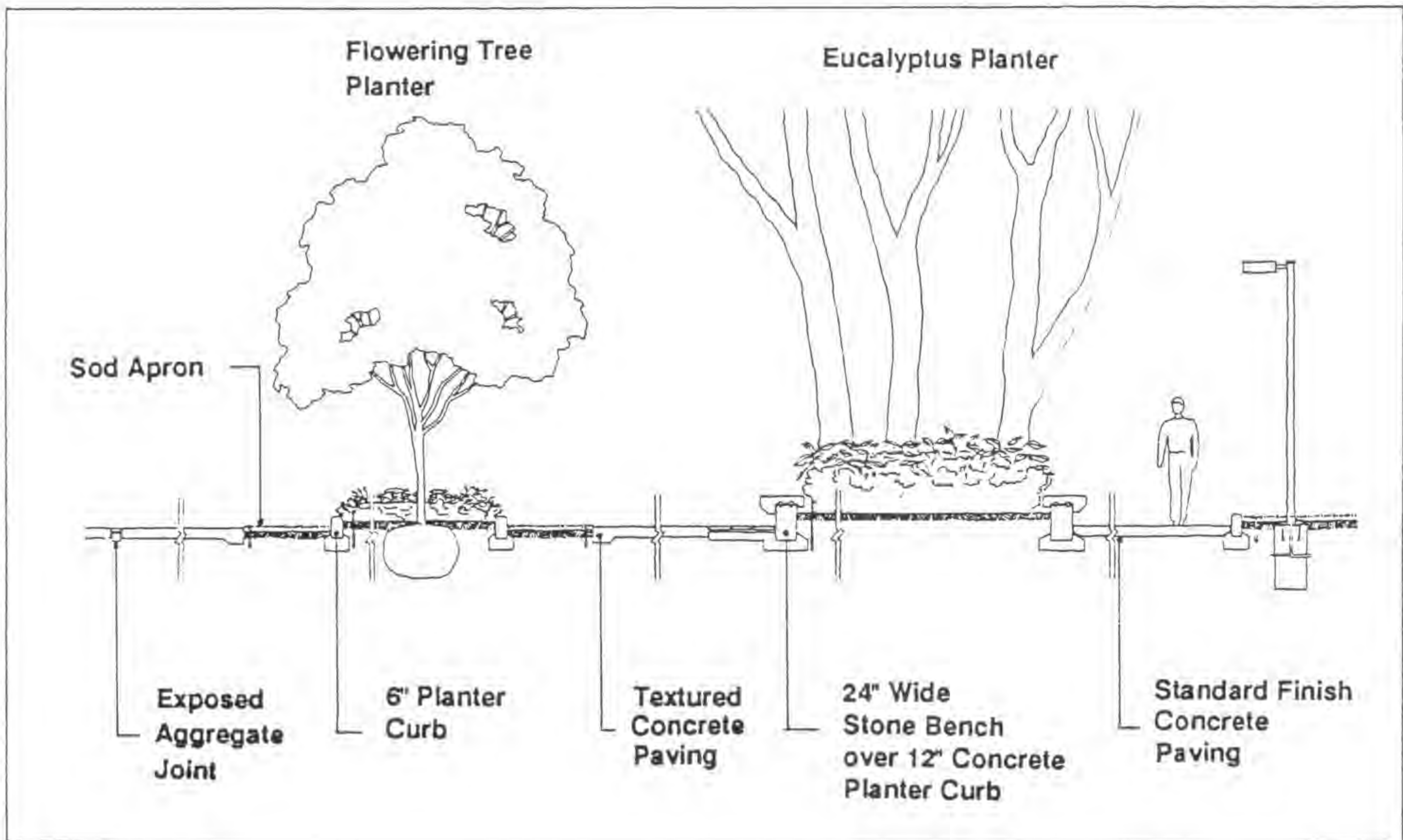


Figure 57 Warren Mall Detail Section

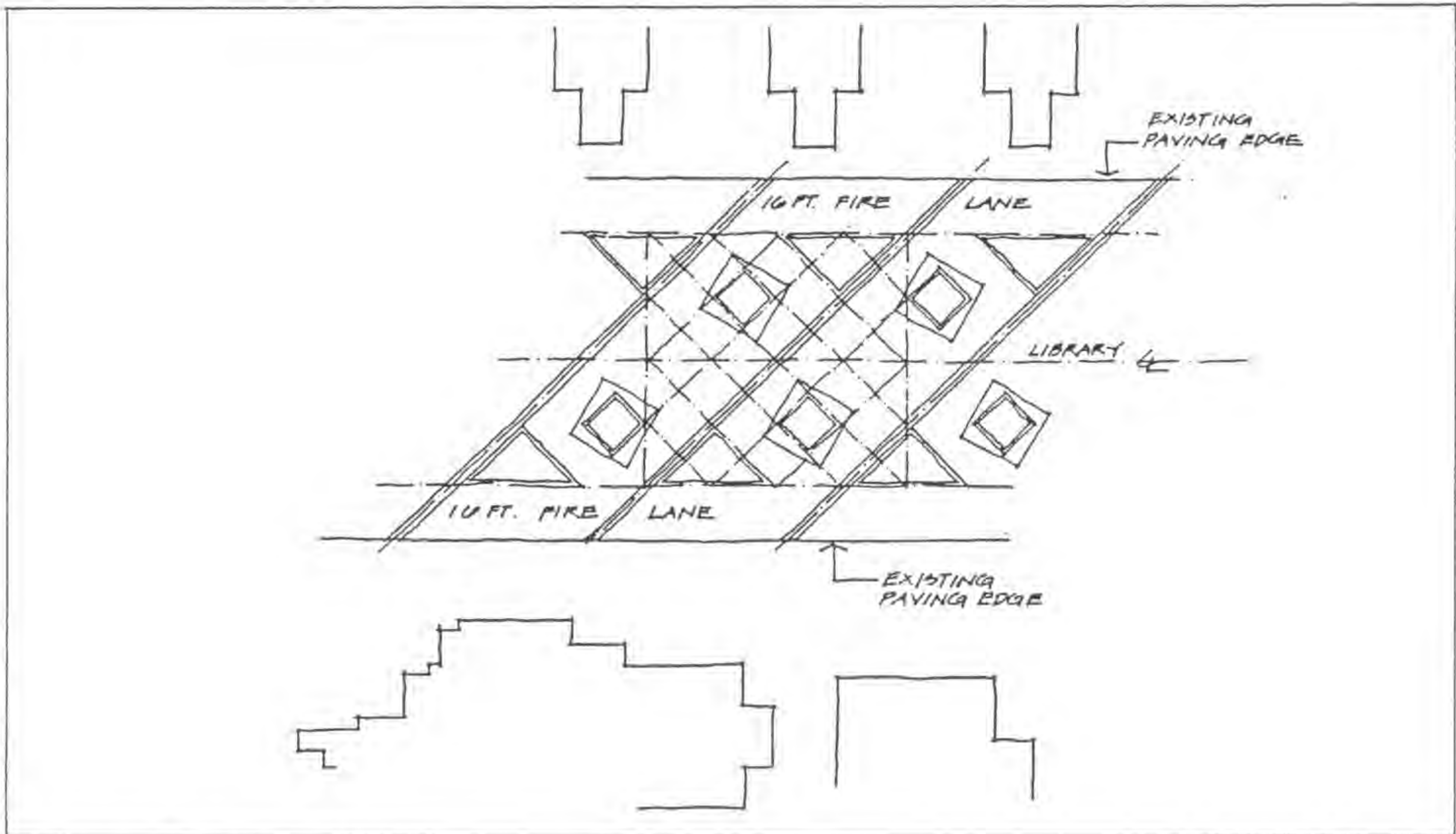


Figure 58 Warren Mall Construction Guidelines

The principal "knowledge" elements are square planters containing wildflowers and a variety of flowering tree species. They function as "vessels" that carry the "seeds of knowledge" along the Mall. The flowering trees are intended to further scale-down the space, providing an intimate setting for seating. The plants sit in a skewed grass apron to recall the loose and informal plantings of the Paradise Gardens.

The geometric center of the Mall, which also coincides with the crossing pedestrian corridor to University Center, is marked by a special stone paving feature.

