2007 2057

South Campus Master Plan

THE UNIVERSITY OF MONTANA-MISSOULA

2007 - 2057

SOUTH CAMPUS MASTER PLAN
THE UNIVERSITY OF MONTANA – MISSOULA

ACKNOWLEDGEMENTS

South Campus Master Plan Committee

The South Campus Master Plan process began with the establishment of a committee to ensure representation from a broad spectrum of interests. The South Campus Master Planning Committee contributions were invaluable and integral to the success of this project.

South Campus Master Plan Committee members:

Rosi C. Keller	Associate Vice President, Administration & Finance, Chair
Marcia Bishop	Far Views/Pattee Canyon Neighborhood Council
Teresa Branch	Vice President, Student Affairs
Perry Brown	Dean, College of Forestry and Conservation
Ron Brunell	Director, Resident Life
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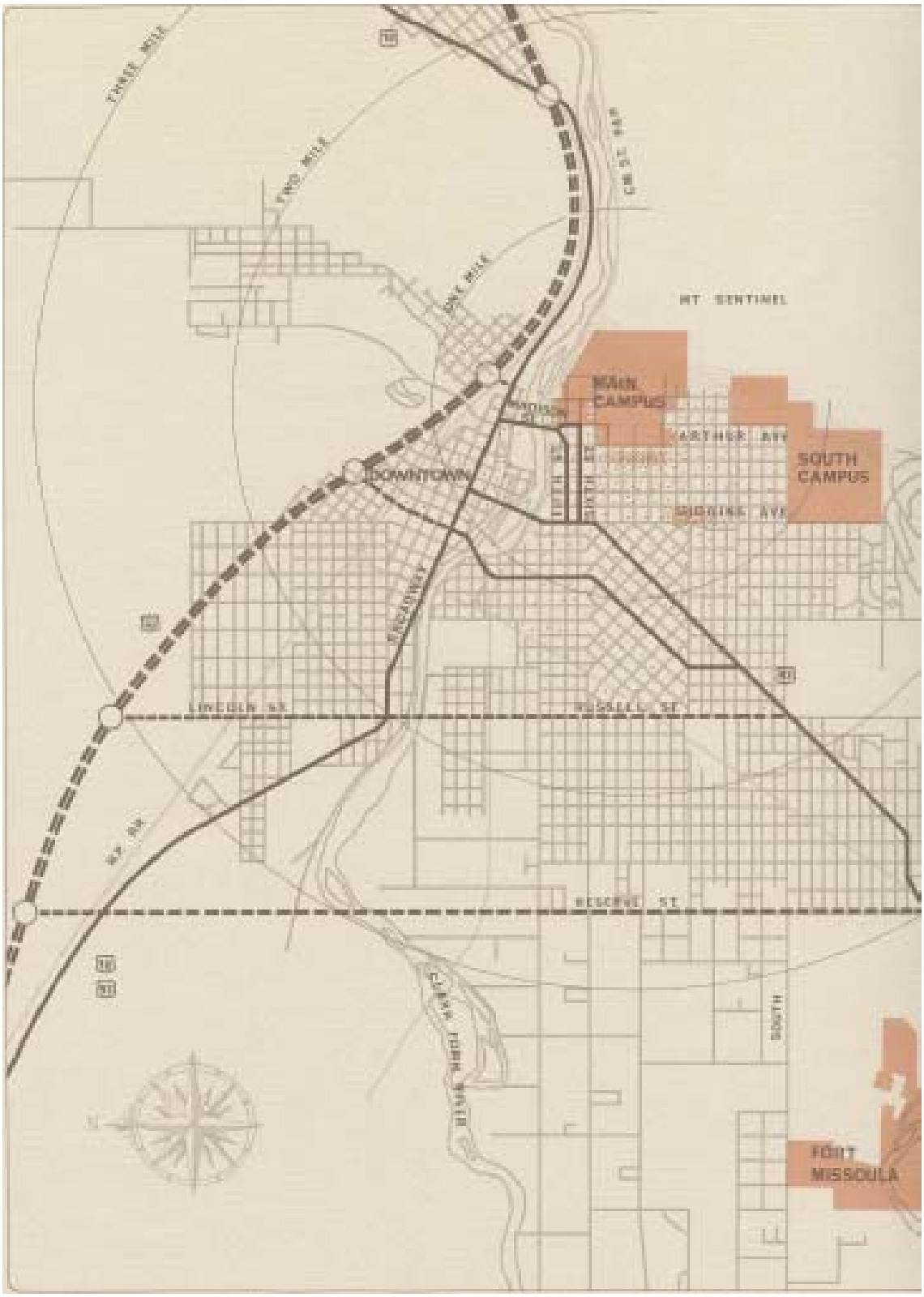
INTRODUCTION

In 2002, The University of Montana (University) published a Master Plan for the 200 acres that comprise the original campus site, known as the Mountain Campus. The Master Plan was the result of an extensive collaborative effort that included administrators, faculty, and students. A land acquisition zone was identified and is still being pursued by the University. It was expected that it would take up to ten years to fund and develop the remaining suitable building sites. After only five years, all identified sites on the Mountain Campus have been built on or are committed for a facility for which current fundraising efforts are underway.

The Mountain Campus Plan was followed by the Fort Missoula Master Plan developed in 2004. The Fort Missoula land houses the West campus of the College of Technology used for the heavy equipment training program that is unique to the Northern Rockies region. The site is also used for research activities by the Division of Biological Sciences and the Department of Geology and their affiliated agencies. The land at Fort Missoula has a great deal of history since it was established as a permanent military post in 1877 and served as an internment camp for Italian seamen during World War II. This, coupled with the fact that 75.14 acres of the land are affected by a 100-year flood plain, limits any future building development.

With the completion of the South Campus Master Plan, a comprehensive University Master Plan exists which lays the foundation for a first-class physical campus appropriate for a modern university for many years to come.



University Master Plan 1964

In the 1920s, a farsighted leader of the University, President Charles H. Clapp, and a cadre of local Missoula businessmen recognized that the University needed some way to raise money for minor improvements without going through the formal Board of Regents funding process. Thus the Alumni Challenge Athletic Field Corporation, or ACAFC, was born, and money was raised to fund minor maintenance needs. By the late 1940s, the group of local boosters had changed their mission, and their name, to the University Development Corporation (Corporation). The Corporation recognized that the University's need for buildings - and land upon which to build them - would grow as soldiers came home from World War II and returned to the University. It was during those years that the Corporation acquired most of the 210 acres known as the South Campus, and deeded it to the University "for the use and benefit of Montana State University at Missoula."

The 1964, Montana State University, now The University of Montana, Long Range Campus Plan stated "The South Campus will accommodate ultimately several activities supporting the instructional program conducted on the main campus. The University has recognized the desirability of having academically-oriented research activities located within reasonable proximity to the campus. The University could benefit from the interchange of personnel, cooperative use of laboratory equipment and reference libraries, and opportunities afforded students to observe and participate in organized research activities and related subjects. Therefore, space has been reserved to accommodate appropriate non-university agencies and similar activities allied to university areas of interest in the belief that progress both in academic education and in technology would benefit closer association between the basic and the applied approaches, and in the further belief that the community at large would also benefit from those activities. Certain portions of the South Campus area have been designated as Reserve areas to accommodate future needs not now defined or foreseeable."

For the past sixty years, the majority of the South Campus site has been used for relatively low-density student recreation, housing, and athletic purposes. While these uses have served the University well, it is now time to chart a South

Campus course for the next fifty years which 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 social well-being of the Missoula community.

PROCESS

Effective planning evolves through multiple steps to create a comprehensive plan for future use based on past experiences. Phase I of the South Campus Master Plan was to select committee members who represent University administration, faculty, staff, students, alumni, and the Missoula Community. These representatives are majority stake holders with vested interest in the South Campus property. An interactive planning process was established to provide meaningful input. To achieve high levels of interaction, user group presentations, workshops, and a web page and e-mail communication were successfully incorporated into the dynamic planning process. This interaction provided a more accurate analysis of existing conditions, creative development of various organizational concepts, logical assessment of alternatives, and refinements of recommendations. The committee understood that the process was as important as the end result to insure a worthwhile product to serve the University for years to come.

In late 2006, a diverse group of 20 persons was appointed to the South Campus Master Plan committee based on their individual perspective, unique relationship, and expert knowledge of the area. They were charged with developing a comprehensive plan to incorporate the broadest spectrum of area use based on the University's mission and goals and to respond to increasing academic and research, student, and other demands. These members worked diligently to understand the needs and purpose of the University and various stakeholders of the areas. Committee meetings were regularly scheduled over the course of 12 months and members were committed to attending and participating fully. Their collaborative work incorporated current and future use information, expressed concerns and views, university culture, environmental impacts, and acknowledged the need to protect the land entrusted to the University.

Historical information of the South Campus was heavily researched. Property deeds that comprise the South Campus were identified along with relevant contract agreement information.

