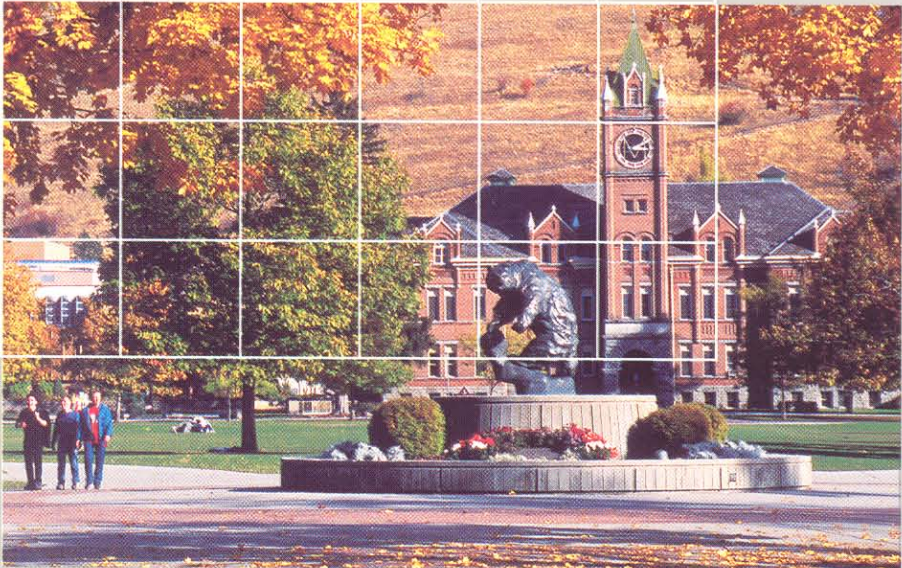
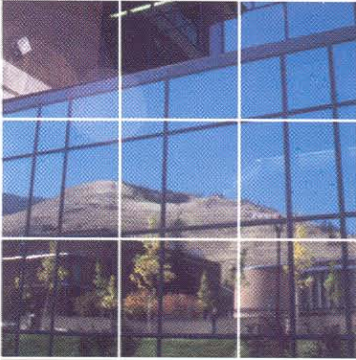
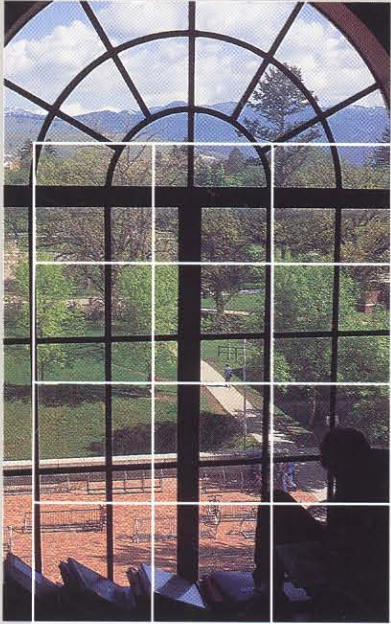


MASTER PLAN

THE UNIVERSITY OF MONTANA-MISSOULA



2002



ACKNOWLEDGMENTS

UM MASTER PLANNING COMMITTEE

The Campus Master Plan began with the establishment of the committee early in the process and the contributions of those members were invaluable. The Campus Master Planning Committee developed the conceptual framework of the Plan and played an integral role in the success of this project.

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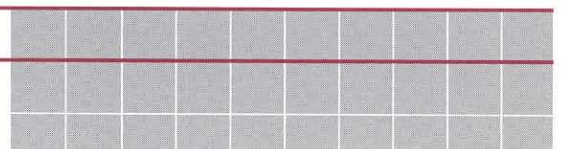
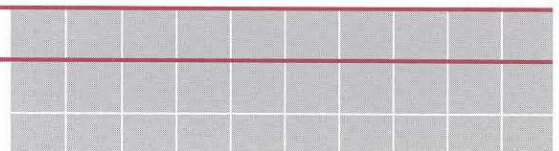




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INTRODUCTION

MONTANA'S SYSTEM OF HIGHER EDUCATION HAD ITS BEGINNING IN AN 1881 ACT OF CONGRESS, which granted the Territory of Montana 72 sections of timber, grazing, and farming land to use in funding a university. Although discussions about establishing a university took place during the following territorial period, it was not until 1893, four years after statehood, that the act creating The University of Montana was passed by Montana's Legislature. Its first class did not enroll until 1895, when the University was housed in a condemned schoolhouse refurbished by the citizens of Missoula. The institution moved to its present site at the foot of Mount Sentinel in 1899 when its first two permanent buildings, University Hall and Science Hall, were completed.

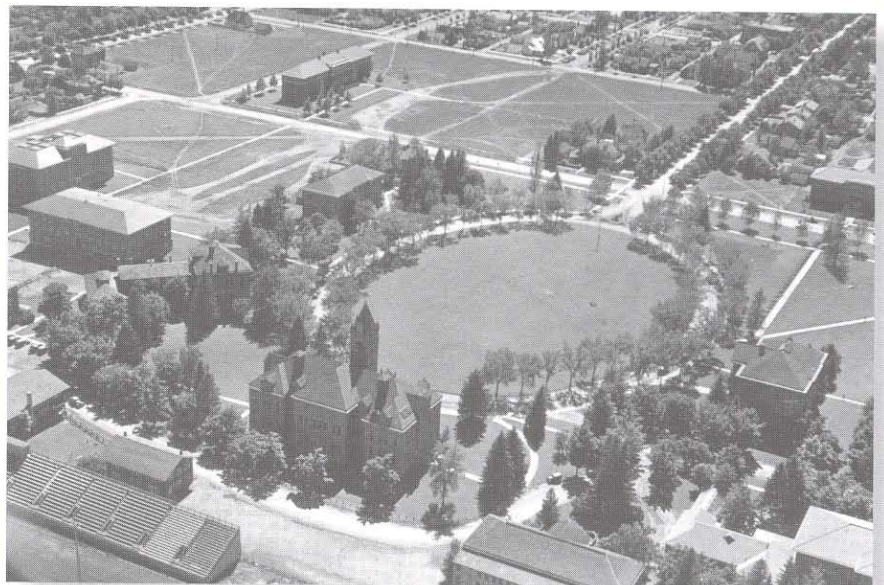
The University has grown to an enrollment approaching 13,000 students and over 63 major buildings on a 200-acre campus. As Montana's leading liberal arts university, it is considered the "flagship" of Montana's university system and offers a number of undergraduate and graduate programs with national recognition. Despite tremendous growth, the nucleus of the University campus retains the designed arrangement of buildings erected during the University's first five decades of existence.



Circa 1903

The original plan of the University campus was designed in 1895 by one of its first professors, Frederick Scheuch, who called for the central oval to be surrounded by immediate and future University buildings. Although Scheuch's plan called for all building entrances to face the center of the Oval, forming a radiating building pattern, New York architect Cass Gilbert submitted a campus master plan in 1917 which called for a bi-axial campus arrangement with straight patterns of building placement. George Carsley of Helena oversaw the Gilbert plan

for the 20 years it was in existence. The Carsley-Gilbert plan is significant because during its implementation the great majority of The University of Montana's buildings were erected. The plan's strengths are still evident despite some deviation after 1935. All buildings under this plan were designed as three-story, Renaissance Revival buildings with hipped roofs and Spanish green roof tiles. The style is not only attractive and uniform, but it links the University with the intellectual vigor of the 16th Century, significant to a liberal arts community.



Circa 1945

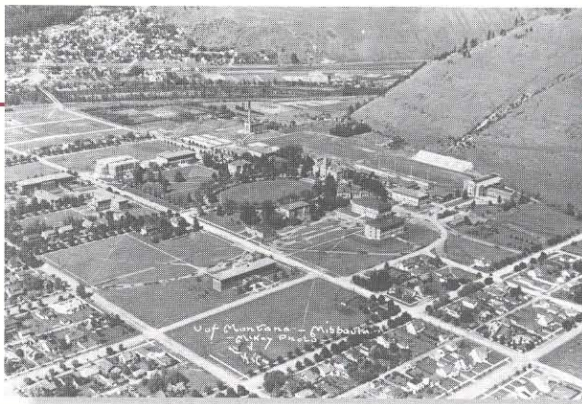
In 1930, The University acquired a quarter section of land south of campus that would later become the site for family housing and the present golf course. This site continues to be used for housing and competitive track and field events, as well as recreational activities.

A new long-range master plan, introduced in 1964, called for a maximum enrollment of 9,000 students. The Library, University Center, Science Complex, Physical Plant, and Family Housing were constructed using this plan. Also in 1964, the University acquired 245 acres of land at Fort Missoula, a site addressed in a separate master plan.

In 1988, the Missoula County High School District transferred ownership of the two-site Missoula Vocational Technical Center to the Board of Regents. The Administration and the Health and Business buildings are situated on 6.54 acres on South Avenue West. An approximately 14-acre site houses the trade and heavy equipment programs adjacent to the Fort Missoula property referenced above.

A land-use plan for campus development was done by Place Architecture (1993) in preparation for several revenue bond projects. This plan identified a conceptual growth pattern for campus and has been used through the construction and renovation of a significant number of facilities.

The physical growth of the campus over time has been guided by these various plans. While these plans have served the University well, it is time to chart a course for the University over the next ten years.



Circa 1941

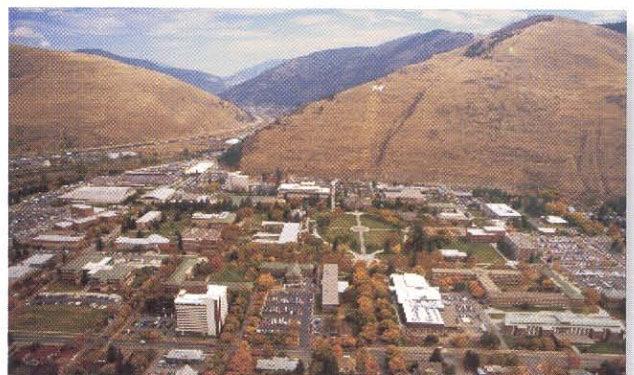
University of Montana-Missoula Strategic Directions. Extracted from the plan are the larger patterns of use, movement, and form. These will bring lasting coherence and

beauty to the campus and a strategy that addresses current campus needs and goals while being sufficiently flexible to respond to future needs.

The higher education environment has become increasingly competitive. The status of The University of Montana will continue to be a function of the quality of the students, faculty, and staff. In a time when budgets are limited, the University must continue to recruit the best. Enrollment will be made up of increasing proportions of more diverse, non-traditional students. The Master Plan must provide an attractive physical environment that improves working conditions and enhances the quality of life. A changing student body, evolving student expectations, and the impact of emerging technologies make it increasingly difficult to assess future space and land-use requirements. In the face of these uncertainties the Master Plan must create a flexible and responsive physical environment, enabling the University to respond appropriately to future demands.

beauty to the campus and a strategy that addresses current campus needs and goals while being sufficiently flexible to respond to future needs.

THE MASTER PLAN LAYS THE FOUNDATION FOR A FIRST-CLASS PHYSICAL CAMPUS APPROPRIATE FOR A MODERN UNIVERSITY. It stresses thoughtful stewardship of the built environment that we have inherited. It envisions a campus that both teaches



Circa 1995

Because state financial support for capital improvement is uncertain, the University will recognize the important role of private support, often in partnership with public funding, in fulfilling space and facility needs.

The plan assumes an enrollment of 13,000 students as identified in The

and exemplifies concern for the natural environment. The plan supports the mission of the University to provide educational programs of the highest quality; to produce cutting-edge research, scholarship, and performing arts, and to promote connections and partnerships that contribute to the economic and social well-being of the citizenry of Montana.



