

Pacific Lutheran University Master Plan: Volume I

October 2006

Pacific Lutheran University

Master Plan Volume I

October 2006

prepared by

MITHŪN

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ACKNOWLEDGEMENTS

October 2006

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Campus Site Analysis – Volume II	
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EXECUTIVE SUMMARY

The Pacific Lutheran University 2006 Master Plan establishes the vision and serves as a guide for the development of the PLU campus for the next ten to twenty years incorporating and supplementing PLU's 2010 Long Range Plan, and the Campus Framework Plan adopted by the Board of Regents in 1997. The focus of this plan is the identification of the priority projects for the next 10 years, both architectural and landscape, within the context of the overall vision.

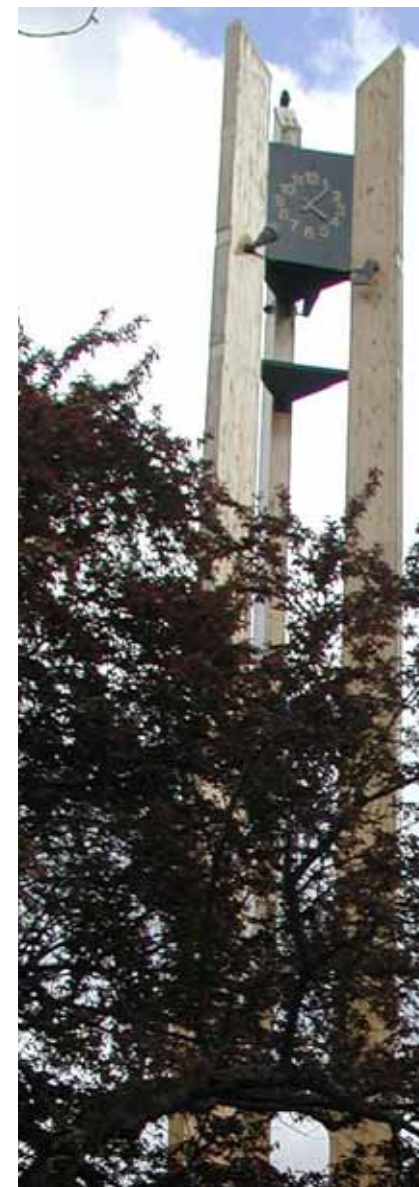
The university mission and goals served as the guiding principles for every decision made throughout the process. At the same time, constituents throughout the university and the neighboring community provided input and shaped the outcome of the plan.

Master plan goals include providing a campus environment that fosters intellectual growth, promotes creativity and expression, facilitates a sense of belonging and connects to place. The overall vision for the plan aims at conserving and enhancing areas that are highly valued while improving those that are weaker by comparison. Other campus improvements include increasing pedestrian linkages, upgrading or replacing buildings in a way that enhances sense of place and celebrates the campus history.

In addition, campus connections between upper and lower campus are improved and the character of lower campus is enhanced with an increase in the tree canopy and long term plans for new and updated athletic facilities and fields. Throughout the plan, there is a focus on sustainable solutions and practices including new goals for energy, water and habitat conservation.

Design Guidelines specify that all University projects meet a high level of quality and respond to the surrounding context, built form, structure, and open space and natural beauty. Buildings must express a sense of permanence and be designed to age well. The use of a warm colored brick is encouraged for academic buildings. Specific projects for the next 10 years include restoration and expansion of Eastvold Hall, renovation of the University Center and residence halls, renovation of Olson Auditorium and development of a new campus entry at Harstad Hall, the University's oldest and most signature building. A synthetic turf playing field will also be developed south of 124th Street. Longer term projects include a new recreation / fitness center, converting Harstad into the University's 'Old Main' and incorporating the former path of Clover Creek into a campus storm water system.

This Volume I describes plan goals and objectives, needs, facilities and landscape analyses and recommendations, project priorities and design guidelines. Six supporting volumes document process, outline technical analyses of buildings and facilities, include the Health and Wellness, Athletics, Recreation and Physical Education Master Plan, set campus interiors standards, and develop plans for each residence hall. These will be available on the Master Plan website. PLU is pleased to present this plan that, in all aspects and throughout each volume, embraces the past, celebrates the present in strength of community and sets the course for the future of PLU.



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A large, light-colored stone wall with the university's name in raised letters. The wall sits on a base of rough-hewn stones. Behind the wall are several tall, dark green evergreen trees. In the background, a white street lamp and a clear blue sky with light clouds are visible.

PACIFIC LUTHERAN UNIVERSITY

Introduction

HISTORIC PERSPECTIVE

Pacific Lutheran University (PLU) was founded in 1890 by Lutherans in the Puget Sound area with strong ties to their Scandinavian heritage. The founders envisioned and established an educational institution (and then the university much later) to further their mission of serving church and community.

Today, PLU has an enrollment of about 3,650 students. As a member of the Associated New American Colleges, PLU is committed to the integration of liberal arts studies and professional preparation programs. PLU has five professional schools including a School of Arts and Communication, School of Business, School of Education, School of Nursing, and School of Physical Education, as well as three academic divisions in the College of Arts & Sciences including a Division of Humanities, Division of Natural Sciences, and Division of Social Sciences. PLU also offers graduate programs in Business Administration, Creative Writing, Education, Nursing, and Marriage and Family Therapy.

PLU remains closely affiliated with the Evangelical Lutheran Church in America and is dedicated to educating its students for lives of thoughtful inquiry, service, leadership and care for other people, for their communities, and for the earth.



Source: <http://www.plu.edu/~archives/timeline/1920-1924.html>

PREVIOUS PLANNING

A number of plans have been completed in the last 10 years. This master plan builds on the previous planning work while addressing the University's current conditions and needs.

PLU 2010: The Next Level of Distinction

In 2000, the Board of Regents adopted a 10-year, long-range plan formulated by the PLU Long-Range Planning Committee and the President's Council. It was developed through studies by 4 commissions, each focusing on one of four topics: Academic Distinction, Community, Fiscal Strategies, and Identity and Constituency.

Through this process, 5 major themes emerged, which remain of critical importance to the University and served as the guiding principals for this master plan. The themes are: (1) the centrality and importance of the Liberal Arts; (2) the University's Christian/Lutheran heritage; (3) the future importance of technology; (4) the importance and impact of international study; and (5) one-to-one interaction with students. Each of these themes helped steer the direction of this plan and its major goals. For more detail on PLU 2010, please refer to PLU's website.

1997 Framework Master Plan

The 1997 Framework Master Plan was established to incorporate the mission of PLU into goals and guidelines for the long-term development of the PLU campus. The plan reflects and advances the qualities that remain fundamental to PLU. The 3 major themes of the 1997 Framework Plan were 'Luther', 'Zippers', and 'Streets.' Luther reflects the commitment to PLU's Lutheran heritage and to providing an atmosphere of collaboration and community. Design considerations that follow the 'Luther' concept include providing informal gathering spaces throughout campus and examining how the campus extends into the community. The 'Zippers' concept reflects the need to unify the campus and apply design solutions that bring divergent parts of the campus together through clustering programs and providing a consistent identity to the whole campus. 'Streets' refers to providing links between campus destinations and connections to the surrounding street grid to promote accessibility and connections from outside and within campus. Each of these themes is retained in the recommendations presented throughout this updated master plan.

1997 Capital Improvements Plan

The 1997 Capital Improvements Plan applied objectives of the 1997 Framework Master Plan to specific development sites, projects and concepts. It assesses the condition of specified physical components, identifies how each proposal meets the objectives of the Framework Plan, and proposes a course of action for development and renovation. The plan was intended to be revised and updated as projects were completed and new projects identified. The 1997 Capital Improvements Plan included the following projects that have been completed or are currently underway:

Completed

- Xavier Renovation
- Morken Center (Computer Science and Computer Engineering, Math and School of Business Building)
- Garfield Street & 12th Avenue Improvements and Parking
- Garfield Street & 10th Avenue Improvements and Parking
- 10th Avenue & 124th Street Parking
- Yakima Avenue Student Housing (South Hall)
- Haavik & Ramsay House Demolitions

Currently Underway

- Eastvold Restoration and Expansion
- Park Ave & 125th Street Development (KPLU)
- Garfield Street Improvements

MASTER PLAN PROCESS

The 2006 PLU Master Plan expresses PLU's core values and creates a framework for future development that promotes innovative measures in response to evolving needs. It was developed through a highly interactive and collaborative process that involved the University community and was coordinated with previous master planning and other projects currently underway. The plan was also designed to support a process for regular updates as needed.

The consultant team worked closely with the Master Plan Steering Committee (MPSC) throughout the process. MPSC members represented each of the major constituencies on campus. The committee worked together to draft the goals of the master plan, inform and comment on the assessment of existing conditions and needs, establish project priorities, and provide feedback on design alternatives.

The process included an analysis phase focusing on assessment of the existing physical condition of the site and facilities, and a Space Needs Analysis. Results of the Campus Assessment were formally presented to the PLU Board of Regents in October 2005 and May 2006, faculty and staff at the 2005 Fall Conference, as well as to the campus community in a number of open campus sessions. Following each presentation, the audience was encouraged to ask questions and comment on issues raised by the findings. A PLU Master Plan Website was also created so that anyone may see the results of the campus assessment and the progress of the master plan.

Based on data from the analysis and feedback from the campus community, the Master Plan Steering Committee identified high priority projects to be further explored. The consultant team developed design alternatives (reflecting short term and long term visions with phasing options) for the committee to review. These alternatives were further refined and are included herein.



Master Plan Steering Committee meeting, June 2005

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CONCURRENT PROJECTS

The following projects have been in progress during the development of the Campus Master Plan.

Athletics, Recreation & Physical Education Master Plan

This master plan was developed concurrently with the Campus Master Plan. A dedicated committee provided guidance and oversight for the plan. Both consultant teams (Mithun and Cannon) worked together to inform and refine each process. The plan identifies site planning for the athletic and recreation fields as well as specific building projects including the renovation of Olson and construction of a new Fitness and Aquatic Center. The first projects are likely to be the development of a synthetic field. The plan is included as Volume V of this Campus Master Plan.

CPTED Study

Crime Prevention through Environmental Design (CPTED) is based on the principle that proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, and improve quality of life. CPTED strategies are used by Law Enforcement Officers, City Planners, Managers, Council Members, Architects, Security Consultants, Educators or others involved in designing the built environment. The Director of PLU's Campus Safety worked with the Pierce County Sheriff's Department to conduct a study of security on campus as it relates to physical features in the environment. The analysis began with a 24-hour surveillance effort to identify areas that appear unsafe. Results of the study were incorporated into the Campus Site Analysis and were influential in determining the site development recommendations of the Master Plan such as improved lighting on campus and thinning overgrown foliage.

SightLines ROPA Analysis

SightLines is a consulting company that advises academic institutions on their facilities assets. The Return on Physical Assets (ROPA) Analysis examines the way a campus operates and maintains its facilities by looking at annual stewardship, asset reinvestment, operations effectiveness and service. The study for PLU revealed (at a '30,000 foot level') a significant backlog in deferred maintenance of PLU's buildings (80% of which are more than 25 years old) and a low operating budget in relation to other universities of similar size. Recommendations include budgeting for the expected utility rate increases and new demand with the growing use of computers, system upgrades for energy conservation, as well as reducing the maintenance backlog. These results were influential in determining the facility development recommendations of the Master Plan.

Garfield Street Activity Center

The Parkland / Spanaway / Midland Community Plan adopted by Pierce County identified the Garfield Street neighborhood as an area requiring revitalization. The Garfield Street Activity Center Project is being developed for this purpose and includes street improvements to the area bound by Park Avenue and Pacific Avenue South, and 121st Street South to 125th Street. The first phase includes improvements to Garfield just West of Pacific Avenue South to C Street South. Phases 2-4 complete improvements along the remainder of Garfield and a number of neighborhood and residential streets.

SR-7 Safety Corridor Improvements

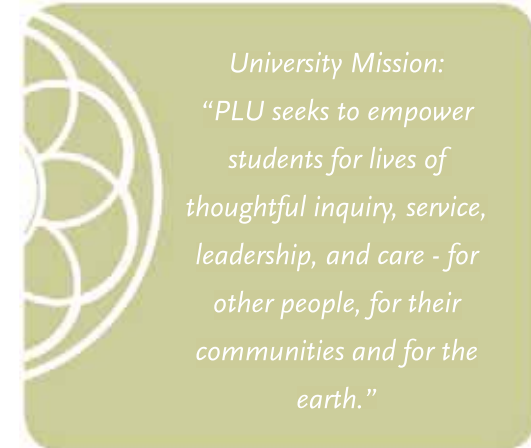
The Washington State Department of Transportation (WSDOT) developed a plan to improve traffic safety along Pacific Avenue, from SR 512 to SR 507, five miles south. With input and support from Pierce County and the Pacific Avenue Task Force, additional improvements include lighting, upgraded signals, bicycle lanes, street trees, curbing and sidewalks, and drainage improvements including landscaped storm water swales. Relocation of utilities has eliminated many poles along Pacific Avenue. The project will be complete in the spring of 2007.



Master Plan Goals

PLU MASTER PLAN GOALS & OBJECTIVES

The mission statement for the University emphasizes four important goals for student development: thoughtful inquiry, service, leadership, and care within three important contexts: individuals, community and the earth. This mission is achieved by fusing academic and professional education with co-curricular learning at PLU including residential life, recreation, cultural activities and worship. Like the activities taking place at PLU, the campus setting (buildings, pathways and open spaces) can reinforce the mission by fostering growth of the individual, strengthening connections to place and community, and supporting stewardship of the surrounding world.



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Cultivate Growth of the Individual

Foster Intellectual Growth

The campus master plan will foster intellectual growth by challenging students, faculty and staff to strive for excellence and by supporting academic and co-curricular learning.

Objectives:

- Develop an environment of creative interaction that is learner-centered
- Create a setting that is accessible and inclusive
- Support the curriculum and reinforce the link between teacher and student
- Provide flexibility for incorporating technological advancements and knowledge sharing
- Provide recreational and co-curricular facilities throughout campus

Promote Creativity and Expression

The campus master plan will provide opportunities for individual leadership, creative self-expression, innovation, research and hands-on experience in an environment that is flexible and able to adapt to future needs.

Objectives:

- Incorporate indoor and outdoor spaces for creative self-expression – audio, visual and kinesthetic
- Support student-centered committees, organizations and groups and provide options and variety in places to meet
- Enhance opportunities for student/faculty research and artistry
- Promote undergraduate research through appropriate allocation of space



Strengthen Community

Facilitate a Sense of Belonging

The campus master plan will develop the life of the mind by strengthening the student, faculty and staff's connection to the campus community. The plan will provide opportunities for different but shared experiences, relationships and activities. It will strengthen the individual's connection to the neighboring community and the world community by supporting lives of service, research and teaching.

Objectives:

- Strengthen interaction among faculty, staff and students
- Develop a university setting that inspires a life of service, leadership and care
- Create more usable gathering spaces – indoor and outdoor
- Improve physical and visual connections between upper and lower campus

Connect to Place

The campus master plan will enhance and reinforce the connection of students, faculty, staff and alumni to the campus, the local commercial community of Garfield Street, the Parkland Neighborhood, Pierce County, the State of Washington and the Pacific Northwest region.

Objectives:

- Create a welcoming front door for visitors and improve campus edges
- Protect and enhance the unique architectural and natural qualities of campus
- Reinforce the qualities associated with the Pacific Northwest in the architecture and landscape of the campus
- Create a sense of permanence in new buildings
- Connect the campus with the neighborhood to serve as a community asset and express PLU as a collaborator with its neighbors



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Encourage Stewardship

Promote Healthy Living

The campus master plan will promote healthy living by providing a safe campus environment, encouraging a balance in the 'live, learn and play' structure of University life, providing choices in transportation and parking, and by supporting sustainable practices.

Objectives:

- Create a setting that is safe and provides a feeling of security
- Reduce the impact of vehicles (i.e. traffic and parking on and around the campus) and improve pedestrian connections
- Create an environment that supports alternative modes of transportation
- Reinforce the interconnection among residential life, academic learning and recreation
- Provide housing opportunities for all types of residents
- Improve wellness, recreation and athletics activities and facilities
- Support sustainable practices with innovative materials and technology

Ensure Preservation of History

The campus master plan will ensure that the University's Lutheran heritage, its history, traditions, culture and identity are preserved and enhanced for future generations including the built environment, natural environment, and the structure of open space.

Objectives:

- Preserve and enhance places of historic and traditional significance to ensure shared experience from one generation to the next
- Strengthen and celebrate the University's Lutheran heritage
- Develop the campus as a model of and learning laboratory for sustainability
- Ensure the protection and stewardship of the characteristic mature tree canopy
- Minimize the University's impact on the natural world while balancing the needs of students, faculty and staff
- Provide educational opportunities in future development of campus landscape and buildings

Encourage Efficiency

The campus master plan will encourage efficiency in departmental and administrative functions and in the operations and maintenance of building systems, infrastructure and grounds.

Objectives:

- Provide for campus information in strategic locations for visitors and the campus community
- Group departments by academic and administrative function
- Provide adequate workspace
- Address parking needs
- Build, renovate, reuse and reassign campus buildings to utilize them efficiently, effectively and economically
- Identify, prioritize and address the most pressing needs first
- Maximize operational and maintenance efficiencies
- Establish a dynamic framework for future needs and decision-making
- Continue to increase handicapped accessibility throughout campus



Campus Master Plan

CAMPUS MASTER PLAN THEMES

The origins of the Campus Master Plan themes are derived from the PLU culture and mission and the master plan goals and objectives. The 1997 Framework Plan is helpful as a springboard. The Framework Plan sought to improve internal and external campus connections (through ‘Streets’ and a ‘Zipper’) and preserve the historic elements of campus that express the university’s Lutheran heritage. This plan addresses the same elements.

The updated Campus Master Plan aims at conserving and enhancing areas of campus that are highly valued, while improving areas that are weaker by comparison. In addition, improvements to interaction, and thus a sense of community, are proposed by increasing pedestrian linkages, improving existing facilities, siting new development, where appropriate, and identifying landscape improvements.

A central element of the plan is preserving the character of the upper campus while bringing the quality of lower campus to a similar level by increasing the tree canopy, improving pedestrian linkages, refurbishing the UC Pond and replacing, renovating or expanding athletic and recreation facilities in a way that will increase this area’s sense of place.

Campus connections between upper and lower campus and future athletic fields are strengthened in the plan. Campus edge improvements include a new main entrance, improved pedestrian access to Garfield Street, and landscape improvements along the bordering streets. Specific development projects are also identified, including suggested renovation or replacement of certain buildings to meet programmatic needs and/or preserve the existing building stock.

Each of the recommendations was identified and further developed within the context of an analysis of projected space needs and functional relationships, an assessment of existing buildings and infrastructure, and an evaluation of the structure and quality of existing circulation, open space, campus edges and connections to adjacent communities. The following sections summarize these analyses and describe specific recommendations.

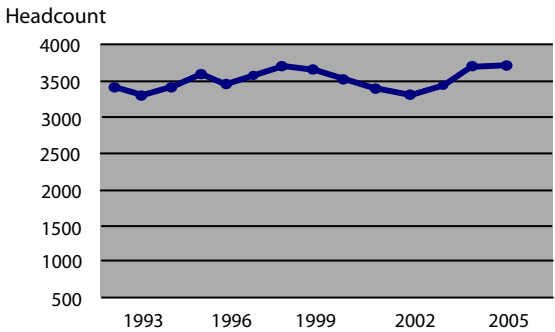
**CAMPUS MASTER PLAN:
NEEDS ANALYSIS & RECOMMENDATIONS**



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Historic Enrollment Patterns

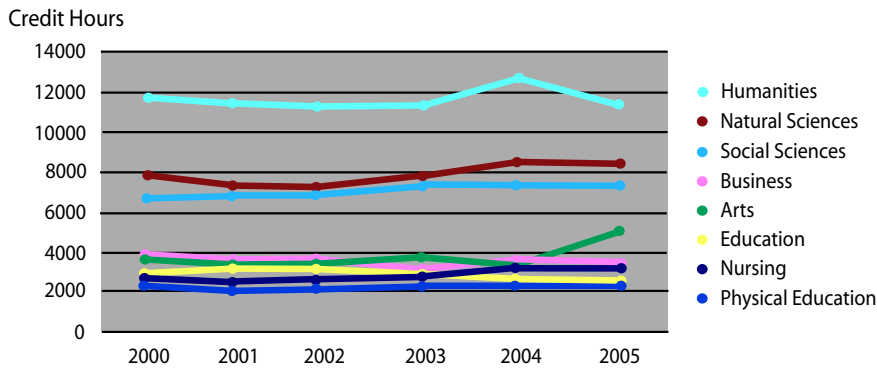
10th Day Headcount



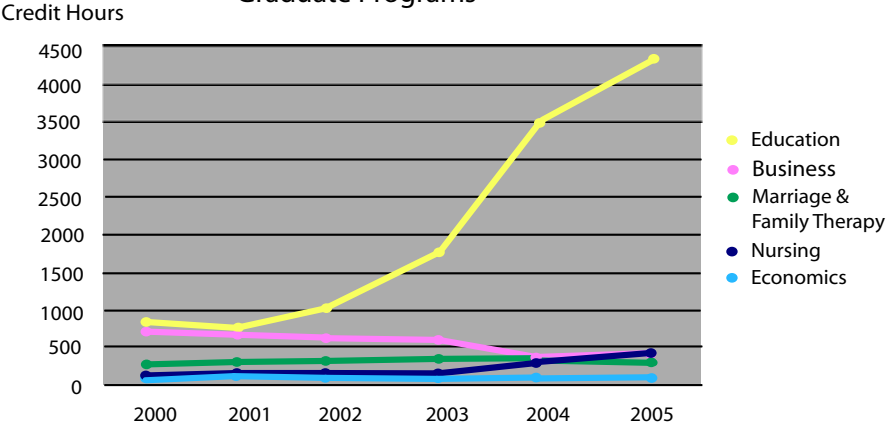
Historic patterns for each major program were examined with credit hour data between 2000-2005. Overall, enrollment has remained relatively stable while some programs have seen individual fluctuations. Enrollment in graduate Education and undergraduate Nursing programs have shown the most growth. Current total enrollment at PLU is 3,650. Overall, future undergraduate enrollment at PLU is anticipated to remain the same while a small increase in graduate enrollment is projected. On-campus enrollment is expected to be 3,600-3,700 in 2010. Over the next ten years, enrollment is not expected to exceed 3,900. Any increase in graduate student enrollment is not expected to affect overall academic space needs since a large percentage of graduate courses are offered in the evenings and on weekends.

PLU is committed to serving a diverse student population and expects the number of non-traditional students to increase. Non-traditional students are typically older or have a family and desire more independent living options than residence halls on campus. While the number of non-traditional students is expected to increase at PLU, it will have minimal impact on the academic space needs of the University since the overall enrollment growth, as described above, is expected to be minimal.

Undergraduate Programs



Graduate Programs



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Focus Groups and Tours

The Needs Analysis process included meetings with each major department or division on campus and a tour of their space. A total of 27 meetings took place and focused on three main questions:

- *How well does your space fit your current needs?*
- *What are your adjacency needs (which other functions do you need to be near)?*
- *How will your space and adjacency needs change in the future?*

Meetings were held with the following groups:

- | | |
|--|---|
| • Office of Admission | (MESA) |
| • School of Arts & Communication | • Department of Music |
| • ASPLU | • Division of Natural Sciences |
| • Athletics, Recreation, Physical Education | • School of Nursing |
| • School of Business | • Office of Development, Alumni Relations, KPLU, University Communications |
| • Campus Safety, Environmental Health & Safety | • Q Club |
| • Campus Ministry | • Ramstad Commons: Center for Public Service, Academic Assistance, Advising, Student Employment |
| • Dining & Auxiliary Services | • Residential Life |
| • School of Education | • ROTC/Interdisciplinary Programs |
| • Facilities Management | • Scandinavian Cultural Center |
| • Financial Aid, Business Office, Registrar, Student Services, Human Resources | • Division of Social Sciences |
| • Division of Humanities | • Student Involvement and Leadership, Women's Center, Diversity Center |
| • Information Technology Services | • Student Life |
| • Math, Engineering and Science Achievement | |
| • Wang Center for International Programs | |

Major Themes

Common themes emerged from the focus group meetings and the team's observations. They are summarized on the following pages. Reference Volume III for programming meeting notes and more detail.



October 2006

Recommendations for General Classrooms:

1. *Establish standards for small, medium and large classroom layouts.*
2. *Re-evaluate classroom availability once Morken is open for 2 semesters.*
3. *Equip as many classrooms as possible with digital presentation technology and internet access.*

General Classrooms

The quality of classroom and lab space on campus, as well as size and availability, are of significant concern to the campus community. Establishing standards for small, medium, and large classroom layouts, furnishings (and equipment) specifically to promote active learning, and used as renovation and new construction opportunities come about, would greatly benefit faculty, students and staff. The PLU Instructional Resources Committee, represented by administration, faculty and students, is currently developing such standards. Considerations for comfort (easily adjustable environmental controls, adequate table top space and sound control) and flexibility for different pedagogical approaches (flexible seating, adjustable lighting, adequate presentation equipment and writing surfaces) are among their priorities. Faculty and staff have also expressed a need for more large and medium-sized classrooms.

Most classroom needs are met by the current inventory of classrooms. Two additional, medium-sized classrooms (50-70 occupancy) and 1 large-sized classroom (120 occupancy) are also needed.

Multimedia Services continues to install technology in classrooms, with a goal of providing appropriate technology in every classroom on campus. This “fixes” the long term problem of reliance on Multimedia Services to transfer equipment from one classroom to another, which is both operationally inefficient and potentially unreliable.

Multimedia Services can better spend time assisting faculty in meeting technology needs in pedagogy and in the classroom. Faculty are expanding the use of technology each year, and should be able to expect reliable, current technology along with assistance in implementation and use.



Labs

Some research and teaching lab spaces have unique requirements based on curriculum needs and must be dedicated to specific programs. A number of issues related to this should be addressed in future planning for lab space. Some labs require dedicated state-of-the-art equipment to accommodate prevailing teaching delivery methods; some must accurately simulate modern professional environments; others require the capacity to accommodate student and faculty research. One of the most critical examples is seen in the labs utilized by Graphics Arts located in Ingram. These spaces lack the equipment required to teach computer applications relevant to contemporary graphic arts curricula because of inadequate electrical capacity in the building.

In the School of Nursing, in order to meet accreditation standards, lab spaces must simulate professional clinic and hospital environments. Currently the nursing labs do not achieve this with inadequate space between beds to accommodate the ideal cohort of students. In the School of Education, specialized storage cabinets are required in classrooms for access to teaching materials. In the Division of Natural Sciences, individual faculty research labs along with spaces dedicated to faculty/student collaborative research are the ideal. Each of these, and other dedicated needs identified in the focus groups should be considered as expansion, relocation and renovation projects are identified. See Focus Group meeting minutes for other specific examples.