Background details of each identified property, along with information from current and potential users, was discussed at length to educate the committee. These entities included:

- Transportation Services
- Student Campus Recreation
- Student Housing
- Research Greenhouses
- Hang Gliders
- Athletics
- UM Golf Course
- Missoula Parks and Trails
- ASUM Community Gardens
- Academics and Research
- Alumni Housing

Throughout the various listening sessions, multiple questions were posed, opinions and concerns expressed, and ideas formulated.

In-depth work sessions were implemented to evaluate gathered information, recognize potential opportunities for use, and to envision specific land zones. The committee incorporated multiple steps that led to a consensus of zone priorities with related elements. Five final land use zones were identified:

- Academic and Research
- Student Housing
- Campus Recreation
- Athletics
- Parking, Transportation, & Circulation

Through a multiple step process, notable Guiding Principles were established forming an identifiable framework for development of the five identified land use zones. These principles will direct future site development, preserve, protect, and enhance the beauty of the areas physical environment, and minimize impacts on its neighbors.

The final phase of the Master Plan was to identify specific recommendations relevant to each of the five priority zones. Comprehensive considerations were used to identify the needs of each zone and the elements relevant for implementation. A conceptual map identified priority land use areas and provided a vision for future planning. These recommendations provide guidelines for future development while allowing flexibility to incorporate unanticipated changes in academic needs and space requirements.

Open and inclusive meetings provided venues for responsive and creative feedback. The general public was invited to each meeting and given opportunity to comment and present their views and ideas. On multiple occasions, the committee presented progress reports to public interest groups and the immediate three surrounding neighborhood councils that include Far Views/Pattee Canyon, Lewis and Clark, and the University District. A joint neighborhood meeting and a general public meeting were convened to present progress and final recommendations prior to submission to the Board of Regents.

The final outcome is a South Campus Master Plan document that will facilitate the implementation of projects for the South Campus as they become known, and will serve as a guide to enable area development for the benefit the University and the Missoula Community.

HISTORY OF THE SOUTH CAMPUS LAND ACQUISITIONS

As a result of a proposition by President Charles H. Clapp to the business community of Missoula to raise money for improvements to the athletic facilities of the University, the Alumni Challenge Athletic Field Corporation (ADAFC) was formed in 1922. After meeting the initial challenge of raising $25,000 the ADAFC expanded its powers to 'promote the general welfare' of the University, including purchasing, holding and sale of real property. For the next 25 years, until it changed its name in 1947 to the University Development Corporation, this organization was the platform for the University to be the eventual owner of multiple tracts of land, including much of the land that now makes up the areas known as the South Campus.

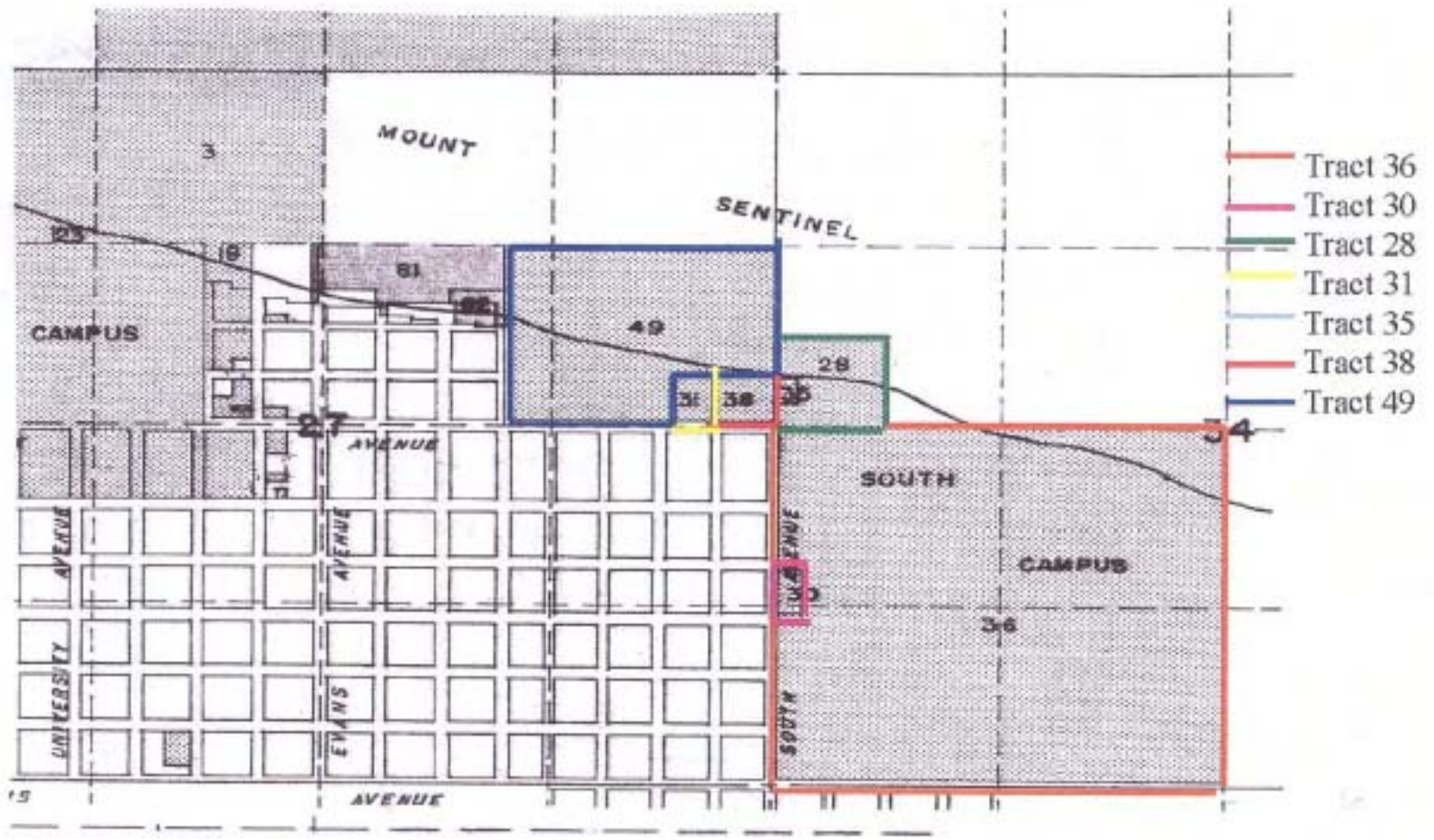
Charles H. Clapp
UM President
1921-1935

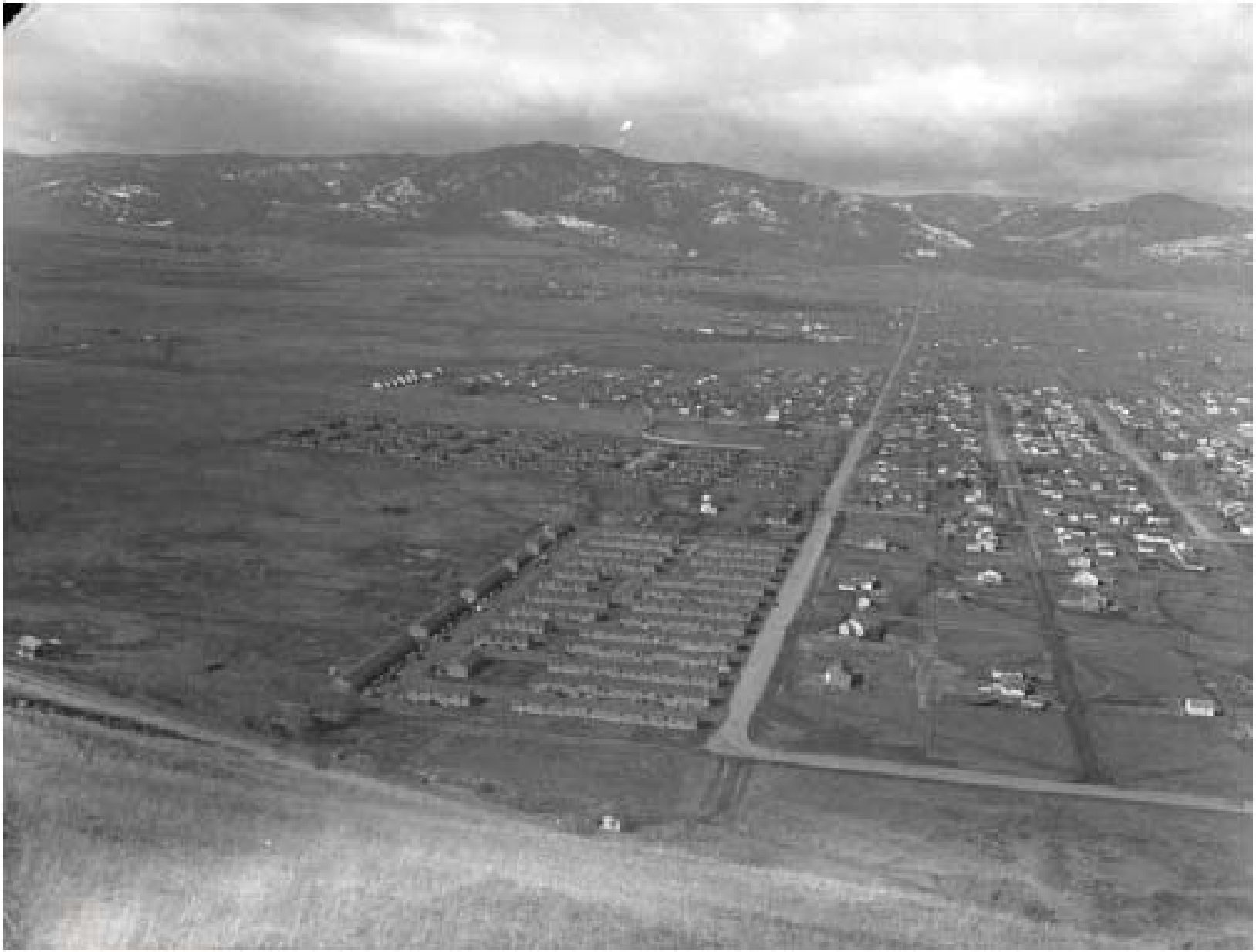
The following table shows details for each of the seven tracts of land that make up the South Campus – the legal description, acreage, grantor or seller, title holder, and any specific conditions. On the next page, individual tracts are shown in separate colors with Mount Sentinel to the east and the Mountain Campus to the north. Parts of the land housed military barracks for veterans of WWII to live while attending the University as well as student housing and a baseball field. The largest segment, the golf course, has been modified throughout this period due to the expanding efforts for student housing, athletics facilities, and student recreational fields.