PROCESS

THE MASTER PLAN COMMITTEE'S WORK, BROADLY DIVIDED INTO TWO PHASES, WAS AIMED AT PRODUCING A PLAN THAT IS UNDERSTOOD AND SUPPORTED BY THE UNIVERSITY COMMUNITY.

Phase I was primarily an educational process. Effective planning processes begin with a review of the existing forces at work in order to create a plan for the future, firmly grounded upon the past. The Committee reviewed the developmental history of the campus, the University's Strategic Directions, the academic trajectories, the role of the College of Technology, the goals of research, and future housing needs.

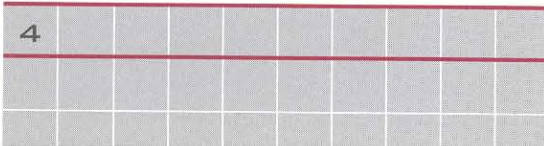
In Phase II, the Committee used this information to define guiding principles for developing the plan.

Because there is a relationship between the nature of the process and the quality of the outcome, the Committee was purposefully composed of University administrators, faculty, staff, students, and state and city representatives. The interaction of these diverse stakeholders provided an accurate analysis of existing conditions, a creative development of

various organizational concepts, and a logical assessment of alternatives. In this open, inclusive process, the committee members made an effort to focus on opportunities rather than obstacles, and to reveal fresh visions of what the campus can become. The Master Plan Committee met with campus constituencies and local community leaders in order to elicit subjective comments and points of view.

Several consultants were retained to assist in the analysis and development of the Master Plan. A professional planner reviewed the process and the initial phases of the planning document to ensure that all critical elements had been addressed. Consultants with expertise in utility infrastructure and technology were utilized.

The Committee has now updated The University of Montana-Missoula Master Plan. The new plan determines how The University of Montana-Missoula campus will grow over the next ten years while preserving the beauty of its physical environment and minimizing negative impacts on its neighbors.





ENSURE STEWARDSHIP

The Campus Master Plan should ensure good stewardship of the existing campus, maintaining and protecting the value of the University’s physical resources and character, history, architecture, and open space. Changes to the campus should improve and enhance, rather than detract from, the value and quality of the campus. The Campus Master Plan identifies and encourages preservation of historic resources and open space.

MAXIMIZE FLEXIBILITY

The Campus Master Plan should provide the maximum amount of flexibility in order to best accommodate future growth and take advantage of unforeseen opportunities.

PROVIDE FACILITIES

The Campus Master Plan should provide for the facility and infrastructure needs of the next decade.

ENHANCE THE CAMPUS

The Campus Master Plan should create an aesthetic quality for new construction while conserving and improving existing buildings, open spaces, and campus vistas appropriate to the campus as a whole.

PROVIDE ACCESSIBILITY

The Campus Master Plan should ensure campus and facility access to maximize non-vehicular travel, emphasize

pedestrian routes, and promote the design of environments to be usable by all people without the need for special arrangements or adaptations.

PROMOTE SAFETY

The Campus Master Plan should help create a safe and healthy environment, with personal and workplace safety considerations integral to planning and design of circulation elements, buildings, and open spaces.

PRESERVE OPEN SPACE

The Campus Master Plan should preserve and enhance campus open space and landscape as a signature characteristic of The University of Montana-Missoula.

ENHANCE CAMPUS PERIMETER

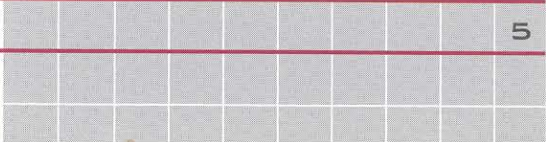
The Campus Master Plan should enhance campus boundaries, approaches, and gateways in appearance and use.

VALUE THE COMMUNITY

The Campus Master Plan should recognize the importance of the surrounding neighborhoods and relationships with the City of Missoula.

IMPROVE TRANSPORTATION, CIRCULATION, AND PARKING

The Campus Master Plan should continue to strengthen transportation systems, pedestrian traffic, and parking.





MASTER PLAN

LAND-USE ZONES

- Land-use has been divided into several categories, each accommodating a different type of activity. These categories are used throughout this Campus Master Plan. Land uses tend to be clustered, and the pattern has been developed over time.
- Academic land-use areas predominantly include buildings with classrooms, faculty and departmental offices, assembly spaces, exhibit spaces, and library spaces as well as research and science areas that include dedicated instructional and research laboratories.
- Student support and administrative areas are where administrative offices and student services are concentrated. Student support and administrative uses have been clustered to reduce trips between

offices. Functions requiring high in-person contact, i.e., the Lommasson Center, Curry Health Center, University Hall, Facilities Services, Brantly Hall, and Corbin Hall have been located at the perimeter of the academic core.

- Housing land-use areas predominantly include student housing-residence halls and apartment housing units.
- Athletics and recreation land-use areas include the intercollegiate athletics facilities and the major student recreation spaces.
- Economic development areas accommodate non-institutional agencies, corporate research, and other spaces on campus leased to interests not part of The University of Montana-Missoula.



RECOMMENDATIONS

- Accommodate various types of activities in the future while respecting the identified land-use areas.
- Benefit from planned proximity of related academic disciplines as student class schedules now benefit from the concentration of most classrooms within a 10-minute walking area. New academic buildings should be constructed within the academic core.
- Create a strong and compelling campus image that is distinctive, yet inviting, and characteristic of an organized, coherent, high quality institution.
- Create a safe, healthy, and vibrant student-oriented campus reflective of the total learning experience.
- Locate future residences peripheral to academic areas to increase the current buffer between the campus and other residential areas.



MASTER PLAN

Academic Core Map





MASTER PLAN

Science/Research Map





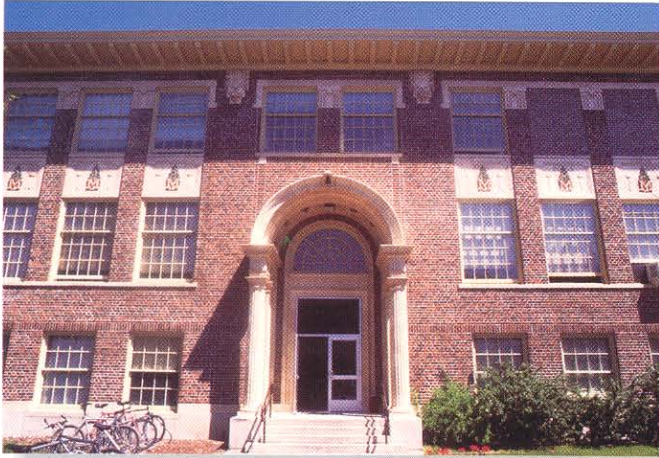
MASTER PLAN

Student Support/Administrative Facilities Map





MASTER PLAN



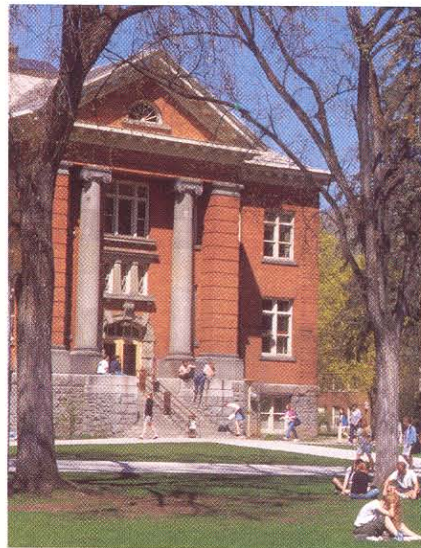
HISTORIC PRESERVATION

Preserve, protect, and build upon historic facilities and patterns that contribute to the cultural and functional environment. Heritage property, in this context, follows the state’s definition: “any district, site, building, structure, or object located upon or beneath the earth or under water that is significant in American history, architecture, archaeology, or culture” (MCA 22-3-421). It is recognized that the historic buildings, structures, and sites of the University contribute to an understanding of its identity and history. The stewardship shown to these resources reflects on the stature, quality, and integrity of the institution.

The University recognizes its responsibilities and stewardship to maintain and respect its historic resources in accordance with local, state, and federal regulations, standards, and guidelines.

RECOMMENDATIONS

- Consult with the Missoula Historic Preservation Officer or a qualified historic preservationist whenever buildings within the “Historic District” are being considered for renovation, additions, or demolition.
- Modify historic buildings, structures, and sites listed on the National Register of Historic Places in a manner that respects and maintains the historic character and integrity of the resources. Design changes, adaptations, and additions, including signage and lighting in the vicinity of historic sites, to respect the nature of the facilities.
- Maintain and preserve “contributing buildings” which include any building or property (regardless of age or of current level of maintenance) that positively contributes to the overall quality of the physical environment. Conversely, consider replacing or modifying “non-contributing buildings,” which include any building (regardless of age) that does not make a positive contribution to the overall quality of the physical environment.





MASTER PLAN

Historic District Map





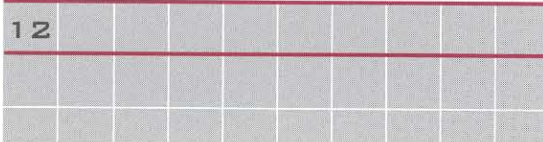
MASTER PLAN

LAND ACQUISITION

While the Campus Master Plan assumes the gradual acquisition of property adjacent to the main campus, the University's current plans do not include any land west of Arthur or south of Beckwith to accommodate future growth. General areas, not specific properties, have been identified for future acquisition, although priorities in land transactions must remain flexible because the University cannot control the timing or price of specific property offerings. The University of Montana-Missoula land acquisition zone, approved by the Board of Regents, identifies the general area for acquisition, which includes the 5th and 6th Street properties.

RECOMMENDATIONS

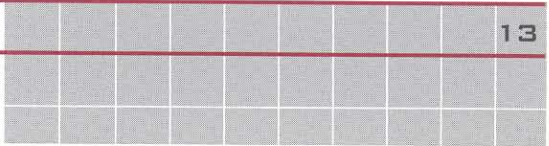
- Retain the existing land acquisition zone plan.
- Purchase additional land as it becomes available, rather than when it is needed, to reduce acquisition costs.
- Treat acquired lands sensitively as transitions to surrounding neighborhoods.
- Maintain purchased properties, being held for future use, at the current neighborhood standards.
- Move lower value land uses, such as parking, out to new lands to allow clustering of core uses such as academic buildings and housing.





MASTER PLAN

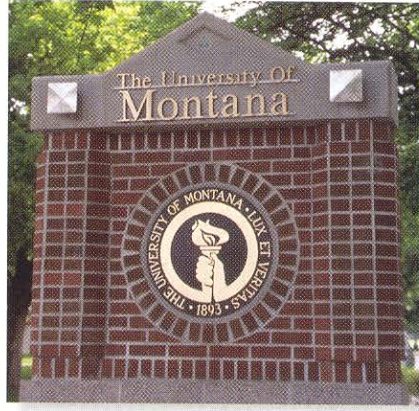
Land Acquisition Map



CAMPUS GATEWAYS AND ENTRANCES

Major entrances and boundaries need to be created to respond to an inward focus on learning and an outward focus on community, and in this sense should be defined yet porous. A sense of arrival and containment: gateway features, building massing, landscape treatments, and design guidelines help to identify the boundaries and entrances to the campus. The campus is a self-contained community, while not being isolated from the City of Missoula.