3. *The Assemblage*

Rising from the Mall's east residual area is "Paradise Reconstructed," the forecourt to EBU II. Following the Paradise Garden design precepts, the forecourt contains regularly spaced planters with plantings of a variety of flowering trees and a single palm tree symbolizing paradise. The planters echo the four-part division of the garden while referencing in the paving the harmonic convergence of both the knowledge and land vectors. The proportionately narrow, shifting spaces between the planters coupled with the varied plantings, intend to recall the intimacy of the traditional Paradise Garden (*Figure 56*). The lone palm tree expresses diversity and randomness and is off center to reinforce the informality within the structure of the grid.

A vertical element, be it a future sculpture or the tall palm tree, will accentuate the terminus of the Mall. It is recommended that the design of EBU II's west facade be integrated to the theme and forms of the Mall.

THE EXPERIENCE

Warren Mall, through its spatial enclosures, provisions of shade and sun, and enriched materials will be a place for all people. The area, which is currently foreboding today because of the wind and massive scale, will become friendly and inviting both to passing pedestrians and those willing to sit and observe.

Climatically, the Mall will be improved by buffering the wind through allees of eucalyptus, providing dappled shade with overhead canopy trees, and providing benches to sit in sheltered locations.

Experientially, the Mall will be improved by framing the library views with the eucalyptus, diversifying the visual interest with a variety of flowering trees, creating three separate, distinguishable areas within the large space, and providing separate places for congregation and circulation.