Land Acquisitions Detail by Date & Tract

Tract No	Date Acquired	Legal Description	County of Record	Common Description	Area	Grantor or Seller	Title Held by	Conditions
36	1928	NW¼ Sec 34, T13N, R19W MPM except 120'x330' tract; and except 5 acre tract (466.69'sq.)in SE corner of said NW¼	Missoula	South Ave E (Golf Course Site)	154.1 Acres	South Side Realty Company	University Development Corporation, formerly Alumni Challenge Athletic Field Corp.	For the use and benefit (convenience) of Montana State University at Missoula
36	1942	In SE Corner of SE¼ of NW¼ Plat 4 Sec 34, T13N, R19W	Missoula	South Ave E (Golf Course Site)	5.0 Acres	Missoula County	University Development Corporation, formerly Alumni Challenge Athletic Field Corp.	For the use and benefit (convenience) of Montana State University at Missoula
30	1946	Parcel 120ftx330ft in NW¼ of NW¼ , and NE¼ NW¼ of Sec 34, T13N, R19W	Missoula	South Ave E (Old Country Road)	0.9 Acres	Leland C. & Ruth M. Tucker	University Development Corporation,formerly Alumni Challenge Athletic Field Corp.	For the use and benefit (convenience) of Montana State University at Missoula
49	1946	Parcel in SW¼ SE¼ & NW¼ of SE¼ of Section 27, T13N, R19W	Missoula	Maurice Avenue (25A on Mtn)	35 Acres (~25 Acres on mountain side)	Paul A & Bernice Bischoff, and Fay G. & Alva S. Clark	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
28	1946	NW¼ of NW¼ of NE¼ Sec 34, T13N, R19W less tract 130' x 180'	Missoula	South Campus	9.5 Acres	Carl H. & Bernice P. Rich	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
31	1947	Parcel 208' x 375' in SW¼ SE¼ of Section 27, T13N, R19W	Missoula	Maurice Avenue	1.8 Acres	Caroline C. Greenfield	University Development Corporation, formerly Alumni Challenge Athletic Field Corp.	For the use and benefit (convenience) of Montana State University at Missoula
30	1947	Parcel 120ftx330ft in NW¼ of NW¼ , and NE¼ NW¼ of Sec 34, T13N, R19W	Missoula	South Ave E (Old Country Road)	0.9 Acres	University Development Corporation, formerly Alumni Challenge Athletic Field Corp.	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
31	1948	Parcel 208' x 375' in SW¼ SE¼ of Section 27, T13N, R19W	Missoula	Maurice Avenue	1.8 Acres	University Development Corporation, formerly Alumni Challenge Athletic Field Corp.	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
35	1948	Parcel 130ftx180ft in NW¼ of NW¼ of NE¼ Sec 34, T13N, R19W	Missoula	Family Housing Area	0.5 Acres	Geo L. & Edna M. Steinbrenner	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
36	1949	NW¼ Sec 34, T13N, R19W MPM except 120'x330' tract; and except 5 acre tract (466.69'sq.)in SE corner of said NW¼	Missoula	South Ave E (Golf Course Site)	154.1 Acres	University Development Corporation, formerly Alumni Challenge Athletic Field Corp. and Central Board of Associated Students	Montana State Universtiy Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
36	1949	A five acre tract, being 466.69 feet square in SE Corner of SE¼ of NW¼ Sec 34, T13N, R19W	Missoula	South Ave E (Golf Course Site)	5.0 Acres	University Development Corporation, formerly Alumni Challenge Athletic Field Corp. and Central Board of Associated Students	Montana State Universtiy Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula
38	1951	Parcel 375' x 375' SW corner of SE¼ Sec 27 T13N R19W	Missoula	Maurice Avenue	3.228 Acres	Agnes A Walker	Montana State University. Missoula (now the University of Montana, Missoula)	For the use and benefit (convenience) of Montana State University at Missoula

South Campus – by Tracts





South Campus Circa 1950

South Campus 2006

GUIDING PRINCIPLES

These Principles focus on identity, community, natural environment, architecture, and mobility. They serve to guide and shape land use development and improvements of the South Campus and to direct future facilities development. The planning and future development of the South Campus will be guided by these principles, taken as a whole and not independent of one another.

INTEGRATE SOUTH CAMPUS WITH MOUNTAIN CAMPUS	The South Campus Master Plan will integrate with the Mountain Campus to the greatest extent possible to ensure maintaining and protecting the value of the University's physical resources, character, history, and mission.
MAXIMIZE FLEXIBILITY	The South Campus Master Plan will provide the maximum amount of flexibility in order to accommodate future growth and unforeseen opportunities. The Plan will optimize campus land use based on the range and character of existing and new university uses, while creating a living and learning environment that is interwoven into the Missoula Community.
PRESERVE OPEN SPACE	The South Campus Master Plan will preserve, protect, and enhance open space, view sheds, and landscapes as a signature characteristic of the University.
VALUE COMMUNITY RELATIONS	The South Campus Master Plan will recognize the importance of relationships among the campus community, surrounding neighborhoods, and the city of Missoula and nurture these connections whenever possible.
CREATE A SAFE CAMPUS ENVIRONMENT	The South Campus Master Plan will promote a safe environment with personal and workplace safety considerations integral to planning and design of circulation, buildings, and open spaces.
STRENGTHEN TRANSPORTATION, CIRCULATION, and PARKING WHILE ENSURING ACCESSIBILITY	The South Campus Master Plan will develop comprehensive solutions for transportation, circulation, and parking in order to minimize traffic impacts.

FUTURE LAND-USE ZONES OF THE SOUTH CAMPUS

- ***ACADEMIC/RESEARCH***
- ***STUDENT HOUSING***
- ***CAMPUS RECREATION***
- ***ATHLETICS***
- ***CIRCULATION, TRANSPORTATION, AND PARKING***

FUTURE LAND-USE ZONES

Land-use zones are used for the purpose of identifying appropriate management types of ‘uses’ that are consistent with the achievement of the desired results. Keeping the appropriate uses located in their corresponding zones will help with planning for buildings, utilities, vehicular circulation and parking and pedestrian circulation.

New campus development, such as academic, housing, parking, etc., are not inherently incompatible and can reasonably coexist if properly designed to minimize conflicts and to accommodate the broadest range of possibilities.

The land-use zones will provide the flexibility that will allow the campus, as it actually grows, to accommodate future needs in a manner that conforms to desirable natural and cultural characteristics creating a visual continuity and distinctive campus identity over time.

Both the existing and future land-use zones are reflected on the following page.

Future Land-Use Zones

ACADEMIC /RESEARCH

The University will encounter a myriad of unpredictable cycles of growth, change, and stability in development over the course of the next several decades. To that end, the South Campus Master Plan should offer a degree of flexibility even as it provides a predictable, overall structure for efficient, high-quality development of the land.