The open space located around the edges of the campus are of significant importance because it is here that the first impression/introduction to the University community is made. Organizing these spaces and integrating the uses into a definable boundary that is consistent with order and continuity is as important as the equivalent goal in the campus core.



RECOMMENDATIONS

- Make certain that campus entrances, identified in the Master Plan, are inviting and obvious.
- Create campus gateways along major transportation corridors to guide individuals to the University.
- Distinguish campus boundaries by gateways and entrances. Landscape and design will be consistent with the character of the campus but compatible with the diversity of the adjacent neighborhood.
- Develop boundaries to suggest active community engagement.
- Improve campus boundary landscaping, signage, site accessories, and material selection.
- Soften views of perimeter parking lots with landscaping.
- Improve safety for all modes of transportation along campus boundaries by designing for vehicular speed, safety, and lighting.
- Enhance pedestrian routes that connect the campus with off-campus population to encourage walking and bicycle traffic in lieu of automobile commuting.
- Create pleasant transitions for entering or exiting campus.
- Design campus corners with a unified image using high-quality landscaping and signage.
- Provide distinctive lighting levels at campus entrances.
- Provide signage that is simple and functional at major vehicular entrances with a logo, name of entrance, and direction to visitor parking.
- Provide orientation maps for pedestrians and bicyclists at campus entrances.
- Design, relocate, or remove signs and site accessories that create clutter at campus entrances.
- Enhance campus open spaces that link with off-campus open spaces.



MASTER PLAN

Campus Gateways and Entrances Map



MASTER PLAN

OPEN SPACE

Open spaces include traditionally landscaped areas, and open and developed green areas that provide visual relief from the built environment. They supplement the built environment in such forms as lawns, malls, courtyards, pedestrian corridors, and special landscaping. Open spaces – the spaces between structures – are important in providing an atmosphere conducive to academic pursuits. Interconnected open spaces can provide “pathways” for safe and efficient pedestrian movement throughout campus. The connected open spaces are an important element in creating an overall campus community and identity by unifying the diverse architectural styles of campus buildings.

The consistent quality of signature details, art and sculpture, gateways, edges, and visual connections throughout the campus landscape will strengthen the sense of place that defines The University of Montana-Missoula campus. Memorable characteristics of the landscape can have enormous, even lifelong impacts on individuals and can promote the University to prospective students.



RECOMMENDATIONS

- Plan for a diversity of open spaces, from the more ordered streets and quadrangles of the north campus, to more romantic and picturesque spaces such as the Oval and the natural spaces dominated by the Clark Fork River corridor and Mount Sentinel. The design of each space should be based on a thorough understanding of its particular ordering principles and/or its ecological relationships. This diversity of character should be preserved, enhanced, and extended, and any new development should reinforce this idea.
- Protect the safety of the campus community. This is of paramount importance within campus open spaces where relaxation, academic instruction, informal discussion, and social interaction take place. Design solutions must provide the appropriate visibility and accessibility needed to create a secure environment.
- Preserve “Sacred Places” and physical icons such as The Oval, Grizzly Circle, and Memorial Grove.
- Retain and enhance the existing vistas on campus.
- Enhance and define existing parks, plazas, and streetscapes.
- Utilize campus open spaces to creatively complement increasing density on campus.





MASTER PLAN

Open Space Map

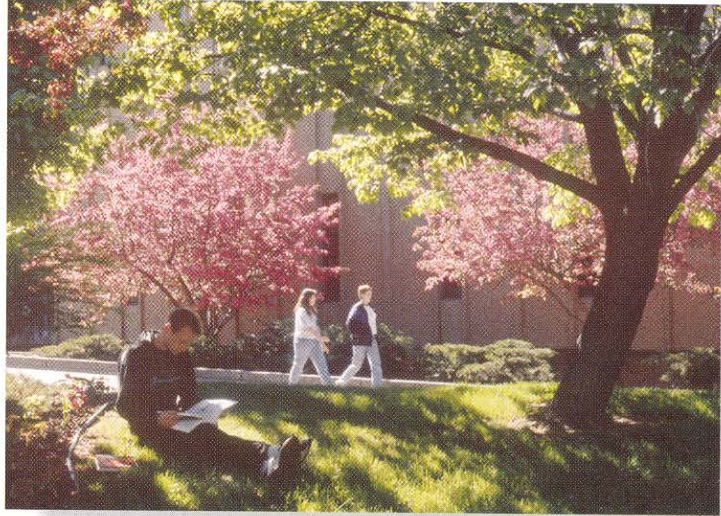




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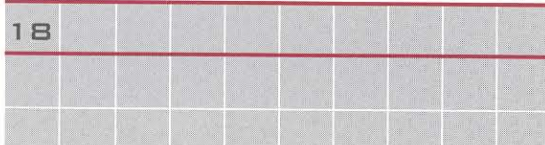
LANDSCAPE

A successful landscape includes ground plane plantings, understory plantings, colorful seasonal plants, shrubs of different sizes, foliage color and change, fragrance, and appropriate scale and form, with characteristics delighting the senses. Landscaping in relationship to the buildings can extend and enhance architectural forms. Because the campus has been designated the State Arboretum, its landscaping functions as an additional asset for public relations.



RECOMMENDATIONS

- Create a landscape that is as efficient and self-sustaining as possible; one that requires minimum labor and energy to remain healthy and attractive. Recognize that some locations may warrant, due to their central location or importance, a higher level of maintenance commitment (i.e., University Hall, Grizzly Circle, the Mounds behind University Hall, and the Prescott House).
- Designate the central campus landmark feature, “The Oval,” a high priority slated for new trees, irrigation, lighting, etc.
- Commit to using indigenous, long lasting, disease resistant, low maintenance species while maintaining diversity and species that do not impede campus safety.
- Create appropriate landscaped setbacks along the streets and other public ways to soften the visual impact of parked vehicles, lighting systems, and urban facades on campus streetscapes.
- Include appropriate mitigation and/or enhancement measures when new construction or renovation projects impact existing landscape.
- Utilize “Integrative Pest Management” principles in the care and maintenance of campus grounds.
- Reinforce the campus plant collection for its significant teaching and research value since the campus has been designated as the State Arboretum.
- Maximize the value of existing trees and plants on campus. Over the years a significant variety of trees have been planted providing the foundation for an arboretum. Existing trees and plants should be identified and new ones added. Specimen trees should be identified and labeled.
- Consult the Campus Arboretum Committee in all instances of renovation or new construction.



HOUSING

The University is committed to providing a variety of living options and programs that complement the academic mission of the University. These include traditional residence halls as well as pod, suite, and apartment-style housing for undergraduate, graduate, and non-traditional students. The University is committed to working with the local community on student housing issues. The University recognizes that housing must meet student preferences in living options, assist in the learning process, and be attractive to students.



RECOMMENDATIONS

- Work with the Missoula community to maintain and retain the residential character of neighborhoods affected by the campus community and to develop creative solutions to the problem of affordable housing throughout the city.
- Develop additional housing to address single students and students with dependents who choose to live on campus or elsewhere in the community. This kind of development will not necessarily be traditional residence halls but may include pod, suite, or apartment-style facilities. This would provide housing that offers students the independent living styles they desire, thereby lessening the impact to the surrounding neighborhoods and the remaining Missoula community. Any housing plan needs to ensure the positive financial and programmatic aspects of the existing residence life program and be viable for private investors.
- Continue the effort to make residence halls and University Villages facilities attractive living options for students by meeting their technology needs and living preferences. This will be accomplished through improvements of existing housing facilities and new construction as deemed appropriate and financially feasible.



MASTER PLAN

Current Housing Facilities Map





MASTER PLAN

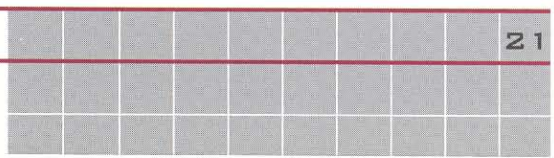
Future Housing Development Map—Mountain Campus



NORTH

LEGEND

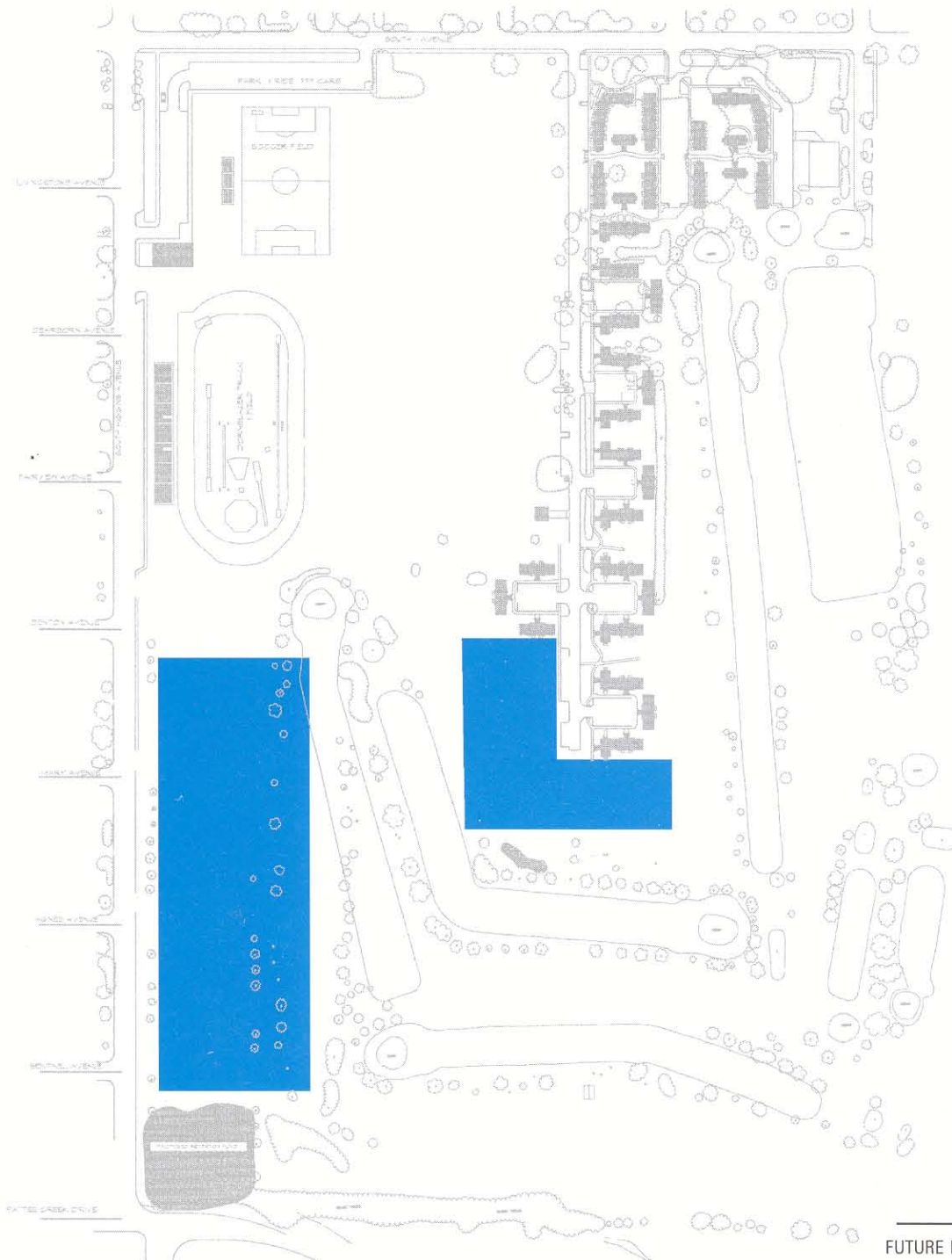
FUTURE HOUSING SITE—MOUNTAIN CAMPUS





MASTER PLAN

Future Housing Development Map—South Campus



**CIRCULATION,
TRANSPORTATION,
AND PARKING**

A major commitment, decided very early in the process, was to maintain the University as a pedestrian-oriented campus. This decision has driven the formulation of two broad goals: improving pedestrian circulation and ease of access to all University facilities, and minimizing conflicts between essential pedestrian routes and vehicular routes.