Figure 59 - Phase I Development

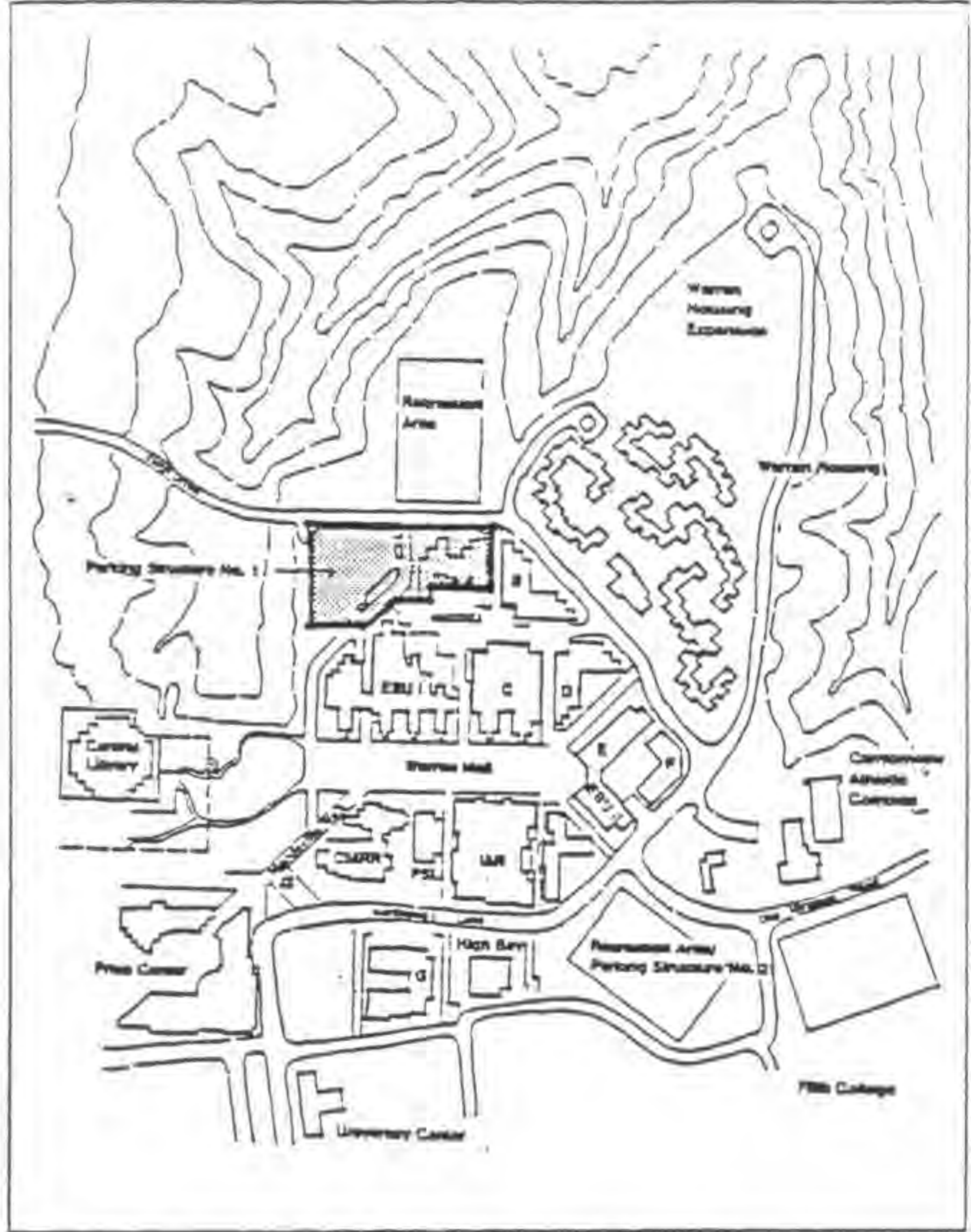


Figure 60 - Phase II Development



Figure 61 - Phase III Development

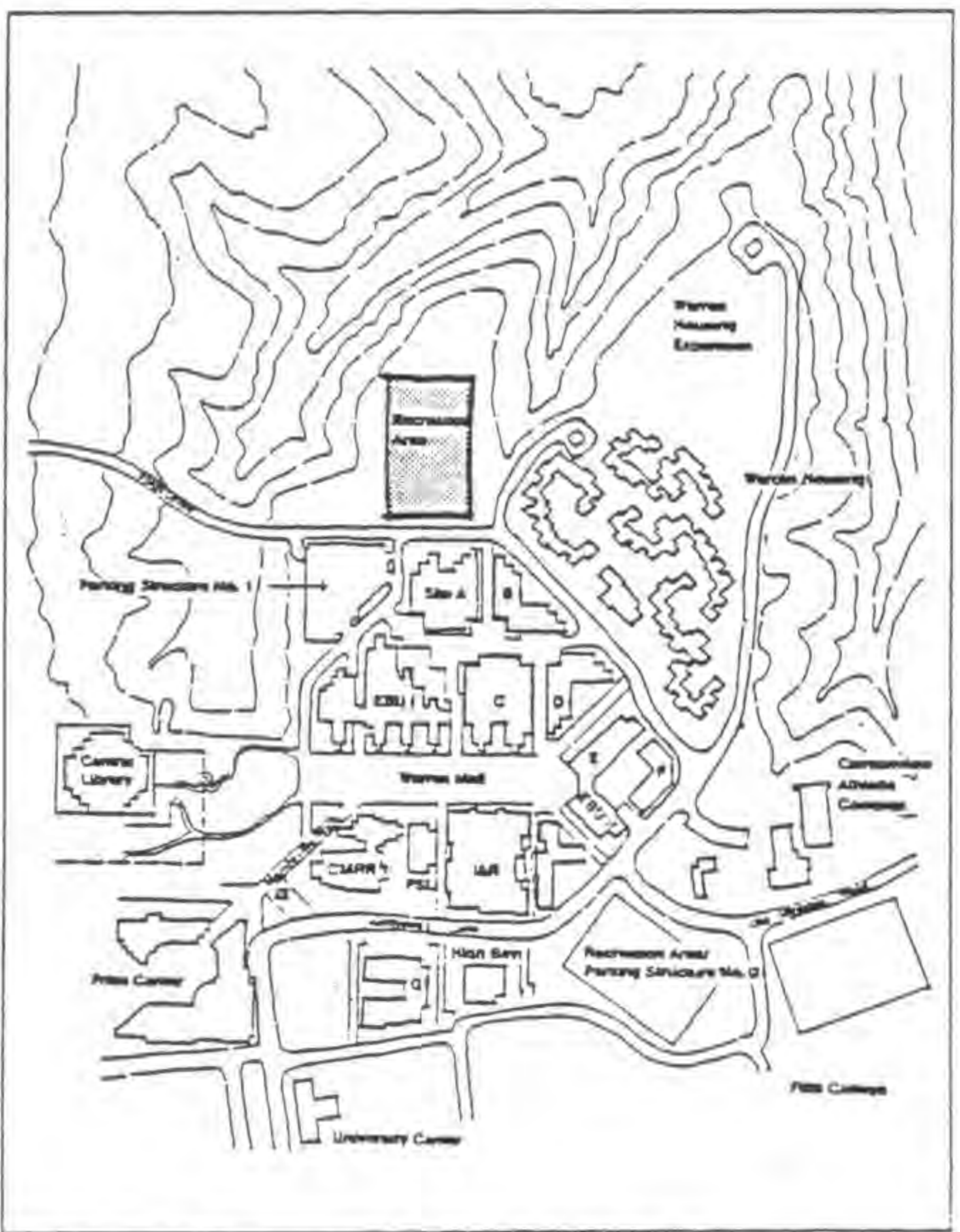


Figure 62 - Phase IV Development

MATERIALS

Salt-textured concrete is proposed as the dominant paving material. To reinforce the overall concept of the discrete landscape (*Page 69*) the paving units, each a single pour, would be "fitted" into the Mall grid and separated by 8" wide, exposed aggregate joints.

The diagonal "land" strips are envisioned as field-fitted stone sections, as would be the raised benches. The paving stones would be set in mortar over a graded concrete base. Where stone paving crosses utility corridors, the detail should provide for easily removed and replaced pieces.

LIGHTING

A variety of light fixtures, bollards and pole types, currently exist on the Mall. The design proposes the removal of these fixtures with a uniform fixture. The type of light standard, its height, and spacing will be determined as part of the Campus Lighting Study (currently in progress).

COST

The cost for the Mall is estimated to be approximately \$950,000 including contractor's overhead and profit and a 10 percent contingency. Given the Mall area, about 84,000 square feet, the costs average about \$11.50 per square foot.

Appendix 3 contains an itemized description of the costs and cost alternatives.

VII. IMPLEMENTATION

PHASING AND PRIORITIES

The implementation of the Warren College Neighborhood Planning study and the proposed program will occur during the next twenty years based on demand, funding, and campus wide growth policies. Spatial concerns also suggest priorities for phasing in order to provide a coherent structure to the college as it moves towards build out (*Figures 59, 60, 61, 62*).

The Warren College housing expansion is scheduled to begin construction in January of 1992 in order to meet UCSD's objective of expanding its housing supply. This will be the first project constructed under the guidelines of the Neighborhood Planning Study. The parking displaced by the construction of the housing (569 cars in lot 504) will be replaced partially on site with the remainder replaced outside of Warren College according to campus wide parking policies.