Recommendations for Labs:

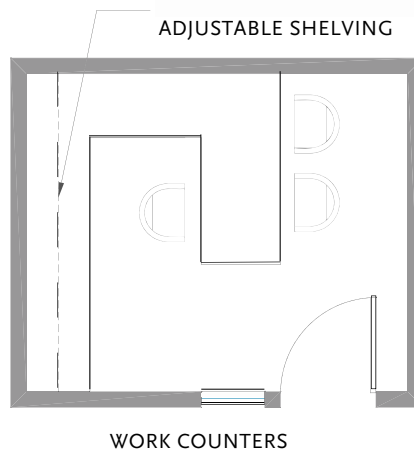
1. *Match lab equipment/storage provided with teaching curriculum needs as closely as possible.*
2. *Adequately simulate the professional work environment for relevant programs.*
3. *Provide opportunities for student/faculty collaborative research.*

Recommendations for Offices:

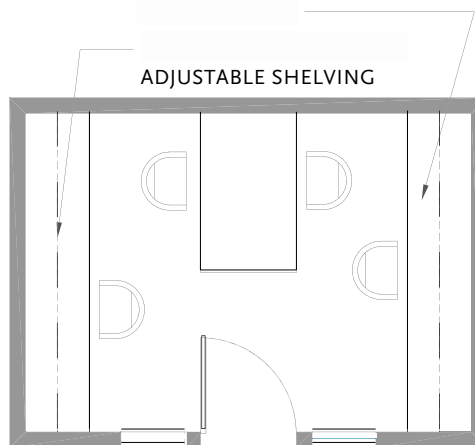
1. *Establish a university standard for faculty and staff offices to be applied to new and renovated buildings.*

Offices

Faculty and staff offices on campus vary in size and quality. The Morken Center and Rieke Science Center have high quality office space. In Ramstad Hall, Xavier Hall and Hauge Administration Building, several offices lack access to daylight and several are limited in size for accommodating student visitors. Establishing a University standard of faculty and staff offices for newly constructed or renovated buildings ensures the appropriate amount and quality of space to work effectively. The following diagrams represent examples of faculty office layouts. Administrative offices depend on workspace needs, but should be of similar size.



FULL-TIME FACULTY OFFICE LAYOUT:
120 S.F. (10'X 12')



SHARED FACULTY OFFICE LAYOUT FOR
PART-TIME AND VISITING FACULTY:
140 S.F. (10'X 14')

Meeting Rooms and Event Spaces

Scheduling meeting rooms was consistently reported as difficult because of limitations in size and availability. There was also concern expressed over the professional image of the meeting rooms and how visitors and faculty recruits perceive the campus as a result.

Most meeting rooms on campus are located in the University Center and sized to accommodate small to medium (<35) or very large groups (100+). Departmental conference rooms, as well as space in the Scandinavian Cultural Center, are often scheduled as alternative meeting spaces. Many programs expressed the need for more meeting rooms to accommodate groups of 35+ people: classrooms can be used for this purpose when available.

The number of large event spaces is also seen as limited by some focus group participants. Currently, large catered events are located in the University Center's Chris Knutzen Hall, the Scandinavian Cultural Center, and in Olson Auditorium. Columbia Center is a large event space with a support kitchen, but under-utilized with a lack of access for the disabled. An additional event space to accommodate 700 people with banquet seating and adequate support space for preparation, staging and storage is desired. Further analysis of the current use and plans for Olson, the University Center and the Columbia Center in relation to large campus events will help clarify this need. See the Space Plan Diagrams & Space Needs in Volume III for a preliminary quantification of additional meeting space needs.

Recommendations for Meeting Rooms & Event Spaces:

1. *Include additional meeting space with new projects and renovations when possible.*
2. *Consider doubling classroom space as meeting space when classrooms are not in session (classes must have priority).*
3. *Further analyze the current and future use for Olson, the UC, and Columbia Center as a large venue space when future projects are further defined.*



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Recommendations for Storage Areas:

1. *Provide additional storage in new and renovation projects when possible.*
2. *Ensure that specialized storage needs are met with future projects.*
3. *Investigate additional off-site storage for official records.*
2. *Develop a records retention policy and dispose of unneeded records and broken or unused furnishings and equipment.*

Storage

All programs and departments expressed the need for more storage capacity that is easily accessible and secure. This is a common concern at most campuses. Many programs have unique storage needs such as Archives and Special Collections, Business Office, Computer and Telecommunication Services, Facilities Management, Registrar's Office, ROTC, School of Arts & Communication, and School of Nursing. Future buildings and renovations should provide adequate storage to meet these and other department needs whenever possible. See programming meeting minutes for detailed descriptions of storage needs.

October 2006



Student-Focused Areas, Gathering Spaces and Common-Use Spaces

In the focus groups, students as well as faculty and staff, consistently mentioned the need for more student-focused areas and gathering spaces on campus. Providing new and improved gathering, common-use, academic, club and organization space, both indoors and out, is important in promoting community among students as well as between students, faculty and staff.

Gathering spaces are usually unassigned to specific departments or functions and thus often difficult to justify in building designs or renovations. Building circulation paths and lobbies can often double as gathering spaces. Whenever possible, gathering space should be provided in new or renovated buildings. At every opportunity, it is also important to connect indoor gathering spaces to outdoor gathering areas and major campus circulation in order to continually activate these areas.

Common-use areas including the Dining Commons and Recreation and Athletics facilities need to be upgraded in quality, student focus, accessibility, the amount of space and the number of options available. This includes possible extended hours of operation. See Volume V for plans and program needs for Recreation and Athletics.

ASPLU, SIL, and Student Life representatives noted the limited office space for clubs and organizations, a shortage of meeting space to plan and hold events, and the need for additional storage space for information and materials. With a relocation of student clubs and organizations, these needs should be addressed.

Recommendations for Student-Focused Areas, Gathering Spaces and Common-Use Spaces:

1. *Provide informal and open gathering spaces whenever possible in new or renovated buildings.*
2. *Connect indoor gathering space with outdoor gathering spaces.*
3. *Improve the student-focused areas and common use spaces throughout campus.*



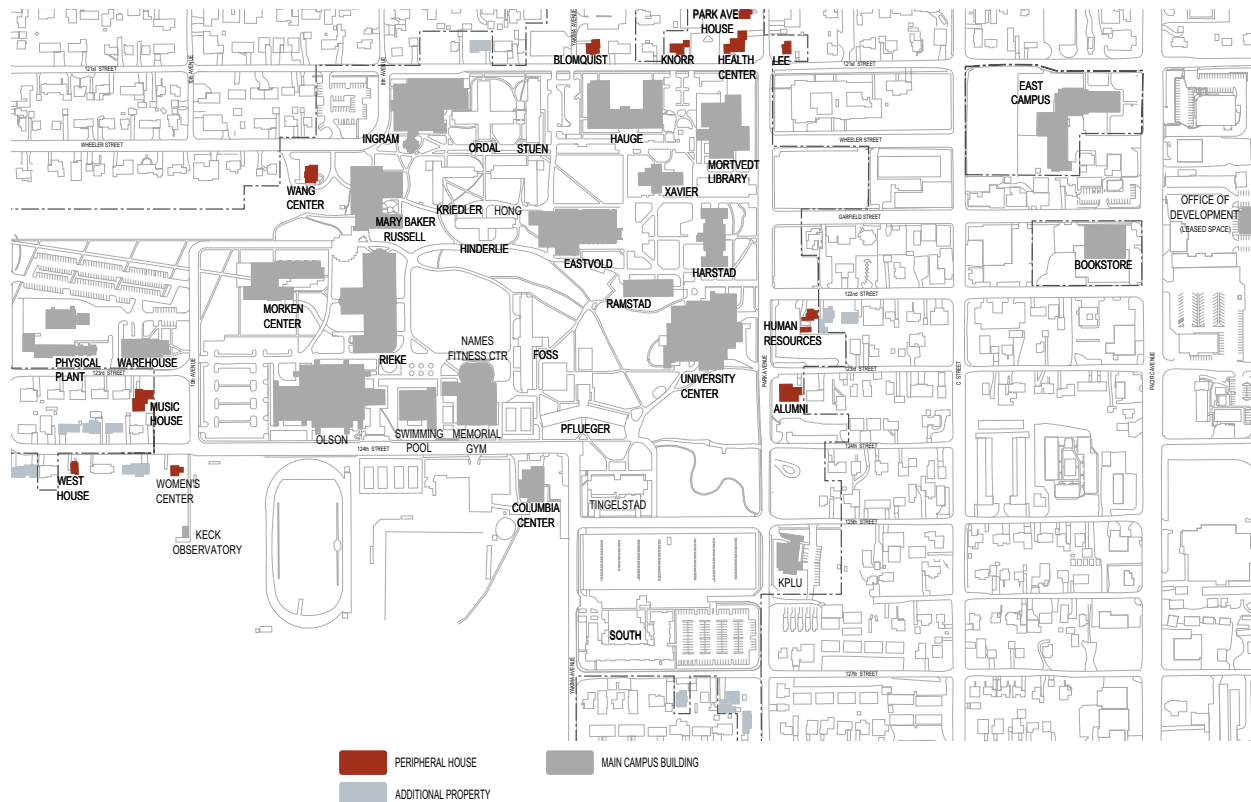
October 2006

Peripheral Houses

Recommendations for Peripheral Houses:

1. Relocate functions in the peripheral houses to the campus core in the long term.
2. Maintain the Health Center and Women's Center's more private access and welcoming environments.
3. Maintain the Alumni Center's convenient access for alumni.

Twelve peripheral houses, outside the main campus area, are used for programs and services at PLU. They are typically outside of the campus core, in poor condition, difficult and inefficient to maintain and have limited access for the disabled. While some faculty and staff find their character and size appealing, the location separates them from the general campus community. Over the long term, it would be an operational and functional advantage to relocate activities housed on the periphery to the campus core. The Health Center and Women's Center, however, may benefit by staying at the campus edge in order to continue to provide privacy and a residential character with a welcoming environment for those seeking counseling and support. The Alumni Center also benefits by being located at the campus edge for easy access to alumni arriving from off-campus.



SITE PLAN - PERIPHERAL HOUSES

Department Consolidation

Some departments and programs are located in separate building and are decentralized throughout campus (including most of those located in the peripheral houses). Consolidating these functions together would allow most departments to better meet their mission and have the advantage of building collegiality, strengthening departmental identity, and providing better access to students. In addition, opportunities for shared conference rooms and administrative resources may reduce the total building area required to house the same functions.

Likely the most critical example of a decentralized department is Psychology where faculty office and lab spaces are located in Harstad, Ramstad and Xavier. This has posed significant difficulties in coordinating department functions and providing service and access to students. In addition, majors have limited opportunities to interact with each other, creating a lack of identity among students. In order for Psychology to best meet its mission, all department spaces should be located in the same building. Another example is the Humanities department, in which faculty are located in four different buildings.

Departmental 'Homes'

A common concern among the academic divisions is the need for a 'home' for student majors to gather in-between classes, exchange information, meet as a study group, learn about program opportunities, and maintain collegiality. This is highly valued by many academic departments and Interdisciplinary Programs (which lack this type of space now) and should be provided whenever possible.

By nature of its mixed representation from a variety of academic departments, Interdisciplinary Studies struggles with these issues, its identity and lack of a permanent home. Currently, the administration moves to the department of the acting chair. With growing participation, the program should ideally have a dedicated area with learning resources and publications, a shared faculty office with assignable office hours, and administrative support.

Recommendations for Department Consolidation:

1. *Consolidate departments that are currently decentralized.*
2. *Provide departmental 'homes' for faculty and students.*

Recommendations for Highly Visible, Yet Confidential:

1. *Consider the unique adjacency needs for programs and services requiring visibility and privacy when relocating such programs.*
2. *Ensure that interior spaces have acoustical privacy where needed.*

Highly Visible Yet Confidential

Several service-oriented programs on campus expressed the need to be highly visible to students while at the same time highly private. Services such as the Diversity Center, Counseling & Testing, Campus Ministry, Women's Center, and Health Center want students to be aware and reminded of the services and programming available. However, high visibility and lack of acoustical privacy is not desirable because of the sensitive nature of these services. These conflicting needs should be given significant consideration when determining the placement and configurations of such service locations.



Future Space Needs

The information compiled from campus representatives, building tours and enrollment patterns as it related to dedicated space was used to determine square footage and adjacencies required for specific departments and programs to function at their best and accommodate change in the next 10 years. These results are useful to guide solutions as projects for the next 10 years become identified. Reference Volume III for space diagrams and additional detail on space needs as it relates to dedicated areas.

Areas such as residence halls, event/meeting spaces, and classrooms not assigned to a particular academic program were also identified to determine additional needs for the next 10 years. Master Plan Steering Committee members, focus group participants and the Registrar helped identify these needs. For housing, additional beds are expected to increase the proportion of students living on campus and/or meet the need for non-traditional student housing. Because enrollment for undergraduates (and day-students) is expected to remain relatively stable, the following list will meet current needs and those for the next 10 years. Overall, classroom needs must be re-assessed with the opening of the Morken Center. As mentioned earlier, the need for a large event venue should be re-assessed in light of future projects identified, scheduling opportunities and resources available.

Residence Hall Needs

- More single rooms / fewer non-single rooms
- More suite style housing
- Non-traditional student housing

Long Term Event Space Needs

- 2 Meeting Rooms (35+ occupancy)
- 1 Large Event Venue for 700 with catering capabilities

Classroom Needs

- Classroom needs should be evaluated after Morken Center is open for two semesters.

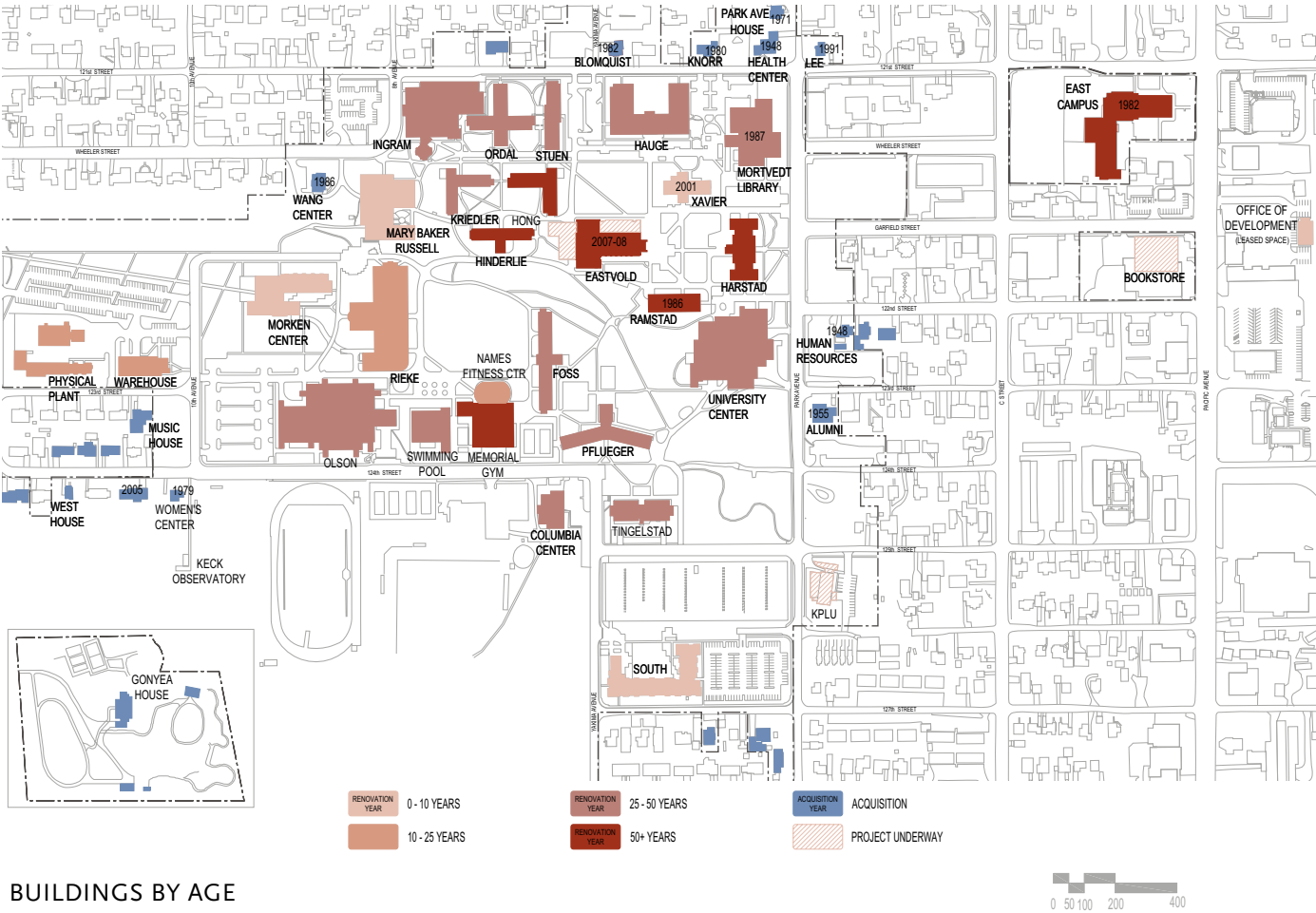
**CAMPUS MASTER PLAN:
FACILITIES ANALYSIS & RECOMMENDATIONS**



October 2006

Inventory

PLU has over 40 buildings on its campus in about 1.3 million square feet of occupied space. The majority of buildings are small with less than 10,000 square feet. Sixteen buildings are mid-sized between 11,000 – 50,000 square feet. Nine buildings on the campus are greater than 50,000 square feet. In addition, most buildings on campus are over 30 years old. The following table lists the buildings on the PLU campus by size and age.



BUILDINGS BY AGE

Large (51,000 sf – 100,000 sf)

<i>Building</i>	<i>Age/Acquisition</i>	<i>Square Footage</i>
Harstad Hall	1894	72,200
Hauge Hall	1960	62,200
Morken Center	2006	53,000
Mortvedt Library	1966	91,400
Olson Auditorium	1969	96,500
Rieke Science Center	1985	89,000
South Hall	2000	100,000
Tingelstad Hall	1967	93,900
University Center	1970	87,800
Subtotal		746,000

Mid-Sized (11,000 sf – 50,000 sf)

<i>Building</i>	<i>Age/Acquisition</i>	<i>Square Footage</i>
Columbia Center	1962	17,300
East Campus	1930	46,800
Eastvold Hall	1952	45,900
Foss Hall	1965	39,700
Hinderlie Hall	1955	34,000
Hong Hall	1955	29,600
Ingram Hall	1956	33,100
Kreidler Hall	1957	30,600
Mary Baker Russell	1993, 1995	45,000
Memorial Gym/Names Fitness Ctr	1947/1984	40,900
Ordal Hall	1967	40,300
Pflueger Hall	1962	40,600
Ramstad Hall	reno 1986	34,900
Stuen Hall	1966	31,300
Swimming Pool	1965	12,500
Xavier Hall	reno 2001	20,300
Subtotal		542,800

Small (<10,000 sf)

<i>Building</i>	<i>Age/Acquisition</i>	<i>Square Footage</i>
Blomquist House	1982	2,600
Facilities Management	1982	9,600
Gonyea House	1971	3,800
Health Center	1948	3,800
Human Resources	1948	1,100
Keck Observatory	1995	1,000
Knorr House	1980	3,000
Lee House	1991	1,500
Music Practice House		1,200
Nesvig Alumni House	1955	3,400
Park Avenue House	1971	3,100
Wang Center	1986	2,300
Warehouse/Printing	1982	9,500
West House		1,200
Women's Center	1979	1,000
Subtotal		48,100

The total square footage for all buildings on campus is 1,336,900 sf. In addition to the buildings listed above, PLU leases space for some administrative functions and owns some small houses that are rented out to residential tenants.

The master plan team worked with facilities staff to determine the physical condition of specific campus buildings. PLU also called upon technical consultants to evaluate the existing conditions of other building systems and the overall campus infrastructure, which includes facility mechanical, electrical, and plumbing (MEP) systems, the structural systems of the major buildings on campus and site utility systems. The MEP and structural system analyses examined buildings identified as priorities by PLU. Based upon existing conditions, the consultants offered recommendations to promote improvements in safety, efficiency and sustainability on the campus. Reference Volume III for more detail. It should be noted that residence halls other than Harstad were not reviewed. For specific information on residence halls and associated projects with phasing, refer the Volume VII - Residence Hall Master Plan.

Architectural Evaluation

Based on interviews with Director of Facilities Dave Kohler and the Master Plan Steering Committee, the following issues have been identified for specific buildings:

<i>Building Name</i>	
Columbia Center	Restrooms are in poor condition Does not comply with the ADA
East Campus	Rooms are tired For redevelopment, it would need to be completely renovated
Harstad	Needs asbestos abatement Needs flooring upgrades Has good windows and a good roof
Hauge	Windows are not efficient Not enough restrooms
Ingram	All systems need major improvements
Memorial Gym	Outdated/some areas not functional
Mortvedt Library	Tired, needs an update Restrooms need upgrades

<i>Building Name</i>	
Olson	Some spaces are not functional Restrooms need upgrades Bleachers need replacement Does not comply with the ADA
Peripheral Houses	Windows, siding, roofing, and overall condition difficult to maintain HVAC/electrical systems need improvement Most houses do not comply with the ADA
Ramstad	Needs improved windows and screens
Residence Halls	Building systems and windows need improvement Common areas and room configurations are outdated
Swimming Pool	Ventilation issues
University Center	Needs an update including kitchens and dining

Utilities and Infrastructure

Mechanical, Electrical and Plumbing Systems Evaluation

Buildings in which there were known or possible building systems problems were evaluated. Abacus Engineers conducted the evaluation, with input from Facilities Management staff. The study revealed the following for the buildings identified below:

- Most mechanical, electrical, and plumbing (MEP) systems have exceeded their useful life and should be renewed or replaced
- Most MEP system types vary throughout campus, complicating efficiency of maintenance
- All buildings are individually metered for power, gas, water and sewer, with the supporting infrastructure provided by the utilities

The MEP Systems Condition table at left shows specific findings by system for each building. Memorial Gym and Harstad Hall are in the worst condition with all MEP systems rated as 'poor'. Hauge and Ingram mechanical and electrical systems are rated 'poor' with plumbing systems rated 'fair' (3). Olson Auditorium's and the University Center's MEP systems are rated between 'fair' (3) and 'good' (4), and Ramstad's systems are all rated 'good' (4). The Swimming Pool also needs mechanical upgrades. Xavier Hall and Rieke Science Center were not reviewed because their systems are newer.

Campus-Wide Energy Use

Current energy use on a campus-wide level at PLU is shown in the following diagram. The total average annual amount of electricity imported to campus is approximately 15,622,000 kwh per year with an annual cost of about \$514,000 (based on 2004 data). This translates to 3,663 kwh/yr and \$120 per person. Energy sources of the Bonneville Power Administration are shown in the figure on the following page. A very small amount of the electricity is combustion generated. Natural gas is the primary fuel for heating, at a 2004 cost of \$573,000/year.

Of particular concern is the amount of carbon dioxide produced by PLU, as this is the major contributor to greenhouse gases. A number of open questions related to carbon output still need to be answered on a campus-wide level. For example, the use of fossil fuels for transportation to and from campus and air travel, as well as the amount of carbon sequestered by trees and the off-site generation of electricity all contribute to PLU's 'carbon footprint'. Answering these, and other energy conservation questions could be the focus of student research and help give PLU the complete picture as well as a bench mark for establishing future strategies. One strategy might include carbon offset opportunities where PLU purchases certificates toward the preservation of existing forests. This is something that can be done presently, and, with enough certificates, could make PLU carbon neutral today.

MEP SYSTEM CONDITIONS:

Building Name	M	E	P
Harstad	2	2	2
Hauge	2	2	3
Ingram	2	2	3
Memorial Gym	1	2	2
Mortvedt Library	3	4	4
Olson	3	4	3
Ramstad	4	4	4
University Center	3	4	4

1 = poor condition 5 = excellent condition

M = mechanical

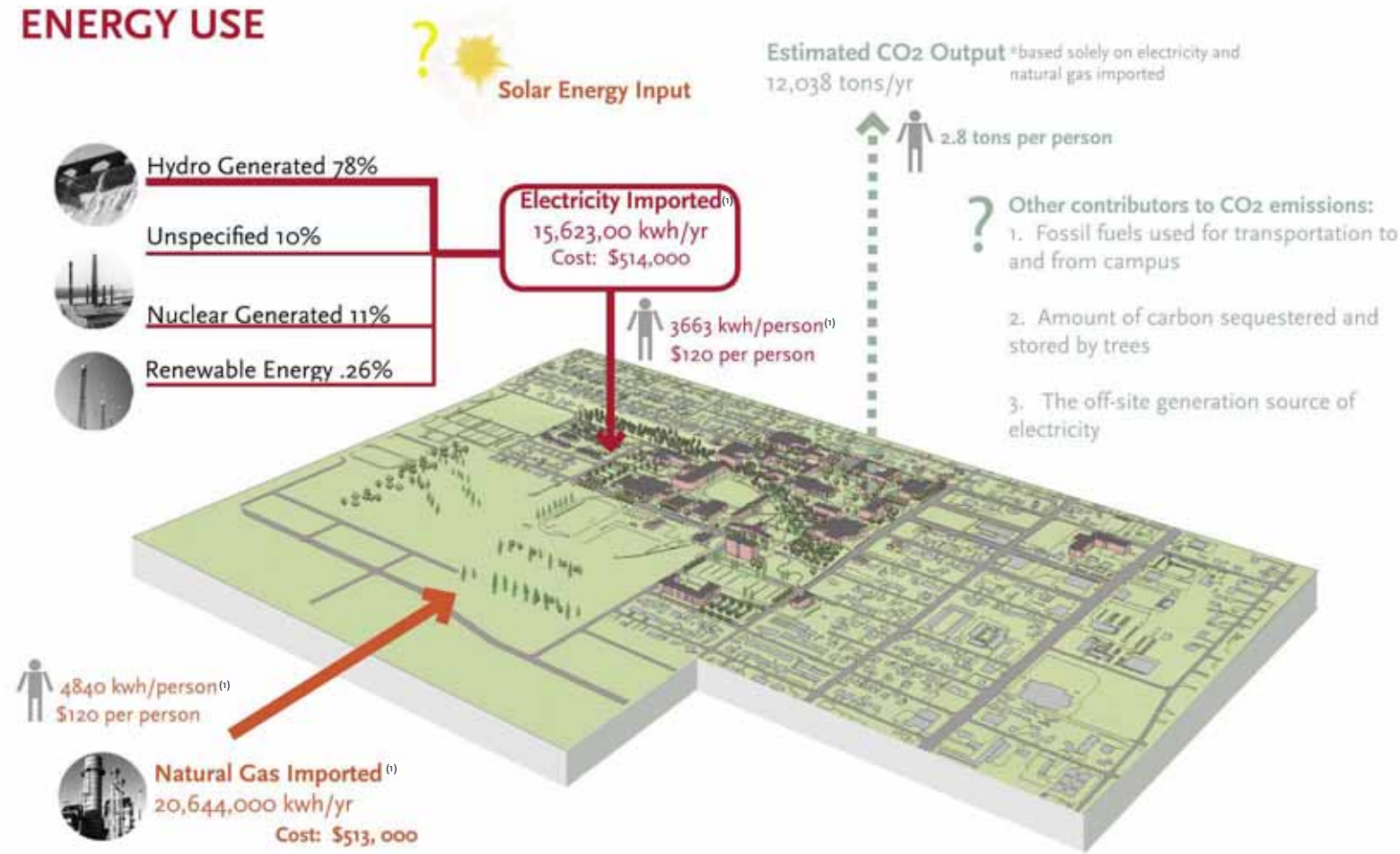
E = electrical

P = plumbing

Energy Use Goals

The University has made a commitment to specific energy use goals. Overall energy consumption will be reduced by 20% over the next 5 years. The campus will become carbon neutral by 2020 and as a long-term goal, the University will consider potential options for generating energy on campus such as solar or wind power.