A pedestrian-oriented campus does not eliminate vehicles. It simply gives priority to pedestrian routes, drop-off areas, and service and delivery space, and increases short-term parking in appropriate locations to ensure short-term access.



RECOMMENDATIONS

- Maintain the campus as pedestrian-oriented by directing general vehicular circulation to the campus periphery.
- Minimize the need for more parking by promoting and giving priority to alternative modes of transportation such as carpooling, bicycling, transit busing, and walking.
- Augment transit systems, including campus "Park-N-Ride," to all campus properties to both optimize transportation and encourage interaction between faculty, staff, and students.
- Continue efforts to increase the frequency of "Mountain Line" bus service to campus and provide shelters at appropriate bus stop locations.
- Develop parking only at the identified parking sites.
- Develop all new parking facilities to the same standards, i.e., lighting, paving, striping, curbs, bumpers, drainage, landscaping, and easy, well-marked access.
- Improve the general aesthetics of campus by screening parking lots and facilities with trees and shrubs.
- Establish islands of planting in parking lots, wherever possible.
- Commit to a re-configuration of the Madison Street Bridge and 5th and 6th Street arterials – via roundabouts or some other means – to substantially improve circulation patterns, reduce campus traffic, and improve safety.
- Widen the primary internal circulation routes on campus to a 16 ft. standard ensuring a smooth and safe flow of traffic for both bicyclists and pedestrians.
- Work with the City of Missoula to develop alternatives that improve the safety of pedestrian traffic on Arthur Avenue crosswalks.
- Consider parking lots major destinations for pedestrian walkways.
- Honor accessibility for those with mobility impairments as a necessary consideration in the development and improvement of all pedestrian facilities. All walkways essential to reaching a building or program will be built to ADA standards.
- Ensure that emergency and service vehicles will have appropriate access to all campus facilities while providing pedestrian safety and maintaining the integrity of campus grounds.
- Emphasize the most convenient accesses by developing the shortest or most direct routes from off-campus to major on-campus destinations. Rather than a single entrance, retain campus access from several directions.
- Configure intersections to respond to and promote smoothest flow in the direction of heaviest volume, or to encourage traffic to follow one route in preference to another.
- Preserve all permanent walkways now located throughout campus.



MASTER PLAN

Primary Circulation Map





MASTER PLAN

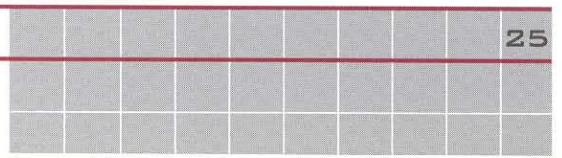
Future Parking Development Map—Mountain Campus



NORTH

LEGEND

FUTURE PARKING—MOUNTAIN CAMPUS





MASTER PLAN

Future Parking Development Map—South Campus





COMMUNITY CONNECTIONS

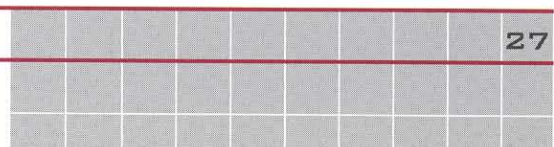
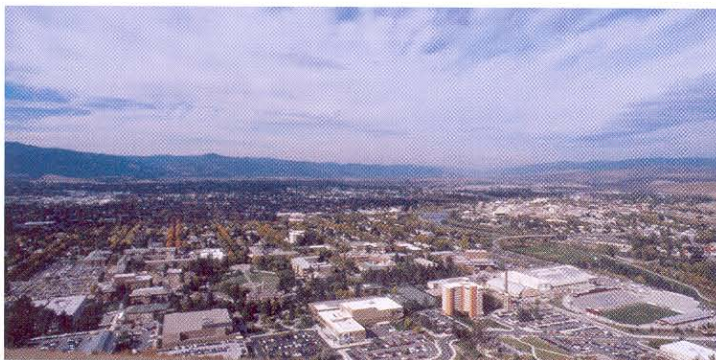
The University enjoys a strong relationship with the larger community of Missoula. University collaboration with neighbors, local businesses, and the city is a means for enriching academic, research, and cultural resources. It allows the University to affect the quality of the larger environment. Joint public, private, and institutional initiatives can impact the surrounding neighborhoods and community.

To whatever degree possible, the Master Plan must encourage the continuation of this positive relationship. The campus must have a character of its own, but must be readily accessible to and from the larger community of Missoula. The physical facilities can serve this mission by facilitating community interaction.

The campus and the adjacent community will form a continuous urban setting connected by open spaces, pedestrian and bicycle ways, and streets. At the same time, campus edges will be distinguished by gateways, landscape, and changes in land use. Defining the campus within the context of its surroundings will help foster a unique identity for the University while improving the interface with the existing community.

RECOMMENDATIONS

- Promote the University's commitment to the surrounding community by establishing welcoming and mutually beneficial physical relationships between campus and the surrounding community.
- Sustain flexibility as an essential element of the plan, recognizing that:
 - The business/industry environment will have some effect on the growth of specific fields of study on campus that may have an impact on the physical nature of the campus.
 - As the alumni community grows, interest in and mutual benefit of a close relationship with the campus community also grows. While it is unclear at this time if or how this may impact the Master Plan or facilities, there may be an impact to campus.
- Maintain the connection of the campus to the Clark Fork River and the link to the Kim Williams Trail. This is considered a major advantage to most people associated with the University. Continue to take full advantage of, and enhance the presence of, the river and the established Missoula Trail System.





MASTER PLAN

Re-utilization Site Map— These sites have been identified for potential re-utilization-facilities/functions other than their current use.





MASTER PLAN

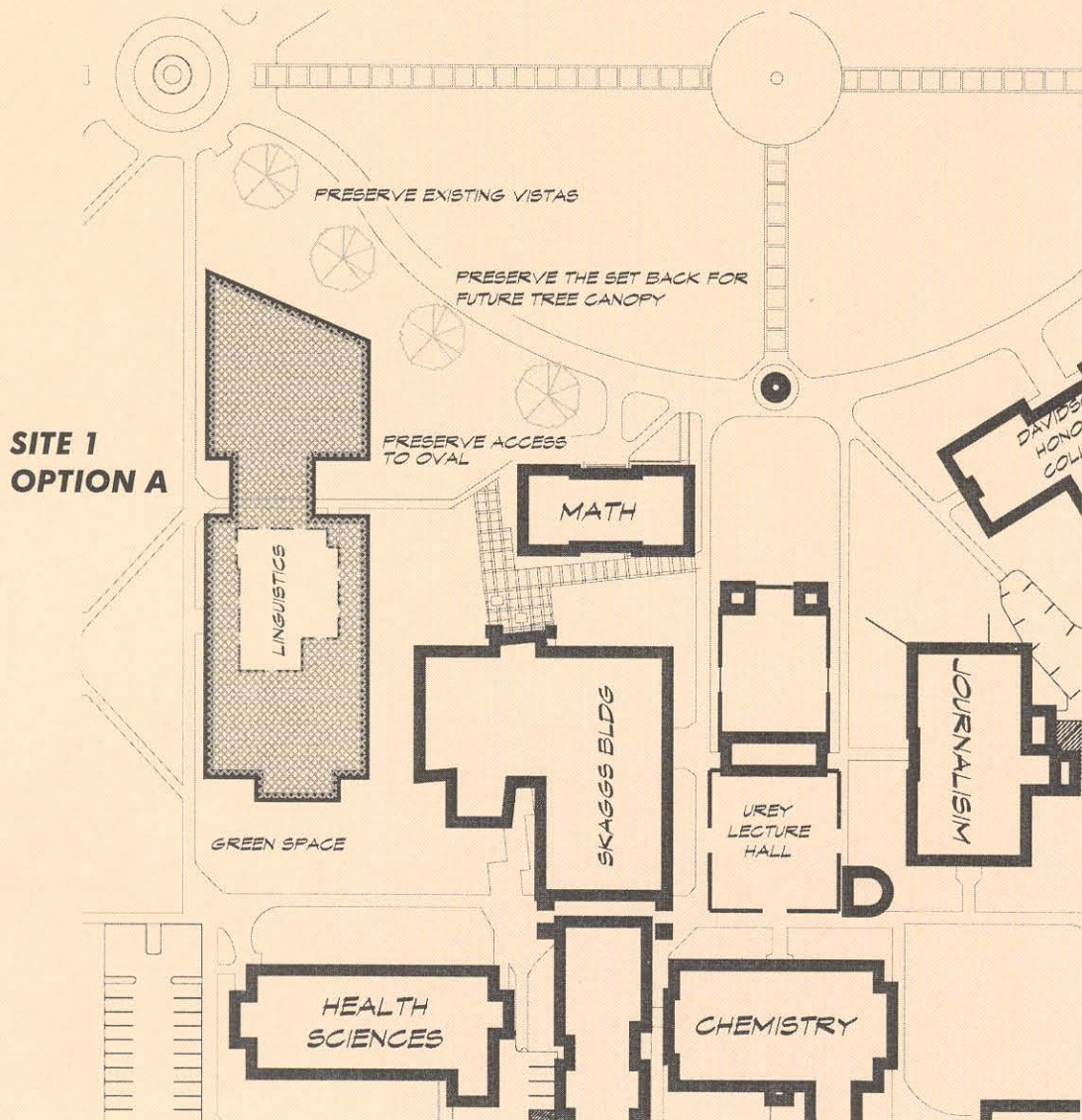
Future Building Site Development Map



SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Acknowledge this as a landlocked site with no public access for parking
- Design site with 80,000+ sq. ft. for a single structure
- Design structure to be three (3) or four (4) stories above grade
- Explore alternatives to the existing Linguistics structure
- Step back building from Oval to lessen impact
- Preserve green belt
- Preserve existing Oval access
- Assure architectural elements are compatible with the significant structures within the historic district