EBU II is scheduled to begin construction during the fall of 1992 and will be the first academic building to go on line following the completion of the Neighborhood Planning Study. EBU II will necessitate the closure of Voigt Drive and the relocation of the loop road to its future alignment between the academic and residential cores. The loop road should be completed by Fall of 1992 in order to ensure uninterrupted operations and construction schedules. The displaced parking (303 cars in lot 503) will be replaced elsewhere within the campus parking system.

With the construction of Warren Housing Expansion and EBU II, the parking at Warren College will be reduced to approximately 474 spaces or 63 percent of the initial program of 750 cars. Therefore two parking structures have been proposed, one at the north of Warren College and one at the interface of Warren and Fifth Colleges.

Prior to redevelopment of Parking Lot 502, additional parking should be provided. Two options exist for replacement facilities. The construction of Structure No. 2 would provide 500 cars and potential for recreational courts. The exact location and phasing of this structure, though, will be determined in the Fifth College Neighborhood Planning Study.

The northern parking structure, Structure No. 1, can also accommodate 500 cars. Its construction will displace a portion of the current Voigt Drive alignment that would not otherwise need to be realigned until Site A is utilized. One parking structure will need to be completed before lot 502 is redeveloped. If constructed in phases, the structure could accommodate 250 cars in the western section depending on the final design in the first phase. The second phase under Building Site A, with an additional 250 spaces, would come on line with the development of that building. Construction in phases may not be cost effective because of the economy of scale of a garage less than 350 stalls. The design of the parking structure should take into consideration the eventual buildout and the under structure portion so that service, access, and structural support is coordinated.

Sites B and G are currently being considered for SERF, which is scheduled to begin construction in 1993. At Site G the program will displace temporary building facilities in University Center. At Site B the program will partially displace recreational facilities at Pryatel Field.

Physics I is scheduled to begin construction in 1996. The recommended site for the large program requirements (100,000 ASF) is Site D, east of EBU I. The construction will displace any recreational uses maintained on Pryatel Field.