ENERGY USE



Recommendations for MEP/ Energy:

General MEP Recommendations:

1. Prepare campus MEP standards for operations and maintenance, renovations, and new construction and ensure they meet Washington State requirements
2. Continue to implement and plan for a “clustered” approach to building mechanical systems, where groups of 3 to 5 buildings are served from one system located in of the cluster’s principal building
- *3. Upgrade all buildings to Direct Digital Controls (DDC) and provide remote control from central facilities via a campus-wide energy management and control system
4. Separately meter utility service to each building, whether stand alone or in a cluster
- *5. Expand the use of natural ventilation/ passive cooling in place of air conditioning when possible
- *6. Utilization of ground source energy is recommended when possible given its 30-40% increase in efficiency over traditional air-cooled systems and the amount of land PLU can dedicate to making it work. Foss Field has the capacity to provide ground source energy to all of lower campus
- *7. Provide temperature control for occupants in each individual office
8. Continue to collect ROPA (Return on Physical Assets) data and use in setting priorities for capital projects and operating budgets.

* Sustainability-focused recommendation

5-year considerations for electrical systems :

1. Establish standard specifications for all renovation and new construction work
2. Replace the electrical and fire alarm systems with a rating of 2 or lower (Harstad, Hauge [electrical only], Ingram, Memorial Gym)
3. Develop a longer-term replacement plan for systems rated 3
4. Replace baseboard heating with central heating systems
- *5. Upgrade light fixtures with energy efficient lamps and motion sensors
- *6. Install variable speed drives for fan loads, which can be programmed when to run resulting in an energy and cost savings
7. Enact an International Electrical Testing Association (NETA) maintenance program to exercise all main breakers and calibrate all switchgear equipment

Long-term considerations for electrical systems:

1. Develop a plan for area and pathway lighting
2. Install annual contracts for NETA testing,
3. Continue to meter the buildings individually to maintain the electrical distribution throughout campus
- *4. Install a fiber tie to manage the power requirements to each building
- *5. Plan every 5 years for an outside consultant to evaluate each building for energy efficiency and functionality

PRIORITIES FOR STRUCTURAL IMPROVEMENT:

Academic/Administration/Student Support/
Recreation Facilities - High Priority Buildings

Building Name	
<hr/>	
Columbia Center	
East Campus	
Hauge	
Memorial Gym	
Olson	
Swimming Pool	
<hr/>	
University Center	Needs Further Analysis
Ingram	Needs Further Analysis
Mortvedt Library	Needs Further Analysis

Residence Halls - High Priority Buildings

Building Name	
<hr/>	
Foss	
Harstad	
Hinderlie	
Hong	
Kreidler	
Ordal	
Pflueger	
Stuen	
Tingelstad	

Structural Evaluation

Coughlin Porter Lundeen assessed the structural integrity of the building systems on the PLU campus. Their evaluation was based on a Tier I analysis which included a review of construction documents and visual observations. Buildings were evaluated for general conformance to the approved national standard for seismic performance. A further Tier 2 and/or Tier 3 analysis is required to determine specific upgrade requirements. All newer buildings and renovations, as well as projects underway, have been designed to current seismic codes, and so were not included in this analysis. The older peripheral houses with simpler wood or masonry construction were also not included.

The table identifies buildings that are recommended as priorities for structural improvements (based on the Tier I analysis). All of the residence halls (except South Hall) and most of the buildings evaluated are determined as higher or medium priorities for improvement with varying needs for structural improvements. Recommendations for life safety include adding shear walls, connections, and drag struts for more support; reinforcing walls and openings; and removing or anchoring unreinforced masonry partitions and chimneys.

The University Center requires further analysis. Concrete diaphragms are in place to handle shear stresses, but the load transfer needs to be assessed to determine whether the diaphragms are accepting an adequate load. Ingram Hall is also inconclusive with its history of multiple additions over the years. Due to its composite of various construction types, the quality of connections between the foundation, walls, and roof and the building’s overall integrity need to be further analyzed. For further detail of the structural analysis, refer to Volume IV.

Campus-wide Water Use

The cycle and flow of water in a given environment are very complex. Water arrives naturally through precipitation and local surface runoff and leaves a site through infiltration, vegetation, streams, soil, evaporation and transpiration.

Existing water service is provided by Parkland Light and Water, and the water mains on campus consist of four-, six- and eight-inch main lines. The four-inch water lines are inadequate for any proposed development and will require replacement with at least a six-inch main. Any new or relocated water mains will require a 15-foot maintenance easement centered on the main line. There is no central water meter for the campus, so each building is metered separately. Irrigation services are also provided throughout the campus with separate irrigation meters. New domestic and irrigation meters will likely be required for all new campus development. Fire service for new developments will require back-flow prevention devices, post indicator valves and fire department connections. The water pressure is low in some areas of campus (specifically around Eastvold Hall); booster pumps may be required for fire protection.

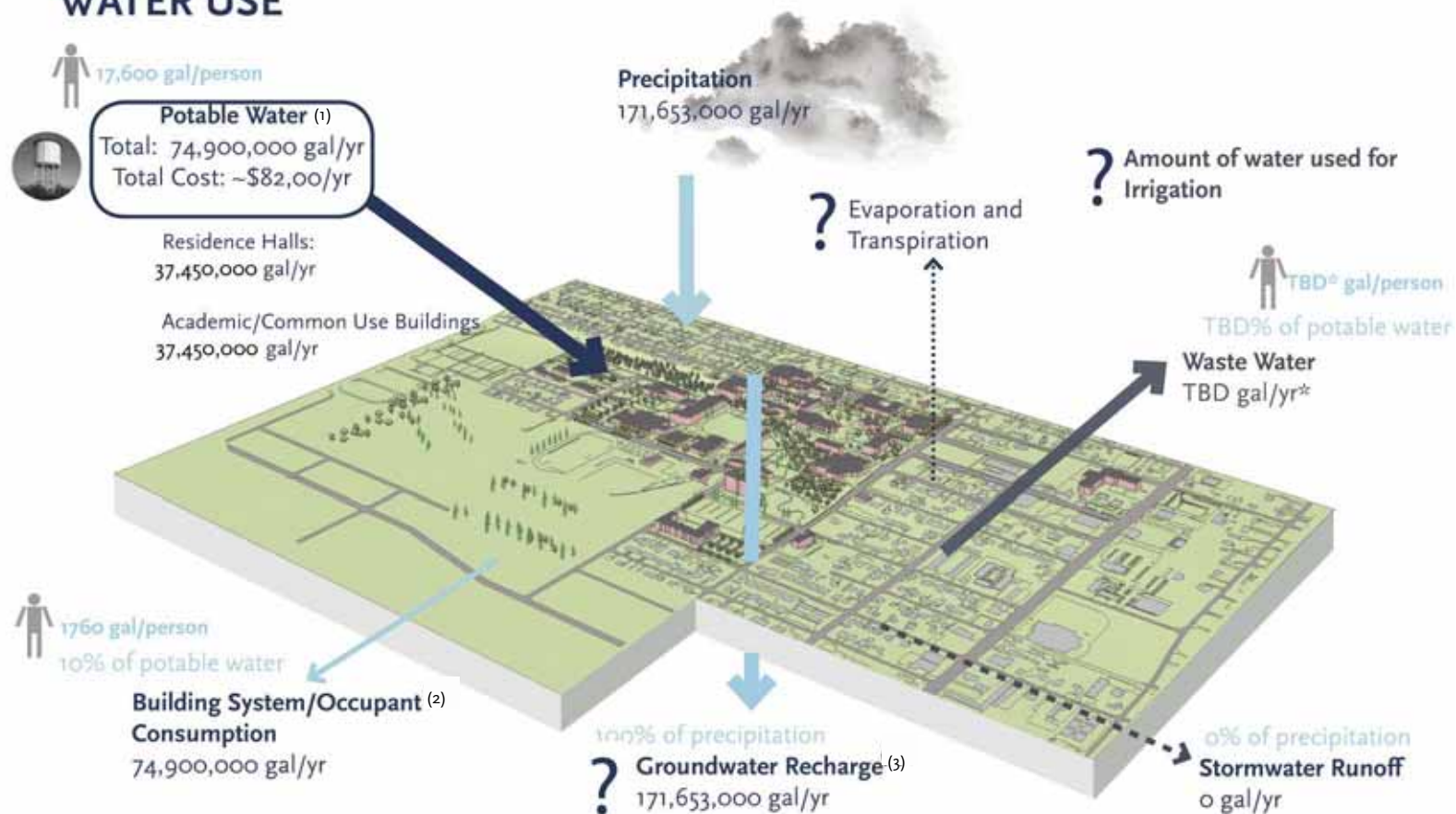
Current water use on a campus-wide level at PLU is shown in the following diagram. The average amount of water brought to campus through precipitation is 172 million gallons per year. Because the soils are so porous, the campus experiences no storm water run-off (aside from that lost to evaporation and transpiration) and all other rain water is recharged into the groundwater on PLU property. Approximately 74.9 million gallons of water per year is piped to campus as potable water. This translates to 17,600 gallons/yr per person.

A number of open questions for water use still need to be answered on a campus-wide level. For example, an accurate estimate of the building system/occupant consumption, the amount of water used for irrigation, an estimation of the amount of waste water leaving the site as well as an accurate breakdown of water use by residence halls and other campus buildings would be helpful for establishing benchmarks. Answering these, and other water use questions could be the focus of student research to help the university establish future goals and strategies.

Water Use Goals

The University has made a commitment to specific water use goals. Overall water consumption will be reduced by 25% over the next 5 years. The University would like to identify more precise numbers for waste water to establish similar reduction goals.

WATER USE



(1) Based on average annual data for 2004.

(2) Figures for water consumption based on assumption of 10% water use/consumption (this could be verified with PLU water/sewer Bills)

(3) Figures for groundwater recharge do not account for water loss through evapotranspiration.

*TBD: PLU Facilities Department is currently gathering relevant data.

Sewer

Pierce County Public Works provides a sewer main from the southeast corner of campus to the west side of campus, roughly following the historic path of Clover Creek. PLU also has its own private sewer system consisting of individual building side sewers and sewer mains that are connected to the public sewer system within the campus. The capacity of the sewer mains should be adequate for any new development.

Dry Utilities

Some underground telephone, data and electrical power lines are inefficiently placed to meet current and future requirements. In an effort to clean up and expand the existing underground utilities, the University recently completed construction of a fiber-optic duct bank that extends from the east side of the upper campus to the west side of the lower campus. Branches extend south to the building site for KPLU and to South Hall.

Natural gas service is provided by Puget Sound Energy. The University is served through four-inch main lines in the south, west and east portions of campus, and there are 12 meter locations for gas service. One location serves four heavy-use buildings (Rieke, Olson, Eastvold and the University Center). Future development may require relocating portions of the gas main.

Existing Stormwater Infiltration, Treatment and Conveyance

Stormwater runoff from the campus primarily travels directly into the ground or into dry wells. Recent developments such as Morken Center and Wheeler Parking Lot have more centralized infiltration systems, and South Hall and the new KPLU site contribute runoff to an infiltration pond at the southeast corner of campus where two biofiltration swales provide water quality treatment and sediment removal. Because soils in this region have a very high infiltration rate, only storm events with high rainfall will create standing water in the infiltration pond possibly limiting the success of the pond as an aesthetic water feature on the campus. There are no stormwater conveyance mains through campus as conveyance is localized for each development.

Recommendations for Reduced Water Use

Operational Strategies

- *1. *Install automatic controller for irrigation system linked to local weather station*
- *2. *Change overall water use behavior to conserve water.*

Ultra-High Efficiency Systems

- *1. *Install low flow fixtures (shower - 2 gpm, faucet - 1 gpm) and waterless urinals*
- *2. *Use native vegetation to reduce irrigation needs*

Reclaim Water

- *1. *Water collection, treatment and reuse of stormwater*
- *2. *Reclaim gray water and reuse*

Proposed Stormwater Infiltration, Treatment, and Conveyance

New development in the upper campus will need to provide a stormwater conveyance system to the lower campus to prevent groundwater seepage in the ravine. Stormwater runoff quality treatment is required for all new developments with pollution generating surfaces, such as parking lots. This will be most relevant along the perimeter of the campus where developments are subject to vehicular access. A new regional infiltration facility pond could serve 16.5 acres within the central portion of campus to accept stormwater from the buildings located just above the hillside (Eastvold, Ramstad, Hinderlie) and many of the lower campus buildings (Memorial Gym, Foss Hall, Tingelstad, Pflueger).

Low Impact Design (LID) techniques for storm water quality treatment such as rain gardens are recommended. This is an aesthetically-pleasing solution that allows for stormwater runoff to feed into the rain garden from the surface and then collects in an underdrain and is conveyed to a regional infiltration system. The Clover Creek drainage path can also be restored to provide stormwater conveyance west to east from the buildings to the new infiltration pond. The channel will need to be lined with non-infiltrative material to prevent stormwater from infiltrating through the ground.

* Sustainability-focused recommendation

**CAMPUS MASTER PLAN:
LANDSCAPE ANALYSIS & RECOMMENDATIONS**



October 2006

The master plan team conducted extensive research regarding the functionality and unique qualities of the PLU campus: walking the campus grounds in all seasons and in all weather; touring the campus with Grounds & Facilities staff; meeting with numerous campus departments and committees; spending a night in a campus residence hall interviewing students and walking the campus at dark; reviewing previous studies, reports and plans; and documenting our findings with photographs, plans and notes.

The information was compiled into a series of plans that comparatively overlay the layers of data collected and identify opportunities that will preserve the best elements of the landscape, incrementally improves those areas that are not fully contributing to the overall character and create a more even level of quality throughout the campus. The information has been organized into the following general areas of focus:

- Open space character– defined by buildings and landscape
- Circulation – pedestrian and vehicular
- Vegetation – plant associations
- Safety – personal and property
- Development – building use
- Campus edge – interface with the community

Open Space Character

The open space on campus includes everything that is not a building, including all pervious and impervious surfaces within the campus boundaries. The structure of the open space is first defined by the faces of buildings and further enhanced by mass plantings of vegetation, creating a series of outdoor rooms that are characterized by the textures of materials, filtration of light and permeability of access and use.

The forested slope running through the center of campus is a significant landform in the Parkland community and subdivides the campus into upper and lower sub-campuses. Historically, academic and residential buildings were located on the upper campus, forming quad-like open spaces interspersed with forest-like plantings of evergreen and deciduous trees. Athletic fields and facilities were located on the lower campus and have subsequently been surrounded by additional residence halls and academic buildings. The grouping of the athletic fields resulted in the lower campus being expansive and open, devoid of mature trees, in sharp contrast to the upper campus.



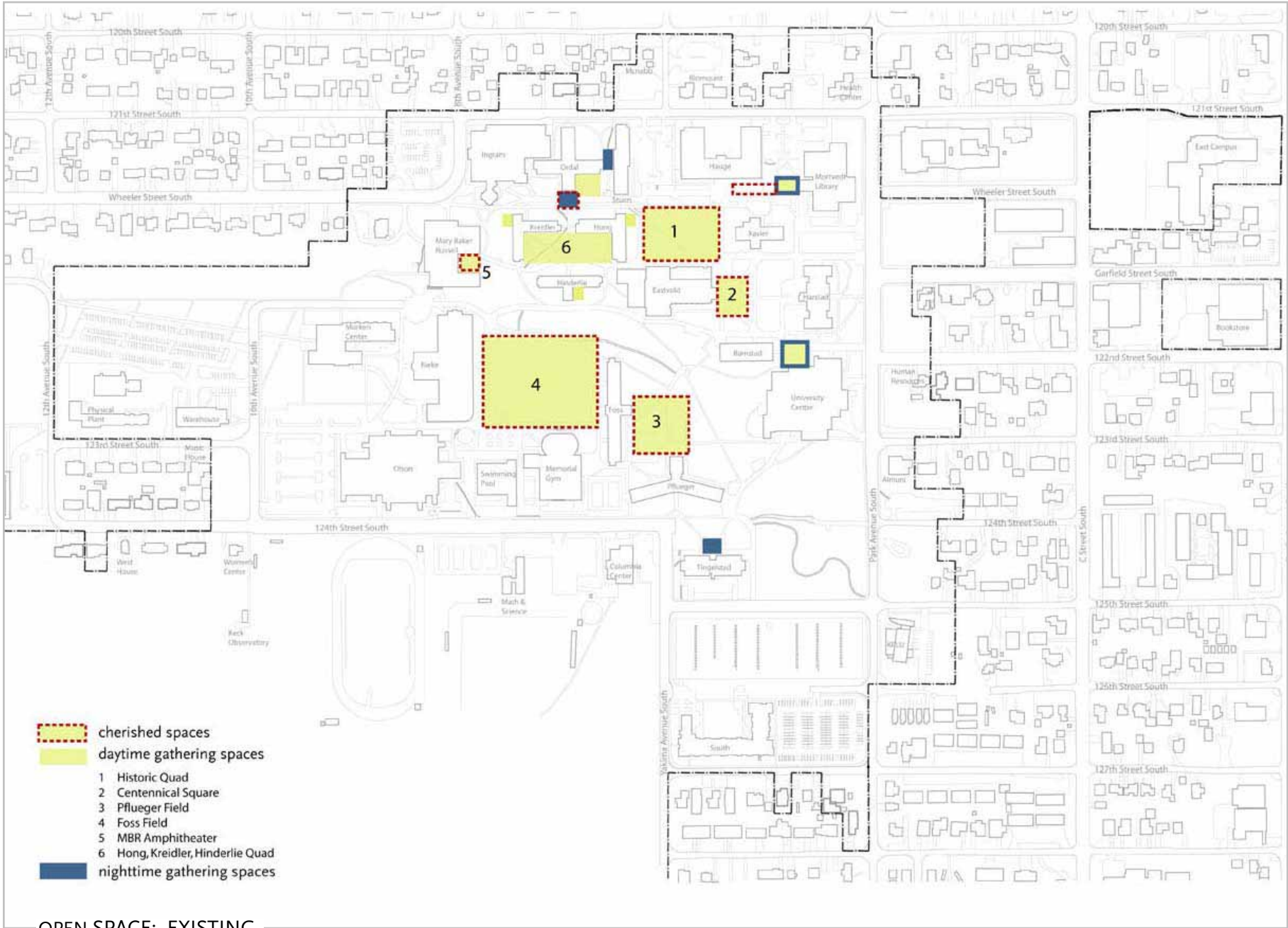
October 2006

The way in which the buildings frame or enclose open spaces has changed over time on both the upper and lower portions of campus. The original heart of campus is centered around Harstad, Eastvold and Xavier Halls and is characterized by intimately scaled open spaces enclosed by brick buildings and a mature tree canopy. The nature of these open spaces, or outdoor rooms, contribute to the unique character that is definitive of PLU and generate shared experiences that are passed from one generation of students to the next. Some of the most cherished spaces on campus include Centennial Square, Foss & Pflueger Fields, the Mary Baker Russell amphitheater and the Ordal patio.

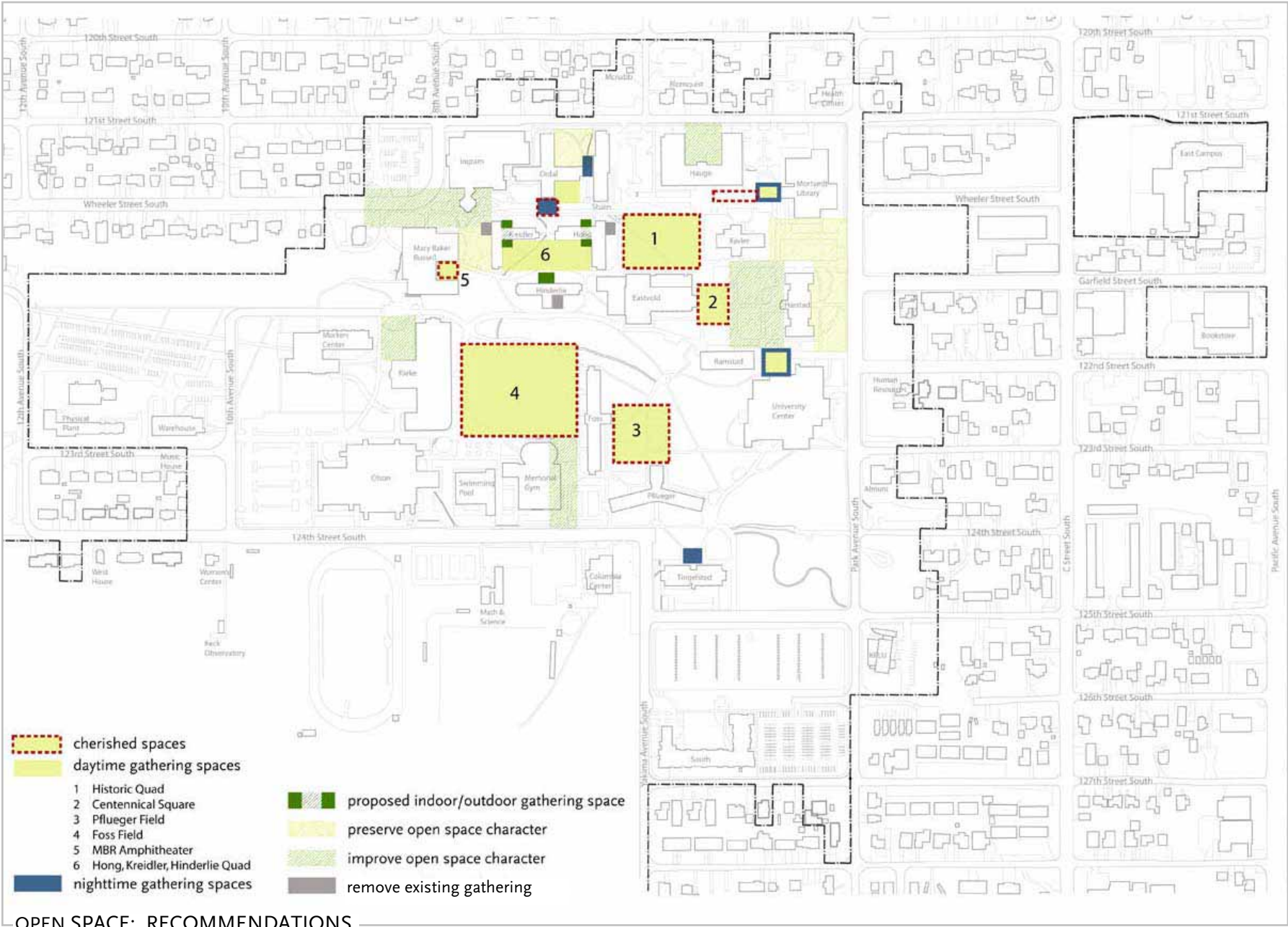
The character and use of outdoor gathering areas is dependent on the season, weather, time of day and adjacency and availability of access to indoor gathering areas. The abandoned outdoor patios adjacent to many of the residence hall lounges are an example of spaces whose use has changed based on the removal of immediate access from the lounge area, lack of adequate seating and limited lighting. Instead, opportunities for daytime and nighttime use could be created at the entrances to residence halls, where group gatherings can spill out from overcrowded lobby spaces into well-designed, safe outdoor gathering areas. Shelter from inclement weather, comfortable seating, attractive plantings and adequate lighting will enhance these spaces and make them more attractive for student to use for socializing, studying, and just passing time.

October 2006





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Recommendations for Open Space:

1. *Improve the network of outdoor spaces so that there are gathering spaces throughout campus that have a diversity of scales and spatial form, and allow for complementary learning and living activities.*
2. *Remove the neglected outdoor patios that have been closed off from the residence hall lounges and replace them with gathering spaces at the entrances of the residence halls. Relate these spaces to the building lobbies so that activities are allowed to spill from inside to outside. Use comfortable seating, shelter from inclement weather, attractive plantings and adequate lighting to define these spaces.*
3. *Preserve the elegant character of open lawns and large trees on the upper campus by developing a replanting policy and limiting the occurrence of small, high-maintenance planting beds.*
4. *Realize opportunities to improve the open-space character of some of the neglected or under-used spaces on campus. Use planting that complements the adjacent architecture and enhances the general campus character to define these spaces. Install seating that creates places where the campus community can congregate, especially related to the entrances of buildings and at the edges of large open spaces. Install lighting that makes the spaces feel safe at night.*



Vehicular Circulation

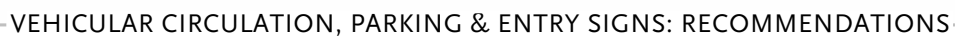
Vehicular circulation consists of the collection of roadways, drives, services lanes and parking lots that are used by students, faculty, staff, visitors, and emergency and service vehicles to move throughout the campus. The primary routes to campus are from the surrounding county roads, with the majority of traffic approaching the University from Pacific Avenue South, down Garfield Street South to Park Avenue South, where they disperse into the perimeter parking lots.

The sequence of arrival to the University is announced by a collage of signage ranging in character from standard highway signs and backlit commercial signs that blend into the commercial character of Pacific Avenue South rather than the character of the University. At the intersection of Garfield Street South and Park Avenue S, a small identification sign announces the arrival to the University. For first time visitors, the directional signage and wayfinding abilities once you have arrived at this point on campus are unclear and do not present a welcoming front door.