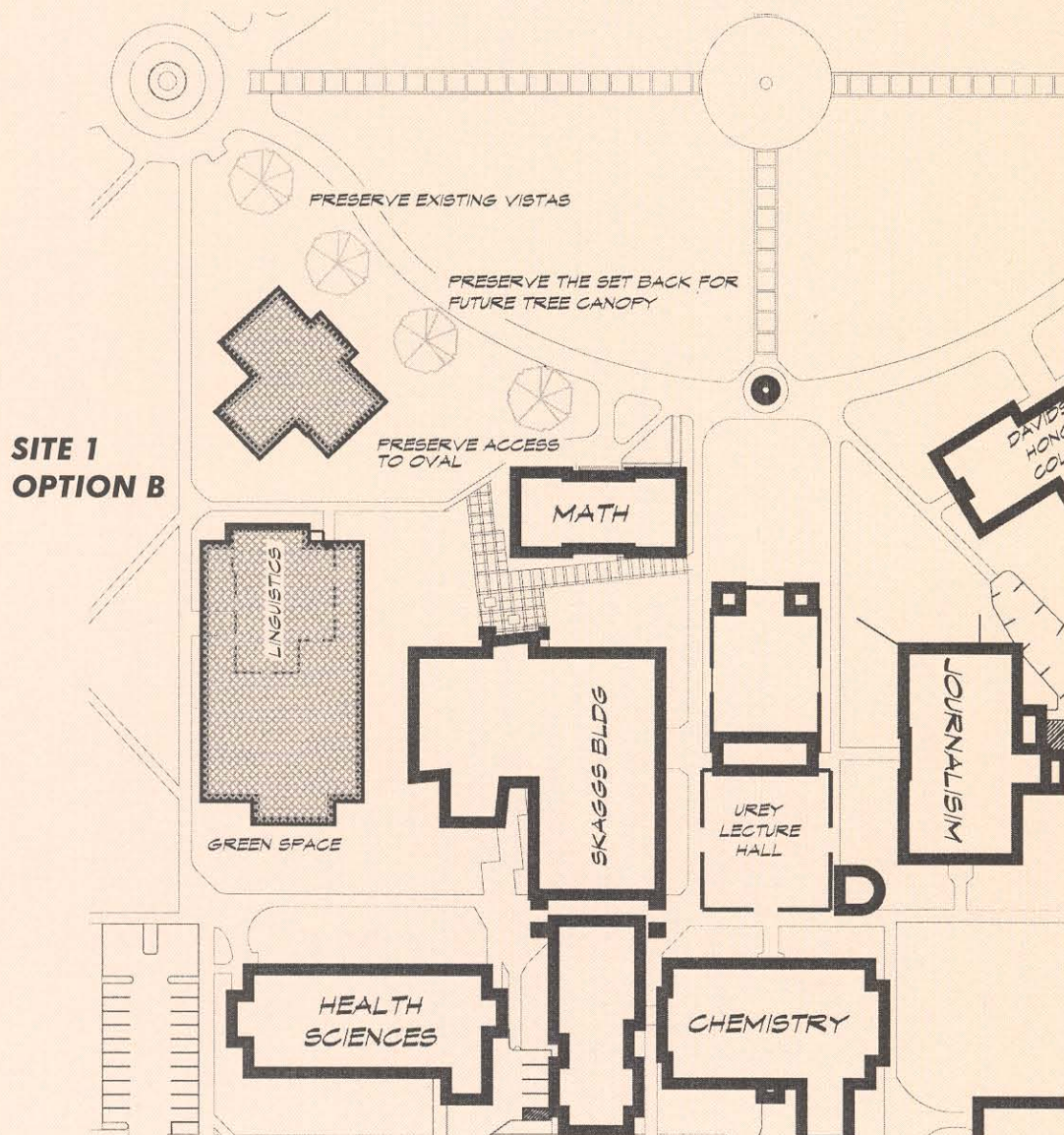


SITE 1-OPTION A

SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Acknowledge this as a landlocked site with no public access for parking
- Design site with an approximate 10,000 sq. ft. smaller building and 70,000 sq. ft. larger building
- Design structures to be two (2) or three (3) stories above grade
- Explore alternatives to the existing Linguistics structure
- Step back building from Oval to lessen impact
- Preserve green belt
- Preserve existing Oval access
- Assure architectural elements are compatible with the significant structures within the historic district

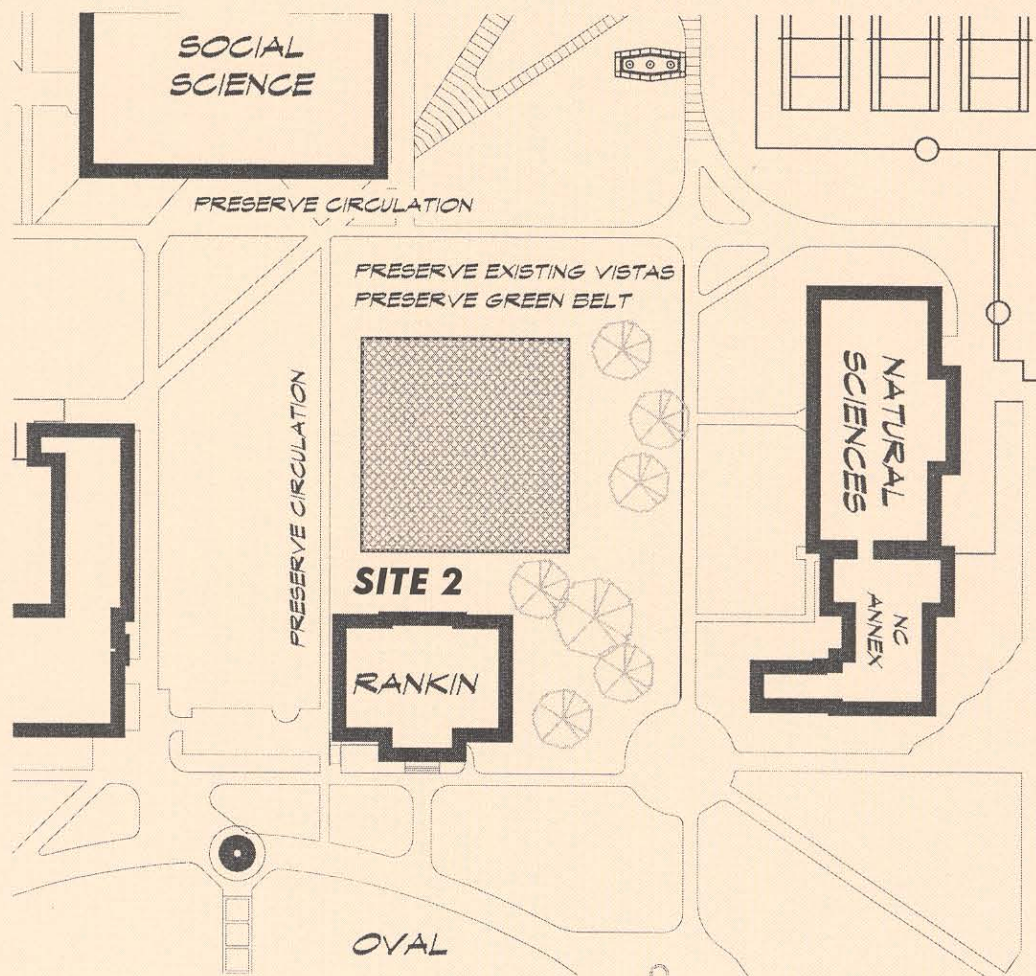


SITE 1-OPTION B

SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Acknowledge this as a landlocked site with no public access for parking
- Design structure to a maximum of three (3) stories above grade and 70,000 sq. ft.
- Incorporate into the design solution prominent entrances on both the west and north facades
- Preserve north-south and east-west circulation
- Preserve existing vista to Memorial Grove
- Consider an expansion to Jeannette Rankin Hall
- Maximize existing site while maintaining plaza
- Retain as much natural light as possible
- Assure no "alley" is formed between the new and old building; leave enough easeway to assure attraction
- Design so the front view of the Social Science Building will not be adversely impacted
- Assure architectural elements are compatible with the significant surrounding structures



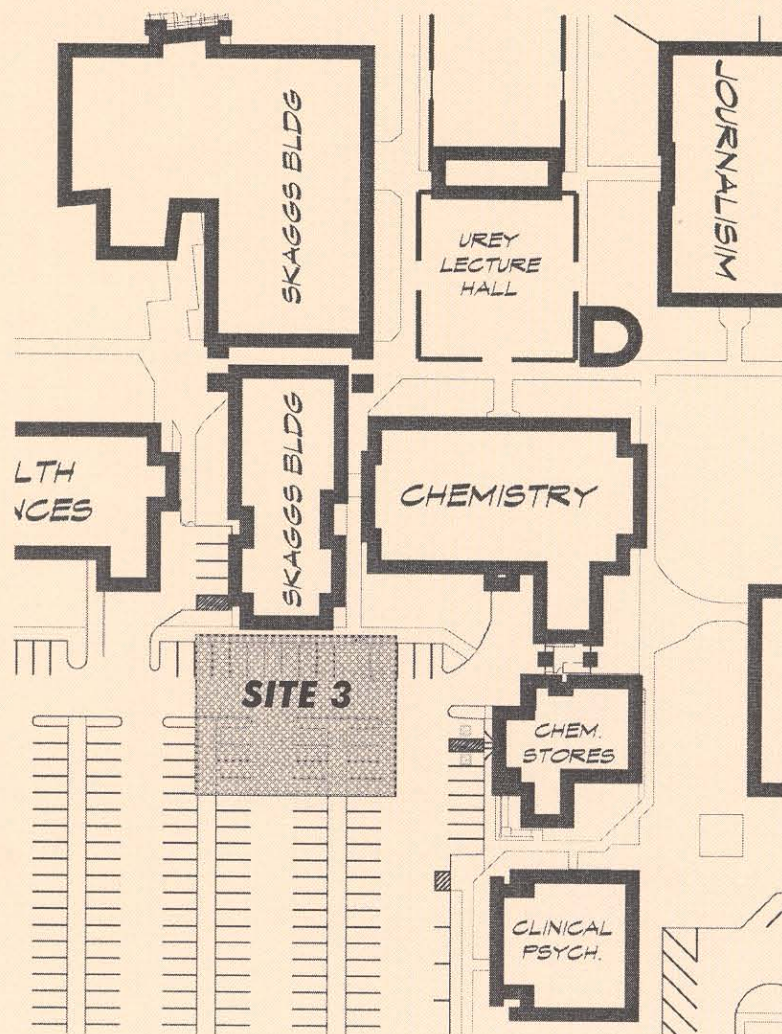
SITE 2



SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Design structure to be approximately 70,000 sq. ft.
- Design structure to be four (4) stories above grade
- Incorporate into the design solution a prominent entrance on the south facade
- Assure no “alley” is formed between the new and old building; leave enough easeway to assure attraction
- Match floor to floor elevations of existing buildings
- Design addition to minimize effects of fume hoods, fans, etc. (visual and sound)

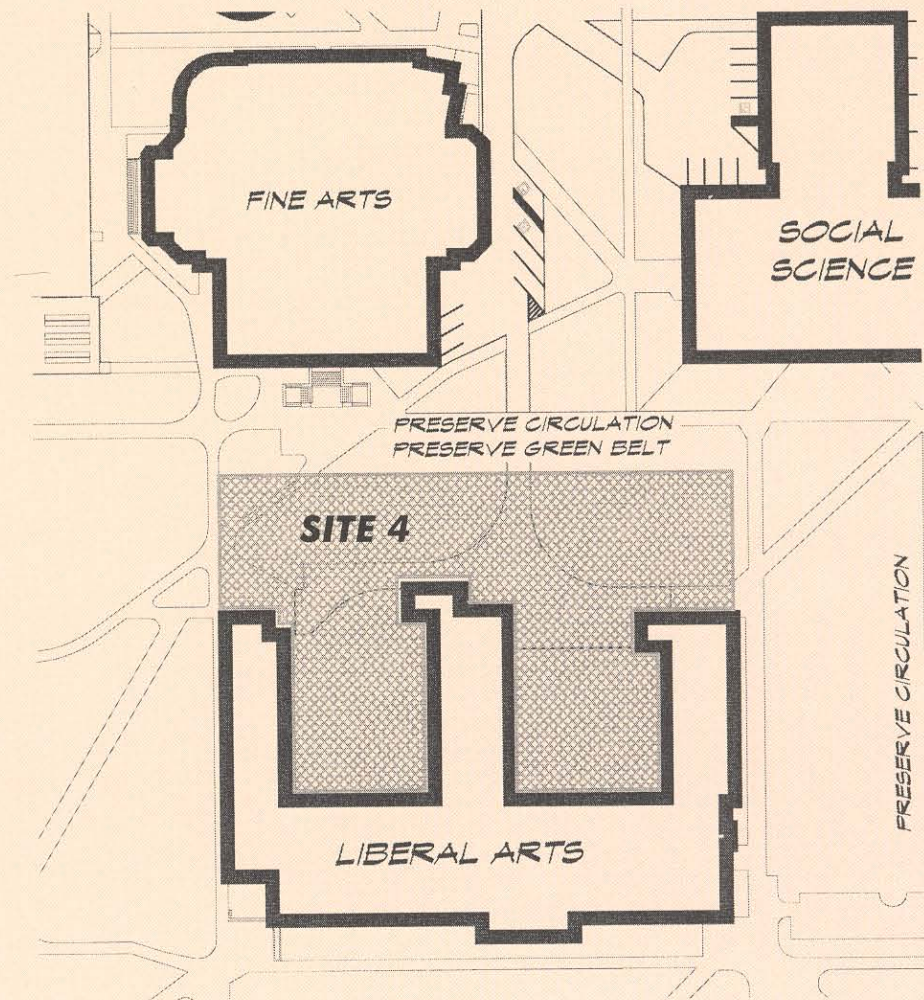


SITE 3

SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Incorporate into the design solution a prominent entrance on the north facade
- Preserve green belt on the north side of the building
- Preserve existing vista from the Oval
- Match floor to floor elevations of the existing building's main floor
- Explore enclosing the court yards to capture additional indoor floor space
- Assure architectural elements are compatible with the significant structures within the historic district