The development of two or more sites on Pryatel Field (Sites A, B, C, and/or D) will eliminate all recreation. The replacement locations for the recreational areas shown on the Master Plan on Parking Lot 502 (474 cars) and at the interface of Warren College and Fifth College. Future studies will look at the possibility of this interface site in conjunction with a parking structure and the possibility of locating fields on Warren Track. The removal of Lot 502 from service would necessitate the construction of the second potential parking garage.

A number of improvements to Warren College are retrofitting existing structures to better relate to the Neighborhood Planning Study. Retrofitting of Warren College Housing should occur simultaneously with the Warren College Housing Expansion in order to give consistency to the improvements and allow for a coherent housing complex.

Planting at the perimeter of Warren Mall in the filter areas should occur as soon as funding becomes available or with the implementation of Warren Mall.

With the construction of EBU II, the form of Warren Mall will become closer to realization. It also provides some funding for the terminus of the Mall at the forecourt of the building.

Additional funding from Physics I on Site D can contribute to the Mall, but will not be available until approximately 1996. Sources beyond the traditional funding should be explored. Enlisting additional funding from private donors and the support of the Stuart Collection for art pieces in Warren Mall will aid the realization of the plan. Ideally Warren Mall should be completed with EBU II to allow for economy of construction and consistency in materials.

FUTURE REVIEW BODIES

The implementation of the planning concepts and the design guidelines will be the responsibility of the Chancellor, UCSD offices of Campus Planning and Facilities Design and Construction and the two campus review bodies, Campus/Community Planning Committee and the Design Review Board. The Neighborhood Planning Study and the Design Guidelines will serve as tools for project direction, review, and evaluation by designers, planners, and those in the review capacity.

Appendices

Appendix 1

UCSD WARREN COLLEGE
PROGRAM ALLOCATION

SITE A: 36,000 SF SITE AREA

Floor Plate		24,500.00	
Efficiency	x	0.60	

		14,700.00	
Floors Above Grade	x	5	

		73,500.00	
Basement (Floor Plate x 0.50)	+	12,250.00	

ASSIGNABLE AREA		85,750.00	
		=====	

24,500
154,750 (SF)

SITE B: 25,500 SF

North Wing Floor Plate		11,000.00	
Efficiency	x	0.60	

		6,600.00	
Floors Above Grade	x	5	

		33,000.00	
South Wing Floor Plate		6,500.00	
Efficiency	x	0.60	

		3,900.00	
Floors Above Grade	x	3	

		11,700.00	

SUBTOTAL OF NORTH AND SOUTH WINGS		44,700.00	
Basement (Floor Plate x 0.50)	+	8,750.00	

ASSIGNABLE AREA		53,450.00	
		=====	

53,450
214,200 SF

SITE C: 21,000 SF

West Wing Floor Plate		11,000.00	
Efficiency	x	0.60	

		6,600.00	
Floors Above Grade	x	5	

		33,000.00	
North Wing Floor Plate		4,800.00	
Efficiency	x	0.60	

		2,880.00	
Floors Above Grade	x	3	

		8,640.00	

Floor plate
15,800'

SUBTOTAL OF WEST AND NORTH WINGS		41,640.00	
Basement (Floor Plate x 0.50)	+	7,900.00	

ASSIGNABLE AREA		49,540.00	
		=====	

1.65 + *5,135 SF*
35,000 SF
46,775.00

SITE D: 42,000 SF (Physics I Site)

Floor Plate		30,000.00	
Efficiency	x	0.60	

		18,000.00	
Floors Above Grade	x	5	

		90,000.00	
Basement (Floor Plate x 0.50)	+	15,000.00	

ASSIGNABLE AREA		105,000.00	
		=====	
		99,750.00	

165,000 SF

4,900 SF
TA 4,000

Appendix 1

UCSD WARREN COLLEGE
PROGRAM ALLOCATION

Site E: 45,000 SF (EBU II)