Parking on campus is accessed from the perimeter roadways and is divided into 21 lots of varying sizes. The Parking Management Study conducted in 2000 found a 75% average utilization rate with most of the demand in the north end of campus. The conclusion was that the number of parking spaces available is sufficient but the allocation of spaces may need to be adjusted. The recent opening of the Morken Center may shift demand for parking to the south end of campus. A separate parking study has since been initiated to evaluate this.

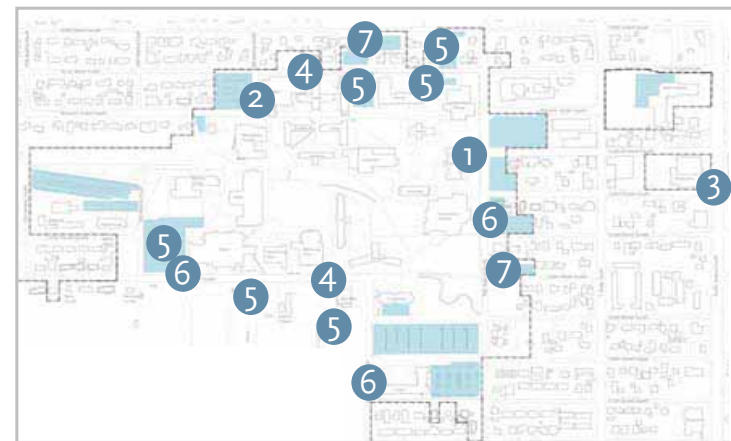
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Recommendations for Vehicular Circulation

1. Define the campus entrance at Garfield Street S and Park Avenue S to welcome visitors and the campus community. Incorporate a monumental sign similar to that found at the corner of Park Avenue S and 127th Street S, a visitor drop-off/pick-up zone, wayfinding signage, seating, pedestrian-scale lighting and landscaping that compliments the architecture of Harstad and preserves the large specimen trees.
 2. Define the campus entrance at Wheeler and 8th Ave South as a gateway between the adjacent neighborhood and the University. Incorporate monumental signage, traffic-calming measures, pedestrian crosswalks, seating, pedestrian-scale lighting and landscaping in the gateway design.
 3. Simplify existing campus signage on Pacific Avenue S by consolidating the small campus signs currently part of the commercial signage into one sign that is a style complementary to the signs at the other campus entrances, and creates a distinct identity for the campus. Incorporate this sign into the development of the bookstore at the corner of Pacific Avenue S and Garfield Street S.
 4. Install traffic-calming measures on the streets that abut the campus to increase safety for pedestrians and define the edges of campus. Use strategies such as narrower traffic lanes, medians or roundabouts at dangerous corners and neck-downs or speed tables at crosswalks to slow traffic speeds and reinforce the primacy of pedestrians on campus.
 - *5. Add new parking lots as needed in recommended locations. Incorporate rain gardens and natural drainage strategies into the design of any new parking lots, or retrofit existing parking lots that have vegetated medians so that storm water is filtered and groundwater is re-charged. Reconfigure existing medians by removing curbs and creating swales to allow the vegetated median to function ecologically.
 6. Designate new areas of parallel parking along 124th Street South and Park Avenue South. Include street edge improvements such as curbs and bump-outs at intersections, sidewalks and crosswalks.
 - *7. Increase the efficiency of parking in Nesvig Lot, Northwest Parking Lot and Yakima Street Parking Lot by paving and reconfiguring the parking layout to accommodate more spaces in each lot while incorporating natural drainage strategies.
 8. Provide structural lawn to areas that need to support vehicular access during move-in/move-out.
- * Sustainability-focused recommendation





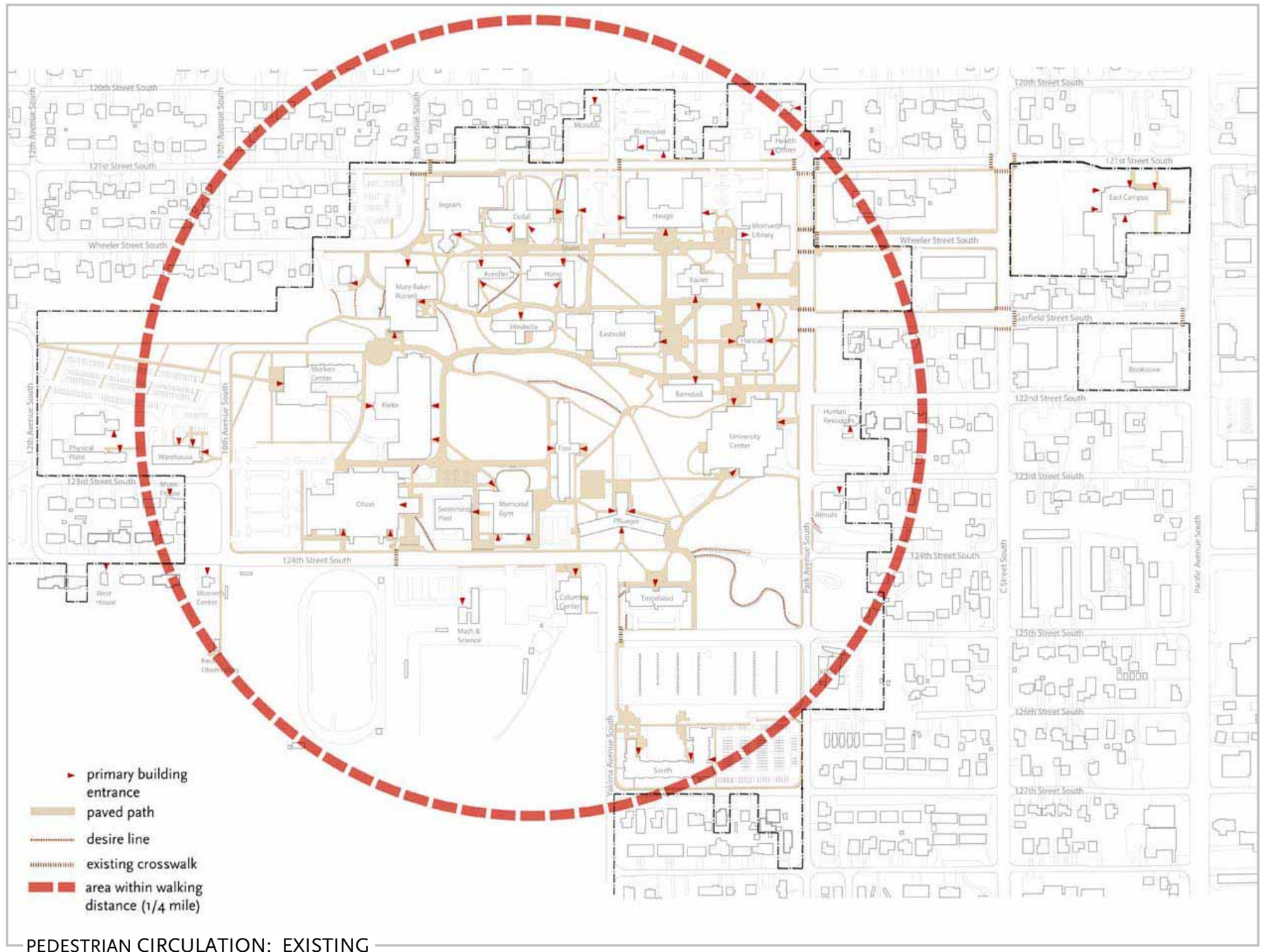
Pedestrian Circulation

The core of the campus is primarily car-free, with the exception of the occasional shared use of walkways by service and emergency vehicles. The compact nature of the campus and limitation of cars within the campus core contribute to a pleasant pedestrian experience. The 40-plus foot hillside that runs east-west through the campus adds a unique quality to the campus landscape, but presents a physical barrier that provides limited access between the buildings located on the top of the hillside and those directly south at the lower elevation. Another weakness in the pedestrian network is the lack of connections from the perimeter parking lots to the campus core, in particular at street crossings.

The complex network of pathways is more pronounced on the north half of campus where it has developed over time than on the south half of campus where it is more spread out and pushed to the perimeter of actively used open spaces. There are also a number unpaved pathways scattered throughout the campus that have developed over time as shortcuts through planted areas. As new pathways are constructed, removal and consolidation of existing pathways is encouraged.

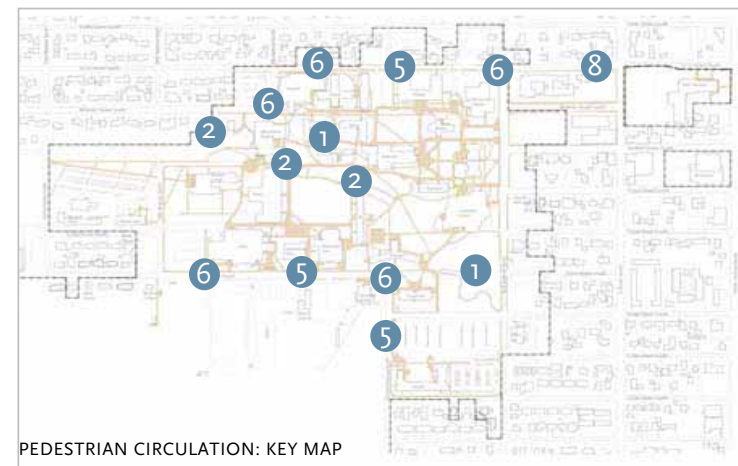
The conditions of the walkways throughout the campus differ only slightly; many suffer from poor drainage, differential settlement and upheaval caused by the roots of nearby trees. The result is walkways that become tripping hazards, are difficult for persons in wheelchairs to negotiate, and are filled with water during heavy rains.





Recommendations for Pedestrian Circulation

1. *Install paved paths where existing desire lines through planted areas suggest direct path routes, for example between Kreidler and Hinderlie.*
2. *Provide additional north/south circulation routes through the forested hillside to better connect the north and south parts of the campus, including a pathway west of Mary Baker Russell Music Center.*
3. *Consolidate and re-configure existing pedestrian paths to simplify circulation patterns and reduce excessive pavement. When possible use permeable paving.*
4. *Improve the condition of paved paths campus-wide to create pathways that are universally accessible with regards to slope, materials and site-furnishing placement.*
5. *Install sidewalks and curbs in areas where pedestrian circulation and on-street parking coincide.*
6. *Provide crosswalks at intersections that surround campus, and at mid-blocks where it is necessary to strengthen pedestrian connections. Use distinctive paving materials, textures, and bump-outs and/or speed tables at crosswalks to increase safety and awareness of pedestrians.*
7. *Screen mechanical equipment, trash collection and service areas from pedestrian walkways to provide a clear separation of use.*
8. *Improve sidewalks and lighting to mass transit center to promote alternative modes of transportation to campus.*



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Vegetation



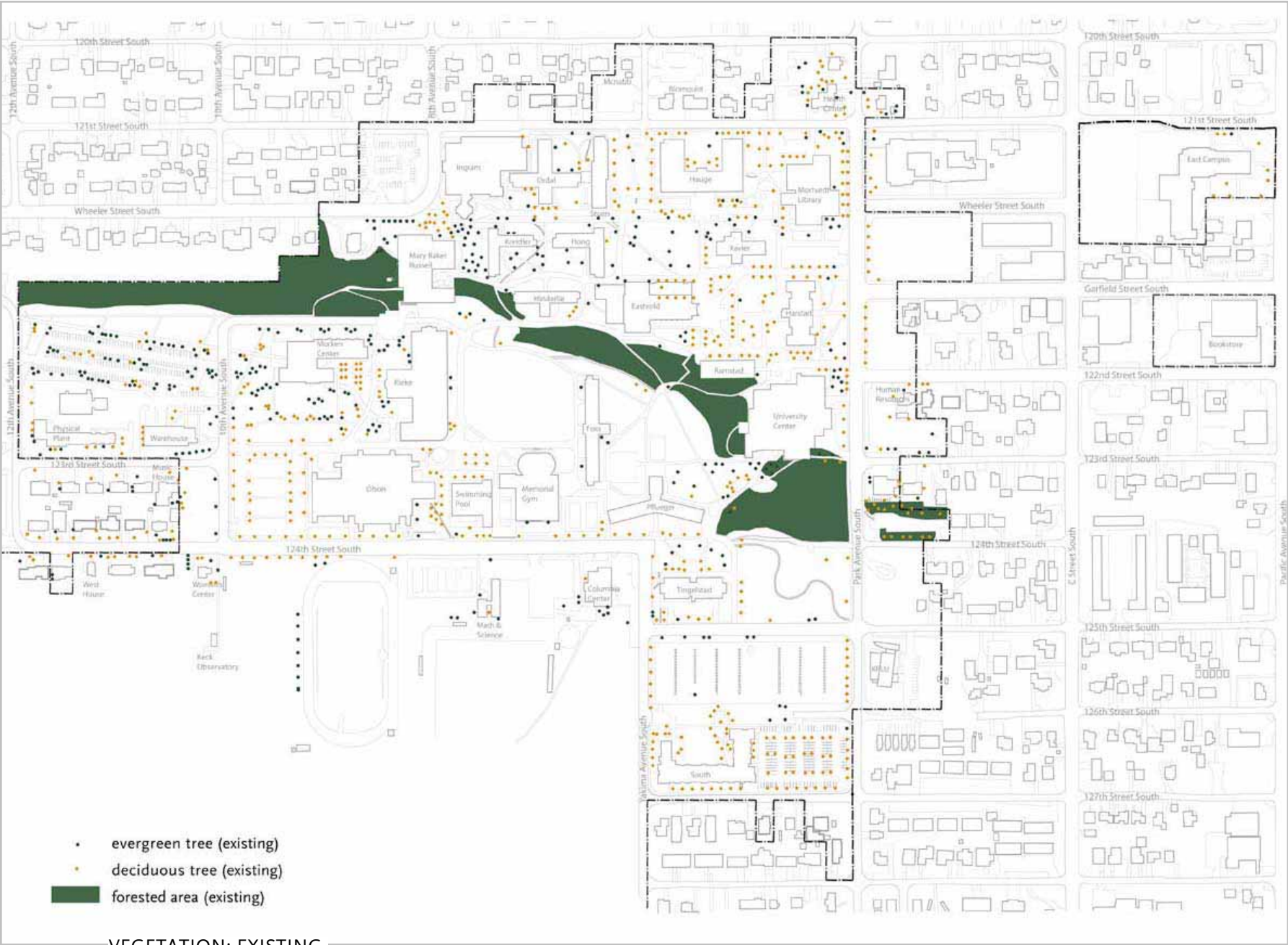
The existing tree canopy with towering firs and mature deciduous trees that cover most of the northern portion of the campus is one of the most identifiable features of the campus landscape. Preservation of the tree canopy through the development of a replanting strategy should be established and extended to the southern portion of the campus to maintain the unique character of the University for generations to enjoy.

The expansive use of lawn is another unique feature, but requires considerable maintenance and water use to sustain the lush green quality that is desired. The abundant use of plant beds around the edges of buildings helps to reduce the amount of lawn on campus and provide seasonal interest, but in some cases, it detracts from the simplicity of the architectural character of the older buildings and if planted too closely, can contribute to rodent problems. Additional use of plant beds scattered throughout the campus to control pedestrian circulation detracts from the grandeur of the larger open spaces and blocks views and connections from one space to another.



The wildness of the forested hillside offers a relief to the manicured nature of the surrounding landscape and provides a natural habitat for wildlife, enhancing the diversity of species on campus. At the same time, the overgrown nature of the vegetation limits the permeability, both visual and physically through the hillside, creating potentially unsafe situations. The introduction of non-native invasive species within the hillside has put a strain on the native species and impacted the viability and long-term survival of the native vegetation.



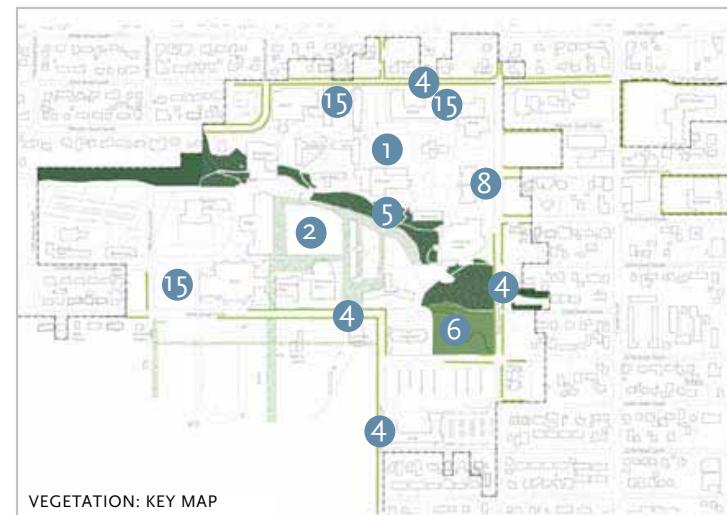


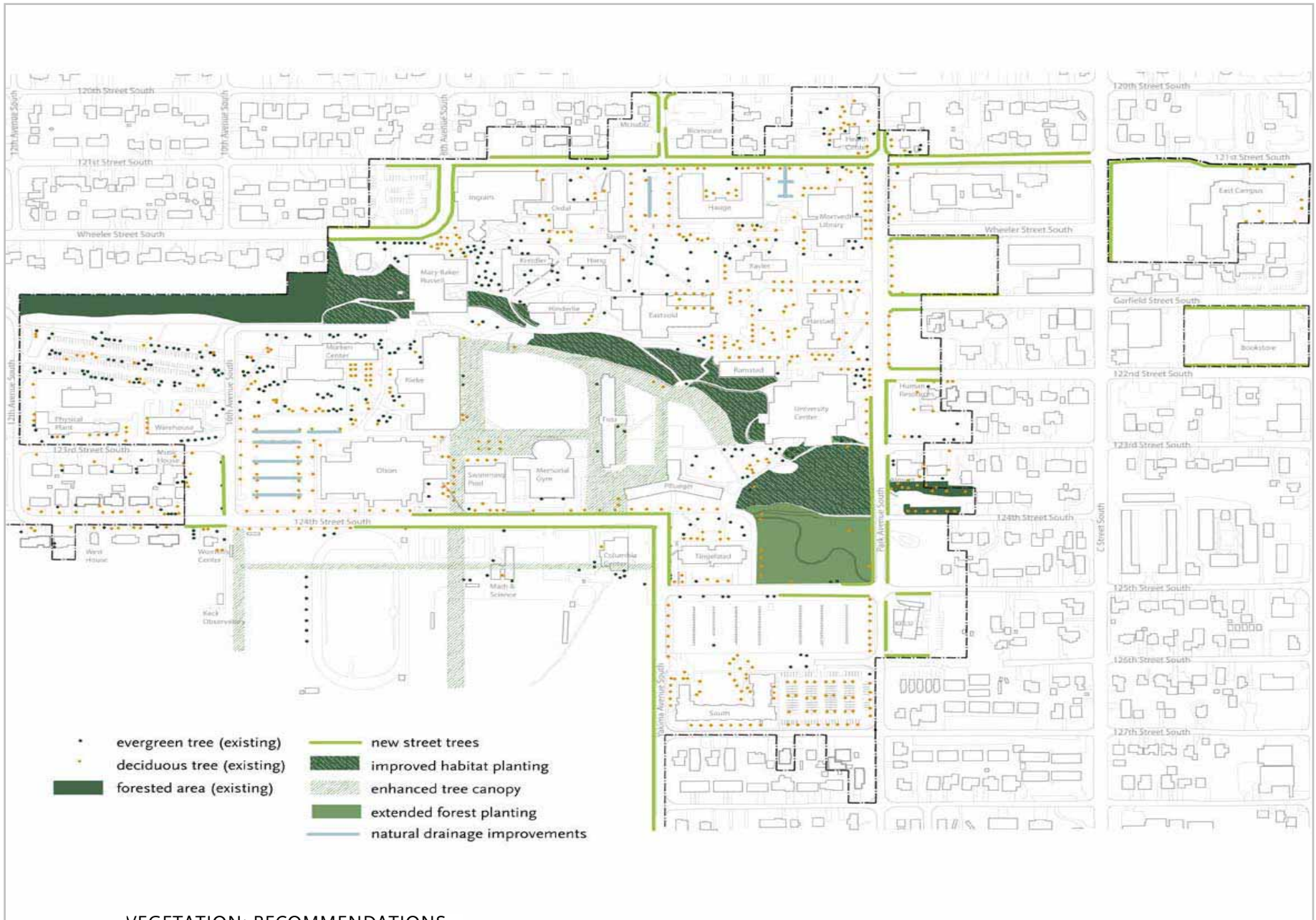
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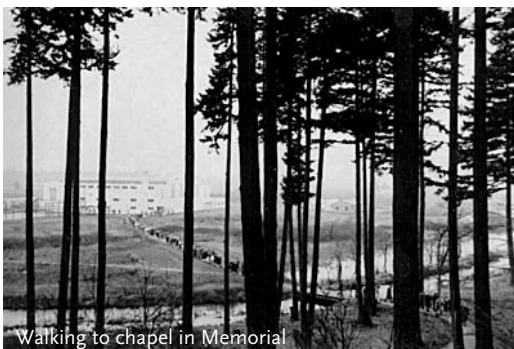
Recommendations for Vegetation

- *1. Assess the age and condition of the tree canopy on upper campus and develop a re-planting strategy that will ensure future tree cover for future generations to enjoy.
- *2. Extend the character of the upper-campus tree canopy to lower campus, using trees to define the edges of the playfields and delineate pathways.
3. Diversify the palette of evergreen trees on campus to ensure future disease and pest resilience of the tree canopy.
4. Create a distinct campus edge by lining the roads adjacent to campus with street trees that exhibit seasonal character.
- *5. Develop a strategy for maintaining the native vegetation on the hillside to include the selective clearing of overgrown mid-story vegetation to create more permeability, both physically and visually. Remove invasive vegetation and replace with native plantings to encourage the development of viable wildlife habitat.
6. Enhance planting around the detention pond so that it reads as an extension of the forested hillside and creates additional habitat for wildlife on campus.
- *7. Improve habitat throughout campus by planting diverse, native or adaptive groundcover and trees.
8. In select areas around Harstad, Eastvold and Xavier, reinforce the historic character of adjacent buildings with landscape plantings that reflect the era of architecture.
9. Provide more seasonal interest by planting additional flowering trees or trees with striking bark characteristics in contrast to adjacent buildings or wooded areas.
10. Provide more layering of plants and mass plantings with groundcovers a minimum or 2-3 feet high to reduce weeding and conserve water usage.
- *11. Capitalize on opportunities to conserve water by using a water efficient eco-lawn seed mix in new or replacement lawn plantings.
12. Replace grass planted on slopes greater than 3:1 that are hard to maintain with more suitable plantings or retaining walls.
13. Consolidate high maintenance, small planting beds along pathways to open up views through campus and visually connect important open spaces to one another.
14. Provide landscape edging between plant beds and lawn areas to reduce maintenance.
- *15. Reconfigure existing parking lot medians to create rain gardens with water-tolerant native plants that can filter storm-water and recharge groundwater.
- *16. Install a new water efficient automated irrigation system with a central controller located in the facilities building. Explore the option of using grey water as the source for the irrigation system.

* Sustainability-focused recommendation







Walking to chapel in Memorial

Source: http://www.plu.edu/~envt/envt350/cc_photo.html



Clover Creek with Foss in background

Source: http://www.plu.edu/~envt/envt350/cc_photo.html



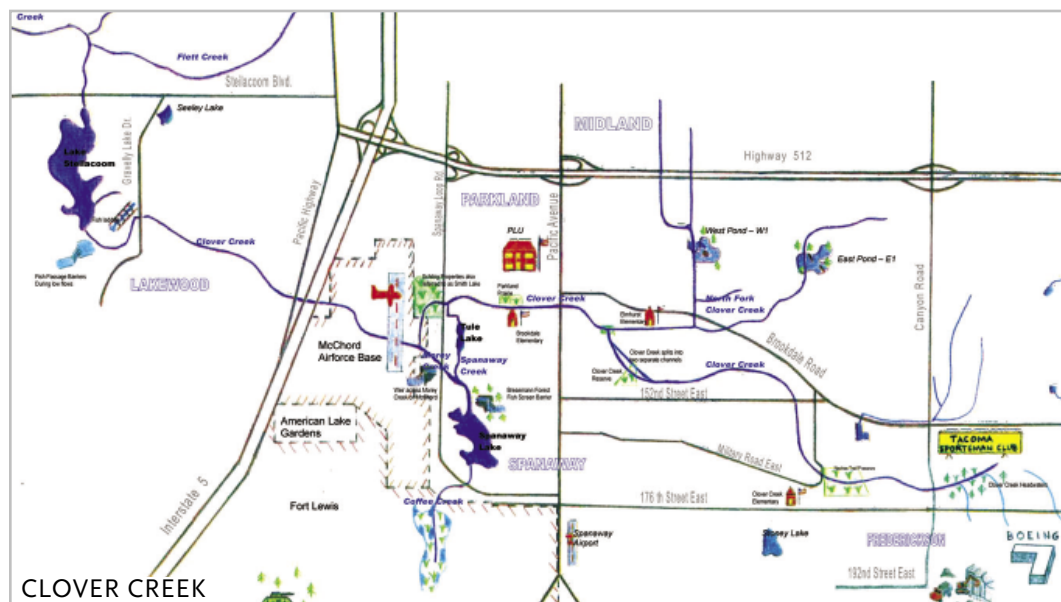
Clover Creek with Harstad & Park Ave in background

Source: http://www.plu.edu/~envt/envt350/cc_photo.html

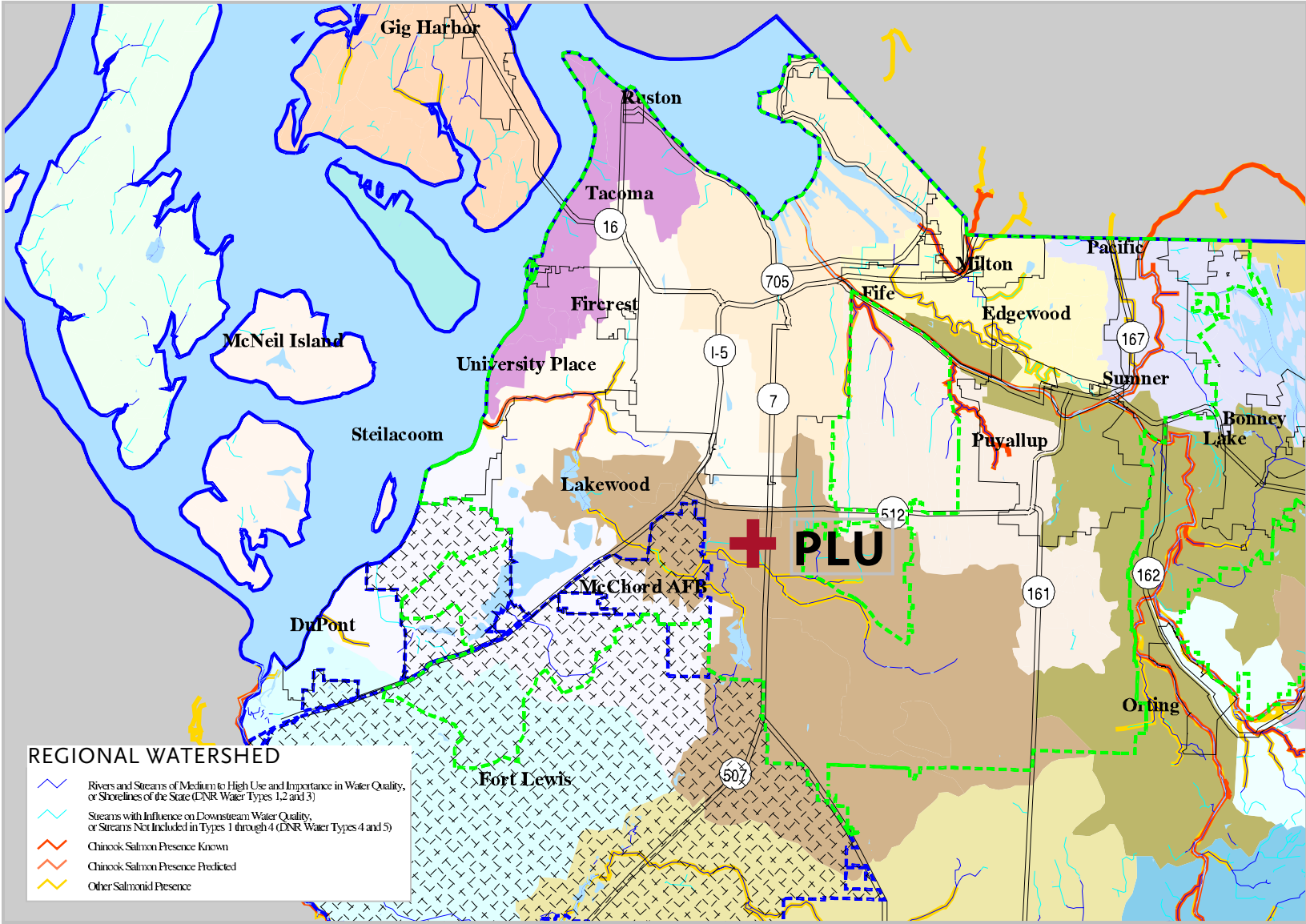
Ecosystem Connections & Habitat

The natural environment serves as a life supporting system for people, wildlife and plants in many ways. The natural systems enrich habitat and biodiversity; maintain natural landscape processes; cleans the air and water; increases recreational and transportation opportunities; helps improve our health; and provides us with better connections to nature and a sense of place. Protecting these resources is an ongoing challenge in today's society where we face issues of sprawl, water quality, endangered species, etc., and requires consideration of the natural environment as a system, linking parks and other green spaces for the benefit of people and biodiversity.