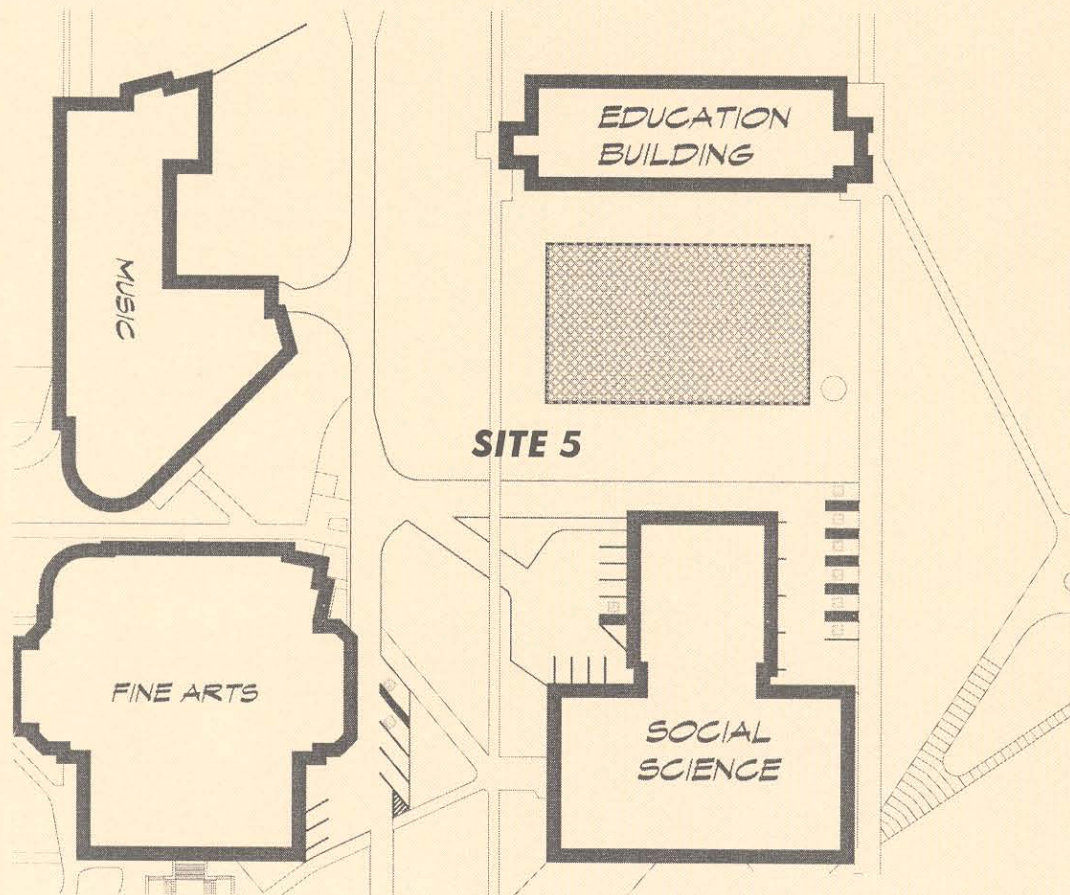
SITE 4



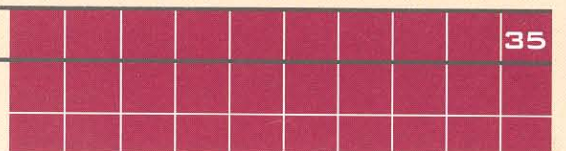
SITE DEVELOPMENT GUIDELINES

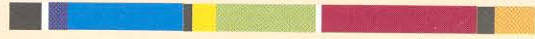
DESIGN CONSIDERATIONS

- Design structure not to exceed four (4) stories above grade
- Incorporate into the design solution a prominent entrance on the east facade
- Preserve green belt
- Preserve existing vista to Memorial Grove
- Assure architectural elements are compatible with the significant structures within the historic district



SITE 5

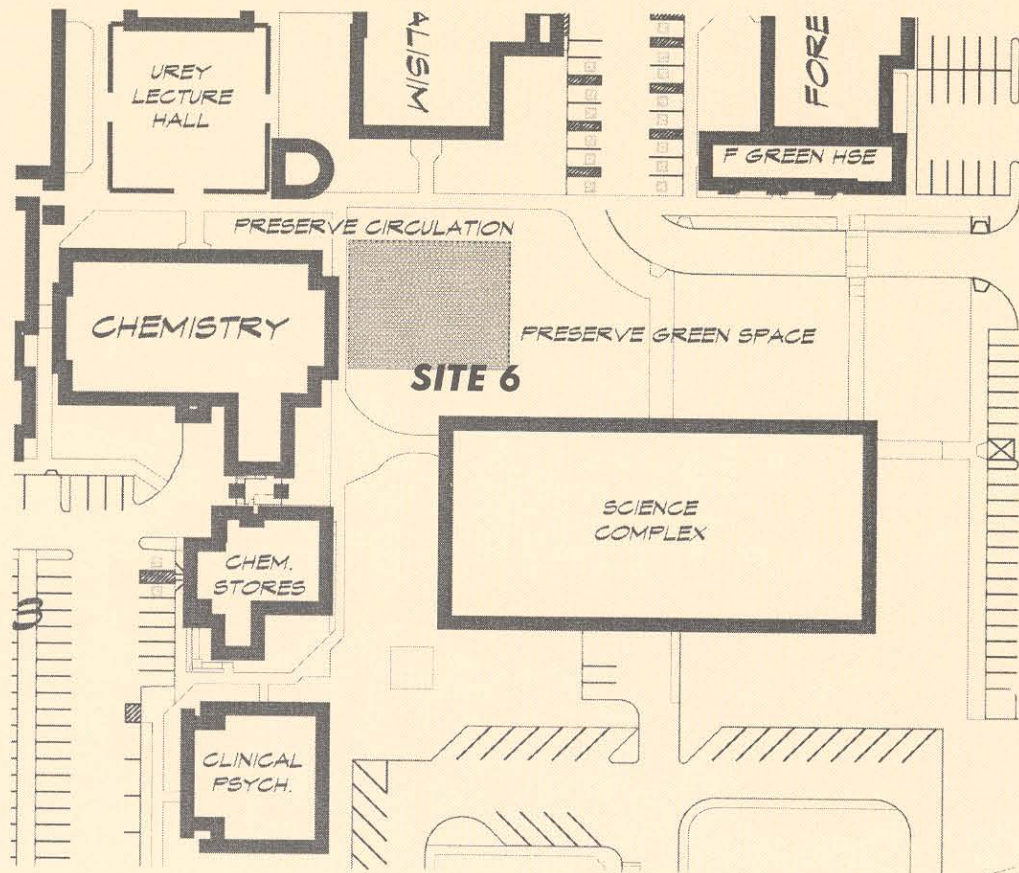




SITE DEVELOPMENT GUIDELINES

DESIGN CONSIDERATIONS

- Incorporate into the design solution a prominent entrance on the east facade
- Assure no "alley" is formed between the new facility and the Science Complex; leave enough easeway to assure attraction
- Match floor to floor elevations of existing buildings
- Design addition to minimize effects of fume hoods, fans, etc. (visual and audible)
- Assure architectural elements are compatible with the significant structures within the historic district