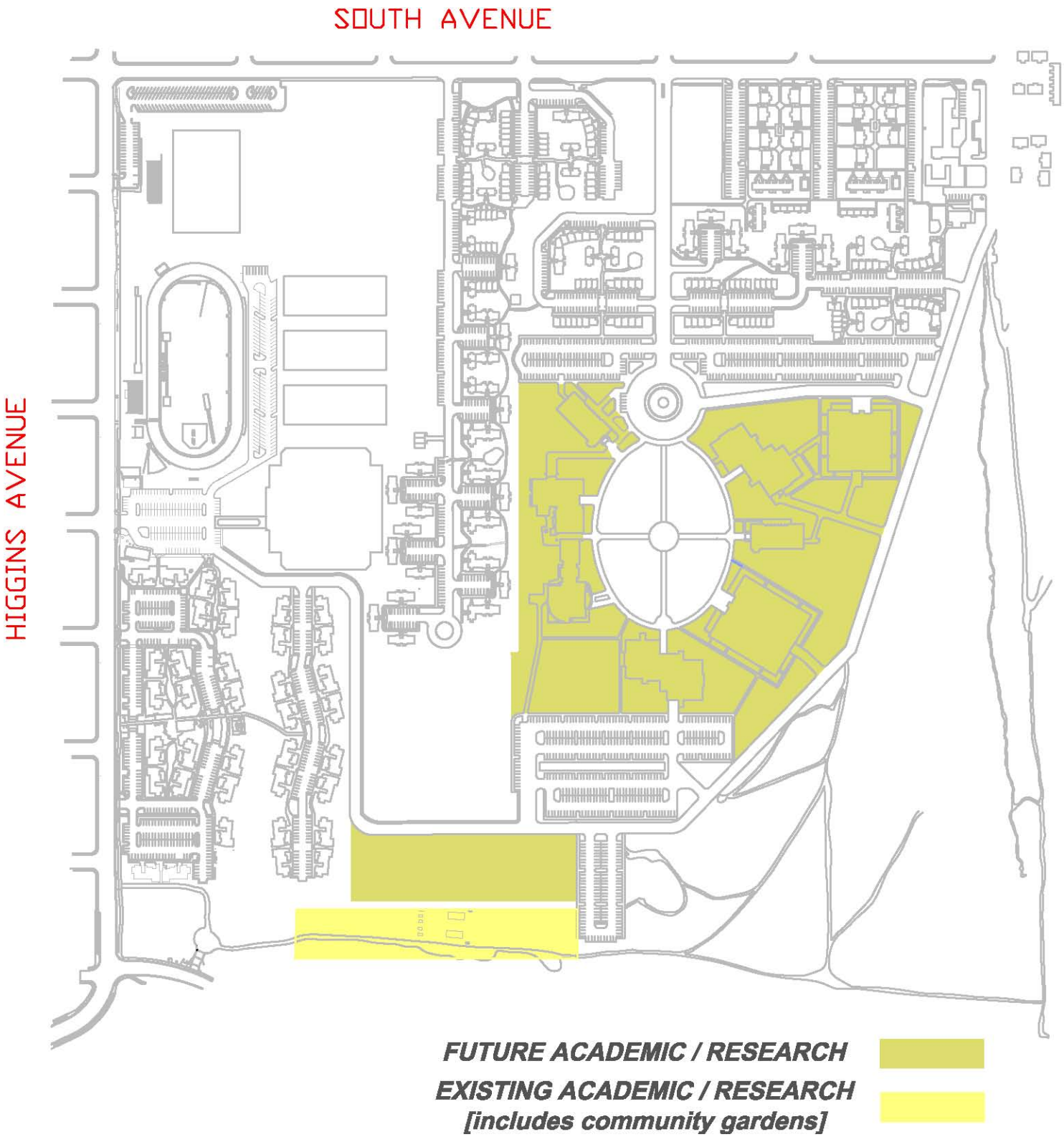
The most difficult task in responding to this priority-zone will be the changing nature of the learning environment. Traditional classrooms, teaching laboratories, student-faculty interaction space, and study space must continue to be designed with performance in mind. In addition, other features of the learning spaces, such as accessibility, flexibility, and aesthetic character will be important. Integrated teaching and research facilities can and will attract talented researchers, students, faculty, and staff. The South Campus should evolve in response to its unique physical setting and academic endeavors.

Recommendations

- Limit academic buildings to no more than three stories above ground.
- Encourage that academic buildings incorporate unified and consistent architecture on the academic portion of the campus and consider the use of natural and curved shapes for the buildings where practicable.
- Create academic buildings that are as energy efficient and green as financially and technologically feasible.
- Support the goal, to the extent feasible, that the units that occupy the South Campus represent interconnected disciplines to foster synergism and a sense of belonging. (e.g. a natural science/natural resource/environmental theme)
- Insure that a service infrastructure is included in the planning for functioning of the academic section and contains elements such as food service, bookstore annex, and IT services.
- Direct all exterior building and pathway lighting downward.
- Consider use of appropriate design when building roofs such that they are attractive to people looking down on them from nearby homes and mountains.
- Create a landscape that is as efficient and self-sustaining as possible; one that requires minimum labor and energy to remain healthy and attractive.

- Include the South Campus as a component of the State Arboretum of Montana (the main campus having been designated by the legislature in 1991 as the State Arboretum of Montana).
- Develop a phased design scenario so that one might be able to visualize how the academic portion of the project might be built over time.
- Identify the round-about near the academic quadrant as the gateway to campus and include a clock or bell tower.

Academic/Research



STUDENT HOUSING

The University is committed to providing a variety of living options and programs that complement its academic mission. These include traditional residence halls as well as suite, pod, and apartment-style housing for undergraduate, graduate, and disabled students as well as conference housing facilities. The University is committed to working with the Missoula Community and local neighborhoods on student housing issues. The University recognizes that housing must meet student preferences of living options, assist the learning and personal development processes, and be attractive and affordable for students.

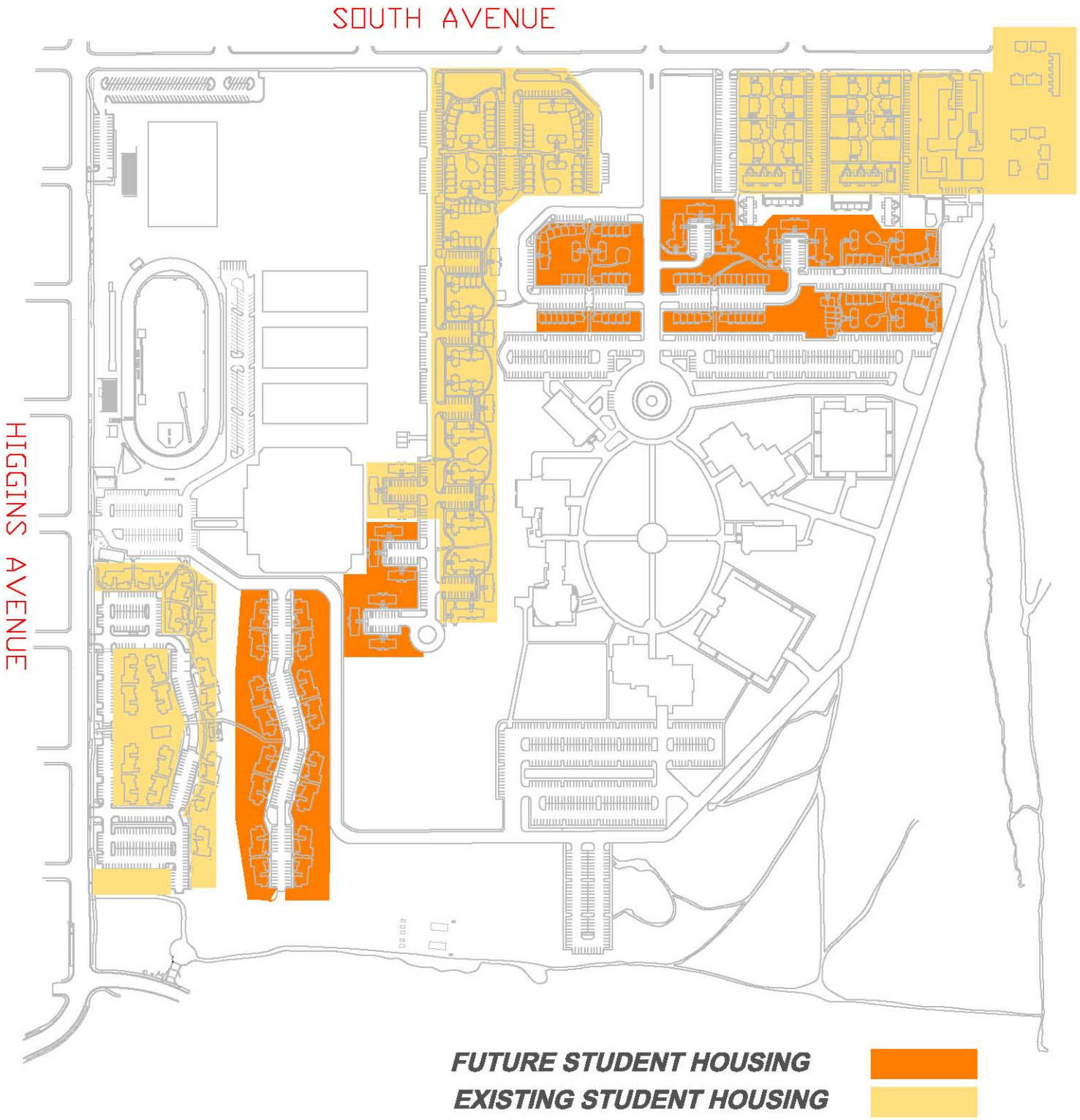
Recommendations

- Student housing on the South Campus should be developed in concert with the assigned campus housing site in the University's acquisition zone (west side of 5th and 6th street corridor). This site would be appropriate for a freshman residence hall with suite units similar to Pantzer Hall. This site could also be developed into a conference housing facility to augment the new Gilkey Center for Executive Education and other campus conference business.
- Design of South Campus housing should reflect the elements and functions of community/village living, parking and public transportation options, fit the character of the surrounding neighborhoods, and limit all structures to no more than three stories above ground to maintain vistas.
- Demolish the Craighead/Sisson Apartment units and replace with appropriately designed apartments that meet the needs of students.