Lab Wing Floor Plate		23,000.00
Efficiency	x	0.60

		13,800.00
Floors Above Grade	x	4

		55,200.00

Office Wing Floor Plate		7,000.00
Efficiency	x	0.60

		4,200.00
Floors	x	6
(5 Above Grade		-----
1 Below Grade)		25,200.00

SUBTOTAL 80,400.00

ASSIGNABLE AREA 80,400.00
=====

134,000 GSF

Site F: 15,000 SF

Floor Plate		10,000.00
Efficiency	x	0.68

		6,800.00
Floors Above Grade	x	3

		20,400.00

30,000 GSF

SITE G: 31,000 SF

Floor Plate		18,000.00
Efficiency	x	0.60

		10,800.00
Floors Above Grade	x	3

		32,400.00

Core Floor Plate		6,000.00
Efficiency	x	0.60

		3,600.00
Floors Above Grade	x	5

		18,000.00
SUBTOTAL		50,400.00

Basement		
(Floor Plate x .50)	+	12,000.00

ASSIGNABLE AREA		62,400.00
		=====

TOTAL POSSIBLE
ASSIGNABLE AREA: 456,940.00
=====

APPENDIX 2
WARREN COLLEGE PLANT LIST

	<u>Scientific Name</u>	<u>Common Name</u>
RUSTIC		
Groundcovers:	Various	Native grasses/wildflower mixes
Shrubs:	<i>Artemisia californica</i> <i>Atriplex</i> ssp. <i>Baccharis pilularis</i> <i>Cistus</i> ssp.	Coast Sage Saltbrush Rockrose
Trees:	<i>Eucalyptus</i> ssp. <i>Platanus racemosa</i> <i>Quercus</i> ssp.	California sycamore
Street Trees:	<i>Platanus acerifolia</i>	London Plane Tree
Parking Lot Trees:	<i>Eucalyptus nicholii</i>	
TRANSITIONAL		
Groundcovers:	Various	Native and naturalized grasses, wildflower mixes Turf (at playfields and housing areas only)
Shrubs:	<i>Baccharis pilularis</i> <i>Cistus</i> ssp. <i>Mimulus puniceus</i> <i>Rosmarinus</i> ssp. <i>Santolina chamaecyparissus</i>	Chaparral Broom Rockrose Red Monkey Flower Rosemary Lavender Cotton
Trees:		
<u>Filters</u>		
Exterior of College	<i>Acacia</i> ssp. <i>Eucalyptus</i> ssp. <i>Schinus molle</i> <i>Tristania conferta</i>	California Pepper Brisbane Box
Interior of College	<i>Cupaniopsis anacardioides</i> <i>Eucalyptus</i> ssp. <i>Fraxinus velutina</i> <i>Liquidamber styraciflua</i> <i>Melaleuca leucadendra</i>	Carrotwood Modesto Ash Sweetgum Cajeput Tree
<u>Screens</u>		
	<i>Ficus nitida</i> <i>Pinus</i> ssp. <i>Pittosporum undulatum</i>	Indian laurel Victoria Box

	<u>Scientific Name</u>	<u>Common Name</u>
DISCRETE		
Warren Mall		
Canopy Trees:	<i>Eucalyptus citriodora</i>	Lemon Scented Gum
Accent Trees:	<i>Bauhinia purpurea</i> <i>Jacaranda mimosifolia</i> <i>Prunus campanulata</i> <i>Prunus cerasifera</i> 'Krauter vesuvius' <i>Pyrus calleryana</i> 'Redspire' <i>Pyrus kawakamii</i> <i>Tabebuia chrysotricha</i>	Purple Orchid Tree Jacaranda Taiwan Flowering Cherry Flowering Plum Ornamental Pear Evergreen Pear Golden Trumpet Treet
Special Accent:	<i>Phoenix dactylifera</i>	Date Palm
Shrubs and Groundcovers:	<i>Turf ssp.</i> <i>Ceanothus griseus horizontalis</i> <i>Convolvulus mauritanicus</i> <i>Coprosma kirkii</i> <i>Lantana ssp.</i> <i>Lavandula dentata</i> <i>Limonum perezii</i> <i>Rosmarinus officinalis</i>	Turf Carmel Creeper Ground Morning Glory French lavender Statice Rosemary
Corridors		
Accent Trees:	<i>Bauhinia purpurea</i> <i>Jacaranda mimosifolia</i> <i>Prunus campanulata</i> <i>Prunus cerasifera</i> 'Krauter vesuvius' <i>Pyrus calleryana</i> 'Redspire' <i>Pyrus kawakamii</i> <i>Tabebuia chrysotricha</i>	Purple Orchid Tree Jacaranda Taiwan Flowering Cherry Flowering Plum Ornamental Pear Evergreen Pear Golden Trumpet Treet
Shrubs, Vines:	<i>Bougainvillea ssp.</i> <i>Carrissa grandiflora</i> <i>Distictus buccinatoria</i> <i>Raphiolepis indica</i> <i>Ternstoemia gymnanthera</i> <i>Trachelospermum jasminoides</i>	Bougainvillea Natal Plum Blood Red Trumpet Vine India Hawthorn Star Jasmine
Plazas		
Accent Trees:	<i>Eucalyptus ssp.</i> <i>Bauhinia purpurea</i> <i>Jacaranda mimosifolia</i> <i>Prunus campanulata</i> <i>Prunus cerasifera</i> 'Krauter vesuvius' <i>Pyrus callenjana</i> 'Redspire' <i>Pyrus kawakamii</i> <i>Tabebuia chrysotricha</i>	 Purple Orchid Tree Jacaranda Taiwan Flowering Cherry Flowering Plum Ornamental Pear Evergreen Pear Golden Trumpet Treet