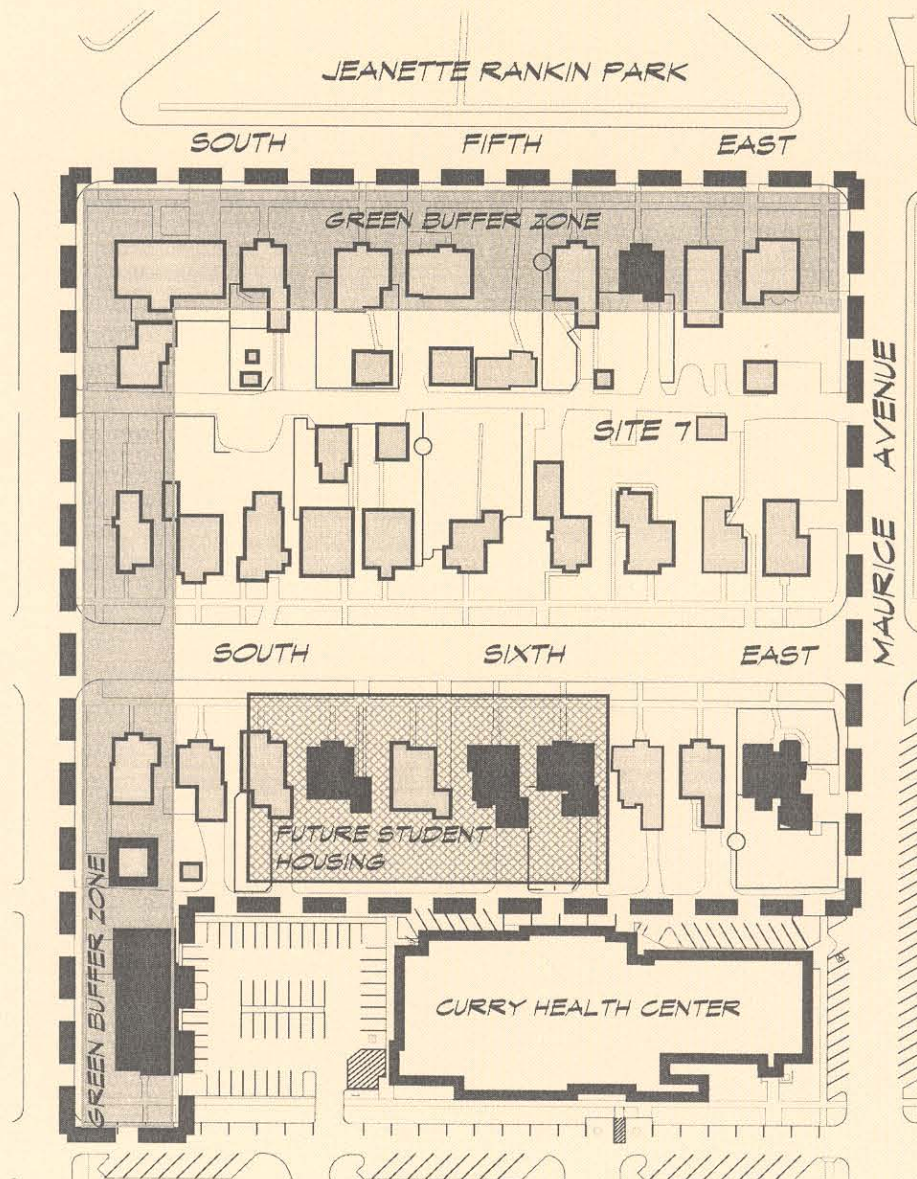
SITE 6



SITE DEVELOPMENT GUIDELINES

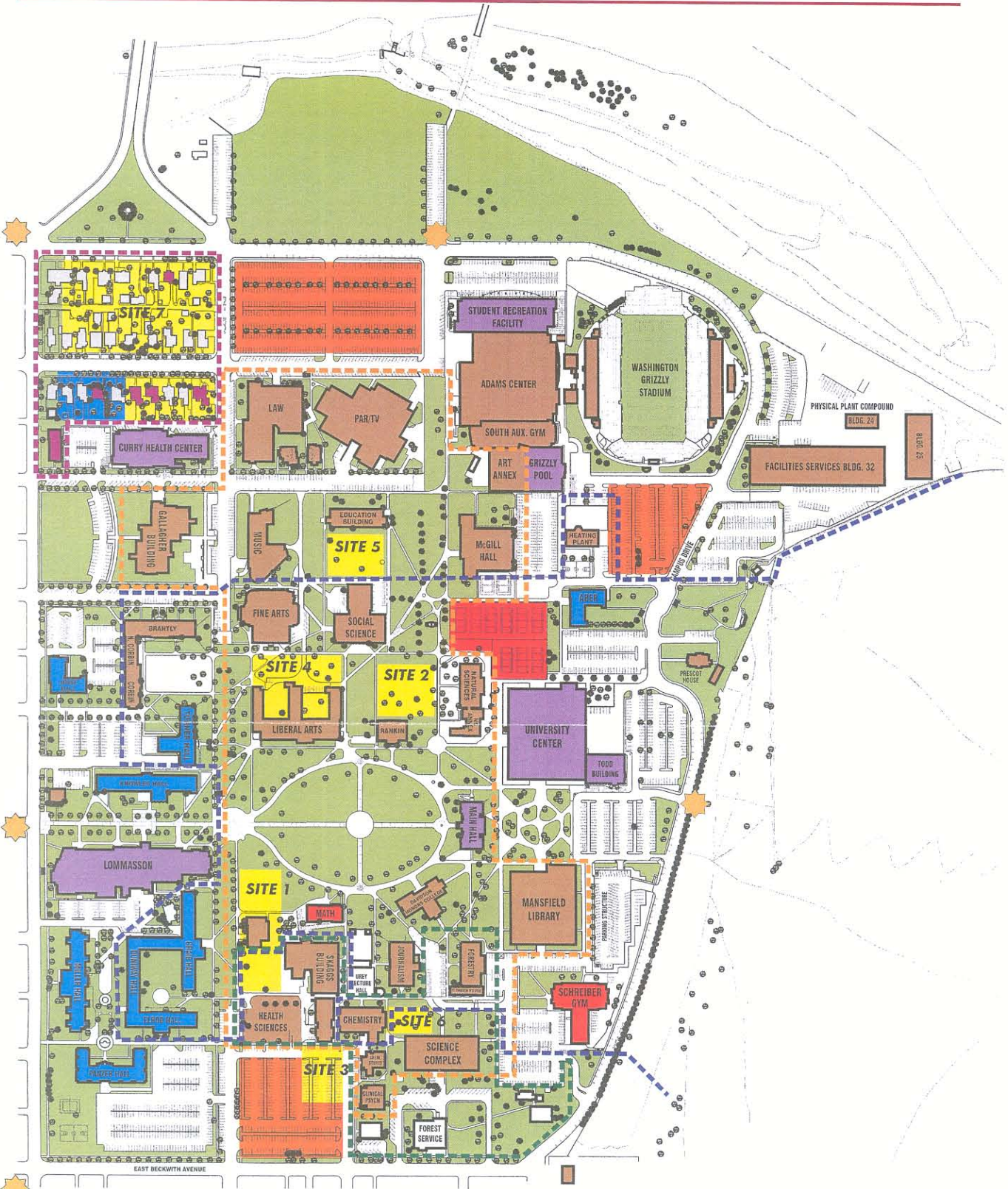
DESIGN CONSIDERATIONS

- Screen and confine parking to internal areas of the site
- Step back proposed residence life building from Arthur Avenue to lessen impact
- Preserve green belt along Arthur Avenue and Jeannette Rankin Park
- Create a "Visitor Center" consistent with the concept of an entrance to a national park
- Consider closing at least one existing thru street
- Initiate a comprehensive planning process for the site when all land is available
- Assure architectural elements are compatible with surrounding neighborhood



SITE 7

COMPREHENSIVE MASTER PLAN MAP



NORTH

LEGEND

- | | | | | | | | |
|--|------------------|--|-----------------------|--|------------------|--|--------------------------------|
| | ACADEMIC CORE | | FUTURE BUILDING SITES | | OPEN SPACE | | STUDENT SUPPORT/ADMINISTRATION |
| | ACQUISITION ZONE | | HOUSING FACILITIES | | PARKING | | RE-UTILIZATION |
| | CAMPUS GATEWAYS | | HISTORIC DISTRICT | | SCIENCE/RESEARCH | | |



ARCHITECTURAL DESIGN GUIDELINES

THE UNIVERSITY OF MONTANA CAMPUS IS COLLEGIATE, TRADITIONAL, AND STATELY. It emphasizes prominence and stature as Montana's first public university. The mission of The University of Montana is first and foremost academic. New buildings must respect the University's rich architectural heritage and provide appropriate flexibility and space to meet University needs. To build for the future is to advance the intellectual purpose of the University. The physical campus and the academic mission are inseparable. Designers should strive to create a strong and compelling campus image that is distinctive, inviting, and characteristic of an organized, coherent, distinguished institution.



These architectural design guidelines are a companion to the Master Plan and are meant to assist architects in understanding the design and planning issues affecting The University of Montana-Missoula campus. Development should balance individual expressiveness with contextual responsibility. Rather than restricting the freedom of individual designers, these guidelines seek to enlist their imagination in extending and enhancing the underlying strengths of the campus.

A range of architectural styles exist throughout the campus. While the Master Plan does not advocate a single architectural style for campus structures, it is important to develop a consistent architectural character with visual ties between existing and future buildings. Some of the most appealing existing buildings on campus include University Hall, Jeanette Rankin Hall, Brantly Hall, Elrod Hall, and the Forestry Building. Successful newer

buildings, like Gallagher and Pantzer, recall the basic form modulation and frequency of detail of older buildings. The proposed guidelines do not suggest that the styles of these buildings be prototypes for new architecture, but rather that the positive qualities of these buildings be used to inform new building designs. From an earlier era, buildings such as these exhibit the qualities of unity and scale that should be echoed in contemporary architectural terms.

The following guidelines are recommended to ensure an inspiring environment throughout the campus.

SENSE OF PLACE

New architecture should enhance the aesthetic quality of the campus as a whole; should preserve, enhance, and restore the built and natural environment; and should provide a safe and pleasant environment in which to learn, work, and live. Appropriate siting, massing/scale, setbacks, height, materials, and color should be used to create a unified collection of campus buildings.

BUILDING SITES

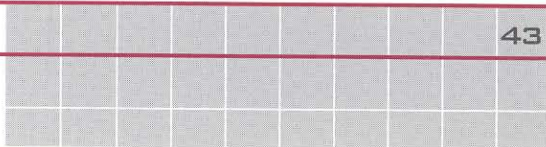
Because the number of building sites available for construction on campus is limited, any new facility will be designed to maximize the use of the site to its fullest potential to avoid irretrievable consumption of limited land resources.

HISTORIC DISTRICT

A major portion of the main campus has the distinction of being in the Historic District. The architect should strive to develop clear ties between the historic central campus, existing



buildings, and new buildings. These ties should be both visual and functional. Visual ties involve connecting buildings through fundamentals of size, shape, color, texture, etc.



ARCHITECTURAL DESIGN GUIDELINES

OPEN SPACE

The quality of corridors, quadrangles, entry plazas, lawn areas, and open space is due largely to the continuity of buildings at their edges. Buildings should be ordered with common “setback lines” and sited parallel or perpendicular to street grids and circulation networks. This will help to define open spaces, long views, and circulation. A clear relationship between each building’s interior and exterior functions should “fit” the building to the site.

BUILDING SCALE AND MASSING

Where possible, structures should be composed of simple rectangular volumes or combinations of rectangular forms. Simple massing will allow constrained budgets to focus on higher quality materials and careful detailing. Overall, existing building proportions tend to be more horizontal than vertical. Buildings are generally organized into three clearly defined parts: base, middle, and top (Gallagher, Fine Arts). Buildings can “step” up or “step” forward from the pedestrian circulation area to the main solid form of the building. To link buildings visually, those grouped in cluster environments should be empathetic to one another and readable as a whole, exhibiting comparable heights and continuity of trim coursing and cornice lines.

SETBACKS

Building siting should meet prescribed build-to lines along roadway or walkway edges. Building setbacks provide a framework for maintaining pedestrian connections and view corridors, establishing open spaces, and creating visual order to a campus edge and interior. Future buildings should adhere to the established setback of existing campus buildings. Within the setback, between building facades and the street pavement, a series of several parallel spatial layers should be created. These serve to articulate the relationship of buildings to the streets and to strengthen the longitudinal nature of the street. These layers may consist of building entrances, hedges, trees, sidewalks, curbs, etc.

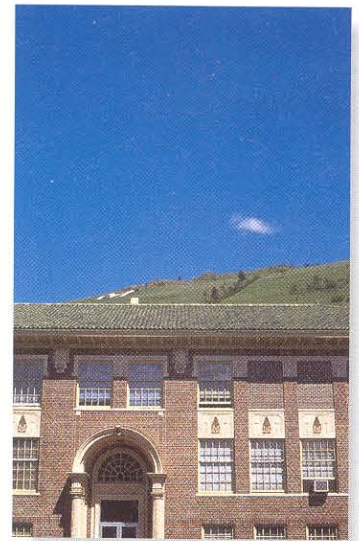
BUILDING HEIGHT

In order to preserve the skyline of natural tree cover and the human-scale proportion of the campus, no building should exceed the profile of existing major tree coverage on campus. The footprint of campus buildings will necessarily vary due to differences in program and site. A variety of building heights, between two and four stories, is encouraged. Such a range is appropriate for most uses in an academic environment and will result in compatible proportions relative to existing buildings and open space.



BUILDING MATERIALS AND COLORS

A flexible palette of materials and colors is recommended to allow variety while maintaining a unified campus image and a level of consistency. Acceptable building materials should deliver lasting, durable, low maintenance qualities. They include brick, cut stone tile/terra-cotta, architectural pre-cast concrete, poured concrete, and masonry. Metal should be used only to accent buildings. Vinyl and aluminum siding *should not* be permitted but may be used for soffits and fascia. Painted building surfaces should be kept to a minimum for low maintenance. Architecturally compatible colors, either native to the area or colors found on site, are to be used as accent colors on windows, doors, trim, eave details, and other architectural features. The use of non-reflective glass, EIFS (Exterior Insulation and Finish Systems), bright or fluorescent colors should be prohibited throughout the campus.