- Development of student housing on the South Campus will require significant research to determine the target (i.e. COT students) and assure this targeted population's needs are met. The housing must be attractive to the target group but maintain flexibility and appeal for the general student population.
- South Campus housing development(s) will require facilities, services, and staff that enhance the programmatic functions for the student residents. These programs and facilities would include community centers, classrooms for learning experiences, and apartments for "faculty in residence" programs.

- All South Campus housing facilities must provide 'state of the art technology services' and meet or exceed all current life/safety codes (i.e. fire systems, lighting, video security, and monitoring, etc.).

Student Housing



CAMPUS RECREATION

Campus Recreation provides diverse facilities and programs that complement the Mission of the University. The program offers individual, dual and team sports for men, women, and coed teams in a variety of seasonal league and tournament formats; promoting physical, emotional, and social growth of individuals by encouraging the development of lifelong skills and positive attitudes through recreational activities.

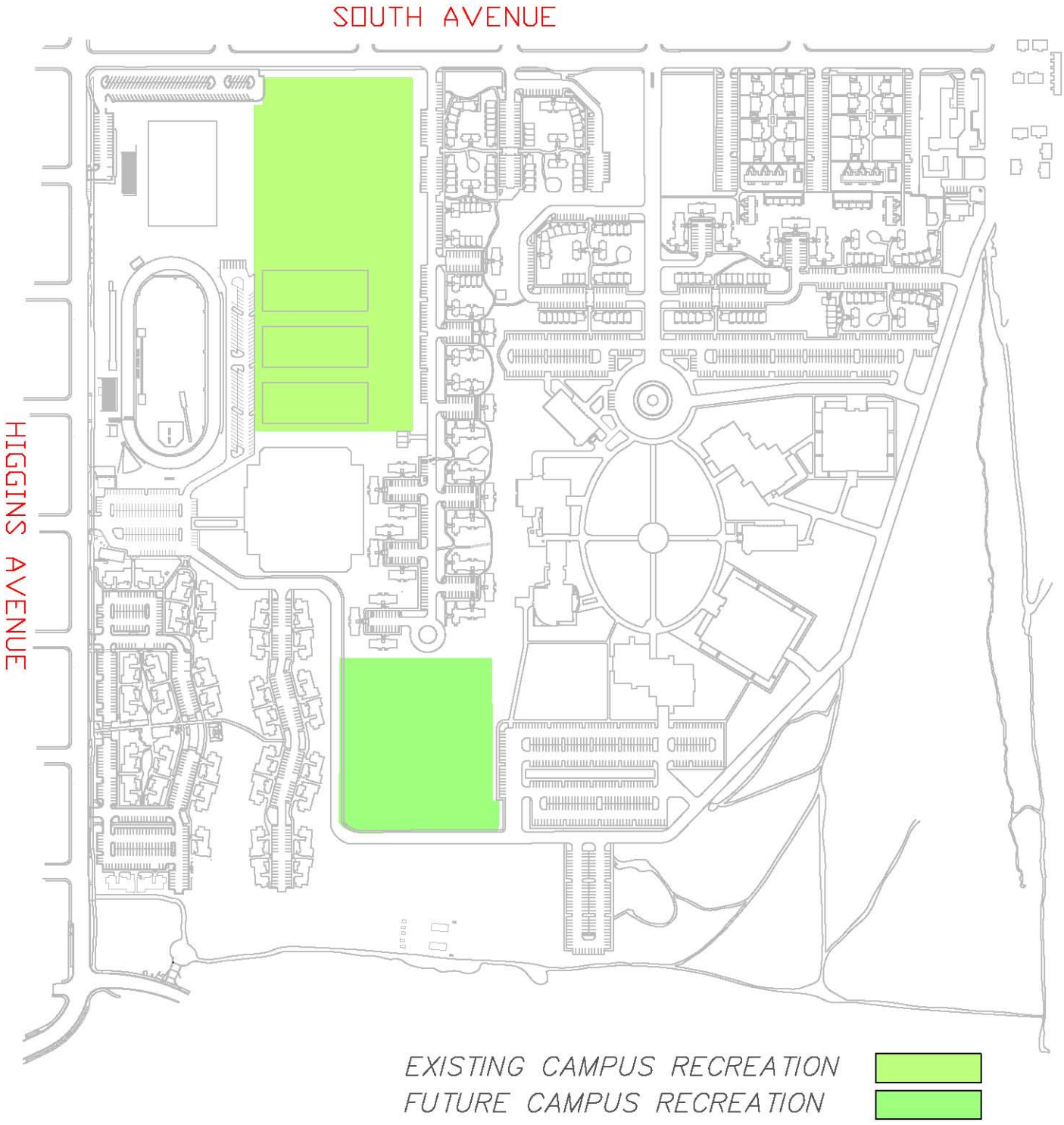
Recreation space on the South Campus should foster a sense of community and interaction of people, preserve the natural vistas, provide multi-purpose playfields, enhance a positive image for the campus, provide buffers to adjacent residential neighborhoods, and enhance pedestrian traffic on campus.

Recommendations

- Work with the city of Missoula and the Open Space Committee to ensure that the biking and hiking trails on Mount Sentinel are well marked and have adequate access and parking. This will allow the public to use the area.

- Design and develop playfield space so it can be used for a variety of activities, is safe for participants, and will not harm or detract from other South Campus activities.
- Plan for open space that enhances the great natural surroundings and the academic undertaking. The design should take into account sight lines, trees and shrub plantings and access. Ensuring that this can be maintained must be part of the plan.
- As buildings are constructed, it is important to determine if there is a need for a six to eight thousand square foot fitness center within one of the facilities.

Campus Recreation



ATHLETICS

As a general rule, Athletic facilities should serve the University athletes but also be available to the larger community of students, faculty and staff. Most "stadium-type" event centers for football, soccer, and track are specially designed and care must be exercised in how often and for what purpose the center is open for other users or events.