The size and openness of the PLU campus contributes significantly as an open space within the Parkland neighborhood. On a regional scale, the campus falls within the Clover Creek/Steilacoom Watershed. The water within this watershed flows into the Clover Creek drainage basin and discharges into Lake Steilacoom. From there, water overflows into Chambers Creek and discharges into Puget Sound. Both Clover Creek and Chambers Creek are of medium to high importance in water quality due to the presence of Chinook Salmon and other Salmonid. Historically, Clover Creek ran through the PLU campus, just south of the hillside.



Source: <http://www.co.pierce.wa.us/pc/services/home/environ/water/ps/basinplans/clovercreek.htm>



Source: <http://triton.co.pierce.wa.us/MapGallery/documents/Chindoc.pdf>

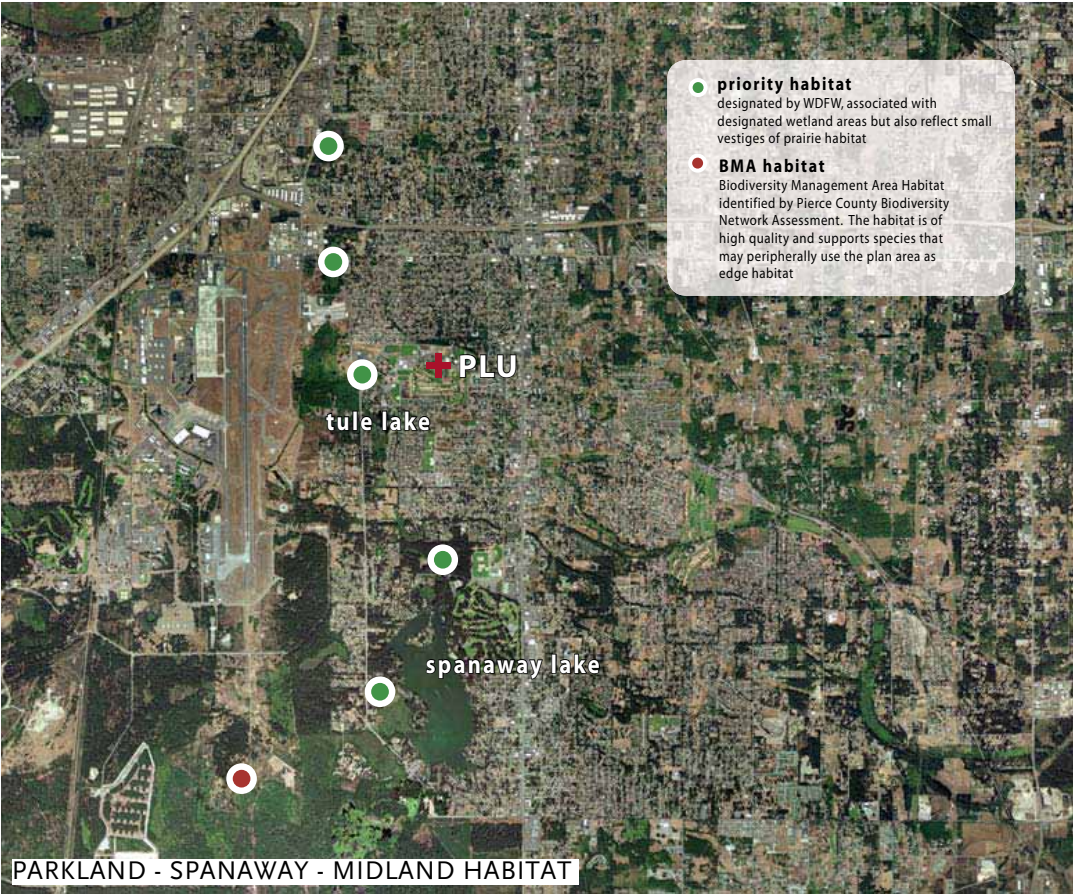
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The PLU campus falls within the Parkland - Spanaway - Midland communities boundary which is rich in priority habitats associated with designated wetland areas and small vestiges of prairie habitat as defined by the Washington Department of Fish and Wildlife. Dense development around the perimeter of campus has resulted in loss of habitat or habitat fragmentation. The hillside on the PLU campus supports many native species of trees that contribute to wildlife habitat for small animals and birds, but is considered a remnant habitat that is disconnected from the surrounding priority habitat areas.

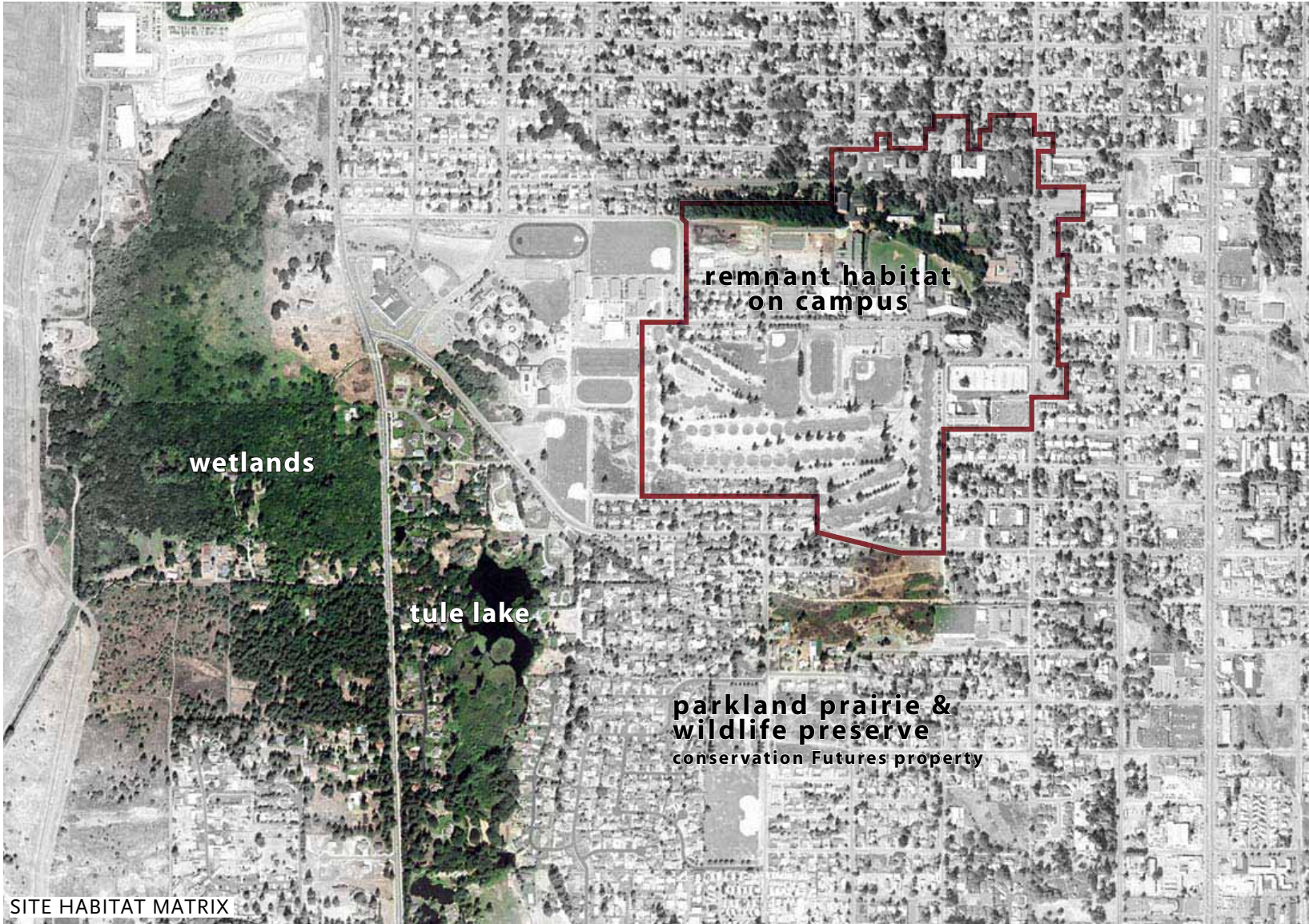
POTENTIAL CRITICAL BIRD SPECIES IN
PARKLAND - SPANAWAY - MIDLAND
COMMUNITIES PLAN

Common Name	Primary Habitat
Yellow Warbler*	Riparian
Western Bluebird	Coniferous forest - riparian & prairies
Chipping Sparrow*	Prairies
Cooper's Hawk	Coniferous forests w/in 1/4 mile of water
American Bittern"	Wetlands
Great Blue Heron	Riparian/Wetlands
Pileated Woodpecker*	Snags - mature forests
Bald Eagle	Forest - snag - riparian

* Indicated at-risk species through the GAP pilot project



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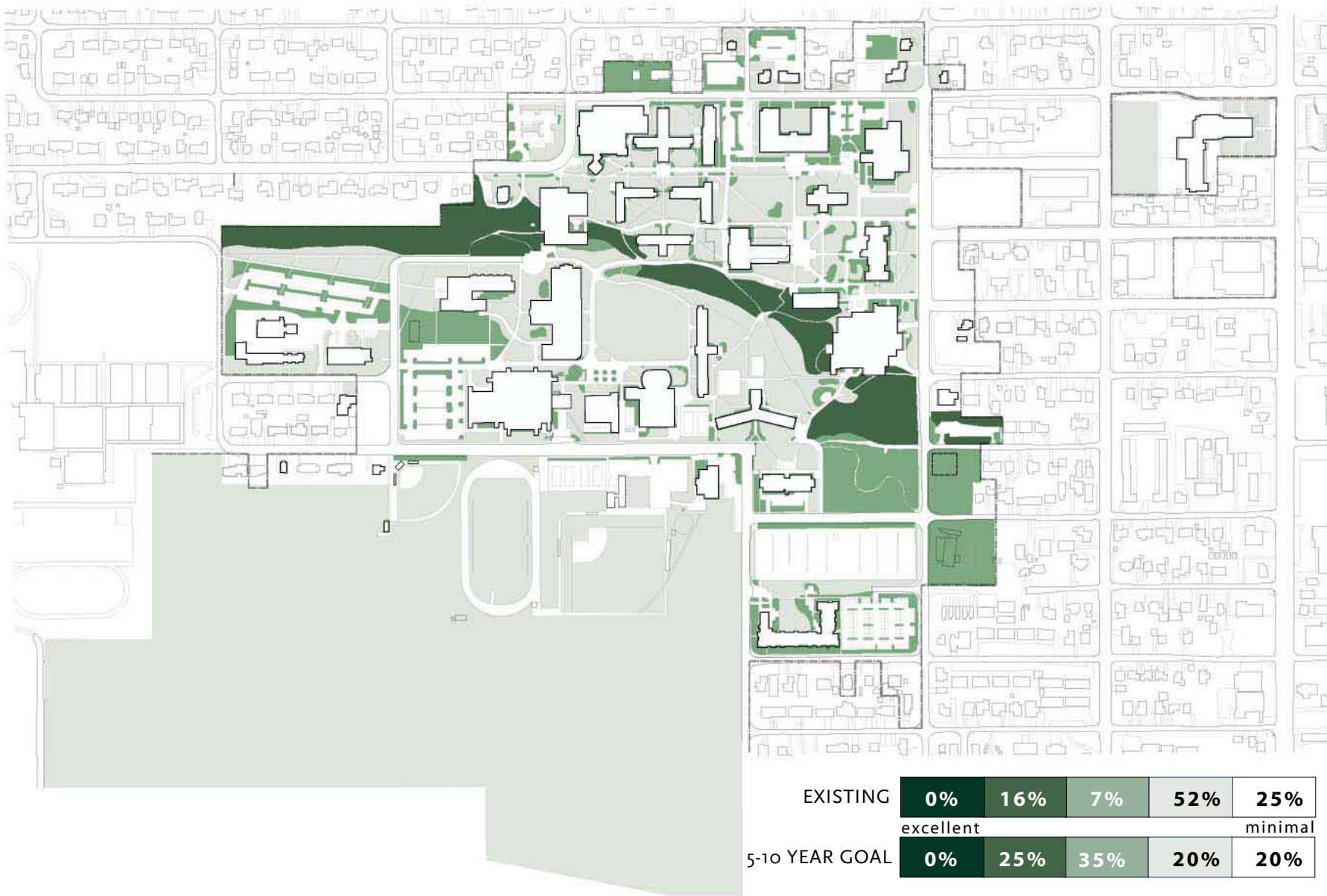
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The quality of habitat on campus is measured by the type of vegetative cover that is found in different areas of campus. Although the hillside is thickly vegetated, the aggressive nature of invasive species has dominated the native species, thereby limiting the areas of native habitat. The diagram below illustrates the value of habitat based on the type of vegetative cover. The plan on the next page quantifies the habitat quality of the existing groundcover as it currently exists and the potential quantities that could be achieved in 5-10 years.

habitat quality

excellent ◀ ▶ **minimal**

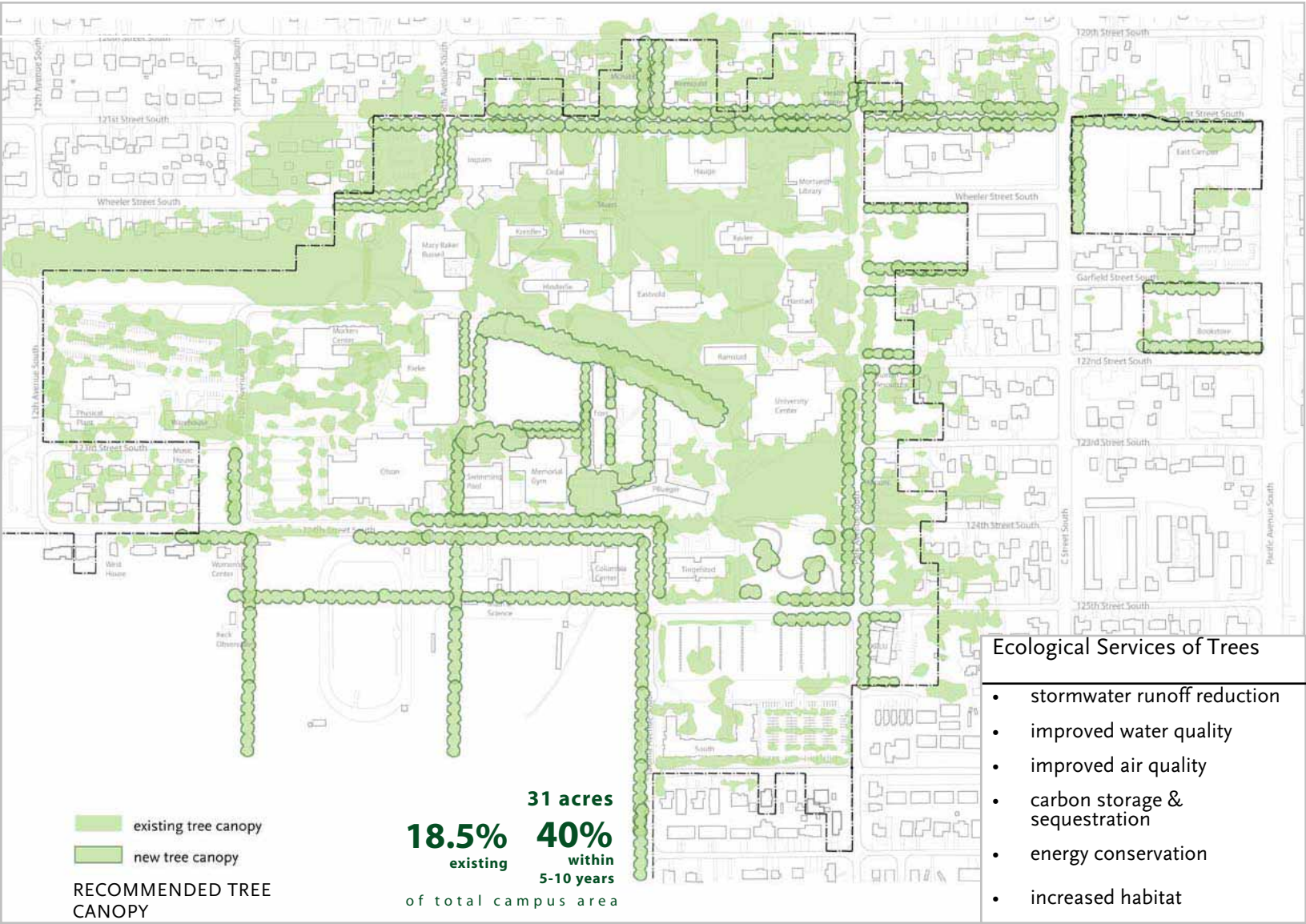




ECOLOGICAL EFFECTIVENESS OF GROUND PLANE

October 2006

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Safety

The perception of safety on campus outweighs the actual incidents of crime. Most incidents that occur on campus are property related, either car break-ins or residence hall break-ins. The perception of personal safety is closely related to the level of lighting along pathways at night, overgrown vegetation that limit views, outdoor areas that are not frequently populated or are adjacent to dark classrooms, the proximity of building entrances, and the nature of the surround community. Emergency phones and cameras have been installed in the more remote areas of campus and have helped reduce the number of incidents.

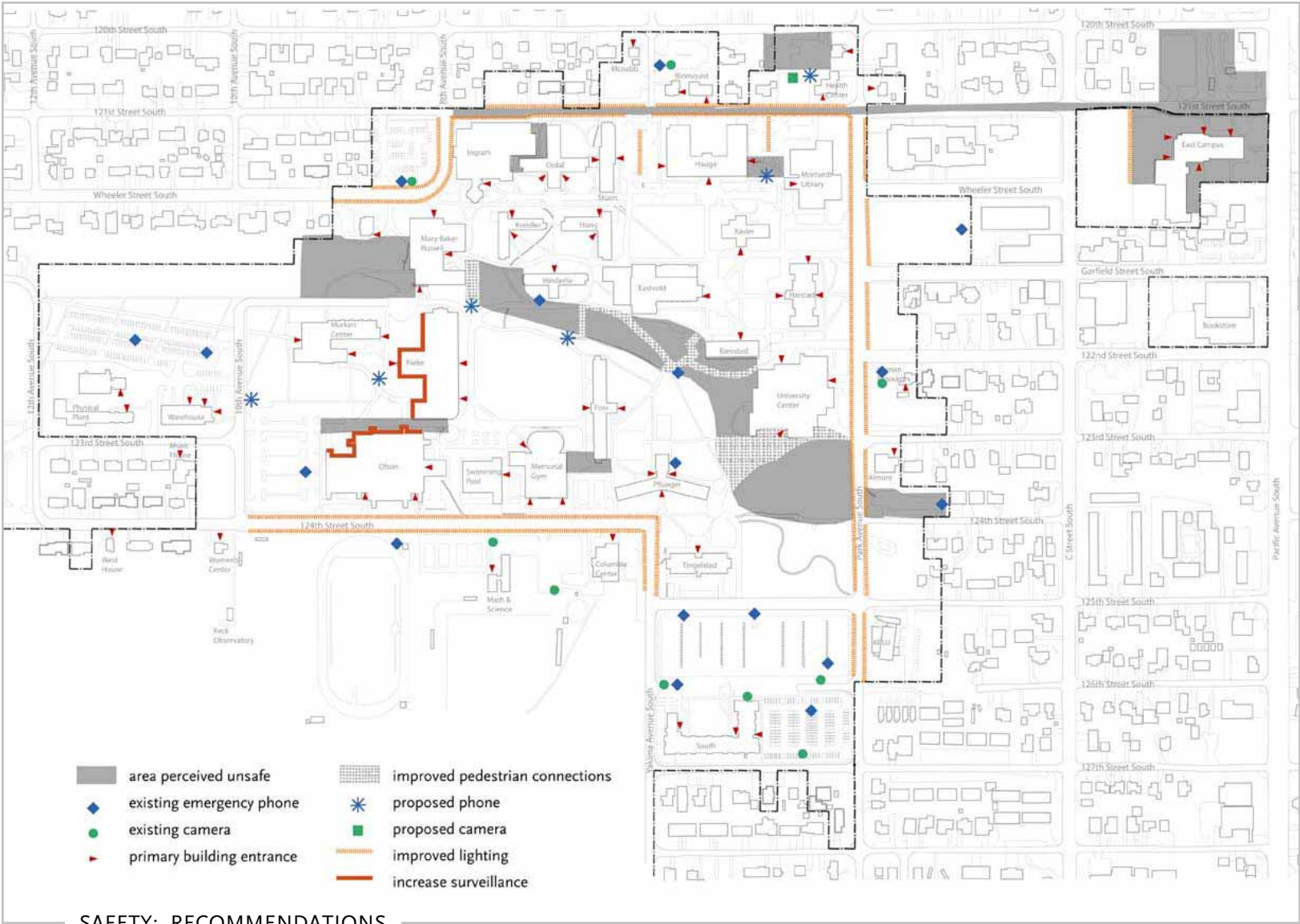


Recommendations for Safety Improvements

1. *Increase safety throughout campus by limiting the use of mid-story plantings along pedestrian walkways that block views. Plantings should maintain visibility between three to eight feet in height.*
2. *Install safety phones and cameras in remote parts of the campus and on walkways through the forested hillside.*
3. *Incorporate additional lighting along streets that form the campus edges, major pathways through campus, and in parking lots that maintain adequate levels of light without increasing the amount of glare on the adjacent neighborhood.*
4. *Increase natural surveillance of open spaces perceived as unsafe by providing building entrances and windows that overlook and access these areas.*
5. *Increase patrol of campus grounds at night.*
6. *Complete installation of security camera system for parking lots and other high priority areas.*



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SAFETY: RECOMMENDATIONS

Mix of Uses & Campus Edge

The unique mix of academic, administrative, and common use buildings interwoven with residence halls contributes to the strength of the live-learn environment at PLU and provides opportunities for students to choose distinctive living arrangements that suit their personalities. This intermixing of residence halls should be maintained as the campus develops.

The cohesive nature of the built environment within the boundaries of 121st Street South to the north, Park Avenue South to the east, 8th and 12th Avenues South to the west and 124th and 125th Street South to the south define the edges of the University within the community. Each edge has a different character. At the north, 121st Street should be developed with sidewalks where they currently don't exist. The Park Street should emphasize the main campus entry. Other campus edges should continue to be sensitive to neighboring residences while improving feelings of safety. Refer to previous sections for other specific edge improvements.