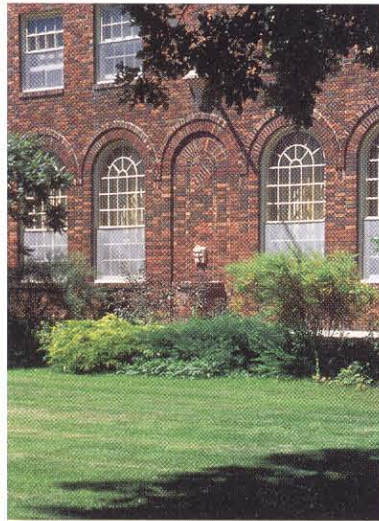
TRANSPARENCY

Transparency is a particularly important architectural element. The use of detailed and clearly defined windows and doorways



ARCHITECTURAL DESIGN GUIDELINES

enlivens and punctuates building facades, and brings vitality to the campus night and day. Transparency at building entries and on ground levels encourages visual fusion of indoor and outdoor space and activity, and heightens awareness of the campus setting. Visibility and transmission of light from buildings should be utilized to enhance the sense of security in campus spaces. Windows should be grouped together to form larger visual units that relate to the overall scale of large facades. Windows with divided-light mullions are encouraged in all cases to enhance the architectural character and scale of new architecture. Highly reflective glass is to be avoided; solar protection by architectural means is preferred.



in material. In order to express the academic endeavors within the building, it is encouraged that ornamentation, bas-relief graphics, or sculpture be integrated with the architectural design. Clarity in the design and style of buildings should avoid excessive decoration and unnecessary ornamentation. Construction features that protrude from or are attached to a structure such as chimneys, antennae, penthouses, canopies, vent stacks, flagpoles, etc., shall be designed or incorporated in such a way as to be aesthetically complimentary to that structure and surrounding area.



FACADES

The traditional buildings on campus have simply-ordered and well-articulated facades. Clearly delineated bases, middles, and tops are the rule. Generally, fenestration patterns should be regular, and facades should be simple and well ordered. Walls should generally be regular planes and appear as solid walls rather than curtain walls (like the Science Complex). Walls should contain vertical and horizontal shape articulation and be subdivided into interesting patterns created by the rhythmic repetition of doors, windows, cornices, dormers, and changes

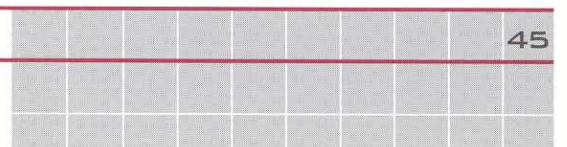


ROOF TREATMENTS

Sloped roofs should be copper, clay, or concrete tile. Flat roofs should be high performance, single ply membranes. Parapets and dormers should be used as unifying elements to add interest or screen equipment. Particular attention should be paid to roofs that will be viewed from prominent points on campus. Obtrusive rooftop mechanical units should be concealed so as not to be visible from the ground. Roof hardware, like mechanical equipment and antennas, should be enclosed in designed forms and grouped to add visual interest.

FLEXIBILITY

Buildings should be designed to adapt to the needs of an evolving academic environment and be responsive to change. To this end, the design must economically accommodate changing users and program requirements. Where possible, expansion opportunities should be part of the original design planning so that growth of the building footprint is orderly.



ARCHITECTURAL DESIGN GUIDELINES

ENTRANCES

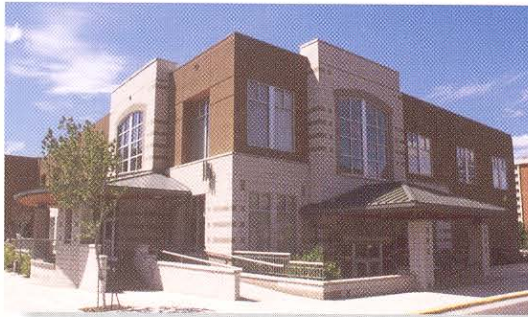
The location of building entries and arcades can do much to animate campus spaces. To create a welcoming environment, building entrances should be clearly visible, compositional or articulated, and should open out into forecourts. Because doorways and entrance plazas are gathering places, they should take advantage of a southerly exposure when possible.



Entryways are open outdoor “porches” that allow gatherings and circulation to occur at the same time (Social Science, Fine Arts). Accessibility is a primary concern when siting entryways and setting floor elevations. Building service areas should be separate from pedestrian entries and located away from primary pedestrian routes when possible.

ACCESSIBILITY

The University is committed to providing ADA compliant access to its facilities. Designers shall design to ADA standards to eliminate barriers and provide access to any part of a designed or constructed facility. Buildings should be designed to ensure accessibility to academic and support services, information (electronic technology), people, and programs. By providing accessible settings for persons with disabilities, the University facilitates communication and promotes interaction and integration among all segments of the University community and the larger community the University serves.



ENERGY EFFICIENCY

Designs should incorporate energy saving considerations: airlocks should be built into building entryways to prevent heat loss and building discomfort; natural ventilation should be included where possible; landscape design should include deciduous trees on the south and west sides to take advantage of shade in summer. Design elements that are attractive in other areas may not be economically viable in the context of long-term operations and maintenance (O&M). All building design projects will be responsive to environmental impact and local climate extremes. The architect will consider life-cycle cost efficiency of buildings as a design parameter with regard to construction, process, material selection, maintenance, and energy utilization.

MAINTENANCE

While each project should address its unique programmatic requirements and other unique qualities, O&M costs – while not the sole factor driving design decisions – must occupy a critical place in all project planning and design. The level of design must reflect a corresponding level of maintenance, a level that has a *reasonable* expectation to be met. Standardized building materials and systems should be used wherever possible to promote and take advantage of uniformity with regard to material/system technical knowledge, replacement cycles, replacement techniques, tools required, materials required, materials available, etc.

New facilities must be durable enough to provide the long service life expected by the institution and to withstand steady maintenance during the long life. They must offer enough efficiencies to offset increasing labor, material, and utility costs. Because O&M costs over the life of a facility can approach 4-8 times the first cost of construction, it is extremely important and appropriate that life-cycle considerations be made during the design phase. The selection of less expensive (first cost) mechanical/electrical equipment or systems that will result in higher energy use throughout the life of the facility represents a false economy that should be avoided. A ban on window air conditioners will continue due to the critical perspectives of energy use, maintenance cost, aesthetic, and refrigerant/regulatory mandates, even though the low first cost of window units can present an attractive, but false, economy.



CAMPUS INFRASTRUCTURE

THE UNIVERSITY OF MONTANA-MISSOULA IS SERVED BY A VARIETY OF UTILITIES THAT ARE ESSENTIAL TO CAMPUS OPERATIONS. The Master Plan process included a review of the utilities supplies and distribution systems for capacity and condition. Expansion necessitates an analysis of these systems and projections of what will be necessary to accommodate the volume of development anticipated within the time frame of the plan. This infrastructure analysis identifies the various utility systems, their current status, and issues that should be addressed.

Utility Systems Overview

Fuel: Central campus heating is a steam-generation facility fueled by natural gas, with fuel-oil backup. Natural gas is the only fuel source for heating buildings at the College of Technology and University Villages and some science facilities.

Heating: Most mountain campus facilities are heated through district steam heating systems radiating from a central plant. There are three direct-fired gas makeup air systems on campus.

Power (Electricity): Northwest Energy provides electricity for the University.

Cooling: Eight buildings, comprising approximately 10 percent of the mountain campus building space, are cooled by chilled water from the Missoula aquifer. Other buildings are cooled with individual systems such as building chillers, evaporative cooling systems, or window air conditioners. A number of buildings, including most residence halls, have no space cooling systems.

Compressed Air: The mountain campus is served by compressed air systems in buildings. The system is used for both building temperature control systems and laboratory use.

Water Supply: Domestic (potable) water is distributed from Mountain Water Company wells and piped to the campus edge. On-campus water distribution is University owned.

Irrigation: Most of the grounds are irrigated by sprinkler systems using water from city domestic water, although many areas, including most of University Villages, are now on their own well systems.

Sanitary Sewers: University sanitary sewer lines collect

campus sewage. All sewage is conveyed through city sewer lines from the campus edge to the city treatment plants.

Storm Sewers: Storm water is collected by a complex system of on-grade facilities and University storm sewer lines. Storm-water runoff is routed to the Clark Fork River, or to the aquifer via French drains.

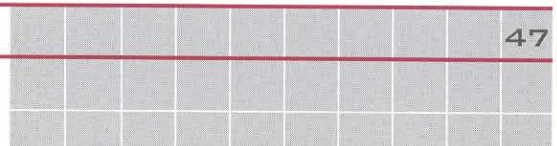
Metering: All campus buildings are metered for electricity use. Most buildings on the mountain campus are metered for condensate (steam) and water usage. Buildings served with natural gas are also metered.

Information Technology Overview

Telecommunications: The University operates its own telephone system that utilizes a large Nortel PBX to provide services to the mountain campus, the College of Technology, and selected remote University facilities. The telephone system is connected to the public switch telephone network through vendor-provided local facilities and state-provided long distance facilities. It also supports compressed video communications to the statewide "METNET" system. The telephone system is evolving to use the campus fiber optic distribution system and incorporate "Voice over IP" functionality.

Data Networking: The University operates its own data communications network that utilizes a fiber optic distribution system and features a switched, gigabit Ethernet core. The internal building infrastructure provides switched, end-user connections ranging from shared 10Mb/sec to dedicated gigabit speeds. The data network has high-speed connections to both the Internet and Internet2 (research) worldwide networks and to the state-owned "SummitNet" network. The data network is evolving to include a 10-gigabit core, high-speed internal building connections, and wireless access in selected locations, with the highest priorities being upgrades to building infrastructure and incorporation of wireless access to the network.

Audio-Visual Cable System: The University operates an audio-visual cable system in selected buildings that is connected to commercial television cable services and satellite downlink facilities. The audio-visual cable system is evolving to feature two-way, IP-based video functionality.





CAMPUS INFRASTRUCTURE

Infrastructure Principles: The following principles should be used as utility systems are improved and expanded:

- *Safety:* Student, faculty, and staff safety is of primary concern. Utility systems must ensure the safety of the entire campus community.
- *Reliability:* Utility systems must be reliable. For many systems, this suggests backup and redundant systems allowing for downtime for equipment failures, maintenance and replacement, and peak-load accommodation.
- *Minimization:* Utility operating costs should be minimized; with life-cycle costing that includes capital improvements. System demands should be controlled, where possible, through energy management tools. New buildings and major renovations should be properly commissioned. Integral to this is the accurate metering of utilities for each building. Environmental impacts associated with the acquisition, production, and distribution of utilities should be minimized.
- *Planning:* Communications, data networks, multimedia-enabled classrooms, and other information technologies are becoming increasingly integral to higher education endeavors. Utility and building systems planning must account for these emerging technologies.

RECOMMENDATIONS:

Utilities

- Renew and upgrade infrastructure and eliminate deferred maintenance to include, but not limited to, the following:
 - Eliminate all direct buried steam distribution lines
 - Upgrade steam generation systems
 - Continue conversion of cooling systems to geothermal
 - Automate irrigation systems and convert to well water source
- Convert to an automated central security access system for campus buildings

Information Technology

Immediate:

- Upgrade all building data feeds and Local Area Networks (LAN's)
- Update campus wiring standard

Near Term:

- Upgrade building feed to 1Gbps
- Improve building entrance facilities and telecommunications closets
- Implement data connectivity to off-campus housing
- Upgrade WAN connectivity to the College of Technology
- Implement WAN redundancy

Long Term:

- Upgrade core network
- Continue to develop and implement distance learning capability



The Discovery Continues...



The University of
Montana

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