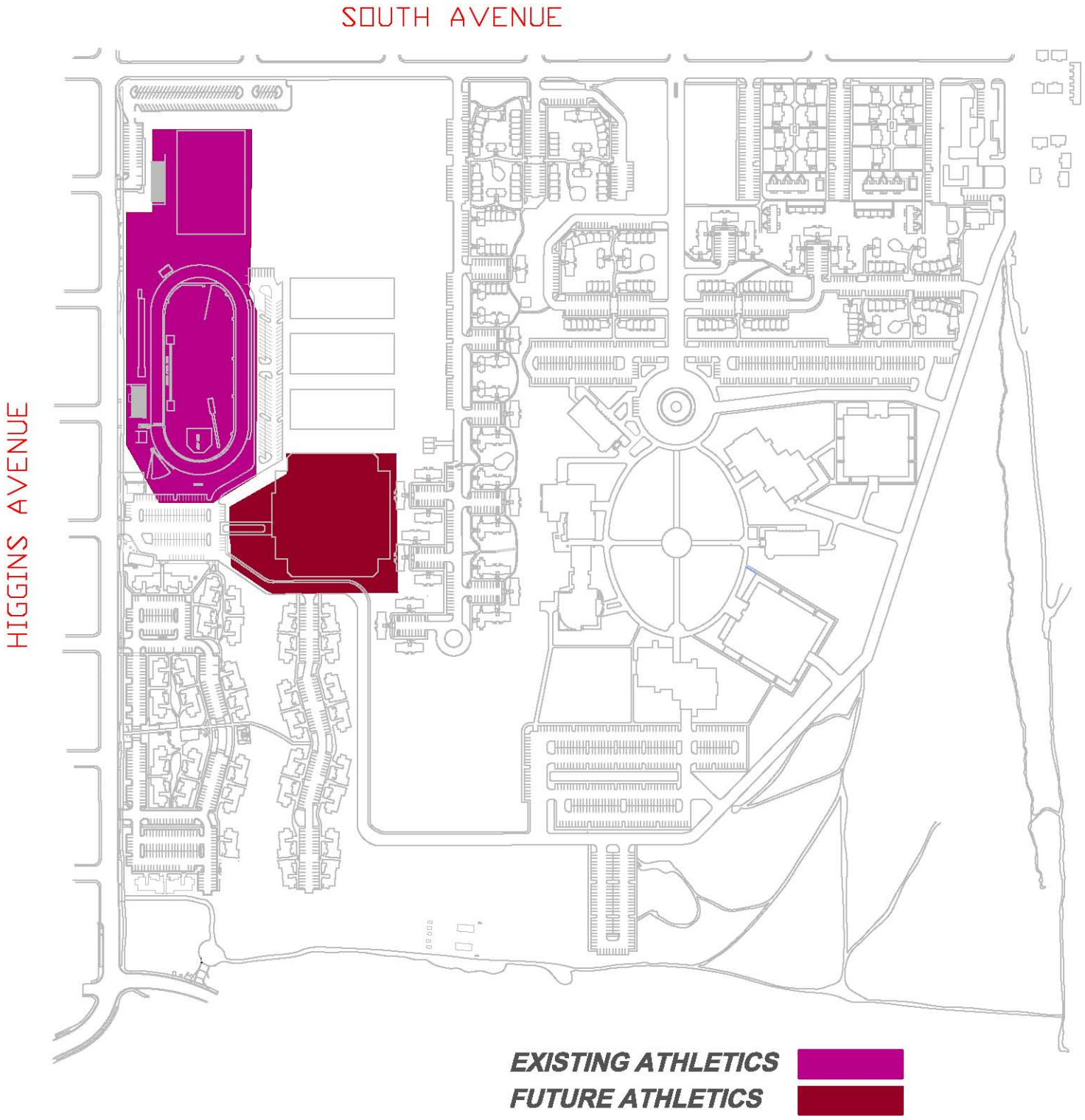
The South Campus currently houses a soccer field complex and an outdoor track and field facility; both of which get considerable use throughout the year. However, maintaining a competitive edge in the Big Sky Conference suggest that inevitably there will be need for the construction of an indoor practice field. The development of such a facility on South Campus should enhance, rather than detract, from the value of land for both the surrounding neighbors and the University as a whole.

Recommendations

- Promote the University's commitment to the surrounding community by establishing mutually beneficial physical relationships between the athletic facility and the surrounding community. Appropriate building siting, massing/scale, setbacks, height, materials and color should be used to minimize the visual impact of a facility of this size.

- Building design solutions should enhance and further develop the existing circulation systems and effective linkages within the campus and the community at large. Vehicular traffic should be minimized to provide a pedestrian oriented campus, which provides the opportunity for interaction with each other on campus.
- Buildings should be designed to adapt to the needs of an evolving athletic environment and to 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.

Athletics


SOUTH AVENUE
HIGGINS AVENUE
EXISTING ATHLETICS
FUTURE ATHLETICS

CIRCULATION, TRANSPORTATION, AND PARKING

Most of the University's Presidents, since the introduction of the automobile, have been pressed with the ever growing demands of adequate parking for students, faculty, and staff at and around the campus. As the community of Missoula has grown along with the student enrollment at the University, parking, traffic, and transportation require an important place at the South Campus planning table. The foreseeable future appears to be no different than the past and planning how one gets to and from and between campuses requires serious discussion and innovative solutions to achieve any measure of success.

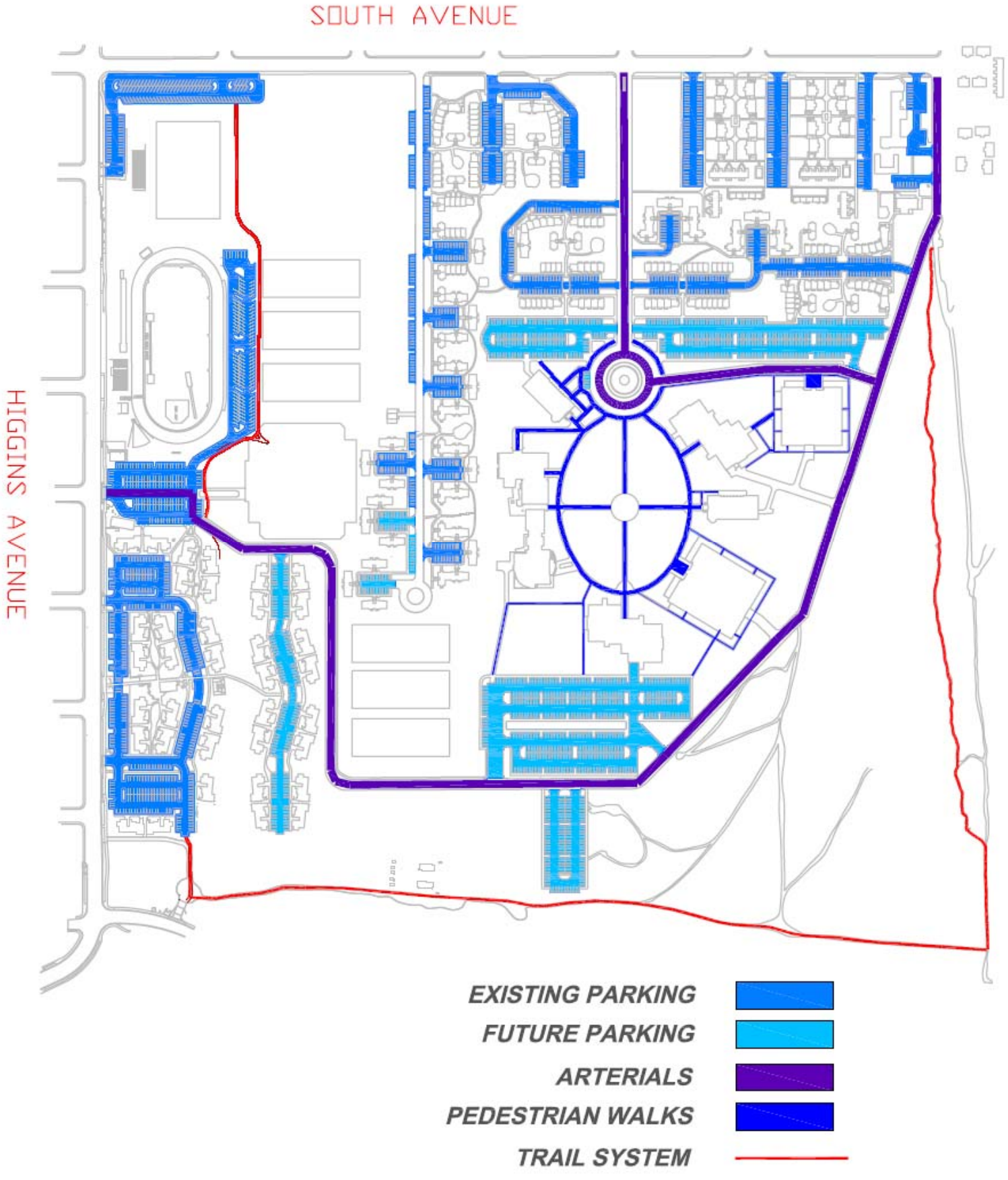
The University's transportation system must provide all members of the campus community with safe and convenient access to the South Campus. It must also provide a seamless connection to the local transportation system. This necessitates diverse multi-modal transportation improvements, including sidewalks, multi-use paths, bike lanes, roads, transits, and shuttles. Because transportation improvements can negatively impact the campus environment and surrounding land uses, careful and coordinated planning efforts with the city and the neighbors are required. To this end, the University will emphasize improvements that limit impacts through the campus and to surrounding residential neighborhoods.

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 modes of transportation such as carpooling, bicycling, transit busing, and walking.
- Provide transit systems, including campus "Park-N-Ride" to all campus properties to accommodate faculty, staff, and students who need convenient transport.

- Continue efforts to increase the frequency of Mountain Line bus service to campus, provide shelters with appropriate access at all bus stop locations, and consider part of the College of Technology East property to be “Park-N-Ride” parking.
- Attempt to 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, and easy well-marked access while improving the general aesthetics of the campus by screening parking lots and facilities with trees and shrubs in islands wherever possible.
- Design 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 specific optimum traffic and pedestrian solutions to the intersections of Helen and South Avenues, Maurice and South Avenues, and Benton and Higgins Avenues, while considering the traffic impacts on all intersections around the campus.
- Consider parking lots major destinations for pedestrian walkways.
- Honor accessibility for those with mobility impairments as a necessary consideration in the development and improvements 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 improving pedestrian safety and maintaining the integrity of campus grounds.
- 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 current trail access now located on South and East ends of South Campus property.