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BUILDING USE

October 2006

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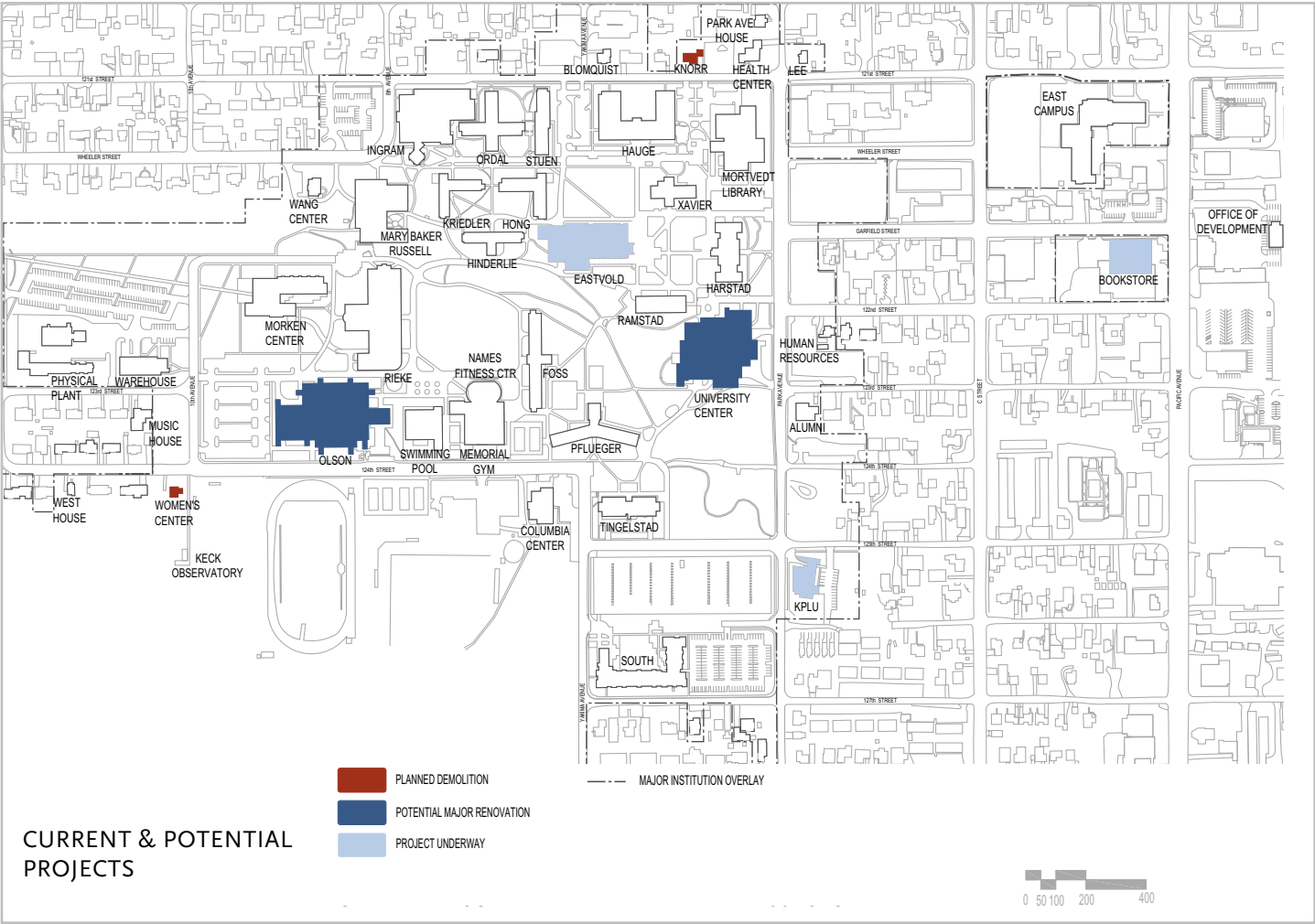
**CAMPUS MASTER PLAN:
FUTURE PROJECTS**



October 2006

Introduction

The following diagrams illustrate potential projects and long term development sites identified by integrating the results of the landscape, needs and facilities analyses. Also shown are the current projects underway, and planned and potential long-term demolition.



Projects Underway

There are several projects currently in design and expected to be completed within the next 3-4 years.

Eastvold Hall Renovation and Addition

This project will allow for Humanities offices to move out of peripheral houses and consolidate in Eastvold. The renovation will also give the Theatre Department a studio theatre venue and expand the chapel to accommodate a larger audience. The completion of Phase I is scheduled for 2008, and subsequent Phases II & III are expected to be completed in later years.

KPLU Facility

The public radio station, KPLU, currently resides on the main campus in Eastvold Hall, and will be moving to a new facility located at 125th Street and Park Avenue.

PLU Bookstore on Garfield Street

The PLU Bookstore, currently located in University Center, will be moving to a new facility at the corner of Pacific Avenue and Garfield Street. This location will increase PLU's and the bookstore's visibility on Pacific Avenue and serve as a landmark on Garfield Street as visitors approach campus. Street improvements along Garfield Street funded by the County are also planned as mentioned earlier.

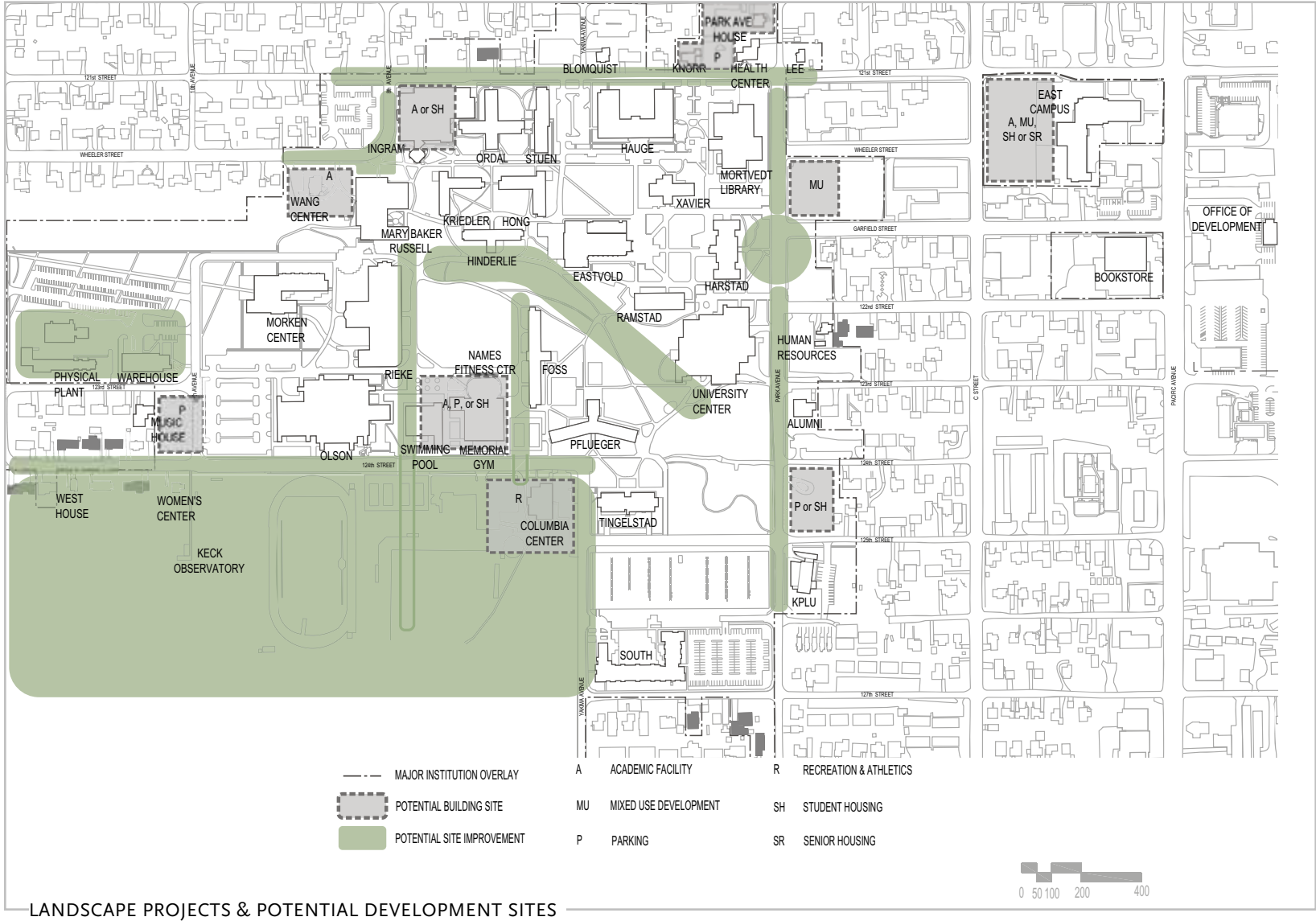
Planned and Long-Term Demolition

Planned demolition projects in lower campus include the Women's Center and West House. On the upper campus, Knorr House will be demolished allowing for additional parking at this locations.

Other peripheral houses including Blomquist House, Human Resources, Music House, and Park Ave House may be demolished in the long term to bring additional functions to the campus core and take facilities that are difficult to maintain off-line. These long-term demolition projects will also allow for additional parking or open space at those locations.

CAMPUS MASTER PLAN

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Potential Major Renovation or Replacement

The facilities analysis helped identify buildings in the poorest condition that should be considered for replacement or major renovation. Four buildings were identified including Ingram, the Swimming Pool, Memorial Gym and the Columbia Center. The decision whether to replace or renovate each of these will be based on an understanding of phasing needs, project costs, relative priorities and the best long-term benefits. For further detail on proposals related to renovation of Olson Auditorium and possible replacement of the Pool, Memorial Gym and Columbia Center specifically refer to Volume V, the Athletics, Recreation and Physical Education Master Plan.

Potential Major Renovation

Other buildings were identified as also being in poor condition but not poor enough (or, too valuable) to be considered for replacement. Facilities identified for major renovation include Olson, the University Center, East Campus, and most residence halls: Foss, Harstad, Hinderlie, Hong, Kreidler, Ordal, Pflueger, Stuen, and Tingelstad.

Potential Minor Renovation or Building Upgrades

Buildings that require minor renovations due to needs for upgrades and/or change of program spaces include Hauge, Mortvedt Library, Ramstad, and Rieke Science Center.

Landscape and Site Improvements

Potential landscape and site improvements shown in the diagram address campus edges, pedestrian safety and functional needs identified in the landscape analysis. The diagram shows improvements at the Park Avenue and Wheeler Street campus entrances. Street improvements such as crosswalks and the addition of curbs are indicated on 121st and 124th Streets. Traffic calming measures are shown on 124th Street and Yakima Avenue. Improvements to the hillside, including the addition of north/south pathways, will strengthen connections between upper and lower campus and thin the heavily forested area. Future expansion of Facilities Management will allow for improvements to the outdoor storage areas. Additional storage for landscape materials may be located on vacant sites around the perimeter, and these sites should be well screened. One temporary location might be at 10th and 124th, across from the Olson parking lot (this site should also be well screened). The large area to the south of 124th indicates expansion of athletic and recreation fields. Landscape projects identified as priorities are described in further detail under 'Priority Projects: Site & Landscape.' For detail on the play fields please refer to Volume V.

Potential Long-Term Development Sites

As shown on the diagram, a number of potential building sites have been identified. While the needs analysis does not indicate a significant amount of growth for PLU over the next two decades, there may be a need for additional housing, the replacement of existing beds or other university space. The development sites, in total, represent more potential development than the university likely will need. However, identifying the sites provides a range of flexibility for locating potential academic, athletics/recreation, student housing, parking, or mixed-use developments as needs arise and funding becomes available.

Potential sites at the campus core are limited to the location of existing buildings that may need to be replaced such as Ingram, Memorial Gym, or the Swimming Pool. The Wang Center site, also contiguous to campus, could be developed more intensely if Wang Center functions are relocated. Each of these sites would serve well for academic uses or student housing.

Sites at the edge of campus include the field just west of East Campus, a portion of the Library parking lot and the site just north of KPLU's new building. These would all work well for non-traditional student housing. The two sites north of Garfield also may serve as mixed use with retail and housing. In addition, senior housing may be appropriate adjacent to East Campus with its close proximity to campus and community resources nearby. Potential locations for expanded parking are also identified at the campus perimeter.

With the expansion of athletics/recreation facilities as defined by the Athletics, Recreation and Physical Education Master Plan, creating additional opportunities for parking on lower campus is highly desired. The Columbia Center site is identified as a good site for a new fitness and aquatic facility due to its proximity to the playing fields and residence halls on lower campus. For more detail, please refer to Volume V.



Priority Projects

ESTABLISHING PROJECT PRIORITIES

To establish project priorities, the master planning team began with the list of projects identified in the previous section. The Master Plan Steering Committee was also asked to evaluate functional priorities by considering which projects are most important in terms of meeting the university's mission and the master plan goals. University leaders including Vice-Presidents, the Provost, and the President took into consideration the Steering Committee's recommendations, results from analysis of the site, facilities, and needs, along with feasibility to determine the final list of projects for the near-term (0-10 years) and long-term (10-20 years).

The near-term and long-term projects below are grouped by funding categories: Capital Campaign, Bond Financing, and Operating Budget and Grants. It should be noted that Site Improvement projects may occur independent of the near- or long-term as funding required is of a smaller scale and implementation can often take place in conjunction with other projects and general maintenance.

Near-Term Projects (0-10 years)

Capital Campaign:

- Eastvold Subsequent Phases: Studio Theatre, Humanities
- Two all-weather athletic fields (football, soccer, lacrosse, track, ultimate frisbee, intramurals, and physical education)
- Olson Auditorium and athletic field improvements to existing fields used for baseball, softball and soccer
- Fitness and sports center, Phase I

Bond Financing:

- Residence Hall renovations
- University Center renovation

Operating Budget and Grants:

- Mortvedt Library/Ramstad renovations
 - Ramstad Commons relocated in Mortvedt Library
 - Psychology consolidation in Ramstad
 - School of Nursing Lab renovations
- Instructional improvements in classrooms and laboratories
- Technology infrastructure improvements
- Rieke Science Center

Site Improvements:

- Main campus entrance at Park Avenue
- Safety/security improvements
 - 124th Street traffic safety
 - Edge enhancement
 - Hillside landscape and security
 - Pedestrian walkways
 - Outdoor lighting
- Stormwater management for University Center and Eastvold coordination with pond and future Clover Creek restoration

Longer-Term Projects (10+ years)

Capital Campaign:

- Harstad/Hauge/Ingram renovations
 - Harstad as 'Old Main'
 - Hauge Renovation and New Addition
 - Ingram Major renovation or replacement
- Athletics/Recreation/Physical Education
 - Memorial Gym/Names Fitness Center major renovation or replacement
 - Swimming Pool major renovation or replacement
 - Additional Playfields and Playfield upgrades, including tennis courts

Operating Budget

- Facilities Management expansion
- Mary Baker Russell Studio expansion
- East Campus renovation

Site Improvements

- 121st Street improvements
- Entrance at Wheeler
- Irrigation strategies
- Preservation/enhancement of tree canopy
- Site furnishings
- Clover Creek restoration

**SELECT PROJECT DESCRIPTIONS:
ARCHITECTURAL**



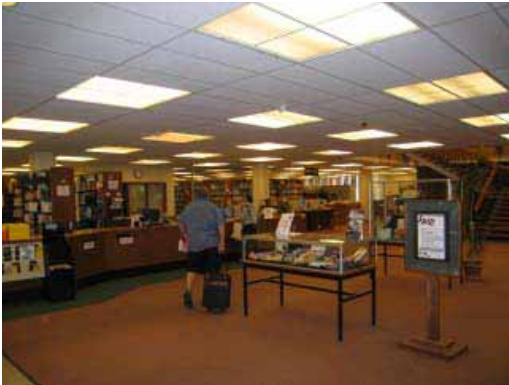
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Select Project Descriptions: Architectural

The following studies solve a number of issues identified in the plan that simultaneously address the physical condition of specific buildings on campus and functional problems. The first 3 projects listed are identified as top priorities to be completed in the next 2 to 10 years. Harstad/Hauge/Ingram renovations require a detailed phasing plan with substantial funding and may be completed in 10-20 years. The Fitness and Aquatic Center project described last, which would replace the Swimming Pool and Memorial Gym, would also require substantial funding and likely a similar timeframe.

Mortvedt Library/Ramstad/Renovations: “Academic Commons”

As discussed in the facilities condition analysis, Mortvedt Library is in relatively good condition with some improvements recommended to the mechanical/electrical systems such as replacing older components to maximize energy efficiency and upgrade the fire alarm system. The structural system is also in good condition. Some lateral load upgrades are recommended to bring the building up to current seismic standards.

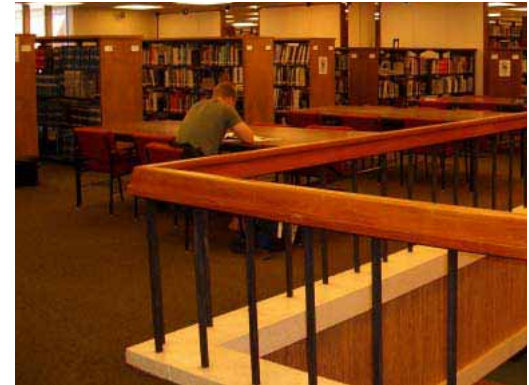


However, the building interiors are worn and need a 'face-lift' for student and faculty morale and recruitment. More importantly, the functional role of libraries is changing requiring a new appraisal of space configuration needs. Over the last decade with advances in technology and new pedagogies, libraries are becoming not just a place to house books and study, but transforming into information centers. PLU's vision for the library of the future is an 'Information Commons' focusing on serving the academic and intellectual life of students and faculty. Services will include academic assistance, advising, and career development as well as a place to find the information students need for their studies. With this vision, Mortvedt Library must house library functions as well as academic services. Most of these programs are currently located on the first floor of Ramstad and in Mortvedt Library. These programs should be co-located in a space called the 'Information Commons' with high visibility to students.

A specific analysis showed that if all academic assistance programs were located on the first floor of Mortvedt Library, these programs plus the Haley Center could create an effective interactive student information resource environment. The programs joining Academic Assistance and the Writing Center in the library would include Academic Advising, Academic Internships, Career Development, the Center for Public Service, Services for Students with Disabilities, Student Employment, and the Volunteer Center.

A benefit of this proposal is that with the vacation of Ramstad by academic assistance functions, the Psychology Department will be able to consolidate into one building. As mentioned earlier, this is a functional priority related to academic programs and thus, helps put the Mortvedt Library renovation as one of the top priorities. It also provides additional space in Xavier Hall for student-faculty research and student team rooms.

This project includes the reconfiguration of Mortvedt Library as well as upgrades to the building infrastructure. Studies are currently underway to identify estimated costs for these improvements. When design work for the renovation begins, potential options will be studied with close review and input from users.



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University Center Renovation



The University Center (UC) is the functional center for the campus and a physical and symbolic link between the upper and lower campus. Students, faculty, and staff use the facility almost equally, with the bulk of the campus meeting rooms used by faculty and staff on the main level during the day. Campus stakeholder groups have expressed the need to make the UC more student-focused and to update and improve the building to maximize its potential as a Campus Commons. This is possible because of relocation of the bookstore to Garfield Street.

Along with refurbishing the building, functional improvements include expanding dining services into a scramble concept that opens up food service to those not on a meal plan. This will increase dining options available to students and, most importantly, strengthen a sense of community by allowing all faculty, staff and students to share meals together while providing a new venue for study, socializing and group work. Additional space for student organization will allow more collaboration and visibility.

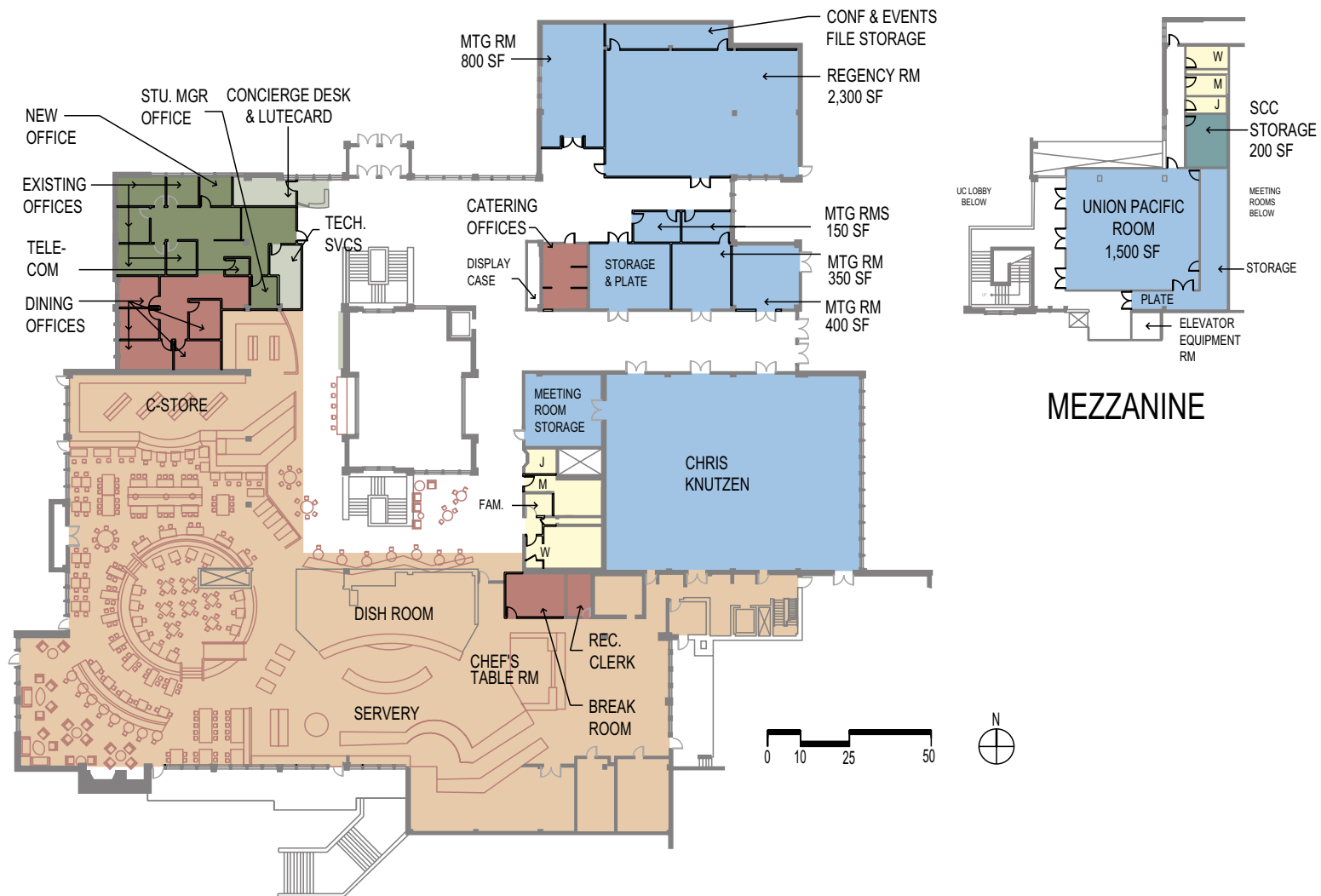


As discussed in the facilities condition analysis, University Center is in relatively good condition with some minimal seismic improvements recommended. Mechanical/electrical improvements include replacing controls and upgrading steam system components, the power distribution system and the fire alarm system. Further study is required to determine the existing boilers' ability to continue to support heating in Ramstad, Xavier, Mortvedt Library and Harstad for the long term.

This project includes the reconfiguration of the University Center as well as upgrades to the entire building. Studies are currently underway to identify estimated costs for these improvements. The following diagrams show preliminary concepts. When design work for the renovation is underway, options will be studied with close review and input by users.

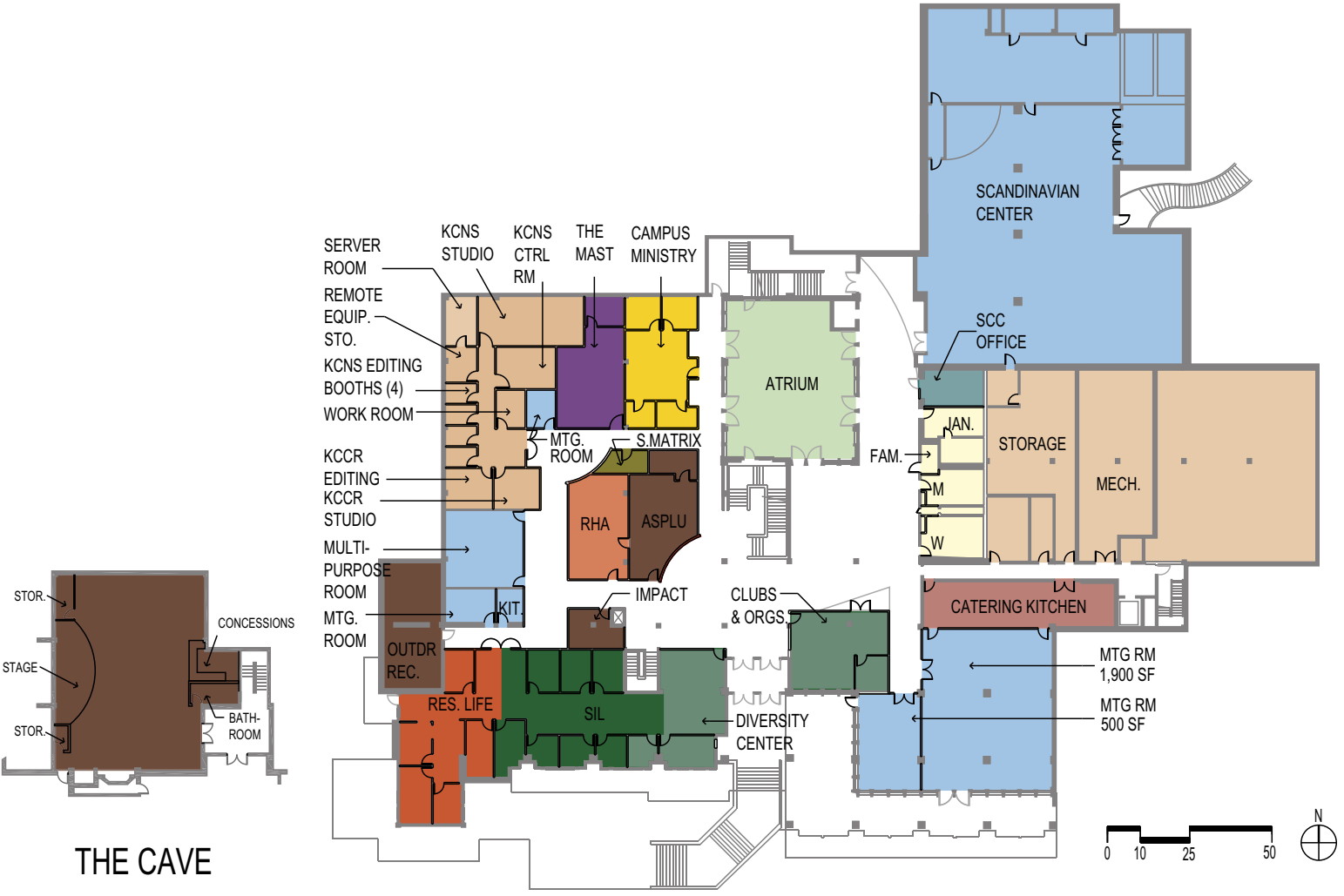


October 2006



UNIVERSITY CENTER - MAIN FLOOR & MEZZANINE
PRELIMINARY CONCEPT 9.21.06

October 2006



THE CAVE

UNIVERSITY CENTER - GROUND FLOOR & THE CAVE
PRELIMINARY CONCEPT 9.21.06

Harstad/Ingram/Hauge

During its lifespan, Ingram Hall has served as a student center, the home of the School of Nursing, and now the home of Communications and the Art Departments. This 1950's building has major systems condition issues including the building skin, mechanical and electrical. The cost of replacement or major upgrades suggests that full replacement of the building may be most cost effective in the long run. In addition, teaching spaces do not meet programmatic needs.