Appendix 3
Warren Mall
Schematic Design Cost Estimate

07/03/90

Item	Quantity	Unit	Unit Cost	Item Total	Subtotal	Remarks
SITEWORK					\$70,750	
1. Demolition	86,500	S.F.	\$0.50	\$43,250		
2. Drainage Structure		L.S.		20,000		
3. Grading	10,000	S.Y.	0.75	\$7,500		Rough Grading
PAVING					407,500	
4. Plain Concrete Paving	2,300	S.Y.	30.00	69,000		Fire Lanes
5. Textured Concrete Paving	3,200	S.Y.	50.00	160,000		
6. Exposed Aggregate Paving	1,400	S.F.	5.00	7,000		
7. Field Stone Strips	5,700	S.F.	20.00	114,000		Sandstone
8. Planter Curbs I	1,800	L.F.	15.00	27,000		
9. Planter Curbs II	1,220	L.F.	25.00	30,500		
FURNISHINGS					113,000	
10. Single Light	18	EACH	4000.00	72,000		To Match Existing
11. Benches	32	EACH	1000.00	32,000		Stone Slabs
12. Waste Receptacle	6	EACH	750.00	4,500		Precast Concrete
13. Tree Grates	6	EACH	750.00	4,500		Stone Pavers
PLANTINGS					117,550	
14. Shading Trees	42	EACH	800.00	33,600		24" Box, Installed
15. Flowering Trees	41	EACH	400.00	16,400		
16. Palm Tree	1	EACH	2,000.00	2,000		
17. Shrubs	5,400	S.F.	2.25	12,150		
18. Ground Cover	5,000	S.F.	5.00	25,000		
19. Lawn Grass	3,000	S.F.	0.50	1,500		
20. Soil	300	C.Y.	15.00	4,500		
21. Mulch	35	C.Y.	40.00	1,400		
22. Irrigation	14,000	S.F.	1.50	21,000		

	Total	\$708,800
General Conditions Overhead and Profit (20 Percent)		141,760
Contingency (10 Percent)		85,056

Grand Total		\$935,616 or \$11.50 per S.F.
		=====

Appendix 3

Warren Mall SCHEMATIC DESIGN COST ESTIMATE

Very few alternatives exist for a less costlier mall that can provide an adequate level of enrichment.

One possibility is the replacement of the field stone strips with an exposed aggregate paving. This would result in a net savings of \$82,000.

A more problematic revision would be the partial maintenance of the existing concrete fire lanes. Although it would save approximately \$65,000, it would force strong contractor supervision, very clean interfacing, and problematic grading. This is not a recommended alternative.

A very minimal design that would only frame the views with the eucalyptus allee and pave the center section could be accomplished for \$350,000 to \$400,000. This would not include any furnishings or special treatment and would barely be distinguishable from what currently exists in terms of a pedestrian friendly environment. It would most probably not be worth the investiture and is not a recommended alternative.

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UCSD Community

Campus/Community Planning Committee

Design Review Board

Warren College Planning Advisory Committee

Campus Planning Office

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