Circulation, Transportation, and Parking



INTEGRAL ELEMENTS OF THE SOUTH CAMPUS MASTER PLAN

- ***OPEN SPACE***
- ***COMMUNITY CONNECTIONS***
- ***CAMPUS ENTRANCES***
- ***INFRASTRUCTURE***
- ***ARCHITECTURAL DESIGN GUIDELINES***

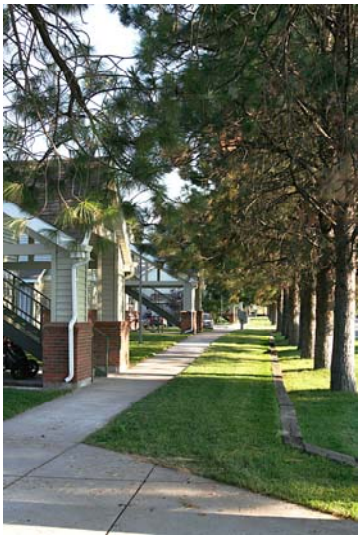
OPEN SPACE

Open space has long been a major factor in consideration of any university development. Past, present and future design elements incorporate and preserve open space throughout planning and development of proposed land use and serve to tie together the natural elements of the land. Much of the character of South Campus should be determined through its open spaces. Walkways, transportation corridors, site development, and community spaces converge through open space relationships.

An inviting campus will include signature details, art and sculpture, gateways, boundaries, and visual connections throughout the campus landscape and will merge the unified Mountain and South Campuses. Characteristics of the landscape can have lifelong effects on individuals and can promote the University to prospective students and faculty.

Recommendations

- Plan a campus that fosters a sense of community and interaction of people through a continuous network of planned and purposeful outdoor spaces. These spaces should work hand-in-hand to provide the campus with a pleasing visual and spacious environment and augment new architectural buildings and features.
- Ensure accessible passages throughout the campus corridor that have connecting landscapes to link key university destinations and maintain esthetically pleasing landscaping with a smooth flow of pedestrian and bike traffic. Link pedestrian circulation systems into the community and surrounding open space systems (e.g. Mount Sentinel trail system).
- Identify areas that could become safe and pleasant open spaces while considering existing environmentally sensitive areas



such as major drainage ways and trail systems. Designate open areas and create policies to ensure their preservation and maintenance. Design solutions should provide appropriate visibility and accessibility needed to create a secure environment that will increase safety and comfort in open spaces.

- Protect the natural scenic quality of Mount Sentinel and insure views and vistas are enhanced and retained wherever possible.
- Incorporate landscape elements conducive to the area being developed that may include water structure/ponds, lawns, quadrangles, pathways/walkways, groves, fields, wooded areas, vistas, natural areas, art, sculpture, and other esthetically pleasing elements.
- Preserve the South Campus assets where possible - trees, ponds, etc. – when development occurs.

COMMUNITY CONNECTIONS

The University is an integral part of the Missoula Community and South Campus should be an extension of this relationship. Residents and businesses enjoy the academic, recreational, and cultural resources that the University offers while the University enjoys the economic benefits of a thriving and engaged community. Through this link, the University strives to achieve open communication, recognition of diversity, and cooperation leading to mutual respect. The University will continue to work with neighbors, surrounding communities, local agencies, and city officials so proactive and cooperative strategies are planned and implemented to minimize impacts from development. This commitment reflects an awareness of mutual interest in addressing the needs of the South Campus and those of the Missoula Community.

Recommendations

- Promote the University's commitment to the surrounding neighborhood by establishing welcoming and mutually beneficial physical relationships between campus and the surrounding community.
- Maintain a strong relationship with the larger community of Missoula through collaboration with neighbors, local businesses, and the city as a means for enriching academic, research, and cultural resources.
- Define the campus within the context of its surroundings to help foster a unique identity for the university while improving the interface with the existing community. The campus and 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 buffer zones, and changes in land use.
- Encourage meaningful and ongoing community involvement and discussion by providing progress reports and information to insure the public is knowledgeable of University plans and direction for development.

CAMPUS ENTRANCES

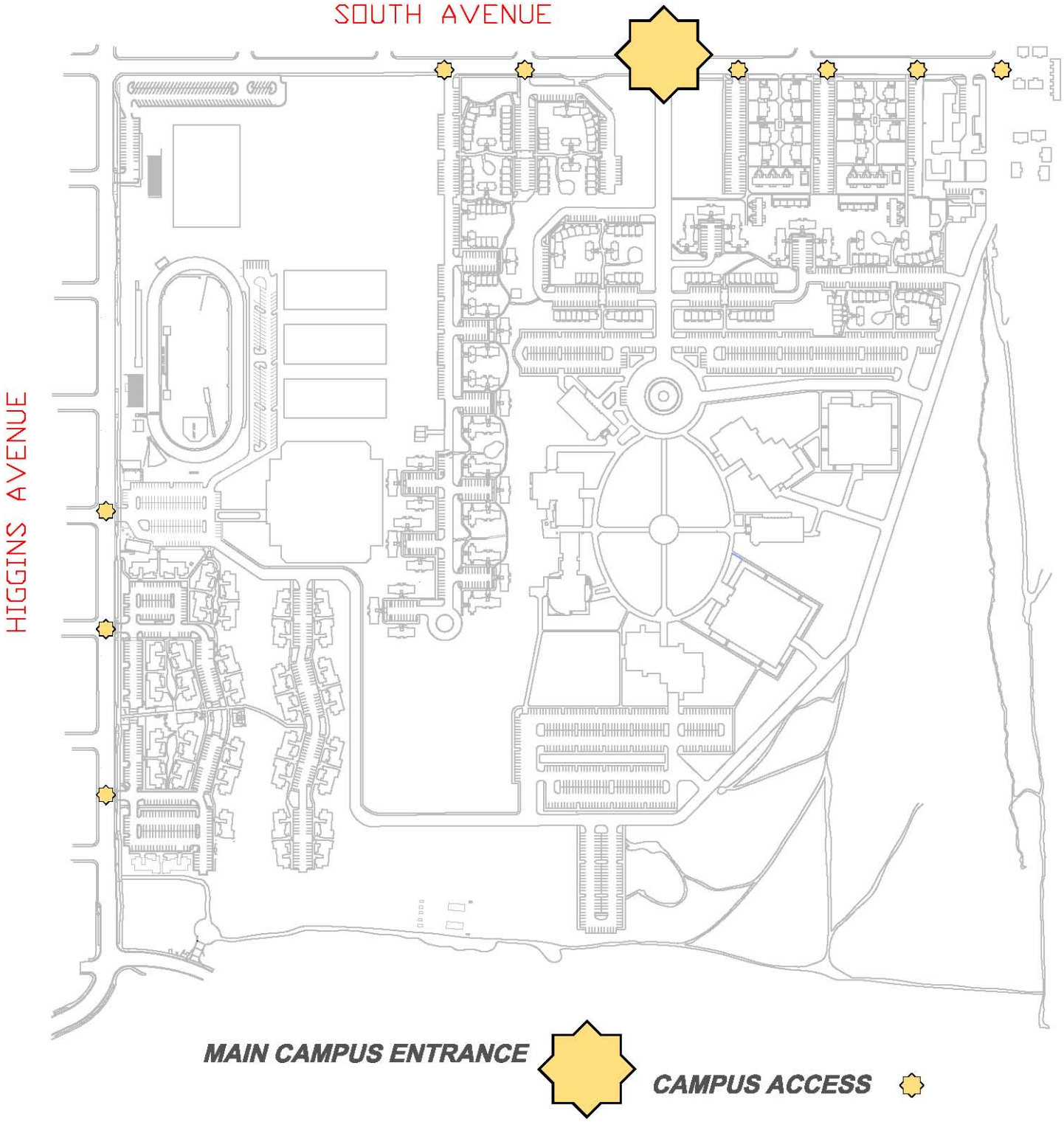
Campus entrances help identify community relationship and shape the institutional image. These entrance points serve as the first impression to campus and make visitors feel welcome. Each access point should provide a transitional experience similar to passing through a doorway. Well-designed entrances should include elements such as surface changes, identifying landscapes, and signs that direct people to their destination with clear information that is easily understood and well defined. These areas should have identifiable boundaries with unique features and gateway elements that serve to invite and welcome visitors.

Recommendations

- Make certain that campus entrances are inviting and obvious and that they create pleasant transitions for entering or exiting South Campus.
- Distinguish campus boundaries by notable gateways and entrances. Landscape and design should be consistent with the character of South Campus but compatible with the diversity of the adjacent neighborhood.
- Develop boundaries to suggest active community engagement.
- Design the corner of South and Higgins with a unified image using high-quality landscaping and signage.
- Provide distinctive lighting levels at campus entrances.
- Provide unique signage that is simple, direct, functional, and well-designed at major vehicular entrances with a logo, entrance name, and direction to visitor parking.
- Provide orientation maps for pedestrians and bicyclists at campus entrances.
- Continue to work with adjacent neighborhoods and the city to beautify the corner of Southwest Higgins and Pattee Canyon.