Harstad is highly valued as the campus' oldest building and landmark. The building functions well as the backdrop for the main campus entrance at Garfield Street and Park Avenue. Currently a residence hall for 200 female students, Harstad is envisioned as the long term home for an 'Old Main' that houses campus administrative and possibly academic functions. The building requires upgrades to its mechanical, electrical, plumbing and structural systems. Timing for the major upgrades needs to be studied within the context of a longer term plan for the building.



The issues and vision for both Ingram and Harstad were drivers for identifying a multi-phased strategy that would include the conversion of Harstad to administrative space and the replacement of Ingram. This will necessitate the replacement of the 200 beds in Harstad and a facility to house art functions. Bed replacement options include development of new housing on one of the development sites identified in previous chapters or conversion of Hauge to beds (Hauge could be vacated when administrative and academic functions move to Harstad). The options for replacing Ingram include development of a new Arts building or conversion of Hauge to Arts and Education. Diagrams on the following page show the amount of space that would be vacated and available for potential arts and education functions (approximately 22,800 sf) if administrative functions were to move to Harstad. In this scenario, Hauge's courtyard could be developed as a usable open space for kiln, foundry, welding and other outdoor art functions such as a sculpture garden. Detailed phasing possibilities that determine the functional feasibility of these options need to be studied. The projects will require substantial funding and are not expected to be completed for 10-20 years.



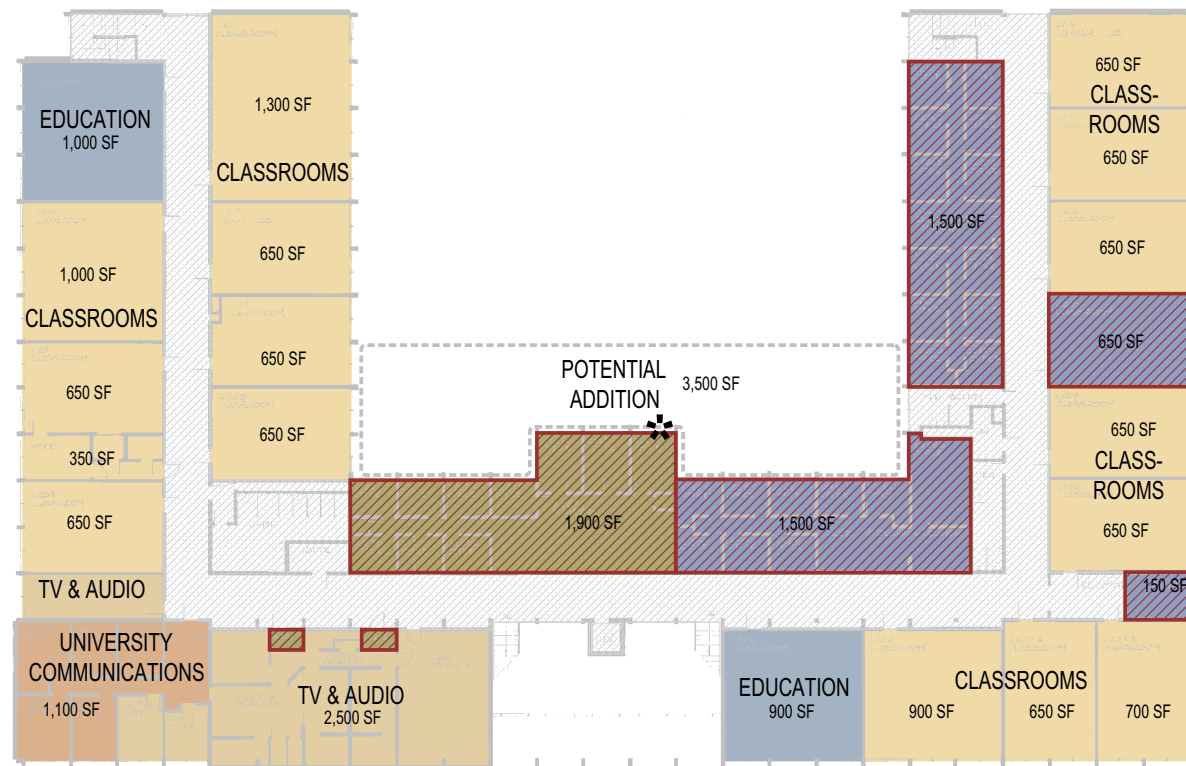
October 2006



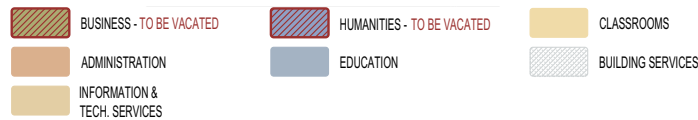
HAUGE - FIRST FLOOR



* Note: the potential addition shown widens the South Wing for large art shops and studios. An addition at the north, closing off the courtyard may be more appropriate for classrooms and small studios with better access to daylight. These options must be explored further during the design process.



❖ Note: the potential addition shown widens the South Wing for large art shops and studios. An addition at the north, closing off the courtyard may be more appropriate for classrooms and small studios with better access to daylight. These options must be explored further during the design process.



HAUGE - SECOND FLOOR



Olson Auditorium Renovation

In terms of the modernization to building systems, Olson Auditorium requires improvements to the lateral load system to bring the building up to current standards. In addition, recommended improvements to the mechanical/electrical systems include replacement of the majority of the heating and air handling systems as well as controls for greater economic efficiency. The power distribution system will need to be upgraded with these improvements and the fire alarm system should be replaced. Studies are currently underway to identify estimated costs for these improvements.

While Olson Auditorium has adequate space, reorganization and modernization will better meet the need of the School of Physical Education and Department of Athletics. Numerous committees and individuals helped identify possible improvements to include consolidation of P.E. faculty offices and classrooms, coaches offices and athletics administration offices within Olson Auditorium (currently located elsewhere), expansion of the training room, and development of locker rooms, team rooms, and equipment rooms. It is envisioned that the building would continue to serve the campus-wide need for a space for large events. The following diagrams show one of the options from examining the feasibility of meeting the required area and adjacency needs. When design work for the renovation begins, additional options will be studied with closer review and input by users.

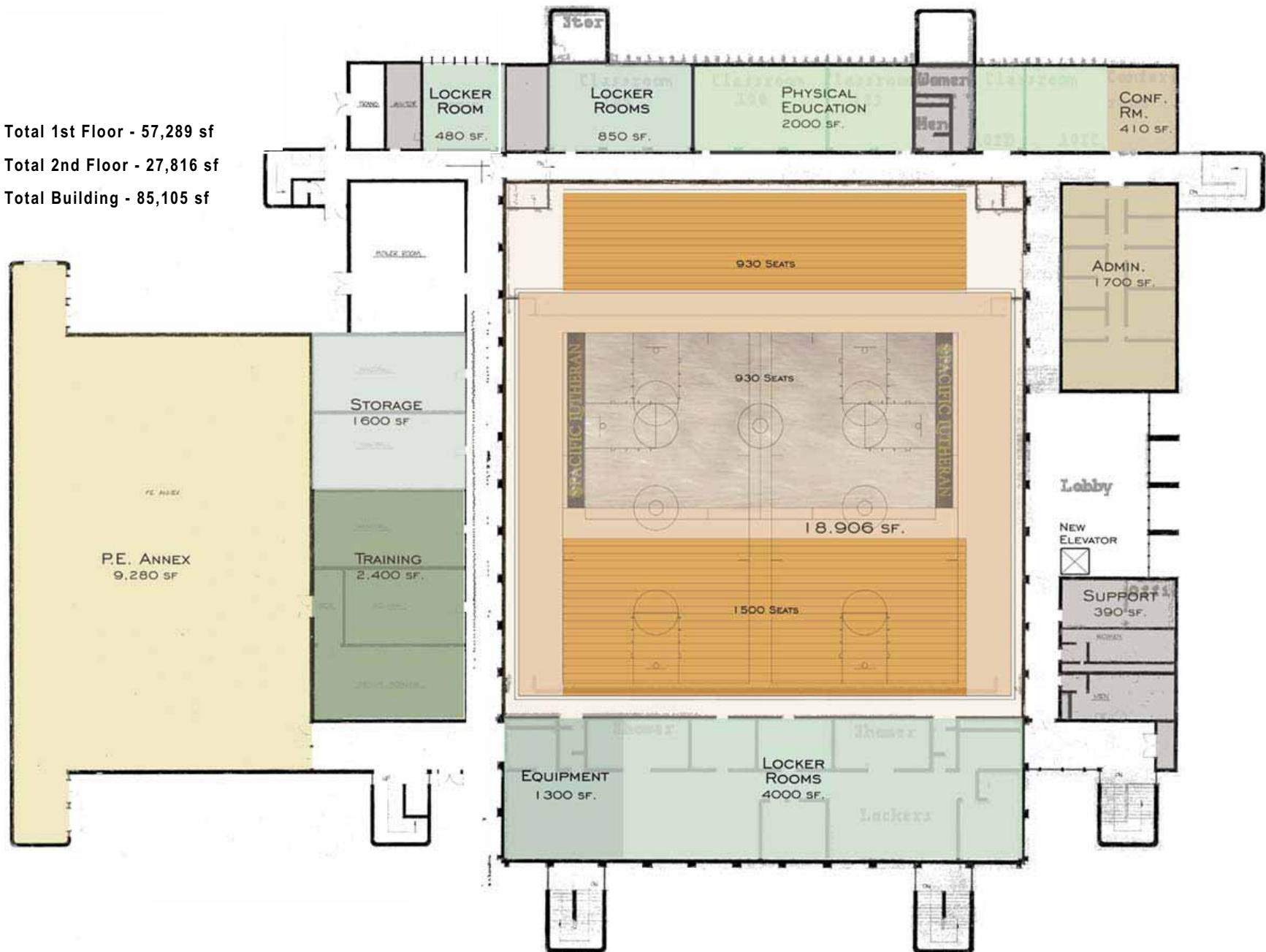


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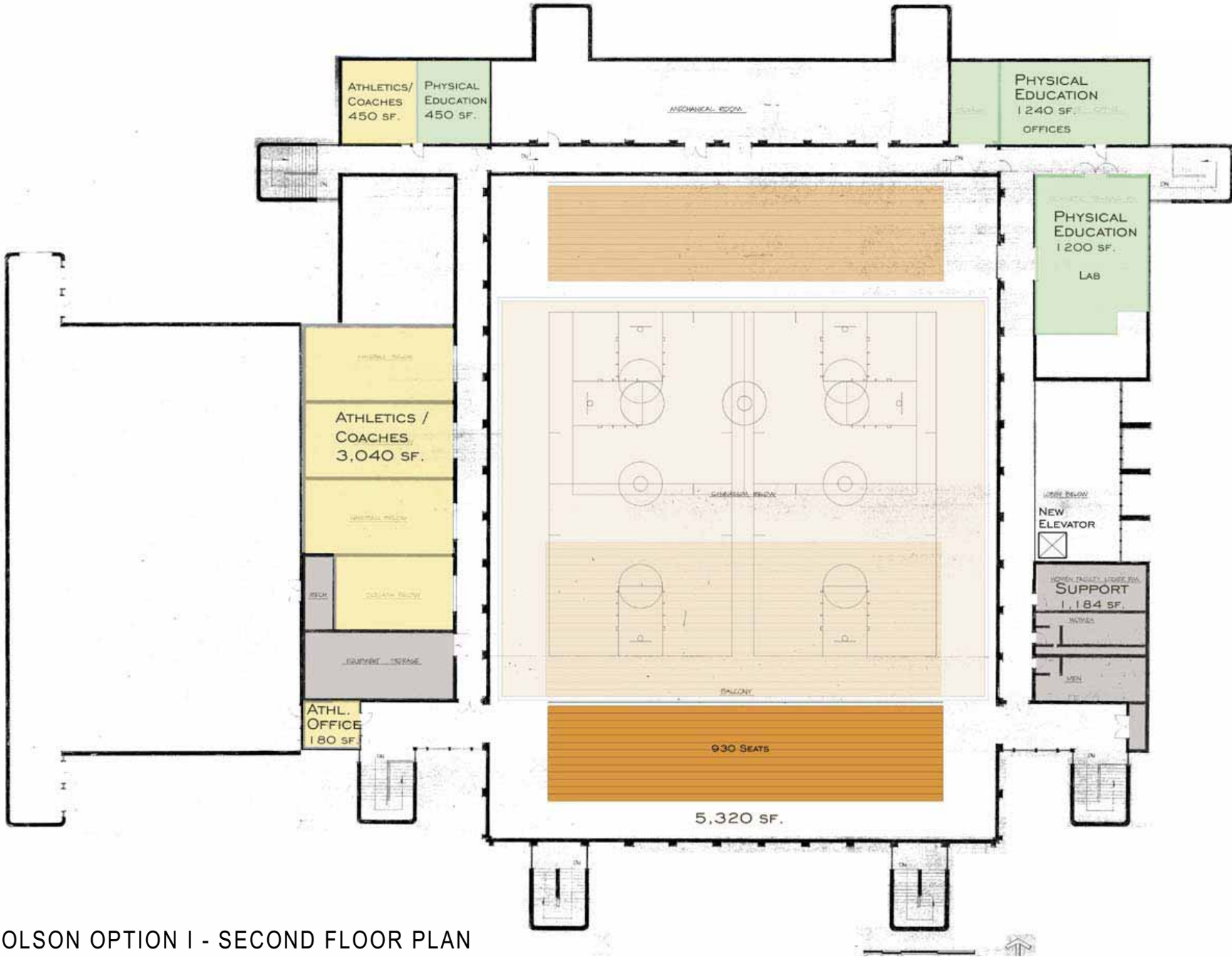
Total 1st Floor - 57,289 sf

Total 2nd Floor - 27,816 sf

Total Building - 85,105 sf



OLSON OPTION I - FIRST FLOOR PLAN



OLSON OPTION I - SECOND FLOOR PLAN

Fitness and Aquatic Center



As noted in the facilities condition analysis, the Swimming Pool and Memorial Gym/Names Fitness Center have major systems condition issues including building skin, structural, mechanical and electrical. Substantial modifications are required to meet building code mandates (for Memorial Gym/Names Fitness Center) or extend useful life (for the Swimming Pool). The potential scope of these upgrades suggests that full replacement of the buildings may be most cost effective in the long run.

Cannon Design developed preliminary program requirements and a design concept for a new Fitness and Aquatic Center to replace the Swimming Pool, Memorial Gym and Names Fitness Center. The concept allows for the Fitness Center or the Aquatic Center to be constructed as separate projects on different time lines.



The facility would include a gymnasium, multi-purpose rooms, weight/fitness room, climbing wall, racquetball/squash courts, classroom, outdoor recreation, wellness center, lockers, swimming pool recreation administration offices, a new food venue to replace the existing Bistro, and building support. Other features include open, social spaces for students, natural light and sustainable strategies. The project will require substantial funding - as it moves forward, design concepts will be studied with closer review and input by users and the campus community.



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FITNESS AND AQUATIC CENTER - FIRST FLOOR PLAN



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**SELECT PROJECT DESCRIPTIONS:
SITE & LANDSCAPE**



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Select Project Descriptions: Site & Landscape

A variety of landscape and streetscape enhancements would improve the outdoor spaces on campus and increase safety and security.

The following studies focus on specific areas of the campus in order to address some of the highest priority issues that were brought forth in the campus analysis. The first study proposes a renovated main campus entry at Park Avenue and Garfield Street that would serve as a welcoming and clear front door to the campus. The second study includes a site analysis focused on the athletics / recreation area south of 124th Street and along term build-out plan for future fields and facilities. With the long term plan in mind, a third study looks at options for connecting the new athletics fields and buildings to the main campus, as well as traffic-calming options for 124th Street. Another study looks at how to create multi-season gathering spaces at the residence halls that connect the indoor lobbies to new outdoor spaces. The final study incorporates issues of sustainability and habitat creation through a water collection system that would connect the University Center and Eastvold Hall to a new wetland through a remembered Clover Creek.



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Campus Entrance

The campus analysis phase of the master plan identified the need for a ceremonial ‘front door’ that more clearly announces the arrival to PLU campus.

Several alternatives were examined for the campus entrance that studied the advantages and disadvantages of different configurations, locations and programmatic elements in the design. The preferred scheme celebrates the historic significance of Harstad as the original building on campus, its focus as the terminus to Garfield Street and its potential future use as the primary administrative building or ‘Old Main’.

The scheme aligns a one-way entrance drive, on axis with Garfield Street, and directs visitors to short-term parking in front of Harstad. Respecting the historic integrity of Harstad Hall and its current use as a women’s residence hall, the configuration of the circular drive is elongated in the north-south direction to encourage pedestrian movement in this direction and minimize the focus of Harstad itself as the main public entry. To announce the sense of arrival to the PLU campus, a monumental sign similar to those found at the corner of Park Avenue and 128th Street and 12th Avenue and Garfield Street is incorporated into the design of the plaza located adjacent to the circular drive. This plaza may also be designed to become the ‘Heritage Plaza’ currently planned to recognize the many of the supporters of PLU.

The goals of this study were as follows:

- Provide a welcoming front door
- Provide an area for drop-off and pick-up
- Provide directional signage for visitors
- Provide short-term parking for use by visitors to obtain a parking permit
- Provide monumental signage that identifies the university, consistent with signs at Morken Center and 127th Street and Park Avenue.
- Maintain the historic character of Harstad Hall and Xavier Hall



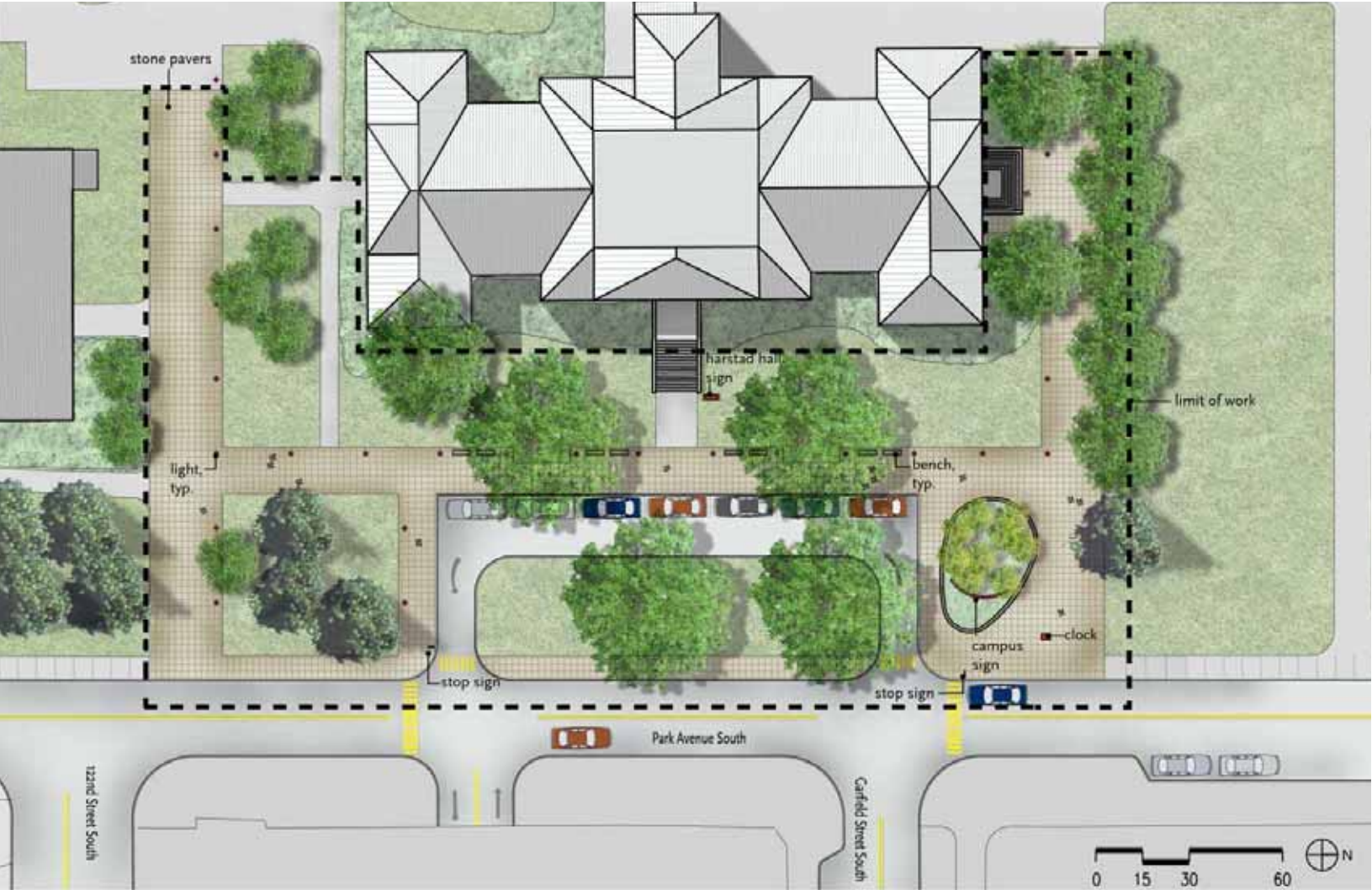
Proposed Campus Entry.



Campus entry at Park Avenue today.

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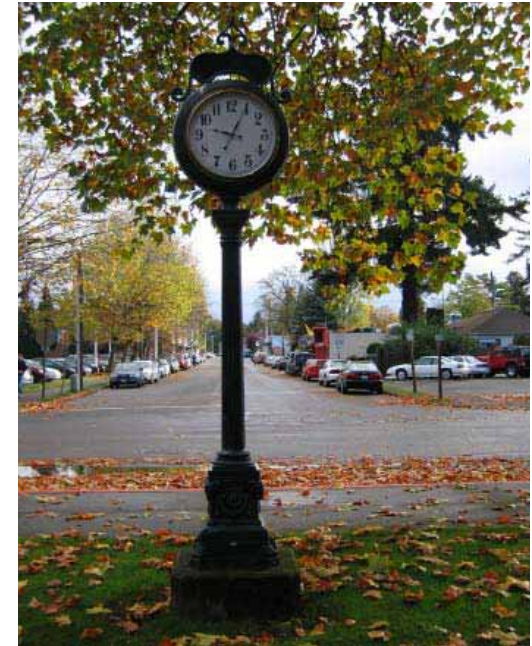


PLAN

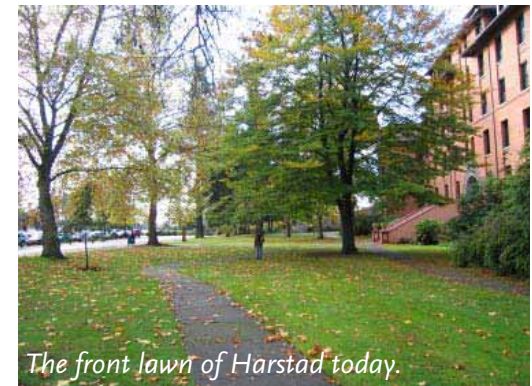
As the front door to campus and the first point of contact with most visitors, it is important for the development of this space to portray the welcoming nature of PLU. Plazas and sidewalks paved in natural stone embrace the quality, timelessness and durability of the campus built environment, while lending a higher level of detail and hierarchy to the pedestrian system to draw visitors into the campus. Pedestrian scale lighting and benches define the back edge of the sidewalk and encourage gathering and socializing at all hours of the day. An open plaza at the north edge of the drive allows for movement in all directions and is articulated with the relocated clock and monumental sign set within a raised plant bed that could be used for seating around the edges and planted with seasonal plantings.



Proposed Main Entry plaza and walkway in front of Harstad Hall



The clock would be relocated to the plaza and become more of a feature element.



The front lawn of Harstad today.

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Athletic / Recreation / Physical Fitness Long Term Build Out

As mentioned earlier, Cannon Design conducted a detailed study of PLU's Athletic, Recreation and Physical Fitness Facilities, both indoor and outdoor. Through the process, a number of goals were identified, including developing a plan for facilities that are comparable to peer institutions, providing all teams the opportunity to practice and compete on campus, creating social spaces, promoting gathering and observation of activities, and developing a menu of projects that can be implemented as funding sources are identified over time.

Outdoor facilities in the long term plan include a lighted synthetic turf field, a multi-purpose sports venue, softball and baseball fields, recreation / intramural / athletic fields and outdoor tennis (in addition to indoor tennis). The observatory might remain at its current location or be relocated. The current golf course will be re-configured or replaced by a driving range, instructional center, jogging trail or other functions.

The planning concept includes reinforcing and extending pedestrian connections in the lower campus as the primary organizational strategy. Also important was minimizing impact on existing fields and facilities through a phased plan, maintaining a buffer with the residential neighborhoods to the south and accommodating traffic calming measures along 124th Street. Specific improvements to 124th Street that solve traffic and other issues are described in the next section.

The Athletics, Recreation and Physical Education plan is likely to be implemented in an incremental fashion. First priorities are to build the outdoor lighted multipurpose sports venue (football, soccer, lacrosse, track, intramurals - for both competition and practice), an indoor multiplex facility for tennis, basketball, field turf, track, classrooms and event space, and the renovation and improvements to extend the life of Memorial Gym/Names Fitness Center and other competition fields.



SITE INFLUENCES

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SITE PLAN PARTIAL BUILDOUT

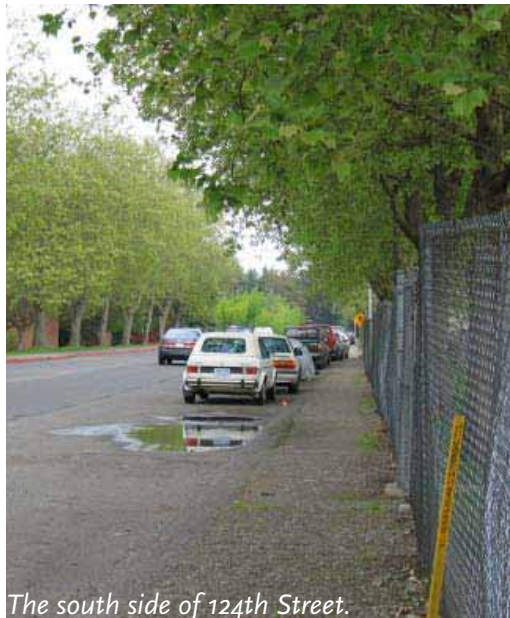
124th Street South Improvements

The goals of this study were as follows:

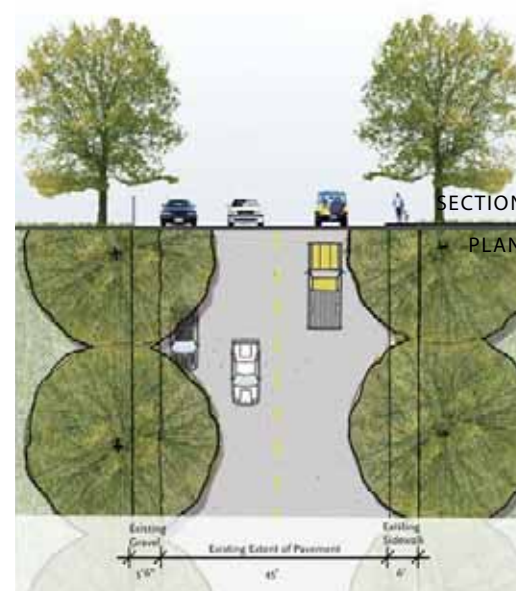
- Create safer pedestrian crossings without losing parking spaces
- Reduce and slow traffic on 124th Street
- Provide sidewalks on both sides of 124th
- Improve visual appearance by reducing lane widths and increasing tree canopy
- Study open space opportunities linked to the development of the new Recreation Center and the possible location of a new residence hall

In general, public streets going through and near campus need safe and well-lighted walkways for pedestrians. These include Park Avenue, Garfield Wheeler Streets, 121st, 124th and 125th Streets, and all intersections. In addition to crossing at intersections, there are also areas where mid-block crossings are common and need safety improvements.

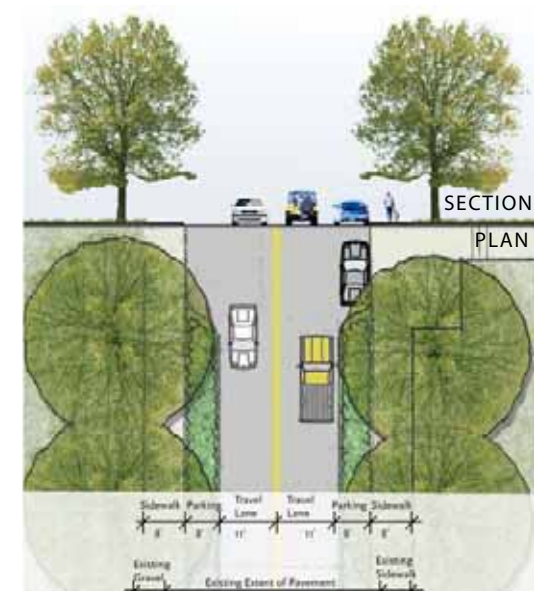
The need for improved connections between the athletic buildings, the fields across 124th Street S., and the main campus was identified as a priority during the master planning process. Currently, 124th Street S. is used as a short cut through campus, causing excessive amounts of traffic. The paved surface measures 51 feet wide, with parking on the south side and a fire lane on the north side. This expansive width of pavement results in 20+ foot travel lanes that encourage high speeds and presents hazards to crossing pedestrians. The mature street trees that line both sides of the street in front of Olson visually narrow the street corridor and may help to reduce traffic speeds in this zone.



The south side of 124th Street.



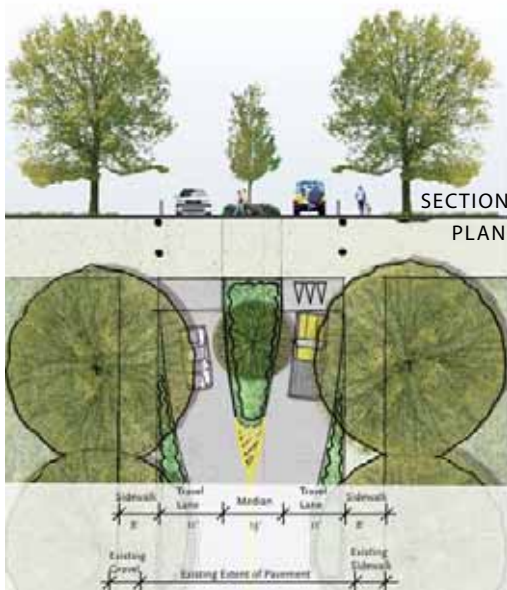
Current conditions on 124th.



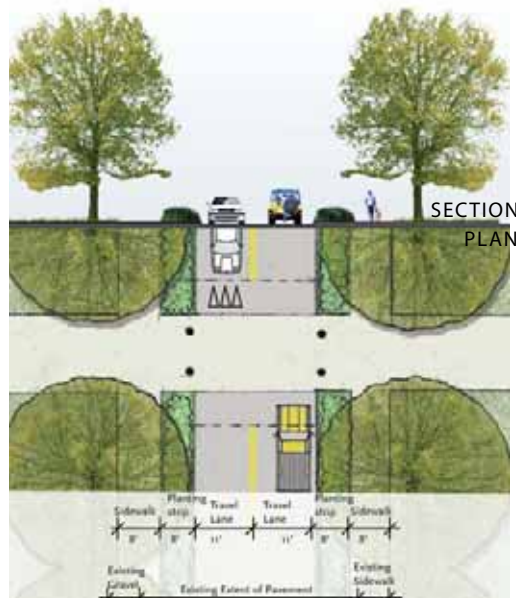
Typical proposed parallel parking configuration.

To help alleviate some of the issues of traffic volume and speeds and provide a safer pedestrian environment a combination of traffic-calming measures can be incorporated into the redevelopment of 124th Street S. These may include continuing tree planting along the entire length of the street, narrowing travel lanes to a more appropriate size, providing parallel parking on both sides of the street, and providing curb bump-outs or medians combined with raised crosswalks at major pedestrian crossings.

Alternative studies were developed that incorporate these traffic-calming measures, provide alternative routes around campus and take into consideration the potential future development of adjacent sites. Any changes to 124th Street S will require coordination with Pierce County and the Franklin-Pierce School District to ensure adequate access for emergency and school services. Connections between the athletic fields/facilities, residence halls and upper campus, as well as the development and character of related open spaces, should be considered in future changes to 124th Street S.



Median with raised crosswalk



Raised crosswalk with planting along edges.



The character of the street tree planting near Olson could be extended the entire length of the street.

124th Street Improvements Option A

The focus of this option was to reduce traffic volumes on 124th Street and redirect through-traffic around the outside of the athletic fields with a future extension of 127th Street. The plan proposes terminating 124th Street with a universally accessible drop-off/pick-up zone at the main entrance to Olson. The area created by the closure of 124th Street creates opportunities for new open spaces and a parking lot adjacent to future development.



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124th Street Improvements Option B:

This option focuses on slowing traffic at the intersection of Yakima Avenue South and 124th Street. The plan proposes a traffic circle at this intersection, which would slow traffic speeds as drivers round the corner. Raised crosswalks and/or medians would further slow traffic at other pedestrian crossings.



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OPTION B

Clover Creek / University Center Pond

Goals:

- Restore, improve and expand the University Center pond ecosystem
- Address safety concerns along pathways and in forested area south of University Center
- Improve storm water management with natural drainage systems
- Remember the historic location of Clover Creek
- Improve the appearance of the existing drainage swale
- Provide increased habitat for wetland wildlife
- Offer educational opportunities for environmental studies and natural sciences

The goal of the study is to develop a forested wetland ecosystem north of the existing storm water treatment area that would remain wet year-round, a wetland meadow, a dry creek bed north of Pflueger and Foss, and conveyance swales from the surrounding buildings that collect roof water runoff and channel it to the wetland and recharge areas.

Within the wetland, walking trails with bridges meander between the islands, keeping some stand-alone islands with no pedestrian connections to them to encourage nesting and increase the habitat quality. The detention basin would remain dry most of the year and in excessive storms, will be able to overflow into the wetlands. Creating a wetland will require amending the soils to make them less permeable but still support vegetation. The source of water will need to be studied, but the strongest possibility is storm water overflow. This system should be designed so that it reduces standing water on campus walkways.

The creek bed is sited to recall the historic location of Clover Creek on campus and could be used to collect storm water runoff from the surrounding roofs of buildings and allow for ground water recharge in an artistic way. Conveyance of storm water collected from the roofs could be channeled along the edges of the existing pathways, opening views and creating safer passage. The character of the creek bed could be designed to be attractive with or without water by providing a gravelly stone base with larger stones and plantings at the edges. At the same time, service access to the south end of the University Center will have to be maintained, and walking paths to Tinglestad, Foss and Pflueger Halls improved.



The existing detention basin.



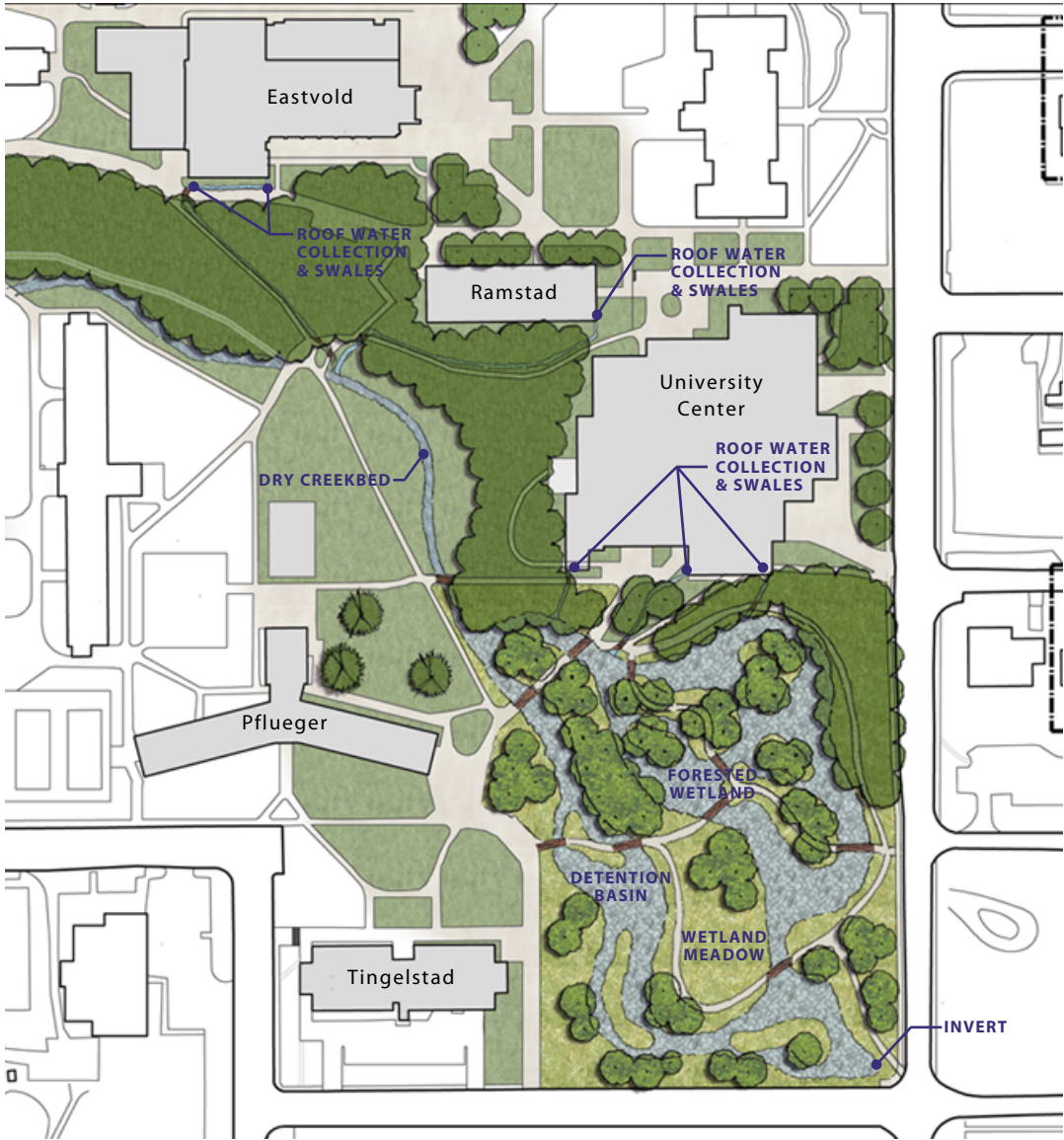
Seasonal Creek bed.



Boardwalks in the wetland.

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Indoor/Outdoor Gathering Areas*Existing entrance of Hinderlie*

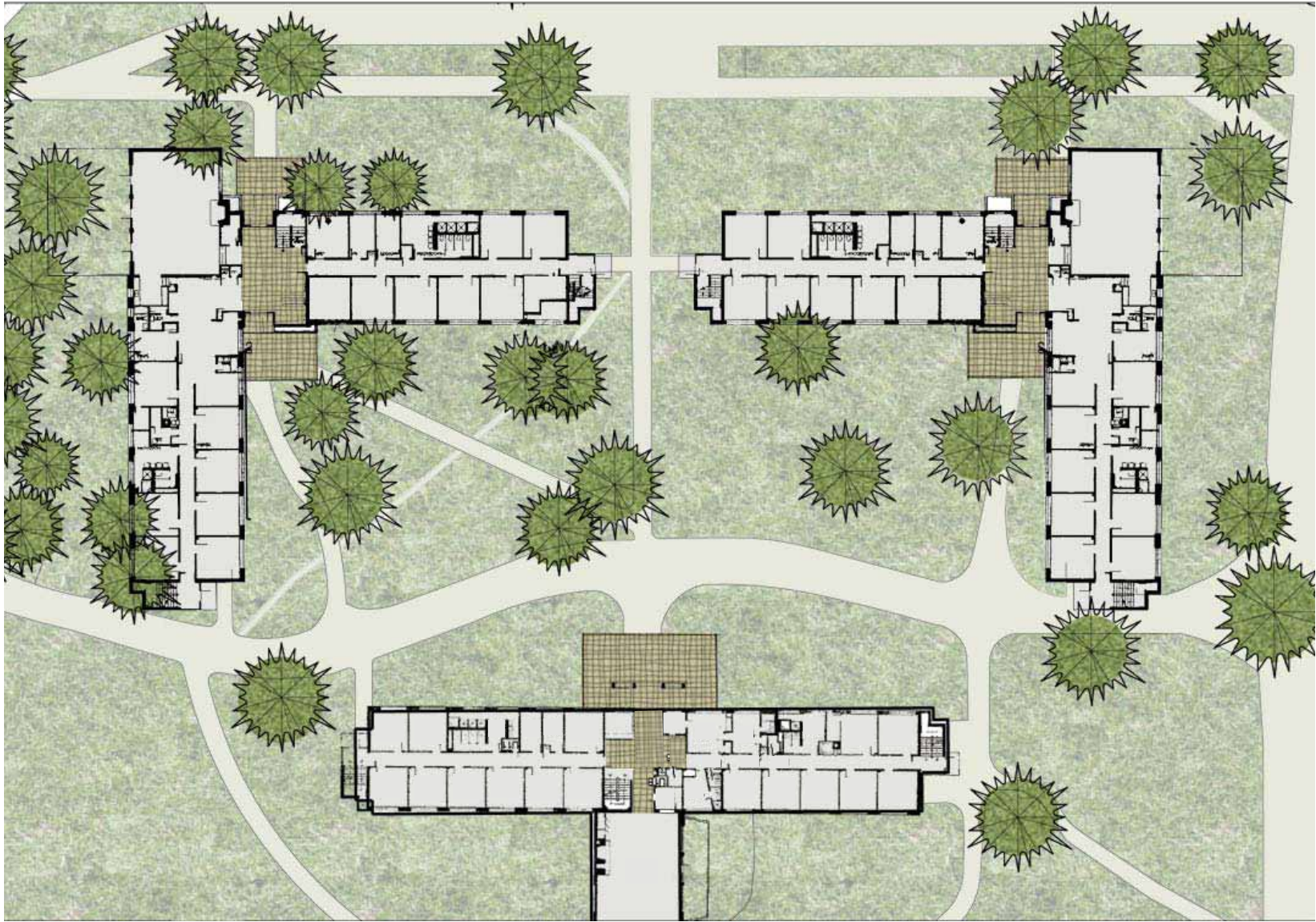
The PLU campus is rich in large informal outdoor gathering spaces such as Foss Field, Mary Baker Russell Plaza and Centennial Square. However, campus representatives, including students, faculty and staff consistently discussed the need for more indoor gathering opportunities. At the same time, there is a strong need for better outdoor gathering spaces connected directly to buildings, especially the residence halls. Warm Spring and Fall evenings draw activity outside yet the outdoor gathering areas at Hinderlie, Hong and Kreidler, which are not located adjacent to the main entries, were empty while the indoor student lounges were full. At Tingelstad, the outdoor plaza, being located at the building entry was very active.

Gathering areas in the UC, residence halls, and other buildings on campus could be improved and increased with stronger connections between indoors and out at high traffic areas. Building lobbies, where possible, should be connected to outdoor plazas and together perceived as one gathering zone. The following diagrams show, conceptually, ways to increase these connections and encourage the use of gathering spaces.

*Students taking advantage of a sunny day on the front lawn of Kreidler*

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Design Guidelines

Over the past 100 years, the PLU campus has developed a specific character and style. Most buildings are predominantly brick, or have brick elements. Tall fir trees provide a beautiful canopy and deciduous trees soften the environment. While some walkways form a grid, most are more organic and follow the most used paths between buildings. New plantings of trees and shrubs will expand the highly valued character of upper campus to the lower campus.

Future university projects must fulfill program needs, meet a high level of quality and respond to context, built form, structure, landscape, and scenic views. Major design elements established over many years addressing the campus environment include formal and informal open spaces, natural features like the hillside, views and connections, and the architectural character of the valued historic buildings should be preserved and reinforced with future development. The following general guidelines will strengthen connections for interiors, open space design and building development on the campus.

Interiors

The Interior Design Guidelines are to be used for small-scale interiors and renovation projects. These guidelines set standards that will ensure quality, consistency, and appropriateness of materials, lighting fixtures, and interior furnishings across all University facilities. The ultimate goal of these guidelines is to allow these projects not only to succeed individually, but also to align with PLU's overall master plan and support the University's core values.

These goals are derived from the University mission statement and infuse objectives that support PLU's vision. Goals for the development of interior spaces include cultivating the individual, strengthening a sense of community and encouraging stewardship.

The use of color, materials, lighting and furnishings within the interior environment should ultimately support the principles that these goals represent. Specific guidelines for each of these elements have been established for classrooms, office and residence halls and should be followed. For more detail on the interior guidelines please refer to Volume VI: Interiors Master Plan.

Buildings

The design teams of all major building projects must demonstrate a thorough understanding of existing systems including circulation patterns, open space contribution, existing vegetation, and continuity with the physical context before developing design solutions. Building plans need to demonstrate how the project contributes to and supports existing systems and campus goals for green infrastructure, energy and water flow. Design solutions that respond to context, climate, and energy conservation are highly important. All new building projects must satisfy the following design requirements.

Building Context

- Contextual responses should respond to the positive attributes of the surrounding area and may be expressed through the choice of materials, form, scale and massing or elements or details such as an entrance, corner, tower, roof, profile and details.
- Additions to existing buildings, or new construction in upper campus must complement the existing buildings architecturally and aesthetically.
- Building design and placement should accommodate convenient pedestrian circulation to and from the building as well as connections through the building.
- Maintain appropriate building scale in relation to adjacent buildings and open spaces.

Building Design

- Express function in the design concept of the building through form and organization.
- In the architecture, clearly define building entrances, transition from outside to inside, and protection from weather.
- Choose materials that emphasize their natural state. They should be of a permanent nature, able to age well. Brick color palette similar to existing burnt orange, red and brown brick is encouraged for academic buildings.

Building Efficiency

- * • Promote low maintenance and operating costs.
- Incorporate appropriate levels of lighting at building entrances and along walkways consistent with the needs of safety and security.

* *Sustainability-focused recommendation*

- Locate mechanical equipment, service areas and loading docks to minimize impacts on pedestrian circulation and views. Screen if necessary.
- * • Develop climatic responses and energy conservation measures. These may include natural light-filled interior spaces for gathering, circulating and learning, natural ventilation, sun-shading devices, etc.
- * • All new buildings should achieve LEED certification, with a goal of LEED silver.

Building and Open Space Relationship

The siting of new buildings and additions to existing buildings will take into account the impact of shade on existing and new open spaces, development or alteration of adjacent open space, and the views throughout campus. Projects should contribute to the improvement of existing vegetation and open spaces. Expectations for building and open space relationships will be developed on a site-by-site basis and will follow the open space and landscape guidelines of the Campus Master Plan.

- Conceive buildings in concert with pedestrian circulation, open space, and landscape and should help define outdoor space whenever appropriate.
- Incorporate sculpture, fountains, and/or other art in existing and new open spaces enhance their spatial identity, and provide for aesthetic stimulation.
- Create consistent signage for campus entries, building identification, and vehicle/ pedestrian wayfinding.
- Provide unhindered access to parking, facilities and open spaces for those with disabilities. Such entrances and circulation paths should not be distinctly different.
- Avoid vehicle/pedestrian conflicts, and the link or transition from vehicle to pedestrian path must be considered and developed in site design.

Building and Circulation Relationship

A building's relationship to campus circulation must be considered with every `project. Main entrances should be clearly identified and relate to the pedestrian circulation system. Pedestrian conflicts at the juncture of building entrances and major pathways should be avoided. Circulation of all modes of access to a building must not deteriorate the surrounding campus form and open space. Where service access and pedestrian circulation coincide, the pedestrian environment should dominate, but not conflict. Parking and service should be screened with landscape and plantings to avoid detracting from the overall quality of the environment.

Historic and Cherished Features

The most significant historic buildings on campus, Harstad Hall, Eastvold Hall, and Xavier Hall should remain prominent features of the campus. Cherished open spaces are Foss Field, Centennial/Red Square, the hillside, and the upper quad between Hauge Hall and Eastvold Hall. These spaces are part of the historic structure of the campus and should remain as essential components of PLU. Any development on or adjacent to these buildings and open spaces shall demonstrate how they maintain and contribute to the integrity of the existing aesthetic.

Open Space and Vegetation*Open Space & Gathering Areas*

- Create gathering spaces at building entries overlooking green open space to encourage students to socialize
- Provide protection from weather at gathering spaces to encourage year-round use
- Materials for hardscape and walls shall be of a durable material that reinforces the character of the surrounding buildings and open spaces.
- Provide unhindered access to parking, facilities and open spaces for those with disabilities. Such entrances and circulation paths should not be distinctly different.
- Significant open spaces that contribute design and value to the history of the campus have been identified as areas to preserve. Any alteration to these areas shall demonstrate how improvements minimize impact and/or enhance these spaces.
- Opportunities to create new open space or reconfigure existing open space currently lacking spatial definition should be realized in conjunction with future development projects
- Diversity in spatial form and scale is encouraged to allow continued variety in character of space
- Locate smoking zones 25' from buildings and provide screening from major pathways

Site Furnishings

- Each new building project shall incorporate the campus standard site furnishings for lighting, seating, bicycle racks and receptacles into each design.
- Consolidate site furnishings – ash urns, trash receptacles, etc. – with seating areas to remove clutter from open spaces
- Provide a minimum of one trash receptacle and one recycling receptacle at all building entries

- Provide seating around the perimeter of open spaces, not in the center, to maintain their sense of openness. Provide backless tree surround benches at around significant trees in the center of open spaces.
- Incorporate signage consistent with campus standard for campus entries, building identification, and vehicle/pedestrian wayfinding.
- Incorporate sculpture, fountains, and/or other art in existing and new open spaces to enhance their spatial identity, and provide for aesthetic stimulation. Establish a maintenance manual for such items.

Lighting & Safety

- Consider existing vegetation and ambient light from adjacent buildings in design of new lighting system
- Consider entry and building mounted lights wherever possible to highlight entries and architecture, eliminate dark spots at the base of buildings and reduce visual clutter in open spaces
- Avoid brightness in the center of a space that can affect the ability to see the perimeter of the space and result in adjacent spaces that seem extremely dark.
- Provide exterior light level calculations for each new project. Ensure light levels meet Illuminating Engineering Society (IES) standards as follows:
- Sidewalks along roads – 0.2 footcandles minimum: uniformity ratio 3:1 preferred, 10:1 maximum allowable
- Interior walkways – 0.5 footcandles minimum: uniformity ratio 4:1 preferred, 10:1 maximum allowable
- Maximum 1.5 footcandles in any location

Vegetation

- * • Specify plant species that will thrive without special care and are known to be disease-resistant and easy to maintain
- Specify dwarf or slow-growing shrubs along pathways that do not require pruning to maintain natural surveillance with a clear distance 4-6 foot high
- * • Develop planting pallets that represent appropriate plant communities and support connectivity of small animal, bird and insects habitat

* *Sustainability-focused recommendation*

- Assess the life expectancy of existing trees and preserve significant trees during new construction
- * • Introduce tree species not currently found on campus, especially evergreen varieties, to increase diversity for ecological or pedagogical reasons
- * • Do not plant species that appear on the Washington Native Plant Society's invasive species lists.
- All new planting of shrubs and trees to receive 3 inches of double-grind bark mulch at time of installation
- Plant all trees a minimum distance of 15 feet from all building facades to ease building maintenance
- Concentrate high maintenance landscape in very selected, high visibility areas.
- Install mow strips (course of brick or other paving material) along the face of buildings to eliminate the need for lawn edging
- Install metal or plastic edging between all plant beds and lawn areas
- Plant low evergreen shrubs on slopes that exceed 3:1 pitch to stabilize the soil and reduce maintenance

Irrigation

- * • Design sprinkler layout to water only planted areas and not pedestrian walks and paved areas
- * • Irrigation of lawn and of shrubs shall be on separate zones
 - Provide fully independent zones that can be linked to a central control system
 - Provide drip irrigation for all plant beds and sprinkler irrigation for all lawn areas

* *Sustainability-focused recommendation*

Planting Soil & Earthwork

- Avoid the import or export of fill; amend and reuse existing soil on site
- For all new construction, ensure adequate percolation of subsoils within construction limits prior to placement of any loam or planting soils, scarifying top 24-36 inches of soil if necessary.
- Creating healthy soils by incorporating policies for sheet mulching, compost mulching, composting tea drenching, promoting mycorrhizal fungi and nitrogen fixing bacteria activity, and by planting a groundcover layer other than lawn.

Management & Horticultural Practices

- All landscape plans shall be approved by Grounds Manager
- * • Continue the use of self-composting mowers to reduce the need for chemical fertilizer
- * • Develop planting and maintenance plans using Integrated Pest Management (IPM) to prevent the need for chemical applications
- Incorporate recommended maintenance for tree management, irrigation upgrades and areas of increased maintenance into the annual budget
- Protect existing vegetation during construction by installing temporary construction fencing at the drip line of each tree to minimize disturbance within the root zone
- * • Minimize the use of pesticides, herbicides and chemical fertilizers and incorporate Integrated Pest Management (IPM) into landscape maintenance practices
- * • Plantings should be allowed to grow to achieve their natural shapes and sizes and should not be pruned except in special circumstances involving safety or special maintenance considerations.

* *Sustainability-focused recommendation*