THE UNIVERSITY OF MONTANA

Campus Entrances



SOUTH CAMPUS INFRASTRUCTURE

The University is served by a variety of utilities that are essential to campus operations. As development occurs at the South Campus, the planning process must include a review of the utilities supplies and distribution systems for capacity and condition. Growth projections will necessarily include an analysis of these systems and projections of what will be necessary to accommodate the volume of development and anticipated within the time frame of the plan. This infrastructure plan identifies the various utility systems, their current status, and the issues that should be addressed.

Infrastructure Overview

Fuel: Natural gas is a readily available fuel source. A high-pressure natural gas-line is routed along Higgins Avenue to the Mountain Campus. It is likely South Campus will be able to utilize this line. Capacity of this pipeline to serve the South Campus needs will have to be evaluated with the utility.

Heating: A central campus steam-generation facility fueled by natural gas, with fuel oil backup is recommended as a primary heating and a steam distribution system via tunnels. Alternately, smaller steam mini-heating plants could be incorporated into new buildings where one mini-plant serves the required capacity of 2-3 buildings. This would limit options for backup fuel. A central or multiple mini-plants provide for a reliable source of steam while minimizing maintenance costs and optimizing efficiency.

Power (Electricity): Northwestern Energy provides electricity for the Mountain Campus and would likely do the same at the South Campus. One main service from the utility will best manage utility costs and a secondary route would provide for redundancy. The University will own the power lines on campus, and it is recommended they be installed inside a tunnel system. Capacity of the adjacent distribution system to serve the South Campus needs will have to be evaluated with the utility.

Cooling: Campus building spaces should be cooled by chilled water from ground-water from the Missoula aquifer. Because of the proximity of the site to the "toe" of the mountain, water from the aquifer will be very site specific and most likely require a distributed system of well-water from a central location of wells. The northwest area of this site is ideal for source wells, while the southwest would be good for injection. A groundwater model will be necessary to ensure proper well location selection.

Water Supply: Domestic (potable) water is provided by Mountain Water from numerous wells in the valley. On-campus water distribution would be primarily through university-owned and maintained water lines. Capacity of the adjacent distributions system to serve the South Campus needs will have to be evaluated with the utility. Metering and backflow preventers at the inlet of campus will be required, while multiple inlets that are looped together are critical for proper operation of the water and fire suppression systems. The additional pressure drop caused by the backflow preventer may require a booster pump system to be installed, with power backup. This will likely require a moderate size building at each water inlet to the campus.

Water Supply: Irrigation water should be provided by University owned wells and manifolded together to minimize the number of wells and pumping costs.

Sanitary Sewers: The city of Missoula is the sewer service provider while on-campus lines are owned by the University. All sewage is conveyed through city sewer lines from the campus edge to the city treatment plants at Reserve Street. Capacity of the adjacent distribution system to serve the South Campus needs will have to be evaluated with the utility. A separate lift station for the campus is likely to be necessary. Alternately, the University could install its own water supply system. The availability of water at this location may preclude this, especially when the demand on the aquifer for ground water cooling is taken into account.

Storm Sewers: Storm water will be collected on site by sumps and swales with water being recharged to the aquifer.

On-Campus Utility Distribution Systems: A tunnel system which provides for steam, condensate, power, data, irrigation water and other utilities is invaluable in allowing for extended life of the

systems, improved maintenance, and ease of upgrades. A tunnel system is recommended for the South Campus.

Communications and Networking: The Mountain Campus has its own telephone system and data communications network, connected to worldwide networks and South Campus is expected to continue with this architecture. Much of the existing system is installed in the tunnel system, which allows for ease of maintenance and upgrades. The Mountain Campus currently has audio-visual cabling in selected buildings. The infrastructure necessary to serve the telecommunication revolution will continue to evolve. While fiber optics may seem the most promising system for accommodating the multitude of users on today's information network, it is impossible to predict if new technologies or new demands will arise. New infrastructure corridors may be needed to serve new buildings, and the buildings themselves may need to be upgraded for better telecommunication service. Other technologies using wireless transmission could result in a system of dispersed satellite facilities around the campus.

Sidewalks and Roadways: The plan calls for safe, efficient, and attractive pedestrian pathways throughout the campus to enhance face-to-face interaction and the sense of a walking community. Pedestrian paths are the primary means of moving about campus. It is important to minimize conflicts with vehicles. The campus plan strives to give the highest priority to pedestrian movement and in descending priority to bicycles, mass-transit, and automobiles. The plan must also provide for adequate vehicle access for service functions, emergency vehicles, and the disabled. In order to create safer pedestrian conditions a look at intersections of streets and sidewalks should be taken. Differentiation between street and sidewalk, such as material change, elevation change or prominent pedestrian crossing signs will aid in slowing down traffic and should be implemented. Major differentiation should be present at such key areas like campus entries and plazas.

Infrastructure Principles

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

- Safety: Safety of the students, faculty, and staff 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: Utilities operating costs should be minimized, along with minimizing life-cycle costs, including capital improvements. System demands should be moderated 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.
- Reliance on Utilities Providers: The University will rely on Mountain Water for the provision of most potable water service and the city of Missoula for sewer treatment and conveyance. Natural gas will be provided either by Northwestern Energy or third-party suppliers. Electricity will be provided by Northwestern Energy.
- Longer Demand Periods: Summer occupancy of campus is increasing, creating higher peak power demand and increased cooling demand. Nighttime and weekend use is also increasing.
- Information Technology: Communications, networking, computer, and building controls technologies are increasingly integral to higher education endeavors. Utility and building systems planning must account for these emerging technologies.
- Utility Development Costs: Costs should be recovered through assessments to the various users based on their proportional demands upon the system.
- Environmental Concerns: Environmental impacts associated with the acquisition, production, and distribution of campus utilities should be minimized wherever possible.

ARCHITECTURAL DESIGN GUIDELINES

Change should be seen as a means to enhance not only functional qualities but aesthetic and experiential qualities as well. The University's overriding planning principles used to assess any new project include:

Sense of Place: to establish an environment that is welcoming, organized, and comprehensible where the arrangement of physical elements is unifying; to provide a sense of entry to the University (gateways); contains identifiable, visually satisfying places; to preserve, enhance, and restore the built and natural environment; and to provide a safe and pleasant environment in which to learn, work, and live.

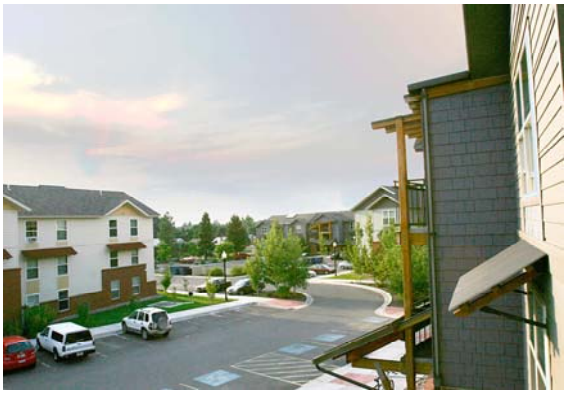
Accessibility: to ensure accessibility within the University to academic and support services, information (electronic technology), people, and programs by providing accessible settings for persons with physical disabilities that facilitate communication and promote interaction and integration among all segments of the University Community and the larger community the University serves.

Respect for the Environment: to plan and design capital improvements and green space that incorporates environmental safety practices and conserves resources and minimizes environmental impacts, including impact on cultural resources, while balancing high design/construction quality standards with economic constraints.

Desirable natural characteristics of the setting shall not be diminished by any new construction. To the extent possible, such natural characteristics shall be taken advantage of and enhanced by the project.

Sustainability: The University is committed to principles of sustainability, implementing sound conservation practices, and environmental responsibility. Recycled materials, renewable energy sources, and sustainable technologies are encouraged for all new buildings.

Circulation: to enhance and further develop the existing circulation systems and effective linkages within the campus and the community at large, and minimize vehicular traffic to provide a pedestrian oriented campus which provides the opportunity for different cultures to interact with each other on campus and make for a welcoming place.



Compatibility: Future buildings should have designs that fit with the traditional campus look. The classic rules of order which include distinguishable entries, continuity of brick and stone accent treatments have stood the test of time. This will preserve the continuity of open space and buildings to ensure the unifying integration of additions to the existing campus. This should also include maintaining compatibility of scale and materials with existing structures and compatibility of function.

Flexibility: to design and develop buildings and circulation, service/utility systems, and open space to adapt to the needs of an evolving academic environment and to be responsive to change.

Size: Buildings will not exceed three stories above ground level. Building footprints of 30,000 to 50,000 square feet, with total sizes ranging from 90,000 to more than 200,000 square feet are proposed. This scale of building fits the fabric of the campus and is an effective size for construction, programming, and operation. Larger buildings are difficult to site without creating barriers to campus circulation.

VISIONS OF THE FUTURE

The University of Montana
South Campus

Comprehensive South Campus